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MIL-HDBK-2361B(AC)
15 October 2004

SUPERSEDING
MIL-HDBK-2361A(AC)
30 August 2002

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

4. The use of Courier font changes in this handbook represent SGML/XML document instance fragments (i.e. `<!ELEMENT callout EMPTY>).`

5. Address any beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Director, Army Publishing Directorate (APD), ATTN: JDSO-PAT-S Hoffman Building 1, 2461 Eisenhower Avenue, Alexandria, VA 22331–0302, by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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VOLUME 1
INTRODUCTION TO MIL-HDBK-2361B

1 SCOPE.

1.1 Introduction. MIL-STD-2361, Department of Defense Interface Standard, Army Digital Publications established the Standard Generalized Markup Language (SGML) and Extensible Markup Language (XML) requirements for use in Army digital publications. The military standard was developed as part of the Digital Publications Development DPD program Army Publishing Directorate (APD) effort 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-HDBK-2361, *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/XML . Detailed guidance is provided in the respective appendices. The appendices include an SGML/XML Tutorial and Reference Material, applications for the respective publication types, stylesheets and an 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 Why SGML to XML. Administrative Publications and Technical Manuals changed from SGML to XML. XML is a subset of SGML. XML keeps enough of SGML's functionality to make it useful but removes all the optional features which makes SGML more complex to program for in a Web environment. The following items list the primary reasons why MIL-STD-2361 went from SGML to XML.

a. XML makes it easy and straightforward to use SGML on the Web.
b. XML enforces better rules to create a clear, simple syntax and unambiguous structure that allows XML easy to read and parse.
c. XML supports a wide variety of applications.
d. XML cost to create a document is less then SGML because of the various applications it supports incomparison to the few SGML complex applications.
e. XML well form document allows data to be chuncked into smaller bits of information and distributed. Examples of chuncked data.
   (1) A TM can be divided into stand alone work packages.
   (2) Tasks can be chuncked out of work packages.
   (3) Procedures can be chuncked out of tasks.

1.1.2 Scope. This handbook provides implementation guidance for the development of Army publications in Standard Generalized Markup Language (SGML) and Extensible Markup Language (XML) 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/XML Registry and Library (ASRL) (see Section 39) and other SGML/XML 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.

1.1.3 Purpose. The purpose of the handbook is to facilitate the work of publications developers and users responsible for creating or using SGML/XML 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.

1.1.4 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

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publications digital data and document development required for compliance with MIL-STD-2361 . This handbook will provide knowledge and information about SGML/XML and its application, tutorials in the various ways it may be used, helpful hints and guidance regarding specific SGML/XML idiosyncrasies, uniqueness and other user assistance type features.

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 Document Automation & Production Services (DAPS) Standardization Document Order Desk ,

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700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.) **(Telephone) 215-697-6257 (URL) http://www.dodssp.daps.mil**

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

AR 25-30 - The Army Integrated 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 Document Automation & Production Services (DAPS) Standardization Document Order Desk , Bldg 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5904.) **(Telephone) 215-697-6257 (URL) http://www.dodssp.daps.mil**
(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 - Training Development Management, Processes, and Products 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.

WORLD WIDE WEB CONSORTIUM

REC-xml-19980210 - Extensible Markup Language (XML) Version 1.0.
REC-xml-names 19990114 - Namespaces in XML.
REC-xslt 19991116 - XML Stylesheet Language Transformations (XSL-T) Version 1.0.
REC-xpath-1999116 - XML Path Language (XPath) Version 1.0.
REC-xsl-20011015 - XML Stylesheet Language (XSL) Version1.0.

(Copies should be obtained from Uniform Resource Locator (URL) address http://www.w3.org/TR/.)

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.)

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2.3.1 Information documents for XML. 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 XML Handbook (4th Edition), By Charles M. Goldfarb, and Paul Prescod, Prentice Hall PTR, .
b. The XML Companion, By Neil Bradley, Addison Wesley Professional
c. Learning XML, 2nd Edition By Erik T. Ray, O'Reilly
d. XML–FO, by Dave Pawson, O'Reilly
e. XSL Companion (2nd Edition), By Neil Bradley, Addison-Wesley Pub Co;

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.

3 DEFINITIONS.

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

3.1 Acronyms.

AAL	Additional Authorization List
APD	Army Publishing Directorate
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/XML 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
CDRL	Contract Data Requirements List
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

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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
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
FM	Field Manual
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
LOGSA	Logistics Support Activity

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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
NMWR	National Maintenance Work Requirement
NSN	National Stock Number
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

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STP	Soldier's Training Publication
STRAP	System Training Plan
TAMMS	The Army Maintenance Management System
TC	Training Circulars
TM	Technical Manual
TMDE	Test Measurement & Diagnostic Equipment
TOE	Table of Organization and Equipment
TRADOC	U.S. Army Training and Doctrine Command
U/I	Unit of Issue
UOC	Usable on Code
URL	Uniform Resource Locator
VB	Visual Basic
VBA	Visual Basic for Applications
WP	Work Package
WWW	World Wide Web
WYSIWYG	What You See Is What You Get
XML	Extensible Markup Language
XSL	XML Stylesheet Language
XSL-FO	Extensible Stylesheet Language for Formatting Objects
XSLT	Extensible Stylesheet Language Transformations

3.2 Terms.

Abstract	A narrative which describes, defines, or synopsizes a Digital Publications Development SGML/XML asset.
Attribute	A member of an attribute definition list within an attribute list declaration. It declares an attribute name, specifies the form and SGML/XML -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/XML -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.

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Contract Data Requirements List	The Contract Data Requirements List (CDRL) defines the data that is to be delivered to the Government by the contractor. This data may be in hard copy, electronic, electronic mailable, or any other form specified. The specific form of delivery needs to be specified either in the SOW and/or in each individual CDRL item.
Constructs	Document type definitions (DTDs), formatting output specification instances (FOSIs), and SGML/XML tag narrative definitions.
Data-oriented	The SGML/XML document instance used for data referencing, i.e. database. The SGML/XML 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/XML declaration defines which characters are used in a document instance, which syntax the DTD is written in, and which SGML/XML features are used. It should accompany each SGML/XML 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/XML 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/XML document. The document instance of an SGML/XML document must always be preceded by a document type declaration.
Document Type Definition (DTD)	A DTD, or Document Type Definition, is an SGML/XML construct used to rigorously and unambiguously describe the structure and content of classes of documents in terms of SGML/XML 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/XML 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/XML data.

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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. XML defines a group of data objects called XML documents and partially describes the behavior of computer programs which process them.
Electronic Technical Manual-Interface (ETM-I).	ETM-I is a prototype software interface, through which the user can electronically transfer parts request information and work order data between the ETM platform and the Unit Level Logistics System (ULLS) and the Standard Army Maintenance System (SAMS). The interface will reduce extensive data entry and eliminate transposition errors that could lead to faulty requisitions and excess parts.
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 a SGML/XML 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.
Interactive Electronic Technical Manual (IETM)	Interactive Electronic Technical Manual (IETM). A technical manual prepared in digital form and designed for interactive display to the maintenance technicians or system operator end users by means of a computer controlled Electronic Display System (EDS).
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) and Extensible Markup Language (XML) completely specifies the SGML/XML Meta-language with regard to the grammar and syntax required for the SGML/XML language along with the features that may be optionally enabled for a given SGML/XML application. In addition, ISO 8879 also specifies various procedures for processing SGML/XML notation.
Legacy data	Legacy data, for purposes of this standard, shall be is defined as any data (paper or digital) that has not been SGML/XML -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.
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/XML -tagged technical publications. The OS has a mechanism for binding the style characteristics to SGML/XML elements and attributes in a document's DTD. The OS is in the form of an SGML/XML 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).

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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 A SGML/XML parser is a computer application that breaks down an SGML/XML -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/XML 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/XML Constructs SGML/XML constructs are DTDs, FOSIs, and their fragments.

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

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

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

SGML Parser A SGML parser is a computer program or a specialized code compiler called a "parser". A SGML parser first processes (or "parses") a 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.

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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.
Table of Organization and Equipment (TOE)	The Table of Organization and Equipment (TOE) is a document that prescribes the wartime mission, capabilities, organizational structure, and mission essential personnel and equipment requirements for military units. It portrays the doctrinal modernization path (MODPATH) of a unit over time from the least modernized configuration (base TOE) to the most modernized (objective TOE).
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, CCITT, 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.
XML Path Language (XPATH)	XPath is a language for addressing parts of an XML document, designed to be used by XSL-T.
XML Stylesheet Language for Formatting Objects (XSL-FO)	Extensible Stylesheet Language for Formatting Objects is a pagination markup language describing a rendering vocabulary capturing the semantics of formatting information for paginated presentation. The paginated presentation may be displaying multiple separated pages on a screen, on paper or audibly.
XML Stylesheet Language Transformations (XSL-T)	Extensible Stylesheet Language Transformations is a templating markup language used to express how a processor creates a transformed result from an instance of XML information. Else the XML transformation is a process that rearranges parts of a document into a new form.
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 six 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 - Interactive Electronic Technical Manual (IETM) Technical Data Requirements To Support The Global Combat Support System-Army (GCSS-A)
- Volume 5 - Technical and Equipment Publications.
- Volume 6 - Army SGML/XML 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.

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-40051 and MIL-STD-2361. 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/XML requirements and procedures for applying SGML/XML 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.

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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 as shown in Figure 1 below. Figure 1 reflects this interrelationship. The figure 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.

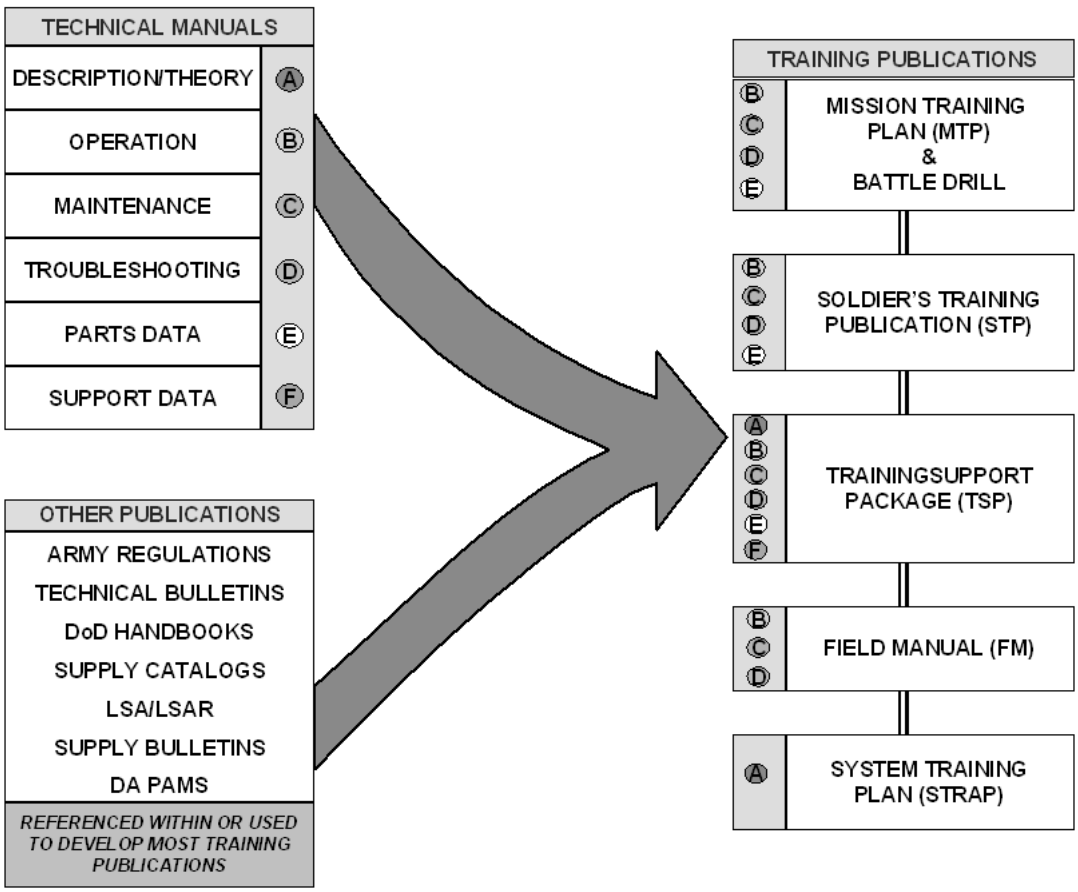

Figure 1 Interrelationships of Army publications data.

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.

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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 (s) 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/XML 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 crosswalk matrix, such as the one depicted in Figure 3, should be prepared and included as a sample in the SOW. This crosswalk shows the relationship between MIL-STD-40051, MIL-HDBK-2361, and MIL-STD-2361 Document Type Definitions (DTDs). The crosswalk also provides a direct relationship between functional requirements and the associated SGML/XML implementations.

Table A.6 Page-Based TM Requirements Matrix for _____

TM Content	DMWR DMWR with RPSTL	NMWR NMWR with RPSTL	MIL-STD-40051 Reference	Element Name
FRONT MATTER	R	R	5.3.1	<paper.frnt>
Front cover	R	R	5.3.1.1	<frntcover>
Warning summary			5.3.1.2	<warnsum>
Change transmittal page			5.3.1.3	<chgsheet>
List of effective pages / work packages	R	R	5.3.1.4	<loepwp>
Title block page	R	R	5.3.1.5	<titleblk>
Table of contents	R	R	5.3.1.6	<contents>
CHAPTER 1. GENERAL INFORMATION, EQUIPMENT DESCRIPTION AND THEORY OF OPERATION	R	R	1-5.1	<gim>
GENERAL INFORMATION WORK PACKAGE	R	R	1-5.2	<ginfowp>
Scope	R	R	1-5.2.1	<scope>
Maintenance forms, records, and reports	R	R	1-5.2.3	<mfrr>
Reporting equipment improvement recommendations (EIR)	R	R	1-5.2.4	<eir>
Corrosion prevention and control (CPC)	R	R	1-5.2.6	<cpcdata>
Ozone depleting substances (ODS)			1-5.2.7	<odsdata>
Destruction of Army materiel to prevent enemy use	R	R	1-5.2.8	<destructmat>
Preparation for storage or shipment	R	R	1-5.2.9	<pssref>
Warranty information			1-5.2.10	<wrntyref>
Nomenclature cross-reference list			1-5.2.11	<nomenreflist>
List of abbreviations/acronyms	R	R	1-5.2.12	<loa>
Quality assurance (QA)			1-5.2.13	<qainfo>

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/NMWR.

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TM Content	-13, -13&P	MIL-STD-40051B Reference Paragraph	MIL-HDBK-2361B Reference Paragraph	Element Name
Production		5.3	27.2	<product>
PAPER MANUAL	R	5.3.1.	27.2.1.1	<paper.manual>
Paper Front .	R	5.3.1	27.2.1.1	<paper.frnt>
Front cover	R	5.3.1.1	27.2.1.1.1	<frntcover>
Warning Summary		5.3.1.2	27.2.1.1.2	<warnsum>
Change transmittal page		5.3.1.3	27.2.1.1.3	<chgsheet>
List of effective pages/work packages	R	5.3.1.4	27.2.1.1.4	<loepwp>
Title block page	R	5.3.1.5	27.2.1.1.5	<titleblk>
Table of contents	R	5.3.1.6	27.2.1.1.6	<contents>
How to use this manual	R	5.3.1.7	27.2.1.1.7	<howtouse>
GENERAL INFORMATION, EQUIPMENT DESCRIPTION AND THEORY OF OPERATION	R	1–5.1	28.3	<gim>
GENERAL INFORMATION WORK PACKAGE	R	1–5.2	28.3.3	<ginfowp>
Maintenance forms, records, and reports	R	1–5.2.3	28.3.3.1	<mfrr>
Reporting equipment improvement recommendation (EIR)	R	1–5.2.4	28.3.3.2	<eir>
Hand receipt (HR) information		1–5.2.5	28.3.3.3	<handreceipt>
Corrosion prevention and control (CPC)	R	1–5.2.6	28.3.3.4	<cpcdata>
Ozone depleting substances (ODS)		1–5.2.7	28.3.3.5	<odsdata>
Destruction of Army materiel to prevent enemy use	R	1–5.2.8	28.3.3.6	<destructmat>
Preparation for storage or shipment	R	1–5.2.9	28.3.3.7	<pssref>
Warranty information		1–5.2.10	28.3.3.8	<wmtyref>
Nomenclature cross-reference list		1– 5.2.11	28.3.3.9	<nomenreflist>
List of abbreviations/acronyms	R	1–5.2.12	28.3.3.10	<loa>
Quality of material	R	1–5.2.14	28.3.3.12	<qual.mat.info>
Safety, care, and handling	R	1– 5.2.15	28.3.3.13	<sfyinfo>
Nuclear hardness		1–5.2.16	28.3.3.14	<hcp>

Figure 3 Example of a crosswalk between a page-based TM –13 and –13P, MIL-STD-40051 and MIL-HDBK-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.

6 SGML/XML REFERENCE MATERIAL.

6.1 How to keep up with SGML/XML . There are several ways to find out more about SGML/XML and to keep up to date with any SGML/XML developments, and new products. The following paragraphs describe some of the channels that users of the ASRL (see paragraph 39) can use.

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

6.3 International Digital Enterprise Alliance (IDEAlliance) The GCA . IDEAlliance (International Digital Enterprise Alliance) formerly The Graphic Communications Association (GCA), is a non-for-profit membership organization. Its mission is to advance user-driven, cross-industry solutions for all publishing and content-related processes by developing standards, fostering business alliances, and identifying best practices. IDEAlliance has been a leader in information technology since 1966 (founded as Graphic Communications Association). For more information contact IDEAlliance The GCA , 100 Daingerfield Road Alexandria, VA 22314-2888, or at (703) 837-1070.

6.4 Books and magazines. For book references see the information documents (see paragraph 2.3.1) section of this handbook. The SGML Newsletter, TAG ***Architag*** is published monthly by the SGML Associates, Inc. and the Graphic Communications Association. Architag International Corporation. The magazine is a reliable source of information on SGML/XML ideas, tips literature, products and conferences. Subscriptions may be obtained from the: SGML Associates, Inc., The SGML Newsletter, 6360 S Gibraltar Circle, Aurora, CO 80016-1212. <TAG> URL **www.architag.com** or the mailing address Architag International Corporation, 9678 E. Arapahoe Road #252, Englewood CO 80112 .

6.5 Servers. Information about SGML/XML 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/XML and a starting point is the SGML/XML Consortia and Users' Group at **http://xml.coverpages.org/groups.html**.

7 NOTES.

7.1 Intended use. U. S. Army publications prepared in Standard Generalized Markup Language (SGML) /Extensible Markup Language (XML) 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.

Administrative Publications
Administrative Publication Proponent/Editor Interface Process (APPIP)
Army Publishing Directorate (APD)
Army SGML/XML Registry and Library (ASRL)
Army Training Information Architecture (ATIA)
Digital Publications Development (DPD)
Document Type Definition (DTD)
Electronic Delivery
Equipment Publications

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Extensible Markup Language (XML)
Formal Public Identifier (FPI)
Formatting Output Specification Instance (FOSI)
Information Reuse
Maintenance Instructions
Operator Instructions
Publishing, Electronic
SGML/XML objects and constructs
Standard Generalized Markup Language (SGML)
Stylesheets
Supporting Information
Training and Doctrine Publications
Theory of Operation
Troubleshooting Instructions
Work Package

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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 XML is applied to the process. Volume 2 is structured with two parts, as shown in "Layout, Format and Content", below. Part I contains general administrative publication development guidance and workflow for both proponent authors and APD editors. Part II contains detailed guidance for the application of XML to administrative publications and related training information. There are workflow charts and other graphic illustrations to amplify the narrative discussions.

8.2 APPIP in XML. The use of XML supports the capability to produce either a page document or a frame document using only one source. The XML source with the use of specific stylesheets can produce a page document or a frame document. The use of XML provides more functionalities with APPIP to produce a more user friendly publication. XML supports funtions such as:

- Hyperlinking items in the change summary to the narrative text in the document.
- Hyperlinking the index to the narrative text in the document.
- Hyperlinking to external documents.
- Roll over function, through the use of a mouse, would display the definition of the word when the user rolls over the word.
- Publication viewing the default web browser.

8.3 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 XML. 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.

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

Part II – Reference

13 Administrative Publication XML Tag Description List – The Tag Description List for Administrative Publication XML 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 APD editor. The following paragraphs are a narrative description of the administrative publication development process and flow.

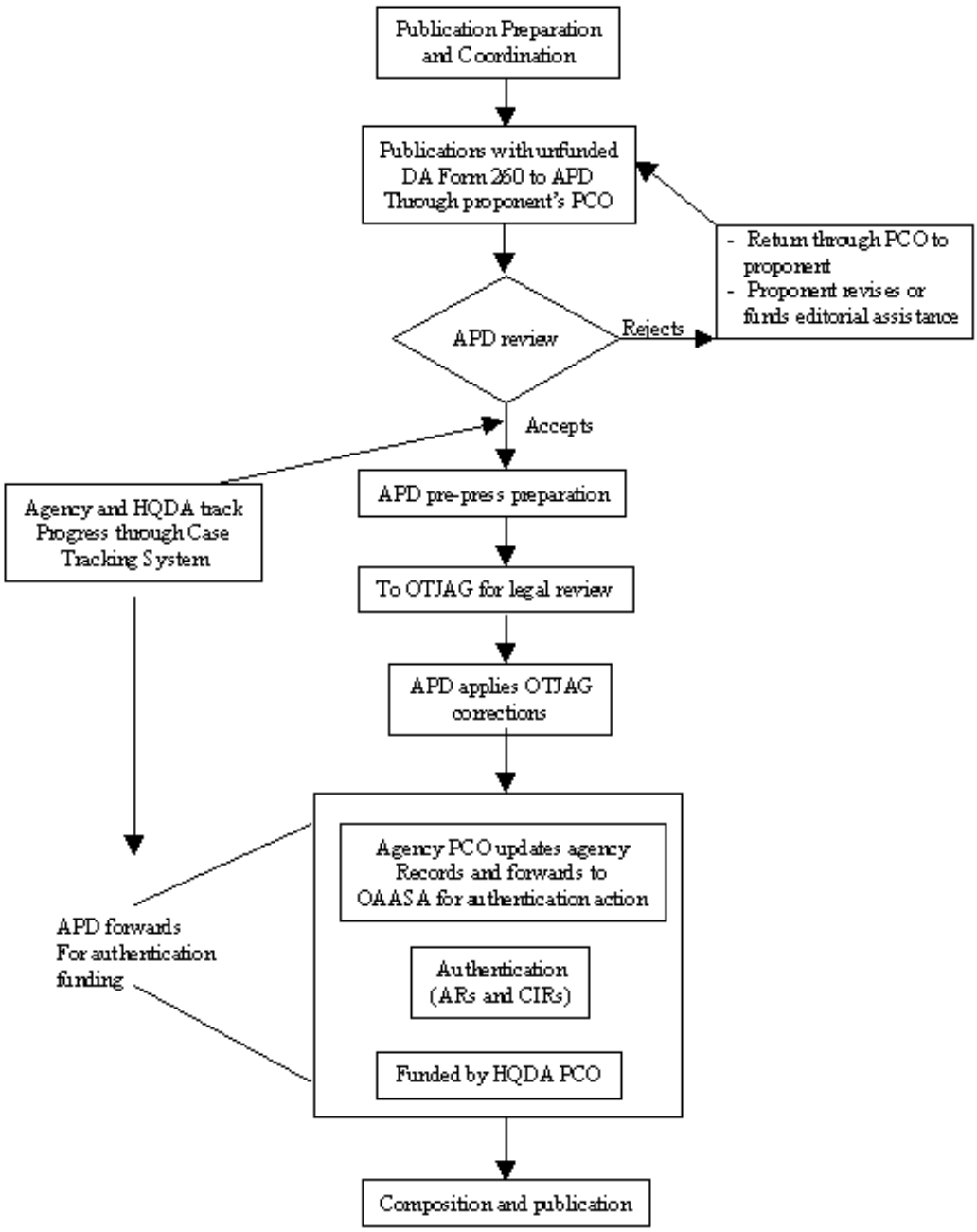

Figure 4 Typical administrative publication development cycle.

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9.1.1 Proponent author role in administrative publication development. The proponent author uses the APD-developed Administrative Publications Proponent/Editor Interface Process (APPIP) to develop administrative publications. APPIP allows administrative publication proponent developers to author 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 APD. 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. 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 Program and DA PAM 25–40, Administrative Publications: Action Officers Guide.

9.1.2 APD role in administrative publication development. APD has the responsibility to review and publish administrative publications for the Army. As part of this responsibility, APD editors will apply XML to the administrative publications. A detailed APD editor workflow is described in paragraph 12.

9.1.2.1 Review of proponent submitted document. The first step, in the APD administrative publication development, is to review the document submitted by the proponent. APD 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, APD will assign the document to an editor for XML document development.

9.1.2.2 APD review and pre-press preparation. Once the proponent author completes the creation or modification of the document, it will be forwarded to the APD editors for review, as described in DA PAM 25–40. The review will verify that the publication conforms to DA PAM 25–40 Chapter 1, 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 APD 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 APD editors).

9.1.2.4 Authentication. APD forwards the corrected and legally approved document through the Publication Control Officer (PCO) of the proponent agencies 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 APD for final composition and publication.

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 APD 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

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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/XML knowledge or experience. By using this tool, the proponents may create documents in a standardized fashion, thus allowing the editors at APD to easily review and apply SGML tags to these documents. The following paragraphs describe the APPIP Proponent Version components available.

10.2.1 APPIP editor version. The APPIP Proponent Version editor provides the proponent and APD 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 APD 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 10.2.1.4.2) 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 10.2.1.4.3) of the following body section paragraph outline.
e. **Appendix A – Working With Text Styles** – This appendix contains information regarding the applying the Microsoft Word styles and occurrence each style is permit.
f. **Appendix B – Special Characters, Symbols and Fractions** – This appendix contains the list of special characters, which are available to use.
g. **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.
h. **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.
i. **Appendix F - APD Receiving and Sending APPIP Files** –
    - APD Sending ZIP Files
    - APD Sending Self-Extracting Files
    - APD Receiving APPIP Documents
j. **Glossary**
k. **Index of Figures**
l. **Index of Tables**

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10.2.1.3 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.
    - APPIP Proponent Templates Installation
    - How to Install APPIP from A Disk or CD
    - How to Install APPIP from Microsoft Outlook
    - How to Install APPIP from Lotus Notes
    - Initial APPIP Start-Up
    - Utilities Button
c. **Start Using APPIP** – provides instruction on the following processes:
    - Working with APPIP Document Segments
    - Accessing Administrative Publications Segments
    - Deleting a Document Segment
    - Editing a Document Segment
    - Print Preview an Administrative Publication
    - Create a New Publication Folder
    - Renaming an "X" Administrative Publication Folder
    - Create a New Document Segment
    - Create New Front Segment
    - Create New Body Segment
    - Legacy Documents
    - General Information About Appendixes
    - Create New Appendix A Segment
    - Create New Appendix B – Z Segment
    - General Information about Glossaries
    - Create Index Segment
    - Microsoft Word Styles
d. **Style Toolbar** – describes the toolbar menus and formatting options .
    - Symbols and Fractions
    - Inclusions
    - Inclusion Insertion
    - Address Inclusion
    - Excerpt Inclusion
    - Note Inclusion
    - List Item Inclusion
    - Proofing Format For Review
    - Formatting and Emphasis
    - Character Emphasis
    - Bullets and Numbering Outline
    - Table and Border Formatting
    - Highlighted Text
    - The Validation Process
    - Error Marker and Error Message Display
    - Validate Document Segments
    - Removing the Error Markers
    - Sample Error Correction
e. **Appendix A – Working With Text Styles** – This appendix contains information regarding the applying the Microsoft Word styles and occurrence each style is permit.
f. **Appendix B – Special Characters, Symbols and Fractions** – This appendix contains the list of special characters, which are available to use.

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h. **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.
i. **Appendix F - APD Receiving and Sending APPIP Files** –
    - APD Sending ZIP Files
    - APD Sending Self-Extracting Files
    - APD Receiving APPIP Documents
j. **Glossary**
k. **Index of Figures**
l. **Index of Tables**

10.2.1.4 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. APD 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 APD -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 (APD provided APPIP formatted) or legacy (non-APPIP formatted) documents.

10.2.1.4.1 Start using APPIP. The Start Using APPIP Section of the Proponent Word Template Users Guide contains guidance for creating and editing documents, and an explanation of the Microsoft Word styles used. 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. This section contains descriptions of the four basic templates: Outline, Table, Text Table, and Illustration and the ability to validate the styles. The templates will guide the author trough each body template. Each template can be selected from the menu toolbar screen. Additionally, the section provides available screen and menu examples to the user.

10.2.1.4.2 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.

10.2.1.4.3 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.

10.2.1.4.3.1 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.

10.2.1.4.3.2 Table template. The Table Template combines the Microsoft Word table editor with the required table label and title styles needed according to the APD 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.

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10.2.1.4.3.3 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.

10.2.1.4.3.4 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 APD editors for final review and publication.

10.2.1.4.4 Information on appendixes, glossaries and indexes. The Rear Matter 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

10.2.1.4.4.1 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

10.2.1.4.4.2 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 the Start APPIP Section. Procedures for validating the documents are also provided.

10.2.1.4.4.3 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

10.2.1.4.4.4 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.

10.2.1.4.5 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 APD 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

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will present the error descriptions and locations 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. The APPIP Proponent Version Legacy import provides the proponent and APD editors a tool that will apply the APPIP Word template styles automatically to a standard document loaded into Microsoft Word. The import does not always provide a 100% valid document 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 APD 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. subparagraph 1 level numbering to subparagraph 3 level numbering.
- After a main level paragraph the subparagraph 1 level does not starts with "a.".
- Mixing paragraph numbering (i.e. 1, 2, c, d).
- Not spelling the section headings 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.

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10.2.2.3.2.1 Case 1: incorrect subparagraph 1 level number. When the first subparagraph 1 levelafter each main paragraph does not start with “a.”, the corrective action is performed in the legacy document. The error causes the remaining subparagraphs not to be converted to the correct APPIP Word styles. After inserting the correcting subparagraph 1 level number, then both the legacy conversion and validation must be rerun.

10.2.2.3.2.2 Case 2: wrong subparagraph level. When the subparagraph is indented to the wrong level (i.e. subparagraph 1level is followed by a subparagraph 3 level), the corrective action is performed in the converted document. The editor would highlight the incorrect subparagraph(s) (i.e. all subparagraph 3s after the subparagraph 1) and press the “Decrease Indent” icon on the tool bar. The subparagraph numbering and APPIP Word style will be modified to the previous subparagraph 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 rerun.

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 rerun.

10.3 APPIP editor version. The APPIP Editor Version provides APD 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

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.

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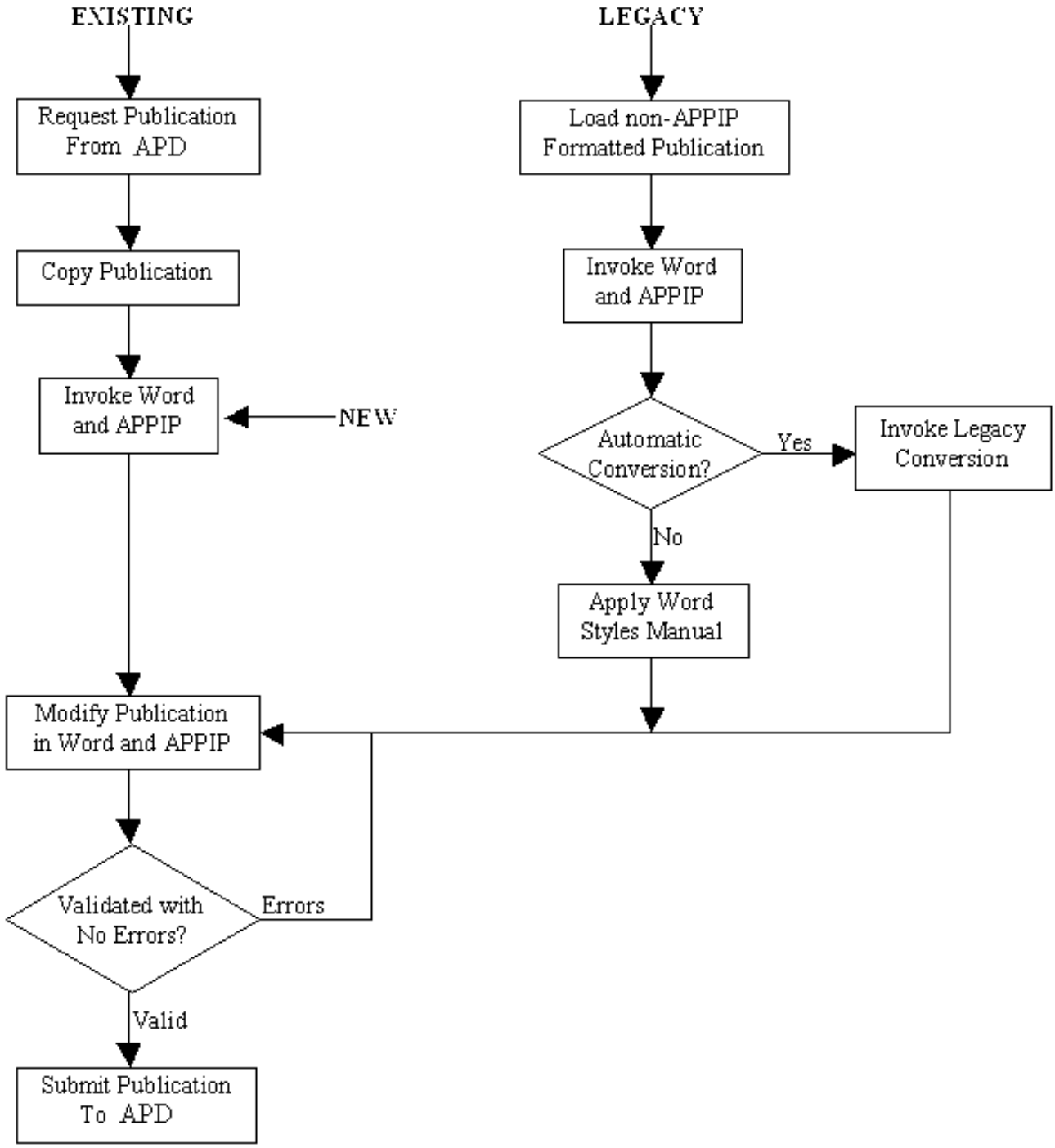

Figure 5 Typical proponent author APPIP development workflow.

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.

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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 APD, which maintains the official source SGML publication. APD 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 subparagraph 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 APD. After all HQDA agencies, MACOMs and OTJAGS corrections have been included and APPIP styles are validated, the publication is submitted to APD for editorial review, authentication, and publishing.

12 APD EDITOR APPIP WORKFLOW PROCESS.

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

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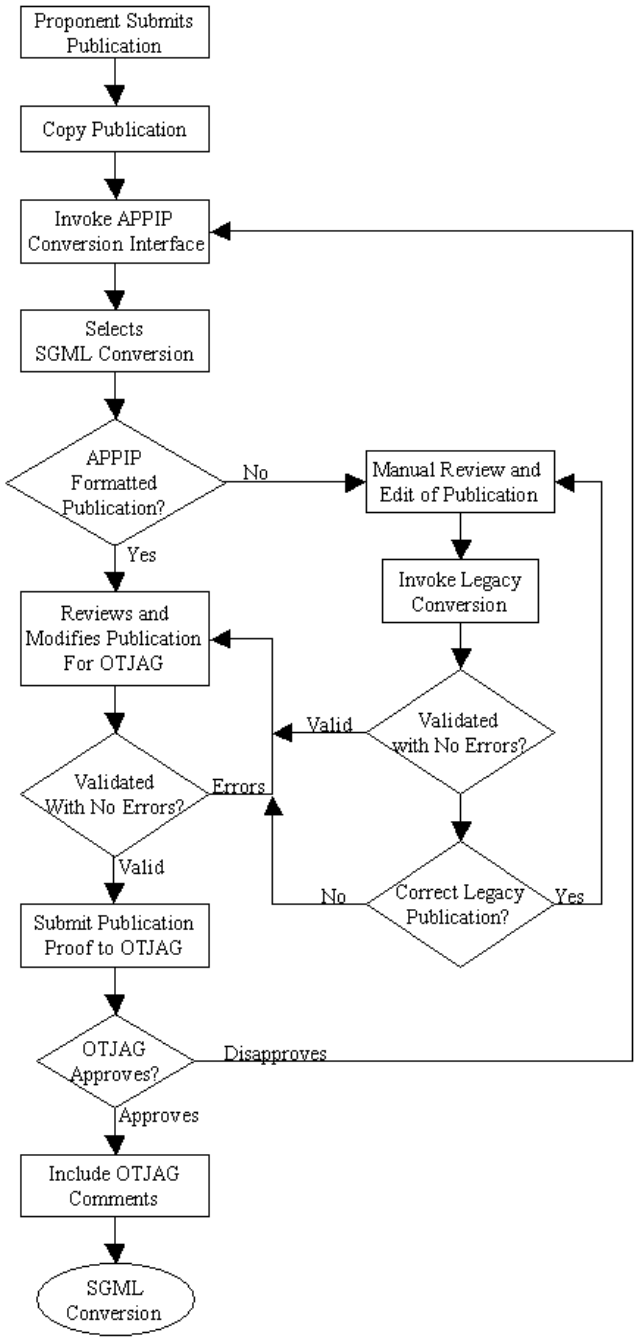

Figure 6 Typical APD editor APPIP development workflow (part 1).

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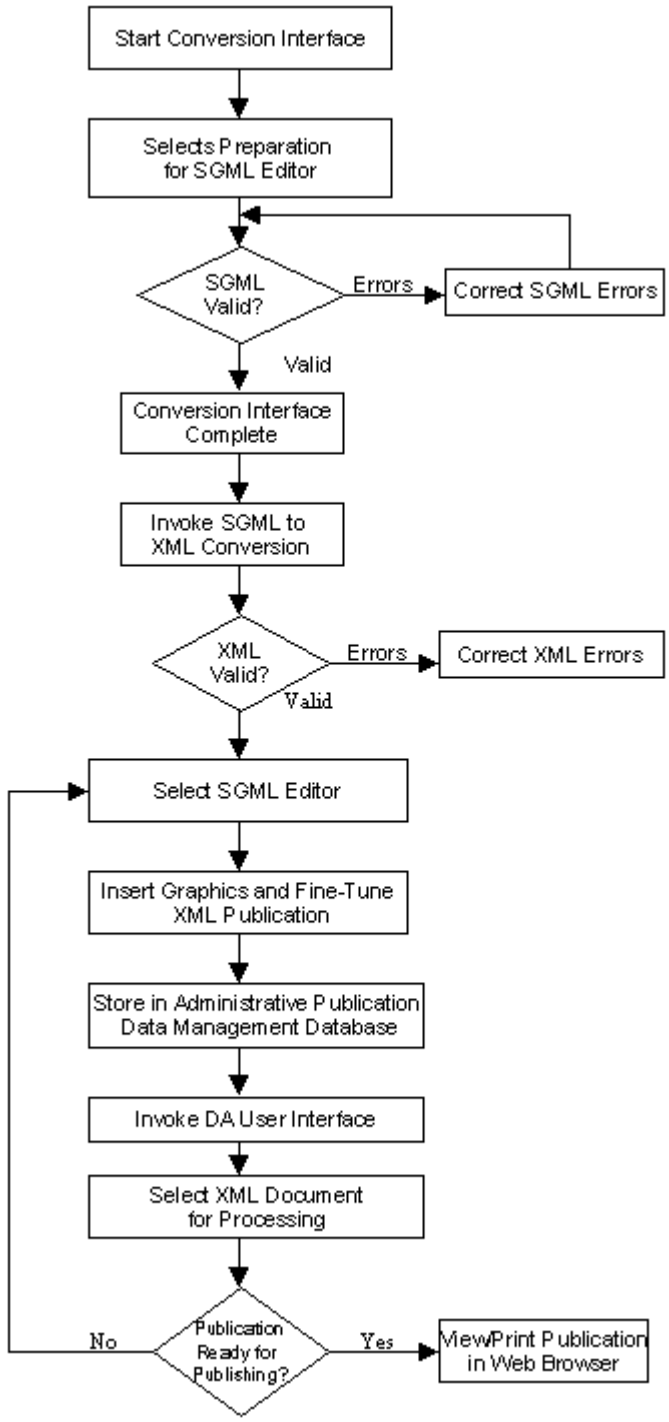

Figure 7 Typical APD editor APPIP development workflow (part 2).

12.2 Administrative publication receipt from the proponent. The proponent submits an electronic APPIP validated publication to APD. 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

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the use of the APPIP Conversion Interface Software. The APPIP Conversion Interface Software was designed to provide the APD 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:

- APD 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 SGML Editor – Validates the SGML document to ensure it adheres to the APD Document Type Definition (DTDs) and inserts the close or end tags as specified in the corresponding DTD. 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 APD editor will determine from the styles if the document is in APPIP format. If the document is not formatted, the APD 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.

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

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 subparagraph 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's comments and approval. After OTJAG's 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 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

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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 SGML 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 SGML 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 Publication database. The editor will maintain the publication in the APD administrative publications data management system (DMS). The DMS will maintain configuration control for each administrative publication version.

12.7 Publish document. Once all reviews have been completed and the document is authenticated and approved for publication, APD will publish the document.

12.8 Proponent requests an administrative publication. When starting a revision the proponent will request from APD 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, APD will provide the APPIP formatted administrative publication, APPIP program and the electronic APPIP Word Template User Guide. Otherwise, APD provides a validated APPIP formatted administrative publication to the proponent for revision.

12.9 SGML to XML document conversion. In order to migrate the Administrative Publications from SGML to XML, another application (Administrative Publications Document Conversion) is required. The Administrative Publications Document Conversion application will convert a valid SGML tagged document into a valid XML tagged document. The application is described in the SGML to XML Document Conversion User's Guide. The User's Guide contains the following sections:

- Introduction
- Installation
- Running the Document Conversion Application
- Error Handling

12.9.1 Introduction. This section describes and details the purpose of the Administrative Publications Document Conversion application.

12.9.2 Installation. The Installation section describes how to obtain the application software, and gives detailed instructions concerning the execution of the self-extracting "ZIP" file which will install the application to the desired location on the user's hard drive.

12.9.3 Running the document conversion application. This section provides detailed instruction on the operation of the application, along with figures illustrating the forms and dialog boxes which control the process.

12.9.4 Error handling. The SGML to XML conversion process is prone to errors. In the event that the user encounters an error during processing, notices will be displayed which will inform the user that an error has occurred, and provide the opportunity to review the list of errors contained in an error file. Once all of the errors have been corrected, the conversion process can be run again

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12.10 DA user interface application. The DA User Interface application is used to display and/or print Administrative Publications documents that have been tagged in XML format in a web browser.

12.10.1 Processing a XML document for viewing. The user is prompted for a path to the XML document and for the location of the graphics files that are associated with the document. Once the XML document and the graphics directory have been selected, the user clicks the Process button to begin the conversion and display process. The user will be presented with a Processing form to indicate the status of the current process.

12.10.1.1 XSL stylesheet. The XML document is opened along with the XSL stylesheet that is associated with the document. The XML document and the XSL stylesheet are processed through SAXON to be converted into HTML for web browser display. Once processing is complete, the document is displayed in the user's default web browser.

12.10.1.2 Document display in a web browser. Once the XML document has been processed, the user's default web browser will be activated and the cover page of the document will be displayed as shown in Figure 8.

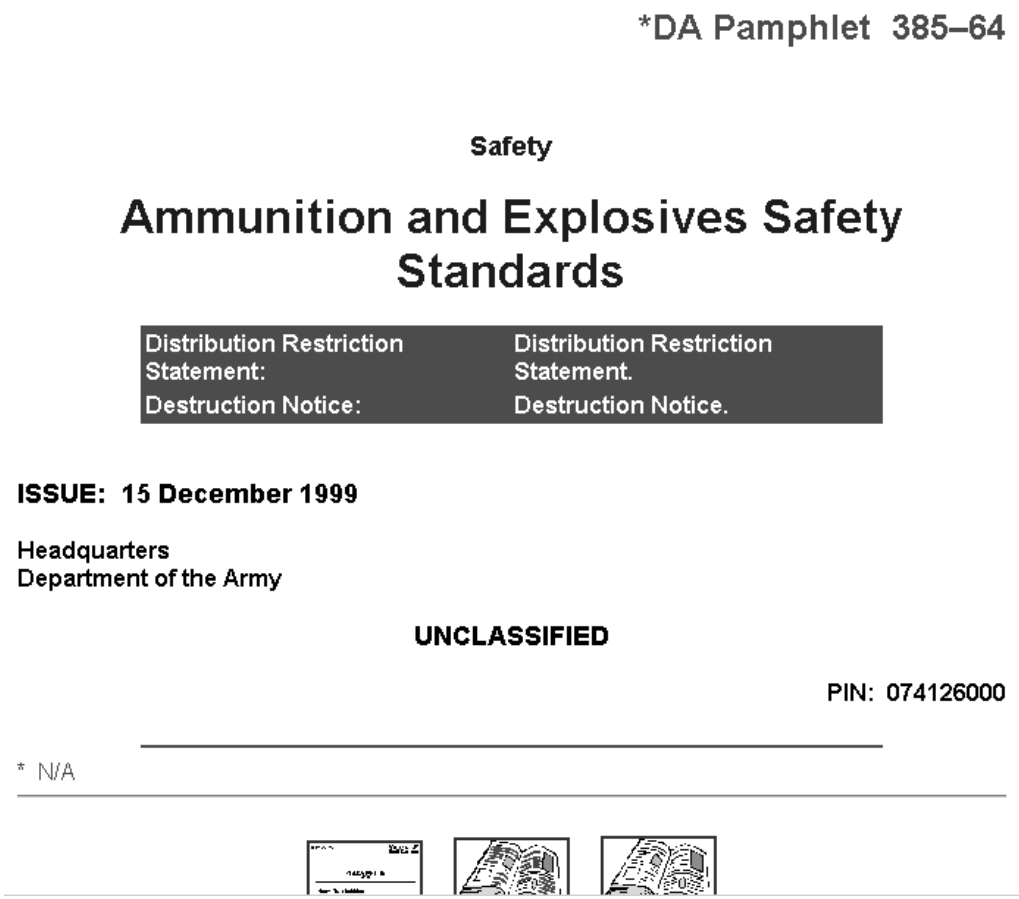

Figure 8 Example of a cover page displayed in a web browser.

12.10.1.3 Navigating in a document. At the bottom of the page, there are three navigation icons which provide access to the rest of the document. From left to right, these icons represent the Title Page; the Change Summary; and the body of the document, respectively. The following steps will demonstrate how to navigate the document using the navigation icons.

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Step 1 Click on the left-most icon for the Title page. The document's title page will then be displayed. (See Figure 8.)

Step 2 From either the Cover page or the Title page; click the center navigation icon to display the Change Summary page.

Step 3 From either the Cover, Title or Change Summary pages, click on the right-most navigation icon to display the Body of the document. For the display of the body of the document, the web browser screen is divided into three frames; the Table of Contents frame, DA Form 2028, the document text frame, and a frame in the lower left which provides buttons for the DA Form 2028 for submitting comments and for printing the document.

12.10.1.4 Printing a hardcopy of a document. From the Body display of the document, the following steps will describe the document printing process.

From the Body display of the document, the following steps will describe the document printing process.

Step 1 Click the Print Publication button.

Step 2 The application will create an RTF file for printing. Once the RTF file creation process is complete, the document will be displayed in another browser window.

Step 3 Click the File menu button, and click the Print button.

Step 4 Select the proper printer and settings as desired, and click the OK button. the file will be sent to the appropriate printer.

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PART II
REFERENCE

13 ADMINISTRATIVE PUBLICATION XML TAG DESCRIPTION LIST.

13.1 Administrative XML tag description list . A copy of the Administrative Tag Description List can be obtained by downloading it from the ASRL Website, **http\\www.asrl.com** under the link “CONSTRUCTS”.

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VOLUME 3
TRAINING AND DOCTRINE PUBLICATIONS

14 INTRODUCTION.

14.1 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.

14.2 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-2361 SGML. Implementation guidance to realize the MIL-STD-2361 objectives to share and reuse common publication information is an underlying theme throughout the handbook.

14.2.1 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

14 –	Introduction	An overview of the Training and Doctrine Publication volume: including the intent, layout, format, and contents.
15 –	Training and Doctrine Publication Workflow and Processes	Identifies and describes the workflow and processes associated with the development of training and doctrine publications.
16 –	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/XML Registry and Library (ASRL) homepage.

15 TRAINING AND DOCTRINE PUBLICATION WORKFLOW AND PROCESSES.

15.1 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. Technical manuals 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 Dennis J. 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

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of battle-focused training resources. It helps trainers develop and manage their training program by providing interface to TRADOC automated systems such as RDL.

15.1.1 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.

15.1.2 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, TC) and customized reports.

15.1.3 Training and doctrine product development responsibilities. Figure 9 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.

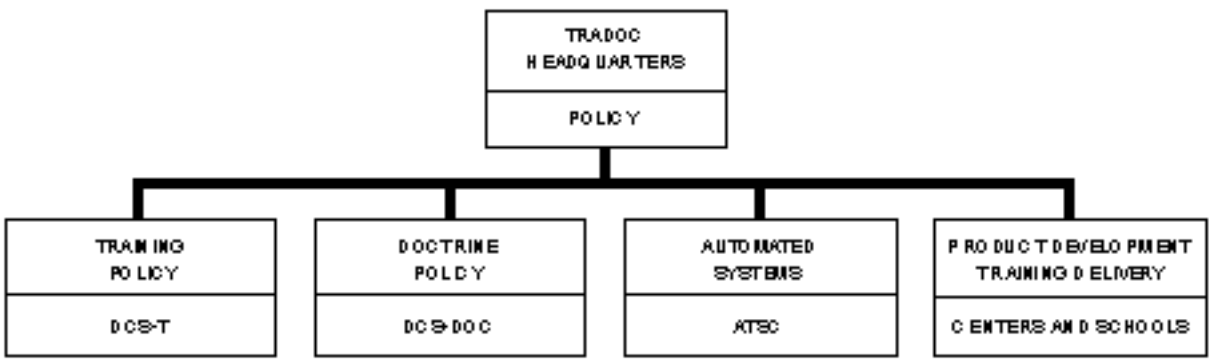

Figure 9 TRADOC product development responsibilities.

Responsibility for developing training and doctrine publications information is split between proponent agencies such as Deputy Chief of Staff for Operations and Training (DCSOPS&T) or Deputy Chief of Staff for Doctrine, Concepts, and Strategy (DCSDCS) 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.

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15.1.3.1 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 Manuals (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.

15.1.3.2 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 formats and content requirements established by the proponent agency.

15.1.3.3 TRADOC publications information development process. Figure 10 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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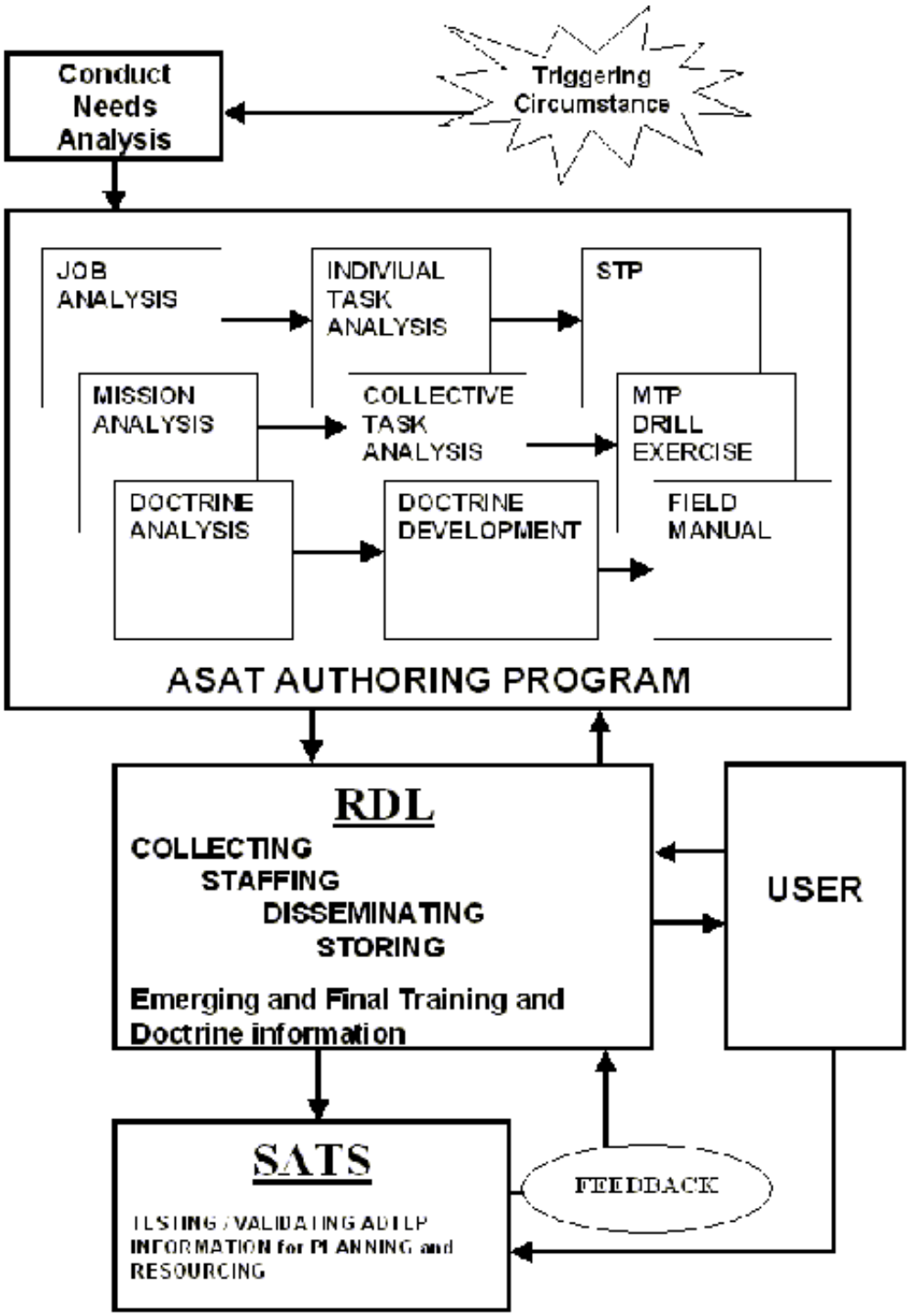

Figure 10 TRADOC publication development flow.

