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MIL-HDBK-2361A(AC)
30 AUGUST 2002

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MIL-HDBK-2361(AC)
20 MAY 1999

DEPARTMENT OF DEFENSE HANDBOOK

ARMY DIGITAL PUBLICATIONS DEVELOPMENT IMPLEMENTATION GUIDE

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FOREWORD

1. This military handbook is approved for use by the Department of the Army and is available for use by all Departments and Agencies of the Department of Defense.

2. This handbook provides guidance on the implementation of Standard Generalized Markup Language (SGML) as it pertains to MIL-STD-2361, Department of Defense, Interface Standard, Army Digital Publications. This handbook is for guidance only. This handbook cannot be cited as a requirement. If it is, the contractor does not have to comply.

3. Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: U.S. Army Publishing Agency, (USAPA) ATTN: ASRL Administrator 2461 Eisenhower Avenue, Alexandria, VA 22331-0302 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

4. This document supplements Army Departmental Manuals, Directives, and Military Standards, and provides basic and fundamental information on Standard Generalized Markup Language (SGML) as it applies to MIL-STD-2361.

5. The use of Courier font changes in this handbook represent SGML document instance fragments (i.e. `<!ELEMENT charfill - O EMPTY>`).

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VOLUME 1
INTRODUCTION TO MIL-HDBK-2361A

1 SCOPE.

1.1 Introduction. MIL-STD-2361, Department of Defense Interface Standard, Army Digital Publications established the Standard Generalized Markup Language (SGML) requirements for use in Army digital publications. The military standard was developed as part of the DPD Program through a business process re-engineering of the way Army publication source data are developed, delivered, stored, exchanged, and accessed. The application of MIL-STD-2361 requirements provides the Army a capability to develop weapons systems source databases that allow reuse and sharing of common publication data.

This Department of Defense Handbook, MIL-STD-2361A(AC) *Digital Publications Development Implementation Guide*, provides implementation guidance for MIL-STD-2361. The handbook is designed to support the requirements contained in MIL-STD-2361, and provides guidance, tutorials, and examples to aid publication developers in the publication development process.

MIL-STD-2361 is designed to provide users a tool that is simple to use and functionally accurate to the Army publication processes. The body of MIL-STD-2361 contains publication development and implementation guidance information to assist the publication developer in the use and application of SGML. Detailed guidance is provided in the respective appendices. The appendices include an SGML Tutorial and Reference Material, applications for the respective publication types, and application of the FOSI as a style guide. The handbook structure is described below with a brief description of each of the handbook's major sections.

1.1.1 Scope. This handbook provides implementation guidance for the development of Army publications in Standard Generalized Markup Language (SGML), in accordance with MIL-STD-2361, Department of Defense Interface Standard, Army Digital Publications. This handbook also provides implementation guidance for the use of the Army SGML Registry and Library (ASRL) and other SGML implementation tools. This handbook is for guidance only. This handbook cannot be cited as a requirement. If it is, the contractor does not have to comply.

1.1.2 Purpose. The purpose of the handbook is to facilitate the work of publications developers and users responsible for creating or using SGML publications in compliance with the requirements of MIL-STD-2361. This handbook is a guide for use by publications developers and users to allow maximum reuse and sharing of common publications source data. Army publications data prepared in accordance with MIL-STD-2361 will facilitate the automated storage, retrieval, interchange, and processing of technical documents from varied data sources.

1.1.3 Applicability. This handbook is applicable for use by the Department of the Army (DA) and its contractors, and may be used by other Services and Departments of the Government. It applies to all publications digital data and document development required for compliance with MIL-STD-2361. This handbook will provide knowledge and information about SGML and its application, tutorials in the various ways it may be used, helpful hints and guidance regarding specific SGML idiosyncrasies, and other user assistance type features.

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2 APPLICABLE DOCUMENTS.

2.1 General. The documents listed below are not necessarily all of the documents referenced herein, but are the ones that are needed in order to fully understand the information provided by this handbook.

2.2 Government Documents.

2.2.1 Specifications, Standards, and Handbooks . The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the latest issue of the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto.

SPECIFICATIONS

DEPARTMENT OF DEFENSE

MIL-PRF-28000	-	Digital Representation for Communication of Product Data: IGES Application Subsets and IGES Application Protocols
MIL-PRF-28001	-	Markup Requirements and Generic Style Specification for Electronic Printed Output and Exchange of Text
MIL-PRF-28002	-	Raster Graphics Representation in Binary Format, Requirements for
MIL-PRF-28003	-	Digital Representation for Communication of Illustration Data: CGM Application Profile
MIL-PRF-87268	-	Manuals, Interactive Electronic Technical: General Content, Style, Format, and User-Interaction Requirements
MIL-PRF 87269	-	Database, Revisable: Interactive Electronic Technical Manuals, for the Support of

STANDARDS

DEPARTMENT OF DEFENSE

MIL-STD-12	-	Abbreviations for use on Drawings, and in Specifications, Standards and Technical Documents.
MIL-STD-974	-	Contractor Integrated Technical Information Service (CITIS)
MIL-STD-1840	-	Automated Interchange of Technical Information
MIL-STD-2361	-	Digital Publications Development
MIL-STD-38784	-	Technical Manuals: General Style and Format Requirements.
MIL-STD-40051	-	Standard Practice Technical Manual Preparation.

HANDBOOKS

DEPARTMENT OF DEFENSE

MIL-HDBK-59	-	Continuous Acquisition and Life-Cycle Support (CALS) Implementation Guide
MIL-HDBK-1222	-	Guide to the General Style and Format of U.S. Army Work Package Technical Manuals

(Unless otherwise indicated, copies of the above specifications, standards, and handbooks are available from Standardization Documents Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111- 5094.)

2.2.2 Other Government Documents and Publications. The following other Government documents and publications form a part of this document to the extent specified herein. Unless specified otherwise, the issues are those cited in the solicitation.

REGULATIONS AND PAMPHLETS

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AR 25-30	-	The Army Publishing Program
DA Pamphlet 25-40	-	Administrative Publications: Action Officers Guide
DA Pamphlet 70-3	-	Army Acquisition Procedures

(Application for copies should be addressed to U.S. Army Publications Distribution Center, 1655 Woodson Road, St. Louis, MO 63114-6181.)

DoD 5000.2	-	Part 6, Section N, Computer-Aided Acquisition and Logistics Support
DoD 5200.1-R	-	Information Security Program Regulation

(Copies of DoD 5000.2 are available from Standardization Documents Order Desk, Bldg 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5904.)
(Copies of DoD 5200.1-R are available from the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, VA 22161.)

TRADOC Pamphlet 350-70-1	-	Guide for Producing Collective Training Products
TRADOC Regulation 350-70	-	Systems Approach to Training Management Processes and Products, http://www-dcst.monroe.army.mil/tdaa

(Copies of Pamphlets, Regulations, and other Government Documents required by contractors in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting activity.)

2.3 Non-Government Publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted are those listed in the issue of the DoDISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DoDISS are the issues of the documents cited in the solicitation.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ISO 8879	-	Information Processing - Text and Office Systems - Standard Generalized Markup Language (SGML)

(Application for copies should be addressed to the American National Standards Institute Inc., 1430 Broadway, New York, NY 10018-3308.)

The following documents are listed for informational purposes only and do not form a part of this handbook. They may be obtained from their publishers.

a. The SGML Handbook, Charles M. Goldfarb, Oxford University Press, 1990.
b. Practical SGML 2nd Edition, Eric van Herwijnen, Kluwer Academic Publishers, 1994.
c. SGML: An author’s guide to the Standard Generalized Markup Language, Martin Bryan, Addison-Wesley, 1988.
d. SGML: The User’s Guide to ISO 8879, Joan M. Smith, and Robert Strtely, John Wiley, 1988.
e. SGML and Related Standards Document Descriptions and Processing Languages, Joan M. Smith, Ellis Horwood, 1992.

2.4 Order of Precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

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3 DEFINITIONS.

This section contains a listing of terms, and their definitions, that are specific to publication development in SGML. There is also a list defining acronyms that are widely used in the Army publication environment.

3.1 Acronyms.

AAL	Additional Authorization List
AMC	Army Materiel Command
ANSI	American National Standards Institute
APPIP	Adminstrative Publication Proponent/Editor Interface Process
AR	Army Regulation
ARTEP	Army Training and Evaluation Program
ASAT	Automated System Approach to Training
ASCII	American Standard Code for Information Interchange
ASRL	Army SGML Registry and Library
ATIA	Army Training Information Architecture
AVIM	Aviation Intermediate Maintenance
AVUM	Aviation Unit Maintenance
BII	Basic Issue Items
BIT	Built-in Test
BITE	Built-in Test Equipment
BOI	Basis of Issue
BOS	Battlefield Operating System
CAGEC	Commercial and Government Entity Code
CALS	Continuous Acquisition Life-Cycle Support
CCITT	Consultative Committee for International Telephone & Telegraph
CFS	Center for Standards
CGM	Computer Graphics Metafile
CIR	Circular
CITIS	Contractor Integrated Technical Information Service
COEI	Components of End Item
CRD	Consolidated Requirements Document
CSI	Critical Safety Items
CSL	CALS SGML Library
CSR	CALS SGML Registry
CTA	Common Table(s) of Allowance
DCA	Document Class Authority
DDRS	Defense Data Repository System
DEP	Delayed Entry Program
DISA	Defense Information Systems Agency
DMS	Data Management System
DMWR	Depot Maintenance Work Request
DoD	Department of Defense
DoDISS	Department of Defense Index of Specifications and Standards
DPD	Digital Publications Development
DS	Direct Support

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DSSSL	Document Style Semantics and Specification Language
DTD	Document Type Definition
e-i-c	Element in Context
ECP	Engineering Change Proposal
EDS	Electronic Display System
EIC	End Item Code
EP	Electronic Publication
EPS	Electronic Publishing System
ESD	Electrostatic Discharge
ETM	Electronic Technical Manual
FDEP	Flight Data Entry Printout
FGC	Functional Group Code
FOSI	Formatting Output Specification Instance
FPI	Functional Process Improvement
FPI	Formal Public Identifier
FSCAP	Flight Safety Critical Aircraft Parts
GFI	Government Furnished Information
GS	General Support
HCI	Hardness Critical Item
HR	Hand Receipt
IAW	In Accordance With
IEP	Interactive Electronic Publication
IETM	Interactive Electronic Technical Manual
IGES	Initial Graphics Exchange Specification
ISO	International Organization for Standardization
IPSC	Information Processing Standards for Computers
JCALS	Joint Continuous Acquisition Life-Cycle Support
LMI	Logistics Management Information
LRU	Line Replacement Unit
LSA	Lead Standardization Activity
LSA	Logistics Support Analysis
MAP	Multi-Service Army Pamphlet
MAR	Multi-Service Army Regulation
MCM	Manual for Courts Martial
MOS	Military Occupational Specialty
MTF	Maintenance Test Flight
MTP	Mission Training Plan
MUX	Multiplex
NATO	North Atlantic Treaty Organization
NBC	Nuclear, Biological, and Chemical
NDTI	Nondestructive Testing Inspection
NHA	Next Higher Assembly
NIIN	National Item Identification Number
NSN	National Stock Number

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OAASA	Office of the Adminstrative Assistance to the Secretary of the Army
ODS	Ozone Depleting Substances
OIP	Overhaul Inspection Procedure
OS	Output Specification
OTJAG	Office of the Judge Advocate General
P/N	Part Number
PA	Preparing Activity
PAM	DA Pamphlet
PCO	Publication Control Officer
PDEP	Preliminary Draft Equipment Publication
PDL	Page Description Language
PI	Parts Information
PMC	Preventive Maintenance Checklist
PMCS	Preventive Maintenance Checks and Services
PMI	Phased Maintenance Inspection
PMS	Preventive Maintenance Services
QA	Quality Assurance
QTY	Quantity
RDL	General Dennis J. Reimer Training and Doctrine Digital Library
RFP	Request For Proposal
RTF	Rich Text Format
SATS	Standard Army Training System
SB	Supply Bulletin
SC	Supply Catalog
SGML	Standardized Generalized Markup Language
SMA	Standardized Management Activity
SME	Subject Matter Expert
SMR	Source, Maintenance, and Recoverability
SRU	Shop Replacement Units
STARS	Software Technology for Adaptable, Reliable Systems
STP	Soldier’s Training Publication
STRAP	System Training Plan
TM	Technical Manual
TMDE	Test Measurement & Diagnostic Equipment
TRADOC	U.S. Army Training and Doctrine Command
U/M	Unit of Measure
UOC	Usable on Code
URL	Uniform Resource Locator
USAPA	US Army Publishing Agency
VB	Visual Basic
VBA	Visual Basic for Applications
XML	Extensible Markup Language
WP	Work Package
WWW	World Wide Web

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WYSIWYG What You See Is What You Get

3.2 Terms.

Abstract A narrative which describes, defines, or synopsizes a Digital Publications Development SGML asset.

Attribute A member of an attribute definition list within an attribute list declaration. It declares an attribute name, specifies the form and SGML-specific aspects of possible values, and specifies the action (such as providing a default value) to be taken if an attribute's value is not specified. In the display under attribute (Definition) list declaration, each attribute definition is shown as: name_of_ attribute allowable_values default.

Attribute (Definition) List Declaration A markup declaration that associates an attribute definition list with one or more element types, shown as: *<!ATTLIST name_of_associated_element(s) name_of_attribute allowable_values default>*.

Attribute (of an element) A qualifier indicating a property of an element, other than its type (which is done by a generic identifier) or its content (which is delimited by start-tags and end-tags). Attributes are only found on start-tags, and can indicate reference identifiers, confidentiality, formatting information, and so on.

Attribute (Specification) List Markup that is a set of one or more attribute specifications, shown as: attribute=value attribute=value attribute=value. The markup is used within a Start Tag, as in: *<element_name attribute=value attribute=value attribute=value>*.

Attribute Definition A member of an attribute definition list within an attribute list declaration. It declares an attribute name, specifies the form and SGML-specific aspects of possible values, and specifies the action (such as providing a default value) to be taken if an attribute's value is not specified. In the display under ATTRIBUTE (Definition) LIST DECLARATION, each attribute definition is shown as: name_of_attribute allowable_values default.

Constructs Document type definitions (DTDs), formatting output specification instances (FOSIs), and SGML tag narrative definitions.

Data-oriented The SGML document instance used for data referencing, i.e. database. The SGML document instance is used to populate data management system, which is used in various ways as reference information, developing publication, source for EP/IEP, etc.

Declaration The SGML declaration defines which characters are used in a document instance, which syntax the DTD is written in, and which SGML features are used. It should accompany each SGML document, although a default to the one described in the standard may be assumed.

Declaration Subset A delimited portion of a markup declaration in which other declarations can occur.

Document Instance The instance is the actual document text and its accompanying SGML tags conforming to the specifications and restrictions set forth in the DTD and stored in an ASCII text format.

Document Type Declaration A markup declaration that contains the formal specifications of a document type definition, shown as: *<!DOCTYPE document_type_name optional_external_identifier [optional_document_type_declaration_subset]>*. The declaration invokes a DTD in an SGML document. The document instance of an SGML document must always be preceded by a document type declaration.

Document Type Definition (DTD) A DTD, or Document Type Definition, is an SGML construct used to rigorously and unambiguously describe the structure and content of classes

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	of documents in terms of SGML instances (elements, attributes, entities, etc.). The DTD is occasionally but not in compliance with ISO 8879 terminology used as an abbreviation for 'document type declaration'; it is also an SGML reserved word used in formal public identifiers to indicate that the identified entity is a document type declaration set, and is often used to identify such a set.
Electronic Publication	A electronic page-based representation that provides concise, user-friendly information for instruction, repair, policy or guidance. The EP may interact with other EP or IEP information.
Element	A component of the hierarchical structure defined by a document type declaration or DTD. It is identified in a document instance by descriptive markup, usually a start-tag and end-tag, shown as: *<element_type_name attribute= ''value'' attribute= ''value''>* content of the element *</element_type_name>*.
Element Type Declaration	A markup declaration that contains the formal specification of the part of the definition of an element type that deals with the content and markup minimization, shown as: *<!ELEMENT element_type_name start_tag_minimization end_tag_minimization content_model_group_or_declared_content content_exceptions>*.
Entity	A unit of information that may be referred to by a symbol in a DTD or in a document instance. Entities may be used for character strings, characters that cannot be keyed in on a keyboard, or for separate files that may or may not contain SGML data.
Entity Reference	A reference that is replaced by an entity, shown as: &entity_name; or %entity_name; the ampersand is used for general entities (referenced in the document instance); the percent sign is used for parameter entities (typically referenced in the document type declaration).
Entity Set	A set of entity (and comment) declarations that are used together.
Extensible Markup Language (XML)	Extensible Markup Language, as specified in REC-xml-19980210, is a subset of SGML and requires conformance to ISO 8879.
Formatting Output Specification Instance (FOSI)	An instance of the Output Specification (OS) that assigns values to the style characteristics for a particular document type definition. The FOSI uses the syntax of an SGML document instance and is designed to format documents for paper delivery.
Interactive Electronic Publication	A computerized screen-based representation that provides interaction with weapon system, instructor, student or technician. The IEP can provide training feedback, troubleshoot, fault isolation, and/or training instruction. The functionality is provided by communicating and interacting with selected weapon system components.
Interim document	Interim or partial delivery of a technical publication that allows for Government review prior to final delivery.
ISO 8879 Information Processing	Text and Office Systems - Standard Generalized Markup Language (SGML) completely specifies the SGML Meta-language with regard to the grammar and syntax required for the SGML language along with the features that may be optionally enabled for a given SGML application. In addition, ISO 8879 also specifies various procedures for processing SGML notation.
Legacy data	Legacy data, for purposes of this standard, is defined as any data (paper or digital) that has not been SGML-tagged in compliance with the respective functional requirement standards or specifications, this standard, and MIL-PRF-28001.
Markup	To add text to data of a document to convey information about the document.

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Output file A text presentation metafile developed through use of a page description language (PDL) is referred to as an output file.

Output Specification An OS, or Output Specification, provides a rigorously defined set of options for the style characteristics which provide the formatting intent for interchanged SGML-tagged technical publications. The OS has a mechanism for binding the style characteristics to SGML elements and attributes in a document's DTD. The OS is in the form of an SGML DTD. At present, the OS is intended for hard copy composition but can be applied to digital display in limited applications (e.g., non-interactive).

Page Fidelity The ability to preserve the exact presentation characteristics in addition to the same information on pages exchanged between systems or revisions.

Page Integrity The ability to preserve the exact same information on each page in a manual as it is exchanged between systems or revisions. This does not mean that the information will be presented exactly the same way, but only that it appear between the same page boundaries.

Parsing An SGML parser is a computer application that breaks down an SGML-coded document into a series of logical elements and checks that these elements conform to the model defined in the associated document type declaration. When parsing a document, the SGML parser:

- Checks each new character to see if it is part of a general delimiter string that identifies the start of a piece of markup.
- Checks whether or not the character is a short reference delimiter that needs to be expanded.
- Checks if the character is a separator character that should be ignored.
- Identifies the various markup tags, identifying any entities that need to be expanded or recalled from external sources.
- Checks if identified markup tags are valid according to the declared model.

Preparing Activity The DoD activity or the Civilian Agency responsible for the preparation, coordination, issuance, and maintenance of standardization documents.

Reuse The use of authored publication information or publications source data in more than one type of publication product. For example, information authored initially for a TM (e.g., a maintenance work package, task, etc.) that is used verbatim, or in part, for inclusion in a training or doctrine product (e.g., Soldier's Manual, Field Manual, etc.). The intent of reuse may also be fulfilled when the information is reused in a different TM (e.g., for a different level of maintenance, different version of an equipment/weapon system, or a different equipment/weapon system altogether).

SGML Constructs SGML constructs are DTDs, FOSIs, and their fragments.

SGML Declaration An SGML Declaration is an SGML construct which specifies an SGML implementation in terms of the values of the SGML parameters, character set, concrete syntax, optional features, and capacity requirements and the SGML features used.

SGML Entity An entity whose characters are interpreted as markup or data in accordance with (IAW) ISO 8879.

SGML Instance An SGML Instance or SGML-tagged document is the collection of data composing a specific document that includes SGML tags (SGML markup) corresponding to elements, their attributes, entity references, etc. The SGML markup conforms to the document's DTD.

SGML Objects SGML objects are elements, entities, attributes of elements, public identifiers, notations, and standard tagging schemes.

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SGML Parser	An SGML parser is a computer program or a specialized code compiler called a "parser". An SGML parser first processes (or "parses") an SGML Declaration defining the particular SGML implementation and stores this SGML environment. Then the SGML parser can be used to process (or "parse") a DTD to determine its conformance regarding grammar and syntax to ISO 8879 and the SGML Declaration for that SGML application. The SGML parser can then be used to process an instance of a particular document to determine the conformance of the instance to both SGML grammar and syntax and the DTD.
Standard Generalized Markup Language	Standard Generalized Markup Language, as detailed in ISO 8879. SGML is a meta-language that provides a coherent and unambiguous syntax for describing the logical structure of publications in unambiguous grammar. Formalizes the markup process and frees it of system and processing dependencies.
Tag or Tagging	Adding tags (descriptive markups) to document data.
Task	A sequence of user actions with a definite beginning and an end. User tasks relate to installation checkout operation, and maintenance of systems or equipment. Tasks may contain procedures and in turn steps to complete the assigned task.
Technical Publication Verification	This term refers to the parsing of the digital data stream containing a publication to assure compliance with the standard (SGML, CClTT, CGM, IGES) to which it was written. There is no intent in this term to imply the validation/verification process used to certify the content of the publication.
Well-formed XML Document	Compliant with REC-xml-19980210 requirements, the basic rules for writing well-formed XML documents a. Start tags must have corresponding end tags b. Elements can not overlap c. XML tags are case-sensitive d. Empty elements must either have an end tag or close the empty tag with "/>" e. Reserved characters (< & > " ’) are replaced with corresponding character sequence (< & > " ') f. Each XML document must have a unique root element g. Each attribute name in an element is unique h. Each attribute name is followed by a value indicator (=) and a quoted string
Work Package	Presentation of information functionally divided into individual task packages in the logical order of work sequence. The work packages will be stand alone general information, operating, maintenance, troubleshooting, parts, and supporting information units containing all information required for directing task performance. Work packages may be given to a soldier(s) so they may have complete instructions for accomplishing a task.

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4 LAYOUT, FORMAT, AND CONTENT.

4.1 Scope. MIL-HDBK-2361 has been structured into five volumes. The volumes are comprised as follows:

- Volume 1 - Introduction to MIL-HDBK-2361, including the Forward.
- Volume 2 - Administrative Publications.
- Volume 3 - Training and Doctrine Publications.
- Volume 4 - Technical and Equipment Publications.
- Volume 5 - Army SGML Registry and Library (ASRL).

Volumes 2-4 contain parts. One part contains the layout, format, and content of each of the volumes as described in the introduction to the respective volume. The remaining part(s) contains reference-type information that can be accessed by the user as required.

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5 ACQUISITION OF ARMY PUBLICATIONS INFORMATION USING MIL-STD-2361.

5.1 Purpose. The primary purpose of MIL-STD-2361 is to provide the requirements for the acquisition, development, and delivery of common publication source data that can be used, reused, and shared throughout the Army. There are many ways in which common publication source data may be used throughout the Army for technical and equipment publications, training and doctrine publications, and administrative publications. The potential uses of common publication source data must be understood and these uses identified and planned for in the earliest possible stages of an acquisition contract. Close coordination must be established and maintained by organizations throughout the publications information life cycle. This section contains information describing the processes used to acquire publications information for each Army publication domain.

5.2 Publications Information Process by Domain. Processes and procedures for acquisition of publications information vary within each of the publication domains. Contracting for Army publication development ranges from very formal for technical manuals to practically no contracting for administrative publications.

5.2.1 Technical Manual (TM). Normally, TM information is obtained as part of a formal weapon or command, control, communication, computer or intelligence system (C4I) development contract. TMs are developed by contractors and delivered as the system development moves through the stages of development. Specific levels of TMs such as operator (-10), organizational (-20), direct support (-30), are specified in the development statement of work (SOW).

5.2.2 Training and Doctrine. Training and doctrine information is normally developed in-house by TRADOC schools and centers. In some cases, certain training information is developed by a contractor under a weapon or C4I contract. But it is rare that information such as new equipment training or individual and collective task analysis/development, when developed by the system developer, is provided to the TRADOC proponent school.

5.2.3 Administrative. Administrative publications, such as Army regulations, circulars and pamphlets, are developed and produced in-house by Department of the Army (DA) staff organizations.

5.2.4 Publications Development Requirements and Guidance. Requirements for TM information development and delivery are contained in MIL-STD-40051A and MIL-STD-2361A. MIL-STD-40051, and its companion handbook, MIL-HDBK-1222, contain functional requirements for TM source information development and guidance for its application, respectively. MIL-STD-2361, and its companion handbook, MIL-HDBK-2361, contain SGML requirements and procedures for applying SGML to publications development, respectively. Functional requirements for development of training and doctrine information are contained in TRADOC Regulation 350-70. TRADOC Regulation 350-70 contains guidance for the training development (TD) process to be employed by TRADOC schools and centers. (See the training and doctrine segment of this handbook for discussion of the training development process). Functional requirements for administrative publications are contained in Army Regulation (AR) 25-30.

5.3 MIL-STD-2361 Acquisition, Development and Delivery Process. Under MIL-STD-2361, the acquisition of publications information should be developed and delivered using an integrated team concept. An integrated team should be comprised of functional staff from both systems development (Army Materiel Command (AMC)), and system training development (TRADOC) organizations. Members of each functional staff should have an understanding of all potential uses of the publication data requirements and the interrelationships existing between the different types of data. They must have a thorough understanding of the need for the end-to-end flow of common source data, and be able to specify these interrelationships in the development contract. Figure 1 reflects this interrelationship. Figure 1 not only depicts the interrelationships of the data, it also reflects the fact that a significant amount of information required for training and doctrine product development is derived from TM source information. The interface required to achieve the end-to-end flow of information is described in the training and doctrine segment of this handbook.

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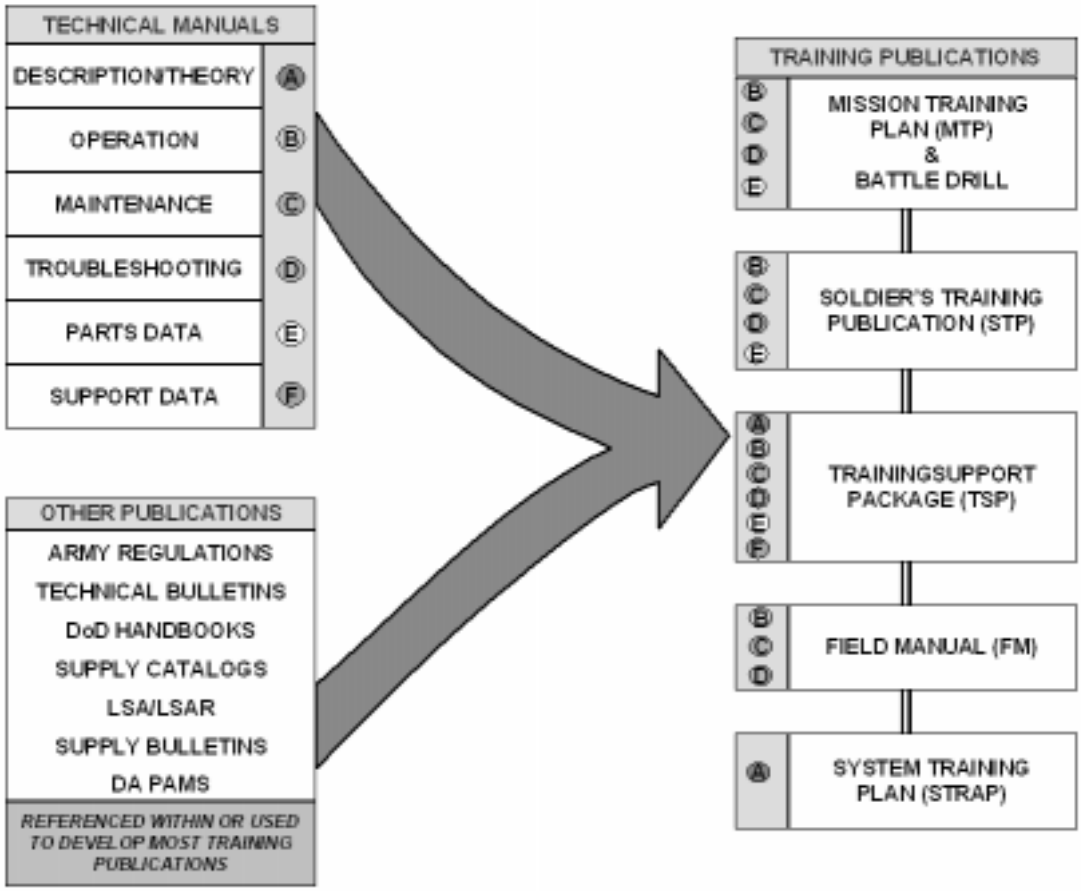

Figure 1 Interrelationships of Army Publications Data

5.3.1 Acquisition Planning. The first step in the process of acquiring common source data is the planning that must take place prior to issuing the contract for publications information. An integrated team comprised of AMC and the appropriate TRADOC school(s) or center(s) personnel should perform this planning. The output of the planning process should be a data acquisition plan that clearly identifies specific data to be acquired, such as technical manuals, new equipment training (NET) plans, literature, and training individual and collective task analysis. This plan should also contain points of contact and schedules for source data development milestones and joint in-process reviews.

5.3.2 Contract/Statement of Work. Guidance must be included in the publication data development and delivery statement of work for the weapon or C4I system that clearly identifies source data to be developed and the method and destinations for delivery. MIL-STD-40051 and MIL-STD-2361 contain requirements for development and delivery of TM data. MIL-STD-40051 contains a series of tables entitled TM Requirement Selection Matrices. Figure 2 contains a sample of one of the matrices. The appropriate matrix(es) should be completed by the integrated team, for use in the development of specific SOW requirements. As can be seen from the sample, the matrix contains specific TM content requirements, as well as MIL-STD-40051 reference paragraphs where detailed functional requirements can be found. The associated MIL-STD-2361 SGML element name is also contained in the matrix. As a further aid in developing the SOW, a MIL-STD-40051/MIL-HDBK-2361/MIL-STD-2361 cross-walk matrix, such as the one depicted in Figure 3, should be prepared and included as a sample in the SOW. This cross-walk shows the relationship between MIL-STD-40051, MIL-HDBK-2361, and MIL-STD-2361 Document Type Definitions (DTDs). The cross-walk also provides a direct relationship between functional requirements and the associated SGML implementations.

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Table A.6 TM Requirements Matrix for _____

TM Content	DMWR DMWR with RPSTL	MIL-STD-40051A Reference	Element Name
FRONT MATTER	R	5.3.1	<frnt>
Front cover	R	5.3.1.1	<frntcover>
Warning summary		5.3.1.2	<warnsum>
Change transmittal page	R	5.3.1.3	<chgsheet>
List of effective pages / work packages	R	5.3.1.4	<loepwp>
Title block page	R	5.3.1.5	<titleblk>
Table of contents	R	5.3.1.6	<contents>
How to use this manual	NR	5.3.1.7	<howtouse>
CHAPTER 1. DESCRIPTION AND THEORY OF OPERATION	R	1-5.1	<gim>
GENERAL INFORMATION WORK PACKAGE	R	5.3.1.9	<ginfowp>
Scope	R	5.3.1.9.1	<scope>
Maintenance forms, records, and reports	R	5.3.1.9.2	<mfrr>
Reporting equipment improvement recommendations (EIR)	R	5.3.1.9.3	<eir>
Hand receipt (HR) information		5.3.1.9.4	<handreceipt>
Corrosion prevention and control (CPC)	R	5.3.1.9.5	<cpcdata>
Ozone depleting substances (ODS)		5.3.1.9.6	<odsdata>
Destruction of Army materiel to prevent enemy use	R	5.3.1.9.7	<destructmat>
Preparation for storage or shipment	R	5.3.1.9.8	<pssref>

Legend
R Required
NR Not Required
O Optional
Shaded As Required

Figure 2 Example of a MIL-STD-40051 Requirements Matrix for a Paper Manual DMWR

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TM -13 -13P Cross-Walk
Between
MIL-STD-400051A(TM)
and
MIL-HDBK-2361A(AC) HandBook

TM Content	-13, -13&P	MIL-STD-40051A Reference Paragraph	MIL-HDBK-2361A Reference Paragraph	Element Name
Production		5.3	24	<product>
PAPER MANUAL		5.3	24.2.1	<paper.manual>
Paper Front	R	5.3.1.	24.2.1.1	<paper.frnt>
Front cover	R	5.3.1.1	24.2.1.1.1	<frntcover>
Warning Summary	R	5.3.1.2	24.2.1.1.2	<warnsum>
Change transmittal page	R	5.3.1.3	24.2.1.1.3	<chgsheet>
List of effective pages/work packages	R	5.3.1.4	24.2.1.1.4	<loepwp>
Title block page	R	5.3.1.5	24.2.1.1.5	<titleblk>
Table of contents	R	5.3.1.6	24.2.1.1.6	<contents>
How to use this manual	R	5.3.1.7	24.2.1.1.7	<howtouse>
GENERAL INFORMATION WORK PACKAGE	R	5.3.1.9	24.2.1.2	<ginfowp>
Scope	R	5.3.1.9.1	24.2.1.2.2	<scope>
Maintenance forms, records, and reports	R	5.3.1.9.2	24.2.1.2.3	<mfrr>
Reporting equipment improvement recommendation (EIR)	R	5.3.1.9.3	24.2.1.2.4	<eir>
Hand receipt (HR) information		5.3.1.9.4	24.2.1.2.5	<handreceipt>
Corrosion prevention and control (CPC)	R	5.3.1.9.5	24.2.1.2.6	<cpcdata>
Ozone depleting substances (ODS)	R	5.3.1.9.6	24.2.1.2.7	<odsdata>
Destruction of Army materiel to prevent enemy use	R	5.3.1.9.7	24.2.1.2.8	<destructmat>
Preparation for storage or shipment	R	5.3.1.9.8	24.2.1.2.9	<psssref>
Warranty information		5.3.1.9.9	24.2.1.2.10	<wmtyref>
Nomenclature cross-reference list		5.3.1.9.10	24.2.1.2.11	<nomenreflist>
List of abbreviations/acronyms		5.3.1.9.11	24.2.1.2.12	<loa>
Quality assurance (QA) (aviation only)		5.3.1.9.12	24.2.1.2.13	<qainfo>
Quality of material		5.3.1.9.13	24.2.1.2.14	<qual.mat.info>
Safety, care, and handling		5.3.1.9.14	24.2.1.2.15	<sfy.info>
Nuclear hardness		5.3.1.9.15	24.2.1.2.16	<hcp>
Security measures for electronic data		5.3.1.9.16	24.2.1.2.17	<secref>
Calibration		5.3.1.9.17	24.2.1.2.18	<calref>
Engineering change proposals (ECP)		5.3.1.9.18	24.2.1.2.19	<ecp>
Deviations and exceptions		5.3.1.9.19	24.2.1.2.20	<deviation>
Mobilization requirements		5.3.1.9.20	24.2.1.2.21	<mobreq>
Flight safety critical aircraft parts		5.3.1.9.21	24.2.1.2.22	<fscapreq>
Cost considerations		5.3.1.9.22	24.2.1.2.23	<cost>
Copyright credit line		5.3.1.9.23	24.2.1.2.24	<copyrt>

Legend

R Required
NR Not Required
O Optional
Shaded As Required

Figure 3 Example of a Cross-Walk Between MIL-STD-40051 and MIL-STD-2361

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5.3.3 Data Delivery. The CDRL and underlying SOW should mandate the delivery of, or unrestricted access to, the database containing the common source data. The CDRL and SOW should specify the delivery of training and doctrine data that is not contained in TMs, such as NET Plans, training material, and task analysis summaries, to the TRADOC school(s) or center(s) requiring the data.

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6 SGML REFERENCE MATERIAL.

6.1 How to Keep Up with SGML. There are several ways to find out more about SGML and to keep up to date with any SGML developments, and new products. The following paragraphs describe some of the channels that users of the ASRL can use.

6.2 The SGML Users' Group. The objectives of the SGML User's Group is to promote the use of the Standard Generalized Markup Language and to provide a forum for the exchange of information about SGML. Regional chapters exist and frequent meetings are organized for developers and users of SGML. For more information contact SGML Users' Group PO Box 361, Great Western Way Swindon, Wiltshire SN57BF, United Kingdom (phone +44 793 512 515; fax +44 793 512 516).

6.3 The GCA. The Graphic Communications Association is a nonprofit organization, affiliated with the Printing Industries of America, Inc. For more information contact Graphic Communications Association, 100 Daingerfield Road Alexandria, VA 22314-2888.

6.4 Books and Magazines. For book references see the information documents section of this handbook. The SGML Newsletter, ***<TAG>,*** is published monthly by the SGML Associates, Inc. and the Graphic Communications Association. The magazine is a reliable source of information on SGML ideas, tips literature, products and conferences. Subscriptions may be obtained from: SGML Associates, Inc., ***<TAG>*** The SGML Newsletter, 6360 S Gibraltar Circle, Aurora, CO 80016-1212.

6.5 Servers. Information about SGML may be obtained from "comp.text.sgml" Usenet Newsgroup on the Internet which contains an archive of messages, postings and additional information. The World Wide Web is a source for information on SGML a starting point is the SGML Consortia and Users' Group at http://www.oasis-open.org/cover/general.html.

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7 NOTES.

7.1 Intended Use. U. S. Army publications prepared in Standard Generalized Markup Language (SGML) in accordance with the information and guidance contained in this handbook is used for development of Army digital publications.

7.2 Subject Term (Key Word) Listing. The following terms are to be used to identify the MIL-HDBK-2361 document during retrieval searches.

Publishing, Electronic
Standard Generalized Markup Language (SGML)
Document Type Definition (DTD)
Formatting Output Specification Instance (FOSI)
SGML objects and constructs
Equipment Publications
Work Package
Information Reuse
Digital Publications Development (DPD)
Army SGML Registry and Library (ASRL)
United States Army Publishing Agency (USAPA)
Electronic Delivery
Maintenance Instructions
Troubleshooting Instructions
Operator Instructions
Supporting Information
Theory of Operation
Administrative Publications
Training and Doctrine Publications
Formal Public Identifier (FPI)

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VOLUME 2
ADMINISTRATIVE PUBLICATIONS

PART I
OVERVIEW, GUIDANCE AND WORKFLOW

8 INTRODUCTION.

8.1 Overview. Volume 2 provides the implementation guidance for the development of Army administrative publications in compliance with MIL-STD-2361, AR 25–30 and DA PAM 25–40. Administrative publications are discussed in sufficient detail to allow the handbook user a comprehensive understanding of the development process and how SGML is applied to the process. Volume 2 Part I contains general administrative publication development guidance and workflow for both proponent authors and USAPA editors. Volume 2 Part II contains detailed guidance for the application of SGML to administrative publications and related training information. There are workflow charts and other graphic illustrations to amplify the narrative discussions. Volume 2 is structured with two parts, as shown in "Layout, Format and Content", below.

8.2 Objectives. Volume 2 MIL-HDBK-2361 is designed to provide users a tool that is simple to use and functionally accurate to the Army administrative publication processes. This volume contains administrative publication development and implementation guidance information, designed to assist publication developers and editors in the use and application of MIL-STD-2361 SGML. Implementation guidance is presented to realize the MIL-STD-2361 objectives to share and reuse common publication information, which is the underlying theme throughout the handbook.

8.3 Layout, Format and Content. Volume 2 contains information relevant to administrative publications, their development, and methods for applying and using SGML. An outline structure of the parts and sections are provided as follows:

Volume 2 – Administrative Publications

Part I – Overview, Guidance and Workflow

8 Introduction – An overview of the Administrative Publication Part I including the intent, layout, format, and contents.

9 Administrative Publication Workflow and Processes – Identifies and describes the workflow and processes associated with the development of administrative publications.

10 Administrative Publications Proponent/Editor Interface Process (APPIP) – Provides an overview and introduction to the APPIP and manuals.

11 Proponent Authoring APPIP Workflow Process – This part provides an overview and introduction to the APPIP Proponent Version and manual.

12 USAPA Editor APPIP Workflow Process – This part provides an overview and introduction to the APPIP Editor Version and manuals.

Part II – Reference

13 Administrative Publication SGML Document Structure – An overview to the SGML document structures for administrative publications.

14Administrative Publication SGML Tag Description List – The Tag Description List for administrative publication SGML tags.

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9 ADMINISTRATIVE PUBLICATION WORKFLOW AND PROCESSES.

9.1 General Administrative Publication Development Process and Workflow. The workflow diagram in Figure 4 illustrates a typical administrative publication development cycle. The process shown is a composite of the efforts by the proponent author and the USAPA editor. The following paragraphs are a narrative description of the administrative publication development process and flow.

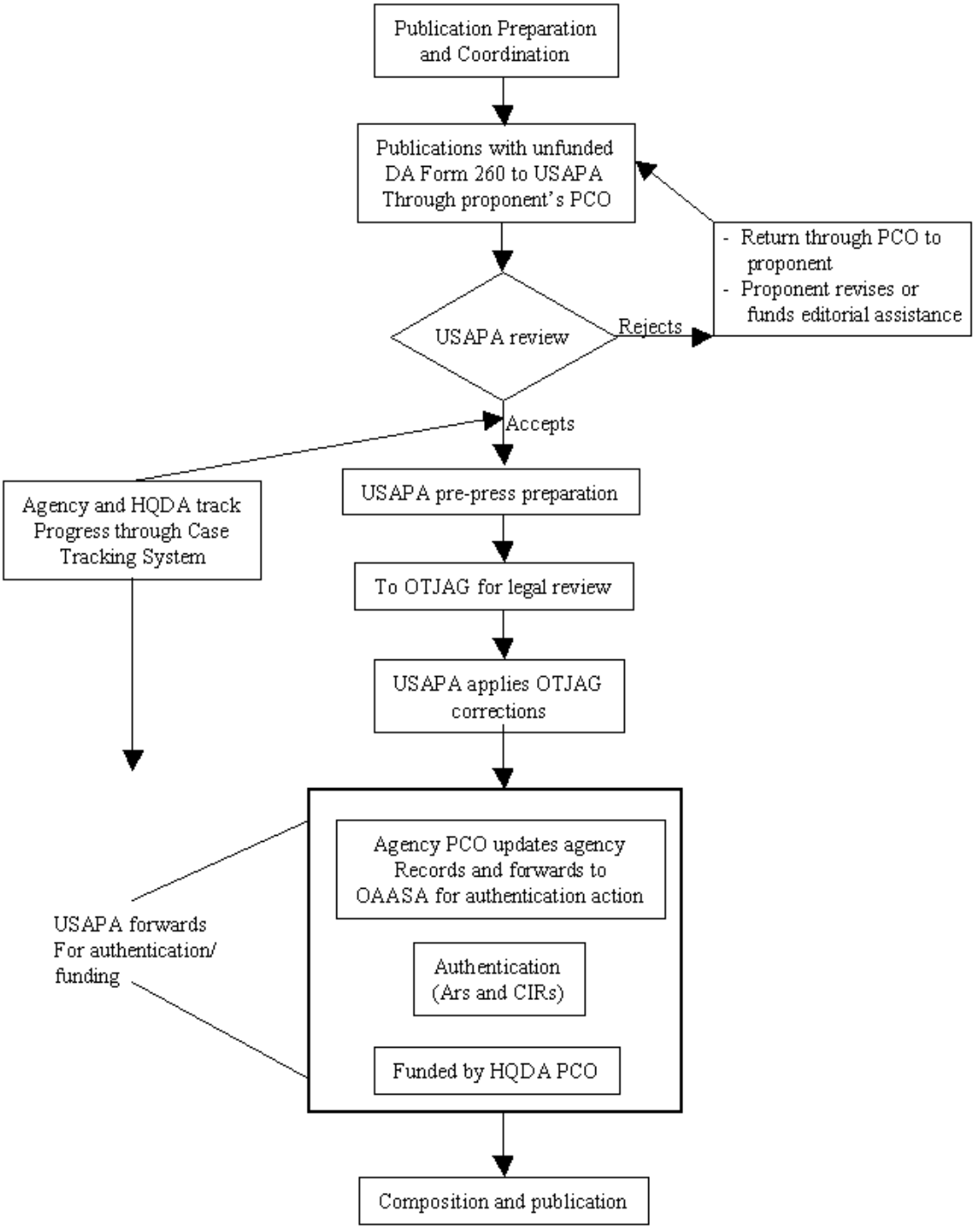

Figure 4 Typical Administrative Publication Development Cycle

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9.1.1 Proponent Author Role in Administrative Publication Development. The proponent author uses the USAPA-developed Administrative Publications Proponent/Editor Interface Process (APPIP) to develop administrative publications. The APPIP allows administrative publication proponent developers to develop their publications using standard Microsoft Word styles. Paragraph 11 provides a description and workflow on the APPIP Proponent Version. The Proponent Word Template Users Guide (obtained from the ASRL www.asrl.com) contains the detailed procedures and steps for using the APPIP Proponent Version.

9.1.1.1 Originating the document. The proponent author will either develop a new administrative publication, or modify an existing administrative publication, provided by USAPA. In either case, the author will use Microsoft Word with the integration of APPIP. The author will open Microsoft Word and follow the menus and prompts to enter the required information on the system screens. The APPIP will allow the author to create a new document (or modify an existing document) by applying the Microsoft Word styles. Once a publication segment has been completed, APPIP will verify that the publication segment conforms to the requirements contained in AR 25–30, The Army Publishing and Printing Program and DA PAM 25–40, Administrative Publications: Action Officers Guide.

9.1.2 USAPA Role in Administrative Publication Development. USAPA has the responsibility to review and publish administrative publications for the Army. As part of this responsibility, USAPA editors will apply SGML to the administrative publications. A detailed USAPA editor workflow is described in paragraph 12.

9.1.2.1 Review of Proponent Submitted Document. The first step, in the USAPA administrative publication development, is to review the document submitted by the proponent. USAPA performs a review of the submitted document, including graphics, to validate its completeness, correct the application of the Microsoft Word styles, and verify compliance with the Army quality assurance policy. Once the document review is complete, USAPA will assign the document to an editor for SGML document development.

9.1.2.2 USAPA Review and Pre-Press Preparation. Once the proponent author completes the creation or modification of the document, it will be forwarded to the USAPA editors for review, as described in DA PAM 25–40. The review will verify that the publication conforms to DA PAM 25–40 Section 3 and Appendix B checklist. If the publication does not meet the prerequisites, the publication is rejected and is returned to the proponent for clarification and/or correction. If the publication does meet the prescribed prerequisites, the USAPA editors will review and prepare the document for the Office of the Judge Advocate General (OTJAG) for legal review.

9.1.2.3 Office of the Judge Advocate General (OTJAG) Role in Administrative Publication Development. The Office of the Judge Advocate General (OTJAG) is responsible for conducting the legal review of the document. When the OTJAG determines the legal sufficiency of the document, it will be returned with corrections (incorporated by the USAPA editors).

9.1.2.4 Authentication. USAPA forwards the corrected and legally approved document through the Publication Control Officer (PCO) to the Office of the Administrative Assistant to the Secretary of the Army (OAASA) for review and authentication.

9.1.2.5 Composition. OAASA forwards the authenticated policy document back to USAPA for final composition and publication.

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10 ADMINISTRATIVE PUBLICATIONS PROPONENT/EDITOR INTERFACE PROCESS (APPIP).

10.1 Introduction. The Administrative Publications Proponent/Editor Interface Process (APPIP) is a user interface to provide a non-SGML application to develop and edit administrative publications. The properly formatted document will provide the necessary structures to automatically map to the administrative publication DTD and apply SGML tags. The APPIP was developed to provide a proponent version and USAPA editor version. This section provides an overview and introduction to the APPIP Proponent Version and the APPIP Editor Version.

10.2 APPIP Proponent Version. The APPIP Proponent Version provides administrative publication proponent developers a methodology for preparation of new, existing (APPIP formatted) and legacy (non-APPIP formatted) administrative publication documents using the styles available in Microsoft Word. The APPIP Proponent Version is based upon a series of Microsoft Word templates and Visual Basic for Applications (VBA) macros, which enable the proponent to create and modify documents without any SGML (Standard Generalized Markup Language) knowledge or experience. By using this tool, the proponents may create documents in a standardized fashion, thus allowing the editors at USAPA to easily review and apply SGML tags to these documents. The following paragraphs describe the APPIP Proponent Version components available.

10.2.1 APPIP Proponent Version Editor. The APPIP Proponent Version editor provides the proponent and USAPA editors an integrated Microsoft Word with Administrative Publication templates to provide a seamless application of SGML to a document. The following paragraphs describe the template styles, users guide content and editor methodology.

10.2.1.1 Microsoft Word Styles. Styles are custom formats (bolded text, underlined text, outline format, etc.) that a user creates or that are standard styles available in Microsoft Word. In Microsoft Word the styles appear in the left-hand side of your window (when view mode is Normal). The styles that are referred to in the Proponent Word Template Users Guide are user-created and are not in the standard Normal template. A special template has been designed that allows the author to apply styles either automatically when creating a new or modifying an existing (APPIP formatted) document, or manually when working with legacy (non-APPIP formatted) documents. Styles determine the formatting of the text and include special information for the system and USAPA editors.

10.2.1.2 Proponent Word Template Users Guide. The Proponent Word Template Users Guide (obtained from the ASRL at www.asrl.com) is divided into seven sections and four appendices:

a. **Introduction** – provides general layout and structure for the users guide.
b. **Overview** – provides the basics and how to start APPIP.
c. **Front Section** – describes the application (paragraph 10.2.1.3.1) of the following front section components:
    - Cover
    - Summary of Change
    - Preface
    - Foreword
    - Title Page
    - Table of Contents
    - List of Tables
    - List of Figures
d. **Body Section** – describes the application (paragraph 10.2.1.3.2) of the following body section paragraph outline.
e. **Tables, Text Tables and Figures** – describpes the application (paragraph 10.2.1.3.2.2, 10.2.1.3.2.3, and 10.2.1.3.2.4) of the following components:
    - Table
    - Text Table
    - Illustration
f. **Rear Section** – describes the application (paragraph 10.2.1.3.3) of the following rear section components:
    - Appendix A – References

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- General Appendices
- Glossary
- Index

g. **Style Toolbars** – describes the toolbar menus and icons used in the APPIP.
h. **Appendix A - Working With Front Narrative** – This appendix contains information regarding the applying the Micorsoft Word styles and occurence each style is permit.
i. **Appendix B - Special Characters, Symbols And Fractions** – This appendix contains the list of special characters, which are available to use.
j. **Appendix C - Enable Outline Numbering** – Microsoft Word Outline Numbering requires information to be entered after the automatic numbering. When no data is entered, Microsoft Word will automatically disable the Outline Numbering. This appendix provides the procedures and steps required to enable the Outline Numbering.
k. **Appendix D - Validation Errors** – describes in detail the error messages generated as a result of errors found during validation and possible methods to correct the errors.

10.2.1.3 Overview of the APPIP Proponent Version Editing Methodology. The APPIP Proponent Version allows administrative publication proponent developers to develop their publications using Microsoft Word styles. USAPA administrative publication editors can then apply SGML to the proponent-developed documents by using the APPIP Editor Version. The methodology contained in the Proponent Word Template Users Guide, combined with the USAPA-developed APPIP Editor Version, provides the Army the necessary tools to apply SGML to administrative publications with only minimal SGML knowledge and experience. These tools may be applied to newly created, existing (USAPA provided APPIP formatted) or legacy (non-APPIP formatted) documents.

10.2.1.3.1 Front Section. The Front Section of the Proponent Word Template Users Guide contains guidance for creating and editing documents. The user is instructed in the use of the menus and screens regarding required information, what to do if information is not available for a required entry, etc. Additionally, the section provides available screen and menu examples to the user.

10.2.1.3.2 Body Section. The Body Section of the Proponent Word Template Users Guide contains four basic templates: Outline, Table, Text Table, and Illustration and the ability to validate the styles. The templates will guide the author through each body template. Each template can be selected from the menu toolbar screen.

10.2.1.3.2.1 Outline Template. The Outline Template is used to guide the author through the body outline paragraph numbering and to enter applicable title and paragraph narrative. Using input screens and pull-down menus, the Outline Template allows the author to:

a. Automatically apply a document number.
b. Divide a document into individual pieces (parts, chapters, sections and paragraphs) (each piece can be authored individually).
c. Assign paragraph numbering.
d. Assign paragraph titles.
e. Assign paragraph text.

10.2.1.3.2.2 Table Template. The Table Template combines the Microsoft Word table editor with the required table label and title styles needed according to the USAPA requirements for the CALS table model. The Table Template is used to specify where the table will be located in the document body. Tables may be placed anywhere in the body section. The author will use the standard Microsoft Word table editor to create or modify rows, columns, merge cells, and enter table cell data.

10.2.1.3.2.3 Text Table Template. The Text Table template is used to create and enter a text table anywhere in the body section. The user is prompted by data entry screens for each prescribed text table components (i.e. entry heading, legend, etc.). A text table is another way to list information in columns and rows in a document. A text table shows data with the column headings running vertically down the page instead of horizontally across the page. The column headings are listed with each information group down the page. Text tables are used if the information is long and best suited to be listed in this format.

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10.2.1.3.2.4 Illustration Template. The Illustration template is used to create and enter a placeholder illustration with the illustration number and caption. The user is prompted by data entry screen for the illustration components. The illustrated digital files are inserted by USAPA editors for final review and publication.

10.2.1.3.3 Rear Section. The Rear section describes how to use the Microsoft Word predefined templates. The templates will assist the author in implementing the necessary styles for the administrative publication rear. The templates will guide the author through each of the rear section pieces. The templates are selected through the Rear menu option screen. The templates associated with the administrative publication rear are as follows:

- Appendix A (Reference)
- Appendix B-Z
- Glossary
- Index

10.2.1.3.3.1 Appendix A (References) Section. The Appendix A Section provides the author document and form references. The manual contains detailed procedures, examples and illustrations to guide the author through the steps of creating or modifying (APPIP formatted) Appendix A or applying styles to a legacy (non-APPIP formatted) Appendix A. The Appendix A contains four sections:

- Section I – Required Publications
- Section II – Related Publications
- Section III – Prescribed Forms
- Section IV – Referenced Forms

10.2.1.3.3.2 Appendix B-Z Section. The Appendix B-Z Section provides templates for the user to enter supplemental information about the document. The manual contains detailed procedures, examples, and illustrations to guide the author through the steps of creating or modifying (APPIP formatted) Appendix B-Z documents, or applying styles to a legacy (non-APPIP formatted) Appendix B-Z document. The document components are the same as described in Body Section paragraph 10.2.1.3.2. Procedures for validating the documents are also provided.

10.2.1.3.3.3 Glossary Section. The Glossary Section provides the author definitions of terminology. The manual contains detailed procedures, examples and illustrations to guide the author through the steps of creating or modifying (APPIP formatted) glossary or applying styles to a legacy (non-APPIP formatted) glossary. The glossary contains three sections:

- Section I – Abbreviations
- Section II – Terms
- Section III – Special Abbreviations and Terms

10.2.1.3.3.4 Index Section. The Index Section provides a keyword cross-reference to the associated paragraph number. The index for an administrative publication is entered manually by the author. The manual contains detailed procedures, examples and illustrations to guide the author through the steps of creating or modifying (APPIP formatted) index or applying styles to a legacy (non-APPIP formatted) index.

10.2.1.3.4 Validation. The APPIP Proponent Version includes a capability to validate that all Microsoft Word styles have been entered in the correct order by the proponent author. Only valid documents can be forwarded to USAPA for review and publishing. During and after each administrative publication piece has been entered, the author will execute the validation process for each piece. The style validation will verify that the titles, sections, paragraph outline numbering, tables and text tables follow the prescribed formatting rules stated in AR 25–30 and DA PAM 25–40. If any errors are encountered in the document, the system will present the errors to the author. The errors must be corrected by the proponent author and the validation process rerun until a valid document is produced.

10.2.2 APPIP Proponent Version Legacy Import. The APPIP Proponent Version legacy import provides the proponent and USAPA editors a tool that will apply the APPIP Word template styles automatically to a standard document load into Microsoft Word. The import does not always provide a 100% valid document

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after importing. Many factors will deteriorate the import recognition capability. The following paragraphs describes the legacy import consideration, users guide content and import methodology.

10.2.2.1 Legacy Import Consideration. The legacy import (conversion) is used to bring previously developed non-APPIP formatted documents into the APPIP process. As in any import, if the document does not conform to the rules provided, incomplete conversion and validation errors will occur. Before executing the legacy conversion, review the document with the prescribed conversion rules. Doing this cursory review can enhance the conversion process and reduce the validation errors.

10.2.2.2 Legacy to Word Conversion Users Guide. The Legacy to Word Conversion Users Guide (obtained from the ASRL at www.asrl.com) is divided into six sections:

a. **Introduction** – provides general layout and structure for the users guide.
b. **Overview** – provides an overview of the legacy conversion process.
c. **Invoking Legacy Conversion Process** – provides the steps to execute the legacy conversion.
d. **Front Section** – describes the requirements in the legacy document needed for best conversion results.
e. **Body Section** – describes the requirements in the legacy document needed for best conversion results.
f. **Rear Section** – describes the requirements in the legacy document needed for best conversion results for the following rear section components:
    - Appendix A – Reference
    - General Appendices
    - Glossary
    - Index

10.2.2.3 Overview of the APPIP Proponent Version Legacy Conversion Methodology. The APPIP Proponent Version allows administrative publication proponent and USAPA editors to convert legacy administrative publication document into an APPIP formatted document. An important step is to review the conversion rules for each publication section. If the document conforms to these rules, the conversion process can deliver a 100% valid document. The conversion rules details are contained in the Legacy to Word Conversion Users Guide and provide the necessary requirements for converting each administrative publication section. After conversion is performed on an administrative publication section, validation is necessary to check the correct application of the APPIP Word styles.

10.2.2.3.1 Error Correction Hints. Many errors can be corrected before conversion is started. Some of the most common errors are the following:

- Not having the required title paragraph(s) or correct titles in the front section.
- Not having two paragraphs for each level.
- Wrong paragraph level (i.e. sub-paragraph 1 numbering to sub-paragraph 3 numbering.
- After a main or zero paragraph the sub-paragraph 1 does not starts with “a.”.
- Mixing paragraph numbering (i.e. 1, 2, c, d).
- Not spelling the section heading correct in Appendix A or Glossary.
- Not having the correct number of sections in Appendix A (four sections) or Glossary (three sections).
- Missing the obtained, cited or prescribed reference in Appendix A Section I documents and Section III forms.

10.2.2.3.2 Correct Legacy or Convert Document. When errors occur after conversion, where should the corrections be performed? The errors can be corrected either in the legacy or the converted document depending on the severity and type of error. The following paragraphs provide cases to correct in the legacy and the converted document.

10.2.2.3.2.1 Case 1: Incorrect Sub-Paragraph 1 Number. When the first sub-paragraph 1 after each main paragraph does not start with “a.”, the corrective action is performed in the legacy document. The error causes the remaining sub-paragraphs not to be converted to the correct APPIP Word styles. After inserting the correcting sub-paragraph 1 number, then both the legacy conversion and validation must be re-run.

10.2.2.3.2.2 Case 2: Wrong Sub-Paragraph Level. When the sub-paragraph is indented to the wrong level (i.e. sub-paragraph 1 is followed by a sub-paragraph 3), the corrective action is performed in the converted

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document. The editor would highlight the incorrect sub-paragraph(s) (i.e. all sub-paragraph 3s after the sub-paragraph 1) and press the "Decrease Indent" icon on the tool bar. The sub-paragraph numbering and APPIP Word style will be modified to the previous sub-paragraph level.

10.2.2.3.2.3 Case 3: Wrong Appendix A or Glossary Section Title. After converting either Appendix A or Glossary and the error message "Section # Style Missing" is displayed, the corrective action should be performed in the legacy document. When the legacy document does have the incorrect Section number and/or Section title, the conversion does not recognize that a new section has been started. Refer to the corresponding legacy conversion rules for the correct section numbering and title information. After the corrections are made, both the legacy conversion and validation must be re-run.

10.2.2.3.2.4 Case 4: Missing Title Page Statement Titles. After converting the front section, the validation indicates required statements (i.e. styles) are missing. The corrective action depends on the number of missing style statements. The most common cause for the style missing error message is an incorrect statement title. Refer to the front rules for the prescribed statement title to be used. If only one or two styles are missing, the correct title and style can be applied in Word with APPIP styles. If more than two styles are missing, the incorrect titles should be corrected in the legacy document (see front conversion rules for the prescribed titles), then both the front conversion and validation must be re-run.

10.3 APPIP Editor Version. The APPIP Editor Version provides USAPA editors a methodology for preparation of new, existing (APPIP formatted) and legacy (non-APPIP formatted) administrative publication documents using the styles available in Microsoft Word. The APPIP Editor Version is based on a series of Microsoft Word templates, Visual Basic for Applications (VBA) macros, Visual Basic (VB), SGML parser, ArborText Epic Editor for SGML editing (part of the JCALS suite), Chrystal Astoria Data Management System, Document Style Semantics and Sheet Language (DSSSL) for proofing publications integrated into a seamless interface. These processes integrated will enable the editor to modify documents without any SGML (Standard Generalized Markup Language) knowledge or experience, import non-APPIP formatted and SGML formatted administrative publications, export to SGML, edit SGML documents and produce final proofing document. By using this tool, the editors have a tool that will reduce the labor intensive application of SGML tags and reduce the processing required to produce an administrative publication.

10.3.1 SGML Conversion Software. The APPIP Editor Version has many software facets associated to the process of applying SGML to administrative publication documents. The APPIP Editor Version has a user interface to guide the editors from reviewing the publication to applying SGML to providing final proofing publication. The SGML Conversion Software user interface provides a step-by-step flow from receiving the proponent administrative publication to final proofed publication. The interface provides the following functions (detail flow and description is provided in Section 12).

SGML Conversion	Transform the APPIP Word document to valid SGML
Preparation for Epic Editor	Validates the SGML document and prepares the SGML publication for Epic Editor
Epic Editor	Creates from the publication sections, a complete administrative publication to be finalized in Epic Editor (an SGML editor)
Proofing	Prepares the SGML administrative publication for publication proofing

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11 PROPONENT AUTHORING APPIP WORKFLOW PROCESS.

11.1 Authoring APPIP Workflow. The workflow diagram in Figure 5 illustrates a typical proponent author APPIP development workflow. The following paragraphs are a narrative description of the process and flow.

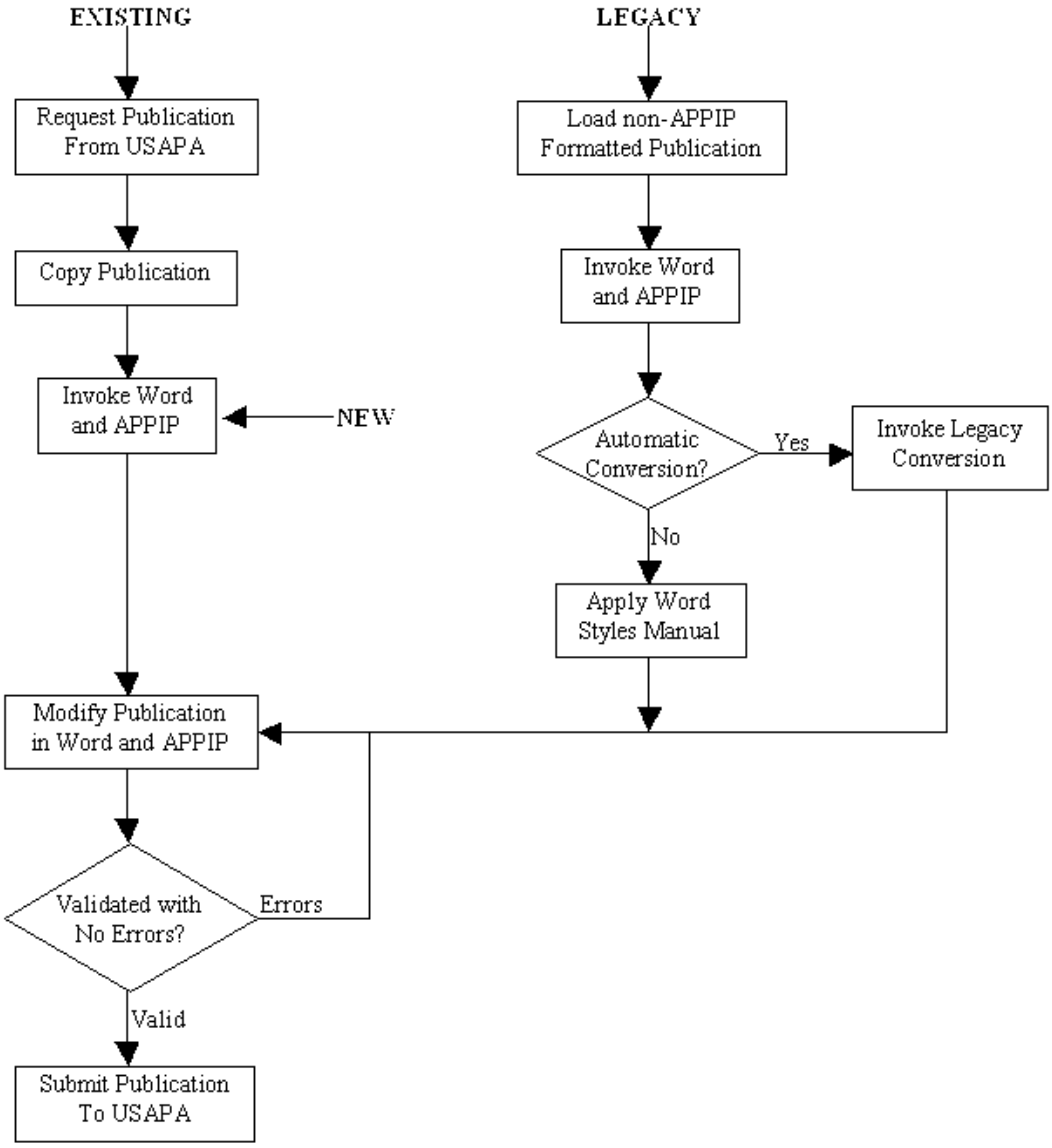

Figure 5 Typical Proponent Author APPIP Development Workflow

11.2 Administrative Publication Format. The proponent author has two possible administrative publication formats; new and existing APPIP formatted publication or legacy non-APPIP formatted publication. The following paragraphs will describe the different formatting characteristics.

11.2.1 New Publication. When a new administrative publication is required, the proponent author will create each publication segment through Microsoft Word using APPIP templates.

11.2.2 Existing Publication. An existing administrative publication is a file already containing APPIP styles. The author will obtain the existing publication from USAPA, which maintains the official source SGML

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publication. USAPA will provide the APPIP–formatted publication to the proponent author. The proponent will author new modifications to the existing publication through Microsoft Word with APPIP templates.

11.2.3 Legacy Publication. A legacy administrative publication is a file already created with a word processor. The proponent can download the APPIP Legacy Conversion User Guide (from the ASRL at www.asrl.com), which contains the series of procedures to convert the legacy publication into APPIP. The proponent will use the following paragraphs to convert legacy to an APPIP formatted publication.

11.2.3.1 Manual Review. The first process in the legacy conversion is to review the legacy publication. The proponent should perform a cursory review and correct the major formatting problems. Possible problem examples are incorrect paragraph number (using the wrong paragraph numbering), incorrect section titles (glossary, Appendix A), etc.

11.2.3.2 Automated Legacy Conversion. The APPIP provides a tool to convert non-APPIP formatted (legacy) publications to APPIP formatted publications. As with a conversion from any semi-structured document, the conversion is not always 100% correct. The legacy conversion process applies the APPIP styles to the publication correctly, if all the manuscript preparation rules from AR 25–30 and DA PAM 25–40 are followed.

11.2.3.3 Validate Legacy Conversion. After the legacy conversion process, the proponent will perform the APPIP validation on each publication segment. If no validation errors are found, the document is ready for modification. If validation errors are found, the errors must be corrected. The proponent will determine if the error corrections should be made in the legacy document or manual insertion. The proponent would manually insert the styles when there are minimum errors to correct. An example is if a sub-paragraph group is indented one paragraph level too far. The proponent would correct the error and revalidate the segment. The proponent would correct or reject the legacy publication if major formatting problems exist. After correcting the legacy publication, the publication would repeat the validation process and be ready for modification.

11.3 Administrative Publication Modification. The proponent can update or create a publication in APPIP and follow the series of procedures in APPIP Word Template User Guide. After modification or creation has been invoked by the proponent, each publication segment requires validation. The validation will confirm that the Microsoft Word styles are correctly structured and comply with AR 25–30 and DA PAM 25–40.

11.4 Submit Administrative Publication for Legal Review. APPIP provides a tool to automatically change from single space document to double spacing (proofing) document. Use standard Microsoft Word printing function for draft publication to provide for HQDA agencies, MACOMs and OTJAG.

11.5 Submit Publication to USAPA. After all HQDA agencies, MACOMs and OTJAGS corrections have been included and APPIP styles are validated, the publication is submitted to USAPA for editorial review, authentication, and publishing.

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12 USAPA EDITOR APPIP WORKFLOW PROCESS.

12.1 Editor APPIP Workflow. The workflow diagram in Figure 6 and Figure 7 illustrates a typical USAPA editor APPIP development workflow. The following paragraphs are a narrative description of the process and flow.

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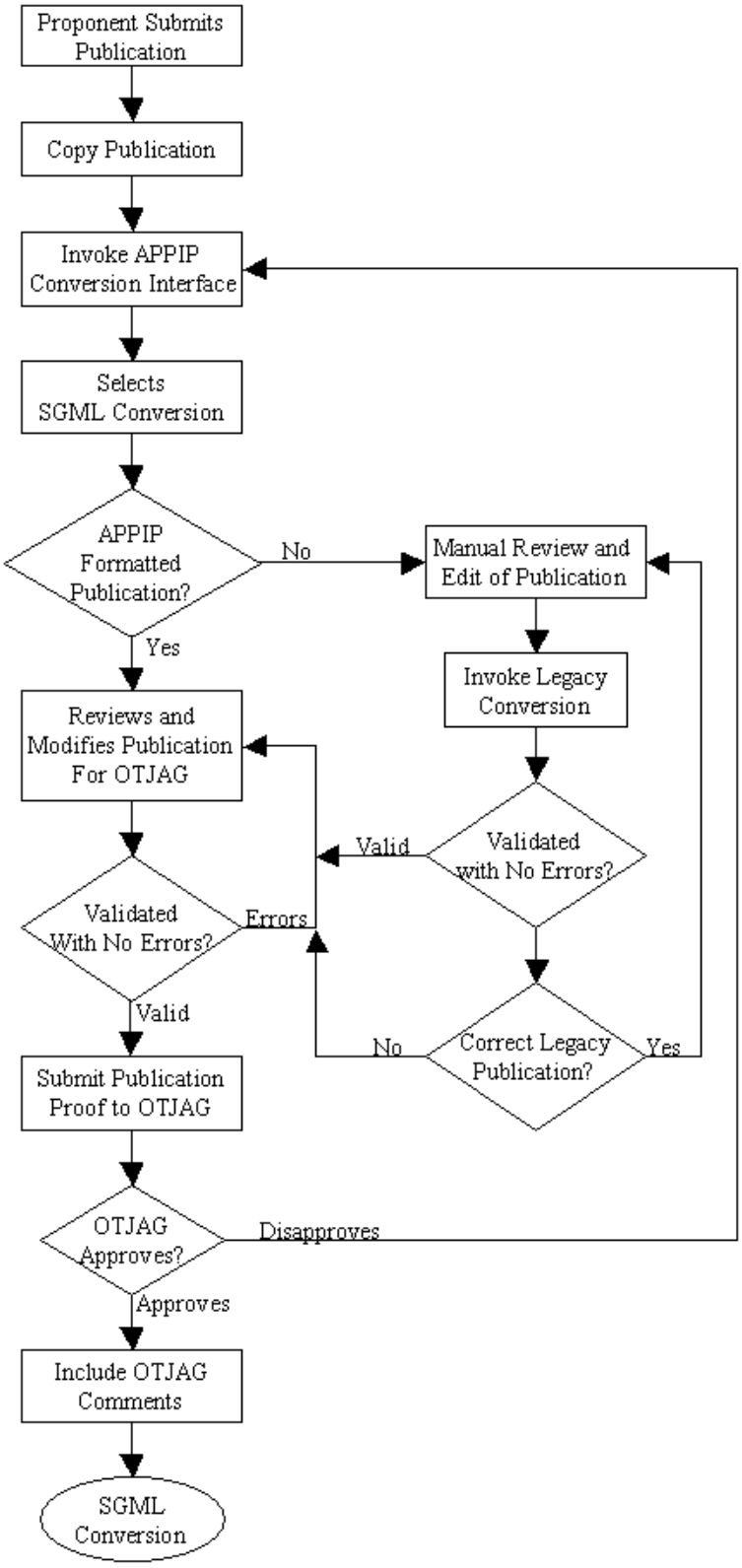

Figure 6 Typical USAPA Editor APPIP Development Workflow (Part 1)

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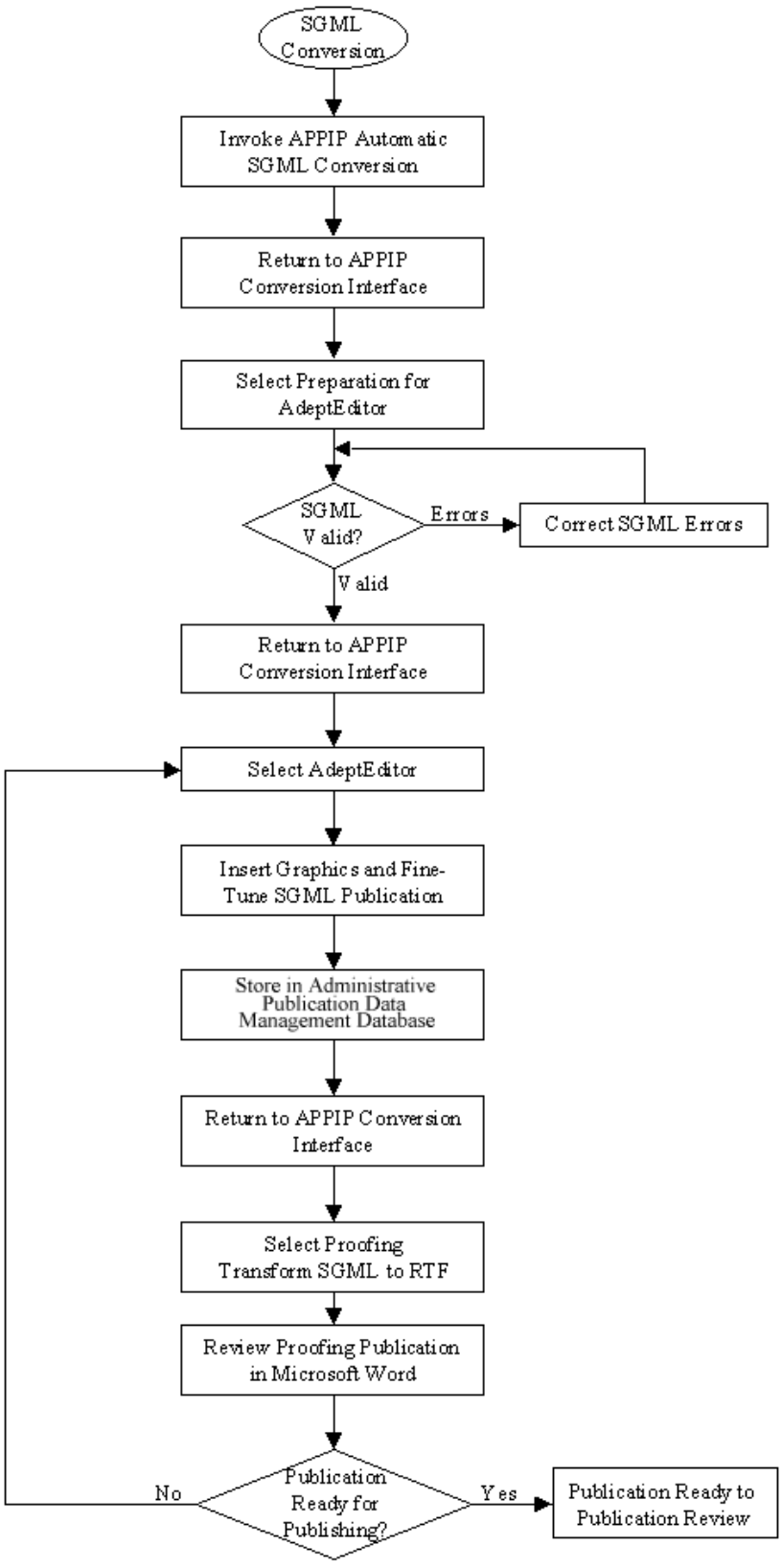

Figure 7 Typical USAPA Editor APPIP Development Workflow (Part 2)

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12.2 Administrative Publication Receipt from the Proponent. The proponent submits an electronic APPIP validated publication to USAPA. The editor will copy all of the APPIP components of the document into the appropriate directories in the APPIP Editor Version prescribed directory. The APPIP Conversion Interface Software User Guide (obtained from the ASRL, www.asrl.com, library) provides users detailed guidance on the use of the APPIP Conversion Interface Software. The APPIP Conversion Interface Software was designed to provide the USAPA Editors a graphical interface and a suite of tools to make the editing and publication process easier and more efficient. The system provides an interface to the following functionality:

- SGML Conversion – The option provides a link to the Microsoft Word templates and VBA macros to automatically SGML tag files in which the proponent authors have applied APPIP Microsoft Word styles. See paragraph 12.4 for process details.
- Preparation for Epic Editor – Validates the SGML document to ensure it adheres to the USAPA Document Type Definition (DTDs) and inserts the close or end tags as specified in the corresponding DTD. See paragraph 12.5 for process details.
- EpicEditor - An SGML editor that allows the USAPA editors to edit both content and SGML tags.
- Proofing – Prepares all of the SGML tagged sections of a document for composition proofing. After preparation, the SGML tagged document is converted into Rich Text Format (RTF) documents. The RTF is reviewed in Microsoft Word. See paragraph 12.5 for process details.

12.3 APPIP or Legacy Publication. During the transition to the APPIP process, the proponents will be submitting both APPIP and legacy (see paragraph 11.2.3 for legacy publication description) publications. The USAPA editor will determine from the styles if the document is in APPIP format. If the document is not formatted, the USAPA editor follows the typical legacy conversion as described in the following paragraphs.

12.3.1 Manual Review. The first process in the legacy conversion is to review the publication provided by the proponent. This review can determine if the publication has any major paragraph number problems (using the wrong paragraph numbering), incorrect section titles (glossary, Appendix A), etc. The editor will perform this cursory review and correct the major formatting problems.

12.3.2 Automated Legacy Conversion. The APPIP provides a tool to convert non-APPIP formatted (legacy) publications to APPIP formatted publications. The editor can obtain the APPIP Legacy Conversion User Guide (obtained from the ASRL www.asrl.com). As with any conversion from a semi-structured document, the conversion is not always 100% correct. The legacy process provides the majority of APPIP styles to narrative, if all the rules from AR 25–30 and DA PAM 25–40 are followed.

12.3.3 Validate Legacy Conversion. After the legacy conversion process, the editor will perform the APPIP validation on each publication segment. The APPIP process will not allow SGML tags to be applied until a publication segment is validated.

12.3.3.1 If no validation errors are found, the document is ready for preparation for OTJAG.

12.3.3.2 If validation errors are found, the document must be modified to correct the errors. The editor will determine if the error corrections should be made in the legacy document or manual insertion. The editor would manually insert the styles when there are minimum errors to correct. An example is if a sub-paragraph group is indented one paragraph level too far. The editor would correct the error and revalidate the segment. The editor would correct or reject the legacy publication if major formatting problems exist. After correcting the legacy publication, repeat the validation process and prepare the publication for OTJAG.

12.3.4 Preparation, Submittal and Approval for OTJAG. The editor will prepare the document for review by OTJAG. The editorial review includes grammatical review, content review, and typical editorial functions. After the editorial review, the editor will prepare the draft publication in double spaced format. The APPIP provides an option to automatically apply proofing spacing to the publication for OTJAG review. After preparation is completed, the editor submits the publication through the PCO for OTJAG comments and approval. After OTJAGS comments have been incorporated, the document is ready to have the SGML tags applied.

12.4 Using the SGML Conversion. The editor will select the SGML Conversion command from APPIP Conversion Interface menu. This invokes Microsoft Word with the integrated APPIP templates and VBA macros. The editor will open each administrative publication segment in Microsoft Word and the editor will

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use the Word to SGML command buttons, menus and prompt screens to convert the publication to SGML. The SGML to APPIP Conversion User Guide can be obtained from the ASRL www.asrl.com.

12.4.1 Validate Before Conversion. Before the SGML conversion will proceed with SGML conversion, the conversion routine will confirm the publication segment has followed the formatting rules. If validation errors are found, APPIP does not invoke the SGML conversion.

12.4.2 Applying SGML. When no validation errors are found during validation, APPIP will convert the APPIP styles to SGML tags with the appropriate attributes. The original APPIP format is not changed during the SGML conversion process. During the conversion process, the display screen will become very active applying the SGML tags to the publication. After the SGML conversion is completed for each segment, the publication is ready for Epic Editor preparation.

12.5 Epic Editor Preparation. When the editor is returned to the APPIP Conversion Interface Software, the Main Menu will be displayed. The editor will select the "Preparation for Epic Editor" command button. Prompts will appear for identification of the document type, document number and the applicable document segment. The editor will enter the appropriate information and invoke the "SGML Validation and Normalization" application. The validation application will determine that the document parses error-free, or identify any SGML errors in the document. When the document parses SGML error-free, the document is ready for Epic Editor editing. The application will return to the Main Menu.

12.6 Epic Editor. The editor will select the "Epic Editor" command button from the main menu, invoking the Epic Editor application. The editor may then make any changes to the document content and/or SGML tags (including inserting graphics) contained in the document. Once the changes have been made, the editor saves the document in Epic and exits the Epic Editor. The editor will be returned to the Main Menu.

12.7 Publication Database. The editor will maintain the publication in the USAPA administrative publications data management system (DMS). The DMS will maintain configuration control for each administrative publication version.

12.8 Composition Proofing. The editor will select the "Proofing" command button from the Main Menu. The "Proofing" command button invokes the DSSSL Script application. The DSSSL (Document Semantic and Style Sheet Language) script converts the document from SGML to RTF (Rich Text Format). The editor will perform the initial review of the RTF document. The document will then be sent to Quality Assurance for a complete SGML and RTF review. Any modifications required from the proofing will be corrected using the SGML editor, by selecting the "Epic Editor" command button.

12.9 Publish Document. Once all reviews have been completed and the document is authenticated and approved for publication, USAPA will publish the document.

12.10 Proponent Requests an Administrative Publication. When starting a revision the proponent will request from USAPA the electronic published document for modification. The Electronic Publishing System (EPS) maintains all documents in an SGML data management system (DMS). The APPIP provides an aid to convert the valid SGML document into a valid APPIP formatted document. The editor will select the SGML Conversion command from APPIP Conversion Interface menu. This invokes Microsoft Word with the integrated APPIP templates and VBA macros. The editor will open each administrative publication SGML segment in Microsoft Word. The editor selects the SGML to Word command buttons, menus and prompt screens to convert the SGML document to an APPIP formatted document. The APPIP to SGML Conversion User Guide is available from the ASRL www.asrl.com. If the proponent does not use the APPIP add-in, USAPA will provide the APPIP formatted administrative publication, APPIP program and the electronic APPIP Word Template User Guide. Otherwise, USAPA provides a validated APPIP formatted administrative publication to the proponent for revision.

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PART II
REFERENCE

13 ADMINISTRATIVE PUBLICATION SGML DOCUMENT STRUCTURE.

This section provides an outline of the Army Regulation (AR) Administrative Publications document structure with the associated SGML tags. The variance between the DA Pamphlet (PAM), Circular (CIR), Multi-service Army Regulation (MAR), and Multi-service Army Pamphlet (MAP) are noted in the document structure outline. This document structure outline is depicted in Figure 8 through Figure 20 on the proceeding pages.

Document Structure

The document structure is a component outline of the Administrative Publications documents.

Document (<doc>)

- Related document numbers (<RelDocNo>) **MPAM and MAR only**
- Front (<Front>)
  - ⇒Cover (<Cover>)
  - ⇒Summary of Change (<ChgSum>)
  - ⇒Preface (<Preface>) **AR, MAR, and PAM only**
  - ⇒Foreword (<Foreword>) **AR, MAR, and PAM only**
  - ⇒Title page (<TitlePg>)
  - ⇒Table of Contents (<Contents>)
  - ⇒List of Tables (<Tablist>)
  - ⇒List of Figures (<Figlist>)
- Body (<Body>)
  - ⇒Multiple parts (<Part>)
  - ⇒Multiple chapters (<Chapter>)
  - ⇒Multiple sections (<Section>)
  - ⇒Multiple paragraphs (<Para0>)
- Rear (<Rear>)
  - ⇒Appendix (<Append>)
  - ⇒Glossary (<Glossary>)
  - ⇒Index (<Index>)
  - ⇒Rforms (<Rforms>)

Figure 8 Administrative Publication DTD Structure 1 of 13

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A further breakdown of the elements contained in Front (<Front>). The element front is further subdivided into a cover, summary of change, preface or foreword, title page, table of contents, list of tables, and/or list of figures.

Cover (<Cover>)

- Security Statement (<Security>)
- Distribution Restriction Statement (<Restrict>)
- Text (<ParaText>)
- Destruction Statement (<Destruct>)
- Text (<ParaText>)
- Series Title (<SerTitle>)
- Subject Title (<DocTitle>)
- Issue Date (<IssDate>)
- Effective Date (<EffDate>) **AR and JAR only**
- Expiration Date (<ExpDate>) **CIR only**
- Supersession statement (<Supsess>)

Summary of Change (<ChgSum>)

- Text (<ParaText>)
  ⇒This text is a brief description of what is contained within the document
- Multiple Summary of Change Paragraph Entries (<SumPara1>)
- Multiple Summary of Change Sub-Paragraph Entries (<SumPara2>)

Preface (<Preface>)

- Graphic (<graphic>)
- Text (<ParaText>)

Forward (<Forward>)

- Graphic (<graphic>)
- Text (<ParaText>)

Figure 9 Administrative Publication DTD Structure 2 of 13

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Title Page (<TitlePg>)

- Signer (<Signer>)
- History (<History>)
- Statement (<Statment>)

⇒Summary (<Summ>)
✧Text (<ParaText>)
⇒Applicability (<Appl>)
✧Text (<ParaText>)
⇒Proponent and Exception Authority Statement (<ProExAth>)
✧Text (<ParaText>)
⇒Customizable Front Page Statement (<Special>)
✧Title (<Title>)
✧Text (<ParaText>)
⇒Army Management Control Process (<CtrlSys>)
✧Text (<ParaText>)
⇒Supplementation (<Suppl>) **AR and JAR only**
✧Text (<ParaText>)
⇒Interim Changes (<InterCh>)
✧Text (<ParaText>)
⇒Suggested Improvements (<SuggImpr>)
✧Text (<ParaText>)
⇒Committee Continuance Approval (<ComConAp>) **AR and JAR only**
✧Text (<ParaText>)
⇒Distribution (<Distrib>)
✧Text (<ParaText>)

Figure 10 Administrative Publication DTD Structure 3 of 13

Table of Contents (<Contents>)

The table of contents will be automatically generated by the system. Information regarding the table of contents will be entered through the use of attributes.

List of Tables (<TabList>)

The list of tables will be automatically generated by the system. Information regarding the list of tables will be entered through the use of attributes.

List of Figures (<FigList>)

The list of figures will be automatically generated by the system. Information regarding the list of figures will be entered through the use of attributes.

Figure 11 Administrative Publication DTD Structure 4 of 13

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A further breakdown of the elements contained in the Body (<Body>). The body of the document may be further subdivided into parts, chapters, sections, or paragraphs.

Part (<Part>)

Parts may be further subdivided into chapters, sections, or paragraphs.

- Title (<Title>)
- Text (<ParaText>)
- Multiple Chapters (<Chapter>)
- Multiple Sections (<Section>)
- Multiple Paragraphs (<Para0>)

Chapter (<Chapter>)

Chapters may be further subdivided into sections or paragraphs.

- Title (<Title>)
- Text (<ParaText>)
- Multiple Sections (<Section>)
- Multiple Paragraphs (<Para0>)

Section (<Section >)

Sections may be further subdivided into paragraphs.

- Title (<Title>)
- Text (<ParaText>)
- Multiple Paragraphs (<Para0>)

Paragraph (<Para0>)

Paragraphs may be further subdivided into sub-paragraph up to a fifth level of indentation.

- Title (<Title>)
- Text (<ParaText>)
- Sub-paragraph, first level (<SubPara1>)
- Title (<Title>), Text (<ParaText>), Sub-paragraph (<SubPara*>) (to the fifth level)

Figure 12 Administrative Publication DTD Structure 5 of 13

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A further breakdown of the elements contained in the Rear (<Rear>). The rear of the document may be further subdivided into appendices, a glossary, indices, and/or Rforms.

Appendix (<Append>)

- Title (<Title>)
- Text (<ParaText>)
- Multiple Sections (<Section>)
- Multiple List of Publications Section (<SectPub>)
  - ⇒Text (<ParaText>)
  - ⇒Document Reference (<SeePub>)
    - ✧Title (<Title>)
    - ✧Obtaining a cited publication or form (<Obtain>)
  - ⇒Multiple Paragraphs (<Para0>)

Glossary (<Glossary>)

- Text (<ParaText>)
- Abbreviations Section (<AbbrSect>)
  - ⇒Text (<ParaText>)
  - ⇒Multiple Paragraphs (<Para0>)
- Term Section (<TermSect>)
  - ⇒Text (<ParaText>)
  - ⇒Multiple Paragraphs (<Para0>)
- Special Abbreviations and Terms (<SpecSect>)
  - ⇒Text (<ParaText>)
  - ⇒Multiple Paragraphs (<Para0>)

Figure 13 Administrative Publication DTD Structure 6 of 13

Index (<Index>)

- Title (<Title>)
- Text (<ParaText>)
- Multiple Topics (<Topic>)
  - ⇒Entry in index (<Phrase>)
  - ⇒Multiple Paragraph Numbers (<ParaNum>)
  - ⇒Multiple Sub-topics (<SubTopic>)
    - ✧Entry in index (<Phrase>)
    - ✧Multiple Paragraph Numbers (<ParaNum>)

Reproducible Forms (<Rforms>)

- Graphics (<graphic>)

Figure 14 Administrative Publication DTD Structure 7 of 13

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Other Document Structures which may appear within Chapters (<Chapter>), Sections (<Section>), Paragraphs (<Para0>), Legends (<Legend>) and the Appendix (<Append>). These structures are also explicitly excluded from the Glossary (<Glossary>) and from within Text Tables (<TxtTable)>.

Table (<Table>)

- Title (<Title>)
- Table Groups (<tgroup>)
  - ⇒Column Specifications (<colspec>)
  - ⇒Span Specifications (<spanspec>)
  - ⇒Table Header (<thead>)
    - ✧Column specifications (<colspec>)
    - ✧Rows (<row>)
  - ⇒Table Footer (<tfoot>)
    - ✧Column specifications (<colspec>)
    - ✧Rows (<row>)
  - ⇒Table Body (<tbody>)
    - ✧Rows (<row>)
      - ➲Entry (<entry>)
      - ➲Entry Table (<entrytbl>) (Not implemented in ADEPT)
  - ⇒Multiple legends (<legend>)
  - ⇒Multiple table notes (<tabnote>)

Text Table (<TxtTable>)

- Title (<Title>)
- Multiple Text Table Definition (<TxtTabDf>)
- Multiple Entries (<Entry>)
- Multiple Legends (<Legend>)
- Multiple Text Table Notes (<TabNote>)

Figure 15 Administrative Publication DTD Structure 8 of 13

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Text Figure (<TxtFig>)

- Title (<Title>)
- Unstructured Free Text (<FreeText>)
- Body of Text Figure (<Struct>)

  ⇒Paragraphs within a Structured Figure (<StrPara>)
- Legend (<Legend>)
- Text Figure Notes (<TabNote>)

Figure (<Figure>)

- Title (<Title>)
- Graphic (<graphic>)
- Legend (<Legend>)
- Figure Notes (<TabNote>)

Figure 16 Administrative Publication DTD Structure 9 of 13

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Other markup that may be used within various areas of the document include:

Elements that may be entered anywhere within the document (<Doc> (unless specifically excluded) include:

- Insertion of vertical or horizontal spacing (<Spacing>)
- Change of indentation format (<Quad>)
- Insertion of a rule (<Rule>)
- Insertion of a specific indentation (<Indent>)
- Sets a type leader (<Leader>)
- Footnote (<FtNote>)
- Sets typeface (<Font>)
- Sets size of type (<FontSize>)
- List (<List>)
- Multiple items (<Item>)
- Controlled break in document (<Page>)
- Bold type (<Bold>)
- Italic type (<Italic>)
- Bold and italic type (<BoldItal>)
- Emphasized type requiring a narrow or condensed typeface (<Narrow>)
- Manual break in line of text (<Line>)

NOTE: Bold, Italic, BoldItal, and Narrow also may be entered within Change

NOTE: Recommend avoiding use of formatting information markup and allowing system to automatically format document.

Figure 17 Administrative Publication DTD Structure 10 of 13

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SuperScript (<SupScrpt>), SubScript (<SubScrpt>),
and Change (<Change>) may be entered within:

- Abbreviation or Acronym (<Abbr>)
- Abbreviation definition (<AbbrDef>)
- Special Abbreviations and Terms (<SpecTerm>)
- Definition of Special Abbreviations and Terms (<SpecDef>)
- Terms (<Term >)
- Definition of Terms (<TermDef>)
- Security (<Security>)
- Main Document Title (<DocTitle>)
- Series Title (<SerTitle>)
- Publishing History (<History>)
- Entry in Index (<Phrase>)
- Paragraph Number (<ParaNum>)
- SubScript (<SubScrpt>)
- SupScrpt (<SupScrpt>)

NOTE: <Change> may also be used within the element <address>

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SuperScript (<SupScrpt>), SubScript (<SubScrpt>),
Change (<Change>), See (<See>), See Publication (<SeePub>),
Footnote (<FtNote>), Footnote Reference (<FtNRef>),
Abbreviation Definition (<AbbrDef>), Term Definition (<TermDef>),
Special Definition (<SpecDef>), Equation (<Eqn>), Index (<Idx>),
MOS (<MOS>), CMF (<CMF>), Quote 1 (<Quote1>), Quote 2 <Quote2>,
Excerpt (<Excerpt>), Legend (<Legend>) may be entered within:

- Bold type (<Bold>)
- Italic type (<Italic>)
- Bold and Italic type (<BoldItal>)
- Change (<Change>)
- Excerpt (<Excerpt>)
- Font (<Font>)
- Size of Font (<FontSize>)
- Item (<Item>)
- Legend (<Legend>)
- Emphasized type requiring a narrow or condensed typeface (<Narrow>)
- Text (<ParaText>)
- Sets a double quote (<Quote1>)
- Sets a single quote (<Quote2>)
- Title (<Title>)
- Supression statement (<Supsess>)
- Footnote (<FtNote>)
- Note (<Note>)
- Document Reference (<SeePub>)
- Entry (<Entry>)
- Unstructured text figure (<FreeText>)
- Paragraph within a structured text figure (<StrPara>)

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The elements line (<Line>), row (<Row>), entry (<Entry>), and paragraph (<Para0) may be entered within:

- Bold type (<Bold>)
- Bold and italic type (<BoldItal>)
- Change (<Change>)

The element address (<Address>) may be entered within:

- Item (<Item>)
- Text (<ParaText>)
- Note (<Note>)
- Entry (<Entry>)
- Unstructured text figure (<FreeTxt>)
- Paragraph within a structured text figure (<StrPara>)

The element note (<Note>) may be entered within:

- Text (<ParaText>)

Figure 20 Administrative Publication DTD Structure 13 of 13

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14 ADMINISTRATIVE PUBLICATION SGML TAG DESCRIPTION LIST.

14.1 <***ABBR***>. Abbreviation or acronym

(#PCDATA) +(%mindata;)

Appears in ABBRDEF:

Marks the abbreviation or the acronym in text. The data marked up is part of the current element and appears between parentheses, for the first occurrence only. Thereafter, the abbreviation or acronym appears without parentheses and without the definition. An ABBR element may contain standard character text, or sub- or superscripts or CHANGE elements. No highlighting is used in the abbreviation section of the glossary.

Example: See ABBRDEF (para. 14.2).

14.2 <***ABBRDEF***>. Abbreviation definition

(#PCDATA, ABBR) +(%mindata;)

Appears in CHANGE, ENTRY, FTNOTE, NOTE, PARATEXT, SUPSESS, TITLE:

Marks the definition of an abbreviation or acronym in text. This tag will be used to generate ABBRSECT in GLOSSARY automatically, if required (see example below). The data marked up is part of the current element. The parentheses will be inserted automatically by the text formatter for the first occurrence only. An ABBRDEF element may contain standard character text, sub- or superscripts, or CHANGE elements preceding the ABBR element, which is required. No highlighting is used in the abbreviation section of the glossary.

Example:

the <ABBRDEF>Army regulation<ABBR>AR</ABBR>.

Formatted:

the Army regulation (AR).

The same information is automatically generated in ABBRSECT:

<PARA0><TITLE>AR<PARATEXT>Army regulation

Attributes:

print	CDATA #IMPLIED If the text is to appear in the abbreviations section differently than it does in the text, the attribute should be filled in with the desired text. Otherwise, the content of the element will be reproduced exactly. The blank space and parentheses will be inserted automatically by the text formatter.

Example:

the <ABBRDEF print="Army regulation">Army regulations<ABBR>AR</ABBR>.

Formatted:

the Army regulation (AR).

The same information is automatically generated in ABBRSECT:

<PARA0><TITLE>AR<PARATEXT>Army regulation

14.3 <***ABBRSECT***>. Abbreviations section (AR 25-30, para. 2-27c.)

(PARATEXT?, PARA0+)

Appears in GLOSSARY:

Marks the abbreviations section in the glossary. It may be empty or may contain PARATEXT, followed by any number (including zero) of one or more PARA0s. If there are no entries in any section of the glossary, the following text will be used, "This section contains no entries.". The title is generated by the text formatter and reads "Section I Abbreviations."

Attributes:

id	ID #IMPLIED Unique identifier for reference.
label	CDATA #IMPLIED Current labels for this element.

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generate	NUMBER "0" Generate the section if set to 1. Use the section "as is" if set to 0.
change	(add | delete) #IMPLIED Indicates if this element was added or deleted after the previous printing.

14.4 <***ADDRESS***>. Address

(%address;, COUNTRY?, PHONE?) +(CHANGE)

Appears in CHANGE, ENTRY, NOTE, PARATEXT:

An ADDRESS element may be used to block an address in any context and record the detailed internal structure of an address so it may be stored in the Army EPS database, A DSN/FTS/AUTOVON telephone number may be included. If an address in text is not to appear in block form, the ADDRESS element is not used. ADDRESS may occur as an ITEM in a LIST or as an ENTRY in a TABLE, wherever the requirement exists to show a blocked address.

Format:

The address elements (IDENT, STREET1, STREET2, and CITY) will each set a new line flush left; STATE and ZIP will not set new lines.

Example:

In the example, the text formatter must insert the required punctuation and space (such as the comma and space after "Philadelphia"). Use "–" between ZIP codes and within office symbols as shown below.

<SUBPARA1><PARATEXT>Send price challenges to– <ADDRESS><IDENT>Defense Personnel Support Center</IDENT> <STREET1>ATTN:DPSC-PMP 2800 South 20th Street<STREET1> <CITY>Philadelphia</CITY><STATE>PA</STATE><ZIP>19101<CHANGE TYPE="ADD">–8419</CHANGE></ZIP></ADDRESS></PARATEXT></SUBPARA1>

Note that the CHANGE element was required to show that the extended zip code had been added. The character used in a ZIP code or an office symbol is an en-dash, not a hyphen.

14.5 %ADDRESS;. Address DTD Entity.

The content replaces all references within this documentation as well as within the DTD.

"Ident, Street1, Street2?, Street3?, City, State, Zip"

NOTE: See individual elements for their explanations.

14.6 <***APPEND***>. Appendix (AR 25-30, para. 2-26.)

(TITLE, PARATEXT?, (((SECTION | SECTPUB), (SECTION | SECTPUB)+) | (PARA0, PARA0+))) +(%tabfig;)

Appears in REAR:

Marks appendixes, which are required to begin with a TITLE. The TITLE may, optionally, be followed by PARATEXT, which must be followed either by at least two sections (that is, SECTION or SECTPUB elements) or by at least two PARA0s. The appendixes are labeled with uppercase letters.

Inclusions permits the use of tables, text tables, and figures anywhere in APPEND.

Setting format=bound in DOC will instruct the text formatter to number pages consecutively throughout the entire publication: front, body, and rear. Chapters will run continuously. Setting format=loose will instruct the text formatter to start each chapter and each appendix on a new right hand page. Paragraphs, page numbers, figures, and tables will be numbered using 2-part Arabic numbers.

For bound format, the author will number paragraphs, figures, and tables consecutively throughout the publication, using Arabic numbers. For loose-leaf format, the author will number paragraphs, figures, and tables consecutively within each chapter or appendix using 2-part Arabic numbers.

Attributes:

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id	ID #IMPLIED Unique identifier for reference.
label	CDATA #IMPLIED Current label for this element.
change	(add | delete | resc) #IMPLIED Indicates if this element was added or deleted after the previous printing. The change attribute is not to be used in Appendix A, "References."

14.7 <***APPL***>. Applicability statement

(PARATEXT+)

Appears in STATMENT:

Marks the applicability statement on the TITLEPG. APPL must include one or more PARATEXT elements.

Format:

The title is generated by the text formatter and reads "Applicability.".

14.8 <***BODY***>. Document body

((PART, PART+) | (CHAPTER, CHAPTER+) | (SECTION, SECTION+) | (PARA0, PARA0+))

Appears in DOC:

Marks the body of the document. This element constitutes the core of the publication. It must consist of at least two PARTs, or at least two CHAPTERs, or at least two SECTIONs, or at least two PARA0s.

14.9 <***BOLD***>. Emphasized type requiring a bold typeface.

(#PCDATA) +(%pcdata;, LINE, ROW, ENTRY, PARA0)

BOLD is used to indicate a change in the typeface being used for emphasis.

This emphasis is not needed where structural use is indicated; for example, the user need not indicate a paragraph title as bold as this is automatically generated by the text formatter.

If several paragraphs or subparagraphs are to be bolded (or to have emphasis added), each paragraph or subparagraph unit should be marked for emphasis separately. Then, if one is deleted in a future change, the structure will not be deleted.

14.10 <***BOLDITAL***>. Emphasized type requiring a bold italic typeface.

(#PCDATA) +(%pcdata;, LINE, ROW, ENTRY, PARA0)

BOLDITAL is used to indicate a change in the typeface being used for emphasis.

14.11 <***CHANGE***>. Change in text

(#PCDATA) -(CHANGE) +(%pcdata;, %emphs;, LINE, ROW, ENTRY, PARA0)

Appears in DOCTITLE, ENTRY, FTNOTE, NOTE, PARANUM, PARATEXT, PHRASE, SEEPUB, SERTITLE, SUBSCRPT, SUPSCRPT, SUPSESS, TITLE, TXTTABDF, TXTTABLE

Marks changes in content. Surround the data to be removed with the CHANGE tags and set the attribute to "delete." Type the new data in a second CHANGE element and set the attribute to "add." This element highlights changes: appears as struck through; appears as underscored. Once the document is changed or revised again these changes are incorporated into the document and are no longer shown as strikethrough or underscore. Once the document is published, the changes are integrated by the text formatter and CHANGE tags disappear.

The CHANGE element must be closed with an end tag at the end of affected text or at the end of a PARA0 element, whichever comes first. If changed material includes complete SUBPARA or PARA0 elements, these should be marked with the CHANGE attribute of the element to invoke the "(Rescinded.)" routine (see those elements).

Change as described above is not allowed in standard tables, although it is used in text tables.

The change elements as described above are used when changes are being made to small portions of text (such as paragraphs, subparagraphs, words, phrases, text tables, figures, etc.). However,

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when large portions of a publication are being added or deleted (entire parts, sections, chapters, etc.), use the add or delete entities.

Attributes:

type	(add | delete | admin) #IMPLIED User must specify the type of change (insertion or deletion). CHANGE=ADD attribute will invoke underscoring of added data in the current printing. For database storage the change=add tag and all underscores will be deleted. CHANGE=DELETE attribute will invoke strikethroughs for all data being deleted. For the current printing all strikethroughs will be shown. For database storage all data marked for deletion and its tags will be deleted prior to storage. CHANGE=ADMIN attribute will indicate material to be changed without showing underscore or strikethrough. These are limited to spelling corrections and typographic errors. Substantial corrections to text should use the CHANGE=ADD and CHANGE=DELETE attributes.

14.12 <***CHAPTER***>. Document chapter (AR 25-30, para. 2-8.)

(TITLE, PARATEXT?, ((SECTION, SECTION+) | (PARA0, PARA0+))) +(%tabfig;)

Appears in BODY, PART:

Marks a chapter. The chapters are numbered consecutively with Arabic numerals throughout the publication. Chapters must begin with a TITLE, which may be followed by PARATEXT. At that point they are divided either into SECTIONs or PARA0s, but in either case, there must be at least two such elements in the CHAPTER.

Inclusions permits the use of tables, text tables, and figures anywhere within CHAPTER.

Attributes:

id	ID #IMPLIED Unique identifier for reference.
label	CDATA #IMPLIED Current label for this element.
change	(add | delete | resc) #IMPLIED Indicates if this element was added or deleted after the previous printing. Using this attribute would indicate the entire chapter unit was added or deleted. In order to add or delete an entire chapter unit, use the add entity or delete entity.

For MCM, chapters will run within the column. Chapter heads will be a bold leading and using all capitals. Chapter begins new page (odd or even) with spanner head.

14.13 <***CHGSUM***>. Summary of change

(PARATEXT, (SUMPARA1, (SUMPARA2, SUMPARA2+)?, (SUMPARA1, (SUMPARA2, SUMPARA2+)?)+)) -(CHANGE)

Appears in FRONT:

CHGSUM must be entered as new text each time by the proponent.

Format:

For standalone publications. Marks the mandatory summary of change page(s) that begin all documents. The main title is generated by the text formatter in bold italic type and reads "Summary of Change." The document number and DOCTITLE are automatically placed at the top of this page before the description of the changes. This element has the same structure as PARA0 except that no CHANGE elements are allowed. The first subdivision used is not numbered but bulleted, the other subdivision is indented and dashed. CHGSUM

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may consist of just PARATEXT or the PARATEXT may be followed by at least two SUMPARA1 elements. Each SUMPARA1 may be followed by at least two SUMPARA2s.
For handbooks. Marks the mandatory summary of change page(s) that begin all documents. Only one CHGSUM per handbook. The main title is generated by the text formatter in bold italic type and reads "Summary of Change." The first document number and DOCTITLE are automatically placed at the top of this page before the description of the changes. This element has the same structure as PARA0 except that no CHANGE elements are allowed. The first subdivision used is not numbered but bulleted; the other subdivision is indented and dashed. CHGSUM may consist of just PARATEXT or the PARATEXT maybe followed by at least two SUMPARA1 elements. Each SUMPARA1 may be followed by at least two SUMPARA2s. The second document number and DOCTITLE and any others will follow the same format starting two lines after the previous changes.
No highlighting will be used for change summary information. CHGSUM will always start on cover2. If only 2 pages, CHGSUM will continue on cover3 with a "continued" line. If 3 or more pages CHGSUM will run to following page, not to cover3, without a "continued" line. The text formatter will set DOCTITLE on the summary of change page on a line not to exceed 21 picas. Words will not be hyphened.

14.14 <***CITY***>. City element within Address
(#PCDATA)
Appears in ADDRESS:
Marks the city, town name, or base name within an ADDRESS element. CITY sets a new line of type. The text formatter must insert the
NOTE: Proponents will not use any punctuation with this element.

14.15 <***COMCONAP***>. Committee continuance approval.
(PARATEXT+)
Appears in STATMENT for ARs and joint Army regulations:
Marks the standard statement on Committee Continuance Approval. The title is generated by the text formatter and reads, "Committee Continuance Approval." The element must begin with one or more PARATEXT elements.
The "Committee Continuance Approval" is placed after the "Suggested improvements." statement in front matter. This is where the second occurrence of "SPECIAL" paragraphs is used. (The first placement of "SPECIAL" paragraphs occurs after "Applicability" in the front matter of AR and JAR only.)
Should a circular require a "Committee Continuance Approval" statement, place after the "Suggested improvements." paragraph using the element "SPECIAL."

14.16 <***CONTENTS***>. Table of contents (system generated)
EMPTY
Appears in FRONT:
Requests the automatic generation of a Table of Contents (TOC). TOC may, based on attributes, contain a preface, foreword, paragraph-titles, list of tables (to include text tables), list of figures, list of appendixes, glossary, and index.
Attributes:

toctype (t1 | t2 | t3) "t3"
By default ("t3"), the TOC will indicate both paragraph and page numbers set in 2 column format; "t1" indicates paragraph numbers only, set in 3 column format, and "t2" indicates page numbers only, set in 3 column format. The Army EPS standard will be that TOC will contain both paragraph and page numbers. Where TOCTYPE= t1, the text formatter will set the words "Contents (listed by paragraph number)." Where TOCTYPE=t2, the text formatter will set the words "Contents (listed by page

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number)." Where TOCTYPE=t3, the text formatter will set the words "Contents (listed by paragraph and page number). "

frtlevl (levl1 | levl2 | levl3 | noentry) "noentry"

By default, TOC will not list any of the parts of the FRONT matter. When levl1 is specified the preface will be listed; when levl2 is specified the foreword will be listed; when levl3 is specified both the preface and foreword will be listed.

body (PART | CHAPTER | SECTION | PARA0 | SUBPARA1 | SUBPARA2 | SUBPARA3) "PARA0"

By default, the TOC will show all the titles and numbers of the elements of BODY down to the PARA0 level. If the BODY attribute is set to SUBPARA1, the text formatter will respond to the title element; the TOC will show those SUBPARA1s that have titles, ignoring those that do not. SUBPARA2 and SUBPARA3 options are limited to MCM only.

rearlevl (L1 | L2 | L0) "L1"

By default ("L1"), the TOC will include REAR matter contents to the first or TITLE level only. That is, the title of an APPEND element will appear ("Appendix A. References" for example), but since GLOSSARY and INDEX contain no TITLE element, they will appear simply as "Glossary" and "Index." If the publication includes RFORMs, the TOC will show "Reproducible Forms." If the publication includes Management Control Review Checklists, the titles of each will appear separately as the last appendix(es) in the TOC. The value "L0" will mean that the TOC will include no entries for REAR matter. The value "L2" will generate headings to the SECTION or SECTPUB level.

14.17 <***COUNTRY***>. Element for name of country within ADDRESS

(#PCDATA)

Appears in ADDRESS:

Marks the name of any country within an ADDRESS element. Country sets a new line of type. Unless such usage would be ambiguous, COUNTRY may be left out of any ADDRESS where the country is the United States of America.

14.18 <***COVER***> for Army Regulations. Publication cover for Army regulations

(SECURITY, (RESTRICT, DESTRUCT)?, SERTITLE, DOCTITLE, ISSDATE, EFFDATE, SUPSESS?)

Appears in FRONT.

Marks the COVER elements. COVER must begin with SECURITY, then may be followed by RESTRICT and DESTRUCT, then must be followed by SERTITLE, DOCTITLE, ISSDATE, and EFFDATE, and may be followed by SUPSESS.

Attribute:

PIN NUMBER "999999999"

The publication identification number (PIN) appears only on the outside back cover (cover four) of a published document. Proponents of administrative publications should leave the number set at the default, and the actual value will be assigned during the production process by USAPA.

Format:

PIN number output format will be generated on cover 4 by the text formatter and will read "PIN 999999999" and will always appear in bold typeface with an en-dash. USAPA will correct the PIN number.

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ISSDATE is entered here because it will be used first on the cover. EFFDATE and SUPSESS are entered here because they are logically associated with ISSDATE, even though they will not be used by the text formatter until the title page.

NOTE: Because of the information the COVER element contains, COVER is required for all publications, to include those circulars that previously were printed without separate covers.

14.19 <***COVER***> for DA Circular. Publication cover for Army circulars

(SECURITY, (RESTRICT, DESTRUCT)?, SERTITLE, DOCTITLE, ISSDATE, EXPDATE, SUPSESS?)

Appears in FRONT.

Marks the COVER elements. COVER must begin with SECURITY, then may be followed by RESTRICT and DESTRUCT, then must be followed by SERTITLE, DOCTITLE, ISSDATE, and EXPDATE, and may be followed by SUPSESS. Circulars do not have an EFFDATE.

Attribute:

PIN NUMBER "999999999"

The publication identification number (PIN) appears only on the outside back cover (cover four) of a published document. Proponents of administrative publications should leave the number set at the default and the actual value will be assigned during the production process by USAPA.

Format:

PIN number output format will be generated on cover 4 by the text formatter and will read "PIN 999999999" and will always appear in bold typeface with an en-dash. USAPA will correct the PIN number.

ISSDATE is entered here because it will be used first on the cover. EXPDATE and SUPSESS are entered here because they are logically associated with ISSDATE, even though they will not be used by the text formatter until the title page.

NOTE: Because of the information the COVER element contains, COVER is required for all publications, to include those circulars that previously were printed without separate covers.

14.20 <***COVER***> for Multi-Service Army Regulation. Publication cover for multi-service Army regulations

(SECURITY, (RESTRICT, DESTRUCT)?, SERTITLE, DOCTITLE, ISSDATE, EFFDATE, SUPSESS?)

Appears in FRONT.

Marks the COVER elements. COVER must begin with SECURITY, then may be followed by RESTRICT and DESTRUCT, then must be followed by SERTITLE, DOCTITLE, ISSDATE, and EFFDATE, and may be followed by SUPSESS.

Attribute:

PIN NUMBER "999999999"

The publication identification number (PIN) appears only on the outside back cover (cover four) of a published document. Proponents of administrative publications should leave the number set at the default and the actual value will be assigned during the production process by USAPA.

Format:

PIN number output format will be generated on cover 4 by the text formatter and will read "PIN 999999999" and will always appear in bold typeface with an en-dash. USAPA will correct the PIN number.

ISSDATE is entered here because it will be used first on the cover. EFFDATE and SUPSESS are entered here because they are logically associated with ISSDATE, even though they will not be used by the text formatter until the title page.

NOTE: Because of the information the COVER element contains, COVER is required for all publications, to include those circulars that previously were printed without separate covers.

14.21 <***COVER***> for DA Pamphlet. Publication cover for Army pamphlets

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(SECURITY, (RESTRICT, DESTRUCT)?, SERTITLE, DOCTITLE, ISSDATE, SUPSESS?)
Appears in FRONT.

Marks the COVER elements. COVER must begin with SECURITY, then may be followed by RESTRICT and DESTRUCT, then must be followed by SERTITLE, DOCTITLE, and ISSDATE, and may be followed by SUPSESS.

Attribute:

PIN	NUMBER "999999999" The publication identification number (PIN) appears only on the outside back cover (cover four) of a published document. Proponents of administrative publications should leave the number set at the default and the actual value will be assigned during the production process by USAPA.

Format:

PIN number output format will be generated on cover 4 by the text formatter and will read "PIN-999999999" and will always appear in bold typeface with an en-dash. USAPA will correct the PIN number.

ISSDATE is entered here because it will be used first on the cover. SUPSESS is entered here because it is logically associated with ISSDATE, even though they will not be used by the text formatter until the title page.

NOTE: Because of the information the COVER element contains, COVER is required for all publications, to include those circulars that previously were printed without separate covers.

14.22 <***CTRLSYS***>. Internal control systems Army management control process
(PARATEXT+)
Appears in STATMENT:

NOTE: DA Pamphlets and Army circulars do not have CTRLSYS element.

Marks the standard statement for Internal Control Systems Army management control process used in ARs and JARs and CIR. CTRLSYS must include one or more PARATEXT elements.

Format:

The title is generated by the text formatter and reads "Internal control systems," "Army management control process." is bold.

14.23 %DATE;. Date DTD Entity.

The content replaces all references within this documentation as well as within the DTD.

day	NUMBER #REQUIRED
month	NUMBER #REQUIRED
year	NUMBER #REQUIRED

Format:

All dates in formatted output will always spell out the full month's name. No abbreviations are allowed.

14.24 <***DESTRUCT***>. Destruction statement (AR 25-30, para. 2-12)
(PARATEXT+)
Appears in COVER:

The destruction statement is mandatory whenever a "Distribution Restriction Statement" appears.

NOTE: When a RESTRICT (Distribution Restriction Statement) appears within a document, a DESTRUCT (Destruction Notice) is mandatory.

Format:

The title is generated by the text formatter and reads "Destruction Notice." These statements MUST appear on both the front cover and page "i" (title page) of each document where used. Cover data will be set in bold on a page one titles in bold and text . The text formatter will set the statements on the cover in a box.

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14.25 <***DISCUSS***>. Discussion

(#PCDATA) +(%pcdata;)

Appears in discussion or commentary in the text of the Manual For Courts-Martial (MCM).

Format:

The DISCUSS tag generates the word "Discussion" centered in bold. Closing the tag will generate a 1 point 6 pica rule centered.

14.26 <***DISTRIB***> for non-Multi-Service publications. Distribution. Indicates the level of distribution. (AR 25-30, para. 12-8 and 12-12)

(PARATEXT+)

Appears in STATMENT:

This tag is used in the Army regulation, Pamphlet and circular DTDs.Marks the distribution statement. DISTRIB must include one or more PARATEXT elements. In the case where the document requires a distribution restriction statement, it should be included by inserting a RESTRICT element and text.

For use of special distribution, see AR 25-30, paragraph 12.

Format:

The title is generated by the text formatter and reads "Distribution." in bold.

14.27 <***DISTRIB***> for Multi-Service publications. Distribution for multi-service publicatrion. Indicates the level of distribution. (AR 25-30, para. 2-12.)

((SERVICE?, PARATEXT+)+)

Appears in STATMENT:

This tag is used in the multi-service Army regulation and multi-service Pamphlet DTDs. Marks the distribution statement. DISTRIB must include one or more PARATEXT elements. In the case where the document requires a distribution restriction statement, it should be included by inserting a RESTRICT element and text.

Format:

The title is generated by the text formatter and reads "Distribution." in bold.

14.28 <***DOC***>. Department of the Army publication

(FRONT, BODY, REAR?) +(%print; | %emphs; | FTNOTE | FONT | FONTSIZE | LINE | LIST | PAGE)

Top-level element for the publication. Although a writer may choose to work on portions (or sub-documents) of a publication during creation, a complete document must begin with the DOC start tag, must include FRONT and BODY matter, and may include REAR matter.

Inclusions — allows for the use of print elements, EMPHASIS, FOOTNOTE, FONT, FONTSIZE, LINE, LIST, or PAGE BREAK at all documents levels.

Attributes

bleedtab	(yes | no) “no” If DOC bleedtab=yes, the text formatter will set bleedtab information on cover 4 for either a standalone or handbook publication in bold. Bleedtabs for a handbook will indicate books; those for a standalone publication will indicate subdivisions of the book. The maximum number of bleedtabs allowed is 24. For a maximum of 24 bleedtabs, size will be 20 points deep with 10-point spaces. For books with up to 12 tabs maximum, the tabs will be 36 points deep with 20-point spaces. For books with up to 19 tabs maximum, the tabs will be 26 points deep with 12-point spaces.
docno	CDATA #REQUIRED Army assigned publication or document number (e.g., "310-30"). Use a hyphen in this attribute rather than the en-dash entity.

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supsess

NUMBER "0"
Set to "1" if this document supersedes a previous version. Zero value indicates no supersession. If SUPSESS=1, the text formatter will insert an asterisk before RELDOCNO on the title page; the CHANGNO information should be reflected in both the SUPSESS element and in the HISTORY element.

doctype

AR DTD — (AR | AFR) "AR"
PAM DTD — (PAM | MCM | USNPLAD | USMCEB | SB | SC | TM | TB | FM | TC | ADSM) "PAM"
CIR DTD — (CIR | CTA) "CIR"
Multi-service AR DTD — (JAR) "JAR"
Multi-service PAM DTD — (JAP) "JAP"
Indicates the type of document. For example as above: Army regulation, Air Force regulation, DA pamphlet, Manual for Courts Martial, U. S. Navy Plain Language Address Directory, U. S. Military Communications-Electronics Board, joint Army pamphlet, Supply Bulletin, Supply Catalog, Technical Manual, Technical Bulletin, Field Manual, Training Circular, Automatic Data Systems Manual, circular, common table(s) of allowance, and joint Army regulation.
NOTE: The MCM document is formatted differently from the AR/PAM/CIR baseline.

booktype

(handbk | stalone) "stalone"
Indicates type of volume of publication, "stalone" for standalone, and "handbk" for handbook. Standalone publications are singular, and handbooks are composed of multiple publications that share a common GLOSSARY, INDEX, and RFORMS. In the database, the RFORMS are part of the files for the standalone publications that make up the handbook.

changeno

NUMBER #IMPLIED
The number represents the number of the current change.

hdbkordr

CDATA #IMPLIED
Handbook order. This number is the Army requisition publication number that will appear on the handbook front cover along with the issue number as follows:

RCPAC handbook would appear as "UPDATE 1-XX";
UNIT SUPPLY handbook is "UPDATE 2-XX";
MAINTENANCE MGMT handbook is "UPDATE 3-XX";
MWR handbook is "UPDATE 4-XX";
ALL RANKS handbook is "UPDATE 5-XX";
OFFICER RANKS handbook is "UPDATE 6-XX";
ENLISTED RANKS handbook is "UPDATE 7-XX";
FINANCE & ACCTG handbook is "UPDATE 8-XX";
MESSAGE ADDRESS handbook is "UPDATE 9-XX";
PHYSICAL SECURITY handbook is "UPDATE 10-XX";
EVALUATIONS handbook is "UPDATE 11 -XX";
MOCAS handbook is "UPDATE 12-XX."
The text formatter will replace the "XX" with the current handbook issue number (HDBKISNO) as stated below.

hdbkisno

NUMBER #IMPLIED
Handbook issue number. This number references the current issue.

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hdbkname CDATA #IMPLIED
Handbook name (e.g., Unit Supply, Maintenance Management, etc.).

hdbkseq NUMBER #IMPLIED
Handbook sequence number. This number represents the document's placement within the handbook, when the document is a part of a handbook.

status (new | con | revision | change | prelim | draft | formal) "formal"
Status of the document. The status allows proponents to track the development cycle of a publication. Proponents may show three stages of in-house development (prelim, draft, formal). Submission of a final production datafile to USAPA must indicate the production status (either: new, con, revision, or change). USAPA will ONLY ACCEPT publications coded in one of these four modes.
Status code definitions are as follows:

NEW — indicates final copy of a new publication never before printed.

CON — indicates consolidation of two or more previously printed publications.

REVISION — indicates a rewrite of a previously published publication.

CHANGE — indicates a modification of an existing publication.

PRELIM — indicates a writer's first draft.

DRAFT — indicates a draft for internal agency staffing or coordination.

FORMAL — indicates draft for external staffing or coordination.

For new handbooks and revisions, the status must be marked properly to generate the word "New." or "Revision." on cover4. The text formatter will first query changno to generate a change number for cover4. If no changno is indicated (null value), the text formatter will then look to the status attribute.

format (loose | bound) "bound"
Defines the output format for printing purposes and paragraph/page numbering (see AR 25-30, table 2-1).
Setting format=bound will instruct the text formatter to number pages consecutively throughout the entire publication: front, body, and rear. Chapters will run into one another. Setting format=loose will instruct the text formatter to start each chapter and each appendix on a new right-hand page. Paragraphs, page numbers, figures, and tables will be numbered using 2-part Arabic numbers. For bound format, the author will number paragraphs, figures, and tables consecutively throughout the publication using Arabic numbers. For loose-leaf format, the author will number paragraphs, figures, and tables consecutively within each chapter or appendix using 2-part Arabic numbers.

orgl NUTOKEN #IMPLIED
Overall reading grade level of the entire publication.

spine (y | n) "n"

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If DOC spine=yes, the text formatter will set PUBNO and DOCTITLE in line for a spine title in extra bold .

14.29 <***DOCTITLE***>. Main document title

(#PCDATA) +(%mindata;)

Appears in COVER, and is used in CHGSUM and TITLEPG:

Marks the main title of the document.

Format:

DOCTITLE appears on the COVER, breaking full words on a 17-pica line length; on the CHGSUM page, breaking on a 21-pica line length; on the TITLEPG, breaking on a 36-pica line length. The full page rule setting DOCTITLE off from the SIGNER, HISTORY, and STATMENT elements is automatically generated by the text formatter.

If DOC spine=yes, the text formatter will set PUBNO and DOCTITLE in line for a spine title. Highlighting (strikethrough, underscore, and tint) is not used in DOCTITLE.

14.30 <***EFFDATE***>. Effective date (AR 25-30, para. 2-68b.)

EMPTY

Appears in COVER for AR and JAR. (There is no EFFDATE in PAM or CIR)

Marks the effective date of the document that appears on the title page. The text formatter provides the word "Effective" in bold ("Effective for Army" in JAR). It has no content other than in its attributes. All date outputs will always spell out the full month's name; no abbreviations are allowed.

Attributes:

day	NUMBER #REQUIRED Day of the month (1 -31).
month	NUMBER #REQUIRED Month of the year (1- 12).
year	NUMBER #REQUIRED Year (4 digits).

Example:

<EFFDATE DAY="25" MONTH="12" YEAR= "1996">

(EFFDATE is entered at COVER because it is logically associated with ISSDATE, which is used by the text formatter at COVER. EFFDATE does not appear on cover 1, but is used first by the text formatter on the title page.)

NOTE: Using the Army EPS SGML Editor, DO NOT enter initial zeros for days or months having a value less than 10.

14.31 %EMPHS;. Entity Emphasis. Used in the DTD.

(BOLD | ITALIC | BOLDITAL | NARROW)

Appears anywhere in DOC:

Bold is for a bold font for the typeface being used. Italic is for an italic font for the typeface being used. BoldItal is for bold italic. Narrow is for a condensed font.

14.32 <***ENTRY***>. Table entry

(#PCDATA) +(%pcdata; | ADDRESS)

Appears in ROW and TXTTABLE:

Marks an entry in a table and may contain the basic set of elements or character text that appear in paragraph-like elements. All the entries should be input in the order they appear in the table from left to right, row by row. No entry should be typed in for blank entries; simply skip that column. All entry data "hangs" from the top of the entry.

Attributes:

colname	NMTOKEN #IMPLIED Indicates what column this entry belongs to. This attribute is either a single number, or two numbers separated by a if the

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entry spans over two or more columns. Horizontal spans should always be expressed with the lowest column number first.

namest NMTOKEN #IMPLIED
Specifies name of leftmost column of span; can be used in combination with "nameend" as an alternative to "spanname." Names are identified in colspec of the current <TGROUP>

nameend NMTOKEN #IMPLIED
Specifies name of rightmost column of span. Names are identified in colspec of the current <TGROUP>

spanname NMTOKEN #IMPLIED
Specifies name of a horizontal span defined through a spanspec element.

morerows NUMBER “0”
Specifies number of additional rows covered by a vertical straddle.

rotate NUMBER “0”
Content is either in the orientation of the table (value is one or more zeros) or 90 degrees counter clockwise to table orientation (value is other than zeros).

align (left | right | center | justify | char) ’center’
The horizontal alignment of content within theentry.

valign (top, middle, bottom) “top”
Vertical alignment of content within the entry.

char CDATA #IMPLIED
For align="char," the value is the single alignment character on which the first to occur of this character in the entry is aligned. Entries not containing this character are aligned to the left of this position.

charoff NUTOKEN #IMPLIED
For align="char," horizontal character offset is the percent of the current column width to the left of the (left edge of the) alignment character.

colsep NUMBER #IMPLIED
Default for all items in this entry. If other than zeros, display the internal column rulings to the right of each item; if only zeros, do not display it. Ignored for the last column, where the frame setting applies.

rowsep NUMBER #IMPLIED
Default for all items in this entry. If other than zeros, display the internal vertical row ruling below each item. If only zeros, do not display it. Ignored for the last row of the table, since overridden by the frame setting.

14.33 <***EQN***>. Equation
(#PCDATA)
Appears in CHANGE, ENTRY, FTNOTE, NOTE, PARATEXT, SUPSESS, TITLE, TXTTABDF:
Marks an equation or a formula in text, Until an international standard exists for coding equations, system dependent processing instructions will be used. These processing instructions must start and end with the "EQN" tag.

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All equations will be provided by the proponents in hard copy format and will be entered and coded by the vendor. Users MUST provide start and stop EQN tags to indicate placement of data.

Attribute:

eqnref	CDATA #REQUIRED Unique identifier for tracking equation paper copy with proper file placement. Proponent will key hardcopy to the corresponding electronic file; e.g., equation 1-1 would be the first equation in chapter 1.

14.34 <***EXCERPT***>. Excerpt

(#PCDATA) +(%pcdata;)

Marks an excerpt (or abstract) in text.

Format:

The text formatter will set an excerpt indented 1 em-space on both sides from the parent margin; thus, an excerpt within an excerpt would be indented an additional em-space on both sides (2 em-spaces on both sides from the original margin). Closing an excerpt returns to the parent margin.

14.35 <***EXPDATE***>. Expiration date

EMPTY

Appears in COVER of circulars only:

Marks the expiration date that appears on the title page of the circular.

Attributes:

day	NUMBER #REQUIRED Number entry for the day of the month (1 -31).
month	NUMBER #REQUIRED Number entry for the month of the year (1-12).
year	NUMBER #REQUIRED Number entry for the year (enter all four digits).

Format:

The text formatter provides the word "Expires" in bold before the EXPDATE. EXPDATE has no content other than in its attributes. All date outputs will always spell out the full month's name; no abbreviations are allowed.

Example:

<EXPDATE DAY="25" MONTH="12" YEAR="1996">

EXPDATE is entered at COVER because it is logically associated with ISSDATE, which is used by the text formatter at COVER. EXPDATE does not appear on COVER I, but it is used first by the text formatter on the title page.

14.36 <***FIGLIST***>. List of figures (generated)

EMPTY

Appears in FRONT:

Generates the automatic output of a list of figures. All FIGURE elements are included. All figures will be listed as part of the table of contents.

Format:

Where figures are marked RESCIND the number and title will remain in text followed by "(Rescinded.)" in bold italic. The number, title, and "(Rescinded.)" will appear in the FIGLIST, preserving the complete figure sequence of the original document.

14.37 <***FIGURE***>. Figure (AR 25-30, para. 2-31.)

(TITLE, GRAPHIC, LEGEND*, TABNOTE*)

Appears in CHAPTER, SECTION, APPEND:

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Marks a figure that is a line art illustration or that is a filled-in sample of a form. The figures are numbered as follows: in loose-leaf publications, figures will be numbered sequentially within a CHAPTER (or SECTION if no CHAPTER) in the form chapter#-figure# or section#-figure#, where figure# is an Arabic number. In an appendix use the form: appendix#-figure# (A-1, etc.). If there are no chapters or sections, follow the same format as shown for bound publications. In bound publications, number figures sequentially throughout the book including any appendixes (1, 2, 3, etc.). An end tag is required.

Attributes:

id	ID #IMPLIED Unique identifier for reference.
label	CDATA #IMPLIED Current label for this element.
orient	(port | land) "port" Specifies the orientation of the figure, either portrait or landscape (broad) mode. The default is portrait mode. **Note:** landscape mode is not supported by the present software for Postscript printing.
change	(add | delete | resc) #IMPLIED Indicates if element was added or deleted after the previous printing. If a figure is deleted the proponent will indicate, in bold, as a change=add, at point of reference in text, "Figure X - X has been rescinded" ; and reset the attribute to CHANGE=RESC to preserve the figure sequence in the table of contents.
linkref	CDATA #IMPLIED Allows the current figure to be linked to another FIGURE or to a TABLE so that if formatting causes one to be moved, the other will move with it. The proponent will indicate the figure or table to be linked (for example, "figure 1-2 and table 1-1 should appear together."). Proponents should indicate all linkref occurrences on the DA Form 260 or on a separate list attached to the DA Form 260. USAPA will transfer this information to the print order.
prtcol	(2|3) "2" Indicates the column where the legend or tabnote would print, if the figure is set one column wider than the graphic(graphic would always fall in the left column of two or the left two columns of three.)
width	(Page | 1col | 2col | 3col) "1col" Indicates the width of the figure in which graphic may appear. (For figures that were defined as 2col in a 3-column format (NO LONGER AVAILABLE), WIDTH=2col will set the figure 30 picas wide centered on the 44 pica page. (Top and bottom rules will also be set at 30 picas.) The 3col attribute will not be used. (Figures defined as 3col in 3-column format will be defined WIDTH=PAGE in 2-column format.))

Format:

Opening this element automatically will generate a $1\frac{1}{2}$ point rule. Closing this element will generate the bottom $1\frac{1}{2}$ point rule beneath the caption. If converted files contain hard rules, these should be deleted.

Figures that do not fit into the text flow will appear at the end of the appropriate chapter or appendix.

LEGEND and TABNOTE will be set in medium followed by a colon.

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NOTE: The width of GRAPHIC is defined under that element.

14.38 <***FONT***>. Sets the typeface
(#PCDATA) +(%pcdata;)
Appears anywhere in DOC.
Attribute:

fntname (TR | HL | RM | ET | ETR) "TR"
Defines the typeface to be used in the document. Choices are: Times Roman (TR) a serif style, Helvetia (HL) a sans-serif style, Remington (RM) a monospace typewriter style, Eterna (ET) a special sans-serif monospace style, or Eterna Reverse (ETR), a reverse (white on black box) type style. Default setting is "TR" or Times Roman.
FONT can be changed for an entire element, such as LIST, by opening FONT before the other element and closing FONT after the other element is closed.
Variations within a font (bold, italic, bold italic, narrow/condensed) may be set with the EMPHS entity.

14.39 <***FONTSIZE***>. Sets the size of type
(#PCDATA) +(%pcdata;)
Appears anywhere in DOC:
Attributes:

size NUMBER "09"
Defines the size of type to be used in the document. Choices range from 6 point to 60 points. The default setting is "09" or 9-point type (a standard for most text).

lead CDATA #IMPLIED
The lead attribute allows adjusting type leading when the fontsize is changed. The Army EPS standard for text is 9-point type on 10-point leading; for tables, 8-point on 9-point. The text formatter will set these default values automatically for standard structural elements. Where different values are required, these can be accommodated manually.

FONTSIZE can be changed for an entire element, such as LIST, by opening FONTSIZE before the other element and closing FONTSIZE after the other element is closed. An end tag is required.

14.40 <***FOREWORD***>. Publication foreword
(GRAPHIC | PARATEXT+) -(CHANGE)
Appears in FRONT:

The FOREWORD (if used) can either be a GRAPHIC (for example, signed letterhead) or typeset copy set on a 30-pica line by the text formatter on a new, unnumbered page.

Format:

The title "FOREWORD" will be generated by the text formatter in 14-point Times Roman bold. If the FOREWORD is typeset, SUBPARA1 will be indented 1-em; subpara2,2-ems.
If the FOREWORD is a scanned copy the BOARDNO is contained in GRAPHIC.

14.41 <***FRONT***> for Army Regulation. Document front matter for AR and multi-service AR
(COVER, CHGSUM, PREFACE?, FOREWORD?, TITLEPG, CONTENTS?, TABLIST?, FIGLIST?)
Appears in DOC for Army regulations and joint Army regulations and DA pamphlets:

Marks the front matter of the document. COVER and CHGSUM (summary of change) elements are mandatory. Preface and foreword are optional. TITLEPG element is required; tables of contents, list(s) of tables and illustrations (or figures) are generated automatically by the text formatter.

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14.42 <***FRONT***> for DA Circular. Document front matter for circulars
(COVER, CHGSUM, TITLEPG, CONTENTS?, TABLIST?, FIGLIST?)
Appears in DOC for circulars:

Marks the front matter of the document. COVER and CHGSUM (summary of change) elements are mandatory. TITLEPG element is required, tables of contents, list(s) of tables and illustrations (or figures) are generated automatically by the text formatter.

NOTE: The PREFACE and FOREWORD elements are not used in circulars.

14.43 <***FRONT***> for DA Pamphlet. Document front matter for pamphlet and multi-service pamphlet
(COVER, CHGSUM, PREFACE*, FOREWORD?, TITLEPG, CONTENTS?, TABLIST?, FIGLIST?)
Appears in DOC for DA pamphlets:

Marks the front matter of the document. COVER and CHGSUM (summary of change) elements are mandatory. Preface and foreword are optional. TITLEPG element is required; tables of contents, list(s) of tables and illustrations (or figures) are generated automatically by the text formatter.

NOTE: Multiple PREFACEs are allowed in PAM to accommodate Executive Orders found in Manual for Courts Martial (MCM).

14.44 <***FTNOTE***>. Footnote (AR 25-30, para. 2-25b.)
(#PCDATA) -(FTNOTE) +(%pcdata;)
Appears anywhere in DOC, TITLE:

Marks the text of a footnote and may contain the basic set of elements or character text that appear in paragraph-like elements. This note could be entered anywhere in the text but is not part of the text. The note will be placed at the bottom of the page on which this declaration appears in 7-point (2 points leading between notes). Footnotes will be set full-page width. At the point where the declaration appears, there will be a superscript number for all text footnotes. Tables will allow footnotes to appear as either a superscript number or a superscript letter. The option within tables will be set in TABDEF. The footnotes are numbered sequentially within the BODY or REAR with Arabic numerals, and are reset by CHAPTER or APPENDIX element. FTNOTE cannot appear inside FTNOTE, STATMENT, and SUPSESS. FTNOTE may appear in the TITLE of a table or TXTTABLE, or in a subhead of a TXTTABLE (see TXTTABDF para. 14.134), but not in the body of a TABLE or TXTTABLE, to include an ENTRY. FTNOTE may appear in the TITLE of a FIGURE but not elsewhere in a FIGURE. (For use of notes within the body of a TABLE or TXTTABLE, or in ENTRY, or in a FIGURE, see TABNOTE.)

Appears in TXTTABDF:

Marks the text of a footnote. This note could be declared anywhere in the text but is not part of the text. The note will be placed in the "Notes" section at the end of the table or figure. At the point where the declaration appears, there will be a superscript number or a superscript letter corresponding to the footnote number. The footnotes are numbered sequentially within the table or figure with Arabic numerals. FTNOTE cannot appear inside FTNOTE. FTNOTES may appear in a subhead of a TXTTABLE (see TXTTABDF para. 14.134), but not in the body of a TXTTABLE. (For use of notes within the body of a TXTTABLE, see TABNOTE para. 14.124.)

NOTE: FtNote Exclusion - FtNote cannot appear within FtNote.

Reference to a footnote:

This reference could occur in any of three ways. The reference could be automatic as when using FTNOTE in text. For a reference to a footnote already declared, the footnote number or letter will appear as a superscript or a number in parentheses when using FTNREF (see FTNREF para. 14.45 for details). SEE could also be used to refer to a footnote, in which case the standard mechanism is used (see SEE para. 14.89 for details)).

Footnotes pick up the superscript in text and the actual footnote number from the FTNOTE label. Footnotes attract strikethrough or underscoring of parent text. When parent text

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is deleted, "Rescinded." footnotes would have to be reinserted to preserve the numbering sequence in a change. Because footnotes are reset by chapter or appendix units, the use of FTNREF must be restricted to the same chapter or appendix in which the FTNOTE appears. Citations of footnotes in other chapters must be made as hard text entries.

TABNOTEs differ from true footnotes because they are internal to the table or figure in which they appear; they do not affect the sequence of the true footnotes, which apply to the whole document.

Attributes:

id — ID #IMPLIED
Unique identifier for reference (see FTNREF para. 14.45).

label — CDATA #IMPLIED
Current label for this element.

14.45 <***FTNREF***>. Reference to a footnote

EMPTY

Appears in CHANGE, ENTRY, FTNOTE, NOTE, PARATEXT, TITLE, TXTTABDF:

Marks a reference to a footnote already declared. The referenced footnote will be identified by its "id" attribute. For example, the second footnote is identified as <FTNOTE ID="XYZ">. The FTNREF in text might read "See footnote <FTNREF FTNOTE="XYZ">. The text formatter will number the footnote superscript 2, and the FTNREF will read "See footnote 2. "

Because footnotes are reset by chapter and appendix units, the use of FTNREF must be restricted to the same chapter or appendix in which the FTNOTE appears. Citations of footnotes in other chapters must be made as hard text entries. A FTNREF can be declared anywhere in a chapter or appendix unit; however, logically, it should not refer to a footnote not yet cited in text.

Attribute:

ftnote — IDREF #REQUIRED
Indicates the value of the "id" attribute of the referenced footnote.

14.46 <***GLOSSARY***>. Document glossary (AR 25-30, para. 2-27.)

(PARATEXT?, ABBRSECT, TERMSECT, SPECSECT) -(%tabfig;)

Appears in REAR:

Marks the document glossary, which will be set in 3-column format. The glossary will contain three sections: abbreviations (ABBRSECT), explanation of terms (TERMSECT), and a list of special abbreviations or terms for instance, those not listed in the PAM 310-50) used in the document (SPECSECT). GLOSSARY will contain ABBRSECT with the title "Abbreviations," a SECTION with the title "TERMSECT," and a SPECSECT section with the title "Special Abbreviations and Terms." These section titles will be generated by the text formatter in 9-point bold.

The PARA0 title in these sections will represent the term or abbreviation and PARATEXT will contain the explanation. Subparagraphs can also be used in the explanations. The PARA0s are not numbered, but sections and subparagraphs are. If there are no entries in any section of the glossary, the following text will be used, "This section contains no entries." to be set in 9-point Times Roman.

Attributes:

newpage — (YES | NO) "YES"
Default setting indicates the GLOSSARY will normally start on a new page. In the event a short (2-3 page) publication is produced, the default will be overridden to permit a continuous flow of data without page breaks. Where newpage=no, the INDEX will

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be set in 2-column format to match the GLOSSARY it follows separated by 30-point space.

14.47 <***GRAPHIC***>. Illustration, graphic, or form.
EMPTY
Appears in FIGURE, RFORMS:
Identifies a graphic, which is contained in an external entity.
Attributes:

BOARDNO	ENTITY #REQUIRED The name of the entity containing the graphic file.
graphsty	NMTOKEN #IMPLIED Provided to allow for cases where a "grphstyl" specified in a style sheet is to be used.
reprowid	NUTOKEN #IMPLIED Specifies the reproduction area width.
reprodep	NUTOKEN #IMPLIED Specifies the reproduction area depth.
coordend	NUTOKEN #IMPLIED Specifies the right upper coordinate pair, separated by a comma, of the end position in the repro area for placement of the portion of the graphic specified by llcordra and rucordra.
coordst	NUTOKEN #IMPLIED Specifies the left lower coordinate pair, separated by a comma, of a portion of the repro area. Start position for placement of the portion of the graphic specified by llcordra and rucordra.
rotation	NUMBER #IMPLIED Specifies the degree of rotation of the graphic.
llcordra	CDATA #IMPLIED Specifies the left lower coordinate pair of a portion of the graphic to be placed in the entire or a portion of the repro area; the pair is separated by a comma. Declared Value : Number Token
rucordra	Specifies the right upper coordinate pair of a portion of the graphic to be placed in the entire or a portion of the repro area, separated by a comma.
hplace	(left | right | center | none) #IMPLIED Specifies the horizontal placement in the available repro area.
vplace	(top | middle | bottom | non) #IMPLIED Specifies the vertical placement in the available repro area.
scalefit	NUMBER #IMPLIED Specifies that the graphic is to be scaled as needed to fit the size of the reproduction area.
hscale	NUTOKEN #IMPLIED Specifies the horizonital scaling factor for scaling the graphic; not used if "scalefit=non-zero."
vscale	NUTOKEN #IMPLIED Specifies the vertical scaling factor for scaling the graphic; not used if "scalefit=non-zero."

14.48 <***HISTORY***>. Publishing history.
(#PCDATA) +(%mindata;)
Appears in TITLEPG:

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Marks the required publishing history paragraph. (This copy previously appeared in the authentication block.)

NOTE: Reprints of pre-electronic publications may carry the following HISTORY statement. "This issue is a reprint of the original form of this publication that was published on (date). Since that time, no changes have been made to amend the original." The HISTORY statement for a publication with previously printed changes adding another change would read: "This regulation was originally printed on (date). Since that time, permanent change(s) (number(s)) have been issued. As of (ISSDATE) those change(s) remain in effect. This printing incorporates those changes into the text. This printing also publishes change (number). The portions being revised by this change are highlighted."

Immediate action interim changes (IOCs), when digitized, will carry the following publishing history statement. As of (ISSDATE) interim changes (number(s)) have been issued, which expire (date(s)). This printing does not incorporate those changes into the text."

Format:

The title is generated by the text formatter and reads "History." in bold.

14.49 ***<IDENT>***. Identifier element within ADDRESS.

(#PCDATA)

Appears in ADDRESS:

Marks the first line within an ADDRESS element.

Format:

IDENT sets a new line of type.

14.50 ***<IDX>***. Index entry.

EMPTY

Appears in CHANGE, ENTRY, FTNOTE, TITLE, PARATEXT, TOPIC, TXTTABDF:

Marks an index entry in text. This tag will be used to generate the INDEX if required. The IDX tag is empty. All information to generate IDX is contained in the attributes.

Attributes:

entry	CDATA #REQUIRED Indicates the text of the entry.
parent	CDATA #IMPLIED Indicates the parent entry of this entry.
xref	CDATA #IMPLIED Indicates a related entry.
blind	NUMBER "0" If set to "1," no paragraph reference will be shown for this entry. If the "IDX entry blind=1" the text formatter will generate "see" and the xref. If the entry is not blind (that is, has a page number), the text formatter will generate "see also" and the xref.

Example: The examples below show tagged entries and then formatted output as it would appear in the INDEX:

<IDX entry=”Regulation”>
Regulation, 1-2
<IDX entry=”Modification” parent=”Regulation”>
Regulation Modification, 1-3
<IDX entry=”Regulation”>
<IDX entry=”Modification” parent=”Regulation”>
Regulation, 1-2
Modification, 1-3
<IDX entry=”Regulation” xref=”Order” blind=”1”>
Regulation, see "Order"

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<IDX entry=”Regulation” xref=”Order”>
Regulation, 1-2, see also "Order"
<IDX entry=”Regulation” blind=”1”>
<IDX entry=”Modification” parent=Regulation” xref=”Change”>
Regulation Modification, 1-3, see also "Change"
It may be instructive to see the intermediate file that creates the INDEX. The example immediately above generates content for the TOPIC element in the INDEX as follows:
<PHRASE>Regulation <PARANUM><SUBTOPIC><PHRASE>Modification <PARANUM>1-3, see also "Change"
Xref attributes may be established only to entries that include a PARANUM, that is, not to a blind entry. A nonexistent entry cannot be referenced.

14.51 ***<INDEX>*** for Army Regulation and DA Circular. Index.

(TITLE?, PARATEXT?, TOPIC*)

Appears in REARfor AR, multi-service AR, circular:

Marks the document index, which will be set in 3-column format. INDEX can be generated, in which case the "generate" attribute should be set and all TOPICs in any existing INDEX (there may be none) will be replaced by new TOPICs generated from the IDXs found in the document. The TOPICs can be edited in an intermediate file produced by the text formatter in order to collapse multiple references to one TOPIC into one entry line. Proponents may use the QUOTE elements to set quotation marks in text. Alternatively, the character entities for opening and closing quotation marks can be used. In INDEX, only the character entities can be used. The QUOTE elements are not allowed in INDEX.

Attributes:

id	ID #IMPLIED Unique identifier for reference.
Label	CDATA #IMPLIED Current label for this element.
generate	NUMBER "0" The default is normally "0," which indicates the index will be manually generated. If the INDEX is not generated, the 5-point line space before alphabetic sections must be hard coded (manually inserted). Until this function is fully implemented, proponents must submit an index; the INDEX appears as optional in the content model for REAR in order to accommodate legacy publications that did not include an INDEX. If proponents provide IDX SGML tags to indicate index entries in the body of the text, set to | for automatic generation.
newpage	(YES | NO) "YES" Default setting indicates the INDEX will normally start on a new page. In the event a short (2-3 page) publication is produced, the default can be overridden to permit a continuous flow of data without page breaks. Where newpage=no, the INDEX will be set in 2-column format to match the GLOSSARY it follows separated by 30-point space.

NOTE: The INDEX will begin with the statement: "This index is organized alphabetically by topic and subtopics within a topic. Topics and subtopics are identified by paragraph and page number. Input for the index will follow Army document format as shown in DA Pam 310-20. The text formatter will indent subtopics 1-em; if the subtopic line wraps, the wrap will indent 2-ems. The text formatter will insert a 5-point vertical space between alphabetical breaks.

14.52 ***<INDEX>*** for DA Pamphlet. Index.

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((TITLE?, PARATEXT?, TOPIC*) | TABLE)

Appears in REAR for PAM and multi-service PAM:

Marks the document index, which will be set in 3-column format. INDEX can be generated, in which case the "generate" attribute should be set and all TOPICs in any existing INDEX (there may be none) will be replaced by new TOPICs generated from the IDXs found in the document. The TOPICs can be edited in an intermediate file produced by the text formatter in order to collapse multiple references to one TOPIC into one entry line. Where multiple indexes are present, the optional TITLE is used. For MCM, TABLE is allowed anywhere in INDEX.

Proponents may use the QUOTE elements to set quotation marks in text. Alternatively, the character entities for opening and closing quotation marks can be used. In INDEX, only the character entities can be used. The QUOTE elements are not allowed in INDEX.

Attributes:

id	ID #IMPLIED Unique identifier for reference.
Label	CDATA #IMPLIED Current label for this element.
generate	NUMBER "0" The default is normally "0," which indicates the index will be manually generated. If the INDEX is not generated, the 5-point line space before alphabetic sections must be hard coded (manually inserted). Until this function is fully implemented, proponents must submit an index; the INDEX appears as optional in the content model for REAR in order to accommodate legacy publications that did not include an INDEX. If proponents provide IDX SGML tags to indicate index entries in the body of the text, set to 1 for automatic generation.
newpage	(YES | NO) "YES" Default setting indicates the INDEX will normally start on a new page. In the event a short (2-3 page) publication is produced, the default can be overridden to permit a continuous flow of data without page breaks. Where newpage=no, the INDEX will be set in 2-column format to match the GLOSSARY it follows separated by 30-point space.

NOTE: The INDEX will begin with the statement: "This index is organized alphabetically by topic and subtopics within a topic. Topics and subtopics are identified by paragraph and page number. Input for the index will follow Army document format as shown in DA Pam 310-20. The text formatter will indent subtopics 1-em; if the subtopic line wraps, the wrap will indent 2-ems. The text formatter will insert a 5-point vertical space between alphabetical breaks.

14.53 ***<INTERCH>***. Interim changes

(PARATEXT+)

Appears in STATMENT:

Marks the interim changes statement. Content is entered by the proponent. No boilerplate entities.

In the rare instance where a DA pamphlet requires an interim change statement, a "SPECIAL" paragraph can be used.

Format:

The title is generated by the text formatter and reads "Interim changes." in bold.

14.54 ***<ISSDATE>***. Issue date (AR 25-30, para. 2-68a.)

EMPTY

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Appears in COVER:

Marks the date of issue of the publication and appears on the front cover and on the title page. All date outputs will ALWAYS spell out the full month's name; no abbreviations.

Attributes:

day	NUMBER #REQUIRED Number entry for day the month (1 -31).
month	NUMBER #REQUIRED Number entry for month of the year (1-12).
year	NUMBER #REQUIRED Number entry for year (4 digits).

Example:

<ISSDATE DAY="25" MONTH="12" YEAR="1986">

NOTE: Using the Army EPS SGML Editor, DO NOT enter initial zeros for days or months having a value less than 10.

14.55 ***<ITALIC>***. Emphasized type requiring an italic typeface

(#PCDATA) +(%pcdata;)

ITALIC is used to indicate an emphasis by slanting type in all supported fonts except Remington and Eterna.

14.56 ***<ITEM>***. One entry of a LIST

(#PCDATA) +(%pcdata; | ADDRESS)

Appears in LIST:

Marks a list entry. Depending on the LIST type, this entry may be within an ordered series, bulleted series, or a dashed series.

14.57 ***<LEADER>***. Print entity special function.

EMPTY

Appears in PRINT ENTITY:

Sets a type leader (usually used only by USAPA)

Attribute:

Type	(Dot | Space | Rule) "Dot" This command will enable dot leaders, space leaders, or rule leaders. Dot leaders, such as appear in the table of contents of some-publications, will be the default. Two rule (line) leaders can be used to draw equal rules on a line of type; for example, "word<LEADER TYPE="rule">word.<LEADER TYPE=”rule"> would set "word_____ word_____ with equal spaces. Proportional leaders can be used; for example, if twice as much rule is wanted between the first and second words on a line as between the second and third, "word<LEADER TYPE=”rule"><LEADER TYPE=”rule"> word.<LEADER TYPE=”rule">" would set "word _____ word_____ where the first rule would be twice as long as the second.

14.58 ***<LEGEND>***. Legend

(#PCDATA) -(LEGEND | FTNOTE) +(%pcdata; | %tabfig;)

Appears in CHANGE, EXCERPT, ITEM, LIST, PARATEXT, QUOTE1, QUOTE2, NOTE, TABLE, TXTTABLE, FIGURE

Marks a legend to a figure or table, listing and explaining the symbols used in the figure or table. The legend precedes any footnote section. The title is generated by the text formatter and reads "Legend:" to include the colon. If more than one LEGEND element appears, only the first will generate the title. For TABLE or TXTTABLE, the text formatter

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will generate the title, "Legend for Table (label number):". For FIGURE, the text formatter will generate the title, "Legend for Figure (label number):".

Exclusions - restricts the use of legend to one occurrence (legends cannot be nested) and bars the use of footnotes.

Inclusions - allows pcdata, tables, text tables, or figures.

Format:

A LEGEND element will automatically generate a half point rule separating the LEGEND from the body of the TABLE or TXTTABLE. In other context LEGEND will not generate a rule.

If the LEGEND appears in a sidebar; for example, instructions for filling out a form, it will be set 8 on 9-point. If it appears at the bottom of a TABLE, TXTTABLE, or FIGURE, it will be set 7 on 8-point medium (by the text formatter).

14.59 <***LINE***>. Manual break in a line of text

EMPTY

Appears anywhere in DOC.

Marks a new line. This is most useful in determining special application requirements, such as title breaks. This functions as a line break command.

14.60 <***LIST***>. List of data entries

(ITEM, ITEM+)

Appears anywhere in DOC:

Marks a list.

Attribute:

type	(ordered | bulleted | dashed) "ordered" Identifies the list as being ordered (such as numerical, alphabetical, or simply sequential (without numbering or lettering)), bulleted, or dashed. The default is "ordered." A list follows the parent typography.

14.61 %MINDATA;. DTD Entity. The content replaces all references within this documentation as well as within the DTD.

"SupScrpt | SubScrpt | Change "

NOTE: See individual elements for additional information.

14.62 <***NARROW***>. Emphasized type requiring a narrow or condensed typeface.

(#PCDATA) +(%pcdata;)

NARROW is used to indicate a typeface condensed in width by 20 percent. It can be either Roman, italic, bold, or bold italic.

14.63 <***NOTE***>. Note in text (AR 25-30, para. 2-25a.)

(#PCDATA) +(%pcdata; | ADDRESS)

Appears in PARATEXT:

Marks notes in text. These notes contain information that does not belong in the basic text and may contain the basic set of elements or character text that appears in paragraph-like elements. The head will be generated by the text formatter in italic, flush left with a line break, and will read "Note" with a period. If a NOTE interrupts paratext, an end tag is required.

The text formatter will resume text after a NOTE, flush left with a line break, unless the NOTE is followed directly by a PARA0 or SUBPARA.

Attribute:

change	(add | delete) #IMPLIED Indicates if this element was added or deleted after the previous printing.

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14.64 <***OBTAIN***>. Details on obtaining a cited publication or form.
(#PCDATA)
Appears in SEEPUB:
Marks instructions needed to obtain a cited publication or form. May include textual information as well as optional full ADDRESS details. See the examples in SEEPUB para. 14.90.

14.65 <***PAGE***>. A controlled break in a document
EMPTY
Appears anywhere in DOC:
Marks a break in the flow of text or other printed material. This is most useful in determining special application requirements, such as controlling white space, table placement, etc.

Attribute:

break	(Next, Odd, Even) "Next"

14.66 <***PARA0***>. Paragraph (AR 25-30, para. 2-8.)
(TITLE, ((PARATEXT, (SUBPARA1, SUBPARA1+)?) |(SUBPARA1, SUBPARA1+))) +(%tabfig;)
Appears in APPEND, BODY, CHAPTER, PART, SECTION:
Marks a primary paragraph. In loose-leaf format, PARA0s are numbered sequentially using 2-part Arabic numerals (for example, 1-3, where the first number represents the chapter and the second the numerical sequence of the paragraph within the chapter; or, in appendixes paragraphs are numbered sequentially as A-2, etc.). In bound format, PARA0s are numbered sequentially with Arabic numerals (for example, 1, 2, 3), unless the publication is divided into chapters, in which case numbering is the same as for the loose-leaf format. The paragraph count is reset by APPEND, CHAPTER (or SECTION if no CHAPTERs are used). For MCM, PARA0 heads are bold flush left, on 12-point with a 12-point space above. All text is 10/12-point Times Roman with normal Army EPS indentations.
Appears in ABBRSECT, GLOSSARY:
Marks a term or an abbreviation explanation. TITLE is the term or abbreviation and PARATEXT is the explanation.(See ABBRSECT para.14.3, GLOSSARY para. 14.46)
The TABFIG entity is allowed at PARA0 to permit the occurrence of tables and figures in publications that are organized by chapters.

Attributes:

id	ID #IMPLIED Unique identifier for reference.
label	CDATA #IMPLIED Current label for this element. Use a hyphen in this attribute rather than the en-dash entity; the text formatter will convert all hyphens to en-dashes.
change	(add | delete | resc) #IMPLIED indicates if this element was added or deleted after the previous printing.

14.67 <***PARANUM***>. Paragraph number in index
(#PCDATA) +(%mindata;)
Appears in SUBTOPIC, TOPIC:
Marks the location of an index reference in the document. A PARANUM element may contain standard character text, or sub- or superscripts or CHANGE elements.

Example:

<PHRASE>Order</PHRASE><PARANUM>1-5, see also "Rules"</PARANUM>

14.68 <***PARATEXT***>. Text
(#PCDATA) +(%pcdata; | ADDRESS | NOTE)

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Appears in ABBRSECT, APPEND, APPL, CHAPTER, CHGSUM, CTRLSYS, DESTRUCT, DISTRIB, GLOSSARY, INDEX, INTERCH, PART, RESTRICT, SECTION, SECTPUB, SPECIAL, SUGGIMPR, SUMM, SUPPL:

Marks a paragraph and may contain the basic set of elements or character text that appear in paragraph-like elements. NOTE elements, if they appear, must be at the end of the element. If a NOTE interrupts PARATEXT, an end-tag is required.

Appears in PARA0, SUBPARA1, SUBPARA2, SUBPARA3, SUBPARA4, SUBPARA5:

Marks a paragraph of text. If in PARA0 within an ABBRSECT or GLOSSARY, it marks the explanation of a term or abbreviation.

14.69 <***PART***>. Document part (AR 25-30, para. 2-8.)

(TITLE, PARATEXT?, ((CHAPTER, CHAPTER+) | (SECTION, SECTION+) | (PARA0, PARA0+)))

Appears in BODY:

Marks a document part. Parts are labeled with spelled-Out numbers. PARTs must begin with a TITLE, which may be followed by PARATEXT. At that point they must consist of at least two CHAPTERs or at least two SECTIONs or at least two PARA0s.

For MCM, PART begins a new odd page, with bleed tabs to cover 4. PART label for MCM is spelled out (for example, "PART TWO." PART numbers and titles will be 12-point bold centered on the page (spanning both columns), using 14-point leading and 12-point spacing between title and text.

Attributes:

id	ID #IMPLIED Unique identifier for references to this PART.
label	CDATA #IMPLIED Current label for this element; e.g., "One" or "Two."
change	(add | delete | resc) #IMPLIED Indicates if this element was added or deleted after the previous printing.

14.70 %PCDATA;. DTD Entity. The content replaces all references within this documentation as well as within the DTD.

"%mindata; | SEE | SEEPUB | FTNOTE | FTNREF | ABBRDEF | TERMDEF | SPECDEF | ABBR | EQN | IDX | QUOTE1 | QUOTE2 | EXCERPT | LEGEND"

NOTE: See individual elements for additional information.

14.71 %PCDATA;. DTD Entity. The content replaces all references within this documentation as well as within the PAM DTD.

"%mindata; | SEE | SEEPUB | FTNOTE | FTNREF | ABBRDEF | TERMDEF | SPECDEF | EQN | IDX | QUOTE1 | QUOTE2 | EXCERPT | DISCUSS | LEGEND"

NOTE: See individual elements for additional information.

DISCUSS is used in the PAM DTD only.

14.72 <***PHONE***>. Telephone number.

(#PCDATA)

Appears in ADDRESS:

Marks a DSN/FTS/AUTOVON telephone number in a structured address block following COUNTRY (if used).

Format:

PHONE sets a new line of type.

14.73 <***PHRASE***>. Entry in index

(#PCDATA) +(%mindata;)

Appears in SUBTOPIC, TOPIC:

Marks an entry in INDEX. A PHRASE element may contain standard character text, sub- or superscripts, or CHANGE elements.

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Example:

<PHRASE>Order</PHRASE><PARANUM> 1-5, see also "Rules"</PARANUM>

14.74 ***<PREFACE>***. Publication preface

(GRAPHIC | PARATEXT+) -(CHANGE)

Appears in FRONT:

The PREFACE (if used) can either be a GRAPHIC (for example, signed letterhead) or typeset copy set on a 30-pica line by the text formatter on a new, unnumbered odd page. Both will not be used together.

If the PREFACE is scanned copy the BOARDNO is contained in GRAPHIC.

MCM will allow multiple PREFACES, each starting a new odd page to carry the Executive Orders.

Format:

The title "PREFACE" will be generated by the text formatter in a 14-point Times Roman bold. If the PREFACE is typeset, SUBPARA1 will be indented 1-em; subpara2, 2-ems.

14.75 %PRINT;. Print control characters

"SPACING | QUAD | RULE | INDENT | LEADER"

Appears anywhere in DOC:

Allows use of printing commands for vertical and horizontal spacing, quadding, drawing rules, special indentations, and setting leaders.

NOTE: See individual elements for additional information.

14.76 ***<PROEXATH>***. Proponent and exception authority statement. (AR 25-30, Change 1, paras. 1 and 4-1.2.)

(PARATEXT+)

Appears in STATMENT of ARs, JARs, and CIRs.

This delegation of authority will appear on the title page of the publication directly before the "Army management control process" statement. This statement will be tailored to each individual policy publication. "PROEXATH" must begin with one or more PARATEXT elements.

Format:

The paragraph will be titled "Proponent and exception authority." in bold.

14.77 ***<QUOTE1>***. Sets a double quote

(#PCDATA) +(%pcdata;)

Marks a double quote, prints start (and end) quote marks in text. The end-tag is required. Can be nested three levels deep (USAPA) and must follow standard sequence: " ’ " " ’ ".

Proponents may use the QUOTE elements to set quotation marks in text. Alternatively, the character entities for opening and closing quotation marks can be used. In INDEX and TITLEs, only the character entities can be used. The QUOTE elements are NOT allowed in INDEX and TITLEs.

The following text is an example of a simple quote:

They said, "Army Pubs provides great service."

Would be coded as:

They said, <QUOTE1>Army Pubs provides great service.</QUOTE1>

14.78 ***<QUOTE2>***. Sets a single quote

(#PCDATA) +(%pcdata;)

Marks a single quote, prints start (and end) quote marks in text. The end-tag is required. It can be nested three levels deep (USAPA) and must follow standard sequence: " ’ " " ’ ".

Proponents may use the QUOTE elements to set quotation marks in text. Alternatively, the character entities for opening and closing quotation marks can be used. In INDEX and TITLEs, only the character entities can be used. The QUOTE elements are NOT allowed in INDEX and TITLEs.

The following text is an example of a consolidated quote:

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"He said, 'This is the "now" generation."'
Would be coded as:
<QUOTE1>He said, <QUOTE2>This is the <QUOTE1>now</QUOTE1> generation.</QUOTE2></QUOTE1>

14.79 <***REAR***>. Document rear matter
(APPEND*, GLOSSARY?, INDEX*, RFORMS?)
Appears in DOC:

Marks the rear matter of the document. It may contain any number (including zero) of APPENDixes, an optional GLOSSARY, an optional INDEX, and optional sets of reproducible forms.

NOTE: New publications must contain an appendix A, "References"; a glossary; and an index. The above content model allows for data that was converted from the old database. Multiple INDEXes are allowed to accommodate TRADOC catalogs, for example.

14.80 <***REAR***> for DA Circular. Document rear matter
(APPEND*, GLOSSARY?, INDEX?, RFORMS?)
Appears in DOC for CIR only:

Marks the rear matter of the document. It may contain any number (including zero) of APPENDixes, an optional GLOSSARY, an optional INDEX, and optional sets of reproducible forms.

NOTE: New publications must contain an Appendix A, "References"; a glossary; and an index. The above content model allows for data that was converted from the old database.

14.81 %REFATT;. DTD Entity. The content replaces all references within the DTD. %refatt; has been appropriately expanded for all DTD instances shown in this documentation.

"id ID #IMPLIED
label CDATA #IMPLIED"
id is a unique identifier for reference.
label is the current label for this element.

14.82 <***RELDOCNO***>. Related Document Number
EMPTY
Appears in DOC for joint Army pamphlets and regulations:

In a joint departmental publication, the DOC element must begin with at least one RELDOCNO element in which the other Service's document number for the current publication is indicated. The element has no content other than in its attributes. RELDOCNO elements will be entered following the executive agent in protocol sequence (Army, Marine Corps, Navy, Air Force, Coast Guard, Defense Logistics Agency).

Attributes:

docno	CDATA #REQUIRED Document number assigned by other Services or organizations involved with the joint departmental publication.
supsess	NUMBER "0" Set to "1" if this document supersedes a previous version. If SUPSESS=1, the text formatter will insert an asterisk before RELDOCNO on the title page; the CHANGNO information should be reflected in both the SUPSESS element and in the HISTORY element.
changno	NUMBER #REQUIRED Indicates the change number for that related document number.
docno	CDATA #REQUIRED Document number assigned by other Services or organizations involved with the joint departmental publication.

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deptblk CDATA #REQUIRED
Enables the "Departments of" block to be ordered and punctuated manually.

doctype CDATA #REQUIRED
Document type assigned by other Services or organizations involved with the joint departmental publication. The DOCTYPE should be spelled out and capitalized, as it will appear on both the COVER and the title page; e.g., "Marine Corps Order," "OPNAV Instruction," "SECNAV Instruction," "Air Force Regulation," "Coast Guard Regulation," "Defense Logistics Agency Regulation."

14.83 <***RESTRICT***>. Distribution restriction statement (AR 25-30, para. 2-11).
(PARATEXT +)
Appears in COVER:

Indicates the availability of the current document for release and dissemination. The title is generated by the text formatter and reads "Distribution Restriction Statement." RESTRICT must begin with one or more PARATEXT elements.

NOTE: When a RESTRICT appears within a document a DESTRUCT (Destruction Notice) is mandatory. The restriction statement is optional, but when used MUST appear on both the front cover and page one (title page) of the document.These statements MUST appear on both the front cover and page one (title page) of each document where used.

14.84 <***RFORMS***>. Reproducible forms (AR 25-30 pg.. 121)
(GRAPHIC+)
Appears ONLY in REAR:

Marks the part of the document that includes a copy of reproducible forms. Running footers including page numbers do not appear on RFORMS. (Running footers, including the page number and "R-Forms," appear on the back of the reproducible forms.

A filled-in RFORM used as an illustration in text will appear in FIGURE as a GRAPHIC.

14.85 <***ROW***>. Table row
(ENTRY+)
Appears in TBODY, THEAD:

Identifies the row information in a table group <TGROUP> of a table. Default values come from the table <TABLE>, table group <TGROUP>, column specification <COLSPEC>, or spanned columns specificatio <SPANSPEC> attlist values for like-named attributes.

Attributes:

rowsep NUMBER #IMPLIED
Default for all items in this column (within the enclosing group) of the table. If other than zeros, display the internal horizontal row ruling below each row. If only zeros, do not display it. Ignored for the last row of the table, where the frame specification determines the ruling.

14.86 <***SECTION***>. Document body section
(TITLE, PARATEXT?, (PARA0, PARA0+)) +(%tabfig;)
Appears in APPEND, BODY, CHAPTER, PART:

Marks a document section. SECTION must begin with a TITLE which may, optionally, be followed by PARATEXT, and must include at least two PARA0s.Sections are labeled with roman numerals; e.g., "I" or "II." The numbering is reset by APPEND, CHAPTER, or PART. Inclusions: permits tables, text tables, or figures to be used throughout SECTION.

Attributes:

id ID #IMPLIED
Unique identifier for reference (see SEE para. 14.89).

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label	CDATA #IMPLIED Current label for this element.
change	(add | delete | resc) #IMPLIED Indicates if this element was added or deleted after the previous printing.

14.87 ***<SECTPUB>***. List of publications section (Appendix A)
(PARATEXT?, SEEPUB*)
Appears in APPEND:

Marks Appendix A, "References," which contains both publications and forms. SECTPUB may begin with PARATEXT, may end with PARATEXT, and may contain any number of SEEPUB elements followed by a requiredl information on where to OBTAIN the referenced documents. SECTPUB can be generated by the text formatter, in which case the "generate" attribute should be set and all SEEPUBs in SECTPUB (there may be none) will be replaced by new SEEPUBs generated from the SEEPUBs found in the document. When the "generate" attribute is not set, the SEEPUBs can be edited and the OBTAIN elements added, along with additional text in PARATEXT elements. The title of each SECTPUB section is generated by the text formatter and depends on the attribute values. Note that separate SECTPUB elements are required to generate each of the types of publications and forms. ("Required Publications," "Related Publications," "Prescribed Forms," and "Referenced Forms."

Attributes:

id	ID #IMPLIED Unique identifier for reference (see SEE para. 14.89).
label	CDATA #IMPLIED Current label for this element.
doctype	(publicat | form) "publicat" Indicates if this section is a list of publications or forms.
status	(required | refer) "required" Indicates if this section is a list of publications that are referenced or required.
generate	NUMBER "0" Generate the section number if set to 1. Use the section as is if set to 0.
change	(add | delete) #IMPLIED Indicates if this element was added or deleted after the previous printing.

The following examples illustrate the prescribed titles as generated by the system depending on the value of the attribute(s):

<SECTPUB doctype=”publicat” status=”require”>
generates the title: Required Publications
<SECTPUB doctype=”publicat” status=”refer”>
generates the title: Related Publications
<SECTPUB doctype=”form” status=”require”>
generates the title: Prescribed Forms
<SECTPUB doctype=”form” status=”refer”>
generates the title: Referenced Forms

Where the appendix of references (Appendix A) is NOT generated, the user will provide all four prescribed titles as shown above. If any SECTPUB has no entries, paratext will read, "This section contains no entries."

14.88 ***<SECURITY>***. Security Statement
(#PCDATA) +(%mindata;)

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Appears in CHANGE, ENTRY, FTNOTE, FREETEXT, NOTE, PARATEXT, SUPSESS, TITLE, TXTTABDF: Appears in COVER:

Marks a SECURITY statement that is required to be printed on the cover1, title page, and cover4. Current database is limited to UNCLASSIFIED publications only. No classified material may be entered. Publications marked "FOR OFFICIAL USE ONLY" (not a classification) can be stored and processed. For an unclassified publication that is not FOUO, leave the tag empty and the text formatter will not reserve space for the element in output. For FOUO publications, enter #PCDATA "FOR OFFICIAL USE ONLY" in all capitals.

14.89 <***SEE***>. Element reference

EMPTY

Appears in CHANGE, ENTRY, FTNOTE, FREETEXT, NOTE, PARATEXT, SUPSESS, TITLE, TXTTABDF:

Marks a reference to another element in the same publication. This tag will be replaced by the label (or combination of labels) of the element referenced. It is the responsibility of the text composition system to store document labels in the form in which they will be needed by the SEE cross reference mechanism.

Appears in SEEPUB:

Marks a reference to another element in the publication referenced in SEEPUB. This tag will be replaced by the label (or combination of labels) of the element referenced.

Attributes:

element (Part | Chapter | Section | Para0 | SubPara1 | SubPara2 | SubPara3 | SubPara4 | SubPara5 | Table | TxtTable | Figure | FtNote | Legend | Append | SectPub | AbbrSect | TermSect | SpecSect) #REQUIRED
Indicates what kind of element is referenced. (Designers of the formatting application may choose to keep the unique identifiers for each type of element in separate lists; this allows them to do less checking for the uniqueness of the attributes.)

idref IDREF #IMPLIED
Indicates the value of the "id" attribute of the referenced element.

info (label | pagenum | title) "label"
Indicates what kind of information should be retrieved. "label" retrieves the value of the "label" attribute of the element referenced. "pagenum" retrieves the page number of the referenced element. "title" retrieves the title of the element referenced (if available).

display (short | long) "short"
When the label is requested, "short" will retrieve just the information in the "label" attribute of the element referenced. "long" will provide a more complete label.

label CDATA #IMPLIED
Indicates the character-data value of this attribute is generated by the text formatter. See the above general tag explanation.

Given the following input at some place in the document:
<PARA0 id=”xyz” label=”1-2”><TITLE>Army Regulations. <SUBPARA1 label=”a”><PARA-TEXT>This is a sample of paratext. <SUBPARA1 id=”xxx” label=”b”><PARATEXT>This also is paratext.
The following references would generate the output text shown:
in paragraph <SEE element=”para0” idref=”xyz”>.
in paragraph 1-2.
paragraph <SEE element=”para0” idref=”xyz” info=”title”>
paragraph "Army Regulations".

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paragraph <SEE element=”subpara1” idref=”xxx”>.
paragraph b.
paragraph <SEE element=”subpara1” idref=”xxx” display=”long”>.
paragraph 1-2b.
Where references are to FIGURE elements, numbering is taken from the label of the element.

14.90 <***SEEPUB***>. Document reference
(TITLE, OBTAIN?) +(%pcdata;)
Appears in CHANGE, ENTRY, FTNOTE, NOTE, PARATEXT, SUPSESS, TITLE, TXTTABDF:
Marks a reference to another publication. This tag will be used to generate contents for SECTPUB in APPEND automatically, if required (see example below). The data marked up (with the exception of TITLE if it is used) is part of the current element. (The contents of TITLE are carried forward for use in SECTPUB.) The "docref ’attribute (after verification) is the first information to be included in the text, followed by the data inside SEEPUB. TITLE appears only when the information is reused in SECTPUB. This element was NOT implemented for database conversion or for generating SECTPUB in APPEND.

Appears in SECTPUB:
Marks the declaration of a publication that was referenced in the text. This is a copy of the reference in a consolidated list form. If TITLE is omitted, it will be found by the application using the "docref" attribute. This SEEPUB will also create the reference to citations of the SEEPUB in the current document before the TITLE.

Attributes:

doctype	(publicat | form | other) "publicat" Indicates what kind of document is referenced. If "other" is chosen, it refers to another type of document such as videotape. (See attribute "infother").
docref	CDATA #REQUIRED Indicates the number of the document referenced. Use a hyphen in this attribute rather than the en-dash entity.
status	(required | refer) #IMPLIED Indicates if the referenced document is required for or related to the current publication.
infother	CDATA #IMPLIED If "other" is chosen for the attribute "doctype" this attribute will give more information about the document referenced.

Example:
in <SEEPUB DOCTYPE="PUBLICAT" DOCREF="AR 25-30" STATUS="REFER">, paragraph <SEE ELEMENT="PARA0" IDREF="XYZ"></SEEPUB>
will be shown in text as:
in AR 25-30, paragraph 1-2.

14.91 <***SERTITLE***>. Series title (AR 25-30, table 2-4.)
(#PCDATA) +(%mindata;)
Appears in COVER and is used by the text formatter on the title page:
Marks the information that appears both on the front cover and page one (before DOCTITLE). Identifies the publication’s assigned series code and title.

14.92 <***SERVICE***>. Service or Organization
(#PCDATA)
Appears in DISTRIB for joint Army regulations:

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Indicates the name of an organization within the DOD (or DOT for USCG) that has specific distribution requirements for the current joint departmental publication. After the executive agent, the Services will be listed in protocol sequence (see RELDOCNO para. 14.82).

14.93 <***SIGNER***>. Authentication signature block (AR 25-30, para. 2-69.)

EMPTY

Appears in TITLEPG:

Marks the authentication/signature block on the title page, consisting of scanned artwork containing authentication data and/or signature. The BOARDNO attribute is the graphic entity callout. Copy will be supplied by USAPA. The editorial system will automatically enter the correct for the entity reference. USAPA will insert the required art call. After composition the housekeeping program will change the BOARDNO back to the correct entity reference.

14.94 <***SPANSPEC***>. Spanned Columns Specification

EMPTY

Appears in TGROUP:

Specifies a horizontal span of columns and associated attributes that can subsequently be referenced by its spanname; the spanname provides attribute specifications repeatedly used in the entries or entry tables in the table group controlled by the group columns speciafication <COLSPEC>, or within the specific table head <THEAD>, table foot <TFOOT>, or table body <TBODY> context in which the spanned columns specification <SPANSPEC> occurs. Namest and nameend identify the first and last columns in increasing order that comprise the span. Spanned columns specification<SPANSPEC> set on table head <THEAD> or table foot <TFOOT> override those on the containing table group <TGROUP> and apply to just the table head <THEAD> or table foot <TFOOT>. Spanned columns specification <SPANSPEC> from the containing table group <TGROUP> apply to table body <TBODY>.

Attributes:

nameend	NMTOKEN #REQUIRED Column name of rightmost column of span. Names are identified in colspec of the current tgroup.
namest	NMTOKEN #REQUIRED Column name of leftmost column of span. Names are identified in colspec of the current tgroup.
spanname	NMTOKEN #REQUIRED Specifies name of the current horizontal span.
align	(left | right | center | justify | char) 'center' The horizontal alignment of content within the span.
char	CDATA #IMPLIED For align="char," the value is the single alignment character on which the first to occur of this character in the entry is aligned. Entries not containing this character are aligned to the left of this position.
charoff	NUTOKEN #IMPLIED For align="char," horizontal character offset is the percent of the current column width to the left of the (left edge of the) alignment character.
colsep	NUMBER #IMPLIED Default for all items in this table. If other than zeros, display the internal column rulings to the right of each item; if only zeros, do not display it. Ignored for the last column, where the frame setting applies.

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rowsep NUMBER #IMPLIED
Default for all items in this column (within the enclosing group) of the table. If other than zeros, display the internal vertical row ruling below each item. If only zeros, do not display it. Ignored for the last row of the table, since overridden by the frame setting.

14.95 <***SPECIAL***>. Customizable front page statement
(TITLE, PARATEXT+)
Marks optional statements that may be placed at various places within the series of elements that make up the STATMENT. SPECIAL must begin with a title and will be set in bold. It must then contain one or more PARATEXT elements. Multiple SPECIAL elements may appear in two locations in front matter: after the "Proponent and exception authority" statement and after the "Suggested improvements" statement.

14.96 <***SPECTERM***>. Special abbreviations and terms explained in section III of the GLOSSARY.
Appears in SPECDEF:
Marks in text the special abbreviations and terms to be explained in section III of the GLOSSARY. The SPECTERM element may contain standard character text, sub-, or superscript elements.
Example: See SPECDEF para. 14.97.

14.97 <***SPECDEF***>. Definition of special abbreviations and terms in section III of the GLOSSARY
(#PCDATA, SPECTERM) +(%mindata;)
Appears in ENTRY, FTNOTE, NOTE, PARATEXT, SUPSESS, TITLE, TXTTABDF:
Defines special abbreviations and terms marked from text in section III, the "Special Abbreviations and Terms" section of the GLOSSARY. This tag will be used to generate SPECDEF in GLOSSARY automatically, if required (see example below). A SPECDEF element may contain standard character text, sub-, or superscript elements preceding the SPECTERM element, which is required.
Example of a special term marked in text:
the <SPECDEF>A computerized system often used by the U.S. Army<SPECTERM>UNIX System</SPECTERM></SPECDEF>
The following information is an example of automatic generation in SPECSECT:
UNIX System - A computerized system often used by the U.S. Army.
Attributes:

print CDATA #IMPLIED
If the text is to appear in the special terms section differently than it does in the text, the attribute should be filled in with the desired text. Otherwise, the content of the element will be reproduced exactly.

14.98 <***SPECSECT***>. Special abbreviations and terms section.
(PARATEXT?, PARA0*)
Appears in GLOSSARY: Marks the section of "Special Abbreviations and Terms." This glossary section (section III) contains abbreviations, brevity codes, and acronyms not found in AR 310-50. TITLE in the PARA0s in these sections will represent the term or abbreviation and PARATEXT will contain the explanation. If there are no entries in any section of the GLOSSARY, the following text will be used, "This section contains no entries." .
Attributes:

id ID #IMPLIED
Unique identifier for reference (see SEE para. 14.89).

label CDATA #IMPLIED
Current label for this element.

generate NUMBER “0”
Generate the section if set to 1. Use the section as is if set to 0.

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14.99 <***STATE***>. State within Address
(#PCDATA)
Appears in ADDRESS: Marks the name of the State within an ADDRESS element. Should use the standard two-letter postal abbreviation and should not be followed by any punctuation. STATE does not set a new line of type and runs on from CITY (the text formatter will have inserted the required punctuation and space after CITY; it will insert the required spacing after STATE).

14.100 <***STATMENT***> for Army Regulation. Front page statements for AR
(SUMM, APPL, PROEXATH, SPECIAL*, CTRLSYS, SUPPL, INTERCH?, SUGGIMPR, COM-CONAP?, SPECIAL*, DISTRIB) -(FTNREF | FTNOTE)
Appears in TITLEPG for Army regulations:
Marks the standard statements that appear right after the signature block (see SIGNER para. 14.93and HISTORY para. 14.48). The content of the STATMENT element varies among the different types of Army publications. An optional element, "SPECIAL," may appear after the "Proponent and exception authority." statement and again after the "Suggested improvements." statement. SPECIAL elements allow multiple additional statements. These SPECIAL elements are formatted identically to the other paragraphs in STATMENT. (see entry for SPECIAL para. 14.95)
Exclusions—neither FTNOTE nor FTNREF is permitted in STATMENT. The full-page rule separating the STATMENT from the table of contents is automatically generated by the text formatter.

14.101 <***STATMENT***> for DA Circular. Front page statements for circular
(SUMM, APPL, SPECIAL*, INTERCH?, SUGGIMPR, SPECIAL*, DISTRIB) -(FTNREF | FTNOTE)
Appears in TITLEPG for Army circulars: Marks the standard statements that appear right after the signature block (see SIGNER para. 14.93and HISTORY para. 14.48). The content of the STATMENT element varies among the different types of Army publications. An optional element, "SPECIAL," may appear after the "Applicability." statement and again after the "Suggested improvements." statement. SPECIAL elements allow multiple additional statements. These SPECIAL elements are formatted identically to the other paragraphs in STATMENT. (see entry for SPECIAL para. 14.95)
Exclusions—neither FTNOTE nor FTNREF is permitted in STATMENT.
NOTE: Circulars do not use CTRLSYS or SUPPL.

14.102 <***STATMENT***> for DA Pamphlet. Front page statements for pamphlet
(SUMM, APPL, SPECIAL*, INTERCH?, SUGGIMPR, SPECIAL*, DISTRIB) -(FTNREF | FTNOTE)
Appears in TITLEPG for Army pamphlets:
Marks the standard statements that appear right after the signature block (see SIGNER para. 14.93and HISTORY para. 14.48). The content of the STATMENT element varies among the different types of Army publications. An optional element, "SPECIAL," may appear after the "Applicability." statement and again after the "Suggested improvements." statement. SPECIAL elements allow multiple additional statements. These SPECIAL elements are formatted identically to the other paragraphs in STATMENT. (see entry for SPECIAL para. 14.95)
Exclusions—neither FTNOTE nor FTNREF is permitted in STATMENT.
NOTE: Pamphlets do not use PROEXATH, CTRLSYS, SUPPL, or COMCONAP.

14.103 <***STATMENT***> for Multi-service Army Regulation. Front page statements for multi-service AR
(SUMM, APPL, PROEXATH, SPECIAL*, CTRLSYS, SUPPL, INTERCH?, SUGGIMPR, COM-CONAP? SPECIAL*, DISTRIB+) -(FTNREF | FTNOTE)
Appears in TITLEPG for multi-service Army regulations:
Marks the standard statements that appear right after the signature block (see SIGNER para. 14.93and HISTORY para. 14.48). The content of the STATMENT element varies among the different types of Army publications. An optional element, "SPECIAL," may appear after the "Proponent and exception authority." statement and again after the "Suggested improvements." statement. SPECIAL elements allow multiple additional statements. These SPECIAL elements are formatted identically to the other paragraphs in STATMENT. (see entry for SPECIAL para. 14.95)
Exclusions—neither FTNOTE nor FTNREF is permitted in STATMENT.

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14.104 <***STREET1***>. First line of Address
(#PCDATA)
Appears in ADDRESS:
Marks the second line of an address block following IDENT. STREET1 may be the office symbol of the military address or street or post office box (or similar element where appropriate). STREET1 sets a new line of type.

14.105 <***STREET2***>. Second line of Address
(#PCDATA)
Appears in ADDRESS:
Marks the optional third line of an address block. STREET2 will be the street address in the military address or post office box (or similar element where appropriate). STREET2 sets a new line of type.

14.106 <***STREET3***>. Third line of Address
(#PCDATA)
Appears in ADDRESS:
Marks the fourth optional line of an address block, where appropriate. STREET3 sets a new line of type.

14.107 <***SUBPARA1***>. Subparagraph first level
(((TITLE, PARATEXT?) | PARATEXT), (SUBPARA2, SUBPARA2+)?)
Appears in PARA0:
Marks a first level (a, b, c) subparagraph.
Attributes:

id	ID #IMPLIED Unique identifier for reference (see SEE para. 14.89).
label	CDATA #IMPLIED Current label (e.g., a, b, c) for this element. The punctuation for the label is provided by the text formatter.
change	(add | delete | resc) #IMPLIED Indicates if this element was added or deleted after the previous printing.

14.108 <***SUBPARA2***>. Subparagraph second level
(((TITLE, PARATEXT?) | PARATEXT), (SUBPARA3, SUBPARA3+)?)
Appears in SUBPARA1:
Marks a second level ((1), (2), (3)) subparagraph.
Attributes:

id	ID #IMPLIED Unique identifier for reference (see SEE para. 14.89).
label	CDATA #IMPLIED Current label (e.g., (1), (2), (3)) for this element. Enter only a numeral. The text formatter will enter the parentheses.
change	(add | delete | resc) #IMPLIED Indicates if this element was added or deleted after the previous printing.

14.109 <***SUBPARA3***>. Subparagraph third level
(((TITLE, PARATEXT?) | PARATEXT), (SUBPARA4, SUBPARA4+) ?)
Appears in SUBPARA2:
Marks a third level ((a), (b), (c)) subparagraph.
Attributes:

id	ID #IMPLIED Unique identifier for reference (see SEE para. 14.89).

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label	CDATA #IMPLIED Current label (e.g., (a), (b), (c)) for this element. Enter only a letter. The text formatter will enter the parenthesis.
change	(add | delete | resc) #IMPLIED Indicates if this element was added or deleted after the previous printing.

14.110 <***SUBPARA4***>. Subparagraph fourth level.
(((TITLE, PARATEXT?) | PARATEXT), (SUBPARA5, SUBPARA5+) ?)
Appears in SUBPARA3:

Marks a fourth level (italic 1, 2, 3) subparagraph. This element will be used ONLY for certain catalog publications. This level of subordination should be avoided in text.

Attributes:

id	ID #IMPLIED Unique identifier for reference(see SEE para. 14.89).
label	CDATA #IMPLIED Current label (e.g., 1, 2, 3) for this element. The punctuation for the label is provided by the text formatter.
change	(add | delete | resc) #IMPLIED Indicates if this element was added or deleted after the previous printing.

NOTE: in the output, the text formatter will insert a point following each numeral for this subpara level.

14.111 <***SUBPARA5***>. Subparagraph fifth level
((TITLE, PARATEXT?) | PARATEXT)
Appears in SUBPARA4:

Marks a fifth level (italic a, b, c) subparagraph. This element will be used ONLY for certain catalog publications. This level of subordination should be avoided in text.

Attributes:

id	ID #IMPLIED Unique identifier for reference(see SEE para. 14.89).
label	CDATA #IMPLIED Current label (a, b, c) for this element. The punctuation for the label is provided by the text formatter.
change	(add | delete | resc) #IMPLIED Indicates if this element was added or deleted after the previous printing.

NOTE: in the output, the text formatter will insert a point following each letter for this subpara level.

14.112 <***SUBSCRPT***>. SubScript
(#PCDATA) +(%mindata;)
Appears in CHANGE, DOCTITLE, ENTRY, FTNOTE, NAME, NOTE, PARANUM, PARATEXT, PHRASE, SEEPUB, SERTITLE, SUBSCRPT, SUPSCRPT, SUPSESS, TITLE, TXTTABDF:

Marks data that should appear in subscript form. A SUBSCRPT element may contain standard character text, sub- or superscripts, or CHANGE elements.

14.113 <***SUBTOPIC***>. Sub-topic in an index entry
(PHRASE, PARANUM*)
Appears in TOPIC:

Marks a sub-entry in an index entry in the INDEX. It must contain a PHRASE followed by a PARANUM.

14.114 <***SUGGIMPR***>. Suggested improvements

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(PARATEXT+)
Appears in STATMENT:

Marks the suggested improvements statement. SUGGIMPR must include one or more PARATEXT elements.

Format:

The title is generated by the text formatter and reads "Suggested improvements." in bold.

14.115 <***SUMM***>. Summary
(PARATEXT+)
Appears in STATMENT:

Marks the summary statement. SUMM must include one or more PARATEXT elements.

Format:

The title is generated by the text formatter and reads "Summary. " in bold.

14.116 <***SUMPARA1***>. Summary of change paragraph entry
(PARATEXT)+
Appears in CHGSUM:

CHGSUM must be entered as new text each time by the proponent. SUMPARA1 cannot be marked CHANGE=ADD or CHANGE=DELETE.

14.117 <***SUMPARA2***>. Summary of change, sub-paragraph entry
(PARATEXT)+
Appears in CHGSUM:

CHGSUM must be entered as new text each time by the proponent. SUMPARA2 cannot be marked CHANGE=ADD or CHANGE=DELETE.

14.118 <***SUPPL***>. Supplementation
(PARATEXT+)
Appears in STATMENT of Army regulations, joint Army regulations, and circulars. (DA PAMs do not use SUPPL.)

Marks the supplementation statement. SUPPL must include one or more PARATEXT elements.

Format:

The title is generated by the text formatter and reads "Supplementation." in bold.

14.119 <***SUPSCRPT***>. SuperScript
(#PCDATA) +(%mindata;)
Appears in CHANGE, DOCTITLE, ENTRY, FTNOTE, NAME, NOTE, PARANUM, PARATEXT, PHRASE, SEEPUB, SERTITLE, SUBSCRPT, SUPSCRPT, SUPSESS, TITLE, TXTTABDF:

Marks data that should appear in superscript form. A SUPSCRPT element may contain standard character text, sub- or superscripts, or CHANGE elements.

14.120 <***SUPSESS***>. Supersession statement (AR 25-30, para. 2-14.)
(#PCDATA) -(FTNREF | FTNOTE) +(%pcdata;)
Appears in COVER:

Marks the supersession notice that appears at the bottom of the title page. When this tag is present, the "supsess" attribute must have been set on DOC and an asterisk is displayed both in front of the document number and before the actual supersession notice. SUPSESS and its sub-elements may not contain any FTNOTE or FTNREF elements.

Exclusions- neither FTNOTE nor FTNREF are permitted in supsess.

Format:

The supersession statement will automatically be placed at the bottom of the title page by the text formatter even though the element appears in the COVER. (SUPSESS is entered at COVER because it is logically associated with ISSDATE, which is used by the text formatter at COVER. The text formatter will automatically generate a full-page rule that appears above SUPSESS at the bottom of the title page; if the table of contents ends on

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the title page the rule is set at $1\frac{1}{2}$ points; if the table of contents runs onto another page the rule is set at $\frac{1}{2}$ point.

The table of contents may be forced to begin on the second page if the title page and supersession statement are both large.

14.121 %TABFIG; . DTD Entity. The content replaces all references within this documentation as well as within the DTD. See individual elements for further explanation.

"TABLE | TXTTABLE | FIGURE"

14.122 <***TABLE***>. Standard table, SAT, or DLT (AR 25-30, para. 2-32.)

(TITLE, (TGROUP+, LEGEND*, TABNOTE*) | GRAPHIC)) +(%tabfig; | %print; | %emphs; | Line | FtNote | Font | Fontsize | List | Page)

Appears in CHAPTER, SECTION, APPEND. Excluded from GLOSSARY.

Marks a table that is a standard table, specified action table (SAT), or decision logic table (DLT).

Attributes:

id	ID #IMPLIED Unique identifier for reference.
label	CDATA #IMPLIED Current label for this element
orient	(port | land) "port" Specifies the orientation of the table, either portrait or landscape (broad) mode. Default is portrait mode.
change	(add | delete | resc) #IMPLIED Indicates if element was added or deleted after the previous printing. If a table is to be deleted, the proponent will indicate, in bold, as <CHANGE TYPE="ADD"> at the point of reference in text, “Table X-X has been rescinded.”change> The attribute must be changed for example to ”<TABLE LABEL="1-1" CHANGE="RESCIND"’> to preserve the table sequence in the table of contents. Also, must be inserted following the table title, and must be inserted before the SGML tag to show deletion of tabular material within the standard table.
linkref	CDATA #IMPLIED Allows the current figure to be linked to another TABLE or to a FIGURE so that if formatting causes one to be moved, the other will move with it. The proponent will indicate the figure or table to be linked (for example, "figure 1-2 and table 1-1 should appear together."). Proponents should indicate all linkref occurrences on the DA Form 260 or on a separate list attached to the DA Form 260. USAPA will transfer this information to the print order.

Format:

In loose-leaf publications the tables are numbered sequentially within CHAPTER (or SECTION if no CHAPTER) in the form: chapter#-table# or section#-table#, where table# is an Arabic number. If no chapters or sections, follow the same format as for bound publications. In bound publications the tables are numbered sequentially (1, 2, 3, etc.).

LEGEND and TABNOTE is followed by a colon.

14.123 <***TABLIST***>. List of tables (generated)

EMPTY

Appears in FRONT:

Requests the automatic generation of a list of tables in a table of contents.

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All standard tables and text tables will be listed in the table of contents. Where tables are marked <CHANGE TYPE=”RESC”>the table number and title will remain in text followed by "(Rescinded.)" in bold italic. The table number, title, and "(Rescinded.)" will remain in the TABLIST preserving the complete table sequence of the original document.

14.124 <***TABNOTE***>. Notes found in the body of a table, text table, or figure.
(#PCDATA)
Appears in TABLE, TXTTABLE, FIGURE:

A TABNOTE is a hard note that appears at the bottom of a table, text table, or within a figure.

Attribute:

label	CDATA #REQUIRED Current label for this element.

Format:

The first TABNOTE will generate the word "NOTES:". Both where cited and in the TABNOTE itself, the number or letter used must be tagged as a SUPSCRIPT subsequent to running the template program. TABNOTEs do not affect the sequence of true footnotes within a publication and are separate from that sequence (see FTNOTE; footnotes always appear at the bottom of the page, not at the end of the element). Normally, a note appearing in the title of a table or text table or in a subhead of a text table that applies to the whole table would be a footnote rather than a TABNOTE. TABNOTEs are used to expand on and provide additional information about a part of the element, such as an ENTRY.

If there are no LEGEND elements, opening a TABNOTE will automatically generate a $\frac{1}{2}$-point rule separating the TABNOTE from the body of the TABLE. If a LEGEND element does appear before TABNOTE, no additional rule is drawn.

14.125 <***TBODY***>. Body of a table
(ROW+)
Appears in TABLE:

Marks the body of TABLE.

Format:

Opening this element will automatically generate a $\frac{1}{2}$ point rule separating the body of the table from the column heads.

Attributes

valign	(top, middle, bottom) “top” Vertical alignment of content within the body entries.

14.126 <***TERM***>. Terms explained in section II of the GLOSSARY
(# PCDATA) +(%mindata;)
Appears in TERMDEF: Marks in text the terms to be further explained in section II of the glossary. Example: See TERMDEF para. 14.127.

14.127 <***TERMDEF***>. Definition of the TERMs in section II of the GLOSSARY
(#PCDATA, TERM) +(%mindata;)
Appears in ENTRY, FTNOTE, NOTE, PARATEXT, SUPSESS, TITLE, TXTTABDF:
Defines terms marked from text in section II, the "Terms" section of the GLOSSARY. This tag will be used to generate TERMDEF in GLOSSARY automatically, if required, (see example below). A TERMDEF element may contain standard character text, sub-, or superscript elements preceding the TERM element, which is required.
Example of term marked in text:
the <TERMDEF>An Army regulation contains Army policy. <TERM>Army regulation</TERM></TERMDEF>
The following information is an example of automatic generation in TERMSECT:
Army regulation. - An Army regulation contains Army policy.

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14.128 **<*TERMSECT*>**. Section II of the GLOSSARY
(PARATEXT?, PARA0+)
Appears in GLOSSARY:

Marks the "Terms" section in the GLOSSARY. TERMSECT must begin with a TITLE, followed by PARATEXT that must include at least two PARA0s. If there are no entries in any section of the GLOSSARY, the following text will be used, "This section contains no entries." to be set in 9-point Times Roman. In the input file, it may then include any number of tables or figures (which may appear anywhere within the TERMSECT: the output specifications must indicate the rules by which they are to be inserted in the output). TERMSECT is labeled with roman numeral "II"

Inclusions: permits tables, text tables, or figures to be used throughout TERMSECT.

Attributes:

id	ID #IMPLIED Unique identifier for reference.
label	CDATA #IMPLIED Current label for this element.
generate	NUMBER "0" Generate the section if set to 1. Use the section "as is" if set to 0.

14.129 **<*TGROUP*>**. Table Group
EMPTY

A table group within the larger table, which may contain a table head <THEAD>, table body <TBODY>, and table foot <TFOOT>. Each <TGROUP> effectively identifies a new portion of a table <TABLE>. If a new columns specification <COLSPEC> is provided, it replaces a previous one. If both columns specification <COLSPEC> and spanned columns specification <SPANSPEC> are new, that spanned columns specification <SPANSPEC> should refer to columns in the most recent spanned columns specification <COLSPEC>. If only a new <SPANSPEC> is provided, it should refer to columns defined by the (most immediately prior) spanned columns specification <COLSPEC> in a <TGROUP> of the table <TABLE>. On the other hand, a new spanned columns specification <COLSPEC> to either a table head <THEAD> or table foot <TFOOT>replaces all prior column definitions.

Attributes:

cols	NUMBER #REQUIRED Specifies number of columns in the table group.
align	(left | right | center | justify | char) 'center' The horizontal alignment of content within the table group.
char	CDATA #IMPLIED For align="char," the value is the single alignment character on which the first to occur of this character in the entry is aligned. Entries not containing this character are aligned to the left of this position.
charoff	NUTOKEN #IMPLIED For align="char," horizontal character offset is the percent of the current column width to the left of the (left edge of the) alignment character.
colsep	NUMBER #IMPLIED Default for all items in this table group. If other than zeros, display the internal column rulings to the right of each item; if only zeros, do not display it. Ignored for the last column, where the frame setting applies.

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rowsep NUMBER #IMPLIED
Default for all items in this table group. If other than zeros, display the internal vertical row ruling below each item. If only zeros, do not display it. Ignored for the last row of the table, since overridden by the frame setting.

tgroupstyle NMTOKEN #IMPLIED
An attribute that allows for the case in which a table group style defined in the FOSI applies to the current table group.

14.130 <***THEAD***>. Head of a table column
(COLSPEC*, ROW+) -(ENTRYTBL)
The text formatter will generate continuity heads from TITLE and THEAD.
Opening this element will automatically generate a $\frac{1}{2}$-point rule separating the THEAD from the TABLE title.
Attributes

valign (TOP, MIDDLE, BOTTOM) "BOTTOM"
Vertical alignment of content within the heading entries.

14.131 <***TITLE***>. Title
(#PCDATA) +(%pcdata;)
Appears in APPEND, CHAPTER, CHGSUM, FIGURE, PARA0, PART, SECTION, SEEPUB, SUBPARA1, SUBPARA2, SUBPARA3, SUBPARA4, SUBPARA5, TABLE, TXTTABLE:
Marks the title of the current element and may contain the basic set of elements or character text that appear in paragraph-like elements.
Appears in SPECIAL:
Marks the title of the current element and may contain the basic character text that appears in paragraph-like elements. Since SPECIAL was created to accommodate new STATMENT elements not anticipated by the DTD (and therefore not likely to have an ability to call for a title generated by the text formatter), within SPECIAL, the TITLE element is required. If quotation marks are used in TITLE, the entity must be used, not the quote element. If a FTNOTE is required in a title, it must appear at the end of the title string-not internally.
Attributes:

change (add | delete) #IMPLIED
Indicates if this element was changed during the last review.

cited CDATA #IMPLIED
Indicates the value of the "id" attribute of the referenced element. This would allow a reference in the title of a table to the paragraph that cites the table; for example, "(Cited first in para. 3-5.)."

NOTE: The text formatter will generate continuity heads for FIGURE, TABLE, and TXTTABLE from the TITLE.

14.132 <***TITLEPG***>. Publication title page
(SIGNER, HISTORY, STATMENT)
Appears in FRONT:
Marks significant and required elements. TITLEPG is required, and must contain the list of elements, in the above listed order.
Format:
The rules on the title page are generated by these same elements. These elements are set in 3-column format.

14.133 <***TOPIC***>. Main topic in an index entry
(PHRASE, PARANUM*, SUBTOPIC*)
Appears in INDEX:
Marks an index entry in the INDEX (see INDEX para. 14.51).

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14.134 <***TXTTABDF***>. Definition of text table
EMPTY
Appears in TXTTABLE:

Marks every header that will be used in a text table and may contain the basic set of elements or character text that appears in paragraph-like elements. The headers should be declared sequentially from left to right (top to bottom).

Attributes:

colnum	NUMBER #REQUIRED Indicates the column number for the particular header. This number will be used to place the entries in the correct columns.
colhead	CDATA #REQUIRED Indicates the text for the head of a column.
subhead	(0 | 1 | 2) "0" SUBHEAD= 1 indicates the presence of a subhead. When a column is designated as a SUBHEAD for the text table, that column and each entry will be set bold, centered on the line, and followed by a $\frac{1}{2}$-point rule. SUBHEAD=2 indicates the presence of a nonrecurring subhead. When a column is designated as a SUBHEAD=2 for the text table, the first occurrence of the column title will be set bold centered on the line and followed by a $\frac{1}{2}$-point rule.

14.135 <***TXTTABLE***>. Text table (AR 25-30, para. 2-32.)
(TITLE, TXTTABDF+, ENTRY+, LEGEND*, TABNOTE*) -(%tabfig;)
Appears in CHAPTER, SECTION, APPEND. Excluded from GLOSSARY.

Marks a table that is a text table and must contain a TITLE, followed by one or more TXTTABDF and ENTRYs, followed by any number (including zero) of footnotes.

Exclusions - neither TABLEs nor TXTTABLEs nor FIGUREs are permitted in TXTTABLE.

Attributes:

id	ID #IMPLIED Unique identifier for reference.
label	CDATA #IMPLIED Current label for this element.
change	(add | delete | rescind) #IMPLIED Indicates if element was added or deleted during the previous printing. If a table is deleted, the proponent will indicate, in bold, as a change=add, at point of reference in text, "Table X-X has been rescinded."

Format:

In loose-leaf publications tables are numbered sequentially within the text in the form: chapter#-table# or section#-table#. In an appendix use the form appendix letter-table# (A-1, etc.). If no chapter or section, follow the same format for bound publications. In bound publications number sequentially throughout the book, including any appendixes (1, 2, 3, etc.).

14.136 <***ZIP***>. Element for the zip or postal code within ADDRESS
(#PCDATA)
Appears in ADDRESS:

Marks the ZIP code within the USA (or similar postal codes in other countries) within an ADDRESS element. Postal codes (including all spaces, dashes, or special symbols) will be entered by the proponent. ZIP does not set a new line of type and runs on from STATE (the text formatter will have inserted the required two spaces after STATE). All USA ZIP codes are required to be in 9-digit format.

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VOLUME 3
TRAINING AND DOCTRINE PUBLICATIONS

15 INTRODUCTION.

15.1 Overview. Volume 3 provides implementation guidance for the development of Army training and doctrine publications in compliance with MIL-STD-2361, TRADOC Regulation 350-70, and other training and doctrine requirements documents. Training and doctrine publications are discussed in sufficient detail to allow the handbook user a comprehensive understanding of their development processes and how SGML is applied to those processes. The volume contains general training and doctrine publication development guidance described in three sections. There are flow charts and other graphic illustrations to amplify the narrative discussions. An outline for each part is shown in "Layout, Format and Content", below.

15.2 Objectives. Volume 3 is designed to provide users with a tool that is simple to use and functionally accurate to the Army training and doctrine publication processes. The volume contains training and doctrine publication development and implementation guidance information, designed to assist publication developers and editors in the uses of MIL-STD-2361A(AC) SGML. Implementation guidance to realize the MIL-STD-2361A(AC) objectives to share and reuse common publication information is an underlying theme throughout the handbook.

15.2.1 Layout, Format and Content. Volume 3 contains information relevant to training and doctrine publications, their development, and methods for applying and using SGML. An outline of each of the sections is provided below. Volume 3 is structured as follows:

Volume 3 – Training and Doctrine Publications

15 –	**Introduction**	An overview of the Training and Doctrine Publication volume: including the intent, layout, format, and contents.
16 –	**Training and Doctrine Publication Workflow and Processes**	Identifies and describes the workflow and processes associated with the development of training and doctrine publications.
17 –	**Training and Doctrine Publication Consolidated Requirements Documents (CRD)**	This section provides an overview and introduction (including the intent, layout, format, and contents) to the training and doctrine publication Consolidated Requirements Documents (CRD). The CRDs for the respective training and doctrine publications can be obtained from the Army SGML Registry and Library (ASRL) home page.

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16 TRAINING AND DOCTRINE PUBLICATION WORKFLOW AND PROCESSES.

16.1 General Training and Doctrine Publication Development Process and Flow . The publication development process in use for training and doctrine products is different from the process used for developing technical and equipment (TM) publications. TMs are normally developed by contractors as part of a formal weapon system contract. The development environment depends upon the authoring system used by the developing contractor. Training and doctrine publications are normally developed by government employees in functional organizations such as TRADOC centers and schools. Within TRADOC, the development environment consists of a number of organic systems, processes and procedures used to develop and deliver training and doctrine products. These systems include the Reimer Digital Library (RDL), Automated Systems Approach to Training (ASAT), and Standard Army Training System (SATS). The RDL is a repository, which provides data storage as well as a communications interface with external organizations. ASAT is the Army-wide system for automated training and doctrine development. It is used by proponent schools for developing and producing training and doctrine information and products. SATS provides an automated training tool for unit management to enhance the planning, assessment, and execution of battle-focused training resources. It helps trainers develop and manage their training program by providing interface to TRADOC automated systems such as RDL.

16.1.1 Proposed Process Flow. Army Training Information Architecture(ATIA) is being developed by Army Training Support Center (ATSC) to replace their three current systems; namely, RDL, ASAT and SATS. These sytems are currently used to develop and deliver training and doctrine products. Three component architectures are being developed in accordance with the Army Enterprise Architecture Guidance Document which is located at **(www.atsc.army.mil/itro/000503_reddy_townhall.ppt).** They are:

- Operational Architecture (ATIA-OA)
- Technical Architecture (ATIA-TA)
- System Architecture (ATIA-SA)

The Army Training Information Architecture purposes:

- Organizes the functional activities into a logical arrangement for implementation.
- Defines the relationships between the activities, data entities, and standards necessary to design and implement the supporting systems.
- Defines the overlying technical standards.
- Forms the basis for total system design and ensures the commonality of effort in the software segment development and design process.

16.1.2 Common Source Publication Data. Training and Doctrine digital publications are developed using common source publication data. Once developed, the data can be reused and distributed via the General Dennis J. Reimer Training and Doctrine Digital Library (RDL). Uses include product approval and staffing, future product development and field use. This requires a view of digital publications in which the data developed can be reduced to a common kernel (task level) of knowledge. Once this data is developed it will be the foundation for any training and doctrine publication with a set of SGML instructions to produce both approved Army publications (FM, STP, MTP, DRILL, ARTEPS) and customized reports.

16.1.3 Training and Doctrine Product Development Responsibilities. Figure 21 reflects the TRADOC organizational structure and associated responsibility for training and doctrine development and delivery. TRADOC headquarters has overall responsibility for training and doctrine policy including development of TRADOC Regulation 350-70.

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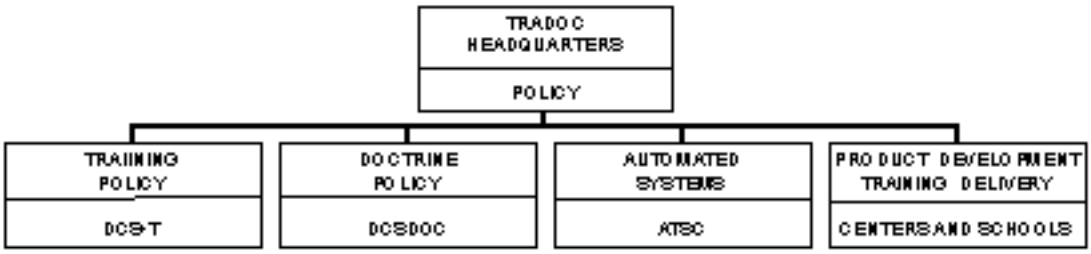

Figure 21 TRADOC Product Development Responsibilities

Responsibility for developing training and doctrine publications information is split between proponent agencies such as Deputy Chief of Staff for Training (DCS-T) or Deputy Chief of Staff for Doctrine (DCS-D) and proponent schools. Proponent agencies are responsible for developing policies, procedures and guidance for training and doctrine publication information development. Proponent schools apply these policies and procedures to training and doctrine product or material development.

16.1.3.1 Proponent Agency. A proponent agency is an Army organization or staff, which has been assigned primary responsibility for materiel or subject matter in its area of interest. Proponent agencies are considered subject matter experts in a specific subject area such as Soldier Training Publications (STP) or Field Manual (FM). A proponent agency could be a proponent school, proponent staff agency, proponent center, etc. Proponent agencies serve as the functional expert within a subject area and prescribe format and content requirements for an assigned TRADOC publication. TRADOC systems developers (ASAT, RDL, etc.) use these format and content requirements as the basis for developing publications development and distribution systems.

16.1.3.2 Proponent School. A proponent school is a proponent agency designated by the Commanding General, TRADOC or other appropriate Major Army Command (MACOM) as training proponent to exercise supervisory management of all combat/training development aspects of a materiel system, functional area or task. It analyzes, designs, and develops training/training products. Basically, proponent schools prepare training publications products such as STP, MTP, etc. using format and content requirements established by the proponent agency.

16.1.3.3 TRADOC Publications Information Development Process. Figure 22 reflects the TRADOC publication information development flow. It begins with a triggering circumstance that leads to mission analysis and ultimately to individual or collective task analysis. The culmination of this task analysis process is the publication of a specific product. Following are examples of triggering circumstances:

- Directed by appropriate authority
- Changes in Doctrine
- Organizational Changes
- Materiel/Systems Changes
- Evaluation Finding (Changes in training methods, sites, etc.)

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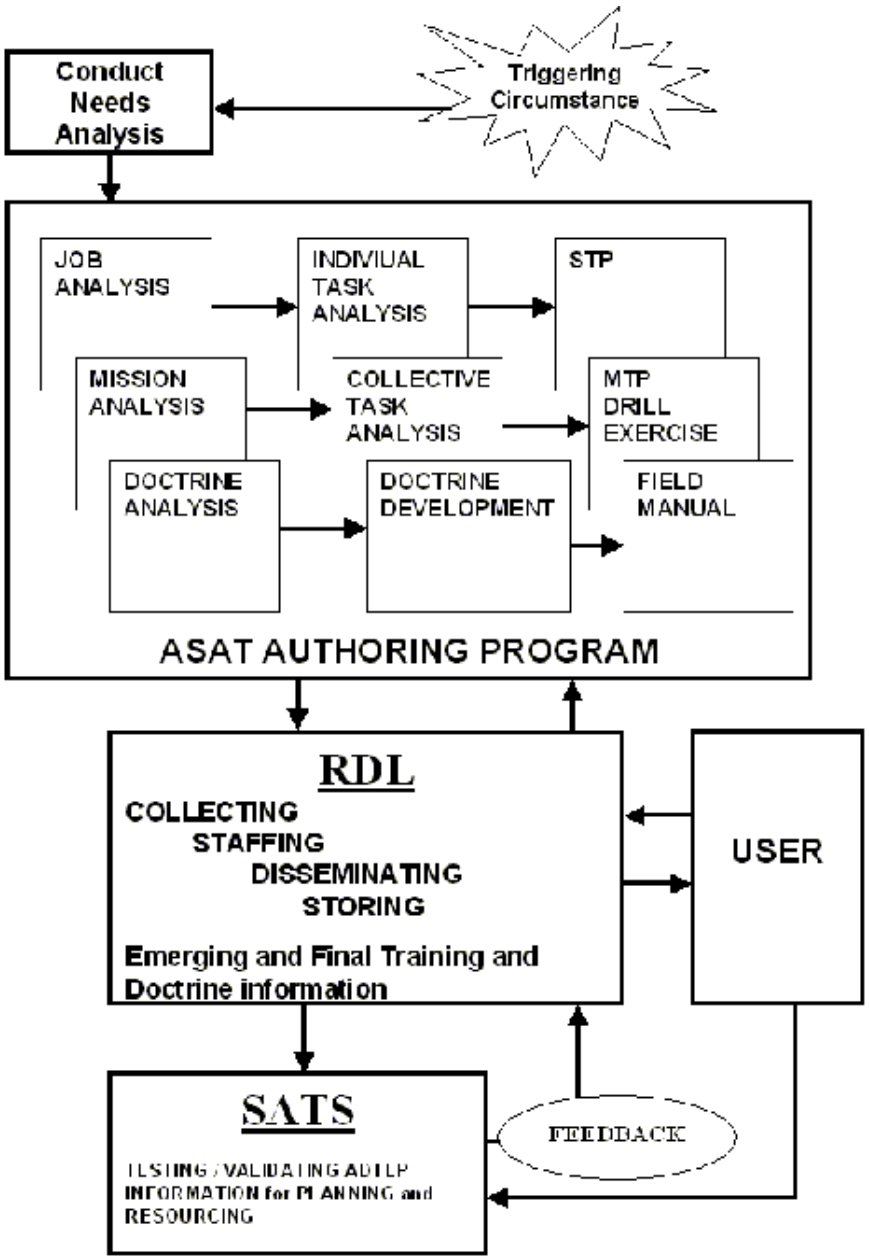

Figure 22 TRADOC Publication Development Flow

16.2 TRADOC Publications Information Development and Delivery Systems. There are a number of information management systems used within TRADOC for developing, storing and distributing training and doctrine publication information and products. The sub-paragraphs below provides a brief description and the roles in TRADOC for these information management systems. These TRADOC information management systems and their relationship to each other are depicted in Figure 23 below and are explained in paragraphs 16.2.1through 16.3.1.2. The significance of these systems is the interface required to implement SGML and reuse, re-purpose, and sharing Army publication information within the Army and with Joint Services. This interface will be discussed in paragraphs 16.2.1 through 16.3.1.2.

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Figure 23 TRADOC Information Management Systems Relationship

16.2.1 Automated Systems Approach to Training (ASAT). ASAT is a software application, which supports Army doctrine and training development, support, and management functions. It operates as a doctrine and training information system, a tool for decision-making, and doctrine and training products production system (printed or electronic media). ASAT is a training information and doctrine management system that provides the following capabilities:

- Task creation
- Task management and training product
- Doctrine creation
- Import/Export to data repository, General Dennis J. Reimer Digital Library (RDL)
- Produces reports in Rich Text Format (RTF), which is converted to HTML

The functional modules in ASAT include:

- Collective Individual
- Combined Arms Training Strategies (CATS)
- Program of Instruction (POI)
- Doctrine

16.2.1.1 Collective Module. The Collective Module allows training developers to create, edit, copy, delete, or review collective and drill tasks, Mission Training Plans (MTP) and Drill Books.

16.2.1.2 Individual Module. The Individual Module allows training developers to create, edit, copy, delete, or review individual tasks, Soldier Training Publications (STP), Training Support Packages (TSP) and Lesson Plans. Report formats include production of an:

- Individual Task Summary
- Individual Task Development
- Individual Synopsis
- STP
- TSP
- Lesson Plan

16.2.1.3 Combined Arms Training Strategies (CATS) Module. The CATS Module produces Combined Arms Training Strategies to include resource information. The CATS module within ASAT allows Training Developers to produce dynamic training strategies. Eventually, these strategies will be made available to the Standard Army Training System (SATS) user via the RDL. The process of strategy development begins with the building of an Action, which consists of:

- Organization (TOE)
- Task Selection (a grouping of collective tasks)
- Exercise
- Training Aid, Device, Simulator, and Simulation (TADSS) Selection

The CATS module allows Training/CATS developers to build actions. (DEVELOPMENT PROCESS-Build actions-Refine actions-Create Reports) Once several Actions have been developed, the Training/CATS developer can easily produce the following reports:

- Calendar
- Matrix Report
- Critical Gates Summary
- CATS Task to Action

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16.2.1.4 Program of Instruction (POI) Management Module (POIMM). The Program of Instruction Management Module (POIMM) produces POI from lesson plan and task data previously developed in the Individual Module.

16.2.1.5 Doctrine Module. The Doctrine Module accommodates development and staffing of doctrine products using Microsoft Word, document comment management, and an Electronic Staffing Module. Word, along with a front-end for managing documents, enables writers to prepare Field Manuals (FM) in a collaborative setting. Development groups such as Process Action Teams (PAT) are able to work together on doctrine projects in an integrated environment.

16.2.2 General Dennis J. Reimer Training and Doctrine Digital Library (RDL). RDL is the approved repository of official Army training and doctrine information. Mission Training Plans (MTP), Drills, Officer Foundation Standards (OFS), and Soldier Training Publications (STP) are dynamically generated by the RDL, using information contained within the RDL Data Repository (DR), as virtual documents. Virtual documents consist of proponent provided information, encapsulated within HTML tags for on-line delivery via the Internet. Access controls are included to restrict access to all non-authenticated products, and authenticated products, as appropriate.

16.2.2.1 RDL Data Repository (RDL DR). The RDL DR is the RDL's database foundation. It acts as a bridge between proponent schools and units, with data flowing among the Army proponent schools, from proponent schools to units, and from units to proponent schools. The system contains hundreds of MTPs, STPs, Drills, TSPs, OFSs and more than 26,000 collective and individual tasks developed by proponents using ASAT. This data represents the most current training and doctrinal information. Relational data from Standards in Training Commission, the Army Cost Factor Handbook, the Combined Arms Training Strategy (CATS), and Modified Tables of Organization and Equipment (MTOE) are linked with the ASAT-derived data to form compatible information modules available to units using the Standard Army Training System (SATS).

16.2.2.2 RDL Document Formats. The RDL uses Hypertext Markup Language (HTML) as its primary document output format for online viewing. The RDL makes use of some advanced features of HTML, such as "frames" "Java Script", and the Secure Socket Layer (SSL). Users are required to use a browser that supports 128-bit encryption. Additionally, many documents are available in alternative formats for print-on-demand, downloading, or on-line multimedia streaming.

16.2.2.3 Products Availability from RDL. Products accessible via the RDL include:

a. Army Doctrinal and Training Literature Program (ADTLP) products includes:
   (1) Field Manuals (FM)
   (2) Soldier Training Publications (STP)
   (3) Officer Foundation Standards (OFS)
   (4) Mission Training Plans (MTP)
   (5) Drills
   (6) Training Circulars (TCs)

b. Army Courseware and training products includes:
   (1) Total Army Training System (TATS) Courseware
   (2) Army Correspondence Course Program (ACCP)
   (3) TRADOC Common Core Training Support Packages (TSP)
   (4) Graphic Training Aids (GTA)
   (5) Civilian Training Materials
   (6) Other Approved Courseware

16.2.3 Standard Army Training System (SATS). SATS is the Army's automated unit training management system for all Active, Guard, and Reserve units. SATS automates most training management according to doctrine in FM 25-100 (Training the Force), FM 25-101 (Battle Focused Training), and FM 100-5 (Operations). SATS supports:

- Training development and scheduling down to company and squad level
- Produces training schedules, calendars, plans, resource requirements, readiness reports
- Allows roll up through brigade staff level
- Incorporates data sharing with other systems

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- Balances training events, plans and resources prior to training execution.
- Identifies paths to accomplish training goals so that units can go through "What if" drills to include usage of CATS, land, ranges and other training facilities, and resources at installation level.

16.3 Application of SGML to the Training and Doctrine Development Process. As indicated earlier, the TRADOC publication information development environment is different from the AMC development environment. TRADOC automated systems are used for authoring, storage and distribution of training and doctrine products. Each of these systems is based on database data elements to represent the product information. For example, ASAT contains 300 plus tables, each containing a number of data elements. In order to apply MIL-STD-2361 SGML to a training or doctrine product, the relationships between the MIL-STD-2361 TRADOC SGML elements and TRADOC data elements must be clearly identified. Software was developed to automatically relate an SGML element to an ASAT data element and populate the ASAT database from the SGML-tagged data for selected TRADOC products (STP, MTP, Drill and FM).

16.3.1 MIL-STD-2361 SGML Element to TRADOC System Data Element Mapping Methodology. Implementation of DPD Program in TRADOC requires two types of mapping. First, mapping was conducted between MIL-STD-2361 TRADOC SGML elements for each TRADOC product and the associated ASAT data elements. The second is a mapping between a complete technical manual (TM) and the RDL data elements. This second type of mapping is required so that TM information can be applied directly to a specific TRADOC product with out re-authoring. The results of both types of mapping was approved by TRADOC and configuration managed by the USAPA ASRL. This ensures that the SGML elements and data element versions used in the mapping stay current as publication requirements reflected in the SGML elements and TRADOC data elements change.

16.3.1.1 MIL-STD-2361 SGML Element to ASAT Data Element Mapping. The first type of mapping is the establishment and implementation of the relationship of MIL-STD-2361 TRADOC SGML to specific training and doctrine products. The product-related tables and fields in ASAT for each product (STP, MTP, Drills, and FM) were identified and paired with the corresponding MIL-STD-2361 SGML element(s) within their respective TRADOC product CRD. ASAT data elements are those provided by ATSC. The mapping results are contained in the appropriate TRADOC product CRD. Table below is an example of the SGML to ASAT data element mapping.

Table 16–1. MIL-STD-2361 TRADOC SGML Element to ASAT Data Element Mapping Example

SGML ELEMENT	ATTRIBUTE	ASAT TABLE	ASAT COLUMN
int.task.wp	bos	ind_task	combat_function_para_id
ind.task.wp	reference	ind_task	parent_ind_task_id
ind.task.wp	mopp	ind_task	mopp_cd
ind.task.wp	mos.code	ind_task_occupation_speciality	combat_speciality_cd
ind.task.wp	level	ind_task_occupation_speciality	skill_level_cd
ind.task.wp	subj.area	subject_area	product_id
ind.task.wp	subj.area	subject_area	record_sequence_cd
ind.task.wp	subj.area	subject_area	subject_area_cd
ind.task.wp	subj.area	subject_area	subject_area_nm
ind.task.wp	subj.area	subject_area	record_sequence_cd

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16.3.1.2 MIL-STD-2361 TM Elements to RDL Data Elements Mapping. Figure 24 depicts the mapping process used to relate SGML-tagged TM information to the RDL. The RDL is the TRADOC interface with external information processing systems. Exchange of weapon system logistics (TM and other logistics analysis information) between TRADOC and AMC organizations will be through the RDL. The mapping process used for MIL-STD-2361 TRADOC SGML to ASAT data element is used for TM mapping. The TM mapping is from the TM SGML elements to the TRADOC SGML elements. Interface into both the RDL and ASAT will be through the MIL-STD-2361 SGML element to ASAT data element mapping process. The ASAT data elements will be identical to the RDL data elements once RDL development is completed.

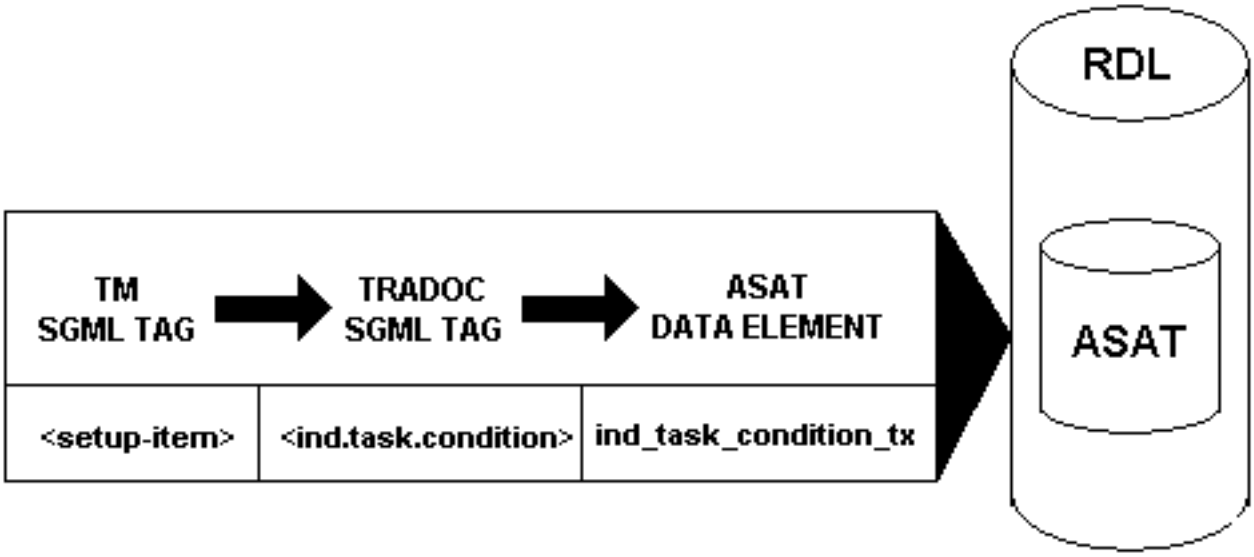

Figure 24 MIL-STD-2361 TM SGML Element to TRADOC SGML Element to RDL Data Element Mapping

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17 TRAINING AND DOCTRINE PUBLICATION CONSOLIDATED REQUIREMENTS DOCUMENTS (CRD).

17.1 Consolidated Requirements Documents (CRD). CRDs were developed for the training and doctrine publication products described in the following paragraphs. The CRDs were designed by USAPA, in conjunction with TRADOC functional requirements experts, as a tool for applying SGML to training and doctrine publication products. The CRDs are based on concepts outlined in the SGML standards ISO 8879 and MIL-PRF-28001. An SGML tagging scheme was designed to meet the training and doctrine publication product requirements contained in TRADOC Regulation (TREG) 350-70. Training and doctrine publications are comprised of data elements. The first step in designing the generalized language of the SGML applied to training and doctrine products was to identify the relationship between the significant data elements of the respective publication products and assign each element a mnemonic name or "generic identifier". A DTD was then created using element and attribute declarations for generic identifiers. Processing information was then developed (i.e., style sheets) to describe or specify a documents formatted output. These concepts formed the baseline for the development of a Standard Generalized Markup Language for TREG 350-70 training and doctrine publications. The CRDs provide implementation guidance and information for development of training and doctrine publications in SGML, and that conform in every way to the functional requirements contained in TREG 350-70 and other relevant TRADOC requirements documents.

17.2 Obtain Consolidated Requirements Document (CRD). The CRDs for Soldier Training Publication (STP), Army Training and Evaluation Program (ARTEP), Training Support Package (TSP), Field Manual (FM) and System Training Plan (STRAP) are available from the ASRL and located in the guidance library.

17.3 Consolidated Requirements Document Structure. CRDs include general information, a non-SGML structure outline for an the training or doctrine product; applicable SGML DTDs; sample input/output text of the training and doctrine product; a detailed description of elements; the FOSI required to produce a final copy for the product; and Automated Systems Approach to Training (ASAT) data element mapping into SGML elements.

17.3.1 Non-SGML Structure Outline. To assist handbook users in a better understanding of the DTDs, a plain-English expression of the document structure is included in Section 2 of the CRD. Although this is not a definitive expression of the structure (which is the role of the conforming DTDs), it is intended to supplement the element descriptions and provide a functional overview of the structure as encoded in the DTDs.

17.3.2 Document Type Definitions (DTDs). The DTDs provided in Section 3 of the CRD were developed by interpreting TREG 350-70 and other pertinent requirements documents, content and structure requirements.

17.3.3 Training and Doctrine Input and Output Samples. Section 4 contains sample files (i.e., marked-up text as it would appear in a file prior to composition), along with a representation of the output which would be produced by this markup. The format and appearance of the printed pages are not controlled by the DTDs, but will be controlled by the FOSI or style sheet. Samples provided in the CRD are not intended to portray the use of all the elements and/or attributes available, but only to exemplify the use of many of the elements which are particular to the respective training and doctrine products.

17.3.4 SGML Element Definitions. Each SGML element necessary to produce the document is described in Section 5. A discussion of the element attributes, their possible values, and the default values are also included. These descriptions can be used as an aid in interpreting the SGML elements and serve as a reference for reading the DTDs.

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VOLUME 4
TECHNICAL AND EQUIPMENT PUBLICATIONS

PART I
OVERVIEW

18 INTRODUCTION.

18.1 Overview. Volume 4 provides implementation guidance for Technical Manuals (TM) and Depot Maintenance Work Requests (DMWR). TMs and DMWRs are discussed in sufficient detail to allow the handbook user a comprehensive understanding of their development processes using SGML. Part I contains general TM and DMWR development guidance. Part II contains detailed guidance for the application of SGML to TMs and DMWRs, related training information, and an SGML Tutorial for TMs and DMWRs. There are flow chart and other graphic illustrations to amplify the narrative discussions. The differences between the "traditional" publication development processes and development using the DPD Program concept are discussed to illustrate the benefits, in time and effort, derived from the DPD Program. These discussions are designed to portray to handbook users sound rationale for developing publications using SGML in accordance with MIL-STD-2361. The DPD Program concept of reusing information that is common to more than one type of equipment is explained in the context in which it relates to different publication types. Part I is structured with five Sections, as shown in "Layout, Format and Content", below. Part II is structured with three parts, as shown in "Layout, Format and Content", below.

18.2 Objectives. Volume 4 of MIL-HDBK-2361 is designed to provide users with a tool that is simple to use and functionally accurate to the Army TM and DMWR publication processes. The volume contains TM and DMWR publication development and implementation guidance information, designed to assist the publication developer in the use and application MIL-STD-2361SGML. Implementation guidance to realize the MIL-STD-2361 objectives to share and reuse common publication information is an underlying theme throughout the handbook.

18.3 Layout, Format and Content. Volume 4 contains information relevant to TMs and DMWRs, and their development using SGML. An outline of each of the parts is provided below.

Part I – Overview

18 – Introduction	An overview of the TM volume: including the intent, layout, format, and contents.
19 – Workflow and Processes	Identifies and describes the workflow and processes associated with the development of TMs.
20 – Introduction to SGML	This section provides a foundation for working with, and understanding, SGML.
21 – Implementation Guidance	This section will contain a descriptive narrative of the functional and technical relationships between TMs/DMWRs, MIL-STD-40051A and MIL-STD-2361. The part will include explanations, examples and descriptive narrative of how the TM contents (e.g., work packages, tasks, etc.) maps (relates) to the appropriate paragraph/page of the respective standard.
22 – TM/DMWR Acquisition	This section will provide the handbook user with information relating to contracting for SGML/publication development services.

Part II – TM Information Chapters

24 – Production	This section provides an in-depth description and use of the SGML elements specifically used in the developing a complete TM/DMWR manual.
25 – Description and Theory of Operation	This section provides an in-depth description and use of the SGML elements specifically used in the General Information with Theory of Operation Chapter (GIM).

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26 – Operator Instructions Information	This section provides an in-depth description and use of the SGML elements specifically used in the General Information with Operating Procedures Information Chapter (OPIM).
27 – Troubleshooting Information	This section provides an in-depth description and use of the SGML elements specifically used in the General Information with Troubleshooting Information Chapter (TIM).
28 – Maintenance Information	This section provides an in-depth description and use of the SGML elements specifically used in the Maintenance Information Chapter (MIM).
29 – Parts Information	This section provides an in-depth description and use of the SGML elements specifically used in the Parts Information Chapter (PIM).
30 – Supporting Information	This section provides an in-depth description and use of the SGML elements specifically used in the Supporting Information Chapter (SIM).
31 – Shipping Information	This section provides an in-depth description and use of the SGML elements specifically used in the Shipping Information Chapter (SHIPIM).
32 – Pilot Operating Procedures Information	This section provides an in-depth description and use of the SGML elements specifically used in the Pilot Operating Procedures Information Chapter (PILOT-OPIM).
33 – SHARED COMMON ELEMENTS	This section provides an in-depth description and use of the SGML elements commonly used throughout TM/DMWR development.
34 – Basic TM/DMWR Training	This section will provide the instructor training-type information on developing TM/DMWR(s) using MIL-STD-40051 and MIL-STD-2361.

Part Part IV – SGML and FOSI Tutorial

35 – SGML Tutorial	This section will provide the developer with SGML knowledge to understand how to read a DTD, understand when and where elements are allowed and provided the basic rules for SGML.
36 – Introduction to MIL-STD-2361A(AC) SGML Markup	This section describes methods to markup SGML documents in accordance with MIL-STD-2361 SGML constructs. Adhering to the methods defined in this appendix will assisted in applying MIL-STD-2361SGML constructs to both legacy and new document development.
37 – FOSI Application as a Style Guide	This section contains information on the application of FOSIs as style guides.

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19 WORKFLOW AND PROCESSES.

19.1 Technical and Equipment Publication Workflow and Processes. The flow diagram in Figure 25 illustrates a typical contractor TM development cycle. The process shown is a subset of the overall logistics support development which is depicted as "Gather Source Data" in the figure. Typically, a TM develops through three iterations: Preliminary Draft Equipment Publications (PDEP); Draft Equipment Publications (DEP); and Final Draft Equipment Publications (FDEP).

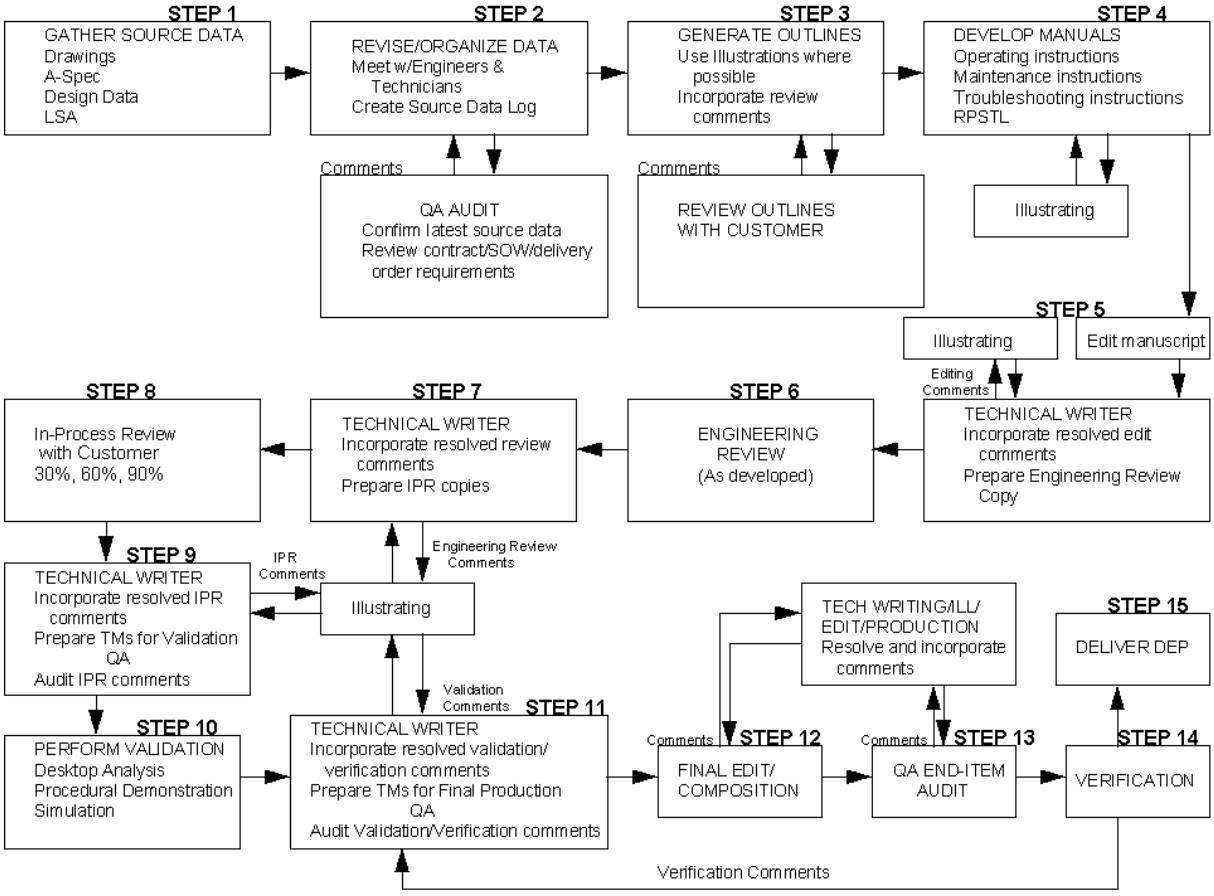

Figure 25 Technical Manual Development Cycle

19.1.1 PDEP and DEP Development. The PDEP and DEP are developed during the development cycle of a weapon system and are generally used in testing the weapon system. The FDEP is developed in the production cycle of a weapon system and, when printed and distributed, is the TM used in the field. The FDEP is usually a modification of the DEP resulting from changes to the weapon system prior to the start of production.

19.1.2 Organization Process of a TM. Figure 25 shows the process of how a TM is organized, developed, reviewed for accuracy during the development process, validated (usually by the writer), and verified (by the customer). Comments are constantly flowing to the database until all verification comments are resolved and included in the FDEP. The FDEP, upon delivery, may be used for printing or final digitalization.

19.2 Traditional Paper TM/DMWR Development: Process and Flow. Figure 26 shows the typical mechanics of developing paper TMs under the current specifications. The digital text file is produced in a standard word processing system and marked up for formatted output. Illustrations are prepared using CAD/CAM software, graphics illustration software, illustrators, or scanned from existing sources. The illustration files are merged into the digital file during the process of composition. Pages are composed according to the specified format for the level of maintenance for which the TM is being prepared. Each page created may be output on reproducible paper, film, or on a laser printer to obtain camera-ready copy. The camera-ready copy is made into offset plates and printed using conventional offset methods. The printed manual is

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generally distributed in loose-leaf form. The digital file of the composed TM, with its illustration files, is available for the revision process.

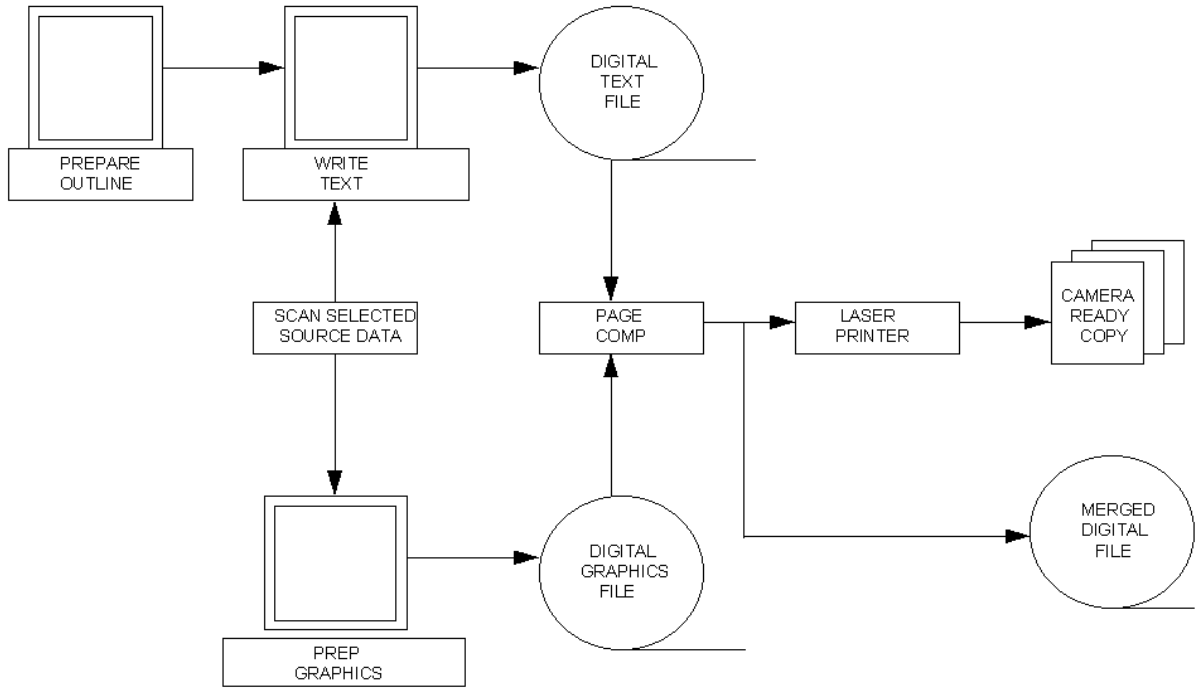

Figure 26 Traditional Paper TM Development Process and Flow

19.3 MIL-STD-2361/MIL-STD-40051(TM) TM Development: Process and Flow. Figure 27 illustrates this flow of TM development under MIL-STD-2361. The gathering of source data will remain essentially unchanged at first, although improved methods of digital capture of data could flow from MIL-STD-2361 in the future.

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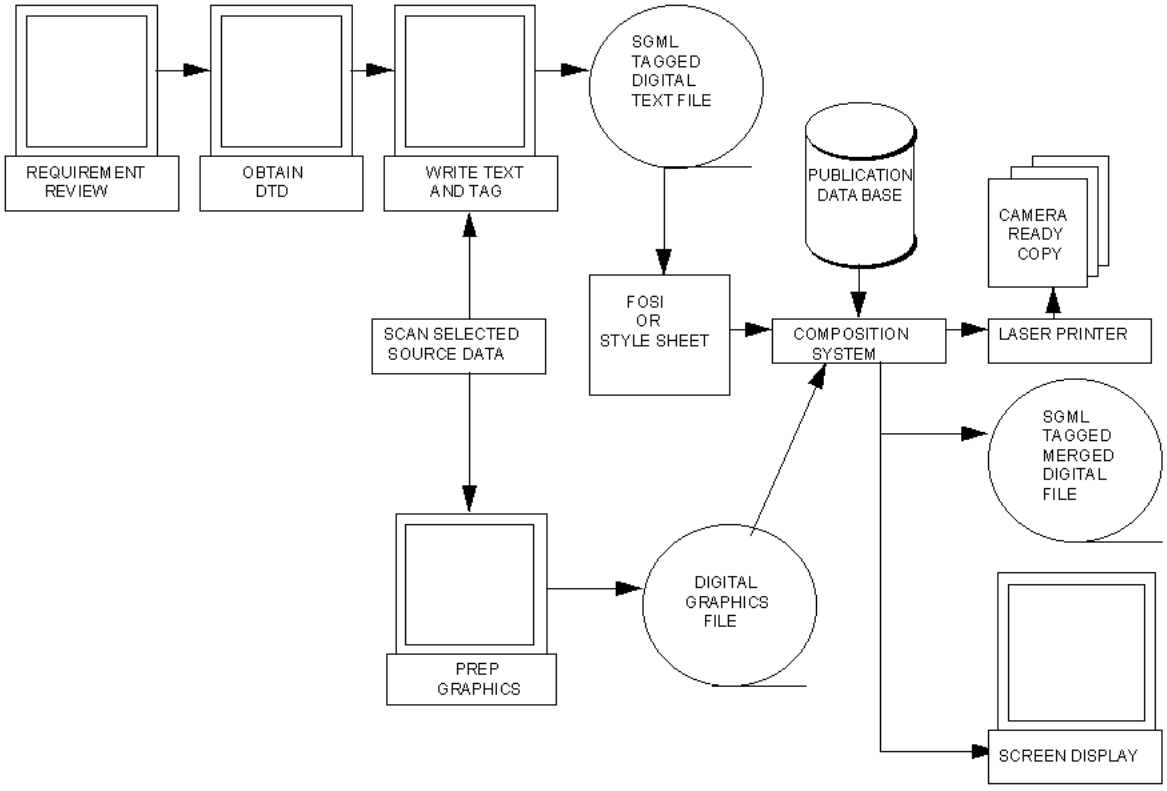

Figure 27 TM Development with MIL-STD-2361

19.3.1 Requirements review. Requirements may be received as a Request for Proposal (RFP), a contract, or modification to a contract. Upon receipt of the requirements, Subject Matter Experts (SME) and managers should review the requirements to determine that they reflect the customer stated end-product (the deliverable). Areas that are unclear or apparently misstated, should be noted for discussion with the requirement proponent. The requirements review should, as a minimum, determine the following:

a. Location of documentation, such as standards or specifications, required to complete the task. The documentation may accompany the contractual document as an attachment or exhibit. Frequently, however, contractual documents specify requirements by reference and direct the TM developer to a specific address to obtain the documentation.
b. Version, identification, and availability of Document Type Definitions (DTD) and other SGML objects and constructs required to develop the TMs in accordance with the Government requirements. Again, the DTDs may be provided with the contractual document. Or, they may be referenced and direction provided to contact the Administrative SGML Registry and Library (refer to paragragh 38.3 for further information) to obtain the DTDs and other associated SGML objects and constructs.
c. Legacy and new TM development. This is an important determination for both level of effort required and cost to complete the effort. Application of SGML to legacy data requires conversion from either paper or digital documents, and is normally time consuming, labor intensive, and costly.

19.3.2 SGML object and construct review and setup. The DTDs, and other SGML objects and constructs, must be acquired, either from the contracting activity as part of the contractual document, or from the ASRL. If the DTDs are not included with the contractual document, a Formal Public Identifier (FPI), location, and procedures for access should be provided for each required DTD. Figure 28 illustrates a general overview of the functional flow for the SGML setup.

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Figure 28 SGML Setup Process

Once the DTDs and associated SGML objects and constructs (e.g., FOSIs, tag description lists, etc.) have been obtained, the following should be accomplished:

a. Check the FPI, abstract, DTD, and FOSI to ensure the correct, contractually required (e.g., version number) SGML constructs have been provided. There may be more than one version of a DTD.
b. Parse the DTDs on an ISO-8879 compliant parser (e.g., SGMLS, etc.) Parsing should be done immediately after the DTDs are received. This will ensure the correctness of the DTDs and preclude TM development with a DTD containing errors. If the DTD does not parse, the provider of the DTD (contracting activity or the ASRL) should be contacted immediately.
c. Load the DTDs and, if appropriate, FOSIs on the SGML platform(s) and setup for the specific SGML tools (e.g., ArborText Author/Editor, Near & Far Author, and Soft Quad's Author Editor). If problems are encountered the ASRL maintains a capability for technical and SGML help.
d. Determine if conversion routines will be required for the FOSI to publish on existing platforms, and ensure development of the routines is included in the development cycle schedule for the TMs.

19.3.3 Document Type Definition (DTD) as the Outline. An outline of the manual, traditionally developed by the contractor as a deliverable, is not required when using the DPD concept and MIL-STD-2361. The MIL-STD-2361 DTD, provided by the Government as Government Furnished Information (GFI), can be used to develop the "outline" of the required TM in accordance with the functional requirements of MIL-STD-40051. The DTD reflects the structure of the content volumes of MIL-STD-40051. The main divisions of the manual are information chapters, which are comprised of work packages. Each of these divisions of the DTD have associated markup tags. In the case of TMs, the MIL-STD-2361 SGML tags associated with each of the functional requirements contained in MIL-STD-40051 have been physically embedded in the standard (See Figure 10). TM developers are able to prepare and furnish outlines by selecting applicable MIL-STD-2361 content tags which conform to content requirements specified in MIL-STD-40051.

5. DETAILED REQUIREMENTS.

5.1 Preparation of Description with Theory of Operation. Description Information with theory of operation shall be prepared as a General Information Chapter <gim>. This chapter shall be subdivided into individual work packages to provide the user with information for descriptive data about the weapon system or equipment, and an explanation of how the weapon system or equipment works. Information shall be divided into the following work packages.

a. Equipment Description and Data Work Package <descwp>.

b. Theory of Operation Work Package <thrywp>.

Figure 29 Example of Embedded Tags in MIL-STD-40051

19.3.4 TM Development. Upon receipt of the appropriate DTD, the writer can begin developing and writing the individual work packages. The writer can follow much the same development path as usual, EXCEPT that the material being developed must be tagged in accordance with the DTD that applies to the information chapter in which the work package appears. Most of the SGML author/editor tools today have "concurrent parsing" (which can be turned on and off) that "parses as you write." In other words, it will not allow incorrect tagging. The organization to which the technical writer or editor belongs may arrange tagging to suit its own structure and work flow. Tagging may be done by the TM writers themselves, or by specially

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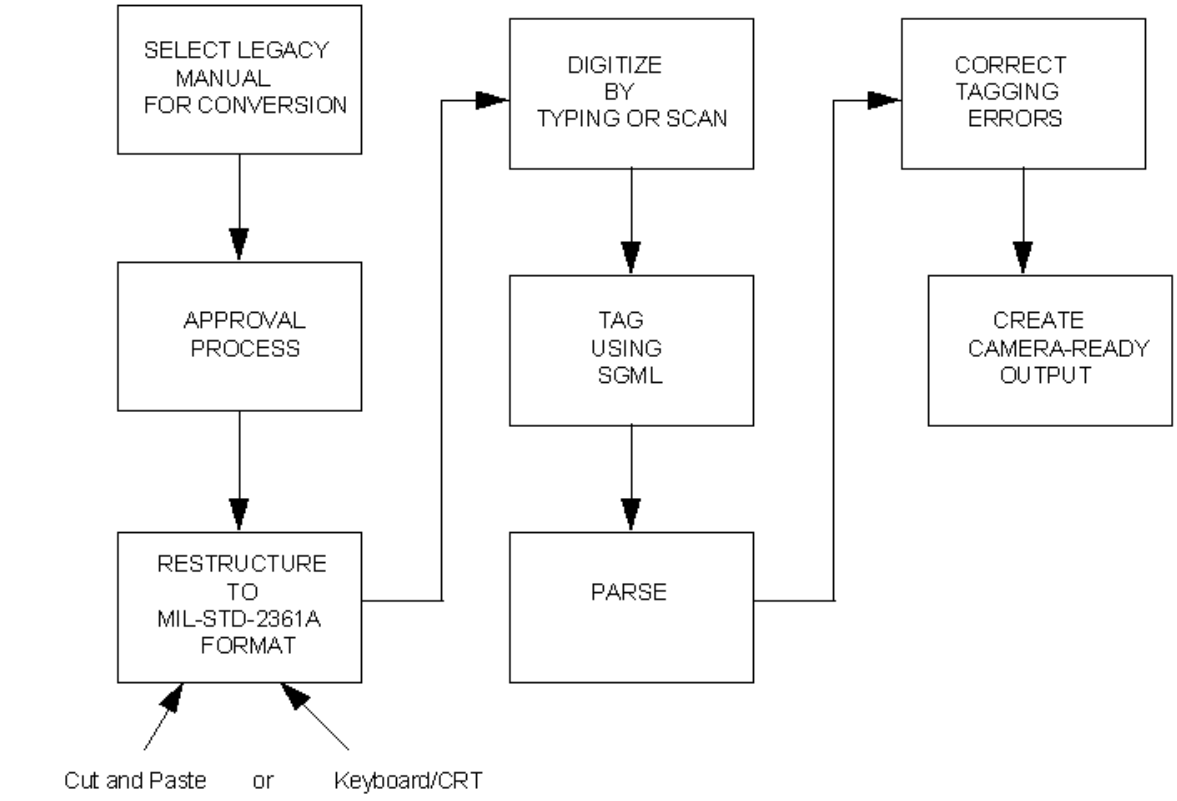
trained staff. In general, a subject matter expert (SME) will understand what tags are appropriate to apply. Illustrations may be incorporated by marked-up references to their placement in the manual and called into the TM for outputting the document or portions of the document.

19.3.5 Layout and Style. An important difference from current TM development practices is the use of a FOSI or style sheet, a formal method of specifying layout and style. This special SGML file maps the styles to be applied to the tags in the document (see Section 37, FOSI Application as a Style Guide). The composition system interprets the FOSI or style sheet for composition of paper or digital output.

19.3.6 Conversion of Legacy Data. Figure 30 shows a generalized process for converting legacy data to MIL-STD-2361 SGML-tagged data. Once the decision to convert legacy data to SGML is made, the legacy data should be available in electronic form (text-based, not raster or vector images or pages). If the legacy data to be converted is not available in this form, the data must be re-keyed or captured by text scanning. The digital legacy data must be restructured in accordance with MIL-STD-40051 requirements. The restructured data may then be tagged and reused in data resources in accordance with the MIL-STD-2361 DTDs. The conversion of legacy data to MIL-STD-2361 requirements will require re-allocation to other data resources in order to provide a complete implementation of the SGML constructs. Remember that the MIL-STD-2361 SGML content tags are included in the MIL-STD-40051 narrative. After tagging, the SGML file must be parsed against the appropriate DTD(s) to validate the markup, structure, and syntax. For a more detailed discussion of legacy data conversion refer to Section 20, Introduction to SGML.



NOTE: Approved legacy data, previously digitized, must be restructured to MIL-STD-2361A format, tagged, and parsed.

Figure 30 Conversion of Legacy Data

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20 INTRODUCTION TO SGML.

20.1 Introduction. This section provides a foundation for working with, and understanding, SGML. Handbook users will find this section invaluable in identifying and defining the idiosyncrasies peculiar to SGML. Users are provided information regarding "what SGML is", and why its use (and "reuse") is beneficial for sharing document-based information among applications and between different computer platforms. There are references within the section that point the user to other areas of information and guidance, such as the parts for SGML Tutorial and References. There are also graphic examples of the concepts under discussion to assist in the handbook user's understanding of the material being presented.

20.1.1 SGML Experience. There are varying degrees of SGML experience and expertise required for different levels of function processes. For example, a publication author and his manager need not necessarily have the same SGML background. This section addresses the levels and types of SGML experience and expertise that may be needed for different implementation considerations.

20.1.2 Four Primary Components. The user will find easy to understand discussions regarding the four primary components of SGML composition: the Document Type Definition (DTD), document instances, the SGML declaration, and SGML markup. Each of the components is described as to its role in the composition process. The SGML markup discussion breaks markup into its essential parts (e.g., tags, elements, attributes, and entities), and describes how the DTD structure and the document instance comprised of these parts are validated through the parsing process.

20.2 What is SGML. Standard Generalized Markup Language (SGML) is a standard approach for applying markup to the content of documents. It is an international, platform-neutral standard for creating and using documents and information across multiple software applications and computer platforms. SGML establishes a consistent language and terminology which provides publications developer and user activities the capability to share and reuse publication information, and to preserve the organization and content of documents. The application of SGML in accordance with MIL-STD-2361 and this handbook is fully compliant with the international, federal, and CALS standards for SGML used throughout the Government and industry (see Section 2, Applicable Documents). Refer to the Section 20, Introduction to SGML for additional information regarding SGML.

20.2.1 SGML Requirements. MIL-STD-2361 establishes SGML requirements which reflect the functional requirements associated with the different types of Army publications. For example, the SGML requirements contained in the technical manual (TM) segment of MIL-STD-2361 reflect the functional requirements contained in MIL-STD-40051, Technical Manual Preparation. SGML provides capabilities for developers and users of publication information to output the information on a variety of media (e.g., paper, CD-ROM, WWW, etc.).

20.2.2 Why use SGML. SGML allows developers to update and maintain critical source information over the life-cycle of weapon systems and other equipment. SGML provides a means for the reuse and exchange of information among its developers and users. SGML is an industry standard for sharing document-based information among applications and is compliant with open systems environments.

20.2.3 The Digital Publications Development (DPD) Program concept. SGML, as applied to the DPD Program concept and implemented by MIL-STD-2361, provides the following:

a. Description of the logical structure of documents in unambiguous syntax.
b. Assurance of automated quality control over adherence to that structure.
c. Delivery and storage of publication text in an easily maintained and updatable form.
d. Vendor, software, and platform independence.

20.2.4 SGML Reference. SGML reference information can be found in Section 6, Volume Volume 1 of this handbook.

20.2.5 MIL-STD-2361 SGML Tags. The MIL-STD-2361DTDs contain two specific types of SGML tags: structural and content tags. Structural tags identify data by its place in the hierarchy of the document and by how the material is formatted on the page (i.e., primary paragraph, subparagraph, list, or table). Content tags identify material by its functional use or the type of data (i.e., maintenance task, circuit alignment, controls and indicators, or components of end item table).

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20.2.6 SGML Tutorial. A tutorial for MIL-STD-2361SGML application and use is contained in Part 20, Introduction to SGML of this handbook. The tutorial appendix in this version of the handbook is intended to provide an overview of the use of SGML.

20.3 SGML Experience and Expertise. There are varying degrees of SGML experience and expertise required for different functions. For example, a publications author and his manager need not necessarily have the same SGML background. This portion of the handbook will address the levels and types of SGML experience and expertise that may be needed for different implementing considerations. The considerations offered below are applicable to both Government and private industry publications developers, authors, and other functions involved with the development and acquisition of publications and publication services.

20.3.1 Types of SGML Knowledge. This paragraph addresses the types of SGML knowledge that will be required by personnel at different functional levels. The functional personnel levels and types addressed below have been the primary players in the MIL-STD-2361 operational testing conducted to date. This type of information will be expanded in later revisions of the handbook, as the operational test results become more definitive.

20.3.1.1 Publications Manager. A publications manager needs a good overall understanding of SGML. The managers experience and depth of SGML knowledge may not be as great as the publication authors or computer specialists, but it should be sufficient to evaluate their technical input and make informed decisions. These decisions may involve the evaluation and selection of an SGML authoring/composition system for the organization, or contracting work to an SGML conversion contractor, a publications developer, or SGML consultant. SGML knowledge provides the manager with tools for evaluation of technical SGML input, whether it comes from within his own organization or some other source.

20.3.1.2 Publications Author. The publications author will be the primary user of SGML. The author will be authoring new material, developing publication revisions, and working with legacy data converted (or scheduled for conversion) to SGML. The author will require the ability to read, understand, and work with SGML concepts, rules, Document Type Definitions (DTDs), and Formatting Output Specification Instances (FOSIs). See paragraphs 20.5.1 and 20.5.4.7 for information on DTDs and FOSIs.

20.3.1.3 Computer Specialist. The computer specialist (including programmers and System Manager) will be the key technical person(s) for accomplishing the detailed technical requirements associated with computer equipment used to develop SGML publications (e.g., the author/editor, composition system, database, etc.). The computer specialist SGML knowledge should be sufficient to allow interpretation of DTDs in order to develop composition scripts, conversion rules, and database management requirements.

20.4 SGML Overview.

20.4.1 SGML is a Markup Language. SGML is a markup language that has been standardized by the International Organization for Standards (ISO). Its syntax and semantics are specified in ISO 8879, Standard Generalized Markup Language. A MIL-STD-2361 application of SGML is fully compliant with ISO 8879 and enhances the utility of the international standard through the use of functionally grouped, content-tagged publication information. The fact that the markup used in SGML is standardized facilitates the exchange of tagged documents between software applications. SGML markup is commonly spoken of as tagging, because tags are inserted into the text.

20.4.2 SGML is Not a Processing Language. SGML is not a processing language; nor does it perform a series of actions in the way that a computer program, written in a language like C, does. Instead it supplies a structured, tagged text database upon which a software application can act. It is like having the record definition of a traditional database without the ability to sort and retrieve. Sorting and retrieving in SGML are accomplished by software that “speaks” SGML and can respond to Document Type Definitions (DTD).

20.4.3 Understanding SGML as a Text Database. Understanding SGML as a text database reinforces its separation of content markup and specific presentation instructions. SGML is ideally suited to multiple presentation formats and media platforms. SGML aims to encourage descriptive markup rather than process-oriented markup. For instance, MIL-STD-2361 uses the tag <remove> rather than a code that describes the format of this subhead; the fact that the tag will be presented as 10 point, boldface Helvetica is inferred rather than expressed directly (in MIL-STD-2361 the FOSI provides this information).

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20.5 SGML Composition. SGML is used to define the structure and contents of a set (or class) of documents, whether those documents consist of one page or a thousand pages. This definition is accomplished and portrayed through the utility in the different parts that comprise MIL-STD-2361 SGML.

20.5.1 Document Type Definitions (DTD). The primary functional unit for SGML is the DTD. MIL-STD-2361 DTDs form a generalized picture of the types of data found over a whole range of publications, rather than descriptions of the specific contents in any one publication.

a. The DTD declares which elements make up the document, the possible sequences in which they will be found, the number of occurrences in that sequence, and what lower-level elements each element may contain. In turn, lower-level elements are described in those same terms. In general, text characters form the lowest-level content of a document.
b. The DTD describes the hierarchical relationships of the elements. For instance, the maintenance information chapter in MIL-STD-2361 module contains several possible types of work packages; one type of work package, the maintenance work package, contains maintenance tasks that consist of procedures made up of steps, and so on.
c. An element can occur at different levels of the hierarchy or in different branches of the hierarchy. For example, lists can occur in Step1, Step2, or Step3 (different levels of a single branch); and in paragraphs and warnings (different branches).

20.5.2 Document Instances. What we commonly think of as documents, actual pages of text and graphics, are known as document instances. In the context of a TM developed in SGML in accordance with MIL-STD-2361, a document instance is any part of a content volume(s) with a complete structure as dictated by the relevant DTD. For instance, the minimum structure of an information chapter must include at least one work package and any mandatory lower-level markup. The “document” described in a DTD is a generalized, virtual template. In simplified terms, a document instance consists of:

a. Text marked up with SGML tags.
b. Illustrations incorporated by tagged references to graphic files.
c. Every document instance must either incorporate or reference its governing DTD.
d. If the document instance uses external file or text entities not defined in the DTD, those entities must be declared in the document instance.

20.5.3 SGML Declaration. Every document and DTD is accompanied by an opening SGML declaration. This file defines the markup character set and the SGML characteristics of the DTD. The SGML declaration includes the characters used as syntactical markers, the maximum length of element and attribute names, special SGML features used, and types of markup minimization. The syntactical markers defined in ISO 8879 itself are known as the reference concrete syntax, and this syntax is used in MIL-STD-2361. Each DTD in MIL-STD-2361 uses the defined SGML declaration in MIL-STD-2361.

20.5.4 SGML Markup. SGML markup includes element tag names, element attributes, and reference entities. These markup categories each have a standardized syntax defined in the ISO 8879 standard. The MIL-STD-2361 DTDs use this standard syntax.

20.5.4.1 SGML Tags. Tags contain two parts: start-tags and end-tags. Where the end tag should occur is guided by the DTD hierarchy. It cannot be inserted until all required content of an element has been included. For instance, the end tag of a maintenance task in a work package cannot occur until at least one procedure has been inserted, insuring that a maintenance task has associated text.

EXAMPLE:

- DTD fragment:

```
<!ELEMENT crewmember - - (#PCDATA)>
```

- Document instance fragment:

```
<crewmember>Gunner<crewmember>
```

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Table 20-1. SGML Tags

Order	Part	Description
1	<	Start Tag Open Delimiter
	</	End Tag Open Delimiter
2	crewmember	Generic Identifier
3	>	Tag Close Delimiter

20.5.4.2 Markup Minimization. ISO 8879 includes several methods to minimize the amount of markup in a document instance. The MIL-STD-2361 DTDs use the feature omit tag, which allows the writer to omit the start-tag or end-tag as specified in the DTD element declaration. Only end tags are omitted in MIL-STD-2361, but the writer should consult the DTD to distinguish which end tags are required and which can be omitted. In general, end tags are dropped only when the beginning of the next element unambiguously signals that the prior element is closed. Even if the end tag is specified, the writer may insert the end tag. For example, the end tag of a procedure can be omitted since another procedure is at the same hierarchical level and none of a procedure's contents occurs at a higher level than a procedure.

```
<!ELEMENT proc - o (title?,%alert;,para*, stepl+)>
```

NOTE

SGML editors will automatically insert end tags even if the DTD specifies optional end tag, except for the special case EMPTY.

20.5.4.3 Distinct Categories. Elements are distinct categories of content, such as "work package," "procedure," "stepl," "table," and "tools."

a. Elements range from the largest divisions of the document down to single words if they are significant data. An important criteria for creating an element is its usefulness for applications such as database retrieval and page composition. An element can contain other elements, such as a warning summary that contains general paragraphs, warnings, hazard symbols, etc. Elements in running text, such as "part number," often contain only character data, which, in the DTD, is identified as "#PCDATA," parsable character data. Elements are identified by an element name. When that name occurs in text, surrounded by characteristic syntactical markers, it is called a tag.

b. In the DTD, an element declaration includes an element name, markup minimization rules, the contents of the element, and any attributes of the element. The contents portion of the declaration is often called a "content model," which refers to the generalized nature of this representation of all possible contents and sequencing. The content model is surrounded by parenthesis.
```
<!ELEMENT surwp -- (wpidinfo, wpinfo, geninfo?, %alert;, surtsk+)>
```

c. The MIL–STD–2361(AC) elements identify generic contents rather than precise, literal contents. For instance, <remove> identifies "a removal task" rather than "removal of the Abrams M-1 rear exhaust components." On the other hand, MIL–STD–2361(AC) uses <remove> rather than <para0>, a structural text object from the base tag set in MIL–PRF–28001. In the base MIL–PRF–28001 DTD, <para0> could be used indiscriminately for removal, assembly, inspection, install, repair-replace, and all other types of maintenance tasks. This specific content orientation of MIL-STD-2361 provides level of granularity essential to full source data sharing and reuse.

20.5.4.4 Attributes. Elements can be qualified by adding attributes. Attributes are part of the element declaration in the MIL-STD-2361 DTD and address such aspects of the data as security classifications, maintenance levels, reference IDs, and column widths of tables. An attribute has a name and an expected data type specified in the DTD and also has its status as required entry, implied value, or defaulted value defined. ISO 8879 defines several data types, depending on whether the value consists of numbers only, numbers and alpha characters, reference SGML elements, cross-references, or an unlimited text string. Rather

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than a data type, the DTD can also declare a discrete list of legal values, or it can use a Boolean true-false test (any value other than "0" represents true).

```
<!ATTLIST pmcstable
             crew-maintained  %yesorno;         #IMPLIED
             tabstyle         NMTOKEN           #IMPLIED
             tocentry         %yesorno;         "l"
             shortentry       %yesorno;         #IMPLIED
             frame            (top | bottom |
                               topbot | all |
                               sides | none)    #IMPLIED
             colsep          %yesorno;          #IMPLIED
             rowsep          %yesorno;          #IMPLIED
             orient          (port | land)      #IMPLIED
             %refs;
             %secur;>
```

20.5.4.5 Entities. SGML allows the user to store text as entities that can then be referenced in the document instance by their entity names. Entities content may be any length (up to 300,000 characters). In MIL-STD-2361, for example, the entire boilerplate explanation of the maintenance allocation chart is declared as an entity and can be included in the work package by a single entity reference. Entities are also often used to reference external files, such as graphics. Indeed, users working with MIL-STD-2361 documents, although they do not need to be able to write DTDs, do need to learn the syntax for declaring entities in order to include specific illustrations within the document instance. The DTDs in MIL-STD-2361 also include entity declarations of standard ISO 8879 character sets. A non-keyboard character, such as "plus-or-minus" or "ohm," should be inserted into the document instance through one of the entity references in these ISO character sets.

a. Text entity example:
    a. In the DTD:

```
<!ENTITY chkeqp "<para>Inspect the equipment for damage incurred during
shipment. If the equipment has been damaged, report the damage on
SF 361, Transportation Discrepancy Report.<para><para>Check the
equipment against the packing slip to see if the shipment is complete.
<para><para>Report all discrepancies in accordance with applicable
service instructions (e.g., for Army instructions, see DA PAM 738-750).
<para><para>Check to see whether the equipment has been modified.
<para>">
```

    b. Referenced in the instance:

```
&chkeqp;
```

b. Non-keyboard character entity reference:
    a. In the DTD:

```
<!ENTITY plusmn SDATA "[plusmn]"--/pm B: =plus-or-minus sign-->
```

    b. Reference in the instance:

```
&plusmn;
```

20.5.4.6 Validation of SGML Markup. A distinctive characteristic of SGML is the parsing process, which allows the DTD structure and the document instance markup to be tested. Unlike most proprietary markup languages, SGML is self-validating through the medium of the SGML parser. Refer to paragraph 21.2.4.2 for additional information on SGML parsing.

a. In order to proof document instance markup, the DTD must be parsed first. Parsing creates a file that encodes the sequence, number, content model, and required tagging rules of the DTD. In short, the full structure of the DTD. Errors in the DTD are identified during this parsing process to ensure the DTD conforms to the ISO 8879 standards.
b. The encoded file is used thereafter whenever a document instance governed by that DTD is parsed. Parsing a document instance checks that all conditions of the DTD have been met, as well as the general rules of SGML. The parsing process guarantees that any SGML application software receives

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files with the expected structure, since the operation of SGML software is built on the tags context within the document.

20.5.4.7 Formatting Output Specification Instance (FOSI). In MIL-STD-2361, a FOSI is written for each DTD. FOSIs follow the OS DTD included in Appendix B of MIL–STD–28001B Amendment 1.

a. A FOSI creates a map of format characteristics and actions that relate to the elements in the document instance. Actions are such things as storing instance data, inserting stored strings and counter values, and building index entries.
Example:

```
<!-- This begins the DOCUMENT DESCRIPTION which is
     considered to be the default environment -->
<docdesc>
<charlist>
<font inherit="O" style="serif" size="lO" posture="upright"
   weight="medium" width="regular" smallcap="O" offset="O">
<leading lead="12">
<hyphen hyph="1" zone="O">
<wordsp minimum="0.25em" nominal="0.35em" maximum="0.75em">
<lettersp minimum="0.Oem" nominal="O.Oem" maximum="0.025em"
   kerntype="none" kernpair="null">
<indent leftind="O" rightind="O" firstln="O">
<quadding quad="left" lastquad="lleft">
<highlt reverse="O"  scoring="O" scorewt="0.5pt" scoreoff="2.5pt"
   scorechr=""  bckclr="bwhite" fontclr="black" bckpct="O"
   forpct="lOO"  allcap="O">
<charlist>
<docdesc>
```

b. Each element described in the FOSI is qualified by its document context, attributes, and order of occurrence in a sequence of identical tags. The software application then can apply the format characteristics and perform any actions specified in the FOSI whenever it finds a matching qualified element in the text stream of the document instance.
Example:

```
<e-i-c gi="tow">
<charlist>
<usetext source="/TOWING/" placemnt="before">
<subchars>
<font inherit="1" weight="bold">
<highlt allcap="1">
<presp minimum="6pt" nominal="12pt" maximum="30pt">
<postsp minimum="4pt" nominal="6pt" maximum="12pt">
<keeps next="1">
<textbrk startln="1" endln="l">
<subchars>
<puttext>
<charlist>
<e-i-c>
```

c. A FOSI takes advantage of the hierarchical structure of the DTD to apply different formats to a single element in different contexts. Therefore, a list in a table can look different than a list in a paragraph and so on. The FOSI can specify that actions such as adding rules or text take place at the start or end of an element. The hierarchical nature of a DTD means that the children of an element occur before the action is taken. For instance, if the FOSI specifies a rule to be inserted at the end of the work package information (<wpinfo>); the children of the tools list, references, personnel required, etc., will all appear on the page above that end rule.

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d. Specific attribute values can also affect the look or use of an element's data or cause different text to be generated. For instance, the value of the "level" attribute on the tag <maintlvl> generates text in the work package information indicating the maintenance level.

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21 IMPLEMENTATION GUIDANCE.

21.1 MIL-STD-40051A(TM) and MIL-STD-2361 Relationship.

21.1.1 MIL-STD-40051A(TM) , "Technical Manual Preparation". MIL-STD-40051A(TM) establishes the technical and functional content, style, and format requirements for the preparation of paper and digital page-oriented TMs and DMWRs within the Department of the Army. The standard covers the development of these publications, and revisions, for operations and maintenance through depot level. The requirements contained in MIL-STD-40051A(TM) are divided into the following specific functional elements (parts) to enhance documentation usability in performance of weapon system/equipment and component maintenance.

a. Introductory Information with Theory of Operation.
b. Operator Instructions.
c. Troubleshooting Procedures.
d. Maintenance Instructions.
e. Repair Parts and Special Tools List (RPSTL).
f. Supporting Information.

Each of these parts provide instructions on how to develop and structure the required technical information into chapters containing individual work packages in a logical order of work sequence. These work packages are stand-alone units containing all information essential for directing task performance.

21.1.1.1 Technical Content Selection Matrixes. MIL-STD-40051A, contains tables that list all of the technical and functional content requirements for the development of all levels of maintenance (through depot) for TMs and DMWRs. The tables indicate which parts of MIL-STD-40051A are applicable and lists the content requirements for each type of TM/DMWR. The content requirements presented in the tables are in the order in which they should appear in the TM/DMWR. The Technical Content Selection Matrixes appear in MIL-STD-40051A as shown in the following example.

Table 21-1. Technical Content Selection Matrixes

Table A-1 TM Requirements Matrix for _____						
TM Content	**-10**	**-12 -12&P**	**-13 -13&P**	**-14 -14&P**	**MIL-STD- 40051A Reference**	**Element Name**
FRONT MATTER	R	R	R	R	5.3.1	<frnt>
Front Cover	R	R	R	R	5.3.1.1	<frntcover>
Warning Summary	R	R	R	R	5.3.1.2	<warnsum>
Change transmittal page	R	R	R	R	5.3.1.3	<chgsheet>
List of effective pages /work packages	R	R	R	R	5.3.1.4	<loepwp>
Title block page	R	R	R	R	5.3.1.5	<titleblk>
Table of contents	R	R	R	R	5.3.1.6	<contents>
How to use this manual	R	R	R	R	5.3.1.7	<howtouse>
GENERAL INFORMATION WORK PACKAGE	R	R	R	R	5.3.1.9	<ginfowp>

21.1.1.1.1 Explanation of Matrix Column Content. The columns in the Content Selection Matrixes contain specific information to assist the user in determining the appropriate functional requirements for the TM/DMWR being developed. A brief description of each of the columns is provided below.

a. Column 1 shows the name of the TM/DMWR content part.
b. Column 2-5 contains an "R" if the content is required in the TM/DMWR. The column block will be blank if the content is not mandatory.