15.2 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 subparagraphs below provide a brief description and the roles within TRADOC for these information management systems. These TRADOC information management

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systems and their relationship to each other are depicted in Figure 11 below and are explained in paragraphs 16.2.1 through 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.

Figure 11 TRADOC information management systems relationship.

15.2.1 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

15.2.1.1 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.

15.2.1.2 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

15.2.1.3 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:

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

15.2.1.4 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.

15.2.1.5 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.

15.2.2 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.

15.2.2.1 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).

15.2.2.2 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.

15.2.2.3 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

15.2.3 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

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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
- 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.

15.3 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).

15.3.1 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 APD ASRL (see Section 39). 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.

15.3.1.1 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 1 is an example of the SGML to ASAT data element mapping.

Table 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

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Table 1. MIL-STD-2361 TRADOC SGML element to ASAT data element mapping example. –Continued

SGML ELEMENT	ATTRIBUTE	ASAT TABLE	ASAT COLUMN
ind.task.wp	subj.area	subject_area	subject_area_nm
ind.task.wp	subj.area	subject_area	record_sequence_cd

15.3.1.2 MIL-STD-2361 TM elements to RDL data elements mapping. Figure 12 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.

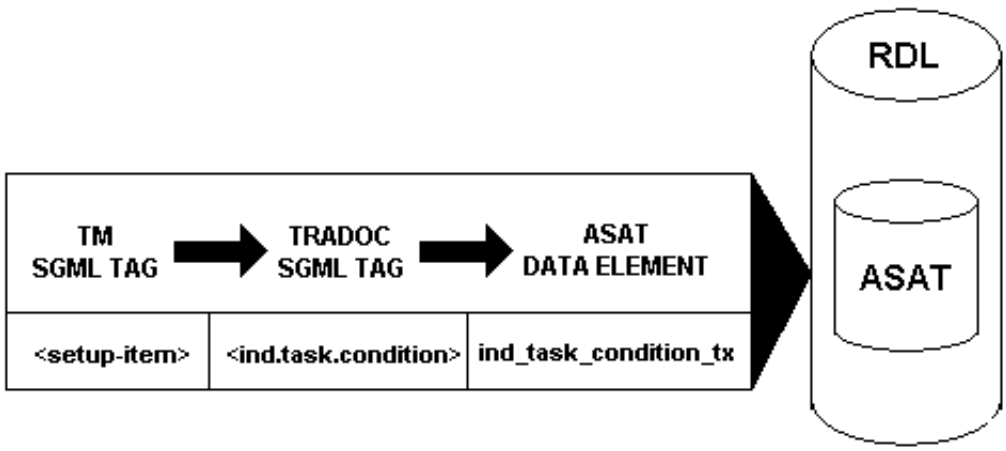

Figure 12 MIL-STD-2361 TM SGML element to TRADOC SGML element to RDL data element mapping.

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

16.1 Consolidated Requirements Documents (CRD). CRDs were developed for the training and doctrine publication products described in the following paragraphs. The CRDs were designed by APD, 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

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the respective publication products and assign each element a nemonic name or "generic identifier." A DTD was then created using element and attribute declarations for generic identifiers. Processing information was then developed (i.e., stylesheets) 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.

16.2 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 (see Section 39) and located in the guidance library.

16.3 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.

16.3.1 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.

16.3.2 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.

16.3.3 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 stylesheet. 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.

16.3.4 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
INTERACTIVE ELECTRONIC TECHNICAL MANUAL (IETM) TECHNICAL DATA REQUIREMENTS TO SUPPORT THE GLOBAL COMBAT SUPPORT SYSTEM-ARMY (GCSS-A)

17 INTRODUCTION.

17.1 Overview. This Volume 4 provides the implementation guidance for the development of Interactive Electronic Technical Manual (IETM) Technical Data Requirements to Support the Global Combat Support System-Army (GCSS-A) in compliance with MIL-STD-2361 and MIL-STD-3008. GCSS-A data provided in this handbook provides non-regulatory guidance and information for the preparation of collecting and reporting operations, historical, maintenance, and ammunition data for the management and support of aviation and non-aviation weapons systems and their related systems, equipment, components/modules, including flight and mission safety parts.

17.2 Objectives. Volume 4 MIL-HDBK-2361 is designed to provide users a tool that is simple to use to develop data to populate the Interactive Electronic Technical Manual (IETM) Technical Data Requirements to Support the Global Combat Support System-Army database. This volume contains GCSS-A publication development and implementation guidance information, designed to assist publication developers and editors in the use and application of MIL-STD-3008 using XML. The data, used in conjunction with the GCSS-A, will provide the capability to support worldwide deployment, employment, and sustainment of combat forces in various scenarios and areas of operations.

17.3 Layout, format and content. Volume 4 contains information relevant to Interactive Electronic Technical Manual (IETM) Technical Data Requirements to Support the Global Combat Support System-Army, its development, and methods for applying and using XML. An outline structure of the sections are provided as follows:

- Volume 4 – Interactive Electronic Technical Manual (IETM) Technical Data Requirements to Support the Global Combat Support System-Army (GCSS-A)
  - 17 Introduction – An overview of the Global Combat Support System-Army (GCSS-A).
  - 18 GCSS-A Capabilities – Identifies and describes GCSS-A capabilities.
  - 19 GCSS-A data sources – Identifies and describes GCSS-A data source and requirements.
  - 20 GCSS-A Implementation Guidance – Identifies and describes GCSS-A data source and requirements.

18 GCSS-A CAPABILITIES.

18.1 Capabilities. The data that supports GCSS-A provides the Army a seamless, integrated, and interactive communications and automated information system (AIS) at all force levels of combat service support (CSS). It provides users a responsive and efficient means to rapidly anticipate, allocate, and synchronize the flow of available CSS resources to equip, deploy, project, sustain, reconstitute, and re-deploy tactical forces in support of the national military strategy. GCSS-A data collected from operations, maintenance, historical, ammunition and parts requisition data will provide for the major capabilities listed below.

a. Provide the capability to request all classes of supplies, manage prescribed load lists, bench stock, shop stock, combat spares, and reparable items.
b. Provide the capability to manage maintenance workloads and coordinate repair activities, establish maintenance priorities, and control subordinate elements such as combat repair teams (CRT) and mobile support teams (MST) and contact teams operating from the unit maintenance collection point (UMCP).
c. Provide the capability to manage maintenance workloads and coordinate repair activities, establish maintenance priorities, and control subordinate elements such as combat repair teams (CRT) and mobile support teams (MST) and contact teams operating from the unit maintenance collection point (UMCP).
d. Provide the functionality needed to report supply and maintenance financial information at all levels.
e. Provide the functionality to report maintenance status and Army Materiel Status System (AMSS) data from organizational maintenance at the unit level, shop operations of Direct Support (DS) and General

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Support (GS) maintenance units, installation level maintenance support at TDA activities, and Aviation Unit Maintenance (AVUM) and Aviation Intermediate Maintenance (AVIM).

f. Provide the functionality for the equipment dispatch procedures, maintenance and inspection worksheet procedures, recording and disposition of maintenance faults, repair parts removal and installation, equipment services performed, and all The Army Maintenance Management System (TAMMS) and TAMMS-Aviation (TAMMS-A) record management.
g. Downloading of existing weapon system historical and maintenance records and data from GCSS-A to an external device for deployment with the unit
h. Transfer of equipment, maintenance, historical, supply requests, and other information back to the parent unit and the task force command while operating in a deployed status.
i. Upload records, information, and data for system updates upon return of units.
j. Provide MST, CRT, maintenance contact team, maintainers, and technical repair personnel for all weapon systems with maintenance information at the point of repair or on site wherever maintenance is performed.
k. Provide users with an embedded capability that allows access to the ETM, ETM-I, or IETM.
l. Provide total asset visibility and readiness of sub-weapon systems and sub-components by weapons system or end item tail number, bumper number, or serial number.
m. Provide the functionality needed to dynamically query unit readiness status and trends on any weapon system, end item, subsystem or serial numbered component for any preceding period of time.
n. Provide the capability to manage phased maintenance requirements for weapon systems and end items by model and mission design series.
o. Provide the functionality and capabilities needed to monitor, control and track commercial vendor provided maintenance support.

19 GCSS-A DATA SOURCES.

19.1 Collecting data. Operational, maintenance, historical, ammunition and parts requisitioning data is collected to support aviation and non-aviation weapons systems and their related systems, equipment, components/modules, including flight and mission safety parts. Electronic Technical Manuals (ETM) and Interactive Electronic Technical Manuals (IETM) are the primary source of collecting data for GCSS-A data base. Other sources of data can be obtained by means of manual or an automated process.

19.2 Data preparation. The data will be prepared as SGML or XML in accordance with MIL-STD-3008 and using the Document Type Definition DTD MIL-STD-3008 provides. MIL-STD-3008 DTD can be obtained from the Army Publish Directorate's ASRL website "www.asrl.com".

19.3 Army sources for providing data. ETMs and IETMs are the primary source for providing data. Other data sources are Army systems such as the Army Maintenance Management System-Aviation (TAMMS-A), Unit Level Logistics System (ULLS), or Standard Army Maintenance System (SAMS) or the data can be manually provided in the interim using form templates.

19.3.1 Army Maintenance Management System-Aviation (TAMMS-A). An Army system "TAMMS-A" provides data on aircraft, aviation-associated equipment, mission related equipment, and maintenance. The data is collected by means of forms and records administered by TAMMS-A. These forms and records forms are use to manage maintenance, control the use, and report warranty actions and deficiencies on Army aircraft and aviation associated equipment.

19.3.2 Unit Level Logistics System (ULLS). ULLS automates the logistics system for unit supply, maintenance and materiel readiness management operations. It prepares supply documents, maintenance management records, materiel readiness reports and property records. GCSS-A will absorb ULLS functionality into its Maintenance Module.

19.3.3 Standard Army Maintenance System (SAMS). SAMS provides centralized information management to support maintenance operations at the Direct Support, General Support, and Installation Activities (both Table of Organization and Equipment (TOE) and Table of Distribution and Allowances (TDA) units). SAMS is divided into two levels: SAMS-1 which operates at the DS/GS maintenance company; and SAMS-2 which

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operates at command levels above the maintenance company. GCSS-A will absorb SAMS functionality into its Management Module.

20 GCSS-A IMPLEMENTATION GUIDANCE.

20.1 GCSS-A's DTD. GCSS-A DTD interprets the technical content and structure for the data requirements contained in MIL-STD-3008. GCSS-A's Document Type Definition (DTD) and associated tag and attribute descriptions are used for preparation and reporting of operations, historical, maintenance, and ammunition data. The data developed using this DTD will be provided to the Global Combat Support System - Army (GCSS-A) to facilitate efficient management and support of aviation and non-aviation weapons systems and their related systems, equipment, components/modules, including flight and mission safety parts.

20.1.1 Data types required. GCSS-A requires specific types of data to populate its database for aviation and non-aviation weapons systems and their related systems, equipment, components/modules, including flight and mission safety parts. GCSS-A requires data for five major functional areas and also requires cross-functional data.

20.1.1.1 Major data types. GCSS-A requires data for the five major functional areas listed below:

a. Operational data
b. Maintenance data
c. Historical data
d. Ammunition data
e. Parts requisitioning data.

20.1.1.2 Cross-functional data . Cross-functional data is developed for multiple functional areas and are used to link with other specific functional data required byMIL-STD-3008. Cross-functional data requirements are applicable to both aviation and non-aviation areas.

20.1.2 Data tables. Specific data is developed and organized in the form of functional data tables. GCSS-A MIL-STD-3008 consist of sixty-five tables. These tables are structured according to the data associations which dictate the table configuration. The interrelationships and data hierarchy between tables are only established through the use of the applicable Document Type Definition. The tables support cross data requirements, aviation data requirements and non-data requirements. All the tables except Table 4 consist of the "Data Element Title" and the "Data Name". The "Data Element Title" provides the noun phrase to identify the data element with sufficient modifiers to ensure title uniqueness for a specific data element definition. The "Data Name" is defined in the DTD. Table 4 consist of "Table No", Table Title, Equipment/Personnel Tables broken into sections consisting of Table 1, Table 2, and Table 3.

20.1.2.1 Meta Tables. GCSS-A meta tables ***<meta-tables>*** consists of Table 1. Equipment type, Table 2. Equipment assignment and Table 3. Personnel data. These tables are allowed by the GCSS-A DTD's as stand-alone submissions.

20.1.2.1.1 Table 1. Equipment type. Table 1 provides standardized information for identifying aviation and non-aviation equipment, the latter including watercraft and rail equipment. This table also provides specific information on a piece of equipment, both by alpha and/or numerical designation and origin. It encompasses an equipment grouping that includes: assembly, sub-assembly, component, sub-component, end item, part, module, piece, and accessory.

20.1.2.1.2 Table 2. Equipment assignment. Table 2 provides necessary information to identify the organization that has ownership, custody and/or control of the specified aviation or non-aviation equipment.

20.1.2.1.3 Table 3. Personnel data. Table 3 provides identification and operational information on personnel who are involved in the daily operations of aviation and non-aviation equipment. The information includes both the operating crew and the maintenance personnel who provide daily support services and perform daily inspections.

20.1.2.2 Table 4. Equipment/personnel matrix. Table 4 as shown Figure 13 identifies Tables 5 through 65 in this standard that are linked to required identifiers contained in Tables 1 through 3. A table that has

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no assignment to either Table 1, Table 2 or Table 3 is a standalone table containing relevant identifying information.

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TABLE 4. Equipment/personnel matrix

		Equipment/Personnel Tables		
Table No.	Table Title	Table 1	Table 2	Table 3
5	Servicing Data	X	X	X
6	Preventive Maintenance Scheduled Data	X	X	X
7	Equipment Inspection and Maintenance Data	X	X	X
8	Equipment Inspection/Modification Data	X	X	
9	Maintenance Request Register Data	X	X	
10	Maintenance Required Data	X		
11	Parts Data	X	X	
12	PLL Inventory Data		X	
13	Cost Data	X	X	X
14	Environmental Conditions Data	X	X	X
15	Operations/Maintenance Fault Data	X	X	X
16	Fault Correcting Data	X	X	
17	Related Maintenance Actions Data	X	X	X
18	Uncorrected Fault Data	X	X	
19	Not Mission Capable Data	X	X	
20	IETM Fault Result Data	X	X	
21	IETM Maintenance Reporting Data	X	X	
22	Oil Analysis Request Data			
23	Oil Analysis And Recommendation Feedback Data			
24	Product Quality Deficiency Data			
25	Ammunition Accounting Data	X	X	X
26	Ammunition Condition Data	X		X
27	Ammunition Peculiar Equipment Utilization Data			
28	General Requisition Data			
29	Technical Manual Deficiency Data			
30	IETM Deficiency Data			
31	Flight Data	X	X	X
32	Flight Manual Exceedance Data	X	X	X
33	System Status Data	X	X	
34	Armament System Data	X	X	X
35	Armament System Sighting Data	X	X	X
36	Component Data	X	X	
37	Removal Data	X	X	X
38	Repair/Overhaul/Gain Data	X	X	X
39	Installation/Loss Data	X	X	
40	Life Raft Data			
41	Helmet And Oxygen Mask/Connector Data			
42	Survival Radio/Emergency Locator Transmitter Data			
43	Survival Kit Inspection And Maintenance Data			
44	Mesh Net Survival Vest Data			
45	Life Preserver Data			
46	Oxygen Console Service Data			
47	Anti-Exposure Coveralls Data			
48	NVG Inspection And Maintenance Data			
49	Vibration Data	X	X	
50	Component Data	X	X	
51	Component/Module Recorder Data	X	X	
52	Aircraft Inventory Data	X	X	
53	Engine Turbine Wheel Data	X	X	X
54	Turbine Analysis Check Data	X	X	X
55	Engine History Recorder Operating Hours Data			
56	Meter Tracked Component Data			
57	Equipment Utilization Data	X	X	
58	Equipment Deadlined Data	X	X	
59	Armament System Data			
60	Equipment Control Data	X	X	X
61	Equipment Maintenance And Calibration Data	X	X	
62	Dry-Docking, Painting And Condition Of Vessel Bottom Data	X	X	X
63	Daily Inspection Data	X	X	X
64	Field Inspection Data	X	X	X
65	Locomotive Inspection And Repair Data	X	X	X

Figure 13 Example of Table 4. Equipment/personnel matrix.

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20.1.2.3 Tables 5–65. Tables 5 through 65 consist of required data to support cross-functional data requirements, aviation data requirements and non-aviation data requirements.

20.1.2.4 Cross-functional data requirements. Cross-functional data requirements, located in MIL-STD-3008, Section 5.2, Tables 1 through 30, have attributes that can span multiple functional areas and are used to link with other functional tables throughout MIL-STD-3008. The cross-functional data contained in the tables are inherent to the identification, description, origin, custody, operation, support and location of a specified weapon system or piece of equipment. Cross-functional data requirements are applicable to both aviation and non-aviation areas.

20.1.2.5 Aviation data requirements. Aviation data requirements, located in MIL-STD-3008, Section 5.3, Tables 31 through 56, provide necessary information to manage operations and maintenance, control the use, and report warranty actions and deficiencies on Army aircraft and aviation-associated equipment. Aviation-associated equipment is construed to mean related mission equipment such as armament systems, electronic systems, aircraft training devices, aircraft simulators and life support equipment.

20.1.2.6 Non-aviation data requirements. Non-aviation data requirements, located in MIL-STD-3008, Section 5.4, Tables 57 through 65, provide necessary information to manage operations and maintenance, to control the use, and to report warranty actions and deficiencies of Army equipment that include self-powered vehicles, towed vehicles, stationary powered equipment, watercraft and rail equipment.

20.2 Example of a tagged IETM history. The following is a scenario of a soldier using an IETM to troubleshoot a piece of equipment and to complete the maintenance task on the equipment.

a. A soldier is given a work order and an IETM to troubleshoot the malfunction of the piece of equipment and to complete the maintenance task on the equipment.
b. The soldier logs on to the IETM using his personal identification number ***<pid>***.
    (1) The IETM will identify the fault of the equipment malfunction by stepping the soldier through a series of fault diagnostics. Performing the series of fault diagnostics that will provide the soldier the correct action to order the part(s) needed and to complete the maintenance task on the equipment.
    (2) The IETM handles the majority of the reporting by prompting the soldier with questions and the soldier mostly responding by clicking a yes or no.
    (3) Parts of the IETM the soldier does need to fill out starting with his:
        (a) Table 3. Personnel Data ***<persn-data>*** - Identifies the soldier which in turn could cross-reference and identify what equipment he has worked on and what equipment he is certified to work on.
            (1) Personal identification number ***<pid>***.
        (b) Table 1. Equipment type data ***<eqp-type-data>*** - Identifies the equipment by specific identification such as administration number ***<admin-no>***, part number ***<partno>*** & CAGE code number ***<cageno>*** and/or National Stock Number ***<nsn>***. The administration number is usually given with the work order. The soldier enters the:
            (1) Administration number ***<admin-no>***.
            (2) Make Model-Type ***<make-model-type>***.
            (3) Serial number ***<serialno>***.
        (c) Table 21. IETM maintenance reporting data ***<ietm-maint-report>*** – Covers data resulting from maintenance actions performed and including parts information.
            (1) Quantity of each part needed ***<qty>***.
            (2) XREF attribute value of IETM Parts Data ***<ietm-parts-data>***
    (4) Parts of the IETM that is usually fill out by the IETM:
        (a) Table 1. Equipment type data ***<eqp-type-data>***.
            (1) National Stock Number (NSN) ***<nsn>***
            (2) Nomenclature ***<nomen>***
        (b) Table 2. Equipment assignment data ***<eqp-assign-data>***
            (1) DoD Activity Address Code ***<dodaac>***
            (2) Unit Identification Code ***<uic>***
            (3) Name ***<name>***

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(4) Address ***<address>***
(5) Home Station ***<home-station>***
(6) Zip Code ***<zip>***

(c) Table 20. IETM fault result data ***<ietm-fault-result-data>*** - Covers fault diagnostics/troubleshooting data.
(1) ID attribute value of IETM Fault ***<ietm-fault-result id="">***
(2) Symptom ***<symptom>***
(3) Description ***<desc>***
(4) Fault Code ***<faultcode>***
(5) Date Discovered ***<date-fault>***
(6) How Recognized ***<how-recognized-code>***
(7) Failue Code ***<fail-code>***
(8) IETM Mission Status Data ***<ietm-mission-status-data>***
(9) Status Symbol ***<status-symbol>***
(10) Mission Capability ***<mission-capability>***
(11) Date Completed ***<date-completed>*** (Identifies how many days or months it took to identify the equipment's malfunction.)
(12) Time Completed ***<time-completed>*** (Identifies how many minutes or hours of the day it took to identify the equipment's malfunction.)

(d) Table 21. IETM maintenance reporting data ***<ietm-maint-report-data>*** - Covers data resulting from maintenance actions performed and including parts information.
(1) IETM Maintenance Report ***<ietm-maint-report>***
(2) IETM Parts Data ***<ietm-parts-data>***
(3) Parts Ordered Information ***<parts-ordered-info>***
(4) Parts Received Information ***<parts-received-info>***
(5) Part Number ***<partno>***
(6) Nomenclature ***<nomen>***
(7) Source, Maintenance, Recoverability (SMR) ***<smr>***
(8) CAGE Code ***<cageno>***
(9) NIIN ***<niin>***
(10) Date ***<date>***
(11) Time ***<time>***
(12) Maintenance Action Performed ***<maint-performed>***
(13) Maintenance Action ***<maint-action>***
(14) Date Performed ***<date-performed>***

(e) The soldier will pass the data through a chain of command for verification. Then the data from the IETM after verification will be sent as a data stream of information to LOGSA.

(f) The data will be disbursed to other Army data systems that manage specific required data.

c. The following is an example of a cross-functional data tagged XML instance for Table 20. IETM fault result data and Table 21. IETM maintenance reporting data:

```
<gcss-a>
<meta-tables>
<persn-data>
<pid>X9991</pid>
</persn-data>
</meta-tables>
<ietm-fault-result-data>
<eqp-type-data>
<admin-no>X99</admin-no>
<nsn>2320-99-999-9999</nsn>
<make-model-type>X9999</make-model-type>
<nomen>Truck, Tractor W Crn</nomen>
<serialno>99999</serialno>
```

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```
</eqp-type-data>
<eqp-assign-data>
<dodaac>XXXWRC</dodaac>
<uic>XXP</uic>
<unit-activity>
<name>B 18TH BN 33RD ARM DIV</name>
<address>Hwy44 North</address>
<home-station>Fort Sill, Oklahoma</home-station>
<zip>73507</zip>
</unit-activity>
</eqp-assign-data>
<item-fault-result>
<item-fault-data id="F991">
<symptom>inoperative</symptom>
<desc>deterioration, break</desc>
<faultcode>099</faultcode>
<date-fault>2000-01-09</date-fault>
<how-recognized-code>900</how-recognized-code>
<fail-code>X</fail-code>
</item-fault-data>
<ietm-mission-status-data>
<status-symbol status="status-inoperable"/>
<mission-capability capability="none"/>
</ietm-mission-status-data>
</item-fault-result>
<item-fault-result>
<item-fault-data id="F992">
<symptom>inoperative</symptom>
<desc>leakage</desc>
<faultcode>092</faultcode>
<date-fault>2000-01-09</date-fault> <>
<how-recognized-code>902</how-recognized-code>
<fail-code>XY</fail-code>
</item-fault-data>
<ietm-mission-status-data>
<status-symbol status="materiel-defect"/>
<mission-capability capability="reduced"/>
</ietm-mission-status-data>
</item-fault-result>
</item-fault-result-data>
<ietm-maint-report-data>
<eqp-type-data>
<admin-no>X99</admin-no>
<nsn>2320-99-999-8888</nsn>
<make-model-type>X9999</make-model-type>
<nomen>Truck, Tractor W Crn</nomen>
<serialno>99999</serialno>
</eqp-type-data>
<eqp-assign-data>
<dodaac>XXXWRC</dodaac>
<uic>XXF</uic>
<unit-activity>
<name>B 18TH BN 33RD ARM DIV</name>
<address>Hwy44 North</address>
<home-station>Fort Sill, Oklahoma</home-station>
<zip>73507</zip>
```

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```
</unit-activity>
</eqp-assign-data>
<ietm-main-report>
<ietm-parts-data  xref="F991">
<parts-ordered-info>
<partno>9XXX9</partno>
<nomen>Battery</nomen>
<smr>XXXXX</smr>
<cageno>9999X</cageno>
<nsn>XXXX-99-999-9999</nsn>
<niin>01-349-7676</niin>
<qty>X</qty>
<date>2000-01-09</date>
<time>12:12:15</time>
</parts-ordered-info>
<parts-receive-info>
<partno>9XXX9</partno>
<nomen>Battery</nomen>
<smr>XXXXX</smr>
<cageno>9999X</cageno>
<nsn>XXXX-99-999-9999</nsn>
<niin>01-349-7676</niin>
<qty>X</qty>
<date>2000–01–19</date>
<time>16:25:30</time>
</parts-received-infor>
</ietm-parts-data>
</ietm-main-report>
<ietm-main-report>
<ietm-parts-data  xref="F991">
<parts-ordered-info>
<partno>XX99999–XXX</partno>
<nomen>nut, plain, hex, 3/8–16</nomen>
<smr>XXYYY</smr>
<cageno>8888X</cageno>
<nsn>XXXX-88-888-9999</nsn>
<niin>88-888-9999</niin>
<qty>10</qty>
<date>2000-01-09</date>
<time>12:12:15</time>
</parts-ordered-info>
<parts-receive-info>
<partno>XX99999–XXX</partno>
<nomen>nut, plain, hex, 3/8–16</nomen>
<smr>XXYYY</smr>
<cageno>8888X</cageno>
<nsn>XXXX-88-888-9999</nsn>
<niin>88-888-9999</niin>
<qty>10</qty>
<date>2000–01–15</date>
<time>14:15:30</time>
</parts-received-infor>
</ietm-parts-data>
</ietm-main-report>
<ietm-main-report>
<maint-performed>
```

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<*maint-action*>BaseMaint = “X99-XX”</*maint-action*>
<*date-performed*>2000-01-09</*date-performed*>
</*maint-performed*>
</*ietm-main-report*>
</*ietm-main-report-data*>
</*gcss-a*>

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VOLUME 5
TECHNICAL AND EQUIPMENT PUBLICATIONS

PART I
OVERVIEW

21 INTRODUCTION.

21.1 Overview. This Volume 5 provides implementation guidance for Technical Manuals (TMs), Depot Maintenance Work Requirements (DMWRs) and National Maintenance Work Requirements (NMWRs). TMs, DMWRs and NMWRs are discussed in sufficient detail to allow the handbook user a comprehensive understanding of their development processes using XMLPart I contains general TM, DMWR and NMWR development guidance. Part II contains detailed guidance for the application of XML to TMs, DMWRs and NMWRs, related training information, and an XML Tutorial for TMs, DMWRs and NMWRs. There are flow charts and other graphic illustrations to amplify the narrative discussions. The differences between the "traditional" publication development processes and development using the Technology After Next (TAN) Program, (formerly the DPD Program), (see paragraph 23.2.3) concepts are discussed to illustrate the benefits, in time and effort, derived from the TAN Program. These discussions are designed to portray to handbook users sound rationale for developing publications using XML in accordance with MIL-STD-2361. The TAN 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.

21.2 Objectives. Volume 5 of MIL-HDBK-2361 is designed to provide users with a tool that is simple to use and functionally accurate to the Army TMs, DMWRs, and NMWRs publication processes. The volume contains TM, DMWR and NMWR publication development and implementation guidance information, designed to assist the publication developer in the use and application of XML Implementation guidance to realize the MIL-STD-2361 objectives to share and reuse common publication information is an underlying theme throughout the handbook.

21.3 Layout, format and content. Volume 5 contains information relevant to TMs, DMWRs and NMWRs and their development using XML. An outline of each of the parts is provided below.

Part I – Overview

21 – Introduction	An overview of the TM volume: including the intent, layout, format, and contents.
22 – Workflow and Processes	Identifies and describes the workflow and processes associated with the development of TMs.
23 – Introduction to XML	This section provides a foundation for working with, and understanding, XML.
24 – Implementation Guidance	This section will contain a descriptive narrative of the functional and technical relationships between TMs, DMWRs and NMWRs, MIL-STD-40051 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.
25 – TM, DMWR/ NMWR Acquisition	This section will provide the handbook user with information relating to contracting for XML/publication development services.

Part II – TM Information Chapters

27 – Production	This section provides an in-depth description and use of the XML elements specifically used in the developing a complete TM or DMWR/ NMWR manual.

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28 – General Information, Equipment Description And Theory Of Operation	This section provides an in-depth description and use of the XML elements specifically used in the General Information, Equipment Description with Theory of Operation Chapter (GIM).
29 – Operator Instructions Information	This section provides an in-depth description and use of the XML elements specifically used in the Operating Procedures Information Chapter (OPIM).
30 – Troubleshooting Information	This section provides an in-depth description and use of the XML elements specifically used in the Troubleshooting Information Chapter (TIM).
31 – Maintenance Information	This section provides an in-depth description and use of theXML elements specifically used in the Maintenance Information Chapter (MIM).
32 – Parts Information	This section provides an in-depth description and use of the XML elements specifically used in the Parts Information Chapter (PIM).
33 – Supporting Information	This section provides an in-depth description and use of the XML elements specifically used in the Supporting Information Chapter (SIM).
34 – Shared Common Elements	This section provides an in-depth description and use of the XML elements commonly used throughout TMs, DMWRs and NMWRs development.
35 – Basic TM, DMWR and NMWR Training	This section will provide the instructor training-type information on developing TMs, DMWRs and NMWRs using MIL-STD-40051 and MIL-STD-2361.
Part Part IV – XML and FOSI Tutorial	
36 – XML Tutorial	This section will provide the developer with XML knowledge to understand how to read a DTD, understand when and where elements are allowed and provided the basic rules for XML.
37 – Introduction to MIL-STD-2361 XML Markup	This section describes methods to markup XML documents in accordance with MIL-STD-2361. XML constructs. Adhering to the methods defined in this appendix will assisted in applying MIL-STD-2361 XML constructs to both legacy and new document development.
38 – Stylesheet/ FOSI Application as a Style Guide	This section contains information on the application of FOSIs as style guides.

22 WORKFLOW AND PROCESSES.

22.1 Technical and equipment publication workflow and processes. The flow diagram in Figure 14 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).

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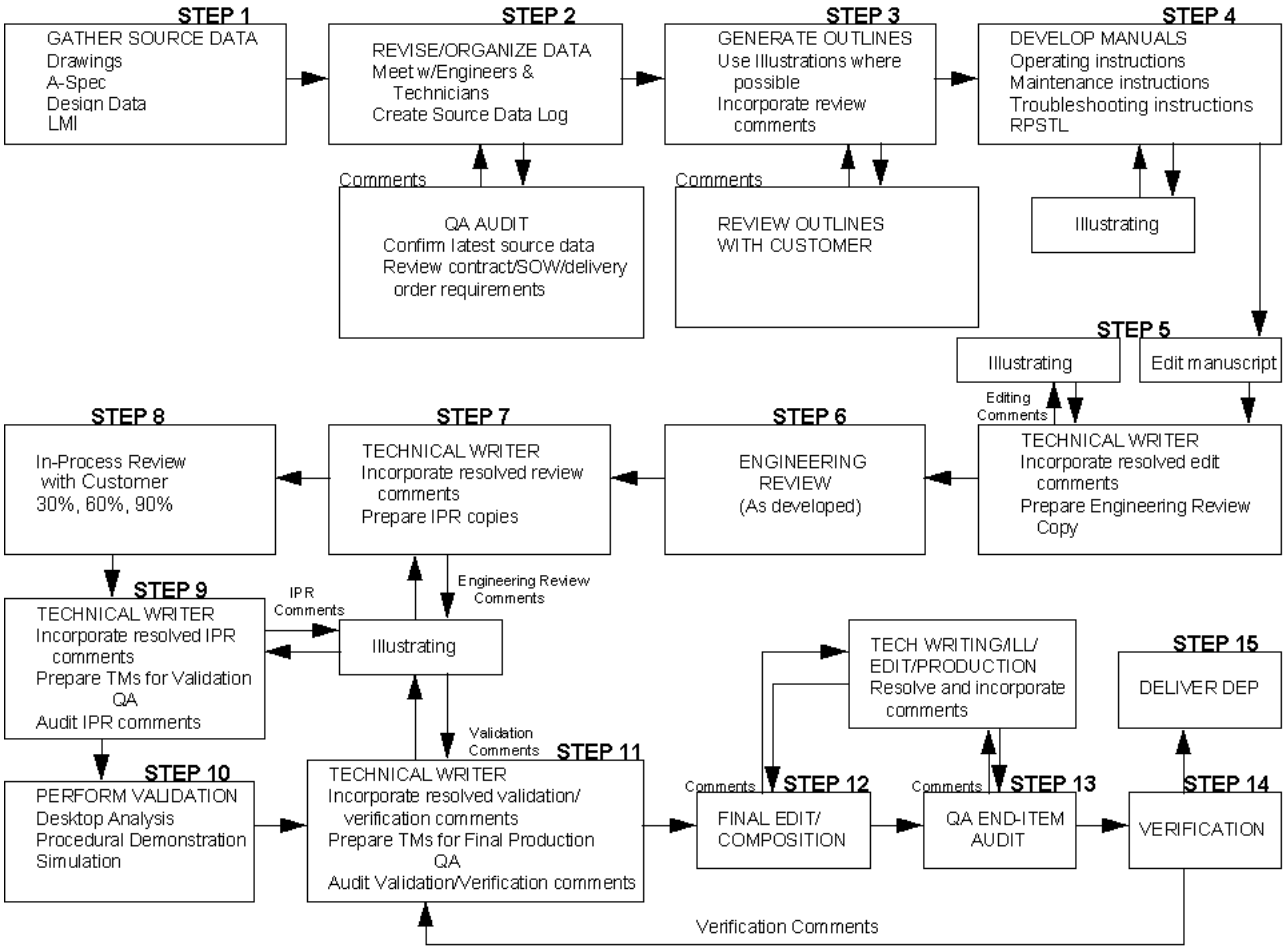

Figure 14 Technical manual development cycle.

22.1.1 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.

22.1.2 Organization process of a TM. Figure 14 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.

22.2 Traditional paper TMs, DMWRs and NMWRs development: process and flow. Figure 15 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

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

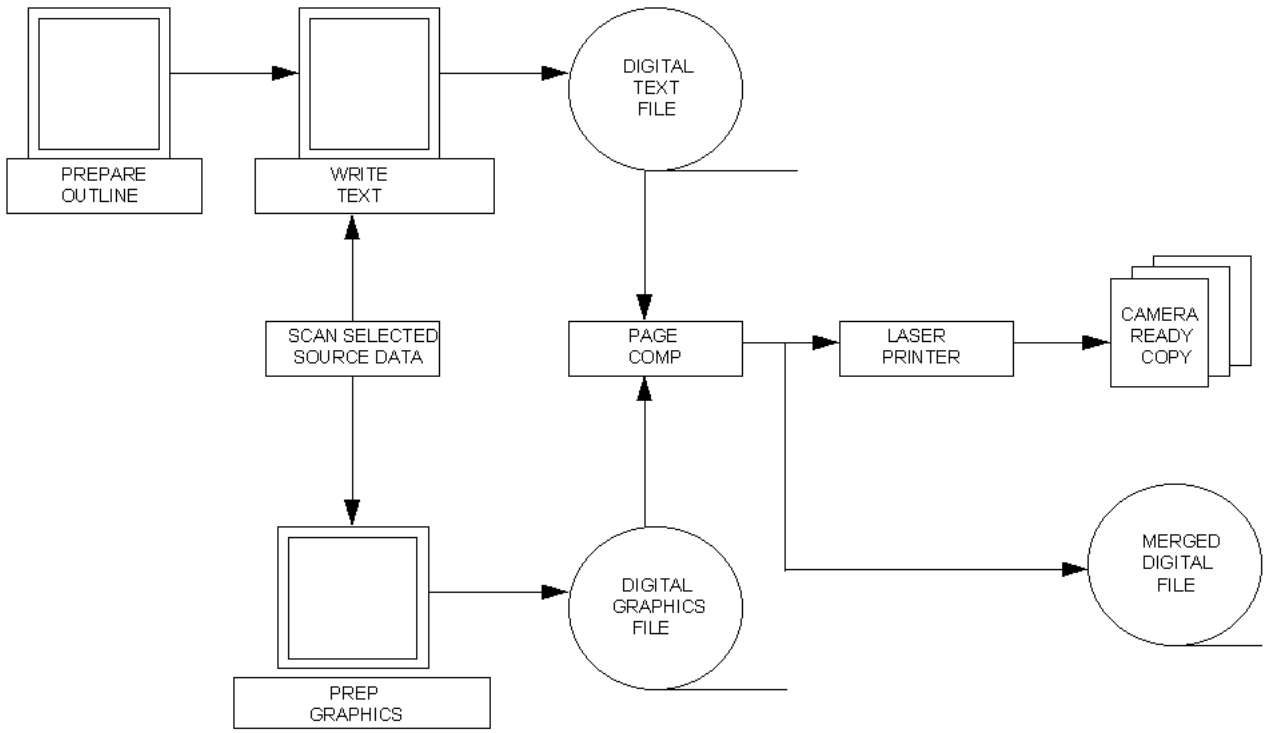

Figure 15 Traditional paper TM development process and flow.

22.3 MIL-STD-2361/MIL-STD-40051(TM) TM Development: process and flow. Figure 16 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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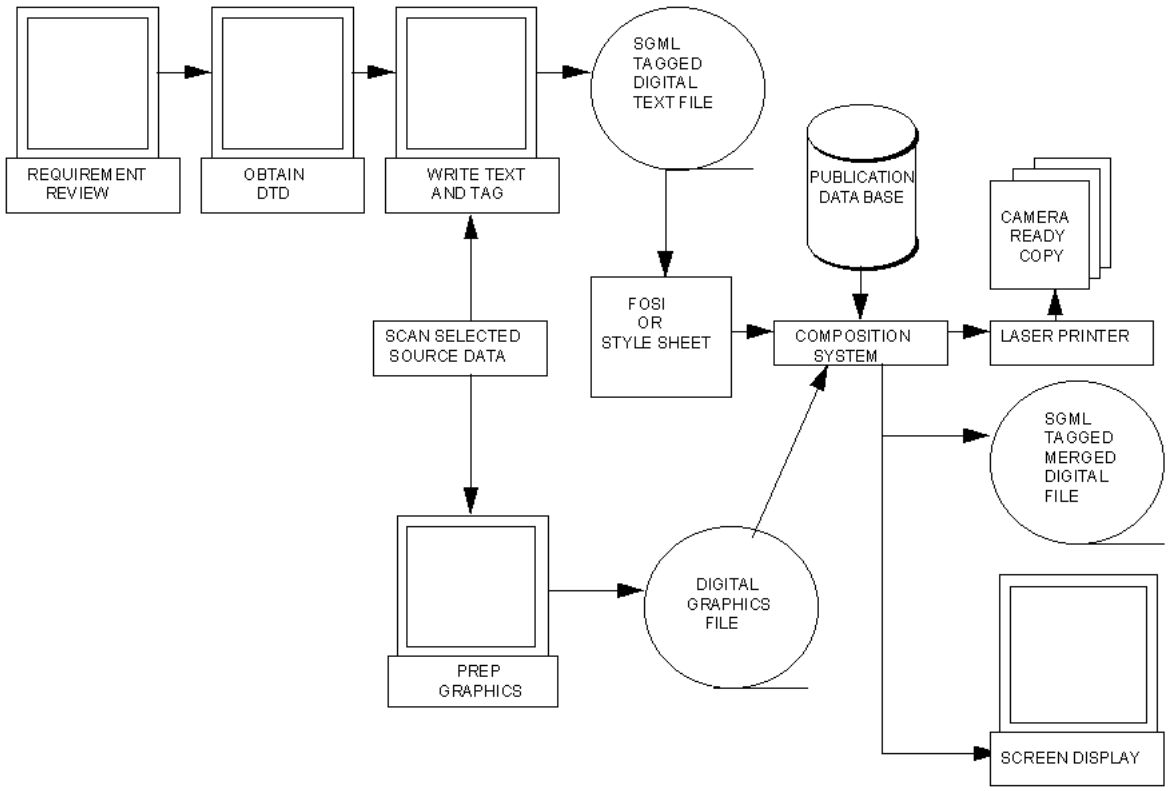

Figure 16 TM Development with MIL-STD-2361.

22.3.1 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 XML 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/XML Registry and Library (refer to paragragh 39.3 for further information) to obtain the DTDs and other associated XML 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 XML to legacy data requires conversion from either paper or digital documents, and is normally time consuming, labor intensive, and costly.

22.3.2 XML object and construct review and setup. The DTDs, and other XML objects and constructs, must be acquired, either from the contracting activity as part of the contractual document, or from the ASRL (see paragraph 39). 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 17 illustrates a general overview of the functional flow for the XML setup.

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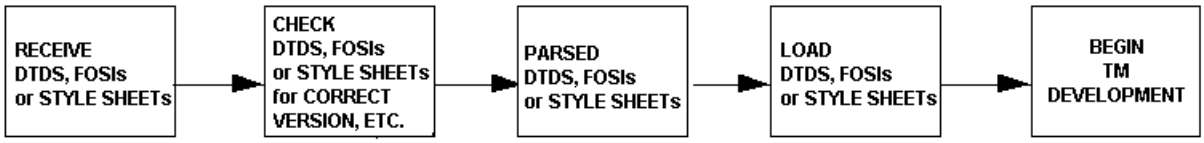

Figure 17 XML Setup Process.

Once the DTDs and associated XML 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) XML 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 XML platform(s) and setup for the specific XML 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 andXML 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.

22.3.3 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 TAN 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 XML tags associated with each of the functional requirements contained in MIL-STD-40051 have been physically embedded in the standard (see Figure 18). 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.

5.2.2.2 Description and use of controls and indicators work package <ctrlindwp>. Information shall be prepared for the description and use of all system or equipment controls and indicators. An introduction may be included in the work package. A description and use of controls and indicators <ctrlinddesc> shall be prepared for each equipment, assembly, or control panel having controls and indicators. Illustrations shall be prepared for all operator controls and indicators. For complex systems, a table <ctrlindtab> (standard information) or list may be used to explain the use of the controls and indicators. If a table is used, the controls and indicators description may be abbreviated to provide a reference to the table. For each control and indicator, the following entries shall be provided. Initial setup information is not required for this work package.

Figure 18 Example of embedded tags as shown in MIL-STD-40051.

22.3.4 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 XML 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

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suit its own structure and work flow. Tagging may be done by the TM writers themselves, or by specially 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.

22.3.5 Layout and style. An important difference from current TM development practices is the use of a FOSI or stylesheet, a formal method of specifying layout and style. This special XML file maps the styles to be applied to the tags in the document (see Section 38, FOSI Application as a Style Guide). The composition system interprets the FOSI or stylesheet for composition of paper or digital output.

22.3.6 Conversion of legacy data. Figure 19 shows a generalized process for converting legacy data to MIL-STD-2361 XML-tagged data. Once the decision to convert legacy data to XML 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 XML constructs. Remember that the MIL-STD-2361 XML content tags are included in the MIL-STD-40051 narrative. After tagging, the XML 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 23, Introduction to XML.

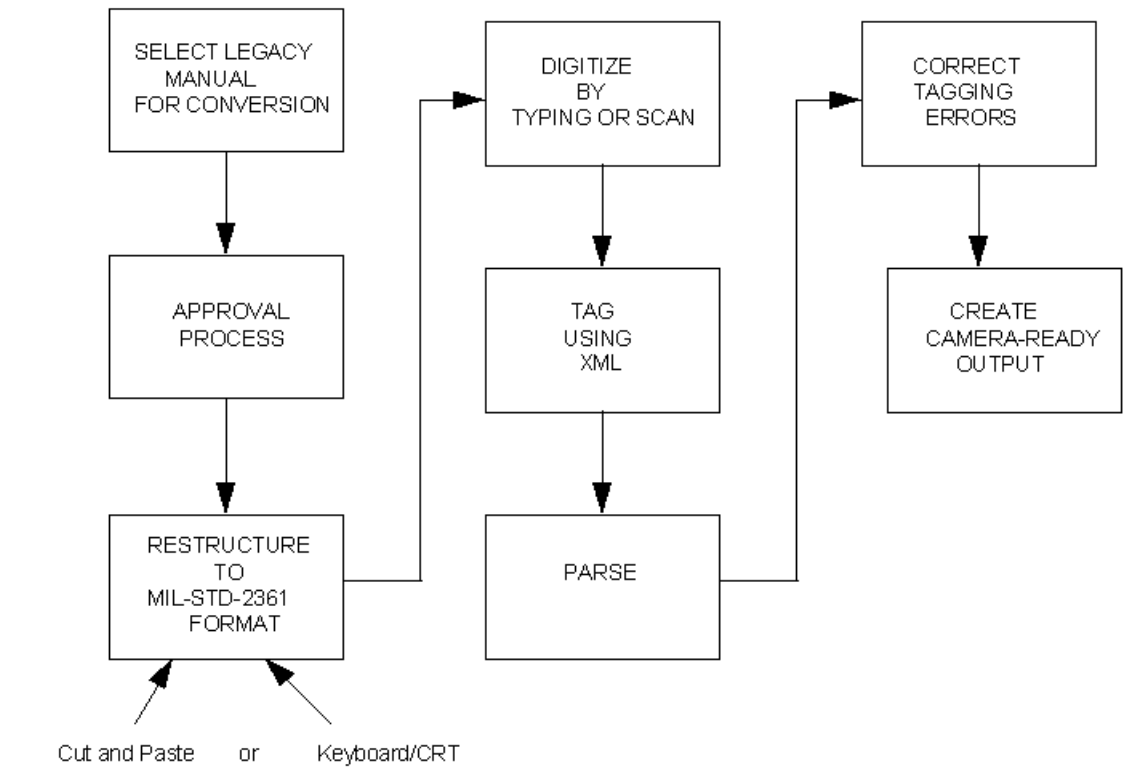

Figure 19 Conversion of legacy data to MIL-STD-40051 requirements.

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23 INTRODUCTION TO XML.

23.1 Introduction. This section provides a foundation for working with, and understanding, XML. Handbook users will find this section invaluable in identifying and defining the uniqueness peculiar to XML. Users are provided information regarding "what XML 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 XML Tutorial (see paragraph 23.2.6) 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.

23.1.1 XML experience. There are varying degrees of XML experience and expertise (see paragraph 23.3) required for different levels of function processes. For example, a publication author and his manager need not necessarily have the same XML background. This section addresses the levels and types of XML experience and expertise that may be needed for different implementation considerations.

23.1.2 Four primary components. The user will find easy to understand discussions regarding the four primary components of XML composition: the Document Type Definition (DTD), document instances, the XML declaration, and XML markup. Each of the components is described as to its role in the composition process. The XML 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.

23.2 What is XML. Extensible Markup Language (XML) "is the universal format for structured documents and data on the Web". Extensible Markup Language (XML) is a simplify subset of SGML and has Hyper Text Markup Language (HTML) capability to process information on the Web. It is an international, platform-neutral standard for creating and using documents and information across multiple software applications and computer platforms. XML establishes a consistent language and terminolog 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 XML in accordance with MIL-STD-2361 and this handbook is fully compliant with the international, federal, and REC-xml-19980210 standards for XML used throughout the Government and industry (see Section 2, Applicable Documents). Refer to the paragraph 1.1.1, for additional information regarding XML.

23.2.1 XML requirements. MIL-STD-2361 establishes XML requirements which reflect the functional requirements associated with the different types of Army publications. For example, the XML requirements contained in the technical manual (TM) segment of MIL-STD-2361 reflect the functional requirements contained in MIL-STD-40051. XML 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.)

23.2.2 Why use XML. XML allows developers to update and maintain critical source information over the life-cycle of weapon systems and other equipment. XML makes it easy and straightforward to use SGML on the Web and in turn provides a better means for the reuse and exchange of information among its developers and users. XML is an industry standard for sharing document-based information among applications and is compliant with open systems environments. See paragraph 1.1.1 for more information concerning the advantages of using XML.

23.2.3 The Technology After Next (TAN) Program concept. The Technology After Next (TAN) Program (formerly The Digital Publications Development (DPD) Program) is to provide a seamless flow of integrated operations, diagnostics, maintenance, and training information from developer to the soldier. XML, as applied to the TAN 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. XML well form document allows data to be chuncked into smaller bits of information and distributed.
e. Vendor, software, and platform independence and XML supports a wide variety of applications.

23.2.4 XML reference. XML reference information can be found in Section 2.3 of this handbook.

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23.2.5 MIL-STD-2361 XML tags. The MIL-STD-2361 DTDs contain two specific types of XML 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).

23.2.6 XML tutorial. A tutorial for MIL-STD-2361 XML application and use is contained in Section 36 , XML Tutorial of this handbook. The tutorial appendix in this version of the handbook is intended to provide an overview of the use of XML. There is a large selection of books on XML. A few of those non government books containing XML guidance can be found in Section 2.3.1.

23.3 XML experience and expertise. There are varying degrees of XML experience and expertise required for different functions. For example, a publications author and his manager need not necessarily have the same XML background. This portion of the handbook will address the levels and types of XML 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.

23.3.1 Types of XML knowledge. This paragraph addresses the types of XML 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 theMIL-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.

23.3.1.1 Publications manager. A publications manager needs a good overall understanding of XML. The managers experience and depth of XML 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 XML authoring/composition system for the organization, or contracting work to an XML conversion contractor, a publications developer, or XML consultant. XML knowledge provides the manager with tools for evaluation of technical XML input, whether it comes from within his own organization or some other source.

23.3.1.2 Publications author. The publications author will be the primary user of XML. The author will be authoring new material, developing publication revisions, and working with legacy data converted (or scheduled for conversion) to XML. The author will require the ability to read, understand, and work with XML concepts, rules, Document Type Definitions (DTDs), and stylesheets. See paragraphs 23.5.1 and 23.5.4.7 for information on DTDs and stylesheets.

23.3.1.3 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 XML publications (e.g., the author/editor, composition system, database, etc.). The computer specialist XML knowledge should be sufficient to allow interpretation of DTDs in order to develop composition scripts, conversion rules, and database management requirements.

23.4 XML overview.

23.4.1 XML is a markup language. Extensible Markup Language, XML Version 1.0, as specified in REC-xml-19980210, is official recommended by the World Wide Web Consortium W3C. The Extensible Markup Language (XML) is a subset of SGML. World Wide Web Consortium's (W3C) goal "is to enable generic SGML to be served, received, and processed on the Web in the way that is now possible with HTML. XML has been designed for ease of implementation and for interoperability with both SGML and HTML". A MIL-STD-2361 application of XML should contain: document type declaration, 23.5.1 DTD, 23.5.2 document instance, a stylesheet or an XML Schema. The fact that the markup used in XML is standardized facilitates the exchange of tagged documents between software applications. XML markup is commonly spoken of as tagging, because tags are inserted into the text.

23.4.1.1 Well-formed XML document. Compliant with REC-xml-19980210 requirements, the basic rules for writing well-formed XML documents.

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a. Start tags must have corresponding end tags
b. Elements can not overlap
c. Element names should start only with letters and underscores. Also, element names may contain letters, numbers, hyphens, periods, and underscores.
d. XML tags are case-sensitive
e. Empty elements must either have an end tag or close the empty tag with />
f. Reserved characters (< &> " ') are replaced with corresponding character sequence (< & > " ')
g. Each XML document must have a unique root element
h. Each attribute name in an element is unique
i. Each attribute name is followed by a value indicator (=) and a quoted string

23.4.2 XML is not a processing language. XML is not a processing language. It does not perform calculations, actions and decisions in the way that a computer program, written in a language like C++ or Java does. Instead it is a markup specification language with which you can design ways of describing text information or data information usually for storage, transmission, or processing by a program. XML supplies a structured, tagged text database upon that 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 XML are accomplished by software that "speaks" XML and can respond to Document Type Definitions (DTD).

23.4.3 Understanding XML as a text database. Understanding XML as a text database reinforces its separation of content markup and specific presentation instructions. XML is ideally suited to multiple presentation formats and media platforms. XML 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 stylesheet provides this information).

23.5 XML composition. XML 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 XML.

23.5.1 Document Type Definition (DTD). A functional unit for MIL-STD-2361 XML 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).

23.5.2 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 XML 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. Document instance must contain an XML declaration
b. Text marked up with XML tags.
c. Illustrations incorporated by tagged references to graphic files.

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d. Every document instance must either incorporate or reference its governing DTD.
e. If the document instance uses external file or text entities not defined in the DTD, those entities must be declared in the document instance.

23.5.3 XML declaration. Every document and DTD is accompanied by an opening XML declaration. The XML declaration describes some of the most general properties of the document and telling the XML processor that it needs an XML parser to interpret this document. Each DTD in MIL-STD-2361 uses the defined XML declaration in MIL-STD-2361 .

23.5.4 XML markup. XML 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.

23.5.4.1 XML tags. Tags contain two parts: start-tags and end-tags as shown in Table 2. 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>
  ```

Table 2. XML Tags

Order	Part	Description
1	<	Start Tag Open Delimiter
	</	End Tag Open Delimiter
2	crewmember	Generic Identifier
3	>	Tag Close Delimiter
4	/>	Empty Element Tag

23.5.4.2 Markup minimization. Compliant with REC-xml-19980210 requirements, XML start tags must have corresponding end tags. Empty elements must be tagged with the empty tag (/>).

- DTD fragment for corresponding end tags:
  ```
  <!ELEMENT date (#PCDATA)>
  ```
- Document instance fragment for corresponding end tags:
  ```
  <date>11 September 2001<date>
  ```
- DTD fragment for an empty element:
  ```
  <!ELEMENT figno EMPTY>    <!ATTLIST figno  idref IDREF #REQUIRED>
  ```
- Document instance fragment for an empty element. XML allows two methods of tagging an EMPTY element
  ```
  <figno idref="f25"/>
  ```
  or
  ```
  <figno idref="f25">The parser will not allow any content, like this, between the start and e
  ```

23.5.4.3 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,”

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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. TheMIL-STD-2361 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 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.

23.5.4.4 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. REC-xml-19980210 and ISO 8879 defines several data types, depending on whether the value consist of numbers only, numbers and alpha characters, reference XML elements, cross-references, or an unlimited text string. Rather 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 (0 | 1)   #IMPLIED
     tabstyle   NMTOKEN   #IMPLIED
     tocentry   (0 | 1)   "l"
     shortentry  (0 | 1)   #IMPLIED
     frame   (top | bottom | topbot | all | sides | none)          "all"
     colsep   (0 | 1)   "l"
     rowsep   (0 | 1)    "0"
     orient   (port | land)  "port"
     %body;         %secur;>
```

23.5.4.4.1 True-false (0 | 1). A value of an attribute may be given as true or false in which "0" implies "no" or "false" and "1" (or any non-zero number) implies "yes" or "true.The attribute **crew-maintained** in the example above for the element ***<pmcstable>*** specifies whether or not the equipment is maintained by an entire crew (1 or any other number) or a single individual (0). The attribute **rowsep** determines row separation. If other than zero the value is yes or true and displays the internal vertical row ruling below each item. This value type can have a default value if specified. The attribute **rowsep** has the default value of "0" if a value is not selected.