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c. Column 6 contains a reference to the MIL-STD-40051A paragraph which addresses the TM/DMWR content requirement.
d. Column 7 contains the TM/DMWR content element name (NOTE: the element name is also the SGML tag name from MIL-STD-2361A).

21.1.1.1.2 Intended Use on the Content Selection Matrixes. The proponent of the TM/DMWR will determine the type(s) of TM/DMWR required for each acquisition. Once this determination has been made, the proponent may duplicate the appropriate matrixes (i.e., the ones that contain the applicable requirements for the TM/DMWR being developed.). The proponent may indicate the type(s) of TM/DMWR required by filling in the blank after "TM Requirements Matrix for" at the top of each matrix. For each type of TM/DMWR selected, the proponent will indicate in the open blocks the "TM Content" desired by entering "R" for REQUIRED content; "NR" for content that is NOT REQUIRED; or an "O" for OPTIONAL content that may be required in the TM/DMWR later by the Government.

21.1.1.1.3 Acquisition Impact. The TM/DMWR Content Selection Matrix table(s) will become contractually binding when it is made part of a contract, statement of work, or other contractual instrument.

21.1.2 MIL-STD-2361A, "Digital Publications Development". MIL-STD-2361A establishes the Standard Generalized Markup Language (SGML) requirements for use in Army digital publications. This standard is a product-oriented interface standard that addresses SGML application to functional requirements set forth in Government functional requirements standards and specifications. This standard establishes the requirements for developing SGML publications in accordance with the various Army functional requirements standards and specifications.

21.1.2.1 MIL-STD-2361A in Publication Development. Within MIL-STD-2361A, Army publication SGML requirements are separated by publication types. There are specified sections for administrative publications, training and doctrine publications, and technical and equipment publications. Each of these publication types are governed by technical and functional requirements documents, which specify the technical, functional, format, and style requirements for the respective publications. The SGML requirements in MIL-STD-2361A are based on, and explicitly reflect, these technical, functional, format, and style requirements.

21.1.2.1.1 SGML Requirements Development. This volume of MIL-HDBK-2361 addresses implementation guidance for the development of Army publications using the SGML requirements for Army TMs and DMWRs contained in MIL-STD-2361A. The MIL-STD-2361A SGML requirements were developed in accordance with, and directly reflect, the functional requirements contained in MIL-STD-40051A.

21.1.2.1.1.1 Functional Requirements Analysis and Determination. SGML requirements contained in MIL-STD-2361A were developed to support Army publication proponent functional requirements. Proponent requirement documents were reviewed and analyzed with the proponent to determine the current functional publication requirements. In some cases, the functional requirements may have to be re-engineered (restructured) to accommodate the work package concept (i.e., TM/DMWR requirements were re-engineered to become MIL-STD-40051A). (NOTE: In no case will functional requirements be changed by ANYONE other than the proponent for the requirements.)

21.1.2.1.1.2 Determination of SGML Requirements. Once the current functional requirements have been identified, re-engineered (if required), and validated, existing SGML DTDs and tags are reviewed to determine if the functional requirements are covered by existing SGML requirements. This review will result in the identification of existing SGML that may be applied to the functional requirements. Another result of the review will be the identification of functional requirements for which no existing SGML requirement exists. In this case, new SGML DTDs and/or tags will have to be developed.

21.1.2.1.1.3 Application of SGML Requirements to Functional Requirements. When the joint determination between the functional requirement proponent and the SGML requirement proponent has been made that the SGML requirements accurately reflect the functional requirements, the SGML applications may be applied to the publications. In the case of TMs and DMWRs, the application of SGML is normally accomplished by a publication development contractor under a contract from the publication proponent.

21.1.2.2 Publication and Requirement Relationships. There is an explicit relationship chain between a TM/DMWR, their functional requirements document (MIL-STD-40051A), and the SGML requirements document (MIL-STD-2361A). One of the objectives of this handbook is to provide a clear understanding of

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these relationships to its users. This paragraph will address the relationships between the elements of the respective documents and show how the element relationships are mapped.

21.1.2.2.1 Element Relationships. TM/DMWR content is comprised of document elements as shown in Column 1 of the TM/DMWR Content Selection Matrixes, above. These document elements have a defined relationship with both the functional requirements in MIL-STD-40051A and the SGML requirements in MIL-STD-2361A.

21.1.2.2.1.1 TM/DMWR Content to MIL-STD-40051A Requirements. Each item in TM/DMWR content (e.g., Front Matter, General Information Work Package, etc.) can be mapped to a functional requirement (paragraph and page) in MIL-STD-40051A. The TM/DMWR content is the result of it's corresponding functional requirement in MIL-STD-40051A. The MIL-STD-40051A functional requirement defines the content, specifies its location in the TM/DMWR, and defines whether or not the content is required.

21.1.2.2.1.2 TM/DMWR to MIL-STD-40051A to MIL-STD-2361A. Both the TM/DMWR content items and their corresponding functional requirements can be mapped to the SGML requirements in MIL-STD-2361A. As previously stated, the SGML requirements in MIL-STD-2361A reflect specific functional requirements in MIL-STD-40051AMIL-STD-2361A. For each TM/DMWR content item and MIL-STD-40051A functional requirement there is a corresponding DTD, SGML tag, and paragraph/page reference inMIL-STD-2361A. The following matrix is an example illustrating the mapping between the TM/DMWR, MIL-STD-40051AMIL-STD-40051A, and MIL-STD-2361A.

Table 21-2. Mapping TM/DMWR to SGML Requirements

TM/DMWR Content	**MIL-STD-40051 Reference**	**MIL-STD-2361 Reference**	**MIL-STD-2361 DTD**	**MIL-STD-2361 SGML Tag**		
	Paragraph	**Page**	**Paragraph**	**Page**		
General Information Work Package	5.3.1.9	58	C.3.1.1	71	GIM	<ginfowp>
Troubleshooting Procedures	3-5.3	6	F.3	181	TIM	<tsproc>
Removal	4-5.3.4.9.1.6	23	E.3.1.48.13	147	MIM	<remove>

21.2 Element Relationships. Technical Manuals (TM) developed in accordance with MIL-STD-2361 and MIL-STD-40051 will consist of volumes (if required by number of pages), information chapters, and work packages (WP) as indicated in Figure 31.

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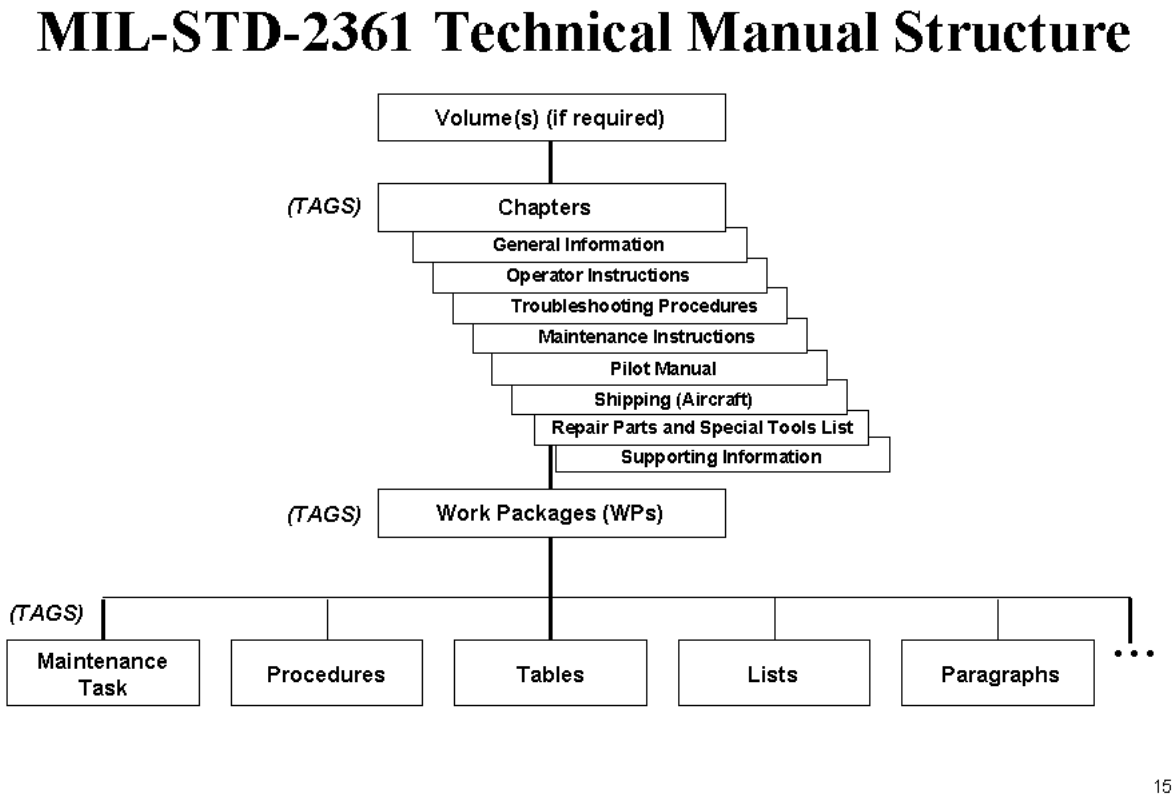

Figure 31 MIL-STD-2361 TM Structure

a. Information Chapter. An information chapter consists of specific functional matter required by MIL-STD-40051, such as introductory information with theory of operations or maintenance instructions. Each information chapter is made up of one or more work packages. Examples of Maintenance Information Chapters (MIM) include end items (e.g., M16A1 Rifle, M109A1 Truck, or Aircraft) or system components (e.g., engine, gun carriage, landing gear, etc.). Other information chapters provide General Information (GIM), Troubleshooting Information (TIM), Operator Information (OPIM), Supporting Information (SIM) and parts or RPSTL information (PIM).

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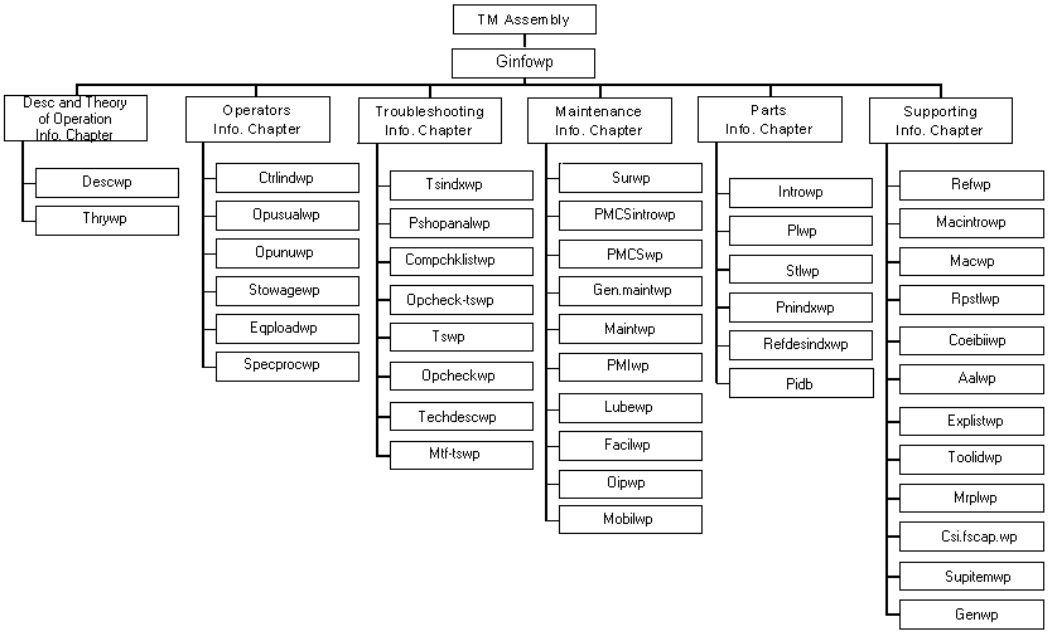

Figure 32 MIL-STD-2361 Information Chapter Hierarchy

b. Work Package. A work package (WP) consists of all data required to perform a specific function, such as service upon receipt, Preventative Maintenance Checks and Services (PMCS), or individual maintenance tasks. This structuring allows electronic access to specific pieces of information required by a technician to perform a specified task. Each work package is assigned a unique identification number (see MIL-STD-40051) for configuration control and reuse of the information contained in the WP. This number does not change over the life of the work package. SGML content tags allow access and use of the same work package for other weapons systems where the same function is performed. Work packages can be printed out, viewed on a computer screen, or otherwise outputted as individual documents and used separately. See Figure 33 for an example of a work package.

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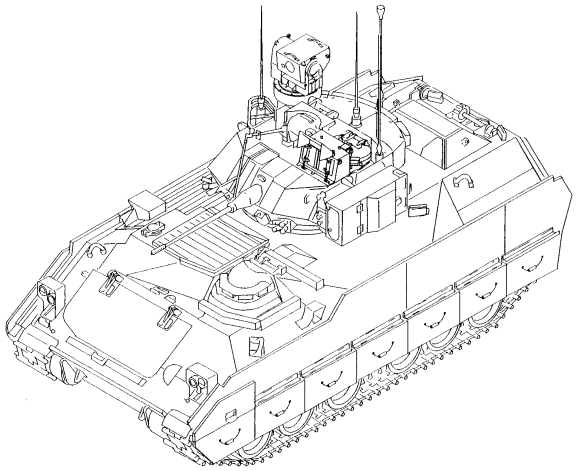
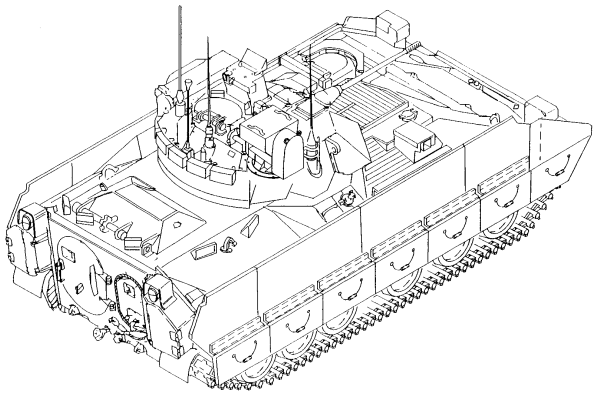
TM 9-2350-294-10-1 0001 00

OPERATOR
FIGHTING VECHICLE, INFANTRY
M2A3
2350-01-436-0005 (EIC TBD)
FIGHTING VECHICLE, INFANTRY
M3A3
2350-01-436-0007 (EIC TBD)
GENERAL INFORMATION

SCOPE



Left Front View



Right Rear View

This manual tells how to operate and maintain the hull so fthe M2A3 and M3A3. TM 9-2350-294-10-2 tells how to operate and maintain the turret.

MAINTENANCE FORMS, RECORDS AND REPORTS

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-750. The Army Maintenance Management System (TAMMS).

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

If your vehicle needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design. Tell us why a procedure is hard to perform.

Figure 33 Work Package Sample

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c. The following is an example of a tagged instance for a General Information Work Package:

```
<ginfowp wpno="G00001-9-2350-294" wpseq= 0001 00 summary-detail="0">
<wpidinfo>
<maintlvl level="operator">
<eicnomen>
<sysnomen>
<name>FIGHTING VECHICLE, INFANTRY</name>
<modelno>M2A3</modelno>
<nsn>2350 01 436 0005</nsn>
<eic>(EIC TBD)</eic>
<name>FIGHTING VECHICLE, INFANTRY</name>
<modelno>M3A3</modelno>
<nsn>2350 01 436 0007</nsn>
<eic>(EIC TBD)</eic>
</sysnomen>
</eicnomen>
<title>GENERAL INFORMATION</title>
</wpidinfo>
<scope>
<para>
<figure><title>Left Front View</title>
<graphic boardno="ev0038"></figure>
<figure><title>Right Rear View</title>
<graphic boardno="ev0052"></figure>
</para>
<para>This manual tells how to operate and maintain the hulls
of the M2A3 and M3A3.<extref docno="TM 9-2350-294-10-2">tells how
to operate and maintain the turret.</para>
</scope>
<mfrr>
<para>Department of the Army forms and procedures used for equipment
maintenance will be those prescribed by<extref docno="DA PAM 738-750">,
The Army Maintenance Management System (TAMMS).</para>
</mfrr>
<eir>
<para>If your vehicle needs improvement, let us know.  Send us
an EIR. You, the user, are the only one who can tell us what
you don't like about your equipment.  Let us know why you don't
like the design.  Tell us why a procedure is hard to perform.
Put you ideas on an SF 368 (Quality Deficiency Report).  Mail
it to us at:<proponent><name>Commander, US Army Tank-Automotive
Command</name><address><servnomen>ATTN: AMSTA-QRT</servnomen><city-state>Warren,
MI 48397-5000</city-state></address></proponent>.</para>
</eir>
<handreceipt>
<para>Hand receipts for Components Of End Item (COEI), Basic Issue
Items (BII), and Additional Authorization List (AAL) items are
in<extref docno="TM 9-2350-294-10-HR">This manual is to aid in property
accountability and is available through:  Commander, Baltimore AG
Publications Center, 2800 Eastern Blvd., Baltimore, MD 21220.</para>
</handreceipt>
<destructmat>
<para>The following manuals tell you how and when to destroy
Army materiel to prevent enemy use:
<randlist>
<item><extref docno="TM 750-244-2"></item>
```

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<item><extref docno="TM 750-244-5-1"></item>
<item><extref docno="TM 750-244-6"></item></randlist></para>
</destructmat>
<pssref>
<para>TBD</para>
</pssref>
<nomenreflist>
<para>This listing includes nomenclature cross references used in this manual.
<deflist>
<term>Brush guard</term><def><para>Duck core rubber sheet</para></def>
<term>CVC helmet</term><def><para>DH 132 helmet</para></def>
<term>Dipstick</term><def><para>Liquid measure gage rod</para></def>
<term>Firing port weapon</term><def><para>M231 5.56mm submachinegun</para></def>
<term>Hot box</term><def><para>25mm ammo container</para></def>
<term>Lock wire</term><def><para>Nonelectrical wire</para></def>
<term>MRE heater</term><def><para>Heater, water and ration</para></def><term>Surge tank</term><def><para>Tank radiator auxiliary</para></def>
<term>Squad headset</term><def><para>H-366/VRC headset</para></def>
<term>Starlight scope</term><def><para>Night vision sight, individual served weapons</para></def>
<term>Steering yoke</term><def><para>Steering wheel</para></def>
<term>TOW missile</term><def><para>Guided missile, surface attack, telemetry, BGM-71A, TOW</para></def></deflist></para></nomenreflist>
<loa>
<para>Many abbreviations are used in this manual. They are listed below. Learn what each one means. It will make your job easier.
<deflist>
<term>A</term>
<def><para>After</para></def>
<term>Ammo</term>
<def><para>Ammunition</para></def>
<term>AP</term>
<def><para>Armor Piercing</para></def>
<term>Assy</term>
<def><para>Assembly</para></def>
<term>AUTO</term>
<def><para>Automatic</para></def>
<term>B</term>
<def><para>Before</para></def>
<term>BELRF</term>
<def><para>Bradley Eyesafe Laser Range Finder</para></def>
<term>BO</term>
<def><para>Blackout</para></def>
<term>BRT</term><def><para>Bright</para></def>
<term>CAL</term>
<def><para>Calibration</para></def>
<term>CFV</term>
<def><para>Cavalry Fighting Vehicle</para></def>
<term>CKT BKR</term>
<def><para>Circuit Breaker</para></def>
<term>CVC</term>
<def><para>Combat Vehicle Communications</para></def>
<term>D</term>

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<def><para>During</para></def>
<term>DCS</term>
<def><para>Digital Compass System (MV103AFV)</para></def>
<term>DEG</term>
<def><para>Degrees</para></def>
<term>DECLIN</term>
<def><para>Declination</para></def>
<term>Decontn Appar</term>
<def><para>Decontamination Apparatus</para></def>
<term>DISCH</term>
<def><para>Discharge</para></def>
<term>Flex hose</term>
<def><para>Flexible Hose</para></def>
<term>FWD</term>
<def><para>Forward</para></def>
<term>GPS</term>
<def><para>Global Positioning System</para></def>
<term>HE</term>
<def><para>High Explosive</para></def>
<term>Hex</term>
<def><para>Hexagonal,having six sides</para></def>
<term>HI-TEMP</term>
<def><para>High Temperature</para></def>
<term>ID PLATE</term>
<def><para>Identification Plate</para></def>
<term>IFV</term>
<def><para>Infantry Fighting Vehicle</para></def>
<term>INT</term>
<def><para>Internal</para></def>
<term>Intercom</term>
<def><para>Intercommunication</para></def>
<term>ITV</term>
<def><para>Improved TOW Vehicle</para></def>
<term>M</term>
<def><para>Monthly</para></def>
<term>MCD</term>
<def><para>Missile Countermeasure Device</para></def>
<term>MRE</term>
<def><para>Meal Ready to Eat</para></def>
<term>NAV</term>
<def><para>Navigation</para></def>
<term>NBC</term>
<def><para>Nuclear, Biological and Chemical</para></def>
<term>OVE</term>
<def><para>On Vehicle Equipment</para></def>
<term>PLGR</term>
<def><para>Precision Lightweight GPS Receiver</para></def>
<term>PMCS</term>
<def><para>Preventive Maintenance Checks and Services</para></def>
<term>POL</term>
<def><para>Polarity</para></def>
<term>PRESS</term>
<def><para>Pressure</para></def>
<term>RAD</term>
<def><para>Radio</para></def>
<term>SER</term>

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```
<def><para>Service</para></def>
<term>SET  CRS</term>
<def><para>Set  Course</para></def>
<term>TEC</term>
<def><para>Transmission Electronic Controller (HMPT 500-3EC)</para></def>
<term>TEMP</term>
<def><para>Temperature</para></def>
<term>TRANS</term>
<def><para>Transmission</para></def>
<term>TRK</term>
<def><para>Track</para></def>
<term>Vent</term>
<def><para>Ventilation</para></def>
<term>W</term>
<def><para>Weekly</para></def>
<term>XTE/ST</term>
<def><para>Cross Track Error/Steer-To</para></def></deflist></para></loa></ginfowp>
```

21.2.1 Information grouping. Information developed in accordance with MIL-STD-40051A and MIL-STD-2361A(AC) is organized into chapters containing similar functional information (e.g., maintenance chapter, troubleshooting chapter, etc.), and content-tagged to support retrieval from a database. Specifically, the use of SGML structured information, in conjunction with database technology and content-tagging, facilitates information access, sharing, reuse, management, control, and change. Database technology provides a variety of powerful SGML tools and utilities, such as searching capabilities, and allowing large information repositories to be broken down and rearranged intelligently into individual documents.

21.2.2 Work Package Reuse. There are instances in which the same work package(s) may be used, without modification, on more than one end-item of equipment. Also, there will be instances when most of the information in a work package will apply and be used on more than one end-item of equipment, but will require minor changes to small portions of the work package information in order to tailor coverage to other end items or systems. The Digital Publications Development concept for information reuse focuses primarily on the reuse of work packages, or portions of work packages, to the maximum possible extent by either direct reuse or by filtering/overlaying information on top of existing work package data.

a. Work package reuse is defined as a single source work package with the same task/procedural intent, that may be used for TM authoring for one or more end-items.
b. Task/procedural intent is defined as tasks/procedures required to perform the same or similar function, but may or may not have the same wording. Establishing a publications source database is a mandatory element of work package reuse.

21.2.2.1 Filtering and Overlaying Work Package Information. Overlaying is defined as adding or hiding portions of original information. Filtering is defined as setting a criteria to include or exclude information. The filtered information would be associated to specific work packages by revision number. SGML elements and attributes may be used to indicate variations within the modified work package text. The criteria for assigning and controlling filtering/overlaying would be the major end-item(s) NSN to which the work package is applied. This methodology could be used by authors to search for work packages by particular end-item equipment that is closely associated, or the same as, the end-item on which they are working, and to note the variations within the work package to determine the best fit or variation needed to satisfy their needs.

21.2.2.2 Work Package Reuse Examples. The following examples are provided as guidance for the various ways work packages may be reused. There are two types of examples: Figure 34 is for direct reuse and Figure 35 is for reuse using the technique for overlaying information.

a. Direct reuse. Direct reuse is use of the same work package on more than one end-item equipment with no modification to the work package. The direct reuse example shown below represents an instance where one work package (WP 3 data) is used for Bradley Fighting Vehicle (BFV) A2 engine data,

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and is reused for two different vehicle end-items configured with the same engines (BFV A3 and Bradley Fire Support Team (BFIST) Vehicles).

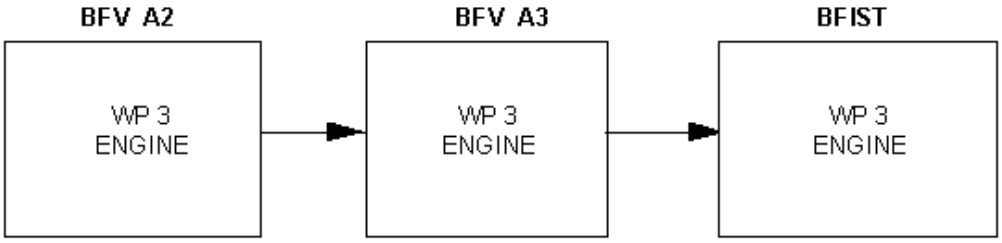

Figure 34 Example 1 Direct Reuse

b. Overlay reuse. Overlay reuse starts with the original work package contained in the BFV A2 vehicle. The BFV A3 contains the same work package tasks, but requires the addition of two steps to a procedure and a change in the initial setup references to correspond to the BFV A3's system. The BFIST has the same task as the BFV A3, but requires a change of the location of a hatch from "left" to "center" of the BFIST vehicle. The remaining work package information is directly reused. The future prototype vehicle reuses the original configuration with some modification to the initial setup references and the removal of a step.

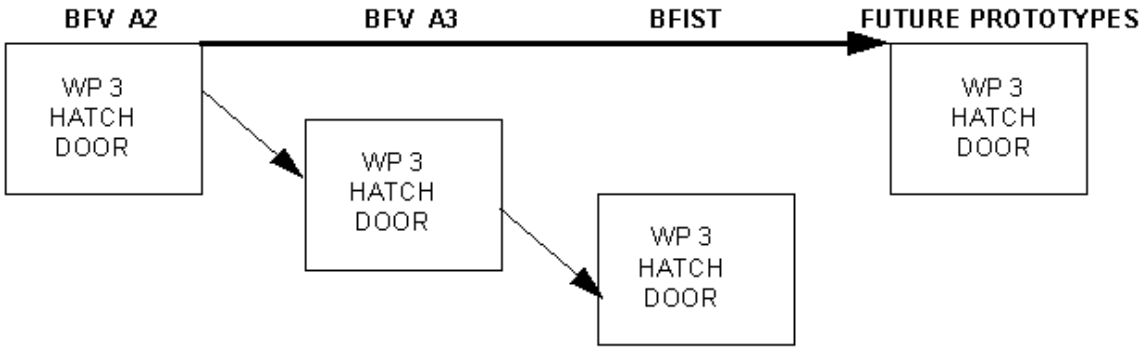

Figure 35 Example 2 Overlayed Reuse

21.2.2.3 Work Package Initial Setup. The "initial setup" is the primary guide to determine if a new work package should be created, or could be filtered/overlaid by other text. The initial setup conditions must be the same, except for references, to constitute justification for reuse. For example, modifications to the initial setup which do not change the intent of the work package, but change the work package reference or applicable configuration (i.e., for another end-item) are candidates for reuse. The initial setup guide below may be used to determine if a new work package should be created, or an existing work package can overlay with other text.

Table 21–3. Initial Setup Guide

Initial Setup Components	New WP	Filter	Rationale
Test Equipment	X		Changes to the test equipment would indicate changed procedures or steps are needed to use this equipment, possibly changing the intent of the work package.

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Initial Setup Components	New WP	Filter	Rationale
Tools/Special Tools	X	X	Changes to the tools/special tools would indicate changed procedures or steps needed to use these tools, possibly changing the intent of the work package. ONLY variation is the SIM reference to the SIM work package, tool, and item number for the particular end-item.
Material/Parts	X	X	Changes to the material/parts would indicate changed procedures or steps needed to use these parts, possibly changing the intent of the work package. ONLY variation is the SIM reference to the SIM work package, part, and item number for the particular end-item.
Personnel Requirements		X	Personnel requirements may change. A change is permitted when the sub-equipment is the same, but mounted on various end-items.
Reference		X	Reference may change because of different end-items, but the intent and purpose to the reference are the same.
Equipment Condition	X	X	The equipment must be in the same condition state, otherwise the difference changes the initial purpose for the work package. ONLY variation is the referenced work package in how to put the equipment in the ready state, but must be referencing a similar type of condition.
Special Environment	X		The special environmental conditions must remain the same, otherwise how to perform the task would become varied and change the purpose of the task.
Drawing Requirement	X	X	The drawing requirements must remain the same, other changes or modifications to the parts or test equipment is possible. The only exception is if the locator drawing is different, then a new work package is not required.

21.2.2.4 Additional Guidance for Work Package Reuse. Besides the initial setup guidance, the following will also govern work package reuse:

a. No variation in the work package title is allowed.
b. No tasks or procedures may be added to, or removed from the work package.
c. No information added to, or removed from, the work package can affect the initial setup new work package column (see Table 21–3).
d. No changes may be made to warnings or cautions associated with work package steps, except for references to other work packages.
e. New warnings or cautions may be associated with new steps added.
f. Warnings or cautions may be removed only when the associated step is removed.

21.2.3 SGML Process. The SGML process follows the general outline in the following paragraphs. For a more extensive explanation of SGML and its application to TM development Section20, Introduction to SGML. Figure 36 is an overview of the SGML process from the developers perspective.

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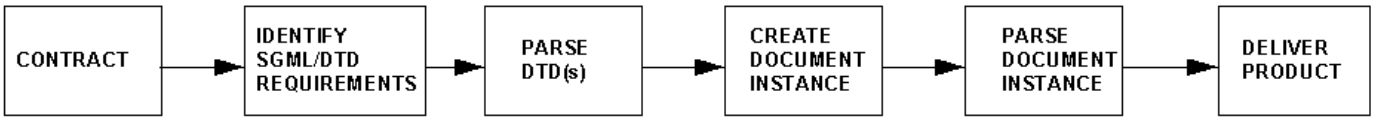

Figure 36 SGML Process

21.2.3.1 Applying the Appropriate DTD. The first step in the process is to identify the DTD requirement(s) (called out in the contract) relating to the appropriate information chapter (e.g., MIM, TIM, etc.) of the material being authored or tagged. Once the determination is made that the correct DTDs are on-hand, they should be parsed to ensure they are valid, error-free DTDs prior to use in the development process. The SGML tags will have to be applied (in the case of legacy data), or the TM content information created (new publication development), within the context and parameters of the DTD and the functional requirements for technical manuals contained in MIL-STD-40051. The process can be accomplished by use of SGML authoring software, or in a word processing system by manual insertion of tags.

21.2.3.2 Page-Based vs Frame-Based. The same DTD can be use for both page-based and frame-based TMs/DMWRs. The information that is not needed for frame-based will be used to provide the detailed information for page-based, by cross-reference linking to the information needed to obtain the detail information. Different style sheet or FOSI is used for the formatting of the page-based or frame-based TM/DMWR. A page-based and frame-based TM/DMWR have the same content coverage. However, the display and presentation of the information is different.

21.2.3.3 Creation of Document Instance. To create a document instance, the tags declared in the DTD must be integrated into the text of the document, whether material is being authored for the first time or legacy data is being converted. The SGML markup (the tag set) takes the place of any format oriented markup. A document instance is a tagged file with a complete structure conforming to its relevant DTD.

21.2.3.4 Validation (Parse) of Markup Syntax. Before proceeding to output a document or information chapter, the document instance must be tested (parsed) to validate that the markup conforms to the syntactic and structural rules of SGML and the DTD. Any errors found by the parser must be corrected before proceeding further.

21.2.3.5 Creation of Required Output. Creation of the required output may include several forms. Requirements for the appropriate type(s) of output will be contained in the Contract Data Requirements List (CDRL) accompanying the contract vehicle. All of the following options are supported by MIL-STD-2361.

a. Using a FOSI or style sheet to direct the composition of the document in page-based format for printed output, or for the frame-based screen display in the composition software.
b. Generation of a suitable page description language file to drive printer, typesetter, or viewing software.
c. Outputting for on-screen access in a navigable database format.
d. Retrieving directly from a comprehensive SGML database of all TMs for on demand printing.

21.2.4 Validation and Verification Process.

21.2.4.1 Validation of an SGML Document. Preparation of documents in an automated support environment typically consists of the following steps:

a. Downloading an approved Document Type Definition (DTD) and Formatting Output Specification Instance (FOSI) from the ASRL.
b. Parsing the DTDs and FOSIs.
c. Creating a document instance.
d. Parsing the document instance.
e. Using the approved FOSI and DTD to compose the composition of the document so that the produced (printed or displayed) copy corresponds to the proper format and style.

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21.2.4.2 Parsing MIL-STD-2361 TM DTDs. The process of validating (compiling) DTDs once they are written is known as parsing. Commonly referred to as a validating SGML parser, the ISO-8879 Standard defines the parser as "A program (or portion of a program or a combination of programs) that recognizes markup in SGML conforming documents." A validating SGML parser will read a DTD and check the markup, and report any errors found to an error file log. It is the responsibility of the user to re-parse DTDs downloaded from the ASRL.

a. Most of the commercial SGML authoring tools on the market today contain a built-in validating parser. To create SGML documents which conform to a DTD downloaded from the ASRL an editor and a parser is needed.
b. The editor is used to input information and insert SGML markup into the document; the parser is used to check that the markup and the way it has been used conform to the rules given in the DTD. Many commercial packages offer syntax-directed editors, which interactively ensure that any editing and markup operations conform to the rules of the DTD.
c. Once a valid SGML document that conforms to a valid SGML DTD has been developed, it may be wise to do some subsequent processing. For example, in order to get paper output, you will need to use a MIL-STD-2361 FOSI, which conforms to MIL-PRF-28001, in conjunction with a composition system to read the SGML document and produce a paper output.
d. It is recommended that the following SGML parsers be used when parsing DTDs that have been downloaded from the ASRL:
    - SGMLS - SGMLS parses and validates the SGML document entity in file name . . . and prints on the standard output a simple ASCII representation of its Element Structure Information Set.
    - NSGMLS - NSGMLS parses and validates the SGML document whose document entity is specified by the system identifiers sys id . . . and prints on the standard output a simple text representation of its Element Structure Information Set.

21.2.4.3 Valid SGML Document vs. Conformance to MIL-STD-40051. Parsing the SGML document does not verify that the information or content of the TM matches the meaning for the SGML element and/or MIL-STD-40051. The contracting activity will be responsible for verifying that the TM content is in compliance with the contract, applicable SOWs, and MIL-STD-40051 requirements.

21.2.4.4 Formal Public Identifiers for Entities. Each formal public identifier (FPI) for graphics and file entities must have a file name associated with that FPI. The FPI is mapped to the file name by using an SGML catalog. The format for the SGML catalog is displayed below.

PUBLIC "-//Owner//ENTITIES Public_Title Rev X.XX YYYYMMDD//EN" "(DIR) file.name"

By making modifications as necessary in the SGML catalog and changing the (DIR) to the specific directory on the target system or modifying the file name to the corresponding operating system restrictions, the correct mapping will be established. Every file entity with an FPI must have an entry in the SGML catalog. Verification of the FPI for entities must satisfy two criteria. The first criteria is that each file identified in the SGML catalog must be included with the electronic delivery. The second criteria is to verify that each FPI in the SGML document instance is defined in the SGML catalog. If either criteria fails, the SGML document instance is unacceptable.

21.2.4.5 ID and IDREF Resolved. The document instance must have an associated ID value for each IDREF in the document instance. A document that does not have an associated ID value for each ID referenced is an incomplete document and unacceptable.

The two methods to verify that all IDREF(s) are resolved are to use either an SGML editor or a software application. The simplest verification method is to use an SGML editor that verifies all IDREF(s) automatically. The SGML editor will display the unresolved IDREF(s).

The other methodology is to develop a software application to identify all attributes with IDREF and ID, which stores the values in a separate list for each respectfully. The application sorts each list and matches the IDREF values to the ID values. The application will display the missing IDREF(s) with no resolution.

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21.2.4.6 IETM - Link Verification. IETM link verification processes are currently being developed and will be included in the next revision of the handbook.

21.2.4.7 Published Document Produced by SGML Instance. The publications developer must verify that the published manual was produced from the SGML instance. When the published manual is not produced from the SGML document instance, errors may reside in the SGML document instance that were corrected or updated in the published manual. To verify that a published document was composed from an SGML document instance, a written certification declaring the electronic SGML document instance used to compose the final delivered published manual will be included with the delivery. The certification will specify the methodology used to compose the SGML document instance to the published manual.

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22 TM/DMWR ACQUISITION.

22.1 Acquisition Guidance. Technical Manual (TM) requirements proponent personnel (e.g., TM writers) develop the portion of procurement data packages (PDP) that provide the TM requirements placed on contract by procurement personnel. The TM portion of PDPs are normally compiled and included in pre-contract documents, such as solicitations and Request for Proposals (RFP). The following paragraphs address some of the different mechanisms (e.g., forms, standards, procedures, etc.) that are involved in applying TM requirements to contractual documents.

22.1.1 CDRL. CDRLs are the primary requirements documents for conveying TM data format, context, and delivery requirements to publications developers. The CDRL is also a primary means for defining SGML requirements to a publication developer. Activities involved in a weapon system development are queried, through a "Data Call", to provide data requirements specific to their functional area. The SGML aspects of the TM requirements may be provided by the activity responding to the data call, or some other functional activity (e.g., an SGML specialist on a PM staff), depending on where SGML functional expertise is available. One of the major results of a data call is the requirements associated with the development of TMs for the weapon system. Based on the TM requirements received as a result of the data call, CDRLs are developed as a means of explicitly describing the requirements. The TM CDRLs are an integral part of the PDP and each CDRL should be supported by a Statement of Work (SOW) task, describing the work effort required to develop the TMs associated with the CDRL. Following are some of the areas that may be addressed in a CDRL. These areas are not all inclusive, and are provided as guidance only.

22.1.2 Statement of Work (SOW). Each CDRL will have an accompanying SOW, or be included in the contract SOW, describing the work effort and requirements required to develop the respective TMs. The SOWs are prepared by the activity that provides CDRL information in response to a data call. The SOW becomes a binding part of the contractual documentation.

22.1.3 Conversion of Legacy Data. The CDRL may direct the contractor to convert specified existing non-SGML data (legacy data) into SGML. The legacy data may consist of previously developed TMs for an existing weapon system or subsystem. The CDRL will provide the version of the DTD and FOSI to be used for conversion, and any other applicable SGML requirement information.

22.1.4 GFI/GFE Source Information. The CDRL will provide identification of required GFI/GFE, such as legacy TMs for conversion, that are required for conversion by the developer. If the GFI/GFE is not provided as part of the PDP, its location and procedures for acquiring it will be provided as part of the contract.

22.1.5 TM Requirements and Standards. TM functional requirements are developed in accordance with MIL-STD-40051 and MIL-STD-2361, MIL-PRF-28001 and FIPS-152 to cover application of SGML. The CDRL will identify these standards specifically as requirements.

22.1.6 Location of SGML Objects, Constructs, and Other Information (DTDs, FOSIs, SGML Tag Description Lists, Documentation etc.). All Army-approved SGML objects and constructs are contained in the Army SGML Registry and Library (ASRL). The SGML objects and constructs may be provided with the contractual document, or the TM developer may be directed to obtain the required objects and constructs from the ASRL. If the ASRL is the directed source for the DTDs, FOSIs, tags, etc., the following information will be provided in the CDRL.

a. Formal Public Identifier (FPI) of the DTD. The FPI is the official identifying designation of a particular version of a DTD. Each separate DTD, and each version of a DTD, has a unique FPI.
b. Information on how to access the ASRL. The CDRL will contain, either explicitly or by reference, the procedures to follow to gain access to the ASRL through the various means available.
c. Information on downloading DTDs, FOSIs, tag description lists, and documentation. The CDRL will contain, either explicitly or by reference, the procedures to be followed to download the SGML information needed by the TM developer.
d. Information on parsing the DTDs and FOSIs. The CDRL will reference the developer to the appropriate SOW, standard, etc., for detailed information on the parsing requirements for the TMs. The parsing

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information should contain requirements regarding parsing the digital SGML tagged instance file parsed against the DTD which was provided, and requirements for submitting a parsing log record.

22.1.7 Tailoring the Work Packages. MIL-STD-40051 and MIL-STD-2361 establish the requirements for tailoring work packages for each type of TM (e.g., –10, –20, etc.). The CDRL will reference the appropriate portions of these standards for tailoring TM work packages. The appropriate SOW paragraphs will also be referenced in the CDRL.

22.1.8 Required Output Medium. The TM proponent will determine the output requirements and provide them to the contracting activity for inclusion in the contractual documentation (e.g., SOW, CDRL, etc.). The output requirements are included in the CDRL. Output file delivery requirements may be found in MIL-STD-2361. Output delivery requirements may include the following.

22.1.8.1 Paper. Delivery of paper products are normally camera-ready output developed from an SGML document instance and FOSI or style sheet. The CDRL will specify the appropriate requirement(s).

22.1.8.2 Electronic Technical Manual (ETM). ETM delivery is normally a page-oriented digital product (e.g., page turner) suitable for viewing on an electronic display. MIL-STD-2361 contains the requirements for ETMs and will be specified in the CDRL.

22.1.8.3 Interactive Electronic Technical Manual (IETM). The IETMs provide functionality to the soldier beyond the capability of either paper based or ETMs. In no instance will an acquisition package state a specific class of manual is being require; for example, that the contractor will deliver a class 4 IETM; but rather the acquisition package will tailor specific requirements needed to support the weapon system or equipment.

22.1.9 Delivery Medium. The determination of the method in which TMs are delivered to the Government is the responsibility of the TM proponent. Determination of the appropriate method of delivery is often impacted, or directly determined, by Defense or Army policies. The method of delivery is contained in the CDRL as part of the contractual documentation. Possible, but not all inclusive, delivery mediums are provided below.

a. MIL-STD-1840 - Digital Tapes.
b. Compact Disk-Read Only Memory (CD-ROM).
c. Diskettes (3 1/2“ or 5 1/4”).
d. Tapes - 1/4“ Data Cartridge Tape.
e. Telecommunications (e.g., Internet, WWW, e-mail, etc.).
f. Paper - with one or more of the above methods.

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PART II
TM INFORMATION CHAPTERS

23 MIL-STD-2361 SGML APPLICATIONS INTRODUCTION .

23.1 Scope. This chapter contains information on the presentation of the SGML elements developed for Army digital equipment manuals publications.

23.2 Applicable Documents. Refer to paragraph 2.

23.3 Introduction to MIL-STD-2361A(AC) DTD Models. In 25 through Chapter 33 the MIL-STD-2361A(AC) DTD content models will be displayed in the following manner:

a. The SGML element is defined as used in the particular Army publication.
b. A visual representation may be given of the SGML content model. The tree structure and its components are given to provide users an understanding of the relationships between the elements and the order of elements. The tree structure contains symbols defined in Figure 37.
c. A reproduction of the DTD fragment is provided for each element.
d. A description of associated attributes is provided for each element.
e. A sample document instance fragment is provided for some higher level elements. The fragmented instance shows a correct usage for the higher level element and its children.
f. When a sample document instance fragment is provided a sample output is included showing a facsimile of what is produced by a composition system.

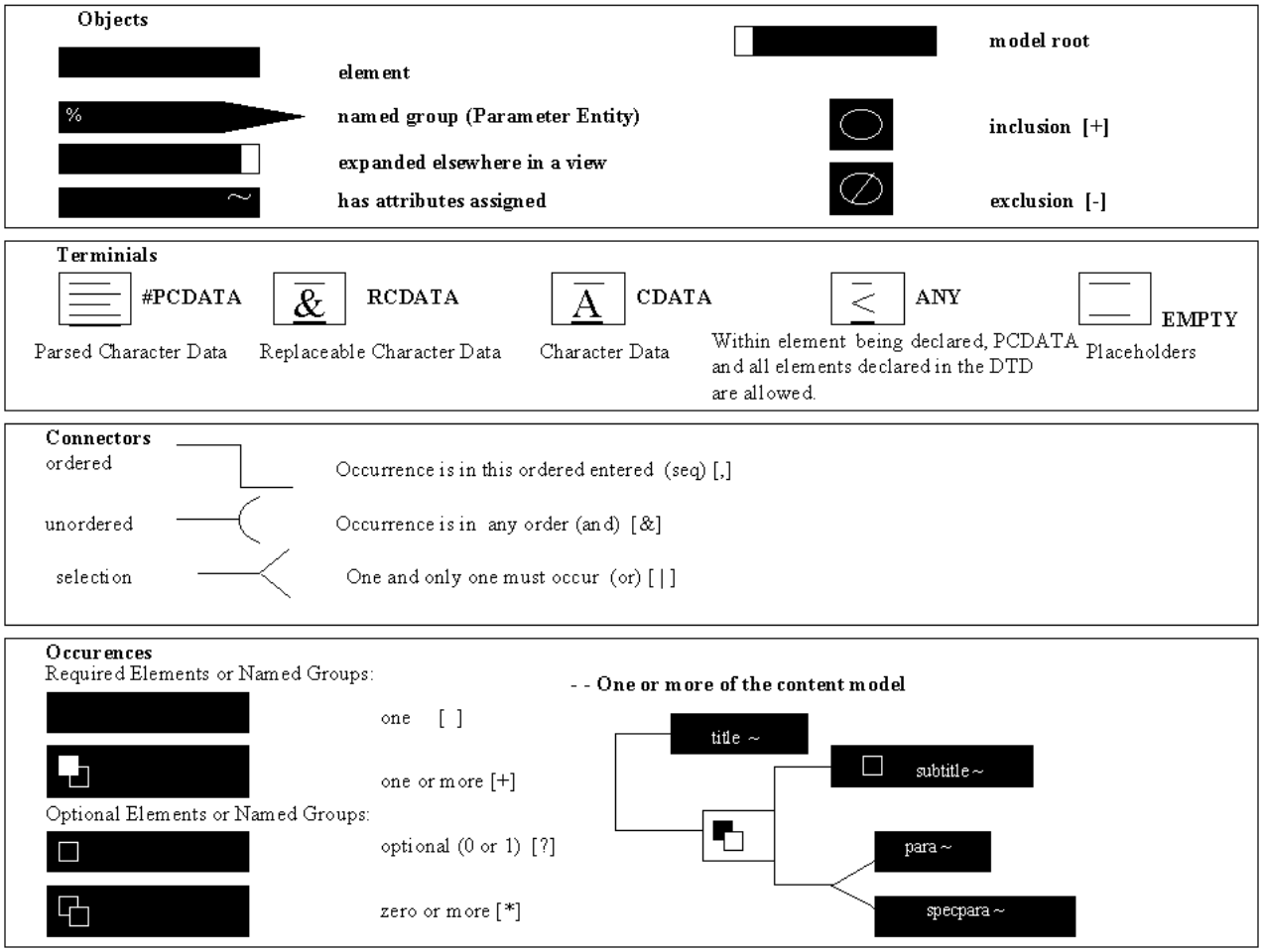

Figure 37 SGML Tree Legend

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24 PRODUCTION.

24.1 Scope. The following paragraphs give a description and use of elements used in the MIL-STD-2361(AC) Production DTD. The production DTD is used for assembling individual work packages with the other required parts of the applicable technical manual (TM) (i.e., front matter, back matter, etc.).

24.2 The element <***production***> consists of the element choices for the type of document to be produced. Any material to be published according to the DTD in Technical Manual Production must begin with this element, whether the material is a complete maintenance manual, one or more information chapters, a specialized manual or module, or a supplementary manual. It contains either a page-based TM (<***paper.manual***> see 24.2.1) , or a frame-based TM (<***frame.manual***> see 24.2.2), or an aviation manual (<***aviation***> see 24.2.3), or a supplement (<***supplement***> see 24.2.4), or at least one TM chapter(s) (<***module***> see 24.2.5), or at least one aviation chapter(s) (<***avmodule***> see 24.2.6). These elements are described below.

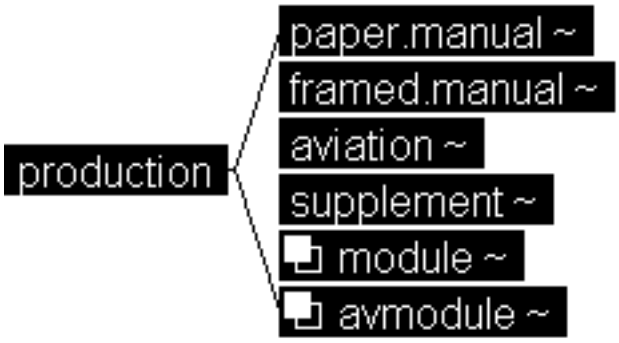

Figure 38 Production DTD Hierarchy

a. DTD fragment for <***production***>:

```
<!ELEMENT production - - (paper.manual | frame.manual | aviation | supplement |
                          module+ |avmodule+)>
```

24.2.1 Page-Based TM <***paper.manual***>. The <***paper.manual***> element contains all contents of an assembled technical manual, including the front and rear matter and the body of the manual. The format and style of the manual is prepared for a standard page-oriented presentation. There is only one <***paper.manual***> element per TM.

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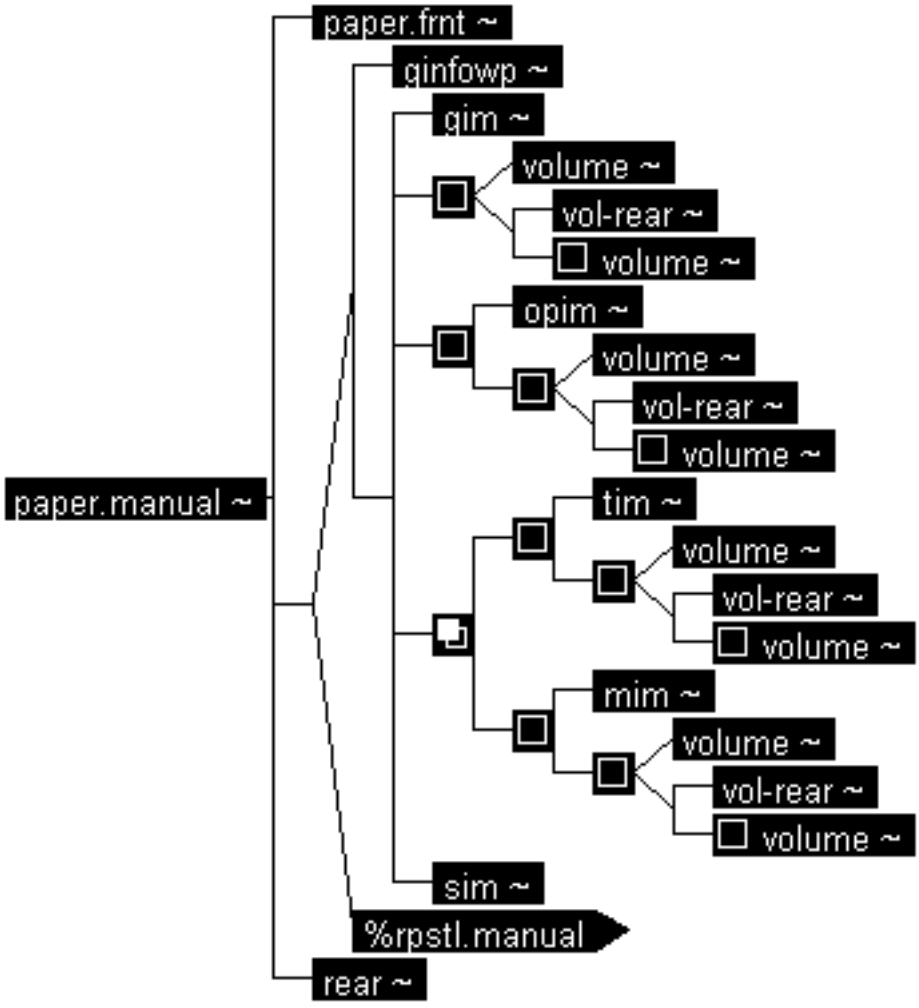

Figure 39 Page-Based TM DTD Hierarchy

a. DTD fragment for <***paper.manual***>:

```
<!ELEMENT paper.manual - - ((paper.frnt, ((%std.manual) | %rpstl.manual;),
                            rear))>
<!ATTLIST paper.manual
            revno          NUMBER                  #REQUIRED
            maintitl       CDATA                   #REQUIRED
            maintlvls      (10 | 12 | 13 |
                            14 | 20 | 23 |
                            24 | 30 | 34 |
                            40 | avum-avim |
                            dmwr | NA)             #REQUIRED
            rpstl          %yesorno;               #REQUIRED
            dmwr-inclus    (parts | parts-tools)   #IMPLIED
            date           CDATA                   #REQUIRED
            pubno          CDATA                   #IMPLIED
            %refs;
            %secur;>
```

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b. Attributes for <***paper.manual***>:
   (1) **REVNO** - The revision number of the overall manual.
   (2) **MAINTITL** - Supplies a literal version of the maintenance-level title.
   (3) **MAINTLVLS** - Specifies the maintenance level(s) authorized to use this manual; this attribute value is used in the FOSI to supply the literal expression of the TM's maintenance level.
   (4) **RPSTL** - Specifies whether or not the manual includes a RPSTL among its appendixes.
   (5) **DMWR-INCLUS** - Specifies whether a DMWR includes parts only or parts and tools.
   (6) **DATE** - The date of the current version of the element.
   (7) **PUBNO** - Specifies the technical manual publication number.
   (8) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
   (9) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1 Front Matter Page-Based <***paper.frnt***>. The element <***paper.frnt***> contains all front matter of a technical manual and occurs before the first chapter of the manual. Format style and requirements are prepared for a standard page-oriented presentation. The front matter paged-based element <***paper.frnt***> consists of the following elements.

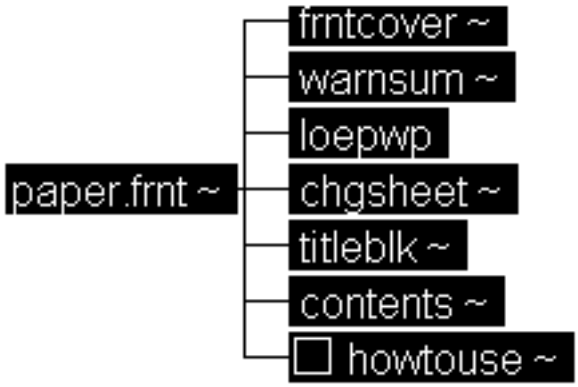

Figure 40 Front Matter-Paged-Based DTD Hierarchy

a. DTD fragment for <***paper.frnt***>:

```
<!ELEMENT paper.frnt - - (frntcover, warnsum, chgsheet, loepwp, titleblk,
                          contents, howtouse?)>
<!ATTLIST paper.frnt
            %refs;
            %secur;>
```

b. Attributes for <***paper.frnt***>:
   (1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
   (2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.1 Front Cover <***frntcover***>. The element <***frntcover***> is used for identifying the front cover of a page-based and a frame-based TM. It contains the technical manual title <***tmtitle***>, an optional graphic <***graphic***>, optional notices <***notices***>, the service nomenclature <***servnomen***>, and when necessary a change number <***chgno***> and change date <***chgdate***>.

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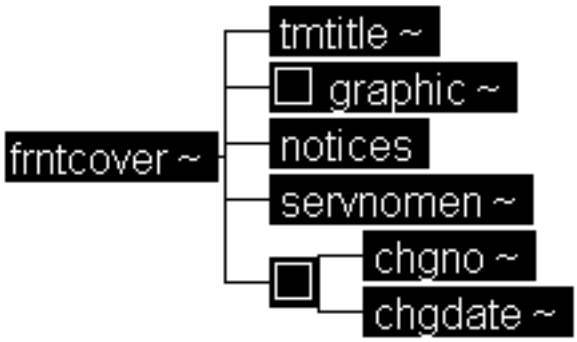

Figure 41 Front Cover DTD Hierarchy

a. DTD fragment for <***frntcover***>:

```
<!ELEMENT frntcover - o (tmtitle, graphic?, notices, servnomen,
                         (chgno, chgdate)?)>
<!ATTLIST frntcover
            %refs;
            %secur;>
```

b. Attributes for <***frntcover***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.1.1 The element <***tmtitle***> contains all the elements that identify a manual, including at least one service manual number <***tminfono***>, the primary title <***prtitle***>, and manual subtitle <***stitle***>.

a. DTD fragment for <***tmtitle***>:

```
<!ELEMENT tmtitle - o (tminfono+, prtitle, stitle?)>
<!ATTLIST tmtitle
            %refs;
            %secur;>
```

b. Attributes for <***tmtitle***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.1.1.1 The element <***tminfono***> is the unique identification of the TM and appears prominently on the front cover and subsequently as a header on every page. If the TM is used by more than one service branch, the proponent's TM number appears first. It contains an optional branch of service <***servbranch***> and a technical manual number <***tmno***>.

a. DTD fragment for <***tminfono***>:

```
<!ELEMENT tminfono - o (servbranch?, tmno)+>
<!ATTLIST tminfono
            %refs;
            %secur;>
```

b. Attributes for <***tminfono***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.1.1.1.1 The element <***servbranch***> is used for a branch of service that has assigned an official TM number to the current manual. The content of this element is derived from the value of the element's attributes.

a. DTD fragment for <***servbranch***>:

```
<!ELEMENT servbranch - o EMPTY>
```

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```
<!ATTLIST servbranch
            service         (army | af |
                             navy | marines)   #REQUIRED
            qualify         CDATA              #IMPLIED
            procuring       %yesorno;          #IMPLIED
            %refs;
            %secur;>
```

b. Attributes for <***servbranch***>:

(1) **SERVICE** - Specifies the service branch.

(2) **QUALIFY**- Supplies any further qualification of the service, e.g., NAVAIR.

(3) **PROCURING**- If more than one service uses the manual, specifies whether or not this branch is the procuring agency; a non-zero value indicates the current element is the procuring agency.

(4) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.1.1.1.2 The element <***tmno***> contains the number portion of the TM identifying number contained in the element <***tminfono***> (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***tmno***>:

```
<!ELEMENT tmno - o (%text;)>
<!ATTLIST tmno
            %refs;>
```

b. Attributes for <***tmno***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.1.1.2 The element <***prtitle***> contains the primary title of the technical manual, which contains the equipment nomenclature <***sysnomen***> with any relevant identifying numbers or qualifying subject <***subject***>. The primary title appears on the front cover, change sheet, and title block page of the TM.

a. DTD fragment for <***prtitle***>:

```
<!ELEMENT prtitle - o (sysnomen, subject?)+>
<!ATTLIST prtitle
            %refs;
            %secur;>
```

b. Attributes for <***prtitle***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.1.1.2.1 The element <***sysnomen***> contains the equipment name <***name***>, followed optionally by a model number <***modelno***>, either a part number <***partno***> or an NSN <***nsn***>, and an end item code <***eic***>.

a. DTD fragment for <***sysnomen***>:

```
<!ELEMENT sysnomen - o (name, modelno?, (partno | nsn)?, eic)+>
<!ATTLIST sysnomen
            pretext CDATA #IMPLIED
            %refs;
            %secur;>
```

b. Attributes for <***sysnomen***>:

(1) **PRETEXT** - Any text that precedes the equipment nomenclature, e.g., "FOR" or "OF." This is the only mechanism for inserting such words on the front cover.

(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.1.1.2.1.1 The element <***name***> (see 33.4.4.15) is used to enter the name of the component/assembly.

24.2.1.1.1.1.2.1.2 The element <***modelno***> (see 33.4.4.14) is used to enter the model number of the component/assembly.

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24.2.1.1.1.1.2.1.3 The element <***partno***> (see 33.4.4.17) is used to enter the part number of the component/assembly.

24.2.1.1.1.1.2.1.4 The element <***nsn***> (see 33.4.4.16) is used to enter the national stock number of the component/assembly.

24.2.1.1.1.1.2.1.5 The element <***eic***> is used for an assigned end-item code of the equipment covered by the TM. When used, it is displayed as part of the prime title on the front cover and title block page and part of the identification information displayed on each work package of a TM or DMWR.

a. DTD fragment for <***eic***>:

```
<!ELEMENT eic - o (#PCDATA)>
<!ATTLIST eic
            %refs;
            %secur;>
```

b. Attributes for <***eic***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.1.1.2.2 The element <***subject***> is used to enter some qualification of the equipment nomenclature, such as block numbers or serial number (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***subject***>:

```
<!ELEMENT subject - o (%text;)>
<!ATTLIST subject
            %refs;
            %secur;>
```

b. Attributes for <***subject***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.1.1.3 The element <***stitle***> represents a subtitle of the TM placed immediately below the prime title to indicate the volume number and contents of every separately bound volume of a TM (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***stitle***>:

```
<!ELEMENT stitle - o (%text;)>
<!ATTLIST stitle
            %refs;
            %secur;>
```

b. Attributes for <***stitle***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.1.2 The element <***graphic***> (see 33.4.3.1.2) is used to enter a graphic on the front cover.

24.2.1.1.1.3 The element <***notices***> contains any notices that appear on the front cover, change sheet, or title block page of a TM. Specific notices that may be entered include: availability <***avail***>, supersedure <***super***>, disclosure <***disclos***>, distribution <***dist***>, exportation <***export***>, destruction <***destr***>, and reproduction <***reprod***>.

a. DTD fragment for <***notices***>:

```
<!ELEMENT notices - o (avail?, super?, disclos?, dist, export?,
                       destr?, reprod?)>
```

24.2.1.1.1.3.1 The availability statement element <***avail***> contains the standard availability notice that appears on the front cover of a DMWR. The element <***avail***> contains an optional title (<***title***> see 33.4.1.5.1) followed by a paragraph of text (<***para***> see 33.4.1.5.3). The paragraph may be entered using an entity reference to boilerplate text. **(Depot only.)**

a. DTD fragment for <***avail***>:

```
<!ELEMENT avail - o (title?, para)>
<!ATTLIST avail
```

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```
              %refs;
              %secur;>
```

b. Attributes for <***avail***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.1.3.2 The supersedur statement element <***super***> contains a standard supersedure notice provided by the contracting activity when the TM revision or change under preparation supersedes other TMs or portions of TMs. The element contains a paragraph of text (<***para***> see 33.4.1.5.3).

a. DTD fragment for <***super***>:

```
<!ELEMENT super - o (para)>
<!ATTLIST super
              %refs;
              %secur;>
```

b. Attributes for <***super***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.1.3.3 The disclosure statement element <***disclos***> contains a standard disclosure notice. It is provided by the contracting activity and appears on the front cover. The element contains a paragraph of text (<***para***> see 33.4.1.5.3). The paragraph may be entered using an entity reference to boilerplate text.

a. DTD fragment for <***disclos***>:

```
<!ELEMENT disclos - o (para)>
<!ATTLIST disclos
              %refs;
              %secur;>
```

b. Attributes for <***disclos***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.1.3.4 The distribution statement element <***dist***> contains a standard distribution notice. It is provided by the contracting activity and appears on the front cover. The element contains a paragraph of text (<***para***> see 33.4.1.5.3). The paragraph may be entered using an entity reference to boilerplate text.

a. DTD fragment for <***dist***>:

```
<!ELEMENT dist - o (para)>
<!ATTLIST dist
              type;     (A.statement | B.statement |
                         C.statement | D.statement |
                         E.statement | F.statement |
                         X.statement | RESTRICT)
              %refs;
              %secur;>
```

b. Attributes for <***dist***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.1.3.5 The export control notice element <***export***> contains a standard export control notice. It is provided by the contracting activity and appears on the front cover. The element contains a paragraph of text (<***para***> see 33.4.1.5.3). The paragraph may be entered using an entity reference to boilerplate text.

a. DTD fragment for <***export***>:

```
<!ELEMENT export - o (para)>
<!ATTLIST export
              %refs;
              %secur;>
```

b. Attributes for <***export***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

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(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.1.3.6 The destruction notice element <***destr***> contains a standard notice concerning destruction of the manual. It is provided by the contracting activity and appears on the front cover. The element contains a paragraph of text (<***para***> see 33.4.1.5.3). The paragraph may be entered using an entity reference to boilerplate text.

a. DTD fragment for <***destr***>:

```
<!ELEMENT destr - o (para)>
<!ATTLIST destr
            %refs;
            %secur;>
```

b. Attributes for <***destr***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.1.3.7 The reproduction notice element <***reprod***> contains a paragraph of text (<***para***> see 33.4.1.5.3). The paragraph may be entered using an entity reference to boilerplate text.

a. DTD fragment for <***reprod***>:

```
<!ELEMENT reprod - o (para)>
<!ATTLIST reprod
            %refs;
            %secur;>
```

b. Attributes for <***reprod***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.1.4 The element <***servnomen***> is used for the service nomenclature of the proponent activity. Most of the Army manuals the text is "HEADQUARTERS, DEPARTMENT OF THE ARMY" (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***servnomen***>:

```
<!ELEMENT servnomen - o (%text;)>
<!ATTLIST servnomen
            %refs;
            %secur;>
```

b. Attributes for <***servnomen***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.1.5 The element <***chgno***> is used for the current change level of the document; the element appears on the front cover, on the change sheet, and on the title block page.

a. DTD fragment for <***chgno***>:

```
<!ELEMENT chgno - o (#PCDATA)>
<!ATTLIST chgno
            %refs;
            %secur;>
```

b. Attributes for <***chgno***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.1.6 The element <***chgdate***> is used for the effective date of a change to a publication. It appears on the front cover and title block page of the TM.

a. DTD fragment for <***chgdate***>:

```
<!ELEMENT chgdate - o (#PCDATA)>
<!ATTLIST chgdate
            %refs;
            %secur;>
```

b. Attributes for <***chgdate***>:

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(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.2 Warning Summary <***warnsum***>. The element <***warnsum***> warning summary appears in every manual on the first right-hand page after the front cover. It consists of warnings extracted <***warnextrac***> from the text, general warnings and safety cautions <***warninfo***> which apply to the document, a key to hazard icons used in the TM, hazardous materials warnings <***hazmat***>, and first-aid information <***safety***>.

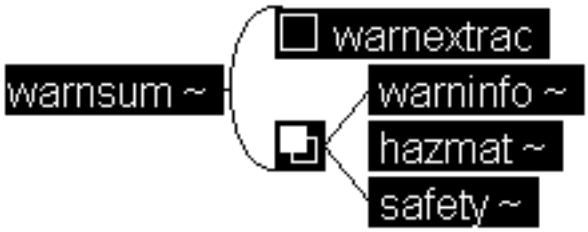

Figure 42 Warning Summary DTD Hierarchy

a. DTD fragment for <***warnsum***>:

```
<!ELEMENT warnsum - o (warninfo | hazmat | safety)>
<ATTLIST warnsum
            inschlvl    NUTOKENS    #IMPLIED
            delchlvl    NUTOKENS    #IMPLIED
            tocentry    %yesorno;   #IMPLIED
            %refs;
            %secur;>
```

b. Attributes for <***warnsum***>:
(1) **INSCHLVL** - Specifies the change level(s) at which information was inserted. An audit trail can be maintained by listing multiple change levels separated by spaces.
(2) **DELCHLVL** - Specifies the change level(s) at which information was deleted. An audit trail can be maintained by listing multiple change levels separated by spaces.
(3) **TOCENTRY** - If other than zeros, the warning summary title (which is automatically generated by the composition system) should be included in the table of contents.
(4) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.2.1 The element <***warninfo***> is a portion of the warning summary that contains general-purpose warnings or cautions, such as radiation or laser light. It can also contain general safety instructions and first-aid information. It contains title(s) (<***title***> see 33.4.1.5.1) followed by at least one paragraph of text <***para***>, and/or warnings (<***warning***> see 33.4.1.1.2), and/or cautions (<***caution***> see 33.4.1.1.3) and/or safety icons <***sfty-icons***>.

a. DTD fragment for <***warninfo***>:

```
<!ELEMENT warninfo - o (((title, para+) | warning | caution | sfty-icons)+)+>
<!ATTLIST warninfo
            %refs;
            %secur;>
```

b. Attributes for <***warninfo***>:
(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

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24.2.1.1.2.1.1 The element <***sfty-icons***> represents the section of the warning summary that contains a key to any safety icons to be used in the TM. It contains one or more of the symbol of the icon (<***symbol***> see 33.4.3.2), followed by an optional title (<***title***> see 33.4.1.5.1), and the safety description <***sftydesc***>.

a. DTD fragment for <***sfty-icons***>:

```
<!ELEMENT sfty-icons - o (symbol, title?, sftydesc)+>
<!ATTLIST sfty-icons
            inschlvl   NUTOKENS   #IMPLIED
            delchlvl   NUTOKENS   #IMPLIED
            %refs;
            %secur;>
```

b. Attributes for <***sfty-icons***>:

(1) **INSCHLVL** - Specifies the change level(s) at which information was inserted. An audit trail can be maintained by listing multiple change levels separated by spaces.

(2) **DELCHLVL** - Specifies the change level(s) at which information was deleted. An audit trail can be maintained by listing multiple change levels separated by spaces.

(3) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(4) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.2.1.1.1 The element <***sftydesc***> is used for a description of the safety condition associated with a safety icon (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***sftydesc***>:

```
<!ELEMENT sftydesc - o (%text;)>
<!ATTLIST sftydesc
            inschlvl    NUTOKENS    #IMPLIED
            delchlvl    NUTOKENS    #IMPLIED
            %refs;
            %secur;>
```

b. Attributes for <***hazdesc***>:

(1) **INSCHLVL** - Specifies the change level(s) at which information was inserted. An audit trail can be maintained by listing multiple change levels separated by spaces.

(2) **DELCHLVL** - Specifies the change level(s) at which information was deleted. An audit trail can be maintained by listing multiple change levels separated by spaces.

(3) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(4) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.2.2 The element <***hazmat***> is used for a section of the warning summary that contains explanations of any hazard icons <***haz-icons***> in the TM and descriptions of hazardous materials used in performing procedures in the TM.

a. DTD fragment for <***hazmat***>:

```
<!ELEMENT hazmat - o (haz-icons, hazard+)>
<!ATTLIST hazmat
            inschlvl    NUTOKENS    #IMPLIED
            delchlvl    NUTOKENS    #IMPLIED
            %refs;
            %secur;>
```

b. Attributes for <***hazmat***>:

(1) **INSCHLVL** - Specifies the change level(s) at which information was inserted. An audit trail can be maintained by listing multiple change levels separated by spaces.

(2) **DELCHLVL** - Specifies the change level(s) at which information was deleted. An audit trail can be maintained by listing multiple change levels separated by spaces.

(3) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(4) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

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24.2.1.1.2.2.1 The element <***haz-icons***> represents the section of the warning summary that contains a key to any hazard icons to be used in the TM. It contains the symbol of the icon (<***symbol***> see 33.4.3.2), followed by an optional title (<***title***> see 33.4.1.5.1), and the description of the hazard <***hazdesc***>.

a. DTD fragment for <***haz-icons***>:

```
<!ELEMENT haz-icons - o (symbol, title?, hazdesc)+>
<!ATTLIST haz-icons
            inschlvl   NUTOKENS   #IMPLIED
            delchlvl   NUTOKENS   #IMPLIED
            %refs;
            %secur;>
```

b. Attributes for <***haz-icons***>:

(1) **INSCHLVL** - Specifies the change level(s) at which information was inserted. An audit trail can be maintained by listing multiple change levels separated by spaces.

(2) **DELCHLVL** - Specifies the change level(s) at which information was deleted. An audit trail can be maintained by listing multiple change levels separated by spaces.

(3) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(4) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.2.2.1.1 The element <***hazdesc***> is used for a description of the hazardous condition associated with a hazard icon (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***hazdesc***>:

```
<!ELEMENT hazdesc - o (%text;)>
<!ATTLIST hazdesc
            inschlvl    NUTOKENS    #IMPLIED
            delchlvl    NUTOKENS    #IMPLIED
            %refs;
            %secur;>
```

b. Attributes for <***hazdesc***>:

(1) **INSCHLVL** - Specifies the change level(s) at which information was inserted. An audit trail can be maintained by listing multiple change levels separated by spaces.

(2) **DELCHLVL** - Specifies the change level(s) at which information was deleted. An audit trail can be maintained by listing multiple change levels separated by spaces.

(3) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(4) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.2.2.2 The element <***hazard***> is used to identify a hazardous material warning appearing in the warning summary. it contains the identification information <***hazid***>, one or more symbols (<***symbol***> see 33.4.3.2)are used to enter the icon, and at least one paragraph (<***para***> see 33.4.1.5.3) describing the hazard, if necessary.

a. DTD fragment for <***hazard***>:

```
<!ELEMENT hazard - o (hazid, symbol+, para*)+>
<!ATTLIST hazard
            inschlvl    NUTOKENS    #IMPLIED
            delchlvl    NUTOKENS    #IMPLIED
            tocentry    %yesorno;   #IMPLIED
            %refs;
            %secur;>
```

b. Attributes for <***hazard***>:

(1) **INSCHLVL** - Specifies the change level(s) at which information was inserted. An audit trail can be maintained by listing multiple change levels separated by spaces.

(2) **DELCHLVL** - Specifies the change level(s) at which information was deleted. An audit trail can be maintained by listing multiple change levels separated by spaces.

(3) **TOCENTRY** - If other than zeros, the hazard should be included in the table of contents.

(4) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

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24.2.1.1.2.2.2.1 The element <***hazid***> is used for the name or other identification of a hazardous material (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***hazid***>:

```
<!ELEMENT hazid - o (%text;)>
<!ATTLIST hazid
            inschlvl    NUTOKENS    #IMPLIED
            delchlvl    NUTOKENS    #IMPLIED
            %refs;
            %secur;>
```

b. Attributes for <***hazid***>:

(1) **INSCHLVL** - Specifies the change level(s) at which information was inserted. An audit trail can be maintained by listing multiple change levels separated by spaces.

(2) **DELCHLVL** - Specifies the change level(s) at which information was deleted. An audit trail can be maintained by listing multiple change levels separated by spaces.

(3) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(4) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.2.3 The element <***safety***> is a portion of the warning summary that contains general safety instructions and first-aid information. It contains paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4).

a. DTD fragment for <***safety***>:

```
<!ELEMENT safety - o (%titldtext;)+>
<!ATTLIST warninfo
            %bodyatt;
            %secur;>
```

b. Attributes for <***safety***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.3 List of Effective Pages Work Package <***loepwp***>. The list of effective pages work package <***loepwp***> is used for listing the latest work packages in the TM and prepared along with the basic version of the TM and each subsequent revision. The <***loepwp***> is located immediately following the warning summary. It contains a note (<***note***> see 33.4.1.1.4), at least one revision date <***rev.date***>, para (<***para***> see 33.4.1.5.3), and at least one revision change <***rev.chg***>.

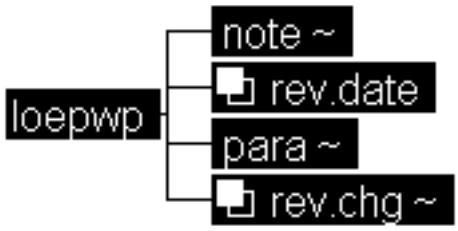

Figure 43 List of Effective Pages Work Package DTD Hierarchy

a. DTD fragment for <***loepwp***>:

```
<!ELEMENT loepwp - o (note, rev.date+, para, rev.chg+)>
```

24.2.1.1.3.1 The element <***rev.date***> contains the list of effective work packages revision date information. It contains a required title (<***title***> see 33.4.1.5.1), the revision number <***rev.no***>, and the date <***date***>.

a. DTD fragment for <***rev.date***>:

```
<!ELEMENT rev.date - o (title, rev.no, date)>
```

24.2.1.1.3.1.1 The element <***rev.no***> contains the list of effective work packages revision number release.

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a. DTD fragment for <***rev.no***>:

```
<!ELEMENT rev.no - o EMPTY>
<!ATTLIST rev.no
            no   NUMBER  #REQUIRED>
```

b. Attributes for <***rev.no***>:

(1) **NO** - List of effective work packages revision number release.

24.2.1.1.3.1.2 The element <***date***> is used to enter the date of the revision (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***date***>:

```
<!ELEMENT date - o (%text;)>
<!ATTLIST date
            %bodyatt;
            %secur;>
```

b. Attributes for <***date***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.3.2 The element <***rev.chg***> contains the revision information work package page number and revision change number or the work package number and revision change number for the list of effective work packages. It contains either a required page number (<***pageno***> see 24.2.1.11.2.2.3), an optional second page number <***pageno***> followed by the revision number (<***rev.no***> see 24.2.1.1.3.1.1) or work package number (<***wpno***> see 33.4.4.25), a work package number (<***wpno***>, followed by the revision number (<***rev.no***> see 24.2.1.1.3.1.1).

a. DTD fragment for <***rev.chg***>:

```
<!ELEMENT rev.chg - o ((pageno, pageno?, rev.no)| (wpno, wpno?, rev.no))>
<!ATTLIST rev.chg
            %refs;>
```

b. Attributes for <***rev.chg***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

24.2.1.1.4 Change Sheet <***chgsheet***>. The element <***chgsheet***> change sheet is required to appear in a changed document. This sheet contains elements explicitly placed in the document (it is not required to be generated by the system, as the Table of Contents must be). The purpose of the change sheet is to list the reason(s) for the change to the data and to provide a table designating which pages are to be removed and which are to be inserted. It contains a change number (<***chgno***> see 24.2.1.1.1.5), the primary title (<***prtitle***> see 24.2.1.1.1.1.4), optional notices (<***notices***> see 24.2.1.1.1.3), at least one paragraph of text para <***para***>, and a list of changes (<***chglist***> see 24.2.1.1.4.1).

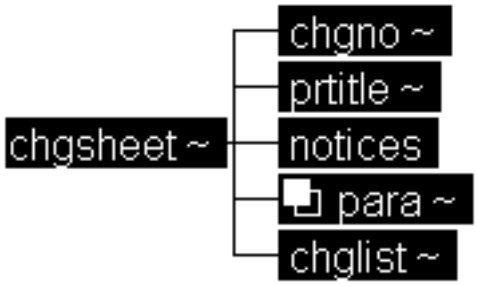

Figure 44 Change Sheet DTD Hierarchy

a. DTD fragment for <***chgsheet***>:

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```
<!ELEMENT chgsheet - o (chgno, prtitle, notices, para+, chglist)>
<!ATTLIST chgsheet
            date        CDATA       #IMPLIED
            %refs;
            %secur;>
```

b. Attributes for <***chgsheet***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

(3) **DATE** - The date of the current version of the element.

24.2.1.1.4.1 The element <***chglist***> contains the list of changed pages and work packages appearing on the change sheet. After a paragraph of text (<***para***> see 33.4.1.5.3), it lists which pages of the existing manual are to be removed <***removepg***> and which pages shipped with the current change are to be inserted <***insertpg***>. It may also include a list of work packages to be added/deleted <***chgwp***>.

a. DTD fragment for <***chglist***>:

```
<!ELEMENT chglist - o ((para, (removepg, insertpg)+)?, chgwp*)>
<!ATTLIST chglist
            %refs;
            %secur;>
```

b. Attributes for <***chglist***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.4.1.1 The element <***removepg***> is used to enter the pages to be removed from the manual (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***removepg***>:

```
<!ELEMENT removepg - o (%text;)>
<!ATTLIST removepg
            %refs;
            %secur;>
```

b. Attributes for <***removepg***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.4.1.2 The element <***insertpg***> is used to enter the pages to be inserted into the manual (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***insertpg***>:

```
<!ELEMENT insertpg - o (%text;)>
<!ATTLIST insertpg
            %refs;
            %secur;>
```

b. Attributes for <***insertpg***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.4.1.3 The element <***chgwp***> is used to enter work packages to be replaced, added, or deleted from the manual. It contains a paragraph of text para (<***para***> see 33.4.1.5.3) and work package number (<***wpno***> see 33.4.4.25).

a. DTD fragment for <***chgwp***>:

```
<!ELEMENT chgwp - o (para, wpno+)>
<!ATTLIST chgwp
            type      (replace | add | delete)     #REQUIRED>
```

b. Attributes for <***chgwp***>:

(1) **TYPE** - Type of change.

(a) REPLACE - Specifies the work package is to be replaced.

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(b) ADD - Specifies the work package is to be added
(c) DELETE - Specifies the work package is to be deleted.

24.2.1.1.5 Title Block <***titleblk***>. The element <***titleblk***> is used for title block material in the TM's front matter and repeats identifying information from the front cover, including the primary title (<***prtitle***> see 24.2.1.1.1.1.4), an optional subtitle (<***stitle***> see 24.2.1.1.1.1.7), the Reporting Errors statement <***reporting***>, any notices (<***notices***> see 24.2.1.1.1.3), the service nomenclature (<***servnomen***> see 24.2.1.1.1.4), and, if applicable, a change number (<***chgno***> see 24.2.1.1.1.5) and change date (<***chgdate***> see 24.2.1.1.1.6).

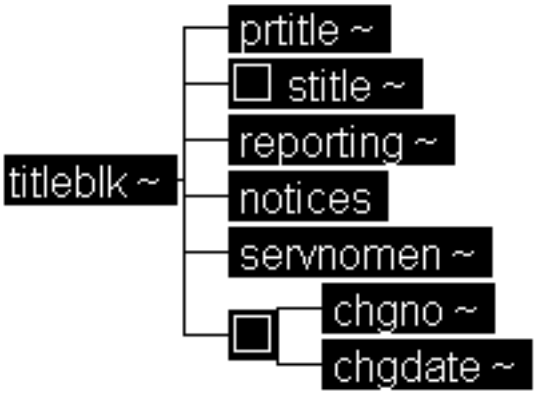

Figure 45 Title Block Page DTD Hierarchy

a. DTD fragment for <***titleblk***>:

```
<!ELEMENT titleblk - o (prtitle, stitle?, reporting, notices, servnomen,
                        (chgno, chgdate)?)>
<!ATTLIST titleblk
            supplement (none | routine | ss| os) "none"
            %refs;
            %secur;>
```

b. Attributes for <***titleblk***>:
(1) **SUPPLEMENT** - Optional attributes for supplementary manual. The default value is none.
(a) NONE - Specifies there is no supplement. This is the default.
(b) ROUTINE - Specifies supplement is routine.
(c) SS - Specifies a safety supplement.
(d) OS - Specifies an operational supplement.
(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.5.1 The element <***reporting***> is used to enter the reporting errors and recommending improvements statement. It contains a paragraph of text para (<***para***> see 33.4.1.5.3). The paragraph may be entered using an entity reference to boilerplate text.

a. DTD fragment for <***reporting***>:

```
<!ELEMENT reporting - o (para)>
<!ATTLIST reporting
            %refs;
            %secur;>
```

b. Attributes for <***reporting***>:
(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

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24.2.1.1.6 Table of Contents <***contents***>. The element <***contents***> is used for the TM's table of contents, which must be generated by the composition system according to the extraction rules found in the FOSI.

a. DTD fragment for <***contents***>:

```
<!ELEMENT contents - o EMPTY>
<!ATTLIST contents
            %refs;
            %secur;>
```

b. Attributes for <***contents***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.1.7 How to Use This Manual <***howtouse***>. The element <***howtouse***> "How to Use This Manual" is used for any special section or detailed information on how to read and use the TM; appears as the last element in the front matter of the TM. This section contains paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4) and/or procedural text (<***proc***> see 33.4.1.8.1).

Figure 46 How to Use This Manual DTD Hierarchy

a. DTD fragment for <***howtouse***>:

```
<!ELEMENT howtouse - o (%titldtext; | proc )+>
<!ATTLIST howtouse
            %refs;
            %secur;>
```

b. Attributes for <***howtouse***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.2 General Information Work Package <***ginfowp***>. The general information work package <***ginfowp***> is subdivided into the following elements and content requirements:

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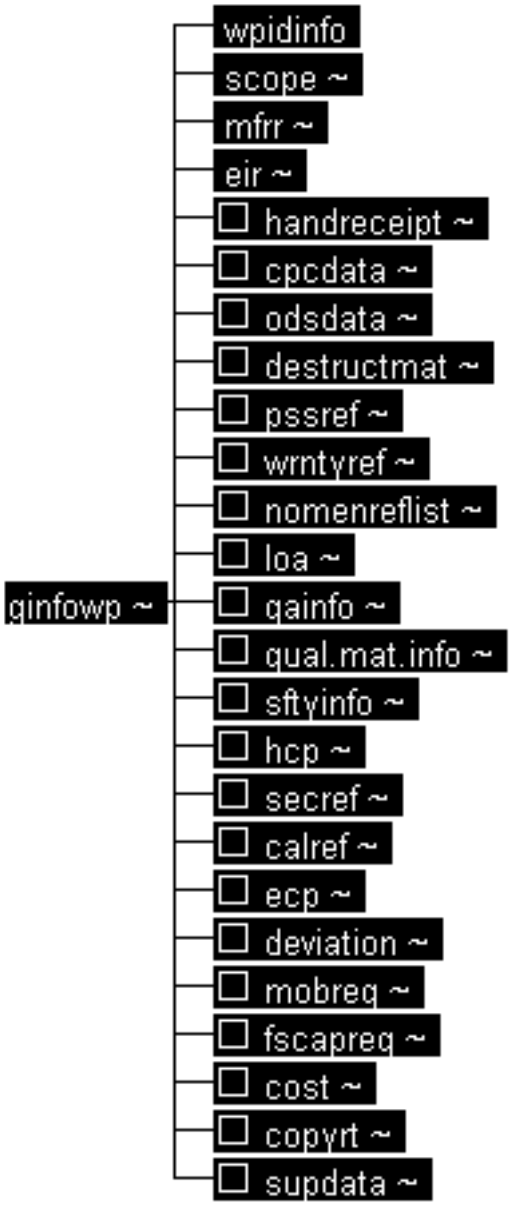

Figure 47 Standard General Information Work Package

a. DTD fragment for <***ginfowp***>:

```
<!ELEMENT ginfowp - - (wpidinfo, scope, mfrr, eir, handreceipt?, cpcdata?,
                       odsdata?, destructmat?, pssref?, wrntyref?,
                       nomenreflist?, loa?, qainfo?, qual.mat.info?,
                       sftyinfo, hcp?, secref?, calref?, ecp?, deviation?,
                       mobreq?, fscapreq?, cost?, copyrt?, supdata?)>
<!ATTLIST ginfowp
            wpno        ID          #REQUIRED
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;
```

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```
%secur;>
```

b. Attributes for <*ginfowp*>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

c. The following is an example of a tagged instance for a General Information Work Package <ginfowp>:

```
<ginfowp wpno="G00001-9-2350-294" wpseq= 0001 00 summary-detail="0">
<wpidinfo>
<maintlvl level= operator >
<eicnomen>
<sysnomen>
<name>FIGHTING VECHICLE, INFANTRY</name>
<modelno>M2A3</modelno>
<nsn>2350 01 436 0005</nsn>
<eic>(EIC TBD)</eic>
<name>FIGHTING VECHICLE, INFANTRY</name>
<modelno>M3A3</modelno>
<nsn>2350 01 436 0007</nsn>
<eic>(EIC TBD)</eic>
</sysnomen>
</eicnomen>
<title>GENERAL INFORMATION</title></wpidinfo>
<scope>
<para>
<figure><title>Left Front View</title><graphic boardno="ev0038"></figure>
<figure><title>Right Rear View</title><graphic boardno="ev0052"></figure></para>
<para>This manual tells how to operate and maintain the hulls
of the M2A3 and M3A3.<extref docno="TM 9-2350-294-10-2">tells how to
operate and maintain the turret.</para></scope>
<mfrr><para>Department of the Army forms and procedures used for equipment
maintenance will be those prescribed by<extref docno=" DA PAM 738-750">,
The Army Maintenance Management System (TAMMS).</para></mfrr>
<eir>
<para>If your vehicle needs improvement, let us know. Send us
an EIR. You, the user, are the only one who can tell us what
you don't like about your equipment. Let us know why you don't
like the design. Tell us why a procedure is hard to perform.
Put you ideas on an SF 368 (Quality Deficiency Report). Mail
it to us at:<proponent><name>Commander, US Army Tank-Automotive
Command</name><address><servnomen>ATTN: AMSTA-QRT</servnomen><city-state>Warren,
MI 48397-5000</city-state></address></proponent>.</para></eir>
<handreceipt>
<para>Hand receipts for Components Of End Item (COEI), Basic Issue
Items (BII), and Additional Authorization List (AAL) items are in<extref
docno="TM 9-2350-294-10-HR">This manual is to aid in property accountability
and is available through: Commander, Baltimore AG Publications Center,
2800 Eastern Blvd., Baltimore, MD 21220.</para></handreceipt>
<destructmat><para>The following manuals tell you how and when to
destroy Army materiel to prevent enemy use:
```

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<randlist>
<item><extref docno="TM 750-244-2"></item>
<item><extref docno="TM 750-244-5-1"></item>
<item><extref docno="TM 750-244-6"></item></randlist></para></destructmat>
<pssref><para>TBD</para></pssref>
<nomenreflist>
<para>This listing includes nomenclature cross references used in this manual.
<deflist>
<term>Brush guard</term><def><para>Duck core rubber sheet</para></def>
<term>CVC helmet</term><def><para>DH 132 helmet</para></def>
<term>Dipstick</term><def><para>Liquid measure gage rod</para></def>
<term>Firing port weapon</term><def><para>M231 5.56mm submachinegun</para></def>
<term>Hot box</term><def><para>25mm ammo container</para></def>
<term>Lock wire</term><def><para>Nonelectrical wire</para></def>
<term>MRE heater</term><def><para>Heater, water and ration</para></def><term>Surge tank</term><def><para>Tank radiator auxiliary</para></def>
<term>Squad headset</term><def><para>H-366/VRC headset</para></def>
<term>Starlight scope</term><def><para>Night vision sight, individual served weapons</para></def>
<term>Steering yoke</term><def><para>Steering wheel</para></def>
<term>TOW missile</term><def><para>Guided missile, surface attack, telemetry, BGM-71A, TOW</para></def></deflist></para></nomenreflist>
<loa>
<para>Many abbreviations are used in this manual. They are listed below. Learn what each one means. It will make your job easier.
<deflist>
<term>A</term><def><para>After</para></def>
<term>Ammo</term><def><para>Ammunition</para></def>
<term>AP</term><def><para>Armor Piercing</para></def>
<term>Assy</term><def><para>Assembly</para></def>
<term>AUTO</term><def><para>Automatic</para></def>
<term>B</term><def><para>Before</para></def>
<term>BELRF</term><def><para>Bradley Eyesafe Laser Range Finder</para></def>
<term>BO</term><def><para>Blackout</para></def>
<term>BRT</term><def><para>Bright</para></def>
<term>CAL</term><def><para>Calibration</para></def>
<term>CFV</term><def><para>Cavalry Fighting Vehicle</para></def>
<term>CKT BKR</term><def><para>Circuit Breaker</para></def>
<term>CVC</term><def><para>Combat Vehicle Communications</para></def>
<term>D</term><def><para>During</para></def>
<term>DCS</term><def><para>Digital Compass System (MV103AFV)</para></def>
<term>DEG</term><def><para>Degrees</para></def>
<term>DECLIN</term><def><para>Declination</para></def>
<term>Decontn Appar</term><def><para>Decontamination Apparatus</para></def><term>DISCH</term><def><para>Discharge</para></def>
<term>Flex hose</term><def><para>Flexible Hose</para></def>
<term>FWD</term><def><para>Forward</para></def>
<term>GPS</term><def><para>Global Positioning System</para></def><term>HE</term><def><para>High Explosive</para></def>
<term>Hex</term><def><para>Hexagonal,having six sides</para></def><term>HI-TEMP</term><def><para>High Temperature</para></def>

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<term>ID PLATE</term><def><para>Identification Plate</para></def><term>IFV</term><def><para>Infantry Fighting Vehicle</para></def><term>INT</term><def><para>Internal</para></def>
<term>Intercom</term><def><para>Intercommunication</para></def>
<term>ITV</term><def><para>Improved TOW Vehicle</para></def>
<term>M</term><def><para>Monthly</para></def>
<term>MCD</term><def><para>Missile Countermeasure Device</para></def>
<term>MRE</term><def><para>Meal Ready to Eat</para></def>
<term>NAV</term><def><para>Navigation</para></def>
<term>NBC</term><def><para>Nuclear, Biological and Chemical</para></def>
<term>OVE</term><def><para>On Vehicle Equipment</para></def>
<term>PLGR</term><def><para>Precision Lightweight GPS Receiver</para></def>
<term>PMCS</term><def><para>Preventive Maintenance Checks and Services</para></def>
<term>POL</term><def><para>Polarity</para></def>
<term>PRESS</term><def><para>Pressure</para></def>
<term>RAD</term><def><para>Radio</para></def>
<term>SER</term><def><para>Service</para></def>
<term>SET CRS</term><def><para>Set Course</para></def>
<term>TEC</term><def><para>Transmission Electronic Controller (HMPT 500-3EC)</para></def>
<term>TEMP</term><def><para>Temperature</para></def>
<term>TRANS</term><def><para>Transmission</para></def>
<term>TRK</term><def><para>Track</para></def>
<term>Vent</term><def><para>Ventilation</para></def>
<term>W</term><def><para>Weekly</para></def>
<term>XTE/ST</term><def><para>Cross Track Error/Steer-To</para>
</def>
</deflist>
</para></loa>
</ginfowp>

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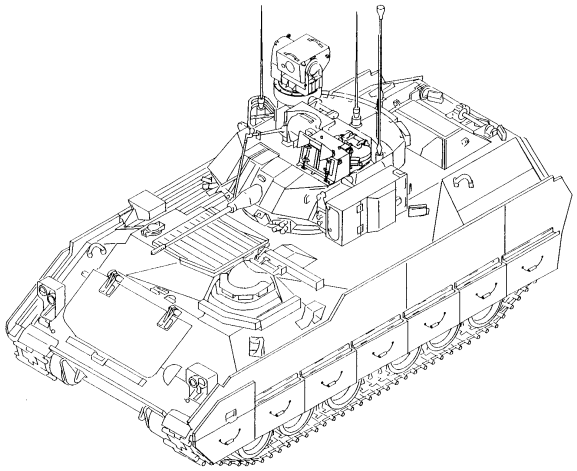
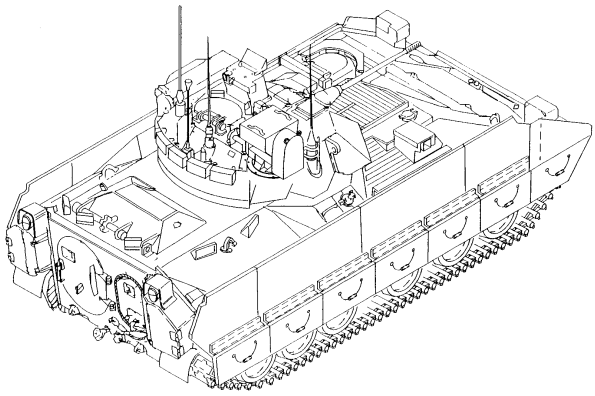
TM 9-2350-294-10-1 0001 00

OPERATOR
FIGHTING VECHICLE, INFANTRY
M2A3
2350-01-436-0005 (EIC TBD)
FIGHTING VECHICLE, INFANTRY
M3A3
2350-01-436-0007 (EIC TBD)
GENERAL INFORMATION

SCOPE



Left Front View



Right Rear View

This manual tells how to operate and maintain the hull so fthe M2A3 and M3A3. TM 9-2350-294-10-2 tells how to operate and maintain the turret.

MAINTENANCE FORMS, RECORDS AND REPORTS

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-750. The Army Maintenance Management System (TAMMS).

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

If your vehicle needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design. Tell us why a procedure is hard to perform.

Figure 48 General Information Work Package Sample

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24.2.1.2.1 The element <***wpidinfo***> (see 33.4.5) defines the identification information required for a work package.

24.2.1.2.2 The element <***scope***> (see 33.4.4.20) is used for a brief statement of what is covered in the general information work package.

24.2.1.2.3 The element <***mfrr***> is used for references to Maintenance forms, records, and reports. The <***mfrr***> can contain one or more paragraph(s) (<***para***> see 33.4.1.5.3). The paragraph(s) may be entered using an entity reference (see 35.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051.

a. DTD fragment for <***mfrr***>:

```
<!ELEMENT mfrr - o (para+)>
<!ATTLIST mfrr
            %bodyatt;
            %secur;>
```

b. Attributes for <***mfrr***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.2.4 The element <***eir***> is used for reporting errors and recommending improvement data. A statement is included on how to report an equipment improvement recommendation. The <***eir***> element can contain one or more paragraph(s) (<***para***> see 33.4.1.5.3). The paragraph(s) may be entered using an entity reference (see 35.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051.

a. DTD fragment for <***eir***>:

```
<!ELEMENT eir   - o (para+)>
<!ATTLIST eir
            %bodyatt;
            %secur;>
```

b. Attributes for <***eir***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.2.5 The element <***handreceipt***> is used for identifying information about the hand receipt manual, that is a companion document to the work package. The <***handreceipt***> element can contain one or more paragraph(s) (<***para***> see 33.4.1.5.3). The paragraph(s) may be entered using an entity reference (see 35.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051.

a. DTD fragment for <***handreceipt***>:

```
<!ELEMENT handreceipt  - o (para+)>
<!ATTLIST handreceipt
            %bodyatt;
            %secur;>
```

b. Attributes for <***handreceipt***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.2.6 The corrosion prevention and control data element <***cpcdata***> is used for identifying the manner in which a corrosion problem is to be reported for specific maintenance tasks in a work package. The <***cpcdata***> element can contain one or more paragraph(s) (<***para***> see 33.4.1.5.3). The paragraph(s) may be entered using an entity reference (see 35.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051.

a. DTD fragment for <***cpcdata***>:

```
<!ELEMENT cpcdata - o (para+)>
<!ATTLIST cpcdata
            %bodyatt;
            %secur;>
```

b. Attributes for <***cpcdata***>:

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(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.2.7 The ozone depleting substances element <***odsdata***> is a listing of the ozone depleting substances that are prohibited. The <***odsdata***> element can contain one or more paragraph(s) (<***para***> see 33.4.1.5.3).

a. DTD fragment for <***odsdata***>:

```
<!ELEMENT odsdata - o (para+)>
<!ATTLIST odsdata
            %bodyatt;
            %secur;>
```

b. Attributes for <***odsdata***>:
(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.2.8 The destruction of army materiel to prevent enemy use element <***destructmat***>, is used for references to the appropriate TMs covering the destruction of Army materiel to prevent enemy use. The <***destructmat***> element can contain one or more paragraph(s) (<***para***> see 33.4.1.5.3).

a. DTD fragment for <***destructmat***>:

```
<!ELEMENT destructmat - o (para+)>
<!ATTLIST destructmat
            %bodyatt;
            %secur;>
```

b. Attributes for <***destructmat***>:
(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.2.9 The preparation for storage or shipment references element <***pssref***> is used to identify information pertaining to the preparation for storage or shipment procedures, including packaging and administrative storage. The <***pssref***> element can contain one or more paragraph(s) (<***para***> see 33.4.1.5.3).

a. DTD fragment for <***pssref***>:

```
<!ELEMENT pssref - o (para+)>
<!ATTLIST pssref
            %bodyatt;
            %secur;>
```

b. Attributes for <***pssref***>:
(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.2.10 The warranty reference element <***wrntyref***> is used for identifying data in the TM which covers equipment that is under warranty. The <***wrntyref***> element can contain one or more paragraph(s) (<***para***> see 33.4.1.5.3). The paragraph(s) may be entered using an entity reference (see 35.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051.

a. DTD fragment for <***wrntyref***>:

```
<!ELEMENT wrntyref - o (para+)>
<!ATTLIST wrntyref
            %bodyatt;
            %secur;>
```

b. Attributes for <***wrntyref***>:
(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.2.11 The cross-reference list element <***nomenreflist***> is used to list any unofficial nomenclature approved by the contracting activity. This list is included in the nomenclature cross-reference list. The <***nomenreflist***> element can contain one or more paragraph(s) (<***para***> see 33.4.1.5.3).

a. DTD fragment for <***nomenreflist***>:

```
<!ELEMENT nomenreflist - o (para+)>
<!ATTLIST nomenreflist
```

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```
            %bodyatt;
            %secur;>
```

b. Attributes for <***nomenreflist***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.2.12 The list of abbreviation/acronyms element <***loa***> is used to list all abbreviations, acronyms, signs, or symbols used in the TM. The <***loa***> element can contain one or more paragraphs (<***para***> see 33.4.1.5.3).

a. DTD fragment for <***loa***>:

```
<!ELEMENT loa - o (para+)>
<!ATTLIST loa
            %bodyatt;
            %secur;>
```

b. Attributes for <***loa***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.2.13 The quality assurance information element <***qainfo***> is used to reference either a Quality Assurance technical manual or enter the appropriate general Quality Assurance information data. This element is used in Depot and Aviation technical manual development only. The <***qainfo***> element can contain one or more paragraph(s) (<***para***> see 33.4.1.5.3). (**DMWR and Aviation only.)**

a. DTD fragment for <***qainfo***>:

```
<!ELEMENT qainfo - o (para)+>
<!ATTLIST qainfo
            %bodyatt;
            %secur;>
```

b. Attributes for <***qainfo***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.2.14 The quality of material element <***qual.mat.info***> is used as a statement defining the requirements on quality of material that is included. The <***qual.mat.info***> tag can contain one or more paragraph(s) (<***para***> see 33.4.1.5.3).

a. DTD fragment for <***qual.mat.info***>:

```
<!ELEMENT qual.mat.info - o (para+)>
<!ATTLIST qual.mat.info
            %bodyatt;
            %secur;>
```

b. Attributes for <***qual.mat.info***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.2.15 The safety, care, and handling information element <***sftyinfo***> is used for general safety precautions. Safety regulations are included for ammunitions TMs, equipment with radioactive parts or components, and electrical/electronic parts. The <***sftyinfo***> element can contain one or more paragraph(s) (<***para***> see 33.4.1.5.3).

a. DTD fragment for <***sftyinfo***>:

```
<!ELEMENT sftyinfo - o (para+)>
<!ATTLIST sftyinfo
            %bodyatt;
            %secur;>
```

b. Attributes for <***sftyinfo***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

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24.2.1.2.16 The nuclear hardness element <***hcp***> is used for equipment or any component which has nuclear hardness survivability requirements that must be identified. The <***hcp***> element can contain one or more paragraph(s) (<***para***> see 33.4.1.5.3). The paragraph(s) may be entered using an entity reference (see 35.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051.

a. DTD fragment for <***hcp***>:

```
<!ELEMENT hcp - o (para+)>
<!ATTLIST hcp
            %bodyatt;
            %secur;>
```

b. Attributes for <***hcp***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.2.17 The security measures for electronic data instructions element <***secref***> is used for data pertaining to handling, loading, scrubbing, overwriting, or unloading classified electronic data under usual or unusual conditions. The <***secref***> element can contain one or more paragraph(s) (<***para***> see 33.4.1.5.3).

a. DTD fragment for <***secref***>:

```
<!ELEMENT secref - o (para+)>
<!ATTLIST secref
            %bodyatt;
            %secur;>
```

b. Attributes for <***secref***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.2.18 The calibration reference element <***calref***> is used to list all equipment requiring calibration. A reference to the publication containing the correct calibration procedure is made within the <***calref***> element. The <***calref***> element can contain one or more paragraph(s) (<***para***> see 33.4.1.5.3).

a. DTD fragment for <***calref***>:

```
<!ELEMENT calref - o (para+)>
<!ATTLIST calref
            %bodyatt;
            %secur;>
```

b. Attributes for <***calref***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.2.19 The engineering change proposal element <***ecp***> is used for describing methods for submitting an engineering change proposal for equipment. The <***ecp***> statement is used in Depot technical manuals only. The <***ecp***> element can contain one or more paragraph(s) (<***para***> see 33.4.1.5.3). **(DMWR only.)**

a. DTD fragment for <***ecp***>:

```
<!ELEMENT ecp - o (para+)>
<!ATTLIST ecp
            mwo     %yesorno; #IMPLIED
            %bodyatt;
            %secur;>
```

b. Attributes for <***ecp***>:

(1) **MWO** Modification Work Order for identifying all modifications which have been incorporated into the work required by the DMWR.

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.2.20 The deviations and exceptions element <***deviation***> is used to describe the methods for requesting any deviations and/or exceptions to a Depot Maintenance Work Requirement (DMWR)s. The <***deviation***> statement is used in Depot technical manuals only. The element <***deviation***> can contain one or more paragraph(s) (<***para***> see 33.4.1.5.3). **(DMWR only.)**

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a. DTD fragment for <***deviation***>:

```
<!ELEMENT deviation - o (para+)>
<!ATTLIST deviation
            %bodyatt;
            %secur;>
```

b. Attributes for <***deviation***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.2.21 The mobilization requirements element <***mobreq***> is used for a brief statement regarding mobilization requirements. The <***mobreq***> statement is used in Depot technical manuals only. The <***mobreq***> element can contain one or more paragraph(s) (<***para***> see 33.4.1.5.3). **(DMWR only.)**

a. DTD fragment for <***mobreq***>:

```
<!ELEMENT mobreq - o (para+)>
<!ATTLIST mobreq
            %bodyatt;
            %secur;>
```

b. Attributes for <***mobreq***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.2.22 The flight safety critical aircraft parts requirement statement element <***fscapreq***> is used to include a standard statement when defining flight safety critical aircraft parts. The <***fscapreq***> element can contain one or more paragraph(s) (<***para***> see 33.4.1.5.3).

a. DTD fragment for <***fscapreq***>:

```
<!ELEMENT fscapreq - o (para+)>
<!ATTLIST fscapreq
            %bodyatt;
            %secur;>
```

b. Attributes for <***fscapreq***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.2.23 The cost considerations statement element <***cost***> is used to include a standard statement when defining cost considerations. The <***cost***> statement is used in Depot technical manuals only. The <***cost***> element can contain one or more paragraph(s) (<***para***> see 33.4.1.5.3). **(DMWR only.)**

a. DTD fragment for <***cost***>:

```
<!ELEMENT cost - o (para+)>
<!ATTLIST cost
            %bodyatt;
            %secur;>
```

b. Attributes for <***cost***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.2.24 The copyright information element <***copyrt***> is used for the copyright credit line. The <***copyrt***> element can contain one or more paragraph(s) (<***para***> see 33.4.1.5.3).

a. DTD fragment for <***copyrt***>:

```
<!ELEMENT copyrt - o (para+)>
<!ATTLIST copyrt
            %bodyatt;
            %secur;>
```

b. Attributes for <***copyrt***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

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24.2.1.2.25 The supporting information for repair parts, special tools, and support equipment element <***supdata***> is used as a reference to the common tools and equipment; special tools, TMDE, and support equipment; and the repair parts. The <***supdata***> element contains one or more paragraph(s) (<***para***> see 33.4.1.5.3).

a. DTD fragment for <***supdata***>:

```
<!ELEMENT supdata - o (para+)>
<!ATTLIST supdata
            %bodyatt;
            %secur;>
```

b. Attributes for <***supdata***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.3 Preventive Maintenance Services General Information Work Package <***pms-ginfowp***>. The preventive maintenance services general information work package should be prepared for Preventive Maintenance Services manuals only. The <***pms-ginfowp***> consists of work package identification information <***wpidinfo***> followed by a brief statement of what is covered in the work package, <***scope***> and general information <***geninfo***>.

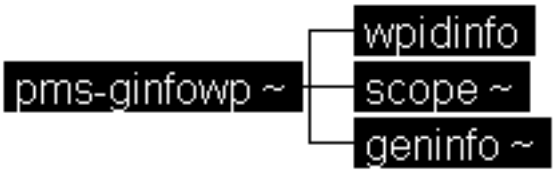

Figure 49 Preventive Maintenance Services General Information Work Package

a. DTD fragment for <***pms-ginfowp***>:

```
<!ELEMENT pms-ginfowp - - (wpidinfo, scope, geninfo)>
<!ATTLIST pmsginfowp
            wpno        ID          #REQUIRED
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***pms-ginfowp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.4 Phased Maintenance Checklist Introductory Work Package <***pm-ginfowp***>. The phased maintenance checklist introductory work package is prepared for Phased Maintenance Checklist manuals only. The <***pm-ginfowp***> should consist of work package identification information <***wpidinfo***> followed by general information <***geninfo***>.

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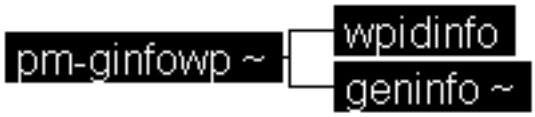

Figure 50 Phased Maintenance Checklist Introductory Work Package

a. DTD fragment for <***pm-ginfowp***>:

```
<!ELEMENT pm-ginfowp - - (wpidinfo, geninfo)>
<!ATTLIST pm-ginfowp
            wpno        ID          #REQUIRED
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***pm-ginfowp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.5 The element <***gim***> (see Section 25) is used to enter the General Information Chapter.

24.2.1.6 The element <***opim***> (see Section 26)is used to enter the Operator's Instruction Information Chapter.

24.2.1.7 The element <***mim***> (see Section 28) is used to enter the Maintenance Information Chapter.

24.2.1.8 The element <***tim***> (see Section 27) is used to enter the Troubleshooting Information Chapter.

24.2.1.9 The element <***sim***> (see Section 30) is used to enter the Supporting Information Chapter.

24.2.1.10 The element <***pim***> (see Section 29) is used to enter the Parts Information Chapter.

24.2.1.11 Rear Matter <***rear***>. The rear or back matter of a TM. It may consist of a glossary <***glossary***>, alphabetic index <***aindx***>, foldout (oversize) illustration section <***foldsect***>, DA-2028 forms <***da2028***>, authentication page <***authent***>, and a metric conversion chart <***back***>. Only the authentication page and metric conversion chart are required. The rear matter element <***rear***> consist of the following elements:

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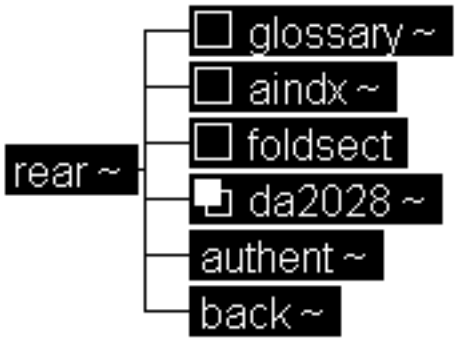

Figure 51 Rear Matter DTD Hierarchy

a. DTD fragment for <***rear***>:

```
<!ELEMENT rear - - (glossary?, aindx?, foldsect?, da2028+, authent, back)>
<!ATTLIST rear
            %refs;
            %secur;>
```

b. Attributes for <***rear***>:
   (1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
   (2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.11.1 Glossary <***glossary***>. The element <***glossary***> is used for a glossary of terms and definitions contained in the rear matter of a page-based TM. It contains a definition list <***deflist***>.

a. DTD fragment for <***glossary***>:

```
<!ELEMENT glossary - o (deflist)>
<!ATTLIST glossary
            %refs;
            %secur;>
```

b. Attributes for <***glossary***>:
   (1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
   (2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.11.1.1 The element <***deflist***> (see 33.4.1.2.3) identifies a list of terms and definitions in the glossary <***glossary***>. The term can enclose a word, phrase, abbreviation, or symbol.

24.2.1.11.2 Aindx <***aindx***>. The element <***aindx***> is used for an alphabetical index of subjects that may be useful to the TM user; appears in the rear matter of the page-based TM. The index is automatically generated when elements to appear in the index have been properly tagged within the instance. The alphabetical index is a optional task element because the composition system of applications varies how it handles specific tasks. Some composition systems can not handle an automated task such as this alphabetical index and has to be manually created. While other composition systems can generate the index with the assistance of a pre or post process, where as some composition systems have the capability to generate the index without any assistance. Additional information on the process of the alphabetical index and other optional methods in developing an alphabetical index see <***aindx***> (see 36.2.1.4.4). The element contains an optional alphabetical category heading <***alphaindx***> and one or more index marker reference <***indexentry***>.

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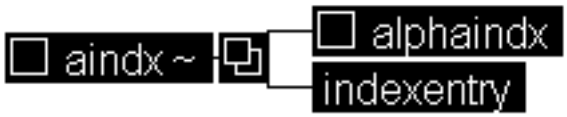

Figure 52 Alphabetical Index DTD Hierarchy

a. DTD fragment for <***aindx***>:

```
<!ELEMENT aindx - o (alphaindx?, indexentry)*>
<!ATTLIST aindx
            %refs;
            %secur;>
```

b. Attributes for <***aindx***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.11.2.1 The element <***alphaindx***> is used for the heading of an alphabetical category in an alphabetical index . The element contains (#PCDATA see 35.3.2).

a. DTD fragment for <***alphaindx***>:

```
<!ELEMENT alphaindx - o (#PCDATA)>
```

24.2.1.11.2.2 The index marker reference element <***indexentry***> establishes a document location and index text to be referenced within the alphabetical index <***aindx***>. The element contains a required topic <***topic***>, may be followed by one or more work package number(s) <***wpno***>, page number(s) <***pageno***>, and may have one or more second level sub-entry <***sub-entry1***>.

a. DTD fragment for <***indexentry***>:

```
<!ELEMENT indexentry - o (topic, (wpno, pageno)*, sub-entry1*)>
```

24.2.1.11.2.2.1 The element <***topic***> is used for the key word of the index entry. The element contains (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***topic***>:

```
<!ELEMENT topic - o (%text;)>
```

24.2.1.11.2.2.2 The element <***wpno***> (see 33.4.4.25) provides the work package sequence number of the topic for the index.

24.2.1.11.2.2.3 The element <***pageno***> is used to reference a page number. The element contains (#PCDATA see 35.3.2).

a. DTD fragment for <***pageno***>:

```
<!ELEMENT pageno - o (#PCDATA)>
<!ATTLIST pageno
            ref     IDREF     #IMPLIED
            id      ID        #IMPLIED>
```

b. Attributes for <***pageno***>

(1) **REF** - References to the page number.

(2) **ID** - Specifies the unique identifier of the page number.

24.2.1.11.2.2.4 The element <***sub-entry1***> is used for the second level entry of the index entry in an index to generate a manual index or permit automated index generation. The element contains a required topic (<***topic***> see 24.2.1.11.2.2.1), may be followed by one or more work package number(s) (<***wpno***> see 33.4.4.25), page number(s) (<***pageno***> see 24.2.1.11.2.2.3), and may have one or more third level sub-entry <***sub-entry2***>.

a. DTD fragment for <***sub-entry1***>:

```
<!ELEMENT sub-entry1 - o (topic, (wpno, pageno)*, sub-entry2*)>
```

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24.2.1.11.2.2.4.1 The element <***sub-entry2***> is used for the third level entry of the index entry in an index to generate a manual index or permit automated index generation. The element contains a required topic (<***topic***> see 24.2.1.11.2.2.1), may be followed by one or more work package number(s) (<***wpno***> see 33.4.4.25), page number(s) (<***pageno***> see 24.2.1.11.2.2.3), and may have one or more fourth level sub-entry <***sub-entry3***>.

a. DTD fragment for <***sub-entry2***>:

```
<!ELEMENT sub-entry2 - o (topic, (wpno, pageno)*, sub-entry3*)>
```

24.2.1.11.2.2.4.1.1 The element <***sub-entry3***> is used for the fourth level entry of the index entry in an index to generate a manual index or permit automated index generation. The element contains a required topic (<***topic***> see 24.2.1.11.2.2.1), may be followed by one or more work package number(s) (<***wpno***> see 33.4.4.25), and page number(s) (<***pageno***> see 24.2.1.11.2.2.3).

a. DTD fragment for <***sub-entry3***>:

```
<!ELEMENT sub-entry3 - o (topic, (wpno, pageno)*)>
```

24.2.1.11.3 Foldout Section <***foldsect***>. The element <***foldsect***> foldout section is used in the rear matter of the page-based TM containing foldout (oversize) illustrations. Figures that appear in this section have been extracted from the body of the manual because the associated attribute "figtype" on the element figure indicated "fo-rear." This extraction is described in the FOSI.

a. DTD fragment for <***foldsect***>:

```
<!ELEMENT foldsect - o EMPTY>
```

24.2.1.11.4 DA 2028 <***da2028***>. The reporting errors and recommending improvements element <***da2028***> form is used for reporting errors and recommending equipment improvements. The DA Form 2028-2 is found in the TM rear matter as three blank copies and one filled-out sample that will include guidelines for completing the form. The three blank DA Form 2028-2 will include the TM number, date, and title.

a. DTD fragment for <***da2028***>:

```
<!ELEMENT da2028 - o EMPTY>
<!ATTLIST da2028
            boardno ENTITY  #REQUIRED
            %refs;
            %secur;>
```

b. Attributes for <***da2028***>:

(1) **BOARDNO**- Specifies the name of the entity containing the graphic file of the form.
(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.11.5 Authentication Page <***authent***>. The element <***authent***> is used for the authentication page for a page-based TM provided by the contracting activity. It is entered using the associated attribute boardno.

a. DTD fragment for <***authent***>:

```
<!ELEMENT authent - o EMPTY>
<!ATTLIST authent
            boardno ENTITY  #REQUIRED
            %refs;
            %secur;>
```

b. Attributes for <***authent***>:

(1) **BOARDNO**- Specifies the name of the entity containing the graphic file of the page.
(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.11.6 Rear Matter <***rear***>. The element <***back***> is used for the back cover of a page-based TM. The inside back cover may contain a metric conversion chart; the outside is blank, except for pocket manuals. It is entered using the associated attribute boardno.

a. DTD fragment for <***back***>:

```
<!ELEMENT back - o EMPTY>
<!ATTLIST back
```

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```
            boardno ENTITY  #REQUIRED
            %refs;
            %secur;>
```

b. Attributes for <***back***>:

(1) **BOARDNO**- Specifies the name of the entity containing the graphic file of the metric conversion chart.

(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.12 Volume <***volume***>. An element containing the front matter for a volume in a multi-volume manual, including the front cover <***frntcover***>, warning summary <***warnsum***>, change sheet <***chgsheet***>, title block <***titleblk***>, table of contents <***contents***>, and How to Use <***howtouse***>. The front cover, title block and table of contents are the only required elements. The element <***volume***> is used to insert the front matter only, not to indicate a containment relationship relative to surrounding TM body matter.

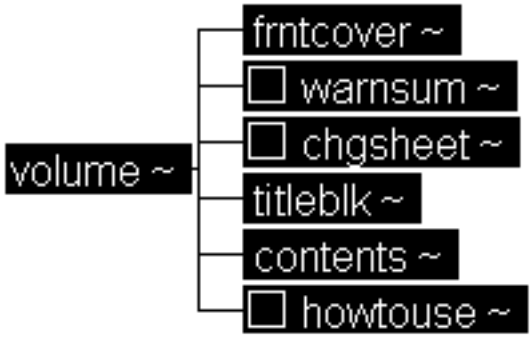

Figure 53 Volume DTD Hierarchy

a. DTD fragment for <***volume***>:

```
<!ELEMENT volume - - (frntcover, warnsum?, chgsheet?, titleblk, contents,
                      howtouse?)>
<!ATTLIST volume
          tmno          CDATA                    #REQUIRED
          revno         NUMBER                   #REQUIRED
          maintitl      CDATA                    #REQUIRED
          maintlvls     NAMES                    #REQUIRED
          eic           CDATA                    #REQUIRED
          date          CDATA                    #REQUIRED
          imlevel       (depot | operator |
                         gensup | dirsup |
                         unitlvl | inter |
                         avum-avim | tmlvls)     #REQUIRED
          syslevel      (enditem | func-system)  "enditem"
          system-title  CDATA                    #IMPLIED
          %refs;
          %secur;>
```

b. Attributes for <***volume***>:

(1) **TMNO** - The number of the current TM. The prefix TM must be included in the attribute value.

(2) **REVNO** - The overall revision number for the volume.

(3) **MAINTITL** - Supplies a literal version of the maintenance-level title.

(4) **MAINTLVLS** - Specifies the maintenance level(s) authorized to use this manual; this attribute value is used in the FOSI to supply the literal expression of the TM's maintenance level.

(5) **EIC** - The end-item code of the equipment covered in the TM.

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(6) **DATE** - The date of the current version of the element.
(7) **IMLEVEL** - The maintenance level of the volume.
  (a) “OPERATOR” – Applies to operator maintenance level.
  (b) “UNITLVL” – Applies to unit maintenance level.
  (c) “DIRSUP” – Applies to direct support (DS) maintenance level.
  (d) “GENSUP” – Applies to general support (GS) maintenance level.
  (e) “INTER” – Applies to intermediate (DS/GS) maintenance level.
  (f) “DEPOT” – Applies to depot maintenance level.
  (g) “AVUM-AVIM” – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.
  (h) “TMLVLS” – Applies to all maintenance levels.
(8) **SYSLEVEL** - Specifies whether the volume constituents cover the full end item ("ENDITEM") or a particular functional system ("FUNC-SYSTEM") within the end item. When the value is not entered for the attribute SYSLEVEL, the default value is ENDITEM.
(9) **SYSTEM-TITLE** - If the attribute value of "SYSLEVEL" is "FUNC-SYSTEM," this attribute is used to identify the functional system which the volume covers.
(10) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(11) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.12.1 The element <***frntcover***> (see 24.2.1.1.1) is used to enter the front cover of the volume.

24.2.1.12.2 The element <***warnsum***> (see 24.2.1.1.2) is used to enter the warning summary for the volume.

24.2.1.12.3 The element <***chgsheet***> (see 24.2.1.1.4) is used to enter the change sheet for the volume.

24.2.1.12.4 The element <***titleblk***> (see 24.2.1.1.5) is used to enter the title block of the volume.

24.2.1.12.5 The element <***contents***> (see 24.2.1.1.6) is used to enter the table of contents for the volume.

24.2.1.12.6 The element <***howtouse***> (see 24.2.1.1.7) is used to enter the How to Use section for the volume.

24.2.1.13 Volume Rear <***vol-rear***>. This element is used for rear or back matter of a volume in a multi-volume manual. This element is used to insert the volume’s rear matter only, not to indicate a containment relationship relative to surrounding TM body matter.

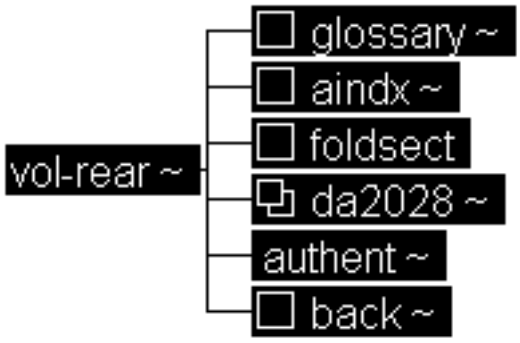

Figure 54 Volume Rear DTD Hierarchy

a. DTD fragment for <***vol-rear***>:

```
<!ELEMENT vol-rear - - (glossary?, aindx?, foldsect?, da2028?*, authent,
                        back?)>
<!ATTLIST vol-rear
            tmno            CDATA       #REQUIRED
            revno           NUMBER      #REQUIRED
            date            CDATA       #REQUIRED
```

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```
%refs;
%secur;>
```

b. Attributes for <***vol-rear***>:

(1) **TMNO** - The number of the current TM. The prefix TM must be included in the attribute value.
(2) **REVNO** - The overall revision number.
(3) **DATE** - The date of the current version of the element.
(4) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.1.13.1 The element <***glossary***> (see 24.2.1.11.1) is used to enter the glossary of the volume.

24.2.1.13.2 The element <***aindx***> (see 24.2.1.11.2) is used to enter the alphabetical index of the volume.

24.2.1.13.3 The element <***foldsect***> (see 24.2.1.11.3) is used to enter the foldout section of the volume.

24.2.1.13.4 The element <***da2028***> (see 24.2.1.11.4) is used to enter the appropriate form for the volume.

24.2.1.13.5 The element <***authent***> (see 24.2.1.11.5) is used to enter the authenticity page for the volume.

24.2.1.13.6 The element <***back***> (see 24.2.1.11.6) is used to enter the metric conversion chart on the back cover of the volume.

24.2.2 Framed-Based TM <***framed.manual***>. The <***framed.manual***> element that contains all contents of an assembled technical manual, including the front matter and the body of the manual. The format style and requirements of the manual is prepared for screen display. There is only one <***framed.manual***> element per TM.

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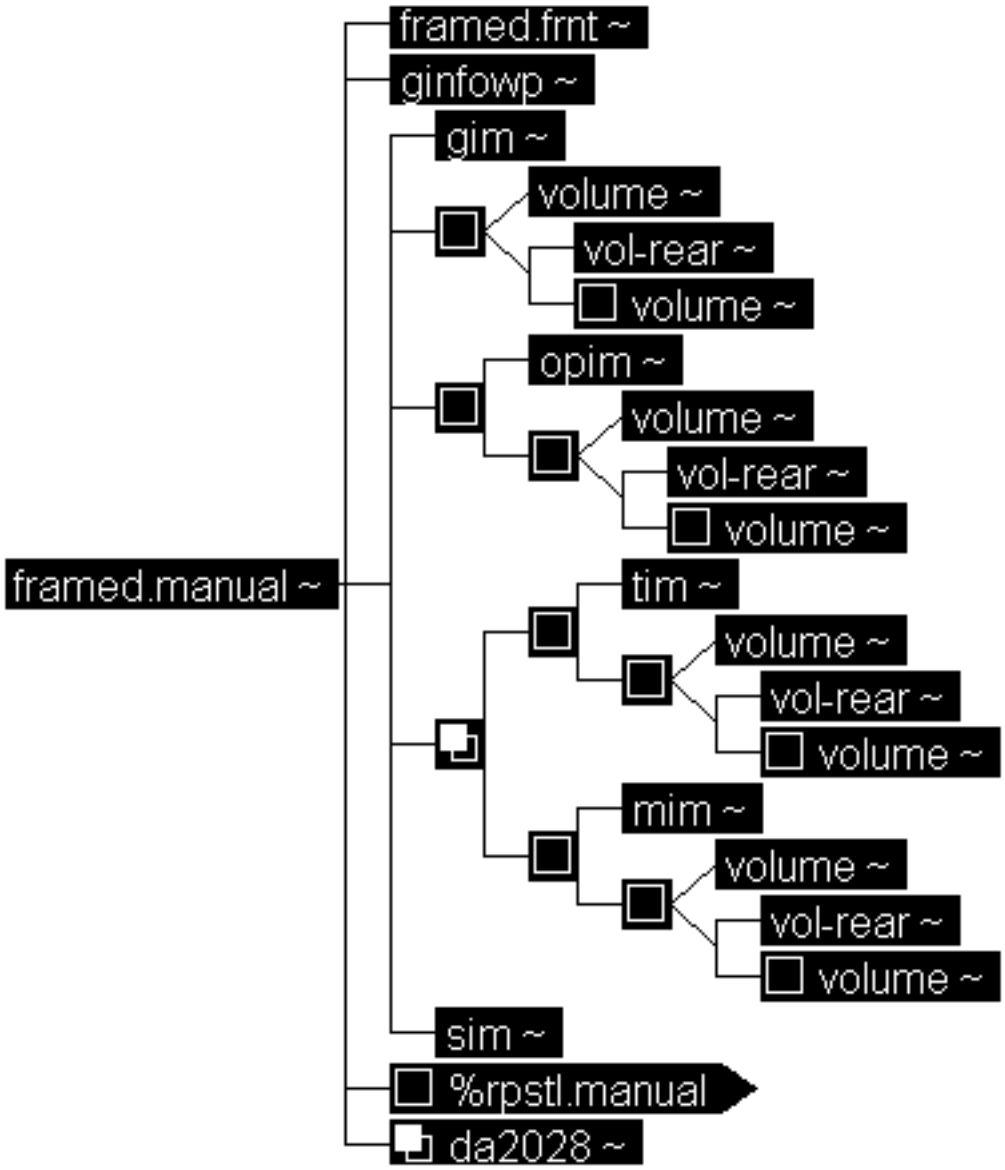

Figure 55 Framed-Based TM DTD Hierarchy

a. DTD fragment for <***framed.manual***>:

```
<!ELEMENT framed.manual - - (framed.frnt, %std.manual, (%rpstl.manual;)?,
                             da2028+)>
<!ATTLIST framed.manual
          revno          NUMBER                  #REQUIRED
          maintitl       CDATA                   #REQUIRED
          maintlvls      (10 | 24 |
                          avum-avim |dmwr         #REQUIRED
          date           CDATA                   #REQUIRED
          pubno          CDATA                   #IMPLIED
          %refs;
```

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```
            %secur;>
```

b. Attributes for <***framed.manual***>:

(1) **REVNO** - The revision number of the overall manual.
(2) **MAINTITL** - Supplies a literal version of the maintenance-level title.
(3) **MAINTLVLS** - Specifies the maintenance level(s) authorized to use this manual; this attribute value is used in the FOSI to supply the literal expression of the TM's maintenance level.
(4) **DATE** - The date of the current version of the element.
(5) **PUBNO** - Specifies the technical manual publication number.
(6) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(7) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.2.1 Front Matter Frame-Based <***framed.frnt***>. The element <***framed.frnt***> contains all front matter of a technical manual and it occurs before the first chapter of the manual. Format style and requirements are prepared for screen display. The element consists of the following elements.

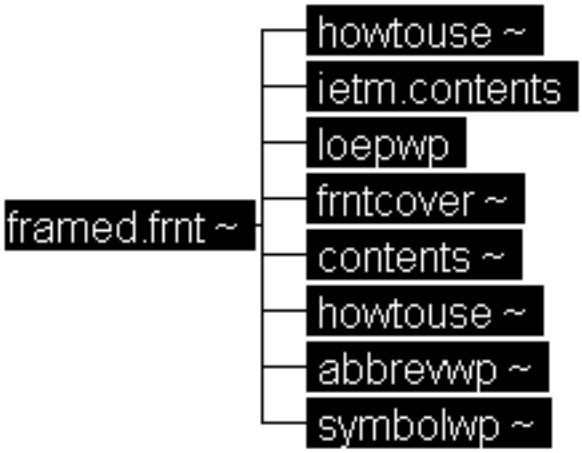

Figure 56 Front Matter-Framed Based DTD Hierarchy

a. DTD fragment for <***framed.frnt***>:

```
<!ELEMENT framed.frnt - - (howtouse, ietm.contents, loepwp, frntcover,
                           contents, howtouse, abbrevwp, symbolwp)>
<!ATTLIST framed.frnt
            %refs;
            %secur;>
```

b. Attributes for <***framed.frnt***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.2.1.1 The element <***howtouse***> (see 24.2.1.1.7) is used to enter the How to Use This IETM section for the front matter - framed-based TM.

24.2.2.1.2 IETM.Contents <***ietm.contents***>. The element <***ietm.contents***> contains the IETM number and title of all technical manuals that are contained on the CD. The element consists of change number (<***chgno***> see 24.2.1.1.1.5) and one or more primary title(s) <***prtitle***> see 24.2.1.1.1.4).

a. DTD fragment for <***ietm.contents***>:

```
<!ELEMENT ietm.contents - - (chgno, prtitle+)>
```

24.2.2.1.3 The element <***loepwp***> (see 24.2.1.1.3) is used to enter the list of effective pages work package.

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24.2.2.1.4 The element <***frntcover***> (see 24.2.1.1.1) is used to enter the front cover for a framed based TM.

24.2.2.1.5 The element <***contents***> (see 24.2.1.1.6) is used to enter the table of contents for a framed based TM.

24.2.2.1.6 Abbreviations and Terms Work Package <***abbrevwp***>. The element <***abbrevwp***> is used to develop an abbreviations, acronyms, and uncommon terms work package. The work package should explain all acronyms, abbreviations, and unusual terms used in the IETM. The element contains identification information required for a work package (<***wpidinfo***>, an optional general information section <***geninfo***> followed by a definition list <***deflist***>.

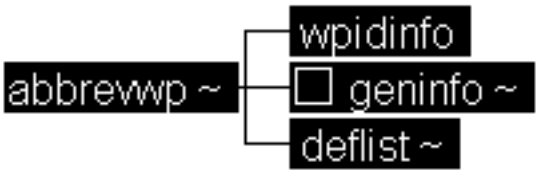

Figure 57 Abbreviations and Terms Work Package Based DTD Hierarchy

a. DTD fragment for <***abbrevwp***>:

```
<!ELEMENT abbrevwp - - (wpidinfo, geninfo?, deflist)>
 !ATTLIST abbrevwp
            wpno       ID       #REQUIRED
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***abbrevwp***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.2.1.6.1 The element <***wpidinfo***> (see 33.4.5) defines the identification information required for a work package.

24.2.2.1.6.2 The element <***geninfo***> (see 33.4.4.11) is introductory information for the work package.

24.2.2.1.6.3 The element <***deflist***> (see 33.4.1.2.3) identifies a list of terms and definitions in the glossary <***glossary***>. The term can enclose a word, phrase, abbreviation, or symbol.

24.2.2.1.7 Symbol Work Package <***symbolwp***>. The element <***symbolwp***> defines all nonstandard symbols for framed-based TMs. The element contains identification information required for a work package <***wpidinfo***> followed by an optional introduction to the work package <***intro***> and may have a hazard icon section <***haz-icon***>.

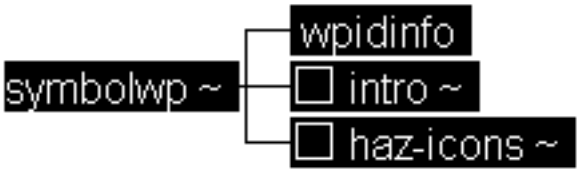

Figure 58 Symbol Work Package Based DTD Hierarchy

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a. DTD fragment for <***symbolwp***>:

```
<!ELEMENT symbolwp - - (wpidinfo, intro,? haz-icons?)>
<!ATTLIST symbolwp
          wpno       ID       #REQUIRED
          %wprsrc-vals;
          %tracking;
          %wpbodyatt;
          %secur;>
```

b. Attributes for <***symbolwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.2.1.7.1 The element <***wpidinfo***> (see 33.4.5) defines the identification information required for a work package.

24.2.2.1.7.2 The element <***intro***> (see 33.4.4.12) is an introductory section for the symbol work package.

24.2.2.1.7.3 The element <***haz-icons***> (see 24.2.1.1.2.2.1) is a section containing a key to any hazard icons to be used in the IETM.

24.2.3 Specialized Aviation Information Manual <***aviation***>. This element <***aviation***> contains specialized aviation manuals that do not share the structure and contents of maintenance TMs. The element <***aviation***> consists of one of the following aviation type manuals: System-Wide Troubleshooting (<***sys-ts***> see 24.2.3.1) Preventive Maintenance Services (<***pms***> see 24.2.3.2) Phased Maintenance Inspections (<***pmi***> see 24.2.3.3), Preparation of Aircraft Operator's Instructions (<***pilotop***> see 24.2.3.4), Pilot's Checklist (<***pcklist-manual***> see 24.2.3.5), and Aircraft for Shipping <***ship***> see 24.2.3.6) the following elements:

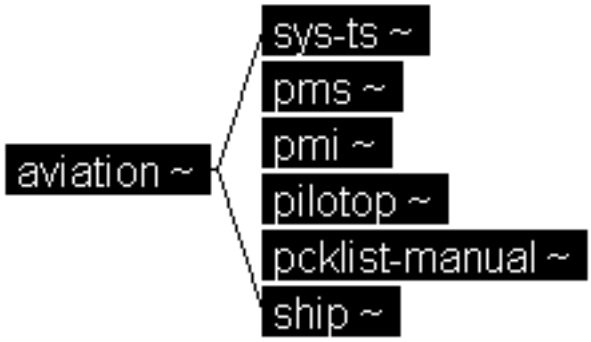

Figure 59 Aviation DTD Hierarchy

a. a. DTD fragment for <***aviation***>:

```
<!ELEMENT aviation - - (sys-ts | pms| pmi| pilotop | pcklist-manual | ship)>
<!ATTLIST aviation
            aircraft CDATA #REQUIRED>
```

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b. Attributes for <***aviation***>:

(1) **AIRCRAFT** - The aircraft to which the specialized manual applies.

24.2.3.1 The element <***sys-ts***> contains the contents of a System-Wide Troubleshooting Aviation Manual. The element consists of front matter paged-based <***paper.frnt***>, work packages from the Troubleshooting Information Chapter <***tim***>, and a rear matter <***rear***>.

a. DTD fragment for <***sys-ts***>:

```
<!ELEMENT sys-ts - - (paper.frnt, tim, rear)>
<!ATTLIST sys-ts
          revno       NUMBER    #REQUIRED
          date        CDATA     #REQUIRED
          pubno       CDATA     #IMPLIED
          %refs;
          %secur;>
```

b. Attributes for <***sys-ts***>:

(1) **REVNO** - The overall revision number for the volume.

(2) **DATE** - The date of the current version of the element.

(3) **PUBNO** - Specifies the technical manual publication number.

(4) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.3.1.1 The element <***paper.frnt***> (see 24.2.1.1) is used to enter front matter for a paged-based manual.

24.2.3.1.2 The element <***tim***> (see 27) is used to enter the Troubleshooting Information Chapter.

24.2.3.1.3 The element <***rear***> (see 24.2.1.11) is used to enter the rear matter.

24.2.3.2 The element <***pms***> contains the contents of a Preventive Maintenance Services Aviation Manual. The element consists of Preventive Maintenance Services front matter <***pm.frnt***>, preventive maintenance services general information work package <***pms-ginfowp***>, work packages from the Maintenance Information Chapter <***mim***>, %vol.group; (***%vol.group;*** see 33.3.6) and a rear matter <***rear***>.

a. DTD fragment for <***pms***>:

```
<!ELEMENT pms - - (pm.frnt, pms-ginfowp, (mim, %vol.group;)+, rear)>
<!ATTLIST pms
            revno       NUMBER    #REQUIRED
            date        CDATA     #REQUIRED
            pubno       CDATA     #IMPLIED
            %refs;
            %secur;>
```

b. Attributes for <***sys-ts***>:

(1) **REVNO** - The overall revision number for the volume.