23.5.4.4.2 Value list. The attribute can contain a discrete list of legal values. The attribute **frame** in the example above for the element ***<pmcstable>*** specifies whether or not the table contains a "top" or "bottom" frame, top and bottom "topbot" frame, surronded by "all" frames, containing just "side" frames or the table does not contain any frames "none". The attribute can have a default if specified. The attribute **frame** default value is "all" if a value is not selected. This attribute **frame** selects the format that is desired for the ***<pmcstable>*** frame.

23.5.4.4.3 Name token (NMTOKEN). The attribute value NMTOKEN is a string of characters that begins with a letter and can contain numbers, letters and certain punctuation. See the attribute **tabstyle** in the example above for the element ***<pmcstable>*** (see paragraph 23.5.4.4).

23.5.4.4.4 Name token list (NMTOKENS). The attribute value NMTOKENS is a sequence of one or more NMTOKENs separated by spaces. The example above PMCS table ***<pmcstable>*** (see paragraph 23.5.4.4)

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contains the entity set security**%secur;** that contains one or more attributes having the value NMTOKENS. See entity set security **%secur;** below.

```
<!ENTITY % secur "security (uc | fouo | c | s | ts) #IMPLIED
      restrict NMTOKENS  #IMPLIED
      release NMTOKENS  #IMPLIED
      codeword NMTOKENS  #IMPLIED
      scilevel (0 | 1)  '0'
      diglyph NMTOKENS  #IMPLIED">
```

23.5.4.4.5 Unique identifier (ID). The attribute value "ID" is a special type of attribute that gives an element a label guaranteed to be unique in the document. The instance is not allowed to have two elements having the same "ID" attribute value. It is used as a cross reference attribute with the attribute value identifier reference "IDREF" or the attribute identifier reference list "IDREFS". The value "ID" of the attribute **wpno** contains the unique number assigned to this work package by the original contracting activity. See below the example value "ID" of the attribute **wpno** of the element ***<aalwp>***.

```
<!ATTLIST aalwp
    wpno ID #REQUIRED
    %wprsrc-vals;
   %tracking;
   %wpbodyatt;
   %secur;>
```

23.5.4.4.6 Identifier reference (IDREF). The attribute value "IDREF" is the unique identifier reference refering to the ID of another element. The attribute **wpref** value "IDREF" is used as a cross reference attribute with the attribute value "ID" of another element. When an "IDREF" is used and there is not an "ID" with the same value as "IDREF", the parser reports an error. See below the example of the attribute value**IDREF** of the attribute **wpref** of element work package number***<wpno>***.

```
<!ATTLIST wpno
    wpref IDREF #REQUIRED
    %secur;>
```

23.5.4.4.7 Identifier reference list (IDREFS). The attribute value "IDREFS" is a space-separated list of "IDREF" values. The attribute value of **refs** of the element ***<oiptab>*** is the cross reference identifier "IDREFS" to the reference letter "ID" that may be included in the OIP to locate the critical inspection characteristics of the parts on the illustrations. Every "IDREF" in the list should match an "ID" value in the instance or the parser reports an error.

```
<!ATTLIST oiptab
  oipno ID #REQUIRED
  refs IDREFS #IMPLIED
  %secur;>
```

23.5.4.4.8 Entity name (ENTITY). Used to reference a general entity. The general entity must be declared to identify the data being declared. See paragraph 36.3.5.3 on details using the graphic data type. The example above ***<pmcstable>*** (see paragraph 23.5.4.4) contains the entity set security **%secur;** that contains one or more attributes.

23.5.4.4.9 Entity name list (ENTITYs). Used to reference a general entity. The general entity must be declared to identify the data being declared. See paragraph 36.3.5.3 on details using the graphic data type. The element (***<pmcs-entry>*** see paragraph 23.5.4.4) contains the entity set **%bodyatt;** that contains attributes but also contains the entity set references **%refs;**. See the following example below.

```
<!ENTITY % bodyatt "inschlvl CDATA  #IMPLIED
      delchlvl CDATA  #IMPLIED
      label  CDATA  #IMPLIED
      texttype CDATA  #IMPLIED
      itemid  NMTOKEN #IMPLIED
      config  CDATA  #IMPLIED
      skilltrk CDATA  #IMPLIED
```

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```
%refs;">
```

23.5.4.4.10 Character data (CDATA). The attribute value "CDATA" contains any character data. Character data can be a number, number and alpha character but can not contain elements or processing instructions. The element electronic mail (**<*email*>**see paragraph 34.4.4.8) contains an attribute **address** that contains the value "CDATA" that specifies the address of the electronic mail. See the following example below:

```
<!ATTLIST email  address CDATA #REQUIRED>
```

23.5.4.5 Entities. XML 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. The non-keyboard character does not have to be declared in the DTD since it is an entity of ISO 8879.

a. Text entity example:
   (1) 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>">
```

   (2) Referenced in the instance: **&chkeqp;**

23.5.4.6 Validation of XML markup. A distinctive characteristic of XML is the parsing process, which allows the DTD structure and the document instance markup to be tested. Unlike most proprietary markup languages, XML is self-validating through the medium of the XML parser. Refer to paragraph 24.2.4.2 for additional information on XML 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 REC-xml-19980210 and ISO 8879 standards.
b. The encoded file is used there after 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 XML. The parsing process guarantees that any XML application software receives files with the expected structure, since the operation of XML software is built on the tags context within the document.

23.5.4.7 Stylesheets. The stylesheet provides a set of formatting characteristic values used to rigorously describe composition processing functions to be performed on the elements of a text document to provide the format style required by a functional specification or standard, such as MIL-STD-40051, AR 25-30 or TRADOC Reg 350-70. A stylesheet (i.e. FOSI, XSL-FO) delivered with the document should contain values of characteristics for every tag used in the DTD, in every context in which the tag has a unique formatting requirement, and with its attributes if they affect the formatting.

23.5.4.7.1 Generated text. Stylesheets may provide specified text that is automatically output by the stylesheet for your application during the formatting of the document. Text can be generated by an element or an attribute when applied. Generated text can be a word, title or a paragraph of text.

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23.5.4.7.1.1 Generating text with elements. Elements can be used to generate text that are sepecified by the assigned stylesheet as a word, title or a paragraph of text. The following are examples of elements that are commonly used in MIL-STD-2361 to generate text:

- Chapter title – ***<gim>***

```
<gim>General Information, Equipment Description and Theory of
Operation ....<gim>
```

- Requirement title – ***<reporting>***

```
<reporting>Reporting Errors and Recommending Improvements Statement
....<reporting>
```

- Maintenance task title – ***<dissassem>***

```
<dissassem>Disassembly....<dissassem>
```

- Warning – ***<warning>***

```
<warning>WARNING....<warning>
```

23.5.4.7.1.2 Generating text with attributes. Attribute values of elements can be assigned specific text to be generated by the assigned stylesheet when the attribute it is applied. The following are examples of attribues that are commonly used in MIL-STD-2361 to generate text:

- Bullet list “bullet” – Specifies whether the item is preceded by a bullet character of the element randlist "."

```
<randlist bullet="1"><item>Example of the attribute "bullet".<item>
<randlist>
```

- Key Word “keyword” – Specifies a word or phrase that may be used as the title of a warning or a caution "HEAVY OBJECT"

```
<warning keyword="HEAVY OBJECT">....<warning>
                                    WARNING
                                  HEAVY OBJECT
```

- Level “level” – Specifies the level of the information module contained in the element maintlvl, in this case, "General Support".

```
<maintlvl level="gensup">
```

23.5.4.8 Extensible stylesheet language for formatting objects (XSL-FO). Extensible stylesheet language for formatting objects is a pagination markup language describing a rendering vocabulary capturing the semantics of formatting information for paginated presentation. The paginated presentation may be displaying multiple separated pages on a screen, on paper or audibly providing the format style required by a functional specification or standard, such as MIL-STD-40051, AR 25-30 or TRADOC Reg 350-70.

23.5.4.9 Formatting output specification instance (FOSI). In MIL-STD-2361 a FOSI is written for each DTD. In MIL-STD-2361 a FOSI may be written for the 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"
```

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```
  kernpair="null">
<indent leftind="0" rightind="0" firstln="0">
<quadding quad="left" lastquad="lleft">
<highlt reverse="0" scoring="0"  scorewt="0.5pt" scoreoff="2.5pt"
scorechr="" bckclr="bwhite" fontclr="black" bckpct="0" forpct="l00" allcap="0">
<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>
<usetext>
<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.

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.

24 IMPLEMENTATION GUIDANCE.

24.1 MIL-STD-40051 and MIL-STD-2361 Relationship.

24.1.1 MIL-STD-40051, "Technical Manual Preparation". MIL-STD-40051 establishes the technical and functional content, style, and format requirements for the preparation of paper and digital page-oriented TMs, DMWRs, and NMWRs 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-40051 are divided into the following specific functional elements (parts) to enhance documentation usability in performance of weapon system/equipment and component maintenance.

a. General Information, Equipment Description and Theory of Operation Information (GIM).
b. Operator Instructions (OIPM).
c. Troubleshooting Procedures (TIM).
d. Maintenance Instructions (MIM).
e. Parts Information (PI) and Repair Parts and Special Tools List (RPSTL).
f. Supporting Information (SIM).

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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.

24.1.1.1 Technical content selection matrixes. MIL-STD-40051, as show in example Table 3, contains tables that list all of the technical and functional content requirements for the development of all levels of maintenance (through depot) for TMs, DMWRs and NMWR. The tables indicate which parts ofMIL-STD-40051 are applicable and lists the content requirements for each type of TM, DMWR and NMWR. The content requirements presented in the tables are in the order in which they should appear in the TM, DMWR and NMWR. The Technical Content Selection Matrixes appear in Appendix A in MIL-STD-40051.

Table 3. Technical Content Selection Matrixes

Table A-1 TM Requirements Matrix for PAGE-BASED						
TM Content	**-10**	**-12 -12&P**	**-13 -13&P**	**-14 -14&P**	**MIL-STD- 40051 Reference**	**Element Name**
FRONT MATTER	R	R	R	R	5.3.1	<paper.frnt>
Front cover	R	R	R	R	5.3.1.1	<frntcover>
Warning Summary					5.3.1.2	<warnsum>
Change transmittal page					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>
CHAPTER 1. GENERAL INFORMATION, EQUIPMENT DESCRIPTION AND THEORY OF OPERATION	R	R	R	R	1–5.1	<gim>
GENERAL INFORMATION WORK PACKAGE	R	R	R	R	1-5.2	<ginfowp>

24.1.1.1.1 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 and NMWR being developed. A brief description of each of the columns is provided below.

a. Column 1 shows the name of the TM, DMWR and NMWR content part.
b. Column 2-5 contains an "R" if the content is required in the TM, DMWR and NMWR. The column block will be blank if the content is not mandatory. The column block will be shaded if the content is as required.
c. Column 6 contains a reference to the MIL-STD-40051 paragraph which addresses the TM, DMWR and NMWR content requirement.
d. Column 7 contains the TM, DMWR and NMWR content element name (NOTE: the element name is also the XML tag name from MIL-STD-2361).

24.1.1.1.2 Intended use on the content selection matrixes. The proponent of the TM/DMWR will determine the type(s) of TM, DMWR and NMWR 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 and NMWR being developed.). The proponent may indicate the type(s) of TM, DMWR and NMWR required by filling in the blank after "TM Requirements Matrix for" at the top of each matrix.

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For each type of TM, DMWR and NMWR 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 and NMWR later by the Government. The blocks that are shaded is content determined by the developer, which is necessary in a work package.

24.1.1.1.3 Acquisition impact. The TM, DMWR and NMWR Content Selection Matrix table(s) will become contractually binding when it is made part of a contract, statement of work, or other contractual instrument.

24.1.2 MIL-STD-2361, "Digital Publications Development". MIL-STD-2361 establishes the Extensible Markup Language (XML) requirements for use in Army digital publications. This standard is a product-oriented interface standard that addresses XML application to functional requirements set forth in Government functional requirements standards and specifications. This standard establishes the requirements for developing XML publications in accordance with the various Army functional requirements standards and specifications.

24.1.2.1 MIL-STD-2361 in publication development. Within MIL-STD-2361, Army publication XML 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 XML requirements in MIL-STD-2361 are based on, and explicitly reflect, these technical, functional, format, and style requirements.

24.1.2.1.1 XML requirements development. This volume of MIL-STD-2361 addresses implementation guidance for the development of Army publications using the XML requirements for Army TM, DMWR and NMWR contained in MIL-STD-2361. The MIL-STD-2361 XML requirements were developed in accordance with, and directly reflect, the functional requirements contained in MIL-STD-40051.

24.1.2.1.1.1 Functional requirements analysis and determination. XML requirements contained in MIL-STD-2361 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 and NMWR requirements were re-engineered to become MIL-STD-40051). (NOTE: In no case will functional requirements be changed by ANYONE other than the proponent for the requirements.)

24.1.2.1.1.2 Determination of XML requirements. Once the current functional requirements have been identified, re-engineered (if required), and validated, existing XML DTDs and tags are reviewed to determine if the functional requirements are covered by existing XML requirements. This review will result in the identification of existing XML that may be applied to the functional requirements. Another result of the review will be the identification of functional requirements for which no existing XML requirement exists. In this case, new XML DTDs and/or tags will have to be developed.

24.1.2.1.1.3 Application of XML requirements to functional requirements. When the joint determination between the functional requirement proponent and the XML requirement proponent has been made that the XML requirements accurately reflect the functional requirements, the XML applications may be applied to the publications. In the case of TM, DMWR and NMWR, the application of XML is normally accomplished by a publication development contractor under a contract from the publication proponent.

24.1.2.2 Publication and requirement relationships. There is an explicit relationship chain between a TM, DMWR and NMWR , their functional requirements document (MIL-STD-40051), and the XML requirements document (MIL-STD-2361). One of the objectives of this handbook is to provide a clear understanding of 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.

24.1.2.2.1 Element relationships. TM, DMWR and NMWR content is comprised of document elements as shown in Column 1 of the TM, DMWR and NMWR Content Selection Matrixes, above. These document elements have a defined relationship with both the functional requirements in MIL-STD-40051 and the XML requirements in MIL-STD-2361.

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24.1.2.2.1.1 TM, DMWR and NMWR content to MIL-STD-40051 Requirements. Each item in TM, DMWR and NMWR content (e.g., Front Matter, General Information Work Package, etc.) can be mapped to a functional requirement (paragraph and page) in MIL-STD-40051. The TM, DMWR and NMWR content is the result of it's corresponding functional requirement in MIL-STD-40051. The MIL-STD-40051 functional requirement defines the content, specifies its location in the TM, DMWR and NMWR, and defines whether or not the content is required.

24.1.2.2.1.2 TM, DMWR and NMWR to MIL-STD-40051 to MIL-STD-2361. Both the TM, DMWR and NMWR content items and their corresponding functional requirements can be mapped to the XML requirements in MIL-STD-2361. As previously stated, the XML requirements in MIL-STD-2361 reflect specific functional requirements in MIL-STD-40051MIL-STD-2361. For each TM, DMWR and NMWR content item and MIL-STD-40051 functional requirement there is a corresponding DTD, XML tag, and paragraph/page reference in MIL-STD-2361. Table 4 is an example illustrating the mapping between the TM, DMWR and NMWR, MIL-STD-40051, and MIL-STD-2361.

Table 4. Mapping TM, DMWR and NMWR to XML Guidance

TM, DMWR /NMWR Content	**MIL-STD-40051 Reference**	**MIL-STD-40051 Reference**	**MIL-HDBK-2361 DTD**	**MIL-HDBK-2361 XML Tag**	**MIL-HDBK-2361 Chapter XML Tag**	**MIL-HDBK-2361 XML Tag**
	Paragraph	**Page**	**Paragraph**	**Page**		
General Information Work Package	1-5.2	3	29.3.3	151	GIM	<ginfowp>
Troubleshooting Procedures	3–5.3.3.6.4	12	31.3.5.3	216	TIM	<tsproc>
Removal	4-5.3.2.4.1.6	21	32.3.1.5.1.12	275	MIM	<remove>

24.2 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 20.

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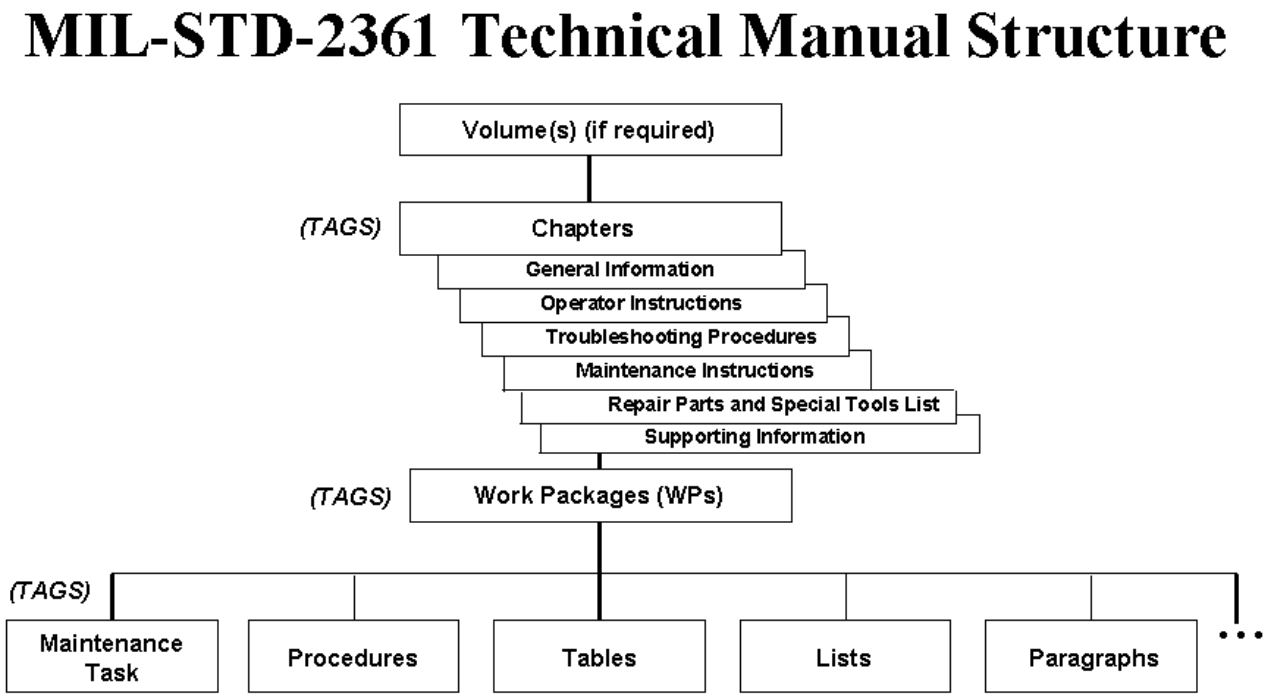

Figure 20 MIL-STD-2361 TM structure.

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 as shown in Figure 21. 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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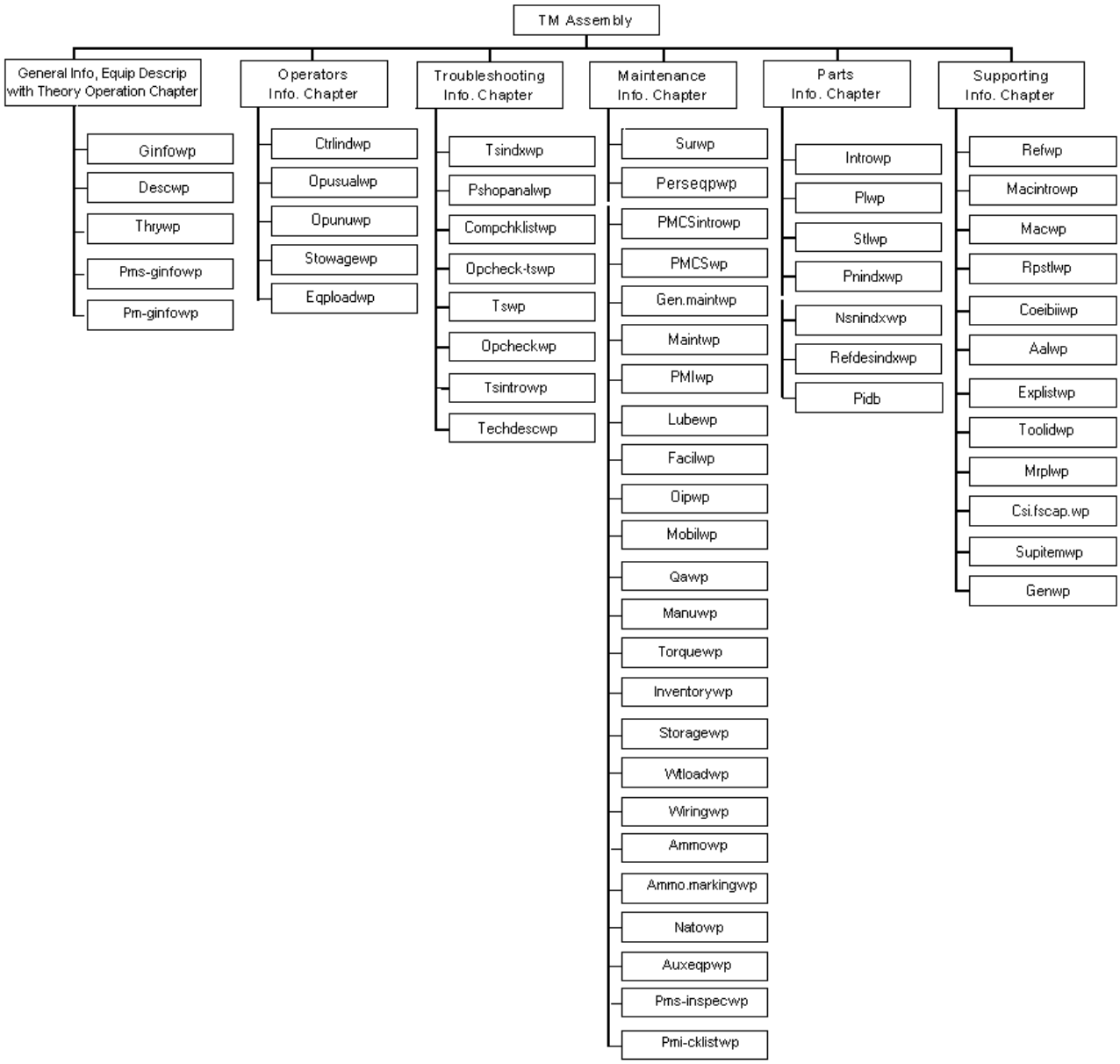

Figure 21 MIL–STD–2361 information chapter hierarchy.

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 for configuration control and reuse of the information contained in the WP (see MIL-STD-40051). This number does not change over the life of the work package. XML 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 22 for an example of a work package.

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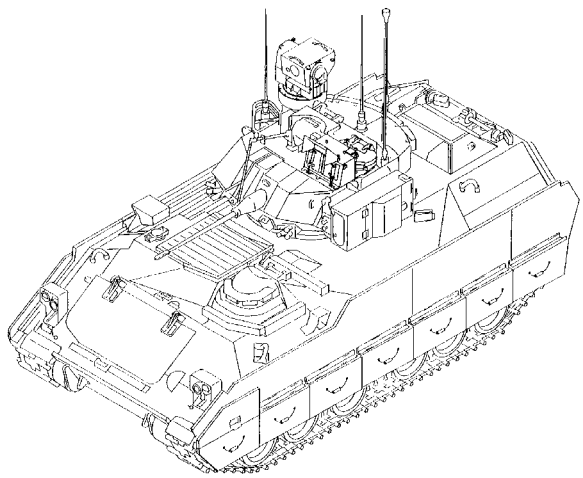
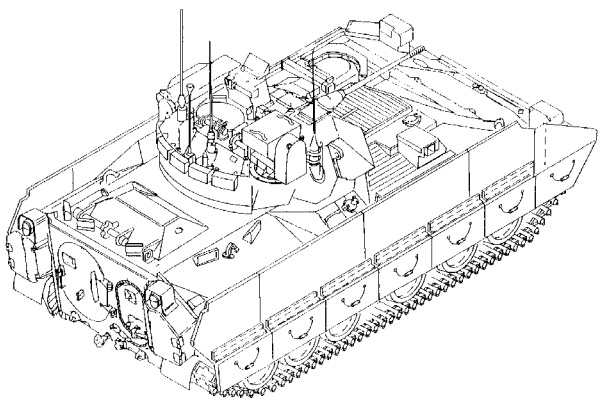
OPERATOR
FIGHTING VECHICLE, INFANTRY
M2A3
2350-01-436-0005 (EIC TBD)
FIGHTING VECHICLE, INFANTRY
M3A3
2350-01-436-0007 (EIC TBD)
GENERAL INFORMATION

SCOPE



Left Front View



Right Rear View

This manual tells how to operate and maintain the hulls of the 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 22 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><fsc>2350</fsc><niin>01 436 0005</niin></nsn>
<eic>(EIC TBD)</eic>
<name>FIGHTING VECHICLE, INFANTRY</name>
<modelno>M3A3</modelno>
<nsn><fsc>2350</fsc><niin> 01 436 0007</niin></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, U.S. 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: Distribution Operations
Facility, 1655 Woodson Road, St. Louis, MO 63114–6128.</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.def><term>Brush guard</term><def><para>Duck core rubber sheet</para></def></term.def>
<term.def><term>CVC helmet</term><def><para>DH 132 helmet</para></def></term.def>
<term.def><term>Dipstick</term><def><para>Liquid measure gage rod</para></def></term.def>
<term.def><term>Firing port weapon</term><def><para>M231 5.56mm submachine gun</para></def></term.def>
<term.def><term>Hot box</term><def><para>25mm ammo container</para></def></term.def>
<term.def><term>Lock wire</term><def><para>Nonelectrical wire</para></def></term.def>
<term.def><term>MRE heater</term><def><para>Heater, water and ration</para></def></term.def>
<term.def><term>Surge tank</term><def><para>Tank radiator auxiliary</para></def></term.def>
<term.def><term>Squad headset</term><def><para>H-366/VRC headset</para></def></term.def>
<term.def><term>Starlight scope</term><def><para>Night vision sight, individual served weapons</para></def></term.def>
<term.def><term>Steering yoke</term><def><para>Steering wheel</para></def></term.def>
<term.def><term>TOW missile</term><def><para>Guided missile, surface attack, telemetry, BGM-71A, TOW </para></def></term.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.def><term>A</term>
<def><para>After</para></def></term.def>
<term.def><term>Ammo</term>
<def><para>Ammunition</para></def></term.def>
<term.def><term>AP</term>
<def><para>Armor Piercing</para></def></term.def>
<term.def><term>Assy</term>
<def><para>Assembly</para></def></term.def>
<term.def><term>AUTO</term>
<def><para>Automatic</para></def></term.def>
<term.def><term>B</term>
<def><para>Before</para></def></term.def>
<term.def><term>BELRF</term>
<def><para>Bradley Eyesafe Laser Range Finder</para></def></term.def>
<term.def><term>BO</term>
<def><para>Blackout</para></def></term.def>
<term.def><term>BRT</term><def><para>Bright</para></def></term.def>
<term.def><term>CAL</term>
<def><para>Calibration</para></def></term.def>

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```
<term.def><term>CFV</term>
<def><para>Cavalry Fighting Vehicle</para></def></term.def>
<term.def><term>CKT BKR</term>
<def><para>Circuit Breaker</para></def></term.def>
<term.def><term>CVC</term>
<def><para>Combat Vehicle Communications</para></def></term.def>
<term.def><term>D</term>
<def><para>During</para></def></term.def>
<term.def><term>DCS</term>
<def><para>Digital Compass System (MV103AFV)</para></def></term.def>
<term.def><term>DEG</term>
<def><para>Degrees</para></def></term.def>
<term.def><term>DECLIN</term>
<def><para>Declination</para></def>
</term.def></deflist></para></loa></ginfowp>
```

24.2.1 Information grouping. Information developed in accordance with MIL-STD-40051 and MIL-STD-2361 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 XML 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 XML tools and utilities, such as searching capabilities, and allowing large information repositories to be broken down and rearranged intelligently into individual documents.

24.2.2 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.

24.2.2.1 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. XML 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. The element ***<step1>*** and its attributes **crewmember** and **applic** is an example of an element and its attributes that can be used to indicate variations.

24.2.2.2 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 23 is for direct reuse and Figure 24 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).

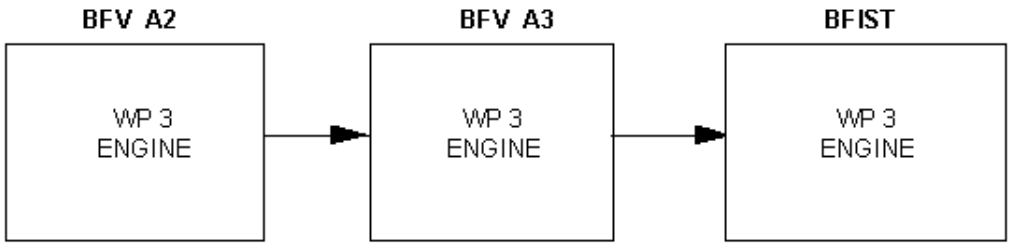

Figure 23 Example 1 Direct Reuse.

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.

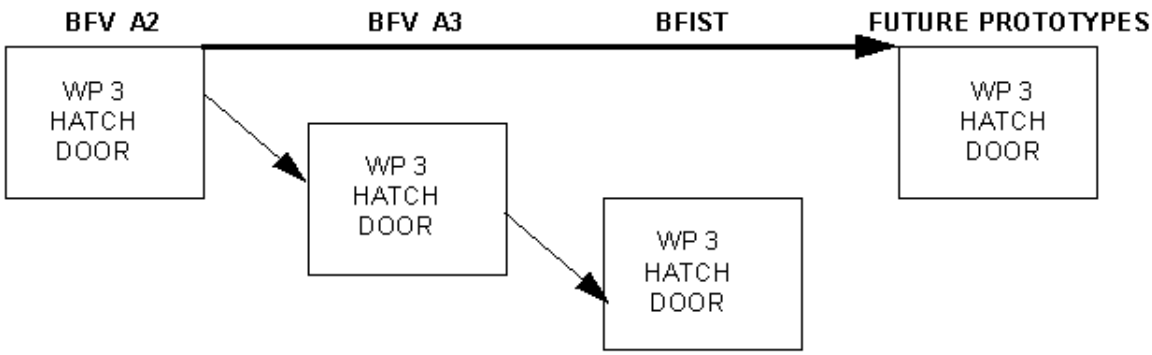

Figure 24 Example 2 Overlayed Reuse

24.2.2.3 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, as shown in Table 5 may be used to determine if a new work package should be created, or an existing work package can overlay with other text.

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Table 5. 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.
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.

24.2.2.4 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 .
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.

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24.2.3 XML process. The XML process follows the general outline in the following paragraphs. For a more extensive explanation of XML and its application to TM development see Section 23, Introduction to XML. Figure 25 is an overview of the XML process from the developers perspective.

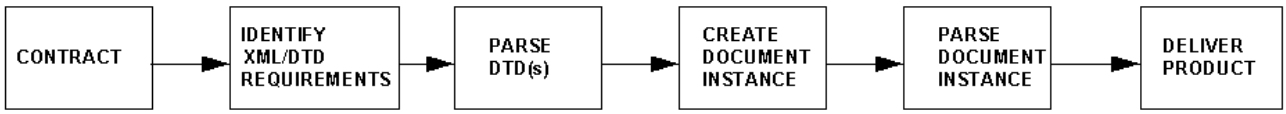

Figure 25 XML Process

24.2.3.1 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 XML 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 XML authoring software, or in a word processing system by manual insertion of tags.

24.2.3.2 Page-based vs frame-based . The same DTD can be used for both page-based and frame-based TMs, DMWRs and NMWRs. 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 stylesheets or FOSIs are used for the formatting of the page-based or frame-based TMs, DMWRs and NMWRs. A page-based and frame-based TM, DMWR and NMWR have the same content coverage. However, the display and presentation of the information is different.

24.2.3.3 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 XML 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.

24.2.3.4 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 XML and the DTD. Any errors found by the parser must be corrected before proceeding further.

24.2.3.5 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 stylesheet 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 XML database of all TMs for on demand printing.

24.2.4 Validation and verification process.

24.2.4.1 Validation of an XML document. Preparation of documents in an automated support environment typically consists of the following steps:

a. Downloading an approved Document Type Definition (DTD) and stylesheet or Formatting Output Specification Instance (FOSI) from the ASRL.
b. Parsing the DTDs and stylesheets or FOSIs.
c. Creating a document instance.

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d. Parsing the document instance.
e. Using the approved stylesheet or 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.

24.2.4.2 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 XML parser, the REC-xml-19980210 Standard defines the parser as "A program (or portion of a program or a combination of programs) that recognizes markup in XML conforming documents." A validating XML 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 (see paragraph 39).

a. Most of the commercial XML authoring tools on the market today contain a built-in validating parser. To create XML 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 XML 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 XML document that conforms to a valid XML 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's stylesheet/FOSI, which conforms to MIL-PRF-28001, in conjunction with a composition system to read the XML document and produce a paper output.
d. It is recommended that the following XML parsers be used when parsing DTDs that have been downloaded from the ASRL:
    - XMLSPY - www.xmlspy.com
    - XML Authority - www.tibco.com
    - Arbortext's Epic - www.arbortext.com

24.2.4.3 Valid XML Document vs. Conformance to MIL-STD-40051. Parsing the XML document does not verify that the information or content of the TM matches the meaning for the XML 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.

24.2.4.4 Formal public identifiers for entities. Each formal public identifier (FPI) for graphics and file entities should have a file name associated with that FPI. The FPI is mapped to the file name by using an XML catalog. The format for the XML catalog is displayed below:

```
PUBLIC "-//Owner//ENTITIES Public_Title Rev X.XX YYYYMMDD//EN"
"(DIR) file.name"
PUBLIC "-//USA-DOD//DTD MIL-STD-962B NON-CONFORMING 930105//EN"
"MIL-STD-962C1.dtd"
```

By making modifications as necessary in the XML 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 XML catalog. Verification of the FPI for entities must satisfy two criteria. The first criteria is that each file identified in the XML catalog must be included with the electronic delivery. The second criteria is to verify that each FPI in the XML document instance is defined in the XML catalog. If either criteria fails, the XML document instance is unacceptable.

24.2.4.5 System identifiers for entities. System identifiers for entities may be found after the formal public identifier in a document file. A system specifies the location of the entity on the users system. The SYSTEM entity below maps the graphic "ginfowp.png" to the directory "graphics\ginfowp.png" on the user's system noting from the entity "NDATA png" that the graphic type is "png" (see paragraph 36.3.5.3.1) . An example of a PUBLIC entity containing the system identifier is found below the SYSTEM entity example.

```
<!ENTITY ginfowp.png SYSTEM "graphics\ginfowp.png" NDATA png>
<!ENTITY ginfowp PUBLIC "-//USA-DOD//ENTITIES GINFOWP DTD Hierarchy//EN"
 "C:graphics\ginfowp.png">
```

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24.2.4.6 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 XML editor or a software application. The simplest verification method is to use an XML editor that verifies all IDREF(s) automatically. The XML 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.

24.2.4.7 IETM - link verification. IETM link verification processes are currently being developed and will be included in the next revision of the handbook.

24.2.4.8 Published document produced by XML instance. The publications developer must verify that the published manual was produced from the XML instance. When the published manual is not produced from the XML document instance, errors may reside in the XML document instance that were corrected or updated in the published manual. To verify that a published document was composed from an XML document instance, a written certification declaring the electronic XML 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 XML document instance to the published manual.

25 TM, DMWR/ NMWR ACQUISITION.

25.1 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.

25.1.1 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 XML 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 XML aspects of the TM requirements may be provided by the activity responding to the data call, or some other functional activity (e.g., an XML specialist on a PM staff), depending on where XML 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.

25.1.2 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.

25.1.3 Conversion of legacy data. The CDRL may direct the contractor to convert specified existing non-XML data (legacy data) into XML. 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 stylesheet/FOSI to be used for conversion, and any other applicable XML requirement information.

25.1.4 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.

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25.1.5 TM requirements and standards. TM functional requirements are developed in accordance with MIL-STD-40051, MIL-STD-2361, MIL-PRF-28001, ISO 8879 and REC-xml-19980210 (see paragraph 2.3) to cover application of XML. The CDRL will identify these standards specifically as requirements.

25.1.6 Location of XML Objects, Constructs, and Other Information (DTDs, stylesheets/ FOSIs, XML Tag Description Lists, Documentation etc.). All Army-approved XML objects and constructs are contained in the Army SGML/XML Registry and Library (ASRL). The XML 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, stylesheets/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, stylesheets/FOSIs, tag description lists, and documentation. The CDRL will contain, either explicitly or by reference, the procedures to be followed to download the XML information needed by the TM developer.
d. Information on parsing the DTDs and stylesheets/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 information should contain requirements regarding parsing the digital XML tagged instance file parsed against the DTD which was provided, and requirements for submitting a parsing log record.

25.1.7 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.

25.1.8 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.

25.1.8.1 Paper. Delivery of paper products are normally camera-ready output developed from a XML document instance and stylesheet/ FOSI. The CDRL will specify the appropriate requirement(s).

25.1.8.2 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.

25.1.8.3 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.

25.1.9 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

26 MIL-STD-2361 XML APPLICATIONS INTRODUCTION.

26.1 Scope. This chapter contains information on the presentation of the XML elements developed for Army digital equipment manuals publications.

26.2 Applicable documents. Refer to paragraph 2

26.3 Introduction to MIL-STD-2361 DTD model. In Chapters 28 through Chapter 34 the MIL-STD-2361 DTD content models will be displayed in the following manner:

a. The XML element is defined as used in the particular Army publication.
b. A visual representation may be given of the XML 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 26.
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.

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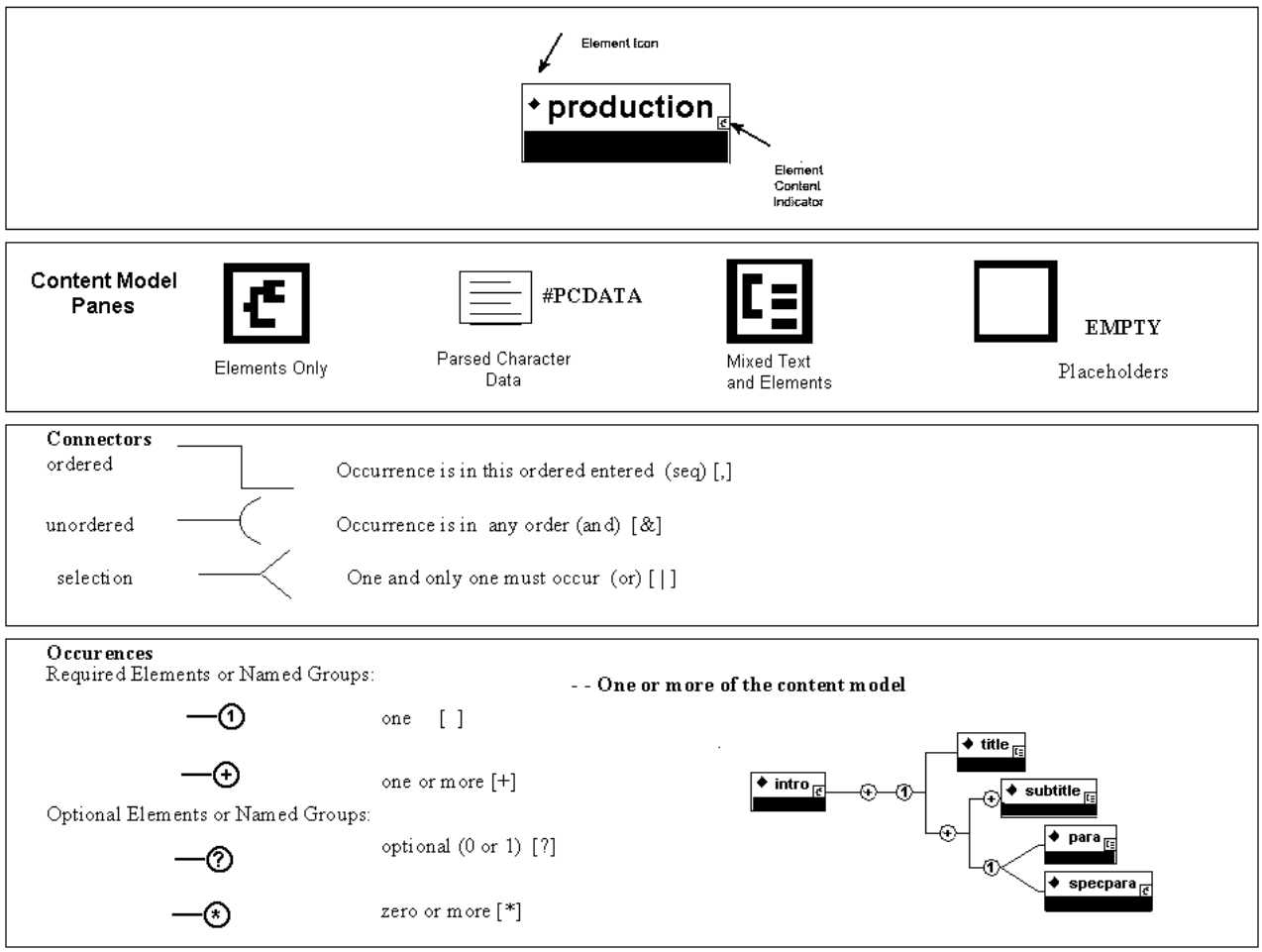

Figure 26 XML Tree Legend

27 PRODUCTION.

27.1 Scope. The following paragraphs give a description and use of elements used in the MIL-STD-2361 Production DTD. The production DTD is used for assembling individual work packages with the other required parts of the applicable technical manual (TM), Depot Maintenance Work Requirements (DMWR) and National Maintenance Work Requirements (NMWR) (i.e., front matter, back matter, etc.).

27.2 Production ***<production>***. 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 a Technical Manual Production must begin with this element, whether the material is a complete maintenance manual, one or more information chapters or a specialized manual. It contains either a page-based TM (***<paper.manual>*** see paragraph 27.2.1), or a frame-based TM (***<frame.manual>*** see paragraph 27.2.2), or a phased maintenance inspections aviation manual, (***<pmi>*** see paragraph 27.2.3.2), or a Preventive Maintenance Services (***<pms>*** see paragraph 27.2.3.1), or a System-Wide Troubleshooting (***<sys-ts>*** see paragraph 27.2.3). These elements are described below.

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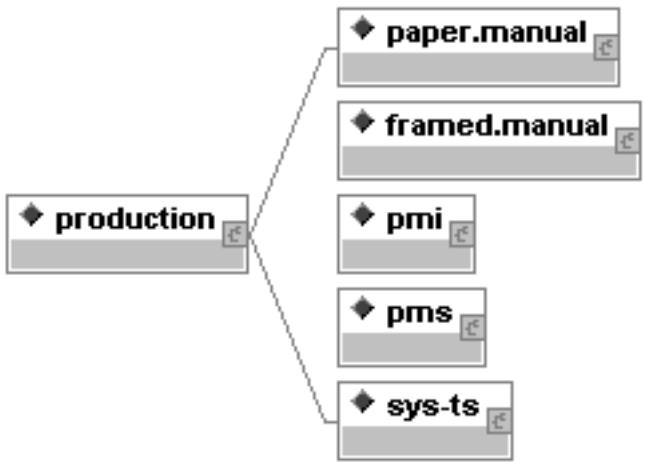

Figure 27 Production DTD hierarchy <production>.

a. DTD fragment for ***<production>***:

```
<!ELEMENT production (paper.manual | frame.manual | aviation | supplement)>
```

27.2.1 Page-Based technical manual ***<paper.manual>***. The element ***<paper.manual>*** page-based technical manual 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. The page-based technical manual consists of a required paper.frnt (***<paper.frnt>*** see paragraph 27.2.1.1) and rear (***<rear>*** see paragraph 27.2.1.2). The body of the page-based technical manual requires a General Information, Description Information And Theory Of Operation Chapter (***<gim>*** see paragraph 28.3), may include one or more Operating Information Chapter(s) (***<opim>***, one or more Troubleshooting Information Chapter(s) (***<tim>*** see paragraph 30.3) and/or one or more Maintenance Information Chapters (***<mim>*** see paragraph 31.3) followed by a required Supporting Information Chapter (***<sim>*** see paragraph 33.3). Volume separation see paragraph 34.3.15) may occur in the General Information, Description Information And Theory Of Operation Chapter ***<gim>***, Operating Information Chapter(s) ***<opim>***, Troubleshooting Information Chapter(s) ***<tim>*** and in the Maintenance Information Chapter(s) ***<mim>***.

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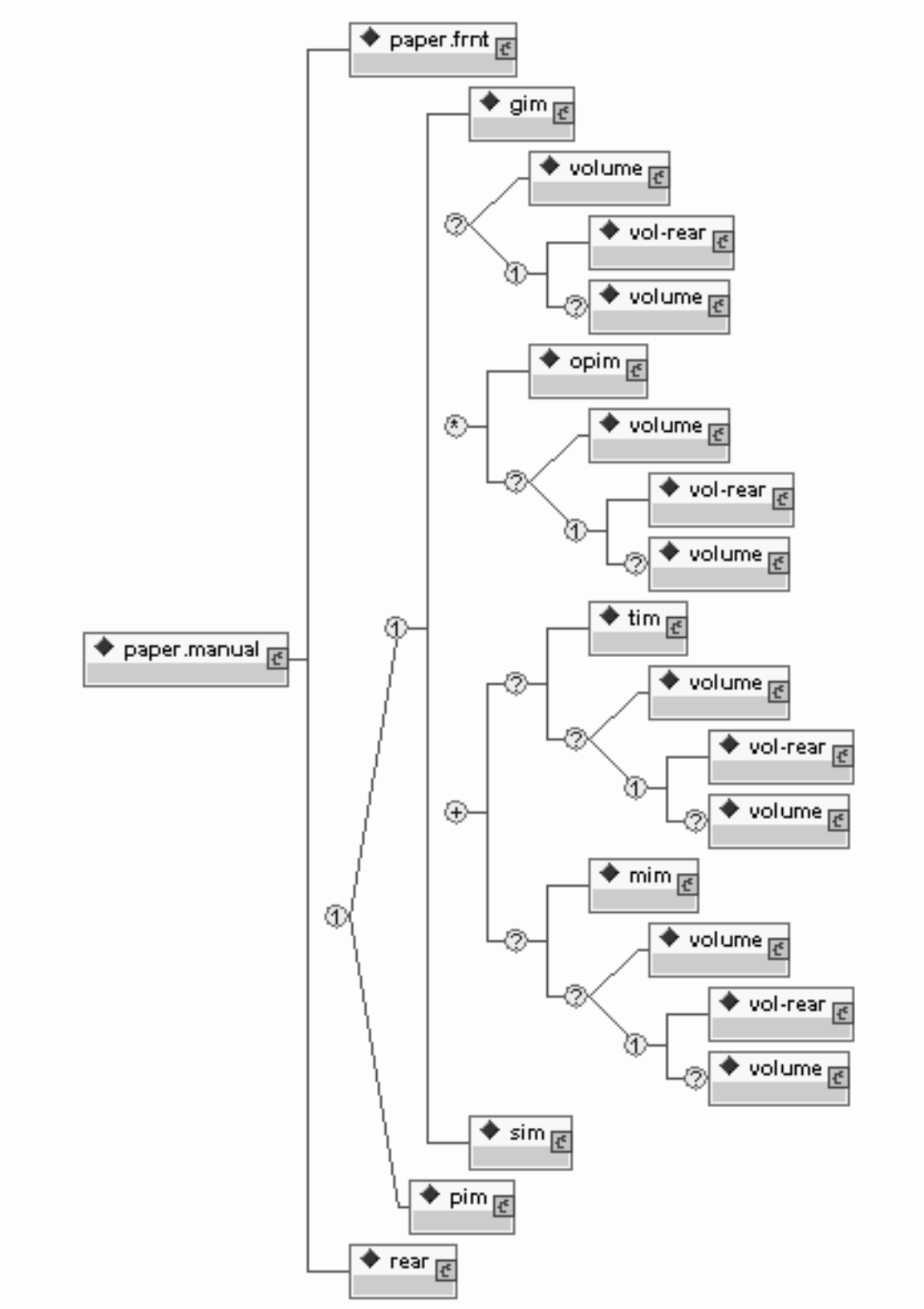

Figure 28 Page-Based TM DTD hierarchy <paper.manual>.

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a. DTD fragment for ***<paper.manual>***:

```
<!ELEMENT paper.manual (paper.frnt, ((gim,%vol.group;, (opim, %vol.group;)*,
 ((tim, %vol.group;)?, (mim, %vol.group;)?)+, sim)| pim), rear)>
<!ATTLIST paper.manual
revno                CDATA                  #REQUIRED
maintitl             CDATA                  #REQUIRE
maintlvls           (10 | 12 | 13 |
                    14 | 20 | 23 |
                    24 | 30 | 34 |
                    40 | avum-avim |
                    dmwr | nmwr| NA)       #REQUIRED
rpstl               (0 | 1)               #REQUIRED
dmwr/nmwr-inclus    (parts | parts-tools)  #IMPLIED
date                CDATA                  #REQUIRED
pubno               CDATA                  #IMPLIED
multivolume         (0 | 1)          "0"
%bodyatt;
%secur;>
```

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 stylesheet/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/NMWR-INCLUS** - Specifies whether a DMWR/NMWR 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) **MULTIVOLUME** - Specifies the technical manual publication has mutliple volumes.
(9) **CURRENTASOF** - The current date of the parts information.
(10) **%BODYATT;** - Refer to common parameter entities for a complete description (see 34.5.1)
(11) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1 Front Matter Page-Base ***<paper.frnt>***. The element ***<paper.frnt>*** front matter page-base 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: a front cover (***<frntcover>*** see paragraph 27.2.1.1.1), an optional warning summary (***<warnsum>*** see paragraph 27.2.1.1.2), an optional change sheet (***<chgsheet>*** see paragraph 27.2.1.1.3), a list of effective pages work package (***<loepwp>*** see paragraph 27.2.1.1.4), a title block (***<titleblk>*** see paragraph 27.2.1.1.5), a table of contents (***<contents>*** see paragraph 27.2.1.1.6) and an optional how to use this manual (***<howtouse>*** see paragraph 27.2.1.1.7).

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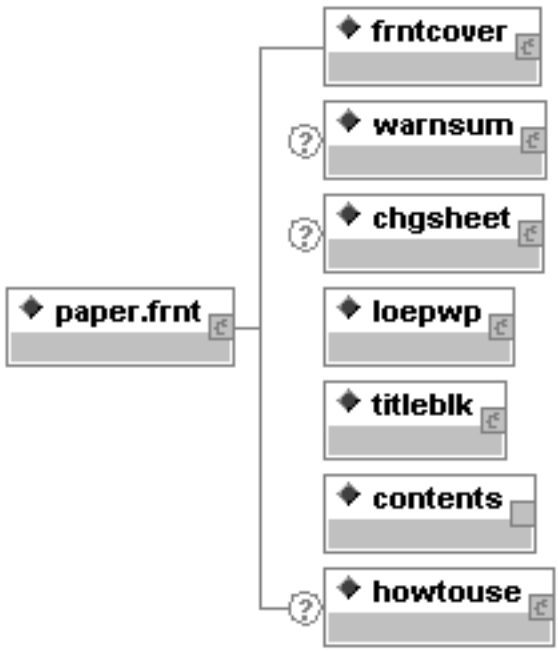

Figure 29 Front matter-paged-based DTD hierarchy.

a. DTD fragment for ***<paper.frnt>***:

```
<!ELEMENT paper.frnt (frntcover, warnsum?, chgsheet?, loepwp, titleblk,
       contents, howtouse?)>
```

27.2.1.1.1 Front cover ***<frntcover>***. The element ***<frntcover>*** front cover is used for identifying the front cover of a page-based and a frame-based TM. It contains the technical manual title (***<tmtitle>*** see paragraph 27.2.1.1.1.1), notices (***<notices>*** see paragraph 27.2.1.1.1.2), an optional illustration (***<graphic>*** see paragraph 34.4.3.1.2), notices ***<notices>***, the service nomenclature (***<servnomen>*** see paragraph 27.2.1.1.1.3), and when necessary a change number (***<chgno>*** see paragraph 27.2.1.1.1.4) and change date (***<chgdate>*** see paragraph 27.2.1.1.1.5).