(2) **DATE** - The date of the current version of the element.

(3) **PUBNO** - Specifies the technical manual publication number.

(4) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.3.2.1 Preventive Maintenance Service Manual Front Matter <***pm.frnt***>. The element <***pm.frnt***> contains the contents of the front matter of a Preventive Maintenance Services Manual <***pms***> or Phased Maintenance Inspections Manual <***pmi***>. The front matter consist of a front cover <***frntcover***>, warning summary <***warnsum***> and a change sheet <***chgsheet***>.

a. DTD fragment for <***pm.frnt***>:

```
<!ELEMENT pm.frnt - - (frntcover, warnsum, chgsheet)>
<!ATTLIST pm.frnt
          %refs;
          %secur;>
```

b. Attributes for <***pm.frnt***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

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(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.3.2.1.1 The element <***frntcover***> (see 24.2.1.1.1) is used to enter the front cover of the preventive maintenance services aviation manual.

24.2.3.2.1.2 The element <***warnsum***> (see 24.2.1.1.2) is used to enter the warning summary of the preventive maintenance services aviation manual.

24.2.3.2.1.3 The element <***chgsheet***> (see 24.2.1.1.4) is used to enter the change sheet for the preventive maintenance services aviation manual.

24.2.3.2.2 The element <***pms-ginfowp***> (see 24.2.1.3) is used to enter the preventive maintenance services general information work package.

24.2.3.2.3 The element <***mim***> (see 28) is used to enter the Maintenance Information Chapter.

24.2.3.2.4 The element <***rear***> (see 24.2.1.11) is used to enter the rear matter.

24.2.3.3 Phased Maintenance Inspections <***pmi***>. The element <***pmi***> contains the contents of a phased maintenance inspections aviation manual. The element consists of phased maintenance inspections/preventive maintenance services front matter <***pm.frnt***>, phased maintenance checklist introductory work package <***pm-ginfowp***>, work packages from the Maintenance Information Chapter <***mim***>, parameter entity volume separation ***%vol.group;*** and a rear matter <***rear***>.

a. DTD fragment for <***pmi***>:

```
<!ELEMENT pmi - - (pm.frnt, pm-ginfowp, (mim, %vol.group;)+, rear)>
<!ATTLIST pmi
            revno       NUMBER    #REQUIRED
            date        CDATA     #REQUIRED
            pubno       CDATA     #IMPLIED
            %refs;
            %secur;>
```

b. Attributes for <***pmi***>:

(1) **REVNO** - The overall revision number for the volume.
(2) **DATE** - The date of the current version of the element.
(3) **PUBNO** - Specifies the technical manual publication number.
(4) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.3.3.1 The element <***pm.frnt***> (see 24.2.3.2.1) contains the contents of the front matter of a phased maintenance inspections manual.

24.2.3.3.2 The element <***pm-ginfowp***> (see 24.2.1.4) is used to enter the phased maintenance checklist introductory work package.

24.2.3.3.3 The element <***mim***> (see 28) is used to enter the Maintenance Information Chapter.

24.2.3.3.4 Volume separation (***%vol.group;*** see 33.3.6) may occur any where in this element.

24.2.3.3.5 The element <***rear***> (see 24.2.1.11) is used to enter the rear matter.

24.2.3.4 Aircraft Operator Instructions <***pilotop***>. The element <***pilotop***> is used for the preparation of aircraft operator's instructions. This element contains the contents of an aircraft operator's technical manual. It includes the front matter paged-based <***paper.frnt***>, Pilot Operator's Information Chapter <***pilot-opim***>, parameter entity volume separation ***%vol.group;***, Supporting Information Chapter <***sim***>, and rear matter <***rear***>.

a. DTD fragment for <***pilotop***>:

```
<!ELEMENT pilotop - - (paper.frnt, pilot-opim, %vol.group;, sim, rear)>
<!ATTLIST pilotop
            revno       NUMBER    #REQUIRED
            maintitl    CDATA     #REQUIRED
            maintlvls   NAMES     #REQUIRED
            %rsrc-values;
            date        CDATA     #REQUIRED
```

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```
              tmno        CDATA     #REQUIRED
              %refs;
              %secur;>
```

b. Attributes for <***pilotop***>:

(1) **REVNO** - The overall revision number for the volume.
(2) **MAINTITL** - Supplies a literal version of the maintenance-level title.
(3) **MAINTLVLS** - Specifies the maintenance level(s) authorized to use this manual; this attribute value is used in the FOSI to supply the literal expression of the TM's maintenance level.
(4) **%RSRC-VALUES;** - This attribute set supplies document-wide format and referencing format default values; applicable to composed paper manuals only. These attributes are attached only to the top element of the document. Attributes of the same name at the IM or work package level override the document-wide values.
(5) **DATE** - The date of the current version of the element.
(6) **TMNO** - The number of the current TM. The prefix TM must be included in the attribute value.
(7) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(8) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.3.4.1 The element <***paper.frnt***> (see 24.2.1.1) is used to enter the front matter for a paged-based aircraft operator's TM.

24.2.3.4.2 The element <***pilot-opim***> is the main body of an aircraft operator's TM. Information on <***pilot-opim***> will be supplied in a later revision of this handbook.

24.2.3.4.3 The element volume <***volume***> (see 24.2.1.12) is used to indicate a volume.

24.2.3.4.4 The element <***vol-rear***> (see 24.2.1.13) is used to indicate the rear matter of a volume.

24.2.3.4.5 Volume separation (***%vol.group;*** see 33.3.6) may occur any where in this element.

24.2.3.4.6 The element <***sim***> (see 30) is the supporting information chapter.

24.2.3.4.7 The element <***rear***> (see 24.2.1.11) is used to enter the rear matter.

24.2.3.5 Pilot Checklist <***pcklist-manual***>. The element <***pcklist-manual***> is used for the preparation of Pilot's Checklist. This element contains the contents, including front and rear matter, of a Pilot's Checklist TM.

a. DTD fragment for <***pcklist-manual***>:

```
<!ELEMENT pcklist-manual - - (paper.frnt, pilot-opim, rear)>
<!ATTLIST pcklist-manual
              revno       NUMBER   #REQUIRED
              maintitl    CDATA    #REQUIRED
              maintlvls   NAMES    #REQUIRED
              %rsrc-values;
              date        CDATA    #REQUIRED
              tmno        CDATA    #REQUIRED
              %refs;
              %secur;>
```

b. Attributes for <***pcklist-manual***>:

(1) **REVNO** - The overall revision number for the manual.
(2) **MAINTITL** - Supplies a literal version of the maintenance-level title.
(3) **MAINTLVLS** - Specifies the maintenance level(s) authorized to use this manual; this attribute value is used in the FOSI to supply the literal expression of the TM's maintenance level.
(4) **%RSRC-VALUES;** - This attribute set supplies document-wide format and referencing format default values; applicable to composed paper manuals only. These attributes are attached only to the top element of the document. Attributes of the same name at the IM or work package level override the document-wide values.
(5) **DATE** - The date of the current version of the element.
(6) **TMNO** - The number of the current TM. The prefix TM must be included in the attribute value.
(7) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

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(8) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.3.5.1 The element <***paper.frnt***> (see 24.2.1.1) is used to enter the front matter for a page-based pilot's checklist TM.

24.2.3.5.2 The element <***pilot-opim***> is the main body of an aircraft operator's TM. Information on <***pilot-opim***> will be supplied in a later revision of this handbook.

24.2.3.5.3 The element <***rear***> (see 24.2.1.11) is used to enter the rear matter.

24.2.3.6 The element <***ship***> is used for preparation of Aircraft for Shipping TM. This element contains the contents, including front and rear matter, of a shipping manual for Army aircraft. Information on <***ship***> will be supplied in a later revision of this handbook.

24.2.4 Technical Manual Supplements <***supplement***>. The element <***supplement***> contains one of several types of supplementary manuals to another TM. A supplement may contain additional or revised operational procedures, safety warnings or instructions, or other information not included in the associated TM. A supplement must refer to the associated TM on its front cover and reproduce the identical distribution notice that appears on the main TM. Volume separation (***%vol.group;*** see 33.3.6) may occur any where in this element. The element <***supplement***> consists of the following elements:

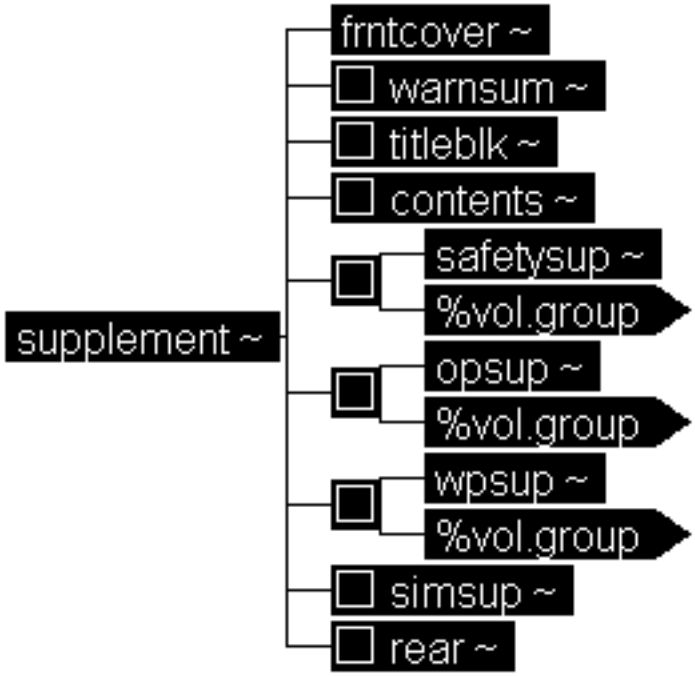

Figure 60 Supplement DTD Hierarchy

a. DTD fragment for <***supplement***>:

```
<!ELEMENT supplement - - (frntcover, warnsum?, titleblk?, contents?,
                          (safetysup,%vol.group;)?, (opsup, %vol.group;)?,
                          (wpsup,%vol.group;)?, simsup?, rear?)>
<!ATTLIST supplement
            revno         NUMBER     #REQUIRED
            maintitl      CDATA      #REQUIRED
            maintlvls     NAMES      #REQUIRED
            %rsrc-values;
            date          CDATA      #REQUIRED
            tmnoref       CDATA      #REQUIRED
            distribref    ENTITY     #REQUIRED
```

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```
                %refs;
                %secur;>
```

b. Attributes for <***supplement***>:

(1) **REVNO** - The overall revision number for the manual.
(2) **MAINTITL** - Supplies a literal version of the maintenance-level title.
(3) **MAINTLVLS** - Specifies the maintenance level(s) authorized to use this manual; this attribute value is used in the FOSI to supply the literal expression of the TM's maintenance level.
(4) **%RSRC-VALUES;** - This attribute set supplies document-wide format and referencing format default values; applicable to composed paper manuals only. These attributes are attached only to the top element of the document. Attributes of the same name at the IM or work package level override the document-wide values.
(5) **DATE** - The date of the current version of the element.
(6) **TMNOREF** - Supplies a reference to the associated TM.
(7) **DISTRIBREF** - An entity name for the distribution statement to appear on the supplement's cover; must match the distribution statement on the associated TM.
(8) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(9) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.4.1 The element <***frntcover***> (see 24.2.1.1.1) is used to enter the front cover of the supplement.

24.2.4.2 The element <***warnsum***> (see 24.2.1.1.2) is used to enter the warning summary of the supplement.

24.2.4.3 The element <***titleblk***> (see 24.2.1.1.5) is used to enter the titleblock of the supplement.

24.2.4.4 The element <***contents***> (see 24.2.1.1.6) is used to enter the table of contents for the supplement.

24.2.4.5 Safety Instructions Supplementary Manual <***safetysup***>. The element <***safetysup***> is used for supplementary manual containing special safety instructions. It contains a required title (<***title***> see 33.4.1.3.6), optional paragraphs of text (<***para***> see 33.4.1.5.3), any alert statements (***%alert;*** see 33.3.3) and/or paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4), and/or flight safety <***fltsafety***> for aviation manuals, and/or emergency procedures (<***emergency***> see 26.3.3.6), and/or operational tasks containing procedures for interim nuclear, biological and chemical (NBC) decontamination (<***decon***> see 26.3.3.5.3). The <***safetysup***> is also used for advisories pertaining to the equipment or procedures in the TM to which the manual is a supplement.

a. DTD fragment for <***safetysup***>:

```
<!ELEMENT safetysup - - (title, para*, ((%alert;) | (%titldtext;)+ | fltsafety
                        | emergency | decon)+)>
<!ATTLIST safetysup
                %bodyatt;
                %secur;>
```

b. Attributes for <***safetysup***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.4.5.1 The element <***fltsafety***> is used to enter safety requirements for flight. It contains paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4).

a. DTD fragment for <***fltsafety***>:

```
<!ELEMENT fltsafety - o (%titldtext;)+>
<!ATTLIST fltsafety
                %bodyatt;
                %secur;>
```

b. Attributes for <***fltsafety***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.4.6 The element <***opsup***> is used for an operational supplement. It contains a required title (<***title***> see 33.4.1.5.1) followed by specialized, additional, or revised operational procedures for the equipment in the

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TM contained within paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4) or in conjunction with flight safety (<***fltsafety***> see 24.2.4.5.1) for aviation manuals to which this manual is a supplement.

a. DTD fragment for <***opsup***>:

```
<!ELEMENT opsup - - (title, para*, ((%titldtext;)+ | fltsafety)+)>
<!ATTLIST opsup
            %bodyatt;
            %secur;>
```

b. Attributes for <***opsup***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.4.7 Supplementary Manual <***wpsup***>. The element <***wpsup***> is used for a supplementary manual consisting of special, additional, or special applicability work packages. The element contains identification information required for a work package (<***wpidinfo***> see 33.4.5), work package setup information (<***wpinfo***> see 33.4.6.1), and paragraphs of text (<***para***> see 33.4.1.5.3). This is followed by maintenance tasks (***%maintsk;*** see 28.3.1.5.5), procedural text (<***proc***> see 33.4.1.8.1), and or specific work packages. Volume separation (***%vol.group;*** see 33.3.6) may occur any where in this element.

a. DTD fragment for <***wpsup***>:

```
<!ELEMENT wpsup - - ((wpidinfo, wpinfo?, para*, ( %maintsk; | proc )) |  descwp
                        | thrywp | surwp| perseqpwp | pmcswp | pmiwp
                        | lubewp | maintwp | tsindxwp | opcheckwp | tswp)+
                        %vol.group;)+>
<!ATTLIST wpsup
            %bodyatt;
            %secur;>
```

b. Attributes for <***opsup***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.4.7.1 The element <***descwp***> (see 25.3.1) is used for information about equipment description.

24.2.4.7.2 The element <***thrywp***> (see 25.3.1.7) is used for information about theory of operation.

24.2.4.7.3 The element <***surwp***> (see 28.3.1.1) is used for information about service upon receipt.

24.2.4.7.4 The element <***perseqpwp***> (see 28.3.1.2) is used for information about personal equipment.

24.2.4.7.5 The element <***pmcswp***> (see 28.3.1.4) is used for information about preventive maintenance checks and services.

24.2.4.7.6 The element <***pmiwp***> (see 28.3.1.7) is used for information about phased maintenance inspection.

24.2.4.7.7 The element <***lubewp***> (see 28.3.1.8) is used for information about lubrication.

24.2.4.7.8 The element <***maintwp***> (see 28.3.1.5) is used for information about maintenance.

24.2.4.7.9 The element <***tsindxwp***> (see 27.3.1.1) is used for the troubleshooting procedures index.

24.2.4.7.10 The element <***opcheckwp***> (see27.3.1.5) is used for operational checkout work package.

24.2.4.7.11 The element <***tswp***> (see 27.3.1.4) is used for troubleshooting procedures.

24.2.4.8 The element <***simsup***> support information supplement is used for supplementary manual containing supporting information (appendix-type material) (<***sim***> see 30).

a. DTD fragment for <***simsup***>:

```
<!ELEMENT simsup - - (sim)>
<!ATTLIST simsup
            %bodyatt;
            %secur;>
```

b. Attributes for <***simsup***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

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(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.4.9 The element <***rear***> (see 24.2.1.11) is used to enter the rear matter.

24.2.4.10 The element volume <***volume***> (see 24.2.1.12) is used to indicate a volume.

24.2.4.11 The element <***vol-rear***> (see 24.2.1.13) is used to indicate the rear matter of a volume.

24.2.5 Module <***module***>. The element <***module***> contains one or more information module, but does not contain front or rear matter of the assembled TM, nor does it necessarily contain all the chapters (IMs) of the TM as assembled.

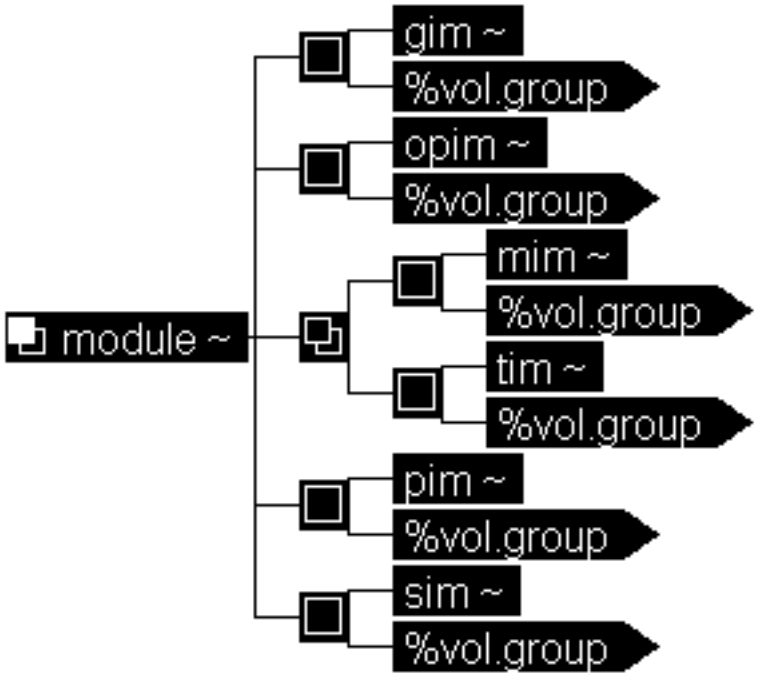

Figure 61 Module DTD Hierarchy

a. DTD fragment for <***module***>:

```
<!ELEMENT module - - ((gim, %vol.group;)?, (opim, %vol.group;)?,
                      ((mim,%vol.group;)?,(tim, %vol.group;)?)*,
                      (pim, %vol.group;)?, (sim, %vol.group;)?)>
<!ATTLIST module
            tmlabel        CDATA                    #IMPLIED
            eic            CDATA                    #REQUIRED
            imno           CDATA                    #REQUIRED
            imctrlabel     NUMBER                   #REQUIRED
            imlevel        (depot | operator |
                            gensup | dirsup |
                            unitlvl | inter |
                            avum-avim | tmlvls)     #REQUIRED
            syslevel       (enditem | func-system)  "enditem"
            system-title   CDATA                    #IMPLIED
            revno          NUMBER                   #REQUIRED
            date           CDATA                    #REQUIRED
            %refs;
```

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%secur;>

b. Attributes for <***module***>:

(1) **TMLABEL** - The number of the TM of which this information chapter (IM) was a part when originally created; this number remains the same throughout all versions of the IM.

(2) **EIC** - The end-item code of the equipment covered in the TM of which this IM is a part. The first time the attribute is referenced for the element it is treated as required, thereafter that it will assume the current attribute value.

(3) **IMNO** - Reserved for a unique identifying number of the information chapter, when and if such a numbering system is instituted; analogous to the attribute "WPNO" at the work package level.

(4) **IMCTRLABEL** - A label giving the sequence number of the information chapter within this version of the TM; allows an individual IM to be composed with full numbering of pages and components.

(5) **IMLEVEL** - The maintenance level of the information chapter.
(a) “OPERATOR” – Applies to operator maintenance level.
(b) “UNITLVL” – Applies to unit maintenance level.
(c) “DIRSUP” – Applies to direct support (DS) maintenance level.
(d) “GENSUP” – Applies to general support (GS) maintenance level.
(e) “INTER” – Applies to intermediate (DS/GS) maintenance level.
(f) “DEPOT” – Applies to depot maintenance level.
(g) “AVUM-AVIM” – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.
(h) “TMLVLS” – Applies to all maintenance levels.

(6) **SYSLEVEL** - Specifies whether the chapter constituents cover the full end item ("ENDITEM") or a particular functional system ("FUNC-SYSTEM") within the end item. When the value is not entered for the attribute SYSLEVEL , the default value is ENDITEM.

(7) **SYSTEM-TITLE** - If the attribute value of "syslevel" is "func-system," this attribute is used to name the functional system which the module covers.

(8) **REVNO** - The overall revision number for the information chapter.

(9) **DATE** - The date of the current version of the element.

(10) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(11) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.5.1 The element <***gim***> (see 25) is used to enter the General Information Chapter.

24.2.5.2 The element <***opim***> (see 26) is used to enter the Operator’s Instruction Information Chapter.

24.2.5.3 The element <***mim***> (see 28) is used to enter the Maintenance Information Chapter.

24.2.5.4 The element <***tim***> (see 27) is used to enter the Troubleshooting Information Chapter.

24.2.5.5 The element <***sim***> (see 30) is used to enter the Supporting Information Chapter.

24.2.5.6 The element <***pim***> (see 29) is used to enter the Parts Information Chapter.

24.2.5.7 The element <***volume***> (see 24.2.1.12) is used to indicate a volume.

24.2.5.8 The element <***vol-rear***> (see 24.2.1.13) is used to indicate the rear matter of a volume.

24.2.5.9 Volume separation (***%vol.group;*** see 33.3.6) may occur any where in this element.

24.2.6 Specialized Aviation Information Chapter <***avmodule***>. The element <***avmodule***> contains the body of either an Aircraft Operator’s TM, a Pilot’s Checklist (<***pilot-opim***> see 24.2.6.1), or a Preparation of Aircraft for Shipping TM (<***shipim***> see 24.2.6.2).

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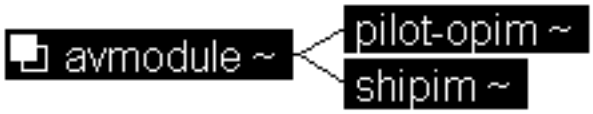

Figure 62 Specialized Aviation Information Chapter DTD Hierarchy

a. DTD fragment for <***avmodule***>:

```
<!ELEMENT avmodule - - (pilot-opim | shipim)>
<!ATTLIST avmodule
            tmlabel       CDATA                    #IMPLIED
            eic           CDATA                    #REQUIRED
            imno          CDATA                    #REQUIRED
            imctrlabel    NUMBER                   #REQUIRED
            imlevel       (depot | operator |
                           gensup | dirsup |
                           unitlvl | inter |
                           avum-avim | tmlvls)     #REQUIRED
            syslevel      (enditem | func-system)  "enditem"
            system-title  CDATA                    #IMPLIED
            revno         NUMBER                   #REQUIRED
            date          CDATA                    #REQUIRED
            %refs;
            %secur;>
```

b. Attributes for <***avmodule***>:

(1) **TMLABEL** - The number of the TM of which this information chapter (IM) was a part when originally created; this number remains the same throughout all versions of the IM.

(2) **EIC** - The end-item code of the equipment covered in the TM of which this IM is a part. The first time the attribute is referenced for the element it is treated as required, thereafter that it will assume the current attribute value.

(3) **IMNO** - Reserved for a unique identifying number of the information chapter, when and if such a numbering system is instituted; analogous to the attribute "WPNO" at the work package level.

(4) **IMCTRLABEL** - A label giving the sequence number of the information chapter within this version of the TM; allows an individual IM to be composed with full numbering of pages and components.

(5) **IMLEVEL** - The maintenance level of the information chapter.

(a) “OPERATOR” – Applies to operator maintenance level.
(b) “UNITLVL” – Applies to unit maintenance level.
(c) “DIRSUP” – Applies to direct support (DS) maintenance level.
(d) “GENSUP” – Applies to general support (GS) maintenance level.
(e) “INTER” – Applies to intermediate (DS/GS) maintenance level.
(f) “DEPOT” – Applies to depot maintenance level.
(g) “AVUM-AVIM” – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.
(h) “TMLVLS” – Applies to all maintenance levels.

(6) **SYSLEVEL** - Specifies whether the chapter constituents cover the full end item ("ENDITEM") or a particular functional system ("FUNC-SYSTEM") within the end item. When the value is not entered for the attribute SYSLEVEL , the default value is ENDITEM.

(7) **SYSTEM-TITLE** - If the attribute value of "syslevel" is "func-system," this attribute is used to name the functional system which the module covers.

(8) **REVNO** - The overall revision number for the information chapter.

(9) **DATE** - The date of the current version of the element.

(10) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

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(11) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

24.2.6.1 Pilot Operator's Information Chapter <***pilot-opim***>. The element <***pilot-opim***> is the main body of an aircraft operator's TM. Information on <***pilot-opim***> will be supplied in a later revision of this handbook.

24.2.6.2 Preparation of Aircraft for Shipping <***shipim***>. The element <***shipim***> is the main body of a shipping manual. Information on <***shipim***> will be supplied in a later revision of this handbook.

25 DESCRIPTION AND THEORY OF OPERATION.

25.1 Scope. The following paragraphs give a description and use of the elements used in the MIL-STD-2361A(AC) General Information Chapter (GIM) DTD.

25.2 Applicable documents. Refer to paragraph 2.

25.3 Description Information and Theory of Operation Chapter <***gim***>. The <***gim***> chapter is prepared as a general information chapter. The chapter contains a required title page (<***titlepg***> see 33.4.4.22) and is then subdivided into equipment description and data work package(s) (<***descwp***> see 25.3.1) and theory of operation work package(s) (<***thrywp***> see 25.3.1.7).

Figure 63 General Information Chapter

a. DTD fragment for <***gim***>:

```
<!ELEMENT gim - -  (titlepg, descwp+, thrywp*)>
<!ATTLIST gim
              tmno          CDATA                    #REQUIRED
              tmlabel       CDATA                    #IMPLIED
              eic           CDATA                    #REQUIRED
              imctrlabel    NUMBER                   #IMPLIED
              imlevel       (depot | operator |
                             gensup | dirsup |
                             unitlvl | inter |
                             avum-avim | tmlvls)     #REQUIRED
              syslevel      (enditem | func-system)  "enditem"
              system-title  CDATA                    #IMPLIED
              %imrsrc-vals;
              revno         NUMBER                   #REQUIRED
              chngno        NUMBER                   #REQUIRED
              date          CDATA                    #IMPLIED
              %refs;
              %secur;>
```

b. Attributes for <***gim***>:

(1) **TMNO** - The number of the current TM. The prefix TM must be included in the attribute value. The first time the attribute is referenced for the element it is treated as required, thereafter that it will assume the current attribute value.

(2) **TMLABEL** - The number of the TM of which this information chapter (IM) was a part when originally created; this number remains the same throughout all versions of the IM.

(3) **EIC** - The end-item code of the equipment covered in the TM of which this IM is a part. The first time the attribute is referenced for the element it is treated as required, thereafter that it will assume the current attribute value.

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(4) **IMCTRLABEL** - A label giving the sequence number of the information chapter within this version of the TM; allows an individual IM to be composed with full numbering of pages and components.
(5) **IMLEVEL** - The maintenance level of the information chapter.
(a) “OPERATOR” – Applies to operator maintenance level.
(b) “UNITLVL” – Applies to unit maintenance level.
(c) “DIRSUP” – Applies to direct support (DS) maintenance level.
(d) “GENSUP” – Applies to general support (GS) maintenance level.
(e) “INTER” – Applies to intermediate (DS/GS) maintenance level.
(f) “DEPOT” – Applies to depot maintenance level.
(g) “AVUM-AVIM” – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.
(h) “TMLVLS” – Applies to all maintenance levels.
(6) **SYSLEVEL** - Specifies whether the chapter constituents cover the full end item ("ENDITEM") or a particular functional system ("FUNC-SYSTEM") within the end item. When the value is not entered for the attribute “SYSLEVEL”, the default value is “ENDITEM”.
(7) **SYSTEM-TITLE** - If the attribute value of "SYSLEVEL" is "FUNC-SYSTEM," this attribute is used to identify the functional system which the chapter/work package covers.
(8) **%IMRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.3).
(9) **REVNO** - The overall revision number for the information chapter.
(10) **CHNGNO** - The overall change number for the information chapter.
(11) **DATE** - The date of the current version of the chapter.
(12) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(13) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

25.3.1 Equipment Description Work Package <***descwp***>. Descriptive data requirements are entered in the equipment description and data work package <***descwp***>. There may be more than one equipment description and data work package in the general information chapter <***gim***>. The <***descwp***> contains required work package identification information <***wpidinfo***>, and is then subdivided into one or more uses of equipment characteristics, capabilities, and features <***eqpinfo***>, may have one or more uses of location and description of major components <***locdesc***>, an optional differences between models <***eqpdiff***>, an optional equipment data <***eqpdata***>, and one or more equipment configurations <***eqpconfig***>.

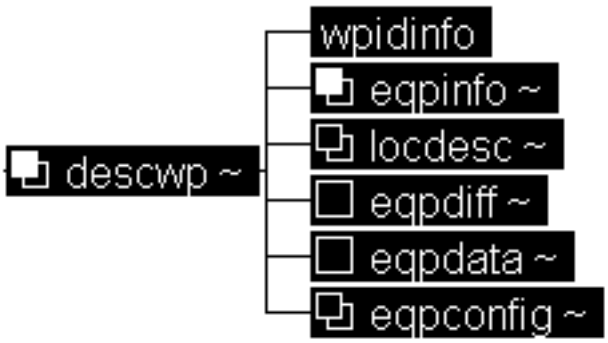

Figure 64 Equipment Description Work Package DTD Hierarchy

a. DTD fragment for <***descwp***>:

```
<!ELEMENT descwp - o (wpidinfo, eqpinfo+, locdesc*, eqpdiff?,
                      eqpdata?, eqpconfig*)>
<!ATTLIST descwp
            wpno    ID        #REQUIRED
            eic     CDATA     #REQUIRED
            %wprsrc-vals;
```

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```
                %tracking;
                %wpbodyatt;
                %secur;>
```

b. Attributes for <***descwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **EIC** - The end-item code of the equipment covered in the TM of which this work package is a part.

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(4) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(5) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(6) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

25.3.1.1 The work package identification information element <***wpidinfo***> (see 33.4.5) defines the identification information required for a work package.

25.3.1.2 The equipment characteristics, capabilities, and features element <***eqpinfo***> is used for descriptive data containing the overall description of the equipment. The element <***eqpinfo***> can contain one or more <***eqpdesc***> element.

a. DTD fragment for <***eqpinfo***>:

```
<!ELEMENT eqpinfo - o (eqpdesc+)>
<!ATTLIST eqpinfo
                %bodyatt;
                %secur;>
```

b. Attributes for <***eqpinfo***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

25.3.1.2.1 The equipment description element <***eqpdesc***> is used to describe the general capabilities and special unique features, as well as other similar information, that will be helpful in the operation and maintenance of equipment. The element <***eqpdesc***> contains paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4).

a. DTD fragment for <***eqpdesc***>:

```
<!ELEMENT eqpdesc - o (%titldtext;)+>
<!ATTLIST eqpdesc
                %bodyatt;
                %secur;>
```

b. Attributes for <***eqpdesc***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

25.3.1.3 The location and description of major components element <***locdesc***> is used for descriptive data on the location and description of major components of the equipment in the work package. The element <***locdesc***> contains one or more component item <***comp-item***>. The component item may be preceded by the parameter entity paragraph type (***%p;*** see 33.3.2).

a. DTD fragment for <***locdesc***>:

```
<!ELEMENT locdesc - o ((%p;)*, comp-item+)>
<!ATTLIST locdesc
                %bodyatt;
                %secur;>
```

b. Attributes for <***locdesc***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

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25.3.1.3.1 The element <***comp-item***> is used for component item(s) under a major component of the equipment, which is covered in the location and description of equipment components. The element contains paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4).

a. DTD fragment for <***comp-item***>:

```
<!ELEMENT comp-item - o (%titldtext;)+>
<!ATTLIST comp-item
            %bodyatt;
            %secur;>
```

b. Attributes for <***comp-item***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

25.3.1.4 The differences between models element <***eqpdiff***> is used for descriptive data containing the significant differences between models or components. The element <***eqpdiff***> contains paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4).

a. DTD fragment for <***eqpdiff***>:

```
<!ELEMENT eqpdiff - o (%titldtext;)+>
<!ATTLIST eqpdiff
            %bodyatt;
            %secur;>
```

b. Attributes for <***eqpdiff***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

25.3.1.5 Equipment data <***eqpdata***> is used for descriptive data, which contains a listing of the major characteristics, dimensions, capabilities and limitations, and other critical data of the equipment that must be defined for the equipment user. The element <***eqpdata***> contains paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4).

a. DTD fragment for <***eqpdata***>:

```
<!ELEMENT eqpdata - o (%titldtext;)+>
<!ATTLIST eqpdata
            %bodyatt;
            %secur;>
```

b. Attributes for <***eqpdata***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

25.3.1.6 Equipment configurations <***eqpconfig***> is used when a piece of equipment can be configured in more than one way, information is included on each configuration. The element <***eqpconfig***> may contain specific equipment configuration(s) <***config***> which may be preceded by the parameter entity paragraph type (***%p;*** see 33.3.2).

a. DTD fragment for <***eqpconfig***>:

```
<!ELEMENT eqpconfig - o ((%p;)*, config*)>
<!ATTLIST eqpconfig
            %bodyatt;
            %secur;>
```

b. Attributes for <***eqpconfig***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

25.3.1.6.1 The element <***config***> is used for specific configuration(s) of each equipment configuration identified and described. The element <***config***> contains paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4).

a. DTD fragment for <***config***>:

```
<!ELEMENT config - o (%titldtext;)+>
<!ATTLIST config
```

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```
            %bodyatt;
            %secur;>
```

b. Attributes for <***config***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

25.3.1.7 Theory of Operation Work Package <***thrywp***>. Identifies a theory of operation work package that contains a functional description on how the equipment and its components function and interface. The LSA/MAC dictates the level of detail presented in this work package and is subdivided into the following content requirements:

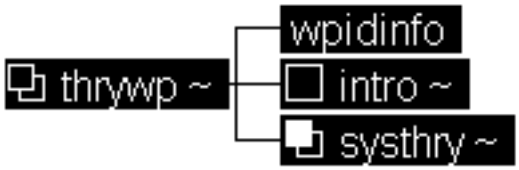

Figure 65 Theory of Operation Work Package DTD Hierarchy

a. DTD fragment for <***thrywp***>:

```
<!ELEMENT thrywp - o (wpidinfo, intro?, systhry+)>
<!ATTLIST thrywp
            wpno     ID         #REQUIRED
            eic      CDATA      #REQUIRED
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***thrywp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **EIC** - The end-item code of the equipment covered in the TM of which this work package is a part.

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(4) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(5) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(6) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

25.3.1.7.1 The work package identification information element <***wpidinfo***> (see 33.4.5) defines the identification information required for a work package.

25.3.1.7.2 The introductory element <***intro***> (see 33.4.4.12) is an introductory section for theory of operation work package.

25.3.1.7.3 The systems theory element <***systhry***> is used to identify a system's theory of operation. Theory of operation explains how the end item and its major systems work and interface in addition to the functional effect of switches, controls, and other devices. Subordinate sections on subsystem theory may be included. A simple system may only have one theory of operation work package whereas a large or complex system may contain system theory, subsystem theory, and component theory (LRU and/or SRU). The element <***systhry***> contains the introductory paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4). Following the introductory section are multiple occurrences of subsystem theory <***ssysthry***>, or

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multiple occurrences of line replaceable units' theory of operation <***lruthry***> which may be followed by multiple occurrences of shop replaceable units' theory of operation <***sruthry***>.

a. DTD fragment for <***systhry***>:

```
<!ELEMENT systhry - o (%titldtext;, (ssysthry* | (lruthry*, sruthry*)))>
<!ATTLIST systhry
            %bodyatt;
            %secur;>
```

b. Attributes for <***systhry***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

25.3.1.7.3.1 The subsystem theory element <***ssysthry***> is used to identify a subsystem theory of operation in a complex system or multi-system equipment. It is used to divide the theory of operation into a subsystem breakdown. The element <***ssysthry***> contains either subsystem description which contains a subsystem title (<***title***> see 33.4.1.5.1) followed by an optional subtitle(s) (<***subtitle***> see 33.4.1.5.2) and paragraphs (<***para***> see 33.4.1.5.3) and/or paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1), or LRU/SRU description which contains a subsystem title (<***title***> see 33.4.1.5.1) followed by multiple occurrences of line replaceable unit theory of operation <***lruthry***> and/or shop replaceable unit theory of operation <***sruthry***>.

a. DTD fragment for <***ssysthry***>:

```
<!ELEMENT ssysthry - o  (title, ((lruthry*, sruthry*) | (subtitle,
                         (specpara | para))+))>
<!ATTLIST ssysthry
            nomen    CDATA      #REQUIRED
            nsn      CDATA      #REQUIRED
            %bodyatt;
            %secur;>
```

b. Attributes for <***ssysthry***>:

(1) **NOMEN** - Specifies the subsystem nomenclature.
(2) **NSN** - Specifies the national stock number of the subsystem.
(3) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(4) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

25.3.1.7.3.2 The line replaceable unit theory of operation element <***lruthry***> is used to identify line replaceable units' theory of operation. A LRU is a component or unit removed at the Unit or Organizational level. The element <***lruthry***> contains paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4).

a. DTD fragment for <***lruthry***>:

```
<!ELEMENT lruthry - o (%titldtext;)>
<!ATTLIST lruthry
            nomen    CDATA      #REQUIRED
            nsn      CDATA      #REQUIRED
            %bodyatt;
            %secur;>
```

b. Attributes for <***lruthry***>:

(1) **NOMEN** - Specifies the subsystem nomenclature.
(2) **NSN** - Specifies the national stock number of the subsystem.
(3) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(4) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

25.3.1.7.3.3 The shop replaceable unit theory of operation element <***sruthry***> is used to identify shop replaceable units' (SRU) theory of operation. A SRU is a component or unit that is authorized to be

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removed only at the repair shop. The element <***sruthry***> contains paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4).

a. DTD fragment for <***sruthry***>:

```
<!ELEMENT sruthry - o (%titldtext; )>
<!ATTLIST sruthry
            nomen    CDATA      #REQUIRED
            nsn      CDATA      #REQUIRED
            %bodyatt;
            %secur;>
```

b. Attributes for <***sruthry***>:

(1) **NOMEN** - Specifies the subsystem nomenclature.
(2) **NSN** - Specifies the national stock number of the subsystem.
(3) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(4) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

26 OPERATOR INSTRUCTIONS INFORMATION.

26.1 Scope. The following paragraphs give a description and use of the elements used in the MIL-STD-2361A(SC)Operator Instructions Information Chapter DTD.

26.2 Applicable documents. Refer to paragraph 2.

26.3 Operator Instructions Information Chapter <***opim***>. The <***opim***> chapter is prepared as an Operator Instructions Information Chapter. The chapter contains a required title page (<***titlepg***> see 33.4.4.22), followed by standard operating procedures which contains a controls and indicators work package (<***ctrlindwp***> see 26.3.1), operations under usual conditions work package(s) (<***opusualwp***> see 26.3.2, operations under unusual conditions work package(s) (<***opunuwp***> see 26.3.3), an optional stowage and decal/data plate guide work package (<***stowagewp***> see 26.3.4) and an optional on-vehicle equipment loading plan work package (<***eqploadwp***> see 26.3.5) or a special and detailed procedures work (<***specprocwp***> see 26.3.6) package. Volume separation (***%vol.group;*** see 33.3.6) may occur any where in this element.

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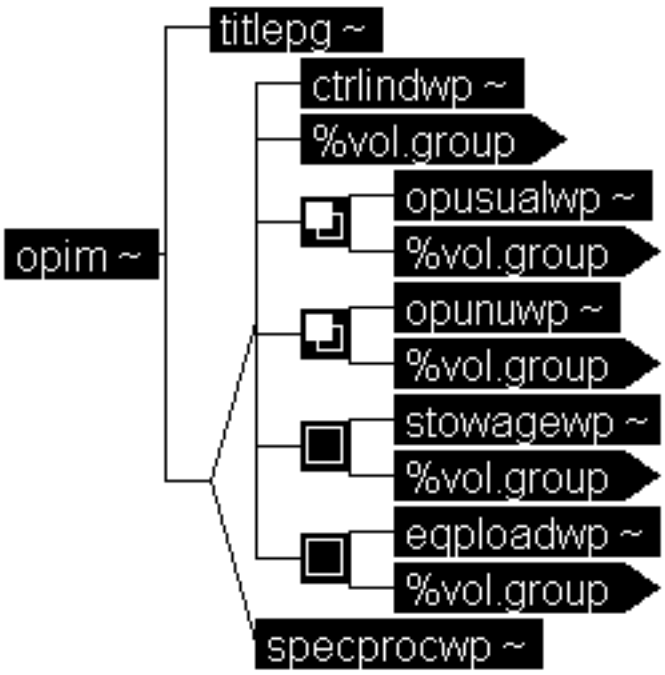

Figure 66 Operator Instructions Information DTD Hierarchy

a. DTD fragment for <***opim***>:

```
<!ELEMENT opim - - (titlepg, ((ctrlindwp, %vol.group;,
                    (opusualwp, %vol.group;)+, (opunuwp, %vol.group;)+,
                    (stowagewp, %vol.group;)?, (eqploadwp, %vol.group;)?)
<!ATTLIST opim
             tmno          CDATA   #REQUIRED
             tmlabel       CDATA   #IMPLIED
             eic           CDATA   #REQUIRED
             imctrlabel    NUMBER  #REQUIRED
             %imrsrc-vals;
             revno         NUMBER  #REQUIRED
             chngno        NUMBER  #REQUIRED
             date          CDATA   #IMPLIED
             %refs;
             %secur;>
```

b. Attributes for <***opim***>:

(1) **TMNO** - The number of the current TM. The prefix TM must be included in the attribute value. The first time the attribute is referenced for the element it is treated as required, thereafter that it will assume the current attribute value.

(2) **TMLABEL** - The number of the TM of which this information chapter (IM) was a part when originally created; this number remains the same throughout all versions of the IM.

(3) **EIC** - The end-item code of the equipment covered in the TM of which this IM is a part. The first time the attribute is referenced for the element it is treated as required, thereafter that it will assume the current attribute value.

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(4) **IMCTRLABEL** - A label giving the sequence number of the information chapter within this version of the TM; allows an individual IM to be composed with full numbering of pages and components.
(5) **%IMRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.3).
(6) **REVNO** - The overall revision number for the information chapter.
(7) **CHNGNO** - The overall change number for the information chapter.
(8) **DATE** - The date of the current version of the chapter.
(9) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(10) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

26.3.1 Controls and Indicators Work Package <***ctrlindwp***>. The element <***ctrlindwp***> contains the description and use of all system and equipment controls and indicators. The description may be presented in a standard table or in a list.

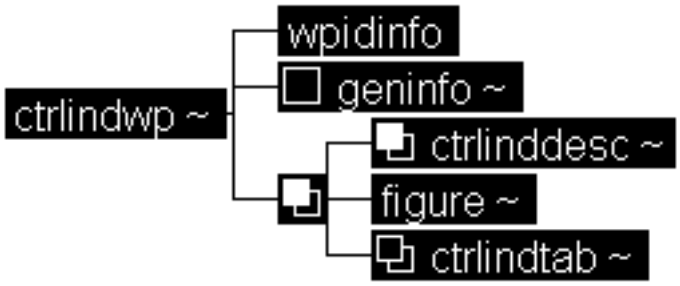

Figure 67 Controls and Indicators Work Package

a. DTD fragment for <***ctrlindwp***>:

```
<!ELEMENT ctrlindwp - - (wpidinfo, geninfo?, (ctrlinddesc+, figure,
                         ctrlindtab*)+)>
<!ATTLIST ctrlindwp
            wpno    ID      #REQUIRED
            %tracking;
            %wprsrc-vals;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***ctrlindwp***>:
(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.
(2) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).
(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).
(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

c. SGML Document Instance Fragment Controls and Indicators Work Package <***ctrlindwp***>:

```
<ctrlindwp wpno="Oxxxx1-11-5840-383" wpseq="0004 00">
<wpidinfo>
<maintlvl level="operator">
<eicnomen>
<sysnomen>
<name>RADAR SET</name>
```

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<*modelno*>AN/PPS-5XX</*modelno*>
<*nsn*>NSN 5840-00-832-7880</*nsn*>
<*eic*>Y10</*eic*>
</*sysnomen*>
</*eicnomen*>
<*title*>DESCRIPTION AND USE OF OPERATOR CONTROLS AND INDICATORS </*title*>
</*wpidinfo*>
<*geninfo*>
<*title*>GENERAL</*title*>
<*para*>The following text contains illustrations that show the location of each control and indicator for operation of the AN/PPS-5XX. Each control and indicator is clearly labeled as it appears on the equipment.</*para*>
</*geninfo*>
<*ctrlinddesc*>
<*title*>RECEIVER-TRANSMITTER CONTROLS AND INDICATOR<*indxref ref1="Receiver-Transmitter Controls and Indicator"*></*title*>
<*para*>Table 1. describes the Controls and Indicators for the R-T.</*para*>
</*ctrlinddesc*>
<*figure*>
<*title*>Receiver-Transmitter, Radar</*title*>
<*graphic boardno="questech.086"*></*figure*>
<*ctrlindtab*><*title*>Receiver-Transmitter Controls and Indicator</*title*>
<*ctrlindrow*>
<*key applic="1"*>1</*key*>
<*ctrlind*>Keypad/Display (Control)</*ctrlind*>
<*function*>Provides control capability of the R-T. Used during Audio Mode</*function*>
</*ctrlindrow*>
<*ctrlindrow*>
<*key applic="1"*>2</*key*>
<*ctrlind*>Power switch (Control)</*ctrlind*>
<*function*>Engages power to the receiver transmitter.</*function*>
</*ctrlindrow*>
<*ctrlindrow*>
<*key applic="1"*>3</*key*>
<*ctrlind*>Circuit breaker (Control)</*ctrlind*>
<*function*><*emphasis emph="bold"*>IN</*emphasis*> position; engages power to the power switch. <*emphasis emph="bold"*>OUT</*emphasis*> position; disengages power to the power switch.</*function*> </*ctrlindrow*>
<*ctrlindrow*>
<*key applic="1"*>4</*key*>
<*ctrlind*>Antenna Control Switch (Control)</*ctrlind*>
<*function*>Provides movement control (left/right) for the antenna. Provides illumination of level indicator (switch in <*emphasis emph="bold"*>BACKLIGHT</*emphasis*> position)</*function*> </*ctrlindrow*>
<*ctrlindrow*>
<*key applic="1"*>5</*key*>
<*ctrlind*>Bubble Level (Indicator)</*ctrlind*>
<*function*>Provides indication of antenna level status by centering bubble.</*function*> </*ctrlindrow*> </*ctrlindtab*> </*ctrlindwp*>

d. Sample FOSI Output Controls and Indicators Work Package <***ctrlindwp***>:

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OPERATOR
FOR
RADAR SET
AN/PPS-XXX
NSN 5840--00-832-7880. EIC: Y10
DESCRIPTION AND USE OF OPERATOR CONTROLS AND INDICATORS

GENERAL

The following text contains illustrations that show the location of each control and indicator for operation of the AN/PPS-5XX. Each control and indicator is clearly labeled as it appears on the equipment.

RECEIVER-TRANSMITTER CONTROLS AND INDICATOR

Table 1. describes the Controls and Indicators for the R-T.

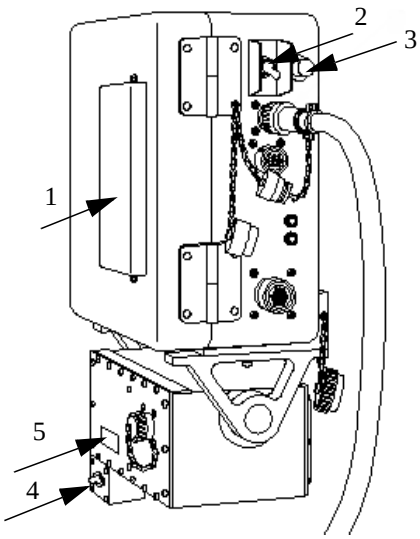

Table 1. Receiver-Transmitter Controls and Indicator

ITEM	CONTROL OR INDICATOR	FUNCTION
1	Keypad/Display (Control)	Provides control capability of the R-T. Used during Audio Mode
2	Power switch (Control)	Engages power to the receiver transmitter..
3	Circuit breaker (Control)	**IN** position; engages power to the power switch. **OUT** positon; disengages power to the power switch.
4	Antenna Control Switch (Control)	Provides movement control (left/right) for the antenna. Provides illumination of level indicator (switch in **BACKLIGHT** position)
5	Bubble Level (Indicator)	Provides indication of antenna level status by centering bubble.

Figure 68 Sample FOSI Output Controls and Indicators Work Package <ctrlindwp>

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26.3.1.1 The element <***wpidinfo***> (see33.4.5) defines the identification information required for a work package.

26.3.1.2 The element <***geninfo***> (see 33.4.4.11) is introductory information for the work package.

26.3.1.3 The element description of controls and indicators <***ctrlinddesc***> is used for providing a description of the controls and indicators for each equipment, assembly, or control panel. References to an illustration that shows the controls and indicators being described is also included within <***ctrlinddesc***>. The element contains the narrative about controls within paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4).

a. DTD fragment for <***ctrlinddesc***>:

```
<!ELEMENT ctrlinddesc - -  (%titldtext;)>
<!ATTLIST ctrlinddesc
            %refs;
            %secur;>
```

b. Attributes for <***ctrlinddesc***> ctrlinddesc:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

26.3.1.4 The element <***figure***> (see 33.4.3.1) displays the equipment items being described in the <***ctrlindtab***>.

26.3.1.5 The element <***ctrlindtab***> describes controls and indicator information in tabular form; table entries may reference an illustration that shows the controls and indicators. There may be more than one table in the work package, usually related to each illustration in the work package. The title (<***title***> see 33.4.1.5.1) of the table must be entered. One or more illustration(s) (<***figure***> see 33.4.3.1) may occur prior to the set of control/indicator rows in each <***ctrlindtab***> table. Any caution (<***caution***> see 33.4.1.1.3) or notes (<***note***> see 33.4.1.1.4) may be inserted in the control/indicator table.

a. DTD fragment for <***ctrlindtab***>:

```
<!ELEMENT ctrlindtab - - (title, (figure?, ctrlindrow+)+)
                          +(caution | note)>
<!ATTLIST ctrlindtab
            %refs;
            %secur;>
```

b. Attributes for <***ctrlindtab***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

26.3.1.5.1 The element <***ctrlindrow***> identifies a control information row. Equivalent to entering "row" in a structural table.

a. DTD fragment for <***ctrlindrow***>:

```
<!ELEMENT (ctrlindrow)  - - (key?, ctrlind, function)>
```

26.3.1.5.1.1 The element <***key***> identifies a key or callout that locates a control or indicator (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics), shown on the related figure. If this element is used, it will appear in the first column of the table.

a. DTD fragment for <***key***>:

```
<!ELEMENT key - - %text;>
<!ATTLIST key
            applic  %yesorno;  #REQUIRED>
```

b. Attributes for <***key***>:

(1) **APPLIC** – The models or versions of the equipment to which this table row applies. Used as navigation criteria.

26.3.1.5.1.2 The element <***ctrlind***> (see 33.4.4.4) is used to enter control or indicator name. It will appear in the second column of the table if the <***key***> element has been used or in the first column of the table if the <***key***> element is not present.

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26.3.1.5.1.3 The element <***function***> is used to specify the function of the controls and indicator specified (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics). It will appear in the third column if the <***key***> element has been used or in the second column of the table if the <***key***> element is not present.

a. DTD fragment for <***function***>:

```
<!ELEMENT function - - (%text;)>
<!ATTLIST function
            %bodyatt;
            %secur;>
```

b. Attributes for <***function***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

26.3.2 Operation Under Usual Conditions Work Package <***opusualwp***>. The operation under usual conditions work package contains step-by-step instructions for operation of the equipment and auxiliary equipment in all modes of operation under usual or normal conditions. There may be more than one <***opusualwp***> operating under usual conditions work package in the operating instructions information chapter.

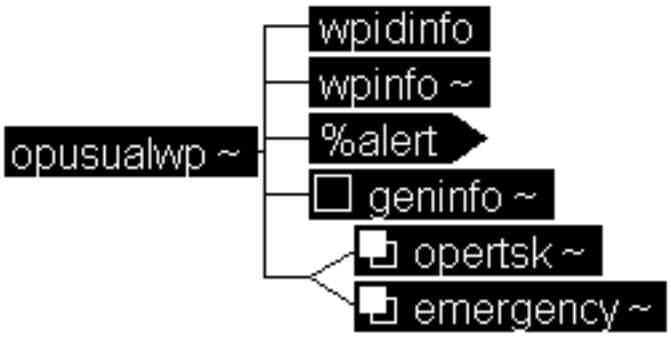

Figure 69 Operation Under Usual Conditions

a. DTD fragment for <***opusualwp***>:

```
<!ELEMENT opusualwp - - (wpidinfo, wpinfo, %alert;, geninfo?, opertsk+|
                         emergency+))>
<!ATTLIST opusualwp
            wpno         ID          #REQUIRED
            crewmember   CDATA       #IMPLIED
            emerg-border %yesorno;   #IMPLIED
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***opusualwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **CREWMEMBER** - The crewmember(s) that should perform the tasks within this work package is specified.

(3) **EMERG-BORDER**- An emergency border around the information.

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(4) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).
(5) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).
(6) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).
(7) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

26.3.2.1 The element <***wpidinfo***> (see33.4.5) defines the identification information required for a work package.

26.3.2.2 The element <***wpinfo***> (see 33.4.6.1) provides the maintenance technician with general information, equipment, parts, material, and authorized personnel required to perform and complete all the operating tasks included in the work package.

26.3.2.3 The element <***geninfo***> (see 33.4.4.11) is introductory information for the work package.

26.3.2.4 The parameter entity ***%alert;*** (see 33.3.3) is the necessary alert notices.

26.3.2.5 The element <***opertsk***> operational tasks, describes all operational tasks <***site***>, <***shelter***>, <***prepforuse***>, <***initial***>, <***oper***>, <***operaux***>, and <***prepmove***> required in the operations under usual conditions work package. A list of warnings <***warning***> (see 33.4.1.1.2), cautions <***caution***> (see 33.4.1.1.3), and/or notes <***note***> (see 33.4.1.1.4) may precede the operational tasks.

a. DTD fragment for <***opertsk***>:

```
<!ELEMENT opertsk - - (warning*, caution*, note*, (site | shelter | prepforuse
                        initial | oper | operaux | prepmove)+)>
<!ATTLIST opertsk
            %bodyatt;
            %secur;>
```

b. Attributes for <***opertsk***>:
(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

26.3.2.5.1 The element <***site***> is used for operational task requirements that must be considered prior to siting. Overall site location, power sources, terrain requirements, and other similar considerations should be included within this element. This element includes a required title (<***title***> see 33.4.1.5.1) followed by paragraphs (<***para***> see 33.4.1.5.3) and/or procedures (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***site***>:

```
<!ELEMENT site - - (title, (para | proc)+)>
<!ATTLIST site
            %bodyatt;
            %secur;>
```

b. Attributes for <***site***>:
(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

26.3.2.5.2 The element <***shelter***> an operational task that specifies the shelter requirements for equipment normally housed in a permanent or semi-permanent shelter. Requirements for dimensions, or loading, layout, power or environmental conditions and other similar considerations. Does not apply to trucks, vans or transportable shelters. This element includes a required title (<***title***> see 33.4.1.5.1) followed by paragraphs (<***para***> see 33.4.1.5.3) and/or procedures (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***shelter***>:

```
<!ELEMENT shelter - - (title, (para | proc)+)>
<!ATTLIST shelter
            %bodyatt;
            %secur;>
```

b. Attributes for <***shelter***>:
(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

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26.3.2.5.3 The element <***prepforuse***> an operational task that is used for items that have been disassembled or removed from an assembly, subassembly or component. When the equipment is shipped or delivered in specially designed containers, unpacking instructions should be prepared. This element may include a figure followed by paragraphs (<***para***> see 33.4.1.5.3), paragraphs requiring alert notices (<***specpara***> see 33.4.1.1.1) and or procedures (<***proc***> see 33.4.1.8.1). one or more procedure (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***prepforuse***>:

```
<!ELEMENT prepforuse - - (figure?, (para | specpara | proc))+>
<!ATTLIST prepforuse
            %bodyatt;
            %secur;>
```

b. Attributes for <***prepforuse***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

26.3.2.5.4 The element <***initial***> is an operational task for specification of routine checks, self-test, or adjustments that the operator performs before putting equipment in operation. This element contains a required title (<***title***> see 33.4.1.5.1), the alert notices (***%alert;*** see 33.3.3) followed by types of paragraphs of parameter entity paragraph type (***%p;*** see 33.3.2) and/or procedures (<***proc***> see 33.4.1.8.1). In addition, information on instruction plates and decals <***instructplt***> may occur any where in this element.

a. DTD fragment for <***initial***>:

```
<!ELEMENT initial - - (title, %alert;, (%p; | proc)+)
                      +(instructplt)>
<!ATTLIST initial
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***initial***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

26.3.2.5.4.1 The element <***instructplt***> is used to specify the decals and instruction plates that are located on the equipment. This element includes one or more paragraph(s) (<***para***> see 33.4.1.5.3) each of which may be preceded by a figure (<***figure***> see 33.4.3.1).

a. DTD fragment for <***instructplt***>:

```
<!ELEMENT instructplt - - (figure, para*)>
<!ATTLIST instructplt
            %bodyatt;
            %secur;>
```

b. Attributes for <***instructplt***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

26.3.2.5.5 The element <***oper***> is an operational task containing all procedures to start the equipment, operate the equipment, place the equipment in standby, or shutdown the equipment. It also includes the operating procedure for auxiliary equipment required to operate or support the primary equipment. This element contains a required title (<***title***> see 33.4.1.5.1), the alert notices (***%alert;*** see 33.3.3) followed by types of paragraphs of parameter entity paragraph type (***%p;*** see 33.3.2) and/or procedures (<***proc***> see 33.4.1.8.1). In addition, information on instruction plates and decals (<***instructplt***> see 26.3.2.5.4.1) may occur any where in this element.

a. DTD fragment for <***oper***>:

```
<!ELEMENT oper - - (title, %alert;, (%p; | proc)+) +(instructplt)>
<!ATTLIST oper
            %hcp.esd
```

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```
        %bodyatt;
        %secur;>
```

b. Attributes for <***oper***>**:**

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

26.3.2.5.6 The element <***operaux***> is an operational task containing procedures to start the auxiliary equipment, operate it, place it in standby or shutdown. If procedures are in another TM, this paragraph may make reference to that TM for operating procedures. This element includes a required title (<***title***> see 33.4.1.5.1), any alert notices (***%alert;*** see 33.3.3) followed by types of paragraphs of parameter entity paragraph type (***%p;*** see 33.3.2) and/or procedures (<***proc***> see 33.4.1.8.1). In addition, information on instruction plates and decals <***instructplt***> (see 26.3.2.5.4.1) may occur any where in this element.

a. DTD fragment for <***operaux***>:

```
<!ELEMENT operaux - - (title,  %alert;, (%p; | proc)+)
                          +(instructplt)>
<!ATTLIST operaux
        %hcp.esd;
        %bodyatt;
        %secur;>
```

b. Attributes for <***operaux***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

26.3.2.5.7 The element <***prepmove***> is an operational task containing procedures for preparing the equipment if required to move. This element includes a required title (<***title***> see 33.4.1.5.1) followed by paragraphs (<***para***> see 33.4.1.5.3) and/or procedures (<***proc***> see 33.4.1.8.1). In addition, information on instruction plates and decals (<***instructplt***> see 26.3.2.5.4.1) may occur any where in this element.

a. DTD fragment for <***prepmove***>:

```
<!ELEMENT prepmove - - (title, (para | proc)+)>
<!ATTLIST prepmove
        %hcp.esd
        %bodyatt;
        %secur;>
```

b. Attributes for <***prepmove***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

26.3.3 Operation Under Unusual Conditions Work Package <***opunuwp***>. The Operating Under Unusual Conditions Work Package <***opunuwp***> contains step-by-step instructions for operation of the equipment and auxiliary equipment in all modes of operation under unusual conditions. There may be more than one operating under unusual conditions work package in the Operating Instructions Information Chapter. An operating under unusual conditions work package will contain work package identification information <***wpidinfo***>, initial setup information <***wpinfo***> and may be followed by warnings, cautions or notes and a general information section. An <***opunuwp***> will contain either one or more operations under unusual tasks <***opunutsk***> or emergency procedures <***emergency***>**.** An operating under unusual conditions work package will not contain both operations under unusual tasks <***opunutsk***> and emergency procedures <***emergency***> in the same work package. Separate work packages are required for either operations under unusual tasks <***opunutsk***> or emergency procedures <***emergency***>.

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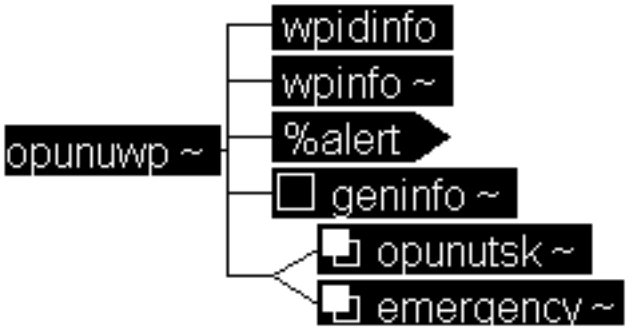

Figure 70 Operation Under Unusual Conditions

a. DTD fragment for <***opunuwp***>:

```
<!ELEMENT opunuwp - - (wpidinfo, wpinfo, %alert;, geninfo?,
                       (opunutsk+ | emergency+))>
<!ATTLIST opunuwp
            wpno         ID          #REQUIRED
            crewmember   CDATA       #IMPLIED
            emerg-border %yesorno;   "0"
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***opunuwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **CREWMEMBER** - The crewmember(s) that should perform the tasks within this work package is specified.

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(4) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(5) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(6) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

26.3.3.1 The element <***wpidinfo***> defines the identification information required for a work package.

26.3.3.2 The element <***wpinfo***> (see 33.4.6.1) provides the maintenance technician with general information, equipment, parts, material, and authorized personnel required to perform and complete all the operating tasks included in the work package.

26.3.3.3 The parameter entity ***%alert;*** (see 33.3.3) is the necessary alert notices.

26.3.3.4 The element <***geninfo***> (see 33.4.4.11) is introductory information.

26.3.3.5 The element unusual operational tasks <***opunutsk***> describes the following conditional tasks that are required in the operations under unusual conditions work package: unusual operational tasks <***unusualenv***>, fording and swimming the equipment <***fording***>, biological and chemical (NBC) decontamination <***decon***>, and the task containing countermeasure procedures for operation of equipment in an ECM environment

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through transmitted and reflected deception signals and jamming <***ecm***>. A series of alert messages; warnings (<***warning***> see 33.4.1.1.2), cautions (<***caution***> see 33.4.1.1.3), and/or notes (<***note***> see 33.4.1.1.4) may precede the unusual operational tasks.

a. DTD fragment for <***opunutsk***>:

```
<!ELEMENT opunutsk - - (warning*, caution*, note*, (unusualenv |fording |
                        decon | ecm)+)>
<!ATTLIST opunutsk
            %bodyatt;
            %secur;>
```

b. Attributes for <***opunutsk***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

26.3.3.5.1 The element <***unusualenv***> is an unusual conditions operational task containing procedures for operating the equipment in unusual environment/weather conditions such as extreme heat or cold, sea spray, dust storm, snow, mud, or similar conditions. This element includes a required title (<***title***> see 33.4.1.5.1) followed by paragraphs (<***para***> see 33.4.1.5.3) and/or procedures (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***unusualenv***>:

```
<!ELEMENT unusualenv - - (title, (para | proc)+) >
<!ATTLIST unusualenv
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***unusualenv***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see33.5.2).

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

26.3.3.5.2 The element <***fording***> is an unusual conditions operational task containing the procedures required before, during and after fording and swimming the equipment. This element includes a required title (<***title***> see 33.4.1.5.1) followed by paragraphs (<***para***> see 33.4.1.5.3) and/or procedures (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***fording***>:

```
<!ELEMENT fording - - (title, (para | proc)+)>
<!ATTLIST fording
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***fording***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see33.5.2).

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

26.3.3.5.3 The element <***decon***> is an unusual conditions operational task containing procedures for interim nuclear, biological and chemical (NBC) decontamination; used for NBC decontamination of equipment when a normal decontamination facility is not available. This element includes a required title (<***title***> see 33.4.1.5.1) followed by paragraphs (<***para***> see 33.4.1.5.3) and/or procedures (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***decon***>:

```
<!ELEMENT decon - - (title, (para | proc)+)>
<!ATTLIST decon
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***decon***>:

(1) **%HCP.ESD;**- Refer to common parameter entities for a complete description.

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

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(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

26.3.3.5.4 The element <***ecm***> is an unusual conditions operational task containing countermeasure procedures for operation of equipment in an ECM environment through transmitted and reflected deception signals and jamming. This element includes a required title (<***title***> see 33.4.1.5.1) followed by paragraphs (<***para***> see 33.4.1.5.3) and/or procedures (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***ecm***>:

```
<!ELEMENT ecm - - (title, (para | proc)+)>
<!ATTLIST ecm
          %hcp.esd;
          %bodyatt;
          %secur;>
```

b. Attributes for <***ecm***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

26.3.3.6 Emergency operational procedures <***emergency***> is used for data content in a safety supplementary for aviation manuals and for the <***emergency***> procedures for temporarily adapting the equipment when a component or part of the equipment has failed or a power reduction or some similar condition exists and continued operation of the equipment is required. This element includes a required title (<***title***> see 33.4.1.5.1) followed by paragraphs (<***para***> see 33.4.1.5.3) and/or procedures (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***emergency***>:

```
<!ELEMENT emergency - - (title, (para | proc)+)>
<!ATTLIST emergency
           %hcp.esd;
           %bodyatt;
           %secur;>
```

b. Attributes for <***emergency***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

26.3.4 Stowage and Decal/Data Plate Guide Work Package <***stowagewp***>. **Operator equipment manuals only**. The stowage and decal/data plate guide work package <***stowagewp***> lists and illustrates the location of all applicable COEI, BII, AAL items, decals and data plates. The element contains identification information required for a work package (<***wpidinfo***> see 33.4.5), an introduction (<***intro***> see 33.4.4.12), illustration(s) detailing the location of COEI, BII and AAL items <***stowinfo***>, and optional illustration(s) detailing the location of all decals and data plates <***decalinfo***>.

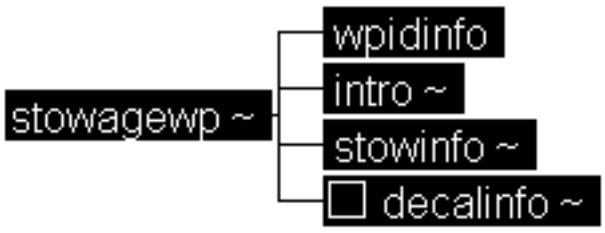

Figure 71 Stowage and Decal/Data Plate Guide Work Package DTD Hierarchy

a. DTD fragments for <***stowagewp***>:

```
<!ELEMENT stowagewp - - (wpidinfo, intro, stowinfo, decalinfo?)>
```

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```
<!ATTLIST stowagewp
            wpno            ID       #REQUIRED
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***stowagewp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

26.3.4.1 The element <***stowinfo***> contains introductory information (<***intro***> see 33.4.4.12) followed by at least one illustration (<***figure***> see 33.4.3.1) that detail the location of applicable COEI, BII, and AAL items that should be prepared for the work package.

a. DTD fragments for <***stowinfo***> and <***decalinfo***>:

```
<!ELEMENT (stowinfo |
           decalinfo) - - (intro, figure+)>
<!ATTLIST (stowinfo |
           decalinfo)
             %refs;
             %secur;>
```

b. Attributes for <***stowinfo***> and <***decalinfo***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

26.3.4.2 The element <***decalinfo***> contains introductory information (<***intro***> see 33.4.4.12) followed by at least one illustration (<***figure***> see 33.4.3.1) that detail the location of all decals and data plates in and on the equipment.

a. The DTD fragment for <***decalinfo***>: See 26.3.4.1 a.

b. The attributes for <***decalinfo***>: See 26.3.4.1 b.

26.3.5 On-Vehicle Equipment Loading Plan Work Package <***eqploadwp***>. The on-vehicle equipment loading plan work package <***eqploadwp***> contains a loading plan that must be prepared by the technical equipment manual developer. The element contains identification information required for a work package (<***wpidinfo***>) see 33.4.5), an introductory section (<***intro***> see 33.4.4.12), and the illustrated loading plan list <***loaddesc***>.

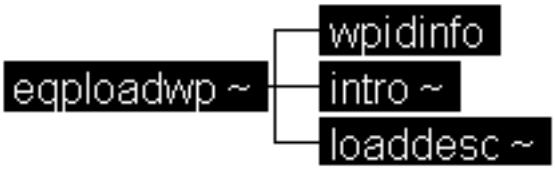

Figure 72 On-Vehicle Equipment Loading Plan Work Package DTD Hierarchy

a. DTD fragment for <***eqploadwp***>:

```
<!ELEMENT eqploadwp - - (wpidinfo, intro, loaddesc)>
<!ATTLIST eqploadwp
            wpno            ID       #REQUIRED
```

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```
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***eqploadwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

26.3.5.1 The element <***loaddesc***> identifies a description of equipment loading, including illustrations of the end item with equipment locations and a standard load list table. The element <***loaddesc***> contains a required title (<***title***> see 33.4.1.5.1), followed by at least one figure (<***figure***> see 33.4.3.1), each of which must be followed by a loading list <***loadlist***>.

a. DTD fragment for <***loaddesc***>:

```
<!ELEMENT loaddesc - o (title, (figure, loadlist)+)>
<!ATTLIST loaddesc
            type      (tac | notac)  #REQUIRED
            %refs;
            %secur;>
```

b. Attributes for <***loaddesc***>:

(1) **TYPE** - Specifies the type of loading plan.

(a) “TAC” - Specifies the list is tactical.

(b) “NONTAC” - Specifies the list is non-tactical.

(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

26.3.5.1.1 The element <***loadlist***> contains a standard loading list table that lists all applicable equipment by illustration identification number (<***callout***> see 33.4.1.3.2) and item name (<***item***> see 33.4.1.2.1.1). The list must be on the same page or adjacent to the illustration.

a. DTD fragment for <***loadlist***>:

```
<!ELEMENT loadlist - o (callout, item)+>
<!ATTLIST loadlist
            %refs;
            %secur;>
```

b. Attributes for <***loadlist***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

26.3.6 Special and Detailed Procedures Work Package <***specprocwp***>. The element <***specprocwp***> is used for special and detailed procedures work package procedures referenced in the Maintenance Test Flight Checklist. The content model <***specprocwp***> contains required work package identification information (<***wpidinfo***> see 33.4.5), which may be followed by introductory information (<***geninfo***> see 33.4.4.11), followed by at least one special procedure <***specialproc***>.

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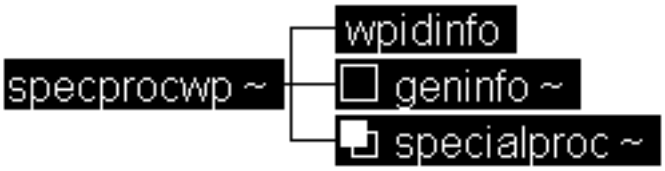

Figure 73 Special and Detailed Procedures Work Package

a. DTD fragment for <***specprocwp***>:

```
<!ELEMENT specprocwp - - (wpidinfo, geninfo?, specialproc+)>
<!ATTLIST specprocwp
            wpno  CDATA  #REQUIRED
            %wprsrc-vals;
            %tracking;
            %bodyatt;
            %secur;>
```

b. Attributes for <***specprocwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

26.3.6.1 The element <***specialproc***> contains special or detailed procedures that will be referenced in the Maintenance Test Flight Checklist. The element includes one or more procedures (<***proc***> see 33.4.1.8.1) to be performed only during a maintenance test flight.

a. DTD fragment for <***specialproc***>:

```
<!ELEMENT specialproc - - (proc+)>
<!ATTLIST specialproc
            %refs;
            %secur;>
```

b. Attributes for <***specialproc***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27 TROUBLESHOOTING INFORMATION.

27.1 Scope. The following paragraphs give a description and use of elements used in the MIL-STD-2361(AC) Troubleshooting Information Chapter DTD.

27.2 Applicable documents. Refer to paragraph 2.

27.3 Troubleshooting Information Chapter <***tim***>. The following paragraphs give a description and use of the elements used in the MIL-STD-2361 Troubleshooting Information Chapter DTD. The <***tim***> chapter is prepared as a Troubleshooting Information Chapter. The Troubleshooting Information Chapter <***tim***> contains a title page, and is then subdivided into work packages chosen from one of the following parameter entities: standard troubleshooting information (***%stdts;*** see 27.3.1), aircraft troubleshooting information (***%airts;*** see 27.3.2) or maintenance test flight troubleshooting information (***%mtfts;*** see 27.3.3).

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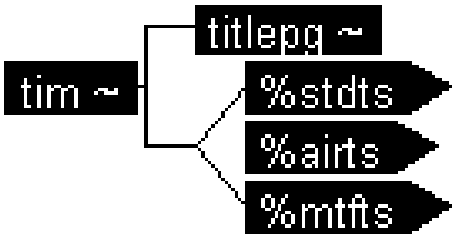

Figure 74 TIM DTD Hierarchy

a. DTD fragment for <***tim***>:

```
<!ELEMENT tim - - (titlepg, (%stdts; | %airts; | %mtfts;)>
<!ATTLIST tim
            tmno            CDATA                    #REQUIRED
            tmlabel         CDATA                    #REQUIRED
            eic             CDATA                    #REQUIRED
            imctrlabel      NUMBER                   #REQUIRED
            imlevel         (depot | operator |
                             gensup | dirsup |
                             unitlvl | inter |
                             avum-avim | tmlvls)     #REQUIRED
            syslevel        (enditem | func-system)  "enditem"
            system-title    CDATA                    #IMPLIED
            %imrsrc-vals;
            revno           NUMBER                   #REQUIRED
            chngno          NUMBER                   #REQUIRED
            date            CDATA                    #IMPLIED
            %refs;
            %secur;>
```

b. Attributes for <***tim***>:

(1) **TMNO** - The number of the current TM. The prefix TM must be included in the attribute value.

(2) **TMLABEL** - The number of the TM of which this information chapter (IM) was a part when originally created; this number remains the same throughout all versions of the IM. The first time the attribute is referenced for the element it is treated as required, thereafter that it will assume the current attribute value.

(3) **EIC** - The end-item code of the equipment covered in the TM of which this IM is a part. The first time the attribute is referenced for the element it is treated as required, thereafter that it will assume the current attribute value.

(4) **IMCTRLABEL** - A label giving the sequence number of the information chapter within this version of the TM; allows an individual IM to be composed with full numbering of pages and components.

(5) **IMLEVEL** - The maintenance level of the information chapter.

(a) “OPERATOR” – Applies to operator maintenance level.

(b) “UNITLVL” – Applies to unit maintenance level.

(c) “DIRSUP” – Applies to direct support (DS) maintenance level.

(d) “GENSUP” – Applies to general support (GS) maintenance level.

(e) “INTER” – Applies to intermediate (DS/GS) maintenance level.

(f) “DEPOT” – Applies to depot maintenance level.

(g) “AVUM-AVIM” – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.

(h) “TMLVLS” – Applies to all maintenance levels.

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(6) **SYSLEVEL** - Specifies whether the chapter constituents cover the full end item (“ENDITEM”) or a particular functional system (“FUNC-SYSTEM”) within the end item. When value is entered for attribute SYSLEVEL the default value is “ENDITEM”.
(7) **SYSTEM-TITLE** - If the attribute value of SYSLEVEL is "FUNC-SYSTEM", this attribute is used to idengify the functional system name which the chapter/work package covers.
(8) **%IMRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.3).
(9) **REVNO** - The overall revision number for the information chapter.
(10) **CHNGNO** - The overall change number for the information chapter.
(11) **DATE** - The date of the current version of the chapter.
(12) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(13) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1 The Standard Troubleshooting Information Chapter ***%stdts;***. The Standard Troubleshooting Information Chapter may consist of optional troubleshooting introduction work package (<***tsindxwp***> see 27.3.1.1), an optional preshop analysis work package (<***pshopanalwp***> see 27.3.1.2), an optional component checklist work package (<***compchklistwp***> see 27.3.1.3) and either one or more of a combined operational checkout and troubleshooting work package(s) (<***opcheck-tswp***> see 27.3.1.6), troubleshooting work package(s) (<***tswp***> see 27.3.1.4), and/or operational checkout work package(s) (<***opcheckwp***> see 27.3.1.5).

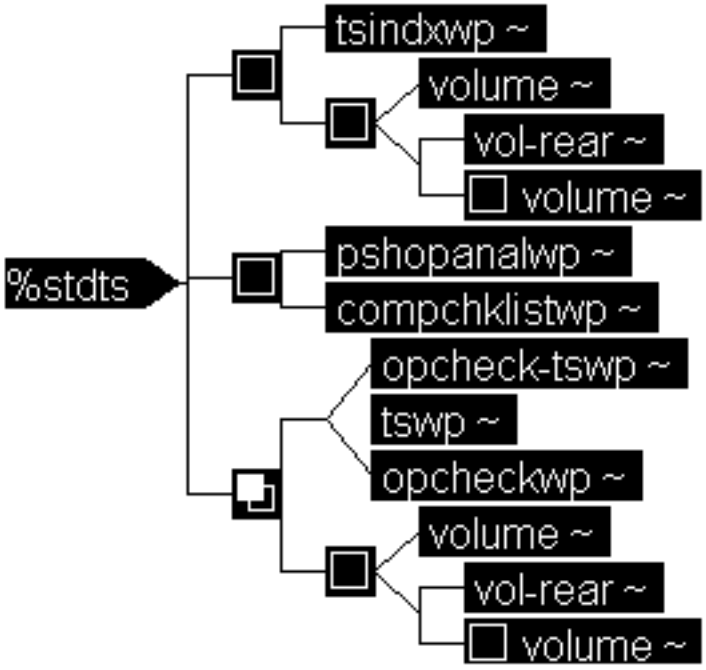

Figure 75 Standard Troubleshooting Information Chapter DTD Hierarchy

a. DTD fragment for ***%stdts;***:

```
<!ENTITY % stdts "((tsindxwp, %vol.group;)?,%dmwr.ts;,((opcheck-tswp | tswp
                  | opcheckwp), %vol.group;)+)">
```

27.3.1.1 Troubleshooting Index Work Package <***tsindxwp***>. The work package element <***tsindxwp***> is used for referencing to troubleshooting work packages, page locations, or more specific troubleshooting locations within the TM. The element contains identification information required for a work package (<***wpidinfo***> see 33.4.5),

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a work package initial setup (<***wpinfo***> see 33.4.6.1), an optional general work package information (<***geninfo***> see 33.4.4.11), any alert statements (***%alert;*** see 33.3.3) followed by a troubleshooting index <***tsindx***>.

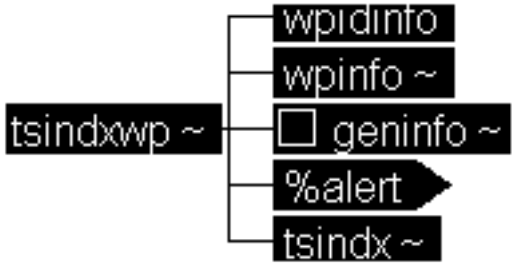

Figure 76 Troubleshooting Index Work Package DTD Hierarchy

a. DTD fragment for <***tsindxwp***>:

```
<!ELEMENT tsindxwp - - (wpidinfo, wpinfo, geninfo?, %alert;, tsindx)>
<!ATTLIST tsindxwp
            level          (depot | operator |
                            gensup | dirsup |
                            unitlvl | inter |
                            avum-avim | tmlvls)       #REQUIRED
            wpno           ID                         #REQUIRED
            ts-type        (manual | automated)       #IMPLIED
            syslevel       (enditem | func-system)    "enditem"
            system-title   CDATA                      #IMPLIED
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. SGML Document Instance Fragment for Troubleshooting Index Work Package <***tsindxwp***>:

<***tsindxwp level="operator" wpno="t00011-11-xxxx-xxx" wpseq="006000"***>
<***wpidinfo***>
<***maintlvl level="operator"***>
<***eicnomen***><***sysnomen***>
<***name***>RADAR SET</***name***>
<***nsn***>5840-00-531-7880</***nsn***>
<***eic***>Y10</***eic***>
</***sysnomen***></***eicnomen***>
<***title***>MALFUNCTION/SYMPTOM INDEX</***title***>
</***wpidinfo***>
<***wpinfo***></***wpinfo***>
<***geninfo***>
<***title***>Troubleshooting Procedures</***title***>
<***para***>The Malfunction/Symptom Index is a quick reference index for finding troubleshooting procedures. </***para***>
<***subtitle***>Operator's Troubleshooting Chart <***xref wpid="t00012-11-xxxx-xxx"***></***subtitle***>
<***para***>Operator's troubleshooting is based on performing the preventive maintenance checks and services until an abnormal condition or result is observed. Refer to the trouble symptom in the troubleshooting chart<***xref wpid="t00012-11-xxxx-xxx" tableid="t00012-11-xxxx-xxx-table1" pretext="(" posttext=")"***>. If the corrective measures do not apply or do not remedy the trouble, a higher category of maintenance is required. </***para***>
<***subtitle***> Unit Troubleshooting Chart <***xref wpid="t00013-11-xxxx-xxx" pretext="(" posttext=")"***></***subtitle***>

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<para>Unit level troubleshooting of this equipment is based on the checks of its operating condition contained in the quarterly preventive maintenance checks and services <xref wpid="t00018-11-xxxx-xxx">. To troubleshoot the equipment, perform all checks in sequence until an abnormal condition or test result is observed.</para>
<para>When you observe an abnormal condition or result, note the trouble symptom and refer to the corresponding trouble symptom in the troubleshooting chart <xref wpid="t00013-11-xxxx-xxx" tableid="t00013-11-xxxx-xxx-table1" pretext="(" posttext=")">. If the corrective measures do not remedy the trouble, notify higher level maintenance.</para>
<subtitle> Direct Support Troubleshooting Chart <xref wpid="txxx14-11-xxxx-xxx" pretext="(" posttext=")"></subtitle>
<para> This section contains instructions to help direct support maintenance personnel recognize, find the cause, and correct equipment malfunctions. This information is presented in tabular format as a troubleshooting procedural chart <xref wpid="t00014-11-xxxx-xxx" tableid="t00014-11-xxxx-xxx-table1" pretext="(" posttext=")">. The troubleshooting chart lists the common malfunctions that may be observed during the operation of the AN/PPS-5XX.</para>
<para> The troubleshooting cannot list all the malfunctions that may occur, all the tests or inspections needed to find the fault, or all the corrective actions needed to correct the fault. If an observed equipment malfunction is not listed or actions listed do not correct the fault, refer to the direct support maintenance manual for the malfunctioning equipment.</para>
<para> The troubleshooting work packages contain tables listing the malfunctions, tests or inspections and corrective action required to return the radar set to normal operation. Perform the steps in the order they appear in the tables.</para>
<para> Each work package is headed by an initial setup. This setup outlines what is needed as well as certain conditions that must be met before starting the task.
<emphasis emph="bold"> DON'T START A TASK UNTIL: </emphasis>
<randlist> <item> You understand the task. </item>
<item> You understand what you are to do. </item>
<item> You understand what is needed to do the work. </item>
<item> You have the things you need.</item>
</randlist>
</para>
<para> This manual cannot list all malfunctions that may occur, or all tests or inspections and corrective actions. For operator, if a malfunction is not listed or is not corrected by listed corrective actions, notify Unit Maintenance.</para>
</geninfo>
<tsindx>
<tsindx-entry>
<malfunc label="malfunction"> No power to R-T. </malfunc>
<xref wpid="t00012-11-xxxx-xxx">
</tsindx-entry>
<tsindx-entry>
<malfunc label="malfunction">No Display on Keypad.</malfunc>
<xref wpid="t00013-11-xxxx-xxx" stepstart="txxx13-11-xxxx-xxx-step1">
</tsindx-entry>
<tsindx-entry>

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<*malfunc label="malfunction"*> Turn R-T power switch ON and radar does not power up. </*malfunc*>
<*xref wpid="t00014-11-xxxx-xxx" stepstart="txxx14-11-xxxx-xxx-step1"*>
</*tsindx-entry*>
<*tsindx-entry*>
<*malfunc label="malfunction"*> High temp warning on the R/T Keyboard/Display or HTU. </*malfunc*>
<*xref wpid="t00014-11-xxxx-xxx" stepstart="txxx14-11-xxxx-xxx-step11"*>
</*tsindx-entry*>
</*tsindx*>
</*tsindxwp*>

c. Sample FOSI Output for Troubleshooting Index Work Package <***tsindxwp***>:

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OPERATOR
FOR
RADAR SET
AN/PPS-XXX
NSN 5840--00-531-7880 EIC: Y10
MALFUNCTION/SYMPTOM INDEX

TROUBLESHOOTING PROCEDURES

The malfunction/symptom index is a quick reference index for finding troubleshooting procedures.

Operator's Troubleshooting Chart (WP0012 00)

Operator's troubleshooting is based on performing the preventive maintenance checks and services until an abnormal condition or result is observed. Refer to the trouble symptom in the troubleshooting chart (WP0012, Table1). If the corrective measures do not apply or do not remedy the trouble, a higher category of maintenance is required.

Unit Troubleshooting Chart (WP0013 00)

Unit level troubleshooting of this equipment is based on the checks of its operating condition contained in the quarterly preventive maintenance checks and services (WP0018 00). To troubleshoot the equipment, perform all checks in sequence until an abnormal condition or test result is observed.

When you observe an abnormal condition or result, note the trouble symptom and refer to the corresponding trouble symptom in the troubleshooting chart (WP0013, Table1). If the corrective measures do not remedy the trouble, notify higher level maintenance.

Direct Support Troubleshooting Chart (WP0014 00)

This section contains instructions to help direct support maintenance personnel recognize, find the cause, and correct equipment malfunctions. This information is presented in tabular format as a troubleshooting procedural chart (WP0014, Table1). The troubleshooting chart lists the common malfunctions that may be observed during the operation of the AN/PPS-5XX.

The troubleshooting cannot list all the malfunctions that may occur, all the tests or inspections needed to find the fault, or all the corrective actions needed to correct the fault. If an observed equipment malfunction is not listed or actions listed do not correct the fault, refer to the direct support maintenance manual for the malfunctioning equipment or

The troubleshooting work packages contain tables listing the malfunctions, tests or inspections and corrective action required to return the radar set to normal operation. Perform the steps in the order they appear in the tables.

Each work package is headed by an initial setup. This setup outlines what is needed as well as certain conditions that must be met before starting the task. **Do not start a task until:**

You understand the task.

You understand what you are to do.

You understand what is needed to do the work.

You have the things you need.

This manual cannot list all malfunctions that may occur, or all tests or inspections and corrective actions. For operator, if a malfunction is not listed or is not corrected by listed corrective actions, notify Unit Maintenance.

Malfunction/Symptom	Troubleshooting Procedure
1. No power to R-T.	WP 0012 00
2. No Display on Keypad.	WP0013 00
3. R-T power swith On and radar does not power.	WP 0014 00
4. High temp warning on R-T Keypad/Display or HTU.	WP 0014 00

END OF WORK PACKAGE

Figure 77 Sample FOSI Output for Troubleshooting Index Work Package <tsindxwp>

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d. Attributes for <***tsindxwp***>:

(1) **LEVEL** - The maintenance level of the work package.
(a) “OPERATOR” – Applies to operator maintenance level.
(b) “UNITLVL” – Applies to unit maintenance level.
(c) “DIRSUP” – Applies to direct support (DS) maintenance level.
(d) “GENSUP” – Applies to general support (GS) maintenance level.
(e) “INTER” – Applies to intermediate (DS/GS) maintenance level.
(f) “DEPOT” – Applies to depot maintenance level.
(g) “AVUM-AVIM” – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.
(h) “TMLVLS” – Applies to all maintenance levels.

(2) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(3) **TS-TYPE** - The type of troubleshooting contained in the work package.

(4) **SYSLEVEL** - Specifies whether the chapter constituents cover the full end item (“ENDITEM”) or a particular functional system (“FUNC-SYSTEM”) within the end item. When value is entered for attribute SYSLEVEL the default value is “ENDITEM”.

(5) **SYSTEM-TITLE** - If the attribute value of SYSLEVEL is "FUNC-SYSTEM", this attribute is used to idengify the functional system name which the chapter/work package covers.

(6) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(7) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(8) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(9) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.1.1 The element <***tsindx***> is used for the index section within a troubleshooting index work package, which may be a malfunctions/symptoms, systems in breakout order, or testing error codes. Unless the indexes are short, a separate work package > should be prepared for each type of index. A separate work package may be prepared for each functional system if appropriate to the overall size and organization of the manual; supply attributes "SYSLEVEL" and "SYSTEM-TITLE" at the work package <***tsindxwp***> level in the latter case. For each entry, indicate a reference to a troubleshooting work package, or page number, or work package and page number, or a corrective action. The <***tsindx***> contains either troubleshooting categories <***ts-category***> or troubleshooting index entries <***tsindx-entry***>.

a. DTD fragment for <***tsindx***>:

```
<!ELEMENT tsindx - - (ts-category+ | tsindx-entry+)>
<!ATTLIST tsindx
            type       (system | symptom | errorcode)     "symptom"
            sysname    CDATA                               #IMPLIED
            reftype    (action | pageloc | wp | wp-page)  "wp"
            %refs;
            %secur;>
```

b. Attributes for <***tsindx***>:

(1) **TYPE** - Defines the troubleshooting index table format to be used by the composition system. If no value is entered for the attribute the default is “SYMPTOM”.
(a) “SYSTEM” - Applies format for systems in breakout order troubleshooting index table.
(b) “SYMPTOM” - Applies format for malfunction/symptom troubleshooting index table.
(c) “ERRORCODE” - Applies format for testing error codes troubleshooting index table.

(2) **SYSNAME** - Supplies the name of that system, if the current troubleshooting index covers only one functional system.

(3) **REFTYPE** - Specifies reference type format to be used in the tables third column for the composition system. If no value is entered for the attribute the default is “WP”.
(a) “ACTION” - Defines the corrective action to be taken.

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(b) “PAGELOC” - Defines to use page number to indicate where the corrective action is located.
(c) “WP” - Defines to use the work package sequence number to indicate where the corrective action is located.
(d) “WP-PAGE” - Defines to use both the work package sequence number and page number to indicate where the corrective action is located.

(4) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.1.1.1 The element <***ts-category***> a category within a troubleshooting procedures index, which may be divided into major functional systems, symptom types, error code sources, or method of detection. The element contains a category (<***title***> see 33.4.1.5.1), any alert statements (***%alert;*** see 33.3.3) followed by troubleshooting index entry <***tsindx-entry***>.

a. DTD fragment for <***ts-category***>:

```
<!ELEMENT ts-category - - (title, %alert;, tsindx-entry+)>
<!ATTLIST ts-category
            catg-name       CDATA           #REQUIRED
            %refs;
            %secur;>
```

b. Attributes for <***ts-category***>:
(1) **CATG-NAME** - Specifies the category name, which is the heading that will appear in the table.
(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.1.1.2 The element <***tsindx-entry***> is a troubleshooting index entry. The element contains either a equipment nomenclature <***sysnomen***>, malfunction <***malfunc***>, or message words and fault reports <***messageword***> followed by a responsive action <***action***> or a cross reference <***xref***>

a. DTD fragment for <***tsindx-entry***>:

```
<!ELEMENT tsindx-entry - - ((sysnomen | malfunc | messageword), (action | xref))>
<!ATTLIST tsindx-entry
            pageref       %yesorno;          #REQUIRED
            %refs;
            %secur;>
```

b. Attributes for <***tsindx-entry***>:
(1) **PAGEREF** - Specifies the reference includes a page number; a non-zero value indicates that a page number should be referenced.
(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.1.1.2.1 The element <***malfunc***> contains information about the detected malfunction to diagnosis. The element <***malfunc***> is used as an abnormal indication or condition in response to the troubleshooting test. The element may have one or more condition(s) <***condition***> followed by the parameter entity (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***malfunc***>:

```
<!ELEMENT malfunc - - (condition*, %text;)>
<!ATTLIST malfunc
           label          (symptom | malfunction | problem)   #REQUIRED
           %refs;
           %secur;>
```

b. Attributes for <***malfunc***>:
(1) **LABEL** - Defines the type of malfunction.
(a) “SYMPTOM” - The suspect fault is a symptom.
(b) “MALFUNCTION” - The suspect fault is a malfunction.
(c) “PROBLEM” - The suspect fault is a problem.
(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

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27.3.1.1.1.2.1.1 The element <***condition***> is used to enter the condition of the item. The element <***condition***> (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***condition***>:

```
<!ELEMENT condition - o (%text;)>
<!ATTLIST condition
            %refs;
            %secur;>
```

b. Attributes for <***condition***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.1.1.2.2 The element <***messageword***> contains a particular message word or bit-code word.

a. DTD fragment for <***messageword***>:

```
<!ELEMENT messageword - - (#PCDATA)>
<!ATTLIST messageword
            label          (symptom | malfunction | problem)   #REQUIRED
            %refs;
            %secur;>
```

b. Attributes for <***messageword***>:

(1) **LABEL** - Defines the type of malfunction.

(a) "SYMPTOM" - The suspect fault is a symptom.

(b) "MALFUNCTION" - The suspect fault is a malfunction.

(c) "PROBLEM" - The suspect fault is a problem.

(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.1.1.2.3 The element <***action***> is taken in response to a troubleshooting test, individual step, or automated message or fault report. The element is used for the same concept in all. The element contains any alert statements ***%alert;*** see 33.3.3), followed by one or more step(s)<***step1***> see 33.4.1.8.2) and/or one or more paragraphs contain within the parameter entity paragraph type (***%p;*** see 33.3.2).

a. DTD fragment for <***action***>:

```
<!ELEMENT action - - (%alert;, (step1+ | (%p;)+))>
<!ATTLIST action
            %refs;
            %secur;>
```

b. Attributes for <***action***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.1.1.2.4 The element <***sysnomen***> (see 33.4.1.3.6) is used to list the specific system, subsystems, assemblies and components requiring troubleshooting in a troubleshooting index.

27.3.1.1.1.2.5 The element <***xref***> (see 33.4.1.3.6) is used to specify the reference to the corrective action in a troubleshooting index.

27.3.1.2 Preshop Analysis Work Package <***pshopanalwp***>. **DMWRs only**. The work package element <***pshopanalwp***> contains preshop analysis data used for testing or inspecting an item (component or system), instead of completely disassembling it, to determine its useful life. The element contains identification information required for a work package (<***wpidinfo***> see 33.4.5), a work package initial setup (<***wpinfo***> see 33.4.6.1), scope (<***scope***> see 1), any alert statements (***%alert;***, see 33.3.3) procedures (<***proc***> see 33.4.1.8.1) and preshop analysis <***pshopanal***>.

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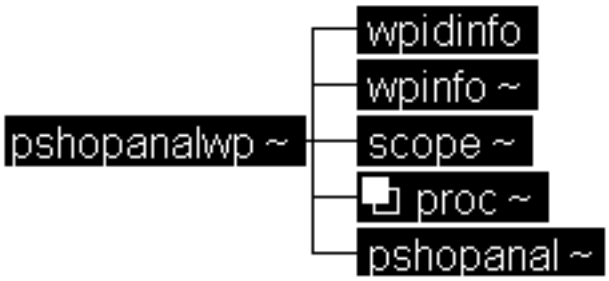

Figure 78 Preshop Analysis Work Package DTD Hierarchy

a. DTD fragment for <***pshopanalwp***>:

```
<!ELEMENT pshopanalwp - - (wpidinfo, wpinfo, scope, proc+, pshopanal)>
<!ATTLIST pshopanalwp
            wpno            ID                          #REQUIRED
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***pshopanalwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.2.1 **Depot level equipment manuals only**. The preshop analysis element <***pshopanal***> is a maintenance task used for testing or inspecting an item (component or system), instead of completely disassembling it, to determine its useful life. The element contains procedures (<***proc***> see 33.4.1.8.1) and/or check lists <***chklist***> (one of which is required).

a. DTD fragment for <***pshopanal***>:

```
<!ELEMENT pshopanal - - (proc | chklist)+>
<!ATTLIST pshopanal
            %bodyatt;
            %secur;>
```

b. Attributes for <***pshopanal***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.2.1.1 The element <***chklist***> contains a required cover page <***coverpage***>, and a required preshop checklist table <***pshopchk.tab***>.

a. DTD fragment for <***chklist***>:

```
<!ELEMENT chklist - o (coverpage, pshopchk.tab)>
<!ATTLIST chklist
             %bodyatt;
             %secur;>
```

b. Attributes for <***chklist***>:

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(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.2.1.1.1 The element <***coverpage***> is used to enter the cover sheet for equipment to be repaired. The part number (<***partno***> see 33.4.4.17), serial number (<***serialno***> see 28.3.8.1.4.1.3.1), and national stock number (<***nsn***> see 33.4.4.16) of the equipment are entered. These are followed by the modifications required <***modreq***>, reason for overhaul or repair <***modreq***>, secondary items required <***secitem***>, and a review of tags <***revtag***> and forms <***revform***>. It also includes the name (<***name***> see 33.4.4.15) and signature <***sig***> of the person doing the analysis followed by the date <***date***> of the analysis.

a. DTD fragment for <***coverpage***>:

```
<!ELEMENT coverpage - o (partno, serialno, nsn, modreq, reason, secitem, revtag,
                         revform, name, sig, date)>
<!ATTLIST coverpage
            %bodyatt;
            %secur;>
```

b. Attributes for <***coverpage***>:
(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.2.1.1.1.1 The modifications required element <***modreq***> includes any modification requirements to be included on the cover page.

a. DTD fragment for <***modreq***>, <***secitem***>, <***reason***>, <***revtag***>, <***revform***>, and <***sig***>:

```
<!ELEMENT (modreq |
           secitem |
           reason |
           revtag |
           revform | sig) - o (#PCDATA)>
<!ATTLIST (modreq |
           secitem |
           reason |
           revtag |
           revform | sig)
             %refs;
             %secur;>
```

b. Attributes for <***modreq***>, <***secitem***>, <***revtag***>, <***revform***>, and <***sig***>:
(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.2.1.1.1.1.1 The element reason <***reason***> is used to enter the reason for overhaul or repair on the cover page.

a. DTD fragment for <***reason***>: (see 27.3.1.2.1.1.1.1a.)
b. Attributes for <***reason***>: (see 27.3.1.2.1.1.1.1b.)

27.3.1.2.1.1.1.1.2 The secondary items element <***secitem***> is used to enter any secondary items on the cover page.

a. DTD fragment for <***secitem***>: (see 27.3.1.2.1.1.1.1a.)
b. Attributes for <***secitem***>: (see 27.3.1.2.1.1.1.1b.)

27.3.1.2.1.1.1.1.3 The review of tags element <***revtag***> includes a review of tags with the item.

a. DTD fragment for <***revtag***>: (see 27.3.1.2.1.1.1.1a.)
b. Attributes for <***revtag***>: (see 27.3.1.2.1.1.1.1b.)

27.3.1.2.1.1.1.1.4 The signature element <***sig***> represents a place for the signature of the person signing the checklist on the cover page.

a. DTD fragment for <***sig***>: (see 27.3.1.2.1.1.1.1a.)
b. Attributes for <***sig***>: (see 27.3.1.2.1.1.1.1b.)

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27.3.1.2.1.1.2 The preshop checklist table element ***<pshopchk.tab>*** represents a content tagged table for actions that may need to be made on a particular item prior to entry into the shop. The table can be broken into sections using the title (<title> see 33.4.1.5.1) and subtitle (<subtitle> see 33.4.1.5.1) elements. The table contains at least one inspection point <insppt>. Each inspection point <insppt> is followed by at least one condition ***<condition>*** and responsive action ***<action>.***

.

a. DTD fragment for ***<pshopchk.tab>***:

```
<!ELEMENT pshopchk.tab - o (title, (subtitle, (insppt, (condition, action)+)+)+)>
<!ATTLIST pshopchk.tab
            %refs;
            %secur;>
```

b. Attributes for ***<pshopchk.tab>***:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

c. SGML Document Instance Fragment for Preshop Checklist Table ***<pshopchk.tab>***:

```
<pshopchk.tab>
<title>Preshop Analysis Checklist</title>
<subtitle>a.  External Visual Inspection.</subtitle>
<insppt>Pump Housing</insppt>
<condition>Inspect for obvious damage, signs of leakage,
overheating, and overall condition.</condition>
<action>
<para><xref wpid="T00008-9-xxxx-xx" pretext="(See" posttext=")"></para>
</action>
<insppt>Equipment Data Plate and Pump Markings</insppt>
<condition>Inspect for legibility, unwanted paint, and
general condition.</condition>
<action>
<para><xref wpid="T00008-9-xxxx-xx" pretext="(See" posttext=")"></para>
</action>
<insppt>Pressure Regulating Valve (TYPE I)</insppt>
<condition>Inspect for damage to threads and mounting surfaces.</condition>
<action>
<para><xref wpid="T00008-9-xxxx-xx" pretext="(See" posttext=")"></para>
</action>
<insppt>Check Valve (TYPE II)</insppt>
<condition>Inspect for damage to threads and mounting surfaces.</condition>
<action>
<para>xref wpid="T00009-9-xxxx-xx" pretext="(See" posttext=")"</para>
</action>
<subtitle>b. External Visual Inspection.</subtitle>
<insppt>Pump Shaft</insppt>
<condition>Turn shaft and check for signs of binding, sticking,
and/or rough operation.</condition>
<action>
<para><xref wpid="T00012-9-xxxx-xx" pretext="(See" posttext=")"></para>
</action>
<subtitle>c. Internal Visual Inspection.</subtitle>
<insppt>Ports and Fittings</insppt>
<condition>Examine for foreign material.</condition>
<action>
<para><xref wpid="T00014-9-xxxx-xx" pretext="(See" posttext=")"></para>
</action>
<insppt>Magnetic Plug</insppt>
<condition>Examine for metal particles.</condition>
```

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<action>
<para><xref wpid="T00014-9-xxxx-xx" pretext="(See" posttext=")"></para>
</action>
</pshopchk.tab>

d. Sample FOSI Output for Preshop Checklist Table <***pshopchk.tab***>:

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Table 1. Preshop Analysis Checklist

Item/Area and/or Inspection/Test Procedure	Results/Condition/ Dimension Found	Remarks/ Recommended Action	Sign & Date
a. External Visual Inspection.			
Pump Housing	Inspect for obvious damage, signs of leakage, overheating, and overall condition.	WP0008 00	
Equipment Data Plate and Pump Markings	Inspect for legibility, unwanted paint, and general condition.	WP0008 00	
Pressure Regulating Valve (TYPE I)	Inspect for damage to threads and mounting surfaces.	WP0008 00	
Check Valve (TYPE II)	Inspect for damage to threads and mounting surfaces.	WP0009 00	
b. External Visual Inspection.			
Pump Shaft	Turn shaft and check for signs of binding, sticking, and/or rough operation.	WP0012 00	
c. Internal Visual Inspection.			
Ports and Fittings	Examine for foreign material.	WP0014 00	
Magnetic Plug	Examine for metal particles.	WP0014 00	

Figure 79 Sample FOSI Output for Preshop Checklist Table <pshopchk.tab>

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27.3.1.2.1.1.2.1 The inspection point element <***insppt***> contains the inspection point of the item.

a. DTD fragment for <***insppt***>:

```
<!ELEMENT insppt - o (#PCDATA)>
<!ATTLIST insppt
            %refs;
            %secur;>
```

b. Attributes for <***insppt***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.2.1.1.2.2 The element <***condition***> (see 33.4.6.1.1.1.5) is used to enter the condition of the item.

27.3.1.2.1.1.2.3 The element <***action***> (see 27.3.1.1.1.2.4) is used to enter any actions that must be made prior to entry into the shop in the preshop checklist table.

27.3.1.3 Component Checklist Work Package <***compchklistwp***>. **DMWRs only**. The component checklist work package <***compchklistwp***> contains the requirements to prepare a checklist to support preshop analysis. The element contains identification information required for a work package (<***wpidinfo***> see 33.4.5), a work package initial setup (<***wpinfo***> see 33.4.6.1) an introductory section (<***intro***> see 33.4.4.12) and component checklist <***compchklist***>.

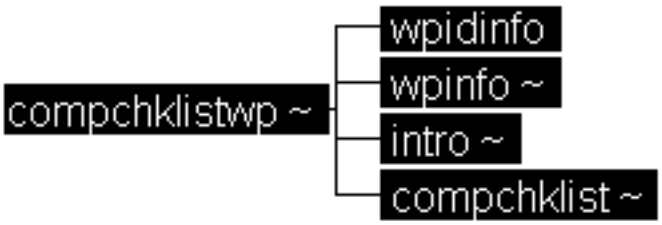

Figure 80 Component Checklist Work Package DTD Hierarchy

a. DTD fragment for <***compchklistwp***>:

```
<!ELEMENT compchklistwp - - (wpidinfo, wpinfo, intro, compchklist)>
<!ATTLIST compchklistwp
            wpno            ID       #REQUIRED
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***compchklistwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(3) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(4) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.3.1 The element <***compchklist***> is used for a standard component checklist containing a blank form on which to list all information that is required prior to preshop analysis. The element <***compchklist***> contains the labeled blank entries for a location to enter each of the following: a name/nomenclature of the equipment (<***name***> see 33.4.4.15) followed by an optional serial number <***serialno***>, an optional date

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received element <***daterec***>, an optional location for where it was received <***recfrom***>, an optional component name <***compname***>, an optional NSN (<***nsn***> see 33.4.4.16), optional part number(s) (<***partno***> see 33.4.4.17), an optional quantity required (<***qty***> see 33.4.6.1.1.1.3), an optional quantity received <***qtyrec***> and an optional visual damage found <***damage***>.

a. DTD fragment for <***compchklist***>:

```
<!ELEMENT compchklist - - (name, serno?, daterec?, recfrom?, compname?, nsn?,
                           partno*, qty?, qtyrec?, damage?)>
<!ATTLIST compchklist
            %refs;
            %secur;>
```

b. Attributes for <***compchklist***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.3.1.1 The element <***serialno***> is used to enter the serial number of the equipment being repaired or overhauled. The element contains (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***serialno***>:

```
<!ELEMENT serialno - o (%text;)>
<!ATTLIST serialno
            %bodyatt;
            %secur;>
```

b. Attributes for <***serialno***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.3.1.2 The element <***daterec***> contains a labeled blank for entering the date the component was received. The element <***daterec***> contains the parameter entity (***%text;*** see 33.3.7) is available to enter inline formatting and contextual characteristics.

a. DTD fragment for <***daterec***>:

```
<!ELEMENT daterec - o (%text;)>
<!ATTLIST daterec
            %refs;
            %secur;>
```

b. Attributes for <***daterec***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.3.1.3 The element <***recfrom***> contains a labeled blank for entering the unit that supplied the component. The element <***recfrom***> contains the parameter entity (***%text;*** see 33.3.7) is available to enter inline formatting and contextual characteristics.

a. DTD fragment for <***recfrom***>:

```
<!ELEMENT recfrom - o (%text;)>
<!ATTLIST recfrom
            %refs;
             %secur;>
```

b. Attributes for <***recfrom***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.3.1.4 The element <***compname***> contains a labeled blank for entering the name of the component. The element <***compname***> contains the parameter entity (***%text;*** see 33.3.7) is available to enter inline formatting and contextual characteristics.

a. DTD fragment for <***compname***>:

```
<!ELEMENT compname - o (%text;)>
<!ATTLIST compname
```

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```
                %refs;
                %secur;>
```

b. Attributes for <***compname***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.3.1.5 The element <***qtyrec***> contains a labeled blank for entering the quantity of components received. The element <***qtyrec***> contains the parameter entity (***%text;*** see 33.3.7) is available to enter inline formatting and contextual characteristics.

a. DTD fragment for <***qtyrec***>:

```
<!ELEMENT qtyrec - o (%text;)>
<!ATTLIST qtyrec
                %refs;
                %secur;>
```

b. Attributes for <***qtyrec***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.3.1.6 The element <***damage***> contains a labeled blank for entering any visual damage found on the component. The element <***damage***> contains the parameter entity (***%text;*** see 33.3.7) is available to enter inline formatting and contextual characteristics.

a. DTD fragment for <***damage***>:

```
<!ELEMENT damage - o (%text;)>
<!ATTLIST damage
                %refs;
                %secur;>
```

b. Attributes for <***damage***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.4 Troubleshooting Procedures Work Package <***tswp***>. **Page-Based TMs only**. The troubleshooting procedures work package contains start-to-finish troubleshooting procedures, which result in fault isolation and rectification and ultimately either a return to readiness status or referral to a higher maintenance level. Troubleshooting procedures can be presented in tabular or narrative format. or in diagrammatic flow trees. In electronic presentations a <***tswp***> may be made up of simple sequential nodes (ETMs) or be traversed as filtered nodes (IETMs). Work packages may be qualified by skill level, maintenance level, and configuration applicability. The element contains identification information required for a work package <***wpidinfo***>, a work package initial setup <***wpinfo***>, an optional introductory section <***intro***>, one or more procedure(s) <***proc***>, or one or more of the elements contain in the parameter entity troubleshooting data ***%tsdata;*** followed by test set hookup procedure <***hookup***>, troubleshooting procedure <***tsproc***>, test set disconnection procedure <***disconnect***> or troubleshooting procedure <***tsproc***> followed by the parameter entity troubleshooting data ***%tsdata;***.

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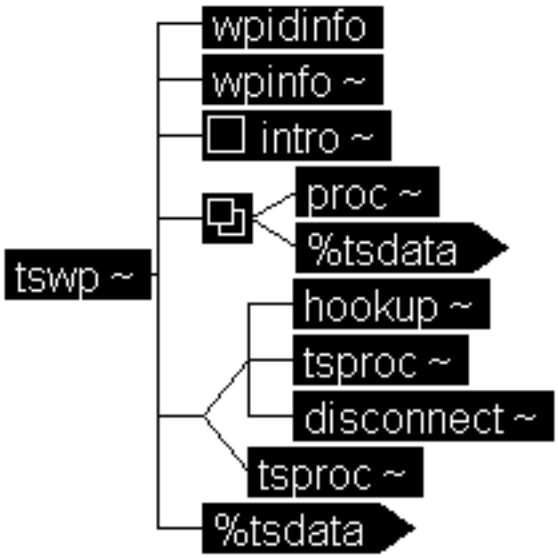

Figure 81 Troubleshooting Procedures Work Package DTD Hierarchy

a. DTD fragment for <***tswp***>

```
<!ELEMENT tswp - o (wpidinfo, wpinfo, intro?, (proc | %tsdata;)*,
                    ((hookup, tsproc, disconnect) | tsproc), %tsdata;)>
<!ATTLIST tswp
            wpno            ID              #REQUIRED
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***tswp***>

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.4.1 The element <***wpidinfo***> (see33.4.5) defines the identification information required for a work package.

27.3.1.4.2 The element <***wpinfo***> (see 33.4.6.1) provides the maintenance technician with general information, equipment, parts, material, and authorized personnel required to perform and complete all the operating tasks included in the work package.

27.3.1.4.3 The element <***intro***> (see 33.4.4.12) is an introductory section explaining how the troubleshooting procedures are to be used to perform troubleshooting and how they relate to the associated operational checkout work packages.

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27.3.1.4.4 The parameter entity troubleshooting data ***%tsdata;*** describes the troubleshooting work package main procedures. Each element is defined below.

a. DTD fragment for ***%tsdata;***:

```
<!ELEMENT tsdata - o (sysdesc?, (interconnect | testflow | funcdepend |
                        schematic | comp-locator | harness-indx)*)>
```

27.3.1.4.4.1 The element <***sysdesc***> is used for description of the system/subsystem under test provided as supporting technical information; contained either as an optional introductory section of a troubleshooting work package or in a stand-alone technical description work package. The element contains the system description narrative (***%titldtext;*** see 33.3.4).

a. DTD fragment for <***sysdesc***>:

```
<!ELEMENT sysdesc - o (%titldtext;)+>
<!ATTLIST sysdesc
            %refs;
            %secur;>
```

b. Attributes for <***sysdesc***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.4.4.2 The element <***interconnect***> contains diagrams or other means of presenting the electrical and electronic connections between components of the system under test. Interconnect <***interconnect***> may be in an introductory section in a troubleshooting work package (<***tswp***> see 27.3.1.4), in an operational checkout work package (<***opcheckwp***> see 27.3.1.5) or in a combined operational checkout and troubleshooting work package (<***opcheck-tswp***> see 27.3.1.6). The element contains a title (<***title***> see 33.4.1.5.1), followed by a figure (<***figure***> see 33.4.3.1) or a table (<***table***> see 33.4.2.1) preceded by an optional parameter entity paragraph type (***%p;*** see 33.3.2).

a. DTD fragment for <***interconnect***>:

```
<!ELEMENT interconnect - - (title, (%p;)?, (figure | table))>
<!ATTLIST interconnect
            %refs;
            %secur;>
```

b. Attributes for <***interconnect***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.4.4.3 The element <***testflow***> contains text (***%titldtext;*** see 33.3.4), figures (<***figure***> see 33.4.3.1), and tables (<***table***> see 33.4.2.1) for presenting the flow of the troubleshooting testing. May be in an introductory section in a troubleshooting work package (<***tswp***> see 27.3.1.4), in an operational checkout work package (<***opcheckwp***> see 27.3.1.5) or in a combined operational checkout and troubleshooting work package (<***opcheck-tswp***> see 27.3.1.6).

a. DTD fragment for <***testflow***>:

```
<!ELEMENT testflow - - ((%titldtext;)+, (figure | table)+)>
<!ATTLIST testflow
            %refs;
            %secur;>
```

b. Attributes for <***testflow***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.4.4.4 The element <***funcdepend***> contains diagrams (<***figure***> see 33.4.3.1) or other means (<***para***> see 33.4.1.5.3) of presenting the functional dependencies of components that make up the system under test. May be in an introductory section in a troubleshooting work package (<***tswp***> see 27.3.1.4), in an operational checkout work package (<***opcheckwp***> see 27.3.1.5) or in a combined operational checkout and troubleshooting work package (<***opcheck-tswp***> see 27.3.1.6).

a. DTD fragment for <***funcdepend***>:

```
<!ELEMENT funcdepend - - (title, para*, figure)>
```

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```
<!ATTLIST funcdepend
            %refs;
            %secur;>
```

b. Attributes for <***funcdepend***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.4.4.5 The element <***schematic***> is used for schematic drawings (<***figure***> incluceded as supporting technical information during a troubleshooting procedure. May be in an introductory section in a troubleshooting work package (<***tswp***> see 27.3.1.4), in an operational checkout work package (<***opcheckwp***> see 27.3.1.5) or in a combined operational checkout and troubleshooting work package (<***opcheck-tswp***> see 27.3.1.6).

a. DTD fragment for <***schematic***>:

```
<!ELEMENT schematic - - (title, para*, figure+)>
<!ATTLIST schematic
            %refs;
            %secur;>
```

b. Attributes for <***schematic***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.4.4.6 The element <***comp-locator***> contains a series of illustration(s) (<***figure***> see 33.4.3.1) followed by supporting text a title (<***title***> see 33.4.1.5.1) followed by at least one paragraph (<***para***> see 33.4.1.5.3) to locate components under test.

a. DTD fragment for <***comp-locator***>:

```
<!ELEMENT comp-locator - - (figure+, title, para+)>
<!ATTLIST comp-locator
            %refs;
            %secur;>
```

b. Attributes for <***comp-locator***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.4.4.7 The element <***harness-indx***> is a special index of electrical wiring harnesses, needed due to the extensive interrelated circuitry. The element contains a required (<***title***> see 33.4.3.1) followed by a required table (<***table***> see 33.4.2.1). Prior to the table one or more paragraph(s) (<***para***> see 33.4.1.5.3) may be entered.

a. DTD fragment for <***harness-indx***>:

```
<!ELEMENT harness-indx - - (title, para*, table)>
<!ATTLIST harness-indx
            %refs;
            %secur;>
```

b. Attributes for <***harness-indx***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.4.5 The element <***proc***> (see 33.4.1.8.1) contains general procedures that must be performed prior to troubleshooting.

27.3.1.4.6 The element <***hookup***> contains procedures for hooking up external test equipment to the system under test; used for automated or semi-automated test equipment or for breakout boxes. The element contains an optional title (<***title***> see 33.4.1.5.1), an optional general information (<***geninfo***> see 33.4.4.11), any alert statements (***%alert;*** see 33.3.3) followed by hookup procedures (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***hookup***>:

```
<!ELEMENT hookup - - (title?, geninfo?, %alert;, proc+)>
<!ATTLIST hookup
            %refs;
            %secur;>
```

b. Attributes for <***hookup***>:

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(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.4.7 The element <***tsproc***> provides a distinct unit of troubleshooting procedures based on the type of system, equipment or assembly/subassembly, the target audience description, and the maintenance level of the operator. The element contains three methods for diagnosing the fault symptoms one or more text logic procedure(s) <***logicproc***>, or one or more fault procedure(s) <***faultproc***>, or a multiplex read code data <***muxproc***>.

a. DTD fragment for <***tsproc***>:

```
<!ELEMENT tsproc - o (logicproc+ | faultproc+ | muxproc)>
<!ATTLIST tsproc
            %refs;
            %secur;>
```

b. Attributes for <***tsproc***>:
(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.4.7.1 The element <***logicproc***> identifies a method of troubleshooting combining text and logic. A title <***title***> is required followed by point of origin <***origin***>, and consisting of one or more test block(s) <***testblock***> and/or end block(s) <***endblock***> and/or branch reference(s) <***branchref***>. Prior to point of origin <***origin***>, any alert statements (***%alert;*** see 33.3.3) may be entered.

a. DTD fragment for <***logicproc***>:

```
<!ELEMENT logicproc - o (title, %alert;, origin, (testblock | endblock |
                         branchref)+)>
<!ATTLIST logicproc
            %refs;
            %secur;>
```

b. Attributes for <***logicproc***>:
(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.4.7.1.1 The element <***origin***> is used for the point of origin of the troubleshooting procedures in a logical procedural table/diagram. The element contains a test procedure <***test***>, normal indications <***indication***>, and at least two response answer (<***answer***> see 27.3.1.4.7.1.3.1).

a. DTD fragment for <***origin***>:

```
<!ELEMENT origin - - (test, indication, answer, answer+)>
<!ATTLIST origin
            type          (yes | no |
                           pass | fail |
                           true | nottrue |
                           value | unantic)      #IMPLIED
            valueloc      NAMES                  #IMPLIED
            valuetype     (boolean | string |
                           sequence | set |
                           real | integer |
                           float | nil |
                           input | outcome)      #IMPLIED
            value          CDATA                 #IMPLIED
            origin         ID                    #REQUIRED
            branchto       IDREFS                 #REQUIRED
            branchlabel    CDATA                 #IMPLIED>
```

b. Attributes for <***origin***>:
(1) **TYPE** - Specifies the type of branch logic current element. This value may be displayed in either paper or electronic display.
(a) “YES” - Applies to a positive answer and composition system will display ”YES".
(b) “NO” - Applies to a negative answer and composition system will display ”NO".

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(c) “PASS” - Applies to a positive answer and composition system will display ”PASS".
(d) “FAIL” - Applies to a negative answer and composition system will display ”FAIL".
(e) “TRUE” - Applies to a positive answer and composition system will display ”TRUE".
(f) “NOTTRUE” - Applies to a negative answer and composition system will display ”NOT TRUE".
(g) “VALUE” - Applies to a response value from “VALUELOC” attribute and the composition system will display the from the “VALUETYPE” attribute.
(h) “UNANTIC” - Applies to a unanticipated result.

(2) **VALUELOC** - Supplies location of value if contained in another element, such as <***input***>.
(3) **VALUETYPE** - Specifies the type of value if attribute "TYPE" is "VALUE."
(a) “BOOLEAN” - Applies to a boolean value from “VALUELOC” and the composition system will display either “TRUE” or “FALSE”.
(b) “STRING” - Applies to a character string from “VALUELOC” and the composition system will display the string.
(c) “SEQUENCE” - Applies to an ordered sequence values from “VALUELOC” and the composition system will display the sequence value.
(d) “SET” - Applies to an unordered sequence values from “VALUELOC” and the composition system will display the set values.
(e) “REAL” - Applies to a real number from “VALUELOC” and the composition system will display the number.
(f) “INTEGER” - Applies to an integer number from “VALUELOC” and the composition system will display the number.
(g) “FLOAT” - Applies to a floating point number from “VALUELOC” and the composition system will display the number.
(h) “NIL” - Applies to null value from “VALUELOC” and the composition system will display the “NIL”.
(i) “INPUT” - Applies to a inserted query value from “VALUELOC” and the composition system will display the inputted value.
(j) “OUTCOME” - Applies to a query outcome from a test from “VALUELOC” and the composition system will display the value.

(4) **VALUE** - Supplies an alphanumeric or numeric value if attribute "TYPE" is "VALUE."
(5) **ORIGIN** - Specifies unique identifier of the path beginning at the origin.
(6) **BRANCHTO** - References identifier(s) of branch or branches to which the user should proceed, which may depend on the outcome of any test or procedure at point of origin.
(7) **BRANCHLABEL** - Supplies an explicit reference to a branch.

27.3.1.4.7.1.1.1 The element <***test***> provides testing procedures. The element contains an optional title <***title***>, any alert statements (***%alert;*** see 33.3.3) and at least one step (<***step1***> see 33.4.1.8.2).

a. DTD fragment for <***test***>:

```
<!ELEMENT test - o (title?, %alert;, step1+)
<!ATTLIST test
            %refs;
            %secur;>
```

b. Attributes for <***test***>:
(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.4.7.1.1.2 The element <***indication***> contains the normal or expected indication in response to the operational test. The element contains the parameter entity paragraph type (***%p;*** see 33.3.2) or a type of list (***%list;*** see 33.3.1) or followed by one or more step(s) <***step1***>. There may be more than one indication for each test.

a. DTD fragment for <***indication***>:

```
<!ELEMENT indication - - ((%p;)+ | %list; | step1+)>
<!ATTLIST indication
            status       (normal | abnormal)  #IMPLIED
```

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```
            %refs;
            %secur;>
```

b. Attributes for <***indication***>:

(1) **STATUS** - Specifies whether the current indication element is a normal or abnormal (out-of-range) indication.

(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.4.7.1.1.3 The element <***answer***> contains explicit actions, keyed to values such as "YES," "NOTTRUE," or "VALUE" contained in the "answerval" attribute of the element. Its contents is placed under the heading **Decision** of the logic procedural table. In a *diagram*, the element answer provides the resulting value that leads to another test block <***testblock***> or an end block <***endblock***>. The element contains the parameter entity (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***answer***>:

```
<!ELEMENT answer - - (%text;)
<!ATTLIST answer
            answerval   (yes | no |
                         pass | fail |
                         true | nottrue |
                         value | unantic)    #IMPLIED
            value       CDATA                #IMPLIED
            %refs;
            %secur;>
```

b. Attributes for <***answer***>:

(1) **ANSWERVAL** - Specifies the logical value associated with the current element. This value may be displayed in either paper or electronic display.

(a) “YES” - Applies to a positive answer and composition system will display ”YES".

(b) “NO” - Applies to a negative answer and composition system will display ”NO".

(c) “PASS” - Applies to a positive answer and composition system will display ”PASS".

(d) “FAIL” - Applies to a negative answer and composition system will display ”FAIL".

(e) “TRUE” - Applies to a positive answer and composition system will display ”TRUE".

(f) “NOTTRUE” - Applies to a negative answer and composition system will display ”NOT TRUE".

(g) “VALUE” - Applies to a response value from “VALUELOC” attribute and the composition system will display the from the “VALUETYPE” attribute.

(h) “UNANTIC” - Applies to an unanticipated response.

(2) **VALUE** - Supplies an alphanumeric or numeric value if attribute "ANSWERVAL" IS "VALUE".

(3) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(4) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.4.7.1.2 The element <***testblock***> contains a test consisting of steps and substeps test, which lead to an indication or condition indication. The element contains a test procedure (<***test***> see 27.3.1.4.7.1.1.1), a indication (<***indication***> see 27.3.1.4.7.1.2.1), and at least two response answer (<***answer***> see 27.3.1.4.7.1.3.1).

a. DTD fragment for <***testblock***>:

```
<!ELEMENT testblock - o (test, indication, answer, answer+)>
<!ATTLIST testblock
            type          (yes | no |
                           pass | fail |
                           true | nottrue |
                           value | unantic)    #REQUIRED
            valueloc      NAMES                #IMPLIED
            valuetype     (boolean | string |
                           sequence | set |
                           real | integer |
                           float | nil |
                           input | outcome)     #IMPLIED
```

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```
value          CDATA                #IMPLIED
origin         ID                   #REQUIRED
branchto       IDREFS               #REQUIRED
branchlabel    CDATA                #IMPLIED>
```

b. Attributes for <***testblock***>:

(1) **TYPE** - Specifies the type of branch logic current element. This value may be displayed in either paper or electronic display.
   (a) “YES” - Applies to a positive answer and composition system will display ”YES".
   (b) “NO” - Applies to a negative answer and composition system will display ”NO".
   (c) “PASS” - Applies to a positive answer and composition system will display ”PASS".
   (d) “FAIL” - Applies to a negative answer and composition system will display ”FAIL".
   (e) “TRUE” - Applies to a positive answer and composition system will display ”TRUE".
   (f) “NOTTRUE” - Applies to a negative answer and composition system will display ”NOTTRUE".
   (g) “VALUE” - Applies to a response value from “VALUELOC” attribute and the composition system will display the from the “VALUETYPE” attribute.
   (h) “UNANTIC” - Applies to a unanticipated result.

(2) **VALUELOC** - Supplies location of value if contained in another element.

(3) **VALUETYPE** - Specifies the type of value if attribute "TYPE" is "VALUE."
   (a) “BOOLEAN” - Applies to a boolean value from “VALUELOC” and the composition system will display either “TRUE” or “FALSE”.
   (b) “STRING” - Applies to a character string from “VALUELOC” and the composition system will display the string.
   (c) “SEQUENCE” - Applies to an ordered sequence values from “VALUELOC” and the composition system will display the sequence value.
   (d) “SET” - Applies to an unordered sequence values from “VALUELOC” and the composition system will display the set values.
   (e) “REAL” - Applies to a real number from “VALUELOC” and the composition system will display the number.
   (f) “INTEGER” - Applies to an integer number from “VALUELOC” and the composition system will display the number.
   (g) “FLOAT” - Applies to a floating point number from “VALUELOC” and the composition system will display the number.
   (h) “NIL” - Applies to null value from “VALUELOC” and the composition system will display the “NIL”.
   (i) “INPUT” - Applies to a inserted query value from “VALUELOC” and the composition system will display the inputted value.
   (j) “OUTCOME” - Applies to a query outcome from a test from “VALUELOC” and the composition system will display the value.

(4) **VALUE** - Supplies an alphanumeric or numeric value if attribute "TYPE" is "VALUE."

(5) **BRANCH**- Specifies the unique identifier of the current branch.

(6) **BRANCHLABEL** - Supplies an explicit reference to a branch.

(7) **BRANCHFROM** - References the identifiers of the branch or branches from which the current branch has descended.

27.3.1.4.7.1.3 The element <***endblock***> concludes a path in a logical procedural table/diagram. Based on the indicators or conditions <***indication***> from the test procedure <***test***>, the malfunction <***malfunc***> will be identified and resolved with responsive action <***action***>. The element contains a malfunction (<***malfunc***> see 27.3.1.1.1.2.1) responsive action (<***action***> see 27.3.1.1.1.2.4).

a. DTD fragment for <***endblock***>:

```
<!ELEMENT endblock - o (malfunc, action)>
<!ATTLIST endblock
            type          (yes | no |
                           pass | fail |
```

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```
                    true | nottrue)       #REQUIRED
          branch    ID                    #REQUIRED
          branchlabel CDATA               #IMPLIED
          branchfrom IDREFS               #REQUIRED>
```

b. Attributes for <***endblock***>:

(1) **TYPE** - Specifies the type of branch logic. This value may be displayed in either paper or electronic display.
   (a) “YES” - Applies to a positive answer and composition system will display ”YES".
   (b) “NO” - Applies to a negative answer and composition system will display ”NO".
   (c) “PASS” - Applies to a positive answer and composition system will display ”PASS".
   (d) “FAIL” - Applies to a negative answer and composition system will display ”FAIL".
   (e) “TRUE” - Applies to a positive answer and composition system will display ”TRUE".
   (f) “NOTTRUE” - Applies to a negative answer and composition system will display ”NOT TRUE".
   (g) “VALUE” - Applies to a response value from “VALUELOC” attribute and the composition system will display the from the “VALUETYPE” attribute.
   (h) “UNANTIC” - Applies to a unanticipated result.

(2) **BRANCH** - Specifies the unique identifier of the current branch.

(3) **BRANCHLABEL** - Supplies an explicit reference to a branch.

(4) **BRANCHFROM** - References the identifiers of the branch or branches from which the current branch has descended.

27.3.1.4.7.1.4 The element <***branchref***> contains a branch reference that refers users to a branch forced to another page by composition boundaries and used the attribute to reference the branch identifier. Relevant only in paper presentations. The element is EMPTY and all pertinent information is entered through its attributes.

a. DTD fragment for <***branchref***>:

```
<!ELEMENT branchref - o  EMPTY>
<!ATTLIST branchref
          textblockid   IDREF             #REQUIRED
          branch        ID                #REQUIRED
          branchlabel   CDATA             #IMPLIED
          branchfrom    IDREFS            #REQUIRED>
          branchto      IDREFS            #REQUIRED>
```

b. Attributes for <***branchref***>:

(1) **TEXTBLOCKID** - References the identifier of the branch forced to another page.

(2) **BRANCH** - Specifies the unique identifier of the current branch.

(3) **BRANCHLABEL** - Supplies an explicit reference to a branch.

(4) **BRANCHFROM** - References the identifiers of the branch or branches from which the current branch has descended.

(5) **BRANCHTO** - References identifier(s) of branch or branches to which the user should proceed, which may depend on the outcome of any test or procedure at point of origin.

27.3.1.4.8 The element <***faultproc***> is used for troubleshooting procedures consisting of an all inclusive series of specific fault symptoms for the system/equipment being troubleshot. The element> should have a title <***title***>, at least one symptom title <***symptom***>, malfunction <***malfunc***> and either an responsive action <***action***> or cross reference <***xref***>.

a. DTD fragment for Fault Procedure <***faultproc***>:

```
<!ELEMENT faultproc - o (title, (symptom, (malfunc, (action | xref))+)+)>
<!ATTLIST faultproc
          %refs;
          %secur;>
```

b. Attributes for <***faultproc***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

c. SGML Document Instance Fragment for Fault Procedure <***faultproc***>:

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```
<faultproc>
<title>NO START (GAS GENERATOR TURNING)</title>
<symptom>No fuel flow or fuel pressure</symptom>
<malfunc label="malfunction">No fuel in tanks.</malfunc>
<action>
<para>Check tanks for fuel quantity.  Refill if necessary
with turbine aviation fuel JP-4 or JP-5 MIL-T-5624 or
JP-8 <extref docno="MIL-T-83133">.</para>
</action>
<malfunc label="malfunction">Main fuel inlet line</malfunc>
<action>
<para>Inspect main fuel inlet connection.  Reconnect
main fuel-in line.</para>
</action>
<malfunc label="malfunction">No fuel to engine.</malfunc>
<action>
<step1>
<para>Be sure speed control shaft moves away from stopcock when the
speed control lever is advanced.  Repair speed control lever linkage
<xref wpid="M00089-9-xxxx-xxx" pretext="(See "posttext=")">.</para>
</step1>
<step1>
<para>Be sure fuel valves are not shut off.  Turn on valve.</para>
</step1>
</action>
<symptom>Fuel or ignition problems:  Speed control lever at IDLE, Ng of
3646–4010 rpm (20–22%) and fuel flow of 100–130 lb/hr.</symptom>
<malfunc label="malfunction">Fuel manifold drain stuck open.</malfunc>
<action>
<para>Check for fuel draining from fuel flow divider valve during
start.  Replace fuel flow divider, if fuel leakage continues during
motoring <xref wpid="Mxxx19-9-xxxx-xxx" pretext="(See "posttext=")">.</para>
</action>
<malfunc label="malfunction">Faulty igniter plug.</malfunc>
<action>
<para>Check both igniter plugs for audible ignition.  Replace faulty
igniter plug(s) <xref wpid="M00020-9-xxxx-xxx" pretext="(See "posttext=")">.</para>
</action>
</faultproc>
```

d. Sample FOSI Output for Fault Procedure <***faultproc***>:

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NO START (GAS GENERATOR TURNING)

SYMPTOM

No fuel flow or fuel pressure

MALFUNCTION

No fuel in tanks.

CORRECTIVE ACTION

Check tanks for fuel quantity. Refill if necessary with turbine aviation fuel JP-4 or JP-5 MIL-T-5624 or JP-8 MIL-T-83133.

Main fuel inlet line

CORRECTIVE ACTION

Inspect main fuel inlet connection. Reconnect main fuel-in line.

No fuel to engine

CORRECTIVE ACTION

1. Be sure speed control shaft moves away from stop cock when the speed control lever is advanced. Repairspeed control lever linkage (WP0089 00).
2. Be sure fuel valves are not shut off. Turn on valve.

SYMPTOM

Fuel or ignition problems: Speed control lever at IDLE, Ng of 3646–4010 rpm (20–22%) and fuel flow of 100-130 lb/hr.

MALFUNCTION

Fuel manifold drain stuck open.

CORRECTIVE ACTION

Check for fuel draining from fuel flow divider valve during start. Replace fuel flow divider, if fuel leakage continues during motoring (WP0019 00).

Faulty igniter plug.

CORRECTIVE ACTION

Check both igniter plugs for audible ignition. Replace faulty igniter plug(s) (WP0020 00).

Figure 82 Sample FOSI Output for Fault Procedure <faultproc>

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27.3.1.4.8.1 The element <***title***> (see 33.4.1.5.1) is the title of a troubleshooting fault procedure table.

27.3.1.4.8.2 The element <***symptom***> is used for grouping of associated malfunctions. Its contents is placed under the column heading **Symptom** of a troubleshooting fault procedure table. The element contains the parameter entity (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***symptom***>:

```
<!ELEMENT symptom - - (%text;)>
<!ATTLIST symptom
            %refs;
            %secur;>
```

b. Attributes for <***symptom***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.4.8.3 The element <***malfunc***> (see 27.3.1.1.1.2.1) is used as an abnormal indication or condition in response to the troubleshooting test. Its contents is placed in the second column under the heading **Malfunction** of a troubleshooting fault procedure table.

27.3.1.4.8.4 The element <***action***> (see 27.3.1.1.1.2.4) is used for the corrective action to be taken related to a malfunction. Its entire contents is placed in the third column under the heading of a **Corrective Action** troubleshooting fault procedure table. An action will be aligned with the malfunction <***malfunc***> element that contains it.

27.3.1.4.8.5 The element <***xref***> (see 33.4.1.3.6) references to the work package or paragraph that contains the data to perform the corrective action. Its entire contents is placed in the third column under the heading **Corrective Action** troubleshooting fault procedure table.

27.3.1.4.9 The element <***muxproc***> consist of a method of troubleshooting based on the use of computer generated multiplex read code data. The MUX read code data are listed in troubleshooting sequence order by signal name <***signame***>. The method can be presented either tabular or narrative format. The element may have a symptom title <***symptom***> followed by at least one signal, component, or data items <***signal-item***>.

a. DTD fragment for <***muxproc***>:

```
<!ELEMENT muxproc - o ((symptom?, signal-item+)+)>
<!ATTLIST muxproc
            format    (tabular | narrative)    #REQUIRED
            %refs;
            %secur;>
```

b. Attributes for <***muxproc***>:

(1) **FORMAT** - Specifies the presentation format.

(a) "TABULAR" - Describes to the composition system to present the information in tabular format.

(b) "NARRATIVE" - Describes to the composition system to present the information in textual format.

(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.4.9.1 The element <***symptom***> (see 27.3.1.4.8.2) is used for listing the MUX read code data by the specific malfunction/symptom for each system or equipment.

27.3.1.4.9.2 The element <***signal-item***> contains all information required to test a particular signal, component part, process, or data item during pass/fail operational check troubleshooting. The element contains a signal name <***signame***>, data items <***dataitem***>, pass/fail check remarks <***ckremarks***>, and a pass/fail criteria <***criteria***>.

a. DTD fragment for <***signal-item***>:

```
<!ELEMENT signal-item - - (signame, dataitem, ckremarks, criteria, criteria)>
<!ATTLIST signal-item
            type         (part| signal |
                          process | other)    #REQUIRED
            %refs;
```

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```
              %secur;>
```

b. Attributes for <***signal-item***>:

(1) **TYPE** - Defines the type of signal being analyzed.
   (a) "PART" - Test applies to a component part.
   (b) "SIGNAL" - Test applies to a particular signal.
   (c) "PROCESS" - Test applies to a process.
   (d) "OTHER" - Test applies to a data item.