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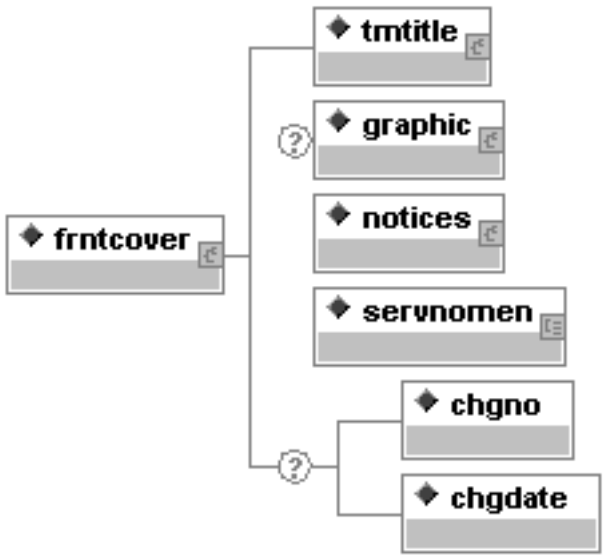

Figure 30 Front cover DTD hierarchy <frntcover>.

a. DTD fragment for ***<frntcover>***:

```
<!ELEMENT frntcover (tmtitle, graphic?, notices, servnomen,
      (chgno, chgdate)?)>
<!ATTLIST frntcover
   %bodyatt;
   %secur;>
```

b. Attributes for ***<frntcover>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

c. XML Document Instance Fragment for Front Cover ***<frntcover>***

```
<frntcover>
<tmtitle><tminfono><servbranch service="army">
<tmno>TM X-XXXX-XXX-10</tmno></tminfono>
<prtitle><sysnomen>
<name>OPERATOR'S MANUAL FOR NUCLEAR-BIOLOGICAL-CHEMICAL
RECONNAISSANCE SYSTEM (NBCRS)</name>
<model>FOX M93A1</model>
<nsn><fsc>6665</fsc><niin>-01-372-1303</niin></nsn>
<eic>Y60</eic>
</sysnomen></prtitle></tmtitle>
<graphic boardno="frnt93A1"></graphic>
<notices>
<dist><c.statement><adminops>DISTRIBUTION STATEMENT C - Distribution authorized
to U.S. Government Agencies and their contractors. This publication is
required for administrative and operational purposes, as determined on
<reason>date22 October 1990</reasondate>
Other requests for this document must be referred to
<releaseagent>
```

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Commander, U.S. Army Chemical Research Development and Engineering Center, ATTN: SMCCR-MAT, Aberdeen Proving Ground, MD 21010-5423.*</releaseagent></adminops>*
</c.statement></dist>
*<export><para>*WARNING - This document contains export-controlled technical data whose export is restricted by the Arms Export Control Act (Title 22, U.S.C., Sec 2751 et seq) or Executive Order 12470. Violation of these export laws is subject to severe criminal penalties.*</para></export>*
<destrt><para>
DESTRUCTION NOTICE - Destroy by any method that will prevent disclosure of contents or reconstruction of the document.*</para>*
</destrt>
</notices>
*<servnomen>*HEADQUARTERS, DEPARTMENT OF THE ARMY 1 JUNE 1996*</servnomen>*
</frntcover>

d. Sample Stylesheet/FOSI Output for Front Cover ***<frntcover>***:

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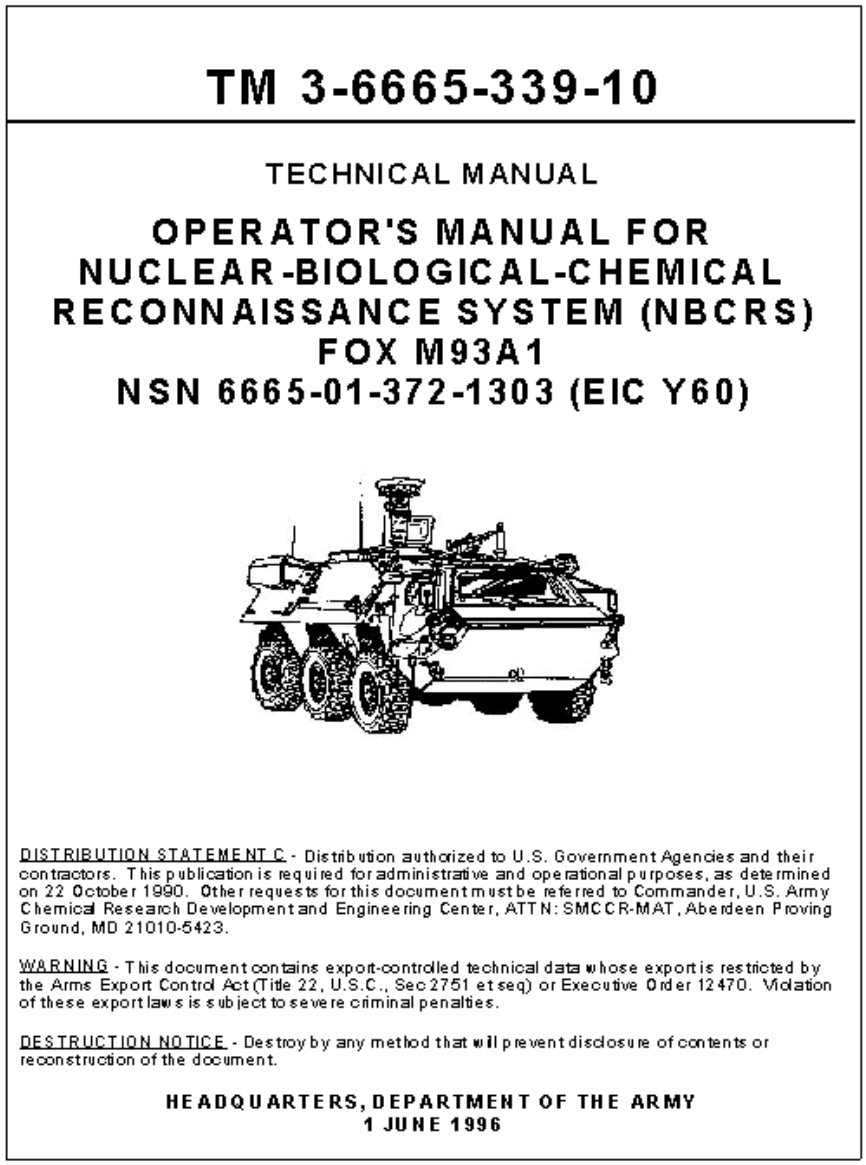

TM 3-6665-339-10

TECHNICAL MANUAL

OPERATOR'S MANUAL FOR
NUCLEAR-BIOLOGICAL-CHEMICAL
RECONNAISSANCE SYSTEM (NBCRS)
FOX M93A1
NSN 6665-01-372-1303 (EIC Y60)

DISTRIBUTION STATEMENT C - Distribution authorized to U.S. Government Agencies and their contractors. This publication is required for administrative and operational purposes, as determined on 22 October 1990. Other requests for this document must be referred to Commander, U.S. Army Chemical Research Development and Engineering Center, ATTN: SMCCR-MAT, Aberdeen Proving Ground, MD 21010-5423.

WARNING - This document contains export-controlled technical data whose export is restricted by the Arms Export Control Act (Title 22, U.S.C., Sec 2751 et seq) or Executive Order 12470. Violation of these export laws is subject to severe criminal penalties.

DESTRUCTION NOTICE - Destroy by any method that will prevent disclosure of contents or reconstruction of the document.

HEADQUARTERS, DEPARTMENT OF THE ARMY
1 JUNE 1996

Figure 31 Sample stylesheet/FOSI output for front cover <frntcover>.

27.2.1.1.1.1 Technical manual title ***<tmtitle>***. The element ***<tmtitle>*** contains all the elements that identify a manual, including at least one service manual number ***<tminfono>***, the primary title ***<prtitle>*** see paragraph 27.2.1.1.1.1.2), and may be followed by a manual subtitle (***<stitle>*** see paragraph 27.2.1.1.1.1.3).

a. DTD fragment for ***<tmtitle>***:

```
<!ELEMENT tmtitle (tminfono+, prtitle, stitle?)>
<!ATTLIST tmtitle
   %bodyatt;
   %secur;>
```

b. Attributes for ***<tmtitle>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

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27.2.1.1.1.1.1 Technical manual number and service branch ***<tminfono>***. 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 (servbranch?, tmno)+>
<!ATTLIST tminfono
   %bodyatt;
   %secur;>
```

b. Attributes for ***<tminfono>***:

(1) **%BODYATT;** (see paragraph 34.5.1)

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.1.1.1.1 Service branch ***<servbranch>***. 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 (EMPTY)>
<!ATTLIST servbranch
   service    (army | af |
               navy | marines)  #REQUIRED
   qualify    CDATA             #IMPLIED
   procuring  (0 | 1 )          #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;** (see paragraph 34.5.1)

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.1.1.2 Technical manual number ***<tmno>***. The element ***<tmno>*** contains (#PCDATA see paragraph 34.3.8) for the number portion of the TM identifying number contained in the element technical manual number and service branch ***<tminfono>***.

a. DTD fragment for ***<tmno>***:

```
<!ELEMENT tmno (#PCDATA)>
<!ATTLIST tmno
   %bodyatt;>
```

b. Attributes for ***<tmno>***:

(1) **%BODYATT;** (see paragraph 34.5.1)

27.2.1.1.1.1.2 Primary title ***<prtitle>***. The element ***<prtitle>*** contains the primary title of the technical manual, which contains the equipment nomenclature (***<sysnomen>*** see paragraph 34.4.5.2.1) with any relevant identifying numbers or qualifying subject ***<subject>*** see paragraph 27.2.1.1.1.1.2.1). The primary title appears on the front cover, change sheet, and title block page of the TM.

a. DTD fragment for ***<prtitle>***:

```
<!ELEMENT prtitle (sysnomen+, subject?)+>
<!ATTLIST prtitle
   %bodyatt;
   %secur;>
```

b. Attributes for ***<prtitle>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

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(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.1.1.2.1 Subject ***<subject>***. The element ***<subject>*** is used to enter some qualification of the equipment nomenclature, such as block numbers or serial number (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<subject>***:

```
<!ELEMENT subject (%text;)*>
<!ATTLIST subject
   %bodyatt;
   %secur;>
```

b. Attributes for ***<subject>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.1.3 Manual subtitle ***<stitle>***. 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 paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<stitle>***:

```
<!ELEMENT stitle (%text;)*>
<!ATTLIST stitle
   %bodyatt;
   %secur;>
```

b. Attributes for ***<stitle>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.1.2 Official notices ***<notices>***. 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>*** see paragraph 27.2.1.1.1.2.1), supersedure (***<super>*** see paragraph 27.2.1.1.1.2.2), disclosure (***<disclos>*** see paragraph 27.2.1.1.1.2.3), distribution (***<dist>*** see paragraph 27.2.1.1.1.2.4), export control notice warning (***<export>*** see paragraph 27.2.1.1.1.2.5) .

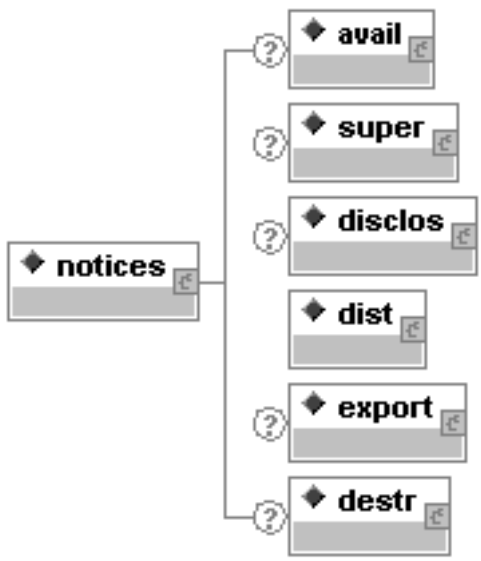

Figure 32 Official notices DTD hierarchy <notices>.

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a. DTD fragment for ***<notices>***:

```
<!ELEMENT notices (avail?, super?, disclos?, dist, export?, destr?)>
```

27.2.1.1.1.2.1 Availability statement ***<avail>***. The element ***<avail>*** contains the standard availability notice that appears on the front cover of a DMWR or NMWR. The element ***<avail>*** contains an optional title (***<title>*** see paragraph 34.4.1.5.1) followed by a paragraph of text (***<para>*** see paragraph 34.4.1.5.3). The paragraph may be entered using an entity reference to boilerplate text. **DMWR/NMWR only.**

a. DTD fragment for ***<avail>***:

```
<!ELEMENT avail (title?, para)>
<!ATTLIST avail
   %bodyatt;
   %secur;>
```

b. Attributes for ***<avail>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.1.2.2 Supersedur statement ***<super>***. The 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 paragraph 34.4.1.5.3).

a. DTD fragment for ***<super>***:

```
<!ELEMENT super (para)>
<!ATTLIST super
   %bodyatt;
   %secur;>
```

b. Attributes for ***<super>***:

(1) **%BODYATT;** (see paragraph 34.5.1)

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.1.2.3 Disclosure Notice ***<disclos>***. The 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 paragraph 34.4.1.5.3). The paragraph may be entered using an entity reference to boilerplate text.

a. DTD fragment for ***<disclos>***:

```
<!ELEMENT disclos (para)>
<!ATTLIST disclos
   %bodyatt;
   %secur;>
```

b. Attributes for ***<disclos>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.1.2.4 Distribution Statement ***<dist>***. The 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 paragraph 34.4.1.5.3). The paragraph may be entered using an entity reference to boilerplate text.

a. DTD fragment for ***<dist>***:

```
<!ELEMENT dist (a.statement | b.statement | c.statement | d.statement
 | e.statement | f.statement |x.statement | RESTRICT)>
<!ATTLIST dist
   %bodyatt;
   %secur;>
```

b. Attributes for ***<dist>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

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27.2.1.1.1.2.4.1 A Statement ***<a.statement>***. The element ***<a.statement>*** will generate the DODD 5230.24 specified text for an unlimited distribution technical manual.

a. DTD fragment for ***<a.statement>***:

```
<!ELEMENT a.statement (EMPTY)>
```

27.2.1.1.1.2.4.2 B Statement ***<b.statement>***. The element ***<b.statement>*** will generate the DODD 5230.24 specified text for B restriction distribution (Distribution authorized to U.S. Government Agencies only) technical manual. The element contains the parameter enitity common distribution reason (***%commondistreason;*** see paragraph 34.3.2), distribution reason - proprietary information (***<proprietary>*** see paragraph 27.2.1.1.1.2.4.2.1), distribution reason - test and evaluation (***<testeval>*** see paragraph 27.2.1.1.1.2.4.2.2) or distribution reason - contractor performance evaluation (***<cntrctperform>*** see paragraph 27.2.1.1.1.2.4.2.3), distribution reason - premature dissemination (***<premature>*** see paragraph 27.2.1.1.1.2.4.2.4) , distribution reason determination date (***<reasondate>*** see paragraph 27.2.1.1.1.2.4.2.5), and distribution statement - controlling DoD office) (***<releaseagent>*** see paragraph 27.2.1.1.1.2.4.2.6).

a. DTD fragment for ***<b.statement>***:

```
<!ELEMENT b.statement (((%commondistreason; | proprietary | testeval
 | cntrctperform | premature), reasondate), releaseagent)>
```

27.2.1.1.1.2.4.2.1 Distribution Reason - Proprietary ***<proprietary>***. The element ***<proprietary>*** indicates the distribution statement restriction reason as the proprietary information and is defined as to protect information not owned by the U.S. Government and protected by a contractor's "limited rights" statement, or received with the understanding that it not be routinely transmitted outside the U.S. Government.

a. DTD fragment for ***<proprietary>***:

```
<!ELEMENT proprietary EMPTY>
```

27.2.1.1.1.2.4.2.2 Distributation Reason - Test and Evaluation ***<testeval>***. The element ***<testeval>*** indicates the distribution statement restriction reason as the Test and Evaluation and is defined as to protect results of test and evaluation of commercial products or military hardware when such disclosure may cause unfair advantage or disadvantage to the manufacturer of the product.

a. DTD fragment for ***<testeval>***:

```
<!ELEMENT testeval EMPTY>
```

27.2.1.1.1.2.4.2.3 Distribution Reason - Contractor Performance Evaluation ***<cntrctperform>***. The element ***<cntrctperform>*** indicates the distribution statement restriction reason as the contractor performance evaluation and is defined as to protect information in management reviews, records of contract performance evaluation, or other advisory documents evaluating programs of contractors.

a. DTD fragment for ***<cntrctperform>***:

```
<!ELEMENT cntrctperform EMPTY>
```

27.2.1.1.1.2.4.2.4 Distribution Reason - Premature Dissemination ***<premature>***. The element ***<premature>*** indicates the distribution statement restriction reason as the premature dissemination and is defined as to protect patent able information on systems or processes in the developmental or concept stage from premature dissemination.

a. DTD fragment for ***<premature>***:

```
<!ELEMENT premature EMPTY>
```

27.2.1.1.1.2.4.2.5 Distribution Reason Determination Date ***<reasondate>***. The element ***<reasondate>*** is used for the determination date for distribution statements B-F and X.

a. DTD fragment for ***<reasondate>***:

```
<!ELEMENT reasondate (#PCDATA)>
```

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27.2.1.1.1.2.4.2.6 Distributation Statement - Controlling DoD Office ***<releaseagent>***. The element ***<releaseagent>*** is used for the controlling DoD office for deciding the distribution statement level and request for further distribution.

a. DTD fragment for ***<releaseagent>***:

```
<!ELEMENT releaseagent (%text;)*>
```

27.2.1.1.1.2.4.3 C Statement ***<c.statement>***. The element ***<c.statement>*** will generate the DODD 5230.24 specified text for C restriction distribution (Distribution authorized to U.S. Government Agencies and their contractors) technical manual. The element .contains the parameter enitity common distribution reason (***%commondistreason;*** see paragraph 34.3.2), distribution reason determination date (***<reasondate>*** see paragraph 27.2.1.1.1.2.4.2.5) and distribution statement - controlling DoD office) (***<releaseagent>*** see paragraph 27.2.1.1.1.2.4.2.6).

a. DTD fragment for ***<c.statement>***:

```
<!ELEMENT c.statement ((%commondistreason;, reasondate), releaseagent)>
```

27.2.1.1.1.2.4.4 D Statement ***<d.statement>***. The element ***<d.statement>*** will generate the DODD 5230.24 specified text for D restriction distribution (Distribution authorized to the Department of Defense and U.S. DoD contractors only) technical manual. The element contains parameter enitity common distribution reason (***%commondistreason;*** see paragraph 34.3.2), distribution reason determination date (***<reasondate>*** see paragraph 27.2.1.1.1.2.4.2.5), and distribution statement - controlling DoD office. (***<releaseagent>*** see paragraph 27.2.1.1.1.2.4.2.6).

a. DTD fragment for ***<d.statement>***:

```
<!ELEMENT d.statement ((%commondistreason;, reasondate), releaseagent)>
```

27.2.1.1.1.2.4.5 E Statement ***<e.statement>***. The element ***<e.statement>*** contains either the parameter enitity parameter enitity common distribution reason ***%commondistreason;*** (see paragraph 34.3.2), or distribution reason - proprietary information ***<proprietary>*** (see paragraph 27.2.1.1.1.2.4.2.1), or distribution reason - test and evaluation ***<testeval>*** (see paragraph 27.2.1.1.1.2.4.2.2) or distribution reason - contractor performance evaluation ***<cntrctperform>*** (see paragraph 27.2.1.1.1.2.4.2.3), or distribution reason - premature dissemination ***<premature>*** (see paragraph 27.2.1.1.1.2.4.2.4), distribution reason determination date (***<reasondate>*** see paragraph 27.2.1.1.1.2.4.2.5), and distribution statement - controlling DoD office (***<releaseagent>*** see paragraph 27.2.1.1.1.2.4.2.6).

a. DTD fragment for ***<e.statement>***:

```
<!ELEMENT e.statement (((%commondistreason; | proprietary | testeval |
 cntrctperform | premature | milsprt), reasondate), releaseagent)>
```

27.2.1.1.1.2.4.6 F Statement ***<f.statement>***. The element ***<f.statement>*** contains (***<reasondate>*** see paragraph 27.2.1.1.1.2.4.2.5), and (***<releaseagent>*** see paragraph 27.2.1.1.1.2.4.2.6).

a. DTD fragment for ***<f.statement>***:

```
<!ELEMENT f.statement (reasondate, releaseagent)>
```

27.2.1.1.1.2.4.7 X Statement. The element ***<x.statement>*** contains one ***<releaseagent>*** element.

a. DTD fragment for ***<x.statement>***:

```
<!ELEMENT x.statement (releaseagent)>
```

27.2.1.1.1.2.4.8 DMWR/NMWR distribution restriction statement ***<restrict>***. The element ***<restrict>*** contains This tag will generate the DODD 5230.24 specified text for DMWR/NMWR restriction distribution (This publication contains technical information that is for official Government use only) technical manual.

a. DTD fragment for ***<restrict>***:

```
<!ELEMENT restrict (EMPTY)>
<!ATTLIST RESTRICT
     command_information CDATA #REQUIRED>
```

b. Attributes for ***<restrict>***:

(1) **COMMAND_INFORMATION** – Restriction statement which is automatically generated by the composition system for distribution when used in DMWRs and NMWRs.

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27.2.1.1.1.2.5 Export control notice warning ***<export>***. The 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 paragraph 34.4.1.5.3). The paragraph may be entered using an entity reference to boilerplate text.

a. DTD fragment for ***<export>***:

```
<!ELEMENT export (para)>
<!ATTLIST export
   %bodyatt;
   %secur;>
```

b. Attributes for ***<export>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.1.2.6 Destruction notice ***<destr>***. The 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 paragraph 34.4.1.5.3). The paragraph may be entered using an entity reference to boilerplate text.

a. DTD fragment for ***<destr>***:

```
<!ELEMENT destr (para)>
<!ATTLIST destr
   %bodyatt;
   %secur;>
```

b. Attributes for ***<destr>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.1.3 Service nomenclature ***<servnomen>***. 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 paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<servnomen>***:

```
<!ELEMENT servnomen (%text;)*>
<!ATTLIST servnomen
   %bodyatt;
   %secur;>
```

b. Attributes for ***<servnomen>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.1.4 Change number ***<chgno>***. 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 (#PCDATA)>
<!ATTLIST chgno
   %refs;
   %secur;>
```

b. Attributes for ***<chgno>***:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.7).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.1.5 Change date ***<chgdate>***. 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>***:

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```
<!ELEMENT chgdate (#PCDATA)>
<!ATTLIST chgdate
   %refs;
   %secur;>
```

b. Attributes for ***<chgdate>***:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.7).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.2 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 general warnings and safety cautions (***<warninfo>*** see paragraph 27.2.1.1.2.1) which apply to the document, a key to hazard icons used in the TM, hazardous materials warnings (***<hazmat>*** see paragraph 27.2.1.1.2.2), and first-aid information (***<safety>*** see paragraph 27.2.1.1.2.3).

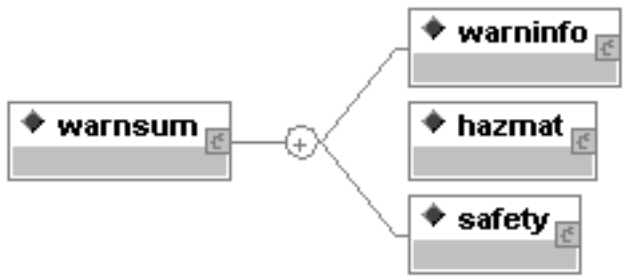

Figure 33 Warning summary DTD hierarchy <warnsum>.

a. DTD fragment for ***<warnsum>***:

```
<!ELEMENT warnsum (((warninfo | hazmat | safety)+))>
<ATTLIST warnsum
   tocentry (0 | 1) #IMPLIED
   %bodyatt;
   %secur;>
```

b. Attributes for ***<warnsum>***:

(1) **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.

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.2.1 General warning information ***<warninfo>***. The element ***<warninfo>*** is a portion of the warning summary that contains general-purpose warnings and cautions, such as radiation or laser light. It can also contain general safety instructions and first-aid information. General warning information contains title(s) (***<title>*** see paragraph 34.4.1.5.1) with at least one paragraph of text ***<para>***, followed by at least one warning (***<warning>*** see paragraph 34.4.1.1.3), with an optional safety icon section ***<sfty-icons>*** see paragraph 27.2.1.1.2.1.1), and may be followed by caution(s) (***<caution>*** see paragraph 34.4.1.1.4) with an optional safety icon section ***<sfty-icons>***.

a. DTD fragment for ***<warninfo>***:

```
<!ELEMENT warninfo (((title, para+), ((warning, sfty-icons*)+,
 (caution, sfty-icons*)*)?)+)>
<!ATTLIST warninfo
   %bodyatt;
   %secur;>
```

b. Attributes for ***<warninfo>***:

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(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.2.1.1 Safety icon section ***<sfty-icons>***. 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 paragraph 34.4.3.2), followed by an optional title (***<title>*** see paragraph 34.4.1.5.1), and a safety description ***<sftydesc>***.

a. DTD fragment for ***<sfty-icons>***:

```
<!ELEMENT sfty-icons (symbol, title?, sftydesc)+>
<!ATTLIST sfty-icons
   inschlvl CDATA #IMPLIED
   delchlvl CDATA #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 paragraph 34.5.7).
(4) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.2.1.1.1 Safety description ***<sftydesc>***. The element ***<sftydesc>*** is used for a description of the safety condition associated with a safety icon (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<sftydesc>***:

```
<!ELEMENT sftydesc (%text;)*>
<!ATTLIST sftydesc
   %bodyatt;
   %secur;>
```

b. Attributes for ***<sftydesc>***:
(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.2.2 Hazard icons and hazardous materials ***<hazmat>***. 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 ***<hazard>*** used in performing procedures in the TM.

a. DTD fragment for ***<hazmat>***:

```
<!ELEMENT hazmat (haz-icons, hazard+)>
<!ATTLIST hazmat
   %bodyatt;
   %secur;>
```

b. Attributes for ***<hazmat>***:
(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.2.2.1 Hazard icon section ***<haz-icons>***. 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 paragraph 34.4.3.2), followed by an optional title (***<title>*** see paragraph 34.4.1.5.1), and the description of the hazard ***<hazdesc>***.

a. DTD fragment for ***<haz-icons>***:

```
<!ELEMENT haz-icons (symbol, title?, hazdesc)+>
<!ATTLIST haz-icons
```

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```
      %bodyatt;
      %secur;>
```

b. Attributes for ***<haz-icons>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.2.2.1.1 Hazard icon description ***<hazdesc>***. The element ***<hazdesc>*** is used for a description of the hazardous condition associated with a hazard icon (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<hazdesc>***:

```
<!ELEMENT hazdesc (%text;)*>
<!ATTLIST hazdesc
   %bodyatt;
   %secur;>
```

b. Attributes for ***<hazdesc>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1)

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.2.2.2 Hazardous material ***<hazard>***. The element ***<hazard>*** is used to identify a hazardous material warning appearing in the warning summary. It contains the identification of a hazardous material warning ***<hazid>***, one or more symbols (***<symbol>*** see paragraph 34.4.3.2) are used to enter the icon, and may have one or more paragraphs (***<para>*** see paragraph 34.4.1.5.3) describing the hazard, if necessary.

a. DTD fragment for ***<hazard>***:

```
<!ELEMENT hazard (hazid, symbol+, para*)+>
<!ATTLIST hazard
   tocentry (0 | 1) #IMPLIED
   %bodyatt;
   %secur;>
```

b. Attributes for ***<hazard>***:

(1) **TOCENTRY** - If other than zeros, the hazard should be included in the table of contents.

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.2.2.2.1 Identifying name of the hazardous material ***<hazid>***. The element ***<hazid>*** is used for the name or other identification of a hazardous material (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<hazid>***:

```
<!ELEMENT hazid (%text;)>
<!ATTLIST hazid
   %bodyatt;
   %secur;>
```

b. Attributes for ***<hazid>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.2.3 Safety ***<safety>***. 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 34.3.10).

a. DTD fragment for ***<safety>***:

```
<!ELEMENT safety (%titldtext;)+>
<!ATTLIST warninfo
   %bodyatt;
```

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```
%secur;>
```

b. Attributes for ***<safety>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.3 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 paragraph 27.2.1.1.1.4), the primary title (***<prtitle>*** see paragraph 27.2.1.1.1.1.2), followed by an official notice (***<notices>*** see paragraph 27.2.1.1.1.2), with at least one paragraph of text para ***<para>***, and a list of changes (***<chglist>*** see paragraph 27.2.1.1.3.1).

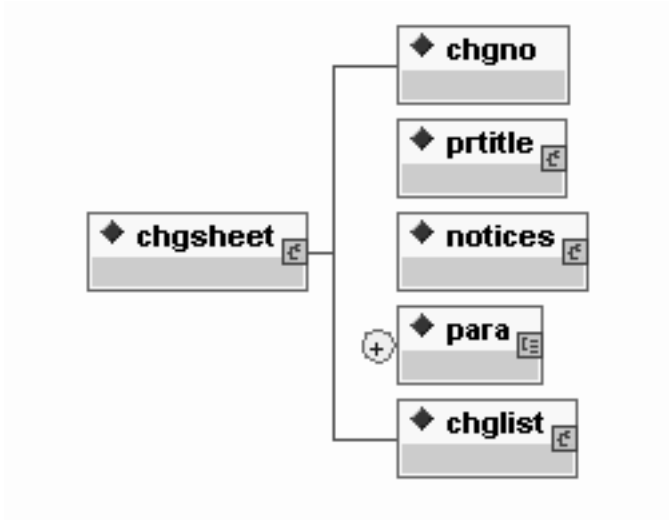

Figure 34 Change sheet DTD hierarchy <chgsheet>.

a. DTD fragment for ***<chgsheet>***:

```
<!ELEMENT chgsheet (chgno, prtitle, notices, para+, chglist)>
<!ATTLIST chgsheet
   date  CDATA  #IMPLIED
   %bodyatt;
   %secur;>
```

b. Attributes for ***<chgsheet>***:

(1) **DATE** - The date of the current version of the element.

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1)

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.3.1 Change list ***<chglist>***. The element ***<chglist>*** contains the list of changed pages and work packages appearing on the change sheet. After a paragraph of text (***<trim.para>*** see paragraph 34.4.1.5.4), it lists which pages of the existing manual are to be removed ***<removepg>***, which pages shipped with the current change are to be inserted ***<insertpg>*** and may also include a list of work packages to be added/deleted ***<chgwp>*** or consists of one or more change work package(s).

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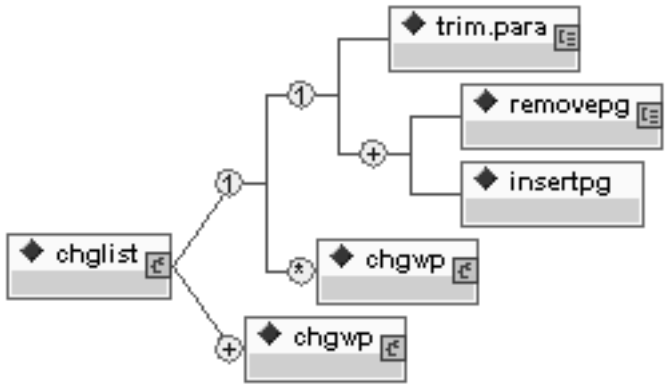

Figure 35 Change list DTD hierarchy <chglist>.

a. DTD fragment for ***<chglist>***:

```
<!ELEMENT chglist (((trim.para, (removepg, insertpg)+), chgwp*) | chgwp+)>
<!ATTLIST chglist
   %bodyatt;
   %secur;>
```

b. Attributes for ***<chglist>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.3.1.1 Remove page ***<removepg>***. The element ***<removepg>*** is used to enter the pages to be removed from the manual (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<removepg>***:

```
<!ELEMENT removepg (%text;)>
<!ATTLIST removepg
   %bodyatt;
   %secur;>
```

b. Attributes for ***<removepg>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.3.1.2 Insert page ***<insertpg>***. The element ***<insertpg>*** is used to enter the pages to be inserted into the manual (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<insertpg>***:

```
<!ELEMENT insertpg (%text;)>
<!ATTLIST insertpg
   %refs;
   %secur;>
```

b. Attributes for ***<insertpg>***:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.7).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.3.1.3 Change work package ***<chgwp>***. 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 paragraph 34.3.5) and work package number (***<wpno>*** see paragraph 34.4.4.25).

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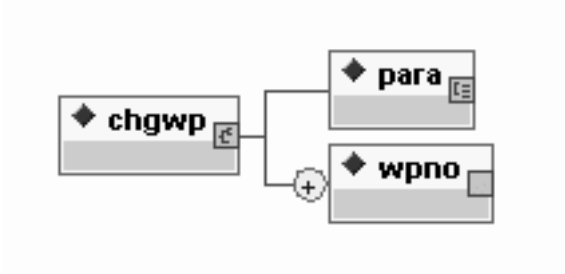

Figure 36 Change work package DTD hierarchy <chgwp>.

a. DTD fragment for ***<chgwp>***:

```
<!ELEMENT chgwp (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.

(b) ADD - Specifies the work package is to be added

(c) DELETE - Specifies the work package is to be deleted.

27.2.1.1.4 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 paragraph 34.4.1.1.5), at least one revision date ***<rev.date>***, a paragraph (***<para>*** see paragraph 34.4.1.5.3), and at least one revision change ***<rev.chg>***.

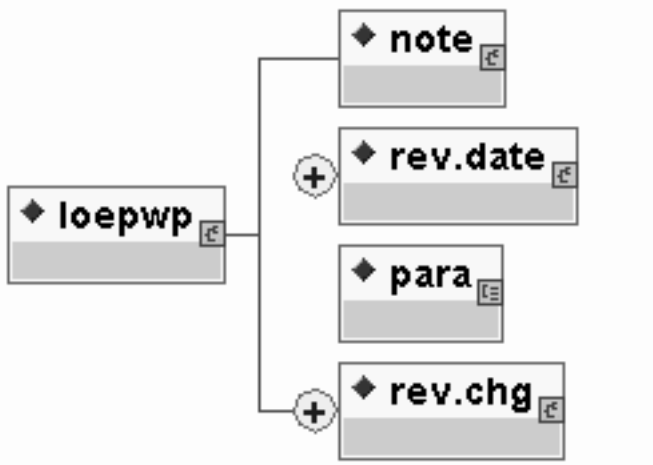

Figure 37 List of effective pages work package DTD hierarchy <loepwp>.

a. DTD fragment for ***<loepwp>***:

```
<!ELEMENT loepwp (note, rev.date+, para, rev.chg+)>
```

27.2.1.1.4.1 Revision date ***<rev.date>***. The element ***<rev.date>*** contains the list of effective work packages revision date information. It contains a required title (***<title>*** see paragraph 34.4.1.5.1), the revision number ***<rev.no>***, and the date ***<date>***.

a. DTD fragment for ***<rev.date>***:

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```
<!ELEMENT rev.date (title, rev.no, date)>
```

27.2.1.1.4.1.1 Revision number ***<rev.no>***. The element ***<rev.no>*** contains the list of effective work packages revision number release.

a. DTD fragment for ***<rev.no>***:

```
<!ELEMENT rev.no EMPTY>
<!ATTLIST rev.no
   no CDATA #REQUIRED>
```

b. Attributes for ***<rev.no>***:

(1) **NO** - List of effective work packages revision number release.

27.2.1.1.4.1.2 Date ***<date>***. The element ***<date>*** is used to enter the date of the revision (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<date>***:

```
<!ELEMENT date (#PCDATA)>
<!ATTLIST date
   %bodyatt;
   %secur;>
```

b. Attributes for ***<date>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.4.2 Revision change information ***<rev.chg>***. 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 paragraph 27.2.1.2.2.2.2), an optional second page number ***<pageno>*** followed by the revision number (***<rev.no>*** see paragraph 27.2.1.1.4.1.1) or a work package number (***<wpno>*** see paragraph 34.4.4.25),with an optional second work package number (***<wpno>***, followed by the revision number (***<rev.no>*** see paragraph 27.2.1.1.4.1.1).

a. DTD fragment for ***<rev.chg>***:

```
<!ELEMENT rev.chg ((pageno, pageno?, rev.no)| (wpno, wpno?, rev.no))>
<!ATTLIST rev.chg
   %bodyatt;>
```

b. Attributes for ***<rev.chg>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

27.2.1.1.5 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 paragraph 27.2.1.1.1.1.2), an optional subtitle (***<stitle>*** see paragraph 27.2.1.1.1.1.3), the reporting errors and recommending improvements statement ***<reporting>*** see paragraph 27.2.1.1.5.1), any notices (***<notices>*** see paragraph 27.2.1.1.1.2), the service nomenclature (***<servnomen>*** see paragraph 27.2.1.1.1.3), and, if applicable, a change number (***<chgno>*** see paragraph 27.2.1.1.1.4) and change date (***<chgdate>*** see paragraph 27.2.1.1.1.5).

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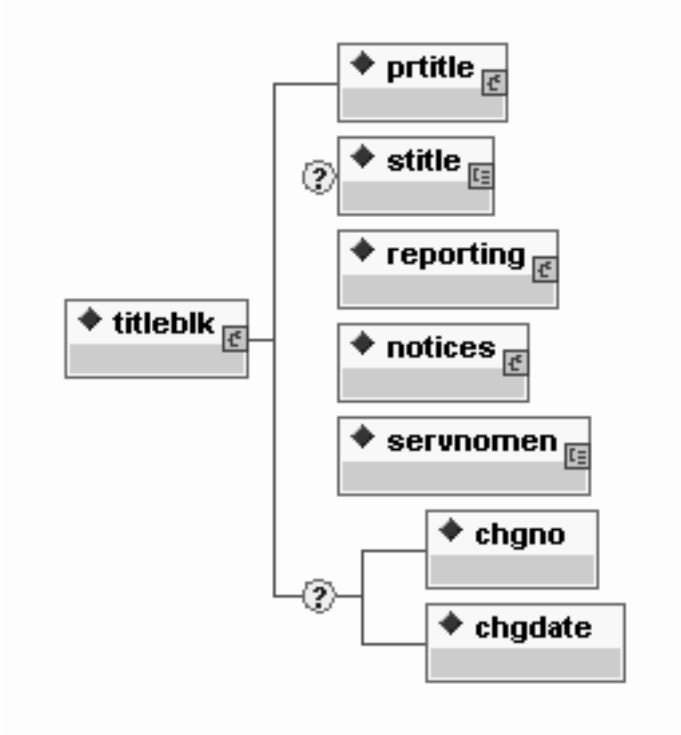

Figure 38 Title block page DTD hierarchy <titleblk>.

a. DTD fragment for ***<titleblk>***:

```
<!ELEMENT titleblk (prtitle, stitle?, reporting, notices, servnomen,
      (chgno, chgdate)?)>
<!ATTLIST titleblk
   supplement (none | routine | ss| os) "none"
   %bodyatt;
   %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) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.5.1 Reporting errors and recommending improvements statement ***<reporting>***. The element ***<reporting>*** is used to enter the reporting errors and recommending improvements statement. It contains a paragraph of text (***<para>*** see paragraph 34.3.5). The paragraph may be entered using an entity reference to boilerplate text.

a. DTD fragment for ***<reporting>***:

```
<!ELEMENT reporting (para)>
<!ATTLIST reporting
   %bodyatt;
   %secur;>
```

b. Attributes for ***<reporting>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

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(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.6 Table of contents ***<contents>***. The element ***<contents>*** is used for the TM's table of contents. The element ***<contents>*** is an EMPTY element. The table of contents must be generated by the composition system according to the extraction rules found in the stylesheet/FOSI.

Figure 39 Table of contents DTD hierarchy <contents>.

a. DTD fragment for Table of Contents ***<contents>***:

```
<!ELEMENT contents (EMPTY)>
<!ATTLIST contents
   %bodyatt;
   %secur;>
```

b. Attributes for ***<contents>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.1.7 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. The element 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 34.3.10) and/or procedural text (***<proc>*** see paragraph 34.4.1.8.1).

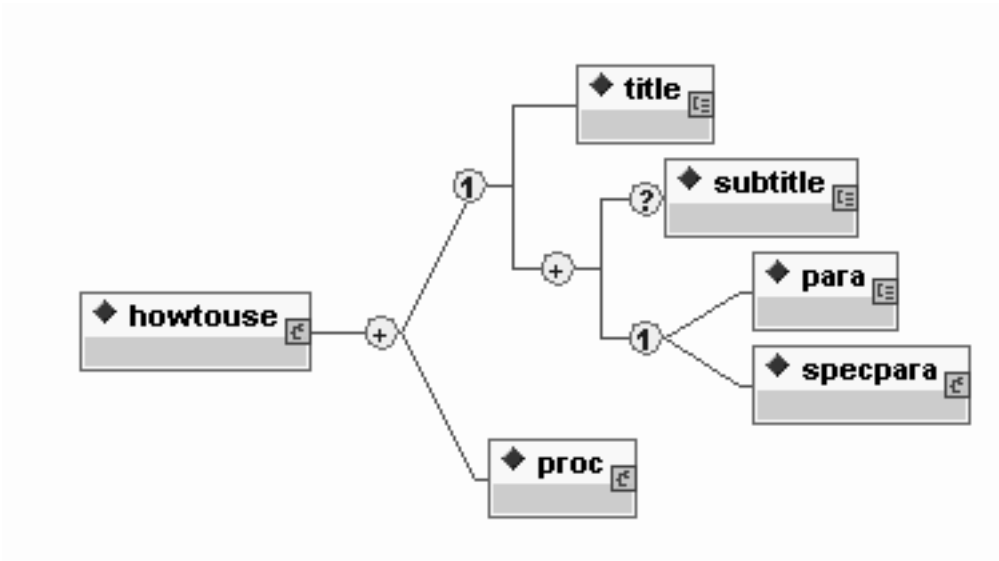

Figure 40 How to use this manual DTD hierarchy <howtouse>.

a. DTD fragment for ***<howtouse>***:

```
<!ELEMENT howtouse (%titldtext; | proc )+>
```

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```
<!ATTLIST howtouse
   %bodyatt;
   %secur;>
```

b. Attributes for ***<howtouse>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.2 Rear matter ***<rear>***. The element ***<rear>*** rear or back matter of a TM. It may consist of a glossary ***<glossary>*** see paragraph 27.2.1.2.1), alphabetic index ***<aindx>*** see paragraph 27.2.1.2.2), foldout (oversize) illustration section ***<foldsect>*** see paragraph 27.2.1.2.3), at least one DA-2028 form(s) ***<da2028>*** see paragraph 27.2.1.2.4), an authentication page ***<authent>*** see paragraph 27.2.1.2.5), followed by an optional metric conversion chart ***<back>*** see paragraph 27.2.1.2.6). Only the DA2028 form and authentication page are required.

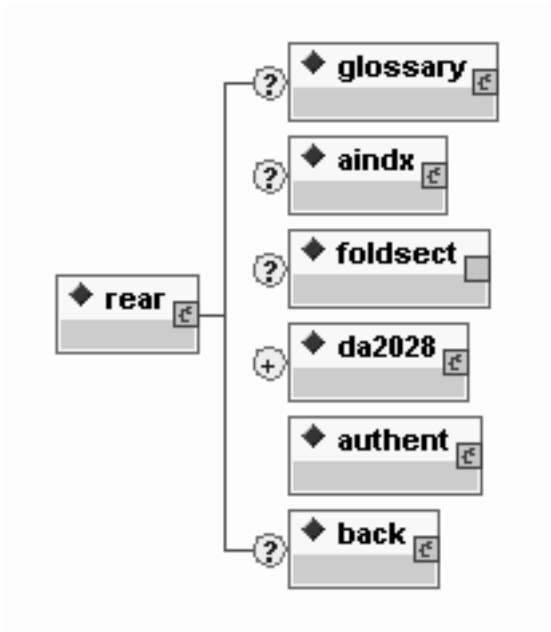

Figure 41 Rear matter DTD hierarchy <rear>.

a. DTD fragment for ***<rear>***:

```
<!ELEMENT rear (glossary?, aindx?, foldsect?, da2028+, authent, back?)>
<!ATTLIST rear
   %bodyatt;
   %secur;>
```

b. Attributes for ***<rear>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1)

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.2.1 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>*** see paragraph 34.4.1.2.3).

a. DTD fragment for ***<glossary>***:

```
<!ELEMENT glossary (deflist)>
<!ATTLIST glossary
   %bodyatt;
```

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```
    %secur;>
```

b. Attributes for ***<glossary>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.2.2 Alphabetical index ***<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 there are some composition systems that 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 (***<aindx>*** see paragraph 37.2.1.4.4). The element contains an optional alphabetical category heading ***<alphaindx>*** and one or more index marker references ***<indexentry>***.

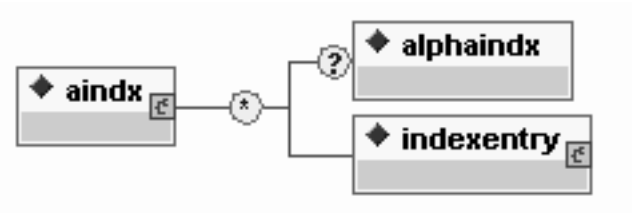

Figure 42 Alphabetical index DTD hierarchy <aindx>.

a. DTD fragment for ***<aindx>***:

```
<!ELEMENT aindx (alphaindx?, indexentry)*>
<!ATTLIST aindx
   %bodyatt;
   %secur;>
```

b. Attributes for ***<aindx>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.1.2.2.1 Alphabetical category heading ***<alphaindx>***. The element ***<alphaindx>*** is used for the heading of an alphabetical category in an alphabetical index . The element contains (#PCDATA see paragraph 34.3.8).

a. DTD fragment for ***<alphaindx>***:

```
<!ELEMENT alphaindx (#PCDATA)>
```

27.2.1.2.2.2 Index entry ***<indexentry>***. The 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>*** see paragraph 34.4.4.25), page number(s) ***<pageno>***, and may have one or more second level sub-entry ***<sub-entry1>***.

a. DTD fragment for ***<indexentry>***:

```
<!ELEMENT indexentry (topic, (wpno, pageno)*, sub-entry1*)>
```

27.2.1.2.2.2.1 Topic ***<topic>***. The element ***<topic>*** is used for the key word of the index entry. The element contains (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<topic>***:

```
<!ELEMENT topic (%text;)*>
```

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27.2.1.2.2.2.2 Page number ***<pageno>***. The element ***<pageno>*** is used to reference a page number. The element contains (#PCDATA see paragraph 34.3.8).

a. DTD fragment for ***<pageno>***:

```
<!ELEMENT pageno (#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.

27.2.1.2.2.2.3 Second level sub-entry ***<sub-entry1>***. 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 paragraph 27.2.1.2.2.2.1), may be followed by one or more work package number(s) (***<wpno>*** see paragraph 34.4.4.25), page number(s) (***<pageno>*** see paragraph 27.2.1.2.2.2.2), and may have one or more third level sub-entry ***<sub-entry2>***.

a. DTD fragment for ***<sub-entry1>***:

```
<!ELEMENT sub-entry1 (topic, (wpno, pageno)*, sub-entry2*)>
```

27.2.1.2.2.2.3.1 Third level sub-entry ***<sub-entry2>***. 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 paragraph 27.2.1.2.2.2.1), may be followed by one or more work package number(s) (***<wpno>*** see paragraph 34.4.4.25), page number(s) (***<pageno>*** see paragraph 27.2.1.2.2.2.2), and may have one or more fourth level sub-entry ***<sub-entry3>***.

a. DTD fragment for ***<sub-entry2>***:

```
<!ELEMENT sub-entry2 (topic, (wpno, pageno)*, sub-entry3*)>
```

27.2.1.2.2.2.3.1.1 Fourth level sub-entry ***<sub-entry3>***. 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 paragraph 27.2.1.2.2.2.1), may be followed by one or more work package number(s) (***<wpno>*** see paragraph 34.4.4.25), and page number(s) (***<pageno>*** see paragraph 27.2.1.2.2.2.2).

a. DTD fragment for ***<sub-entry3>***:

```
<!ELEMENT sub-entry3 (topic, (wpno, pageno)*)>
```

27.2.1.2.3 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 EMPTY>
```

27.2.1.2.4 Reporting errors and recommending improvements DA 2028-2 ***<da2028>***. The 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 should include guidelines for completing the form. The three blank DA Form 2028-2 should include the TM number, date, and title.

a. DTD fragment for ***<da2028>***:

```
<!ELEMENT da2028 (%section508;)>
<!ATTLIST da2028
 boardno ENTITY #REQUIRED
 reprowid CDATA #IMPLIED
 reprodep CDATA #IMPLIED>
```

b. Attributes for ***<da2028>***:

(1) **BOARDNO**- Specifies the name of the entity containing the graphic file of the form.

(2) **REPROWID** - Specifies the illustration width.

(3) **REPRODEP** - Specifies the illustration depth.

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27.2.1.2.4.1 Detailed disability statement ***<disable.long>***. The element ***<disable.long>*** detailed disability statement is used in accordance with public law section 508, computer assisted informations require the disabled to able to interprete the information. This element allows a detailed description on the illustration or table being displayed. The element consist of one or more reduced paragraph(s) (***<trim.para>*** see paragraph 34.4.1.5.4).

a. DTD fragment for Emphasis Terms ***<disable.long>***:

```
<!ELEMENT disable.long (trim.para)+>
```

27.2.1.2.4.2 Simple disability statement ***<disable.short>***. The element ***<disable.short>*** simple disability statement is used in accordance with public law section 508, computer assisted informations require the disabled to able to interprete the information. This element allows a short or simple description on the illustration or table cell being displayed. The element consists of the

a. DTD fragment for Emphasis Terms ***<disable.short>***:

```
<!ELEMENT disable.short (%pcdata;)*>
```

27.2.1.2.5 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 (%section508;)>
<!ATTLIST authent
   boardno ENTITY #REQUIRED
   type
   reprodep
   reprowid>
```

b. Attributes for ***<authent>***:

(1) **BOARDNO**- Specifies the name of the entity containing the graphic file of the page.
(2) **TYPE** - Graphical format type selected from the defined list.
(3) **REPROWID** - Specifies the illustration width.
(4) **REPRODEP** - Specifies the illustration depth.

27.2.1.2.6 Back cover ***<back>***. The element ***<back>*** is used for the back cover of a page-based TM. The inside back cover contains the parameter entity ***%section508;*** (see paragraph 34.3.9) which is comprised of the elements ***<disable.long>*** and ***<disable.short>***. It is entered using the associated attribute boardno.

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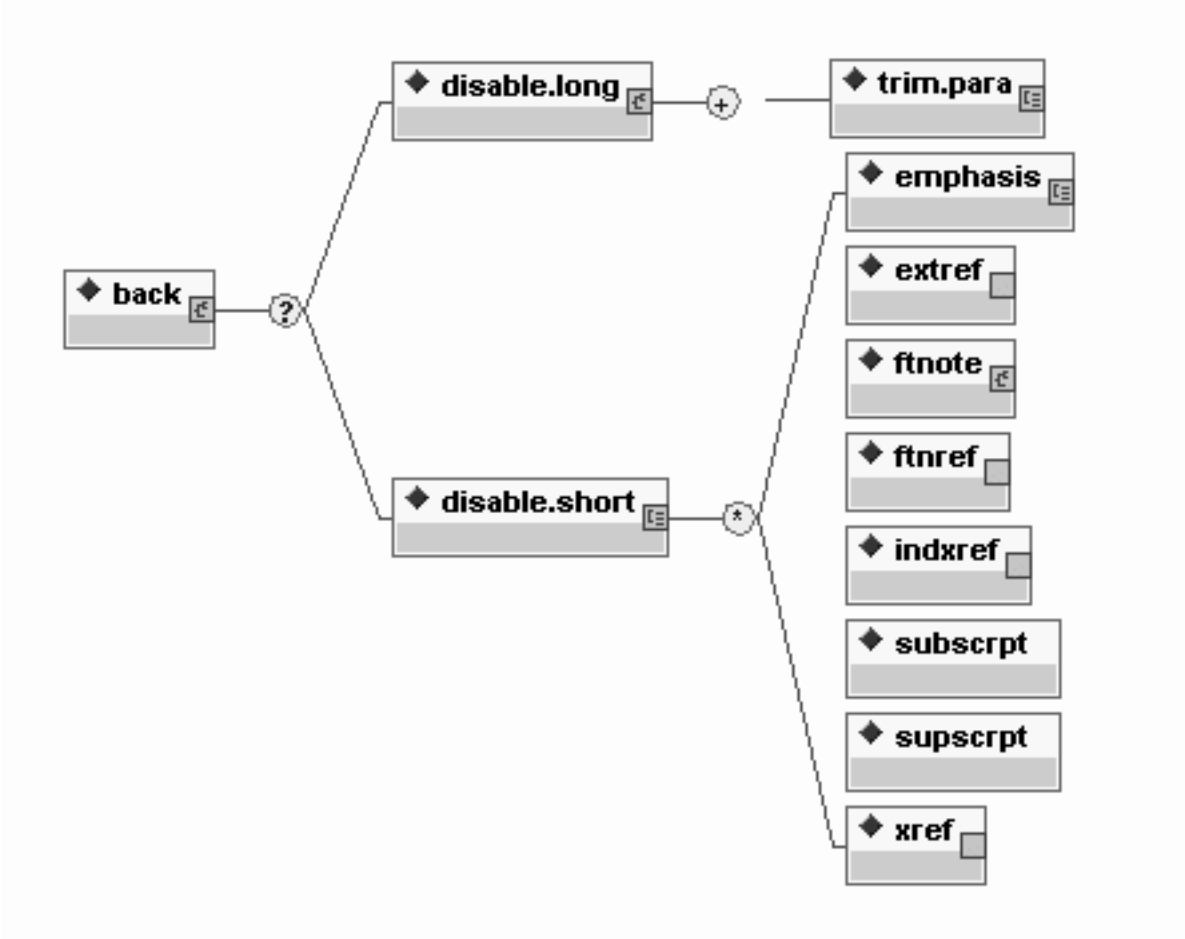

Figure 43 Back cover DTD hierarchy <back>.

a. DTD fragment for ***<back>***:

```
<!ELEMENT back (%section508;)>
   <!ATTLIST back
 boardno  ENTITY #REQUIRED
 reprowid CDATA  #IMPLIED
 reprodep CDATA  #IMPLIED>
```

b. Attributes for ***<back>***:

(1) **BOARDNO**- Specifies the name of the entity containing the graphic file of the metric conversion chart.

(2) **REPROWID** - Specifies the illustration width.

(3) **REPRODEP** - Specifies the illustration depth.

27.2.1.3 Volume ***<volume>***. An element containing the front matter for a volume in a multi-volume manual, including the title block ***<titleblk>*** (see paragraph 27.2.1.1.5) and a table of contents ***<contents>*** (see paragraph 27.2.1.1.6). The element ***<volume>*** is used to insert the front matter only, not to indicate a containment relationship relative to surrounding TM body matter.

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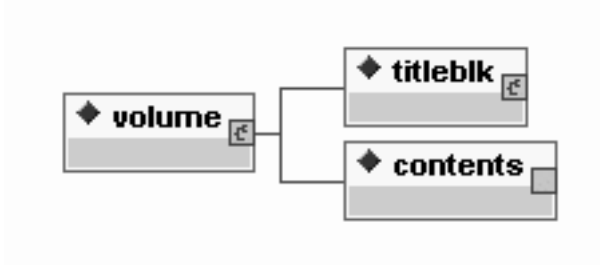

Figure 44 Volume DTD hierarchy <volume>.

a. DTD fragment for ***<volume>***:

```
<!ELEMENT volume (titleblk, contents)>
```

27.2.1.4 Volume rear ***<vol-rear>***. This element is used for rear ***<rear>*** (see paragraph 27.2.1.2) 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.

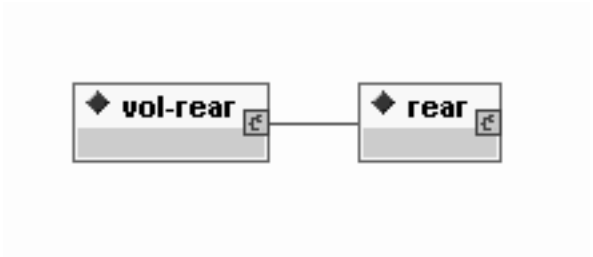

Figure 45 Volumerear DTD hierarchy <vol-rear>.

a. DTD fragment for ***<vol-rear>***:

```
<!ELEMENT vol-rear (rear)>
```

27.2.2 Framed-Based TM ***<framed.manual>***. The ***<framed.manual>*** element 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. The element consists of a framed front ***<framed.frnt>***, a General Information Chapter (***<gim >*** see paragraph 28.3) with the parameter entity volume separation ***%vol.group;*** (see paragraph 34.3.15), an optional one or more Operating Chapter(s) (***<opim>*** see paragraph 29.3) and parameter entity volume separation ***%vol.group;***, with a Trouble Information Chapter (***<tim>*** see paragraph 30.3) and parameter entity volume separation ***%vol.group;*** and/or Maintenance Chapter (***<mim>*** (see paragraph 31.3) and parameter entity volume separation ***%vol.group;*** followed by a required Supporting Chapter (***<sim>*** see paragraph 33.3) , an optional Parts Information Chapter pim and at least one Reporting Errors and Recommending Improvements DA 2028 form (***<da2028>*** see paragraph 27.2.1.2.4). There is only one ***<framed.manual>*** element per TM.

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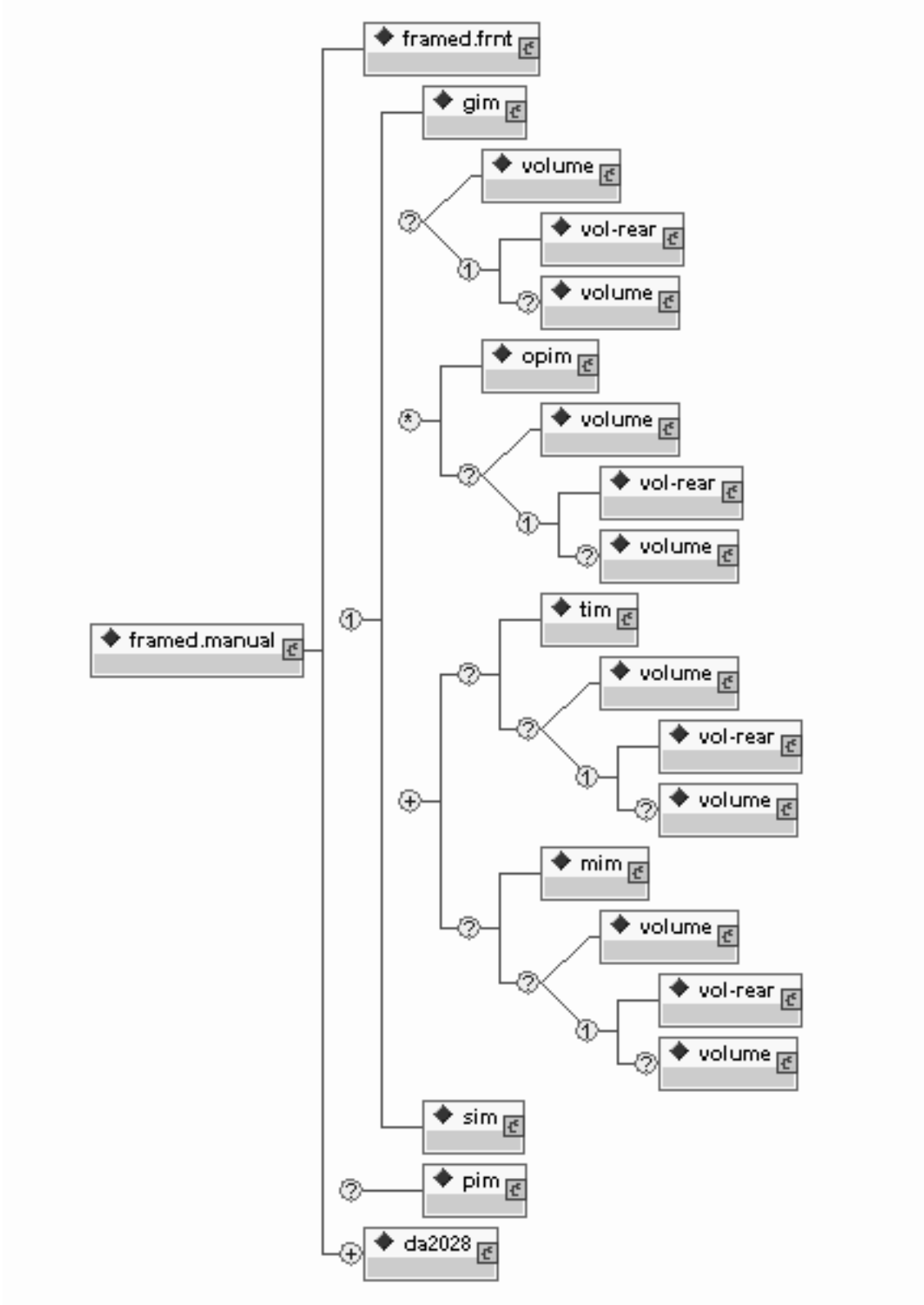

Figure 46 Framed-Based TM DTD hierarchy <framed.manual>.

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a. DTD fragment for ***<framed.manual>***:

```
<!ELEMENT framed.manual (framed.frnt,(gim,%vol.group;, (opim, %vol.group;)*,
 ((tim, %vol.group;)?, (mim, %vol.group;)?)+, sim), (pim)?, da2028+)>
<!ATTLIST framed.manual
   revno   CDATA     #REQUIRED
   maintitl  CDATA     #REQUIRED
   maintlvls  10 | 13 | 14 | 24 | avum-avim | dmwr | nmwr)   #REQUIRED
   currentasof CDATA     #REQUIRED
   date   CDATA     #REQUIRED
   pubno   CDATA     #IMPLIED
   %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) **CURRENTASOF** - The current date of the parts information.
(5) **DATE** - The date of the current version of the element.
(6) **PUBNO** - Specifies the technical manual publication number
(7) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.2.1 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. It consist of a required List of Effective Pages Work Package (***<loepwp>*** see paragraph 27.2.1.1.4), a front cover (***<frntcover>*** see paragraph 27.2.1.1.1), a table of contents (***<contents>*** see paragraph 27.2.1.1.6) and a how to use section (***<howtouse>*** see paragraph 27.2.1.1.7). Format style and requirements are prepared for screen display.

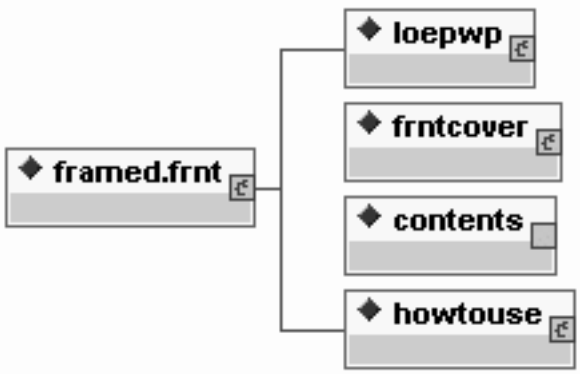

Figure 47 Front matter framed–based DTD hierarchy <framed.frnt>.

a. DTD fragment for ***<framed.frnt>***:

```
<!ELEMENT framed.frnt (loepwp, frntcover, contents, howtouse)>
```

27.2.3 System-Wide troubleshooting aviation manual ***<sys-ts>***. The element ***<sys-ts>*** contains the contents of a System-Wide Troubleshooting Aviation Manual. The element consists of front matter paged-based ***<paper.frnt>*** (see paragraph 27.2.1.1), work packages from the Troubleshooting Information Chapter (***<tim>*** see paragraph 30.3), and a rear matter (***<rear>*** see paragraph 27.2.1.2).

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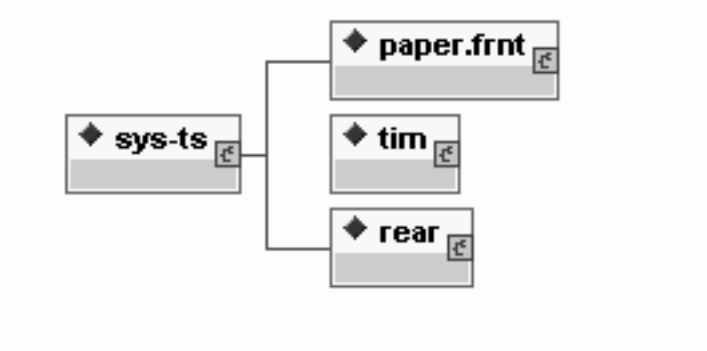

Figure 48 System-Wide troubleshooting aviation manual DTD hierarchy <sys-ts>.

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
   %bodyatt;
   %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) **%BODYATT;** - Refer to common parameter entities for a complete description (see 34.5.1)
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.3.1 Preventive maintenance services aviation manual **<*pms*>**. The element **<*pms*>** contains the contents of a Preventive Maintenance Services Aviation Manual. The element consists of Preventive Maintenance Services front matter (**<*pm.frnt*>** see paragraph 27.2.3.1.1), General Information Chapter (**<*gim*>** see paragraph 28.3), work packages from the Maintenance Information Chapter (**<*mim*>** see paragraph 31.3), parameter entity volume separation (***%vol.group;*** see paragraph 34.3.15) and a rear matter (**<*rear*>** see paragraph 27.2.1.2).

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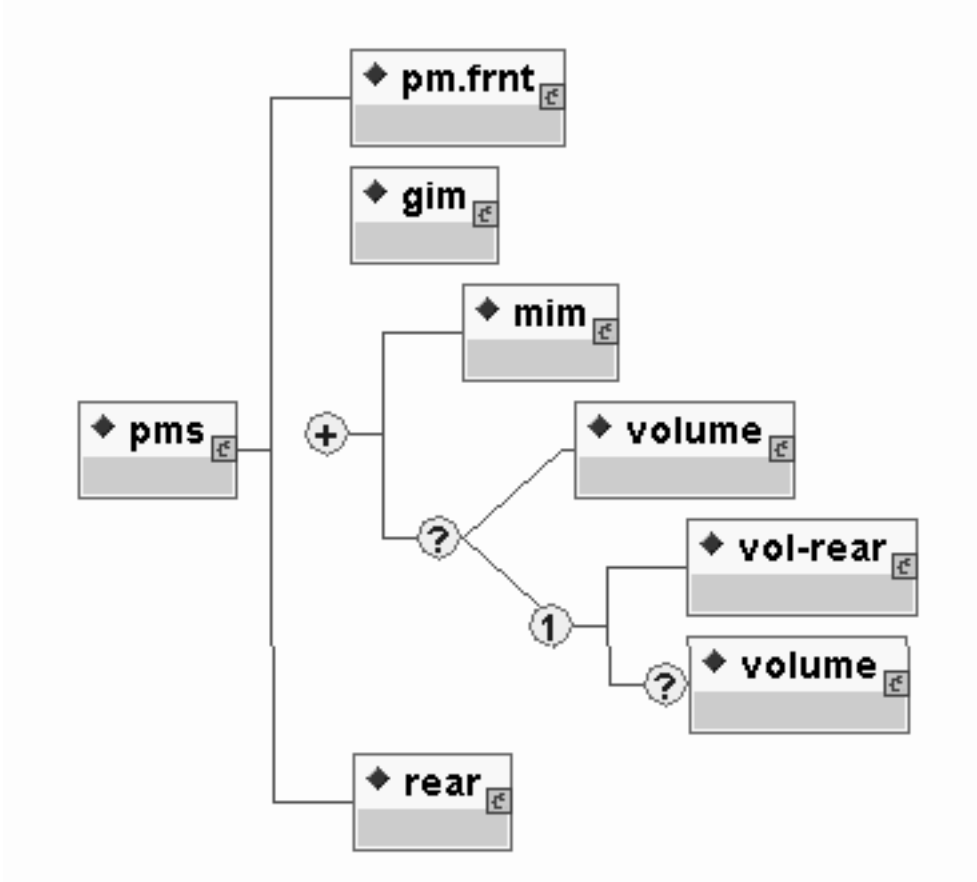

Figure 49 Preventive maintenance services aviation manual DTD hierarchy <pms>.

a. DTD fragment for ***<pms>***:

```
<!ELEMENT pms (pm.frnt, gim, (mim, %vol.group;)+, rear)>
<!ATTLIST pms
   revno  CDATA #REQUIRED
   date  CDATA  #REQUIRED
   pubno  CDATA  #IMPLIED
   %bodyatt;
   %secur;>
```

b. Attributes for ***<pms>***:

(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) **%BODYATT;** - Refer to common parameter entities for a complete description (see 34.5.1)
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.3.1.1 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>*** see paragraph 27.2.3.1) or Phased Maintenance Inspections Manual (***<pmi>*** see paragraph 27.2.3.2). The front matter consist of a front cover (***<frntcover>*** see paragraph 27.2.1.1.1), warning summary (***<warnsum>*** see paragraph 27.2.1.1.2) and a change sheet (***<chgsheet>*** see paragraph 27.2.1.1.3).

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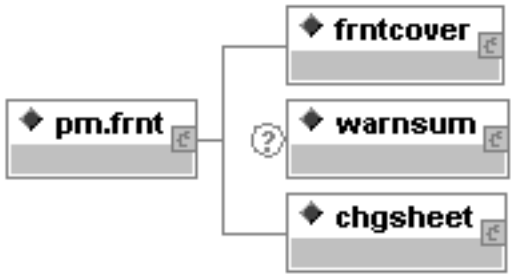

Figure 50 Preventive maintenance service manual front matter DTD hierarchy <pm.frnt>.

a. DTD fragment for ***<pm.frnt>***:

```
<!ELEMENT pm.frnt (frntcover, warnsum?, chgsheet)>
<!ATTLIST pm.frnt
   %bodyatt;
   %secur;>
```

b. Attributes for ***<pm.frnt>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

27.2.3.2 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>*** see paragraph 27.2.3.1.1), General Information Chapter (***<gim>*** see paragraph 28.3), work packages from the Maintenance Information Chapter (***<mim>*** see paragraph 31.3), parameter entity volume separation ***%vol.group;*** (see paragraph 34.3.15) and a rear matter (***<rear>*** see paragraph 27.2.1.2).

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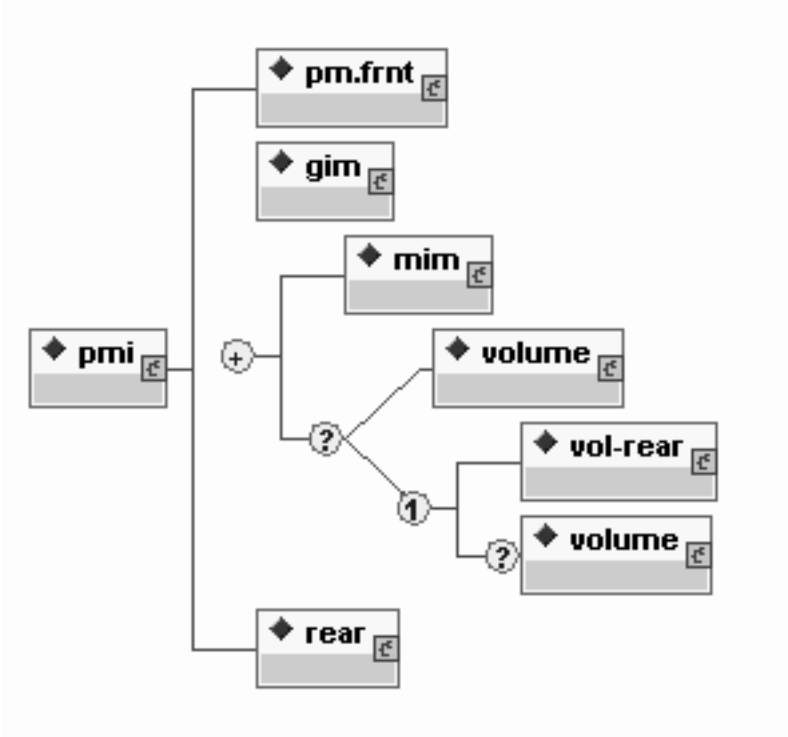

Figure 51 Phased maintenance inspections DTD hierarchy<pmi>.

a. DTD fragment for ***<pmi>***:

```
<!ELEMENT pmi (pm.frnt, gim, (mim, %vol.group;)+, rear)>
<!ATTLIST pmi
   revno  CDATA #REQUIRED
   date  CDATA  #REQUIRED
   pubno  CDATA  #IMPLIED
   %bodyatt;
   %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) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28 GENERAL INFORMATION, EQUIPMENT DESCRIPTION AND THEORY OF OPERATION.

28.1 Scope. The following paragraphs give a description and use of the elements used in the MIL-STD-2361 General Information Chapter (GIM) DTD.

28.2 Applicable documents. Refer to paragraph 2

28.3 General information, 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 paragraph 34.4.4.22) followed by either a preventive maintenance services general information work package ***<pms-ginfowp>*** or a phased maintenance checklist introductory work package ***<pm-ginfowp>*** or is subdivided

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into a general information work package ***<ginfowp>*** see paragraph 28.3.3), equipment description and data work package(s) (***<descwp>*** see paragraph 28.3.4) and may have one or more theory of operation work package(s) (***<thrywp>*** see paragraph 28.3.5).

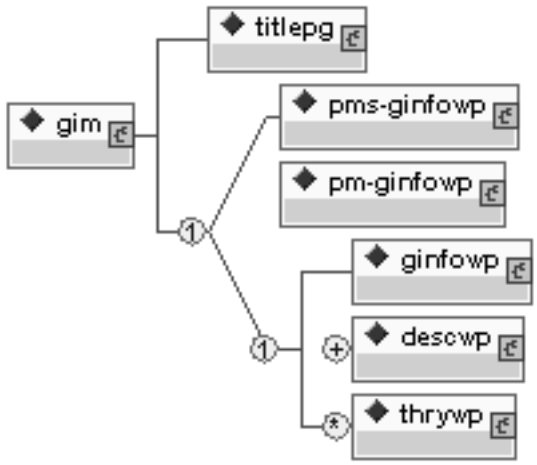

Figure 52 General information chapter DTD hierarchy <gim>.

a. DTD fragment for ***<gim>***:

```
<!ELEMENT gim (titlepg, pms-ginfowp | pm-ginfowp | (ginfowp, descwp+, thrywp*))>
<!ATTLIST gim
   tmno    CDATA     #REQUIRED
   tmlabel   CDATA     #IMPLIED
   imctrlabel   CDATA     #IMPLIED
   %chapterlevel;        #REQUIRED
   syslevel   (enditem | func-system) "enditem"
   system-title  CDATA     #IMPLIED
   %imrsrc-vals;
   revno    CDATA     #REQUIRED
   chngno   CDATA     #REQUIRED
   date    CDATA     #IMPLIED
   %bodyatt;
   %secur;>
```

b. Attributes for ***<gim>***:

(1) **TMNO** - 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) **TMLABEL** - The number of the current TM. The prefix TM must be included in the attribute value.

(3) **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.

(4) **%CHAPTERLEVEL;** - The maintenance level of the information chapter. Any of the attributes in the associated attribute set may be used with this element. Refer to %chapterlevel; see paragraph 34.5.5) for a complete description.

(5) **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”.

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(6) **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.
(7) **%IMRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.3) .
(8) **REVNO** - The overall revision number for the information chapter.
(9) **CHNGNO** - The overall change number for the information chapter.
(10) **DATE** - The date of the current version of the chapter.
(11) **%REFS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.7).
(12) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.1 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 (***<scope>*** see paragraph 34.4.4.21) and general information (***<geninfo>*** see paragraph 34.4.4.10).

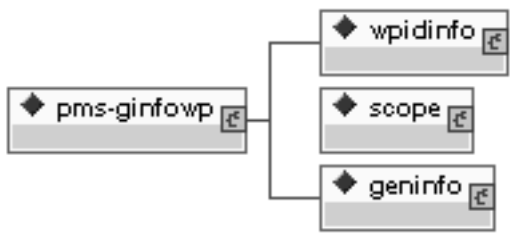

Figure 53 Preventive maintenance services general information work package DTD hierarchy <pms-ginfowp>.

a. DTD fragment for ***<pms-ginfowp>***:

```
<!ELEMENT pms-ginfowp (wpidinfo, scope, geninfo)>
<!ATTLIST pmsginfowp
   wpno  ID   #REQUIRED
   %tracking;
   %wprsrc-vals;
   %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 paragraph 34.5.9) .
(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .
(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.2 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>*** see paragraph 34.4.5) followed by general information (***<geninfo>*** see paragraph 34.4.4.10).

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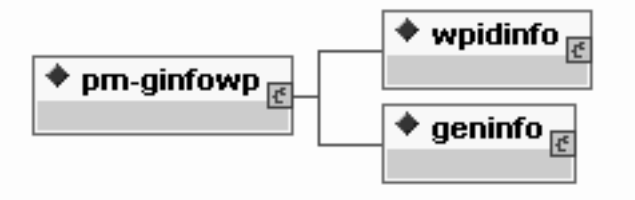

Figure 54 Phased maintenance checklist introductory work package DTD hierarchy <pm-ginfowp>.

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) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.3 General information work package ***<ginfowp>***. The general information work package ***<ginfowp>***the following elements and content requirements: (***<wpidinfo>*** see paragraph 34.4.5), scope (***<scope>*** see paragraph 34.4.4.21), reporting (***<reporting>*** see paragraph 27.2.1.1.5.1), required maintenance forms, records, and report (***<mfrr>*** see paragraph 28.3.3.1), required reporting errors and recommending improvement (***<eir>*** see paragraph 28.3.3.2), hand receipt manual (***<handreceipt>*** see paragraph 28.3.3.3), corrosion prevention and control data (***<cpcdata>*** see paragraph 28.3.3.4), (***<odsdata>*** see paragraph 28.3.3.5), destruction of Army materiel to prevent enemy use (***<destructmat>*** see paragraph 28.3.3.6), preparation for storage or shipment referencs (***<pssref>*** see paragraph 28.3.3.7), warranty reference (***<wrntyref>*** see paragraph 28.3.3.8), nomenclature cross-reference list (***<nomenreflist>*** see paragraph 28.3.3.9), list of abbreviation/acronyms (***<loa>*** see paragraph 28.3.3.10), , quality assurance information (***<qainfo>*** see paragraph 28.3.3.11), quality of material (***<qual.mat.info>*** see paragraph 28.3.3.12), safty, care, and handling (***<sftyinfo>*** see paragraph 28.3.3.13), nuclear hardness (***<hcp>*** see paragraph 28.3.3.14), calibration reference ***<calref>*** see paragraph 28.3.3.15), engineering change proposal (***<ecp>*** see paragraph 28.3.3.16), deviations and exceptions (***<deviation>*** see paragraph 28.3.3.17), mobilization requirements (***<mobreq>*** see paragraph 28.3.3.18), flight safety critical aircraft parts requirement statement (***<fscapreq>*** see paragraph 28.3.3.19), cost considerations statement (***<cost>*** see paragraph 28.3.3.20), copyright information (***<copyrt>*** see paragraph 28.3.3.21) and supporting information for repair parts, special tools, and support equipment (***<supdata>*** see paragraph 28.3.3.22). The generated text for the element work package title for ***<ginfowp>*** is **"General Information".**

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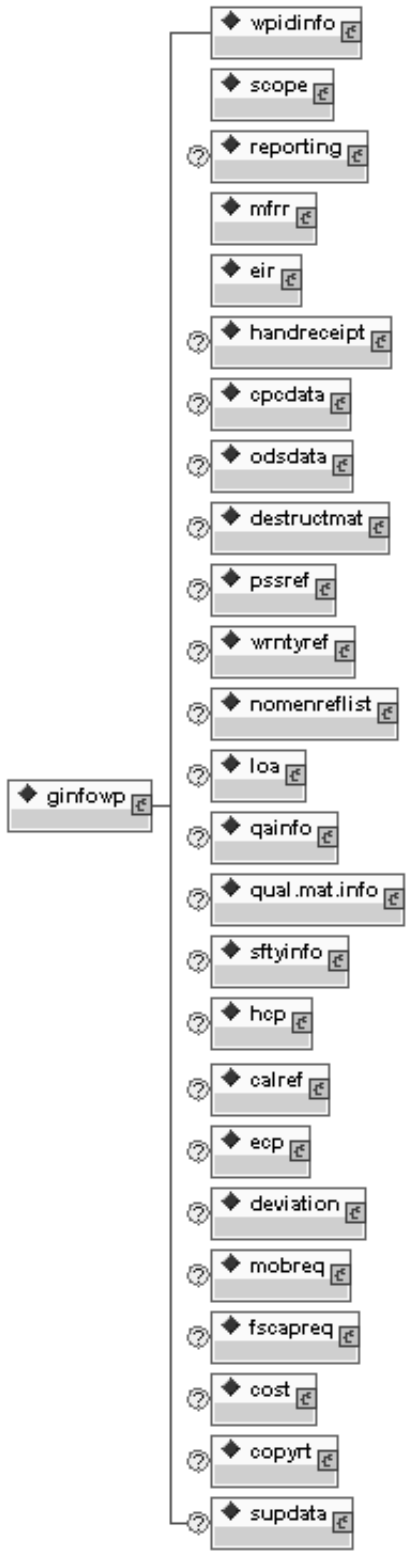

Figure 55 Standard general information work package DTD hierarchy <ginfowp>.

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a. DTD fragment for ***<ginfowp>***:

```
<!ELEMENT ginfowp (wpidinfo, scope, reporting?, mfrr, eir, handreceipt?,
 cpcdata?, odsdata?, destructmat?, pssref?, wrntyref?, nomenreflist?,
 loa?, qainfo?, qual.mat.info?, sftyinfo?, hcp?, calref?, ecp?,
 deviation?, mobreq?, fscapreq?, cost?, copyrt?, supdata?)>
<!ATTLIST ginfowp
   wpno  ID   #REQUIRED
   %wprsrc-vals;
   %tracking;
   %wpbodyatt;
   %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) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

c. The XML Document Instance Fragment 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><fsc>2350</fsc><niin>01-43-0005</niin></nsn>
<eic>XXX</eic>
<name>FIGHTING VECHICLE, INFANTRY</name>
<modelno>M3A3</modelno>
<nsn>2350 01 436 0007</nsn>
<eic>XXX</eic>
</sysnomen>
</eicnomen>
<title>GENERAL INFORMATION</title></wpidinfo>
<scope>
<para>
<figure><title>Left Front View</title><graphic boardno="ev0038" >
</graphic></figure>
<figure><title>Right Rear View</title><graphic boardno="ev0052" ></graphic>
</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>
```

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<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, U.S. 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: Distribution Operations Facility, 1655 Woodson Road, St Louis, MO 63114–6128.</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>
<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.def>
<term>Brush guard</term><def><para>Duck core rubber sheet</para></def></term.def>
<term.def><term>CVC helmet</term><def><para>DH 132 helmet</para></def></term.def>
<term.def> <term>Dipstick</term><def><para>Liquid measure gage rod</para></def></term.def>
<term.def><term>Firing port weapon</term><def><para>M231 5.56mm submachinegun</para></def></term.def>
<term.def> <term>Hot box</term><def><para>25mm ammo container</para></def></term.def>
<term.def><term>Lock wire</term><def><para>Nonelectrical wire</para></def></term.def>
<term.def><term>MRE heater</term><def><para>Heater, water and ration</para></def></term.def>
<term.def><term>Surge tank</term><def><para>Tank radiator auxiliary</para></def></term.def>
<term.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.def>
<term.def> <term>Steering yoke</term><def><para>Steering wheel</para></def></term.def>
<term.def> <term>TOW missile</term><def><para>Guided missile, surface attack, telemetry, BGM-71A, TOW</para></def></term.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.def><term>A</term><def><para>After</para></def></term.def>
<term.def> <term>Ammo</term><def><para>Ammunition</para></def></term.def>
<term.def><term>AP</term><def><para>Armor Piercing</para></def></term.def>
<term.def><term>Assy</term><def><para>Assembly</para></def></term.def>
<term.def><term>AUTO</term><def><para>Automatic</para></def></term.def>
<term.def><term>B</term><def><para>Before</para></def></term.def>

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<term.def><term>BELRF</term><def><para>Bradley Eyesafe Laser Range Finder</para></def></term.def>
<term.def> <term>BO</term><def><para>Blackout</para></def></term.def>
<term.def> <term>BRT</term><def><para>Bright</para></def></term.def>
<term.def><term>CAL</term><def><para>Calibration</para></def></term.def>
<term.def><term>CFV</term><def><para>Cavalry Fighting Vehicle</para></def></term.def>
<term.def><term>CKT BKR</term><def><para>Circuit Breaker</para></def></term.def>
<term.def><term>CVC</term><def><para>Combat Vehicle Communications</para></def></term.def>
<term.def><term>D</term><def><para>During</para></def></term.def>
<term.def><term>DCS</term><def><para>Digital Compass System (MV103AFV)</para></def></term.def>
<term.def> <term>DEG</term><def><para>Degrees</para></def></term.def>
<term.def><term>DECLIN</term><def><para>Declination</para></def></term.def>
<term.def><term>Decontn Appar</term><def><para>Decontamination Apparatus</para></def></term.def>
<term.def><term>DISCH</term><def><para>Discharge</para></def></term.def>
<term.def><term>Flex hose</term><def><para>Flexible Hose</para></def></term.def>
<term.def><term>FWD</term><def><para>Forward</para></def></term.def>
<term.def><term>GPS</term><def><para>Global Positioning System</para></def></term.def>
<term.def><term>HE</term><def><para>High Explosive</para></def></term.def>
<term.def><term>Hex</term><def><para>Hexagonal,having six sides</para></def></term.def>
<term.def><term>HI-TEMP</term><def><para>High Temperature</para></def></term.def>
<term.def> <term>ID PLATE</term><def><para>Identification Plate</para></def><term>IFV</term><def><para>Infantry Fighting Vehicle</para></def></term.def>
</deflist>
</para></loa>
</ginfowp>

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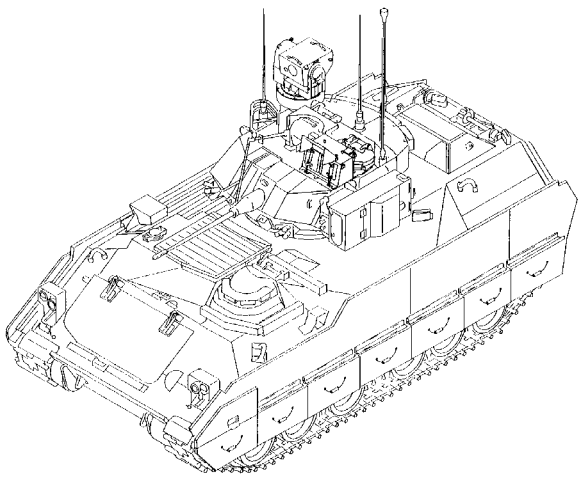
d. Sample Stylesheet/FOSI Output General Information Work Package <ginfowp>:

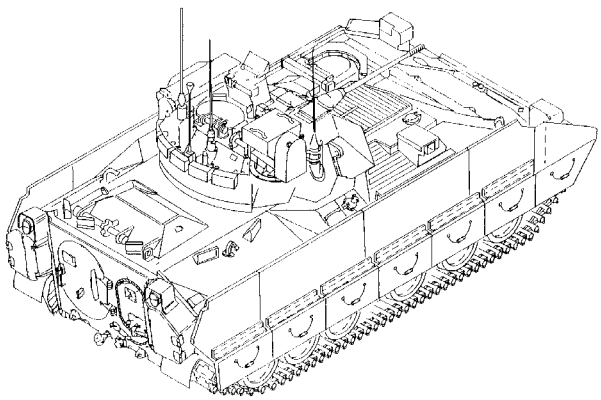
TM 9-2350-294-10-1 0001 00

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 hulls of the 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 56 Sample stylesheet/FOSI output general information work package <ginfowp>.

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28.3.3.1 Maintenance forms, records, and report ***<mfrr>***. The element ***<mfrr>*** element is used for references to Maintenance forms, records, and reports. The element can contain one or more paragraph(s) (***<para>*** see paragraph 34.4.1.5.3). The paragraph(s) may be entered using an entity reference (see paragraph 36.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051.

a. DTD fragment for ***<mfrr>***:

```
<!ELEMENT mfrr (para+)>
<!ATTLIST mfrr
   %bodyatt;
   %secur;>
```

b. Attributes for ***<mfrr>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.3.2 Reporting errors and recommending improvement ***<eir>***. 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 element can contain one or more paragraph(s) (***<para>*** see paragraph 34.4.1.5.3). The paragraph(s) may be entered using an entity reference (see paragraph 36.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051.

a. DTD fragment for ***<eir>***:

```
<!ELEMENT eir (para+)>
<!ATTLIST eir
   %bodyatt;
   %secur;>
```

b. Attributes for ***<eir>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.3.3 Hand receipt manual ***<handreceipt>***. 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 contains a title (***<title>*** see paragraph 34.4.1.5.1) and a paragraph (***<para>*** see paragraph 34.4.1.5.3). The paragraph(s) may be entered using an entity reference (see paragraph 36.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051.

a. DTD fragment for ***<handreceipt>***:

```
<!ELEMENT handreceipt (title, para)>
<!ATTLIST handreceipt
   %bodyatt;
   %secur;>
```

b. Attributes for ***<handreceipt>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.3.4 Corrosion prevention and control data ***<cpcdata>***. The 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 paragraph 34.4.1.5.3). The paragraph(s) may be entered using an entity reference (see paragraph 36.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051.

a. DTD fragment for ***<cpcdata>***:

```
<!ELEMENT cpcdata (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 paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.3.5 Ozone depleting substances ***<odsdata>***. The element ***<odsdata>*** element is a listing of ozone depleting substances that are prohibited. The ***<odsdata>*** element can contain one or more paragraph(s) (***<para>*** see paragrapph 34.4.1.5.3).

a. DTD fragment for ***<odsdata>***:

```
<!ELEMENT odsdata (para+)>
<!ATTLIST odsdata
   %bodyatt;
   %secur;>
```

b. Attributes for ***<odsdata>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.3.6 Destruction of army materiel to prevent enemy use ***<destructmat>***. The element ***<destructmat>*** is used for references to the appropriate TMs covering the destruction of Army materiel to prevent enemy use. The element can contain one or more paragraph(s) (***<para>*** see paragraph 34.4.1.5.3).

a. DTD fragment for ***<destructmat>***:

```
<!ELEMENT destructmat (para+)>
<!ATTLIST destructmat
   %bodyatt;
   %secur;>
```

b. Attributes for ***<destructmat>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.3.7 Preparation for storage or shipment references ***<pssref>***. The element ***<pssref>*** is used to identify information pertaining to the preparation for storage or shipment procedures, including packaging and administrative storage. The element can contain one or more paragraph(s) (***<para>*** see paragraph 34.4.1.5.3).

a. DTD fragment for ***<pssref>***:

```
<!ELEMENT pssref (para+)>
<!ATTLIST pssref
   %bodyatt;
   %secur;>
```

b. Attributes for ***<pssref>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.3.8 Warranty reference ***<wrntyref>***. The 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 34.4.1.5.3). The paragraph(s) may be entered using an entity reference (see paragraph 36.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051.

a. DTD fragment for ***<wrntyref>***:

```
<!ELEMENT wrntyref (para+)>
<!ATTLIST wrntyref
   %bodyatt;
   %secur;>
```

b. Attributes for ***<wrntyref>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

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28.3.3.9 Nomenclature cross-reference list ***<nomenreflist>***. The 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 34.4.1.5.3).

a. DTD fragment for ***<nomenreflist>***:

```
<!ELEMENT nomenreflist (para+)>
<!ATTLIST nomenreflist
   %bodyatt;
   %secur;>
```

b. Attributes for ***<nomenreflist>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.3.10 List of abbreviation/acronyms ***<loa>***. The 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 paragraph 34.4.1.5.3).

a. DTD fragment for ***<loa>***:

```
<!ELEMENT loa (para+)>
<!ATTLIST loa
   %bodyatt;
   %secur;>
```

b. Attributes for ***<loa>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.3.11 Quality assurance information ***<qainfo>***. The 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 element can contain one or more paragraph(s) (***<para>*** see paragraph 34.4.1.5.3). **DMWR/NMWR and Aviation only.**

a. DTD fragment for ***<qainfo>***:

```
<!ELEMENT qainfo (para)+>
<!ATTLIST qainfo
   %bodyatt;
   %secur;>
```

b. Attributes for ***<qainfo>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.3.12 Quality of material ***<qual.mat.info>***. The element ***<qual.mat.info>*** is used as a statement defining the requirements on quality of material that is included. The element can contain one or more paragraph(s) (***<para>*** see paragraph 34.4.1.5.3).

a. DTD fragment for ***<qual.mat.info>***:

```
<!ELEMENT qual.mat.info (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 paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.3.13 Safety, Care, and Handling Information ***<sftyinfo>***. The element ***<sftyinfo>*** is for general precautions and safety regulations that are included in ammunitions TMs, equipment with radioactive parts

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or components, and electrical/electronic parts. The element can contain one or more paragraph(s) (***<para>*** see paragraph 34.4.1.5.3).

a. DTD fragment for ***<sftyinfo>***:

```
<!ELEMENT sftyinfo (para+)>
<!ATTLIST sftyinfo
   %bodyatt;
   %secur;>
```

b. Attributes for ***<sftyinfo>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.3.14 Nuclear hardness ***<hcp>***. The 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 paragraph 34.4.1.5.3). The paragraph(s) may be entered using an entity reference (see paragraph 36.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051.

a. DTD fragment for ***<hcp>***:

```
<!ELEMENT hcp (para+)>
<!ATTLIST hcp
   %bodyatt;
   %secur;>
```

b. Attributes for ***<hcp>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.3.15 Calibration reference ***<calref>***. The 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 element can contain one or more paragraph(s) (***<para>*** see paragraph 34.4.1.5.3).

a. DTD fragment for ***<calref>***:

```
<!ELEMENT calref (para+)>
<!ATTLIST calref
   %bodyatt;
   %secur;>
```

b. Attributes for ***<calref>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.3.16 Engineering change proposal ***<ecp>***. The 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 element can contain one or more paragraph(s) (***<para>*** see paragraph 34.4.1.5.3). **DMWR/NMWR only.**

a. DTD fragment for ***<ecp>***:

```
<!ELEMENT ecp (para+)>
<!ATTLIST ecp
   mwo  (0 | 1 ) #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 paragraph 34.5.1).

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(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.3.17 Deviations and exceptions ***<deviation>***. The element ***<deviation>*** is used to describe the methods for requesting any deviations and/or exceptions to a Depot Maintenance Work Requirement (DMWR)s or National Maintenance Work Requirement. The element ***<deviation>*** can contain one or more paragraph(s) (***<para>*** see paragraph 34.4.1.5.3). **DMWR/NMWR only.**

a. DTD fragment for ***<deviation>***:

```
<!ELEMENT deviation (para+)>
<!ATTLIST deviation
   %bodyatt;
   %secur;>
```

b. Attributes for ***<deviation>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.3.18 Mobilization requirements ***<mobreq>***. The element ***<mobreq>*** is used for a brief statement regarding mobilization requirements. The ***<mobreq>*** element can contain one or more paragraph(s) (***<para>*** see paragraph 34.4.1.5.3). **DMWR/NMWR only.**

a. DTD fragment for ***<mobreq>***:

```
<!ELEMENT mobreq (para+)>
<!ATTLIST mobreq
   %bodyatt;
   %secur;>
```

b. Attributes for ***<mobreq>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.3.19 Flight safety critical aircraft parts requirement statement ***<fscapreq>***. The 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 paragraph 34.4.1.5.3). **Aviation only.**

a. DTD fragment for ***<fscapreq>***:

```
<!ELEMENT fscapreq (para+)>
<!ATTLIST fscapreq
   %bodyatt;
   %secur;>
```

b. Attributes for ***<fscapreq>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.3.20 Cost considerations statement ***<cost>***. The element ***<cost>*** is used to include a standard statement when defining cost considerations. The ***<cost>*** element can contain one or more paragraph(s) (***<para>*** see paragraph 34.4.1.5.3). The paragraph(s) may be entered using an entity reference (see paragraph 36.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051. **DMWRNMWR only.**

a. DTD fragment for ***<cost>***:

```
<!ELEMENT cost (para+)>
<!ATTLIST cost
   %bodyatt;
   %secur;>
```

b. Attributes for ***<cost>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

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28.3.3.21 Copyright information ***<copyrt>***. The element ***<copyrt>*** is used for the copyright credit line. The ***<copyrt>*** element can contain one or more paragraph(s) (***<para>*** see paragraph 34.4.1.5.3).

a. DTD fragment for ***<copyrt>***:

```
<!ELEMENT copyrt (para+)>
<!ATTLIST copyrt
   %bodyatt;
   %secur;>
```

b. Attributes for ***<copyrt>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.3.22 Supporting information for repair parts, special tools, and support equipment ***<supdata>***. The 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 paragraph 34.4.1.5.3).

a. DTD fragment for ***<supdata>***:

```
<!ELEMENT supdata (%titldtext;)>
<!ATTLIST supdata
   %bodyatt;
   %secur;>
```

b. Attributes for ***<supdata>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.4 Equipment description and data 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>*** see paragraph paragraph 34.4.5), and is then subdivided into one or more uses of equipment characteristics, capabilities, and features ***<eqpinfo>*** see paragraph 28.3.4.1), at least one or more more uses of location and description of major components (***<locdesc>*** see paragraph 28.3.4.2), an optional equipment differences between models (***<eqpdiff>*** see paragraph 28.3.4.3), one equipment data (***<eqpdata>*** see paragraph 28.3.4.4), and may one or more equipment configurations (***<eqpconfig>*** see paragraph 28.3.4.5). The generated text for the element work package title for ***<descwp>*** is **"Description and Data"**.

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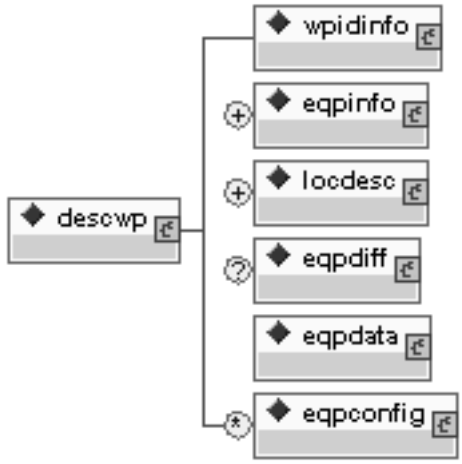

Figure 57 Equipment description and data work package DTD hierarchy <descwp>.

a. DTD fragment for ***<descwp>***:

```
<!ELEMENT descwp (wpidinfo, eqpinfo+, locdesc+, eqpdiff?, eqpdata, eqpconfig*)>
<!ATTLIST descwp
   wpno ID  #REQUIRED
   %wprsrc-vals;
   %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) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.4.1 Equipment characteristics, capabilities, and features ***<eqpinfo>***. The element ***<eqpinfo>*** is used for descriptive data containing the overall description of the equipment. The element can contain one or more equipment description ***<eqpdesc>*** element.

a. DTD fragment for ***<eqpinfo>***:

```
<!ELEMENT eqpinfo (eqpdesc+)>
<!ATTLIST eqpinfo
   %bodyatt;
   %secur;>
```

b. Attributes for ***<eqpinfo>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

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28.3.4.1.1 Equipment description ***<eqpdesc>***. The 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 34.3.10).

a. DTD fragment for ***<eqpdesc>***:

```
<!ELEMENT eqpdesc (%titldtext;)+>
<!ATTLIST eqpdesc
   %bodyatt;
   %secur;>
```

b. Attributes for ***<eqpdesc>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.4.2 Location and description of major components ***<locdesc>***. The element ***<locdesc>*** is used for descriptive data on the location and description of major components of the equipment in the work package. The element contains one or more component item ***<comp-item>***. The component item may be preceded by the parameter entity paragraph type (***%p;*** see paragraph 34.3.5).

a. DTD fragment for ***<locdesc>***:

```
<!ELEMENT locdesc ((%p;)*, comp-item+)>
<!ATTLIST locdesc
   %bodyatt;
   %secur;>
```

b. Attributes for ***<locdesc>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.4.2.1 Component item ***<comp-item>***. 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 34.3.10).

a. DTD fragment for ***<comp-item>***:

```
<!ELEMENT comp-item (%titldtext;)+>
<!ATTLIST comp-item
   %bodyatt;
   %secur;>
```

b. Attributes for ***<comp-item>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.4.3 Differences between models ***<eqpdiff>***. The element ***<eqpdiff>*** is used for descriptive data containing the significant differences between models or components. The element contains paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 34.3.10).

a. DTD fragment for ***<eqpdiff>***:

```
<!ELEMENT eqpdiff (%titldtext;)+>
<!ATTLIST eqpdiff
   %bodyatt;
   %secur;>
```

b. Attributes for ***<eqpdiff>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

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28.3.4.4 Equipment data ***<eqpdata>***. The element ***<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 contains one or more sections or subsections of data consisting of a title ***<title>***, may have a subtitle ***<subtitle>*** followed by either a paragraph ***<para>*** or specific paragraph associated with an alert ***<specpara>*** or a hazard icons and hazardous materials ***<hazmat>***.

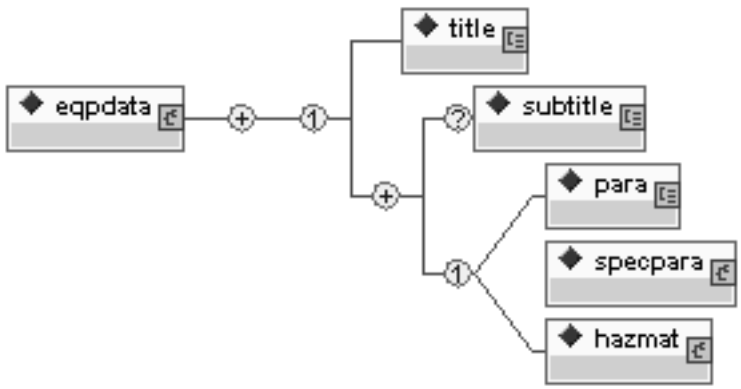

Figure 58 Equipment data DTD hierarchy <eqpdata>.

a. DTD fragment for ***<eqpdata>***:

```
<!ELEMENT eqpdata ((title, (subtitle?, (para | specpara | hazmat))+))+>
<!ATTLIST eqpdata
   %bodyatt;
   %secur;>
```

b. Attributes for ***<eqpdata>***:
   (1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
   (2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.4.5 Equipment configurations ***<eqpconfig>***. The element ***<eqpconfig>*** element is used when a piece of equipment can be configured in more than one way, information is included on each configuration. The element may contain specific equipment configuration(s) ***<config>*** which may be preceded by the parameter entity paragraph type (***%p;*** see paragraph 34.3.5).

a. DTD fragment for ***<eqpconfig>***:

```
<!ELEMENT eqpconfig ((%p;)*, config*)>
<!ATTLIST eqpconfig
   %bodyatt;
   %secur;>
```

b. Attributes for ***<eqpconfig>***:
   (1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
   (2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.4.5.1 Specific configuration ***<config>***. 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 34.3.10).

a. DTD fragment for ***<config>***:

```
<!ELEMENT config (%titldtext;)+>
<!ATTLIST config
   %bodyatt;
```

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```
%secur;>
```

b. Attributes for ***<config>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.5 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. The element consist of a required work package identification information (***<wpidinfo>*** see paragraph 34.4.5), may have an introduction section (***<intro>*** see paragraph 34.4.4.12) and at least one systems theory section ***<systhry>***. The generated text for the element ***<thrywp>*** work package title for is **"Theory of Operation".**

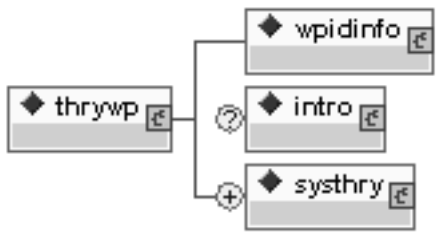

Figure 59 Theory of operation work package DTD hierarchy <thrywp>.

a. DTD fragment for ***<thrywp>***:

```
<!ELEMENT thrywp (wpidinfo, intro?, systhry+)>
<!ATTLIST thrywp
   wpno  ID   #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) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

c. The XML Document Instance Fragment for a Theory Of Operation Work Package <thrywp>

<thrywp wpno="GXXXXX-X-XXXX-XXX" wpseq= 0003 00 summary-detail="0">
<wpidinfo>
<maintlvl level="tmlvls">
<eicnomen>
<sysnomen>

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<name>OPERATOR, UNIT, DIRECT AND GENERAL SUPPORT MAINTENANCE TRANSPORTATION ELECTRONIC SHOP</name>
<nsn><fsc>4940</fsc>
<niin>01 293 5615</niin>
</nsn>
<eic>XXX</eic>
</sysnomen>
</eicnomen>
<title>THEORY OF OPERATION</title></wpidinfo>
<systhry>
<title>
POWER ENTRY HOUSING AND SECONDARY INPUT POWER FILTER</title>
<para>
Three phase input power from an external source, i.e. diesel powered generator or facility power, is cabled to the power entry housing and connected to the power input connector. Inside the housing, each phase line and the neutral line are wired to four independent surge arresters and the primary input power fitter. The surge arresters protect the circuits within the shelter from transients caused by lightning, induction, switching surges and Electro Magnetic Pulse (EMP). When a surge voltage exceeds the spark over voltage of the arrester, the arrester becomes a short circuit and remains so until the transient has been by-passed and the line automatically returns to normal. The primary input power filter suppresses condition of noise caused by Electro Magnetic Interference (EMI), into and out of the shelter over the input power lines. A secondary input power filter is connected in series with the primary input power fitter to ensure protection of shelter circuits from transient voltages below the spark over voltage of the EMP protectors coming in through the power lines.</para>
<sruthry>
<title>
POWER DISTRIBUTION ASSEMBLY (PDA)</title>
<para>
The PDA consists of a bass assembly which houses the circuit protection and the power distribution panel which contains circuit breakers and indicators. The circuit protection devices consist of an over/under voltage-relay, a phase sequence relay and an over current relay. If a condition exists in a circuit that does not meet the parameters of any one of these devices, that fault will cause the MAIN POWER circuit breaker to reset to the OFF position, thereby removing power to the internal circuits of the shelter and causes the AC POWER FAULT light to come on. When set to ON, the MAIN POWER circuit breaker applies power to the inputs of the other breakers and three green power indicators showing power applied for each phase will come on. As each of the remaining circuit breakers are set to ON, the corresponding indicators will come on providing a visual indication of power applied to each circuit.</para>
</sruthry>
<sruthry>
<title>
ENVIRONMENTAL CONTROL UNIT (ECU)</title>
<para>
(Horizontal ECU is used only on the AN/TSM-191 (V)3 model of the shelter. Vertical ECU is used only on the AN/ TSM-191(V)2 and AN/TSM-191(V)4 models of the shelter.) Once started, the air conditioner operates automatically due to the relationship of the components, controls and instruments. With the model selector switch in the OFF position, all

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```
electrical components are isolated from electrical power except for
the crankcase heater.  This device must be energized for 30 minutes
prior to operation in the coolmode.  The following operating modes
of the ECU are controlled by the mode selector switch.</para>
</sruthry>
<sruthry>
<title>
Ventilation</title>
<para>
Ventilation is provided in the VENT position by energizing the fan
motor which forces air out of the evap-orator discharge louver.
The amount of outdoor air used for ventilation is determined
by the position of the fresh air damper.</para>
</sruthry>
</systhry></thrywp>
```

d. Example of a Stylesheet/FOSI Output Theory of Operation Work Package ***<thrywp>***

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TM 11-6625-3178 -14 0015 00

OPERATOR, UNIT, DIRECT AND GENERAL SUPPORT MAINTENANCE
TRANSPORTATION ELECTRONIC SHOP
NSN 4940 01 293 5615, EIC XXX
THEORY OF OPERATION

POWER ENTRY HOUSING AND SECONDARY INPUT POWER FILTER

Three phase input power from an external source, i.e. diesel powered generator or facility power, is cabled to the power entry housing and connected to the power input connector. Inside the housing, each phase line and the neutral line are wired to four independent surge arresters and the primary input power fitter. The surge arresters protect the circuits within the shelter from transients caused by lightning, induction, switching surges and Electro Magnetic Pulse (EMP). When a surge voltage exceeds the spark over voltage of the arrester, the arrester becomes a short circuit and remains so until the transient has been by-passed and the line automatically returns to normal. The primary input power filter suppresses condition of noise caused by Electro Magnetic Interference (EMI), into and out of the shelter over the input power lines. A secondary input power filter is connected in series with the primary input power fitter to ensure protection of shelter circuits from transient voltages below the spark over voltage of the EMP protectors coming in through the power lines.

POWER DISTRIBUTION ASSEMBLY (PDA)

The PDA consists of a bass assembly which houses the circuit protection and the power distribution panel which contains circuit breakers and indicators. The circuit protection devices consist of an over/under voltage-relay, a phase sequence relay and an over current relay. If a condition exists in a circuit that does not meet the parameters of any one of these devices, that fault will cause the MAIN POWER circuit breaker to reset to the OFF position, thereby removing power to the internal circuits of the shelter and causes the AC POWER FAULT light to come on. When set to ON, the MAIN POWER circuit breaker applies power to the inputs of the other breakers and three green power indicators showing power applied for each phase will come on. As each of the remaining circuit breakers are set to ON, the corresponding indicators will come on providing a visual indication of power applied to each circuit.

ENVIRONMENTAL CONTROL UNIT (ECU)

(Horizontal ECU is used only on the AN/TSM-191 (V)3 model of the shelter. Vertical ECU is used only on the AN/ TSM-191(V)2 and AN/TSM-191(V)4 models of the shelter.) Once started, the air conditioner operates automatically due to the relationship of the components, controls and instruments. With the model selector switch in the OFF position, all electrical components are isolated from electrical power except for the crankcase heater. This device must be energized for 30 minutes prior to operation in the cool mode. The following operating modes of the ECU are controlled by the mode selector switch.