(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.4.9.2.1 The element <***signame***> contains the name of the signal item being analyzed. The multiplex read code data are listed in troubleshooting sequence order by the signal name. The element contains narrative text (#PCDATA parsable characters see 35.3.2).

a. DTD fragment for <***signame***>:

```
<!ELEMENT signame - o (#PCDATA)>
<!ATTLIST signame
              %refs;
              %secur;>
```

b. Attributes for <***signame***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.4.9.2.2 The element <***dataitem***> contains the memory location <***memloc***>, memory data bit(s) <***memdata***>, condition (<***condition***> see 33.4.6.1.1.1.5), and the signal function <***sigfunc***>.

a. DTD fragment for <***dataitem***>:

```
<!ELEMENT dataitem - - (memloc, memdata, condition, sigfunc)>
<!ATTLIST dataitem
              %refs;
              %secur;>
```

b. Attributes for <***dataitem***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.4.9.2.2.1 The element <***memloc***> defines memory location address.

a. DTD fragment for <***memloc***>, <***memdata***>, and <***sigfunc***>:

```
<!ELEMENT (memloc |
           memdata |
           sigfunc) - - (#PCDATA)>
<!ATTLIST (memloc |
           memdata |
           sigfunc)
             %refs;
             %secur;>
```

b. Attributes for <***memloc***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.4.9.2.2.2 The element <***memdata***> defines the memory data bit register being examined. The element contains narrative text (#PCDATA parsable characters see 35.3.2).

a. DTD fragment for <***memdata***>: (see 27.3.1.4.9.2.2.1 a.)

b. Attributes for <***memdata***>: (see 27.3.1.4.9.2.2.1 b.)

27.3.1.4.9.2.2.3 The element <***sigfunc***> describes/identifies the signal function. The element contains narrative text (#PCDATA parsable characters see 35.3.2)

a. DTD fragment for <***sigfunc***>: (see 27.3.1.4.9.2.2.1 a.)

b. Attributes for <***sigfunc***>: (see 27.3.1.4.9.2.2.1 b.)

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27.3.1.4.9.2.6 The element <***ckremarks***> is any remarks concerning the signal item. The element contains the parameter entity (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***ckremarks***>:

```
<!ELEMENT ckremarks - - (%text;)>
<!ATTLIST ckremarks
            %refs;
            %secur;>
```

b. Attributes for <***ckremarks***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.4.9.2.7 The element <***criteria***> specify the criteria for a functioning signal item and next step in diagnosing the problem. The element contains narrative text (<***text***> see 33.3.7).

a. DTD fragment for <***criteria***>:

```
<!ELEMENT criteria - o (%text;)>
<!ATTLIST criteria
            type       (pass | fail)     #IMPLIED
            %refs;
            %secur;>
```

b. Attributes for <***criteria***>:

(1) **TYPE** - Specifies the type of action resulting from this criteria element.

(a) “PASS” - The identifies the content as a pass criteria.

(b) “FAIL” - The identifies the content as a fail criteria.

(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.4.10 The element <***disconnect***> contains a test set disconnection procedure to return the system or equipment to its normal configuration prior to operational checkout setup. The element contains a title (<***title***> see 33.4.1.5.1) followed by optional general introductory information (<***geninfo***> see 33.4.4.11), any alert statements (***%alert;*** see 33.3.3) performed before disconnection procedure, and multiple disconnection procedures (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***disconnect***>:

```
<!ELEMENT disconnect - - (title, geninfo?, %alert;, proc+)>
<!ATTLIST disconnect
            %refs;
            %secur;>
```

b. Attributes for <***disconnect***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.5 Operational Checkout Work Package <***opcheckwp***>. **Page-Based TMs only**. A type of work package presenting operational checkout procedures that subject an aircraft, or other type of major weapon system or their systems, subsystems, components, accessories, and items of equipment to prescribed conditions to determine that they will function in accordance with predetermined test parameters. The element contains identification information required for a work package <***wpidinfo***>, a work package initial setup <***wpinfo***>, an optional introductory section <***intro***>, one or more procedure(s) <***proc***>, or one or more of the elements contain in the parameter entity troubleshooting data ***%tsdata;*** followed by test set hookup procedure <***hookup***>, operational checkout procedures <***opcheckproc***>, test set disconnection procedure <***disconnect***> or operational checkout procedures <***opcheckproc***> followed by the parameter entity troubleshooting data ***%tsdata;***.

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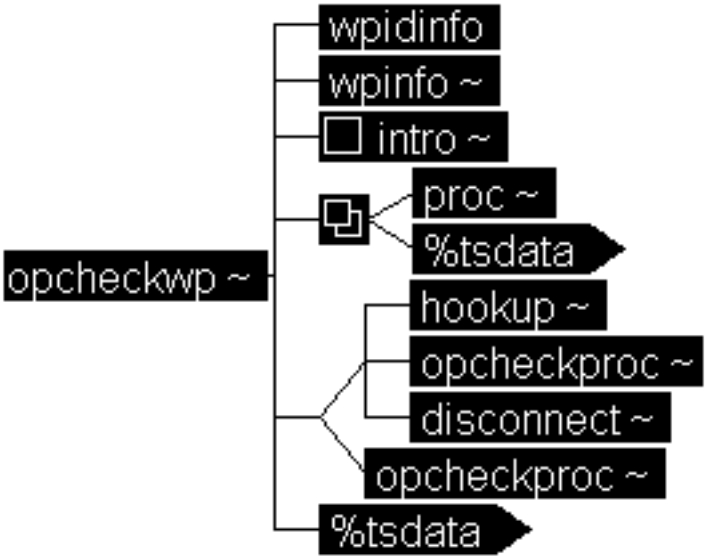

Figure 83 Operational Checkout Work Package DTD Hierarchy

a. DTD fragment for <***opcheckwp***>

```
<!ELEMENT opcheckwp - o (wpidinfo, wpinfo, intro?, (proc | %tsdata;)*,
                         ((hookup, opcheckproc, disconnect) | opcheckproc),
                         %tsdata;)>
<!ATTLIST opcheckwp
            wpno            ID                          #REQUIRED
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***opcheckwp***>

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.5.1 The element <***wpidinfo***> (see33.4.5) defines the identification information required for a work package.

27.3.1.5.2 The element <***wpinfo***> (see 33.4.6.1) provides the maintenance technician with general information, equipment, parts, material, and authorized personnel required to perform and complete all the operating tasks included in the work package.

27.3.1.5.3 The element <***intro***> (see 33.4.4.12) is an introductory section explaining how the operational checkout procedures are to be used to perform testing and how they relate to the associated troubleshooting work packages.

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27.3.1.5.4 The element <***proc***> (see 33.4.1.8.1) contains general procedures that must be performed prior to checkout.

27.3.1.5.5 The parameter entity ***%tsdata;*** (see 27.3.1.4.4) describes the troubleshooting work package main procedures.

27.3.1.5.6 The element <***hookup***> (see 27.3.1.4.6) contains procedures for connecting any test and accessory equipment to a system under test.

27.3.1.5.7 The element <***opcheckproc***> is used for a selection of type of operational checkout procedures based on the type of system, equipment, or assembly/subassembly. The element contains at least one of operational check testing <***opcheck***>, or a message index <***messageindx***> or a fault report listing <***faultreports***>.

a. DTD fragment for <***opcheckproc***>:

```
<!ELEMENT opcheckproc  - o (opecheck+ | messageindx | faultreports)>
<!ATTLIST opcheckproc
            %refs;
            %secur;>
```

b. Attributes for <***opcheckproc***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.5.7.1 The element <***opcheck***> contains an ordered set of operational test procedures to obtain results that will point the user to detailed troubleshooting procedure work package. The operational checkout test table can be represented in a narrative format or as tabular. It may contain a title (<***title***> see 33.4.1.5.1) followed by a series of test procedures <***testproc***>.

a. DTD fragment for <***opcheck***>:

```
<!ELEMENT opcheck - o (title?, testproc+)>
<!ATTLIST opcheck
            %refs;
            %secur;>
```

b. Attributes for <***opcheck***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.5.7.1.1 The element <***testproc***> is a series of test procedures in an operational check.

a. DTD fragment for <***testproc***>:

```
<!ELEMENT testproc - - (checkstep)+>
<!ATTLIST testproc
            %refs;
            %secur;>
```

b. Attributes for <***testproc***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.5.7.1.1.1 The element <***checkstep***> contains a series of steps <***step1***> and substeps that leads to an indication or condition <***indication***> which concludes with a responsive action <***action***> or cross reference <***xref***>. When a normal indication is obtained, the operational checkout continues until the complete checkout is completed or until an abnormal condition or indication is observed. When the test procedure results in an abnormal indication or condition, a malfunction <***malfunc***> or a series of malfunctions is provided. For each malfunction, the possible corrective action <***action***> should be provided. The element represents the row in a page-based or a group in a frame-based in a operational checkout test table (<***opcheck***> see 27.3.1.5.7.1) and in a operational testing troubleshooting table (<***opcheck-tsproc***> see 27.3.1.6.9).

a. DTD fragment for <***checkstep***>:

```
<!ELEMENT checkstep - - (step1+, indication, ((malfunc, (action | xref))+
                          | (action | xref)))+>
<!ATTLIST checkstep
            %refs;
```

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```
            %secur;>
```

b. Attributes for <***checkstep***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.5.7.1.1.1.1 The element <***step1***> (see 33.4.1.8.2) is required steps that lead to an indication or condition.

27.3.1.5.7.1.1.1.2 The element <***malfunc***> (see 27.3.1.1.1.2.1) is used as an abnormal indication or condition in response to the troubleshooting test.

27.3.1.5.7.1.1.1.3 The element <***action***> (see 27.3.1.1.1.2.4) is used for the corrective action to be taken related to a malfunction.

27.3.1.5.7.1.1.1.4 The element <***xref***> (see 33.4.1.3.6) is used to reference to a detailed troubleshooting procedure work package for the corrective action.

27.3.1.5.7.1.1.1.5 The element <***indication***> (see 27.3.1.4.7.1.2.1) contains the normal or expected indication in response to the operational test. There may be more than one indication for each test.

27.3.1.5.7.2 The element <***messageindx***> identifies a group of test set message words. The element contains a required title (<***title***> see 33.4.1.5.1), optional general information (<***geninfo***> see 33.4.4.11) followed by one or more message item <***messageitem***>. The element represents the row in a page-based or a group in a frame-based in the test set message word index table.

a. DTD fragment for <***messageindx***>:

```
<!ELEMENT messageindx - o (title, geninfo?, messageitem+)>
<!ATTLIST messageindx
            %refs;
            %secur;>
```

b. Attributes for <***messageindx***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.5.7.2.1 The element <***messageitem***> contains a particular message word or bit-code word. The element identifies a group of test set message words. The element represents the row in a page-based or a group in a frame-based in the test set message word index table. The element contains a message word <***messageword***>, general paragraph(s) of text (<***para***>, cross reference <***xref***>, responsive action <***action***>

a. DTD fragment for <***messageitem***>:

```
<!ELEMENT messageitem - o (messageword, para+ (xref | action))>
<!ATTLIST messageitem
            %refs;
            %secur;>
```

b. Attributes for <***messageitem***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.5.7.2.1.1 The element <***para***> (see 33.4.1.5.3) provides a narrative description of the message word or bit-code word.

27.3.1.5.7.2.1.2 The element <***xref***> (see 33.4.1.3.6) is used to reference to a detailed troubleshooting procedure work package.

27.3.1.5.7.2.1.3 The element <***action***> (see 27.3.1.1.1.2.4) is used for the corrective action to be taken related to a message word or bit-code word.

27.3.1.5.7.2.1.4 The element <***messageword***> contains a particular message word or bit-code word. The element contains narrative text (#PCDATA parsable characters see 35.3.2).

a. DTD fragment for <***messageword***>:

```
<!ELEMENT messageword - - (#PCDATA)>
<!ATTLIST messageword
            id     ID      #REQUIRED
```

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```
            %secur;>
```

b. Attributes for <***messageword***>:

(1) **ID** - Specifies the unique identifier of the help link.

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.5.7.3 The element <***faultreports***> is used for a troubleshooting reference table contained in a test module work package. These fault reports are generated by automated and/or built-in diagnostics. The element contains an optional title (<***title***> see 33.4.1.5.1), general information (<***geninfo***> see 33.4.4.11).

a. DTD fragment for <***faultreports***>:

```
<!ELEMENT faultreports - - (title?, geninfo?, faultcode+)>
<!ATTLIST faultreports
            indxcols     (2 | 3)     #REQUIRED
            reftype      (wp | page | tsloc)  "page"
            %refs;
            %secur;>
```

b. Attributes for <***faultreports***>:

(1) **INDXCOLS** - Specifies number of columns in the index; although an index of message words will have three columns, an index of fault reports from built-in diagnostics may have only two.

(2) **REFTYPE** - Specifies reference type format to be used in the tables third column for the composition system. If no value is entered for the attribute the default is "WP".

(a) "ACTION" - Defines the corrective action to be taken.

(b) "PAGELOC" - Defines to use page number to indicate where the corrective action is located.

(c) "WP" - Defines to use the work package sequence number to indicate where the corrective action is located.

(d) "WP-PAGE" - Defines to use both the work package sequence number and page number to indicate where the corrective action is located.

(3) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(4) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.5.7.3.1 The element <***faultcode***> identifies a set of fault codes. The element represents the row in a page-based or group in a frame-based in the fault code reference index. The element contains an <***messageword***> responsive action <***action***> or <***xref***> and an optional <***follow-on***>.

a. DTD fragment for <***faultcode***>:

```
<!ELEMENT faultcode - o (messageword, (action | xref), follow-on?>
<!ATTLIST faultcode
            indxcols     (2 | 3)     #REQUIRED
            reftype      (wp | page | tsloc)  "page"
            %refs;
            %secur;>
```

b. Attributes for <***faultcode***>:

(1) **INDXCOLS** - Specifies number of columns in the index; although an index of message words will have three columns, an index of fault reports from built-in diagnostics may have only two.

(2) **REFTYPE** - Specifies the type of reference location used. When no attribute value is entered, the default is "PAGE".

(a) "WP" - Defines to use the work package sequence number to indicate where the corrective action is located.

(b) "PAGE" - Applies the reference using the page number.

(c) "TSLOC" - Applies the reference using the troubleshooting procedure.

(3) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(4) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.5.7.3.1.1 The element <***messageword***> (see 27.3.1.1.1.2.3) contains a particular message word or bit-code word.

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27.3.1.5.7.3.1.2 The element <***action***> (see 27.3.1.1.1.2.4) is the corrective action to be taken based on the messageword.

27.3.1.5.7.3.1.3 The element <***xref***> (see 33.4.1.3.6) is used to reference to a detailed troubleshooting procedure work package for the corrective action.

27.3.1.5.7.3.1.4 The element <***follow-on***> specifies any follow-on action to be performed after the maintenance action has be completed. The element contains either a paragraph (<***para***> see 33.4.1.5.3), at least one procedural step (<***step1***> see 33.4.1.8.2), or a cross reference to the follow-on procedure (<***xref***> see 33.4.1.3.6).

a. DTD fragment for <***follow-on***>:

```
<!ELEMENT follow-on - - (para | step1+ | xref)>
<!ATTLIST follow-on
            id      ID        #REQUIRED
            %secur;>
```

b. Attributes for <***follow-on***>:

(1) **ID** - A unique identifier for the follow-on procedure.

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.1.5.8 The element <***disconnect***> (see 27.3.1.4.10) contains a test set disconnection procedure to return the system or equipment to its normal configuration prior to operational checkout setup.

27.3.1.6 Combined Operational Checkout and Troubleshooting Work Package <***opcheck-tswp***>. The element <***opcheck-tswp***> is a type of work package presenting combined operational checkout and troubleshooting procedures to verify proper operation to prescribed standards and for detecting, isolating, and correcting system and equipment failures and malfunctions. The element contains identification information required for a work package <***wpidinfo***>, a work package initial setup <***wpinfo***>, an optional introductory section <***intro***> may be followed by one or more procedure(s) <***proc***>, and the parameter entity troubleshooting data ***%tsdata;***. When there is a connection and a shut down involved use test set hookup procedure <***hookup***>, with either operational checkout procedures <***opcheckproc***>, and troubleshooting procedures <***tsproc***> or operational checkout troubleshooting procedures <***opcheck-tsproc***> followed by test set disconnection procedure <***disconnect***>; else use either operational checkout procedure <***opcheckproc***> and troubleshooting procedure <***tsproc***> or operational checkout troubleshooting procedure <***opcheck-tsproc***> preceding the parameter entity troubleshooting data ***%tsdata;***.

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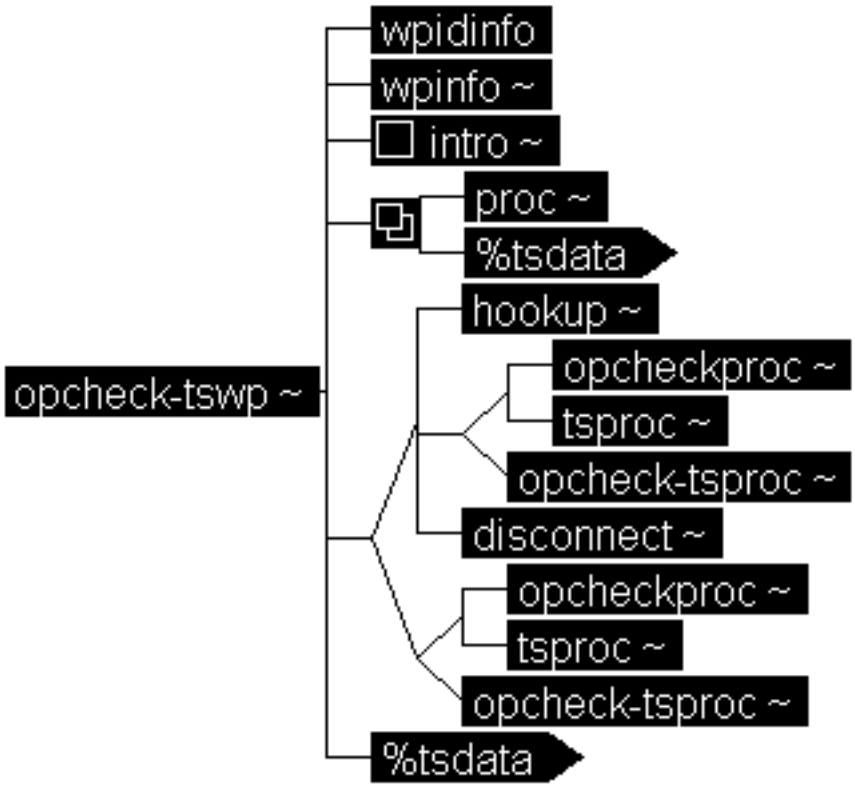

Figure 84 Combined Operational Checkout and Troubleshooting Work Package DTD Hierarchy

a. DTD fragment for <***opcheck-tswp***>:

```
<!ELEMENT opcheck-tswp - o (wpidinfo, wpinfo, intro?, (proc, %tsdata;)*,
                            ((hookup,((opcheckproc, tsproc) |
                            opcheck-tsproc), disconnect) |
                            ((opcheckproc, tsproc)|
                            opcheck-tsproc)), %tsdata;)>
<!ATTLIST opcheck-tswp
            wpno        ID                      #REQUIRED
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***opcheck-tswp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

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27.3.1.6.1 The element <***wpidinfo***> (see33.4.5) defines the identification information required for a work package.

27.3.1.6.2 The element <***wpinfo***> (see 33.4.6.1) provides the maintenance technician with general information, equipment, parts, material, and authorized personnel required to perform and complete all the operating tasks included in the work package.

27.3.1.6.3 The element <***intro***> (see 33.4.4.12) is an introductory section explaining how the operational checkout and troubleshooting procedures are to be used to perform checkout and troubleshooting and how they relate to the associated maintenance work packages that include the corrective actions that will return the equipment to proper operation.

27.3.1.6.4 The element <***proc***> (see 33.4.1.8.1) contains general procedures that must be performed prior to checkout.

27.3.1.6.5 The parameter entity ***%tsdata;*** (see 27.3.1.4.4) describes the troubleshooting work package main procedures.

27.3.1.6.6 The element <***hookup***> (see 27.3.1.4.6) contains procedures for connecting any test and accessory equipment to a system under test.

27.3.1.6.7 The element <***opcheckproc***> (see 27.3.1.5.7) is used for a selection of type of operational checkout procedures based on the type of system, equipment, or assembly/subassembly.

27.3.1.6.8 The element <***tsproc***> (see 27.3.1.4.7) is used for a selection of type of troubleshooting procedures based on the type of system, equipment, or assembly/subassembly.

27.3.1.6.9 The element <***opcheck-tsproc***> is a method of troubleshooting that consists of operational checkout and troubleshooting procedures followed by normal indications or responses and corrective actions for when indications are out of rang. The element contains an optional title <***title***> followed by at least one test procedure <***testproc***>.

a. DTD fragment for <***opcheck-tsproc***>:

```
<!ELEMENT opcheck-tsproc - o (title?, testproc+)>
<!ATTLIST opcheck-tsproc
            %refs;
            %secur;>
```

b. Attributes for <***opcheck-tsproc***>:

(1) **ID** - A unique identifier for the follow-on procedure.

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

(3) SGML Table Document Instance Fragment for Operational Checkout and Troubleshooting Procedure <***opcheck-tsproc***>:

<***opcheck-tsproc***>
<***title***>Computer Processor Operational Checkout and Troubleshooting</***title***>
<***testproc***>
<***checkstep***>
<***step1***>
<***para***>Remove computer processor top cover <***xref wpid="M00015-9-xxxx-xxx" tableid="M00015-9-xxxx-xxx-table2" pretext="(See" posttext=")"***>.</***para***>
</***step1***>
<***step1***>
<***para***> Apply power to test set and place test set POWER switch to ON position.</***para***>
</***step1***>
<***indication***><***para***> Test set power indicator is illuminated.</***para***></***indication***>
<***malfunc label="malfunction"***>If power indicator does not light</***malfunc***>
<***action***> <***para***>***Check power source for 28 VDC.***</***para***></***action***></***checkstep***> <***checkstep***><***step1***><***para***> Place UUT Power switch in CP position.</***para***></***step1***> <***indication***><***para***>CP LEDS momentarily flash.</***para***></***indication***> <***malfunclabel="malfunction"***> If power indicator does not light</***malfunc***><***action***><***para***>Check test set wiring.</***para***></***action***></***checkstep***>

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<*indication*><*para*>BIT test routine runs for 30 seconds. During the first 15 seconds the CP LEDs (DS1–DS10) will flash. The second 15 second period is the status reporting period. All LEDs are OFF during the second 15 second period. After the BIT routine is complete, all LEDs will return to the original OFF state.</*para*></*indication*>
<*malfunc label="malfunction"*>If DS1 is illuminated</*malfunc*><*action*>
<*para*>.Perform DS1 testing. Refer to <*xref wpid="T00097-9-xxxx-xxx" tableid="T00097-9-xxxx-xxx-table2"*>. </*para*></*action*><*malfunc label="malfunction"*>If DS2 is illuminated, perform DS2 testing.</*malfunc*> <*action*><*para*>Refer to <*xref wpid="T00097-9-xxxx-xxx" tableid="T00097-9-xxxx-xxx-table3"*></*para*></*action*>
</*checkstep*></*testproc*></*opcheck-tsproc*>

c. Sample FOSI Table Output for an Operational Checkout and Troubleshooting Procedure <***opcheck-tsproc***>:

TM XX-XXXX-XXX-12P **0014 00**

OPERATIONAL CHECKOUT AND TROUBLESHOOTING PROCEDURE

COMPUTER PROCESSOR OPERATIONAL CHECKOUT AND TROUBLESHOOTING

Test Procedure

1. Remove computer processor top cover (WP 0005 00).
2. Apply power to test set and place test set POWER switch to ON position.

Indication/Condition

Test set power indicator is illuminated.

Malfunction/Corrective Action

If power indicator does not light, check power source for 28 VDC.

Test Procedure

3. Place UUT POWER switch in CP position.

Indication/Condition

CP LEDS momentarily flash.

Malfunction/Corrective Action

If LEDS do not flash briefly, check test set wiring.

Test Procedure

4. Place Test Set UUT POWER switch in CP position. Quickly press and release the CP BIT button on the system interface card. Observe the 10 LEDs on the system I/F CCA.

Indication/Condition

BIT test routine runs for 30 seconds. During the first 15 seconds the CP LEDs (DS1- DS10) will flash. The second 15 second period is the status reporting period. All LEDs are OFF during the second 15 second period. After the BIT routine is complete, all LEDs will return to the original OFF state.

Malfunction/Corrective Action

a. If DS1 is illuminated, perform DS1 testing. Refer to table 2.
b. If DS2 is illuminated, perform DS2 testing. Refer to table 3.

0014 00-1

Figure 85 Sample FOSI Table Output for an Operational Checkout and Troubleshooting Procedure

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27.3.1.6.10 The element **<*disconnect*>** (see 27.3.1.4.10) contains a test set disconnection procedure to return the system or equipment to its normal configuration prior to operational checkout setup.

27.3.2 The Aircraft Troubleshooting Information Chapter ***%airts;***. The Aircraft Troubleshooting Information Chapter should consist of a troubleshooting introduction work package (**<*tsintrowp*>** see 27.3.2.1), may have one or more technical information and description work package(s) (**<*techdescwp*>** see 27.3.2.2), and either one or more of a combined operational checkout and troubleshooting work package(s) (**<*opcheck-tswp*>** see 27.3.1.6), troubleshooting work package(s) (**<*tswp*>** see 27.3.1.4), and/or operational checkout work package(s) (**<*opcheckwp*>** see 27.3.1.5).

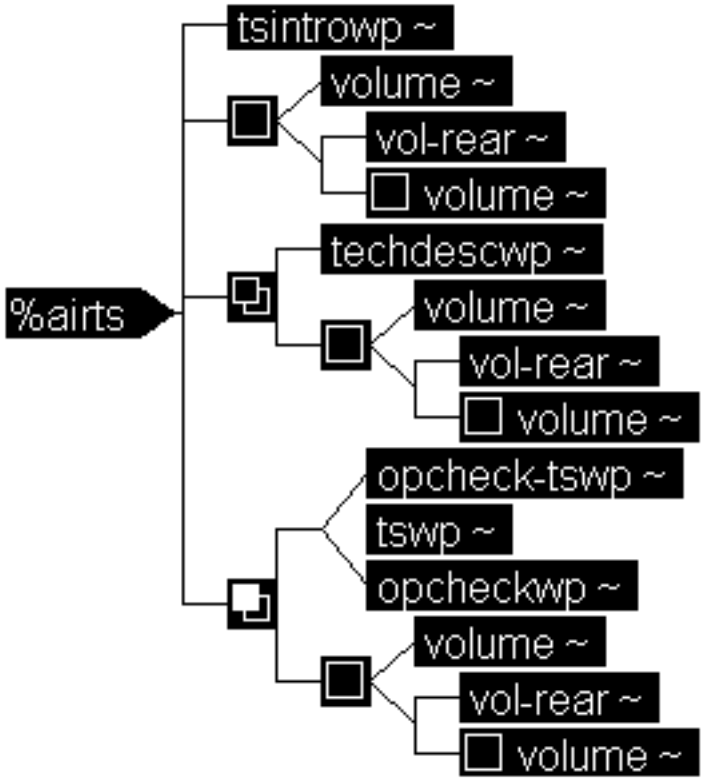

Figure 86 Aircraft Troubleshooting Information Chapter DTD Hierarchy

a. DTD fragment for ***%airts;***:

```
<!ENTITY % airts "(tsintrowp, %vol.group;,(techdescwp,%vol.group;)*
                  ((opcheck-tswp | tswp | opcheckwp), %vol.group;)+)">
```

27.3.2.1 Troubleshooting Introduction Work Package **<*tsintrowp*>**. The work package element **<*tsintrowp*>** is used for the introductory work package to a troubleshooting chapter that contains any general information needed to supplement the troubleshooting procedures, such as "how to use troubleshooting procedures". The element contains identification information required for a work package (**<*wpidinfo*>** see 33.4.5), followed by either general troubleshooting information (***%titldtext;*** see 33.3.4) or how to use the Troubleshooting Chapter (**<*howtouse*>** see 24.2.1.1.7).

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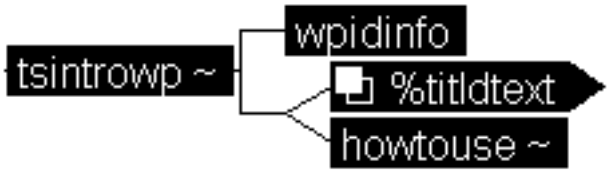

Figure 87 Troubleshooting Introduction Work Package DTD Hierarchy

a. DTD fragment for <***tsintrowp***>:

```
<!ELEMENT tsintrowp - - (wpidinfo, ((%titldtext;)+ | howtouse)+)>
<!ATTLIST tsintrowp
            wpno        ID                      #REQUIRED
            ts-type     (manual | automated)  #IMPLIED
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***tsintrowp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **TS-TYPE** - The type of troubleshooting contained in the work package.

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(4) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(5) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(6) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.2.2 Technical Information and Description Work Package <***techdescwp***>. **Page-based Aircraft Troubleshooting Manuals only.** The technical information and description work package <***techdescwp***> is a type of work package presenting technical description and other supporting information about a system or subsystem/assembly/component under test; it is presented in an independent section. The element contains identification information required for a work package <***wpidinfo***>, a work package initial setup <***wpinfo***>, an optional general work package information <***geninfo***>, equipment description and data <***descproc***>, controls and indicators procedures <***ctrlindproc***>, theory of operation procedure <***thryproc***>.

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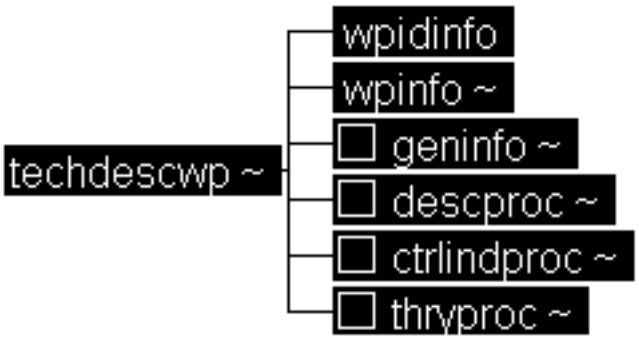

Figure 88 Technical Information and Description Work Package DTD Hierarchy

a. DTD fragment for <***techdescwp***>

```
<!ELEMENT techdescwp - - (wpidinfo, wpinfo, geninfo?, descproc?,
                          ctrlindproc?, thryproc?)>
<!ATTLIST techdescwp
            level       (depot | operator |
                         gensup | dirsup |
                         unitlvl | inter |
                         avum-avim | tmlvls)   #REQUIRED
            wpno      ID                       #REQUIRED
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***techdescwp***>

(1) **LEVEL** - The maintenance level of the work package.
   (a) “OPERATOR” – Applies to operator maintenance level.
   (b) “UNITLVL” – Applies to unit maintenance level.
   (c) “DIRSUP” – Applies to direct support (DS) maintenance level.
   (d) “GENSUP” – Applies to general support (GS) maintenance level.
   (e) “INTER” – Applies to intermediate (DS/GS) maintenance level.
   (f) “DEPOT” – Applies to depot maintenance level.
   (g) “AVUM-AVIM” – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.
   (h) “TMLVLS” – Applies to all maintenance levels.

(2) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(4) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(5) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(6) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.2.2.1 The element <***wpidinfo***> (see33.4.5) defines the identification information required for a work package.

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27.3.2.2.2 The element <***wpinfo***> (see 33.4.6.1) provides the maintenance technician with general information, equipment, parts, material, and authorized personnel required to perform and complete all the operating tasks included in the work package.

27.3.2.2.3 The element <***geninfo***> (see 33.4.4.11) is introductory information for the technical information and description work package.

27.3.2.2.4 The element <***descproc***> contains information from the Equipment Description and Data Work Package required to support the testing and troubleshooting procedures in a technical description work package. The element contains at least one equipment characteristics, capabilities, and features <***eqpinfo***>, followed by an option of one or more location and description of major components <***locdesc***>, may have a differences between models <***eqpdiff***>, and also may have an equipment data <***eqpdata***>.

a. DTD fragment for <***descproc***>:

```
<!ELEMENT descproc - o (eqpinfo+, locdesc*, eqpdiff?, eqpdata?)>
<!ATTLIST descproc
            %refs;
            %secur;>
```

b. Attributes for <***descproc***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.2.2.4.1 The <***eqpinfo***> (see 25.3.1.2) is used for descriptive data containing the overall description of the equipment.

27.3.2.2.4.2 The <***locdesc***> (see 25.3.1.3) is used for descriptive data on the location and description of major components of the equipment in the work package.

27.3.2.2.4.3 The <***eqpdiff***> (see 25.3.1.4) is used for descriptive data containing the significant differences between models or components.

27.3.2.2.4.4 The <***eqpdata***> (see 25.3.1.5) is used for descriptive data, which contains a listing of the major characteristics, dimensions, capabilities and limitations, and other critical data of the equipment that must be defined for the equipment user.

27.3.2.2.5 The element <***ctrlindproc***> provides information concerning the description and use of the controls and indicators to support the testing and troubleshooting procedures in a technical description work package. The element contains at least one description of controls and indicators <***ctrlinddesc***>, an illustration <***figure***> and may have one or more description of controls and indicator in tabular form <***ctrlindtab***>.

a. DTD fragment for <***ctrlindproc***>:

```
<!ELEMENT ctrlindproc - o (ctrlinddesc+, figure, ctrlindtab*)+)>
<!ATTLIST ctrlindproc
            %refs;
            %secur;>
```

b. Attributes for <***ctrlindproc***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.2.2.5.1 The <***ctrlinddesc***> (see 26.3.1.3) is used for providing a description of the controls and indicators for each equipment, assembly, or control panel. References to an illustration <***figure***> that shows the controls and indicators being described is also included within <***ctrlinddesc***>.

27.3.2.2.5.2 The <***figure***> (see 33.4.3.1) displays the equipment items being described in the control/indicator table <***ctrlindtab***>.

27.3.2.2.5.3 The <***ctrlindtab***> (see 26.3.1.5) describes controls and indicator information in tabular form; table entries may reference an illustration <***figure***> that shows the controls and indicators.

27.3.2.2.6 The element <***thryproc***> contains information from the Theory of Operation to support troubleshooting procedures in a technical description work package techdescwp.

a. DTD fragment for <***thryproc***>:

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```
<!ELEMENT thryproc - o (systhry+)>
<!ATTLIST thryproc
            %refs;
            %secur;>
```

b. Attributes for <***thryproc***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.2.2.6.1 The <***systhry***> (see 25.3.1.7.3) is used to identify a system's theory of operation. Theory of operation explains how the end item and its major systems work and interface in addition to the functional effect of switches, controls, and other devices. Subordinate sections on subsystem theory may be included. A simple system may only have one theory of operation work package whereas a large or complex system may contain system theory, subsystem theory, and component theory (LRU and/or SRU).

27.3.3 The Maintenance Test Flight Troubleshooting Information Chapter ***%mtfts;***. The Maintenance Test Flight Troubleshooting Information Chapter should consist of a maintenance test troubleshooting guide work package (<***mtf-tswp***> see 27.3.3.1) and is used for aviation equipment manuals. The element is the only work package type in an MTF TIM). It contains a symptom reference index to troubleshooting work packages in the maintenance manual for the aircraft.

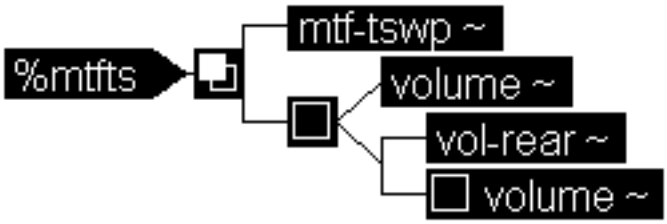

Figure 89 Maintenance Test Flight Troubleshooting Information Chapter DTD Hierarchy

a. DTD fragment for ***%mtfts;***:

```
<!ENTITY % mtfts "(mtf-tswp, %vol.group;)+">
```

27.3.3.1 Maintenance Test Flight Troubleshooting Guide Work Package <***mtf-tswp***>. The maintenance test flight (MTF) troubleshooting guide work package <***mtf-tswp***> is used for aviation equipment manuals. This element is the only work package type in an MTF TIM). It contains a symptom reference index to troubleshooting work packages in the maintenance manual for the aircraft. The element <***mtf-tswp***> shouldconsistofthe elements described below:

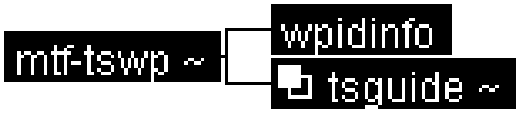

Figure 90 Maintenance Test Flight Troubleshooting Guide Work Package DTD Hierarchy

a. DTD fragment for <***mtf-tswp***>

```
<!ELEMENT mtf-tswp - - (wpidinfo, tsguide+)>
<!ATTLIST mtf-tswp
            level       (depot | operator |
                        gensup | dirsup |
                        unitlvl | inter |
                        avum-avim | tmlvls)  #IMPLIED
            wpno        ID                    #REQUIRED
```

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```
applic       CDATA                  #IMPLIED
%wprsrc-vals;
%tracking;
%wpbodyatt;
%secur;>
```

b. Attributes for <***mtf-tswp***>

(1) **LEVEL** - The maintenance level of the work package.
   (a) "OPERATOR" – Applies to operator maintenance level.
   (b) "UNITLVL" – Applies to unit maintenance level.
   (c) "DIRSUP" – Applies to direct support (DS) maintenance level.
   (d) "GENSUP" – Applies to general support (GS) maintenance level.
   (e) "INTER" – Applies to intermediate (DS/GS) maintenance level.
   (f) "DEPOT" – Applies to depot maintenance level.
   (g) "AVUM-AVIM" – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.
   (h) "TMLVLS" – Applies to all maintenance levels.

(2) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(3) **APPLIC** - Used to qualify the applicability of the work package by equipment configuration.

(4) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(5) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(6) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(7) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.3.1.1 The element <***wpidinfo***> (see33.4.5) defines the identification information required for a work package.

27.3.3.1.2 The element <***tsguide***> is a troubleshooting reference guide that forms a section within the troubleshooting chapter of an aircraft Maintenance Test Flight TM. The required attribute(s) of "GUIDENO" are used for the standard troubleshooting guide number as listed below:

a. DTD fragment for <***tsguide***>:

```
<!ELEMENT tsguide - - (title, (xref, condition, prob-cause+)+)>
<!ATTLIST tsguide
            guideno    (A | B | CE | D |
                        E | F | G | H |
                        I | J | K | L |
                        M | N | O | P )       #REQUIRED
            %refs;
            %secur;>
```

b. Attributes for <***tsguide***>:

(1) **GUIDENO** - The standard troubleshooting guide number as listed in the specification paragraph.
   (a) Troubleshooting Guide A - Starting
   (b) Troubleshooting Guide B - Instruments
   (c) Troubleshooting Guide C - Electrical
   (d) Troubleshooting Guide D - Caution Warning Advisory System
   (e) Troubleshooting Guide E - Powerplants
   (f) Troubleshooting Guide F - Rotors
   (g) Troubleshooting Guide G - Hydraulics and IPAS
   (h) Troubleshooting Guide H - Flight Controls
   (i) Troubleshooting Guide I - Fuels
   (j) Troubleshooting Guide J - Vibrations
   (k) Troubleshooting Guide K - Communications and Navigation

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(l) Troubleshooting Guide L - Stabilator and Controls System
(m) Troubleshooting Guide M - Sighting Systems
(n) Troubleshooting Guide N - Armament
(o) Troubleshooting Guide O - Mission Equipment

(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.3.1.2.1 The element <***title***> is title for the MTF troubleshooting guide. Refer to the common elements section for a complete description (see 33.4.1.5.1).

27.3.3.1.2.2 The element <***xref***> (see 33.4.1.3.6) is reference to the appendix.

27.3.3.1.2.3 The element <***condition***> (see 33.4.6.1.1.1.5) specifies an prerequisite conditions to be meet before continuing.

27.3.3.1.2.4 The element <***prob-cause***> contains a probable cause for a malfunction or not-ready status. The element contains at least one fault item <***faultitem***>.

a. DTD fragment for <***prob-cause***>:

```
<!ELEMENT prob-cause - o (faultitem)+ >
<!ATTLIST prob-cause
            %refs;
            %secur;>
```

b. Attributes for <***prob-cause***>:
(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

27.3.3.1.2.4.1 The element <***faultitem***> is the know fault information. The element contains the parameter entity (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***faultitem***>:

```
<!ELEMENT faultitem - - (%text;)>
<!ATTLIST faultitem
            status  (OK | NOT-OK) #IMPLIED
            %refs;
            %secur;>
```

b. Attributes for <***faultitem***>:
(1) **STATUS** - The known fault status.
(a) "OK" - Specifies whether the fault has been cleared and will generate OK after the fault item.
(b) "NOT-OK" - Specifies whether the fault has been diagnosed as faulty and will generate NOT-OK after the fault item.
(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28 MAINTENANCE INFORMATION.

28.1 Scope. The following paragraphs give a description and use of elements used in the MIL-STD-2361(AC) Maintenance Information Chapter DTD.

28.2 Applicable documents. Refer to paragraph 2.

28.3 The <***mim***> chapter is prepared as a Maintenance Information Chapter <***mim***>. The chapter contains a titlepage <***titlepg***>, and is then subdivided into work packages chosen from one of the following parameter entities: standard maintenance information (***%stdmim;*** see 28.3.1), depot maintenance work requirement information (***%dmwrmim;*** see 28.3.2), support maintenance information (***%supportmim;*** see 28.3.3), maintenance test flight maintenance information (***%mtfmim;*** see 28.3.4), ammunitions maintenance information (***%ammomim;*** see 28.3.5), auxiliary equipment maintenance information (***%auxeqpmim;*** see 28.3.6), preventive maintenance services maintenance information (***%pmsmim;*** see 28.3.7) or preventive maintenance inspections checklist maintenance information (***%pmicklistmim;*** see 28.3.8).

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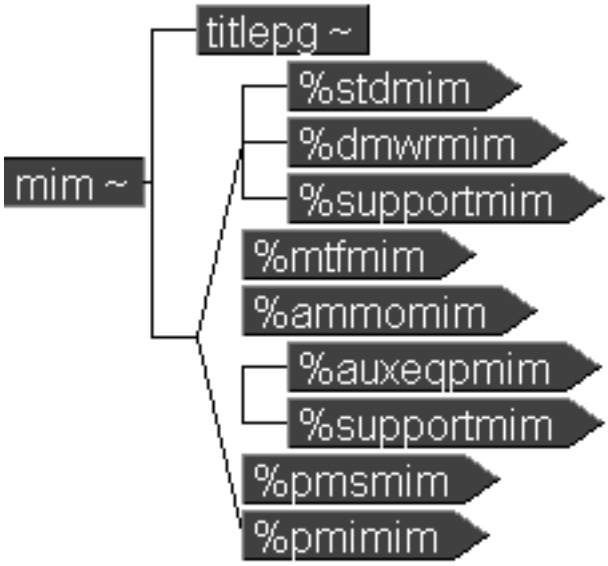

Figure 91 Maintenance Information Chapter DTD Hierarchy

a. DTD fragment for <***mim***>:

```
<!ELEMENT mim - - (titlepg, ((%stdmim; (%dmwrmim;)?, %supportmim;) |
                    %mtfmim; |%ammomim; (%auxeqpmim;, %supportmim;) |
                    %pmsmim; | %pmimim;))>
<!ATTLIST mim
             tmno          CDATA                          #REQUIRED
             tmlabel       CDATA                          #IMPLIED
             eic           CDATA                          #REQUIRED
             imctrlabel    NUMBER                         #REQUIRED
             imlevel       (depot | operator | gensup |
                            dirsup | unitlvl | inter |
                            avum-avim | tmlvls)           #REQUIRED
             syslevel      (enditem | func-system)        "enditem"
             system-title  CDATA                          #IMPLIED
             %imrsrc-vals;
             mimtype       (maint | ammo |  auxeq |
                            pms | pmi | sw)               "maint"
             revno         NUMBER                         #REQUIRED
             chngno        NUMBER                         #REQUIRED
             date          CDATA                          #IMPLIED
             %refs;
             %secur;>
```

b. Attributes for <***mim***>:

(1) **TMNO** - The number of the current TM. The prefix TM must be included in the attribute value. The first time the attribute is referenced for the element it is treated as required, thereafter that it will assume the current attribute value.

(2) **TMLABEL** - The number of the TM of which this information chapter (IM) was a part when originally created; this number remains the same throughout all versions of the IM.

(3) **EIC** - The end-item code of the equipment covered in the TM of which this IM is a part. The first time the attribute is referenced for the element it is treated as required, thereafter that it will assume the current attribute value.

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(4) **IMCTRLABEL** - A label giving the sequence number of the information chapter within this version of the TM; allows an individual IM to be composed with full numbering of pages and components.
(5) **IMLEVEL** - The maintenance level of the information chapter.
  (a) “OPERATOR” – Applies to operator maintenance level.
  (b) “UNITLVL” – Applies to unit maintenance level.
  (c) “DIRSUP” – Applies to direct support (DS) maintenance level.
  (d) “GENSUP” – Applies to general support (GS) maintenance level.
  (e) “INTER” – Applies to intermediate (DS/GS) maintenance level.
  (f) “DEPOT” – Applies to depot maintenance level.
  (g) “AVUM-AVIM” – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.
  (h) “TMLVLS” – Applies to all maintenance levels.
(6) **SYSLEVEL** - Specifies whether the chapter constituents cover the full end item ("ENDITEM") or a particular functional system ("FUNC-SYSTEM") within the end item. When the value is not entered for the attribute "SYSLEVEL", the default value is "ENDITEM".
(7) **SYSTEM-TITLE** - If the attribute value of "SYSLEVEL" is "FUNC-SYSTEM," this attribute is used to identify the functional system which the chapter/work package covers.
(8) **%IMRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.3).
(9) **MIMTYPE** - Specifies the type of maintenance information module in order that the FOSI will be able to place the correct title on the titlepage of the information module for maintenance module, ammo maintenance, or auxeqp maintenance, the default is maint
(10) **REVNO** - The overall revision number for the information chapter.
(11) **CHNGNO** - The overall change number for the information module.
(12) **DATE** - The date of the current version of the element.
(13) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(14) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1 Standard Maintenance Information Chapter ***%stdmim;***. The Standard Maintenance Information Chapter may consist of optional service upon receipt work packages **<*surwp*>**, optional personal equipment work package(s) **<*perseqpwp*>**, and followed by either a required preventive maintenance checks and services introduction work package with a required preventive maintenance checks and services work package **<*pmcswp*>** and followed by one or more general maintenance work package(s) **<*gen.maintwp*>** and/or one or more maintenance work packages(s) or followed by one or more phased maintenance inspection work package(s) **<*pmiwp*>**, and/or one or more lubrication work package(s) **<*lubewp*>**, and/or one or more maintenance work package(s) **<*maintwp*>** and/or one or more general maintenance work package(s) **<*gen.maintwp*>**.

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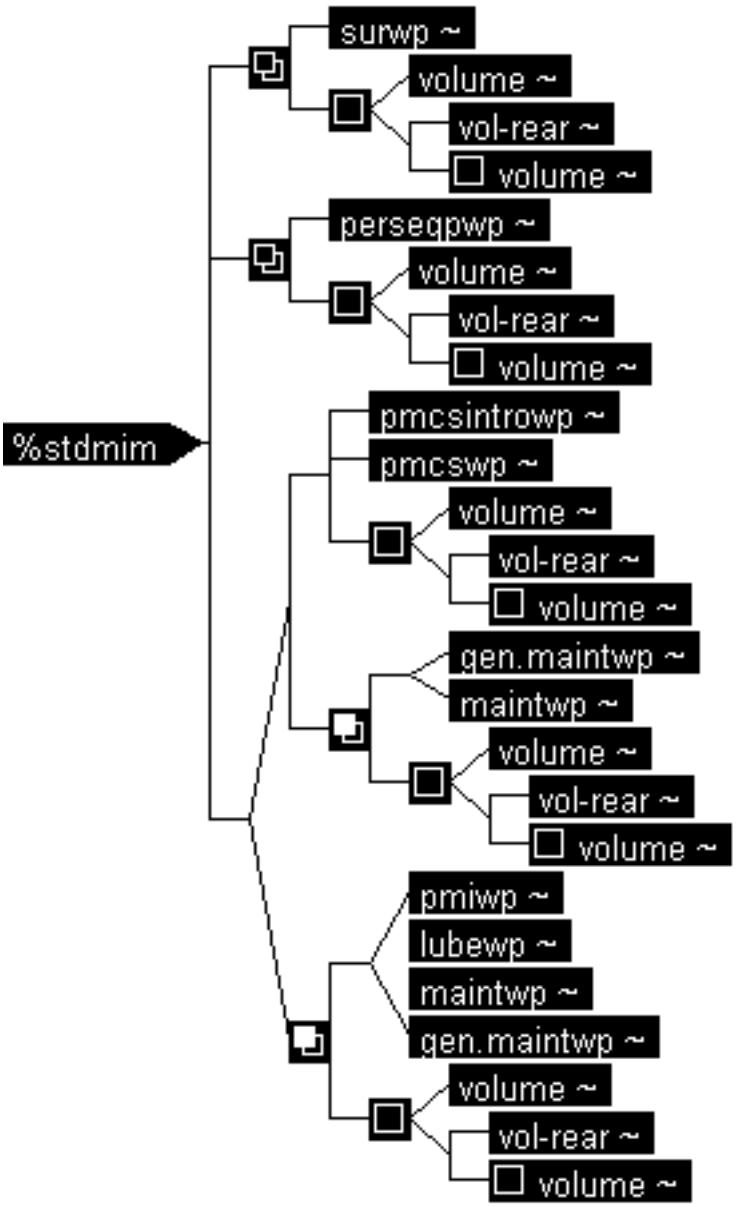

Figure 92 Standard Maintenance Information Chapter DTD Hierarchy

a. DTD fragment for ***%stdmim;***:

```
<!ENTITY % stdmim "((surwp, %vol.group;)*, (perseqpwp, %vol.group;)*,
                    (((pmcsintrowp, pmcswp,%vol.group;), ((gen.maintwp |
                    maintwp), %vol.group;)+) |((pmiwp |lubewp | maintwp |
                    gen.maintwp),%vol.group;)+))">
```

28.3.1.1 Service Upon Receipt Procedures Work Package <***surwp***>. The service upon receipt work package is subdivided into the following elements and content requirements:

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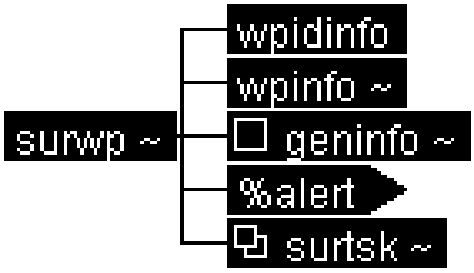

Figure 93 Service Upon Receipt Work Package DTD Hierarchy

a. DTD fragment for <***surwp***>:

```
<!ELEMENT surwp - - (wpidinfo, wpinfo, geninfo?, %alert;, surtsk*)>
<!ATTLIST surwp
            level         (depot | operator
                          |gensup | dirsup |
                          unitlvl | inter)     #REQUIRED
            wpno          ID                   #REQUIRED
            %tracking;
            %wprsrc-vals;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***surwp***>:

(1) **LEVEL** - The maintenance level of the work package.
   (a) “OPERATOR” – Applies to operator maintenance level.
   (b) “UNITLVL” – Applies to unit maintenance level.
   (c) “DIRSUP” – Applies to direct support (DS) maintenance level.
   (d) “GENSUP” – Applies to general support (GS) maintenance level.
   (e) “INTER” – Applies to intermediate (DS/GS) maintenance level.
   (f) “DEPOT” – Applies to depot maintenance level.
   (g) “AVUM-AVIM” – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.
   (h) “TMLVLS” – Applies to all maintenance levels.

(2) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(4) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(5) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(6) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.1.1 The element <***wpidinfo***> (see33.4.5) defines the identification information required for a work package.

28.3.1.1.2 The element <***wpinfo***> (see 33.4.6.1) provides the maintenance technician with general information, equipment, parts, material, and authorized personnel required to perform and complete all the operating tasks included in the work package.

28.3.1.1.3 The element <***geninfo***> (see 33.4.4.11) is introductory information for the work package.

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28.3.1.1.4 The parameter entity ***%alert;*** (see 33.3.3) is the necessary alert notices prior to service upon receipt tasks.

28.3.1.1.5 The element <***surtsk***> is used for all tasks required in the service upon receipt work package and contained within this element. The element <***surtsk***> contains a parameter entity ***%surtsk;*** which contains the following tasks: <***siting***>, <***shltr***>, <***surmat***>, <***install***>, <***preserv***>, <***preckadj***>, <***precal***>, <***calign***>, <***ammo.markings***>, <***ammo.defect***>, and/or <***arm***>.

a. DTD fragment for <***surtsk***> and ***%surtsk;***:

```
<!ELEMENT surtsk - - (%surtsk;)>
<!ATTLIST surtsk
            %refs;
            %secur;>
<!ENTITY % surtsk "(siting | shltr | surmat | install | preserv |
                    prechkadj | precal | calign | ammo.markings |
                    ammo.defect | arm)">
```

b. Attributes for <***surtsk***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.1.5.1 The element <***siting***> is a service upon receipt task for site requirements that must be considered prior to siting. Overall site location, power sources, terrain requirements, and other similar considerations should be included within this element. This element includes a required title (<***title***> see 33.4.1.5.1) followed by the parameter entity paragraph type (***%p;*** see 33.3.2) and/or procedural text (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***siting***>:

```
<!ELEMENT siting - - (title, ((%p;) | proc)+)>
<!ATTLIST siting
            %hcp.esd
            %refs;
            %secur;>
```

b. Attributes for <***siting***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).

(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.1.5.2 The element <***shltr***> is a service upon receipt task that specifies the shelter requirements for equipment normally housed in a permanent or semi-permanent shelter. Requirements for dimensions, floor loading, layout, power or environmental conditions and other similar considerations should be included within this element. This element does not apply to trucks, vans or transportable shelters. This element includes optional title <***title***> followed by the parameter entity paragraph type (***%p;*** see 33.3.2) and/or procedural text (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***shltr***>:

```
<!ELEMENT shltr - - (title?, ((%p;) | proc)+)>
<!ATTLIST shltr
            %hcp.esd
            %refs;
            %secur;>
```

b. Attributes for <***shltr***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).

(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.1.5.3 The element <***surmat***> is a service upon receipt of material task which contains information on unpacking <***unpack***>, checking <***chkeqp***>, and processing <***processeqp***> equipment preceded by an optional title <***title***>.

a. DTD fragment for <***surmat***>:

```
<!ELEMENT surmat - - (title?, (unpack | chkeqp | processeqp)+)>
```

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```
<!ATTLIST surmat
            %hcp.esd
            %refs;
            %secur;>
```

b. Attributes for <***surmat***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).

(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.1.5.3.1 The element <***unpack***> is service upon receipt task containing all unpacking information. It contains paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4)or one or more procedure (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***unpack***>:

```
<!ELEMENT unpack - o ((%titldtext;) | proc+)>
<!ATTLIST unpack
            %hcp.esd
            %bodyatt;
            %secur;>
```

b. Attributes for <***unpack***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.1.5.3.2 The element <***chkeqp***> is a service upon receipt of material task that contains all inspections required after equipment is unpacked. The element contains the parameter entity paragraph type (***%p;*** see 33.3.2), and/or procedural text (<***proc***> see 33.4.1.8.1), and may be followed by either a criteria inspection table <***crit.insp.tab***> and/or a peculiar inspection table <***pecul.insp.tab***>.

a. DTD fragment for <***chkeqp***>:

```
<!ELEMENT chkeqp - o (%p; | proc | crit.insp.tab | pecul.insp.tab)+>
<!ATTLIST chkeqp
            %hcp.esd
            %bodyatt;
            %secur;>
```

b. Attributes for <***chkeqp***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.1.5.3.2.1 The element <***crit.insp.tab***> contains the content elements required for the criteria inspection table. It contains a required title <***title***>, followed by the elements which make up the table itself. The table may be broken up into sections which have a heading <***subtitle***>. The component assemblies <***compnt-assem***> are followed by at least one grouping of acceptance <***accept***>, repairable <***repairable***>, and non-repairable <***nonrepairable***>.

a. DTD fragment for <***crit.insp.tab***>:

```
<!ELEMENT crit.insp.tab - - (title, (subtitle?, (compnt-assem, (accept,
                              repairable, nonrepairable)+)+)+)>
<!ATTLIST crit.insp.tab
          %bodyatt;
          %secur;>
```

b. Attributes for <***crit.insp.tab***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.1.5.3.2.1.1 The element title (<***title***> see 33.4.1.5.1) defines the table title.

28.3.1.1.5.3.2.1.2 The element subtitle (<***subtitle***> see 33.4.1.5.1) defines a subtitle used to create sections within the table.

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28.3.1.1.5.3.2.1.3 The element <***compnt-assem***> is used to enter the component assembly (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***compnt-assem***>, <***location***>, and <***seqno***>:

```
<!ELEMENT (seqno | location | compnt-assem) - o (%text;)>
```

28.3.1.1.5.3.2.1.4 The acceptations element <***accept***> is used to enter the acceptation criteria(s) to the component/assembly (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***accept***>, <***repairable***>, and <***nonrepairable***>:

```
<!ELEMENT (accept
                    |repairable
                    | nonrepairable) - o (%text;)>
```

28.3.1.1.5.3.2.1.5 The repairable element <***repairable***> is used to enter the criteria when the component/assembly is repairable (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***repairable***>: (see 28.3.1.1.5.3.2.1.4a.)

28.3.1.1.5.3.2.1.6 The non-repairable element <***nonrepairable***> is used to enter the criteria when the component/assembly is non-repairable (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***nonrepairable***>: (see 28.3.1.1.5.3.2.1.4a.).

28.3.1.1.5.3.2.2 The element <***pecul.insp.tab***> contains the content elements required for the peculiar inspection table. It contains a required title <***title***>, followed by the elements which make up the table itself. The table contains one or more locations <***location***> each of which is followed by an item <***item***>, each location and item must be followed by at least one grouping of a primary level step <***step1***> followed by remarks <***remarks***>.

a. DTD fragment for <***pecul.insp.tab***>:

```
<!ELEMENT pecul.insp.tab - - (title, (location, item, (step1, remarks)+)+)>
<!ATTLIST pecul.insp.tab
          %bodyatt;
          %secur;>
```

b. Attributes for <***pecul.insp.tab***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.1.5.3.3.1.1 The element title (<***title***> see 33.4.1.5.1) defines the table title.

28.3.1.1.5.3.3.1.2 The location element <***location***> is used to identify the location of the item (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***location***>: (see 28.3.1.1.5.3.2.1.3a.)

28.3.1.1.5.3.3.1.3 The item element <***item***> (see 33.4.1.2.1.1) is used to identify the item in the peculiar inspection table.

28.3.1.1.5.3.3.1.4 A primary level step <***step1***> (see 33.4.1.8.2) may be entered within the peculiar inspection table to enter the steps of the inspection.

28.3.1.1.5.3.3.1.5 The remarks element <***remarks***> may be used to enter any additional remarks (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***remarks***>:

```
<!ELEMENT remarks - o (%text;)>
<!ATTLIST remarks
          %refs;
          %secur;>
```

b. Attributes for <***remarks***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

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28.3.1.1.5.3.5 The element <***processeqp***> is a service upon receipt of materials task containing all procedures and inspections for cleaning or processing unpacked equipment. The element contains the parameter entity paragraph type (***%p;*** see 33.3.2) and/or procedural text (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***processeqp***>:

```
<!ELEMENT processeqp - o ((%p;) | proc)+>
<!ATTLIST processeqp
          %hcp.esd
          %bodyatt;
          %secur;>
```

b. Attributes for <***processeqp***>:

(1) **%HCP.ESD;**- Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.1.5.4 The element <***install***> is a service upon receipt task containing necessary instructions for proper installation of equipment. The use of tools, necessary interconnections, and procedures to lubricate, calibrate and adjust equipment are included within this task. It may have a <***title***> followed by the parameter entity paragraph type (***%p;*** see 33.3.2) and/or procedural text (<***proc***> see 33.4.1.8.1) or the text may be entered in tabular format (<***table***> see 33.4.2.1).

a. DTD fragment for <***install***>:

```
<!ELEMENT install - - (title?, ((%p;) | proc)+ | table)>
<!ATTLIST install
            %hcp.esd
            %bodyatt;
            %secur;>
```

b. Attributes for <***install***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.1.5.5 The element <***preserv***> is a service upon receipt task that contains instructions for lubrication of newly installed equipment. It contains paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4) or procedural text (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***preserv***>:

```
<!ELEMENT preserv - - ((%titldtext;) | proc+)>
<!ATTLIST preserv
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***preserv***>:

(1) **%HCP.ESD;**- Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.1.5.6 The element <***prechkadj***> is a service upon receipt task for preliminary checks and adjustments of newly installed equipment. Data on location of parts, controls, and check-points are contained within <***prechkadj***>. It may have a <***title***> followed by the parameter entity paragraph type (***%p;*** see 33.3.2) and/or procedural text (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***prechkadj***>:

```
<!ELEMENT prechkadj - - (title?, ((%p;) | proc)+)>
<!ATTLIST prechkadj
            %hcp.esd
            %bodyatt;
            %secur;>
```

b. Attributes for <***prechkadj***>:

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(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.1.5.7 The element <***precal***> is a service upon receipt task for preliminary calibration of newly installed equipment. It may have a <***title***> followed by the parameter entity paragraph type (***%p;*** see 33.3.2) and/or procedural text (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***precal***>:

```
<!ELEMENT precal - - (title?, (%p; | proc)+)>
<!ATTLIST precal
            %hcp.esd
            %bodyatt;
            %secur;>
```

b. Attributes for <***precal***>:
(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.1.5.8 The element <***calign***> is a service upon receipt task containing instructions for circuit alignment including external connections <***extconn***>, switch settings, patch panel connections and internal control settings <***setconn***> and alignment procedures <***alignproc***> and may be preceded by a <***title***>.

a. DTD fragment for <***calign***>:

```
<!ELEMENT calign - - (title?, (extconn?, setconn?, alignproc?)>
<!ATTLIST calign
            %hcp.esd
            %bodyatt;
            %secur;>
```

b. Attributes for <***calign***>:
(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.1.5.8.1 The element <***extconn***> contains instructions for making all external connections within the circuit alignment procedures. The element contains the parameter entity paragraph type (***%p;*** see 33.3.2) and/or procedural text (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***extconn***>:

```
<!ELEMENT extconn - o (%p; | proc)+>
<!ATTLIST extconn
           %hcp.esd
           %bodyatt;
           %secur;>
```

b. Attributes for <***extconn***>:
(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.1.5.8.2 The element <***setconn***> contains instructions for all switch settings, patch panel connections, and internal control settings for each installation and mode of operation within the circuit alignment procedures. The element contains the parameter entity paragraph type (***%p;*** see 33.3.2) and/or procedural text (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***setconn***>:

```
<!ELEMENT setconn - o (%p; | proc)+>
<!ATTLIST setconn
            %hcp.esd
            %bodyatt;
            %secur;>
```

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b. Attributes for <***setconn***>:
   (1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
   (2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
   (3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.1.5.8.3 The element <***alignproc***> contains all of the alignment procedures for circuit alignment. The element contains the parameter entity paragraph type (***%p;*** see 33.3.2) and/or procedural text (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***alignproc***>:

```
<!ELEMENT alignproc - o (%p; | proc)+>
<!ATTLIST alignproc
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***alignproc***>:
   (1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
   (2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
   (3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.2 Personal Equipment Work Package <***perseqpwp***>. The element <***perseqpwp***> identifies an equipment/user fitting instructions work package. The personal equipment work package is subdivided into the following elements and content requirements:

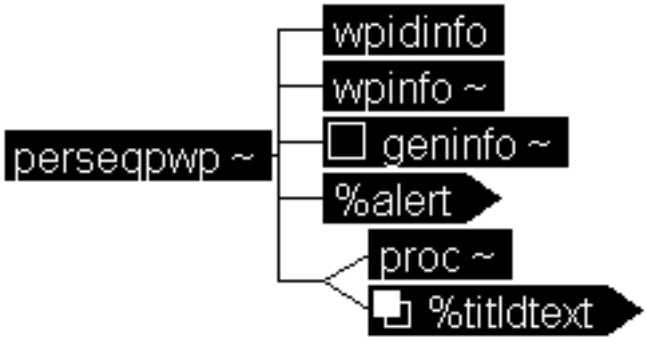

Figure 94 Personal Equipment Work Package DTD Hierarchy

a. DTD fragment for <***perseqpwp***>:

```
<!ELEMENT perseqpwp - - (wpidinfo, wpinfo, geninfo?, %alert;,
                         (proc | (%titldtext;)+))>
<!ATTLIST perseqpwp
            level          (depot | operator |
                            gensup | dirsup |
                            unitlvl | inter |
                            avum-avim | tmlvls)   #REQUIRED
            wpno           ID                     #REQUIRED
            %tracking;
            %wprsrc-vals;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***perseqpwp***>:
   (1) **LEVEL** - The maintenance level of the work package.
      (a) “OPERATOR” – Applies to operator maintenance level.

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(b) “UNITLVL” – Applies to unit maintenance level.
(c) “DIRSUP” – Applies to direct support (DS) maintenance level.
(d) “GENSUP” – Applies to general support (GS) maintenance level.
(e) “INTER” – Applies to intermediate (DS/GS) maintenance level.
(f) “DEPOT” – Applies to depot maintenance level.
(g) “AVUM-AVIM” – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.
(h) “TMLVLS” – Applies to all maintenance levels.

(2) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.
(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).
(4) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).
(5) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).
(6) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.2.1 The element <***wpidinfo***> (see 33.4.5) defines the identification information required for a work package.

28.3.1.2.2 The element <***wpinfo***> (see 33.4.6.1) provides the maintenance technician with general information, equipment, parts, material, and authorized personnel required to perform and complete all the operating tasks included in the work package.

28.3.1.2.3 The element <***geninfo***> (see 33.4.4.11) is introductory information for the work package.

28.3.1.2.4 The parameter entity ***%alert;*** (see 33.3.3) is the necessary alert notices.

28.3.1.2.5 The parameter entity ***%titldtext;*** (see 33.3.4) contains paragraphs of text that may be grouped into sections or subsections.

28.3.1.2.6 The element <***proc***> (see 33.4.1.8.1) contains procedural text to instruct personnel with installation of equipment.

28.3.1.3 Preventive Maintenance Checks and Services Introduction Work Package <***pmcsintrowp***>. The element <***pmcsintrowp***> is used to explain the purpose and use of the PMCS data contained in a preventive maintenance checks and services introduction work package. The preventive maintenance checks and services introduction work package is subdivided into the following elements and content requirements:

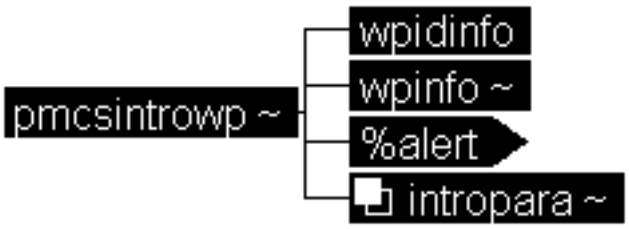

Figure 95 Preventive Maintenance Checks and Services Introduction Work Package DTD Hierarchy

a. DTD fragment for <***pmcsintrowp***>:

```
<!ELEMENT pmcsintrowp - - (wpidinfo, wpinfo, %alert;, intropara+)>
<!ATTLIST pmcsintrowp
            level         (depot | operator |
                           gensup | dirsup |
                           unitlvl | inter |
                           avum-avim | tmlvls)   #REQUIRED
```

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```
wpno       ID                              #REQUIRED
%tracking;
%wprsrc-vals;
%wpbodyatt;
%secur;>
```

b. Attributes for <***pmcsintrowp***>:

(1) **LEVEL** - The maintenance level of the work package.
   (a) "OPERATOR" – Applies to operator maintenance level.
   (b) "UNITLVL" – Applies to unit maintenance level.
   (c) "DIRSUP" – Applies to direct support (DS) maintenance level.
   (d) "GENSUP" – Applies to general support (GS) maintenance level.
   (e) "INTER" – Applies to intermediate (DS/GS) maintenance level.
   (f) "DEPOT" – Applies to depot maintenance level.
   (g) "AVUM-AVIM" – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.
   (h) "TMLVLS" – Applies to all maintenance levels.

(2) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(4) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(5) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(6) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.3.1 The element <***wpidinfo***> (see 33.4.5) defines the identification information required for a work package.

28.3.1.3.2 The element <***wpinfo***> (see 33.4.6.1) provides the maintenance technician with general information, equipment, parts, material, and authorized personnel required to perform and complete all the operating tasks included in the work package.

28.3.1.3.3 The parameter entity ***%alert;*** (see 33.3.3) is the necessary alert notices.

28.3.1.3.4 The element <***intropara***> contains the explanation material for the PMCS table. It contains at least one section of text containing a required title (<***title***> see 33.4.1.5.1), an optional subtitle (<***subtitle***> see 33.4.1.5.2) followed by the parameter entity paragraph type (***%p;*** see 33.3.2) and/or primary level steps (<***step1***> see 33.4.1.8.2).

a. DTD fragment for <***intropara***>:

```
<!ELEMENT intropara - o (title, (subtitle?, (%p; | step1+))+)+>
<!ATTLIST intropara
          %refs;
          %secur;>
```

b. Attributes for <***intropara***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.4 Preventive Maintenance Checks and Services Work Package <***pmcswp***>. The element <***pmcswp***> is used for all of the data required to perform Preventive Maintenance Checks and Services (PMCS) on the equipment contained in the PMCS work package. The element <***pmcswp***> is subdivided into the following elements and content requirements:

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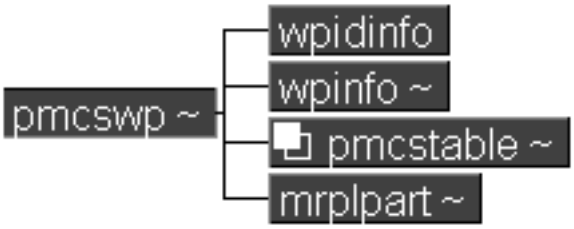

Figure 96 Preventive Maintenance Checks and Services Work Package DTD Hierarchy

a. DTD fragment for <***pmcswp***>:

```
<!ELEMENT pmcswp - - (wpidinfo, wpinfo, pmcstable+, mrplpart)>
<!ATTLIST pmcswp
            level       (depot | operator |
                         gensup | dirsup |
                         unitlvl | inter |
                         avum-avim | tmlvls)   #REQUIRED
            wpno          ID                   #REQUIRED
            %tracking;
            %wprsrc-vals;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***pmcswp***>:

(1) **LEVEL** - The maintenance level of the work package.
   (a) "OPERATOR" – Applies to operator maintenance level.
   (b) "UNITLVL" – Applies to unit maintenance level.
   (c) "DIRSUP" – Applies to direct support (DS) maintenance level.
   (d) "GENSUP" – Applies to general support (GS) maintenance level.
   (e) "INTER" – Applies to intermediate (DS/GS) maintenance level.
   (f) "DEPOT" – Applies to depot maintenance level.
   (g) "AVUM-AVIM" – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.
   (h) "TMLVLS" – Applies to all maintenance levels.

(2) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(4) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(5) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(6) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.4.1 The element <***wpidinfo***> (see33.4.5) defines the identification information required for a work package.

28.3.1.4.2 The element <***wpinfo***> (see 33.4.6.1) provides the maintenance technician with general information, equipment, parts, material, and authorized personnel required to perform and complete all the operating tasks included in the work package.

28.3.1.4.3 The element <***pmcstable***> identifies the detailed requirements of the PMCS table. The title of the table must be entered after the title (<***title***> see 33.4.1.5.1) element. The <***pmcstable***> contains at least one <***pmcs-entry***>.

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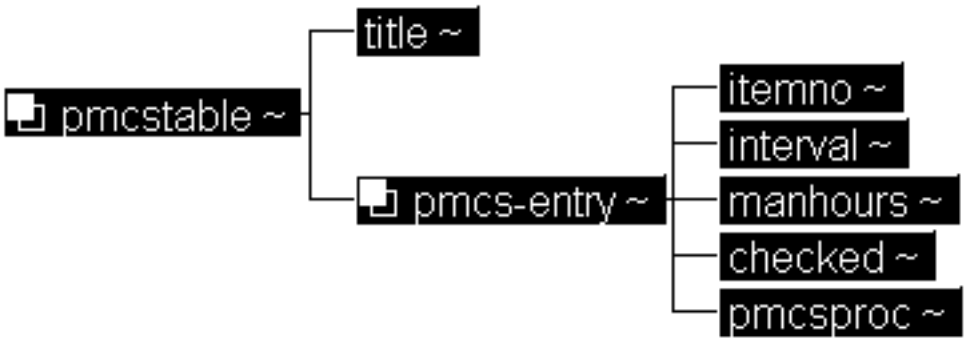

Figure 97 PMCS Table DTD Hierarchy

a. DTD fragment for <***pmcstable***>:

```
<!ELEMENT pmcstable - - (title, pmcs-entry+)>
<!ATTLIST pmcstable
          crew-maintained  %yesorno;        #IMPLIED
          tabstyle         NMTOKEN          #IMPLIED
          tocentry         %yesorno;        "1"
          frame            (top | bottom |
                            topbot | all |
                            sides | none)   "all"
          colsep           %yesorno;  "1"
          rowsep           %yesorno;  "0"
          orient           (port | land)    "port"
          %refs;
          %secur;>
```

b. Attributes for <***pmcstable***>:

(1) **CREW-MAINTAINED** - Specifies whether or not the equipment is maintained by an entire crew (1 or any other number) or a single individual (0). If it is maintained by a crew, it indicates that there will be separation of steps according to crew members within the table.

(2) **TABSTYLE** - A unique table style defined in the FOSI. Currently there is only one PMCS table style defined and this attribute does not need to be used.

(3) **TOCENTRY** - If other than zeros, the table title should be included in the list of tables. The default is for the table title to be placed in the table of contents.

(4) **FRAME** - Describes position of outer rulings. The default is "ALL".
   (a) "TOP" - Ruling across top of table only.
   (b) "BOTTOM" - Ruling across bottom of table only.
   (c) "TOPBOT" - Ruling across top and bottom of table only.
   (d) "ALL" - Ruling across top, bottom, and sides of table.
   (e) "SIDES" - Ruling across sides of table only.
   (f) "NONE" - No rulings.

(5) **COLSEP** - Determines column separation. If other than zeros, display the internal column rulings to the right of each item; if only zeros, do not display it. Ignored for the last column, where the frame setting applies. The default is for column separation to occur.

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(6) **ROWSEP** - Determines row separation. If other than zeros, display the internal vertical row ruling below each item. If only zeros, do not display it. Ignored for the last row of the table, where the frame value applies. The default is for no separation between rows.

(7) **ORIENT** - The orientation of the table in relationship to the page. The default is for the table to appear in portrait form.

(a) "PORT" - Portrait.

(b) "LAND" - Landscape.

(8) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(9) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

c. SGML Document Instance Fragment for Preventive Maintenance Checks and Services (PMCS) Table <***pmcstable***>:

```
<pmcstable>
<title>Preventive MaintenanceChecks and Services for Radar
Set, AN/PPS-5XX </title>
<pmcs-entry crewmember="None">
<itemno>1</itemno>
<interval>Before</interval>
<manhours>.2</manhours>
<checked>Radar Set, AN/PPS-5XX/<checked>
<pmcsproc>
<pmcsstep1>
<para> Install radar set (chap 2).</para>
<eqpnotavail></eqpnotavail>
</pmcsstep1>
<pmcsstep1>
<para>Set controls as indicated in WP0005, page 9.</para>
<eqpnotavail></eqpnotavail>
</pmcsstep1>
</pmcsproc>
</pmcs-entry>
<pmcs-entry>
<itemno>2</itemno>
<interval>Before</interval>
<manhours>.02</manhours>
<checked>Input power</checked>
<pmcsproc>
<pmcsstep1>
<para>Connect remote cable toreceiver-transmitter Remote
Cable connector.</para>
<eqpnotavail></eqpnotavail>
</pmcsstep1>
<pmcsstep1>
<para>Set PWR switch to<emphasis emph="bold">ON</emphasis>and Scan
Method to<emphasis emph="bold"> MANUAL.</emphasis></para>
<eqpnotavail></eqpnotavail>
</pmcsstep1>
</pmcsproc>
</pmcs-entry>
<pmcs-entry>
<itemno>3</itemno>
<interval>Before</interval>
<manhours>.02</manhours>
<checked>Illumination of receiver-transmitter indicators</checked>
<pmcsproc><pmcspara>
```

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<para>Check to see that<emphasis emph="bold">BUBBLE LEVEL</emphasis>indicator
is illuminated when<emphasis emph="bold">Antenna Control</emphasis>switch
on the R-Tis held up<emphasis emph="bold">(ON)</emphasis>.</para>
<eqpnotavail><emphasis emph="bold">LEVEL</emphasis>indicatoris not illuminated
when the<emphasis emph="bold">AntennaControl</emphasis>switch is switched
to<emphasisemph="bold">BACKLIGHT</emphasis>.</eqpnotavail>
</pmcspara>
</pmcsproc>
</pmcs-entry>
<pmcs-entry>
<itemno>4</itemno>
<interval>Before</interval>
<manhours>.1</manhours>
<checked>LEVEL indicator</checked>
<pmcsproc>
<pmcspara>
<para>Check to see that bubble is in centerof<emphasis
emph="bold">LEVEL</emphasis>indicator after adjusting leveling
wheels as necessary.</para>
<eqpnotavail>Leveling bubble will not center in the indicator.</eqpnotavail>
</pmcspara>
</pmcsproc>
</pmcs-entry>
<pmcs-entry>
<itemno>5</itemno>
<interval>Daily</interval>
<manhours>.1</manhours>
<checked>Antenna positioning (Searchlighting)</checked>
<pmcsproc>
<pmcspara>
<para>Push and hold antenna control switch at<emphasis
emph="bold">FWD</emphasis> for 6 seconds, then
at<emphasisemph="bold">REV</emphasis>for about 6 seconds.</para>
<eqpnotavail>Antenna does not rotatefirst in one direction then
in the other direction at 272 mils per second(about 6 sec
per 90 deg of rotation.</eqpnotavail>
</pmcspara>
</pmcsproc>
</pmcs-entry>
<pmcs-entry>
<itemno>6<ftnref xrefid="ftref01"><ftnote id="ftref01">
<para>For setting up a test targetat a know range/azimuth,
refer to procedures in wp0006.</para>
</ftnote>
</itemno>
<interval>Daily</interval>
<manhours>.1</manhours>
<checked>Automatic scanning sector</checked>
<pmcsproc>
<pmcspara>
<para>Run BIT "ANT JOG"</para>
<eqpnotavail>Antenna does not scan, orthe results from BIT
indicate a failure.</eqpnotavail>
</pmcspara>
</pmcsproc>
</pmcs-entry>

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```
</pmcstable><pmcstable>
<title>Preventive MaintenanceChecks and Services for Radar
Set, AN/PPS-5XX</title>
<pmcs-entry crewmember="None">
<itemno>1</itemno>
<interval>Before</interval>
<manhours>.2</manhours>
<checked>Radar Set, AN/PPS-5XX/</checked>
<pmcsproc>
<pmcsstep1>
<para>Install radar set (chap 2).</para>
<eqpnotavail></eqpnotavail>
</pmcsstep1>
<pmcsstep1>
<para>Set controls as indicated in WP0005, page 9.</para>
<eqpnotavail></eqpnotavail>
</pmcsstep1>
</pmcsproc>
</pmcs-entry>
<pmcs-entry>
<itemno>2</itemno>
<interval>Before</interval>
<manhours>.02</manhours>
<checked>Input power</checked>
<pmcsproc>
<pmcsstep1>
<para>Connect remote cable toreceiver-transmitter Remote
Cable connector.</para>
<eqpnotavail></eqpnotavail>
</pmcsstep1>
<pmcsstep1>
<para>Set PWR switch to<emphasis emph="bold">ON</emphasis>and Scan
Method to<emphasis emph="bold">MANUAL.</emphasis></para>
<eqpnotavail></eqpnotavail>
</pmcsstep1>
</pmcsproc>
</pmcs-entry>
<pmcs-entry>
<itemno>3</itemno>
<interval>Before</interval>
<manhours>.02</manhours>
<checked>Illumination of receiver-transmitter indicators</checked>
<pmcsproc><pmcspara>
<para>Check to see that<emphasis emph="bold">BUBBLE LEVEL</emphasis>indicator
is illuminated when<emphasis emph="bold">Antenna Control</emphasis>switch
on the R-Tis held up<emphasis emph="bold">(ON)</emphasis>.</para>
<eqpnotavail><emphasis emph="bold">LEVEL</emphasis>indicatoris not illuminated
when the<emphasis emph="bold">AntennaControl</emphasis>switch is switched
to<emphasisemph="bold"> BACKLIGHT</emphasis>.</eqpnotavail>
</pmcspara>
</pmcsproc>
</pmcs-entry>
<pmcs-entry>
<itemno>4</itemno>
<interval>Before</interval>
<manhours>.1</manhours>
```

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```
<checked>LEVEL indicator</checked>
<pmcsproc>
<pmcspara>
<para>Check to see that bubble is in center of<emphasis
emph="bold">LEVEL</emphasis>indicator after adjusting leveling
wheels as necessary.</para>
<eqpnotavail>Leveling bubble will not center in the indicator.</eqpnotavail>
</pmcspara>
</pmcsproc>
</pmcs-entry>
<pmcs-entry>
<itemno>5</itemno>
<interval>Daily</interval>
<manhours>.1</manhours>
<checked>Antenna positioning (Searchlighting)</checked>
<pmcsproc>
<pmcspara>
<para>Push and hold antenna control switch at<emphasis
emph="bold">FWD</emphasis>for 6 seconds, then at<emphasis
emph="bold">REV</emphasis>for about 6 seconds.</para>
<eqpnotavail>Antenna does not rotate first in one direction then in
the other direction at 272 mils per second(about 6 sec per 90 deg
of rotation.</eqpnotavail></pmcspara></pmcsproc></pmcs-entry>
<pmcs-entry>
<itemno>6<ftnref xrefid="ftref01"><ftnote id="ftref01">
<para>For setting up a test target at a know range/azimuth,
refer to procedures in wp0006.</para>
</ftnote>
</itemno>
<interval>Daily</interval>
<manhours>.1</manhours>
<checked>Automatic scanning sector</checked>
<pmcsproc>
<pmcspara>
<para>Run BIT "ANT JOG"</para>
<eqpnotavail>Antenna does not scan, or the results from BIT indicate
a failure.</eqpnotavail></pmcspara></pmcsproc></pmcs-entry></pmcstable>
```

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d. Sample FOSI Output Preventive Maintenance Checks and Services (PMCS) Table <***pmcstable***>:

Table 1. Preventive Maintenance Checks and Services for Radar Set, AN/PPS-5XX

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURES	EQUIPMENT NOT READY AVAILABLE IF:
1	Before	.2	Radar Set, An/ PPS-5XX	1. Install radar set (chap 2). 2. Set controls as indicated in WP0005, page 9.	
2	Before	.02	Input power	1. Connect remote cable to receiver-transmitter Remote Cable connector. 2. Set PWR switch to **ON** and Scan Method to **MANUAL.**	
3	Before	.02	Illumination of receiver-transmitter indicators	Check to see that **BUBBLE LEVEL** indicator is illuminated when **Antenna Control** switch on the R-T is held up **(ON)**.	**LEVEL** indicator is not illuminated when the **Antenna Control** switch is switched to **BACKLIGHT.**
4	Before	.1	LEVEL indicator	Check to see that bubble is in center of **LEVEL** indicator after adjusting leveling wheels as necessary.	Leveling bubble will not center in the indicator.
5	Daily	.1	Antenna positioning (Searchlighting)	Push and hold antenna control switch at **FWD** for 6 seconds, then at **REV** for about 6 seconds.	Antenna does not rotate first in one direction then in the other direction at 272 mils per second (about 6 sec per 90 deg of rotation.
6*	Daily	.1	Automatic scanning sector	Run BIT "ANT JOG"	Antenna does not scan, or the results from BIT indicate a failure.

* For setting up a test target at a known range/azimuth, refer to procedures in WP0006

Figure 98 Sample FOSI Output for Preventive Maintenance Checks and Services (PMCS)Table<pmcstable>

28.3.1.4.3.1 The <***pmcs-entry***> identifies the detailed requirements of the contents of each column in a PMCS table. Equivalent to entering "row" in a structural table.

a. DTD fragment for <***pmcs-entry***>:

```
<!ELEMENT pmcs-entry - - (itemno, interval, manhours, checked, pmcsproc)>
<!ATTLIST pmcs-entry
            crewmember   CDATA   #Implied
            %refs;
            %secur;>
```

b. Attributes for <***pmcs-entry***>:

(1) **CREWMEMBER**- the crewmember that should perform these procedures is specified. This will appear in the table prior to the beginning of the procedure. The declared value is any characters.

(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.4.3.1.1 The element <***itemno***> contains the item number assigned to the procedure (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***itemno***>:

```
<!ELEMENT itemno - - (%text;)>
<!ATTLIST itemno
```

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```
            %refs;
            %secur;>
```

b. Attributes for <***itemno***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.4.3.1.2 The element <***interval***> identifies the PMCS table interval column containing the interval between checks
(***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***interval***>:

```
<!ELEMENT interval - o (%text)>
<!ATTLIST interval
          %refs;
          %secur;>
```

b. Attributes for <***interval***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.4.3.1.3 The element <***manhours***>, which is the PMCS table man-hour column, contains manhours required to perform lubrication services (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics). Manhours are listed in 6 minute segments (1/10 of an Hour).

a. DTD fragment for <***manhours***>:

```
<!ELEMENT manhours - o (%text;)>
<!ATTLIST manhours
          %refs;
          %secur;>
```

b. Attributes for <***manhours***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.4.3.1.4 The element <***checked***> represents the PMCS table column where the item to be checked or serviced is identified (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***checked***>:

```
<!ELEMENT checked - o (%text;)>
<!ATTLIST checked
            %refs;
            %secur;>
```

b. Attributes for <***checked***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.4.3.1.5 The element <***pmcsproc***> which represents the PMCS table procedure column, contains a brief description of the procedure by which each check is to be performed, as well as any information required to accomplish each check or service, including lubrication, appropriate tolerances, adjustment limits, and instrument gage readings. PMCS procedures contain an optional title (<***title***> see 33.4.1.5.1), an optional crewmember element <***crewmember***>, followed by either <***pmcspara***> or at least one or more <***pmcsstep1***>.

a. DTD fragment for <***pmcsproc***>:

```
<!ELEMENT pmcsproc - - (title?, crewmember?, (pmcspara | pmcsstep1+))>
<!ATTLIST pmcsproc
            %hcp.esd;
            %refs;
            %secur;>
```

b. Attributes for <***pmcsproc***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).

(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

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28.3.1.4.3.1.5.1 The optional element <***crewmember***> identifies the crewmember(s) who performs the preventive maintenance check in the interval column.

a. DTD fragment for <***crewmember***>:

```
<!ELEMENT crewmember - - (#PCDATA)>
<!ATTLIST crewmember
            %refs;
            %secur;>
```

b. Attributes for <***crewmember***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.4.3.1.5.2 The element <***pmcspara***> describes the checks to be performed and contains the parameter entity paragraph type (***%p;*** see 33.3.2) followed by an optional equipment not ready/available <***eqpnotavail***>.

a. DTD fragment for <***pmcspara***>:

```
<!ELEMENT pmcspara - o ((%p;)+, eqpnotavail?)>
<!ATTLIST pmcspara
            %bodyatt;
            %secur;>
```

b. Attributes for <***pmcspara***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.4.3.1.5.3 The PMCS first-level procedural step element <***pmcsstep1***> contains an optional <***crewmember***>, followed by parameter entity paragraph type (***%p;*** see 33.3.2) with an optional equipment not ready/available <***eqpnotavail***> aligned with the procedural step and may have additional substeps <***pmcsstep2***> in a PMCS procedure <***pmcsproc***>.

a. DTD fragment for <***pmcsstep1***>:

```
<!ELEMENT pmcsstep1 - o (crewmember?, (%p;)+, eqpnotavail?, pmcsstep2*)>
<!ATTLIST pmcsstep1
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***pmcsstep1***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.4.3.1.5.3.1 The PMCS second-level procedural step element <***pmcsstep2***> contains the parameter entity paragraph type (***%p;*** see 33.3.2) followed by an optional equipment not ready/available <***eqpnotavail***> aligned with the procedural step and may have additional substeps <***pmcsstep3***>.

a. DTD fragment for <***pmcsstep2***>:

```
<!ELEMENT pmcsstep2 - o ((%p;)+, eqpnotavail?, pmcsstep3*)>
<!ATTLIST pmcsstep2
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***pmcsstep2***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.4.3.1.5.3.1.1 The PMCS third-level procedural step element <***pmcsstep3***> contains the parameter entity paragraph type (***%p;*** see 33.3.2) followed by an optional <***eqpnotavail***> equipment not ready/available <***eqpnotavail***> aligned with the procedural steps and may have additional substeps <***pmcsstep4***>.

a. DTD fragment for <***pmcsstep3***>:

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```
<!ELEMENT pmcsstep3 - o ((%p;)+, eqpnotavail?, pmcsstep4*)>
<!ATTLIST pmcsstep3
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***pmcsstep3***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.4.3.1.5.3.1.1.1 The PMCS fourth-level procedural step element <***pmcsstep4***> contains the parameter entity paragraph type (***%p;*** see 33.3.2) followed by an optional equipment not ready/available <***eqpnotavail***>.

a. DTD fragment for <***pmcsstep4***>:

```
<!ELEMENT pmcsstep4 - o ((%p;)+, eqpnotavail?)>
<!ATTLIST pmcsstep4
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***pmcsstep4***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.4.3.1.5.3.2 The optional equipment not ready/available <***eqpnotavail***> if column of the PMCS table defines the condition of the equipment (shortages, malfunctions, etc.) that will make equipment not ready or available for use (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics). If this element is entered, it will aligned with PMCS paragraph or step associated with the condition.

a. DTD fragment for <***eqpnotavail***>:

```
<!ELEMENT eqpnotavail - o (%text;)>
<!ATTLIST eqpnotavail
            %refs;
            %secur;>
```

b. Attributes for <***eqpnotavail***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.4.4 The element <***mrplpart***> is used for describing the mandatory replacement parts for the PMCS. The element <***mrplpart***> contains at least one paragraph (<***para***> see 33.4.1.5.3) regarding mandatory replacement parts and followed by an optional mandatory replacement parts list (<***mrpl***> see 30.3.1.9.1).

a. DTD fragment for <***mrplpart***>:

```
<!ELEMENT mrplpart - - (para+, mrpl?)>
<!ATTLIST mrplpart
            %refs;
            %secur;>
```

b. Attributes for <***mrplpart***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5 Maintenance Work Packages <***maintwp***>. The element <***maintwp***> covers maintenance tasks required to maintain all types of equipment at all maintenance levels. There may be more than one maintenance work package. The maintenance work package is subdivided into the following elements and content requirements:

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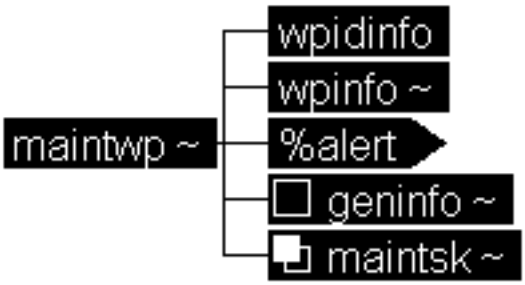

Figure 99 Maintenance Work Packages DTD Hierarchy

a. DTD fragment for <***maintwp***>:

```
<!ELEMENT maintwp - - (wpidinfo, wpinfo, %alert; geninfo?, maintsk+)>
<!ATTLIST maintwp level (depot | operator |
                         gensup | dirsup |
                         unitlvl | inter)     #REQUIRED
              wpno    ID                      #REQUIRED
              %tracking;
              %wprsrc-vals;
              %wpbodyatt;
              %secur;>
```

b. Attributes for <***maintwp***>:

(1) **LEVEL** - The maintenance level of the work package.
   (a) "OPERATOR" – Applies to operator maintenance level.
   (b) "UNITLVL" – Applies to unit maintenance level.
   (c) "DIRSUP" – Applies to direct support (DS) maintenance level.
   (d) "GENSUP" – Applies to general support (GS) maintenance level.
   (e) "INTER" – Applies to intermediate (DS/GS) maintenance level.
   (f) "DEPOT" – Applies to depot maintenance level.
   (g) "AVUM-AVIM" – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.
   (h) "TMLVLS" – Applies to all maintenance levels.

(2) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(4) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(5) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(6) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

c. SGML Document Instance Fragment for Maintenance Work Package <***maintwp***>:

<***maintwp level="dirsup" wpno="tm-11-5840-383-13" wpseq="0024 00"***>
<***wpidinfo***>
<***maintlvl level="dirsup"***>
<***eicnomen***>
<***sysnomen***>
<***name***>RADAR SET</***name***>
<***model***>AN/PPS-XXX </***model***>
<***nsn***>NSN 5840-00-832-7880</***nsn***>

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<eic>EIC: Y10-</eic> </sysnomen> </eicnomen>
<title>DC/DC CONVERTER CIRCUIT CARD ASSEMBLY REPLACEMENT </title>
</wpidinfo>
<wpinfo>
<tools>
<setup-item>
<name>#1 Phillips Head Screwdriver</name>
<qty>1</qty>
</setup-item>
<setup-item>
<name>Small Flat Blade Screwdriver </name>
<qty>1</qty>
</setup-item>
<setup-item>
<name>1/4" Hex Nut Driver</name>
<qty>1</qty>
</setup-item>
</tools>
<mtrlpart>
<setup-item>
<xref wpid="S00034-11-5840-383" pretext="(WP" posttext=")">
</setup-item>
</mtrlpart>
<eqpconds>
<setup-item>
<condition>
<name> Perform procedure for RF Assembly Removal (WP0027
RF ASSEMBLY REPLACEMENT). </name>
</condition>
<itemref> <xref wpid="Mxxx13-11-5840-383" pretext="See" posttext="For
RF Assembly"> </itemref>
</setup-item>
</eqpconds></wpinfo>
<maintsk>
<remove>
<proc>
<caution>
<para> This equipment contains parts and assemblies subject to damage by
electrostatic discharge (ESD). Use wrist ground strap. </para>
</caution>
<step1>
<para> Using a small flat blade screwdriver, loosen <emphasis emph="bold"> (do
not remove from retaining clips)</emphasis> two screws (1) holding harness
connector to DC/DC Converter P1 connector, and remove connector. </para>
</step1>
<step1>
<para> Gently pull harness (2) out of the way of the DC/DC Converter
card to expose the hex standoffs. </para>
</step1>
<step1>
<para> Using a " Hex Nut Driver, remove two 1.53" hex standoffs from the
bottom left and right corner (3) of the DC/DC Converter card.</para>
</step1>
<step1>

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<*para*>Using a #1 Phillips head screwdriver, remove two 3/8" pan head Phillips head screws from the Upper Left and Right corners (4) of the DC/DC Converter card.</*para*>
</*step1*>
<*step1*>
<*para*> Gently pull the DC/DC Converter card out of the R-T enclosure. <*figure*>
<*title*>Removal of the DC/DC Converter Circuit Card Assembly </*title*>
<*graphic boardno="Removaldcdc.gif" id="biicfcde"*>
</*figure*>
</*para*>
</*step1*>
</*proc*>
</*remove*>
<*install*>
<*proc*>
<*note*>
<*para*>Refer to Figure 1. Use Loctite on all screws. </*para*>
</*note*>
<*step1*>
<*para*>Prior to inserting the DC/DC Converter card, verify that the thermally conductive Gap Pad is attached to the DC/DC Converters on the card. The material will make physical contact with the R-T when card installation is complete.</*para*>
</*step1*>
<*step1*>
<*para*> Insert DC/DC Converter card into position in the R-T.</*para*>
</*step1*>
<*step1*>
<*para*> Using a #1 Phillips head screwdriver, screw two 3/8" pan head Phillips head screws in the Upper Left and Right hand corners (4) of the card and loosely tighten.</*para*>
</*step1*>
<*step1*>
<*specpara*>
<*caution*>
<*para*> Do not over tighten the standoffs in the next step. </*para*>
</*caution*>
<*para*> Using a " Hex Nut Driver, screw two 1.53" hex standoffs into the Lower Left and Right hand corners (3) of the card and tighten. </*para*>
</*specpara*>
</*step1*>
<*step1*>
<*para*> Tighten Screws (4). </*para*>
</*step1*>
<*step1*>
<*specpara*>
<*caution*>
<*para*> Do not over tighten the screws in the next step. </*para*>
</*caution*>
<*para*> Using a small flat blade screwdriver, tighten the two mounting screws (1) that hold the harness connector to connector P1 on the DC/DC Converter card. </*para*>
</*specpara*>
</*step1*>
<*step1*>

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```
<para> Perform procedure for RF Assembly installation (WP0028
RF ASSEMBLY REPLACEMENT). </para>
</step1>
</proc>
</install>
</maintsk>
</maintwp>
```

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DIRECT SUPPORT

RADAR SET

AN/PPS-XXX

NSN 5840-00-832-7880 EIC Y10

DC/DC CONVERTER CIRCUIT CARD ASSEMBLY REPLACEMENT

INITIAL SETUP:

Tools and Special Tools

#1 Phillips Head Screwdriver (1)
Small Flat Blade Screwdriver (1)
1/4" Hex Nut Driver (1)

Materials/Parts

Loctite (WP0064 00)

Equipment Condition

Perform procedure for RF Assembly Removal and RF ASSEMBLY REPLACEMENT).
See (WP0034 00) for RF Assembly

REMOVAL

CAUTION

This equipment contains parts and assemblies subject to damage by electrostaticdischarge (ESD). Use wrist ground strap.

1. Using a small flat blade screwdriver, loosen **(do not remove from retaining clips)** two screws (1) holding harness connector to DC/DC Converter P1 connector, and remove connector.
2. Gently pull harness (2) out of the way of the DC/DC Converter card to expose the hex standoffs.
3. Using a " Hex Nut Driver, remove two 1.53" hex standoffs from the bottom left and right corner (3) of the DC/DC Converter card.
4. Using a #1 Phillips head screwdriver, remove two 3/8" pan head Phillips headscrews from the Upper Left and Right corners (4) of the DC/DC Converter card.
5. Gently pull the DC/DC Converter card out of the R-T enclosure.

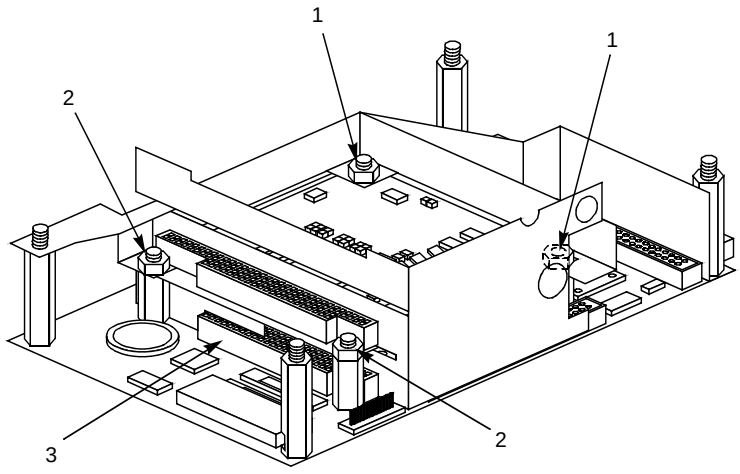

FIGURE 1. Removal of the DC/DC Converter Circuit Card Assembly

Figure 100 Sample FOSI Output for Maintenance Work Package <maintwp>

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28.3.1.5.1 The element <***wpidinfo***> (see33.4.5) defines the identification information required for a work package.

28.3.1.5.2 The element <***wpinfo***> (see 33.4.6.1) provides the maintenance technician with general information, equipment, parts, material, and authorized personnel required to perform and complete all the operating tasks included in the work package.

28.3.1.5.3 The parameter entity ***%alert;*** (see 33.3.3) is the necessary alert notices prior to any maintenance tasks <***maintsk***>.

28.3.1.5.4 The element <***geninfo***> (see 33.4.4.11) is introductory information for the work package.

28.3.1.5.5 The element <***maintsk***> is used for all the maintenance tasks that are required to maintain any type of equipment. The element <***maintsk***> contains a parameter entity ***%maintsk;*** which contains the following tasks: assembly and preparation for use <***prepforuse***>, servicing <***service***>, ground tasks <***groundtsk***>, inspection of installed items <***inspinstitm***>, removal <***remove***>, disassembly <***disassem***>, cleaning <***clean***>, inspection-acceptance and rejection criteria <***acptrejinsp***>, nondestructive testing inspection <***ndti***>, repair or replacement <***repair-rplc***>, alignment <***align***>, painting <***paint***>, lubrication <***lube***>, assembly <***assem***>, test and inspection <***test-inspect***>, installation <***install***>, adjustment <***adjust***>, calibration <***calibration***>, radio interference suppression <***ris***>, placing in service <***pis***>, testing <***test-pass***>, preservation, packaging, and marking <***ppm***>, overhaul and retirement schedule <***orsch***>, preparation for storage or shipment <***pss***>, classification of ammunition defects <***ammo.defect***>, handling ammunition <***ammo.handling***>, ammunition markings <***ammo.markings***> and procedures for ammunition activation <***arm***>. Warnings (<***warning***> see 33.4.1.1.2), cautions (<***caution***> see 33.4.1.1.3), and/or notes (<***note***> see 33.4.1.1.4) may be entered prior to the maintenance tasks.

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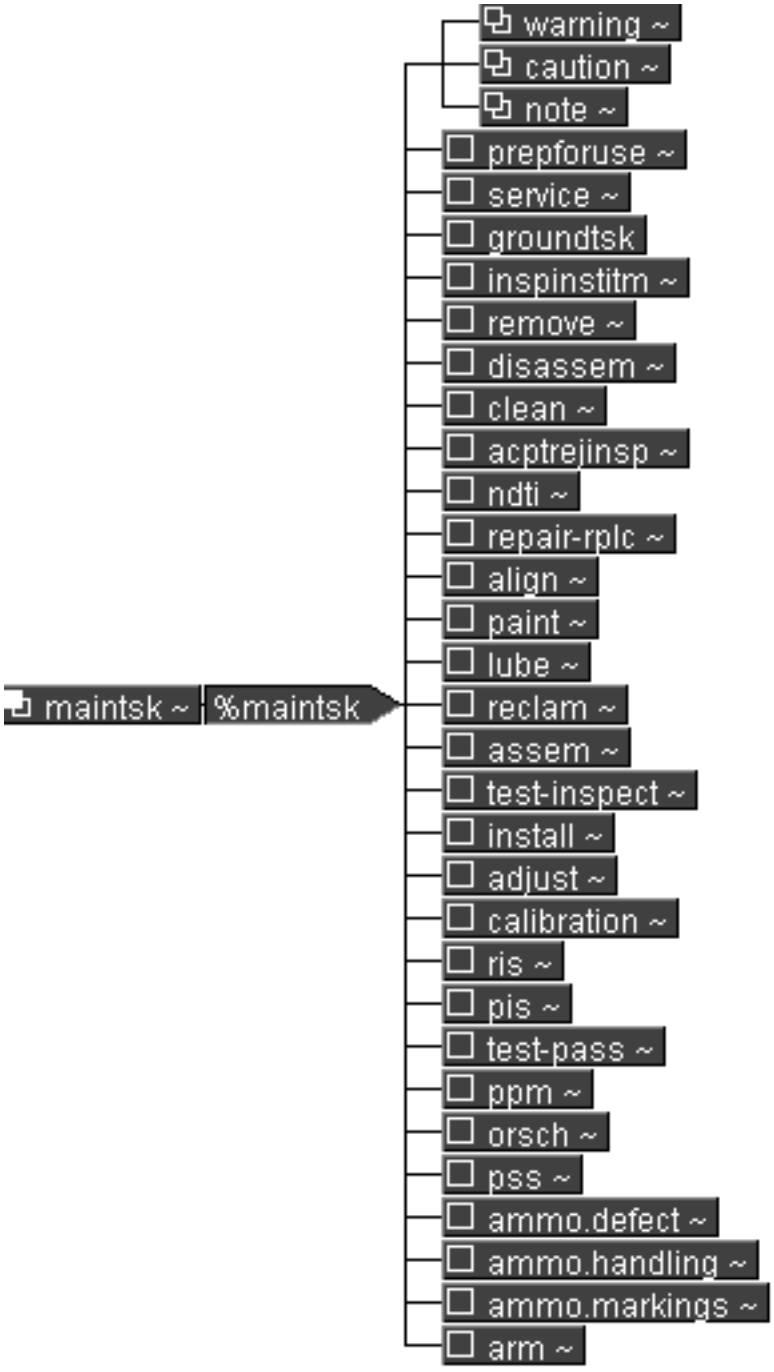

Figure 101 Maintenance Tasks DTD Hierarchy

a. DTD fragment for <***maintsk***> and ***%maintsk;***:

```
<!ELEMENT maintsk - - (%maintsk;)>
<!ATTLIST maintsk
            %bodyatt;
            %secur;>
<!ENTITY % maintsk "(warning*, caution*, note*, prepforuse?, service?,
                     %groundtsk;?, inspinstitm?, remove?, disassem?,clean?,
```

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```
                    acptrejinsp?, ndti?,repair-rplc?, align?, paint?,
                    lube?,assem?, test-inspect?, install?, adjust?,
                    calibration?, ris?,pis?, test-pass?, ppm?, orsch?,
                    pss?, ammo.defect?, ammo.handling?, ammo.markings?,
                    arm?)">
```

b. Attributes for <***maintsk***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.1 The element <***prepforuse***> is a maintenance and service upon receipt task that contains procedures for unpacking, assembly, and installation. The element <***prepforuse***> may contain procedural text (<***proc***> see 33.4.1.8.1) or paragraphs (<***para***> see 33.4.1.5.3) and/or paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1) each of which may be followed by a subtitle (<***subtitle***> see 33.4.1.5.2). **(Aircraft only.)**

a. DTD fragment for <***prepforuse***>:

```
<!ELEMENT prepforuse  - - (proc | (subtitle?, (para | specpara)+)+)>
<!ATTLIST prepforuse
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***prepforuse***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see33.5.2).

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.2 The element <***groundtsk***> contains the procedures for all types of ground handling of the aircraft. The element contains the parameter entity ground handling tasks ***%grndhndl;***.

a. DTD fragment for <***groundtsk***> and ***%grndhndl;***:

```
<!ELEMENT groundtsk - - (%grndhndl;)
<!ENTITY "(tow | jack | park | moor | cover | hoist | sling | extpwr)+">
```

28.3.1.5.5.3 The element <***tow***> is a maintenance task used for towing the equipment and includes all safety requirements related to towing of equipment. The element <***tow***> may contain procedural text (<***proc***> see 33.4.1.8.1) or paragraphs (<***para***> see 33.4.1.5.3) and/or paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1) each of which may be followed by a subtitle (<***subtitle***> see 33.4.1.5.2).

a. DTD fragment for <***tow***>:

```
<!ELEMENT tow  - - (proc | (subtitle?, (para | specpara)+)+)>
<!ATTLIST tow
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***tow***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.4 The element <***jack***> is a maintenance task used for the jacking which includes procedures for blocking, supporting, and shoring the equipment. The element <***jack***> may contain procedural text (<***proc***> see 33.4.1.8.1) or paragraphs (<***para***> see 33.4.1.5.3) and/or paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1) each of which may be followed by a subtitle (<***subtitle***> see 33.4.1.5.2).

a. DTD fragment for <***jack***>:

```
<!ELEMENT jack   - - (proc | (subtitle?, (para | specpara)+)+)>
<!ATTLIST jack
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***jack***>:

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(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.5 The element <***park***> is used for maintenance task containing procedures for parking the equipment at a site. Procedures for use of parking brakes, control locks, and chocks are included. The element <***park***> may contain procedural text (<***proc***> see 33.4.1.8.1) or paragraphs (<***para***> see 33.4.1.5.3) and/or paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1) each of which may be followed by a subtitle (<***subtitle***> see 33.4.1.5.2).

a. DTD fragment for <***park***>:

```
<!ELEMENT park   - - (proc | (subtitle?, (para | specpara)+)+) >
<!ATTLIST park
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***park***>:
(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.6 The element <***moor***> is used for the maintenance task containing procedures for mooring or securing the equipment at a site; it includes procedures for using tie down cables or other mooring devices. The element <***moor***> may contain procedural text (<***proc***> see 33.4.1.8.1) or paragraphs (<***para***> see 33.4.1.5.3) and/or paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1) each of which may be followed by a subtitle (<***subtitle***> see 33.4.1.5.2).

a. DTD fragment for <***moor***>:

```
<!ELEMENT moor   - - (proc | (subtitle?, (para | specpara)+)+) >
<!ATTLIST moor
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***moor***>:
(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.7 The element <***cover***> is a maintenance task used for the installation of covers that will protect the equipment from damage or adverse weather conditions. The element <***cover***> may contain procedural text (<***proc***> see 33.4.1.8.1) or paragraphs (<***para***> see 33.4.1.5.3) and/or paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1) each of which may be followed by a subtitle (<***subtitle***> see 33.4.1.5.2).

a. DTD fragment for <***cover***>:

```
<!ELEMENT cover  - - (proc | (subtitle?, (para | specpara)+)+)>
<!ATTLIST cover
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***cover***>:
(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.8 The element <***hoist***> is the maintenance task used for hoisting procedures for aircraft with shrink film covering installed. The element <***hoist***> may contain procedural text (<***proc***> see 33.4.1.8.1) or paragraphs (<***para***> see 33.4.1.5.3) and/or paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1) each of which may be followed by a subtitle (<***subtitle***> see 33.4.1.5.2).

a. DTD fragment for <***hoist***>:

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```
<!ELEMENT hoist  - - (proc | (subtitle?, (para | specpara)+)+) >
<!ATTLIST hoist
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***hoist***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.9 The element <***sling***> is the maintenance task used for lifting or moving equipment by using a sling. Maintenance tasks should include all safety requirements. The element <***sling***> may contain procedural text (<***proc***> see 33.4.1.8.1) or paragraphs (<***para***> see 33.4.1.5.3) and/or paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1) each of which may be followed by a subtitle (<***subtitle***> see 33.4.1.5.2).

a. DTD fragment for <***sling***>:

```
<!ELEMENT sling  - - (proc | (subtitle?, (para | specpara)+)+) >
<!ATTLIST sling
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***sling***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.10 The element <***extpwr***> external power is the maintenance task containing procedures for connecting electrical power to the equipment. The element <***extpwr***> may contain procedural text (<***proc***> see 33.4.1.8.1) or paragraphs (<***para***> see 33.4.1.5.3) and/or paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1) each of which may be followed by a subtitle (<***subtitle***> see 33.4.1.5.2).

a. DTD fragment for <***extpwr***>:

```
<!ELEMENT extpwr - - (proc | (subtitle?, (para | specpara)+)+) >
<!ATTLIST extpwr
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***extpwr***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.11 The element <***inspinstitm***> (inspection of installed items) is used for the maintenance task containing the procedures for inspection of components and assemblies installed on the equipment to determine if the item is damaged, deteriorated or missing. The element <***inspinstitm***> may contain paragraphs (<***para***> see 33.4.1.5.3), paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1), and/or procedural text (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***inspinstitm***>:

```
<!ELEMENT inspinstitm - - (para | specpara | proc)+>
<!ATTLIST inspinstitm
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***inspinstitm***>:

(1) **%HCP.ESD;**- Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

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28.3.1.5.5.12 The element <***remove***> is used for the maintenance task containing procedures for removal of an assembly or component. The element <***remove***> contains an optional figure (<***figure***> see 33.4.3.1) followed by procedure text (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***remove***>:

```
<!ELEMENT remove - - (figure?, proc+)>
<!ATTLIST remove
            %hcp.esd
            %bodyatt;
            %secur;>
```

b. Attributes for <***remove***>:"

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.13 The element <***disassem***> is the maintenance task containing procedures regarding the disassembly of an assembly, subassembly or component to the extent authorized by the maintenance allocation chart (MAC) and source maintenance and recoverability code (SMR). The element <***disassem***> contains procedural text (<***proc***> see 33.4.1.8.1). A figure (<***figure***> see 33.4.3.1) may be entered prior to the procedure when it is beneficial to clarify the disassembly.

a. DTD fragment for <***disassem***>:

```
<!ELEMENT disassem - - (figure?, proc)+>
<!ATTLIST disassem
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***disassem***>:

(1) **%HCP.ESD;**- Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.14 The element <***clean***> is used for the maintenance task containing procedures for maintaining corrosion control of equipment and metal parts. The element <***clean***> contains procedural text (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***clean***>:

```
<!ELEMENT clean - - (proc)+>
<!ATTLIST clean
            %hcp.esd
            %bodyatt;
            %secur;>
```

b. Attributes for <***clean***>:

(1) **%HCP.ESD;**- Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.15 The element <***acptrejinsp***> is the maintenance task used for inspection-acceptance/rejection information required to determine the serviceability of the ammunition or related equipment within an ammunitions work package. The element <***acptrejinsp***> contains paragraphs (<***para***> see 33.4.1.5.3) and/or procedural text (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***acptrejinsp***>:

```
<!ELEMENT acptrejinsp - - (para | proc)+>
<!ATTLIST acptrejinsp
            %hcp.esd
            %bodyatt;
            %secur;>
```

b. Attributes for <***acptrejinsp***>:

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(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.16 The element <***ndti***> Nondestructive Testing Inspection (NDTI) is used for the maintenance task containing procedures for inspecting an item using a special method that will not damage the item but will show a hard to find defect. This element is for aircraft only. The element <***ndti***> may contain paragraphs (<***para***> see 33.4.1.5.3), paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1), and/or procedural text (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***ndti***>:

```
<!ELEMENT ndti - - (para | specpara | proc)+>
<!ATTLIST ndti
            %hcp.esd
            %bodyatt;
            %secur;>
```

b. Attributes for <***ndti***>:
(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.17 The element <***repair-rplc***> repair or replacement is used for the maintenance task containing procedures for repair of a part or replacement of a new or serviceable part. Information on tolerances, torque values, clearance, and other similar data are included within this element. The element <***repair-rplc***> contains multiple procedures (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***repair-rplc***>:

```
<!ELEMENT repair-rplc - - (proc)+>
<!ATTLIST repair-rplc
            %hcp.esd
            %bodyatt;
            %secur;>
```

b. Attributes for <***repair-rplc***>:
(1) **%HCP.ESD;**- Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.18 The element <***align***> is used for the alignment maintenance task containing procedures to adjust specified variable elements to bring about optimum or desired performance. The element <***align***> contains multiple procedures (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***align***>:

```
<!ELEMENT align - - (proc)+>
<!ATTLIST align
            %hcp.esd
            %bodyatt;
            %secur;>
```

b. Attributes for <***align***>:
(1) **%HCP.ESD;**- Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.19 The element <***paint***> is used for maintenance task containing procedures for painting. References to applicable documents that contain these procedures may be made. The element <***paint***> contains multiple procedures (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***paint***>:

```
<!ELEMENT paint - - (proc)+>
<!ATTLIST paint
            %hcp.esd
```

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```
            %bodyatt;
            %secur;>
```

b. Attributes for <***paint***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.20 The element <***lube***> is used for maintenance task specifying the lubrication of equipment. The element <***lube***> contains multiple procedures (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***lube***>:

```
<!ELEMENT lube - - (proc)+>
<!ATTLIST lube
            %hcp.esd
            %bodyatt;
            %secur;>
```

b. Attributes for <***lube***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.21 The element <***assem***> is the maintenance task containing procedures regarding the assembly of an item, subassembly or component. The element <***assem***> contains procedural text (<***proc***> see 33.4.1.8.1). A figure (<***figure***> see 33.4.3.1) may be entered prior to the procedure when it is beneficial to clarify the assembly.

a. DTD fragment for <***assem***>:

```
<!ELEMENT assem - - (figure?, proc)+>
<!ATTLIST assem
            fin-assem    %yesorno;   "0"
            %hcp.esd
            %bodyatt;
            %secur;>
```

b. Attributes for <***assem***>:

(1) **fin-assem**- Final assembly is an attribute of the maintenance task, assemble <***assem***>. It may be used in DMWRs to cover the final assemble of the overhauled item.
(2) **%HCP.ESD;**- Refer to common parameter entities for a complete description (see 33.5.2).
(3) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(4) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.22 The element <***test-inspect***> is a maintenance task for testing and inspection during or after assembly of an item to ensure proper assembly. The element includes procedures (<***proc***> see 33.4.1.8.1) for checking tolerances, back play, clearances and other similar data and may be followed by one or more defect table(s) <***defect.tab***>.

a. DTD fragment for <***test-inspect***>:

```
<!ELEMENT test-inspect - - (proc, defect.tab*)+>
<!ATTLIST test-inspect
            %hcp.esd
            %bodyatt;
            %secur;>
```

b. Attributes for <***test-inspect***>:

(1) **%HCP.ESD;**- Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.22.1 The defect table element <***defect.tab***> is a content tagged table that may occur within <***test-inspect***>. It contains a required title (<***title***> see 33.4.1.5.1) followed by groupings of component assemblies by the type of defect <***defecttype***>, the condition <***condition***> (see 27.3.1.1.1.2.1.1), a cross

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reference (<***xref***> (see 33.4.1.3.6) or the narrative text <***actionreq***>, the inspection method <***insp-method***>, and the acceptance quality required <***acceptqual***>. If there is more than one defect for a component assembly, this grouping may be repeated.

a. DTD fragment for <***defect.tab***>:

```
<!ELEMENT defect.tab - o (title, (defecttype, (condition, (xref | actionreq),
                              insp-method, acceptqual)+)+)>
```

28.3.1.5.5.22.1.1 The element <***defecttype***> identifies the type of defect for the component.

a. DTD fragment for <***defecttype***>:

```
<!ELEMENT defecttype - o EMPTY>
<!ATTLIST defecttype
          type (critical | major | minor) #REQUIRED >
```

b. Attributes for <***defecttype***>:

(1) **TYPE** - Specifies the type of defect. It is required to enter one of the following defect types:

(a) "CRITICAL" - Indicates the defect type is critical.

(b) "MAJOR" - Indicates the defect type is major.

(c) "MINOR" - Indicates the defect type is minor.

28.3.1.5.5.22.1.2 The element <***actionreq***> identifies the required action to be performed to correct the defect (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***actionreq***>:

```
<!ELEMENT actionreq - o (%text;)>
<!ATTLIST actionreq
            %bodyatt;
            %secur; >
```

b. Attributes for <***actionreq***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.22.1.3 The element <***insp-method***> is used to describe the method (usual, torque, etc.) to correctly determine if the corrective action was accomplished. The element contains narrative text (#PCDATA parsable characters see 35.3.2).

a. DTD fragment for <***insp-method***>:

```
<!ELEMENT insp-method - o (#PCDATA)>
```

28.3.1.5.5.22.1.4 The element <***acceptqual***> identifies the acceptance quality required for the component assembly (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***acceptqual***>:

```
<!ELEMENT acceptqual - o (%text;)>
```

28.3.1.5.5.23 The element <***install***> is used for the maintenance task containing necessary instructions for proper installation of equipment. The use of tools, necessary interconnections, and procedures to lubricate, calibrate and adjust equipment are included within this element. The element <***install***> contains an optional title, followed by paragraphs (<***para***> see 33.4.1.5.3), paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1), and/or procedural text (<***proc***> see 33.4.1.8.1)instructions or tabular data <***table***>.

a. DTD fragment for <***install***>:

```
<!ELEMENT install - - (title?, ((para | specpara | proc)+ | table))>
<!ATTLIST install
            %hcp.esd
            %bodyatt;
            %secur;>
```

b. Attributes for <***install***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

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28.3.1.5.5.24 The element <***adjust***> is a maintenance task containing procedures for adjustments that may be required prior to operating a part, system or end item. The element <***adjust***> contains multiple procedures (<***proc***> paragraph see 33.4.1.8.1).

a. DTD fragment for <***adjust***>:

```
<!ELEMENT adjust - - (proc)+>
<!ATTLIST adjust
            %hcp.esd
            %bodyatt;
            %secur;>
```

b. Attributes for <***adjust***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.25 The element <***calibration***> is a maintenance task containing procedures for any calibration which may occur after an assembly or an installation. References to applicable publications containing the calibration procedure may be entered. The element <***calibration***> contains multiple procedures (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***calibration***>:

```
<!ELEMENT calibration - - (proc)+>
<!ATTLIST calibration
            %hcp.esd
            %bodyatt;
            %secur;>
```

b. Attributes for <***calibration***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.26 The element <***ris***> is a maintenance task containing radio interference suppression procedures for removal and replacement of defective components. The element <***ris***> contains paragraphs (<***para***> see 33.4.1.5.3), paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1), and/or procedural text (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***ris***>:

```
<!ELEMENT ris - - (para | specpara | proc)+>
<!ATTLIST ris
            %hcp.esd
            %bodyatt;
            %secur;>
```

b. Attributes for <***ris***>:

(1) **%HCP.ESD;**- Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.27 The element <***pis***> (placing in service) is a maintenance task for removal of an item from storage, installation, final servicing checks, calibration, testing or any other procedure required to place an item in service that is not covered elsewhere. The element <***pis***> contains paragraphs (<***para***> see 33.4.1.5.3), paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1), and/or procedural text (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***pis***>:

```
<!ELEMENT pis - - (para | specpara | proc)+>
<!ATTLIST pis
            %hcp.esd
            %bodyatt;
            %secur;>
```

b. Attributes for <***pis***>:

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(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.28 The element <***test-pass***> is a maintenance task containing the testing procedures for performance of compounds, assemblies and subassemblies prior to installation in the end-item. The element <***test-pass***> contains paragraphs (<***para***> see 33.4.1.5.3), paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1), and/or procedural text (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***test-pass***>:

```
<!ELEMENT test-pass - - (para | specpara | proc)+>
<!ATTLIST test-pass
            %hcp.esd
            %bodyatt;
            %secur;>
```

b. Attributes for <***test-pass***>:
(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.29 The element <***ppm***> is a maintenance task containing instructions for special or unique preservation, packaging, or markings that apply to equipment. The Army Master Data File (AMDF) Retrieval Microform System for normal packaging procedures may be referenced within this element. This element is for depot equipment level only. The element <***ppm***> contains multiple procedures <***proc***> (see 33.4.1.8.1).

a. DTD fragment for <***ppm***>:

```
<!ELEMENT ppm - - (proc)+>
<!ATTLIST ppm
            %hcp.esd
            %bodyatt;
            %secur;>
```

b. Attributes for <***ppm***>:
(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.30 The element <***orsch***> is a maintenance task containing a list of equipment and their overhaul/retirement schedule. A reference may be made to TM 1-1500-328-25. The element <***orsch***> contains paragraphs (<***para***> see 33.4.1.5.3), paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1), and/or procedural text (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***orsch***>:

```
<!ELEMENT orsch - - (para | specpara | proc)+>
<!ATTLIST orsch
            %hcp.esd
            %bodyatt;
            %secur;>
```

b. Attributes for <***orsch***>:
(1) **%HCP.ESD;**- Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.5.5.31 The element <***pss***> is a maintenance task containing procedures for storage or shipment preparation, including all special security procedures, special transportation procedures for sensitive items and administrative storage as required by applicable Army Regulations. It also includes a reference to TM 1-1500-204-23 for aviation ground support equipment. The element <***pss***> contains paragraphs (<***para***> see 33.4.1.5.3), paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1), and/or procedural text (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***pss***>:

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```
<!ELEMENT pss - - (para | specpara | proc)+>
<!ATTLIST pss
            %hcp.esd
            %bodyatt;
            %secur;>
```

b. Attributes for <***pss***>:

(1) **%HCP.ESD;**- Refer to common parameter entities for a complete description (see 33.5.2).

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.6 General Maintenance Work Packages <***gen.maintwp***>. The element <***gen.maintwp***> contains common, general, or standard maintenance procedures applicable to other maintenance work packages contained within the TM. There may be more than one general maintenance work package. The general maintenance work package is subdivided into the following elements and content requirements:

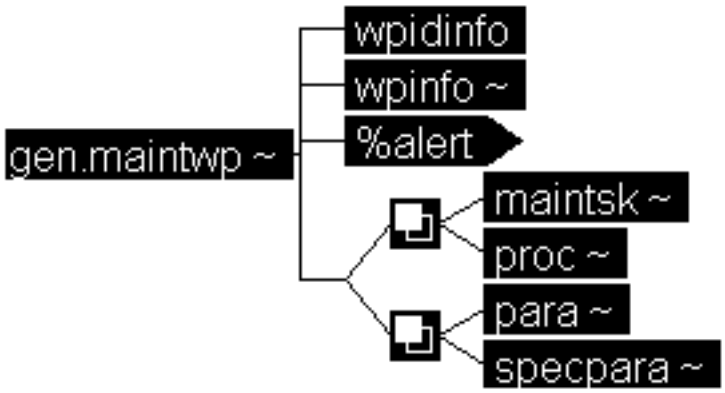

Figure 102 General Maintenance Work Packages DTD Hierarchy

a. DTD fragment for <***gen.maintwp***>:

```
<!ELEMENT gen.maintwp - - (wpidinfo, wpinfo, %alert;
                             ((maintsk | proc)+ | (para | specpara)+))>
<!ATTLIST gen.maintwp
          level       (tmlvls| depot |
                       operator |gensup |

                       dirsup |unitlvl |
                       inter)              #REQUIRED
          wpno    ID                       #REQUIRED
          %tracking;
          %wprsrc-vals;
          %wpbodyatt;
          %secur;>
```

b. Attributes for <***gen.maintwp***>:

(1) **LEVEL** - The maintenance level of the work package.

(a) “OPERATOR” – Applies to operator maintenance level.

(b) “UNITLVL” – Applies to unit maintenance level.

(c) “DIRSUP” – Applies to direct support (DS) maintenance level.

(d) “GENSUP” – Applies to general support (GS) maintenance level.

(e) “INTER” – Applies to intermediate (DS/GS) maintenance level.

(f) “DEPOT” – Applies to depot maintenance level.

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(g) “AVUM-AVIM” – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.
(h) “TMLVLS” – Applies to all maintenance levels.

(2) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.
(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).
(4) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).
(5) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).
(6) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.6.1 The element **<*wpidinfo*>** (see 33.4.5) defines the identification information required for a work package.

28.3.1.6.2 The element **<*wpinfo*>** (see 33.4.6.1) provides the maintenance technician with general information, equipment, parts, material, and authorized personnel required to perform and complete all the operating tasks included in the work package.

28.3.1.6.3 The element **<*maintsk*>** (see 28.3.1.5.5) is used to describe the maintenance tasks that are standard or common for equipment maintenance.

28.3.1.6.4 The parameter entity ***%alert;*** (see 33.3.3) is the necessary alert notices, prior to maintenance tasks **<*maintsk*>**.

28.3.1.6.5 Procedural text **<*proc*>** (see 33.4.1.8.1) may be entered for standard or common equipment maintenance.

28.3.1.6.6 Paragraphs of text **<*para*>** (see 33.4.1.5.3) may be entered for standard or common equipment maintenance.

28.3.1.7 Phased Maintenance Inspections Work Package **<*pmiwp*>**. The element **<*pmiwp*>** is used for data required to perform phased maintenance inspections on aircraft. This work package is for aircraft only. There may be more than one phased maintenance inspections work package in the maintenance information chapter. The phased maintenance inspections work package is subdivided into the following elements and content requirements:

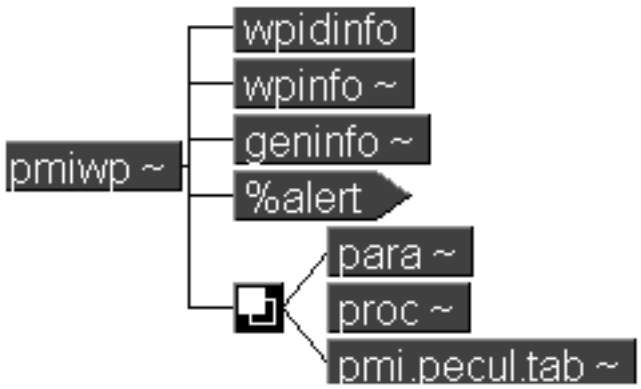

Figure 103 Phased Maintenance Inspections Work Package DTD Hierarchy

a. DTD fragment for **<*pmiwp*>**:

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```
<!ELEMENT pmiwp - - (wpidinfo, wpinfo, geninfo, %alert;,
                     (para | proc | pmi.pecul.tab)+)>
<!ATTLIST pmiwp
            level    (depot | operator |
                      gensup | dirsup |
                      unitlvl | inter)      #REQUIRED
            wpno       ID                  #REQUIRED
            %tracking;
            %wprsrc-vals;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***pmiwp***>:

(1) **LEVEL** - The maintenance level of the work package.
   (a) "OPERATOR" – Applies to operator maintenance level.
   (b) "UNITLVL" – Applies to unit maintenance level.
   (c) "DIRSUP" – Applies to direct support (DS) maintenance level.
   (d) "GENSUP" – Applies to general support (GS) maintenance level.
   (e) "INTER" – Applies to intermediate (DS/GS) maintenance level.
   (f) "DEPOT" – Applies to depot maintenance level.
   (g) "AVUM-AVIM" – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.
   (h) "TMLVLS" – Applies to all maintenance levels.

(2) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(4) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(5) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(6) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.7.1 The element <***wpidinfo***> (see 33.4.5) defines the identification information required for a work package.

28.3.1.7.2 The element <***wpinfo***> (see 33.4.6.1) provides the maintenance technician with general information, equipment, parts, material, and authorized personnel required to perform and complete all the operating tasks included in the work package.

28.3.1.7.3 The element <***geninfo***> (see 33.4.4.11) is introductory information for the work package.

28.3.1.7.4 The parameter entity ***%alert;*** (see 33.3.3) is the necessary alert notices.

28.3.1.7.5 Paragraphs of text <***para***> (see 33.4.1.5.3) may be entered.

28.3.1.7.6 Procedural text <***proc***> (see 33.4.1.8.1) may be entered.

28.3.1.7.7 The element <***pmi.pecul.tab***> is used for the preventive maintenance inspection peculiar inspection table to include components and other items which qualify under the criteria for special inspections, e.g., hard landings, sudden stoppage and overspeed. The element contains a aircraft tail serial number <***serialno***>, inspection date <***date***>, and at least one area number <***areano***>, item number <***itemno***>, inspection interval <***interval***>, component name <***compname***> and inspection procedure <***proc***>.

a. DTD fragment for <***pmi.pecul.tab***>:

```
<!ELEMENT pmi.pecul.tab - - (serialno, date, (areano, itemno, interval,
                              compname, proc)+)>
<!ATTLIST pmi.pecul.tab
            %bodyatt;
            %secur;>
```

b. Attributes for <***pmi.pecul.tab***>:

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(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.7.7.1 The element <***serialno***> (see 28.3.8.1.4.1.3.1) is used to enter the aircraft tail serial number

28.3.1.7.7.2 The element <***date***> (see 24.2.1.1.3.1.2) is used to enter the inspection date (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

28.3.1.7.7.3 The element <***areano***> is used to enter the area number from the diagram.

a. DTD fragment for <***areano***>:

```
<!ELEMENT areano - o (#PCDATA)>
<!ATTLIST areano
          %refs;>
```

b. Attributes for <***areano***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

28.3.1.7.7.4 The element <***itemno***> contains the item number assigned to the inspection.

28.3.1.7.7.5 The element <***interval***> is used to enter the inspection interval.

28.3.1.7.7.6 The element <***compname***> (see 27.3.1.3.1.4) is used to enter the name of the inspected component.

28.3.1.7.7.7 Procedural text (<***proc***> see 33.4.1.8.1) is used to enter the inspection steps.

28.3.1.8 Lubrication Instructions Work Package <***lubewp***>. The element <***lubewp***> is used for all of the data required to lubricate an aircraft and is contained within the aircraft lubrication instructions work package. This work package is for aircraft only. There may be more than one aircraft lubrications instructions work package within a maintenance information chapter. The lubrications instructions work package is subdivided into the following elements and content requirements:

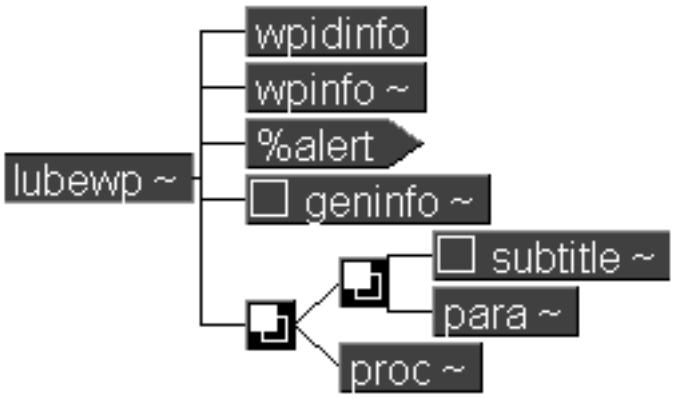

Figure 104 Lubrication Instructions Work Package DTD Hierarchy

a. DTD fragment for <***lubewp***>:

```
<!ELEMENT lubewp - - (wpidinfo, wpinfo, %alert;, geninfo?, ((subtitle?,
                      para)+ | proc)+) >
<!ATTLIST lubewp     level     (depot | operator |
                                gensup | dirsup |
                                unitlvl | inter)      #REQUIRED
              wpno       ID                           #REQUIRED
              %tracking;
              %wprsrc-vals;
              %wpbodyatt;
```

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%secur;>

b. Attributes for <***lubewp***>:

(1) **LEVEL** - The maintenance level of the work package.
   (a) "OPERATOR" – Applies to operator maintenance level.
   (b) "UNITLVL" – Applies to unit maintenance level.
   (c) "DIRSUP" – Applies to direct support (DS) maintenance level.
   (d) "GENSUP" – Applies to general support (GS) maintenance level.
   (e) "INTER" – Applies to intermediate (DS/GS) maintenance level.
   (f) "DEPOT" – Applies to depot maintenance level.
   (g) "AVUM-AVIM" – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.
   (h) "TMLVLS" – Applies to all maintenance levels.

(2) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(4) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(5) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(6) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.1.8.1 The element <***wpidinfo***> (see 33.4.5) defines the identification information required for a work package.

28.3.1.8.2 The element <***wpinfo***> (see 33.4.6.1) provides the maintenance technician with general information, equipment, parts, material, and authorized personnel required to perform and complete all the operating tasks included in the work package.

28.3.1.8.3 The element <***geninfo***> (see 33.4.4.11) is introductory information for the work package.

28.3.1.8.4 The parameter entity ***%alert;*** (see 33.3.3) is the necessary alert notices.

28.3.1.8.5 Paragraphs of text <***para***> (see 33.4.1.5.3) is used to enter the lubrication information placed in sections using the subtitle element (<***subtitle***> see 33.4.1.5.2).

28.3.1.8.6 Procedural text <***proc***> (see 33.4.1.8.1) is used to enter the lubrication steps.

28.3.2 Depot Maintenance Work Requirement Maintenance Information Chapter ***%dmwrmim;***. The Depot Maintenance Work Requirement Maintenance Information Chapter may consists of a facilities work package <***facilwp***>, may have one or more overhaul inspection procedure work packages <***oipwp***>, depot mobilization requirements work package <***mobilwp***> and a quality assurance requirements work package <***qawp***>.

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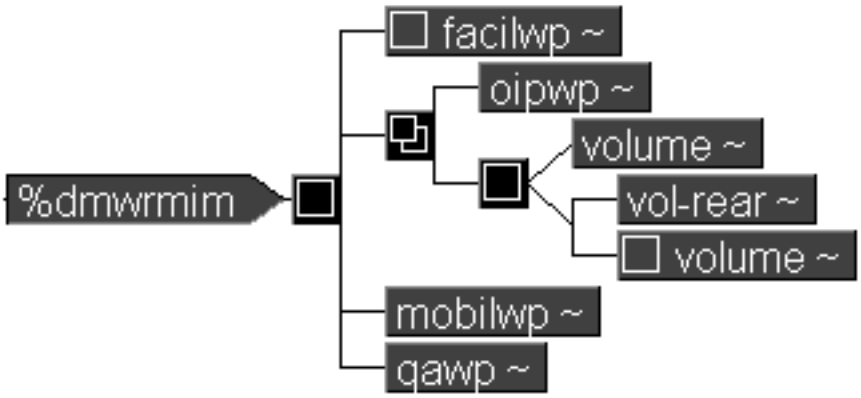

Figure 105 Depot Maintenance Work Requirement Maintenance Information Module %dmwrmim; DTD Hierarchy

a. DTD fragment for ***%dmwrmim;***:

```
<!ENTITY % dmwrmim; "(facilwp?, (oipwp,%vol.group;)*, mobilwp, qawp)>
```

28.3.2.1 Facilities Work Package <***facilwp***>. **DEPOT only**. The facilities work package <***facilwp***> contains a description of all facilities, such as test stands, test tracks, clean rooms, shielded rooms, or other facilities that are required to do the maintenance work. The element contains identification information required for a work package (<***wpidinfo***> see 33.4.5), followed by initial setup information (<***wpinfo***> see 33.4.6.1),and paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4).

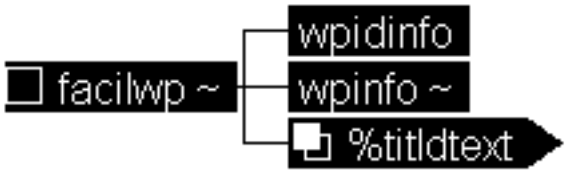

Figure 106 Facilities Work Package DTD Hierarchy

a. DTD fragment for <***facilwp***>:

```
<!ELEMENT facilwp - - (wpidinfo, wpinfo, (%titldtext;)+)>
<!ATTLIST facilwp
            wpno            ID       #REQUIRED
            %tracking;
            %wprsrc-vals;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***facilwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

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(2) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).
(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).
(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.2.2 Overhaul Inspection Procedure Work Package(s) <***oipwp***>**. Depot only.** The overhaul inspection procedure work package <***oipwp***> consists of overhaul inspection procedures (OIPs) for items that have parts with specific characteristics, wear limits, specified performance requirements, or fatigue characteristics. The overhaul inspection procedure work packages is subdivided into the following elements and content requirements.

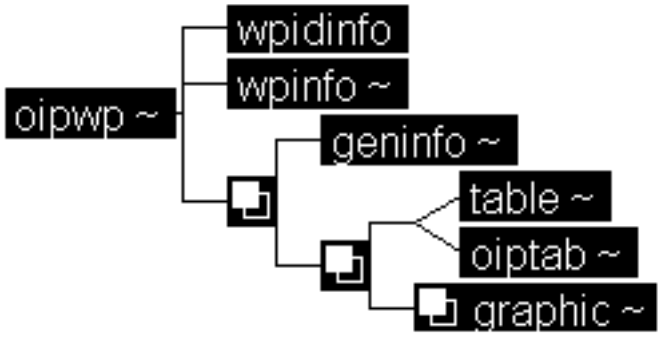

Figure 107 Overhaul Inspection Procedure Work Package DTD Hierarchy

a. DTD fragment for <***oipwp***>:

```
<!ELEMENT oipwp - - (wpidinfo, wpinfo, (geninfo, ((table | oiptab),
                    graphic+)+)+)>
<!ATTLIST oipwp
            wpno            ID       #REQUIRED
            %tracking;
            %wprsrc-vals;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***oipwp***>:
(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.
(2) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).
(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).
(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.2.2.1 The element <***wpidinfo***> (see 33.4.5) defines the identification information required for a work package.

28.3.2.2.2 The element <***wpinfo***> (see 33.4.6.1) provides the maintenance technician with general information, equipment, parts, material, and authorized personnel required to perform and complete all the operating tasks included in the work package.

28.3.2.2.3 The element <***geninfo***> (see 33.4.4.11) is introductory information for the overhaul inspection procedure work package.

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28.3.2.2.4 The element <***table***> (see 33.4.4.11) is a generic table to specify unique OIP requirements not identified in the common OIP table.

28.3.2.2.5 The element overhaul inspection procedures table <***oiptab***> contains the content elements in the common overhaul inspection procedures table. It contains a required title <***title***> follow by one or more overhaul inspection procedure item(s) <***oipitem***>.

a. DTD fragment for <***oiptab***>:

```
<!ELEMENT oiptab - o (title, oipitem+) >
<!ATTLIST oiptab
            oipno    ID     #REQUIRED
            refs     IDREFS #IMPLIED
            %secur;>
```

b. Attributes for <***oiptab***>:

(1)

(a) **OIPNO** - Identifies the OIP number.

(b) **REFS** - The Cross Reference identifier to the reference letter that may be included in the OIP to locate the critical inspection characteristics of the parts on the illustrations.

(c) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

(2) DTD fragment for <***oipitem***>:

```
<!ELEMENT oipitem - o (itemno, callout, desc, insp-method, actionreq)>
<!ATTLIST oipitem
            %qa;
            %refs;
            %secur;>
```

(3) Attributes for <***oipitem***>:

(a)

(a) **%QA;** Refer to common parameter entities for a complete description (see 33.5.5).

(b) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(c) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

c. SGML Document Instance Fragment:

```
<oiptab oipno="rg38631-2">
<title id="bgbbbafb">Pump Housing</title>
<oipitem>
<itemno>1</itemno>
<callout label="">
<desc>Serviceability</desc>
<insp-method>Visual</insp-method>
<actionreq>Examine for burrs, minor dents, gouges scratches,
and pitting.<xref wpid="m00003-9-xxxx-xxx" pretext="Refer to " posttext="
for additional inspection criteria."></actionreq>
</oipitem>
<oipitem>
<itemno>2</itemno>
<callout label="A">
<desc>Pump body</desc>
<insp-method>Visual</insp-method>
<actionreq>No cracks, corrosion, foreign material, or deformation.</actionreq>
</oipitem>
<oipitem>
<itemno>3</itemno>
<callout label="B">
<desc>Pump bores</desc>
<insp-method>Visual</insp-method>
<actionreq>No cracks, corrosion, foreign material, or deformation.</actionreq>
</oipitem>
```

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```
<oipitem>
<itemno>4</itemno>
<callout label="C">
<desc>Mounting flanges and surfaces </desc>
<insp-method>Visual</insp-method>
<actionreq>No cracked, broken, or bent flanges.  </actionreq>
</oipitem>
<oipitem>
<itemno>5</itemno>
<callout label="D">
<desc>Threads and threaded ports</desc>
<insp-method>Visual</insp-method>
<actionreq>Examine for cross-threaded, stripped, dented, or damaged
threads.  Refer to <emphasis emph="bolditalic"> Repair or Replacement
Paragraph </emphasis> for repair information.  Preformed packing chamfers
must be free from nicks, burrs, scratches, and deformation.</actionreq>
</oipitem>
<oipitem>
<itemno>6</itemno>
<callout label="E">
<desc> Ports and sealing surfaces </desc>
<insp-method>Visual</insp-method>
<actionreq>No scratches, burrs, deformation, or foreign material.</actionreq>
</oipitem>
</oiptab>
```

d. Sample FOSI Output Output Overhaul Inspection Procedures Table <***oiptab***>:

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Table14. OIP RG38631-2 Pump Housing

QA REQ	NO.	REF LTR	CHARACTERISTIC	INSP METHOD	REQUISITE
No	1		Serviceability	Visual	Examine for burrs, minor dents, gouges scratches, and pitting. Refer to WP 0005 00 for additional inspection criteria.
No	2	A	Pump body	Visual	No cracks, corrosion, foreign material, or deformation.
No	3	B	Pump bores	Visual	No cracks, corrosion, foreign material, or deformation.
No	4	C	Mounting flanges and surfaces	Visual	No cracked, broken, or bent flanges.
No	5	D	Threads and threaded ports	Visual	Examine for cross-threaded, stripped, dented, or damaged threads. Refer to *Repair or Replacement Paragraph* for repair information. Preformed packing chamfers must be free from nicks, burrs, scratches, and deformation.
No	6	E	Ports and sealing surfaces	Visual	No scratches, burrs, deformation, or foreign material.

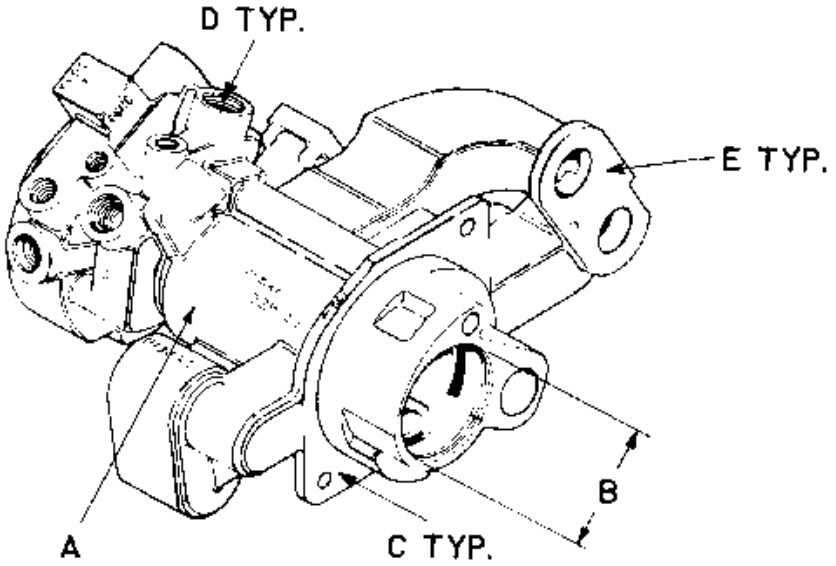

Figure 108 Sample FOSI Output Overhaul Inspection Procedures Table <oiptable>

28.3.2.2.5.1 The element <***oipitem***> contain entries of the overhaul inspection procedure table. It is equivalent to a "row" element in a structural table. The QA acronym is display in the first column of the table to identify the characteristics having a major qualify assurance effect. The column is derived from the QA attribute.

a. DTD fragment for <***oipitem***>:

```
<!ELEMENT oipitem - o (itemno, callout, desc, insp-method, actionreq) >
<!ATTLIST oipitem
            %qa;
            %refs;
            %secur;>
```

b. Attributes for <***oipitem***>:

(1)

(a) **%QA;** Refer to common parameter entities for a complete description (see 33.5.5).

(b) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

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(c) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.2.2.5.1.1 The element <***itemno***> (see 30.3.1.7.1.2.1) is the number assigned to the entry which is entered in the second column of the overhaul inspection procedure (OIP) table.

28.3.2.2.5.1.2 The element <***callout***> (see 33.4.1.3.2) is the reference letter entered in the third column of the OIP table to locate the critical inspection characteristics of the parts on the illustration.

28.3.2.2.5.1.3 The element <***desc***> (see 30.3.1.5.1.1.4.1.1) contains the name and description of the item which is entered in the fourth column of the OIP table.

28.3.2.2.5.1.4 The element <***insp-method***> (see 28.3.1.5.5.22.3.1) is the type of inspection method used for inspecting the item and is entered in the fifth column of the OIP table.

28.3.2.2.5.1.5 The element <***actionreq***> (see 28.3.1.5.5.22.2.1) identifies the required action to be performed to correct the defect. This element appears in the sixth column of the OIP table.

a. DTD fragment for <***actionreq***>:

```
<!ELEMENT actionreq - o (%text;)>
<!ATTLIST actionreq
            %bodyatt;
            %secur;>
```

b. Attributes for <***actionreq***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.2.2.6 The element <***graphic***> (see 33.4.3.1.2) identifies an illustration(s), which relates to the prior OIP table.

28.3.2.3 Depot Mobilization Requirements Work Package <***mobilwp***>. **Depot only**. The depot mobilization requirements work package <***mobilwp***> includes the modifications, deletions, or additions to the preshop analysis or overhaul procedure required during mobilization. The element contains identification information required for a work package (<***wpidinfo***>), followed by initial setup information <***wpinfo***>, an introductory section <***intro***> and requirements to modify, delete, or add data to the DMWR during mobilization (<***mobilreq***>).

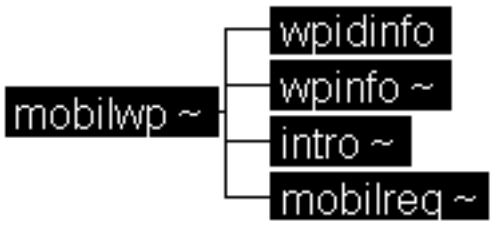

Figure 109 Depot Mobilization Requirements Work Package DTD Hierarchy

a. DTD fragment for <***mobilwp***>:

```
<!ELEMENT mobilwp - - (wpidinfo, wpinfo, intro, mobilreq)>
<!ATTLIST mobilwp
            wpno            ID       #REQUIRED
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***mobilwp***>:

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(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.
(2) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).
(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).
(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.2.3.1 The element <***wpidinfo***> (see 33.4.5) defines the identification information required for a work package.

28.3.2.3.2 The element <***wpinfo***> (see 33.4.6.1) provides the maintenance technician with general information, equipment, parts, material, and authorized personnel required to perform and complete all the operating tasks included in the work package.

28.3.2.3.3 The element <***intro***> (see 33.4.4.12) is an introductory section containing verbatim statements for a depot mobilization requirements work package.

28.3.2.3.4 The element <***mobilreq***> is used for the requirements for all analysis and procedures that are modified during mobilization are contained within the mobilization requirements. The element <***mobilreq***> contains an explanation paragraph (<***para***> see 33.4.1.5.3), followed by a mobilization requirement table <***mobiltab***>.

a. DTD fragment for <***mobilreq***>:

```
<!ELEMENT mobilreq - - (para, mobiltab)>
<!ATTLIST mobilreq
            %refs;
            %secur;>
```

b. Attributes for <***mobilreq***>:
(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.2.3.4.1 The element <***mobiltab***> is a standard mobilization table that contains the requirements for all analysis and procedures that are modified during mobilization. The element contains a table title (<***title***> see 33.4.1.5.1), work package reference (<***xref***> see 33.4.1.3.6) is the first column, and action required for mobilization (<***actionreq***> see 28.3.2.2.5.1.5) is the second column.

a. DTD fragment for <***mobiltab***>:

```
<!ELEMENT mobiltab - o (title, (xref, actionreq)+)>
<!ATTLIST mobiltab
            %refs;
            %secur;>
```

b. Attributes for <***mobiltab***>:
(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.2.4 Quality Assurance Requirements Work Package <***qawp***>. **Depot only**. The quality assurance work package <***qawp***> contains the requirements to prepare a quality assurance work package and in accordance with ISO 9000. The element contains identification information required for a work package <***wpidinfo***>, followed by initial setup information <***wpinfo***>, a responsibility statement <***responsibility***>, an optional definition statement <***def***>, an optional special requirements for inspection tools and equipment statement <***specialreq***>, an optional certification requirements statement <***certreq***>, an in-process inspections statement <***inprocess***>, an acceptance statement <***acceptance***>, and an optional first article inspection statement <***first***>.

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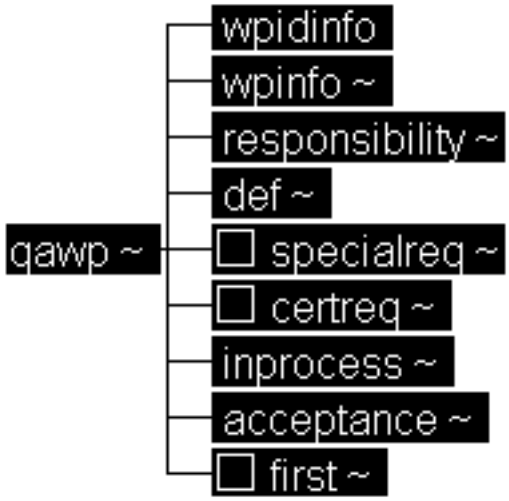

Figure 110 Quality Assurance Requirements Work Package DTD Hierarchy

a. DTD fragment for <***qawp***>:

```
<!ELEMENT qawp - - (wpidinfo, wpinfo, responsibility, def?, specialreq?,
                    certreq?,inprocess, acceptance, first?))>
<!ATTLIST qawp
            wpno        ID       #REQUIRED
            %tracking;
            %wprsrc-vals;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***qawp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.2.4.1 The element <***wpidinfo***> (see 33.4.5) defines the identification information required for a work package.

28.3.2.4.2 The element <***wpinfo***> (see 33.4.6.1) provides the maintenance technician with general information, equipment, parts, material, and authorized personnel required to perform and complete all the operating tasks included in the work package.

28.3.2.4.3 The element <***responsibility***> is used for the responsibility statement that defines the responsibilities of the depot/contractor. The element <***responsibility***> contains a paragraph (<***para***> see 33.4.1.5.3). The paragraph(s) may be entered using an entity reference (see 35.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051.

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a. DTD fragment for <***responsibility***>:

```
<!ELEMENT responsibility - o (para)>
<!ATTLIST responsibility
            %refs;
            %secur;>
```

b. Attributes for <***responsibility***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.2.4.4 The element <***def***> (see 33.4.1.2.3.2) contains a specific definition for all QA terms applicable to the DMWR.

28.3.2.4.5 The element <***specialreq***> is used for special requirements for inspection tools and equipment statement. The element defines the requirements for the maintenance and calibration of tools and test equipment used in the quality assurance inspections. The element <***specialreq***> contains the paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4).

a. DTD fragment for <***specialreq***>:

```
<!ELEMENT specialreq - o (%titldtext;)>
<!ATTLIST specialreq
            %refs;
            %secur;>
```

b. Attributes for <***specialreq***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.2.4.6 The element <***certreq***> is used the statement for certification or licensing requirements for process, procedures, materials, equipment or personnel skills within a quality assurance work package. The element <***certreq***> contains the paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4).

a. DTD fragment for <***certreq***>:

```
<!ELEMENT certreq - o (%titldtext;)>
<!ATTLIST certreq
          %refs;
          %secur;>
```

b. Attributes for <***certreq***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.2.4.7 The element <***inprocess***> is used for the statement that defines the method used to identify QA in-process inspections. The element <***inprocess***> contains a paragraph (<***para***> see 33.4.1.5.3). The paragraph(s) may be entered using an entity reference (see 35.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051.

a. DTD fragment for <***inprocess***>:

```
<!ELEMENT inprocess - o (para)>
<!ATTLIST inprocess
            %refs;
            %secur;>
```

b. Attributes for <***inprocess***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.2.4.8 The element <***acceptance***> is used for a statement that defines the method used for acceptance inspection. The element <***acceptance***> contains a paragraph (<***para***> see 33.4.1.5.3). The paragraph(s) may be entered using an entity reference (see 35.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051.

a. DTD fragment for <***acceptance***>:

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```
<!ELEMENT acceptance - o (para)>
<!ATTLIST acceptance
            %refs;
            %secur;>
```

b. Attributes for <***acceptance***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.2.4.9 The element <***first***> is used for the statement that defines the criteria used to inspect the first article in accordance with ISO 9000. The element <***first***> contains the paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4).

a. DTD fragment for <***first***>:

```
<!ELEMENT first - o (%titldtext;)>
<!ATTLIST first
          %refs;
          %secur;>
```

b. Attributes for <***first***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.3 Supporting Maintenance Information Chapter ***%supportmim;***. The Supporting Maintenance Information Chapter may consists of an Illustrated list of Manufactured Items Work Package <***manuwp***>, Torque Limits Work Package Work Package <***torquewp***> (see 28.3.3.2), Inventory Work Package <***inventorywp***> (see 28.3.3.3), Storage of Aircraft Work Package <***storagewp***> (see 28.3.3.4), Weighing and Loading Work Package <***wtloadwp***> (see 28.3.3.5), and Wiring Diagrams Work Package <***wiringwp***> (see 28.3.3.6).

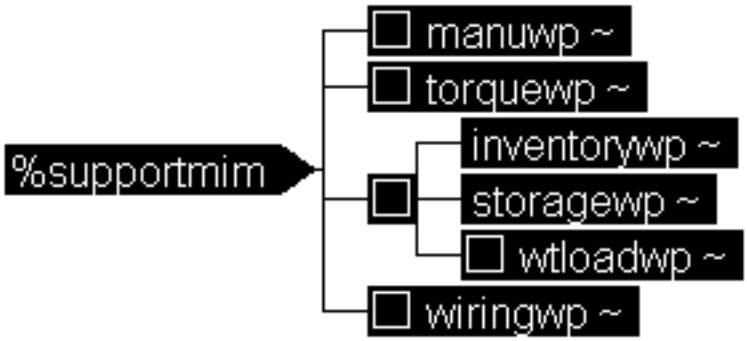

Figure 111 Depot Maintenance Work Requirement Maintenance Information Module %supportmim; DTD Hierarchy

a. DTD fragment for ***%supportmim;***:

```
<!ENTITY % supportmim; "(manuwp?, torquewp?, (inventorywp, storagewp,
                        wtloadwp?)? wiringwp?">
```

28.3.3.1 Illustrated List of Manufactured Items Work Package <***manuwp***>. This work package is for **Unit level and above technical equipment manuals only**. The manufactured items work package <***manuwp***> contains technical information for each item authorized to be manufactured or fabricated by maintenance level. The element contains identification information required for a work package (<***wpidinfo***>, see 33.4.5) followed by initial setup information (<***wpinfo***> see 33.4.6.1) , an introductory section (<***intro***> see 33.4.4.12), an index of the manufactured items <***manuindx***>, and illustration(s) (<***graphic***> see 33.4.3.1.2) followed by paragraphs (<***para***> see 33.4.1.5.3), procedures (<***proc***> see 33.4.1.8.1), note(s) (<***note***> see 33.4.1.1.4) and materials/parts required (<***mtrlpart***> see 33.4.6.1.3).

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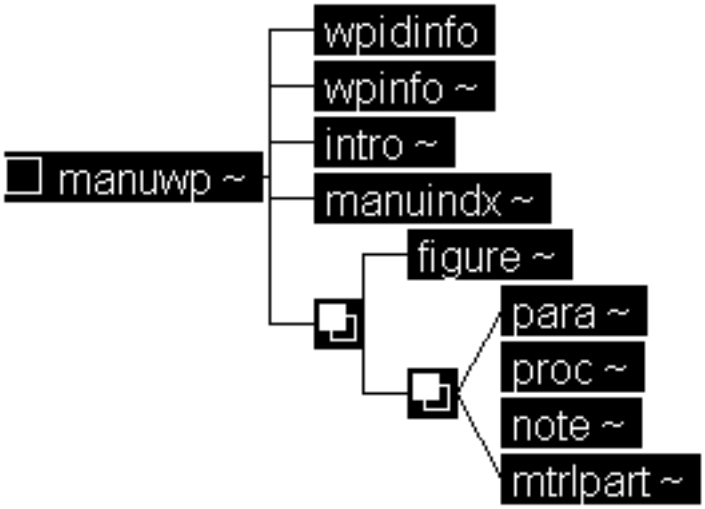

Figure 112 Illustrated list of Manufactured Items Work Package DTD Hierarchy

a. DTD fragment for <***manuwp***>:

```
<!ELEMENT manuwp - - (wpidinfo, wpinfo, intro, manuindx, (figure,(para |
                      proc | note |mtrlpart)+)+)>
<!ATTLIST manuwp
            wpno            ID       #REQUIRED
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***manuwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(3) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(4) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.3.1.1 The element <***manuindx***> is used for Illustrated List of Manufactured Items Index (unit level or above). The manufactured items index <***manuindx***> contains a list of all manufactured items by a part description <***partdesc***> followed by one or more figure number reference(s) <***figno***> for each item.

a. DTD fragment for <***manuindx***>:

```
<!ELEMENT manuindx - - (partdesc, figno?)+>
<!ATTLIST manuindx
            %bodyatt;
            %secur;>
```

b. Attributes for <***manuindx***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

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28.3.3.1.1.1 The element <***partdesc***> contains the manufactured part description which includes either the part number (<***partno***> see 33.4.4.17) and an optional name of the part number (<***name***> see 33.4.4.15) or the drawing number (<***dwgno***> see 33.4.4.8) and optional name of the item (<***name***> see 33.4.4.15).

a. DTD fragment for <***partdesc***>:

```
<!ELEMENT partdesc - - ((partno | dwgno), name?)>
<!ATTLIST partdesc
            %bodyatt;
            %secur;>
```

b. Attributes for <***partdesc***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.3.1.1.2 The element <***figno***> contains the reference to the applicable figure.

a. DTD fragment for <***figno***>

```
<!ELEMENT (figno) - o EMPTY>
<!ATTLIST (figno)
             idref   IDREF   #REQUIRED>
```

b. Attributes for <***figno***>:

(1) **IDREF** - References the identifier of the figure bearing the figure number.

28.3.3.2 Torque Limits Work Package <***torquewp***>. This work package is for **Unit level and above technical equipment manuals only**. The torque limits work package <***torquewp***> provides the applicable torque values data to the specific torque sequencing requirements. The element contains identification information required for a work package (<***wpidinfo***> see 33.4.5), followed by initial setup information (<***wpinfo***> see 33.4.6.1) an introductory section (<***intro***> see 33.4.4.12) and torque values <***torqueval***>. This work package is for **Unit level and above technical equipment manuals only**.

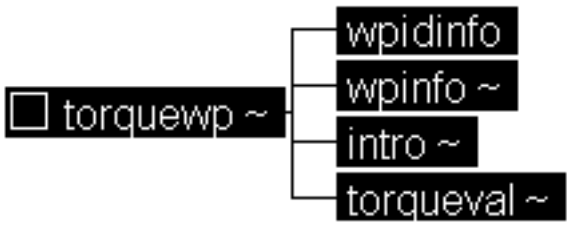

Figure 113 Torque Limits Work Package DTD Hierarchy

a. DTD fragment for <***torquewp***>:

```
<!ELEMENT torquewp - - (wpidinfo, wpinfo, intro, torqueval)>
<!ATTLIST torquewp
            wpno      ID    #REQUIRED
            %tracking;
            %wprsrc-vals;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***torquewp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

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(2) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).
(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).
(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.3.2.1 The element <***torqueval***> identifies torque values which will be expressed in lb-ft or lb-in terms. The element <***torqueval***> contains an optional title (<***title***> see 33.4.1.5.1) followed by paragraphs (<***para***> see 33.4.1.5.3), and/or paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1) and procedures (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***torqueval***>:

```
<!ELEMENT torqueval - - (title?, (para  | specpara| proc)+)>
<!ATTLIST torqueval
            %refs;
            %secur;>
```

b. Attributes for <***torqueval***>:
(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.3.3 Inventory Work Package <***inventorywp***>. The inventory work package <***inventorywp***> contains information on standard inventory procedures to determine inventoriable items. The element contains an identification information required for a work package (<***wpidinfo***> see 33.4.5), followed by initial setup information (<***wpinfo***> see 33.4.6.1), introductory section (<***intro***> see 33.4.4.12), a security classification notice <***security***>, inventoriable items <***inventoriable***>, and periods of inventory <***prdinv***>.

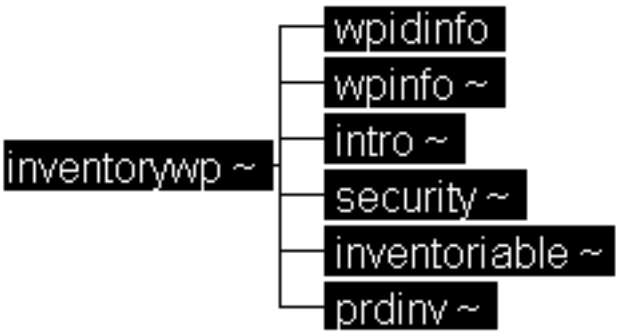

Figure 114 Inventory Work Package DTD Hierarchy

a. DTD fragment for <***inventorywp***>:

```
<!ELEMENT inventorywp - - (wpidinfo, wpinfo, intro, security, inventoriable,
                           prdinv)>
<!ATTLIST inventorywp
            wpno     ID     #REQUIRED
            %tracking;
            %wprsrc-vals;
            %wpbodyatt;
          %secur;>
```

b. Attributes for <***inventorywp***>:

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(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.
(2) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).
(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).
(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.3.3.1 The element <***security***> security statement explains the classification of the aircraft inventory master guide data. The element <***security***> contains paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4).

a. DTD fragment for <***security***>:

```
<!ELEMENT security - o (%titldtext;)>
<!ATTLIST security
            %refs;
            %secur;>
```

b. Attributes for <***security***>:
(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.3.3.2 The element <***inventoriable***> is the criteria used to define inventoriable items. This includes all items without regard to the source or ownership. Inventoriable items information is also used as source data for DA Form 2408-17. The element <***inventoriable***> contains paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4).

a. DTD fragment for <***inventoriable***>:

```
<!ELEMENT inventoriable - o (%titldtext;)>
<!ATTLIST inventoriable
            %refs;
            %secur;>
```

b. Attributes for <***inventoriable***>:
(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.3.3.3 The element <***prdinv***> identifies periods of inventories which are normally performed upon receipt, transfer, or every 12 months are contained within this element. The element <***prdinv***> contains the paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4). The paragraph(s) may be entered using an entity reference (see 35.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051.

a. DTD fragment for <***prdinv***>:

```
<!ELEMENT prdinv - o (%titldtext;)>
<!ATTLIST prdinv
            %refs;
            %secur;>
```

b. Attributes for <***prdinv***>:
(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.3.4 Storage of Aircraft Work Package <***storagewp***>. The storage of aircraft work package <***storagewp***> describes each category of aircraft storage and removal from storage. The element contains identification information required for a work package (<***wpidinfo***> see 33.4.5), followed by initial setup information (<***wpinfo***> see 33.4.6.1), a general information section (<***geninfo***> see 33.4.4.11), and the types of aircraft storage <***flyable***>, <***short***> and <***intermediate***>. **(Aircraft only.)**

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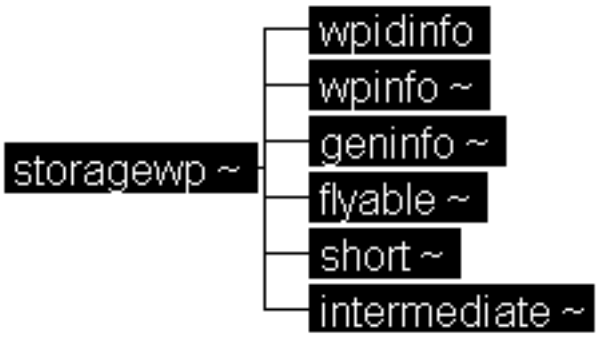

Figure 115 Storage of Aircraft Work Package DTD Hierarchy

a. DTD fragment for <***storagewp***>:

```
<!ELEMENT storagewp - - (wpidinfo, wpinfo, geninfo, flyable, short,
                         intermediate)>
<!ATTLIST storagewp
            wpno         ID       #REQUIRED
            %tracking;
            %wprsrc-vals;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***storagewp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(3) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(4) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.3.4.1 The element <***flyable***> is used for procedures for flyable storage of aircraft. The element <***flyable***> contains an optional title (<***title***> see 33.4.1.5.1), followed by either paragraph(s) (<***para***> see 33.4.1.5.3), paragraph(s) with required alert notices (<***specpara***> see 33.4.1.1.1) and/or procedure(s) (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***flyable***>, <***short***>, and <***intermediate***>:

```
<!ELEMENT (flyable |
           short |
           intermediate) - o (title?,  (para | specpara | proc)+)+>
<!ATTLIST (flyable |
           short |
           intermediate)
             %hcp.esd
             %refs;
             %secur;>
```

b. Attributes for <***flyable***>, <***short***>, and <***intermediate***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).

(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

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28.3.3.4.2 The element <***short***> is used for criteria for short length storage of aircraft. The element <***short***> contains an optional title (<***title***> see 33.4.1.5.1), followed by either paragraph(s) (<***para***> see 33.4.1.5.3), paragraph(s) with required alert notices (<***specpara***> see 33.4.1.1.1) and/or procedure(s) (<***proc***> see 33.4.1.8.1).

a. The DTD fragment of <***short***>: (See 28.3.3.4.1a.).
b. The attributes of <***short***>: (See 28.3.3.4.1b.).

28.3.3.4.3 The element <***intermediate***> is used for criteria for intermediate-length storage of aircraft. The element <***intermediate***> contains an optional title (<***title***> see 33.4.1.5.1) followed by either paragraph(s) (<***para***> see 33.4.1.5.3), paragraph(s) with required alert notices (<***specpara***> see 33.4.1.1.1) and/or procedure(s) (<***proc***> see 33.4.1.8.1).

a. The DTD fragment of <***intermediate***>: (See 28.3.3.4.1a.).
b. The attributes of <***intermediate***>: (See 28.3.3.4.1b.).

28.3.3.5 Weighing and Loading Work Package <***wtloadwp***>. The weighing and loading work package element provides description, information, and procedures for aircraft weighing, balancing, and loading. The element <***wtloadwp***> contains identification information required for a work package (<***wpidinfo***> see 33.4.5), followed by initial setup information (<***wpinfo***> see 33.4.6.1), a general information section (<***geninfo***> see 33.4.4.11), a form chart <***formchart***> and weight instructions <weightinst> are intended to be used.

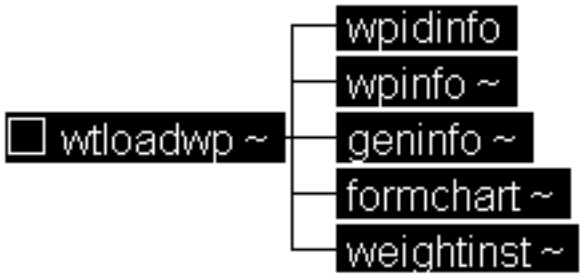

Figure 116 Weighing and Loading Work Package DTD Hierarchy

a. DTD fragment for <***wtloadwp***>:

```
<!ELEMENT wtloadwp - - (wpidinfo, wpinfo, geninfo, formchart, weightinst)
<!ATTLIST wtloadwp
            wpno         ID       #REQUIRED
            %tracking;
            %wprsrc-vals;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***wtloadwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.
(2) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).
(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).
(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.3.5.1 The element <***formchart***> contains instructions for preparing the aircraft, weighing the aircraft in the basic weight condition, performing calculations, and using and recording data on DD Form 365-1

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(Basic Wight Checklist) and DD Form 365-2 (Aircraft Weighing Record) within the weighing and loading work package. The element <***formchart***> contains the paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4), and/or procedure(s) (<***proc***> see 33.4.1.8.1), and/or figure(s) (<***figure***> see 33.4.3.1).

a. DTD fragment for <***formchart***>:

```
<!ELEMENT formchart - - (proc | %titldtext; | figure)+>
<!ATTLIST formchart
            %hcp.esd;
            %refs;
            %secur;>
```

b. Attributes for <***formchart***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.3.5.2 The element <***weightinst***> contains the weighing instructions and is prepared in accordance with DD Form 365-1. The element <***weightinst***> contains the preliminary weighing instructions <***prelim***> followed by the weighing equipment instructions <***weighteqp***>.

a. DTD fragment for <***weightinst***>:

```
<!ELEMENT weightinst - - (prelim, weighteqp)>
<!ATTLIST weightinst
            %refs;
            %secur;>
```

b. Attributes for <***weightinst***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.3.5.2.1 The element <***prelim***> is used to enter the preliminary weighing instructions not covered in TM 55-1500-342-23. This element is used as part of a weight and balance work package applying to aircraft only. The element <***prelim***> contains the paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4).

a. DTD fragment for <***prelim***>:

```
<!ELEMENT prelim - - (%titldtext;)>
<!ATTLIST prelim
          %refs;
          %secur;>
```

b. Attributes for <***prelim***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.3.5.2.2 The element <***weighteqp***> is used to enter any additional instruction for use of the weighing equipment in the individual aircraft. The element <***weighteqp***> contains the paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4).

a. DTD fragment for <***weighteqp***>:

```
<!ELEMENT weighteqp - - (%titldtext;)>
<!ATTLIST weighteqp
            %refs;
            %secur;>
```

b. Attributes for <***weighteqp***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.3.6 Wiring Diagrams Work Package <***wiringwp***>. The wiring diagrams work package <***wiringwp***> provides descriptions and graphics to explain the wiring diagrams. The element contains identification information required for a work package (<***wpidinfo***> see 33.4.5) followed by initial setup information (<***wpinfo***> see 33.4.6.1) an introductory section (<***intro***> see 33.4.4.12), a wire identification explanation

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<***wireid***>, an abbreviations used list <***abbrev***>, and wiring diagrams <***wiringdiag***>. This work package is for unit level or above technical equipment manuals.

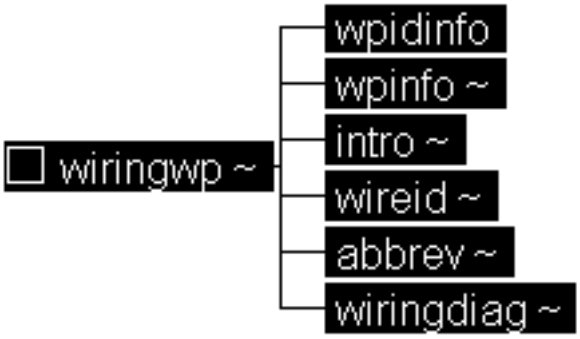

Figure 117 Wiring Diagrams Work Package DTD Hierarchy

a. DTD fragment for <***wiringwp***>:

```
<!ELEMENT wiringwp - - (wpidinfo, wpinfo, intro, wireid, abbrev,
                        wiringdiag))>
<!ATTLIST wiringwp
            wpno            ID       #REQUIRED
            %tracking;
            %wprsrc-vals;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***wiringwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.3.6.1 The element <***wireid***> is used for explanation of the wire identifications by number. The wiring identification should be prepared as table with the columns described in the narrative. The element <***wireid***> contains the paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4).

a. DTD fragment for <***wireid***>:

```
<!ELEMENT wireid - o (%titldtext;)>
<!ATTLIST wireid
            %refs;
            %secur;>
```

b. Attributes for <***wireid***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.3.6.2 The element <***abbrev***> is a statement that abbreviations are in accordance with MIL-STD-12, except when the abbreviation stands for a marking actually found in the equipment. The element <***abbrev***> contains the paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4).

a. DTD fragment for <***abbrev***>:

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```
<!ELEMENT abbrev - o (%titldtext;)>
<!ATTLIST abbrev
          %refs;
          %secur;>
```

b. Attributes for <***abbrev***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.3.6.3 The element <***wiringdiag***> is used for wiring diagrams, the element contains all electrical, electronic system, and circuit wiring diagrams. The element <***wiringdiag***> contains at least one figure (<***figure***> see 33.4.3.1).

a. DTD fragment for <***wiringdiag***>:

```
<!ELEMENT wiringdiag - o (figure)+)>
<!ATTLIST wiringdiag
          %refs;
          %secur;>
```

b. Attributes for <***wiringdiag***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.4 Maintenance Test Flight Maintenance Information Chapter ***%mtfmim;***. The Maintenance Test Flight Information Module may consist of multiple maintenance test flight procedure work packages <***mtfprocwp***> or a maintenance test flight chart work package <***mtfchartwp***>.

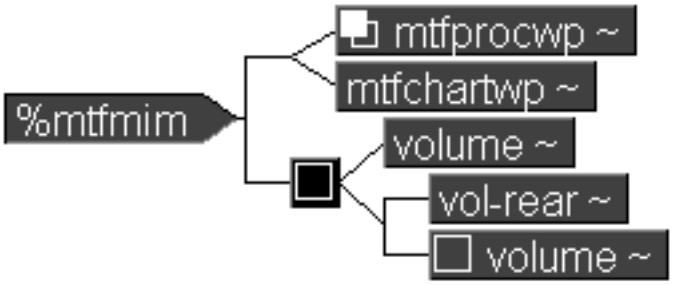

Figure 118 Maintenance Test Flight Maintenance Information Module DTD Hierarchy

a. DTD fragment for ***%mtfmim;***:

```
<!ENTITY %mtfmim "(mtfprocwp+ | mtfchartwp)">
```

28.3.4.1 Maintenance Test Flight Maintenance Procedures Work Package <***mtfprocwp***>. The maintenance test flight maintenance procedures work package describes pre- and post-flight maintenance, services, and check lists on an aircraft. The <***mtfprocwp***> is subdivided into the following elements and content requirements:

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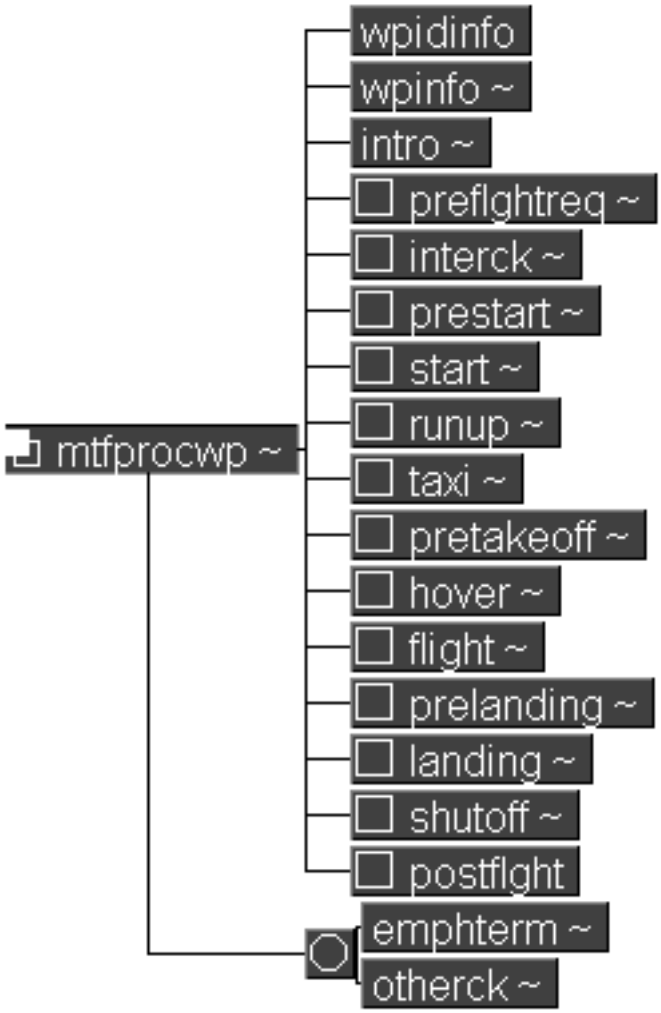

Figure 119 Maintenance Test Flight Maintenance Procedures Work Package DTD Hierarchy

a. DTD fragment for <***mtfprocwp***>:

```
<!ELEMENT mtfprocwp - -  (preflghtreq?, interck?, prestart?, start?,
                          runup?, taxi?, pretakeoff?, hover?,
                          flight?, prelanding?, landing?, shutoff?,
                          postflght?) +(emphterm|otherck)>
<!ATTLIST mtfprocwp
            wpno            ID              #REQUIRED
            %tracking;
            %wprsrc-vals;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***mtfprocwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced

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through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).
(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).
(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.4.1.1 The element <***wpidinfo***> (see 33.4.5) defines the identification information required for a work package.

28.3.4.1.2 The element <***wpinfo***> (see 33.4.6.1) provides the maintenance technician with general information, equipment, parts, material, and authorized personnel required to perform and complete all the operating tasks included in the work package.

28.3.4.1.3 The element <***preflghtreq***> contains the checks necessary prior to flight. This element contains paragraphs of text or procedural text contained as contained within the parameter entity ***%procedures;*** (see 33.3.5).

a. DTD fragment for <***preflghtreq***>:

```
<!ELEMENT preflghtreq - - (%procedures;)>
<!ATTLIST preflghtreq
            %bodyatt;
            %secur;>
```

b. Attributes for <***preflghtreq***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.4.1.4 The element <***interck***> contains checks necessary to the interior. This element may contain alert statements (***%alert;*** see 33.3.3), paragraphs (<***para***> see 33.4.1.5.3) and/or paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1), and procedural text (<***proc***> see 33.4.1.8.1), procedure items <***proc-item***>, or check list procedures <***cl-proc***>. In addition, figures (<***figure***> see 33.4.3.1) and operations procedure symbols <***opsym***> may be entered.

a. DTD fragment for <***interck***>, <***start***>, <***taxi***>, <***hover***>, <***landing***>, and <***shutoff***>:

```
<!ELEMENT  (interck |
            start |
            taxi |
            hover |
            landing |
            shutoff) - - ((%alert;, (para | specpara)*, (proc | proc-item+))
                          | cl-proc+) -(genoperproc) +(figure|opsym)>
<!ATTLIST (interck |
           start |
           taxi |
           hover |
           landing |
           shutoff)
             crewmember  CDATA       #IMPLIED
             title       CDATA       #REQUIRED
             %hcp.esd;
             %bodyatt;
             %secur;>
```

b. Attributes for <***interck***>, <***start***>, <***taxi***>, <***hover***>, <***landing***>, and <***shutoff***>:

(1) **CREWMEMBER** - The crewmember that should perform these checks is specified.
(2) **TITLE**- Specifies the title of the interior check.
(3) **%HCP.ESD; -** Refer to common parameter entities for a complete description (see 33.5.2).
(4) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

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(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.4.1.4.1 The element <***proc-item***> is a procedure for specific sub-componenat items. It contains a required title (<***title***> see 33.4.1.5.1) and at least one primary level step <***step1***>. The steps may be preceded by any alert statements (***%alert;*** see 33.3.3), and paragraphs (<***para***> see 33.4.1.5.3) and/or paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1).

a. DTD fragment for <***proc-item***>:

```
<!ELEMENT proc-item - - (title, %alert;, (para | specpara)*, step1+)>
<!ATTLIST proc-item
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***proc-item***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.4.1.4.2 The check list procedures element <***cl-proc***> represents detailed procedures that expand on procedures presented in condensed form elsewhere in a Pilot's Checklist TM. The <***cl-proc***> element contains an optional title (see 33.4.1.5.1), any alert statements (***%alert;*** see 33.3.3), followed by primary level steps (<***step1***> see 33.4.1.8.2).

a. DTD fragment for <***cl-proc***>:

```
<!ELEMENT cl-proc - - (title?, ((%alert;), step1+)) +(table | opsym)>
<!ATTLIST cl-proc
            procid IDREF #REQUIRED
            %hcp.esd;
            %secur;>
```

b. Attributes for <***cl-proc***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.4.1.4.3 The element <***opsym***> is an element used to contain a symbol that marks steps within flight operating procedures; symbols represent such aspects as copilot duty, night or instrument flight only. An SGML parser will only recognize entity references entered within this element. Any other text (including SGML tags) is not recognized by an SGML parser.

a. DTD fragment for <***opsym***>:

```
<!ELEMENT opsym - - RCDATA>
<!ATTLIST opsym
            circle  %yesorno;   "0"
            id      ID          #REQUIRED>
```

b. Attributes for <***opsym***>:

(1) **CIRCLE** - Specifies whether the symbol is a circled step number; a non-zero value indicates that it is.
(2) **ID** - Specifies the identifier of the operational symbol.

28.3.4.1.5 The element <***prestart***> contains the checks necessary for preparation of flight operation. This element contains paragraphs of text or procedural text as contained within the parameter entity (***%procedures;***.

a. DTD fragment for <***prestart***>, <***runup***>, <***pretakeoff***>, <***flight***>, <***prelanding***>, and <***otherck***>:

```
<!ELEMENT (prestart |
           runup |
           pretakeoff |
           flight |
           prelanding |
           otherck) - - (%procedures;) +(figure)>
<!ATTLIST (prestart |
```

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```
runup |
pretakeoff |
flight |
prelanding |
otherck)
  crewmember      CDATA   #IMPLIED
  %bodyatt;
  %secur;>
```

b. Attributes for <***prestart***>, <***runup***>, <***pretakeoff***>, <***flight***>, <***prelanding***>, and <***otherck***>:

(1) **CREWMEMBER** - The crewmember that should perform these checks is specified.

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.4.1.6 The element <***start***> contains the checks for starting the engine. This element may contains warnings <***warning***>, cautions <***cautions***>, and/or notes <***note***> contained within (***%alert;*** see 33.3.3), paragraphs (<***para***> see 33.4.1.5.3) and/or paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1), and procedural text (<***proc***> see 33.4.1.8.1), procedure items <***proc-item***>, or check list procedures <***cl-proc***>. In addition, figures (<***figure***> see 33.4.3.1)and operations procedure symbols <***opsym***> see 28.3.4.1.4.3) may be entered.

a. DTD fragment for <***start***>: (see 28.3.4.1.4a.).

b. Attributes for <***start***>: (see 28.3.4.1.4b.).

28.3.4.1.7 The element <***runup***> contains the checks for warm-up procedures. This element contains paragraphs or procedural text as contained within the parameter entity (***%procedures;*** see 33.3.5).

a. DTD fragment for <***runup***>: (see 28.3.4.1.5a.).

b. Attributes for <***runup***>: (see 28.3.4.1.5b.).

28.3.4.1.8 The element <***taxi***> contains the checks for taxiing. This element may contains warnings <***warning***>, cautions <***cautions***>, and/or notes <***note***> contained within (***%alert;*** see 33.3.3), paragraphs (<***para***> see 33.4.1.5.3) and/or paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1), and procedural text (<***proc***> see 33.4.1.8.1), procedure items <***proc-item***>, or check list procedures <***cl-proc***>. In addition, figures (<***figure***> see 33.4.3.1) and operations procedure symbols (<***opsym***> see 28.3.4.1.4.3) may be entered.

a. DTD fragment for <***taxi***>: (see 28.3.4.1.4a.).

b. Attributes for <***taxi***>: (see 28.3.4.1.4b.).

28.3.4.1.9 The element <***pretakeoff***> contains the checks necessary prior to takeoff. This element contains paragraphs of text or procedural text (***%procedures;*** see 33.3.5).

a. DTD fragment for <***pretakeoff***>: (see 28.3.4.1.5a.).

b. Attributes for <***pretakeoff***>: (see 28.3.4.1.5b.).

28.3.4.1.10 The element <***hover***> contains the checks for hovering. This element may contains warnings <***warning***>, cautions <***cautions***>, and/or notes <***note***> contained within (***%alert;*** see 33.3.3), paragraphs (<***para***> see 33.4.1.5.3) and/or paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1), and procedural text (<***proc***> see 33.4.1.8.1), procedure items <***proc-item***>, or check list procedures <***cl-proc***>. In addition, figures (<***figure***> see 33.4.3.1) and operations procedure symbols (<***opsym***> see 28.3.4.1.4.3) may be entered.

a. DTD fragment for <***hover***>: (see 28.3.4.1.4a.).

b. Attributes for <***hover***>: (see 28.3.4.1.4b.).

28.3.4.1.11 The element <***flight***> contains the flight checks for any special precautions that must be taken. This element contains paragraphs of text or procedural text as contained within the parameter entity (***%procedures;*** see 33.3.5).

a. DTD fragment for <***flight***>: (see 28.3.4.1.5a.).

b. Attributes for <***flight***>: (see 28.3.4.1.5b.).

28.3.4.1.12 The element <***prelanding***> contains the checks necessary prior to landing. This element contains paragraphs of text or procedural text as contained within the parameter entity (***%procedures;*** see 33.3.5).

a. DTD fragment for <***prelanding***>: (see 28.3.4.1.5a.).

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b. Attributes for <***prelanding***>: (see 28.3.4.1.5b.).

28.3.4.1.13 The element <***landing***> contains the checks necessary for landing. This element may contains warnings <***warning***>, cautions <***cautions***>, and/or notes <***note***> contained within (***%alert;*** see 33.3.3), paragraphs (<***para***> see 33.4.1.5.3) and/or paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1), and procedural text (<***proc***> see 33.4.1.8.1), procedure items <***proc-item***>, or check list procedures <***cl-proc***>. In addition, figures (<***figure***> see 33.4.3.1) and operations procedure symbols (<***opsym***> see 28.3.4.1.4.3) may be entered.

a. DTD fragment for <***landing***>: (see 28.3.4.1.4a.).
b. Attributes for <***landing***>: (see 28.3.4.1.4b.).

28.3.4.1.14 The element <***shutoff***> The element contains the checks for engine shutoff. This element may contains warnings <***warning***>, cautions <***cautions***>, and/or notes <***note***> contained within (***%alert;*** see 33.3.3), paragraphs (<***para***> see 33.4.1.5.3) and/or paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1), and procedural text (<***proc***> see 33.4.1.8.1), procedure items <***proc-item***>, or check list procedures <***cl-proc***>. In addition, figures (<***figure***> see 33.4.3.1)and operations procedure symbols (<***opsym***> see 28.3.4.1.4.3) may be entered.

a. DTD fragment for <***shutoff***>: (see 28.3.4.1.4a.).
b. Attributes for <***shutoff***>: (see 28.3.4.1.4b.).

28.3.4.1.15 The element <***postflight***> contains the checks for post flight inspection. This element contains paragraphs of text or procedural text as contained within the parameter entity (***%procedures;*** see 33.3.5).

a. DTD fragment for <***postflight***>:

```
<!ELEMENT postflght - - (%procedures;)>
```

28.3.4.1.16 The element <***emphterm***> (see 33.4.1.6.2) is used to denote placard text and is included where necessary.

28.3.4.1.17 The element <***otherck***> may be used to enter any other checks that do not have specific content elements. This element contains paragraphs of text or procedural text as contained within the parameter entity (***%procedures;*** see 33.3.5).

a. DTD fragment for <***otherck***>: (see 28.3.4.1.5a.).
b. Attributes for <***otherck***>: (see 28.3.4.1.5b.).

28.3.4.2 Maintenance Test Flight Chart Work Package <***mtfchartwp***>. The element <***mtfchartwp***> contains all the figures and/or tables required for the aircraft maintenance test flight check list. The maintenance test flight chart work package <***mtfchartwp***> is subdivided into the following elements and content requirements:

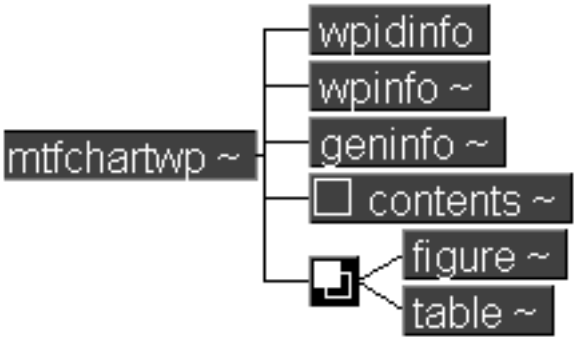

Figure 120 Maintenance Test Flight Chart Work Package DTD Hierarchy

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a. DTD fragment for <***mtfchartwp***>:

```
<!ELEMENT mtfchartwp - o (wpidinfo, wpinfo, geninfo, contents?, (figure |
                          table)+)>
<!ATTLIST mtfchartwp
            wpno     ID      #REQUIRED
            %tracking;
            %wprsrc-vals;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***mtfchartwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.4.2.1 The element <***wpidinfo***> (see 33.4.5) defines the identification information required for a work package.

28.3.4.2.2 The element <***wpinfo***> (see 33.4.6.1) provides the maintenance technician with general information, equipment, parts, material, and authorized personnel required to perform and complete all the operating tasks included in the work package.

28.3.4.2.3 The element <***geninfo***> (see 33.4.4.11) is introductory information for the work package.

28.3.4.2.4 The element <***contents***> (see 24.2.1.1.6) contains a table of contents for this work package.

28.3.4.2.5 The element <***figure***> (see 33.4.3.1) is used to enter figures within this work package.

28.3.4.2.6 The element <***table***> (see 33.4.2.1) is used to enter tabular information within this work package.

28.3.5 Ammunition Maintenance Information Chapter ***%ammomim;***. The Ammunition Maintenance Information Chapter consists of one or more ammunitions work package <***ammowp***>, and/or one or more ammunitions marking work package <***ammo.markingwp***> and/or one or more <***natowp***>.

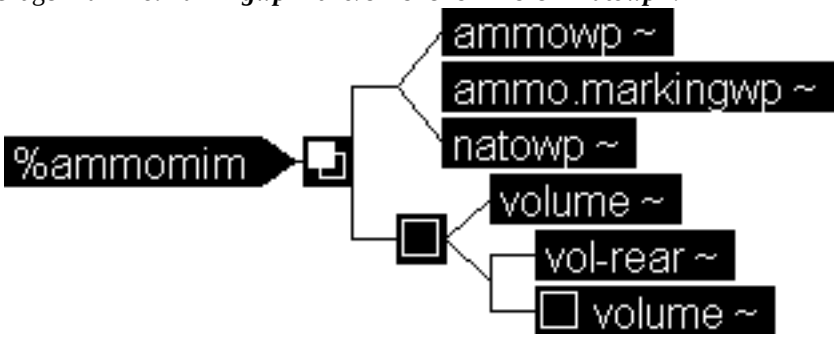

Figure 121 Ammunition Maintenance Information Module DTD Hierarchy

a. DTD fragment for ***%ammomim;***:

```
<!ENTITY % ammomim "(ammowp| ammo.markingwp | natowp), %vol.group;)+)">
```

28.3.5.1 Ammunition Maintenance Work Package <***ammowp***>. The element <***ammowp***> contains all procedures required for the care and handling of ammunition within the ammunition maintenance work package. There may be more than one ammunitions maintenance work package. The ammunitions maintenance work package is subdivided into the following content requirements:

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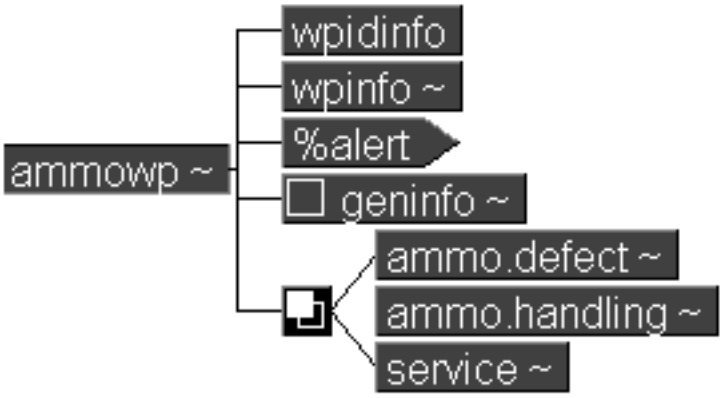

Figure 122 Ammunition Maintenance Work Package DTD Hierarchy

a. DTD fragment for <***ammowp***>:

```
<!ELEMENT ammowp - - (wpidinfo,  wpinfo?, warning*, caution*, note*,
                      geninfo?, (ammo.defect | ammo.handling | service)+)>
<!ATTLIST ammowp level (depot|operator| gensup|
                        dirsup| unitlvl|avum-avim |
                        inter|tmlvls)              #REQUIRED
            wpno  ID                               #REQUIRED
            %tracking;
            %wprsrc-vals;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***ammowp***>:

(1) **LEVEL** - The maintenance level of the work package.
   (a) “OPERATOR” – Applies to operator maintenance level.
   (b) “UNITLVL” – Applies to unit maintenance level.
   (c) “DIRSUP” – Applies to direct support (DS) maintenance level.
   (d) “GENSUP” – Applies to general support (GS) maintenance level.
   (e) “INTER” – Applies to intermediate (DS/GS) maintenance level.
   (f) “DEPOT” – Applies to depot maintenance level.
   (g) “AVUM-AVIM” – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.
   (h) “TMLVLS” – Applies to all maintenance levels.

(2) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(4) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(5) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(6) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.5.1.1 The element <***wpidinfo***> (see33.4.5) defines the identification information required for a work package.

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28.3.5.1.2 The element <***wpinfo***> (see 33.4.6.1) provides the maintenance technician with general information, equipment, parts, material, and authorized personnel required to perform and complete all the operating tasks included in the work package.

28.3.5.1.3 The element <***warning***> (see 33.4.1.1.2) is used to enter warnings pertaining to this work package.

28.3.5.1.4 The element <***caution***> (see 33.4.1.1.3) is used to enter cautions pertaining to this work package.

28.3.5.1.5 The element <***note***> (see 33.4.1.1.4) is used to enter notes pertaining to this work package.

28.3.5.1.6 The element <***geninfo***> (see 33.4.4.11) is introductory information for the work package.

28.3.5.1.7 The element <***ammo.defect***> is used for ammunition defect procedures and visual inspection information. This element contains paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4).

a. DTD fragment for <***ammo.defect***>:

```
<!ELEMENT ammo.defect  - o  ((%titldtext;)+)>
<!ATTLIST ammo.defect
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***ammo.defect***>:

(1) **%HCP.ESD;** (see 33.5.2)
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.5.1.8 The element <***ammo.handling***> is used for ammunition handling information. This element is used within the ammunition work package only. This element contains a required title (<***title***> see 33.4.1.3.6) followed by one or more of the following specific tasks: <***ammo.unpacking***>, <***acptrejinsp***>, <***ammo.markings***>, and/or <***ammo.packing***>.

a. DTD fragment for <***ammo.handling***>:

```
<!ELEMENT ammo.handling - o (title,(ammo.unpacking |acptrejinsp |
                              ammo.markings | ammo.packing)+)>
<!ATTLIST ammo.handling
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***ammo.handling***>:

(1) **%HCP.ESD;** (see 33.5.2)
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.5.1.8.1 The element <***ammo.unpacking***> contains all ammunition unpacking information. It contains a required title (<***title***> see 33.4.1.5.1) followed by at least one procedure (<***proc***> see 33.4.1.8.1) and/or at least one or more types of paragraphs of parameter entity paragraph type (***%p;*** see 33.3.2).

a. DTD fragment for <***ammo.unpacking***>:

```
<!ELEMENT ammo.unpacking - - (title, (proc | %p;)+)>
<!ATTLIST ammo.unpacking
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***ammo.unpacking***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

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28.3.5.1.8.2 The element <***acptrejinsp***> (see 28.3.1.5.5.15) is the task used for inspection-acceptance/rejection information required to determine the serviceability of the ammunition or related equipment within an ammunitions work package.

28.3.5.1.8.3 The element <***ammo.markings***> (see 28.3.5.2.7) is used for ammunition markings information.

28.3.5.1.8.4 The element <***ammo.packing***> contains all ammunition packing information. It contains a required title (<***title***> see 33.4.1.5.1) followed by at least one procedure (<***proc***> see 33.4.1.8.1) and/or at least one or more types of paragraphs of entity paragraph type (***%p;*** see 33.3.2).

a. DTD fragment for <***ammo.packing***>:

```
<!ELEMENT ammo.packing - - (title, (proc | %p;)+)>
<!ATTLIST ammo.packing
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***ammo.packing***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.5.1.9 The element <***service***> is used for instructions on complete servicing of the ammunition. Any other such items and materials required may be included (except for lubricants). The element <***service***> contains paragraphs (<***para***> see 33.4.1.5.3), paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1), and/or procedural text (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***service***>:

```
<!ELEMENT service - - (para | specpara | proc)+>
<!ATTLIST service
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***service***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.5.2 Ammunition Markings Work Package <***ammo.markingwp***>. The element <***ammo.markingwp***> contains all procedures required for marking ammunition within the ammunition markings work package. There may be more than one ammunitions markings work package. The ammunitions markings work package is subdivided into the following content requirements:

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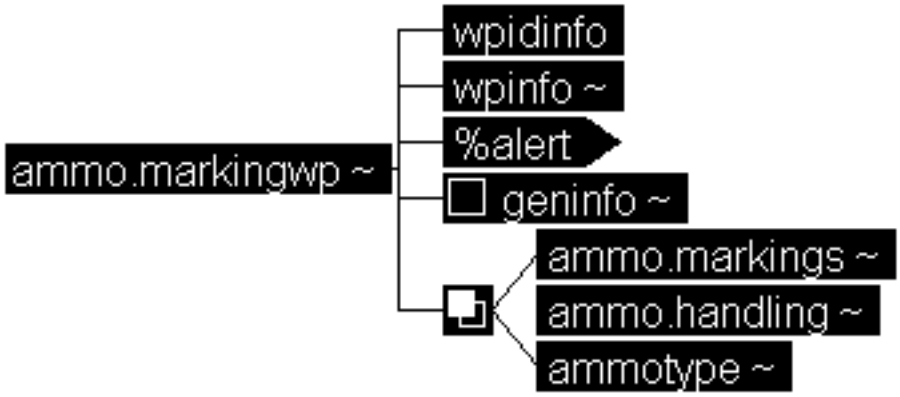

Figure 123 Ammunition Markings Work Package DTD Hierarchy

a. DTD fragment for <***ammo.markingwp***>:

```
<!ELEMENT ammo.markingwp - - (wpidinfo, wpinfo?, warning*, caution*, note*,
                              geninfo?, (ammo.defect | ammo.handling |
                              service)+)>
<!ATTLIST ammo.markingwp level (depot|operator|
                                gensup|dirsup|
                                unitlvl|avum-avim |
                                inter|tmlvls)          #REQUIRED
          wpno  ID                                     #REQUIRED

          %hcp.esd;
          %tracking;
          %wprsrc-vals;
          %wpbodyatt;
          %secur;>
```

b. Attributes for <***ammo.markingwp***>:

(1) **LEVEL** - The maintenance level of the work package.
  (a) “OPERATOR” – Applies to operator maintenance level.
  (b) “UNITLVL” – Applies to unit maintenance level.
  (c) “DIRSUP” – Applies to direct support (DS) maintenance level.
  (d) “GENSUP” – Applies to general support (GS) maintenance level.
  (e) “INTER” – Applies to intermediate (DS/GS) maintenance level.
  (f) “DEPOT” – Applies to depot maintenance level.
  (g) “AVUM-AVIM” – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.
  (h) “TMLVLS” – Applies to all maintenance levels.

(2) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(3) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).

(4) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(5) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(6) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

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(7) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.5.2.1 The element <***wpidinfo***> (see33.4.5) defines the identification information required for a work package.

28.3.5.2.2 The element <***wpinfo***> (see 33.4.6.1) provides the maintenance technician with general information, equipment, parts, material, and authorized personnel required to perform and complete all the operating tasks included in the work package.

28.3.5.2.3 The element <***warning***> (see 33.4.1.1.2) is used to enter warnings pertaining to this work package.

28.3.5.2.4 The element <***caution***> (see 33.4.1.1.3) is used to enter cautions pertaining to this work package.

28.3.5.2.5 The element <***note***> (see 33.4.1.1.4) is used to enter notes pertaining to this work package.

28.3.5.2.6 The element <***geninfo***> (see 33.4.4.11) is introductory information for the work package.

28.3.5.2.7 The element <***ammo.markings***> is used for ammunition markings information. This element is used within the ammunitions work package only. The element <***ammo.markings***> contains a title (<***title***> see 33.4.1.5.1) followed by at least one procedure (<***proc***> see 33.4.1.8.1) and/or at least one or more paragraphs of parameter entity paragraph type (***%p;*** see 33.3.2).

a. DTD fragment for <***ammo.markings***>:

```
<!ELEMENT ammo.markings - - (title, (proc | (%p;))+)>
<!ATTLIST ammo.markings
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***ammo.markings***>:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.5.2.8 The element <***ammo.handling***> (see 28.3.5.1.8) is used for ammunition handling information.

28.3.5.2.9 The element <***service***> (see 28.3.5.1.9) is used for instructions on complete servicing of the equipment.

28.3.5.2.10 The element <***ammotype***> contains the name and information pertaining to a type of ammunition. After the name (<***name***> see 33.4.4.15), the information is entered using paragraphs of parameter entity paragraph type (***%p;*** see 33.3.2).

a. DTD fragment for <***ammotype***>:

```
<!ELEMENT ammotype - o (name, (%p;)+)>
<!ATTLIST ammotype
            %refs;
            %secur;>
```

b. Attributes for <***ammotype***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.5.3 Foreign Ammunition (NATO) Marking Information Work Package <***natowp***>. The element <***natowp***> contains the special requirements for foreign (NATO) ammunition marking, classification, identification, handling, transportation, preparation for firing and other similar data. There may be more than one foreign ammunition (NATO) marking information work package. The foreign ammunition (NATO) marking information work package is subdivided into the following content requirements:

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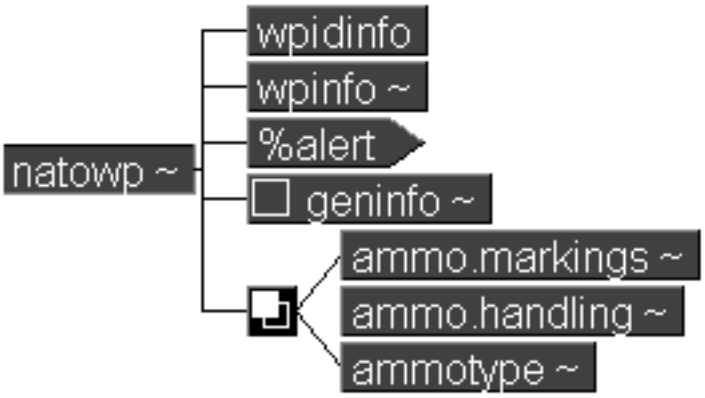

Figure 124 Foreign Ammunition (NATO) Marking Information Work Package DTD Hierarchy

a. DTD fragment for <***natowp***>:

```
<!ELEMENT natowp - - (wpidinfo, wpinfo?, warning*, caution*, note*,
                      geninfo?, (ammo.defect | ammo.handling | service)+)>
<!ATTLIST natowp level (depot|operator|
                        gensup|dirsup|
                        unitlvl|avum-avim|
                        inter|tmlvls)          #REQUIRED
            wpno  ID                           #REQUIRED
           %hcp.esd;
           %tracking;
           %wprsrc-vals;
           %wpbodyatt;
           %secur;>
```

b. Attributes for <***natowp***>:

(1) **LEVEL** - The maintenance level of the work package.
   (a) “OPERATOR” – Applies to operator maintenance level.
   (b) “UNITLVL” – Applies to unit maintenance level.
   (c) “DIRSUP” – Applies to direct support (DS) maintenance level.
   (d) “GENSUP” – Applies to general support (GS) maintenance level.
   (e) “INTER” – Applies to intermediate (DS/GS) maintenance level.
   (f) “DEPOT” – Applies to depot maintenance level.
   (g) “AVUM-AVIM” – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.
   (h) “TMLVLS” – Applies to all maintenance levels.

(2) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(3) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).

(4) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(5) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(6) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

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(7) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.5.3.1 The element <***wpidinfo***> (see33.4.5) defines the identification information required for a work package.

28.3.5.3.2 The element <***wpinfo***> (see 33.4.6.1) provides the maintenance technician with general information, equipment, parts, material, and authorized personnel required to perform and complete all the operating tasks included in the work package.

28.3.5.3.3 The element <***warning***> (see 33.4.1.1.2) is used to enter warnings pertaining to this work package.

28.3.5.3.4 The element <***caution***> (see 33.4.1.1.3) is used to enter cautions pertaining to this work package.

28.3.5.3.5 The element <***note***> (see 33.4.1.1.4) is used to enter notes pertaining to this work package.

28.3.5.3.6 The element <***geninfo***> (see 33.4.4.11) is introductory information for the work package.

28.3.5.3.7 The element <***ammo.markings***> (see 28.3.5.2.7) is used for ammunition markings information.

28.3.5.3.8 The element <***ammo.handling***> (see 28.3.5.1.8) is used for ammunition handling information.

28.3.5.3.9 The element <***ammotype***> (see 28.3.5.2.10) contains the name and information pertaining to a type of ammunition.

28.3.6 Auxiliary Equipment Maintenance Information Chapter ***%auxeqpmim;***. The Auxiliary Equipment Maintenance Information Module consists of one or more auxiliary equipment work package <***auxeqpwp***>.

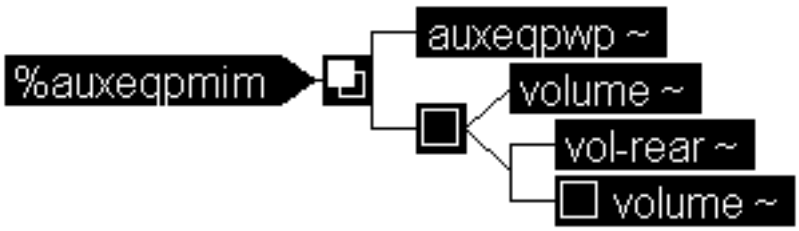

Figure 125 Auxiliary Equipment Maintenance Information Module DTD Hierarchy

a. DTD fragment ***%auxeqpmim;***:

```
<!ENTITY % auxeqpmim "(auxeqpwp+)">
```

28.3.6.1 The element <***auxeqpwp***> contains all maintenance instructions for peculiar support equipment when not provided by procurement. The auxiliary equipment work package is subdivided into the following elements and content requirements:

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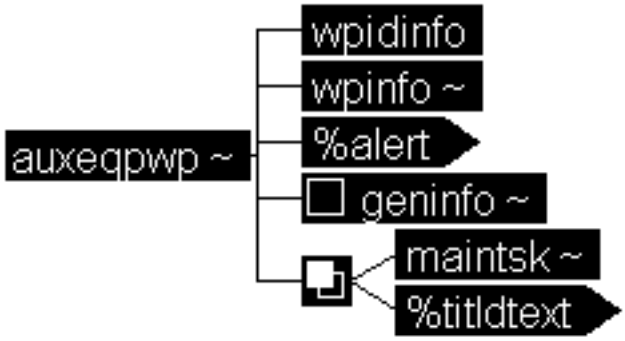

Figure 126 Auxiliary Equipment Work Package DTD Hierarchy

a. DTD fragment for <***auxeqpwp***>:

```
<!ELEMENT auxeqpwp - - (wpidinfo, wpinfo, %alert;, geninfo?, (maintsk |
                        %titldtext;)+)>
<!ATTLIST auxeqpwp level (tmlvls | depot |
                          operator | gensup |
                          dirsup | unitlvl |
                          inter | avum-avim)      #REQUIRED
             wpno          ID                     #REQUIRED
             %tracking;
             %wprsrc-vals;
             %wpbodyatt;
             %secur;>
```

b. Attributes for <***auxeqpwp***>:

(1) **LEVEL** - The maintenance level of the work package.
   (a) “OPERATOR” – Applies to operator maintenance level.
   (b) “UNITLVL” – Applies to unit maintenance level.
   (c) “DIRSUP” – Applies to direct support (DS) maintenance level.
   (d) “GENSUP” – Applies to general support (GS) maintenance level.
   (e) “INTER” – Applies to intermediate (DS/GS) maintenance level.
   (f) “DEPOT” – Applies to depot maintenance level.
   (g) “AVUM-AVIM” – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.
   (h) “TMLVLS” – Applies to all maintenance levels.

(2) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(4) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(5) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(6) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.6.1.1 The element <***wpidinfo***> (see33.4.5) defines the identification information required for a work package.

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28.3.6.1.2 The element <***wpinfo***> (see 33.4.6.1) provides the maintenance technician with general information, equipment, parts, material, and authorized personnel required to perform and complete all the operating tasks included in the work package.

28.3.6.1.3 The parameter entity ***%alert;*** (see 33.3.3) is the necessary alert notices.

28.3.6.1.4 The element <***geninfo***> (see 33.4.4.11) is introductory information for the work package.

28.3.6.1.5 The element <***maintsk***> (see 28.3.1.5.5) the maintenance tasks that are required to maintain the auxiliary equipment to describe the reference to the auxilary equipment.

28.3.6.1.6 The parameter entity (***%titldtext;*** see 33.3.4).

28.3.7 Preventive Maintenance Services Maintenance Information Chapter ***%pmsmim;***. The Preventive Maintenance Services Chapter consists of one or more preventive maintenance service inspection work packages <***pms-inspecwp***>.

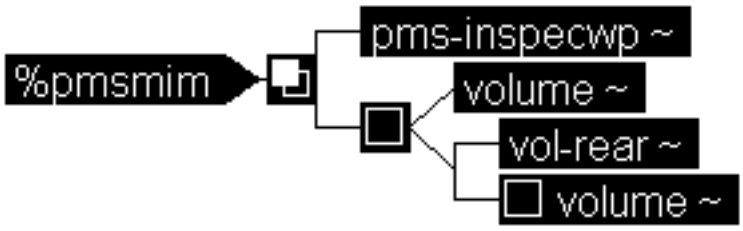

Figure 127 Preventive Maintenance Services Maintenance Information Module %pmsmim;

a. DTD fragment for ***%pmsmim;***:

```
<!ENTITY % pmsmim "(pms-inspecwp+)">
```

28.3.7.1 Preventive Maintenance Service InspectionWork Package <***pms-inspecwp***>. The element <***pms-inspecwp***> contains all data regarding preventive maintenance inspection for aircraft preventive maintenance services (PMS). This work package is for PMS only. The preventive maintenance service inspection work package is subdivided into the following elements and content requirements:

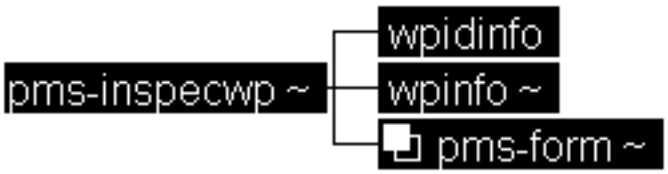

Figure 128 Preventive Maintenance Service Inspection Work Package DTD Hierarchy

a. DTD fragment <***pms-inspecwp***>:

```
<!ELEMENT pms-inspecwp - - (wpidinfo, wpinfo, pms-form+)>
<!ATTLIST pms-inspecwp
            wpno  ID                                #REQUIRED
            %tracking;
```

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```
%wprsrc-vals;
%wpbodyatt;
%secur;>
```

b. Attributes for <***pms-inspecwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.7.1.1 The element <***wpidinfo***> (see33.4.5) defines the identification information required for a work package.

28.3.7.1.2 The element <***wpinfo***> (see 33.4.6.1) provides the maintenance technician with general information, equipment, parts, material, and authorized personnel required to perform and complete all the operating tasks included in the work package.

28.3.7.1.3 The element <***pms-form***> is used for aircraft manuals only in the preparation of preventive maintenance services technical manuals. The element <***pms-form***> contains one or more period definitions <***perioddef***>, a component assembly (<***compnt-assem***> see 28.3.1.1.5.3.2.1.3), and one or more PMS items <***pms-item***>.

a. DTD fragment <***pms-form***>:

```
<!ELEMENT pms-form - - (perioddef+, compnt-assem, pms-item+)>
<!ATTLIST pms-form
          power (on | off)   #IMPLIED
          avionics %yesorno; #IMPLIED
          lube     %yesorno; #IMPLIED>
```

b. Attributes for <***pms-form***>:

(1) **POWER** - Specifies whether the inspection is a power on (ON) or power off (OFF) inspection.

(2) **AVIONICS** - Used to specify the status of avionics inspections.

(3) **LUBE** - Used to specify the lubrication requirement in accordance with the lubrication chart.

28.3.7.1.3.1 The period definitions <***perioddef***> are used when the format of the <***pms-form***> is to break the interval column into several columns, each of which contain the abbreviation of the interval. The columns will then be marked, if that is the interval identified, for a particular procedure. Each additional column needs a separate period definition with its associated attributes.

a. DTD fragment for <***perioddef***>:

```
<!ELEMENT perioddef - o EMPTY>
<!ATTLIST perioddef
             abbrev  NMTOKEN  #IMPLIED
             no      NUMBER   #IMPLIED>
```

b. Attributes for <***perioddef***>:

(1) **ABBREV** - The abbreviation of the interval to appear in the column heading in abbreviated form.

(2) **NO** - Specifies the column number in which the abbreviated interval should appear.

28.3.7.1.3.2 The element <***pms-item***> indicates a preventive maintenance inspection item for Safety-of-Flight. Each item will begin a new row. Each item will contain a sequence number (<***seqno***> , see 28.3.1.1.5.3.2.1.3) a.) location (<***location***> see 28.3.1.1.5.3.2.1.3) a.), component assembly (<***compnt-assem***> see 28.3.1.1.5.3.2.1.3), an item-condition <***item-condition***> and one or more inspection periods <***period***>.

a. DTD fragment <***pms-item***>:

```
<!ELEMENT pms-item - - (seqno, location, item-condition, period+)>
<!ATTLIST pms-item
```

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```
            %refs;
            %secur;>
```

b. Attributes for <***pms-item***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.7.1.3.2.1 The element <***item-condition***> is used to identify an item condition of an equipment of preventive maintenance services technical manuals. It contains a PMS procedure <***pms-proc***>.

a. DTD fragment for <***item-condition***>:

```
<!ELEMENT item-condition - - (pms-proc)>
<!ATTLIST item-condition
          safeflght   %yesorno;   #IMPLIED>
```

b. Attributes for <***item-condition***>:

(1) **SAFEFLGHT** - Specifies whether or not the condition is of safe flight.

28.3.7.1.3.2.1.1 The element <***pms-proc***> contains an optional title (<***title***> see 33.4.1.5.1), followed by alert statements (***%alert;*** see 33.3.3), followed by either at least one paragraph (<***para***> see 33.4.1.5.3) or at least one primary level step (<***step1***> see 33.4.1.8.2).

a. DTD fragment for <***pms-proc***>:

```
<!ELEMENT pms-proc - - (title?, (%alert;), (para+ | step1+) )>
<!ATTLIST pms-proc
          safeflght      %yesorno;      #IMPLIED>
```

b. Attributes for <***pms-proc***>:

(1) **SAFEFLGHT** - Specifies whether or not the condition is of safe flight.

28.3.7.1.3.2.2 The associated attributes of the element <***period***> are used to specify the inspection period identified in <***perioddef***>.

a. DTD fragment for <***period***>:

```
<!ELEMENT period - o EMPTY>
<!ATTLIST period
            colno    NUMBER    #REQUIRED>
```

b. Attributes for <***period***>:

(1) **COLNO** - Specifies the period column number to be marked.

28.3.8 Phased Maintenance Inspection Checklist Maintenance Information Chapter ***%pmicklistmim;***. Phased Maintenance Inspection Checklist Maintenance Information Chapter consists of one or more phased maintenance inspection checklist work package <***pmi-cklistwp***>.

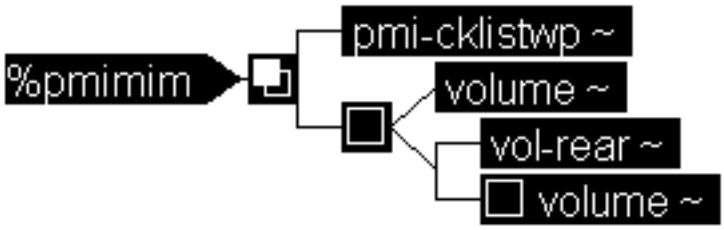

Figure 129 Phased Maintenance Inspection Checklist Maintenance Information Chapter %pmicklistmim;

a. DTD fragment for ***%pmicklistmim;***:

```
<!ENTITY % pmicklistmim "(pmi-cklistwp+)">
```

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28.3.8.1 Phased Maintenance Inspection Checklist Work Package <***pmi-cklistwp***>. The element <***pmi-cklistwp***> contains all of the data required to perform phased maintenance inspections on aircraft. This work package is for aircraft only. The phased maintenance inspection checklist work package is subdivided into the following elements and content requirements:

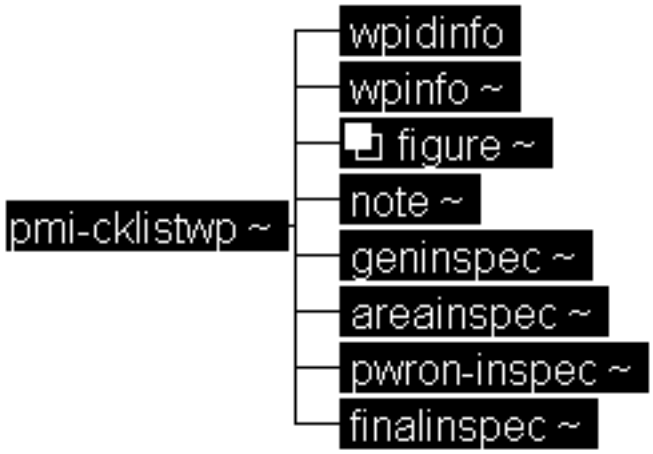

Figure 130 Phased Maintenance Inspection Checklist Work Package <pmi-cklistwp> DTD Hierarchy

a. DTD fragment for <***pmi-cklistwp***>:

```
<!ELEMENT pmi-cklistwp - - (wpidinfo, wpinfo, figure+, note,
                            geninspec, areainspec, pwron-inspec,
                            finalinspec)>
<!ATTLIST pmi-cklistwp
            wpno            ID              #REQUIRED
            %tracking;
            %wprsrc-vals;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***pmi-cklistwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.8.1.1 The element <***wpidinfo***> (see33.4.5) defines the identification information required for a work package.

28.3.8.1.2 The element <***wpinfo***> (see 33.4.6.1) provides the maintenance technician with general information, equipment, parts, material, and authorized personnel required to perform and complete all the operating tasks included in the work package.

28.3.8.1.3 The element <***note***> (see 33.4.1.1.4) is used to enter notes pertaining to this work package.

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28.3.8.1.4 The element <***geninspec***> contains the general inspection items specified by the procuring activity. This element contains a required title <***title***> (see 33.4.1.5.1), an optional figure (<***figure***> (see 33.4.3.1), and the inspection formation <***inspec-form***>.

a. DTD fragment for <***geninspec***>, <***areainspec***>, <***pwron-inspec***>, and <***finalinspec***>:

```
<!ELEMENT (geninspec |
           areainspec |
           pwron-inspec |
           finalinspec) - - (title, figure?, inspec-form+)>
<!ATTLIST (geninspec |
           areainspec |
           pwron-inspec |
           finalinspec)
            %bodyatt;
            %secur;>
```

b. Attributes for <***geninspec***>, <***areainspec***>, <***pwron-inspec***>, and <***finalinspec***>:

(1)

(a) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(b) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.8.1.4.1 The element <***inspec-form***> is the format used for specifying specific inspection types contained within the PMI checklist work package. A required inspection heading <***inspec-head***> and one or more inspection items <***inspec-item***> are contained within the <***inspec-form***>. Figures (<***figure***> see 33.4.3.1).

a. DTD fragment for <***inspec-form***>:

```
<!ELEMENT inspec-form - - (inspec-head, inspec-item+)>
<!ATTLIST inspec-form
            %bodyatt;
            %secur;>
```

b. Attributes for <***inspec-form***>:

(1)

(a) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(b) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.8.1.4.1.1 The element <***inspec-head***> contains the heading information for the PMI check list. The headings fall under <***phaseno***>, <***inspec-area***>, <***serialno***>, <***date***>, and <***totalhrs***>.

a. DTD fragment for <***inspec-head***>:

```
<!ELEMENT inspec-head - o (phaseno, inspec-area, serialno, date, totalhrs)>
<!ATTLIST inspec-head
            %bodyatt;
            %secur;>
```

b. Attributes for <***inspec-head***>:

(1)

(a) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(b) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.8.1.4.1.1.1 The element <***phaseno***> contains the phase number of the inspection item (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***phaseno***>, <***inspec-area***>, <***totalhrs***>, <***requiremnt***>, <***status***>, <***indentfault***>, and <***initials***>:

```
<!ELEMENT (phaseno |
           inspec-area |
           totalhrs |
           requirement |
           status |
           identfault |
           initials) - o (%text;)
<!ATTLIST (phaseno |
```

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```
inspec-area |
totalhrs |
requirement |
status |
identfault |
initials)
  %bodyatt;
  %secur;>
```

b. Attributes for <***phaseno***>, <***inspec-area***>, <***totalhrs***>, <***requiremnt***>, <***status***>, <***indentfault***>, and <***initials***>:

(1)

(a) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(b) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.8.1.4.1.1.2 The element <***inspec-area***> is used to enter the area of the inspection (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***inspec-area***>: (see 28.3.8.1.4.1.1.1a.).

b. Attributes for <***inspec-area***>: (see 28.3.8.1.4.1.1.1b.).

28.3.8.1.4.1.1.3. The element <***serialno***> (see 28.3.8.1.4.1.3.1) is used to enter the aircraft tail serial number (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***serialno***>:

```
<!ELEMENT serialno - o (%text;)>
<!ATTLIST serialno
            %bodyatt;
            %secur;>
```

b. Attributes for <***serialno***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.8.1.4.1.1.4 The element <***date***> (see 24.2.1.1.3.1.2) is used to enter the inspection date (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

28.3.8.1.4.1.1.5 The element <***totalhrs***> is used to enter the total number of hours needed for the inspection (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***totalhrs***>:(see 28.3.8.1.4.1.1.1a.).

b. Attributes for <***totalhrs***>: (see 28.3.8.1.4.1.1.1b.).

28.3.8.1.4.1.2 The element <***inspec-item***> indicates an inspection item. Each item will indicate a new row. Each item will contain an inspection phase <***inspecphase***>, requirement <***requiremnt***>, status <***status***>, fault identity <***ident-fault***>, action required <***actionreq***> and inspector's initials <***initials***>.

a. DTD fragment for <***inspec-item***>:

```
<!ELEMENT inspec-item - o (inspecphase, requiremnt, status, ident-fault,
                           actionreq, initials)>
<!ATTLIST inspec-item
            %bodyatt;
            %secur;>
```

b. Attributes for <***inspec-item***>:

(1)

(a) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(b) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.8.1.4.1.2.1 The element <***inspecphase***> is used to enter the phase of the inspection (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***inspecphase***>:

```
<!ELEMENT inspecphase - o (%text;) >
<!ATTLIST inspecphase
```

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```
combat-inspec %yesorno; #IMPLIED
%bodyatt;
%secur;>
```

b. Attributes for <***inspecphase***>:

(1)

(a) **COMBAT-INSPEC** - Specifies whether or not this inspection should occur during combat.
(b) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(c) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

28.3.8.1.4.1.2.2 The element <***requiremnt***> is used to enter the requirements for the inspection (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***requiremnt***>:(see 28.3.8.1.4.1.1.1a.).
b. Attributes for <***requiremnt***>: (see 28.3.8.1.4.1.1.1b.).

28.3.8.1.4.1.2.3 The element <***status***> is used to enter the status of the inspection (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***status***>: (see 28.3.8.1.4.1.1.1a.).
b. Attributes for <***status***>: (see 28.3.8.1.4.1.1.1b.).

28.3.8.1.4.1.2.4 The element <***ident-fault***> is used to identify the fault (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***ident-fault***>: (see 28.3.8.1.4.1.1.1a.).
b. Attributes for <***ident-fault***>: (see 28.3.8.1.4.1.1.1b.).

28.3.8.1.4.1.2.5 The element <***actionreq***> is used to enter any actions required for the inspection (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***actionreq***>: (see 28.3.1.5.5.22.2.1 a.).
b. Attributes for <***actionreq***>: (see 28.3.1.5.5.22.2.1b.).

28.3.8.1.4.1.2.6 The element <***initials***> of the person performing the inspection (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for <***initials***>: (see 28.3.8.1.4.1.1.1a.).
b. Attributes for <***initials***>: (see 28.3.8.1.4.1.1.1b.).

28.3.8.1.5 The element <***areainspec***> contains inspection by area including all surfaces, materials, components and equipment. This element contains a required title (<***title***> see 33.4.1.5.1), an optional figure (<***figure***> see 33.4.3.1), and the inspection formation <***inspec-form***>.

a. DTD fragment for <***areainspec***>: (see 28.3.8.1.4a.).
b. Attributes for <***areainspec***>: (see 28.3.8.1.4b.).

28.3.8.1.6 The element <***pwron-inspec***> contains the aircraft power on inspection as specified by the procuring activity. This element contains a required title (<***title***> see 33.4.1.5.1), an optional figure (<***figure***> see 33.4.3.1), and the inspection formation <***inspec-form***>.

a. DTD fragment for <***pwron-inspec***>: (see 28.3.8.1.4a.).
b. Attributes for <***pwron-inspec***>: (see 28.3.8.1.4b.).

28.3.8.1.7 The element <***finalinspec***> contains the aircraft final inspection requirements as specified by the procuring activity. This element contains a required title (<***title***> see 33.4.1.5.1), an optional figure (<***figure***> see 33.4.3.1), and the inspection formation <***inspec-form***>.

a. DTD fragment for <***finalinspec***>: (see 28.3.8.1.4a.).
b. Attributes for <***finalinspec***>: (see 28.3.8.1.4b.).

29 PARTS INFORMATION.

29.1 Scope. The following paragraphs give a description and use of the elements used in the MIL-STD-2361 Parts Information Chapter DTD.

29.2 Applicable documents. Refer to paragraph 2.

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29.3 Parts Information Chapter <***pim***>. Parts information should be prepared as work packages and contained in a parts information chapter <***pim***>. The chapter should contain a titlepage (<***titlepg***> see 33.4.4.22), followed by introduction RPSTL work package (<***introwp***> see 29.3.2), repair parts list work package(s) (<***plwp***> see 29.3.3), special tools list work package(s) (<***stlwp***> see 29.3.4), a NSN index work package (<***nsnindxwp***> see 29.3.5), a part number index work package (<***pnindxwp***> see 29.3.6), an optional reference designator index work package (<***refdesindxwp***> see 29.3.7), or a parts information data base <***pidb***>. Volume separation (***%vol.group;*** see 33.3.6) may occur any where in this element. The element consist of the following elements described below:

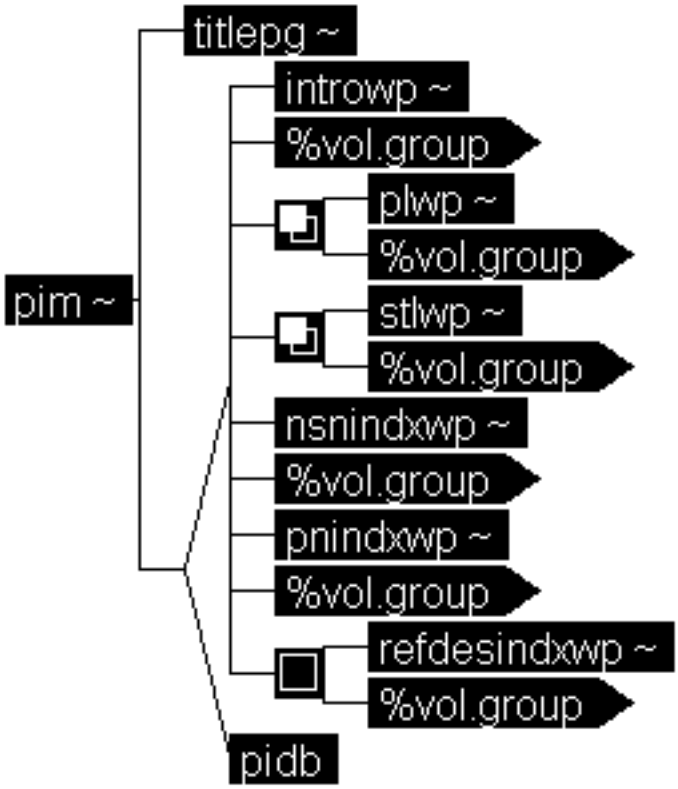

Figure 131 Parts Information Chapter DTD Hierarchy

a. DTD fragment for pim:

```
<!ELEMENT pim - - (titlepg, ((introwp, %vol.group;, (plwp+, %vol.group;)+,
                  (stlwp, %vol.group;)+, pnindxwp, %vol.group;,
                  nsnindxwp, %vol.group;,(refdesindxwp?, %vol.group;)?) |
                  pidb))>
<!ATTLIST pim
             tmno          CDATA                    #REQUIRED
             imctrlabel    NUMBER                   #REQUIRED
             imlevel       (depot | operator |
                           gensup | dirsup |
                           unitlvl | inter |
                           avum-avim | tmlvls)      #REQUIRED
             dmwr-inclus   (parts | parts-tools |
```

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```
                 none)                    #REQUIRED
revno          NUMBER                     #REQUIRED
chngno         NUMBER                     #REQUIRED
date           CDATA                      #IMPLIED
pubno          CDATA                      #IMPLIED
%refs;
%secur;>
```

b. Attributes for <***pim***>:

(1) **TMNO** - The number of the current TM. The prefix TM must be included in the attribute value. The first time the attribute is referenced for the element it is treated as required, thereafter that it will assume the current attribute value.

(2) **IMCTRLABEL** - A label giving the sequence number of the information chapter within this version of the TM; allows an individual IM to be composed with full numbering of pages and components.

(3) **IMLEVEL** - The maintenance level of the information chapter.
(a) "OPERATOR" – Applies to operator maintenance level.
(b) "UNITLVL" – Applies to unit maintenance level.
(c) "DIRSUP" – Applies to direct support (DS) maintenance level.
(d) "GENSUP" – Applies to general support (GS) maintenance level.
(e) "INTER" – Applies to intermediate (DS/GS) maintenance level.
(f) "DEPOT" – Applies to depot maintenance level.
(g) "AVUM-AVIM" – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.
(h) "TMLVLS" – Applies to all maintenance levels.

(4) **DMWR-INCLUS** - Specifies whether a part of the DMWR.
(a) PARTS - The chapter is part of a parts DMWR manual.
(b) PARTS-TOOLS - The chapter is part of a parts and tools DMWR manual.
(c) NONE - The chapter is not part of a DMWR manual.

(5) **REVNO** - The overall revision number for the information chapter.

(6) **CHNGNO** - The overall change number for the information chapter.

(7) **DATE** - The date of the current version of the chapter.

(8) **PUBNO** - Specifies the technical manual publication number.

(9) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(10) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.1 Parts Information Data Base <***pidb***>. This element <***pidb***> contains the parts information data base and the parts data should be arranged in ascending alphanumeric sequence by part number. The <***pidb***> contains parts information either by part name(s) <***pi.item***> or part categories <***pi.category***>.

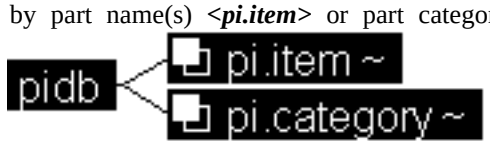

Figure 132 Parts Information Data Base DTD Hierarchy

a. DTD fragment for <***pidb***>:

```
<!ELEMENT pidb - - (pi.item+ | pi.category+) >
```

29.3.1.1 The element <***pi.item***> lists the part description in the parts information data base. The element <***pi.item***> contains a special tool identification (<***stlitem***> see 29.3.4.1.1.1), next higher assembly(s) (<***parent.partno***>, see 29.3.1.1.1), an optional reference designation (<***refdes***> see 29.3.7.1.1.1), and also may contain the part illustration (<***graphic***> see 33.4.3.1.2).

a. DTD fragment for <***pi.item***>:

```
<!ELEMENT pi.item - - (stlitem, parent.partno+, refdes?, graphic?>
<!ATTLIST pi.item
            hci        %yesorno;          "0"
```

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```
esd         %yesorno;          "0"
fscap       %yesorno;          "0"
mrp         %yesorno;          "0"
exp         %yesorno;          "0"
coei        %yesorno;          "0"
stool       %yesorno;          "0"
piid        ID                #REQUIRED>
```

b. Attributes for <***pi.item***>:

(1) **HCI** - Identify if the part is a nuclear hardness critical part.
(2) **ESD** - Identify if the part is an electrostatic discharge sensitive part.
(3) **FSCAP** - Identify if the part is a flight safety critical aircraft part.
(4) **MRP** - Identify if the part is a mandatory replacement part.
(5) **EXP** - Identify if the part is a durable and expendable part.
(6) **COEI** - Identify if the part is a components of end items.
(7) **STOOL** - Identify if the part is a special tools and test equipment.
(8) **PIID** - Specifies the unique identifier of the part.

29.3.1.1.1 The element <***parent.partno***> contains the next higher assembly part number that is reference in the part information data base.

a. DTD fragment for <***parent.partno***>:

```
<!ELEMENT parent.partno - o EMPTY>
<!ATTLIST parent.partno
          parent    IDREF   #REQUIRED>
```

b. Attributes for <***parent.partno***>:

(1) **PARENT** - References the parent of the part <***pi.item***>.

29.3.1.2 The element <***pi.category***> may be separated into specific categories. If the data base is subdivided for example by system or subsystem the category element is used to represent this. After the category element is entered, the specific part(s) information may be entered for that category.

a. DTD fragment for <***pi.category***>:

```
<!ELEMENT pi.category - o pi.item+>
<!ATTLIST pi.category
            catg-name    CDATA   #REQUIRED
            %refs;
            %secur;>
```

b. Attributes for <***pi.category***>:

(1) **CATG-NAME** - Specifies the category name which is the heading that will appear in the table.
(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.2 Introductory RPSTL Work Package <***introwp***>. The element <***introwp***> contains applicable content items as specified by the contracting activity and contains the parts information chapter introductory material. The <***introwp***> contains identification information required for a work package (<***wpidinfo***> see 33.4.5), followed by either introductory paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 33.3.4) or how to use this chapter (<***howtouse***> see 24.2.1.1.7). The <***introwp***> element can **NOT** include any figures <***figure***>. The paragraph(s) may be entered using an entity reference (see 35.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051. This work package should consist of the following elements described below:

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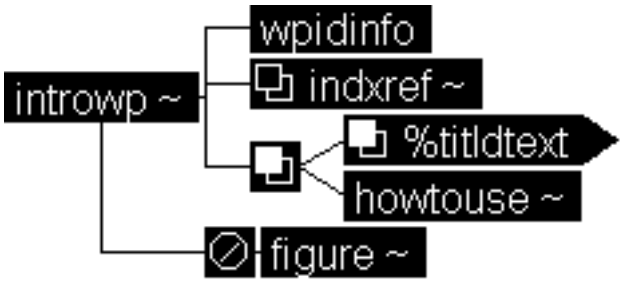

Figure 133 Introductory Work Package DTD Hierarchy

a. DTD fragment for <***introwp***>:

```
<!ELEMENT introwp - - (wpidinfo, indxref*,  ((%titldtext;)+ | howtouse)+)
                        -(figure) >
<!ATTLIST introwp
            wpno      ID         #REQUIRED
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***introwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.3 Repair Parts List Work Package <***plwp***>. The element <***plwp***> contains lists and illustrations of all repair parts in accordance with the functional group codes (FGC). This work package contains identification information required for a work package (<***wpidinfo***> see 33.4.5),and a repair parts list title <***pltitle***> and a repair parts list(s) <***pl***>. The element <***plwp***> should consist of the following elements described below:

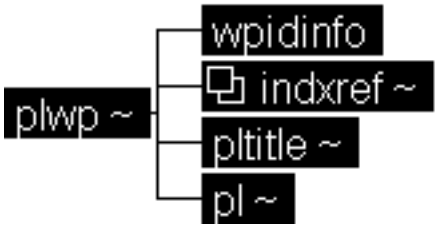

Figure 134 Repair Parts List Work Package DTD Hierarchy

a. DTD fragment for <***plwp***>:

```
<!ELEMENT plwp - - (wpidinfo, indxref*, pltitle, pl)>
<!ATTLIST plwp
            wpno      ID         #REQUIRED
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***plwp***>:

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(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.
(2) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).
(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).
(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

c. SGML Document Instance Fragment for Repair Parts List Work Package **<*plwp*>**:

```
<plwp wpno="pxxxx26-11-5840-383" wpseq="0056 00">
<wpidinfo>
<maintlvl level="operator">
<eicnomen>
<sysnomen>
<name>RADAR SET</name>
<modelno>AN/PPS-5XX</modelno>
<nsn>5340-00-051-5555</nsn>
<eic>R10</eic>
</sysnomen>
</eicnomen>
<title>MALFUNCTION/SYMPTOM INDEX</title>
</wpidinfo>
<pl>
<figure>
<title>Adapter, Mount Radar Set</title>
<graphic boardno="adaptermount">
</figure>
<pltbl>
<fncgrp>
<fnccode>16</fnccode>
<fnctitle>ADAPTER, MOUNT, RADAR SET</fnctitle>
</fncgrp>
<plitem>
<callout id="fig25-1" numref="fig25-1" label="1">
<smr sourcecode="XD" maintcode="FZ" recovercode="Z">
<cageno>80063</cageno>
<partno>SMB505780</partno>
<desc-uoc>
<name>PLATE, IDENTIFICATION</name>
</desc-uoc>
<qty>1</qty>
</plitem>
<plitem>
<callout id="fig25-2" numref="fig25-2" label="2">
<smr sourcecode="XD" maintcode="FZ" recovercode="Z">
<nsn>5305-00-175-3230</nsn>
<cageno>96906</cageno>
<partno>MS21318</partno>
<desc-uoc>
<name>SCREW, MACHINE</name>
</desc-uoc>
<qty>4</qty>
</plitem>
<plitem>
```

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<callout id="fig25-3" numref="fig25-3" label="3">
<smr sourcecode="XD" maintcode="FZ" recovercode="Z">
<cageno>80063</cageno>
<partno>SMB505778</partno>
<desc-uoc>
<name>T-BOLT</name>
</desc-uoc>
<qty>2</qty>
</plitem>
<plitem>
<callout id="fig25-4" numref="fig25-4" label="4">
<smr sourcecode="XD" maintcode="FZ" recovercode="Z">
<cageno>80063</cageno>
<partno>SMB505774</partno>
<desc-uoc>
<name>HUB</name>
</desc-uoc>
<qty>1</qty>
</plitem>
<plitem>
<callout id="fig25-5" numref="fig25-5" label="5">
<smr sourcecode="XD" maintcode="FZ" recovercode="Z">
<nsn>5305-00-981-3512</nsn>
<cageno>96906</cageno>
<partno>MS16995-79</partno>
<desc-uoc>
<name>SCREW, CAP SOCKET HEAD</name>
</desc-uoc>
<qty>4</qty>
</plitem>
<plitem>
<callout id="fig25-6" numref="fig25-6" label="6">
<smr sourcecode="XD" maintcode="FZ" recovercode="Z">
<cageno>80063</cageno>
<partno>SMB505777</partno>
<desc-uoc>
<name>HANDLE, MOUNT</name>
</desc-uoc>
<qty>1</qty>
</plitem>
<plitem>
<callout id="fig25-7" numref="fig25-7" label="7">
<smr sourcecode="XD" maintcode="FZ" recovercode="Z">
<cageno>80063</cageno>
<partno>SMB505776</partno>
<desc-uoc>
<name>BOLT,HEX HEAD</name>
</desc-uoc>
<qty>2</qty>
</plitem>
<plitem>
<callout id="fig25-8" numref="fig25-8" label="8">
<smr sourcecode="XD" maintcode="FZ" recovercode="Z">
<cageno>80063</cageno>
<partno>SMB505772</partno>
<desc-uoc>

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```
<name>PINTLE,50  CALIBER</name>
</desc-uoc>
<qty>1</qty>
</plitem>
<plitem>
<callout  id="fig25-9"  numref="fig25-9"  label="9">
<smr  sourcecode="XD"  maintcode="FZ"  recovercode="Z">
<cageno>80063</cageno>
<partno>SMB505775</partno>
<desc-uoc><name>BALL,MOUNT  ADAPTER</name>
</desc-uoc>
<qty>1</qty>
</plitem><plitem>
<callout  id="fig25-10"  numref="fig25-10"  label="10">
<smr  sourcecode="XD"  maintcode="FZ"  recovercode="Z">
<cageno>80063</cageno>
<partno>SMB505779</partno>
<desc-uoc><name>SCREW,  EXTERNALLY  RELIEVED  BODY</name>
</desc-uoc>
<qty>2</qty>
</plitem>
</pltbl>
</pl>
</plwp>
```

d. Sample FOSI Output for Repair Parts List Work Package <***plwp***>:

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OPERATOR
FOR
RADAR SET, AN/PPS-5XX
NSN 5340-00-051-555 EIC: Y10
REPAIR PARTS LIST

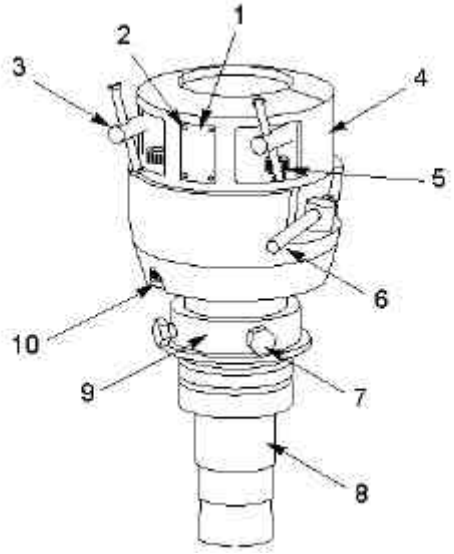

Figure 4. Adapter Mount Radar Set

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 16 Fig 24. ADAPTER, MOUNT	
1	XDFZZ		80063	SMB505780	PLATE, IDENTIFICATION	1
2	XDFZZ	5305-00-175-3230	96906	MS21318	SCREW, MACHINE	4
3	XDFZZ		80063	SMB505778	T-BOLT	2
4	XDFZZ		80063	SMB505774	HUB	1
5	XDFZZ	5305-00-981-3512	96906	MS16995-79	SCREW, CAP SOCKET HEAD	4
6	XDFZZ		80063	SMB505777	HANDLE, MOUNT	1
7	XDFZZ		80063	SMB505776	BOLT, HEX HEAD	2
8	XDFZZ		80063	SMB505772	PINTLE, 50 CALIBER	1
9	XDFZZ		80063	SMB505775	BALL, MOUNT ADAPTER	1
10	XDFZZ		80063	SMB505779	SCREW, EXTERNALLY RELIEVED BODY	2
					END OF FIGURE	

Figure 135 Sample FOSI Output Repair Parts List Work Package <plwp>

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29.3.3.1 The element <***pltitle***> contains the repair parts nomenclature <***pleqp***> and the functional group number code <***fnccode***>.

a. DTD fragment for <***pltitle***>:

```
<!ELEMENT pltitle - o (fnccode, pleqp>
<!ATTLIST pltitle
            %refs;
            %secur;>
```

b. Attributes for <***pltitle***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.3.1.1 The element <***fnccode***> is used to display the functional group number <***fnccode***> located in the repair parts list title <***pltitle***> and in the header of a repair parts list work package table <***pltbl***>.

a. DTD fragment for <***fnccode***>:

```
<!ELEMENT fnccode - o (#PCDATA)
<!ATTLIST fnccode
            %refs;
            %secur;>
```

b. Attributes for <***fnccode***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.3.1.2 The element <***pleqp***> is used for the repair parts nomenclature. The element contains the parameter entity ***%text;*** (see 33.3.7).

a. DTD fragment for <***pleqp***>:

```
<!ELEMENT pleqp - o (%text;)
```

29.3.3.2 The element <***pl***> is used for repair parts list and will consist of an illustration (<***figure***> see 33.4.3.1) with an associated repair parts list table <***pltbl***>.

a. DTD fragment for <***pl***>:

```
<!ELEMENT pl - - (figure, pltbl)>
<!ATTLIST pl
            %refs;
            %secur;>
```

b. Attributes for <***pl***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.3.2.1 The element <***pltbl***> is used for the repair parts items contained in the repair parts list. This element functions as the table element. The element contains a functional group (<***fncgrp***> see 29.3.3.2.1.1), followed by repair parts list item(s) <***plitem***> and may contain repair part component(s) <***plcomp***> and/or followed kit(s) <***kit***>.

a. DTD fragment for <***pltbl***>:

```
<!ELEMENT pltbl - - (fncgrp, ((plitem, plcomp*) | kit)+)>
<!ATTLIST pltbl
            %refs;
            %secur;>
```

b. Attributes for <***pltbl***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.3.2.1.1 The element <***fncgrp***> consist of the functional group located in the header of a repair parts list work package table. The element contains either a functional group code (<***fnccode***> see 29.3.3.1.1), followed by an optional functional group code title <***fnctitle***>, and followed by an optional illustration reference <***figref***> or a subfunctional group <***subfncgrp***>.

a. DTD fragment for <***fncgrp***>:

```
<!ELEMENT fncgrp - - ((fnccode, fnctitle?, figref?)+ | subfncgrp)>
```

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```
<!ATTLIST fncgrp
            %refs;
            %secur;>
```

b. Attributes for <***fncgrp***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.3.2.1.1.1 The element <***fnctitle***> is the function group code title and is displayed in the functional group <***fncgrp***> after the functional group code <***fnccode***> located in the header of a repair parts list work package. The element contains the parameter entity ***%text;*** (see 33.3.7).

a. DTD fragment for <***fnctitle***>:

```
<!ELEMENT fnctitle - - (%text;)>
<!ATTLIST fnctitle
            %refs;
            %secur;>
```

b. Attributes for <***fnctitle***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.3.2.1.1.2 The element <***figref***> contains the reference to the applicable figure. The figure reference is display in the function group code <***fncgrp***> after the functional group code title <***fnctitle***> located in the header of a repair parts list work package.

a. DTD fragment for <***figref***>:

```
<!ELEMENT figref - o (figref)>
<!ATTLIST figref
            %refs;
            %secur;>
```

b. Attributes for <***figref***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.3.2.1.1.3 The element <***subfncgrp***> is used to enter more than one function code, if the table pertains to more than one function code. The element contains one or more functional group code(s) <***fnccode***> and may be followed by a functional group title <***fnctitle***>.

a. DTD fragment for <***subfncgrp***>:

```
ELEMENT subfncgrp - - (fnccode, fnctitle?)+>
<!ATTLIST subfncgrp
            %refs;
            %secur;>
```

b. Attributes for <***subfncgrp***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.3.2.1.2 The element <***plitem***> contains entries of a standard repair parts list table. The element is equivalent to a "row" element in a structural table. The <***plitem***> consists of the following elements described below:

a. DTD fragment for <***plitem***>:

```
<!ELEMENT plitem - - (callout?, smr, nsn?, cageno, partno, desc-uoc, qty)>
<!ATTLIST plitem
            hci       %yesorno;         "0"
            esd       %yesorno;         "0"
            fscap     %yesorno;         "0"
            mrp       %yesorno;         "0"
            exp       %yesorno;         "0"
            coei      %yesorno;         "0"
            stool     %yesorno;         "0"
```

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```
            %bodyatt;
            %secur;>
```

b. Attributes for <***plitem***>:

(1) **HCI** - Identify if the part is a nuclear hardness critical part.
(2) **ESD** - Identify if the part is an electrostatic discharge sensitive part.
(3) **FSCAP** - Identify if the part is a flight safety critical aircraft part.
(4) **MRP** - Identify if the part is a mandatory replacement part.
(5) **EXP** - Identify if the part is a durable and expendable part.
(6) **COEI** - Identify if the part is a components of end items.
(7) **STOOL** - Identify if the part is a special tools and test equipment.
(8) **PIID** - Specifies the unique identifier of the part.
(9) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(10) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.3.2.1.2.1 The element <***callout***> (see 33.4.1.3.2) is the reference letter to the part shown on the associated illustration. The element is placed in the first column of the repair parts list table.

29.3.3.2.1.2.2 The element <***smr***> contains supply/requisitioning information, maintenance level authorization criteria, and disposition instruction codes. The element is placed in the second column of the repair parts list table. The <***smr***> element is entered using the attribute SOURCECODE, MAINTCODE, and RECOVERCODE.

a. DTD fragment for <***smr***>:

```
<!ELEMENT smr - o (EMPTY)>
<!ATTLIST smr
            sourcecode    CDATA #REQUIRED
            maintcode     CDATA #REQUIRED
            recovercode   CDATA #REQUIRED
            eic           CDATA #IMPLIED
            %refs;
            %secur;>
```

b. Attributes for <***smr***>:

(1) **SOURCECODE** - First two positions. How to get an item.
(2) **MAINTCODE** - Third and fourth position. Third position is who can install, replace, or use the item. Fourth position is who can do complete repair on the item.
(3) **RECOVERCODE** - Fifth position. Who determines disposition action on unserviceable items.
(4) **EIC** - The end-item code of the equipment covered in the technical manual of which this information module is a part.
(5) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(6) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.3.2.1.2.3 The element <***nsn***> (see 33.4.4.16) is the national stock number for an item and is entered in the third column of the repair parts list table.

29.3.3.2.1.2.4 The element <***cageno***> (see 33.4.4.2) is the Commercial and Government Entity Code (CAGEC) and is entered in the fourth column of the repair parts list table.

29.3.3.2.1.2.5 The element <***partno***> (see 33.4.4.17) is the part number of the item and is entered in the fifth column of the repair parts list table.

29.3.3.2.1.2.6 The element <***desc-uoc***> contains the part name (<***name***> see 33.4.4.15), optional description (<***desc***> see 30.3.1.5.1.1.4.1.1), and may be followed by usable on code <***uoc***>, basis of issue <***boi***> and/or usable effective serial numbers <***usbefserno***>. The element is entered in the sixth column of the repair parts list table.

a. DTD fragment for <***desc-uoc***>:

```
<!ELEMENT desc-uoc - o (name, desc?, (uoc|boi|usbefserno)*)>
<!ATTLIST desc-uoc
            eic           CDATA     #IMPLIED
```

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```
              hci           %yesorno; "0"
              esd           %yesorno; "0"
              repairpart    (1|2)     #IMPLIED
              %refs;
              %secur;>
```

b. Attributes for <***desc-uoc***>:

(1) **EIC** - The end-item code of the equipment covered in the technical manual of which this information module is a part.

(2) **HCI** - Identifies the items or parts as hardness critical items.

(3) **ESD** - Identify if the part is an electrostatic discharge sensitive part.

(4) **REPAIRPART**- Format of option one or two per MIL-STD-40051-5A.

(5) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(6) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.3.2.1.2.6.1. The element <***uoc***> is used for the usable on code to identify a model when more than one applicable model exists. The element contains the parameter entity (***%text;*** see 33.3.7). The code is entered after (<***desc***> see 30.3.1.5.1.1.4.1.1) in the description and usable on code (<***desc-uoc***> see 29.3.3.2.1.2.6) sixth column of the repair parts list table.

a. DTD fragment for <***uoc***>:

```
<!ELEMENT uoc - o (%text;)>
<!ATTLIST uoc
              %refs;
              %secur;>
```

b. Attributes for <***uoc***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.3.2.1.2.6.2 The element <***boi***> indicates the quantity of the items, sets, or kits authorized to support a quantity of end items/assembly. The element contains the parameter entity (***% text;*** see 33.3.7). The code is entered after <***desc***> in the description and usable on code <***desc-uoc***> sixth column of the repair parts list table.

a. DTD fragment for <***boi***>:

```
<!ELEMENT boi - o (%text;)>
<!ATTLIST boi
              %refs;
              %secur;>
```

b. Attributes for <***boi***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.3.2.1.2.6.3 The element <***usbefserno***> contains the statement to identify the usable effective serial numbers when part numbers of spare/repair parts are not the same for all serial numbered equipment of the same model. The starting serial number is entered using the attribute BEGINSERNO and the ending serial number is entered using the attribute END SERNO . The element is entered after (<***desc***> see 30.3.1.5.1.1.4.1.1) in the description and usable on code (<***desc-uoc***> see 29.3.3.2.1.2.6) sixth column of the repair parts list table.

a. DTD fragment for <***usbefserno***>:

```
<!ELEMENT usbefserno - o (EMPTY)>
<!ATTLIST usbefserno
              beginserno     CDATA     #REQUIRED
              endserno       CDATA     #IMPLIED>
```

b. Attributes for <***boi***>:

(1) **BEGINSERNO**- The first part of the usable effective serial number.

(2) **ENDSERNO**- The last part of the usable effective serial number.

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29.3.3.2.1.2.7 The element <***qty***> (see 33.4.6.1.1.1.3) is the number of times the part appears in the illustration with the associated part number. When a definite quantity cannot be determined because the number of uses per equipment or the size/length of an item may vary with each equipment, the letter V should be placed in the quantity column. The element is entered in the seventh column of the repair parts list table.

29.3.3.2.1.3 The element <***plcomp***> contains the sub-component parts entries of the repair parts list table. The part name listed in the Description and Usable On Code column should be indented, with the identified number of periods in attribute INDENTLEVEL , to show a component of assemblies of next higher assemblies. This element is equivalent to a "row" element in a structural table. The element consists of the following elements described below:

a. DTD fragment for <***plcomp***>:

```
<!ELEMENT plcomp - - (callout?, smr, nsn?, cageno, partno, desc-uoc, qty)>
<!ATTLIST plcomp
          indentlevel     (1 | 2 | 3 | 4 | 5)     #REQUIRED
          %bodyatt;
          %secur;>
```

b. Attributes for <***plcomp***>:

(1) **INDENTLEVEL**- The sub-component part Indent level from the parent part.
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.3.2.1.3.1 The element <***callout***> (see 33.4.1.3.2) is the reference letter to the component part shown on the associated illustration. The element is placed in the first column of the repair parts list table.

29.3.3.2.1.3.2 The element <***smr***> (see 29.3.3.2.1.2.2) contains supply/requisitioning information, maintenance level authorization criteria, and disposition instruction codes. The element is placed in the second column of the repair parts list table. The element is entered using the attribute SOURCECODE, MAINTCODE, and RECOVERCODE.

29.3.3.2.1.3.3 The element <***nsn***> (see 33.4.4.16) is the national stock number for a part component and is entered in the third column of the repair parts list table.

29.3.3.2.1.3.4 The element <***cageno***> (see 33.4.4.2) is the Commercial and Government Entity Code (CAGEC) and is entered in the fourth column of the repair parts list table.

29.3.3.2.1.3.5 The element <***partno***> (see 33.4.4.17) is the part number of the part component and is entered in the fifth column of the repair parts list table.

29.3.3.2.1.3.6 The element <***desc-uoc***> (see 29.3.3.2.1.2.6) contains the part component name (<***name***> see 33.4.4.15), optional description (<***desc***> see 30.3.1.5.1.1.4.1.1), and may be followed by the usable on code (<***uoc***> see 29.3.3.2.1.2.6.1) , basis of issue (<***boi***> see 29.3.3.2.1.2.7.1) and/or usable effective serial numbers (<***usbefserno***> see 29.3.3.2.1.2.8.1). The element is entered in the sixth column of the repair parts list table.

29.3.3.2.1.3.7 The element <***qty***> (see 33.4.6.1.1.1.3) is the number of times the part component appears in the illustration with the associated number. When a definite quantity cannot be determined because the number of uses per equipment or the size/length of an item may vary with each equipment, the letter V should be placed in the quantity column. The element is entered in the seventh column of the repair parts list table.

29.3.3.2.1.4 The element <***kit***> is used for a repair kit entry in a repair parts list table and should contain complete information in all columns except Item No. and Qty columns. Item No. and Qty columns should be left blank. This element is equivalent to a "row" element in a structural table. The element consists of the following elements described below:

a. DTD fragment for <***kit***>:

```
<!ELEMENT kit - - (callout?, smr, nsn?, cageno, partno, desc-uoc,
                   qty, kititem*)>
<!ATTLIST kit
            %bodyatt;
            %secur;>
```

b. Attributes for <***kit***>:

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(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.3.2.1.4.1 The element <***callout***> (see 33.4.1.3.2) is the reference letter to the repair kit shown on the associated illustration. The element is placed in the first column of the repair parts list table.

29.3.3.2.1.4.2 The element <***smr***> (see 29.3.3.2.1.2.2) contains supply/requisitioning information, maintenance level authorization criteria, and disposition instruction. The element is placed in the second column of the repair parts list table. The element is entered using the attribute SOURCECODE, MAINTCODE, and RECOVERCODE .

29.3.3.2.1.4.3 The element <***nsn***> (see 33.4.4.16) is the national stock number for a component part and is entered in the third column of the repair parts list table.

29.3.3.2.1.4.4 The element <***cageno***> (see 33.4.4.2) is the Commercial and Government Entity Code (CAGEC) and is entered in the fourth column of the repair parts list table.

29.3.3.2.1.4.5 The element <***partno***> (see 33.4.4.17) is the part number of the component part and is entered in the fifth column of the repair parts list table.

29.3.3.2.1.4.6 The element <***desc-uoc***> (see 29.3.3.2.1.2.6) is used to further identify the item/part. The element is entered in the sixth column of the repair parts list table.

29.3.3.2.1.4.7 The element <***qty***> (see 33.4.6.1.1.1.3) is the number of times the component part appears in the illustration with the associated part. When a definite quantity cannot be determined because the number of uses per equipment or the size/length of a part may vary with each equipment, the letter V should be placed in the quantity column. The element is entered in the seventh column of the repair parts list table.

29.3.3.2.1.4.8 The element <***kititem***> is used for kit repair parts and should be listed under the kit list at the end of the parts list. This element contents are placed in the sixth column of the table. The statement "part of Kit P/N follows the kit name (<***name***> see 33.4.4.15). Parts of the kit list should be indented and listed alphabetically by kit name or number sequence immediately below the kit name. The quantity (<***qty***> see 33.4.6.1.1.1.3) is (in parentheses), and an optional figure and item number <***figitemno***> follows the repair part item name.

a. DTD fragment for <***kititem***>:

```
<!ELEMENT kititem - - (name, qty, figitemno?)>
<!ATTLIST kititem
            %refs;
            %secur;>
```

b. Attributes for <***kititem***>:
(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.3.2.1.4.8.1 The element <***figitemno***> is used for the figure and the item number after quantity (<***qty***> see 33.4.6.1.1.1.3) located in a kit repair parts <***kititem***>. The element contains the parameter entity (***%text;*** see 33.3.7).

a. DTD fragment for <***figitemno***>:

```
<!ELEMENT figitemno - - (%text;)>
<!ATTLIST figitemno
            %refs;
            %secur;>
```

b. Attributes for <***figitemno***>:
(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.4 Special Tools List Work Package <***stlwp***>. The element <***stlwp***> contains lists and illustrations of all special tools, special TMDE, and special support equipment in accordance with the functional group codes. This work package contains identification information required for a work package (<***wpidinfo***> see 33.4.5)

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and may have one or more special tools (repair part) list(s) <***stl***>. The element <***stlwp***> should consist of the following elements described below:

Figure 136 Special Tools Lists DTD Hierarchy

a. DTD fragment for <***stlwp***>:

```
<!ELEMENT stlwp - -  (wpidinfo, indxref*, stl*) >
<!ATTLIST stlwp
          wpno      ID         #REQUIRED
          %wprsrc-vals;
          %tracking;
          %wpbodyatt;
          %secur;>
```

b. Attributes for <***stlwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.4.1 The element <***stl***> is used for each special tools (repair parts) list and will consist of an illustration (<***figure***> see 33.4.3.1) with an associated special tools (repair parts) list table <***stltbl***>.

a. DTD fragment for <***stl***>:

```
<!ELEMENT stl - - (figure, stltbl)>
<!ATTLIST stl
          %refs;
          %secur;>
```

b. Attributes for <***stl***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.4.1.1 The element <***stltbl***> is used for the repair parts items contained in the repair parts list table. This element functions as the table element. The element contains a (<***fncgrp***> see 29.3.3.2.1.1), followed by either one or more special tool set(s) <***stlitem***>, one or more special tool component(s) <***stlcomp***> or one or more kits (<***kit***> see 29.3.3.2.1.4).

a. DTD fragment for <***stltbl***>:

```
<!ELEMENT stltbl - - (fncgrp, (stlitem | stlcomp | kit)+)>
<!ATTLIST stltbl
          %refs;
          %secur;>
```

b. Attributes for <***stltbl***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.4.1.1.1 The element <***stlitem***> contains entries of a special tools list table. The entries contain complete information in all columns except the columns ITEM NO. and QTY. ITEM NO. and QTY columns should

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be left blank. The element is equivalent to a "row" element in a structural table. The <***stlitem***> consists of the following elements described below:

a. DTD fragment for <***stlitem***>:

```
<!ELEMENT stlitem - - (callout?, smr, nsn?, cageno, partno, desc-uoc, qty?)>
<!ATTLIST stlitem
          %bodyatt;
          %secur;>
```

b. Attributes for <***stlitem***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.4.1.1.1.1 The element <***callout***> (see 33.4.1.3.2) is the reference letter to the item shown on the associated illustration. The element is placed in the first column of the special tools list table.

29.3.4.1.1.1.2 The element <***smr***> (see 29.3.3.2.1.2.2) contains supply/requisitioning information, maintenance level authorization criteria, and disposition instruction. The element is placed in the second column of the special tools list table. The element is entered using the attributes SOURCECODE, MAINTCODE, and RECOVERCODE.

29.3.4.1.1.1.3 The element <***nsn***> (see 33.4.4.16) is the national stock number for an item and is entered in the third column of the special tools list table.

29.3.4.1.1.1.4 The element <***cageno***> (see 33.4.4.2) is the Commercial and Government Entity Code (CAGEC) and is entered in the fourth column of the special tools list table.

29.3.4.1.1.1.5 The element <***partno***> (see 33.4.4.17) is the part number of the item and is entered in the fourth column of the special tools list table.

29.3.4.1.1.1.6 The element <***desc-uoc***> (see 29.3.3.2.1.2.6) is used to further identify the item. The element is entered in the sixth column of the special tools list table.

29.3.4.1.1.1.7 The element <***qty***> (see 33.4.6.1.1.1.3) column should be left blank in a <***stlitem***> entry in a special tools list table.

29.3.4.1.1.2 The element <***stlcomp***> contains entries of a standard special tool list table and should contains complete information in all columns except the <***qty***> column. Quantities of components should be included in the Description and Usable on Code <***desc-uoc***>. The item name listed in the Description and Usable On Code column should be indented to show components of assemblies and next higher assemblies. This element is equivalent to a "row" element in a structural table. The <***stlcomp***> consists of the following elements described below:

a. DTD fragment for <***stlcomp***>:

```
<!ELEMENT stlcomp - - (callout?, smr, nsn?, cageno, partno, desc-uoc, qty)>
<!ATTLIST stlcomp
          indentlevel     (1 | 2 | 3 | 4 | 5)     #REQUIRED
          %bodyatt;
          %secur;>
```

b. Attributes for <***stlcomp***>:

(1) **INDENTLEVEL** Indent level of the item name listed in the Description and Usable On Code Column.

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.4.1.1.2.1 The element <***callout***> (see 33.4.1.3.2) is the reference letter to reference the item shown on the associated figure. The element is placed in the first column of the special tools list table.

29.3.4.1.1.2.2 The element <***smr***> (see 29.3.3.2.1.2.2) contains supply/requisitioning information, maintenance level authorization criteria, and disposition instruction. The element is placed in the second column of the special tools list table. The element is entered using the attributes SOURCECODE, MAINTCODE, and RECOVERCODE.

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29.3.4.1.1.2.3 The element <***nsn***> (see 33.4.4.16) is the national stock number for an item and is entered in the third column of the special tools list table.

29.3.4.1.1.2.4 The element <***cageno***> (see 33.4.4.2) is the Commercial and Government Entity Code (CAGEC) and is entered in the fourth column of the special tools list table.

29.3.4.1.1.2.5 The element <***partno***> (see 33.4.4.17) is the part number of the item and is entered in the fourth column of the special tools list table.

29.3.4.1.1.2.6 The element <***desc-uoc***> (see 29.3.3.2.1.2.6) is used to further identify the item/part. The element is entered in the sixth column of the special tools list table.

29.3.4.1.1.2.7 The element <***qty***> (see 33.4.6.1.1.1.3) column should be left blank in a <***stlcomp***> entry in a special tools list table.

29.3.5 NSN Index Work Package <***nsnindxwp***>. The element <***nsnindxwp***> contains an index that lists the NSN for all NSNs assigned to applicable items. The element contains identification information required for a work package (<***wpidinfo***> see 33.4.5), may be followed by one or more index references (<***indxref***> see 33.4.1.3.4), followed by a required NSN index <***nsnindex***>.

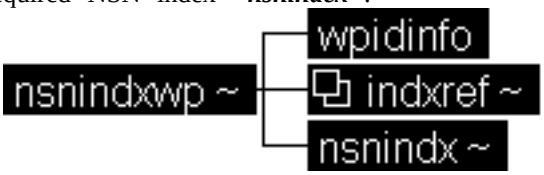

Figure 137 NSN Index Work Package DTD Hierarchy

a. DTD fragment for <***nsnindxwp***>:

```
<!ELEMENT nsnindxwp - - (wpidinfo, indxref*, nsnindx)>
<!ATTLIST nsnindxwp
          wpno      ID         #REQUIRED
          %wprsrc-vals;
          %tracking;
          %wpbodyatt;
          %secur;>
```

b. Attributes for <***nsnindxwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

c. SGML Document Instance Fragment for NSN Index Work Package <***nsnindxwp***>:

```
<nsnindxwp wpno = "Sxxxx30-11-5840-383" wpseq = "0060 00">
<wpidinfo>
<maintlvl level = "operator">
<eicnomen>
<sysnomen pretext = "FOR">
<name>RADAR SET</name>
<modelno>AN/PPS-XXX</modelno>
<nsn>NSN 5840--00-832-7880</nsn>
<eic>EIC: Y10</eic>
<title>NATIONAL STOCK NUMBER INDEX</title>
<nsnindx>
```

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<nsnindxrow><nsn>5840-00-450-3561</nsn>
<dwgno>15</dwgno>
<callout label = "1"></nsnindxrow>
<nsnindxrow><nsn>5840-00-450-3561</nsn>
<dwgno>15</dwgno>
<callout label = "2"></nsnindxrow>
<nsnindxrow><nsn>5840-00-450-3562</nsn>
<dwgno>15</dwgno>
<callout label = "3"></nsnindxrow>
<nsnindxrow><nsn>5315-00-832-6785</nsn>
<dwgno>15</dwgno>
<callout label = "4"></nsnindxrow>
<nsnindxrow><nsn>5310-00-832-5543</nsn>
<dwgno>15</dwgno>
<callout label = "5"></nsnindxrow>
<nsnindxrow><nsn>5310-00-832-5546</nsn>
<dwgno>15</dwgno>
<callout label = "6"></nsnindxrow>
<nsnindxrow><nsn>5315-00-531-7880</nsn>
<dwgno>15</dwgno>
<callout label = "7"></nsnindxrow>
<nsnindxrow><nsn>5340-00-832-5096</nsn>
<dwgno>15</dwgno>
<callout label = "9"></nsnindxrow>
<nsnindxrow><nsn>5315-00-619-2949</nsn>
<dwgno>15</dwgno>
<callout label = "11"></nsnindxrow>
<nsnindxrow><nsn>5365-00-812-1525</nsn>
<dwgno>15</dwgno>
<callout label = "12"></nsnindxrow>
<nsnindxrow><nsn>5330-00-458-1979</nsn>
<dwgno>15</dwgno>
<callout label = "13"></nsnindxrow>
<nsnindxrow><nsn>5310-00-457-6892</nsn>
<dwgno>15</dwgno>
<callout label = "15"></nsnindxrow>
<nsnindxrow><nsn>5840-00-129-6053</nsn>
<dwgno>15</dwgno>
<callout label = "16"></nsnindxrow>
<nsnindxrow><nsn>5325-00-291-9366</nsn>
<dwgno>15</dwgno>
<callout label = "18"></nsnindxrow><nsnindxrow><nsn>5360-00-458-1982</nsn>
<dwgno>15</dwgno>
<callout label = "19"></nsnindxrow>
<nsnindxrow><nsn>5305-00059-3660</nsn>
<dwgno>15</dwgno>
<callout label = "22"></nsnindxrow>
<nsnindxrow><nsn>5310-00-019-9222</nsn>
<dwgno>15</dwgno>
<callout label = "23"></nsnindxrow>
<nsnindxrow><nsn>5340-00-935-3918</nsn>
<dwgno>15</dwgno><callout label = "24"></nsnindxrow>
<nsnindxrow><nsn>5340-00-143-0318</nsn>
<dwgno>15</dwgno>
<callout label = "25"></nsnindxrow>
<nsnindxrow><nsn>5340-00-242-5851</nsn>

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```
<dwgno>18</dwgno>
<callout label = "1"></nsnindxrow>
<nsnindxrow><nsn>5305-00-051-4496</nsn>
<dwgno>18</dwgno>
<callout label = "4"></nsnindxrow>
<nsnindxrow><nsn>5305-00-832-6340</nsn>
<dwgno>21</dwgno>
<callout label = "2"></nsnindxrow>
<nsnindxrow><nsn>5310-00-832-6663</nsn>
<dwgno>21</dwgno>
<callout label = "3"></nsnindxrow>
<nsnindxrow><nsn>5310-00-832-5547</nsn><dwgno>21</dwgno>
<callout label = "4"></nsnindxrow>
<nsnindxrow><nsn>5840-00-937-9065</nsn>
<dwgno>21</dwgno>
<callout label = "5"></nsnindxrow>
<nsnindxrow><nsn>5305-00-403-7718</nsn>
<dwgno>21</dwgno>
<callout label = "7"></nsnindxrow>
<nsnindxrow><nsn>5305-00-763-6961</nsn>
<dwgno>21</dwgno>
<callout label = "10"></nsnindxrow>
</nsnindx>
</nsnindxwp>
```

Sample FOSI Output for NSN Index Work Package **<*nsnindxwp*>**:

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OPERATOR
RADAR SET
AN/PPS-XXX
PN XX-XXXXXX EIC: Y10
NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIG.	ITEM
5840-00-450-3561	15	1
5840-00-450-3561	15	2
5840-00-450-3562	15	3
5315-00-832-6785	15	4
5310-00-832-5543	15	5
5310-00-832-5546	15	6
5315-00-531-7880	15	7
5340-00-832-5096	15	9
5315-00-619-2949	15	11
5365-00-812-1525	15	12
5330-00-458-1979	15	13
5310-00-457-6892	15	15
5840-00-129-6053	15	16
5325-00-291-9366	15	18
5360-00-458-1982	15	19
5305-00059-3660	15	22
5310-00-019-9222	15	23
5340-00-935-3918	15	24
5340-00-143-0318	15	25
5340-00-242-5851	18	1
5305-00-051-4496	18	4
5305-00-832-6340	21	2
5310-00-832-6663	21	3
5310-00-832-5547	21	4
5840-00-937-9065	21	5
5305-00-403-7718	21	7
5305-00-763-6961	21	10

END OF WORK PACKAGE

Figure 138 Sample FOSI Output NSN Index Work Package <nsnindxwp>

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29.3.5.1 The element <***nsnindx***> is a cross reference listing of National Stock Number(s) (NSN) with illustration numbers and callout. The element contains one or more NSN index row(s) <***nsnindxrow***>.

a. DTD fragment for <***nsnindx***>:

```
<!ELEMENT nsnindx - - (nsnindxrow)+>
<!ATTLIST nsnindx
          %bodyatt;
          %secur;>
```

b. Attributes for <***nsnindx***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.5.1.1 The element <***nsnindxrow***> contain entries and should be arranged in ascending alphanumeric sequence by the National Item Identification Number (NIIN) which is the last nine digits of the NSN. The NSN line entry contains a National Stock Number <***nsn***>, the applicable figure number <***dwgno***> and item number for which the stock number is applicable <***callout***>. This element is equivalent to a "row" element in a structural table.

a. DTD fragment for <***nsnindxrow***>:

```
<!ELEMENT nsnindxrow - - (nsn, (dwgno, callout)+)>
<!ATTLIST nsnindxrow
          %bodyatt;
          %secur;>
```

b. Attributes for <***nsnindxrow***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.5.1.1.1 The element <***nsn***> (see 33.4.4.16) is the NSN number for an item and is entered in the first column of the NSN index table.

29.3.5.1.1.2 The element <***dwgno***> (see 33.4.4.8) is the cross referenced illustration number and is entered in the second column of the NSN index table.

29.3.5.1.1.3 The element <***callout***> (see 33.4.1.3.2) is the cross reference illustration callout number, letter, or symbol and is entered in the third column of the NSN index table.

29.3.6 Part Number Index Work Package <***pnindxwp***>. The element <***pnindxwp***> contains an index that lists the part number, figure number, and item number for all part numbers. The element contains identification information required for a work package (<***wpidinfo***> see 33.4.5), may be followed by one or more index references (<***indxref***> see 33.4.1.3.4), followed by a required parts number list <***pnindx***>.