Ventilation Ventilation is provided in the VENT position by energizing the fan motor which forces air out of the evaporator discharge louver. The amount of outdoor air used for ventilation is determined by the position of the fresh air damper.

0015 00-1

Figure 60 Example of a stylesheet/FOSI system theory of operation work package <thrywp>.

28.3.5.1 Systems theory ***<systhry>***. 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

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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 34.3.10). Following the introductory section are multiple occurrences of subsystem theory ***<ssysthry>***, or multiple occurrences of line replaceable units' theory of operation ***<lruthry>*** see paragraph) which may be followed by multiple occurrences of shop replaceable units' theory of operation ***<sruthry>*** see paragraph 28.3.5.1.3).

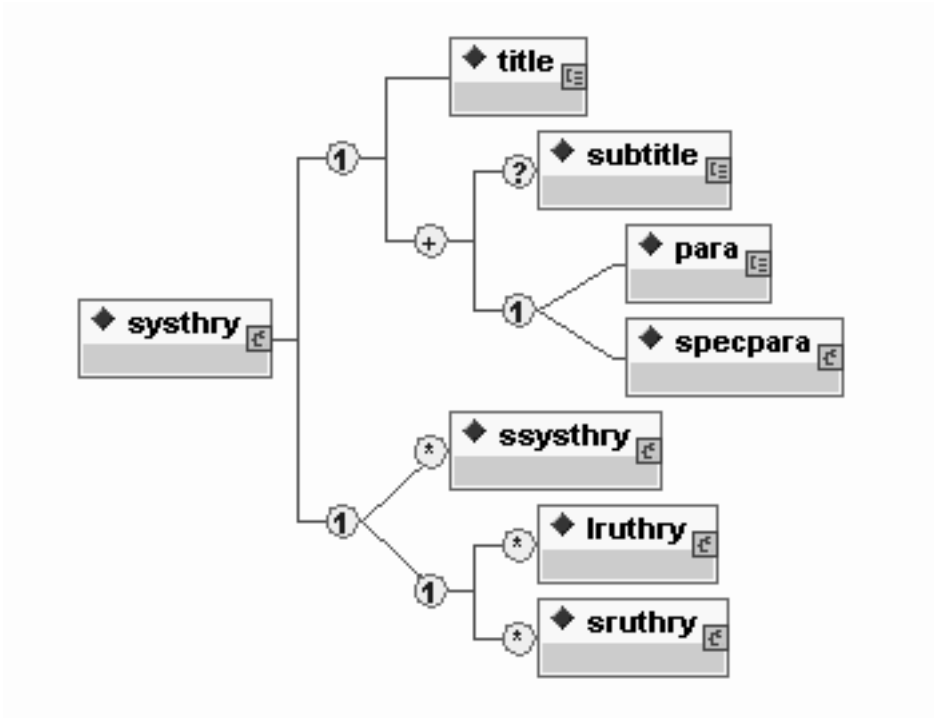

Figure 61 Systems theory DTD hierarchy <systhry>.

a. DTD fragment for ***<systhry>***:

```
<!ELEMENT systhry (%titldtext;, (ssysthry* | (lruthry*, sruthry*)))>
<!ATTLIST systhry
   %bodyatt;
   %secur;>
```

b. Attributes for ***<systhry>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.5.1.1 Subsystem theory ***<ssysthry>***. The 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 paragraph 34.4.1.5.1) , followed by optional multiple occurrences of line replaceable unit theory of operation ***<lruthry>*** and/or shop replaceable unit theory of operation ***<sruthry>*** or followed by general text paragraphs (***<para>*** see paragraph 34.4.1.5.3) and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2) preceded with an optional subtitle (***<subtitle>*** see paragraph 34.4.1.5.2).

a. DTD fragment for ***<ssysthry>***:

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```
<!ELEMENT ssysthry (title, ((lruthry*, sruthry*) | (sruthry+) |
 (subtitle?, (%p;))+))>
<!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 paragraph 34.5.1).

(4) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.5.1.2 Line replaceable unit theory of operation ***<lruthry>***. The element ***<lruthry>*** is used to identify line replaceable units' (LRU) theory of operation. A LRU is a component or unit removed at the Unit or Organizational level. The element contains paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 34.3.10) .

a. DTD fragment for ***<lruthry>***:

```
<!ELEMENT lruthry (%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 paragraph 34.5.1).

(4) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

28.3.5.1.3 Shop replaceable unit theory of operation ***<sruthry>***. The element ***<sruthry>*** element is used to identify shop replaceable units' (SRU) theory of operation. A SRU is a component or unit that is authorized to be removed only at the repair shop. The element contains paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 34.3.10).

a. DTD fragment for ***<sruthry>***:

```
<!ELEMENT sruthry (%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 paragraph 34.5.1).

(4) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

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29 OPERATOR INSTRUCTIONS INFORMATION.

29.1 Scope. The following paragraphs give a description and use of the elements used in the MIL-STD-2361 Operator Instructions Information Chapter DTD.

29.2 Applicable documents. Refer to paragraph 2

29.3 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 paragraph 34.4.4.22), followed by standard operating procedures which contains a controls and indicators work package (***<ctrlindwp>*** see paragraph 29.3.1), operations under usual conditions work package(s) (***<opusualwp>*** see paragraph 29.3.2) , operations under unusual conditions work package(s) (***<opunuwp>*** see paragraph 29.3.3), an optional stowage and decal/data plate guide work package (***<stowagewp>*** see paragraph 29.3.4) and an optional on-vehicle equipment loading plan work package (***<eqploadwp>*** see paragraph 29.3.5)

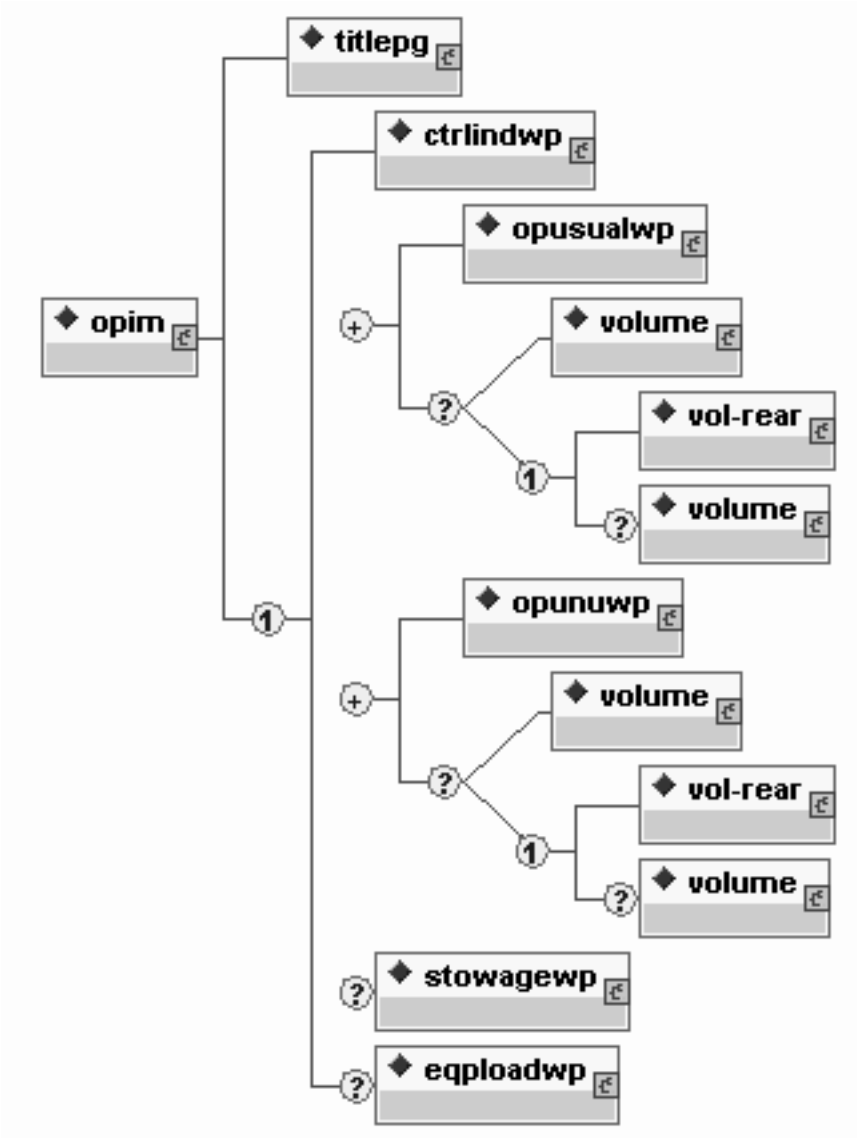

Figure 62 Operator instructions information DTD hierarchy <opim>.

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a. DTD fragment for ***<opim>***:

```
<!ELEMENT opim (titlepg, (ctrlindwp, opusualwp+, opunuwp+,
stowagewp?, eqploadwp?))>
<!ATTLIST opim
   tmno   CDATA  #REQUIRED
   tmlabel  CDATA  #REQUIRED
   imctrlabel  CDATA  #IMPLIED
   %imrsrc-vals;
   revno   CDATA  #REQUIRED
   chngno   CDATA  #REQUIRED
   date   CDATA  #IMPLIED
   %bodyatt;
   %secur;
```

b. Attributes for ***<opim>***:

(1) **TMNO** - 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) **TMLABEL** - The number of the current TM. The prefix TM must be included in the attribute value.

(3) **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.

(4) **%IMRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.3) .

(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) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(9) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

29.3.1 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. The element contains a required work package identification information (***<wpidinfo>*** see paragraph 34.4.5), introductory information (***<geninfo>*** see paragraph 34.4.4.10), one or more description of controls and indicators ***<ctrlinddesc>*** see paragraph 29.3.1.1) followed by an illustration ***<figure>*** displaying the equipment items being described in the controls and indicator table and may have one or more controls and indicator information in tabular form ***<ctrlindtab>*** see paragraph 29.3.1.2). The generated text for ***<ctrlindwp>*** the element work package title for is **"Controls and Indicators".**

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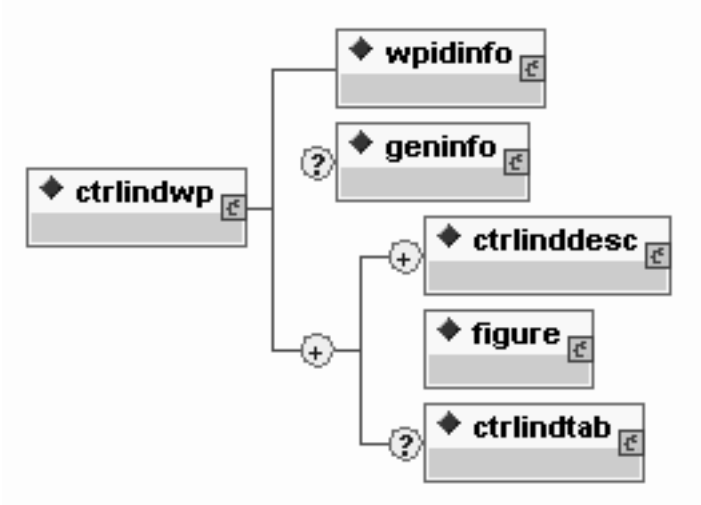

Figure 63 Controls and indicators work package DTD hierarchy <ctrlindwp>.

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 paragraph 34.5.9) .

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

c. XML 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>
<modelno>AN/PPS-5XX</modelno>
<nsn>NSN<fsc>5840</fsc>
<niin>-00-832-7880</niin>
</nsn>
<eic>EIC  XXX</eic>
</sysnomen>
</eicnomen>
```

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```
<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. Example of a Stylesheet/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.

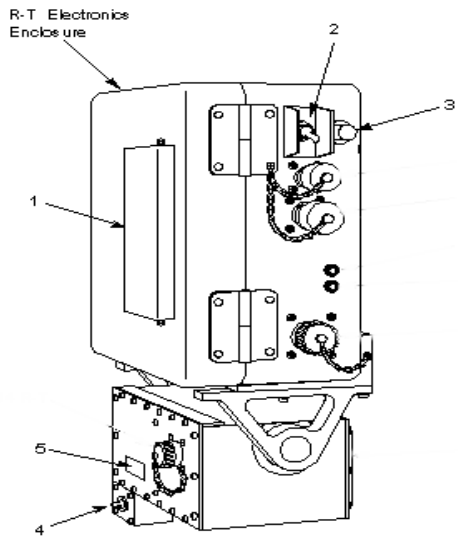

Table 1. Receiver-Transmitter Controls and Indicator

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 64 Example of a stylesheet/FOSI output controls and indicators work package <ctrlindwp>.

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29.3.1.1 Description of controls and indicators ***<ctrlinddesc>***. The ***<ctrlinddesc>*** element 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 the description of controls and indicators. The element contains the narrative about controls within paragraphs of text that may be grouped into sections or subsections (***%trim.titldtext;*** see paragraph 34.3.12).

a. DTD fragment for ***<ctrlinddesc>***:

```
<!ELEMENT ctrlinddesc (%trim.titldtext;)>
<!ATTLIST ctrlinddesc
   %bodyatt;
   %secur;>
```

b. Attributes for ***<ctrlinddesc>*** ctrlinddesc:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

29.3.1.2 Description of controls and indicators in tabular form ***<ctrlindtab>***. 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 paragraph 34.4.1.5.1) of the table must be entered. One or more illustration(s) (***<figure>*** see paragraph 34.4.3.1) may occur prior to the controls and indicators table ***<ctrlindtab>*** containing at least one or more control/indicator rows ***<ctrlindrow>*** in each table.

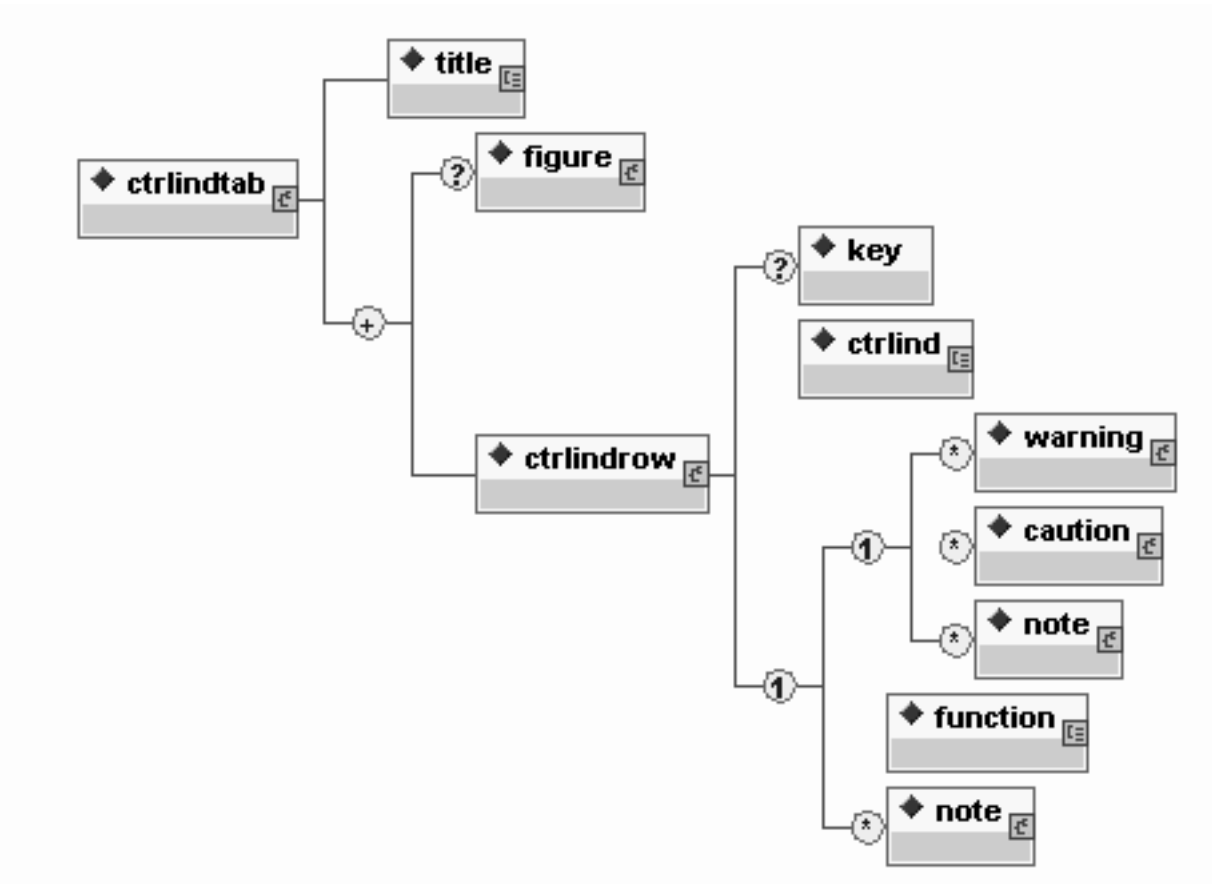

Figure 65 Description of controls and indicators in tabular form DTD hierarchy <ctrlindwp>.

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a. DTD fragment for ***<ctrlindtab>***:

```
<!ELEMENT ctrlindtab (title, (figure?, ctrlindrow)+)
<!ATTLIST ctrlindtab
   %bodyatt;
   %secur;>
```

b. Attributes for ***<ctrlindtab>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

29.3.1.2.1 Controls and indicators row ***<ctrlindrow>***. The ***<ctrlindrow>*** element identifies a control information row. Equivalent to entering "row" in a structural table. The element contains an optional key ***<key>***, a required control or indicator ***<ctrlind>***, alert statments ***%alert;*** see paragraph 34.3.1), followed by a function ***<function>*** with one or more optional note(s) ***<note>***.

a. DTD fragment for ***<ctrlindrow>***:

```
<!ELEMENT ctrlindrow (key?, ctrlind, (%alert;, function, note*))>
<!ATTLIST ctrlindrow
   id   ID  #IMPLIED
   figref  IDREF #IMPLIED>
```

29.3.1.2.1.1 Key ***<key>***. The element ***<key>*** identifies a key or callout that locates a control or indicator shown on the related figure. The element contains #PCDATA. If this element is used, it will appear in the first column of the table.

a. DTD fragment for ***<key>***:

```
<!ELEMENT key (#PCDATA)>
<!ATTLIST key
   applic (0 | 1) #REQUIRED>
```

b. Attributes for ***<key>***:

(1) **APPLIC** – The models or versions of the equipment to which this table row applies. Used as navigation criteria.

29.3.1.2.1.2 Control or indicator ***<ctrlind>***. The ***<ctrlind>*** element (see paragraph 34.4.4.3) 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.

a. DTD fragment for ***<ctrlind>***:

```
<!ELEMENT ctrlind (#PCDATA)>
<!ATTLIST ctrlind
   %bodyatt;>
```

b. Attributes for ***<ctrlind>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

29.3.1.2.1.3 Function ***<function>***. The element ***<function>*** is used to specify the function of the controls and indicator specified (***%text;*** (see paragraph 34.3.16) 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 paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

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29.3.2 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. The element contains a required work package identification information (***<wpidinfo>*** see paragraph 34.4.5), work package initial setup information (***<wpinfo>*** see paragraph 34.4.6), any alert statements (***%alert;*** see paragraph 34.3.1), an optional introductory information (***<geninfo>***see paragraph 34.4.4.10), may have an optional security measures for electronic data (***<secref>*** see paragraph 29.3.2.1) followed by one or more operating tasks (***<opertsk>*** see paragraph 29.3.2.2). The generated text for ***<opusualwp>*** the element work package title for is **"Operation Under Usual Conditions".**

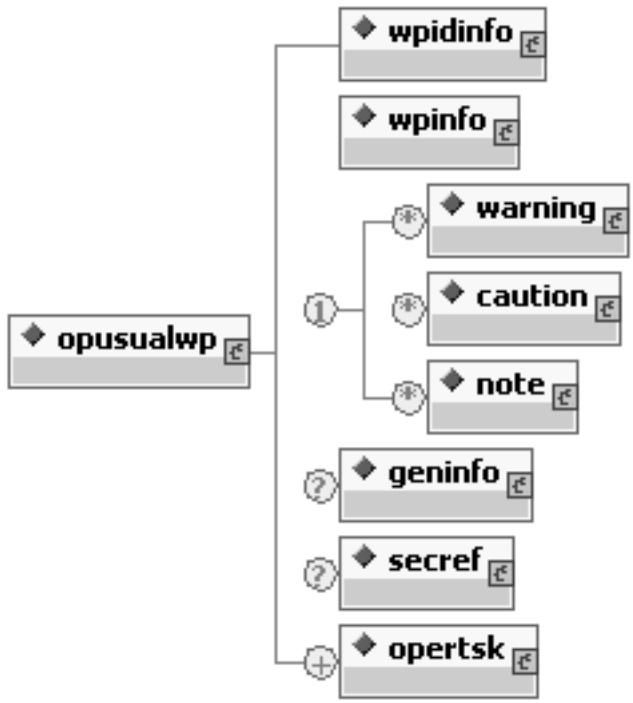

Figure 66 Operation under usual conditions work package DTD hierarchy.

a. DTD fragment for ***<opusualwp>***:

```
<!ELEMENT opusualwp (wpidinfo , wpinfo , %alert; , geninfo? , secref? , opertsk+)>

<!ATTLIST opusualwp
   wpno  ID  #REQUIRED
   crewmember CDATA #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

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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) **CREWMEMBER** - The crewmember(s) that should perform the tasks within this work package is specified.

(3) **EMERG-BORDER**- An emergency border around the information.

(4) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

(5) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(6) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(7) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

29.3.2.1 Security measures for electronic data ***<secref>***. The element ***<secref>*** is used for data pertaining to handling, loading, scrubbing, overwriting, or unloading classified electronic data under usual or unusual conditions. The element can contain one or more paragraph(s) (***<para>*** see paragraph 34.4.1.5.3).

a. DTD fragment for ***<secref>***:

```
<!ELEMENT secref (para+)>
<!ATTLIST secref
   %bodyatt;
   %secur;>
```

b. Attributes for ***<secref>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

29.3.2.2 Operational tasks ***<opertsk>***. The element ***<opertsk>*** operational tasks, describes all operational tasks consisting of siting requirements (***<site>*** see paragraph 29.3.2.2.1), (***<shelter>*** see paragraph 29.3.2.2.2), (***<prepforuse>*** see paragraph 29.3.2.2.3), ***<initial>*** see paragraph 29.3.2.2.4), (***<oper>*** see paragraph 29.3.2.2.5), (***<operaux>*** see paragraph 29.3.2.2.6), and (***<prepmove>*** see paragraph 29.3.2.2.7) required in the operations under usual conditions work package. Any alert statements (***%alert;*** see paragraph 34.3.1) may precede the operational tasks.

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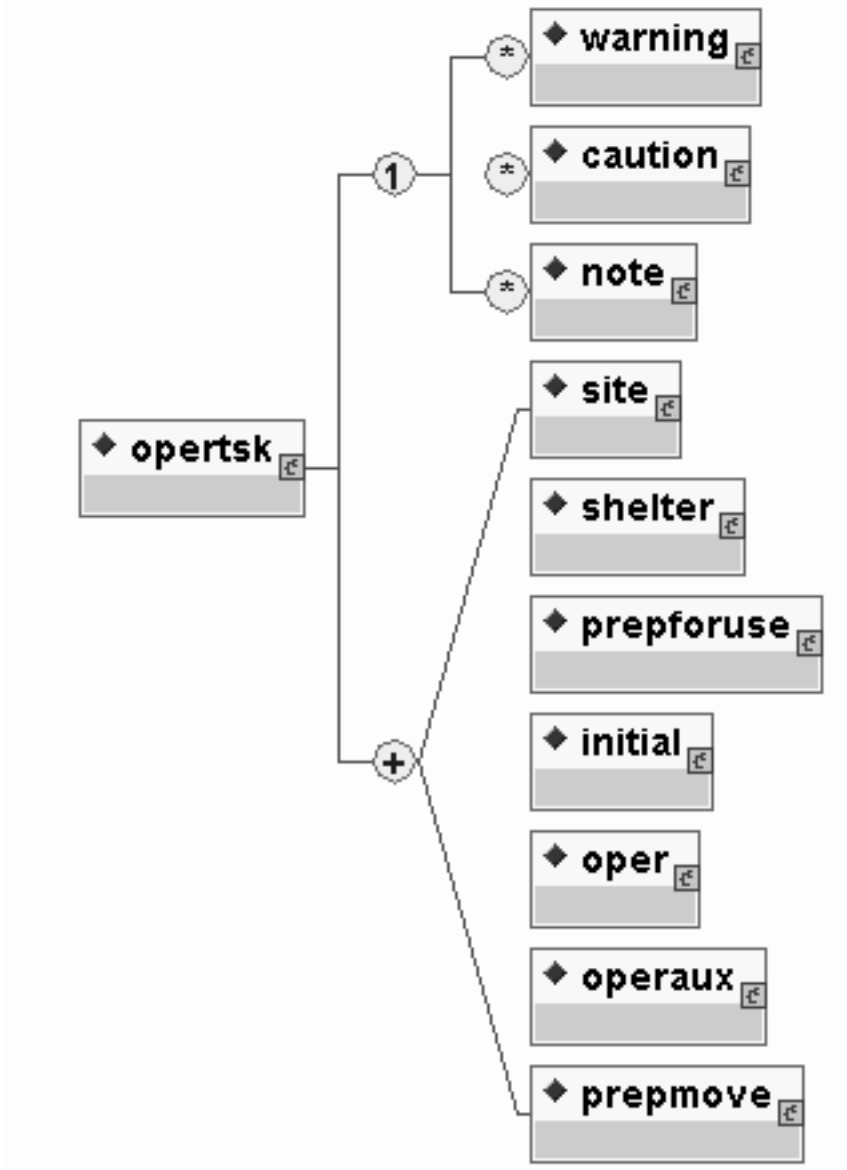

Figure 67 Operation tasks DTD hierarchy <opertsk>.

a. DTD fragment for ***<opertsk>***:

```
<!ELEMENT opertsk (%alert;, (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 paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

29.3.2.2.1 Siting requirements***<site>***. The ***<site>*** element 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

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paragraph 34.4.1.5.1) followed by paragraphs see paragraph34.4.1.5.3) and/or procedures (***<proc>*** see paragraph 34.4.1.8.1).

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 paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

29.3.2.2.2 Shelter requirements ***<shelter>***. The element***<shelter>*** shelter requirements is 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 paragraph 34.4.1.5.1) followed by either one or more group(s) containing an optional subtitle and a required paragraph ***<para>*** see paragraph 34.4.1.5.3), and/or procedures (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<shelter>***:

```
<!ELEMENT shelter (title, ((subtitle?, para) | proc)+)>
<!ATTLIST shelter
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<shelter>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

29.3.2.2.3 Preparation for use ***<prepforuse>***. The ***<prepforuse>*** element is 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 paragraph 34.4.1.5.3), paragraphs requiring alert notices (***<specpara>*** see paragraph 34.4.1.1.2) and/or procedures (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<prepforuse>***:

```
<!ELEMENT prepforuse (figure?, (%p; | proc))+>
<!ATTLIST prepforuse
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<prepforuse>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

29.3.2.2.4 Adjustments, before use, daily checks, and self-test ***<initial>***. The element ***<initial>*** adjustments, before use, daily checks, and self-test 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 paragraph 34.4.1.5.1), any alert statements (***%alert;*** see paragraph34.3.1) followed by types of paragraphs of parameter entity paragraph type (***%p;*** see paragraph 34.3.5) that may be preceded by a subtitle ***<subtitle>*** and/or procedures (***<proc>*** see paragraph 34.4.1.8.1).

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a. DTD fragment for ***<initial>***:

```
<!ELEMENT initial (title, %alert;, ((subtitle?, (%p;)) | proc)+)>
<!ATTLIST initial
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<initial>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

29.3.2.2.5 Operating procedures ***<oper>***. The ***<oper>*** element 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 paragraph 34.4.1.5.1), may contain any alert statements (***%alert;*** see paragraph34.3.1) followed by types of paragraphs of parameter entity paragraph type (***%p;*** see paragraph 34.3.5)that may be preceded by a subtitle ***<subtitle>*** and/or procedures (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<oper>***:

```
<!ELEMENT oper (title, %alert;, ((subtitle?, (%p;)) | proc)+)>
<!ATTLIST oper
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<oper>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

29.3.2.2.6 Operating auxiliary equipment ***<operaux>***. The element ***<operaux>*** element 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 paragraph 34.4.1.5.1) , any alert notices (***%alert;*** see paragraph34.3.1) followed by one or more groups of types of paragraphs of parameter entity paragraph type (***%p;*** see paragraph 34.3.5) that may be preceded by a subtitle ***<subtitle>*** and/or procedures (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<operaux>***:

```
<!ELEMENT operaux (title, %alert;, ((subtitle?, (%p;)) | proc)+)>
<!ATTLIST operaux
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<operaux>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

29.3.2.2.7 Preparation for movement ***<prepmove>***. 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

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paragraph 34.4.1.5.1) followed by either one or more group(s) containing an optional subtitle and a required paragraph (***<para>*** see paragraph 34.4.1.5.3) and/or procedures (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<prepmove>***:

```
<!ELEMENT prepmove (title, ((subtitle?, para) | proc)+)>
<!ATTLIST prepmove
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<prepmove>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

29.3.3 Operation under unusual conditions work package ***<opunuwp>***. The element ***<opunuwp>*** operating under unusual conditions work package 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. The element contains a required work package identification information (***<wpidinfo>*** see paragraph 34.4.5), work package initial setup information (***<wpinfo>*** see paragraph 34.4.6), any alert statements (***%alert;*** see paragraph34.3.1), an optional introductory information (***<geninfo>***see paragraph 34.4.4.10), may have an optional security measures for electronic data (***<secref>*** see paragraph 29.3.2.1) followed by either one or more operating tasks ***<opunutsk>*** see paragraph 29.3.3.1) or emergency(s) ***<emergency>*** see paragraph 29.3.3.2). Operations under unusual tasks ***<opunutsk>*** **MUST** be in a separate work package than any emergency procedures ***<emergency>***. The generated text for ***<opunuwp>*** the element work package title for is **"Operation Under Unusual Conditions".**

Figure 68 Operation under unusual conditions DTD hierarchy <opunuwp>.

a. DTD fragment for ***<opunuwp>***:

```
<!ELEMENT opunuwp (wpidinfo, wpinfo, %alert;, geninfo?,
 secref?, (opunutsk+ | emergency+))>
<!ATTLIST opunuwp
   wpno   ID              #REQUIRED
   crewmember CDATA       #IMPLIED
   emerg-border (0 | 1 )  "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) **EMERG-BORDER** - The overall revision number for the information chapter.

(4) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

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(5) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(6) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(7) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

29.3.3.1 Unusual operational tasks ***<opunutsk>***. The ***<opunutsk>*** element describes the following conditional tasks that are required in the operations under unusual conditions work package: unusual operational tasks (***<unusualenv>*** see paragraph 29.3.3.1.1), fording and swimming the equipment (***<fording>*** see paragraph 29.3.3.1.2), biological and chemical (NBC) decontamination (***<decon>*** see paragraph 29.3.3.1.3), and the task containing countermeasure procedures for operation of equipment in an ECM environment through transmitted and reflected deception signals and jamming (***<ecm>*** see paragraph 29.3.3.1.4). A series of alert statements ***%alert;*** see paragraph 34.3.1) may precede the unusual operational tasks.

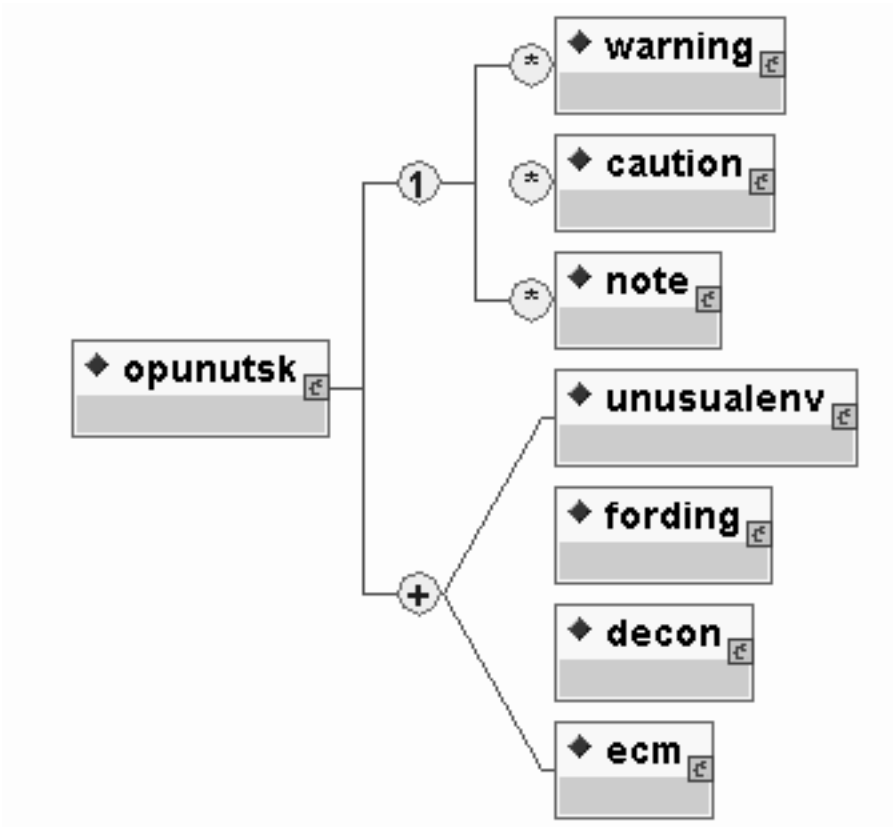

Figure 69 Unusual operational tasks DTD hierarchy <opunutsk>.

a. DTD fragment for ***<opunutsk>***:

```
<!ELEMENT opunutsk (%alert;, (unusualenv |fording | decon | ecm)+)>
<!ATTLIST opunutsk
   %bodyatt;
   %secur;>
```

b. Attributes for ***<opunutsk>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

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29.3.3.1.1 Unusual environment ***<unusualenv>***. The ***<unusualenv>*** element 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 paragraph 34.4.1.5.1)followed by either one or more group(s) containing an optional subtitle and a required general paragraph (***<para>*** see paragraph 34.4.1.5.3) and/or procedures (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<unusualenv>***:

```
<!ELEMENT unusualenv (title, ((subtitle?, para) | proc)+)>
<!ATTLIST unusualenv
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<unusualenv>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

29.3.3.1.2 Fording and swimming ***<fording>***. The ***<fording>*** element 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 paragraph 34.4.1.5.1) followed by either one or more group(s) containing an optional subtitle and a required general paragraph (***<para>*** see paragraph 34.4.1.5.3) and/or procedures (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<fording>***:

```
<!ELEMENT fording (title, ((subtitle?, para) | proc)+)>

<!ATTLIST fording
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<fording>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

29.3.3.1.3 Interim nuclear, biological, chemical (nbc) decontamination ***<decon>***. The ***<decon>*** element 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 paragraph 34.4.1.5.1) followed by either one or more group(s) containing an optional subtitle and a required general paragraph (***<para>*** see paragraph 34.4.1.5.3) and/or procedures (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<decon>***:

```
<!ELEMENT decon (title, ((subtitle?, para) | proc)+)>
<!ATTLIST decon
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<decon>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

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(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

29.3.3.1.4 Jamming and electronic countermeasure procedures ***<ecm>***. ***<ecm>*** element 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 paragraph 34.4.1.5.1) followed by either one or more group(s) containing an optional subtitle and a required paragraph (***<para>*** see paragraph34.4.1.5.3) and/or procedures (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<ecm>***:

```
<!ELEMENT ecm (title, ((subtitle?, para) | proc)+)>>
<!ATTLIST ecm
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<ecm>***:
(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

29.3.3.2 Emergency operational procedures ***<emergency>***. The ***<emergency>*** element 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 paragraph 34.4.1.5.1) followed by followed the parameter entity ***%p;*** paragraphs (***<para>*** see paragraph 34.4.1.5.3) and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2) that may be preceded by a subtitle and/or procedures (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<emergency>***:

```
<!ELEMENT emergency ((title, ((subtitle?, (%p;)) | proc)+)>
<!ATTLIST emergency
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<emergency>***:
(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

29.3.4 Stowage and Decal/Data Plate Guide Work Package ***<stowagewp>***. 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 paragraph 34.4.5), an introduction (***<intro>*** see paragraph 34.4.4.12), illustration(s) detailing the location of COEI, BII and AAL items (***<stowinfo>*** see paragraph 29.3.4.1), and optional illustration(s) detailing the location of all decals and data plates (***<decalinfo>*** see paragraph 29.3.4.2). The generated text for ***<stowagewp>*** the element work package title for is **"Stowage and Decal/Data Plate Guide". Operator equipment manuals only**

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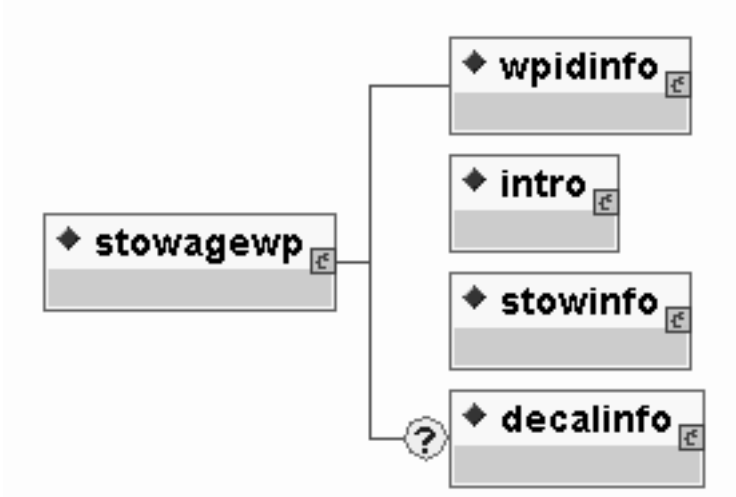

Figure 70 Stowage and Decal/Data Plate Guide Work Package DTD Hierarchy <stowagewp>.

a. DTD fragments for ***<stowagewp>***:

```
<!ELEMENT stowagewp (wpidinfo, intro, stowinfo, decalinfo?)>
<!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 paragraph 34.5.11) .

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

29.3.4.1 Stowage information ***<stowinfo>***. The ***<stowinfo>*** element contains introductory information (***<intro>*** see paragraph 34.4.4.12) followed by at least one illustration (***<figure>*** see paragraph 34.4.3.1) 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)
    %bodyatt;
    %secur;>
```

b. Attributes for ***<stowinfo>*** and ***<decalinfo>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

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(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

29.3.4.2 Decal information ***<decalinfo>***. The element ***<decalinfo>*** contains introductory information (***<intro>*** see paragraph 34.4.4.12) followed by at least one illustration (***<figure>*** see paragraph 34.4.3.1) that detail the location of all decals and data plates in and on the equipment.

a. The DTD fragment for ***<decalinfo>***: See paragraph 29.3.4.1 a.
b. The attributes for ***<decalinfo>***: See paragraph29.3.4.1 b.

29.3.5 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 paragraph 34.4.5), an introductory section (***<intro>*** see paragraph 34.4.4.12), and the illustrated loading plan list ***<loaddesc>***. The generated text for ***<eqploadwp>*** the element work package title for is **"On-Vehicle Equipment Loading Plan".**

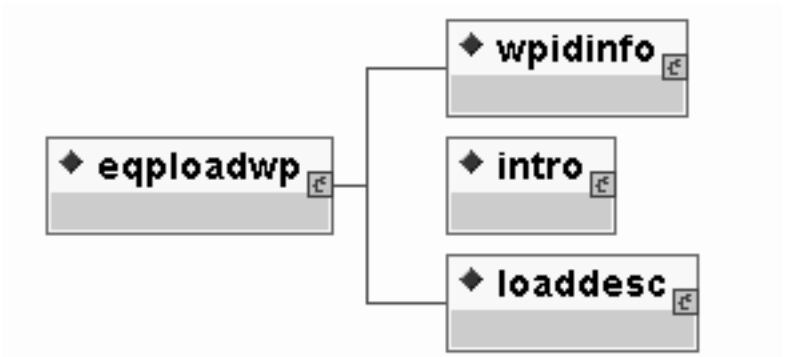

Figure 71 On-Vehicle equipment loading plan work package DTD hierarchy <eqploadwp>.

a. DTD fragment for ***<eqploadwp>***:

```
<!ELEMENT eqploadwp (wpidinfo, intro, loaddesc)>
<!ATTLIST eqploadwp
   wpno   ID  #REQUIRED
   %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 paragraph 34.5.11) .
   (3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .
   (4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .
   (5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

29.3.5.1 Loading description ***<loaddesc>***. The ***<loaddesc>*** element identifies a description of equipment loading, including illustrations of the end item with equipment locations and a standard load list table. The

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element contains a required title (***<title>*** see paragraph 34.4.1.5.1), followed by at least one figure (***<figure>*** see paragraph 34.4.3.1), each of which must be followed by a loading list ***<loadlist>***.

a. DTD fragment for ***<loaddesc>***:

```
<!ELEMENT loaddesc (title, (figure, loadlist)+)>
<!ATTLIST loaddesc
   type  (tac | notac) #REQUIRED
   %bodyatt;
   %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) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

29.3.5.1.1 Loading list ***<loadlist>***. The ***<loadlist>*** element contains a standard loading list table that lists all applicable equipment by illustration identification number (***<callout>*** see paragraph 34.4.1.3.2) and item name (***<item>*** see paragraph 34.4.1.2.1.1). The list must be on the same page or adjacent to the illustration.

a. DTD fragment for ***<loadlist>***:

```
<!ELEMENT loadlist (callout, item)+>
<!ATTLIST loadlist
   %bodyatt;
   %secur;>
```

b. Attributes for ***<loadlist>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30 TROUBLESHOOTING INFORMATION.

30.1 Scope. The following paragraphs give a description and use of elements used in the MIL-STD-2361(AC) Troubleshooting Information Chapter DTD.

30.2 Applicable documents. Refer to paragraph 2

30.3 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 consisting of an optional Troubleshooting Index Work Package (***<tsindxwp>*** see paragraph 30.3.1), Preshop Analysis Work Package (***<pshopanalwp>*** see paragraph 30.3.2), Component Checklist Work Package (***<compchklistwp>*** see paragraph 30.3.3), followed by either one or more Combined Operational Checkout and Troubleshooting Work Package(s) (***<opcheck-tswp>*** see paragraph 30.3.6) and/or Troubleshooting Work Package (***<tswp>*** see paragraph 30.3.4) and/or operational Checkout Work Package (***<opcheckwp>*** see paragraph 30.3.5). A Troubleshooting Information Chapter may also consist of a Troubleshooting Introduction Work Pack (***<tsintrowp>*** see paragraph 30.3.7) with one or more Technical Information and Description Work Package (***<techdescwp>*** see paragraph 30.3.8), an optional Troubleshooting Index Work Package (***<tsindxwp>*** see paragraph 30.3.1) followed by either one or more Combined Operational Checkout and Troubleshooting Work Package(s) (***<opcheck-tswp>*** see paragraph 30.3.6) and/or Troubleshooting Work Package (***<tswp>*** see paragraph 30.3.4) and/or Operational Checkout Work Package (***<opcheckwp>*** see paragraph 30.3.5).

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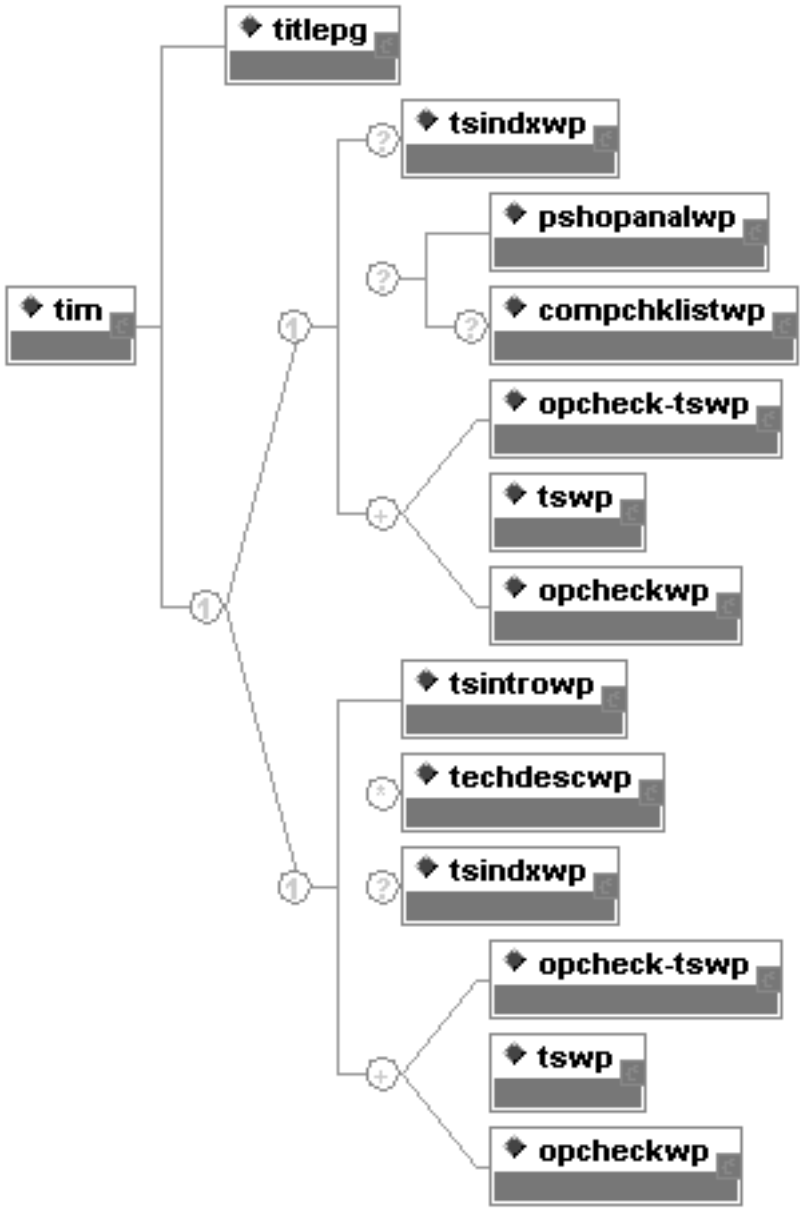

Figure 72 TIM DTD hierarchy <tim>.

a. DTD fragment for ***<tim>***:

```
<!ELEMENT tim (titlepg, ((tsindxwp?, (pshopanalwp, compchklistwp?)?,
(opcheck-tswp | tswp | opcheckwp)+) | (tsintrowp, techdescwp*, tsindxwp?,
 (opcheck-tswp | tswp | opcheckwp)+)))>
<!ATTLIST tim
   tmno   CDATA     #REQUIRED
   tmlabel   CDATA     #REQUIRED
   imctrlabel  CDATA     #REQUIRED
   %chapterlevel;
   syslevel  (enditem | func-system) "enditem"
   system-title CDATA     #IMPLIED
   %imrsrc-vals;
```

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```
revno   CDATA     #REQUIRED
chngno   CDATA     #REQUIRED
date   CDATA     #IMPLIED
%refs;
%secur;>
```

b. Attributes for ***<tim>***:

(1) **TMNO** - 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) **TMLABEL** - The number of the current TM. The prefix TM must be included in the attribute value.

(3) **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.

(4) **%CHAPTERLEVEL;** - The maintenance level of the information chapter. Any of the attributes in the associated attribute set may be used with this element. Refer to %chapterlevel; see paragraph 34.5.5) for a complete description.

(5) **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".

(6) **SYSTEM-TITLE** - If the attribute value of SYSLEVEL is "FUNC-SYSTEM", this attribute is used to identify the functional system name which the chapter/work package covers.

(7) **%IMRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.3) .

(8) **REVNO** - The overall revision number for the information chapter.

(9) **CHNGNO** - The overall change number for the information chapter.

(10) **DATE** - The date of the current version of the chapter.

(11) **%REFS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.7).

(12) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.1 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 paragraph 34.4.5), an optional general work package information (***<geninfo>*** see paragraph 34.4.4.10), any alert statements (***%alert;*** see paragraph 34.3.1) followed by a troubleshooting index (***<tsindx>*** see paragraph 30.3.1.1). The generated text for the element work package title for ***<tsindxwp>*** is **"Troubleshooting Index".**

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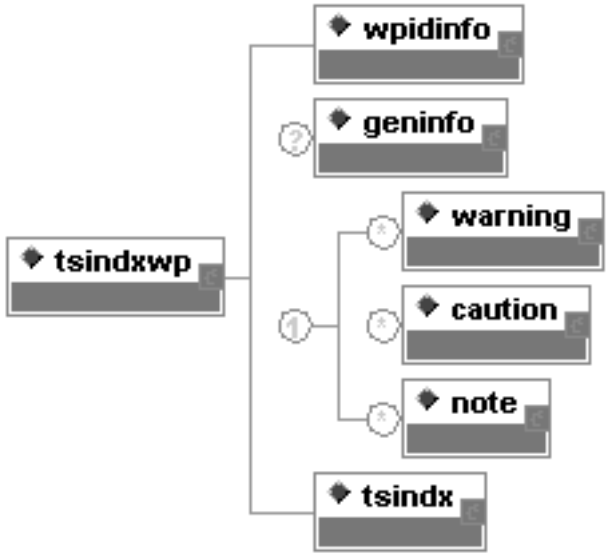

Figure 73 Troubleshooting index work package DTD hierarchy <tsindxwp>.

a. DTD fragment for ***<tsindxwp>***:

```
<!ELEMENT tsindxwp (wpidinfo, geninfo?, %alert;, tsindx)>
<!ATTLIST tsindxwp
   wpno   ID       #REQUIRED
   ts-type   (manual | automated)  #IMPLIED
   syslevel  (enditem | func-system)  "enditem"
   system-title CDATA      #IMPLIED
   %wprsrc-vals;
   %tracking;
   %wpbodyatt;
   %secur;>
```

b. Attributes for ***<tsindxwp>***:

(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) **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”.

(4) **SYSTEM-TITLE** - If the attribute value of SYSLEVEL is "FUNC-SYSTEM", this attribute is used to identify the functional system name which the chapter/work package covers.