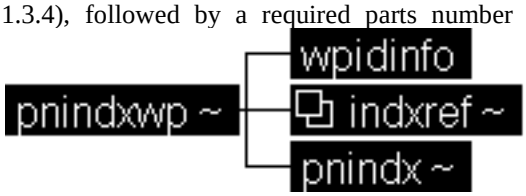

Figure 139 Part Number Index Work Package DTD Hierarchy

a. DTD fragment for <***pnindxwp***>:

```
<!ELEMENT pnindxwp - - (wpidinfo, indxref*, pnindx)>
<!ATTLIST pnindxwp
        wpno      ID          #REQUIRED
        %wprsrc-vals;
        %tracking;
        %wpbodyatt;
        %secur;>
```

b. Attributes for <***pnindxwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced

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through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).
(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).
(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.6.1 The element <***pnindx***> is a cross reference of part numbers identifying the applicable figure and item number. The element contains one or more part number index row(s) <***pnindxrow***>.

a. DTD fragment for <***pnindx***>:

```
<!ELEMENT pnindx - - (pnindxrow)+ >
<!ATTLIST pnindx
            %bodyatt;
            %secur;>
```

b. Attributes for <***pnindx***>:
(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.6.1.1 The element <***pnindxrow***> contain entries and should be arranged in ascending alphanumeric sequence by part number. The line entry contains a part number <***partno***>, the applicable figure number <***dwgno***> and item number <***callout***>. This element is equivalent to a "row" element in a structural table.

a. DTD fragment for <***pnindxrow***>:

```
<!ELEMENT pnindxrow - - (partno, (dwgno, callout)+)>
<!ATTLIST pnindxrow
            %bodyatt;
            %secur;>
```

b. Attributes for <***pnindxrow***>:
(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.6.1.1.1 The element <***partno***> (see 33.4.4.17) is the part number of the item number and is entered in the first column of the part number index table.

29.3.6.1.1.2 The element <***dwgno***> (see 33.4.4.8) is the cross referenced illustration number and is entered in the second column of the part number index table.

29.3.6.1.1.3 The element <***callout***> (see 33.4.1.3.2) is the cross reference illustration callout number, letter, or symbol and is entered in the third column of the part number index table.

29.3.7 Reference Designator Index Work Package <***refdesindxwp***>. The element <***refdesindxwp***> contains an index that lists the reference designator, figure number, and item number for all items with a reference designator. The element contains identification information required for a work package (<***wpidinfo***> see 33.4.5), reference designator list <***refdesindx***> and may contain one or more index reference(s) <***indxref***> see 33.4.1.3.4).

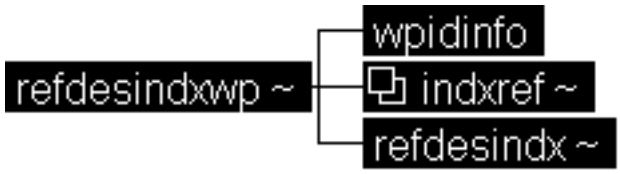

Figure 140 Reference Designator Index DTD Hierarchy

a. DTD fragment for <***refdesindxwp***>:

```
<!ELEMENT refdesindxwp - - (wpidinfo, indxref*, refdesindx)>
<!ATTLIST refdesindxwp
            wpno      ID         #REQUIRED
```

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```
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***refdesindxwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.7.1 The element <***refdesindx***> is a cross reference of reference designators with illustration number and callout. The element contains one or more reference designator row(s) <***refdesindxrow***>.

a. DTD fragment for <***refdesindx***>:

```
<!ELEMENT refdesindx - - (refdesindxrow)+ >
<!ATTLIST refdesindx
            %bodyatt;
            %secur;>
```

b. Attributes for <***refdesindx***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.7.1.1 The element <***refdesindxrow***> contain entries and should be arranged in ascending alphanumeric sequence by reference designators <***refdes***>. The line entry contains a reference designator <***refdes***>, the applicable reference illustration <***dwgno***>, and may be followed the item number <***callout***>. This element is equivalent to a "row" element in a structural table.

a. DTD fragment for <***refdesindxrow***>:

```
<!ELEMENT refdesindxrow - - (refdes, dwgno, callout?)>
<!ATTLIST refdesindxrow
            %bodyatt;
            %secur;>
```

b. Attributes for <***refdesindxrow***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

29.3.7.1.1.1 The element <***refdes***> list the callout reference designation part. The element contains the parameter entity (***%text;*** (see 33.3.7) is available to enter inline formatting and contextual characteristics). The reference designation is displayed in the first column of the reference designator index list table.

a. DTD fragment for <***refdes***>:

```
<!ELEMENT refdes - - (%text;)>
<!ATTLIST refdes
            nsn         CDATA     #IMPLIED
            eic         CDATA     #IMPLIED
            %refs;
            %secur;>
```

b. Attributes for <***refdes***>:

(1) **NSN** - Specifies the national stock number associated with this model number.

(2) **EIC** - The end-item code of the equipment covered in the technical manual of which this national stock number is a part.

(3) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(4) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

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29.3.7.1.1.2 The element <***dwgno***> (see 33.4.4.8) is the cross referenced illustration number and is entered in the second column of the reference designator index table.

29.3.7.1.1.3 The element <***callout***> (see 33.4.1.3.2) is the cross reference illustration callout number, letter, or symbol and is entered in the third column of the reference designator index table.

30 SUPPORTING INFORMATION.

30.1 Scope. The following paragraphs give a description and use of the elements used in the MIL-STD-2361 Supporting Information Chapter DTD.

30.2 Applicable documents. Refer to paragraph 2.

30.3 Supporting Information Chapter <***sim***>. Supporting information is prepared as work packages and contained in a supporting information chapter <***sim***>. The chapter contains required title page (<***titlepg***> see 33.4.4.22), either a standard supporting information chapter ***%stdsim;*** or an aviation supporting information chapter (<***avsim***> see 30.3.2).

Figure 141 Supporting Information Chapter DTD Hierarchy

a. DTD fragment for <***sim***>:

```
<!ELEMENT sim - - ( titlepg, (%stdsim; | avsim))>
<!ATTLIST sim
            tmno         CDATA                  #REQUIRED
            tmlabel      CDATA                  #IMPLIED
            eic          CDATA                  #REQUIRED
            imno         CDATA                  #REQUIRED
            imctrlabel   NUMBER                 #REQUIRED
            imlevel      (depot | operator |
                         gensup | dirsup |
                         unitlvl | inter |
                         avum-avim | tmlvls)    #REQUIRED
            revno        NUMBER                 #REQUIRED
            chngno       NUMBER                 #REQUIRED
            date         CDATA                  #IMPLIED
            pubno        CDATA                  #IMPLIED
            %imrsrc-vals;
            %refs;
            %secur;>
```

b. Attributes for <***sim***>:

(1) **TMNO** - The number of the current TM. The prefix TM must be included in the attribute value. The first time the attribute is referenced for the element it is treated as required, thereafter that it will assume the current attribute value.

(2) **TMLABEL** - The number of the TM of which this information chapter (IM) was a part when originally created; this number remains the same throughout all versions of the IM.

(3) **EIC** - The end-item code of the equipment covered in the TM of which this IM is a part. The first time the attribute is referenced for the element it is treated as required, thereafter that it will assume the current attribute value.

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(4) **IMNO** - reserved for a unique identifying number of the information chapter, when and if such a numbering system is instituted; analogous to the attribute "WPNO" at the work package level.
(5) **IMCTRLABEL** - a label giving the sequence number of the information chapter within this version of the TM; allows an individual IM to be composed with full numbering of pages and components.
(6) **IMLEVEL** - the maintenance level of the information chapter.
(a) “OPERATOR” – Applies to operator maintenance level.
(b) “UNITLVL” – Applies to unit maintenance level.
(c) “DIRSUP” – Applies to direct support (DS) maintenance level.
(d) “GENSUP” – Applies to general support (GS) maintenance level.
(e) “INTER” – Applies to intermediate (DS/GS) maintenance level.
(f) “DEPOT” – Applies to depot maintenance level.
(g) “AVUM-AVIM” – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.
(h) “TMLVLS” – Applies to all maintenance levels.
(7) **REVNO** - the overall revision number for the information chapter.
(8) **CHNGNO** - the overall change number for the information chapter.
(9) **DATE** - The date of the current version of the chapter.
(10) **PUBNO** - Specifies the technical manual publication number.
(11) **%IMRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.3).
(12) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(13) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1 Standard Supporting Information Chapter ***%stdsim;***. The Standard Supporting Information Chapter contains twelve work packages which are defined as follows:

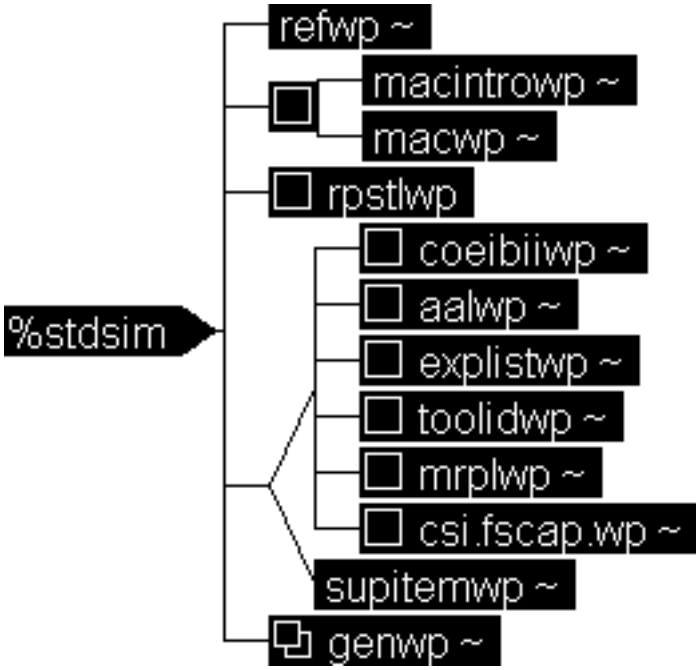

Figure 142 Standard Supporting Information Chapters DTD Hierarchy

a. DTD fragment for ***%stdsim;***:

```
<!ENTITY % stdsim "(refwp, (macintrowp, macwp)?, rpstlwp?, ((coeibiiwp?,
                   aalwp?, explistwp?, toolidwp?, mrplwp?, csi.fscap.wp?)|
                   supitemwp), genwp*)">
```

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30.3.1.1 References Work Package <***refwp***>. The references work package <***refwp***> lists all publications referenced in the TM and required by the user to operate and/or maintain the equipment. The <***refwp***> contains the following elements:

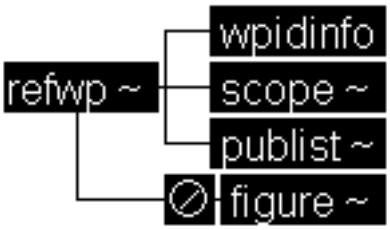

Figure 143 References Work Package DTD Hierarchy

a. DTD fragment for <***refwp***>:

```
<!ELEMENT refwp - - (wpidinfo, scope, publist) -(figure)>
<!ATTLIST refwp
          wpno            ID       #REQUIRED
          %wprsrc-vals;
          %tracking;
          %wpbodyatt;
          %secur;>
```

b. Attributes for <***refwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

c. SGML Document Instance Fragment for References Work Package<***refwp***>:

```
<refwp wpno="dmwrx-xxxx-xxx" wpseq="0030 00">
<wpidinfo>
<maintlvl level ="depot”>
<eicnomen><sysnomen pretext="FOR">
<name>ENGINE OIL PUMP ASSEMBLY</name>
<modelno>M303</modelno>
<partno>PN 12286924</partno> <eic>EIC H6U</eic>
</sysnomen></eicnomen>
<title>REFERENCES</title>
</wpidinfo>
<scope>
<para>This work package lists all forms, field manuals, and technical
manuals referenced in this manual for M2A3 and M3A3.</para>
</scope>
<publist>
<title>FIELD MANUALS</title>
<pubident>FM 3-3</pubident>
<name>NBC Decontamination Avoidance</name>
```

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<pubident>FM 3-19</pubident>
<name>NBC Reconnaissance</name>
<pubident>FM 9-207</pubident>
<name>Operation and Maintenance of Ordnance Material in Cold Weather</name>
<pubident>FM 20-22</pubident>
<name>Vehicle Recovery Operations</name>
<pubident>FM21-11</pubident>
<name>First Aid for Soldiers</name>
<pubident>FM 31-70</pubident>
<name>Basic Cold Weather Manual</name>
<title>FORMS</title>
<pubident>DA Form 2028</pubident>
<name>Recommended Changes to Publications and Blank Forms</name>
<pubident>DA Form 2028–2</pubident>
<name>Recommended Changes to Equipment Technical Publications</name>
<pubident>DA Form 2062</pubident>
<name>Hands Receipt</name>
<pubident>DA Form 2404</pubident>
<name>Equipment Inspection and Maintenance Worksheet</name>
<pubident>DA Form 2408</pubident>
<name>Equipment Log Assembly (Records)</name>
<pubident>DA Form 2408-4</pubident>
<name>Weapon Record Data</name>
<title>TECHNICAL MANUALS</title>
<pubident>TM 9-1300-200</pubident> <name>Ammunition, General</name>
<pubident>TM 11-5695-286-14</pubident> <name>Hand Set Microphone</name>
<pubident>TM 750-244-6</pubident> <name>Destruction of TACOM Equipment</name>
</publist></refwp>

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OPERATOR
ENGINE OIL PUMP ASSEMBLY
M303
PN 12286924 EIC H6U
REFERENCES

SCOPE

This work package lists all, field manuals, forms and technical manuals referenced in this manual.

FIELD MANUALS

FM 3-3	NBC Decontamination Avoidance
FM 3-19	NBC Reconnaissance
FM 9-207	Operation and Maintenance of Ordnance Material in Cold Weather
FM 20-22	Vehicle Recovery Operations
FM 21-11	First Aid for Soldiers
FM 31-70	Basic Cold Weather Manual

FORMS

DA Form 2028	Recommended Changes to Publications and Blank Forms
DA Form 2028-2	Recommended Changes to Equipment Technical Publications
DA Form 2062	Hands Receipt
DA Form 2404	Equipment Inspection and Maintenance Worksheet
DA Form 2408	Equipment Log Assembly (Records)
DA Form 2408-4	Weapon Record Data

TECHNICAL MANUALS

TM 9-1300-200	Ammunition, General
TM 11-5695-286-14	Hand Set Microphone
TM 750-244-6	Destruction of TACOM Equipment

END OF WORK PACKAGE

Figure 144 Sample FOSI Out Put References Work Package <refwp>

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30.3.1.1.1 The element <***wpidinfo***> (see33.4.5) defines the identification information required for a work package.

30.3.1.1.2 The element <***scope***> (see 33.4.4.20) is used for a brief statement of what is covered in the reference work package. This includes the type of manual, model numbers and equipment names, purpose of equipment, any special inclusions in the manual and any other pertinent information.

30.3.1.1.3 The element <***publist***> is used for listing all publications, forms, and similar data referenced in the TM that are required to operate or maintain the equipment. This element may be presented in as a structural table. The element <***publist***> functions equivalent to a table model, but without the row and column lines. The element <***publist***> contains a required title (<***title***> see 33.4.1.5.1), followed by either optional introductory paragraph(s) (<***para***> see 33.4.1.5.3) and/or optional introductory paragraph(s) with required alert notices (<***specpara***> see 33.4.1.1.1), followed by at least one row containing publication identification number <***pubident***> and the publication name (<***name***> see 33.4.4.15). The reference publications may be grouped into major section and/or categories, thus allowing repeating the above model for each division.

a. DTD fragment for <***publist***>:

```
<!ELEMENT publist - o (title, (para | specpara)*, (pubident, name )+)+>
<!ATTLIST publist
            %refs;
            %secur;>
```

b. Attributes for <***publist***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.1.3.1 The element <***pubident***> is used for publication identification number.

a. DTD fragment for <***pubident***>:

```
<!ELEMENT pubident - - (#PCDATA)>
<!ATTLIST pubident
            %refs;
            %secur;>
```

b. Attributes for <***pubident***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.2 Maintenance Allocation Chart (MAC) Introduction Work Package <***macintrowp***>. **Unit level only**. The maintenance allocation chart introduction work package element <***macintrowp***> contains the data for an introduction for a standard format Maintenance Allocation Chart Work Package. The element contains identification information required for a work package (<***wpidinfo***> see 33.4.5), and an introduction section (<***intro***>).

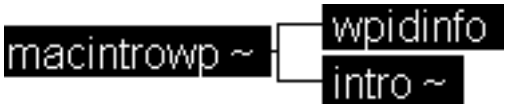

Figure 145 Maintenance Allocation Chart Introduction Work Package DTD Hierarchy

a. DTD fragment for <***macintrowp***>:

```
<!ELEMENT macintrowp - - (wpidinfo, intro)>
<!ATTLIST macintrowp
            wpno            ID       #REQUIRED
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***macintrowp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced

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through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).
(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).
(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.2.1 The element <***intro***> (see 33.4.4.12) is introduction to the MAC/Aviation MAC work package. The paragraph(s) may be entered using an entity reference (see 35.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051.

30.3.1.3 Maintenance Allocation Chart (MAC) Work Package <***macwp***>. The maintenance allocation chart work package <***macwp***> identifies and details the maintenance functions assigned to each maintenance level. This work package is for -20 or AVUM Levels Only. The element contains identification information required for a work package <***wpidinfo***> see 33.4.5), either a MAC <***mac***> or an aviation MAC <***avmac***>, required tools and equipment references <***tereqtab***>, and MAC's remarks references <***remarktab***>.

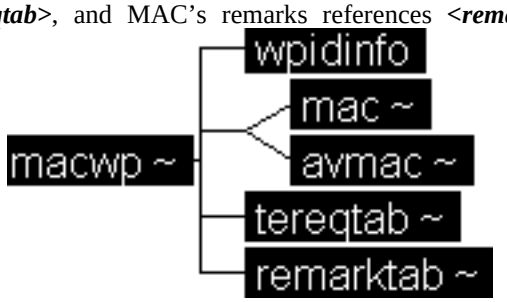

Figure 146 Maintenance Allocation Chart Work Package DTD Hierarchy

a. DTD fragment for <***macwp***>:

```
<!ELEMENT macwp - - (wpidinfo, (mac | avmac), tereqtab, remarktab)>
<!ATTLIST macwp
            wpno         ID       #REQUIRED
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***macwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.
(2) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).
(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).
(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.3.1 The element <***mac***> is a standard Maintenance Allocation Chart lists for the maintenance functions, levels and times assigned to each item. This element is equivalent to a structural table. The element <***mac***> contains a required MAC title (<***title***> see 33.4.1.5.1), followed by at least one row containing a group number <***groupno***>, a component/assembly <***compassem***>, and a component qualifier <***qualify***> (maintenance function, maintenance level, optional required tools and equipment reference(s), and optional MAC remarks reference(s)).

a. DTD fragment for <***mac***>:

```
<!ELEMENT mac - o (title, (groupno, compassem, qualify)+)>
```

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```
<!ATTLIST mac
            %refs;
            %secur;>
```

b. Attributes for <***mac***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.3.1.1 The element <***groupno***> contains a group number which appears in the first column of the MAC and contains the functional group code of the unit.

a. DTD fragment for <***groupno***>:

```
<!ELEMENT groupno - o (#PCDATA)>
<!ATTLIST groupno
            %refs;
            %secur;>
```

b. Attributes for <***groupno***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.3.1.2 The element <***compassem***> contains item names of components, assemblies, subassemblies, and modules (<***name***> see 33.4.4.15) for which maintenance with an optional unit designator <***typedes***> is authorized, appears in the second column of the MAC.

a. DTD fragment for <***compassem***>:

```
<!ELEMENT compassem - o (name, typedes?)>
<!ATTLIST compassem
            %refs;
            %secur;>
```

b. Attributes for <***compassem***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.3.1.2.1 The element <***typedes***> contains the type designation for the unit which is presented after the component in the second column.

a. DTD fragment for <***typedes***>:

```
<!ELEMENT typedes - o (#PCDATA)>
```

30.3.1.3.1.3 The element <***qualify***> contains a qualification of components in a MAC. The component qualifier contains maintenance function <***maintfunc***>, maintenance level <***maintclass***>, optional required tools and equipment reference(s) <***terefs***>, and optional MAC remarks reference(s) <***remarkrefs***>. This element contains the remaining columns in the table.

a. DTD fragment for <***qualify***>:

```
<!ELEMENT qualify - o (maintfunc, maintclass, terefs?, remarkrefs?)+>
```

30.3.1.3.1.3.1 The element <***maintfunc***> contains the maintenance function to be performed on the item listed, in column two, is entered in the third column of the MAC. The maintenance function is entered using the attribute “FUNC”.

a. DTD fragment for <***maintfunc***>:

```
<!ELEMENT maintfunc - o EMPTY>
<!ATTLIST maintfunc
          func    (inspect | test |
                   service | adjust |
                   align | calib |
                   remove | replace |
                   repair | overhaul |
                   rebuild | none)                #REQUIRED>
```

b. Attributes for <***maintfunc***>:

(1) **FUNC** - The maintenance functions allowed to be entered in the third column of the MAC.

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(a) “INSPECT” - Indicates the action is to determine the serviceability of an item through examination.
(b) “TEST” - Indicates the action is to verify serviceability by measuring characteristics against prescribed standards.
(c) “SERVICE” - Indicates the action is to periodically to keep an item in proper operating condition.
(d) “ADJUST” - Indicates the action is to maintain or regulate by bringing into proper position, or by setting the operating characteristics to specified parameters.
(e) “ALIGN” - Indicates the action is to adjust specified variable elements of an item.
(f) “CALIB” - Indicates the action is to determine and cause corrections to be made or to be adjusted on instruments.
(g) “REMOVE” - Indicates the action is to remove and install the same item when required to perform service or maintenance function.
(h) “REPLACE” - Indicates the action is to remove an unserviceable item and install a serviceable counterpart in its place.
(i) “REPAIR” - Indicates the action is to apply maintenance services to an item by correcting specific damage, fault, malfunction, or failure in a component.
(j) “OVERHAUL” - Indicates the action is to restore an item to a completely serviceable/operational condition.
(k) “REBUILD” - Indicates the action is to restore the unserviceable equipment to a like new condition.

30.3.1.3.1.3.2 The element <***maintclass***> contains the maintenance classification appears in the fourth labeled column in the MAC (fourth to eighth structural columns) and contains the authorized maintenance level and the time required to perform the task. The time required to complete the task is entered after the element name representing the appropriate level of maintenance (unit, direct, general support and depot).

a. DTD fragment for <***maintclass***>:

```
<!ELEMENT maintclass - o (unit | direct | gensup | depot)>
```

30.3.1.3.1.3.2.1 The element <***unit***> contains the unit level is the first subdivision of the labeled fourth column (fourth and fifth structural columns). The work time will be entered under either crew (C) or operator (O).

a. DTD fragment for <***unit***>:

```
<!ELEMENT unit - o ((crew | operator), org)>
```

30.3.1.3.1.3.2.1.1 The element <***crew***> contains the crew work time (#PCDATA) which is entered within this element and it will appear under the crew/operator maintenance level (C) subdivision of the labeled fourth column (fourth structural column).

a. DTD fragment for <***crew***>:

```
<!ELEMENT crew - o (#PCDATA)>
```

30.3.1.3.1.3.2.1.2 The element <***operator***> contains the operator work time (#PCDATA) which is entered within this element and it will appear under the crew/operator maintenance level (C) subdivision of the labeled fourth column (fourth structural column).

a. DTD fragment for <***operator***>:

```
<!ELEMENT operator - o (#PCDATA)>
```

30.3.1.3.1.3.2.1.3 The element <***org***> contains the organizational work time (#PCDATA) which is entered within this element and it will appear under the organizational (unit) maintenance level (O) subdivision of the labeled fourth column (fifth structural column).

a. DTD fragment for <***org***>:

```
<!ELEMENT org - o (#PCDATA)>
```

30.3.1.3.1.3.2.2 The element <***direct***> contains the direct support (DS) maintenance level (F) which is the second subdivision of the labeled fourth column (sixth structural column). The DS work time (#PCDATA) will be entered within element.

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a. DTD fragment for <***direct***>:

```
<!ELEMENT direct - o (#PCDATA)>
```

30.3.1.3.1.3.2.3 The element <***gensup***> contains the general support (GS) maintenance level (H) which is the third subdivision of the labeled fourth column (seventh structural column). The GS work time (#PCDATA) will be entered within element.

a. DTD fragment for <***gensup***>:

```
<!ELEMENT gensup - o (#PCDATA)>
<!ATTLIST gensup
            %refs;
            %secur;>
```

30.3.1.3.1.3.2.4 The element <***depot***> contains the depot level maintenance (D) which is the fourth subdivision of the labeled fourth column (eighth structural column and aviation MAC sixth structural column). The depot work time (#PCDATA) will be entered within the element.

a. DTD fragment for <***depot***>:

```
<!ELEMENT depot - o (#PCDATA)>
```

30.3.1.3.1.3.7 The element <***terefs***> contains a reference to an item in the tools and equipment table following the MAC. The fifth labeled column (ninth structural column and aviation MAC seventh structural column) contains the tools and equipment item reference code (use the attribute “REFS” to reference the item).

a. DTD fragment for <***terefs***>:

```
<!ELEMENT terefs - o EMPTY>
<!ATTLIST terefs
          refs    ID   #REQUIRED
```

b. Attributes for <***terefs***>:

(1) **REFS** - The cross reference identifier to the item(s) in the tools and equipment table.

30.3.1.3.1.3.8 The element <***remarkrefs***> contains a reference to a remark found in the remarks table following the MAC. The sixth labeled column (tenth structural column and aviation MAC eighth structural column) contains the remark reference code (use the attribute “REFS” to reference the remark).

a. DTD fragment for <***remarkrefs***>:

```
<!ELEMENT remarkrefs - o EMPTY>
<!ATTLIST remarkrefs
          refs    IDREFS   #REQUIRED
>
```

b. Attributes for <***remarkrefs***>:

(1) **REFS** - The cross reference identifier to the remark(s) in the remarks table.

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.3.2 The element <***avmac***> is a standard aviation Maintenance Allocation Chart lists for the maintenance functions, levels and times assigned to each item. The AVMAC is identical to the normal MAC except that it only identifies three levels (AVUM, AVIM and depot) of maintenance instead of five levels. This element is equivalent to a structural table. The element <***avmac***> contains a required MAC title (<***title***> see 33.4.1.5.1), followed by at least one row containing a group number (<***groupno***> see 30.3.1.3.1.1), a component/assembly (<***compassem***> see 30.3.1.3.1.2), and an aviation component qualifier <***avqualify***> (maintenance function, aviation maintenance level, optional required tools and equipment reference(s), and optional MAC remarks reference(s)).

a. DTD fragment for <***avmac***>:

```
<!ELEMENT avmac - o (title, (groupno, compassem, avqualify)+)>
<!ATTLIST avmac
          %refs;
          %secur;>
```

b. Attributes for <***avmac***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

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30.3.1.3.2.1 The element <***avqualify***> contains a qualification of components in an aviation MAC. The component qualifier contains maintenance function (<***maintfunc***> see 30.3.1.3.1.3.1), aviation maintenance level (<***avmaintclass***>), optional required tools and equipment reference(s) (<***terefs***> see 30.3.1.3.1.3.7), and optional MAC remarks reference(s) (<***remarkrefs***> see 30.3.1.3.1.3.8). This element contains the remaining columns in the table.

a. DTD fragment for <***avqualify***>:

```
<!ELEMENT avqualify - o (maintfunc, avmaintclass, terefs?, remarkrefs?)+>
```

b. Attributes for <***avqualify***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.3.2.1.1 The element <***avmaintclass***> contains the fourth labeled column and spans the fourth to sixth structural columns of the table. The maintenance classification appears in the fourth (AVUM <***avum***>), fifth (AVIM <***avim***>), or sixth (depot <***depot***> see 30.3.1.3.1.3.5.1) column in the aviation MAC and contains the authorized maintenance level and the time required to perform the task. The time required to complete the task is entered after the element name representing the appropriate level of maintenance (AVUM, AVIM, and depot).

a. DTD fragment for <***avmaintclass***>:

```
<!ELEMENT avmaintclass - o (avum | avim | depot)>
```

30.3.1.3.2.1.1.1 The element <***avum***> contains the aviation unit maintenance (AVUM) level (O) which appears in the first subdivision in the labeled fourth column (fourth structural column). The AVUM work time (#PCDATA) will be entered within this element.

a. DTD fragment for <***avum***>:

```
<!ELEMENT avum - o (#PCDATA)>
```

30.3.1.3.2.1.1.2 The element <***avim***> contains the aviation intermediate maintenance (AVIM) level (O) which appears in the second subdivision in the labeled fourth column (fifth structural column). The AVIM work time (#PCDATA) will be entered within this element.

a. DTD fragment for <***avim***>:

```
<!ELEMENT avim - o (#PCDATA)>
```

30.3.1.3.3 The element <***tereqtab***> is used for a tabular list of all tools and test equipment, both special and common, required to maintain the equipment. The element <***tereqtab***> contains a required title (<***title***> see 33.4.1.5.1), followed by at least one row containing a tools and equipment reference code <***terefcode***>, the lowest level of maintenance authorized to use the tool or test equipment <***maintenance***>, the name or identification of the tool or test equipment (<***name***> see 33.4.4.15), the NSN number (<***nsn***> see 33.4.4.16) and the tool number <***toolno***>.

a. DTD fragment for <***tereqtab***>:

```
<!ELEMENT tereqtab - o (title, (terefcode, maintenance, name, nsn,
                          toolno)+)>
<!ATTLIST tereqtab
            %refs;
            %secur;>
```

b. Attributes for <***tereqtab***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.3.3.1 The element <***terefcode***> contains the first column of the tools and equipment references table which contains a tools and equipment reference code . The attribute “ID” correlates to a reference code (#PCDATA) using the element <***terefs***> attribute “REFS”) is entered in the fifth labeled column of the MAC.

a. DTD fragment for <***terefcode***>:

```
<!ELEMENT terefcode - o (#PCDATA)>
<!ATTLIST terefcode
            id              ID   #REQUIRED>
```

b. Attributes for <***terefcode***>:

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(1) **ID** - Specifies the unique identifier of an item in the tools and equipment table.

30.3.1.3.3.2 The element <***maintenance***> contains the lowest level of maintenance authorized to use the tool or test equipment which is entered in the second column of the tools and equipment reference table.

a. DTD fragment for <***maintenance***>:

```
<!ELEMENT maintenance - o EMPTY>
<!ATTLIST maintenance
            lvl     NAMES    #REQUIRED>
```

b. Attributes for <***maintenance***>:

(1) **LVL** - Specifies the lowest maintenance level(s) code allowed. The MAC contains the following maintenance level codes:

(a) “C” - Crew or operator.
(b) “O” - Organizational (unit).
(c) “F” - Direct support (DS).
(d) “H” - General support (GS).
(e) “D” - Depot.

The aviation MAC contains the following maintenance level codes:

(a) “O” - AVUM.
(b) “F” - AVIM.
(c) “D” - Depot.

(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
%SECUR; - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.3.3.3 The element <***toolno***> contains the manufacturer’s part number, model number, or type number (#PCDATA) which is entered in the fifth column of the tools and equipment reference table.

a. DTD fragment for <***toolno***>:

```
<!ELEMENT toolno - o (#PCDATA)>
<!ATTLIST toolno
            %refs;>
```

b. Attributes for <***toolno***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

30.3.1.3.4 The element <***remarktab***> provides pertinent remarks to the maintenance functions as listed in the sixth labeled column of the MAC. The element <***remarktab***> contains a title (<***title***> see 33.4.1.5.1), followed by at least one row containing a code letter <***remarkcode***> that is referenced in the MAC and remarks containing any discursive information pertinent to the maintenance function performed <***remarks***>.

a. DTD fragment for <***remarktab***>:

```
<!ELEMENT remarktab - o (title, (remarkcode, remarks)+)>
<!ATTLIST remarktab
            %refs;
            %secur;>
```

b. Attributes for <***remarktab***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.3.4.1 The element <***remarkcode***> contains the first column of the remarks table which contains a code letter (#PCDATA) referenced using the attribute “ID” for a unique identifier) that is referenced in the sixth column of the MAC (using the element <***remarkrefs***> attribute “REFS”).

a. DTD fragment for <***remarkcode***>:

```
<!ELEMENT remarkcode - o (#PCDATA)>
<!ATTLIST remarkcode
            id    ID     #REQUIRED>
```

b. Attributes for <***remarkcode***>:

(1) **ID** - Specifies the unique identifier of the remark entry.

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30.3.1.3.4.2 The element <***remarks***> contains remarks information (***%text;*** see 33.3.7) pertinent to the maintenance function performed as indicated in the MAC.

a. DTD fragment for <***remarks***>:

```
<!ELEMENT remarks - o (%text;)>
<!ATTLIST remarks
            %refs;
            %secur;>
```

b. Attributes for <***remarks***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.4 Repair Parts and Special Tools List (RPSTL) Work Package <***rpstlwp***>. The repair parts and special tools list work package <***rpstlwp***> is for Unit level or above. For a complete description of the RPSTL work package refer to Section29, Parts Information. The <***rpstlwp***> contains the following elements:

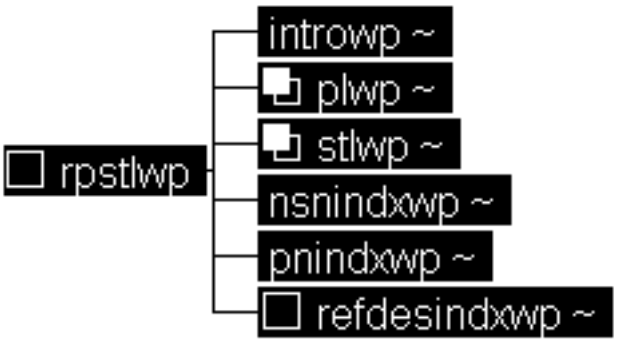

Figure 147 Repair Parts and Special Tools List Work Package DTD Hierarchy

a. DTD fragment for <***rpstlwp***>:

```
<!ELEMENT rpstlwp - - (introwp, plwp+, stlwp+, nsnindxwp, pnindxwp,
                       refdesindxwp?)>
```

30.3.1.5 Components of End Item (COEI) and Basic Issue Items (BII) Lists Work Package <***coeibiiwp***>. The COEI and BII lists work package <***coeibiiwp***> is prepared as an inventory of the equipment and items required to operate the equipment to ensure safe and efficient operation. The element contains identification information required for a work package (<***wpidinfo***> see 33.4.5), followed by an introduction to the work package (<***intro***> see 33.4.4.12). (The paragraph(s) may be entered using an entity reference (see 35.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051.) A COEI list <***coei***> and a BII list <***bii***>.

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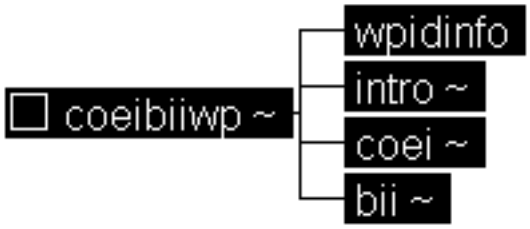

Figure 148 Components of End Item (COEI) and Basic Issue Items (BII) Work Package DTD Hierarchy

a. DTD fragment for <***coeibiiwp***>:

```
<!ELEMENT coeibiiwp - - (wpidinfo, intro, coei, bii)>
<!ATTLIST coeibiiwp
            wpno       ID       #REQUIRED
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***coeibiiwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.5.1 The element <***coei***> contains a component of end item table that lists and illustrates all COEI items for inventory purposes. The element <***coei***> contains at least one figure (<***figure***> see 33.4.3.1) followed by a components of end item table <***coeitab***>.

a. DTD fragment for <***coei***>:

```
<!ELEMENT coei - - (figure+, coeitab)>
<!ATTLIST coei
            %refs;
            %secur;>
```

b. Attributes for <***coei***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.5.1.1 The element <***coeitab***> contains all spare and repair parts that are removed from the major end item and separately packaged or stowed for transportation or movement are listed in the COEI list table. The element <***coeitab***> contains at least one category of COEI entries (<***coei-category***> or at least one COEI entry <***coei-entry***>.

a. DTD fragment for <***coeitab***>:

```
<!ELEMENT coeitab - o (coei-category+ | coei-entry+)>
<!ATTLIST coeitab
            %refs;
            %secur;>
```

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b. Attributes for <***coeitab***>:
(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.5.1.1.1 The element <***coei-category***> is used to represent a table that is subdivided into parts, for example by subassemblies. After the COEI category element is entered, the specific entries for that particular table type are entered. The element <***coei-category***> contains at least one COEI entry <***coei-entry***> (see 30.3.1.5.1.1.2). There is at least one category in the table.

a. DTD fragment for <***coei-category***>:

```
<!ELEMENT coei-category - o (coei-entry)+>
<!ATTLIST coei-category
            catg-name    CDATA   #REQUIRED
            %refs;
            %secur;>
```

b. Attributes for <***category***>:
(1) **CATG-NAME** - Specifies the category name which is the heading that will appear in the table.
(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.5.1.1.2 The element <***coei-entry***> contains the entries of a components of end item list table which are contained within this element. It is equivalent to a "row" element in a structural table.

a. DTD fragment for <***coei-entry***>:

```
<!ELEMENT coei-entry - o (illno, (nsn, dcpno, um, qty)+)>
<!ATTLIST coei-entry
            %refs;
            %secur;>
```

b. Attributes for <***coei-entry***>:
(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.5.1.1.2.1 The element <***illno***> contains the illustration callout number which is entered in the first column in the COEI list and relates the illustration to the list. The element <***illno***> contains (#PCDATA).

a. DTD fragment for <***illno***>:

```
<!ELEMENT illno - o (#PCDATA)>
<!ATTLIST illno
            %refs;
            %secur;>
```

b. Attributes for <***illno***>:
(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.5.1.1.2.2 The element <***nsn***> (see 33.4.4.16) is the callout NSN and appears in the second column of the COEI list.

30.3.1.5.1.1.2.3 The element <***dcpno***> contains the description <***desc***>, CAGE number (<***cageno***> see 33.4.4.2), and part number (<***partno***> see 33.4.4.17), all of which appear in the third column of the COEI list. The usable on code <***uoc***> appears in the fourth column of the COEI list.

a. DTD fragment for <***dcpno***>:

```
<!ELEMENT dcpno - o (name, desc?, (cageno, partno, uoc)+)>
<!ATTLIST dcpno
          %refs;
          %secur;>
```

b. Attributes for <***dcpno***>:
(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

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30.3.1.5.1.1.2.3.1 The element <***desc***> contains the name and description of the item which are entered in the third column of the COEI list. The element <***desc***> contains the parameter entity ***%text;*** (see 33.3.7).

a. DTD fragment for <***desc***>:

```
<!ELEMENT desc - o (%text;)>
<!ATTLIST desc
            %refs;
            %secur;>
```

b. Attributes for <***desc***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.5.1.1.2.3.2 The element <***uoc***> contains more than one applicable model if it exists, it is identified by the usable on code. This code appears in the fourth column of the COEI list. The element <***uoc***> contains the parameter entity ***%text;*** (see 33.3.7).

a. DTD fragment for <***uoc***>:

```
<!ELEMENT uoc - o (%text;)>
<!ATTLIST uoc
            %refs;
            secur;>
```

b. Attributes for <***uoc***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.5.1.1.2.4 The element <***um***> contains the unit of measure which is specified in the sixth column of the COEI List. The element <***um***> contains the parameter entity ***% text;*** (see 33.3.7).

a. DTD fragment for <***um***>:

```
<!ELEMENT um - o (%text;)>
<!ATTLIST um
            %refs;
            %secur;>
```

b. Attributes for <***um***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.5.1.1.2.5 The element <***qty***> (see 33.4.6.1.1.1.3) the quantity required and appears in the fifth column of the COEI list.

30.3.1.5.2 The element basic issue items list <***bii***> contains a standard basic issue items table for listing and illustrating all BII items required to operate the equipment. The BII items are not part of the end item but are required to operate it. The element contains one or more illustration(s) (<***figure***> see 33.4.3.1), and a required basic issue items table <***biitab***>.

a. DTD fragment for <***bii***>:

```
<!ELEMENT bii - o (figure+, biitab)>
<!ATTLIST bii
            %refs;
            %secur;>
```

b. Attributes for <***bii***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.5.2.1 The element <***biitab***> contains the basic issue items necessary for operation, operate it and to do emergency repairs, which are contained in the BII list table. The element <***biitab***> contains at least one basic issue items category (<***bii-category***> see 30.3.1.5.2.1.1) or at least one BII entry (<***bii-entry***>).

a. DTD fragment for <***biitab***>:

```
<!ELEMENT biitab - o (bill-category+ | bii-entry+)>
<!ATTLIST biitab
            %refs;
```

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```
            %secur;>
```

b. Attributes for <***biitab***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.5.2.1.1 The element <***bii-category***> is used to represent a table that is subdivided into parts, for example by subassemblies. After the BII category element is entered, the specific entries for that particular table type are entered. The element <***bii-category***> contains at least one BII entry (<***bii-entry***> (see 30.3.1.5.2.1.2). There is at least one category in the table.

a. DTD fragment for <***bii-category***>:

```
<!ELEMENT bii-category - o (bii-entry)+>
<!ATTLIST bii-category
            catg-name    CDATA   #REQUIRED
            %refs;
            %secur;>
```

b. Attributes for <***bii-category***>:

(1) **CATG-NAME** - Specifies the category name which is the heading that will appear in the table.

(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.5.2.1.2 The element <***bii-entry***> contains the entries for basic issued items list table. It is equivalent to a "row" element in a structural table.

a. DTD fragment for <***bii-entry***>:

```
<!ELEMENT bii-entry - o (illno, (nsn+, dcpno, um, qty)+)>
<!ATTLIST bii-entry
            %refs;
            %secur;>
```

b. Attributes for <***bii-entry***>:

c. **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

d. **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.5.2.1.2.1 The element <***illno***> contains the illustration callout number which is entered in the first column in the BII list and relates the illustration to the list.

30.3.1.5.2.1.2.2 The element <***nsn***> (see 33.4.4.16) is the callout NSN and appears in the second column of the BII list.

30.3.1.5.2.1.2.3 The element <***dcpno***> contains the description (<***desc***> see 30.3.1.5.1.1.4.1.1), cage number (<***cageno***> see 33.4.4.2), and part number (<***partno***> see 33.4.4.17), all of which appear in the third column of the BII list. The usable on code <***uoc***> appears in the fourth column of the BII list.

30.3.1.5.2.1.2.4 The element <***um***> contains the unit of measure which is specified in the fifth column of the BII List.

30.3.1.5.2.1.2.5 The element <***qty***> (see 33.4.6.1.1.1.3) the quantity required and appears in the sixth column of the BII list.

30.3.1.6 Additional Authorization List (AAL) Work Package <***aalwp***>. **Operator only work package** The additional authorization list work package <***aalwp***> contains a listing of additional items authorized for the support of the component. The element contains identification information required for a work package (<***wpidinfo***> see 33.4.5), an introduction to the work package (<***intro***> see 33.4.4.12), and the AAL table <***aal***>.

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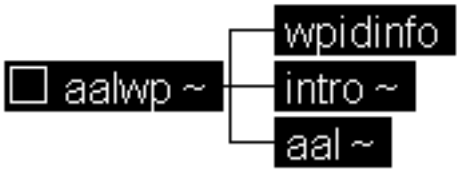

Figure 149 Additional Authorization List Work Package DTD Hierarchy

a. DTD fragment for <***aalwp***>:

```
<!ELEMENT aalwp - - (wpidinfo, intro, aal)>
<!ATTLIST aalwp
            wpno          ID       #REQUIRED
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***aalwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

c. SGML document instance fragment for <***aalwp***>:

```
<aalwp wpno="S00003-9-2350-294" wpseq="0041 00">
<wpidinfo>
<maintlvl level="operator">
<eicnomen><sysnomen pretext="FOR">
<name>ENGINE OIL PUMP ASSEMBLY</name>
<partno nsn="2990-01-074-3488">PN 12286924</partno> <eic>EIC: H6U</eic>
</sysnomen>
</eicnomen>
<title>ADDITIONAL AUTHORIZATION LIST</title>
</wpidinfo>
<intro>
<title>INTRODUCTION</title>
<subtitle>SCOPE</subtitle>
<para>This work package lists additional items you are authorized
for the support of the M3A3.</para>
<subtitle>General</subtitle>
<para>This appendix lists additional items you are authorized
for the support of the M3A3.</para>
<subtitle>Explanations of Columns in the AAL</subtitle><para>Column (1),
National Stock Number, identifies the stock number of the item
to be used for requisitioning purposes.</para>
<para>Column (2), Description, CAGEC, and Part Number, identifies
the Federal item name (in all capital letters) followed by
```

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a minimum description when needed. The last line below the description is the CAGEC (Commercial and Government Entity Code) (in parentheses) and the part number.</*para*>
<*para*>Column (3), Usable on Code, when applicable, gives you a code if the item you need is not the same for different models of equipment.</*para*>
<*para*>Column (4), U/M (unit of measure), indicates how the item is issued for the National Stock Number shown in column (1).</*para*>
<*para*>Column (5), Qty Recm, indicates the quantity recommended.</*para*>
</*intro*>
<*aal*><*aal-entry id="S00003-9-2350-294-6665-00-935-6955"*>
<*nsn*>6665-00-935-6955</*nsn*>
<*dcpno*>
<*name*>ALARM, CHEMICAL AGENT, M-8 A1 W/ACCESSORIES (IN-TERIOR-LEFT SPONSON)</*name*>
<*cageno*>(81361)</*cageno*>
<*partno*>C5-15-8803</*partno*>
<*uoc*>1A1</*uoc*>
</*dcpno*>
<*um*>EA</*um*>
<*qty*>1</*qty*>
</*aal-entry*>
<*aal-entry id="S00003-9-2350-294-6665-00-859-2215"*>
<*nsn*>6665-00-859-2215</*nsn*>
<*dcpno*>
<*name*>ALARM UNIT, CHEMICAL M42E1</*name*>
<*cageno*>81361</*cageno*>
<*partno*>D5-15-4826</*partno*>
<*uoc*>2D2</*uoc*>
</*dcpno*>
<*um*>EA</*um*>
<*qty*>1</*qty*>
</*aal-entry*>
<*aal-entry id="S00003-9-2350-294-6135-00-935-8738"*>
<*nsn*>6135-00-935-8738</*nsn*>
<*dcpno*>
<*name*>BATTERY, DRY CELL</*name*>
<*cageno*>
</*cageno*>
<*partno*>BA3202UF</*partno*>
<*uoc*>5B5</*uoc*>
</*dcpno*>
<*um*>EA</*um*>
<*qty*>4</*qty*>
</*aal-entry*>
<*aal-entry id="S00003-9-2350-294-5820-00-086-7651"*>
<*nsn*>5820-00-086-7651</*nsn*>
<*dcpno*>
<*name*>ANTENNA, AT-784/PRC (SQD LDR ONLY) (INTERIOR-LEFT SPONSON)</*name*>
<*cageno*>80058</*cageno*>
<*partno*>AT-784/PRC</*partno*>
<*uoc*>3A3</*uoc*>
</*dcpno*>
<*um*>EA</*um*>
<*qty*>1</*qty*></*aal-entry*></*aal*></*aalwp*>

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OPERATOR
FOR
ENGINE OIL PUMP ASSEMBLY
M93A1
PN 12286924 EIC: H6U
ADDITIONAL AUTHORIZATION LIST

INTRODUCTION

Scope

This work package lists additional items you are authorized for the support for the the support of the M3A3.

General

This appendix lists additional items you are authorized for the support ofthe M3A3.

Explanation of Columns in the AAL

Column (1), National Stock Number. Identifies the stock number of the item to be used for requisitioning purposes.

Column (2), Description, Part Number and CAGEC. Identifies the Federal item name (in all capital letters) followed by a minimum description when needed. The last line below the description is the CAGEC (commercial and Government entity code) (in parentheses) and the part number.

Column (3), Usable On Code. When applicable, gives you a code if the item you need is not the same for different models of equipment.

Column (4), U/M (unit of measure). indicates how the item is issued for the National Stock Number shown in column (1).

Column (5), QTY RECM. Indicates the quantity recommended.

This work package lists additional items you are authorized for the support of the M93A1 Fox NBCRS.

ADDITIONAL AUTHORIZED LIST ITEMS

Table 1. Additional Authorization List

(1) NATIONAL STOCK NUMBER	(2) DESCRIPTION, CAGEC, AND PART NUMBER	(3) USABLE ONCODE	(4) UM	(5) QTY RECM
6665-00-935-6955	ALARM, CHEMICAL AGENT, M-8 A1 W/ ACCESSORIES (INTERIOR-LEFT SPONSON) (81361) C5-15-8803	1A1	EA	1
6665-00-859-2215	ALARM UNIT, CHEMICAL M42E1 (81361) D5-15-4826	2D2	EA	1
6135-00-935-8738	BATTERY, DRY CELL BA3202UF	5B5	EA	4
5820-00-086-7651	ANTENNA, AT-784/PRC (SQD LDR ONLY) (INTERIOR-LEFT SPONSON) (80058) AT-784/PRC	3A3	EA	1

END OF WORK PACKAGE

Figure 150 Sample FOSI Table Out Put for Additional Authorization List Work Package

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30.3.1.6.1 The element <***intro***> (see 33.4.4.12) is the introductory paragraphs for AAL. The paragraph(s) may be entered using an entity reference (see 35.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051.

30.3.1.6.2 The element <***aal***> is used for all additional authorization items contained in the additional authorization list. These items are required to operate the equipment but are not classified as COEI or BII items. This element functions as the table element. The element <***aal***> contains at least one AAL category (<***aal-category***> see 30.3.1.6.2.1) or at least one AAL entry (<***aal-entry***>).

a. DTD fragment for <***aal***>:

```
<!ELEMENT aal - - (aal-category+ | aal-entry+)>
<!ATTLIST aal
            %refs;
            %secur;>
```

b. Attributes for <***aal***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.6.2.1 The element <***aal-category***> is used to represent a table that is subdivided into parts, for example by subassemblies. The element <***aal-category***> contains at least one AAL entry <***aal-entry***> (see 30.3.1.6.2.2). There is at least one category in the table.

a. DTD fragment for <***aal-category***>:

```
<!ELEMENT aal-category - o (aal-entry)+>
<!ATTLIST aal-category
          catg-name    CDATA   #REQUIRED
          %refs;
          %secur;>
```

b. Attributes for <***aal-category***>:

(1) **CATG-NAME** - Specifies the category name which is the heading that will appear in the table.

(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.6.2.2 The element <***aal-entry***> contains entries of an additional authorization list table. It is equivalent to a "row" element in a structural table.

a. DTD fragment for <***aal-entry***>:

```
<!ELEMENT aal-entry - o (nsn+, dcpno, um, qty)>
<!ATTLIST aal-entry
            %refs;
            %secur;>
```

b. Attributes for <***aal-entry***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.6.2.2.1 The element <***nsn***> (see 33.4.4.16) is the NSN item and the information appears in the first column of AAL table.

30.3.1.6.2.2.2 The element <***dcpno***> is the description for the third and fourth column of the AAL table.

30.3.1.6.2.2.3 The element <***um***> is the unit of measure and appears in the fifth column of the AAL table.

30.3.1.6.2.2.4 The element <***qty***> (see 33.4.6.1.1.1.3) is recommended quantity and appears in the sixth column of the AAL table.

30.3.1.7 Expendable and Durable Items List Work Package <***explistwp***>. The expendable and durable items list work package <***explistwp***> contains a listing of all expendable and durable items required to operate and/or maintain the equipment. The element contains identification information required for a work package (<***wpidinfo***> see 33.4.5), an introduction to the work package (<***intro***> see 33.4.4.12) (The paragraph(s) may

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be entered using an entity reference (see 35.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051.), and expendable and durable items list <***explist***>.

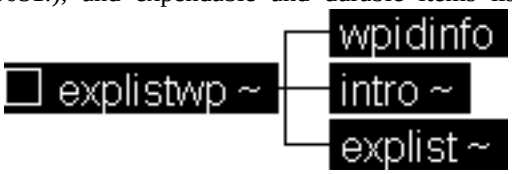

Figure 151 Expendable and Durable Items List Work Package DTD Hierarchy

a. DTD fragment for <***explistwp***>:

```
<!ELEMENT explistwp - - (wpidinfo, intro, explist)>
<!ATTLIST explistwp
            wpno          ID       #REQUIRED
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***explistwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.7.1 The element <***explist***> is used for the standard expendable and durable items table. All expendable and durable items are in alphabetical order by approved item name are listed. The element <***explist***> contains at least one expendable and durable category <***expdur-category***> or at least one expendable and durable entry <***expdur-entry***>.

a. DTD fragment for <***explist***>:

```
<!ELEMENT explist - o (expdur-category+ | expdur-entry+)>
<!ATTLIST explist
          %refs;
          %secur;>
```

b. Attributes for <***explist***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.7.1.1 The element <***expdur-category***> is used to represent a table that is subdivided into parts, for example by subassemblies. The element contains at least one expendable and durable entry <***expdur-entry***> (see 30.3.1.7.1.2). There is at least one category in the table.

a. DTD fragment for <***expdur-category***>:

```
<!ELEMENT expdur-category - o (expdur-entry)+>
<!ATTLIST expdur-category
          catg-name    CDATA   #REQUIRED
          %refs;
          %secur;>
```

b. Attributes for <***expdur-category***>:

(1) **CATG-NAME** - Specifies the category name which is the heading that will appear in the table.

(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

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30.3.1.7.1.2 The element <***expdur-entry***> contains entries for an expendable and durable items list. It is equivalent to a "row" element in a structural table.

a. DTD fragment for <***expdur-entry***>:

```
<!ELEMENT expdur-entry - - (itemno, lvl, nsn, name, desc, cageno, partno, um)>
<!ATTLIST expdur-entry
          %refs;
          %secur;>
```

b. Attributes for <***expdur-entry***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.7.1.2.1 The element <***itemno***> is the number assigned to the entry which is entered in the first column of the expendable and durable items list. The element contains inline text (***%text;*** see 33.3.7).

a. DTD fragment for <***itemno***>:

```
<!ELEMENT itemno - - (%text;)>
<!ATTLIST itemno
            %refs;
            %secur;>
```

b. Attributes for <***itemno***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.7.1.2.2 The element <***lvl***> contains the lowest level of maintenance that requires the listed item which is entered in the second column of the expendable and durable items list. The available maintenance level codes are: “C”- Operator/Crew, “O”- Unit/AVUM, “F”- Direct Support/AVIM, “H”- General Support and “D”- Depot. The element <***lvl***> contains the parameter entity **%text;** (see 33.3.7).

a. DTD fragment for <***lvl***>:

```
<!ELEMENT lvl - o (#PCDATA)>
```

30.3.1.7.1.2.3 The element <***nsn***> (see 33.4.4.16) is the applicable NSN for the item and appears in the third column of the expendable and durable list.

30.3.1.7.1.2.4 The element <***name***> (see 33.4.4.15) is the item name, CAGENO, and part number, and appears in the fourth column in the expendable and durable list.

30.3.1.7.1.2.5 The element <***desc***> contains the name and description of the item and appears in the fourth column following <***name***> in the expendable and durable list.

30.3.1.7.1.2.6 The element <***cageno***> (see 33.4.4.2) is the Commercial and Government Entity Code (CAGEC) and appears in the fourth column following <***desc***> in the expendable and durable list.

30.3.1.7.1.2.7 The element <***partno***> (see 33.4.4.17) is the part number which appears in the fourth column following <***cageno***> in the expendable and durable list.

30.3.1.7.1.2.8 The element <***um***> is the unit of measure and appears in the fifth column in the expendable and durable list.

30.3.1.8 Tool Identification List Work Package <***toolidwp***>. The tool identification work package <***toolidwp***> lists all common tools and supplements and special tools/fixtures needed to maintain equipment. The element contains identification information required for a work package (<***wpidinfo***> see 33.4.5), an introductory section (<***intro***> see 33.4.4.12), and a tabular listing of all tools required by the technical equipment manual (-20/AVUM level or above) <***toolidlist***>.

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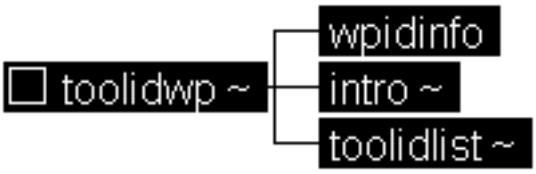

Figure 152 Tool Identification List Work Package DTD Hierarchy

a. DTD fragment for <***toolidwp***>:

```
<!ELEMENT toolidwp - - (wpidinfo, intro, toolidlist)>
<!ATTLIST toolidwp
            wpno       ID    #REQUIRED
            %wprsrc-vals;
            %tracking
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***toolidwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.8.1 The element <***toolidlist***> is a standard tool identification list and includes a tabular listing of all tools required by the initial setup requirements of any procedure in the technical manual. The element <***toolidlist***> contains at least one tool category <***tool-category***> or at least one tool entry <***tool-entry***>.

a. DTD fragment for <***toolidlist***>:

```
<!ELEMENT toolidlist - o (tool-category+ | tool-entry+)>
<!ATTLIST toolidlist
            %refs;
            %secur;>
```

b. Attributes for <***toolidlist***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.8.1.1 The element <***tool-category***> is used to represent a table that is subdivided into parts, for example by subassemblies. The element contains at least one tool entry <***tool-entry***> (see 30.3.1.8.1.2). There is at least one category in the table.

a. DTD fragment for <***tool-category***>:

```
<!ELEMENT tool-category - - (tool-entry)+>
<!ATTLIST tool-category
          catg-name    CDATA   #REQUIRED
          %refs;
          %secur;>
```

b. Attributes for <***tool-category***>:

(1) **CATG-NAME** - Specifies the category name which is the heading that will appear in the table.

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(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.8.1.2 The element <***tool-entry***> contains entries of a tool identification list table. It is equivalent to a "row" element in a structural table.

a. DTD fragment for <***tool-entry***>:

```
<!ELEMENT tool-entry - - (itemno, name, nsn, partno+, extref?)>
<!ATTLIST tool-entry
            %refs;
            %secur;>
```

b. Attributes for <***tool-entry***>:
(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.8.1.2.1 The element <***itemno***> (see 30.3.1.7.1.2.1) is the number assigned to the entry which is entered in the first column of the tool identification list. It is referenced in the initial setup to identify the item.

30.3.1.8.1.2.2 The element <***name***> (see 33.4.4.15) is the tool name or description which is entered in the second column of the tool identification list.

30.3.1.8.1.2.3 The element <***nsn***> (see 33.4.4.16) is the tool NSN which is entered in the third column of the tool identification list.

30.3.1.8.1.2.4 The element <***partno***> (see 33.4.4.17) is the tool part number which is entered in the fourth column of the tool identification list.

30.3.1.8.1.2.5 The element <***extref***> (see 33.4.1.3.3) is used for a reference to another TM, information chapter outside the document, work package outside the document, or other external source. The element <***extref***> is entered in the fifth column of the tool identification list.

30.3.1.9 Mandatory Replacement Parts List Work Package <***mrplwp***>. The mandatory replacement parts list work package <***mrplwp***> contains a list of all mandatory replacement parts referenced in the task initial setups and procedures. The element contains identification information required for a work package (<***wpidinfo***> see 33.4.5), an introductory section (<***intro***> see 33.4.4.12) and mandatory replacement parts list <***mrpl***>.

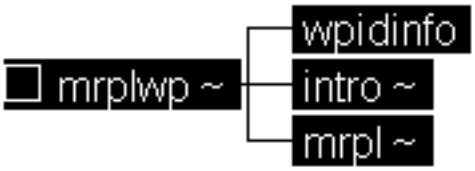

Figure 153 Mandatory Replacement Parts List Work Package DTD Hierarchy

a. DTD fragment for <***mrplwp***>:

```
<!ELEMENT mrplwp - - (wpidinfo, intro, mrpl)>
<!ATTLIST mrplwp
          wpno            ID       #REQUIRED
          %wprsrc-vals;
          %tracking;
          %wpbodyatt;
          %secur;>
```

b. Attributes for <***mrplwp***>:
(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work

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package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).
(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).
(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.9.1 The element <***mrpl***> lists all mandatory replacement parts referenced in the initial setups of maintenance work packages. The element <***mrpl***> contains at least one MRPL category of entries <***mrpl-category***> or at least one MRPL entry <***mrpl-entry***>.

a. DTD fragment for <***mrpl***>:

```
<!ELEMENT mrpl - o (mrpl-category+ | mrpl-entry+)>
<!ATTLIST mrpl
          %refs;
          %secur;>
```

b. Attributes for <***mrpl***>:
(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.9.1.1 The element <***mrpl-category***> is used to represent a table that is subdivided into parts, for example by subassemblies. The element contains at least one MRPL entry <***mrpl-entry***> (see 30.3.1.9.1.2). There is at least one category in the table.

a. DTD fragment for <***mrpl-category***>:

```
<!ELEMENT mrpl-category - o (mrpl-entry)+>
<!ATTLIST mrpl-category
            catg-name    CDATA   #REQUIRED
            %refs;
            %secur;>
```

b. Attributes for <***mrpl-category***>:
(1) **CATG-NAME** - Specifies the category name which is the heading that will appear in the table.
(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.9.1.2 The element <***mrpl-entry***> contains the entries for a standard mandatory replacement parts list. It is equivalent to a "row" element in a structural table.

a. DTD fragment for <***mrpl-entry***>:

```
<!ELEMENT mrpl-entry - o (itemno, partno, nsn, name, qty)>
<!ATTLIST mrpl-entry
            %refs;
            %secur;>
```

b. Attributes for <***mrpl-entry***>:
(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.9.1.2.1 The element <***itemno***> (see 30.3.1.7.1.2.1) is the number assigned to the MRPL which is entered in the first column of the standard mandatory replacement parts list. It is referenced in the initial setup to identify the item.

30.3.1.9.1.2.2 The element <***partno***> (see 33.4.4.17) is the MRPL part number which is entered in the second column of the standard mandatory replacement parts list.

30.3.1.9.1.2.3 The element <***nsn***> (see 33.4.4.16) is the MRPL NSN which is entered in the third column of the standard mandatory replacement parts list.

30.3.1.9.1.2.4 The element <***name***> (see 33.4.4.15) is the MRPL item name which is entered in the fourth column of the standard mandatory replacement parts list.

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30.3.1.9.1.2.5 The element <***qty***> (see 33.4.6.1.1.1.3) is the MRPL required quantity which is entered in the fifth column of the standard mandatory replacement parts list.

30.3.1.10 Ammunition Work Package (<***ammowp***> see 28.3.5.1). The element <***ammowp***> is described in complete detail in the Maintenance Information Chapter.

30.3.1.11 Critical Safety Items and Flight Safety Critical Aircraft Parts Work Package <***csi.fscap.wp***>. The critical safety items and flight safety critical aircraft parts work package <***csi.fscap.wp***> contains a tabular listing of all critical safety items and a listing of flight safety critical aircraft parts. The element contains identification information required for a work package (<***wpidinfo***> see 33.4.5), followed by an optional critical safety items <***csi***> and an optional flight safety critical aircraft parts <***fscap***>.

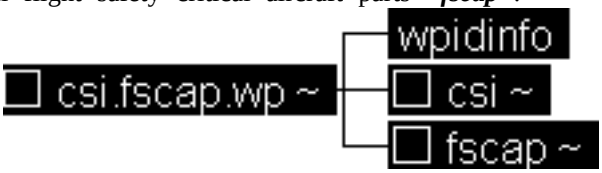

Figure 154 Critical Safety Items and Flight Safety Critical Aircraft Parts Work Package DTD Hierarchy

a. DTD fragment for <***csi.fscap.wp***>:

```
<!ELEMENT csi.fscap.wp - - (wpidinfo, csi?, fscap?)>
<!ATTLIST csi.fscap.wp
            wpno            ID       #REQUIRED
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***csi.fscap.wp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see 33.5.10).

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.11.1 The element <***csi***> lists all the critical safety items required by AMC-R 702-32. The element <***csi***> contains paragraphs (<***para***> see 33.4.1.5.3), paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1), and/or procedural text (<***proc***> see 33.4.1.8.1).

a. DTD fragment for <***csi***>:

```
<!ELEMENT csi - o (para | specpara | proc)+>
<!ATTLIST csi
            %refs;
            %secur;>
```

b. Attributes for <***csi***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.11.2 The element <***fscap***> lists all the critical safety items required by AMC-R 702-32. The element <***fscap***> contains paragraphs (<***para***> see 33.4.1.5.3), paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1), and/or procedural text (<***proc***> see 33.4.1.8.1) and a flight safety critical aircraft parts table <***fscap.tab***>.

a. DTD fragment for <***fscap***>:

```
<!ELEMENT fscap - o ((para | specpara | proc)+, fscap.tab)>
```

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```
<!ATTLIST fscap
          %refs;
          %secur;>
```

b. Attributes for <***fscap***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.11.2.1 The element <***fscap.tab***> flight safety critical aircraft parts table contains a required title (<***title***> see 33.4.1.5.1) followed by at least one or more flight safety critical aircraft parts entry <***fscap-entry***>.

a. DTD fragment for <***fscap.tab***>:

```
<!ELEMENT fscap.tab - o (title, fscap-entry+)>
<!ATTLIST fscap.tab
            %refs;
            %secur;>
```

b. Attributes for <***fscap.tab***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.11.2.1.1 The element <***fscap-entry***> contain the entries of a flight safety critical aircraft parts list. It is equivalent to a "row" element in a structural table.

a. DTD fragment for <***fscap-entry***>:

```
<!ELEMENT fscap-entry - o (partno, cageno, name, desc)>
<!ATTLIST fscap-entry
            %refs;
            %secur;>
```

b. Attributes for <***fscap-entry***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.11.2.1.1.1 The element <***partno***> (see 33.4.4.17) is the part number and is entered in the first column in the flight safety critical aircraft parts table.

30.3.1.11.2.1.1.2 The element <***cageno***> (see 33.4.4.2) is the Commercial and Government Entity Code (CAGEC) and is entered in the first column following <***partno***> in the flight safety critical aircraft parts table.

30.3.1.11.2.1.1.3 The element <***name***> (see 33.4.4.15) is the item name and is entered in the second column in the flight safety critical aircraft parts table.

30.3.1.11.2.1.1.4 The element <***desc***> (see 30.3.1.5.1.1.4.1.1) contains description of the item which is entered in the third column of the flight safety critical aircraft parts table.

30.3.1.12 Generic Supporting Information Work Package <***genwp***>. If a manual contains a work package that does not fit any of the content specific work packages, the generic supporting information work package <***genwp***> may be used to enter the text of the work package. There may be more than one generic work package contained in the supporting information chapter, and all will occur at the end of the chapter. The element contains identification information required for a work package (<***wpidinfo***> see 33.4.5), followed by paragraph(s) (<***para***> see 33.4.1.5.3), paragraph(s) with required notices (<***specpara***> see 33.4.1.1.1), and/or procedures (<***proc***> see 33.4.1.8.1) that may be grouped into section(s) (<***title***> see 33.4.1.5.1), or subsection(s) (<***subtitle***> see 33.4.1.5.2).

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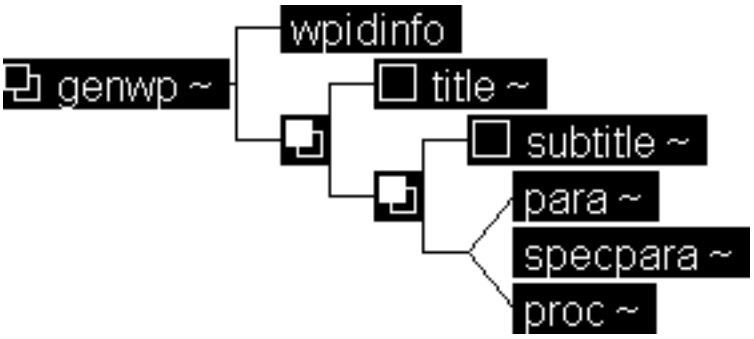

Figure 155 Generic Appendix Work Package DTD Hierarchy

a. DTD fragment for <***genwp***>:

```
<!ELEMENT genwp - - (wpidinfo, (title?, (subtitle?, (para | specpara
                    | proc))+)+)>
<!ATTLIST genwp
            wpno          ID       #REQUIRED
            subject       CDATA    #REQUIRED
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;
            %secur;>
```

b. Attributes for <***genwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **SUBJECT** - Specifies the subject of the work package for database indexing.

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.1.13 Support Items Work Package <***supitemwp***>. The support items work package (<***supitemwp***>) is used to combine any of the supporting list when the data contained in these supporting lists are minimal and creating a separate work package for each list is unnecessary. The element contains identification information required for a work package (<***wpidinfo***> see 33.4.5), may be followed by an introductory section (<***intro***> see 33.4.4.12), and a combination of two or more of the supporting lists (<***coei***> see 30.3.1.5.1), (<***aal***> see 30.3.1.6.2), (<***explist***> see 30.3.1.7.1), (<***toolidlist***> see 30.3.1.8.1), (<***mrpl***> see 30.3.1.9.1), (<***csi***> see 30.3.1.11.1), and (<***fscap***> see 30.3.1.11.2).

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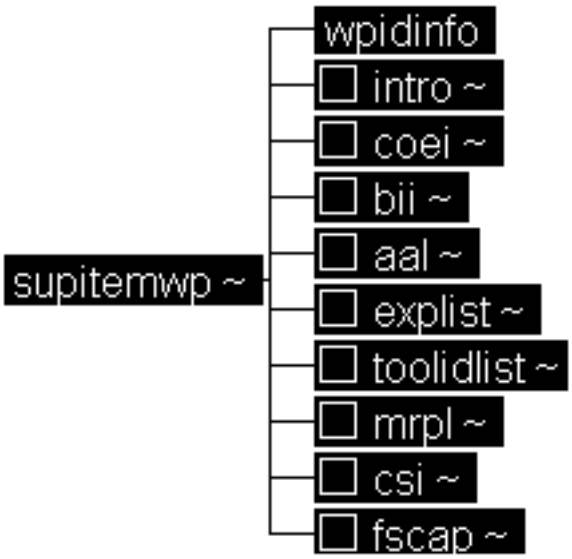

Figure 156 Support Items Work Package DTD Hierarchy

a. DTD fragment for <***supitemwp***>:

```
<!ELEMENT supitemwp - - (wpidinfo, intro?, coei?, bii?, aal?, explist?,
                         toolidlist?, mrpl?, csi?, fscap?)>
<!ATTLIST supitemwp
            wpno          ID       #REQUIRED
            subject       CDATA    #REQUIRED
            %wprsrc-vals;
            %tracking;
            %wpbodyatt;

            %secur;>
```

b. Attributes for <***supitemwp***>:

(1) **WPNO** - The unique number assigned to this work package by the original developer. This number remains the same when the work package is reused. The work package is referenced through an ID which is (#REQUIRED) and remains with the work package for the work package life. The composition system generates the work package sequence number. Refer to MIL-STD-40051A, Part 1, to obtain the work package number format.

(2) **SUBJECT** - Specifies the subject of the work package for database indexing.

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see 33.5.8).

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see 33.5.9).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

30.3.2 Aviation Supporting Information Chapter <***avsim***>. The aviation supporting information chapter contains two types of chapters; pilot operator's instruction ***%pilotopsim;*** see 30.3.1.8.1) (the element will be covered in future revision of this handbook) or shipping equipment ***%shipsim;*** (the element will be covered in future revision of this handbook) supporting information.

a. DTD fragment for ***%avsim;***:

```
!ENTITY % avsim "(%shipsim | %pilotopsim)">
```

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31 SHIPPING INFORMATION.

31.1 Scope. The shipping information chapter will be described in a future release of the handbook. The <***shipim***> has not been fully coordinated with respected commands. After full coordination with respected commands the description will be incorporated with the handbook.

31.2 Applicable documents. Refer to paragraph 2

32 PILOT OPERATING PROCEDURES INFORMATION.

32.1 Scope. The pilot operating procedures information chapter will be described in a future release of the handbook. The <pilot-opim> has not been fully coordinated with respected commands. After full coordination with respected commands the description will be incorporated with the handbook.

32.2 Applicable documents. Refer to paragraph 2.

33 SHARED COMMON ELEMENTS.

33.1 Scope. The following parameter entities and elements are common throughout MIL-STD-2361 and are shared elements used with the various information chapters.

33.2 Applicable documents . Refer to paragraph 2.

33.3 Parameter Entities Elements. The parameter entities listed in this paragraph will define the parameter entity, description, and content model. The elements defined in the parameter entity will be defined in 33.4.

33.3.1 Lists ***%list;***. The parameter entity ***%list;*** defines the available list types, which are random (unordered) list (<***randlist***> see 33.4.1.2.2), sequential (numbered) list (<***seqlist***> see 33.4.1.2.1) and definition list (<***deflist***> see 33.4.1.2.3).

a. DTD fragment for Parameter Entity Lists ***%list;***:

```
<!ENTITY % list "seqlist | randlist | deflist">
```

33.3.2 Paragraph Type ***%p;***. The parameter entity ***%p;*** identifies the type of paragraph whether it is a specific paragraph (<***specpara***> see 33.4.1.1.1) that is associated with warnings (<***warning***> see 33.4.1.1.2), cautions (<***caution***> see 33.4.1.1.3), and/or notes (<***note***> see 33.4.1.1.4) or a general paragraph of text (<***para***> see 33.4.1.5.3).

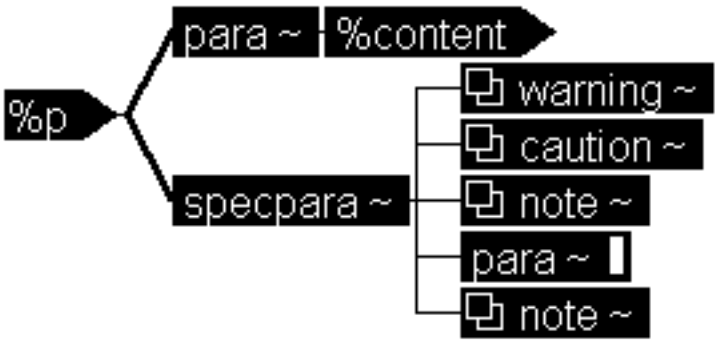

Figure 157 DTD Hierarchy for Parameter Entity Paragraph Type %p;

a. DTD fragment for Parameter Entity Paragraph Type ***%p;***:

```
<!ENTITY % p "(para | specpara)">
```

33.3.3 Alert Notices ***%alert;***. The parameter entity ***%alert;*** defines any required warning(s), caution(s) or note(s) to alert reader to potentially hazardous condition, if the prescribed conditions and notices are not

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followed. The parameter entity contains warning statement (<***warning***> see 33.4.1.1.2), caution statement (<***caution***> see 33.4.1.1.3), and note statement (<***note***> see 33.4.1.1.4).

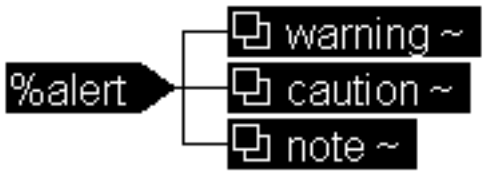

Figure 158 DTD Hierarchy for Parameter Entity Alert Notices %alert;

a. DTD fragment for Parameter Entity Alert Notices ***%alert;***:

```
<!ENTITY % alert "(warning*, caution*, note*)">
```

33.3.4 Titled Paragraph ***%titldtext;***. The parameter entity ***%titldtext;*** is provided to allow sections and/or subsections in general data format. The parameter entity contains a section title (<***title***> see 33.4.1.5.1) followed by an optional subsection title (<***subtitle***> see 33.4.1.5.2) followed by parameter entity paragraph type ***%p;***.

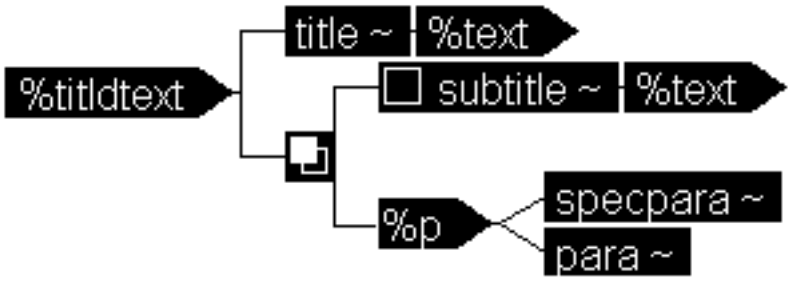

Figure 159 DTD Hierarchy for Parameter Entity Titled Paragraph %titldtext;

a. DTD fragment for Parameter Entity Titled Paragraph ***%titldtext;***:

```
<!ENTITY % titldtext "(title, (subtitle?, (%p;))+)">
```

33.3.5 Titled Procedures ***%procedures;***. The parameter entity ***%procedures;*** is common procedural content model for a task or work package. The parameter entity contains an optional section title (<***title***> see 33.4.1.5.1), optional parameter entity alert statements ***%alert;*** see 33.3.3), followed by either subsection(s) or procedure(s) (<***proc***> see 33.4.1.8.1). The subsection contains an optional subsection title (<***subtitle***> see 33.4.1.5.2) followed by parameter entity paragraph type (the parameter entity ***%p;*** paragraphs (<***para***> see 33.4.1.5.3) and/or paragraphs with required alert notices (<***specpara***> see 33.4.1.1.1) see 33.3.2).

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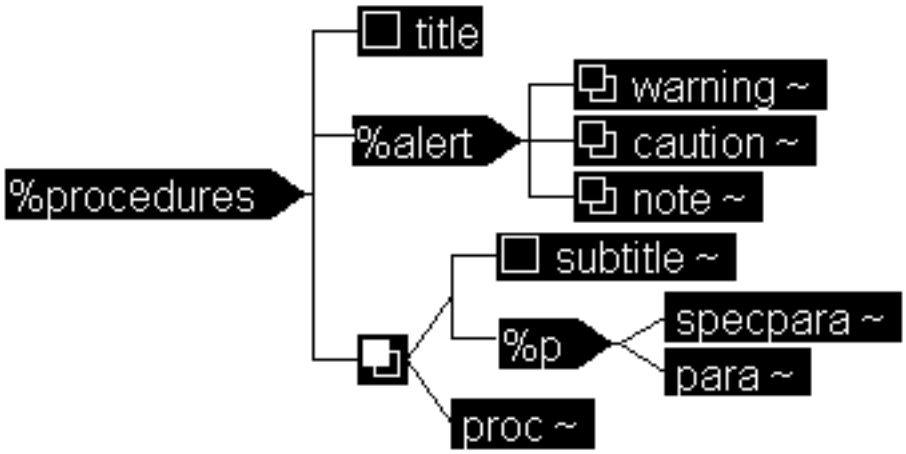

Figure 160 DTD Hierarchy for Parameter Entity Titled Procedures %procedures;

a. DTD fragment for Parameter Entity Titled Procedures ***%procedures;***:

```
<!ENTITY % procedures "(title?, %alert;,((subtitle?, (%p;)+) |
                        proc)+)">
```

33.3.6 Volume Separation ***%vol.group;***. The parameter entity ***%vol.group;*** is the volume separations for large TMs. The element contains a volume front matter (<***volume***> see 24.2.1.12) and/or volume rear matter (<***vol-rear***> see 24.2.1.13).

a. DTD fragment for ***%vol.group;***

```
<!ENTITY % vol.group    "(volume | (vol-rear, volume?))?">
```

33.3.7 Inline Text ***%text;***. The parameter entity ***%text;*** is used for including or excluding information based on the data requirements within a data element. The parameter entity ***%text;*** is used for specifying contextual information based on the data requirements within an element. This allows for greater control of the data within data elements. The parameter entity ***%text;*** contains at least one of following the narrative text (#PCDATA parsable characters see 35.3.2), CAGE code (<***cageno***> see 33.4.4.2), figure callout number (<***callout***> see 33.4.1.3.2), changed text (<***change***> see 33.4.1.7), control or indicator description (<***ctrlind***> see 33.4.4.4), control or indicator value/setting (<***ctrlind-val***> see 33.4.4.5), Department of Defence Ammunition Code (<***dodac***> see 33.4.4.6) drawing name (<***dwgname***> see 33.4.4.7), drawing number (<***dwgno***> see 33.4.4.8), emphasis narrative (<***emphasis***> see 33.4.1.6.1), emphasis aviation term (<***emphterm***> see 33.4.1.6.2), external document reference (<***extref***> see 33.4.1.3.3), flight safety critical part (<***flghtsafe-part***> see 33.4.4.10), footnote narrative (<***ftnote***> see 33.4.1.4.1), footnote reference (<***ftnref***> see 33.4.1.4.2), index flag reference (<***indxref***> see 33.4.1.3.4), lubricant instruction (<***lubricant***> see 33.4.4.13), equipment model number (<***modelno***> see 33.4.4.14), component/assembly name (<***name***> see 33.4.4.15), national stock number (NSN) (<***nsn***> see 33.4.4.16), null content marker (<***null***> see 33.4.1.6.3), page location cross-reference marker (<***pageloc***> see 33.4.1.3.5), part number (<***partno***> see 33.4.4.17), supply catalog number (<***sc***> see 33.4.4.19), graphic symbol (<***symbol***> see 33.4.3.2), torque value (<***torque***> see 33.4.4.23), verbatim narrative (<***verbatim***> see 33.4.1.6.4), critical voltage measurement (<***voltage***> see 33.4.4.24) and cross reference pointer (<***xref***> see 33.4.1.3.6).

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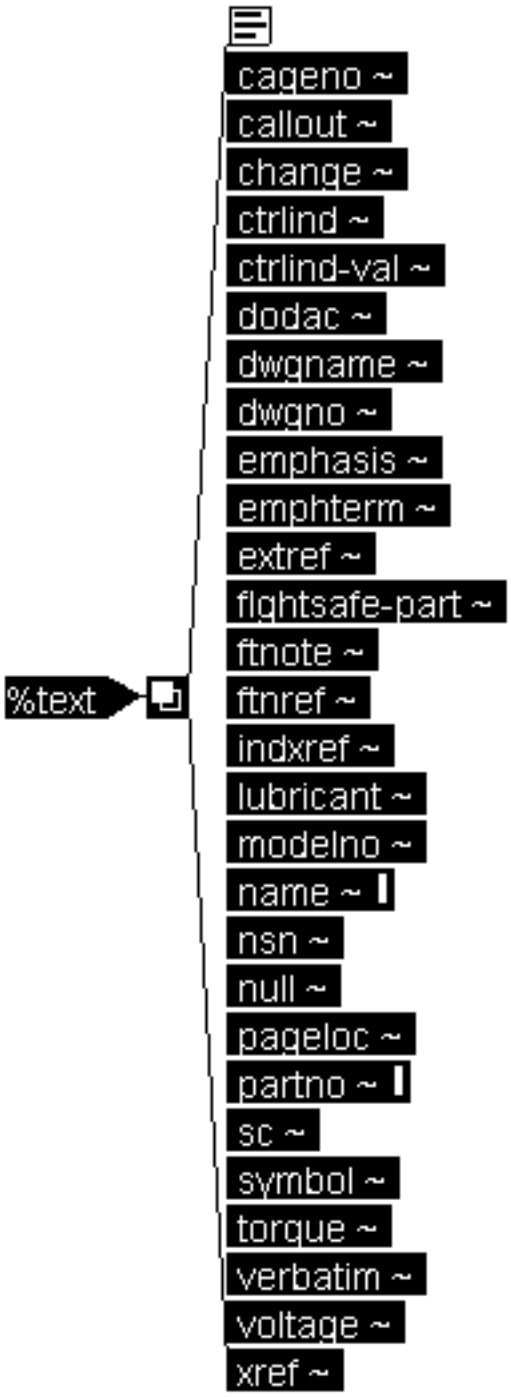

Figure 161 DTD Hierarchy for Parameter Entity Inline Text %text;

a. DTD fragment for Parameter Entity Inline Text ***%text;***:

```
<!ENTITY % text "(#PCDATA | cageno | callout | change | ctrlind |
                 ctrlind-val | dodac | dwgname | dwgno | emphasis | emphterm |
                 extref | flghtsafe-part | ftnote | ftnref | indxref |
                 lubricant | modelno | name | nsn | null | pageloc |
```

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```
partno | sc | symbol | torque | verbatim | voltage | xref)+">
```

33.3.8 Paragraph Content ***%content;***. The parameter entity ***%content;*** is referenced within the elements <***para***> and <***item***> and is used for specifying contextual information based on the data requirements within an element. This allows for greater control of the data within data elements. The parameter entity ***%content;*** contains at least one of the following: the inline structural, formatting and content sensitive text (***%text;*** see 33.3.7), various lists (***%list;*** see 33.3.1), figure anchor (<***anchor***> see 33.4.1.3.1), email (<***email***> see 33.4.4.9), figure (<***figure***> see 33.4.3.1), illustration (<***graphic***> see 33.4.3.1.2), note statement (<***note***> see 33.4.1.1.4), proponent (<***proponent***> see 33.4.4.18), CALS table (<***table***> see 33.4.2.1) and/or telephone (<***telephone***> see 33.4.4.21).

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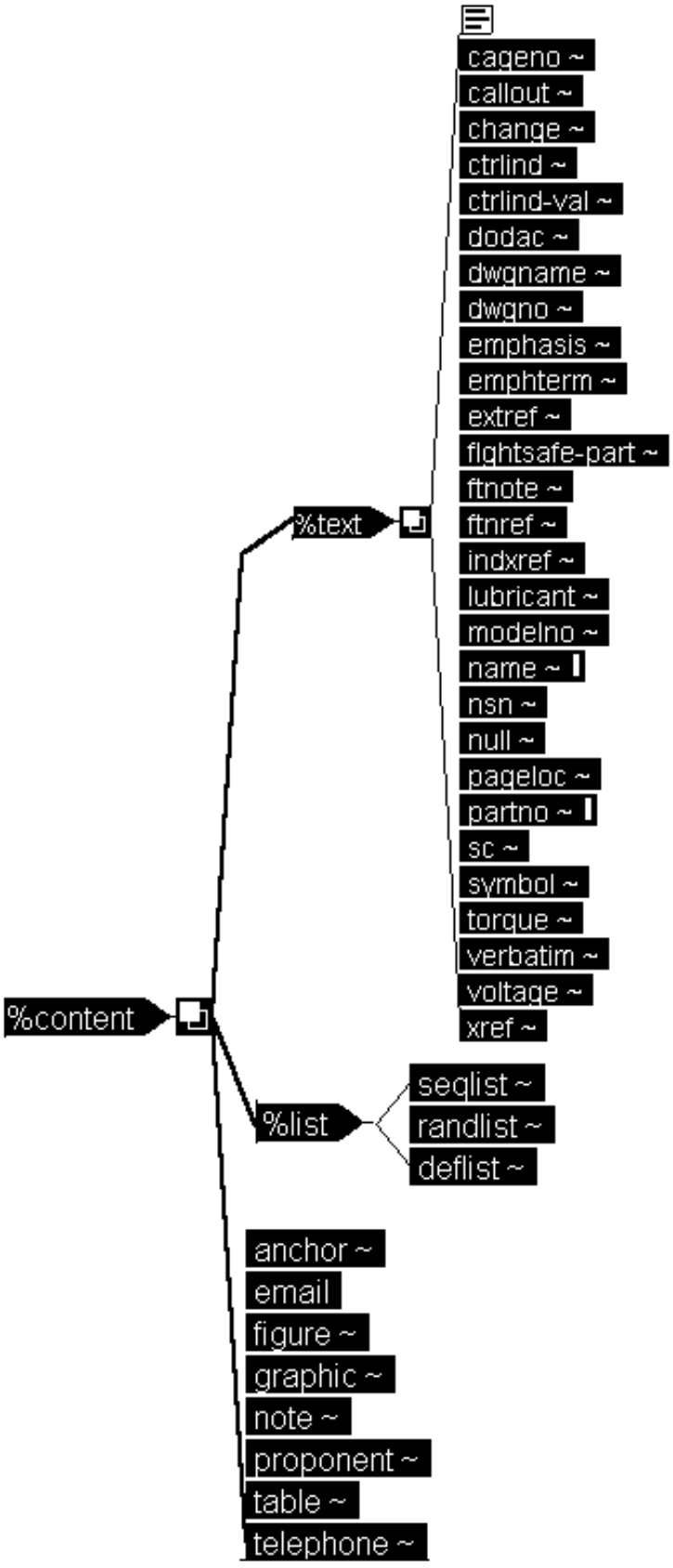

Figure 162 DTD Hierarchy for Parameter Entity Paragraph Content %content;

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a. DTD fragment for Parameter Entity Paragraph Content ***%content;***:

```
<!ENTITY % content "(%text; | (%list;) | anchor | email | figure | graphic |
                    note | proponet |table | telephone)+">
```

33.3.9 Table Content ***%tabcontent;***. The parameter entity ***%tabcontent;*** is referenced within the elements <***entry***> and <***tabentry***> and is used for specifying contextual information based on the data requirements within an element. This allows for greater control of the data within data elements. The parameter entity ***%content;*** contains at least one of the following: the inline structural, formatting and content sensitive text (***%text;*** see 33.3.7), various lists (***%list;*** see 33.3.1), paramenter entity paragraph type (***%p;*** see 33.3.2), caution statement (<***caution***> see 33.4.1.1.3), illustration (<***graphic***> see 33.4.3.1.2), note statement (<***note***> see 33.4.1.1.4), procedure (<***proc***> see 33.4.1.8.1), procedural step first level (<***step1***> see 33.4.1.8.2), title (<***title***> see 33.4.1.5.1), and/or warning statement (<***warning***> see 33.4.1.1.2).

a. DTD fragment for Parameter Entity Table Content ***%tabcontent;***:

```
<!ENTITY % tabcontent "(%text; | (%list;) |(%p;)| caution | graphic | note |
                        proc | step1 | title | warning)+">
```

33.3.10 Changed Text ***%changetext;***. The parameter entity ***%changetext;*** is used for specifying contextual information based on the modified information within <***change***>. The parameter entity ***%changetext;*** contains at least one of the following narrative text (#PCDATA parsable characters see 35.3.2), CAGE code (<***cageno***> see 33.4.4.2), figure callout number (<***callout***> see 33.4.1.3.2), caution statement (<***caution***> see 33.4.1.1.3), changed text (<***change***> see 33.4.1.7), control or indicator description (<***ctrlind***> see 33.4.4.4), control or indicator value/setting (<***ctrlind-val***> see 33.4.4.5), drawing name (<***dwgname***> see 33.4.4.7), drawing number (<***dwgno***> see 33.4.4.8), emphasis narrative (<***emphasis***> see 33.4.1.6.1), emphasis aviation term (<***emphterm***> see 33.4.1.6.2), external document reference (<***extref***> see 33.4.1.3.3), flight safety critical part (<***flghtsafe-part***> see 33.4.4.10), footnote narrative (<***ftnote***> see 33.4.1.4.1), footnote reference (<***ftnref***> see 33.4.1.4.2), index flag reference (<***indxref***> see 33.4.1.3.4), lubricant instruction (<***lubricant***> see 33.4.4.13), equipment model number (<***modelno***> see 33.4.4.14), component/assembly name (<***name***> see 33.4.4.15), national stock number (NSN) (<***nsn***> see 33.4.4.16), null content marker (<***null***> see 33.4.1.6.3), page location cross-reference marker (<***pageloc***> see 33.4.1.3.5), general paragraph (<***para***> see 33.4.1.5.3), part number (<***partno***> see 33.4.4.17), supply catalog number (<***sc***> see 33.4.4.19), procedural step first level (<***step1***> see 33.4.1.8.2), graphic symbol (<***symbol***> see 33.4.3.2), title (<***title***> see 33.4.1.5.1), torque value (<***torque***> see 33.4.4.23), verbatim narrative (<***verbatim***> see 33.4.1.6.4), critical voltage measurement (<***voltage***> see 33.4.4.24), warning statement (<***warning***> see 33.4.1.1.2) and cross reference pointer (<***xref***> see 33.4.1.3.6).

a. DTD fragment for Parameter Entity Changed Text ***%changetext;%changetext;***:

```
<!ENTITY % changetext "(#PCDATA | cageno | callout | caution | change |
                        ctrlind | ctrlind-val | dwgname | dwgno | emphasis |
                        emphterm | extref | flghtsafe-part | ftnote |
                        ftnref | indxref | lubricant | modelno | name | note
                        | nsn | null | pageloc | para | partno | sc  |
                        step1 | symbol | title | torque | verbatim |
                        voltage | warning | xref)+">
```

33.4 Common Elements. This paragraph will define the common elements used throughout MIL-STD-2361. The elements are divided into functional groups to define the element's characteristic. The elements are defined with the element name, description, content model and attribute list.

33.4.1 Structural Elements. The elements have structural or formatting type information and is subdivided into various functional groups.

33.4.1.1 Alert Notices.

33.4.1.1.1 Paragraph with Required Alert Notices <***specpara***>. The element <***specpara***> is used for paragraphs that are specifically associated with warnings, cautions, or notes. The actual narrative data (<***para***> see 33.4.1.5.3) will follow after the warning statement(s) <***warning***>, caution statement(s) <***caution***>, and/or note statement(s) <***note***>. The alert notices and the narrative text will be printed on the same page or will be electronic displayed before the narrative text.

a. DTD fragment for <***specpara***>:

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```
<!ELEMENT specpara - - (warning*, caution*, note*, para, note*)>
<!ATTLIST specpara
          %refs;
          %secur;>
```

b. Attributes for <***specpara***>:

- **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
- **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.1.1.2 Warning Statement <***warning***>. A warning contains an operation, procedure, or statement that if not performed properly may result in personal injury or death. A warning must appear on the same page or screen as the procedure, step, or paragraph to which it applies. The element contains at least one of the following:

Icon set (<***icon-set***> see 33.4.3.3) to display hazardous icon symbol to identify quickly the type of warning being discussed.

Illustration (<***graphic***> see 33.4.3.1.2) is provided to better describe the warning statement.

The warning statement (<***para***> see 33.4.1.5.3) used to describe instructions to follow.

Sequence list (<***seqlist***> see 33.4.1.2.1) provides a sequential number or letter list used to describe the instruction to follow.

a. DTD fragment for Warning Statement <***warning***>:

```
<!ELEMENT warning - - (icon-set | graphic | para | seqlist)+ -(figure |
                       table | note) >
<!ATTLIST warning
          keyword          CDATA          #IMPLIED
          xrefid           IDREF          #IMPLIED
          warnsum-entry    %yesorno;      #IMPLIED
          %bodyatt;
          %secur;>
```

b. Attributes for <***warning***>:

(1) **KEYWORD** - Specifies a word or phrase that may be used as the title of the warning. The information appears under the generated text WARNING.

(2) **XREFID** - References the identifier of the element with which the warning is associated.

(3) **WARNSUM-ENTRY** - Specifies whether or not the warning should appear in the warning summary of the TM. The implied value is for inclusion.

(4) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.1.1.3 Caution Statement <***caution***>. A caution is used for procedures or actions that if not executed properly may result in damage to equipment or in long-term health hazards. The element <***caution***> contains at least one of the following elements:

a. DTD fragment for Caution Statement <***caution***>:

```
<!ELEMENT caution - - (icon-set | graphic | para | seqlist)+ -(figure |
                       table | note) >
<!ATTLIST caution
          keyword          CDATA          #IMPLIED
          xrefid           IDREF          #IMPLIED
          warnsum-entry    %yesorno;      #IMPLIED
          %bodyatt;
          %secur;>
```

b. Attributes for <***caution***>:

(1) **KEYWORD** - Specifies a word or phrase that may be used as the title of the caution. The information appears under the generated text CAUTION.

(2) **XREFID** - References the identifier of the element with which the warning is associated.

(3) **WARNSUM-ENTRY** - Specifies whether or not the warning should appear in the warning summary of the TM. The implied value is for inclusion.

(4) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

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33.4.1.1.4 Note Statement <***note***>. A procedure, condition, or statement that is important enough to highlight as a note. The element <***note***> contains at least one illustration (<graphic> see33.4.3.1.2) is provided to better describe the note statement.

The note statement (<***para***> see 33.4.1.5.3) used to describe instructions to follow.

Sequence list (<***seqlist***> see 33.4.1.2.1) provides a sequential number or letter list used to describe the instruction to follow.

a. DTD fragment for Note Statement <***note***>:

```
<!ELEMENT note - - (graphic | para | seqlist)+ -(figure | table | note)>
<!ATTLIST note
          keyword          CDATA          #IMPLIED
          xrefid           IDREF          #IMPLIED
          %bodyatt;
          %secur;>
```

b. Attributes for <***note***>:

(1) **KEYWORD** - Specifies a word or phrase that may be used as the title of the warning. The information appears under the generated text WARNING.

(2) **XREFID** - References the identifier of the element with which the warning is associated.

(3) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(4) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.1.2 List Elements.

33.4.1.2.1 Sequence (Ordered) List <***seqlist***>. The element <***seqlist***> is used for a sequential or ordered list. The sequence of items is denominated by numbers or letters. It contains an optional list title (<***title***> see 33.4.1.5.1) followed at least one list item <***item***>. The numbering scheme is the first level list uses numerical counter surrounded by parentheses, the second level list uses lower case alpha characters counter surrounded by parentheses and the third level list uses numerical counter followed by a right parentheses.

a. DTD fragment for <***seqlist***>:

```
<!ELEMENT seqlist - - (title?, item+)>
<!ATTLIST seqlist
          %refs;
          %secur;>
```

b. Attributes for <***seqlist***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.1.2.1.1 The element <***item***> is an entry in a sequential or random list or an equipment item. The element contains paragraph content (***%content;*** see 33.3.8).

a. DTD fragment for <***item***>:

```
<!ELEMENT item - o (%content;)>
<!ATTLIST item
label       CDATA   #IMPLIED
          %refs;
          %secur;>
```

b. Attributes for <***item***>:

(1) **LABEL** - Contains a number or symbol that will override the normal numbering or marker for the list item being generated by the composition system.

(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.1.2.2 Random List <***randlist***>. The element <***randlist***> is used for a list of randomly ordered items and are not numbered. The element contains an optional list title (<***title***> see 33.4.1.5.1) followed by at least one list item <***item***>. The bullet scheme, when specified, is the first level list uses a filled circled and the second level list uses a dash.

a. DTD fragment for <***randlist***>:

```
<!ELEMENT randlist - - (title?, item+)>
```

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```
<!ATTLIST randlist
          bullet       %yesorno   '0'
          prefix       CDATA      #IMPLIED
          %refs;
          %secur;>
```

b. Attributes for <***randlist***>:

(1) **BULLET**- Specifies whether (non-zero number) or not a bullet (0) should precede each item. If no value is entered the default is no bullet displayed.

(2) **PREFIX** - Specifies a character, word, or symbol (other than a bullet) that should precede each item.

(3) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(4) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.1.2.2.1 List Item <***item***>. The element <***item***> (see 33.4.1.2.1.1) is an entry in a sequential or random list or an equipment item.

33.4.1.2.3 Definition List <***deflist***>. The element <***deflist***> identifies a list of terms and definitions. The term can enclose a word, phrase, abbreviation, or symbol. The element contains an optional title list (<***title***> (see 33.4.1.5.1) followed by a list of terms <***term***> each of which must be followed by its definition <***def***>.

a. DTD fragment for <***deflist***>:

```
<!ELEMENT deflist - - (title?, (term, def)+)>
<!ATTLIST deflist
          %refs;
          %secur;>
```

b. Attributes for <***deflist***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.1.2.3.1 The element <***term***> is a word, phrase, acronym, symbol or abbreviation to be defined in a definition list. The element contains inline textual narrative (***%text;*** see 33.3.7).

a. DTD fragment for <***term***>:

```
<!ELEMENT term - o (%text;)>
<!ATTLIST term
          %refs;
          %secur;>
```

b. Attributes for <***term***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.1.2.3.2 The element <***def***> is a definition for the term in a definition list. The element contains a general paragraph (<***para***> see 33.4.1.5.3).

a. DTD fragment for <***def***>:

```
<!ELEMENT def - - (para)>
<!ATTLIST def
          %refs;
          %secur;>
```

b. Attributes for <***term***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.1.3 Reference Elements.

33.4.1.3.1 Figure Anchor <***anchor***>. An anchor binds a figure to a location in another element in the current document instance. The anchor name is referenced by <***figure***> and uses the attribute "PLACEMENT" to determine the figure placement relative to the anchor. The <***anchor***> and <***figure***> attribute is used for display and composition processing. The element is EMPTY and all pertinent information is entered through its attributes.

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a. DTD fragment for <***anchor***>:

```
<!ELEMENT anchor - o EMPTY>
<!ATTLIST anchor
          anchorname      NMTOKEN    #REQUIRED
          figid           IDREFS     #REQUIRED>
```

b. Attributes for <***anchor***>:

(1) **ANCHORNAME** - Specifies the anchor's name, which will be referenced in <***figure***> attribute "PLACEMENT". This is a NAME not an ID attribute value.

(2) **FIGID** - Reference(s) the figure identifier tied to the current anchor.

33.4.1.3.2 Figure Callout <***callout***>. The element <***callout***> appears in text to reference a callout number, letter, or symbol appearing in a figure. The element is EMPTY and all pertinent information is entered through its attributes.

a. DTD fragment for <***callout***>:

```
<!ELEMENT callout - o EMPTY>
<!ATTLIST callout
          id              ID         #IMPLIED
          numref          IDREF      #IMPLIED
          partref         IDREF      #IMPLIED
          assocfig        IDREF      #IMPLIED
          label           NUMBER     #IMPLIED>
```

b. Attributes for <***callout***>:

(1) **ID** - Specifies the identifier of the callout element.

(2) **NUMREF** - References the figure identifier of the callout.

(3) **PARTREF** - References the part identifier to which the callout is being associated.

(4) **ASSOCFIG** - References the figure identifier in which the callout appears.

(5) **LABEL** - Specifies a literal expression of the callout.

33.4.1.3.3 External Document Reference <***extref***>. The element <***extref***> is used for a reference to another TM, information chapter outside the document, work package outside the document, document, or other external source. Note that the attributes for this element contain the content to be displayed and is not an SGML IDREF since the references are external to the document instance. The element is EMPTY and all pertinent information is entered through its attributes.

a. DTD fragment for External Document Reference <***extref***>:

```
<!ELEMENT extref - o EMPTY >
<!ATTLIST extref
            docno     CDATA     #IMPLIED
            revno     NUMBER    #IMPLIED
            pretext   CDATA     #IMPLIED
            posttext  CDATA     #IMPLIED
            wpid      CDATA     #IMPLIED
            taskid    CDATA     #IMPLIED
            figid     CDATA     #IMPLIED
            tableid   CDATA     #IMPLIED
            partid    CDATA     #IMPLIED
            %secur;>
```

b. Attributes for <***extref***>:

(1) **DOCNO** - Used to specify the title, document number, or other identifier of an external document.

(2) **REVNO** - Used to specify the revision level of the external document.

(3) **PRETEXT** - Used to specify any text that precedes the external reference when resolved for display.

(4) **POSTTEXT** - Used to enter any text that follows the external reference when resolved for display.

(5) **WPID** - Used to specify a work package identification number. This number is not the sequence number, but attribute "WPNO" value. To specify the work package sequence number use either attribute "PRETEXT" or "POSTTEXT". The attribute will allow future links to the information.

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(6) **TASKID** - Used to specify a task identifier (ID). To specify the task name use either attribute "PRETEXT" or "POSTTEXT". The attribute will allow future links to the information.
(7) **FIGID** - Used to specify a figure identifier (ID. To specify the figure title use either attribute "PRETEXT" or "POSTTEXT". The attribute will allow future links to the information.
(8) **TABLEID** - Used to specify a table identifier (ID). To specify the table title use either attribute "PRETEXT" or "POSTTEXT". The attribute will allow future links to the information.
(9) **PARTID** - Used to specify a part or a part number identifier (ID). To specify the part or part number use either attribute "PRETEXT" or "POSTTEXT". The attribute will allow future links to the information.
(10) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.1.3.4 Index Marker Reference <***indxref***>. The element <***indxref***> establishes a document location and index text to be referenced within the alphabetic index (<***aindx***> see 24.2.1.11.2). The element is EMPTY and all pertinent information is entered through its attributes.

a. DTD fragment for Index Marker Reference <***indxref***>:

```
<!ELEMENT indxref - o EMPTY >
<!ATTLIST indxref
            ref1      CDATA     #IMPLIED
            ref2      CDATA     #IMPLIED
            ref3      CDATA     #IMPLIED
            ref4      CDATA     #IMPLIED
            id        ID        #IMPLIED
            indxref   IDREF     #IMPLIED>
```

b. Attributes for <***indxref***>:
(1) **REF1** - Level 1. Index text to be referenced.
(2) **REF2** - Level 2. Index text to be referenced.
(3) **REF3** - Level 3. Index text to be referenced..
(4) **REF4** - Level 4. Index text to be referenced.
(5) **ID** - Index reference page # ID.
(6) **INDXREF** - Index reference from index.

33.4.1.3.5 Page Location <***pageloc***>. The element <***pageloc***> is used to establish a page location anchor that can be invoked as a cross-reference and resolved to the page number. Used when a text location cannot be referenced to an element, such as a table, task, or work package. The element is EMPTY and all pertinent information is entered through its attributes.

a. DTD fragment for Page Location <***pageloc***>:

```
<!ELEMENT pageloc - o EMPTY >
<!ATTLIST pageloc
            pageid     ID     #REQUIRED
            %secur;>
```

b. Attributes for <***pageloc***>:
- **PAGEID** - Specifies the page location identifier.
- **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.1.3.6 Cross Reference <***xref***>. The element <***xref***> is used to specify an internal cross reference to other information in the TM. The attributes for <***xref***> are used to specify what is being referenced. The composition system specifies how the ID referenced value(s) are to be resolved. The element can have multiple object ID references to reference several different objects to provide a single reference. An example is a reference to a work package and procedural steps. The element would use three attributes "WPID", "STEPSTART" and "STEPEND" to identify the reference location and the composition system would generate "WP 0004 00 steps 3-5". The element is EMPTY and all pertinent information is entered through its attributes.

a. DTD fragment for Cross Reference <***xref***>:

```
<!ELEMENT xref - o EMPTY >
<!ATTLIST xref
          taskid         IDREF            #IMPLIED
```

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```
wpid            IDREF           #IMPLIED
stepstart       IDREF           #IMPLIED
stepend         IDREF           #IMPLIED
figid           IDREF           #IMPLIED
callout         CDATA           #IMPLIED
tableid         IDREF           #IMPLIED
tslocid         IDREF           #IMPLIED
pagelocid       IDREF           #IMPLIED
pretext         CDATA           #IMPLIED
posttext        CDATA           #IMPLIED
%secur;>
```

b. Attributes for <***xref***>:

(1) **TASKID** - Reference to a task identifier, such as "repair-replace" or "service upon receipt." The composition system will generate the task title.

(2) **WPID** - Reference to a work package identifier. The composition system will generate the literal “WP” and work package sequence number.

(3) **STEPSTART** - Reference to a procedural step identifier. The attribute is either a single step reference (composition system generates “step ” and step number) or the start of a reference to a range of steps (composition system generates “steps ” and the step number).

(4) **STEPEND** - Reference to a ending procedural step identifier. The composition system generates “-” and the step number. Used only with the attribute “STEPSTART”.

(5) **FIGID** - Reference to a figure identifier. The composition system will generate the literal “figure ” and the figure number.

(6) **CALLOUT** - Supplies the literal callout value.

(7) **TABLEID** - Reference to a table identifier. The composition system will generate the literal “table ” and the table number.

(8) **TSLOCID** - Reference to a troubleshooting procedure object locator identifier defined in **<*tswp*>**. The composition system will generate the literal “page” and the page number.

(9) **PAGELOCID** - References to a page location identifier defined in **<*pageloc*>**. The composition system will generate the literal “page” and the page number.

(10) **PRETEXT** - Supplies any text that precedes the cross reference when resolved for display.

(11) **POSTTEXT** - Supplies any text that follows the cross reference when resolved for display.

(12) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.1.4 Footnote Elements.

33.4.1.4.1 Footnote <***ftnote***>. The element <***ftnote***> is used for the body of a footnote in the document. The footnote information can be entered all in the same location or where footnote occurs. The footnote does not appear until the element <***ftnref***> is entered.

a. DTD fragment for Footnote <***ftnote***>:

```
<!ELEMENT ftnote - - (para+)>
<!ATTLIST ftnote
          id      ID            #REQUIRED
          mark    (ctr | mark)  "ctr"
          label   CDATA         #IMPLIED
          %secur;>
```

b. Attributes for <***ftnote***>:

(1) **ID** - Specifies the footnote identifier.

(2) **LABEL** - Used to specify the number or symbol assigned to the footnote and overrides autogeneration of the number or symbol by the composition system.

(3) **MARK** - Used to specify the footnote prefix marking. When no value is entered the default value is “CTR”.

(a) “CTR” - The footnote prefix is numbered.

(b) “MARK” - The footnote prefix is symbol defined in the GPO Manual of Style.

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(4) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.1.4.2 Footnote Reference <***ftnref***>. The element <***ftnref***> is used to reference a footnote appearing in the footnote page area. The element is EMPTY and all pertinent information is entered through its attributes.

a. DTD fragment for Footnote Reference <***ftnref***>:

```
<!ELEMENT ftnref  - o EMPTY>
<!ATTLIST ftnref
          xrefid  IDREF   #REQUIRED>
```

b. Attributes for <***ftnref***>:

- **XREFID** - Reference to the footnote identifier. The composition system will generate the footnote text at the bottom of the referenced page.

33.4.1.5 Textual Elements.

33.4.1.5.1 Title <***title***>. The element <***title***> is used in multiple contexts within a TM to define the context to be discussed and is presented according to the composition system specifications of a particular context. The actual title is entered after the <***text***> element. The element contains inline text (***%text;*** see 33.3.7) which allows the embedding of data elements. Generally, the narrative is entered using #PCDATA.

a. DTD fragment for Title <***title***>:

```
<!ELEMENT title - o (%text;)>
<!ATTLIST title
          %refs;
          %secur;>
```

b. Attributes for <***title***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.1.5.2 Subtitle <***subtitle***>. The element <***subtitle***> is subordinate to a <***title***> and denotes that the paragraph to which it is attached is subordinate to one attached to a title. The element contains the parameter entity ***%text;*** (see 33.3.7).

a. DTD fragment for Subtitle <***subtitle***>:

```
<!ELEMENT subtitle - o (%text;)>
<!ATTLIST subtitle
%refs;
          %secur;>
```

b. Attributes for <***subtitle***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.1.5.3 General Paragraph <***para***>. The element <***para***> is used for paragraphs of text and can also contain embedded inline formatting, structural, referencing and content specific elements which are contained within the parameter entity ***%content;*** (see 33.3.8).

a. DTD fragment for General Paragraph <***para***>:

```
<!ELEMENT para - o (%content;) >
<!ATTLIST para
          bullet        %yesorno;    '0'
          parahead      CDATA        #IMPLIED
          %hcp.esd;
          %bodyatt;
          %secur;>
```

b. Attributes for <***para***>:

(1) **BULLET** - Used to specify if the paragraph is to have a bullet preceding the text. A non-zero specifies to display a bullet and 0 not to use a bullet. The default value if no value is entered is no bullet.

(2) **PARAHEAD** - Used to enter a paragraph heading before the paragraph narrative. The composition system specifies the text to be inlined and bold.

(3) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).

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(4) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.1.6 Formatting Elements.

33.4.1.6.1 Emphasis <***emphasis***>. The element <***emphasis***> is used to emphasize text within the data stream. Emphasis elements should be used only in situations where the emphasized material is embedded in plain text or where an exception from the usual style of the element specified by the composition system is needed. Emphasis elements can be nested to specify a combination of styles, such as underlined bold italic. The emphasized text is enclosed in a <***emphasis***> start and end element. The element <***emphasis***> contains a parameter entity ***%text;*** (see 33.3.7) which allows the embedding of data elements within the element.

a. DTD fragment for Emphasis <***emphasis***>:

```
<!ELEMENT emphasis - - (%text;) >
<!ATTLIST emphasis
            emph         (caps | bold |
                          italic | bolditalic |
                          uline | strikeout)
                          2line | smallcaps
                          overline | color        #REQUIRED
            color         (black | white |
                           red | green |
                           orange | blue
                           yellow | cyan
                           magental)              #IMPLIED
            presentation  (interrupt | escape |
                           window)                #IMPLIED>
```

b. Attributes for <***emphasis***>:

(1) **EMPH** - Specifies the type of emphasis to be used.
  (a) “CAPS” - Specifies the data is capitalized all text.
  (b) “BOLD” - Specifies the data is bold text.
  (c) “ITALIC” - Specifies the data is italicized text.
  (d) “BOLDITALIC” - Specifies the data is bold and italicized text.
  (e) “ULINE” - Specifies the data is underlined text.
  (f) “STRIKEOUT” - Specifies the data is strikeout dash through each character.
(2) **COLOR** - Specifies the color of the highlighted text. Declared values is from the list (BLACK, WHITE, RED, GREEN, ORANGE, BLUE, YELLOW, CYAN, MAGENTAL).
(3) **PRESENTATION** - In an electronic manual used to specify the type of window or dialog box. Declared values is from the list (INTERRUPT, ESCAPE, WINDOW).

33.4.1.6.2 Emphasis Terms <***emphterm***>. The element <***emphterm***> is used to denote placard items within the aircraft/cockpit that are referenced in operating procedures, such as switches and controls. Data that is enclosed by a start and end <***emphterm***> element will appear in all capital letters.

a. DTD fragment for Emphasis Terms <***emphterm***>:

```
<!ELEMENT emphterm - - (%text;)>
<!ATTLIST emphterm
            %refs;>
```

b. Attributes for <***emphterm***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

33.4.1.6.3 Null <***null***>. The element <***null***> is used for an element in a table entry which specifically indicates the entry contains no content. The element is EMPTY and all pertinent information is entered through its attributes.

a. DTD fragment for Null <***null***>

```
<!ELEMENT null - o EMPTY>
<!ATTLIST null
            insert    (NA | NR |
```

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```
                    dash | secure |
                    none)          "none"
            %refs;
            %secur;>
```

b. Attributes for <***null***>:

(1) **INSERT** - Specifies the null type for the composition system to generate. When no value is entered the default value is “NONE”.
   (a) “NA” - Specifies the literal “NA”.
   (b) “NR” - Specifies the literal “NR ”.
   (c) “DASH” - Specifies the literal “– ”.
   (d) “SECURE ” - Specifies the information is classified and generates a blank.
   (e) “NONE” - Specifies the literal “ ”.

(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.1.6.4 Verbatim <***verbatim***>. The element <***verbatim***> is used for text to be presented verbatim as it is sequenced in the text stream and implies that SGML record ends (carriage returns) are to be treated as a new line separators. The element is presented in a monospaced font.

a. DTD fragment for Verbatim <***verbatim***>:

```
<!ELEMENT verbatim - - CDATA >
<!ATTLIST verbatim
            allowbrk      %yesorno;      '1'
            %secur;>
```

b. Attributes for <***verbatim***>:

(1) **ALLOWBRK** - Specifies whether or not verbatim information can be broken over a page boundary. An attribute value consisting only of zeros does not allow a break and any non-zero value specifies that a break is allowed. When no value is entered the default is to allow a break.

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.1.7 Changed Text <***change***>. The element <***change***> is used for changed information at the paragraph level and below. Information changed at a higher level uses attributes for insertion change level (“INSCHLVL”) and deletion change level (“DELCHLVL”). The element encloses the changed information only with a start and end element. The element <***change***> contains allowable elements (***%changetext;*** see 33.3.10) that use the element.

a. DTD fragment for Changed Text<***change***>:

```
<!ELEMENT change - - (%changetext;) >
<!ATTLIST change
          level    NUMBER        #REQUIRED
          date     CDATA         #IMPLIED
          change   (mod | add |
                    delete)      #IMPLIED
          mark     %yesorno;     #IMPLIED
          %secur;>
```

b. Attributes for <***change***>:

(1) **LEVEL** - Used to specify the change level number.

(2) **DATE** - Used to specify the effective change date.

(3) **CHANGE** - Used to specify the change type.
   (a) “MOD” - Modified the original narrative.
   (b) “ADD” - Inserted new narrative.
   (c) “DELETE” - Deleted the narrative. The original narrative remains, but is suppressed during presentation.

(4) **MARK** - Used to specify whether (non-zero number) or not (0) a side mark is to be used.

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.1.8 Procedural Elements.

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33.4.1.8.1 Procedure <***proc***>. The element <***proc***> is a set of steps to be followed to operate the equipment, to maintain the equipment or component, or to troubleshoot the equipment. The element contains an optional title <***title***> , optional parameter entity alert statements (***%alert;*** see 33.3.3), optional and repeatable general paragraph(s) <***para***>, and followed by required and repeatable step(s) <***step1***>.

a. DTD fragment for Procedure <***proc***>:

```
<!ELEMENT proc - o (title?, %alert;, para*, step1+) >
<!ATTLIST proc
          crewmember      CDATA        #IMPLIED
          applic          CDATA        #IMPLIED
          %hcp.esd
          %bodyatt;
          %secur;>
```

b. Attributes for <***proc***>:

(1) **CREWMEMBER** - The crew member specifically assigned to the procedure.
(2) **APPLIC** - Specifies to what equipment configuration is applicable to the procedure.
(3) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(4) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.1.8.2 Primary Step Level <***step1***>. The element <***step1***> is the primary or fist level step in a procedure. The <***step1***> element is not to be confused as the first step and the element <***step2***> as the second step. The number proceeding the step is the procedure hierarchy and not counting the steps. The element contains parameter entity paragraph type (***%p;*** see 33.3.2) followed by optional second-level step <***step2***>.

a. DTD fragment for Primary Step Level <***step1***>:

```
<!ELEMENT step1 - o ( (%p;)+, step2*)) >
<!ATTLIST step1
          crewmember      CDATA        #IMPLIED
          opsymref        IDREF        #IMPLIED
          applic          CDATA        #IMPLIED
          %qa;
          %hcp.esd;
          %bodyatt;
          %secur;>
```

b. Attributes for <***step1***>:

(1) **CREWMEMBER** - The crew member specifically assigned to the step.
(2) **OPSYMREF** - In an Aircraft Operator's TM or Pilot's Checklist, references the unique identifier of a symbol that qualifies the step.
(3) **APPLIC** - Specifies the equipment configuration applicable to the step.
(4) **%QA;** - Refer to common parameter entities for a complete description (see 33.5.5).
(5) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(6) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(7) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.1.8.3 Second-Level Procedural Step<***step2***>. The element <***step2***> is the second-level step in a procedure. The element contains parameter entity paragraph type (***%p;*** see 33.3.2) followed by optional third-level step <***step3***>.

a. DTD fragment for Second-Level Procedural Step<***step2***>:

```
<!ELEMENT step2 - o ((%p;)+, step3*) >
<!ATTLIST step2
          crewmember      CDATA        #IMPLIED
          opsymref        IDREF        #IMPLIED
          applic          CDATA        #IMPLIED
          %qa;
          %hcp.esd;
          %bodyatt;
```

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```
            %secur;>
```

b. Attributes for <***step2***>:

(1) **CREWMEMBER** - The crew member specifically assigned to the step.
(2) **OPSYMREF** - In an Aircraft Operator's TM or Pilot's Checklist, references the unique identifier of a symbol that qualifies the step.
(3) **APPLIC** - Specifies the equipment configuration applicable to the step.
(4) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(5) **%QA;** - Refer to common parameter entities for a complete description (see 33.5.5).
(6) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(7) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.1.8.4 Third-Level Procedural Step<***step3***>. The element <***step3***> is the third-level step in a procedure. The element contains parameter entity paragraph type (***%p;*** see 33.3.2) followed by one or more optional fourth-level step <***step4***>.

a. DTD fragment for Third-Level Procedural Step <***step3***>:

```
<!ELEMENT step3 - o ((%p;)+, step4*) >
<!ATTLIST step3
            crewmember      CDATA        #IMPLIED
            opsymref        IDREF        #IMPLIED
            applic          CDATA        #IMPLIED
            %qa;
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***step3***>:

(1) **CREWMEMBER** - The crew member specifically assigned to the step.
(2) **OPSYMREF** - In an Aircraft Operator's TM or Pilot's Checklist, references the unique identifier of a symbol that qualifies the step.
(3) **APPLIC** - Specifies the equipment configuration applicable to the step.
(4) **%QA;** - Refer to common parameter entities for a complete description (see 33.5.5).
(5) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(6) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(7) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.1.8.5 Fourth-Level Procedural Step<***step4***>. The element <***step4***> is the fourth-level step in a procedure. The element contains parameter entity paragraph type (***%p;*** see 33.3.2) followed by one or more optional fifth-level step <***step5***>.

a. DTD fragment for Fourth-Level Procedural Step <***step4***>:

```
<!ELEMENT step4 - o ((%p;)+, step5*) >
<!ATTLIST step4
            crewmember      CDATA        #IMPLIED
            opsymref        IDREF        #IMPLIED
            applic          CDATA        #IMPLIED
            %qa;
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***step4***>:

(1) **CREWMEMBER** - The crew member specifically assigned to the step.
(2) **OPSYMREF** - In an Aircraft Operator's TM or Pilot's Checklist, references the unique identifier of a symbol that qualifies the step.
(3) **APPLIC** - Specifies the equipment configuration applicable to the step.
(4) **%QA;** - Refer to common parameter entities for a complete description (see 33.5.5).
(5) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(6) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

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(7) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.1.8.6 Fifth-Level Procedural Step<***step5***>. The element <***step5***> is the fifth-level step in a procedure. The element contains parameter entity paragraph type (***%p;*** see 33.3.2) followed by one or more optional sixth-level step <***step6***>.

a. DTD fragment for Fifth-Level Procedural Step <***step5***>:

```
<!ELEMENT step5 - o ((%p;)+, step6*)>
<!ATTLIST step5
          crewmember      CDATA        #IMPLIED
          opsymref        IDREF        #IMPLIED
          applic          CDATA        #IMPLIED
          %qa;
          %hcp.esd;
          %bodyatt;
          %secur;>
```

b. Attributes for <***step5***>:

(1) **CREWMEMBER** - The crew member specifically assigned to the step.
(2) **OPSYMREF** - In an Aircraft Operator's TM or Pilot's Checklist, references the unique identifier of a symbol that qualifies the step.
(3) **APPLIC** - Specifies the equipment configuration applicable to the step.
(4) **%QA;** - Refer to common parameter entities for a complete description (see 33.5.5).
(5) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(6) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(7) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.1.8.7 Sixth-Level Procedural Step<***step6***>. The element <***step6***> is the sixth-level step in a procedure. The element contains parameter entity paragraph type (***%p;*** see 33.3.2) followed by one or more optional seventh-level step <***step7***>.

a. DTD fragment for Sixth-Level Procedural Step<***step6***>:

```
<!ELEMENT step6 - o ((%p;)+, step7*) >
<!ATTLIST step6
          crewmember      CDATA        #IMPLIED
          opsymref        IDREF        #IMPLIED
          applic          CDATA        #IMPLIED
          %qa;
          %hcp.esd;
          %bodyatt;
          %secur;>
```

b. Attributes for <***step6***>:

(1) **CREWMEMBER** - The crew member specifically assigned to the step.
(2) **OPSYMREF** - In an Aircraft Operator's TM or Pilot's Checklist, references the unique identifier of a symbol that qualifies the step.
(3) **APPLIC** - Specifies the equipment configuration applicable to the step.
(4) **%QA;** - Refer to common parameter entities for a complete description (see 33.5.5).
(5) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(6) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(7) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.1.8.8 Seventh-Level Procedural Step <***step7***>. The element <***step7***> is the seventh-level step in a procedure. The element contains parameter entity paragraph type (***%p;*** see 33.3.2) followed by one or more optional eighth-level step <***step8***>.

a. DTD fragment for Seventh-Level Procedural Step <***step7***>:

```
<!ELEMENT step7 - o ((%p;)+, step8*)>
<!ATTLIST step7
          crewmember      CDATA        #IMPLIED
          opsymref        IDREF        #IMPLIED
```

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```
            applic          CDATA        #IMPLIED
            %qa;
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***step7***>:

(1) **CREWMEMBER** - The crew member specifically assigned to the step.
(2) **OPSYMREF** - In an Aircraft Operator's TM or Pilot's Checklist, references the unique identifier of a symbol that qualifies the step.
(3) **APPLIC** - Specifies the equipment configuration applicable to the step.
(4) **%QA;** - Refer to common parameter entities for a complete description (see 33.5.5).
(5) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(6) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(7) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.1.8.9 Eighth-Level Procedural Step<***step8***>. The element <***step8***> is the eighth-level step in a procedure. The element contains parameter entity paragraph type (***%p;*** see 33.3.2).

a. DTD fragment for Eighth-Level Procedural Step <***step8***>:

```
<!ELEMENT step8 - o ((%p;)+)>
<!ATTLIST step8
            crewmember      CDATA        #IMPLIED
            opsymref        IDREF        #IMPLIED
            applic          CDATA        #IMPLIED
            %qa;
            %hcp.esd;
            %bodyatt;
            %secur;>
```

b. Attributes for <***step8***>:

(1) **CREWMEMBER** - The crew member specifically assigned to the step.
(2) **OPSYMREF** - In an Aircraft Operator's TM or Pilot's Checklist, references the unique identifier of a symbol that qualifies the step.
(3) **APPLIC** - Specifies the equipment configuration applicable to the step.
(4) **%QA;** - Refer to common parameter entities for a complete description (see 33.5.5).
(5) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see 33.5.2).
(6) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).
(7) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.2 Table Elements.

33.4.2.1 Continuous Acquisition and Life-cycle Support (CALS) Table <***table***>. The element <***table***> is the CALS table model. The element contains a table title (<***title***> see 33.4.1.5.1) followed by table group(s) (<***tgroup***>).

a. DTD fragment for CALS Table <***table***>:

```
<!ELEMENT table - - (title, tgroup+)>
<!ATTLIST table
              tabstyle    NMTOKEN           #IMPLIED
              tablenum    %yesorno;         '1'
              tocentry    %yesorno;         '1'
              frame       (top | bottom |
                           topbot | all |
                           sides | none)    #IMPLIED
              colsep      %yesorno;         #IMPLIED
              rowsep      %yesorno;         #IMPLIED
              orient      (port | land)     #IMPLIED
              %refs;
              %secur;>
```

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b. Attributes for <***table***>:

(1) **TABSTYLE** - Specified an unique table style defined in the style sheet.

(2) **TABLENUM** - Specifies if the table is number, a non-zero number. If no value is entered the default value is to number the table.

(3) **TOCENTRY** - Specifies if the table is reference in the TOC. If no value is entered the default value is to include in the TOC.

(4) **FRAME** - Specifies the position of the outer table rules (border).

(a) "TOP" - Top rule.

(b) "BOTTOM" - Bottom rule.

(c) "TOPBOT" - Both top and bottom rule.

(d) "ALL" - All sides ruled.

(e) "SIDES" - Both left and right rule.

(f) "NONE" - Unruled.

(5) **COLSEP** - Default for all items in this table. If non-zero , display the internal column rulings to the right of each item. If zero, do not display column rulings. Ignored for the last column, where the frame setting applies.

(6) **ROWSEP** - Default for all items in this table. If non-zero , display the internal row rulings below each item. If zero, do not display row rulings. Ignored for the last row, where the frame setting applies.

(7) **ORIENT** - Orientation of the entire table.

(a) "PORT" - The table writing direction, along rows, is the same as marginal text.

(b) "LAND" - The table writing direction is 90° counterclockwise to marginal text.

(8) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(9) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.2.1.1 Table Group <***tgroup***>. The element <***tgroup***> identifies a new portion of a table. If a new <***colspec***> and/or <***spanspec***> is provided, it replaces a previous one. The element contains optional column specification(s) (<***colspec***>), optional spanned column specification(s) spanspec <***spanspec***>), an optional table head (<***thead***>), an optional table foot (<***tfoot***>) and a table body (<***tbody***>). The table can only contain up to and including a fourth level procedural step.

a. DTD fragment for Table Group <***tgroup***>:

```
<!ELEMENT tgroup - o (colspec*, spanspec*, thead?, tfoot?, tbody) -(step5)>
<!ATTLIST tgroup
            cols         NUMBER             #REQUIRED
            tgroupstyle  NMTOKEN            #IMPLIED
            colsep       %yesorno;          #IMPLIED
            rowsep       %yesorno;          #IMPLIED
            align        (left | right |
                          center | justify |
                          char)             '"left'
            charoff      NUTOKEN            '50'
            char         CDATA              ' '"
            %secur;>
```

b. Attributes for <***tgroup***>:

(1) **COLS** - Number of columns in the table.

(2) **TGROUPSTYLE** - A unique table group style defined in the style sheet.

(3) **COLSEP** - Default for all items in this table group. If non-zero , display the internal column rulings to the right of each item. If zero, do not display column rulings. Ignored for the last column, where the frame setting applies. If no value is entered, inherited from table.

(4) **ROWSEP** - Default for all items in this table group. If non-zero , display the internal row rulings below each item. If zero, do not display row rulings. Ignored for the last row, where the frame setting applies. If no value is entered, inherited from table.

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(5) **ALIGN** - Text horizontal position within the column. If no value is entered the default value is flush left alignment.
  (a) “LEFT” - Alignment is flush left.
  (b) “RIGHT” - Alignment is flush right.
  (c) “CENTER” - Alignment is centered.
  (d) “JUSTIFY” - Alignment is right/left justified.
  (e) “CHAR” - Alignment is on the left most of the character specified in attribute “CHAR” and position by attribute “CHAROFF”.

(6) **CHAROFF** - For attribute **ALIGN** with a value “CHAR”, percent of the current width to the left of the alignment character. If no value is entered the default value is 50%.

(7) **CHAR** - For attribute **ALIGN** with a value “CHAR”, the value is aligned on the first character occurrence. If no value is entered the default value is a blank character.

(8) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.2.1.1.1 Column Specification <***colspec***>. The element <***colspec***> is the column specification. A column specification is needed for each column in the table. The element is EMPTY and all pertinent information is entered through its attributes.

a. DTD fragment for Column Specification <***colspec***>:

```
<!ELEMENT colspec - o EMPTY >
<!ATTLIST colspec
            colnum    NUMBER              #IMPLIED
            colname   NMTOKEN             #IMPLIED
            align     (left | right |
                       center | justify |
                       char)              #IMPLIED
            charoff   NUTOKEN             #IMPLIED
            char      CDATA               #IMPLIED
            colwidth  CDATA               #IMPLIED
            colsep    %yesorno;           #IMPLIED
            rowsep    %yesorno;           #IMPLIED>
```

b. Attributes for <***colspec***>:

(1) **COLNUM** - Specifies the column number, start counting from 1 at the leftmost column. If no value is entered the column will be numbered automatically in the order entered.

(2) **COLNAME** - Specifies the name of the column, used to specify the position in a row, or the start or end of a horizontal spanned column. If no value is entered the composition system can only allow cell entries to occur sequentially and required for each column in the row and no spanned columns is permitted.

(3) **ALIGN** - Text horizontal position within the column. If no value is entered, inherited from table group.
  (a) “LEFT” - Alignment is flush left.
  (b) “RIGHT” - Alignment is flush right.
  (c) “CENTER” - Alignment is centered.
  (d) “JUSTIFY” - Alignment is right/left justified.
  (e) “CHAR” - Alignment is on the leftmost of the character specified in attribute “CHAR” and position by attribute “CHAROFF”.

(4) **CHAROFF** - For attribute **ALIGN** with a value “CHAR”, percent of the current width to the left of the alignment character. If no value is entered the default value is 50%.

(5) **CHAR** - For attribute **ALIGN** with a value “CHAR”, the value is aligned on the first character occurrence. If no value is entered the default value is a blank character.

(6) **COLSEP** - Default for all items in this table group. If non-zero, display the internal column rulings to the right of each item. If zero, do not display column rulings. Ignored for the last column, where the frame setting applies. If no value is entered, inherited from table group.

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(7) **ROWSEP** - Default for all items in this table group. If non-zero, display the internal row rulings below each item. If zero, do not display row rulings. Ignored for the last row, where the frame setting applies. If no value is entered, inherited from table group.

33.4.2.1.1.2 Spanned Column Specification <***spanspec***>. The element <***spanspec***> is horizontal span of columns and associated attributes that can subsequently be referenced by its "SPANNAME" to provide attributes repeatedly used in the entries or entry tables in several rows of the table group controlled by the column specification. The element is EMPTY and all pertinent information is entered through its attributes.

a. DTD fragment for Spanned Column Specification <***spanspec***>:

```
<!ELEMENT spanspec - o EMPTY >
<!ATTLIST spanspec
            namest     NMTOKEN            #REQUIRED
            nameend    NMTOKEN            #REQUIRED
            spanname   NMTOKEN            #REQUIRED
            align      (left | right |
                        center | justify |
                        char)              "center"
            charoff    NUTOKEN            #IMPLIED
            char       CDATA              #IMPLIED
            colsep     %yesorno;          #IMPLIED
            rowsep     %yesorno;          #IMPLIED>
```

b. Attributes for <***spanspec***>:

(1) **NAMEST** - The leftmost column name, from <***colspec***>, of the spanned columns.
(2) **NAMEEND** - The rightmost column name, from <***colspec***>, of the spanned columns.
(3) **SPANNAME** - The horizontal span name.
(4) **ALIGN** - Text horizontal position within the column. If no value is entered defaults to centered.
  (a) "LEFT" - Alignment is flush left.
  (b) "RIGHT" - Alignment is flush right.
  (c) "CENTER" - Alignment is centered.
  (d) "JUSTIFY" - Alignment is right/left justified.
  (e) "CHAR" - Alignment is on the leftmost of the character specified in attribute "CHAR" and position by attribute "CHAROFF".
(5) **CHAROFF** - For attribute **ALIGN** with a value "CHAR", percent of the current width to the left of the alignment character. If no value is entered the default value is 50%.
(6) **CHAR** - For attribute **ALIGN** with a value "CHAR", the value is aligned on the first character occurrence. If no value is entered the default value is a blank character.
(7) **COLSEP** - Default for all items in this table group. If non-zero, display the internal column rulings to the right of each item. If zero, do not display column rulings. Ignored for the last column, where the frame setting applies. If no value is entered, inherited from table group.
(8) **ROWSEP** - Default for all items in this table group. If non-zero , display the internal row rulings below each item. If zero, do not display row rulings. Ignored for the last row, where the frame setting applies. If no value is entered, inherited from table group.

33.4.2.1.1.3 Table Head <***thead***>. The element <***thead***> is the heading information in a displayed at the top of the table and again at the top of any continuation after a physical break between rows in the table body. The element contains optional column specification(s) (<***colspec***> see 33.4.2.1.1.1) and rows (<***row***> see 33.4.2.1.1.4.1). Entry table may not occur within this element.

a. DTD fragment for Table Head <***thead***>:

```
<!ELEMENT thead - o (colspec*, row+) -(entrytbl) >
<!ATTLIST thead
            valign  (top | middle | bottom)    "bottom"
```

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```
            %secur;>
```

b. Attributes for <***thead***>:

(1) **VALIGN** - Specifies the vertical positioning within the cell entries. If no value is entered the default value is bottom.

(a) “TOP” - Align to the top of the cell entry.

(b) “MIDDLE” - Align to the vertical middle of the cell entry.

(c) “BOTTOM” - Align to the bottom of the cell entry.

33.4.2.1.1.4 Table Body <***tbody***>. Identifies the body of the table. The element contains rows <***row***>.

a. DTD fragment for Table Body <***tbody***>:

```
<!ELEMENT tbody - o (row)+ >
<!ATTLIST tbody
            valign  (top | middle | bottom)    "top"
            %secur;>
```

b. Attributes for <***tbody***>:

(1) **VALIGN** - Specifies the vertical positioning within the cell entries. If no value is entered the default value is top.

(a) “TOP” - Align to the top of the cell entry.

(b) “MIDDLE” - Align to the vertical middle of the cell entry.

(c) “BOTTOM” - Align to the bottom of the cell entry.

33.4.2.1.1.4.1 Row <***row***>. The element row <***row***> identifies the row information in a table group. The element contains cell entries <***entry***>. The element <***entrytbl***> is not supported by must composition system and is suggested not use the element in developing a table.

a. DTD fragment for Row <***row***>:

```
<!ELEMENT row - o (entry | entrytbl)+ >
<!ATTLIST row
            rowsep    %yesorno;    #IMPLIED
            %secur;>
```

b. Attributes for <***row***>:

(1) **ROWSEP** - Default for all items in this table group. If non-zero, display the internal row rulings below each item. If zero, do not display row rulings. Ignored for the last row, where the frame setting applies. If no value is entered, inherited from table group.

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.2.1.1.4.1.1 Entry <***entry***>. The element entry <***entry***> identifies an entry in a table. When no attribute value is specified in “COLNAME”, “NAMEST”, “NAMEEND” or “SPANNAME” the cell entries will fill consecutively in the column. The element contains table content inline text (<***tabcontent***> see 33.3.9). Table may not occur within this element.

a. DTD fragment for Entry <***entry***>:

```
<!ELEMENT entry - o (%tabcontent;) -(table)>
<!ATTLIST entry
            colname    NMTOKEN             #IMPLIED
            namest     NMTOKEN             #IMPLIED
            nameend    NMTOKEN             #IMPLIED
            spanname   NMTOKEN             #IMPLIED
            colsep     %yesorno;           #IMPLIED
            rowsep     %yesorno;           #IMPLIED
            rotate     %yesorno;           '0'
            valign     (top | bottom |
                        middle)            'top'
            align      (left | right |
                        center | justify |
                        char)              #IMPLIED
            charoff    NUTOKEN             #IMPLIED
            char       CDATA               #IMPLIED
```

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```
            %secur;>
```

b. Attributes for <***entry***>:

(1) **COLNAME** - Specifies the column name the entry is positioned. The column name is defined in the <***colspec***> attribute. Omit if "SPANNAME", "NAMEST" or "NAMEEND" is present.

(2) **NAMEST** - Name of the leftmost span column name. The column name is defined in the <***colspec***> attribute.

(3) **NAMEEND** - Name of the rightmost span column name. The column name is defined in the <***colspec***> attribute.

(4) **SPANNAME** - Specifies the spanned column name the entry is positioned. The spanned column name is defined in the <***spanspec***> attribute.