(5) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

(6) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(7) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(8) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

c. XML Document Instance Fragment for Troubleshooting Index Work Package ***<tsindxwp>***:

<tsindxwp level="operator" wpno="t00011-11-xxxx-xxx" wpseq="006000">

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<wpidinfo>
<maintlvl level="operator">
<eicnomen><sysnomen>
<name>RADAR SET</name>
<nsn><fsc>5840</fsc><niin>-00-531-7880</niin></nsn>
<eic>EIC Y10</eic>
</sysnomen></eicnomen>
<title>MALFUNCTION/SYMPTOM INDEX</title>
</wpidinfo>
<wpinfo><null/></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>
<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>

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```
<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">
</tsindx-entry>
<tsindx-entry>
<malfunc label="malfunction">Turn R-T power switch ON and radar
does not power up.</malfunc>
<xref wpid="t00014-11-xxxx-xxx" >
</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">
</tsindx-entry>
</tsindx>
</tsindxwp>
```

d. Example of a Stylesheet/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 74 Example of a stylesheet/FOSI output for troubleshooting index work package <tsindxwp>.

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30.3.1.1 Troubleshooting index ***<tsindx>***. 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>*** see paragraph 30.3.1) 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 one or more troubleshooting categories (***<ts-category>*** see paragraph 30.3.1.1.1) or one or more troubleshooting index entries (***<tsindx-entry>*** see paragraph 30.3.1.1.2).

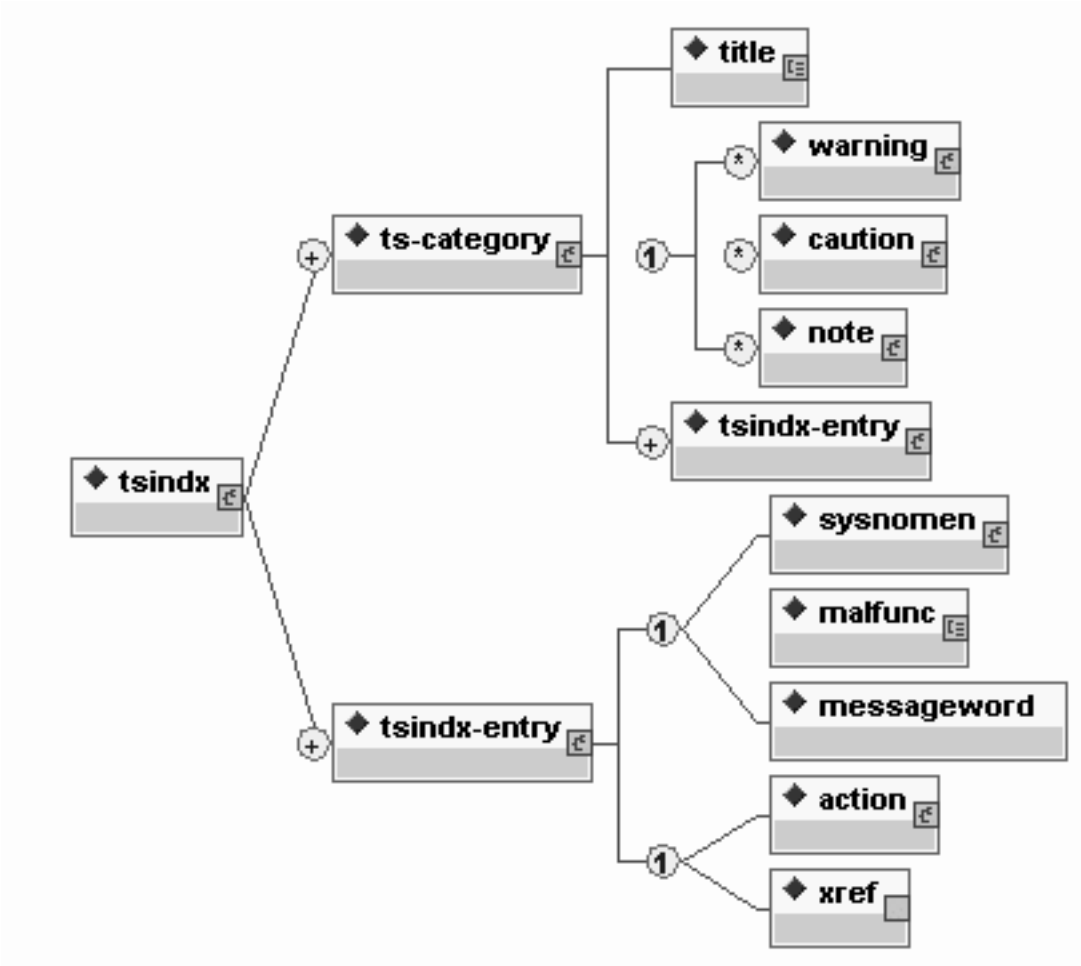

Figure 75 Troubleshooting index DTD hierarchy <tsindx>.

a. DTD fragment for ***<tsindx>***:

```
<!ELEMENT tsindx (ts-category+ | tsindx-entry+)>
<!ATTLIST tsindx
   type  (system | symptom | errorcode)  "symptom"
   sysname CDATA        #IMPLIED
   %bodyatt;
   %secur;>
```

b. Attributes for ***<tsindx>***:

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(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) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(4) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.1.1.1 Troubleshooting category ***<ts-category>***. The element ***<ts-category>*** troubleshooting category is 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 (***<title>*** see paragraph 34.4.1.5.1), any alert statements (***%alert;*** see paragraph 34.3.1) followed by at least one 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
   %bodyatt;
   %secur;>
```

b. Attributes for ***<ts-category>***:
(1) **CATG-NAME** - Specifies the category name, which is the heading that will appear in the table.
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.1.1.2 Troubleshooting index entry ***<tsindx-entry>***. The element ***<tsindx-entry>*** is a troubleshooting index entry. The element contains either an equipment nomenclature (***<sysnomen>*** see paragraph 34.4.5.2.1), or a malfunction (***<malfunc>*** see paragraph 30.3.1.1.2.1), or message words and fault reports (***<messageword>*** see paragraph 30.3.5.1.2.1.1) followed by a responsive action (***<action>*** see paragraph 30.3.1.1.2.3) or a cross reference (***<xref>*** see paragraph 34.4.1.3.6)

a. DTD fragment for ***<tsindx-entry>***:

```
<!ELEMENT tsindx-entry ((sysnomen | malfunc | messageword), (action | xref))>
<!ATTLIST tsindx-entry
   %bodyatt;
   %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) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.1.1.2.1 Malfunction ***<malfunc>***. The element ***<malfunc>*** malfunction contains information about the detected malfunction to diagnosis. The element is used as an abnormal indication or condition in response to the troubleshooting test. The element contains the parameter entity inline text (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<malfunc>***:

```
<!ELEMENT malfunc (%text;)*>
<!ATTLIST malfunc
   label  (symptom | malfunction | problem)
 #REQUIRED
   inschlvl  CDATA  #IMPLIED
```

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```
delschlvl  CDATA  #IMPLIED
%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) **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.

(3) **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.

(4) **%REFS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.7).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.1.1.2.2 Message words and fault reports ***<messageword>***. The element ***<messageword>*** element contains a particular message word or bit-code word.

a. DTD fragment for ***<messageword>***:

```
<!ELEMENT messageword (#PCDATA)>
<!ATTLIST messageword
   id ID #REQUIRED
   %secur;>
```

b. Attributes for ***<messageword>***:

(1) **ID** - Specifies the unique identifier of the message word.

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.1.1.2.3 Action ***<action>***. 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 paragraph 34.3.1), followed by one or more step(s) (***<step1>*** see paragraph 34.4.1.8.2) and/or one or more paragraphs contain within the parameter entity paragraph type (***%p;*** see paragraph 34.3.5).

a. DTD fragment for ***<action>***:

```
<!ELEMENT action (%alert;, (step1+ | (%p;)+))>
<!ATTLIST action
   %bodyatt>
```

b. Attributes for ***<action>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

30.3.2 Preshop Analysis Work Package ***<pshopanalwp>***. 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 paragraph 34.4.5), a work package initial setup (***<wpinfo>*** see paragraph 34.4.6), scope (***<scope>*** see paragraph 34.4.4.21), any alert statements (***%alert;***, see paragraph 34.3.1) procedures (***<proc>*** see paragraph 34.4.1.8.1) and preshop analysis ***<pshopanal>***. The generated text for the element work package title for ***<pshopanalwp>*** is **"Preshop Analysis Procedures".DMWR/NMWR only**.

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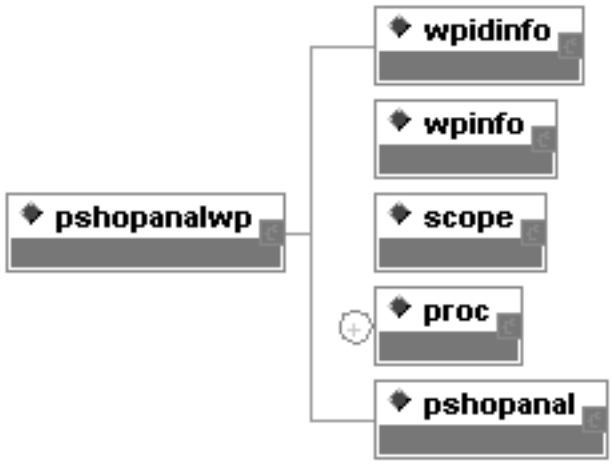

Figure 76 Preshop analysis work package DTD hierarchy <pshopanalwp>.

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 paragraph 34.5.11) .

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.2.1 Preshop analysis ***<pshopanal>***. The 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 paragraph 34.4.1.8.1) and/or check lists ***<chklist>*** (one of which is required). **DMWR/NMWR only**.

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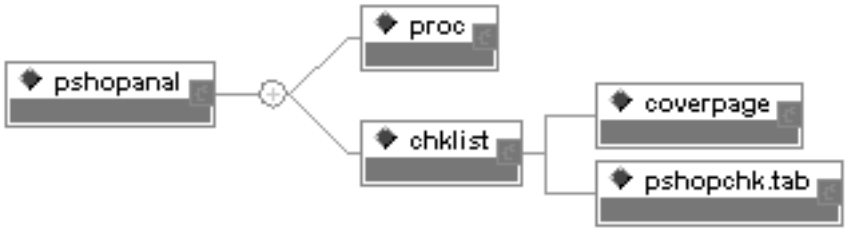

Figure 77 Preshop analysis DTD hierarchy <pshopanal>.

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 paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.2.1.1 Check list ***<chklist>***. The element ***<chklist>*** contains a required cover page ***<coverpage>***, and a required preshop checklist table (***<pshopchk.tab>*** see paragraph 30.3.2.1.1.2).

a. DTD fragment for ***<chklist>***:

```
<!ELEMENT chklist (coverpage, pshopchk.tab)>
<!ATTLIST chklist
    %bodyatt;
    %secur;>
```

b. Attributes for ***<chklist>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.2.1.1.1 Cover page ***<coverpage>***. The element ***<coverpage>*** is used to enter the cover sheet for equipment to be repaired. The part number (***<partno>*** see paragraph 34.4.4.17) , serial number (***<serialno>*** see paragraph 30.3.3.1.1), and national stock number (***<nsn>*** see paragraph 34.4.4.16) of the equipment are entered. These are followed by the modifications required ***<modreq>***, reason for overhaul or repair (***<reason>*** see paragraph 30.3.2.1.1.1.2), secondary items required ***<secitem>***, and a review of tags ***<revtag>*** and forms ***<revform>***. It also includes the name (***<name>*** see paragraph 34.4.4.15) and signature (***<sig>*** see paragraph 30.3.2.1.1.1.6) of the person doing the analysis followed by the date ***<date>*** of the analysis.

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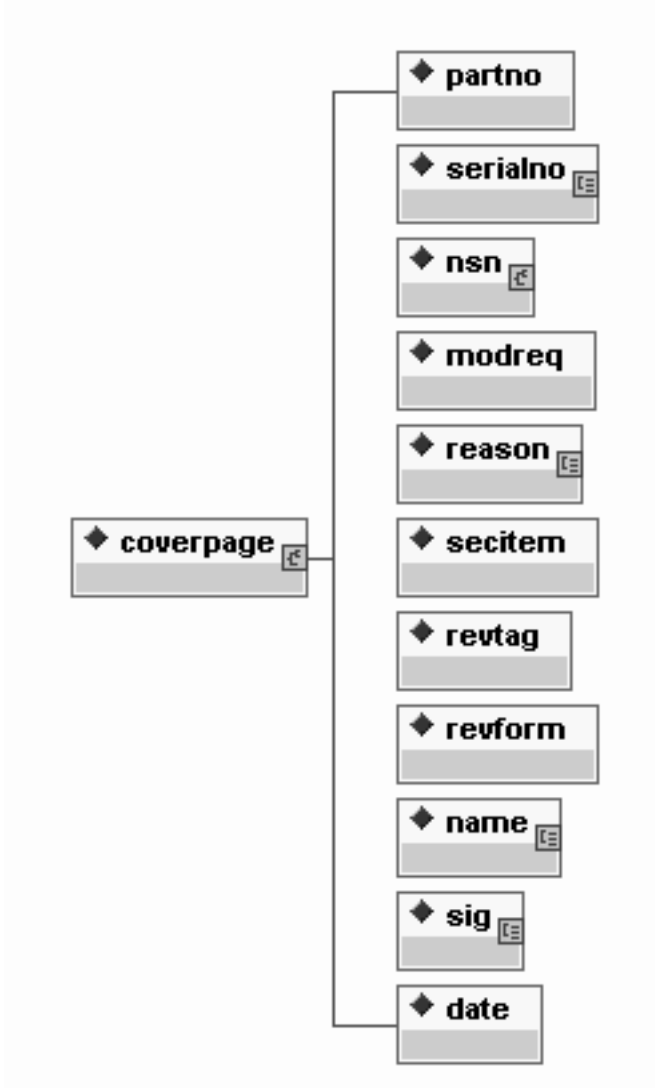

Figure 78 Cover page DTD hierarchy <coverpage>.

a. DTD fragment for ***<coverpage>***:

```
<!ELEMENT coverpage (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 paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.2.1.1.1.1 Modifications required ***<modreq>***. The element ***<modreq>*** includes any modification requirements to be included on the cover page.

a. DTD fragment for ***<modreq>***, ***<secitem>***, ***<revtag>*** and ***<revform>***:

```
<!ELEMENT (modreq |
   secitem |
```

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```
      revtag |
      revform | sig) (#PCDATA)>
   <!ATTLIST (modreq |
      secitem |
      revtag |
      revform | sig)
       %bodyatt;
       %secur;>
```

b. Attributes for ***<modreq>***, ***<secitem>***, ***<revtag>***, ***<revform>***, and ***<sig>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.2.1.1.1.2 Reason ***<reason>***. The element ***<reason>*** element is used to enter the reason for overhaul or repair on the cover page.

a. DTD fragment for ***<reason>***:

```
<!ELEMENT reason (%text;)*>
<!ATTLIST reason
    %bodyatt;
    %secur;>
```

b. Attributes for ***<reason>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.2.1.1.1.3 Secondary items ***<secitem>***. The element ***<secitem>*** is used to enter any secondary items on the cover page.

a. DTD fragment for ***<secitem>***: (see paragraph 30.3.2.1.1.1.1a.)

b. Attributes for ***<secitem>***: (see paragraph 30.3.2.1.1.1.1b.)

30.3.2.1.1.1.4 Review of tags ***<revtag>***. The element ***<revtag>*** element includes a review of tags with the item.

a. DTD fragment for Review of Tags ***<revtag>***: (see paragraph 30.3.2.1.1.1.1a.)

b. Attributes for ***<revtag>***: (see paragraph 30.3.2.1.1.1.1b.)

30.3.2.1.1.1.5 Review of forms ***<revform>***. The element***<revform>*** review of forms is part of the context of preshop analysis checklist coverpage The element ***<revform>*** element includes a review of forms with the item.

a. DTD fragment for Review of Forms ***<revform>***:(see paragraph 30.3.2.1.1.1.1a.)

b. Attributes for ***<revtag>***: (see paragraph 30.3.2.1.1.1.1b.)

30.3.2.1.1.1.6 Signature ***<sig>***. The element ***<sig>*** element represents a place for the signature of the person signing the checklist on the cover page. The element contains narrative text parsable characters (#PCDATA see paragraph 34.3.8), subscript***<subscrpt>*** and superscript ***<supscrpt>***.

a. DTD fragment for ***<sig>***:

```
<!ELEMENT sig (#PCDATA | subscrpt | supscrpt)*>
<!ATTLIST reason
    %bodyatt;
    %secur;>
```

b. Attributes for ***<sig>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.2.1.1.1.6.1 Subscript ***<subscrpt>***. The element ***<subscrpt>*** is a differentiating character or symbol written directly beneath or next to and slightly below a letter or number. The element contains the narrative text parsable characters (#PCDATA).

a. DTD fragment for ***<subscrpt>***:

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```
<!ELEMENT subscrpt (#PCDATA)>
```

30.3.2.1.1.1.6.2 Superscript ***<supscrpt>***. The element ***<supscrpt>*** is a character or symbol written directly above or next to a letter or number. The element contains the narrative text parsable characters (#PCDATA).

a. DTD fragment for ***<supscrpt>***:

```
<!ELEMENT supscrpt (#PCDATA)>
```

30.3.2.1.1.2 Preshop checklist table ***<pshopchk.tab>***. The 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 paragraph 34.4.1.5.1) and subtitle (***<subtitle>*** see paragraph 34.4.1.5.2) elements. The table contains at least one preshop checklist entry ***<pshopchk-entry>*** element.

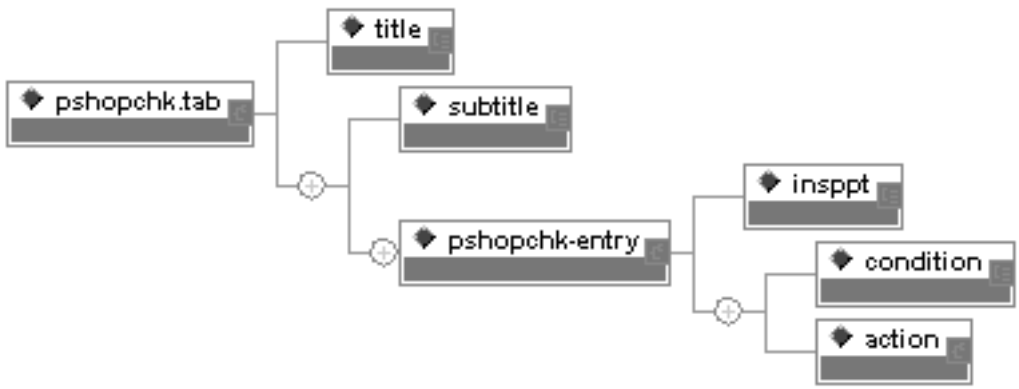

Figure 79 Preshop checklist table DTD hierarchy <pshopchk.tab>.

a. DTD fragment for ***<pshopchk.tab>***:

```
<!ELEMENT pshopchk.tab (title, (subtitle, pshopchk-entry+)+)>
<!ATTLIST pshopchk.tab
   %bodyatt;
   %secur;>
```

b. Attributes for ***<pshopchk.tab>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

c. XML Document Instance Fragment for Preshop Checklist Table ***<pshopchk.tab>***:

```
<pshopchk.tab>
<title>Preshop Analysis Checklist</title>
<subtitle>a.  External Visual Inspection.</subtitle>
<pshopchk-entry>
<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="WP"></para>
</action>
</pshopchk-entry>
<pshopchk-entry>
<insppt>Equipment Data Plate and Pump Markings</insppt>
<condition>Inspect for legibility, unwanted paint, and
general condition.</condition>
```

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```
<action>
<para><xref wpid="T00008-9-xxxx-xx" pretext="WP"></para>
</action>
</pshopchk-entry>
<pshopchk-entry>
<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="WP"></para>
</action>
</pshopchk-entry>
<pshopchk-entry>
<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="WP"></para>
</action>
</pshopchk-entry>
<subtitle>b.  External Visual Inspection.</subtitle>
<pshopchk-entry>
<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="WP"></para>
</action>
</pshopchk-entry>
<subtitle>c.  Internal Visual Inspection.</subtitle>
<pshopchk-entry>
<insppt>Ports and Fittings</insppt>
<condition>Examine for foreign material.</condition>
<action>
<para><xref wpid="T00014-9-xxxx-xx" pretext="WP"></para>
</action>
</pshopchk-entry>
<pshopchk-entry>
<insppt>Magnetic Plug</insppt>
<condition>Examine for metal particles.</condition>
<action>
<para><xref wpid="T00014-9-xxxx-xx" pretext="WP"></para>
</action>
</pshopchk-entry>
</pshopchk.tab>
```

d. Example of a Stylesheet/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 80 Example of a stylesheet/FOSI output for preshop checklist table <pshopchk.tab>.

30.3.2.1.1.2.1 Preshop checklist entry ***<pshopchk-entry>***. The element ***<pshopchk-entry>*** element represents a content tagged row in the preshop checklist table ***<pshopchk.tab>***. Equivalent to entering "row" in a structural table. The row contains one inspection point ***<insppt>***. Each inspection point ***<insppt>*** is followed by at least one or more condition(s) ***<condition>*** and responsive action(s) (***<action>*** see paragraph 30.3.1.1.2.3).

a. DTD fragment for ***<pshopchk-entry>***:

```
<!ELEMENT pshopchk-entry (insppt, (condition, action)+)>
```

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30.3.2.1.1.2.1.1 Inspection point. The element ***<insppt>*** element contains the inspection point of the item. The element contains narrative text parsable characters (#PCDATA see paragraph 34.3.8), subscript (***<subscrpt>*** see paragraph 30.3.2.1.1.1.6.1) and superscript (***<supscrpt>*** see paragraph 30.3.2.1.1.1.6.2).

a. DTD fragment for ***<insppt>***:

```
<!ELEMENT insppt (#PCDATA | subscrpt | supscrpt)*)>
<!ATTLIST insppt
   %bodyatt;
   %secur;>
```

b. Attributes for ***<insppt>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.2.1.1.2.1.2 Condition ***<condition>***. The element ***<condition>*** is used to enter the condition of the item. The element contains parameter entity (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<condition>***:

```
<!ELEMENT condition (%text;)*>
<!ATTLIST condition
   %bodyatt;
   %secur;>
```

b. Attributes for ***<condition>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.3 Component Checklist Work Package ***<compchklistwp>***. 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 paragraph 34.4.5), a work package initial setup (***<wpinfo>*** see paragraph 34.4.6) an introductory section (***<intro>*** see paragraph 34.4.4.12) and a component checklist (***<compchklist>*** see paragraph 30.3.3.1) . The generated text for the element work package title for ***<compchklistwp>*** is **"Component Checklist"**. **DMWR/NMWR only**.

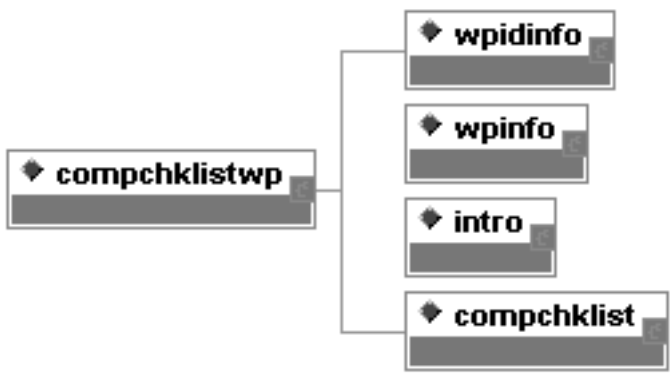

Figure 81 Component checklist work package DTD hierarchy <compchklistwp>.

a. DTD fragment for ***<compchklistwp>***:

```
<!ELEMENT compchklistwp (wpidinfo, wpinfo, intro, compchklist)>
<!ATTLIST compchklistwp
   wpno   ID  #REQUIRED
   %wprsrc-vals;
   %tracking;
```

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```
%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) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.3.1 Component checklist ***<compchklist>***. 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 paragraph 34.4.4.15) followed by an optional serial number ***<serialno>***, an optional date received element ***<daterec>***, an optional location for where it was received ***<recfrom>***, an optional component name ***<compname>***, an optional NSN (***<nsn>*** see paragraph 34.4.4.16), optional part number(s) (***<partno>*** see paragraph 34.4.4.17), an optional quantity required (***<qty>*** see paragraph 34.4.6.1.3.1.1), an optional quantity received ***<qtyrec>*** and an optional visual damage found ***<damage>***.

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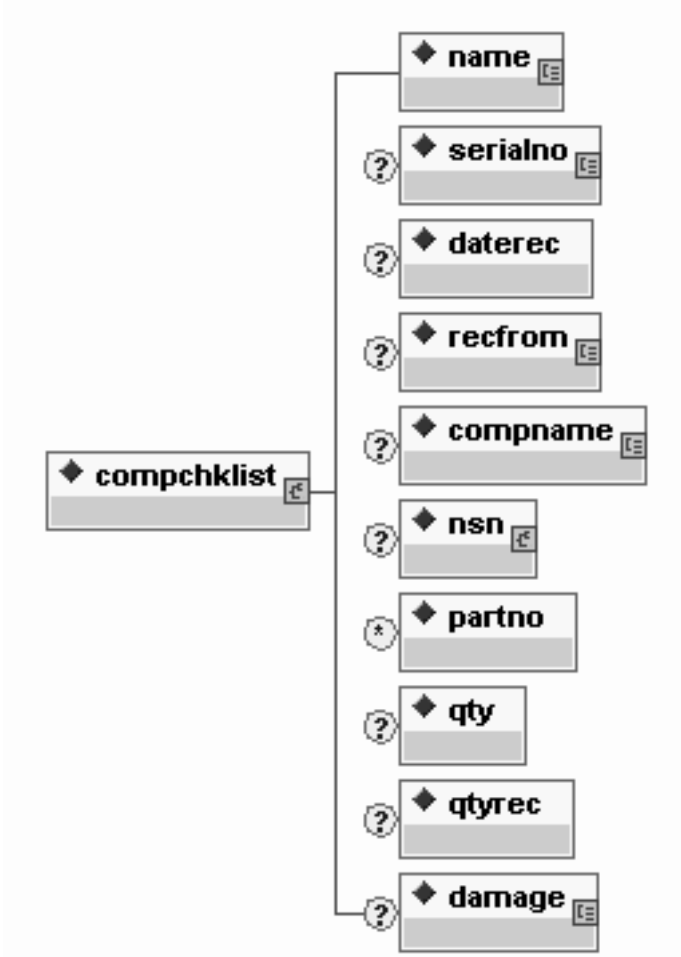

Figure 82 Component checklist DTD herarchy <compchklist>.

a. DTD fragment for ***<compchklist>***:

```
<!ELEMENT compchklist (name, serialno?, daterec?, recfrom?, compname?,
 nsn?, (partno, cageno)*, qty?, qtyrec?, damage?)>
<!ATTLIST compchklist
   %bodyatt;
   %secur;>
```

b. Attributes for ***<compchklist>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.3.1.1 Serial number ***<serialno>***. The element ***<serialno>*** is used to enter the serial number of the equipment being repaired or overhauled. The element contains (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<serialno>***:

```
<!ELEMENT serialno (%text;)*>
<!ATTLIST serialno
   %bodyatt;
   %secur;>
```

b. Attributes for ***<serialno>***:

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(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.3.1.2 Date received ***<daterec>***. The element ***<daterec>*** contains a labeled blank for entering the date the component was received. The element contains the parameter entity (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<daterec>***:

```
<!ELEMENT daterec (%text;)>
<!ATTLIST daterec
   %bodyatt;
   %secur;>
```

b. Attributes for ***<daterec>***:
(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.3.1.3 Received from ***<recfrom>***. The element ***<recfrom>*** contains a labeled blank for entering the unit that supplied the component. The element contains the parameter entity (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics). is available to enter inline formatting and contextual characteristics.

a. DTD fragment for ***<recfrom>***:

```
<!ELEMENT recfrom (%text;)*>
<!ATTLIST recfrom
   %bodyatt;
    %secur;>
```

b. Attributes for ***<recfrom>***:
(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.3.1.4 Component Name ***<compname>***. The element ***<compname>***contains a blank labeled for entering the name of the component. The element contains the parameter entity inline text (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<compname>***:

```
<!ELEMENT compname (%text;)*>
<!ATTLIST compname
   %bodyatt;
   %secur;>
```

b. Attributes for ***<compname>***:
(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.3.1.5 Quantity received ***<qtyrec>***. The element ***<qtyrec>*** element contains a labeled blank for entering the quantity of components received. The element contains narrative text (#PCDATA parsable characters see paragraph 34.3.8)

a. DTD fragment for ***<qtyrec>***:

```
<!ELEMENT qtyrec (#PCDATA)>
<!ATTLIST qtyrec
   %bodyatt;
   %secur;>
```

b. Attributes for ***<qtyrec>***:
(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

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30.3.3.1.6 Damage ***<damage>***. The element ***<damage>*** element contains a labeled blank for entering any visual damage found on the component. The element contains the parameter entity (***%text;*** see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics.

a. DTD fragment for ***<damage>***:

```
<!ELEMENT damage (%text;)*>
<!ATTLIST damage
   %bodyatt;
   %secur;>
```

b. Attributes for ***<damage>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.4 Troubleshooting Procedures Work Package ***<tswp>***. 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>*** see paragraph 34.4.5), a work package initial setup (***<wpinfo>*** see paragraph 34.4.6), an optional introductory section (***<intro>*** see paragraph 34.4.4.12), one or more procedure(s) (***<proc>*** see paragraph 34.4.1.8.1), or one or more of the elements contain in the parameter entity troubleshooting data (***%tsdata;*** see paragraph 30.3.4.1) followed by test set hookup procedure (***<hookup>*** see paragraph 30.3.4.2), troubleshooting procedure (***<tsproc>*** see paragraph 30.3.4.3), test set disconnection procedure ***<disconnect>*** or troubleshooting procedure ***<tsproc>*** followed by the parameter entity troubleshooting data ***%tsdata;***. The generated text for the element work package title for ***<tswp>*** is **"Troubleshooting Procedure"**. **Page-Based TMs only.**

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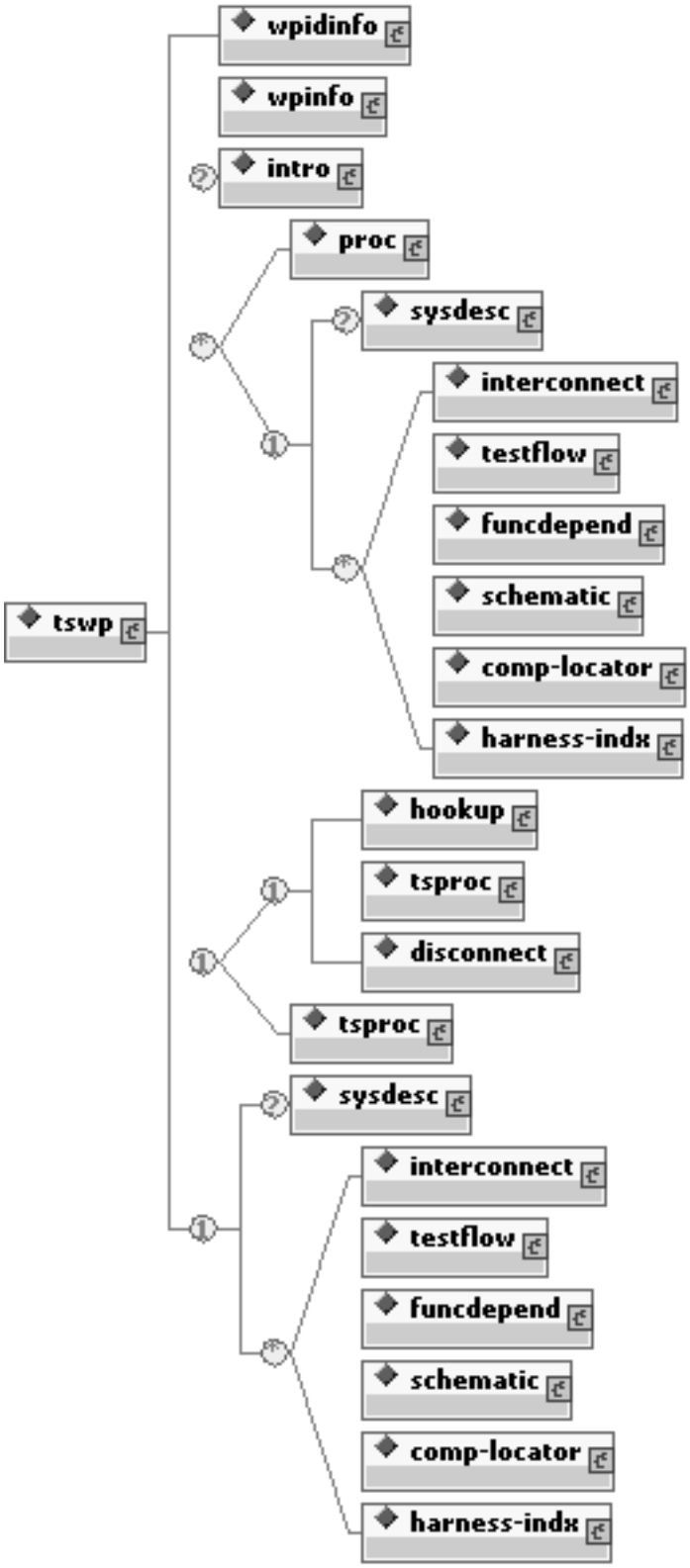

Figure 83 Troubleshooting procedures work package DTD hierarchy <tswp>.

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a. DTD fragment for ***<tswp>***

```
<!ELEMENT tswp (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 paragraph 34.5.11) .

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.4.1 Troubleshooting data ***%tsdata;***. The parameter entity ***%tsdata;*** describes the troubleshooting work package main procedures. Each element is defined below.

a. DTD fragment for ***%tsdata;***:

```
<!Entity %tsdata (sysdesc?, (interconnect | testflow | funcdepend |
      schematic | comp-locator | harness-indx)*)>
```

30.3.4.1.1 System description ***<sysdesc>***. 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 paragraph 34.3.10).

a. DTD fragment for ***<sysdesc>***:

```
<!ELEMENT sysdesc (%titldtext;)+>
<!ATTLIST sysdesc
   %bodyatt;
   %secur;>
```

b. Attributes for ***<sysdesc>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.4.1.2 Interconnections ***<interconnect>***. 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 paragraph 30.3.4), in an operational checkout work package (***<opcheckwp>*** see paragraph 30.3.5) or in a combined operational checkout and troubleshooting work package (***<opcheck-tswp>*** see paragraph 30.3.6). The element contains a title (***<title>*** see paragraph 34.4.1.5.1) , followed by a figure (***<figure>*** see paragraph 34.4.3.1) or a table (***<table>*** see paragraph 34.4.2.1) preceded by an optional parameter entity paragraph type (***%p;*** see paragraph 34.3.5).

a. DTD fragment for ***<interconnect>***:

```
<!ELEMENT interconnect (title, (%p;)?, (figure | table))>
<!ATTLIST interconnect
   %bodyatt;
```

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```
%secur;>
```

b. Attributes for ***<interconnect>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.4.1.3 Test flow ***<testflow>***. The element ***<testflow>*** element contains title text (***%titldtext;*** see paragraph 34.3.10), figure(s) (***<figure>*** see paragraph 34.4.3.1), and/or table(s) (***<table>*** see paragraph 34.4.2.1) for presenting the flow of the troubleshooting testing. May be in an introductory section in a troubleshooting work package (***<tswp>*** see paragraph 30.3.4), in an operational checkout work package (***<opcheckwp>*** see paragraph 30.3.5) or in a combined operational checkout and troubleshooting work package (***<opcheck-tswp>*** see paragraph 30.3.6).

a. DTD fragment for ***<testflow>***:

```
<!ELEMENT testflow ((%titldtext;)+, (figure | table)+)>
<!ATTLIST testflow
   %bodyatt;
   %secur;>
```

b. Attributes for ***<testflow>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.4.1.4 Functional dependencies ***<funcdepend>***. The element ***<funcdepend>*** element contains a title (***<title>*** see paragraph 34.4.1.5.1), a diagram (***<figure>*** see paragraph 34.4.3.1) preceded by optional general paragraphs (***<para>*** see paragraph 34.4.1.5.3) 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 paragraph 30.3.4), in an operational checkout work package (***<opcheckwp>*** see paragraph 30.3.5) or in a combined operational checkout and troubleshooting work package (***<opcheck-tswp>*** see paragraph 30.3.6).

a. DTD fragment for ***<funcdepend>***:

```
<!ELEMENT funcdepend (title, para*, figure)>
<!ATTLIST funcdepend
   %bodyatt;
   %secur;>
```

b. Attributes for ***<funcdepend>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.4.1.5 Schematic drawings ***<schematic>***. The element ***<schematic>*** element is used for schematic drawings included as supporting technical information during a troubleshooting procedure. May be in an introductory section in a troubleshooting work package (***<tswp>*** see paragraph 30.3.4), in an operational checkout work package (***<opcheckwp>*** see paragraph 30.3.5) or in a combined operational checkout and troubleshooting work package (***<opcheck-tswp>*** see paragraph 30.3.6). The element contains a required title (***<title>*** see paragraph 34.4.1.5.1), optional general paragraph(s) (***<para>*** see paragraph 34.4.1.5.3) followed by at least one illustration (***<figure>*** see paragraph 34.4.3.1).

a. DTD fragment for ***<schematic>***:

```
<!ELEMENT schematic (title, para*, figure+)>
<!ATTLIST schematic
   %bodyatt;
   %secur;>
```

b. Attributes for ***<schematic>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

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30.3.4.1.6 Component locator ***<comp-locator>***. The element ***<comp-locator>*** element contains a series of illustration(s) (***<figure>*** see paragraph 34.4.3.1) followed by supporting text title (***<title>*** see paragraph 34.4.1.5.1) followed by at least one paragraph (***<para>*** see paragraph 34.4.1.5.3) to locate components under test.

a. DTD fragment for ***<comp-locator>***:

```
<!ELEMENT comp-locator (figure+, title, para+)>
<!ATTLIST comp-locator
   %bodyatt;
   %secur;>
```

b. Attributes for ***<comp-locator>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.4.1.7 Harness index ***<harness-indx>***. 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 paragraph 34.4.3.1) followed by a required table (***<table>*** see paragraph 34.4.2.1). Prior to the table one or more paragraph(s) (***<para>*** see paragraph 34.4.1.5.3) may be entered.

a. DTD fragment for ***<harness-indx>***:

```
<!ELEMENT harness-indx (title, para*, table)>
<!ATTLIST harness-indx
   %bodyatt;
   %secur;>
```

b. Attributes for ***<harness-indx>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.4.2 Test set hookup procedure ***<hookup>***. 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 a required title (***<title>*** see paragraph 34.4.1.5.1), an optional general information section (***<geninfo>*** see paragraph 34.4.4.10), any alert statements (***%alert;*** see paragraph 34.3.1) followed by hookup procedures (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<hookup>***:

```
<!ELEMENT hookup (title, geninfo?, %alert;, proc+)>
<!ATTLIST hookup
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<hookup>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.4.3 Troubleshooting procedure ***<tsproc>***. The element ***<tsproc>*** troubleshooting procedure 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>*** see paragraph 30.3.4.3.1), or one or more fault procedure(s) (***<faultproc>*** see paragraph 30.3.4.4), or a multiplex read code data (***<muxproc>*** see paragraph 30.3.4.5).

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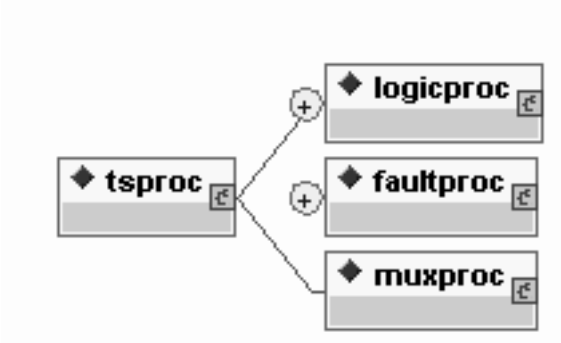

Figure 84 Troubleshooting procedure DTD hierarchy<tsproc>.

a. DTD fragment for ***<tsproc>***:

```
<!ELEMENT tsproc (logicproc+ | faultproc+ | muxproc)>
<!ATTLIST tsproc
   %bodyatt;
   %secur;>
```

b. Attributes for ***<tsproc>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.4.3.1 Logic procedure ***<logicproc>***. 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 paragraph 34.3.1) may be entered.

a. DTD fragment for ***<logicproc>***:

```
<!ELEMENT logicproc (title, %alert;, origin, (testblock | endblock |
       branchref)+)>
<!ATTLIST logicproc
   %bodyatt;
   %secur;>
```

b. Attributes for ***<logicproc>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.4.3.1.1 Point of origin ***<origin>***. The element ***<origin>*** is used for the point of origin of the troubleshooting procedures in a logical procedural table/diagram. The element contains one or more test procedure(s) ***<test>***, a normal indication (***<indication>*** see paragraph 30.3.4.3.1.1.2), and at least one response answer (***<answer>*** see paragraph 30.3.4.3.1.1.3).followed by one or more response answer(s).

a. DTD fragment for ***<origin>***:

```
<!ELEMENT origin (%alert;, test+, indication, answer, answer+)>
<!ATTLIST origin
   type   (yes | no |
       pass | fail |
       true | nottrue |
       value | unantic)  #IMPLIED
   valueloc  NNOKENS     #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 ***<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".
  (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.

30.3.4.3.1.1.1 Test ***<test>***. The element ***<test>*** test provides testing procedures. The element consists of an optional title ***<title>***, any alert statements (***%alert;*** see paragraph 34.3.1) and followed by one or more primary step(s) (***<step1>*** see paragraph 34.4.1.8.2).

a. DTD fragment for ***<test>***:

```
<!ELEMENT test (title?, %alert;, step1+)
<!ATTLIST test
   %bodyatt;
   %secur;>
```

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b. Attributes for ***<test>***:
   (1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
   (2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.4.3.1.1.2 Normal indication ***<indication>***. The element ***<indication>*** normal indication contains the normal or expected indication in response to the operational test. The element consist of either one or more groupings of an optional subtitle and the parameter entity paragraph type (***%p;*** see paragraph 34.3.5) or a type of list (***%list;*** see paragraph 34.3.3) or one or more step(s) ***<step1>***. There may be more than one indication for each test.

a. DTD fragment for ***<indication>***:

```
<!ELEMENT indication (((subtitle?, (%p;))+) | %list; | step1+)>

<!ATTLIST indication
   status  (normal | abnormal) #IMPLIED
   %bodyatt;
   %secur;>
```

b. Attributes for ***<indication>***:
   (1) **STATUS** - Specifies whether the current indication element is a normal or abnormal (out-of-range) indication.
   (2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
   (3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.4.3.1.1.3 Answer ***<answer>***. The element ***<answer>*** element 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 paragraph 34.3.16) 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
   %bodyatt;
   %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".

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(3) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(4) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.4.3.1.2 Test block ***<testblock>***. The element ***<testblock>*** element contains a test consisting of steps and substeps, which lead to an indication or condition indication. The element contains a test procedure (***<test>*** see paragraph 30.3.4.3.1.1.1), an indication (***<indication>*** see paragraph 30.3.4.3.1.1.2), an answer (***<anwer>*** see paragraph 30.3.4.3.1.1.3) and followed by one or more answer(s) ***<anwer>***. Prior to the preceding elements, the element test block may consists of alert statements.

a. DTD fragment for ***<testblock>***:

```
<!ELEMENT testblock (%alert;, test+, indication, answer, answer+)>

<!ATTLIST testblock
   type   (yes | no |
       pass | fail |
       true | nottrue |
       value | unantic) #REQUIRED
   valueloc  NMTOKENS    #IMPLIED
   valuetype  (boolean | string |
       sequence | set |
       real | integer |
       float | nil |
       input | outcome)  #IMPLIED
   value   CDATA    #IMPLIED
   branch  ID     #REQUIRED
   branchto  IDREFS    #REQUIRED
   branchfrom 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.

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(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** - References the identifier(s) of the branch containing the current testblock.
(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.
(8) **BRANCHFROM** - References the identifiers of the branch or branches from which the current branch has descended.

30.3.4.3.1.3 End block ***<endblock>***. The element ***<endblock>*** element concludes a path in a logical procedural table/diagram. Based on the indicators or conditions ***<indication>*** from the test procedure ***<test>***, the malfunction (***<malfunc>*** see paragraph 30.3.1.1.2.1) will be identified and resolved with a responsive action (***<action>***. The element contains a malfunction (***<malfunc>*** see paragraph 30.3.1.1.2.1) followed by a responsive action (***<action>*** see paragraph 30.3.1.1.2.3).

a. DTD fragment for ***<endblock>***:

```
<!ELEMENT endblock (malfunc, action)>
<!ATTLIST endblock
   type   (yes | no |
       pass | fail |
       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.

30.3.4.3.1.4 Branch reference ***<branchref>***. The element ***<branchref>*** branch reference contains a branch reference that refers users to a branch 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 EMPTY>
```

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```
<!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.

30.3.4.4 Fault procedure ***<faultproc>***. The ***<faultproc>*** fault procedure element 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>***, one or more groups of at least one symptom title ***<symptom>***, malfunction (***<malfunc>*** see paragraph 30.3.1.1.2.1) and either an responsive action (***<action>*** see paragraph 30.3.1.1.2.3) or cross reference (***<xref>*** see paragraph 34.4.1.3.6).

a. DTD fragment for Fault Procedure ***<faultproc>***:

```
<!ELEMENT faultproc (title, (symptom, (malfunc, (action | xref))+)+)>
<!ATTLIST faultproc
   %bodyatt;
   %secur;>
```

b. Attributes for ***<faultproc>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

c. XML Document Instance Fragment for Fault Procedure ***<faultproc>***:

```
<faultproc>
<title>NO START (GAS GENERATOR TURNING)</title>
<symptom>No fuel flow or fuel pressure</symptom>
<malfunc label="problem">No fuel in tanks.</malfunc>
<action>
<para>Check tanks for fuel quantity.  Refill if necessary with
turbine aviation fuel JP-4 or JP-5 <extref docno="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 WP " posttext=")">.</para>
</step1>
<step1>
<para>Be sure fuel valves are not shut off.  Turn on valve.</para>
</step1>
</action>
```

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```
<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 WP " 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 WP "posttext=")">.</para>
</action>
</faultproc>
```

d. Example of a Stylesheet/FOSI Output for A Fault Procedure ***<faultproc>***:

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TROUBLESHOOTING PROCEDURE

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 stopcock when the speed control lever is advanced. Repair speed control lever linkage (WP 089 00).

2. Be sure fuel valves are not shut off. Turn on valves.

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 (WP 019 00).

Faulty igniter plug.

CORRECTIVE ACTION

Check both igniter plugs for audible ignition. Replace faulty igniter plug(s) (WP 020 00).

Figure 85 Example of a stylesheet/FOSI output for a fault procedure <faultproc>.

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30.3.4.4.1 Symptom ***<symptom>***. The element ***<symptom>*** 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 (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<symptom>***:

```
<!ELEMENT symptom (%text;)*>
<!ATTLIST symptom
   %bodyatt;
   %secur;>
```

b. Attributes for ***<symptom>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.4.5 Multiplex read code ***<muxproc>***. The element ***<muxproc>*** multiplex read code 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 consist of a symptom (***<symptom>*** see paragraph 30.3.4.4.1) followed by at least one signal, component, or data items ***<signal-item>***.

a. DTD fragment for ***<muxproc>***:

```
<!ELEMENT muxproc ((symptom?, signal-item+)+)>
<!ATTLIST muxproc
   %bodyatt;
   %secur;>
```

b. Attributes for ***<muxproc>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.4.5.1 Signal item ***<signal-item>***. 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>***, a pass/fail criteria ***<criteria>*** followed by a second pass/fail criteria. .

a. DTD fragment for ***<signal-item>***:

```
<!ELEMENT signal-item (signame, dataitem, ckremarks, criteria, criteria)>
<!ATTLIST signal-item
   type   (part| signal |
       process | other) #REQUIRED
   %bodyatt;
   %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) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.4.5.1.1 Signal name ***<signame>***. 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 paragraph 34.3.8).

a. DTD fragment for ***<signame>***:

```
<!ELEMENT signame (#PCDATA)>
```

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```
<!ATTLIST signame
   %bodyatt;
   %secur;>
```

b. Attributes for ***<signame>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.4.5.1.2 Data item ***<dataitem>***. The element ***<dataitem>*** element contains data items for a particular pass/fail operational check. The element contains the memory location ***<memloc>***, memory data bit(s) ***<memdata>***, condition (***<condition>*** see paragraph 34.4.6.1.6.1.1), and the signal function ***<sigfunc>***.

a. DTD fragment for ***<dataitem>***:

```
<!ELEMENT dataitem (memloc, memdata, condition, sigfunc)>
<!ATTLIST dataitem
   %bodyatt;
   %secur;>
```

b. Attributes for ***<dataitem>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.4.5.1.2.1 Memory location ***<memloc>***. The element ***<memloc>*** defines memory location address. The element contains narrative text (#PCDATA parsable characters). See paragraph 34.3.8)

a. DTD fragment for ***<memloc>***, ***<memdata>***, and ***<sigfunc>***:

```
<!ELEMENT (memloc |
   memdata |
   sigfunc) (#PCDATA)>
<!ATTLIST (memloc |
   memdata |
   sigfunc)
    %bodyatt;
    %secur;>
```

b. Attributes for ***<memloc>***, ***<memdata>***, ***<sigfunc>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.4.5.1.2.2 Memory data ***<memdata>***. The element ***<memdata>*** memory data defines the memory data bit register being examined. The element contains narrative text (#PCDATA parsable characters). See paragraph 34.3.8).

a. DTD fragment for ***<memdata>***: (see paragraph 30.3.4.5.1.2.1 a.)

b. Attributes for ***<memdata>***: (see paragraph 30.3.4.5.1.2.1 b.)

30.3.4.5.1.2.3 Signal function ***<sigfunc>***. The element ***<sigfunc>*** element describes/identifies the signal function. The element contains narrative text (#PCDATA parsable characters). See paragraph 34.3.8)

a. DTD fragment for ***<sigfunc>***: (see paragraph 30.3.4.5.1.2.1 a.)

b. Attributes for ***<sigfunc>***: (see paragraph 30.3.4.5.1.2.1 b.)

30.3.4.5.1.3 Fail check remarks ***<ckremarks>***. The element ***<ckremarks>*** element is any remarks concerning the signal item. The element contains the parameter entity (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<ckremarks>***:

```
<!ELEMENT ckremarks (%text;)*>
<!ATTLIST ckremarks
   %bodyatt;
   %secur;>
```

b. Attributes for ***<ckremarks>***:

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(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.4.5.1.4 Criteria ***<criteria>***. 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 paragraph 34.3.16).

a. DTD fragment for ***<criteria>***:

```
<!ELEMENT criteria (%text;)*>
<!ATTLIST criteria
   type  (pass | fail)  REQUIRED#
   %bodyatt;
   %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) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.4.6 Disconnect ***<disconnect>***. The element ***<disconnect>*** element 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 paragraph 34.4.1.5.1) followed by optional general introductory information (***<geninfo>*** see paragraph 34.4.4.10), any alert statements (***%alert;*** see paragraph 34.3.1) performed before disconnection procedure, and multiple disconnection procedures (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<disconnect>***:

```
<!ELEMENT disconnect (title, geninfo?, %alert;, proc+)>
<!ATTLIST disconnect
   %bodyatt;
   %secur;>
```

b. Attributes for ***<disconnect>***:
(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.5 Operational Checkout Work Package ***<opcheckwp>***. Operational Checkout Work Package is 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>*** see paragraph 34.4.5) , a work package initial setup (***<wpinfo>*** see paragraph 34.4.6), an optional introductory section ***<intro>*** see paragraph 34.4.4.12), one or more procedure(s) (***<proc>*** see paragraph 34.4.1.8.1), or one or more of the elements contain in the parameter entity troubleshooting data (***%tsdata;*** see paragraph 30.3.4.1) followed by test set hookup procedure (***<hookup>*** see paragraph 30.3.4.2), operational checkout procedures (***<opcheckproc>*** see paragraph 30.3.5.1), test set disconnection procedure (***<disconnect>*** see paragraph 30.3.4.6) or operational checkout procedures ***<opcheckproc>*** followed by the parameter entity troubleshooting data ***%tsdata;***. The generated text for the element work package title for ***<opcheckwp>*** is **"Operational Checkout"**. **Page-Based TMs only**

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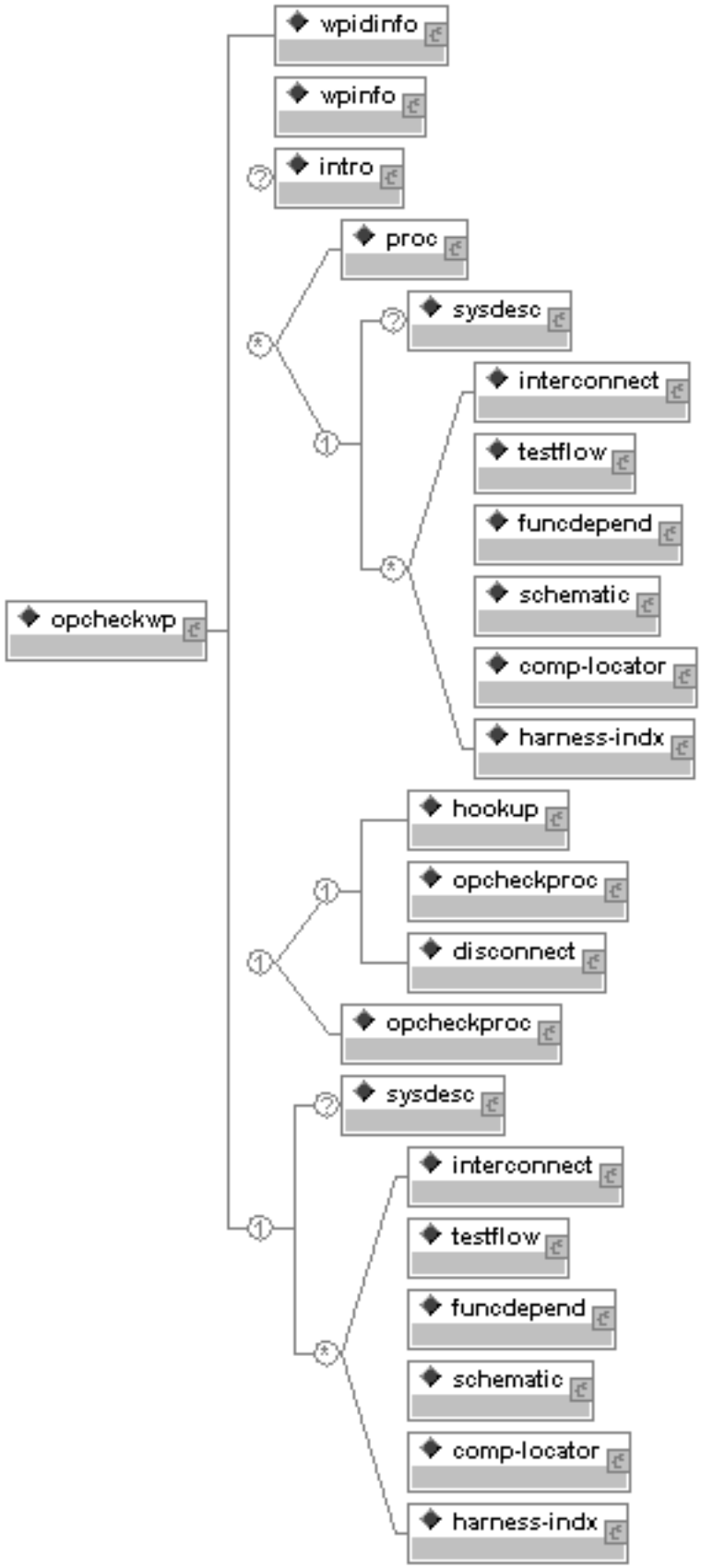

Figure 86 Operational checkout work package DTD hierarchy <opcheckwp>.