(5) **COLSEP** - Default for all items in this table group. If non-zero, display the internal column rulings to the right of each item. If zero, do not display column rulings. Ignored for the last column, where the frame setting applies. If no value is entered, inherited from column specification or spanned column specification.

(6) **ROWSEP** - Default for all items in this table group. If non-zero, display the internal row rulings below each item. If zero, do not display row rulings. Ignored for the last row, where the frame setting applies. If no value is entered, inherited from row.

(7) **ROTATE** - The narrative in rotated 90° counterclockwise, for a non-zero value. If no value is entered the default is no rotations.

(8) **VALIGN** - Specifies the vertical positioning within the cell entries. If no value is entered the default is inherited from row.

(a) "TOP" - Align to the top of the cell entry.

(b) "MIDDLE" - Align to the vertical middle of the cell entry.

(c) "BOTTOM" - Align to the bottom of the cell entry.

(9) **ALIGN** - Text horizontal position within the column. If no value is entered defaults is inherited from either column or spanned column specification.

(a) "LEFT" - Alignment is flush left.

(b) "RIGHT" - Alignment is flush right.

(c) "CENTER" - Alignment is centered.

(d) "JUSTIFY" - Alignment is right/left justified.

(e) "CHAR" - Alignment is on the leftmost of the character specified in attribute "CHAR" and position by attribute "CHAROFF".

(10) **CHAROFF** - For attribute **ALIGN** with a value "CHAR", percent of the current width to the left of the alignment character. If no value is entered defaults is inherited from either column or spanned column specification.

(11) **CHAR** - For attribute **ALIGN** with a value "CHAR", the value is aligned on the first character occurrence. If no value is entered defaults is inherited from either column or spanned column specification.

(12) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.2.1.1.4.1.2 The element entry table <***entrytbl***> is a table in a cell. This element should not be used since most composition system can not implement this element.

33.4.2.1.1.5 Table Foot <***tfoot***>. The element <***tfoot***> is the footer information in a displayed at the bottom of the table and again at the bottom of any continuation after a physical break between rows in the table body. The element contains optional column specification(s) (<***colspec***> see 33.4.2.1.1.1) and rows (<***row***> see 33.4.2.1.1.4.1). Entry table may not occur within this element.

a. DTD fragment for Table Foot <***tfoot***>:

```
<!ELEMENT tfoot - o (colspec*, row+) -(entrytbl) >
<!ATTLIST tfoot
            valign  (top | middle | bottom)    "top"
            %secur;>
```

b. Attributes for <***thead***>:

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(1) **VALIGN** - Specifies the vertical positioning within the cell entries. If no value is entered the default value is top.
(a) “TOP” - Align to the top of the cell entry.
(b) “MIDDLE” - Align to the vertical middle of the cell entry.
(c) “BOTTOM” - Align to the bottom of the cell entry.

33.4.3 Figures and Graphics.

33.4.3.1 Figure <***figure***>. The element <***figure***> may contain graphic illustrations, multi-sheet illustrations, graphic charts, or text illustrations, etc. Figures may be numbered or unnumbered. The element contains either an illustration(s) or verbatim narrative. The illustration group contains an optional figure title (<***title***> see 33.4.1.5.1), followed by either at least one subfigure (<***subfig***>) or at least one illustration (<***graphic***>) followed by optional legend(s) (<***table***> see 33.4.2.1) or <***legend***>. The verbatim narrative group contains the verbatim narrative <***verbatim***> and a figure title (<***title***> see 33.4.1.5.1).

a. DTD fragment for Figure <***figure***>:

```
<!ELEMENT figure - - ((title?, (subfig+ | graphic+), (table | legend)*) |
                      (verbatim, title))>
<!ATTLIST figure
          fignum        %yesorno;                 '0'
          figtype       (normal-page | fo-inline |
                         fo-rear)                 "normal-page"
          fo-size       (25x11 | 35x11 |
                         45x11)                   #IMPLIED
          tocentry      %yesorno;                 '1'
          placement     (above | above-anchor |
                         below | below-anchor |
                         facingpg | facing-anchor |
                         immediate)               "immediate"
          orient        (port | land)             "port"
          size          (eighth | quarter |
                         half | full)             #IMPLIED
          shape         (vertical | horizontal)   #IMPLIED
          anchorref      NMTOKEN                  #IMPLIED
          %refs;
          %secur;>
```

b. Attributes for <***figure***>:

(1) **FIGNUM** - Specifies whether the figure should be numbered, a non-zero value. If no value is entered the default value is no figure number.
(2) **FIGTYPE** - Specifies the figure size and location.
(a) “NORMAL-PAGE” - Current page size and inline with the narrative.
(b) “FO-INLINE” - Oversized (foldout) page and inline with the narrative. Page size is determined by the attribute “FO-SIZE”.
(c) “FO-REAR” - Oversized (foldout) page and is located at the end of the manual. Page size is determined by the attribute “FO-SIZE”.
(3) **FO-SIZE** - If **FIGTYPE** attribute is specified as either "FO-INLINE" or "FO-REAR", this attribute is used to specify the size of the foldout.
(a) “25X11” - Foldout size is 25" by 11".
(b) “35X11” - Foldout size is 35" by 11".
(c) “45X11” - Foldout size is 45" by 11".
(4) **TOCENTRY** - Specifies whether the figure title should appear in the table of contents, a non-zero value. If no value is entered the default is to include in the TOC.
(5) **PLACEMENT** - Indicates the placement of the figure relative to the element’s position within text elements or relative to an anchor element. If no value is entered the default is immediate.
(a) “ABOVE” - Float the graphic to the top of the same page the figure is located.

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(b) “ABOVE-ANCHOR” - Float the graphic to the top of the same page the figure anchor (<***anchor***> see 33.4.1.3.1) is located.
(c) “BELOW” - Float the graphic to the bottom of the same page the figure is located.
(d) “BELOW-ANCHOR” - Float the graphic to the bottom of the same page the figure anchor (<***anchor***> see 33.4.1.3.1) is located.
(e) “FACINGPG” - Float the graphic to the facing page where the figure reference is located.
(f) “FACING-ANCHOR” - Float the graphic to the facing page where the figure anchor (<***anchor***> see 33.4.1.3.1) is located.
(g) “IMMEDIATE” - Place the figure immediately inline where the figure reference or figure anchor location.

(6) **ORIENT** - Specifies the orientation of the figure. If no value is entered the default is portrait.
(a) "PORT" - Indicating that the top of the graphic points toward the top of a portrait page
"LAND" - Indicating that the top of the graphic points toward the top of a landscape page.

(7) **SIZE** - Fractional part of a page occupied by the figure.
(a) “EIGHTH” - The figure is scaled to an eighth page.
(b) “QUARTER” - The figure is scaled to a quarter page.
(c) “HALF” - The figure is scaled to a half page.
(d) “FULL” - The figure is a full page.

(8) **SHAPE** - Specifies whether the longer side of the figure’s repro area is on the vertical or horizontal side.
(a) “VERTICAL” - The long size is vertical.
(b) “HORIZONTAL” - The long size is horizontal.

(9) **ANCHORREF** - Non-ID reference to an anchor name; the anchor element that is being referenced is placed in the text.

(10) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(11) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.3.1.1 Subfigure <***subfig***>. The element <***subfig***> is used to enter multiple sheets within a figure. The element contains a illustration <***graphic***> which may be followed by one or more table(s) (<***table***> see 33.4.2.1) or legend(s) (<***legend***> see 33.4.3.1.3).

a. DTD fragment for Subfigure <***subfig***>:

```
<!ELEMENT subfig - - (graphic, (table | legend)*)>
<!ATTLIST subfig
          orient   (port | land)           "port"
          size     (eighth | quarter |
                    half | full)           #IMPLIED
          shape    (vertical | horizontal) #IMPLIED
          id       ID                      #IMPLIED
          idrefs   IDREFS                  #IMPLIED>
```

b. Attributes for <***subfig***>:

(1) **ORIENT** - Specifies the orientation of the figure. If no value is entered the default is portrait.
(a) "PORT" - Indicating that the top of the graphic points toward the top of a portrait page.
"LAND" - Indicating that the top of the graphic points toward the top of a landscape page.

(2) **SIZE** - Fractional part of a page occupied by the figure.
(a) “EIGHTH” - The figure is scaled to an eighth page.
(b) “QUARTER” - The figure is scaled to a quarter page.
(c) “HALF” - The figure is scaled to a half page.
(d) “FULL” - The figure is a full page.

(3) **SHAPE** - Specifies whether the longer side of the figure’s repro area is on the vertical or horizontal side.
(a) “VERTICAL” - The long size is vertical.

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(b) “HORIZONTAL” - The long size is horizontal.

(4) **ID** - Specifies the subfigure identifier.

(5) **IDREFS** - References to the figure (contained in the subfigure) identifier(s).

33.4.3.1.2 Illustration <***graphic***>. The element <***graphic***> identifies an illustration, which is contained in an external entity. The illustration is stored either as vector (MIL-D-28000 or MIL-D-28003) or raster (MIL-R-28002) data and is used as an illustration in the document.

a. DTD fragment for Illustration <***graphic***>:

```
<!ELEMENT graphic - o EMPTY >
<!ATTLIST graphic
          boardno    ENTITY                    #REQUIRED
          graphsty   NMTOKEN                   #IMPLIED
          llcordra   NUTOKEN                   #IMPLIED
          rucordra   NUTOKEN                   #IMPLIED
          size       (eighth | quarter |
                      half | full)             #IMPLIED
          shape      (vertical | horizontal)   #IMPLIED
          hscale     NUTOKEN                   #IMPLIED
          vscale     NUTOKEN                   #IMPLIED
          scalefit   %yesorno;                 #IMPLIED
          hplace     (left | right |
                      center | none)           #IMPLIED
          vplace     (top | bottom |
                      middle | non)            #IMPLIED
          coordst    NUTOKEN                   #IMPLIED
          coordend   NUTOKEN                   #IMPLIED
          rotation   NUMBER                    #IMPLIED
          %refs;
          %secur;>
```

b. Attributes for <***graphic***>:

(1) **BOARDNO** - Specifies the name of the entity containing the external graphic file.

(2) **GRAPHSTY** - Provided to allow for cases where a "grphstyl" specified in a FOSI is to be used.

(3) **LLCORDRA** - Specifies the left lower coordinate pair of a portion of the graphic to be placed in the entire or a portion of the repro area. The coordinate pair is separated by a comma.

(4) **RUCORDRA** - Specifies the right upper coordinate pair of a portion of the graphic to be placed in the entire or a portion of the repro area. The coordinate pair is separated by a comma.

(5) **SIZE** - Fractional part of a page occupied by the figure.

(a) “EIGHTH” - The figure is scaled to an eighth page.

(b) “QUARTER” - The figure is scaled to a quarter page.

(c) “HALF” - The figure is scaled to a half page.

(d) “FULL” - The figure is a full page.

(6) **SHAPE** - Specifies whether the longer side of the figure’s repro area is on the vertical or horizontal side.

(a) “VERTICAL” - The long size is vertical.

(b) “HORIZONTAL” - The long size is horizontal.

(7) **HSCALE** - Specifies the horizontal scaling factor. The number 100 is unscaled graphic.

(8) **VSCALE** - Specifies the vertical scaling factor. The number 100 is unscaled graphic.

(9) **SCALEFIT** - Specifies the characteristic that allows the graphic to be scaled as needed to fit the size of the reproduction area, when attribute value is non-zero.

(10) **HPLACE** - Specifies the horizontal placement in the available repro area. The position is flushed left, flushed right, centered or none.

(11) **VPLACE** - Specifies the vertical placement in the available repro area. The position is top, bottom, centered or none.

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(12) **ROTATION** - Specifies the degree of rotation of the graphic.
(13) **COORDST** - Specifies the left lower coordinate pair, separated by a comma, of a portion of the repro area. Start position for placement of the portion of the graphic specified by LLCORDRA and RUCORDRA.
(14) **COORDEND** - Specifies the right upper coordinate pair, separated by a comma, of a portion of the repro area. End position for placement of the portion of the graphic specified by LLCORDRA and RUCORDRA.
(15) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(16) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.3.1.3 Legend <***legend***>. The element <***legend***> identifies a legend occurring as part of a figure. The element contains a list of callouts (<***callout***> see 33.4.1.3.2) followed by callout definition (<***def***> see 33.4.1.2.3.2).

a. DTD fragment for Legend <***legend***>:

```
<!ELEMENT legend - - (callout, def)+ >
<!ATTLIST legend
          id          ID       #IMPLIED
          assocfig    IDREF    #IMPLIED>
```

b. Attributes for <***legend***>:
(1) **ID** - Specifies the legend identifier.
(2) **ASSOCFIG** - A reference to a figure(s) associated with the current element.

33.4.3.2 Symbol <***symbol***>. The element <***symbol***> is used for a graphic symbol not found in standard ISO character sets that is inserted as a graphic in text. A symbol should be stored either as vector (MIL-D-28000 or MIL-D-28003) or raster (MIL-R-28002) data.

a. DTD fragment for Symbol <***symbol***>:

```
<!ELEMENT symbol - o EMPTY >
<!ATTLIST symbol
          symbolcall    ENTITY           #IMPLIED
          symbolid      ID               #REQUIRED
          symrefid      IDREF            #IMPLIED
          symlocid      IDREF            #IMPLIED
          reprowid      NUTOKEN          #IMPLIED
          reprodep      NUTOKEN          #IMPLIED
          hscale        NUTOKEN          #IMPLIED
          vscale        NUTOKEN          #IMPLIED
          scalefit      %yesorno;        #IMPLIED
          hplace        (left | right |
                         center | none)  #IMPLIED
          vplace        (top | bottom |
                         middle | non)   #IMPLIED
          rotation      NUMBER           #IMPLIED
          %secur;>
```

b. Attributes for <***symbol***>:
(1) **SYMBOLCALL** - The external entity containing the symbol's graphic file.
(2) **SYMBOLID** - Specifies the symbol identifier.
(3) **SYMREFID** - References a symbol identifier for the external entity name.
(4) **SYMLOCID** - References a symbol identifier for the location attributes.
(5) **REPROWID** - Specifies the repro area width.
(6) **REPRODEP** - Specifies the repro area depth.
(7) **HSCALE** - Specifies the horizontal scaling factor. The number 100 is unscaled graphic.
(8) **VSCALE** - Specifies the vertical scaling factor. The number 100 is unscaled graphic.
(9) **SCALEFIT** - Specifies the characteristic that allows the graphic to be scaled as needed to fit the size of the reproduction area, when attribute value is non-zero.

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(10) **HPLACE** - Specifies the horizontal placement in the available repro area. The position is flushed left, flushed right, centered or none.
(11) **VPLACE** - Specifies the vertical placement in the available repro area. The position is top, bottom, centered or none.
(12) **ROTATION** - Specifies the degree of rotation of the graphic.
(13) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.3.3 Icon Set <***icon-set***>. The element <***icon-set***> is the hazard icon-set to identify graphically the dangerous condition associated to the warning statement.

a. DTD fragment for Icon Set <***icon-set***>:

```
<!ELEMENT icon-set - o EMPTY >
<!ATTLIST icon-set
             boardno     ENTITY       #REQUIRED>
```

b. Attributes for <***icon-set***>:
(1) **BOARDNO** - Specifies the name of the entity containing the external icon file.

33.4.4 Content Specified Elements.

33.4.4.1 Address <***address***>. The element <***address***> is used to enter the address. The element contains the service nomenclature <***servnomen***> and the city and state <***city-state***>.

a. DTD fragment for Address <***address***>:

```
<!ELEMENT address - - (servnomen, city-state)>
<!ATTLIST address
          %refs;
          %secur;>
```

b. Attributes for <***address***>:
(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.4.2 Commercial and Government Entity Code (CAGEC) <***cageno***>. The element <***cageno***> is the Commercial and Government Entity Code (CAGEC) and can be embedded within the text stream to further identify a piece of information within the data. The element contains inline text (***%text;*** see 33.3.7) which allows the embedding of data elements. Generally, the narrative is entered using #PCDATA.

a. DTD fragment for CAGEC <***cageno***>:

```
<!ELEMENT cageno - - (%text;)>
<!ATTLIST cageno
          %refs;
          %secur;>
```

b. Attributes for <***cageno***>:
(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.4.3 City and State <***city-state***>. The element <***city-state***> is used to enter the city and state. The element contains inline text (***%text;*** see 33.3.7) which allows the embedding of data elements. Generally, the narrative is entered using #PCDATA.

a. DTD fragment for City and State <***city-state***>:

```
<!ELEMENT city-state - - (%text;)>
<!ATTLIST city-state
          %refs;>
```

b. Attributes for <***city-state***>:
(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

33.4.4.4 Control/Indicator <***ctrlind***>. The element <***ctrlind***> control or indicator can be embedded within the text stream to further identify the data. The element contains inline text (***%text;*** see 33.3.7) which allows the embedding of data elements. Generally, the narrative is entered using #PCDATA.

a. DTD fragment for Control/Indicator <***ctrlind***>:

```
<!ELEMENT ctrlind - - (%text;)>
```

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```
<!ATTLIST ctrlind
          %refs;
          %secur;>
```

b. Attributes for <***ctrlind***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.4.5 Control/Indicator Value <***ctrlind-val***>. The element <***ctrlind-val***> is the reading on a control or indicator and can be embedded within the text stream to further identify the data. The element contains inline text (***%text;*** see 33.3.7) which allows the embedding of data elements. Generally, the narrative is entered using #PCDATA.

a. DTD fragment for Control/Indicator Value <***ctrlind-val***>:

```
<!ELEMENT ctrlind-val - - (%text;)>
<!ATTLIST ctrlind-val
            %refs;
            %secur;>
```

b. Attributes for <***ctrlind-val***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.4.6 DoD Ammunition Code <***dodac***>. The element <***dodac***> is used to identify a type of ammunition. This element is used within the ammunition work package only.

a. DTD fragment for DoD Ammunition Code <***dodac***>:

```
<!ELEMENT dodac  - - (#PCDATA)>
<!ATTLIST dodac
            %refs;>
```

b. Attributes for <***dodac***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

33.4.4.7 Drawing Name <***dwgname***>. The element <***dwgname***> is used to identify the names of drawings that can be embedded within text stream to further identify the data. The element contains the inline text (<***text***> see 33.3.7) after which the drawing name is entered.

a. DTD fragment for Drawing Name <***dwgname***>:

```
<!ELEMENT dwgname - o (%text;)>
<!ATTLIST dwgname
            %refs;
            %secur;>
```

b. Attributes for <***dwgname***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.4.8 Drawing Number <***dwgno***>. The element <***dwgno***> is the drawing number and can be embedded within the text stream to further identify the data. The element contains inline text (***%text;*** see 33.3.7) which allows the embedding of data elements. Generally, the narrative is entered using #PCDATA.

a. DTD fragment for Drawing Number <***dwgno***>:

```
<!ELEMENT dwgno - o (%text;)>
<!ATTLIST dwgno
            %refs;
            %secur;>
```

b. Attributes for <***dwgno***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.4.9 Electronic Mail <***email***>. The element <***email***> is used to enter the email address. The element contains narrative text (#PCDATA) parsable characters.

a. DTD fragment for Electronic Mail <***email***>:

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```
<!ELEMENT email - o (#PCDATA)>
```

33.4.4.10 Flight Safety Critical Part <***flghtsafe-part***>. The element <***flghtsafe-part***> is used to identify a flight-safety-critical part, officially denoted in the Army Aviation Flight Safety Program that can be embedded in the text stream. The element contains inline text (***%text;*** see 33.3.7) which allows the embedding of data elements. Generally, the narrative is entered using #PCDATA.

a. DTD fragment for Flight Safety Critical Part <***flghtsafe-part***>:

```
<!ELEMENT flghtsafe-part - - (%text;)>
<!ATTLIST flghtsafe-part
            %refs;
            %secur;>
```

b. Attributes for <***flghtsafe-part***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.4.11 General or Introductory Information <***geninfo***>. The element <***geninfo***> contains titled and subtitled paragraphs giving general or introductory information. The element is contained in various work package contexts; such as service upon receipt work package, or contained as part of procedural instructions; such as cleaning an aircraft prior to shipping. This element contains the section and subsection parameter entity (***%titldtext;*** see 33.3.4).

a. DTD fragment for General or Introductory Information <***geninfo***>:

```
<!ELEMENT geninfo - o (%titldtext;)+ >
<!ATTLIST geninfo
            %refs;
            %secur;>
```

b. Attributes for <***geninfo***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.4.12 Introductory <***intro***>. The element <***intro***> identifies an introductory section contained in various work packages, which often (but not always) has text that should be entered verbatim as boiler plate text from the governing specification (TMs is MIL-STD-40051). This element contains the section and subsection parameter entity (***%titldtext;*** see 33.3.4).

a. DTD fragment for Introductory <***intro***>:

```
<!ELEMENT intro - o (%titldtext;)+ >
<!ATTLIST intro
            %refs;
            %secur;>
```

b. Attributes for <***intro***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.4.13 Lubricant <***lubricant***>. The element <***lubricant***> identifies a lubricant within text, primarily within a lubrication work package. The element contains inline text (***%text;*** see 33.3.7) which allows the embedding of data elements. Generally, the narrative is entered using #PCDATA.

a. DTD fragment for Lubricant <***lubricant***>:

```
<!ELEMENT lubricant - - (%text;)>
<!ATTLIST lubricant
            %refs;
            %secur;>
```

b. Attributes for <***lubricant***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

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33.4.4.14 Model Number <***modelno***>. The element <***modelno***> is used to mark any official model number of a piece of equipment embedded in the text stream, work package setup information, and on chapter title pages and front cover of the manual.

a. DTD fragment for Model Number <***modelno***>:

```
<!ELEMENT modelno - - (#PCDATA)>
<!ATTLIST modelno
            nsn         CDATA       #IMPLIED
            eic         CDATA       #IMPLIED
            %refs;
            %secur;>
```

b. Attributes for <***modelno***>:

(1) **NSN** - Used to specify the NSN of the current model number, if applicable.
(2) **EIC** - Used to specify the end item code of the current model number, if applicable.
(3) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(4) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.4.15 Name <***name***>. The element <***name***> is used to identify the official name of a component/assembly. The element contains inline text (***%text;*** see 33.3.7) which allows the embedding of data elements. Generally, the narrative is entered using #PCDATA.

a. DTD fragment for Name <***name***>:

```
<!ELEMENT name - - (%text;)>
<!ATTLIST name
          applic      CDATA       #IMPLIED
          partno      CDATA       #IMPLIED
          nsn         CDATA       #IMPLIED
          %refs;
          %secur;>
```

b. Attributes for <***name***>:

(1) **APPLIC** - Specifies the equipment configurations to which the current name applies.
(2) **PARTNO** - Specifies the part number, if any, of the part bearing the current name.
(3) **NSN** - Specifies the national stock number, if any, of the part bearing the current name.
(4) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.4.16 National Stock Number (NSN) <***nsn***>. The element <***nsn***> is the national stock number and can be embedded within text stream to further identify the data.

a. DTD fragment for NSN <***nsn***>:

```
<!ELEMENT nsn - - (#PCDATA)>
<!ATTLIST nsn
            eic         CDATA       #IMPLIED
            %refs;>
```

b. Attributes for <***nsn***>:

(1) **EIC** - Used to specify the end item code of the current NSN, if applicable.
(2) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

33.4.4.17 Part Number <***partno***>. The element <***partno***> is used to identify a part numbers and can be embedded within text stream to further identify the data.

a. DTD fragment for Part Number <***partno***>:

```
<!ELEMENT partno - - (#PCDATA)>
<!ATTLIST partno
nsn         CDATA       #IMPLIED
            eic         CDATA       #IMPLIED
            %refs;>
```

b. Attributes for <***partno***>:

(1) **NSN** - Used to specify the national stock number of the current part number, if applicable.
(2) **EIC** - Used to specify the end item code of the current part number, if applicable.

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(3) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

33.4.4.18 Proponent <***proponent***>. The element <***proponent***> is used to enter the name (<***name***> see 33.4.4.15) and address (<***address***> see 33.4.4.1) of the supporter of the activity.

a. DTD fragment for Proponent<***proponent***>:

```
<!ELEMENT proponent - o (name, address)>
<!ATTLIST proponent
            %refs;>
```

b. Attributes for <***proponent***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

33.4.4.19 Supply Catalog <***sc***>. The element <***sc***> is used to identify a supply catalog number of a tool or tool kit that occurs in the text stream or as a setup item identifying number. The element contains inline text (***%text;*** see 33.3.7) which allows the embedding of data elements. Generally, the narrative is entered using #PCDATA.

a. DTD fragment for Supply Catalog <***sc***>:

```
<!ELEMENT sc - - (%text;)>
<!ATTLIST sc
            %refs;>
```

b. Attributes for <***sc***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

33.4.4.20 Scope <***scope***>. The element <***scope***> includes a brief statement of what is covered in the TM, information chapter, work package and/or procedure. This includes the type of manual, model numbers and equipment names, purpose of equipment, any special inclusions in the manual and any other pertinent information. The element includes parameter entity paragraph type (***%p;*** see 33.3.2).

a. DTD fragment for Scope <***scope***>:

```
<!ELEMENT scope - - ((%p;)+) >
<!ATTLIST scope
          %bodyatt;
          %secur;>
```

b. Attributes for <***scope***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see 33.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.4.21 Telephone <***telephone***>. The element <***telephone***> is used to enter the telephone number. The element contains narrative text (#PCDATA) parsable characters.

a. DTD fragment for Telephone <***telephone***>:

```
<!ELEMENT telephone - o (#PCDATA)>
<!ATTLIST telephone
          dsn     %yesorno; '1'>
```

b. Attributes for <***telephone***>:

(1) **DSN** - Is the DSN number being used?

33.4.4.22 Title Page <***titlepg***>. The element <***titlepg***> is used for a title page preceding an information chapter in a technical equipment manual. The element contains at least one nomenclature/component name (<***name***> see 33.4.4.15), with optional part number(s) (<***partno***> see 33.4.4.17), equipment model number(s) (<***modelno***> see 33.4.4.14), and/or NSN(s) (<***nsn***> see 33.4.4.16).

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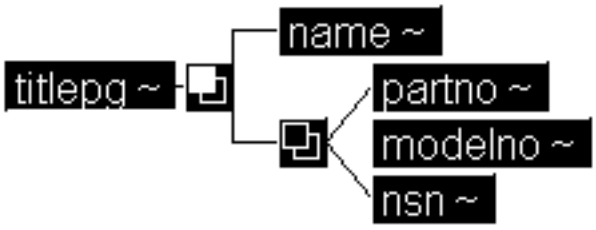

Figure 163 Title Page DTD Hierarchy <titlepg>

a. DTD fragment for Title Page <***titlepg***>:

```
<!ELEMENT titlepg - - (name, (partno | modelno | nsn)*)+>
<!ATTLIST titlepg
            maintlvl   (depot | operator |
                        gensup | dirsup |
                        unitlvl | inter |
                        avum-avim | tmlvls)   #REQUIRED>
```

b. Attributes for <***titlepg***>:

(1) **MAINTLVL** - Maintenance level.

(a) "OPERATOR" – Applies to operator maintenance level.
(b) "UNITLVL" – Applies to unit maintenance level.
(c) "DIRSUP" – Applies to direct support (DS) maintenance level.
(d) "GENSUP" – Applies to general support (GS) maintenance level.
(e) "INTER" – Applies to intermediate (DS/GS) maintenance level.
(f) "DEPOT" – Applies to depot maintenance level.
(g) "AVUM-AVIM" – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.
(h) "TMLVLS" – Applies to all maintenance levels.

33.4.4.23 Torque Value or Limit <***torque***>. The element <***torque***> is used to identify a torque value or limit embedded in the text or table entry. The element contains inline text (***%text;*** see 33.3.7) which allows the embedding of data elements. Generally, the narrative is entered using #PCDATA.

a. DTD fragment for Torque Value <***torque***>:

```
<!ELEMENT torque - - (%text;)>
<!ATTLIST torque
            %refs;>
```

b. Attributes for <***torque***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

33.4.4.24 Voltage <***voltage***>. The element <***voltage***> identifies a critical voltage measurement embedded in the text. The element contains inline text (***%text;*** see 33.3.7) which allows the embedding of data elements. Generally, the narrative is entered using #PCDATA.

a. DTD fragment for Voltage <***voltage***>:

```
<!ELEMENT voltage - - (%text;)>
<!ATTLIST voltage
            %refs;>
```

b. Attributes for <***voltage***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

33.4.4.25 Work Package Number <***wpno***>. The element <***wpno***> contains the work package number and requires the attribute "wpref". The attribute "wpref" is an Identification Reference (IDREF), which maps to the work package identification in the attribute "wpno" (contained in each root work package SGML element). Page-based systems will display the WP sequence number and frame-based systems will display a hyperlink.

a. DTD fragment for Work Package Number <***wpno***>:

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```
<!ELEMENT wpno - o EMPTY>
<!ATTLIST wpno
          wpref     idref     #REQUIRED
          %secur;>
```

b. Attributes for <***wpno***>:

(1) **WPREF** -

(a) For frame-based use work package title.

(b) For page-based use work package number.

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.5 Work Package Identification Information <***wpidinfo***>. The element <***wpidinfo***> lists the identification information required for a work package. The element contains a maintenance level <***maintlvl***>, end item nomenclature <***eicnomen***>, title <***title***> (see 33.4.1.5.1), an optional applicable configuration <***appconfig***> and an optional supersedure notice <***wpsupersede***>.

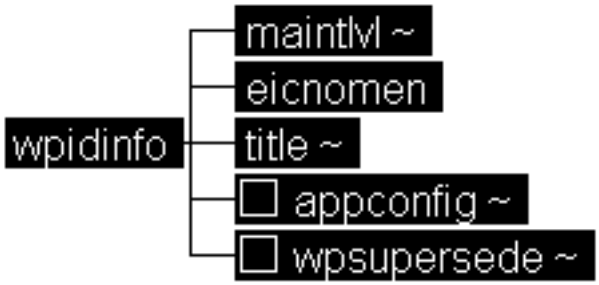

Figure 164 Work Package Identification Information DTD Hierarchy <wpidinfo>

33.4.5.1 Maintenance Level <***maintlvl***>. The element maintenance level <***maintlvl***> is the work package maintenance level and is entered using the attribute "LEVEL". The element is EMPTY and all pertinent information is entered through its attributes.

a. DTD fragment for Maintenance Level <***maintlvl***>:

```
<!ELEMENT maintlvl - o EMPTY>
<!ATTLIST maintlvl
            level    (depot | operator |
                      gensup | dirsup |
                      unitlvl | inter |
                      avum-avim | tmlvls)     #REQUIRED>
```

b. Attributes for <***maintlvl***>:

(1) **LEVEL** - Specifies the work package maintenance level.

(a) “OPERATOR” – Applies to operator maintenance level.

(b) “UNITLVL” – Applies to unit maintenance level.

(c) “DIRSUP” – Applies to direct support (DS) maintenance level.

(d) “GENSUP” – Applies to general support (GS) maintenance level.

(e) “INTER” – Applies to intermediate (DS/GS) maintenance level.

(f) “DEPOT” – Applies to depot maintenance level.

(g) “AVUM-AVIM” – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.

(h) “TMLVLS” – Applies to all maintenance levels.

33.4.5.2 End Item Nomenclature <***eicnomen***>. The element <***eicnomen***> contains the nomenclature of the end item and the system, subsystem, equipment or component name <***sysnomen***> covered in the work package.

a. DTD fragment for End Item Nomenclature <***eicnomen***>:

```
<!ELEMENT eicnomen - o (sysnomen)>
```

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33.4.5.2.1 System, Subsystem, Equipment or Component Name <***sysnomen***>. The element <***sysnomen***> is used to enter the system, subsystem, equipment or component name covered in the work package.

a. DTD fragment for System, Subsystem, Equipment or Component Name <***sysnomen***>:

```
<!ELEMENT sysnomen - o (name, modelno?, (partno | nsn), eic)+>
<!ATTLIST sysnomen
          pretext CDATA   #IMPLIED
          %refs;
          %secur;>
```

b. Attributes for <***sysnomen***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).
(3) **PRETEXT** - Used to specify any text that precedes the external reference when resolved for display.

33.4.5.3 Applicable Configuration <***appconfig***>. The element <***appconfig***> defines the applicable configurations that lists the configurations covered by the work package. The element contains one or more name(s) <***name***> (see 33.4.4.15).

a. DTD fragment for Applicable Configuration <***appconfig***>:

```
<!ELEMENT appconfig - o (name+)>
<!ATTLIST appconfig
          %refs;
          %secur;>
```

b. Attributes for <***appconfig***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.5.4 Supersedure Notice <***wpsupersede***>. The element supersedure notice <***wpsupersede***> consists of the supersedure notice. **It is used for page-based TMs.** The element is EMPTY and all pertinent information is entered through its attributes.

a. DTD fragment for Supersedure Notice <***wpsupersede***>:

```
<!ELEMENT wpsupersede - o EMPTY >
<!ATTLIST wpsupersede
          supersede.wpseq      CDATA     #REQUIRED
          supersede.dated      CDATA     #REQUIRED
          from.tmno            CDATA     #IMPLIED
          supersed.secur       %yesorno; '0'>
```

b. Attributes for <***wpsupersede***>:

(1) **SUPERSEDE.WPSEQ** - The work package sequence number of the superseded work package.
(2) **SUPERSEDE.DATED** - The date of the superseded work package.
(3) **FROM.TMNO** - The technical manual publication number from where the susperseded work package is contained.
(4) **SUPERSED.SECUR** - Security regulations notice for a work package that supersedes a classified work package.

33.4.6 Work Package Initial Setup.

33.4.6.1 Work Package Setup Information <***wpinfo***>. The element <***wpinfo***> initial setup information lists all of the information required by the technician so the tools, test equipment, references, parts, and other items needed to complete the tasks can be obtained. The element may contain the following optional elements: test equipment list <***testeqp***>, tools list <***tools***>, expendable materials and parts required list, <***mtrlpart***>, personnel requirements <***persnreq***>, drawing requirements <***dwgreq***>, document reference materials <***refs***>, troubleshooting references <***trblrefs***>, equipment condition <***eqpconds***>, special environment <***specenv***>, and estimated time to complete the task <***time.to.comp***> see 33.4.6.1.9)or null (<***null***> see 33.4.1.6.3). Each setup category may only be referenced once.

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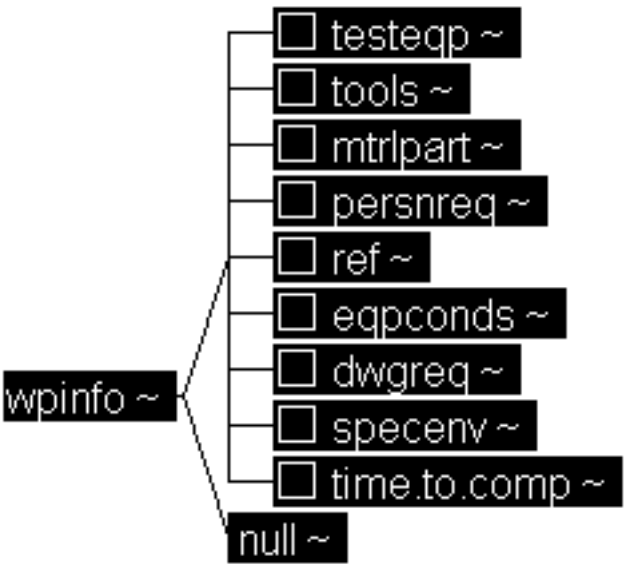

Figure 165 Work Package Setup Information DTD Hierarchy <wpinfo>

a. DTD fragment for Work Package Setup Information <***wpinfo***>:

```
<!ELEMENT wpinfo - - ((testeqp?, tools?, mtrlpart?, persnreq?, ref?, eqpconds?,
                       dwgreq?, specenv?, time.to.comp?) | null)>
<!ATTLIST wpinfo
          %refs;
          %secur;>
```

b. Attributes for <***wpinfo***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.6.1.1 Test Equipment List <***testeqp***>. The element test equipment list <***testeqp***> is the list of test equipments required to perform the procedures in the work package. The element contains at least one test equipment item (<***setup-item***> see 33.4.6.1.1.1).

a. DTD fragment for Test Equipment List <***testeqp***>:

```
<!ELEMENT testeqp - o ((setup-item)+)>
<!ATTLIST testeqp
            %refs;
            %secur;>
```

b. Attributes for <***testeqp***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.6.1.1.1 Setup Item <***setup-item***>. The element setup- item <***setup-item***> is a generic item in a specific initial setup category list. Information is entered identifying the equipment/tool name (<***name***> see 33.4.4.15), followed by an optional personnel MOS (<***nameid***> see 33.4.6.1.1.1.1) and quantity <***qty***> see 33.4.6.1.1.1.3) or identification number <***identno***> see 33.4.6.1.1.1.2), an optional quantity <***qty***> reference to the item's description <***itemref***> see 33.4.6.1.1.1.7) followed by an optional mandatory replacement part (<***mrp***> see 33.4.6.1.1.1.4) or conditional statement <***condition***> see 33.4.6.1.1.1.5), followed by either reason <***reason***> see 33.4.6.1.1.1.6) or reference to the item's description <***itemref***> or drawing name <***dwgname***> see 33.4.4.7)

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and drawing number <***dwgno***> see 33.4.4.8) or a cross reference within the document (<***xref***> see 33.4.1.3.6) or a cross reference external to the document (<***extref***> see 33.4.1.3.3).

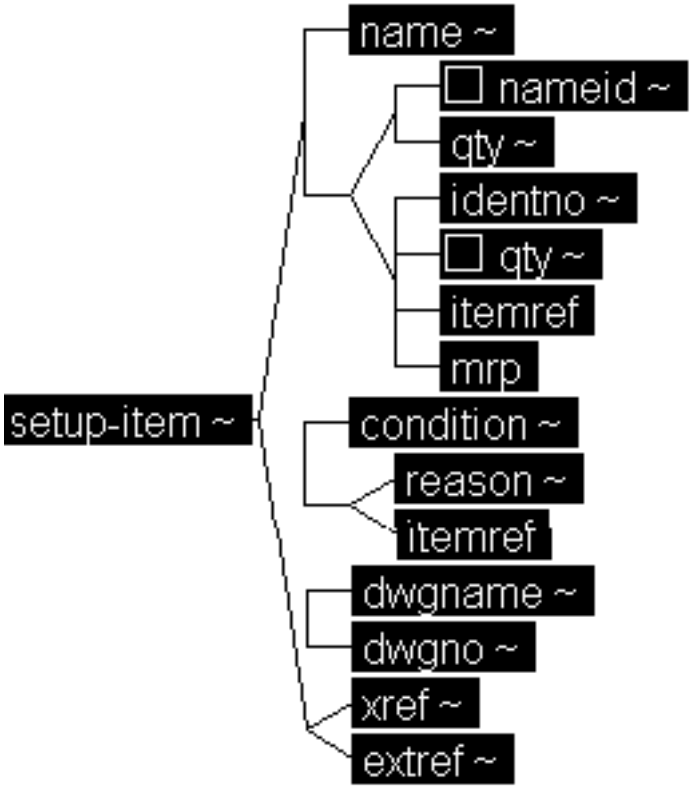

Figure 166 Setup Item DTD Hierarchy <setup-item>

a. DTD fragment for Setup Item<***setup-item***>:

```
<!ELEMENT setup-item - o ((name, (nameid?, qty) | (identno qty?,
                          itemref?, mrp?)))| (condition, (reason |
                          itemref))|(dwgname, dwgno)| ((xref | extref))>
<!ATTLIST setup-item
            %refs;
            %secur;>
```

b. Attributes for <***setup-item***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.6.1.1.1.1 Military Occupational Specialty (MOS) <***nameid***>. The element Military Occupational Specialty (MOS) name identification <***nameid***> is the identifying number of the Military Occupational Specialty (MOS) required to perform the procedures in the work package. The element contains inline text (***%text;*** see 33.3.7) which allows the embedding of data elements. Generally, the narrative is entered using #PCDATA.

a. DTD fragment for Military Occupational Specialty (MOS) <***nameid***>:

```
<!ELEMENT nameid - o (%text;)>
<!ATTLIST nameid
          %refs;
          %secur;>
```

b. Attributes for <***nameid***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

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33.4.6.1.1.1.2 Identifying Number <***identno***>. The element identifying number <***identno***> contains some form of identifying number for an item within the work package setup information. The element contains one or more of the following identifying qualifiers part number (<***partno***> see 33.4.4.17), model number (<***modelno***> see 33.4.4.14), TM number (<***tmno***> see 24.2.1.1.1.1.1.2), NSN (<***nsn***> see 33.4.4.16), supply category (<***sc***> see 33.4.4.19) and/or CAGEC (<***cageno***> see 33.4.4.2).

a. DTD fragment for Identifying Number <***identno***>:

```
<!ELEMENT identno - o (partno | modelno | tmno | nsn |
                       sc | cageno)+>
<!ATTLIST identno
            %refs;
            %secur;>
```

b. The attributes for <***identno***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.6.1.1.1.3 Quantity <***qty***>. The element quantity <***qty***> indicates the recommended quantity.

a. The DTD fragment Quantity <***qty***>:

```
<!ELEMENT qty - o (%text;)>
<!ATTLIST qty
            %refs;
            %secur;>
```

b. The attributes for <***qty***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.6.1.1.1.4 Mandatory Replacement Part <***mrp***>. The element mandatory replacement part <***mrp***> is used within the work package setup information to identify all items/parts that must be replaced during repair and overhaul of equipment.

a. The DTD fragment Mandatory Replacement Part <***mrp***>:

```
<!ELEMENT mrp - o (Empty)>
```

33.4.6.1.1.1.5 Condition Statement <***condition***>. The element condition statement <***condition***> is used to describe either prerequisite, special environmental or equipment condition statement(s) prior to the work package procedure(s). The element contains inline text (***%text;*** see 33.3.7) which allows the embedding of data elements. Generally, the narrative is entered using #PCDATA.

a. DTD fragment for Condition Statement <***condition***>:

```
<!ELEMENT condition - o (%text;)>
<!ATTLIST condition
            %refs;
            %secur;>
```

b. Attributes for <***condition***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.6.1.1.1.6 Reason <***reason***>. The element reason <***reason***> is used to explain the condition. The element contains inline text (***%text;*** see 33.3.7) which allows the embedding of data elements. Generally, the narrative is entered using #PCDATA.

a. DTD fragment for Reason <***reason***>:

```
<!ELEMENT reason - o (%text;)>
<!ATTLIST reason
            %refs;
            %secur;>
```

b. Attributes for <***condition***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

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33.4.6.1.1.1.7 Setup Item Reference Information <***itemref***>. The element setup-item reference information <***itemref***> contains a reference to the setup item information. The element contains a cross reference within the document (<***xref***> see 33.4.1.3.6), or a cross reference external to the document (<***extref***> see 33.4.1.3.3).

a. DTD fragment for Setup Item Reference Information <***itemref***>:

```
<!ELEMENT itemref - o (xref | extref)>
```

33.4.6.1.2 Tools<***tools***>. The element tools <***tools***> is the list of tools required to perform the procedures in the work package. The element contains at least one tool item (<***setup-item***> see 33.4.6.1.1.1).

a. DTD fragment for Tools <***tools***>:

```
<!ELEMENT tools - o (setup-item)+>
<!ATTLIST tools
          %refs;
          %secur;>
```

b. Attributes for <***tools***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.6.1.3 Materials/PartsRequired <***mtrlpart***>. The element expendable materials and parts required <***mtrlpart***> is the list of expendable materials and parts required to perform the procedures in the work package. It consists of at least one expendable material and part item (<***setup-item***> see 33.4.6.1.1.1).

a. DTD fragment for Materials/PartsRequired <***mtrlpart***>:

```
<!ELEMENT mtrlpart - o (setup-item)+>
<!ATTLIST mtrlpart
            %refs;
            %secur;>
```

b. Attributes for <***mtrlpart***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.6.1.4 Personnel Required <***persnreq***>. The personnel required element <***persnreq***> lists the personnel required to perform the procedures in the current work package. The element contains one or more setup items (<***setup-item***> see 33.4.6.1.1.1).

a. DTD fragment for Personnel Required <***persnreq***>:

```
<!ELEMENT persnreq - o (setup-item)+>
<!ATTLIST persnreq
            %refs;
            %secur;>
```

b. Attributes for <***persnreq***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.6.1.5 Work Package Reference Material <***ref***>. The element reference material <***ref***> is all reference information other than references to troubleshooting work packages. The reference material may include other TMs and publications, chapters, or work packages. The element contains at least one or more setup items (<***setup-item***> see 33.4.6.1.1.1).

a. DTD fragment for Work Package Reference Material <***ref***>:

```
<!ELEMENT ref - o (setup-item)+>
<!ATTLIST ref
            %refs;
            %secur;>
```

b. Attributes for <***ref***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

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33.4.6.1.6 Equipment Condition <***eqpconds***>. The element equipment condition <***eqpconds***> is a list of equipment condition prior to beginning the tasks covered by the work package. The element contains at least one equipment condition item (<***setup-item***> see 33.4.6.1.1.1).

a. DTD fragment for Equipment Condition <***eqpconds***>:

```
<!ELEMENT eqpconds - o  (setup-item)+>
<!ATTLIST eqpconds
           %refs;
           %secur;>
```

b. Attributes for <***eqpconds***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.6.1.7 Drawing Requirements <***dwgreq***>. The element drawing requirements <***dwgreq***> lists the drawings required to perform the procedures in the work package. The element contains at least one drawing number <***dwgno***> which may be preceded by a drawing name <***dwgname***>.

a. DTD fragment for Drawing Requirements <***dwgreq***>:

```
<!ELEMENT dwgreq - o  (dwgname?, dwgno)+>
<!ATTLIST dwgreq
          %refs;
          %secur;>
```

b. Attributes for <***dwgreq***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.6.1.8 Special Environment Condition <***specenv***>. The element special environment condition <***specenv***> is special environmental condition, such as ventilation, lighting, or temperature, required to perform the procedures contained in the work package. The element contains least one special environmental condition item (<***setup-item***> see 33.4.6.1.1.1).

a. DTD fragment for Special Environment Condition <***specenv***>:

```
<!ELEMENT specenv - o (setup-item)+>
<!ATTLIST specenv
           %refs;
           %secur;>
```

b. Attributes for <***specenv***>:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see 33.5.7).

33.4.6.1.9 Estimated Time to Complete The Task <***time.to.comp***>. The element estimated time to complete the task <***time.to.comp***> is in the work package setup information to include the estimated time it takes to complete the operating task. The element is EMPTY and all pertinent information is entered through its attributes.

a. DTD fragment for Estimated Time to Complete The Task <***time.to.comp***>:

```
<!ELEMENT time.to.comp - o EMPTY>
<!ATTLIST time.to.comp
            hrs      NUTOKEN     #REQUIRED>
```

b. Attributes for <***time.to.comp***>:

(1) **HRS** - The estimated amount of hours to complete the operating task.

33.5 Common Attributes. The following attributes are common throughout MIL-STD-2361 and are entered in the DTDs using parameter entity references.

33.5.1 Body Attribute Set***%bodyatt;***. The attributes are for general use for any SGML element. The attributes defines change levels, equipment configuration, identifier and referencing attributes. By referencing the parameter entity ***%bodyatt;***, the following attributes are available to the associated element.

a. DTD fragment for Body Attribute Set ***%bodyatt;***:

```
<!ENTITY % bodyatt "inschlvl   NUTOKENS   #IMPLIED
```

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```
delchlvl    NUTOKENS    #IMPLIED
label       CDATA       #IMPLIED
texttype    NUMBER      #IMPLIED
itemid      NMTOKEN     #IMPLIED
config      NUTOKENS    #IMPLIED
skilltrk    NUTOKENS    #IMPLIED
%refs;" >
```

b. Attributes for ***%bodyatt;***:
c. **INSCHLVL** - Specifies the change level(s) at which information was inserted. An audit trail can be maintained by listing multiple change levels separated by spaces.
d. **DELCHLVL** - Specifies the change level(s) at which information was deleted. An audit trail can be maintained by listing multiple change levels separated by spaces.
e. **LABEL** - Specifies the label associated with paragraph, figure, or table. Label is only appropriate for manually enumerated documents. Typically, the rendering system will automatically enumerate the elements requiring numbering, in which case the label attribute is omitted or ignored if present, as specified in the FOSI.
f. **TEXTTYPE** - (Pending information from OSD).
g. **ITEMID** - Supplies an identifier of the item, such as SSSN, LRU, part number, or reference designator.
h. **CONFIG** - Specifies the equipment configurations to which element applies.
i. **SKILLTRK** - Designation of the skill level of the user at which the current element of information is aimed. A particular set of values common to all documents has not been created. Currently, the relevant values are set by contract.
j. **%REFS;** - Refer to common parameter entities for a complete description (see 33.5.6).

33.5.2 Nuclear Hardness and Electrostatic Discharge Markings ***%hcp.esd;***. The attributes are for general use for any SGML element.. Marking attributes which specify a task or steps in a procedure relate to establishing nuclear hardness or could damage electrostatic discharge sensitive parts. By referencing the parameter entity ***%hcp.esd;***, the following attributes are available to the associated element.

a. DTD fragment for Nuclear Hardness and Electrostatic Discharge Markings ***%hcp.esd;***:

```
<!ENTITY % hcp.esd "hcp        %yesorno   '0'
                    esd        %yesorno   '0'" >
```

b. Attributes for ***%hcp.esd;***:
c. **HCP** - Marks the task or a step in a procedure relating or contributing to establishing nuclear hardness.
d. **ESD** - Marks a task or a step in a procedure relating to handling or maintenance actions which could damage electrostatic sensitive parts.

33.5.3 Information Module Resource Values ***%imrsrc-vals;***. The attributes are used for information chapter SGML elements. The attributes define whether to include page number with cross reference, highlighting of primary procedural step, number of columns and chapter TOC attributes. By referencing the parameter entity ***%imrsrc-vals;***, the following attributes are available to the associated element.

a. DTD fragment for Information Chapter Resource Value Attributes ***%imrsrc-vals;***:

```
<!ENTITY % imrsrc-vals "pageref          %yesorno;     '0'
                        summary-detail   %yesorno;     '0'
                        columns          (1 | 2)       '1'
                        chap-toc         %yesorno;     '1'>
```

b. Attributes for ***%imrsrc-vals;***:
c. **PAGEREF** - Specifies whether or not cross references include a reference a page number. A non-zero value indicates that the cross reference should include a page number. The first time the attribute is referenced for the element it is treated as required, thereafter that it will assume the current attribute value.
d. **SUMMARY-DETAIL** - Specifies the style of writing procedural steps. A summary-detail style, indicated by a nonzero value, summarizes the action in a primary procedural step, usually presented in all-caps, and gives the actual procedure to accomplish the action in a second-level procedure step(s), presented in upper-and-lowercase format.

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e. **COLUMNS** - Specifies the either single or dual columns on a composed page. If no value is entered the default value is single column.
f. **CHAP-TOC** - Specifies whether the chapter includes a table of chapter contents on the chapter title page. The style sheet for the information chapter specifies what contents are extracted to create the TOC. A non-zero value indicates that a TOC should be extracted and printed. If no value is entered the default value is include the TOC.

33.5.4 Joint Use ***%joint.use;***. The attributes are for general use for any SGML element. The attributes are used to specify if the work package is for one or more services in a joint publication. By referencing the parameter entity ***%joint.use;***, the following attributes are available to the associated element.

a. DTD fragment for Joint Use ***%joint.use;***:

```
<!ENTITY % joint.use "army     %yesorno;    '0'
                      airforce %yesorno;    '0'
                      navy     %yesorno;    '0'
                      marines  %yesorno;    '0'">
```

b. Attributes for ***%joint.use;***:
a. **ARMY** - United States Army.
b. **AIRFORCE** - United States Air Force.
c. **NAVY** - United States Navy.
d. **MARINES** - United States Marines.

33.5.5 Quality Assurance ***%qa;***. The attributes are for general use for any SGML element. Depot and aviation maintenance procedures which have a major quality assurance effect should be identified by the attribute **QA** at the step level. By referencing the parameter entity ***%qa;***, the following attributes are available to the associated element.

a. DTD fragment for Quality Assurance ***%qa;***:

```
<!ENTITY % qa "qa %yesorno   '0' ">
```

b. Attributes for ***%qa;***:
c. **QA** - Specifies whether or not the step in the procedure has a major quality assurance effect; a non-zero value indicates that it does.

33.5.6 Referencing Attribute Set ***%refs;***. The attributes are for general use for any SGML element. The attributes defines an identifier and referencing attributes. By referencing the parameter entity ***%refs;***, the following attributes are available to the associated element.

a. DTD fragment for Referencing Attribute Set***%refs;***:

```
<!ENTITY % refs "id         ID       #IMPLIED
                 idref      IDREFS   #IMPLIED
                 assocfig   IDREFS   #IMPLIED">
```

b. Attributes for ***%refs;***:
c. **ID** - An identifier of the element which is assigned at origination and which remains unchanged as the document is revised or updated even though the automatically assigned enumeration or manually-assigned "labels" change (in some cases many times). The value of the "ID" is used when making references to the element from other portions of the document. If no ID is given, none will be maintained and the element can then not be cross-referenced by means of an IDREF.
d. **IDREF** - A reference to an identifier(s). The use of this attribute must be specified in the composition system as it has no implied or default use.
e. **ASSOCFIG** - A reference to a figure(s) associated with the current element.

33.5.7 Security ***%secur;***. The attributes are for general use for any SGML element. The attribute defines security classification for the element and is inherent to any children to the element. By referencing the parameter entity ***%secur;***, the following attributes are available to the associated element.

a. DTD fragment for Security Attributes ***%secur;***:

```
<!ENTITY % secur "security (uc | fouo |
                            c | s | ts)  #IMPLIED
                  restrict   NMTOKENS      #IMPLIED
```

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```
                release     NMTOKENS      #IMPLIED
                codeword    NMTOKENS      #IMPLIED
                scilevel    %yesorno;     '0'
                diglyph     NMTOKENS      #IMPLIED">
```

b. Attributes for ***%secur;***:

c. **SECURITY** - Specifies the security classification of the element. If no value is entered the implied value is unclassified.
   (1) "UC" - Indicates the element is unclassified.
   (2) "FOUO" - Indicates the element is for official use only.
   (3) "C" - Indicates the element is confidential.
   (4) "S" - Indicates the element is secret.
   (5) "TS" - Indicates the element is top secret.

d. **RESTRICT** - Specifies the restrictions to the information. The value might include: No Foreign Distribution, NATO, etc.

e. **RELEASE** - Specifies the countries to which the document may be released.

f. **CODEWORD** - Specifies any associated code words.

g. **SCILEVEL** - Flag to indicate if element has a Special Compartmentalized Information level; a non-zero value indicates the element has such a designation.

h. **DIGLYPH** - One or more two-letter codes defining the classification of the element. Values are determined by contract.

33.5.8 Tracking ***%tracking;***. The attributes are used for work package SGML elements. The attributes define FGC, LSA origin and modification audit trail attributes. By referencing the parameter entity ***%tracking;***, the following attributes are available to the associated element.

a. DTD fragment for Tracking ***%tracking;***:

```
<!ENTITY % tracking "FGC           CDATA      #IMPLIED
                     written-by    CDATA      #IMPLIED
                     written-on    CDATA      #IMPLIED
                     changelvl     CDATA      #IMPLIED
                     last-mod      CDATA      #IMPLIED
                     LSA-ID        CDATA      #IMPLIED
                     wpseq         CDATA      #IMPLIED
                     insertwp      %yesorno;  '0'
                     deletewp      %yesorno;  '0'>
```

b. Attributes for ***%tracking;***:

c. **FGC** - Specifies the functional group code that applies to the subject of the element.

d. **WRITTEN-BY** - Specifies the original author of a document.

e. **WRITTEN-ON** - Specifies the original creation date.

f. **CHANGELVL** - Specifies the change level.

g. **LAST-MOD** - Specifies the last modification date.

h. **LSA-ID** - Specifies the identification of the subject of the element in logistic support analysis applying to the equipment covered in the TM.

i. **INSERTWP** - Specifies the a new work package since last TM revision. Setting this attribute to a non-zero number will cause the work package sequence number to use the point work package number (the last two numbers). The work package sequence number will use the for the first four numbers the from the prior old revision work package and the point number will count the number of new work packages added from the prior to the old revision work package. After a revision is enacted the attribute is reset to zero. If no value is entered the default is not a new work package.

j. **DELETEWP** - Specifies the work package has been deleted. The attribute is used for a place holder for the composition to determine the work package sequence number. The attribute is using the default value #CONREF. To maintain the place holder the IDREF references the attribute "WPID". #CONREF causes the content model to become EMPTY and assumes the content model of the referenced material.

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Therefore, referencing the itself causes no contain to be present and work package sequence number is maintained correctly until the next revision. After a revision is enacted the work package is removed from the document instance.

33.5.9 Work Package Body Attribute Set ***%wpbodyatt;***. The attributes are used for work package SGML elements. The attributes define change level, equipment configuration and referencing attributes. By referencing the parameter entity ***%wpbodyatt;***, the following attributes are available to the associated element.

a. DTD fragment for Work Package Body Attribute Set ***%wpbodyatt;***:

```
<!ENTITY % wpbodyatt "inschlvl   NUTOKENS   #IMPLIED
                      delchlvl   NUTOKENS   #IMPLIED
                      label      CDATA      #IMPLIED
                      texttype   NUMBER     #IMPLIED
                      itemid     NMTOKEN    #IMPLIED
                      config     NUTOKENS   #IMPLIED
                      skilltrk   NUTOKENS   #IMPLIED
                      idref      IDREFS     #IMPLIED
                      assocfig   IDREFS     #IMPLIED">
```

b. Attributes for ***%wpbodyatt;***:

(1) **INSCHLVL** - Specifies the change level(s) at which information was inserted. An audit trail can be maintained by listing multiple change levels separated by spaces.

(2) **DELCHLVL** - Specifies the change level(s) at which information was deleted. An audit trail can be maintained by listing multiple change levels separated by spaces.

(3) **LABEL** - Specifies the label associated with paragraph, figure, or table. Label is only appropriate for manually enumerated documents. Typically, the rendering system will automatically enumerate the elements requiring numbering, in which case the label attribute is omitted or ignored if present, as specified in the FOSI.

(4) **TEXTTYPE** - (Pending information from OSD).

(5) **ITEMID** - Supplies an identifier of the item, such as SSSN, LRU, part number, or reference designator.

(6) **CONFIG** - Specifies the equipment configurations to which element applies.

(7) **SKILLTRK** - Designation of the skill level of the user at which the current element of information is aimed. A particular set of values common to all documents has not been created. Currently, the relevant values are set by contract.

(8) **IDREF** - A reference to an identifier(s). The use of this attribute must be specified in the composition system as it has no implied or default use.

(9) **ASSOCFIG** - A reference to a figure(s) associated with the current element.

33.5.10 Work Package Module Resource Value Attributes ***%wprsrc-vals;***. The attributes are used for work package SGML elements. The attributes define the highlighting of primary procedural step and number of columns. By referencing the parameter entity ***%wprsrc-vals;***, the following attributes are available to the associated element.

a. DTD fragment for Work Package Module Resource Value Attributes ***%wprsrc-vals;***:

```
<!ENTITY % wprsrc-vals "summary-detail %yesorno;    IMPLIED
                        columns         (1 | 2)      '1'"
                        %joint.use>
```

b. Attributes for ***%wprsrc-vals;***:

a. **SUMMARY-DETAIL** - Specifies the style of writing procedural steps. A summary-detail style, indicated by a nonzero value, summarizes the action in a primary procedural step, usually presented in all-caps, and gives the actual procedure to accomplish the action in a second-level procedure step(s), presented in upper-and-lowercase format. The first time the attribute is referenced for the element it is treated as required, thereafter that it will assume the current attribute value.

b. **COLUMNS** - Specifies the either single or dual columns on a composed page. If no value is entered the default value is single column.

c. **%joint.use;** - Refer to common parameter entities for a complete description (see 33.5.4).

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PART III
TRAINING INFORMATION

34 BASIC TM/DMWR TRAINING.

34.1 Scope. This section contains training-type information on developing TM/DMWR(s) using MIL-STD-40051 and MIL-STD-2361. The information contained in this version of the handbook is intended to provide a general overview of the relationship between MIL-STD-40051 and MIL-STD-2361 for developing TM/DMWR(s).

34.2 MIL-STD-40051A Content Selection Matrixes. The training packet contains information on using MIL-STD-40051A Content Selection Matrixes. The information contained in this version of the handbook is intended to provide a general overview of the purpose for the usage of MIL-STD-40051A(TM) matrixes for developing TM/DMWR(s). The Content Selection Matrixes are found in MIL-STD-40051A, Chapter 1, Appendix A. They are also available as a PDF file by downloading them from the ASRL Website, (www.asrl.com) under the link “CONSTRUCTS”.

34.3 MIL-STD-40051A andMIL-STD-2361A(AC) Cross-Walk. The cross-walk is a user friendly chart which maps out the relationship between MIL-STD-40051A and MIL-STD-2361 by comparing what work packages would be used in a -20TM to a DMWR. The cross-walk gives the location of the work package detail in MIL-STD-40051A and the location of the work package detail in MIL-STD-2361A(AC). A copy of the Cross-Walk can be obtained by downloading it from the ASRL Website, (www.asrl.com) under the link “CONSTRUCTS”.

34.4 MIL-STD-40051 and MIL-STD-2361 Work Package Training. The training packet contains information on how to conduct information exchange on requirements for developing work packages in accordance with MIL-STD-40051 and MIL-STD-2361 . The information contained in this version of the handbook is intended to provide a general overview of developing a work package. A copy of the MIL-STD-40051 and MIL-STD-2361 Work Package Training can be obtained by downloading it from the ASRL Website, (www.asrl.com) under the link “CONSTRUCTS”.

34.5 SGML Basic Training. The training packet provides a general overview of SGML. A copy of the SGML Basic Training can be obtained by downloading it from the ASRL Website, (www.asrl.com) under the link “CONSTRUCTS”.

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PART IV
SGML AND FOSI TUTORIAL

35 SGML TUTORIAL.

35.1 Scope. This appendix contains tutorial-type information on MIL-STD-2361 SGML. The information contained in this version of the handbook is intended to provide a overview of the use of SGML.

35.2 Applicable Documents. Refer to paragraph 2.

35.3 Document Type Definition (DTD). DTDs describe the structure and content of a document. A DTD is comprised of document elements and their relationships elements, attributes, entities, etc.

35.3.1 Document Elements. Document elements begin with document element declarations. Element declarations may be identified in the DTD by the markup declaration open (MDO) "<!" and the reserved word "ELEMENT", which is always the first word in the element declaration. The next component of the element declaration is the element name ("deflist" in the example below). The element name is always followed by the OMITTAG rules which in MIL-STD-2361 are: "- -" indicates an end tag is required; and "- o" indicates the end tag may be omitted (but does not have to be). The element declaration component following the OMITTAG rules is either declared content or a content model. Declared content is either "CDATA," "RCDATA," or "EMPTY." The MIL-STD-2361 application makes use of the concept of "EMPTY" elements (for example the table of contents). The content model is comprised of two parts: the "model group" and any "exceptions." Sequence and occurrence indicators contained in the content model determine whether or not a sub-element will be in the document (see 35.3.3) and in what order the sub-elements may occur. Exceptions are either "exclusions" (indicated by "-" prior to the left parenthesis) or "inclusions" (indicated by "+" prior to the left parenthesis) to the model group itself. If content model has both exclusions and inclusions, the exclusions are listed first. After the content model is completed the last component is the markup declaration close (MDC) ">". An example of an element declaration is as follows:

```
<!ELEMENT deflist - - (title?, (term, def)+) >
```

35.3.2 Parsable Character Data #PCDATA. The reserved name #PCDATA is used inside the content model to indicate zero or more parsed data characters. Note no information is required to be entered to maintain a valid document. #PCDATA contains the narrative (content) text for the document, non-keyboard character general entity and text general entity, but no subelements are allowed unless the current content model or higher-level permits inclusions.

35.3.3 Sequence and Occurrence Indicators. Sequence and occurrence indicators determine the required (mandatory) content and element groups for DTDs. Required content parameters include both the sequence and occurrence of elements within a DTD, and are identified within the DTD by standard SGML codes.

35.3.3.1 Sequence Indicators. Sequence indicators determine how the elements are arranged within the document. Elements which will occur in a particular order are separated by comma's (,), such as the comma after "title?" in the example above. In this example, the "title?" of the definition list ("deflist") will precede "term and definition" (The "?" is an occurrence indicator that indicates the title is optional). Elements that have alternative relationships (e.g., use one but not the other), are designated by vertical bars (|), such as "(xref | extref)". Elements that will be included in the document, but in no particular order are indicated by the ampersand (&) such as "(name & date)" which means the name could be followed by the date or the date could be entered first and followed by the name.

35.3.3.2 Occurrence Indicators. Occurrence indicators determine the number of times an element will occur in a document. An element that may or may not occur (e.g., optional) and that, if used, will occur only once, is designated by a question mark (?). An optional element that may occur zero or more times is designated by an asterisk (*). A mandatory element that will occur at least once, or that may occur many times, is designated by a plus sign (+). An element with no occurrence indicator is an mandatory element and must occur once only.

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35.3.3.3 Content Model Element Sub-groups. Element sub-groups within a content model are enclosed in parentheses. Inside the parentheses, individual elements are governed by the same sequence and occurrence indicators as other elements, creating a sequence/occurrence model within the sub-group. The entire sub-group is governed by the sequence indicator before the open parentheses and the occurrence indicator after the close parentheses. Examples of markup for various combinations of sequence, occurrence, and element sub-groups are provided below.

a. When elements are mandatory in sequence and occurrence: (name, xref) = <name> followed by an <xref>.
b. When elements have a mandatory sequence, but the occurrence of second element is optional: (name, xref?) = <name>, which may be followed by a single optional <xref>.
c. When elements have a mandatory sequence, occurrence of third element is optional: (name, xref, extref?) = <name> followed by one <xref>, which may be followed by an optional <extref>.
d. When elements have an optional sequence and occurrence: (name? | xref?) = either one <name> or one <xref> may occur but neither has to occur.
e. When elements have an optional sequence and occurrence: (name | xref)* = either a <name> or an <xref> may occur but neither has to occur; either or both of the tags may occur many times with no specified sequence; this model could be empty of content.
f. When elements have a mandatory sequence and occurrence, but with alternative second elements: (name, (xref | extref)) = <name> followed by either one <xref> or one <extref>.
g. When elements have a mandatory sequence and minimum occurrence requirements for the alternative second element: (name, (xref | extref)+) = <name> followed by at least one <xref> or <extref>; either or both the <extref> and <xref> can occur more than once, in no particular order.
h. When elements have a mandatory sequence but occurrence is required only for the first element: (name, (xref | extref)*) = <name>, which may be followed by an <xref> or <extref>; either or both the <xref> and <extref> can occur more than once, in no particular order, but neither has to occur.
i. When elements have a mandatory sequence but are modified by having no mandatory occurrences: (name*, (xref l extref)?) = <name> may occur any number of times, but is not mandatory, followed optionally by either a single <xref> or <extref>; this model could be empty of content.

35.3.4 Attribute Declaration. Attribute declarations is prefaced in the DTDs by the (MDO) "!" and the SGML reserved word "ATTLIST". The next component is the element to which the attributes apply ("ginfowp" in the example below). The element is followed by the attribute name ("wpno" in the example below). The attribute name is followed by the allowable attribute values ("CDATA" in the example below). The last part of the attribute declaration is the default value or value source keyword ("#REQUIRED" in the example below). The attribute name, value and declaration may have multiple attributes to better qualify the SGML element to which it is associated. The example, upon which the above descriptions are based, is as follows:

```
<!ATTLIST ginfowp wpno CDATA #REQUIRED>
```

35.3.4.1 Attribute Value Types and Reserved SGML Names. The attribute value types and reserved SGML names should be used in the context presented and should follow the rules contained in the definitions associated with the respective terms.

a. NAME - Will start with a letter and may be followed by letters, digits, period, and/or dash.
b. NMTOKEN - Will consist of either valid digits or letters.
c. NUMBER - Will consist only of digits (numbers). (Note: change signs and decimal numbers are not permitted.)
   NOTE: a special case in this application makes use of the reserved word NUMBER through an entity reference %yesorno;. It is meant to be used as a true-false test (hence the entity name) in which "O" implies "no" or "false" and "1" (or any non-zero number) implies "yes" or "true."
d. NUTOKEN - Will start with a number and may be followed by letters, digits, period, and/or dash.
e. CDATA - Free text that is not parsed internally.
f. ID - Unique identifier that may be referenced by the attribute with NAME value.

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g. IDREF - Used to generate cross-references and to link elements, such as footnote text and foot note reference. The IDREF references the ID value.
h. ENTITY - Used to reference a general entity. The general entity must be declared to identify the data being declared. See 35.3.5.3 on details using the graphic data type.
i. List - List of text values within parentheses usually, separated by "|" (the "or" indicator). Only one value will parse for each attribute instance and only values that are contained in the list are valid.

35.3.4.2 Keyword Attribute Defaults. The following keyword attribute defaults are used by MIL-STD-2361.

a. #REQUIRED - Indicates that the value should be supplied in the instance.
b. #IMPLIED - Indicates that a value is not required to be included in the instance. #IMPLIED should be used when a system is expected to resolve the current attribute value, or when it would be difficult to supply a specific value for each attribute.
   (1) In the MIL-STD-2361 application, an example of the first case is the security attribute "security". When the parent element defines the "security" attribute, the system will imply the value for the attribute to be the same as the parent attribute, unless otherwise defined.
   (2) In the MIL-STD-2361 application, an example of the second case is the attribute list of cross reference (<***xref***>). Since the reference may be to a table (attribute "tableid IDREF #IMPLIED"), or a figure (attribute "figid IDREF #IMPLIED"), but never to both. Therefore, one cannot require any of these attributes be supplied. If the user does not supply an appropriate ID, the cross-reference will not be expressed.
c. #CURRENT - Indicates that the value must be supplied in the instance the first time it is encountered and assumes the specified value for subsequent occurrences (within the same element).
d. #CONREF - Indicates the attribute is a content reference attribute. If there is an entry for an attribute with #CONREF as its keyword default, the associated elements content model is considered to be "EMPTY."
e. Specified default value - When a value is supplied in the keyword attribute default, the system will use the value if no value is entered for the element. In the example below, the attribute "mark" has the default value of "ctr".

```
<!ATTLIST ftnoteref
          ftnoteid   ID           #REQUIRED
          mark       (ctr | mark) "ctr"
          label      CDATA        #IMPLIED>
```

35.3.5 Entities. There are two types of entity declarations: parameter and general.

35.3.5.1 Parameter Entity. Parameter entities are often used as a short cut in the DTD in order to insert common DTD declaration data. Parameter entity declarations will be prefaced by the (MDO) "<!" and the SGML reserved word "ENTITY." The reserved word, ENTITY will be followed by at least one space, then a "%" followed by a space, followed by the entity name. When referenced, typically in a DTD, the entity name is preceded by the percent sign ("%") and followed by a semi-colon (";"). There is no space between the percent sign and the entity name when the entity is referenced.

35.3.5.1.1 Replacement Text Entities. Parameter entities can be used within the DTD to reference often used content such as:

```
<!ENTITY % titldtext "(title, (subtitle?, (%p))+)">
```

Referenced as:

```
<!ELEMENT eqpdesc - o (%titldtext;)+>
```

Resolved as:

```
<!ELEMENT eqpdesc - o ((title, (subtitle?, (para | specpara))+))+>
```

35.3.5.1.2 Nested Entities. Parameter entities may be nested. That is, one entity may occur within another entity declaration. In the example below, the entity %content; references %text; and %list. In essence, %text and%list; have been "nested" within %content. An entity being referenced must have been declared prior to its reference.

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```
<!ENTITY % list "seqlist | randlist | deflist">
<!ENTITY % text "(#PCDATA | cageno | callout | change | ctrlind |
                 ctrlind-val | dwgname | dwgno| emphasis | emphterm |
                 extref | flghtsafe-part | ftnote | ftnref | indxref |
                 lubricant | modelno | name | nsn | null | pageloc |
                 partno | sc | symbol | torque | verbatim |
                 voltage | xref)+">
<!ENTITY % content "(%text; | (%list;) | anchor | email | figure | graphic |
                     note | proponent | table  | telephone)+">
```

35.3.5.1.3 External Files. Parameter entities are also used to declare external files that may be referenced in the DTD. Once referenced, the content of that external file is then considered to be a part of the DTD being defined. External files may contain sets of "boilerplate" text that have been declared as general entities (see 35.3.5.2), sets of graphic entities (see 35.3.5.3), or ISO character sets (see 35.3.5.4). The entity must be declared then referenced in the DTD. In the example below, %boilertxt; references the % boilertext entity which has given a name and location to an external file. The contents of that file "replaces" the entity reference to it. The boilerplate text entity described above contains numerous general entities that have already been defined in the MIL-STD-2361 application. Some DTDs may declare all general entities directly within the document rather than making use of the parameter entity reference. (These entities may be referred to as direct entities).

```
<!ENTITY % boilertext PUBLIC " -//DA-USAPA//ENTITIES MIM BoilerPlate
                              REV 1.0 19970301//EN">
%boilertext;
```

35.3.5.2 General Entity. General entities are frequently used to enter commonly used text into the narrative. Within the DTD, general entity declarations are prefaced by the (MDO) "<!" and the SGML reserved word ENTITY. The reserved word ENTITY will be followed by at least one space and the entity name. The entity name will be followed by at least one space and the text of the entity which is contained within quotation marks (typically double quotation marks are used; however single quotation marks may also be used and must be used if the text itself contains double quotations). When referenced in the document instance, the entity name is prefaced with an ampersand ("&") and followed by a semi-colon (";").

a. The general entity declaration in a DTD:
   `<!ENTITY siname "Driver's Night Vision Viewer">`
b. The general entity used in a document instance:
   `If your &siname; needs improvement, let us know.`
c. The resolved general entity:
   `If your Driver's Night Vision Viewer needs improvement, let us know.`

35.3.5.2.1 Replacement Text Entities. General entities are defined for often used text or "boilerplate" text. For example, the warranty statement below may occur in numerous documents and should appear in the same wording. By defining it as a general entity in the DTD, users may reference the entity (&pmcs.warranty;) in the document instance without retyping and/or retagging the text.

```
<!ENTITY pmcs.warranty "<para> For equipment under manufacturer's warranty,
hardtime oil service intervals will be followed.  Intervals will be
shortened if lubricants are known to be contaminated or if operation is
under adverse conditions (such as longer-than-usual operating hours,
extended idling periods, extreme dust.)<para>">
```

35.3.5.2.2 Nested Entities. General entities may be nested. In the MIL-STD-2361 application, this concept is used to allow for customization for a specific document or document class. MIL-STD-2361 DTDs, provide for use of nested entities to allow local revision of boilerplate text. In the example below, the entity eir.short.name needs to be changed to reflect the equipment short item name.

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```
<!ENTITY eir.short.name "Replace text with equipment short item name">

<!ENTITY eir.state "<para> If your &eir.short.name; needs improvement, let us
know. Send us an EIR.  You, the user, are the only one who can tell us what
you don't like about your equipment.  Let us know why you don't like the
design or performance. Put it on an <extref docno='SF 368'
posttext=' (Product Quality Deficiency Report)'>. Mail it to the address
specified in <extref docno= 'DA PAM 738750' posttext=', Functional users
Manual for the Army Maintenance Management System (TAMMS)'>, or as specified
by the contracting activity.  We will send you a reply.<para>">
```

35.3.5.3 Graphic Entities. Graphic entities will be declared through the use of entity templates for graphics. An external file, containing graphic declarations, will be included in each DTD as in the following example:

```
<!ENTITY % graph PUBLIC "-//'ENTER OWNER'//ENTITIES 'ENTER FORMAL
PUBLIC IDENTIFIER'//EN">
%graph;
```

In the example above, the external file should contain a set of graphic entity declarations needed for a given document instance. The external file contains a template to follow when naming the graphic.

```
<!ENTITY graph PUBLIC "-//'ENTER OWNER'//ENTITIES 'ENTER FORMAL
PUBLIC IDENTIFIER'//EN" NDATA 'ENTER GRAPHIC NOTATION'>
```

35.3.5.3.1 SYSTEM vs. PUBLIC Identifier. A SYSTEM identifier specifies the location of an external file in the particular system on which the document instance was developed. When the document instance is provided to another user, the document instance must be changed to identify the new location for the external files. A PUBLIC identifier specifies a unique name identifying the information. The formal public identifier (FPI) is mapped to the external file location. The mapping information is stored in a catalog (see Figure 167). When the document instance is provided to another user, the catalog is changed, but not the document instance. The preferred method for identifying the external files is PUBLIC.

```
PUBLIC  "-//DA-USAPA//ENTITIES  BFV  Left  Side  19971001//EN"
                    "c:\graphics\bfvleft.cgm">
PUBLIC  "-//DA-USAPA//ENTITIES  BFV  Right  Side  19971001//EN"
                "c:\graphics\revised\bfvright.cgm">
```

Figure 167 Sample SGML Catalog

35.3.5.3.2 Graphic Entity Key Names. Once a graphic entity is declared in a document, it will be referred to by its entity name. In a tagged document instance, the entity name will be used as the value of the graphic attribute "boardno". The key name will point to the Public Identifier of a specific graphic file.

35.3.5.3.3 Exchanging Graphic Files. When tagged documents are required to be exchanged with another (external) site, the graphic files will be converted to one of the following CALS graphic formats; Computer Graphic Metafile (CGM), Consultive Committee for International Telephone and Telegraph (CCITT) Group 4 facsimile (FAX), or Initial Graphics Exchange Specification IGES (IGES). The appropriate graphic notation type will be added to the graphic file entity declarations. "Graph" will represent the key name used in "boardno" and "NDATA" will be used as a reserved word for coding non-SGML data, such as graphic formats, as in the following example:

```
<!ENTITY graph PUBLIC "ENTER FORMAL PUBLIC IDENTIFIER" NDATA cgm
        -- enter "cgm", " "fax," or "iges" here as appropriate -->
```

35.3.5.4 ISO Character Sets. ISO character entities will be used to insert non-keyboard characters, such as the plus/minus sign, in text. A general entity must be declared for the character and the replacement text

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is the appropriate text or coding that allows a given system to process the non-keyboard character. If the “minus-or-plus” sign has been defined as in the example below, ± may be used in the document instance to obtain the minus-or-plus sign when the document is processed.

```
<!ENTITY plusmn SDATA "[plusmn]"--/pm B: =plus-or-minus sign-->
```

In order to use ISO character sets the ISO character set files must be available to your system. ISO character set files are a series of entity declarations which may be referenced with an external entity declaration. SGML parsers can be used to resolve ISO entities to system-specific references to a character. The following ISO character sets are included in the MIL-STD-2361 DTDs, and will be used when requirements call for their use.

```
<!ENTITY % ISOpub PUBLIC "ISO 8879-1986//ENTITIES Publishing //EN">
<!ENTITY % ISOgrk3 PUBLIC "ISO 8879-1986//ENTITIES Greek Symbols //EN">
<!ENTITY % ISOnum PUBLIC "ISO 8879-1986//ENTITIES Numeric and Special
Graphic//EN">
<!ENTITY % ISOtech PUBLIC "ISO 8879-1986//ENTITIES General Technical//EN">
```

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36 INTRODUCTION TO MIL-STD-2361A(AC) SGML MARKUP.

36.1 Scope. This section describes methods to markup SGML documents in accordance with MIL-STD-2361A(AC) SGML constructs. Adhering to the methods defined in this appendix will assisted in applying MIL-STD-2361A(AC) SGML constructs to both legacy and new document development.

36.2 Introduction to MIL-STD-2361A(AC)SGML Markup.

36.2.1 Types of Tags in MIL-STD-2361A(AC). The elements used by MIL-STD-2361 fall into two types of tags: content tags and structural tags. Content tags embody the functional requirements contained in the respective functional requirements standards and specifications, such as MIL-STD-40051A. Content tags have names indicating their data content, such as <***maintsk***>, <***install***>, or <***mac***>. Structural tags, such as <***para***> (paragraphs), are based on the physical structure of the document, and are used to "chunk up" the data within the content tags. MIL-STD-2361A(AC) tags mix content identification and structural uses, such as <***step1***>, <***step2***>, etc.

36.2.1.1 Applying Content Tags. Each of MIL-STD-40051A(AC) content parts is comprised of a similar structure. The top level is an information module tag, such as <***gim***>, <***mim***>, <***opim***>, <***tim***>, <***pim***>, or <***sim***>. These top-level tags contain specialized sets of work package elements that are, in some cases, unique to the respective information modules, while, in other cases, common to one or more information module. For example, maintenance information chapter <***mim***> can contain service upon receipt work packages <***surwp***>, preventive maintenance work packages <***pmcswp***>, maintenance instruction work packages <***maintwp***>, etc. The top level information chapter tag will be used for building even a single work package.

36.2.1.2 Tagging Legacy Data. There is a great deal of legacy data within the Army. Legacy data, for purposes of this standard, will be defined as any data (paper or digital) that has not been SGML-tagged in compliance with the respective functional requirements standard or specification, MIL-STD-2361, and MIL-PRF-28001. To ensure appropriate tagging conventions and methodology are applied, the following procedures are offered as guidance for applying SGML to legacy data. These procedures are oriented toward the TM requirements set forth in MIL-STD-45001, due to the maturity of that standard and its close association with MIL-STD-2361. However, all of the procedures may be applied regardless of the types of data being converted and tagged.

a. Determine the functional type(s) of publication material to be tagged (i.e., TMs, training products, etc.). Publications developed in compliance with traditional requirements documents are produced as complete books (e.g., front, body, and rear matter) in which the publication technical content is not functionally grouped. SGML tagging of legacy data in compliance with this standard can be accomplished only after the publication data has been restructured into functional groupings.
b. Determine the legacy data (e.g., TM, training product, etc.) restructuring requirements for compliance with the respective functional requirements standard or specification and MIL-STD-2361. Virtually no TM legacy data are structured in compliance with functionally grouped requirements standards and specifications, such inMIL-STD-40051.
c. Once the restructuring requirements have been determined, an outline of the restructured document(s) should be developed. The outline will be used as a guide for restructuring the documents in compliance with the functional standard or specification and tagging the restructured document in compliance with the applicable MIL-STD-2361 DTD(s). In the case of TMs, an outline may be developed by selecting applicable MIL-STD-2361 content tags which conform to content requirements, specified in MIL-STD-40051A,pertaining to the type and maintenance level of the legacy manual.
d. The appropriate top-level tag from the DTD (e.g., <***mim***>, <***opim***>, etc.) will be selected and applied to the legacy data. Any #REQUIRED attributes of the top-level tag can then be inserted. In particular, <***tmno***> and <***imlevel***> are necessary to construct page header, page footer, and chapter cover page.
e. Select the appropriate text for the module from your legacy data and determine the type of work package for the legacy material being tagged. Work packages will contain complete "start-to-finish" tasks for a particular component, and they may contain multiple tasks and procedures. Work packages may have starting conditions that require completing a previous work package. Starting conditions that are dependent upon completion of another work package must contain a reference to the requisite

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work package in the Initial Setup under the reference tag <***ref***>. Starting conditions may be referenced in several work packages.

f. Once the work package has been determined, the appropriate work package tag may be applied and any #REQUIRED attributes of that tag inserted. In particular, <***wpno***> is used as source of the work package number.

g. Every work package has its own unique set of content tags. Some work package content is mandatory while other content is optional. First, determine the content-specific tags in the work package. For instance, a maintenance work package <***maintwp***> requires the content specific tags work package identification information <***wpidinfo***>, work package information <***wpinfo***>, and at least one maintenance task <***maintsk***>. In addition, <***maintwp***> may include tags for warnings <***warning***>, cautions <***caution***>, and/or notes <***note***> and general information <***geninfo***>. Apply the tags to the appropriate legacy text data and insert any #REQUIRED attributes of those tags.

h. As the writer continues to fill in the content requirements, checks of the DTD should be made for any content-oriented tags contained in the third-level tags. For instance, work package information <***wpinfo***> can contain eleven optional content tags. As the optional and required content tags are determined and added to the legacy data, the content requirements for the work package are being satisfied. The content tags should be applied to the legacy data to the level of the document requiring content tags.

i. There are some special content tagging considerations that must be addressed when tagging legacy data. The considerations are concerned with General Information with Theory of Operation, Troubleshooting, Maintenance Allocation Chart (MAC), and Repair Parts and Special Tools List (RPSTL).

- General Information with Theory of Operation. When developing the general information with theory of operation portions of a publication chapter, several work packages may require construction, depending on the complexity of the equipment. A work package may contain a whole system theory <***systhry***> followed by subsystem theory <***ssysthry***>, or it may begin immediately with subsystem theory. General information should use an introduction tag <***intro***> rather than a <***systhry***> tag. The <***systhry***> tag will be reserved for theory only. Complex systems may need a separate work package constructed for each subsystem. Such work packages will often include data on line replaceable units <***lruthry***> and shop replaceable units <***sruthry***>.
- Maintenance Allocation Chart (MAC). The maintenance allocation charts are tagged with content tags. The functional group number <***groupno***> is followed by the nomenclature of the component or assembly. All of the maintenance information pertaining to that component or assembly should be contained within the qualify function tag <***qualify***>. The qualify tag is comprised of the maintenance function <***maintfunc***>; the level to which the maintenance function is assigned (<***maintclass***>), which contains specific maintenance level tags; reference to tools and equipment used in the maintenance <***teref***>; and any additional remarks <***remarks***>. The qualify function may contain multiple <***maintfunc***> entries.
- Repair Parts and Special Tool Lists (RPSTL). The DTDs containing RPSTL work packages <***rpstlwp***> do not currently model the list data itself. The list data should be incorporated based on the CCSS database format until revisions are made to MIL-STD-40051A. Efforts are currently underway to provide requirements for content tagging the RPSTL list data. The standard RPSTL introductory material is currently included as a boilerplate text entity.

36.2.1.3 Applying Structural Tags. Structural tags, such as paragraph <***para***>, contain no intelligence about the content of data, but they do flag material for specific treatment by a presentation system. For instance, tagged text can be numbered automatically by a presentation system, but untagged text cannot be automatically numbered. SGML does not recognize carriage returns as processing instructions (e.g., "break line here"), but as marking record boundaries. The presentation system, in general, ignores carriage record boundaries and will not trigger paragraph returns.

36.2.1.3.1 Titles. Many elements contain a title (<***title***> see 33.4.1.5.1) element content. For instance, all work packages will have a title. The title of a work package is found in work package identification information <***wpidinfo***> see 33.4.5. Most title <***title***> elements are mandatory and contain only character data.

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If a title <***title***> is associated with a counter, the FOSI will specify the appropriate automatic numbering. Titles are tagged <***title***> </***title***> for a title.

36.2.1.3.2 Paragraphs (<***para***>). Paragraphs are common structural tags, included in many content-oriented element content models. Paragraphs contain a parameter entity, %content;, which includes character data (#PCDATA) and various SGML tags that may be contained in paragraph text, such as references, footnote references, index references, change notices, and emphasis tags. Paragraphs are the element through which lists, figures, and tables are included in documents developed in accordance with MIL-STD-2361A(AC).

Sub-paragraphs. Titling paragraphs may be preceded by the usual <***title***> element if the content model follows the pattern "(title?, para)+". However, the <***para***> element uses its "parahead" attribute for the title if the DTD does not specify a <***title***> element before every single <***para***>. The information will be bold and inline with the paragraphs.

a. DTD fragment for <***systhry***>:

```
<!ELEMENT systhry - o (title, (specpara | para)+, (ssysthry* |
                          (lruthry*, sruthry*)*))>.
```

b. Sample SGML document fragment for <***systhry***>:

```
<systhry>
<title>Viewer Mount</title>
<para parahead="Bolt Assembly, Vehicle Side"> There are three bolts needed
for the plate next to the vehicle.  By bolting these three bolts
the viewer can be fixed to the vehicle.</para>
<para parahead="Revolving Plate"> The viewer revolves freely due to the
revolving plate that is start of the viewer mount.</para> </systhry>
```

36.2.1.3.3 Procedures (<***proc***>). A procedure is a set of steps that comprise all or part of a task. A procedure may, but does not have to, contain a title. However, if a task, such as "SERVICING", has more than one procedure, the separate procedures will have a title. The distinction between a task name and a procedure title will be maintained and will be explicit. Task names are literals and will be appropriately inserted into the document instance by the FOSI. Procedure titles will be included as content of the <***title***> tag in the document instance.

36.2.1.3.4 Determination of Procedure, Task, or Work Package Designation. There may be publications data where it is difficult to determine if data are procedures, tasks, or work packages. If legacy data contains a long or specific title for a maintenance action, it may be a procedural title. The parameter entity %maintsk; tag may have to be included above the title if not present in legacy data. On the other hand, a long or specific title may signal the beginning of a work package. If tasks like "Removal" or "Installation" are subordinate to the title, it should probably be treated as the title of a maintenance work package. The document instance developer will be required to analyze the legacy data to determine its intent for portraying either procedures, tasks, or work packages.

36.2.1.3.5 Steps. The SGML structural tags for steps will be used when tagging legacy data to show the steps within a procedure. Care will be taken to ensure that the step tags are used correctly. The step tag <***step1***> (see 33.4.1.8.2) refers to primary-level step, not the first step in a procedure. The step tag <***step2***> refers to first-level substep, not to step number 2. Sub-steps are contained in next higher step level. Element <***step1***> does not end until the end of any <***step2***> sub-element contained within the <***step1***> parent element. Steps are automatically numbered by the FOSI. To avoid double presentation of step numbers upon printing, delete the literal step numbers from document instance. The same convention applies to indentation of sub-steps, which are indented by FOSI. To avoid duplication of indentation space, all tabs or spaces will be deleted from the legacy document instance.

Steps usually consist of single paragraphs, although multiple paragraphs are allowed. Good writing practice dictates precise separation into steps rather than merging several actions in one step. If a step has an associated warning, caution, or note, it will be tagged with the <***specpara***> tag. The <***specpara***> tag may replace <***para***> as the first element in a step. An end-tag will be included for <***warning***> and <***specpara***>,

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but are not required for steps or paragraphs. The first step will include the text for the step in a paragraph within the <***specpara***> tag, and the second primary-level step will include a substep. For example:

<***step1***>
<***specpara***>
<***warning***> <***para***> Sodium peroxide can cause caustic burns from prolonged skin contact. </***para***> </***warning***>
<***para***> Mix the sodium peroxide into a paste with the distilled water. </***para***>
</***specpara***> </***step1***>
<***step1***> <***para***> Apply a thick layer of the paste over the corroded plate.
<***step2***> <***para***> Use the toothbrush to ensure paste coverage in the threaded holes. </***para***> </***step2***>
</***step1***>
<***step1***> <***para***> After 15 minutes, wash the plate clean of the sodium peroxide paste with distilled water. </***para***> </***step1***>

36.2.1.3.6 Lists. Lists are usually contained within paragraphs. However, any element with a parameter entity %content; as a content model can contain a list. Warnings, cautions, and notes may also contain lists. The list tag will identify the type of list being tagged. There are three types of SGML lists: random, sequential, and definition lists.

36.2.1.3.6.1 Random Lists. Random lists (<***randlists***> see 33.4.1.2.2) are not numbered. Each item starts a new line of text as is regulated by the FOSI. If the "bullet" attribute is changed to "yes" (by entering <***randlist bullet =”1”***> in the document instance, the items will be bulleted.

36.2.1.3.6.2 Sequential Lists. The numbers on sequential lists <***seqlist***> see 33.4.1.2.1 are provided by the FOSI. Therefore, any numbers appearing on legacy data numbered lists should be removed during the tagging process, otherwise, the items in the lists will have duplicate item numbers. This applies to nested sequence lists also. Nested sequence list numbering is keyed to the nesting level of the list.

36.2.1.3.6.3 Definition Lists. Definition lists <***deflist***> see 33.4.1.2.3) are used to for lists defining words. A definition list may have a title <***title***>. A definition list may then have one or more term <***term***> each of which must be followed by a definition <***def***>.

36.2.1.3.6.4 Numbered Lists. The numbers on numbered lists <***seqlist***> are provided by the FOSI. Therefore, any numbers appearing on legacy data numbered lists should be removed during the tagging process, otherwise, the items in the lists will have duplicate item numbers. This applies to nested sequence lists also. Nested sequence list numbering is keyed to the nesting level of the list.

36.2.1.4 Tables. There are two types of table structures allowed for use with MIL-STD-2361 DTDs: CALS table model <***table***> (see 33.4.2.1), and MIL-STD-40051 defined standard tables, in which columns and rows are inferred from content-specific tags.

36.2.1.4.1 CALS Tables. The CALS table model defined in MIL-PRF-28001. The following conventions apply to CALS tables:

- May have any number and widths of columns.
- May have multi-level heads, stub columns, and spanning cells or rows.
- May be ruled and rules can be controlled locally.
- May contain graphic elements.
- May contain warnings, cautions, notes, and procedures or steps.
- May be varied by the markup in the document.
- May be numbered or unnumbered using "tablenum" attribute.

a. CALS table structure and markup. The CALS table model follows the general model:

TABLE	<***table***>
COLUMN SPECIFICATION	<***colspec***>
SPAN SPECIFICATION	<***spanspec***>
TABLE GROUP	<***tgroup***>
TABLE HEAD	<***thead***>

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TABLE FOOT <***tfoot***>

TABLE BODY <***tbody***>

The head, body, and foot each contain:

ROWS <***row***>

CELL ENTRY <***entry***>

ENTRY TABLES <***entrytbl***>

b. Column specifications <***colspec***>. Colspec are used to define the column characteristics of a <***table***>. Column specifications can be specified separately for head, body and foot (the <***colspec***> of <***tgroup***> control the column specs for the body). The following colspec, used in MIL-STD-2361, is identical to the one used in MIL-PRF-28001.

```
<!ELEMENT colspec - o EMPTY >
        <!ATTLIST colspec
                    colnum    NUMBER                  #IMPLIED
                    colname   NMTOKEN                 #IMPLIED
                    align     (left | right | center
                               |justify | char)      #IMPLIED
                    charoff   NUTOKEN                 #IMPLIED
                    char      CDATA                   #IMPLIED
                    colwidth  CDATA                   #IMPLIED
                    colsep    %yesorno;               #IMPLIED
                    rowsep    %yesorno;               #IMPLIED>
```

c. Spanning specification <***spanspec***>. The spanning specification is used to define the spanned column characteristics of a <***table***>. The following spanspec is used in MIL-STD-2361 and is identical to the one used in MIL-PRF-28001. "Namest" and "nameend" refer to column names set up in <***colspec***>.

```
<!ELEMENT spanspec - o EMPTY>
        <!ATTLIST   spanspec
                    namest     NMTOKEN       #REQUIRED
                    nameend    NMTOKEN       #REQUIRED
                    spanname   NMTOKEN       #REQUIRED
                    align      (left | right |
                                center | justify|
                                char)        "center"
                    charoff    NUTOKEN      #IMPLIED
                    char       CDATA        #IMPLIED
                    colsep     %yesorno;    #IMPLIED
                    rowsep     %yesorno;    #IMPLIED>
```

d. Table columns and spans. Columns are assigned both a number and a name in <***colspec***>. The column names are referenced in a <***spanspec***> in "namest" and "nameend" to specify start and end of a spanning column. Horizontal spans can be given a name so that they can be referenced in the tagged document instance as an attribute of <***entry***> (the cell). Spanned rows are controlled in <***entry***> by the attribute "morerows" and the column is referenced by name in <***entry***>.

e. Alignment in troubleshooting tables. To indicate how material is aligned within the troubleshooting table, the second column contains, in effect, the third column. For instance, a ruled row in a <***known***> table consists of a <***malfunc***> (which appears in the first column) and one or more <***testing***> tags. The <***testing***> tag includes the contents of both the second and third columns. It contains a <***proc***> (in second column) and an <***action***> (in third column) to be taken in response to the procedure. Each <***proc***> and <***action***> are aligned. If a second <***testing***> tag follows, it starts a new line in the second column, separated by a line space from the material above. When another <***malfunc***> tag occurs, it is separated by a rule from the <***malfunc***> group above.

36.2.1.4.2 Figures. Few systems can handle composite figures in which multiple graphic files are positioned within a single figure area using the attributes of <***graphic***>. Keep figure tagging simple. Single-page figures should contain only a <***graphic***> tag, not <***subfig***> or <***macrograph***>. Each illustration should be a single graphic file unless made up of full-page sheets. If a figure contains several sheets, use one <***figure***> tag

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and a <***subfig***> for each sheet. Figures can be numbered or unnumbered using attribute "fignum". If your legacy data uses unnumbered figures, add 'fignum="0"' to the <***figure***> tag.

Suggestion is to perform graphic file sizing and cropping in a graphics editor. Using this suggestion will eliminate guess work and the sizing is performed in an application made specifically for the task.

36.2.1.4.3 Graphics. The <***graphic***> tag is used to refer to the graphic file entity and supply its size, clipping, scaling, placement, etc. The following graphic specification is used in MIL-STD-2361 and is similar to MIL-STD-28001.

```
<!ELEMENT graphic - o EMPTY >
        <!ATTLIST graphic
                  boardno    ENTITY                  #REQUIRED
                  graphsty   NMTOKEN                 #IMPLIED
                  llcordra   NUTOKEN                 #IMPLIED
                  rucordra   NUTOKEN                 #IMPLIED
                  size      (eighth | quarter |
                             half | full)            #IMPLIED
                  shape      (vertical | horizontal) #IMPLIED
                  hscale     NUTOKEN                 #IMPLIED
                  vscale     NUTOKEN                 #IMPLIED
                  scalefit   %yesorno;               #IMPLIED
                  hplace     (left| right |
                             center | none)          #IMPLIED
                  vplace     (top | bottom |
                             middle | non)          #IMPLIED
                  coordst    NUTOKEN                 #IMPLIED
                  coordend   NUTOKEN                 #IMPLIED
                  rotation   NUMBER                  #IMPLIED
                  %refs;
                  %secur;>
```

36.2.1.4.4 Alphabetic Index. The <***aindx***> Alphabetic index. The index marker reference <***indxref***> tag establishes a document location and index text to be referenced within the alphabetic index. Composition systems vary how they generate the data that is reference by the <***indxref***> tags. A composition system may be able to generate the index entry <***indexentry***> to include the topic <***topic***>, page number <***pageno***> and work package number <***wpno***> while another system needs an addition process to generate this information or the data be inserted manually. Automatic systems that need additional support to generate the work package number would use a process script such as PERL The PERL script process would review the SGML instance and search for the <***indxref***> tag. When a <***indxref***> tag is found an "unique" id will be added to the tag and the attributes "ref1-4" of the <***indxref***> tag would be collected and stored in an array. When all the SGML instances have been processed the PERL scripts then would create an SGML instance of an Index. The array is then sorted, (alphabetical order) and each cell of the array will become an entry in the SGML index instance. The SGML index instance is imported into composition system with other SGML instances and processed along with the TM creating an Index. The Index entries are cross-referenced to their Work Packages. The Index would display up to a four level depth entry with its page number and work package number.

Three authoring methods are provided for generating index reference and index by the use of the index reference <***indxref***> tag. Methods (1) and (2) require an application to generate necessary ID and IDREF automatically. Method (3) is manually input by the author. Using any of the methods will provide the necessary information for any composition system to publish an index and furnish a mechanism to hyperlink between the index and the index reference.

Method 1 – Index reference defines the index level titles.
Method 2 – Reference the index level title generated in the index.
Method 3 – Index reference ID and index entries point to the index reference identifier.

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Method 1 has the author to specify for each index reference entry the specify index level title(s). This method is the same as described in MIL-M-28001B to generate an index. MIL-STD-2361 provides a better tool for the soldier to find the indexed material, when the information is used electronically. To improve the index authoring methodology an application is required. The application will perform the following tasks: Read the document instance to obtain the index level topic and subtopics. Assign an automatic generated ID to the index reference (”). Sort the index level topics and subtopics. Generate the index using the SGML elements with the associated generated index reference IDs. The application is necessary for the composition system to generate alphabetically sorted index, the page number, and the work package number for the index reference. The author’s responsibility is to enter the index level topics for each SGML element. The index reference IDs, IDREFs and index entries will be generated after completing the index reference SGML elements. The application will be applied to the document instance to prepare the document for publication.

Method 2 has the author create the index entries and associate a unique identifier to each index level entry. The writer authors the document instance and applies the SGML element for index reference with attribute IDREF pointing to the index entry ID location. The method provides a consistent list of possible entries and will reduce spelling errors. The disadvantage is recalling or looking up the associated index entry ID. Again as Method 1, an application is required to provide a better tool for the soldier to find the indexed material. The application will perform the following tasks: Read the document instance to obtain the index entry reference identifier. Assign an automatic generated ID to the index reference. Assign to the associated index entry the index reference generated ID. The application is necessary for the composition system to generate the page number, the work package number for the index reference. The author’s responsibility is to enter the sorted index entries with associated unique identifiers and enter the SGML element index reference with associated attribute index entry IDREF. The application will be applied to the document instance to prepare the document for publication.

Method 3 does not require a separate application applied to the document instance. The author will manually perform the following tasks to permit index generation. Generate the sorted index entries. Create the index reference with a unique identifier. Associate the index reference index to the index entry. Generate new index entries, when required. An application is not required to be applied to the document instance and the author will make the association when creating the index reference entry. However, the author must have a valid list of available IDs and the same index entry document instance needs to be shared or merged with other authors. The author’s responsibility is to enter the sorted index entries, enter the index reference with an unique identifier for each SGML element, and associate the ID to the index entry IDREF.

```
<!ELEMENT aindx - o (alphaindx?, indexentry)*>
<!ATTLIST aindx
            %refs;
            %secur;>
```

36.2.1.4.5 Warnings, Cautions, and Notes. Warnings, Cautions, and Notes may be added by two methods: within the <***specpara***> element, or explicitly by including the tags <***warning***>, <***caution***>, and /or <***note***> in the document instance. The method chosen for use will be controlled by content model of an element. If a warning or caution applies to specific step or procedure, it must be contained in that element. This can be accomplished through <***specpara***>. The <***specpara***> element is usually invoked in grouping, i.e., (specpara | para). The <***specpara***> element includes a <***para***> element after an optional and repeating warning, caution, and or note. This <***para***> is mandatory in a <***specpara***>. In steps, this <***para***> is the first paragraph normally contained in the step. Another <***note***> may follow this <***para***>.

36.2.1.4.6 Assigning Attribute Values. Almost every element has associated attributes. There are three global parameter entity sets of attributes that attach to most elements: %refs;, %bodyatts;, and %secur;. These global attributes define, respectively: IDs and ID references; text characteristics like change level or nuclear hardness critical processes; and security level. None of these attributes are required.

a. Local attributes. Many elements have additional attributes, some of which are required. For instance, “tmno” is required on the top module element and "id" is required on the footnote.

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b. Cross-reference attributes. To cross-reference an element, insert an ID attribute for the element. Then refer to that ID at the cross-reference point with an <***xref***> or an attribute of the IDREF tag. Insert the ID as a value of the appropriate IDREF attribute. ID values must be unique strings, beginning with an alpha character, after which the IDs can contain both letters and numbers. To help keep ID strings unique, use the beginning alpha character to keep the IDs of work packages, tables, tasks, procedures, figures, index entries, and footnotes separate. These seven elements are the only IDs that must be resolved. The FOSI specifies resolution of the IDREFs. You can use entire words or abbreviations as IDs and they are not required to contain numbers.

c. Cross reference <***xref***> (see 33.4.1.3.6). The cross-reference tag <***xref***> uses an IDREF attribute to automatically link to the ID attribute of other elements. The attribute "assocfig" (part of the %ref; attribute set) also has an IDREF value type and it is used to link text and graphics, not for cross-references. The external reference tag <***extref***> (see 33.4.1.3.3) is used to reference other TMs or documents outside the document instance, and the reference is inserted as a literal string in the attribute "docno."

(1) Internal reference:

```
<!ELEMENT xref - o EMPTY >
<!ATTLIST xref
            taskid        IDREF          #IMPLIED
            wpid          IDREF          #IMPLIED
            stepstart     IDREF          #IMPLIED
            stepend       IDREF          #IMPLIED
            figid         IDREF          #IMPLIED
            itemno        CDATA          #IMPLIED
            itemid        IDREF          #IMPLIED
            callout       CDATA          #IMPLIED
            tableid       IDREF          #IMPLIED
            tslocid       IDREF          #IMPLIED
            pagelocid     IDREF          #IMPLIED
            pretext       CDATA          #IMPLIED
            posttext      CDATA          #IMPLIED
            %secur;>
```

(2) External reference :

```
<!ELEMENT extref - o EMPTY >
        <!ATTLIST extref
                    docno     CDATA     #IMPLIED
                    revno     NUMBER    #IMPLIED
                    pretext   CDATA     #IMPLIED
                    posttext  CDATA     #IMPLIED
                    wpid      CDATA     #IMPLIED
                    taskid    CDATA     #IMPLIED
                    figid     CDATA     #IMPLIED
                    tableid   CDATA     #IMPLIED
                    partid    CDATA     #IMPLIED
                    %secur;>
```

d. Cross-reference resolution.

- Text. Text references will be to either a task or a titled procedure within a work package. The resolved value for a task will be its name; for a procedure it will be the title. The attribute "taskid" supplies the IDREF to the ID of a task or titled procedure. Only procedures with titles will be referenced. If a procedure does not have a title, the task containing the procedure will be referenced. The work package number will always be invoked through "wpid", if the reference location is in another work package in same information module.
- Work packages. The <***xref***> attribute "wpid" will always be used for cross reference resolution for work packages. The "wpid" value for text, tables, and figures located in another work package in the same information module will always be supplied. When referencing complete

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start-to-finish contents of another work package, only the "wpid" attribute will be used. Each work package tag will have an "id" attribute. The "wpno" attribute is not its ID. The same value will not be used for "wpno" attribute and work package "id" attribute.

- Figures and tables. Only numbered figures and tables will be referenced. The FOSI will extract the figure id ("figid") or table number ("tableid"). and use as appropriate. The cross-reference value will not include the title.
- Steps. The word “step” and the step number will be generated by the composition system when ONLY step start reference (“stepstart”) is used. When reference a sequence of steps the composition system generates the word “steps” with the first step number (using “stepstart” attribute reference) followed by an “–” and the ending step number (using “stepend attribute reference).

e. Empty tags. Empty elements contain no character data or other elements. Empty tags mark things like cross-references and index entries that will be created by the composition system. Empty tags also mark insertions of external files in non-SGML notations, such as graphic files. “Empty tags” contain the information your composition system needs to resolve reference values in a series of attributes.

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37 FOSI APPLICATION AS A STYLE GUIDE .

37.1 Scope. This section contains information on the application of FOSIs as style guides.

37.2 Using Formatting Output Specification Instances (FOSI). This section describes methods for interchanging formatting requirements for technical documents whose source files are tagged according to DTDs developed in accordance with MIL-STD-2361. A DTD interprets the content and structural requirements contained in a functional specification, and the FOSI interprets the style and formatting requirements specified in the DTD.

37.2.1 Style. Adherence to rules described in MIL-STD-2361 allows for different receiving processing systems to unambiguously interpret the style and formatting intent of the sending system. By combining the document instance, content-tagged in accordance with the appropriate MIL-STD-2361 DTDs, with the FOSI, the resulting publication will preserve the information content of the original and allow similar presentation. The FOSI's values for the style characteristics are passed to, or used by, the program that performs layout and final composition.

37.2.2 The Output Specification (OS). The Output Specification (OS) uses SGML to define style characteristics and provide methods of linking style to elements in an SGML document instance. In fact, the OS is itself a DTD. A FOSI containing specific values for the characteristics which identify the format of a document type is itself an instance of the OS DTD. In this sense, any particular FOSI is just one member of the family of possible instances for the OS DTD.

37.3 FOSIs in the ASRL. FOSIs available in the ASRL are designed to function with DTDs developed in accordance with MIL-STD-2361. The FOSIs are fully compliant with, and adhere to the rules described in, ISO 8879 and MIL-STD-28001B Amendment 1. The Army-approved FOSIs contained in the ASRL will facilitate the reuse of DoD SGML DTDs. The overall goal is to allow for the interchange of style and formatting information between all types of publishing systems. This includes current batch and WYSIWYG systems, as well as future systems incorporating newer technology. This is accomplished by the interchange of style information using the semantics described, to be used as input to the formatting system, whether human or computer.

37.4 Using the FOSI. A FOSI is developed to present the formatting information of a specific document, or class of documents, based on the MIL-STD-2361 DTD with which the document instance was marked up. The FOSI is written to the Output Specification Document Type Definition (OS DTD). The OS DTD was designed to present a methodology for interchanging formatting information in a standard way. It contains many of the same features of a style sheet and is designed to be read by both humans and machines. However, for a person to read through a FOSI, some knowledge of the Standard Generalized Markup Language (SGML) would be beneficial as well as knowledge of the OS DTD. The process of using a FOSI to produce a document is as follows.

a. A document would be marked using the SGML tagging scheme provided by the DTD written for that document type.
b. A FOSI would be prepared designating the formatting information for the document type. The FOSI provides all the necessary formatting information. Within the FOSI, this information is associated with the elements and/or attributes of the DTD written for that document. For example, the FOSI might specify that a chapter title is to be centered, bold, sanserif, in 10 on 12 type. The document being tagged using SGML tags would simply have the SGML tags:

```
chapter><title>THIS IS THE TITLE<title>....<chapter>
```

The user does not have to alter the FOSI or provide formatting information in any manner, other than to mark up a document using the elements and attributes provided in the DTD. It should be understood, however that the FOSI has itself been written to a DTD. This is why the formatting information can be interchanged in a standard way. If formatting information needs to be changed for a given document (for example, chapter titles will now be quad left), the FOSI will have to be changed to reflect this, and parsed to make certain it is following the OS DTD. An organizational policy and procedure for such changes should be developed, implemented, and adhered to. The user should not be allowed to make arbitrary changes to the FOSI.

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VOLUME 5
ARMY SGML REGISTRY AND LIBRARY (ASRL)

38 ARMY SGML REGISTRY AND LIBRARY (ASRL).

38.1 Introduction. This Volume 5 provides MIL-HDBK-2361 users with guidance and instruction about the ASRL, operated and maintained by USAPA. Volume 5 is comprised of the following four major subject areas:

a. ASRL Description.
b. ASRL Concept of Operation.
c. ASRL Operations.
d. Submittal Package Format Procedures.

38.2 ASRL description. The U.S. Army Standard Generalized Markup Language (SGML) Registry and Library (ASRL) contains Army-approved SGML objects and constructs, such as Document Type Definitions (DTD), Formatting Output Specification Instances (FOSI), and SGML Tag description lists authorized for use in the preparation of Army Publications. DTDs, FOSIs, and SGML Tags officially registered with the ASRL are authorized in developing Department of the Army (DA) publications, including administrative, doctrinal and training, technical, and equipment publications, and Electronic and Interactive Electronic Technical Manuals (ETM/IETM). The ASRL is responsible for interfacing with the Defense Information Systems Agency (DISA) Center for Standards (CFS) for all matters dealing with development and application of SGML within the Army. The ASRL is the Army operational site for the Department of Defense (DoD) Continuous Acquisition Life-cycle Support (CALS) SGML Registry (CSR) and CALS SGML Library (CSL). Throughout this section DTDs, FOSIs, and tag description lists are referred to as SGML objects and constructs.

38.2.1 ASRL capabilities. The ASRL may be used by publications developers to provide capabilities for the standardization and reuse of Army SGML objects and constructs. In this regard, the ASRL will provide for the establishment and support of the following:

a. Infrastructures (administrative and communicative) that provide easy access to standard SGML objects and constructs.
b. Processes to encourage use of standard objects and constructs by Army and defense contractor publications developers.
c. Processes to encourage timely submission of requirements not covered by existing SGML objects and constructs by Army and defense contractor publications developers.
d. Procedures for evaluation of requirements to determine whether or not they can be satisfied by approved SGML objects and constructs and, if required, development of new objects and constructs.

38.2.2 Standardization and reuse. The two primary ASRL methods for SGML standardization and reuse are direct reuse of existing, Army-approved SGML objects and constructs; and development of new objects and constructs by USAPA to satisfy requirements not covered by existing SGML objects and constructs.

38.2.2.1 Direct reuse. Direct reuse refers to the development of an SGML document instance (which represents some class of Army publication under development) based upon Army-approved SGML objects and constructs acquired from the ASRL. The publication developer will obtain the appropriate objects and constructs from the ASRL and use them to create the required SGML document instance.

38.2.2.2 New SGML object and construct development. This refers to the development of new SGML objects and constructs for requirements not covered by existing objects and constructs. A Government or contractor publications developer may identify a requirement(s) that supposedly is not covered by objects and constructs already included in the ASRL Library. The developer may submit a request, with full justification and rationale, to the ASRL Registry for evaluation of the requirement(s). Detailed submission procedures are contained in 38.5. Review of the ASRL Registry will determine if existing SGML objects and constructs can satisfy the requirement, or have features in common with the requirement that can be reused. If the requirement evaluation determines that new SGML objects and constructs are justified, they will be developed and tested by USAPA and included in the ASRL Library for Army-wide use.

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38.3 ASRL Concept of Operations. This section describes the purpose, background, and overall concept of operations involving the ASRL and its related environment.

38.3.1 Purpose of the ASRL. The ASRL will contain all SGML Document Type Definitions (DTD), Formatting Output Specification Instances (FOSI), and associated SGML tags authorized for use in the preparation of Army Publications. All DTDs, FOSIs, and SGML Tags must be officially registered with the ASRL prior to their use for developing any Department of the Army (DA) publication, including administrative, doctrinal and training, technical and equipment publications, and (ETM/IETM).

38.3.2 Background. The ASRL is a part of the Army strategy to achieve the digitalization and integration of technical and business data. Employing SGML facilitates the digital exchange and integration of textual data. A component of an SGML application is the DTD. The DTD defines the rules that apply SGML to the markup of a particular type of document, such as a technical or training manual. The development of a DTD is time consuming, but once developed, it can be reused whenever another instance of that document type is generated. Reuse saves DTD development time and document instance markup time by using previously established markup rules. The ASRL was established to facilitate the reuse of Army SGML DTDs.

38.3.3 ASRL organization. Functional capabilities for the standardization and reuse of SGML objects and constructs are provided by the ASRL. The Army proponent for the ASRL is the USAPA DPD Program. The ASRL is comprised of the Registry and Library. Figure 168 illustrates the organizational structure of the ASRL.

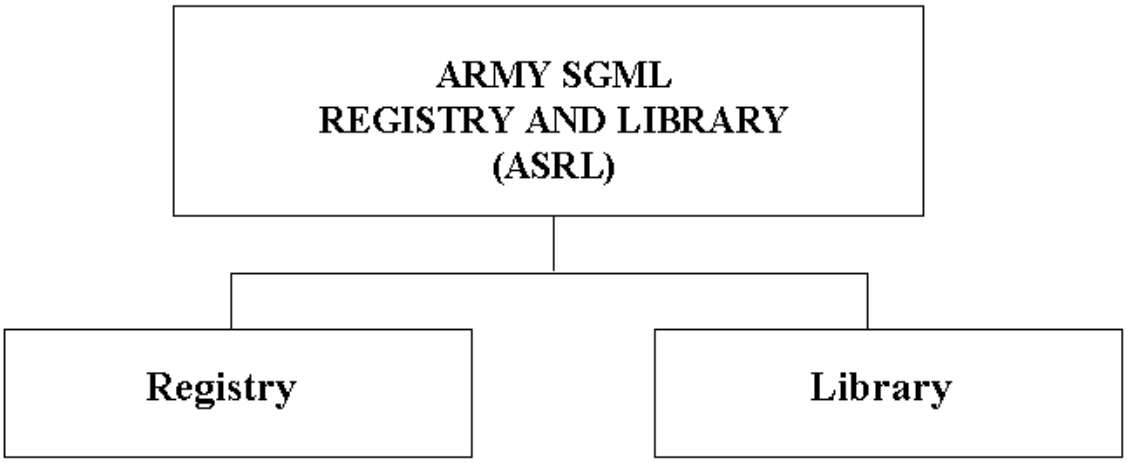

Figure 168 ASRL Organizational Structure

38.3.4 ASRL Services. The Library will provide the publications developers with a set of services that will enhance the SGML publication development process. The services provided by the ASRL Library include:

a. Library services to ensure user access and utility, such as automated sign-in/check-out; virtual navigation aids; browse, search, and find utilities; and configuration control of the SGML objects and constructs.
b. SGML analysis capability to support ASRL user needs.
c. Administrative assistance to provide help and technical support to ASRL users needs.
d. Registry services to evaluate new SGML requirements.

38.3.5 ASRL Assets. ASRL assets will include, but are not limited to:

a. SGML objects and constructs.
b. Army requirements and guidance documents, such as this handbook.
c. General SGML reference documents or pointers.
d. ISO 8879 compliant parser list.
e. Government Furnished Information (GFI), such as style sheets and instance processors.
f. Parser and SGML system tips, examples, and lessons learned.
g. Information regarding frequently asked questions about SGML, using the ASRL, etc.

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h. Point-of-Contact (POC) listings.
i. ASRL access data, such as user statistics and library usage statistics.
j. SGML-based Freeware.

38.3.6 Procedures for submitting existing SGML objects and constructs. The ASRL registration process includes coordination with the DISA operated CALS SGML Registry (CSR) and CALS SGML Library (CSL) to ensure that Army SGML objects and constructs are not redundant, or otherwise duplicative of those approved for use throughout the DoD. There will be an established period during which existing Army SGML objects and constructs may be submitted to the ASRL Registry as candidates for incorporation into the ASRL Library. Such existing objects and constructs may be incorporated into the library under ”grandfather” approval. Approval will be contingent upon compliance with the appropriate requirements standards and is at the sole discretion of USAPA. Information and guidance regarding “grandfathering” SGML objects and constructs will be established and distributed by USAPA. This section of the handbook will be in effect only as long as the “grandfathering” period is in effect. This section will be deleted in future revisions. The following procedures will be followed for submission of existing SGML objects and constructs to the ASRL Registry as candidates for evaluation and acceptance into the ASRL.

a. Existing SGML objects and constructs (i.e., DTDs, FOSIs and associated tag descriptions) will be submitted to the ASRL for registration using the format and procedures described in 38.5 of this handbook.
b. Each submitted SGML object and construct will be reviewed by USAPA to assess its compliance with guidance in this handbook, MIL-STD-2361A(AC), Digital Publication Development MIL-PRF-28001, Standard Generalized Markup Language, and other specifications or standards, as required.
c. SGML objects and constructs found to be not in compliance with applicable requirements standards and specifications will be returned to the submitting organization for revision.
d. SGML tags complying with applicable requirements standards and specifications will be compared with other tags in the Library. Where more than one tag exists for the same information, or where joint review is required, USAPA will coordinate with submitting organizations to establish a common tag.
e. SGML objects and constructs successfully completing the ASRL registration process will be incorporated into the library and become available for Army-wide use by publications developers.

38.3.7 Procedures for submitting new SGML object and construct requirements. The ASRL Registry provides a capability for evaluating new SGML requirements to determine whether or not they are covered by Army-approved SGML objects and constructs. This capability is used only after a publications developer has identified a set of specific structure and content requirements that are not addressed, or only partially addressed, by approved SGML objects and constructs.

a. The publications developer will submit the requirements, along with complete justification and rationale, to the ASRL Registry for evaluation. Detailed procedures and submission package format are described in paragraph 38.5 .
b. The ASRL Registry will review the requirements package for completeness. Incomplete or incorrect submission packages will be coordinated with the submitting organization.
c. The requirements will be evaluated by USAPA to determine whether or not there are Army-approved SGML objects and constructs that satisfy the submitted requirements.
d. When Army-approved SGML objects and constructs are identified that satisfy the submitted requirements the objects and constructs will be provided to a submitting organization. These SGML objects and constructs will be used for development or acquisition of Army publications.
e. Document structure and content requirements, or portions thereof, that cannot be satisfied using existing SGML objects and constructs will be identified by the ASRL Registry evaluation process. USAPA will develop new SGML objects and constructs for the requirements which cannot be satisfied by existing Army-approved objects and constructs.
f. The ASRL Registry evaluation and coordination process consists of technical and functional reviews by the ASRL Registry Administrator, and coordination through the ASRL Registry Registrar. This process identifies technical and functional issues associated with the new objects and constructs. This review process should take no longer than 30 days, depending on the size and complexity of the new SGML

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objects and constructs. New SGML objects and constructs are registered and approved for use only after all technical and functional issues have been resolved.

g. Upon notification of approval by the ASRL Registry, the publications developer will use the Army-approved SGML objects and constructs for the development or acquisition of Army publications. Once SGML objects and constructs have been validated and approved by the ASRL, they are made available for access and Army-wide use through the ASRL Library.

38.4 ASRL Operations.

38.4.1 ASRL Repository Operations. The ASRL holdings, services, technical assistance, and utilities may be accessed in several different ways in order to accommodate all ASRL users, regardless of the type of equipment available to them. The primary means of access for users will be through the World Wide Web (WWW) (refer to paragraph 38.4.3 for additional information). All of the current means of access to the ASRL are provided in the table below. Additional assistance may be obtained through the ASRL/USAPA home page. All users must apply for a user account at the ASRL/USAPA home page, by contacting the ASRL Help line or mail to the address listed below. Once users have applied for an account, the holdings of the Army SGML Registry and Library (ASRL) are available for free downloading from the Files directory on the ASRL/USAPA World Wide Web Site (http://www.asrl.com).

Table 38–1. ASRL Access

Access	Number/Address	Comments
WWW	http://www.asrl.com	ASRL direct.
U.S. Mail	Director, USAPA Attn: JDHQSV-PAP-E 2461 Eisenhower Avenue Alexandria, VA 22331	May request 3.5″ DOS formatted diskettes or .25" UNIX tar formatted tape.
Telephone	Commercial: (703) 428-0508/0504	USAPA telephone numbers.
	DSN: 328-0508/0504	
Electronic mail	asrl@monmouth.com	ASRL E-Mail address.
Facsimile (FAX)	(732) 578–9136	ASRL FAX number.
Support/Help Line	(800) 880-3773	ASRL help line. Toll-free. Available Monday-Friday, 8:00am - 5:00pm EST (except holidays).

38.4.2 Assistance and Problem Reporting. For DTD submission assistance (be prepared to state the problem or nature of assistance required), direct problem reporting (be prepared to provide a description of the problem), and customer help and technical assistance contact the ASRL administrator through any of the ASRL-designated means of access in table 6–1.

38.4.3 Access via the Internet (WWW). The homepage for the ASRL is accessed through the Uniform Resource Locator (URL) http://www.asrl.com. The ASRL Home Page provides for a sign-up capability as well as entry to the ASRL Library. By following the links and pointers on the ASRL Home Page (see Figure 169), developers will be able to view, search, find, and download SGML constructs and objects via the Internet WWW. Developers may also perform searches on key phrases. Application for a library card may be obtained on-line on the ASRL Home Page (see Figure 170). A library card is required for downloading SGML constructs from the library (see Figure 171).

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Welcome to the U.S. Army Publishing Agency (USAPA) Standard Generalized Markup Language (SGML) Registry ar (ASRL). The ASRL is part of the Digital Publications Development (DPD) Program, and is the Army operational site for CALS SGML Registry (CSR) and CALS SGML Library (CSL). The ASRL is the central SGML data repository and sin source for Army-approved SGML objects and constructs for publications developers. USAPA is the approving authority f Army standard SGML objects and constructs.

Army publications online!
FAQs - Frequently asked questions about this site.

Provide comments and feedback to the ASRL staff, by email or calling (800) 880-3773.

DoD Security Notice
Last ASRL update: 27 May 1997

The ASRL is operated for USAPA by Computer Sciences Corporation (CSC) under Contract No. DCA100-96-D-0051.

Figure 169 ASRL Home Page

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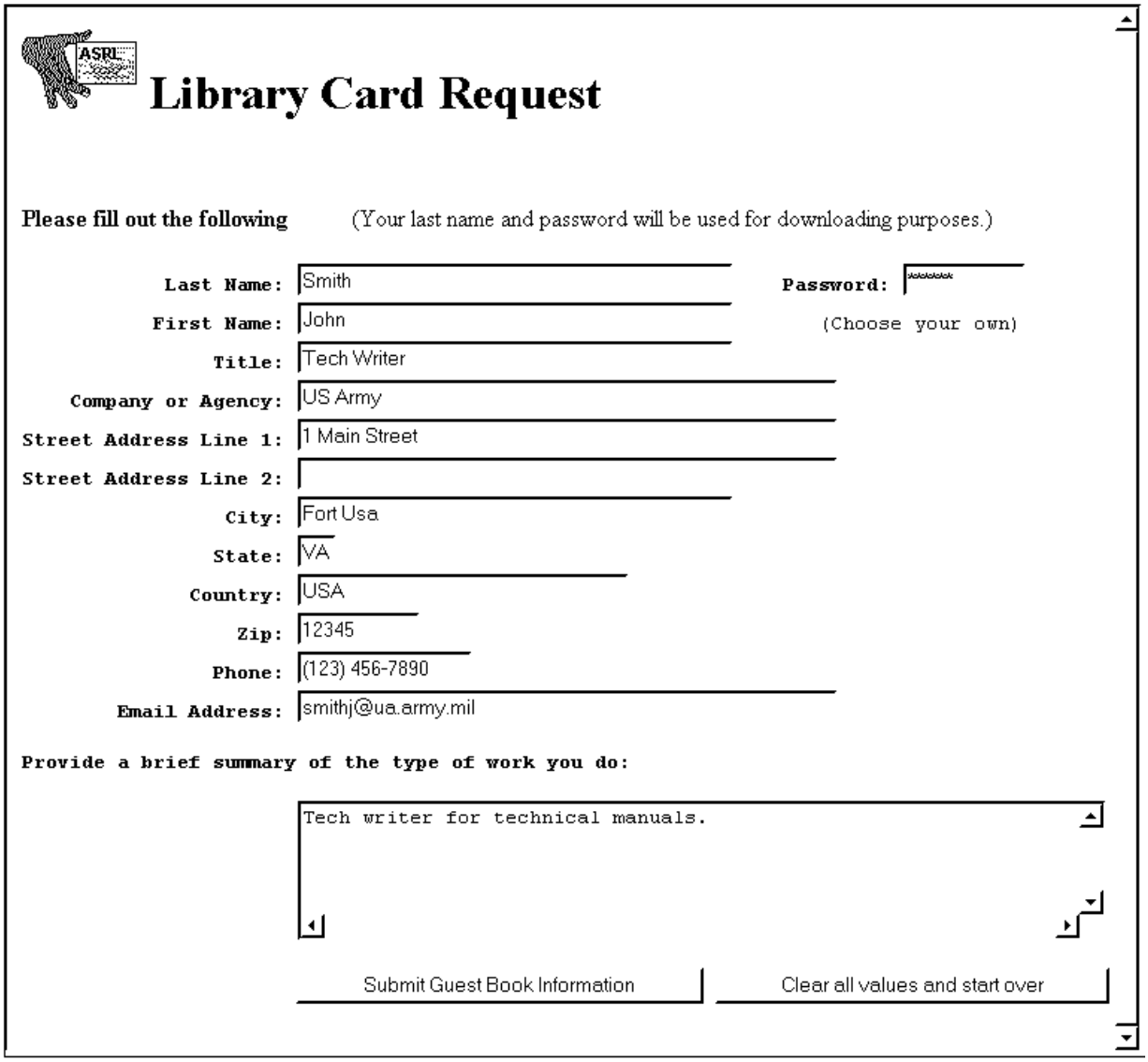

Figure 170 ASRL Library Card Request

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CONSTRUCTS

SGML Constructs

SGML constructs consist of document type definitions (DTD), formatting output specification instance (FOSI) and SGML tag definitions. You can obtain all MIL-STD-2361 constructs from this page.

Technical Manual (TM) Publications

TM DTD Abstract
TM Tag Description List [PDF file size: 1.1MB]
Download DTD (includes abstract and tag list)

TM FOSIs - not yet available.

Training and Doctrine Publications

NOTE: Training and Doctrine Publications are not available for downloading until operational testing is complete. The following items will be available after testing.

Army Training and Evaluation Program (ARTEP)
- Drill Books DTD and FOSI
- Mission Training Plans (MTP) DTD and FOSI

Soldier's Training Products (STP)
- Soldier's Manuals (SM) DTD and FOSI
- Military Qualification Standards (MQS) DTD and FOSI
- Trainer's Guides (TG) DTD and FOSI

System Training Plan (STRAP) DTD and FOSI

Field Manual (FM) DTD and FOSI

Administrative Publications

Download Army Regulation (AR) DTD
FOSI - Being finalized

Download Joint Army Regulation (JAR) DTD
FOSI - Being finalized

Download Army Circular (CIR) DTD
FOSI - Being finalized

Download Army Pamphlet (PAM) DTD
FOSI - Being finalized

GUIDANCE REFERENCE REGISTRY ASSISTANCE ASRL HOME

Figure 171 SGML Constructs

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38.5 Submittal Package Format Procedures. This section describes the procedures for submitting DTD candidates for evaluation and approval to the ASRL. SGML DTD candidates should be submitted to USAPA at the ASRL. USAPA will review the candidates, and if there appears to be a conflict with functional requirements, USAPA will coordinate with the functional requirement proponent.

38.5.1 Submission package. Each submission package should be comprised of the following five parts.

a. Administrative information about the DTD, such as title, release date, alternate name, up to five keywords, etc.
b. DTD abstract containing a description of the purpose and content of the DTD.
c. The DTD.
d. A certification, signed by the submitting activity, that the DTD conforms to MIL-STD-2361(AC) and MIL-PRF-28001.
e. Parse logs from at least three parsers.

38.5.2 Submission package contents. Physical submission requirements vary depending upon the delivery option selected. The following paragraphs describe each part of the submission package.

38.5.2.1 DTD Information. Table 38–2 describes the data elements which comprise the DTD Information part of the submission package.

Table 38–2. DTD Information

ELEMENT NAME	DESCRIPTION	EXAMPLE
name	This is the DTD title. It is not to exceed 79 characters. It is all capital letters as per asset process requirements.	DTD for MIL-T-38804B Supplement DTD.
title	DTD Subject Matter. Not to exceed 79 characters. This format is in normal writing standard	-
version	Use "-" if no version info. (This is a place holder for future capability.)	
release_date	The date the DTD was released for submission (DD_MMM_YY)	09 Jan 94
alternate_name	This is the DTD's public identifier. Describes DTDs owner, title, and language written in. Not to exceed 79 characters.	-//USA-DOD//DTD MIL-T-38804B SUPP//EN
asset_size	The size of the DTD in kbytes.	15 kbytes.
keyword	Text string within the asset title or asset itself that allows the user to narrow the search for specific topics. Up to five keywords can be used. Each text string can contain up to 45 characters.	Technical Manuals MIL-T-38804B DTD TCTO AGE
support available	Y or N	Y
producer	Personnel email address	jdoe@army.mil

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DTD information will be submitted in ASCII Format using the format template below. Each data entry must immediately follow the "=>" character in the template.

38.5.2.2 DTD abstract. Each DTD submitted must have an abstract. An abstract is a registry term for a user-provided narrative entry describing the DTD. The abstract should provide an overview of the DTD's purpose, its public identifier (PI), and other information identifying the DTD.

begin asset
name ⇒
title ⇒
version ⇒
release_date ⇒
alternate_name ⇒
asset_size ⇒
keyword ⇒
keyword ⇒
keyword ⇒
keyword ⇒
keyword ⇒
support_available ⇒
producer ⇒
end asset

a. Abstract Contents. Table 38–3 defines the data to be included in an abstract. The abstract contains free form text, so there is no specified size provided for the different data.

Table 38–3. Abstract Contents

DATA	DESCRIPTION	EXAMPLE
Asset Name	The asset name is the first line of the abstract.	Abstract for MIL-T-38804B Supplement DTD
Entity Name, Entity Text	The entity name and entity text of the entity DTD.	% m38804bsup PUBLIC "-//USA-DOD//DTD MIL-T-38804B SUPP//EN"
Description	The actual title (if applicable) and overview of the document corresponding to the asset name.	Preparation of Military Specification Time Compliance Technical Orders ----------
Legal restrictions pertaining to the asset/service	This contains the distribution restrictions for the document and is placed at the end of the abstract.	Distribution Statement A: Approved for public release; distribution is approved for public release with unlimited distribution.

b. Sample Abstract. Figure 172, displays a sample abstract.

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Abstract for MIL-T-38804B Supplement DTD

% m38804bsup PUBLIC "-//USA-DOD//DTD MIL-T-38804B SUPP//EN".

The DTD describes the SGML structure and content tagging conventions for MIL-T-38804B.

The following paragraph(s) describe the requirements for this manual.

This specification identifies the preparation requirements for Time Compliance Technical Orders (TCTO) manuals. TCTOs covered by this specification are used in accomplishing and providing a record of any one-time inspection, and replacement or installation of components, retrofit change or alteration to the design or construction of any aeronautical, non-aeronautical, Communication-Electronic (CE), air launched or surface launched missile, space vehicle systems or ground vehicles, their related equipment, sites, facilities, support systems and associated Aerospace Ground Equipment (AGE).

TCTOs may be used to announce each computer program change affecting weapon systems, automatic test equipment, simulator and on-board command and control systems utilizing digital computer systems.

Distribution Statement A. Approved for public release; distribution is approved for public release with unlimited distribution.

Figure 172 Sample Abstract

38.5.2.3 Sample DTD. The DTD for which registration is being requested must be included in the submission package. The following is a sample DTD.

```
<!--************** START OF FILE ******************-->
<!-- SUPPLEMENT NOTICE:  This file is made available to provide the user with
  a digital representation of the DTD found in Appendix B of MIL-T-38804B.
  This file is incomplete without MIL-T-38804B.-->
<!-- NOTE: The start and end of this file are marked with a row of asterisks.
   If these rows are not present the file may not be complete!-->
<!-- MIL-T-38804B Supplement DTD -->
<!-- The following set of declarations may be referred to by using a public
entity as follows:
<!ENTITY % m38804bsup PUBLIC "-//USA-DoD//DTD MIL-T-38804B SUPP//EN" >
%m38804bsup;-->
<!-- NOTE:  In order to parse the following DTD subset alone, append the
   following statement to the beginning of the file:
<!DOCTYPE docsupp {and the associated"}>" to the end of the file.-->
<!--ENTITY DECLARATION-->
%m38804b;
<!--****************** END OF FILE ************************-->
```

38.5.2.4 DTD certification. The submission package must contain a statement of certification, signed by the responsible authority from the submitting activity, that the candidate DTD meets all the submission criteria and is in compliance with MIL-STD-2361(AC) and MIL-PRF-28001. The certification should identify the cognizant DoD organization certifying compliance. Figure 173 is an example of a DTD Certification.

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DTD CERTIFICATION MEMORANDUM

TO:

FROM:

DATE:

The following Document Type Definition (DTD) is certified as in complete conformance with Army SGML Registry and Library (ASRL) submission criteria and MIL-PRF-28001, Markup Requirements and Generic Style Specification for Electronic Printed Output and Exchange of Text. DTD Title: In addition, the above DTD does not duplicate an existing DTD, nor contain elements, attributes, and attributes sets that have not been approved by the ASRL USAPA Registrar.

_____ Organization Certifying Authority

Figure 173 Sample DTD Certification

38.5.2.5 Parse logs. The submission package must contain parse logs (e.g., records of parsing) from at least three different ISO 8879–compliant parsers. It is recommended that one of the parsers be the SGMLS parser. SGMLS is public domain software and can be obtained through the ASRL at Uniform Resource Locator (URL): http://www.asrl.com. Figure 174 is an example of the first page of a parse report. If a parser does not produce a report, the submitter will provide the following information.

* Title of the parser
* Date parsed
* Name of person who executed the parser
* Any other pertinent information associated with this parsing (e.g., errors, warnings).

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```
                    Datalogics  Parser  Log

                SGML  Document  Type  Definition  Parser
                        Version  3.36
            Copyright  (c)  Datalogics  1988,1989,  1990,  1991
        SGML  System  Conforming  to  International  Standard  ISO  8879
                Standard  Generalized  Markup  Language

Log  file:'804bb.LOG'

SDO  File:'ctndecl.sdo'  Namecase  General  is  yes.  Namecase  Entity  is  no.

Parsing  DTD  file:  '804bb.dtd'

Parsing DOCTYPE DOCSUPP DTDO144:  Attempt  to  declare  Parameter  Entity  Name
                                  'supp'  more  than  once  denied.  In  declaration-
```

Figure 174 Sample Parse Log

38.5.3 Delivery options. Submission packages may be submitted on 3.5″ DOS formatted diskettes or via an Electronic Mail message to the ASRL Administrator. Each option is described below.

38.5.3.1 Diskette delivery. Submissions on disk require that the five parts be contained in five separate MS DOS ASCII files on a 3.5″ MS DOS formatted diskette. DTDs submitted by disk will share a common file name (where possible) for the first eight characters. Each part will have file name extensions as listed in Table 38–4.

Table 38–4. File Name Extensions

SUBMISSION PART	FILE NAME EXTENSION	EXAMPLE
DTD Information	.OTL	D0804BB0.OTL
DTD Abstract	.ABS	D0804BB0.ABS
DTD	.DTD	D0804BB0.DTD
Certification	.CRT	D0804BB0.CRT
Parse Log	.LOG	D0804BB0.LOG

Disk delivery will be made to the ASRL Administrator at the address below:

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Director, USAPA
ATTN: JDHQSV-PAP-E
Hoffman Building 1
2461 Eisenhower Avenue
Alexandria, VA 22331

38.5.3.2 Electronic Mail. Submissions via E-Mail should be directed to the ASRL at asrl@monmouth.com. The submission must contain all five parts in one message. Each part will be delimited on a dedicated line as described in Table 38–5.

Table 38–5. Part Delimiters

SUBMISSION PART	PART DELIMITER
DTD Information	=====PART1
DTD Abstract	=====PART2
DTD	=====PART3
Certification	=====PART4
Parse Log	=====PART5

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<SERTITLE> 76
<SERVICE> 76
<SIGNER> 77
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<STREET3> 80
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