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a. DTD fragment for ***<opcheckwp>***

```
<!ELEMENT opcheckwp (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 paragraph 34.5.11) .

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.5.1 Operational checkout procedure ***<opcheckproc>***. The element ***<opcheckproc>*** element 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>*** see paragraph 30.3.5.1.2)or a fault report listing (***<faultreports>*** see paragraph 30.3.5.1.3).

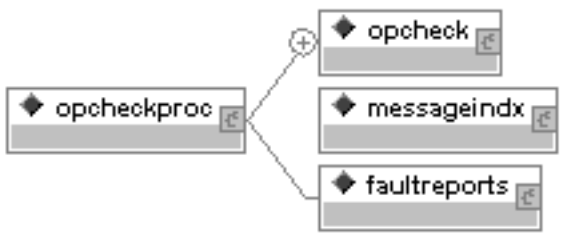

Figure 87 Operational checkout procedure DTD hierarchy <opcheckproc>.

a. DTD fragment for ***<opcheckproc>***:

```
<!ELEMENT opcheckproc (opcheck+ | messageindx | faultreports)>
<!ATTLIST opcheckproc
   %bodyatt;
   %secur;>
```

b. Attributes for ***<opcheckproc>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.5.1.1 Operational check testing ***<opcheck>***. The element ***<opcheck>*** operational check testing 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

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as tabular. It may contain a title (***<title>*** see paragraph 34.4.1.5.1) followed by a series of test procedures (***<testproc>*** see paragraph 30.3.5.1.1.1).

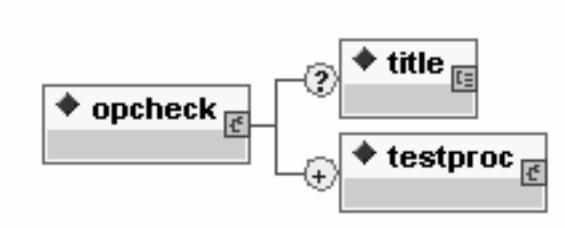

Figure 88 Operational check testing DTD hierarchy <opcheck>.

a. DTD fragment for ***<opcheck>***:

```
<!ELEMENT opcheck (title?, testproc+)>
<!ATTLIST opcheck
   %bodyatt;
   %secur;>
```

b. Attributes for ***<opcheck>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.5.1.1.1 Test procedures ***<testproc>***. The element ***<testproc>*** is a series of test procedures in an operational check. The element contains one or more operational check step(s) (***<checkstep>*** see paragraph 30.3.5.1.1.1.1).

a. DTD fragment for ***<testproc>***:

```
<!ELEMENT testproc (checkstep)+>
<!ATTLIST testproc
   %refs;
   %secur;>
```

b. Attributes for ***<testproc>***:

(1) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.5.1.1.1.1 Operational Check Step ***<checkstep>***. The element ***<checkstep>*** element contains a series of steps (***<step1>*** see paragraph 34.4.1.8.2) and substeps that leads to an indication or condition (***<indication>*** see paragraph 30.3.4.3.1.1.2) which concludes with a responsive action (***<action>*** see paragraph 30.3.1.1.2.3) or cross reference (***<xref>*** see paragraph 34.4.1.3.6). 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 paragraph 30.3.5.1.1) and in a operational testing troubleshooting table (***<opcheck-tsproc>*** see paragraph 30.3.6.1).

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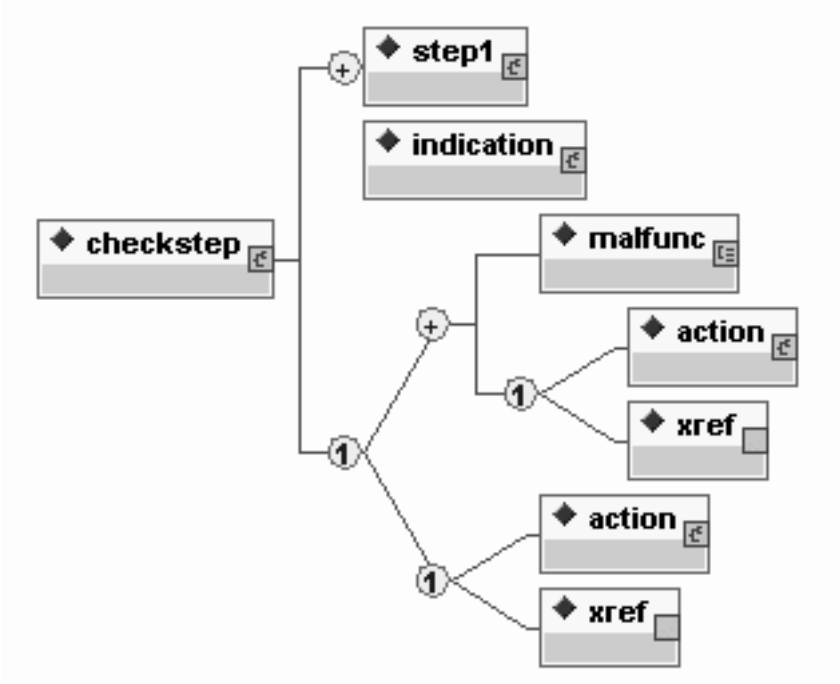

Figure 89 Operational check step DTD hierarchy <checkstep>.

a. DTD fragment for ***<checkstep>***:

```
<!ELEMENT checkstep (step1+, indication, ((malfunc,
 (action | xref))+ | (action | xref)))>
<!ATTLIST checkstep
   %bodyatt;
   %secur;>
```

b. Attributes for ***<checkstep>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.5.1.2 Message index ***<messageindx>***. The element ***<messageindx>*** element is an index of automated/semi-automated test set messages or bit-code words with message word description. The test set message word index can be represented in a narrative format or as tabular. The element contains a required title (***<title>*** see paragraph 34.4.1.5.1), optional general information (***<geninfo>*** see paragraph 34.4.4.10) followed by one or more message item ***<messageitem>***. The element ***<messageitem>*** 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 (title, geninfo?, messageitem+)>
<!ATTLIST messageindx
   %bodyatt;
   %secur;>
```

b. Attributes for ***<messageindx>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.5.1.2.1 Message item ***<messageitem>***. 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

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a message word (***<messageword>*** see paragraph 30.3.5.1.2.1.1), general paragraph(s) of text (***<para>***, followed by a cross reference (***<xref>*** see paragraph 34.4.1.3.6) or a responsive action ***<action>***.

a. DTD fragment for ***<messageitem>***:

```
<!ELEMENT messageitem (messageword, para+ (xref | action))>
<!ATTLIST messageitem
   %bodyatt;
   %secur;>
```

b. Attributes for ***<messageitem>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.5.1.2.1.1 Message word ***<messageword>***. The element ***<messageword>*** contains a particular message word or bit-code word. The element contains narrative text (#PCDATA parsable characters see paragraph 34.3.8).

a. DTD fragment for ***<messageword>***:

```
<!ELEMENT messageword (#PCDATA)>
<!ATTLIST messageword
   id  ID  #REQUIRED
   %secur;>
```

b. Attributes for ***<messageword>***:

(1) **ID** - Specifies the unique identifier of the help link for the message word.

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.5.1.3 Fault reports ***<faultreports>***. The element ***<faultreports>*** element is used for a troubleshooting reference table contained in a operational checkout work package. These fault reports are generated by automated and/or built-in diagnostics. The element contains an optional title (***<title>*** see paragraph 34.4.1.5.1), with an optional general information (***<geninfo>*** see paragraph 34.4.4.10) and followed by one or more fault code(s) (***<faultcode>*** see paragraph 30.3.5.1.3.1).

a. DTD fragment for ***<faultreports>***:

```
<!ELEMENT faultreports (title?, geninfo?, faultcode+)>
<!ATTLIST faultreports
   indxcols  (2 | 3)  #REQUIRED
   reftype  (wp | page | tsloc) "page"
   %bodyatt;
   %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) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(4) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.5.1.3.1 Fault Code ***<faultcode>***. 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 a message word (***<messageword>*** see paragraph 30.3.5.1.2.1.1) followed by either a responsive action ***<action>*** or a cross reference ***<xref>***, and an optional follow-on (***<follow-on>*** see paragraph 30.3.5.1.3.1.1).

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a. DTD fragment for ***<faultcode>***:

```
<!ELEMENT faultcode (messageword, (action | xref), follow-on?>
<!ATTLIST faultcode
   %bodyatt;
   %secur;>
```

b. Attributes for ***<faultcode>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.5.1.3.1.1 Follow-on ***<follow-on>***. The element ***<follow-on>*** specifies any follow-on action to be performed after the maintenance action has be completed. The element contains either a general paragraph (***<para>*** see paragraph 34.4.1.5.3), or one or more primary step(s) (***<step1>*** see paragraph 34.4.1.8.2), or a cross reference to the follow-on procedure (***<xref>*** see paragraph 34.4.1.3.6).

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 paragraph 34.5.8).

30.3.6 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>*** see paragraph 34.4.5), a work package initial setup (***<wpinfo>*** see paragraph 34.4.6), an optional introductory section (***<intro>*** see paragraph 34.4.4.12) may be followed by one or more procedure(s) (***<proc>*** see paragraph 34.4.1.8.1), and the parameter entity troubleshooting data (***%tsdata;*** see paragraph 30.3.4.1). When there is a connection and a shut down involved use test set hookup procedure (***<hookup>*** see paragraph 30.3.4.2), with either operational checkout procedures (***<opcheckproc>*** see paragraph 30.3.5.1), and troubleshooting procedures (***<tsproc>*** see paragraph 30.3.4.3) or an operational checkout troubleshooting procedures (***<opcheck-tsproc>*** see paragraph 30.3.6.1) followed by a test set disconnection procedure ***<disconnect>***; else use either operational checkout procedure (***<opcheckproc>*** see paragraph 30.3.5.1) and troubleshooting procedure (***<tsproc>*** see paragraph 30.3.4.3) or an operational checkout troubleshooting procedure ***<opcheck-tsproc>*** preceding the parameter entity troubleshooting data ***%tsdata;***. The generated text for the element work package title for ***<opcheck-tswp>*** is **Operational Checkout and Troubleshooting Procedure**.

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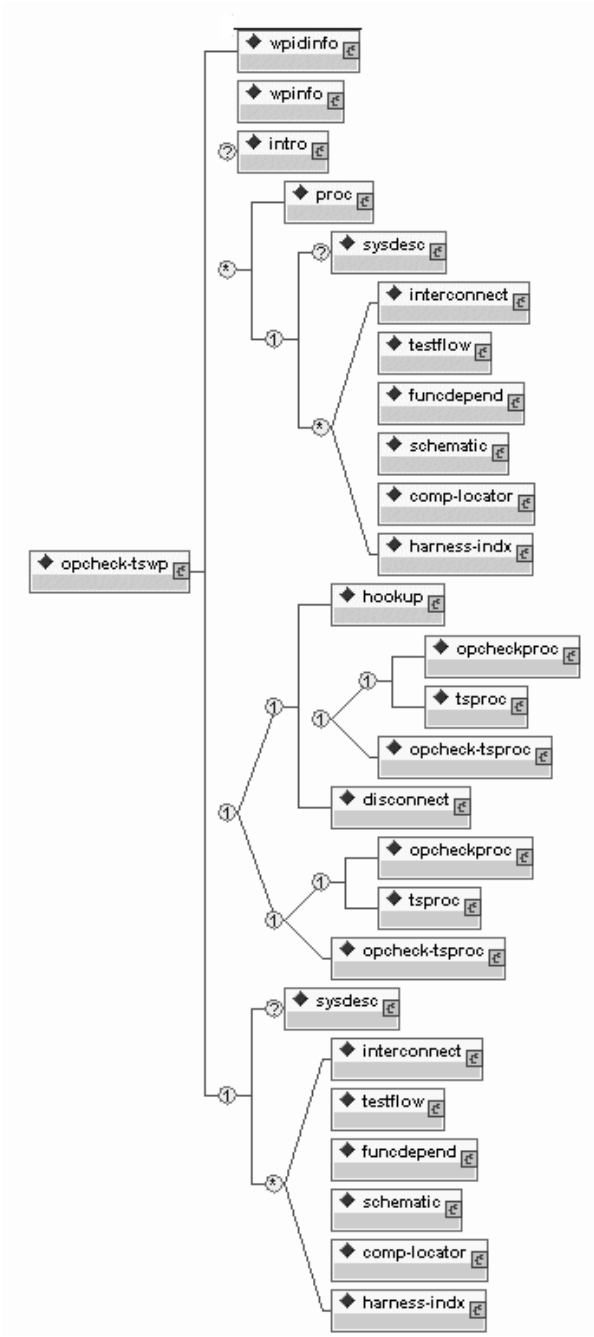

Figure 90 Combined operational checkout and troubleshooting work package DTD hierarchy <opcheck-tswp>.

a. DTD fragment for ***<opcheck-tswp>***:

```
<!ELEMENT opcheck-tswp (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;
```

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```
%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 paragraph 34.5.11) .

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.6.1 Operational testing troubleshooting ***<opcheck-tsproc>***. The element ***<opcheck-tsproc>*** operational testing troubleshooting 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>*** see paragraph 30.3.5.1.1.1) and followed by at least one test procedure (***<testproc>*** see paragraph 30.3.5.1.1.1).

Figure 91 Operational testing troubleshooting DTD hierarchy <opcheck-tsproc>.

a. DTD fragment for ***<opcheck-tsproc>***:

```
<!ELEMENT opcheck-tsproc (title?, testproc+)>
<!ATTLIST opcheck-tsproc
   %bodyatt;
   %secur;>
```

b. Attributes for ***<opcheck-tsproc>***

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

c. XML Table Document Instance Fragment for Operational Checkout and Troubleshooting Procedure ***<opcheck-tsproc>***:

```
<opcheck-tsproc>
<title>Computer Processor Operational Checkout and Trou-
bleshooting</title><testproc>
<checkstep>
<step1><para>Remove computer processor top cover <xref wpid="M00015-9-xxxx-xxx"
tableid=" M00015-9-xxxx-xxx-table2" pretext="(see paragraph " 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>
```

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```
</checkstep>
<checkstep>
<step1> <para>Place UUT POWER switch in CP position.</para></step1>
<indication> <para>CP LEDS momentarily flash.</para> </indication>
<malfunc label="malfunction">IF LEDS do not flash briefly.</malfunc>
<action><para>Check test set wiring.</para></action>
</checkstep>
<checkstep>
<step1><para>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.</para></step1>
<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, per-
form 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>
```

d. Example of a Stylesheet/FOSI Table Output for an Operational Checkout and Troubleshooting Procedure <opcheck-tsproc>:

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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.

Figure 92 Example of a stylesheet/FOSI table output for an operational checkout and troubleshooting procedure <opcheck-tsproc>.

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30.3.7 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 34.4.5), followed by either general troubleshooting information (***%titldtext;*** see 34.3.10) or how to use the troubleshooting chapter (***<howtouse>*** see 27.2.1.1.7). The generated text for the element work package title for ***<tsintrowp>*** is **"Troubleshooting Introduction"**.

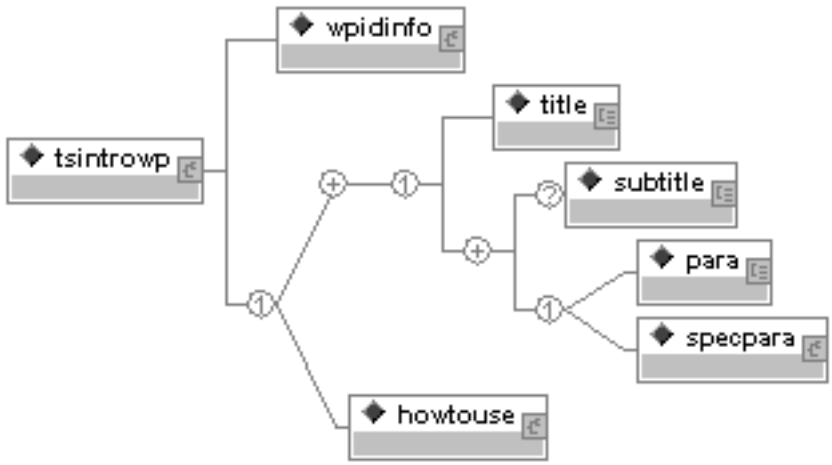

Figure 93 Troubleshooting introduction work package DTD hierarchy <tsintrowp>.

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 paragraph 34.5.11) .

(4) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(5) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(6) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.8 Technical Information and Description Work Package ***<techdescwp>***. 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

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independent section. The element contains identification information required for a work package (***<wpidinfo>*** see paragraph 34.4.5), a work package initial setup (***<wpinfo>*** see paragraph 34.4.6), an optional general work package information (***<geninfo>*** see paragraph 34.4.4.10), followed by either a grouping of an equipment description and data (***<descproc>*** see paragraph 30.3.8.1), controls and indicators procedures (***<ctrlindproc>*** see paragraph 30.3.8.2), and theory of operation procedure (***<thryproc>*** see paragraph 30.3.8.3) or a grouping of controls and indicators procedures ***<ctrlindproc>***, and theory of operation procedure ***<thryproc>*** or a theory of operation procedure ***<thryproc>***. **Page-based Aircraft Troubleshooting Manuals only.**

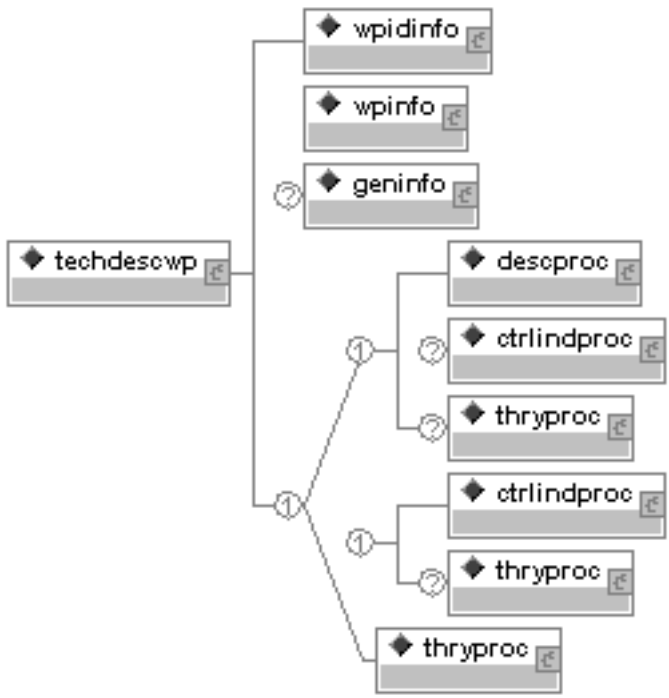

Figure 94 Technical information and description work package DTD hierarchy <techdescwp>.

a. DTD fragment for ***<techdescwp>***

```
<!ELEMENT techdescwp (wpidinfo, wpinfo, geninfo?, ((descproc, ctrlindproc?,
thryproc?) |(ctrlindproc, thryproc?)| thryproc))>
<!ATTLIST techdescwp
   wpno  ID      #REQUIRED
   %wprsrc-vals;
   %tracking;
   %wpbodyatt;
   %secur;>
```

b. Attributes for ***<techdescwp>***

(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 paragraph 34.5.11) .

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

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(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.8.1 Equipment Description and Data ***<descproc>***. The element ***<descproc>*** Equipment Description and Data Work Package contains information 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>*** see paragraph 28.3.4.1), followed by an option of one or more location and description of major components (***<locdesc>*** see paragraph 28.3.4.2), may have a differences between models (***<eqpdiff>*** see paragraph 28.3.4.3), an optional equipment data (***<eqpdata>*** see paragraph 28.3.4.4) and may have one or more equipment configuration(s) (***<eqpconfig>*** see paragraph 28.3.4.5).

a. DTD fragment for ***<descproc>***:

```
<!ELEMENT descproc (eqpinfo+, locdesc*, eqpdiff?, eqpdata?, eqpconfig*)>
<!ATTLIST descproc
   %bodyatt;
   %secur;>
```

b. Attributes for ***<descproc>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.8.2 Controls and indicators procedures ***<ctrlindproc>***. Controls and Indicators Procedures ***<ctrlindproc>*** element 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>*** see paragraph 29.3.1.1), an illustration (***<figure>*** see paragraph 34.4.3.1) and may have one or more description of controls and indicator in tabular form (***<ctrlindtab>*** see paragraph 29.3.1.2).

a. DTD fragment for ***<ctrlindproc>***:

```
<!ELEMENT ctrlindproc (ctrlinddesc+, figure, ctrlindtab?)+)>
<!ATTLIST ctrlindproc
   %bodyatt;
   %secur;>
```

b. Attributes for ***<ctrlindproc>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

30.3.8.3 Theory of operation procedure ***<thryproc>***. Theory of operation procedure ***<thryproc>*** element contains information from the theory of operation to support troubleshooting procedures in a technical description work package techdescwp. The element contains one or more system theory of operation (***<systhry>*** see paragraph 28.3.5.1).

a. DTD fragment for ***<thryproc>***:

```
<!ELEMENT thryproc (systhry+)>
<!ATTLIST thryproc
   %bodyatt;
   %secur;>
```

b. Attributes for ***<thryproc>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31 MAINTENANCE INFORMATION.

31.1 Scope. The following paragraphs give a description and use of elements used in the MIL-STD-2361 Maintenance Information Chapter DTD.

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31.2 Applicable documents. Refer to paragraph 2

31.3 Maintenance Information Chapter ***<mim>***. The ***<mim>*** chapter is prepared as a Maintenance Information Chapter . The chapter contains a titlepage ***<titlepg>*** see paragraph 34.4.4.22), and is then subdivided into work packages chosen from one of the following Service Upon Receipt Procedures Work Package (***<surwp>*** see paragraph 31.3.1), Personal Equipment Work Package (***<perseqpwp>*** see paragraph 31.3.1.2), Preventive Maintenance Checks and Services Introduction Work Package (***<pmcsintrowp>*** see paragraph 31.3.1.3), (***<pmcswp>*** see paragraph 31.3.1.4), (***<gen.maintwp>*** see paragraph 31.3.1.6), (***<maintwp>*** see paragraph 31.3.1.5), (***<pmiwp>*** see paragraph 31.3.1.7), (***<lubewp>*** see paragraph 31.3.1.8), (***<facilwp>*** see paragraph 31.3.1.9), (***<oipwp>*** see paragraph 31.3.1.10), (***<mobilwp>*** see paragraph 31.3.1.11), (***<qawp>*** see paragraph 31.3.1.12), (***<manuwp>*** see paragraph 31.3.1.13), (***<torquewp>*** see paragraph 31.3.1.14), (***<inventorywp>*** see paragraph 31.3.1.15), (***<storagewp>*** see paragraph 31.3.1.16), (***<wtloadwp>*** see paragraph 31.3.1.17), (***<wiringwp>*** see paragraph 31.3.1.18), (***<ammowp>*** see paragraph 31.3.1.19), (***<ammo.markingwp>*** see paragraph 31.3.1.20), (***<natowp>*** see paragraph 31.3.1.21), (***<auxeqpwp>*** see paragraph 31.3.1.22), (***<pms-inspecwp>*** see paragraph 31.3.1.23) and (***<pmi-cklistwp>*** see paragraph 31.3.1.24).

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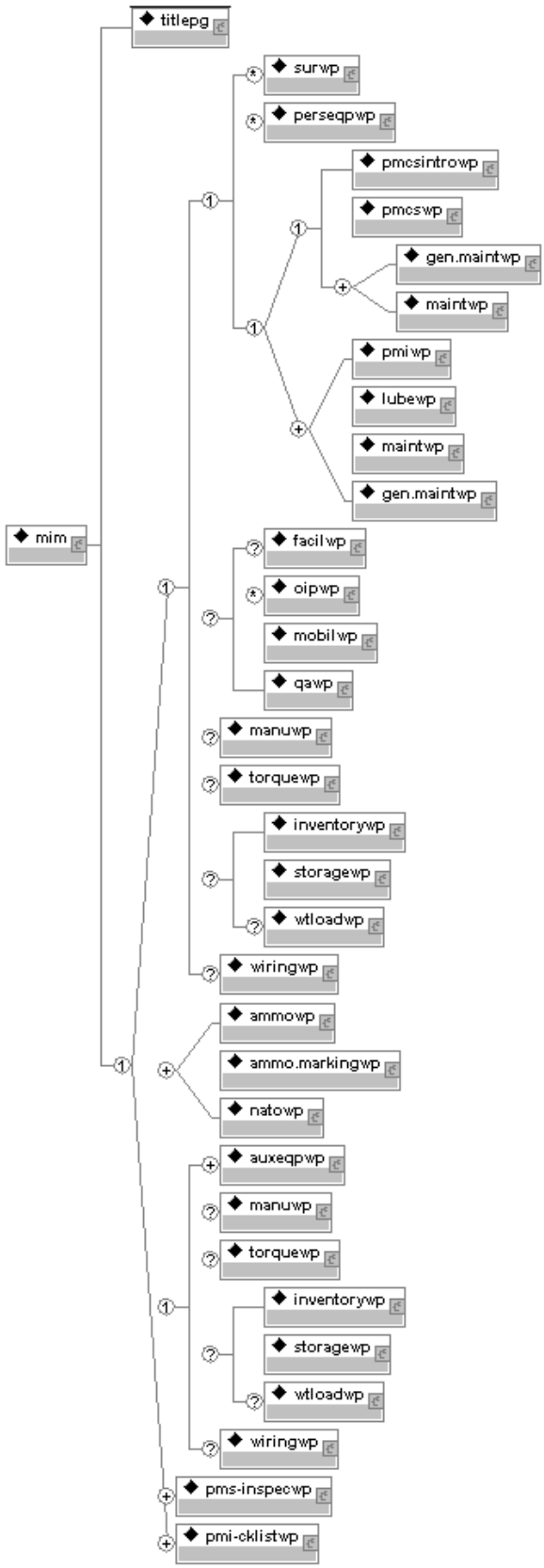

Figure 95 Maintenance information chapter DTD hierarchy <mim>.

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a. DTD fragment for ***<mim>***:

```
<!ELEMENT mim (titlepg, (((surwp*, perseqpwp*, ((pmcsintrowp, pmcswp,
(gen.maintwp | maintwp)+) | (pmiwp | lubewp | maintwp | gen.maintwp)+)),
(facilwp?, oipwp*, mobilwp, qawp)?, manuwp?, torquewp?,
(inventorywp, storagewp, wtloadwp?)?, wiringwp?) |
(ammowp | ammo.markingwp | natowp)+
| (auxeqpwp+, manuwp?, torquewp?, (inventorywp, storagewp, wtloadwp?)?, wiringwp?) |
pms-inspecwp+ | pmi-cklistwp+))>
<!ATTLIST mim
            tmno              CDATA                    #REQUIRED
            tmlabel           CDATA                    #IMPLIED
            eic               CDATA                    #REQUIRED
            imctrlabel        NUMBER                   #REQUIRED
            %chapterlevel;
            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
            %bodyatt;
            %secur;>
```

b. Attributes for ***<mim>***:

(1) **TMNO** - 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) **TMLABEL** - The number of the current TM. The prefix TM must be included in the attribute value.

(3) **EIC** - The end-item code of the equipment covered in the TM of which this IM is a part.

(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) **%CHAPTERLEVEL;** - The maintenance level of the information chapter. Any of the attributes in the associated attribute set may be used with this element. Refer to %chapterlevel; see paragraph 34.5.5) for a complete description.

(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 paragraph 34.5.3) .

(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) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

(14) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

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31.3.1 Service Upon Receipt Procedures Work Package ***<surwp>***. The Service Upon Receipt Work Package is subdivided into the following elements and content requirements: The element contains identification information required for a work package (***<wpidinfo>*** see paragraph 34.4.5), a work package initial setup (***<wpinfo>*** see paragraph 34.4.6), an optional introductory section (***<geninfo>*** see paragraph 34.4.4.10), alert statements (***%alert;*** see paragraph 34.3.1) and followed by one or more of the service upon receipt tasks (***<surtsk>*** see paragraph 31.3.1.1). The generated text for the element work package title for ***<surwp>*** is **"Service Upon Receipt"**.

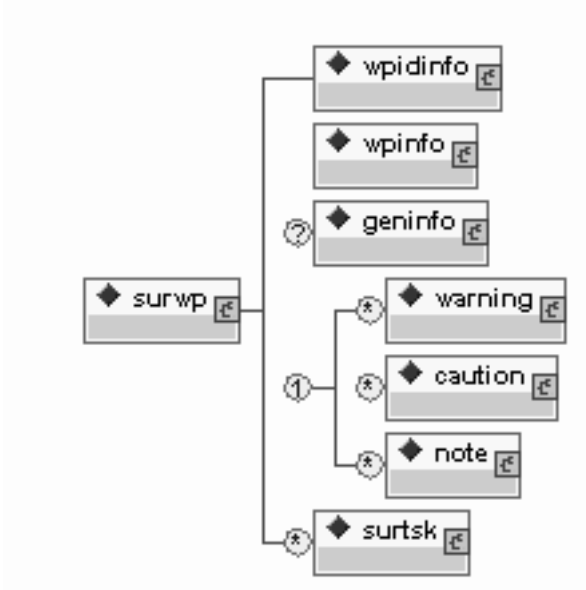

Figure 96 Service upon receipt work package DTD hierarchy <surwp>.

a. DTD fragment for ***<surwp>***:

```
<!ELEMENT surwp (wpidinfo, wpinfo, geninfo?, %alert;, surtsk*)>
<!ATTLIST surwp
   wpno   ID     #REQUIRED
   %tracking;
   %wprsrc-vals;
   %wpbodyatt;
   %secur;>
```

b. Attributes for ***<surwp>***:

(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 paragraph 34.5.9) .

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

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31.3.1.1 Service upon receipt tasks<***surtsk***>. 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***> see paragraph 31.3.1.1.1), (<***shltr***> see paragraph 31.3.1.1.2), (<***surmat***> see paragraph 31.3.1.1.3), (<***install***> see paragraph 31.3.1.1.4), (<***preserv***> see paragraph 31.3.1.1.5), (<***prechkadjj***> see paragraph 31.3.1.1.6), (<***precal***> see paragraph 31.3.1.1.7), (<***calign***> see paragraph 31.3.1.1.8), (<***ammo.handling***> see paragraph 31.3.1.1.9) (<***ammo.markings***> see paragraph 31.3.1.1.10), (<***ammo.defect***> see paragraph 31.3.1.1.11), and/or (<***arm***> see paragraph 31.3.1.1.12).

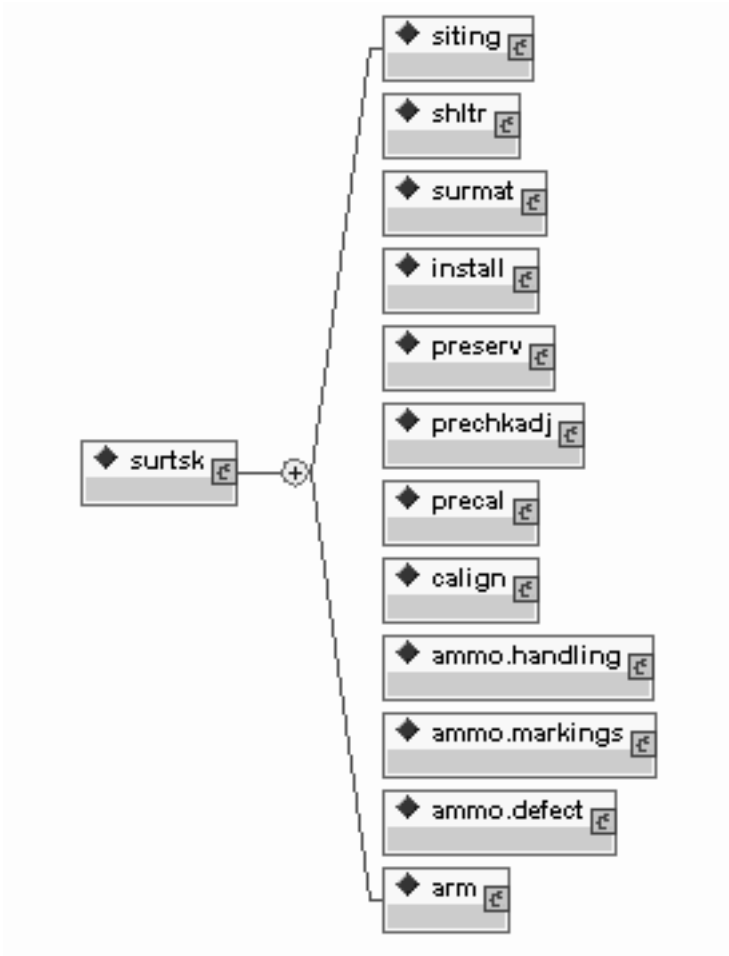

Figure 97 Service upon receipt tasks DTD hierarchy <surtsk>.

a. DTD fragment for <***surtsk***> and ***%surtsk;***:

```
<!ELEMENT surtsk (siting | shltr | surmat | install | preserv | prechkadj
 | precal | calign | ammo.handling | ammo.markings | ammo.defect | arm)+>
<!ATTLIST surtsk
   %bodyatt;
   %secur;>
```

b. Attributes for <***surtsk***>:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

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31.3.1.1.1 Siting ***<siting>***. 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 paragraph 34.4.1.5.1) followed by the parameter entity paragraph type (***%p;*** see paragraph 34.3.5) and/or procedural text (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<siting>***:

```
<!ELEMENT siting (title, ((%p;) | proc)+)>
<!ATTLIST siting
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<siting>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) ..

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.1.2 Shelter Requirements ***<shltr>***. 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>***see paragraph 34.4.1.5.1) followed by the parameter entity paragraph type (***%p;*** see paragraph 34.3.5) and/or procedural text (***<proc>*** see paragraph 34.4.1.8.1) .

a. DTD fragment for ***<shltr>***:

```
<!ELEMENT shltr (title?, ((%p;) | proc)+)>
<!ATTLIST shltr
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<shltr>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.1.3 Service upon receipt of material ***<surmat>***. The element ***<surmat>*** is a service upon receipt of material task which contains information on unpacking (***<unpack>*** see paragraph 31.3.1.1.3.1), checking (***<chkeqp>*** see paragraph 31.3.1.1.3.2), and processing equipment preceded (***<processeqp>*** see paragraph 31.3.1.1.3.3) equipment preceded by an optional title ***<title>***.

a. DTD fragment for ***<surmat>***:

```
<!ELEMENT surmat (title?, (unpack | chkeqp | processeqp)+)>
<!ATTLIST surmat
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<surmat>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

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31.3.1.1.3.1 Unpack ***<unpack>***. 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 34.3.10) or one or more procedure (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<unpack>***:

```
<!ELEMENT unpack ((%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 paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.1.3.2 Checking unpacked equipment ***<chkeqp>***. The element ***<chkeqp>*** checking unpacked equipment is a service upon receipt of material task that contains all inspections required after equipment is unpacked. The element contains the parameter entity ***%p;*** paragraphs (***<para>*** see paragraph 34.4.1.5.3) and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2) , and/or procedural text (***<proc>*** see paragraph 34.4.1.8.1), and may be followed by either a criteria inspection table ***<crit.insp.tab>*** see paragraph 31.3.1.1.3.2.1) and/or a peculiar inspection table ***<pecul.insp.tab>*** see paragraph 31.3.1.1.3.2.2).

a. DTD fragment for ***<chkeqp>***:

```
<!ELEMENT chkeqp (%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 paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.1.3.2.1 Criteria inspection table ***<crit.insp.tab>***. The element ***<crit.insp.tab>*** contains the content elements required for the criteria inspection used in checking unpacked equipment. It contains a required title (***<title>*** see paragraph 34.4.1.5.1), followed by the elements which make up the table itself. The table may be broken up into sections which have an equipment item ***<eqpitem>*** followed by one or more component assembly entry(s) ***<compnt-assem-entry>***.

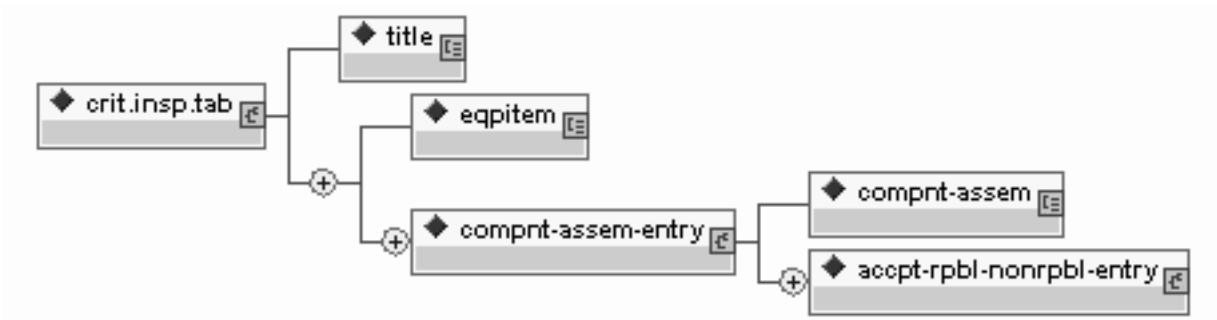

Figure 98 Criteria inspection table DTD hierarchy <crit.insp.tab>.

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a. DTD fragment for ***<crit.insp.tab>***:

```
<!ELEMENT crit.insp.tab (title, (eqpitem, compnt-assem-entry+)+))>
<!ATTLIST crit.insp.tab
   %bodyatt;
   %secur;>
```

b. Attributes for ***<crit.insp.tab>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.1.3.2.1.1 Equipment item ***<eqpitem>***. The element ***<eqpitem>*** is used to enter the equipment item using the parameter entity (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<eqpitem>***,

```
<!ELEMENT eqpitem (%text;)*>
<!ATTLIST eqpitem
   %bodyatt;
   %secur;>
```

b. Attributes for ***<eqpitem>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.1.3.2.1.2 Component assembly entry ***<compnt-assem-entry>***. The element ***<compnt-assem-entry>*** is used to enter the component assembly requirements. The element contains a component assembly ***<compnt-assem>*** followed by one or more entry(s) accept, repairable and nonrepairable ***<accpt-rpbl-nonrpbl-entry>***. Equivalent to entering "row" in a structural table.

a. DTD fragment for ***<compnt-assem-entry>***,

```
<!ELEMENT compnt-assem-entry (compnt-assem, accpt-rpbl-nonrpbl-entry+)>
```

31.3.1.1.3.2.1.2.1 Component assembly ***<compnt-assem>***. The element ***<compnt-assem>*** is used to enter the component assembly (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<compnt-assem>***:

```
<!ELEMENT (compnt-assem) (%text;)>
```

31.3.1.1.3.2.1.2.2 Accept, repairable, non-repairable entry ***<accpt-rpbl-nonrpbl-entry>***. The element ***<accpt-rpbl-nonrpbl-entry>*** is used to enter the acceptation (***<accept>*** see paragraph 31.3.1.1.3.2.1.2.2.1), repairable see paragraph 31.3.1.1.3.2.1.2.2.2), and non-repairable criteria see paragraph 31.3.1.1.3.2.1.2.2.3).

a. DTD fragment for ***<accpt-rpbl-nonrpbl-entry>***, :

```
<!ELEMENT accpt-rpbl-nonrpbl-entry (accept, repairable, nonrepairable)>
```

31.3.1.1.3.2.1.2.2.1 Acception ***<accept>***. . The acceptations element ***<accept>*** see paragraph 34.4.1.5.1) is used to enter the acceptation criteria(s) to the component/assembly. The element contains the entity ***%pcdata;***.

a. DTD fragment for ***<accept>***:

```
<!ELEMENT accept (%pcdata;)*>
```

31.3.1.1.3.2.1.2.2.2 Repairable ***<repairable>***. . The element ***<repairable>*** is used to enter the criteria when the component/assembly is repairable (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<repairable>***, and ***<nonrepairable>***:

```
<!ELEMENT ( repairable
      | nonrepairable) (%text;)*>
```

31.3.1.1.3.2.1.2.2.3 Nonrepairable ***<nonrepairable>***. . The element ***<nonrepairable>*** is used to enter the criteria when the component/assembly is non-repairable (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<nonrepairable>***: see paragraph 31.3.1.1.3.2.1.2.2.2

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31.3.1.1.3.2.2 Peculiar inspection table ***<pecul.insp.tab>***. The element ***<pecul.insp.tab>*** contains the content elements required for the peculiar inspection table. It contains a required title (***<title>*** see paragraph 34.4.1.5.1), 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>*** see paragraph 34.4.1.2.1.1), each location and item must be followed by at least one grouping of a primary level step ***<step1>*** followed by remarks ***<remarks>***.

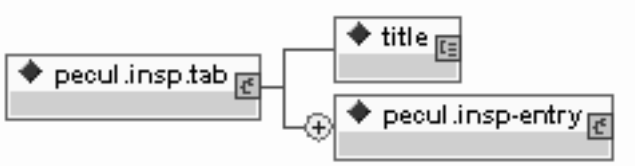

Figure 99 Criteria inspection table DTD hierarchy <pecul.insp.tab>.

a. DTD fragment for ***<pecul.insp.tab>***:

```
<!ELEMENT pecul.insp.tab (title, pecul.insp-entry+)>
<!ATTLIST pecul.insp.tab
   %bodyatt;
   %secur;>
```

b. Attributes for ***<pecul.insp.tab>***:
   (1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
   (2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.1.3.2.2.1 Peculiar inspection entry element ***<pecul.insp-entry>***. The element ***<pecul.insp-entry>*** is an entry in the peculiar inspection table. It contains one or more locations ***<location>*** each of which is followed by an item (***<item>*** see paragraph 34.4.1.2.1.1). Each location and item must be followed by at least one grouping of a primary level step entry(s) (***<step1>*** see paragraph 34.4.1.8.2).

a. DTD fragment for ***<pecul.insp-entry>***:

```
<!ELEMENT pecul.insp-entry (location, item, (step1-entry)+)>
```

31.3.1.1.3.2.2.2 Location ***<location>***. The location element ***<location>*** is used to identify the location of the item (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<location>***:

```
<!ELEMENT location (%text;)*>
```

31.3.1.1.3.2.2.3 Step1 Entry ***<step1-entry>***. The element ***<step1-entry>*** step1 entry is used to enter primary steps (***<step1>*** see paragraph 34.4.1.8.2) and remarks (***<remarks>*** see paragraph 31.3.1.1.3.2.2.4) in the peculiar inspection table.

a. DTD fragment for ***<step1-entry>***:

```
<!ELEMENT step1-entry (step1, remarks)>
```

31.3.1.1.3.2.2.4 Remarks***<remarks>***. The remarks element ***<remarks>*** may be used to enter any additional remarks (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<remarks>***:

```
<!ELEMENT remarks (%text;)*>
<!ATTLIST remarks
   %bodyatt;
   %secur;>
```

b. Attributes for ***<remarks>***:
   (1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
   (2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.1.3.3 Processing unpacked equipment ***<processeqp>***. The element ***<processeqp>*** processing unpacked equipment is a service upon receipt of materials task containing all procedures and inspections for cleaning

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or processing unpacked equipment. The element contains the parameter entity paragraph type (***%p;*** see paragraph 34.3.5) and/or procedural text (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<processeqp>***:

```
<!ELEMENT processeqp ((%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 paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.1.4 Install ***<install>***. 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>*** see paragraph 34.4.1.5.1) or the text may be entered in tabular format (***<table>*** followed by the parameter entity paragraph type (***%p;*** see paragraph 34.3.5) and/or procedural text (***<proc>*** see paragraph 34.4.1.8.1) or the text may be entered in tabular format (***<table>*** see paragraph 34.4.2.1).

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 paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.1.5 Preliminary servicing of equipment ***<preserv>***. 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 34.3.10) or procedural text (***<proc>*** see paragraph 34.4.1.8.1) .

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 paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.1.6 Preliminary checks and adjustment of equipment ***<prechkadj>***. 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>***

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followed by the parameter entity paragraph type (***%p;*** see paragraph 34.3.5) and/or procedural text (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<prechkadj>***:

```
<!ELEMENT prechkadj (title?, ((%p; | proc)+)>
<!ATTLIST prechkadj
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<prechkadj>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.1.7 Preliminary calibration of equipment ***<precal>***. 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 paragraph 34.3.5) and/or procedural text (***<proc>*** see paragraph 34.4.1.8.1).

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 paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.1.8 Circuit alignment element ***<calign>***. The element ***<calign>*** is a service upon receipt task containing instructions for circuit alignment including external connections ***<extconn>***, with optional switch settings, patch panel connections and internal control settings ***<setconn>*** and alignment procedures ***<alignproc>*** or one switch settings, patch panel connections and internal control settings ***<setconn>*** followed by an optional alignment procedures ***<alignproc>*** or just alignment procedures ***<alignproc>***. The groups of instructions may be preceded by a title ***<title>***.

a. DTD fragment for ***<calign>***:

```
<!ELEMENT calign (title?, (extconn, setconn?, alignproc?) |
 (setconn, alignproc?) | alignproc))>
<!ATTLIST calign
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<calign>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.1.8.1 External connections ***<extconn>***. 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 paragraph 34.3.5) and/or procedural text (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<extconn>***:

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```
<!ELEMENT extconn (%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 paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.1.8.2 Switch settings, patch panel connections, and internal control settings ***<setconn>***. 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 paragraph 34.3.5) and/or procedural text (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<setconn>***:

```
<!ELEMENT setconn (%p; | proc)+>
<!ATTLIST setconn
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<setconn>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.1.8.3 Alignment procedure element ***<alignproc>*** . The element ***<alignproc>*** contains all of the alignment procedures for circuit alignment. The element contains the parameter entity paragraph type (***%p;*** see paragraph 34.3.5) and/or procedural text (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<alignproc>***:

```
<!ELEMENT alignproc (%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 paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.1.9 Ammunition handling ***<ammo.handling>***. 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 paragraph 34.4.1.5.1) followed by one or more of the following specific tasks: (***<ammo.unpacking>*** see paragraph 31.3.1.1.9.1), (***<acptrejinsp>*** see paragraph 31.3.1.5.1.15), and/or ***<ammo.packing>*** see paragraph 31.3.1.1.9.2).

a. DTD fragment for ***<ammo.handling>***:

```
<!ELEMENT ammo.handling (title,(ammo.unpacking |acptrejinsp |
ammo.packing)+)>
<!ATTLIST ammo.handling
```

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```
%hcp.esd;
%bodyatt;
%secur;>
```

b. Attributes for ***<ammo.handling>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.1.9.1 Ammunition unpacking ***<ammo.unpacking>***. The element ***<ammo.unpacking>*** contains all ammunition unpacking information. It contains a required title (***<title>*** see paragraph 34.4.1.5.1), followed by one or more groupings consisting of an optional subtitle and the parameter entity ***%p;*** paragraphs (***<para>*** see paragraph 34.4.1.5.3) and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2) and/or followed by one or more procedure(s) (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<ammo.unpacking>***:

```
<!ELEMENT ammo.unpacking (title, ((subtitle?, (%p;)) | proc)+)>
<!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 paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.1.9.2 Ammunition packing ***<ammo.packing>***. The element ***<ammo.packing>*** contains all ammunition packing information. It contains a required title (***<title>*** see paragraph 34.4.1.5.1) followed by either one or more of the parameter entity ***%p;*** paragraphs (***<para>*** see paragraph 34.4.1.5.3) and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2) and/or by one or more procedure(s) (***<proc>*** see paragraph 34.4.1.8.1).

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 paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.1.10 Ammunition markings ***<ammo.markings>***. 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 paragraph 34.4.1.5.1) followed by at least one procedure (***<proc>*** see paragraph 34.4.1.8.1) and/or the parameter entity ***%p;*** paragraphs (***<para>*** see paragraph 34.4.1.5.3) and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2) .

a. DTD fragment for ***<ammo.markings>***:

```
<!ELEMENT ammo.markings (title, (proc | (%p;))+)>
<!ATTLIST ammo.markings
   %hcp.esd;
```

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```
%bodyatt;
%secur;>
```

b. Attributes for ***<ammo.markings>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.1.11 Ammunition defect ***<ammo.defect>***. 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 34.3.10).

a. DTD fragment for ***<ammo.defect>***:

```
<!ELEMENT ammo.defect ((%titldtext;)+)>
<!ATTLIST ammo.defect
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<ammo.defect>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.1.12 Ammunition activation ***<arm>***. The element ***<arm>*** is used for all information on preparing activation of ammunition and mines is included in this element. This element contains a required title (***<title>***see paragraph 34.4.1.5.1), followed by an optional subtitle (***<subtitle>*** see paragraph 34.4.1.5.2) and the parameter entity ***%p;*** paragraphs (***<para>*** see paragraph 34.4.1.5.3) and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2) , or followed by one or more procedures (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<arm>***:

```
<!ELEMENT arm <!ELEMENT arm (title, ((subtitle?, (%p;)) |
 proc)+)>>
<!ATTLIST arm
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<ammo.defect>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.2 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: identification information required for a work package (***<wpidinfo>*** see paragraph 34.4.5), a work package initial setup (***<wpinfo>*** see paragraph 34.4.6), an optional introductory section (***<geninfo>*** see paragraph 34.4.4.10), alert statements (***%alert;*** see paragraph 34.3.1) followed by and/or procedures (***<proc>*** see paragraph 34.4.1.8.1), and/or the parameter entity title text ***%titldtext;*** (see paragraph 34.3.10) contains paragraphs of text that may be grouped into sections or subsections. The generated text for the element work package title for ***<perseqpwp>*** is **"Equipment Fitting Instructions"**.

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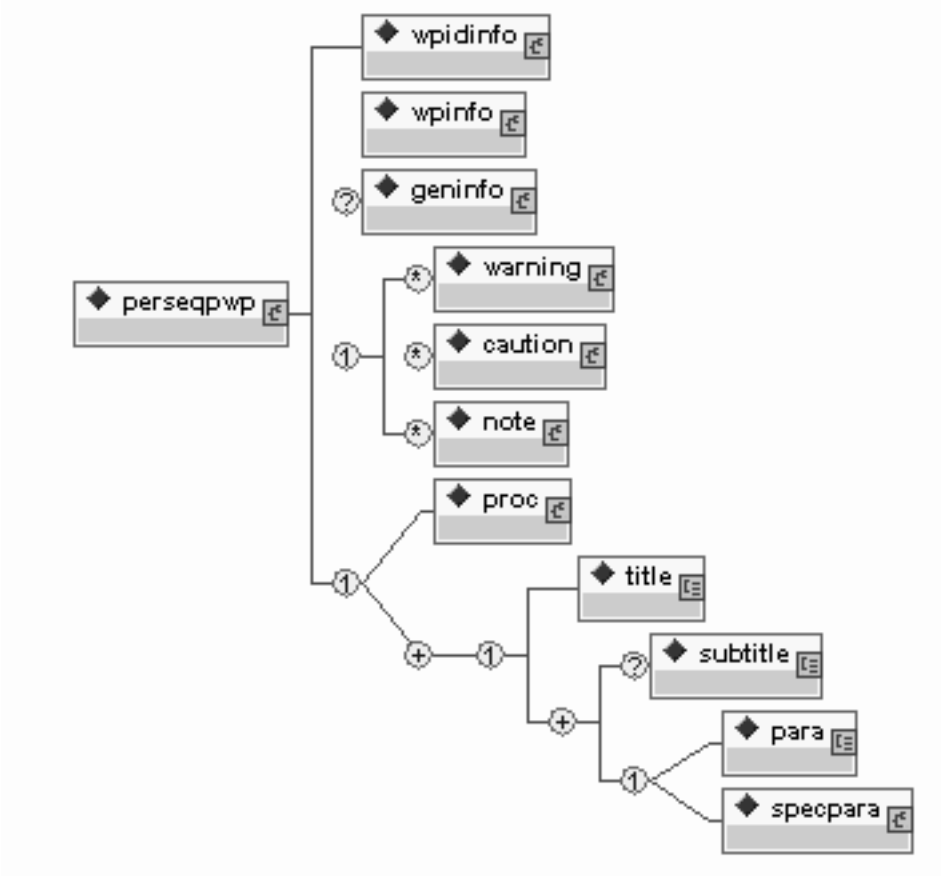

Figure 100 Personal equipment work package DTD hierarchy <perseqpwp>.

a. DTD fragment for ***<perseqpwp>***:

```
<!ELEMENT perseqpwp (wpidinfo, wpinfo, geninfo?, %alert;,
      (proc | (%titldtext;)+))>
<!ATTLIST perseqpwp
    wpno   ID      #REQUIRED
    %tracking;
   %wprsrc-vals;
   %wpbodyatt;
   %secur;>
```

b. Attributes for ***<perseqpwp>***:

(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 paragraph 34.5.9) .

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

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31.3.1.3 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: identification information required for a work package (***<wpidinfo>*** see paragraph 34.4.5), alert statements (***%alert;*** see paragraph 34.3.1) one or more introduction paragraph(s) (***<intropara>*** see paragraph 31.3.1.3.1). The generated text for the element work package title for ***<pmcsintrowp>*** is **"PMCS Procedures Introduction"**.

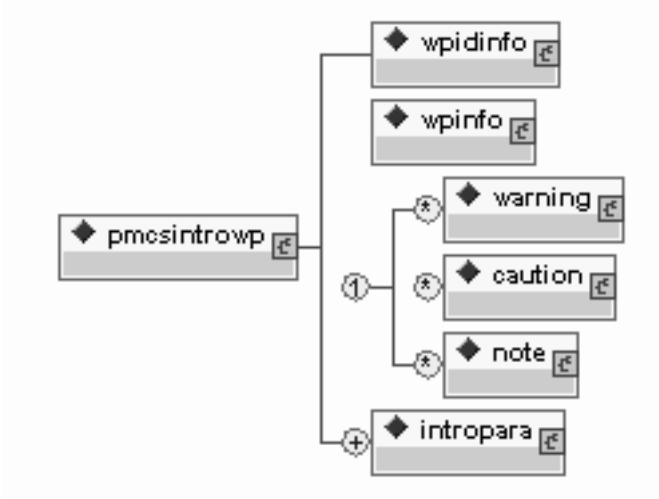

Figure 101 Preventive maintenance checks and services introduction work package DTD hierarchy <pmcsintrowp>.

a. DTD fragment for ***<pmcsintrowp>***:

```
<!ELEMENT pmcsintrowp (wpidinfo, %alert;, intropara+)>
<!ATTLIST pmcsintrowp
   wpno  ID      #REQUIRED
   %tracking;
   %wprsrc-vals;
   %wpbodyatt;
   %secur;>
```

b. Attributes for ***<pmcsintrowp>***:

(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 paragraph 34.5.9) .

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.3.1 Introduction paragraph ***<intropara>***. The element ***<intropara>*** contains the explanation material in the ***<pmcsintrowp>*** for the PMCS table.

a. DTD fragment for ***<intropara>***:

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```
<!ELEMENT intropara (title, (subtitle?, (%p; | step1+))+)+>
<!ATTLIST intropara
   %bodyatt;
   %secur;>
```

b. Attributes for ***<intropara>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.4 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: identification information required for a work package (***<wpidinfo>*** see paragraph 34.4.5), a work package initial setup (***<wpinfo>*** see paragraph 34.4.6), one or more PMCS table(s) (***<pmcstable>*** see paragraph 31.3.1.4.2) followed by a required mandatory replacement parts (***<mrplpart>*** see paragraph 31.3.1.4.3). The generated text for the element work package title for ***<pmcswp>*** is **"Preventive Maintenance Checks and Services"**.

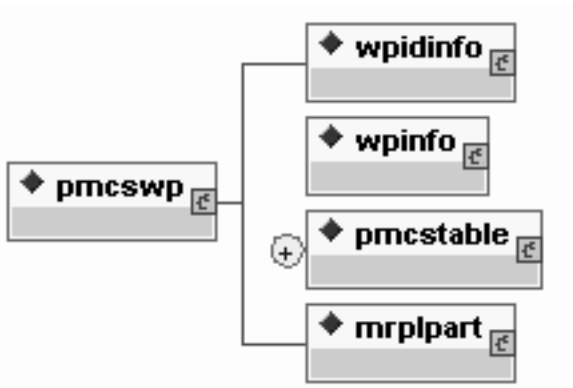

Figure 102 Preventive maintenance checks and services work package DTD hierarchy <pmcswp>.

a. DTD fragment for ***<pmcswp>***:

```
<!ELEMENT pmcswp (wpidinfo, wpinfo, pmcstable+, mrplpart)>
<!ATTLIST pmcswp
   wpno   ID     #REQUIRED
   %tracking;
   %wprsrc-vals;
   %wpbodyatt;
   %secur;>
```

b. Attributes for ***<pmcswp>***:

(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 paragraph 34.5.9) .

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

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(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

The element ***<wpidinfo>*** (see paragraph 34.4.5) defines the identification information required for a work package.

31.3.1.4.2 PMCS table ***<pmcstable>***. The element ***<pmcstable>*** identifies the detailed requirements of the PMCS table. The title of the table must be entered after the title (***<title>*** see paragraph 34.4.1.5.1) element. The ***<pmcstable>*** contains at least one ***<pmcs-entry>***.

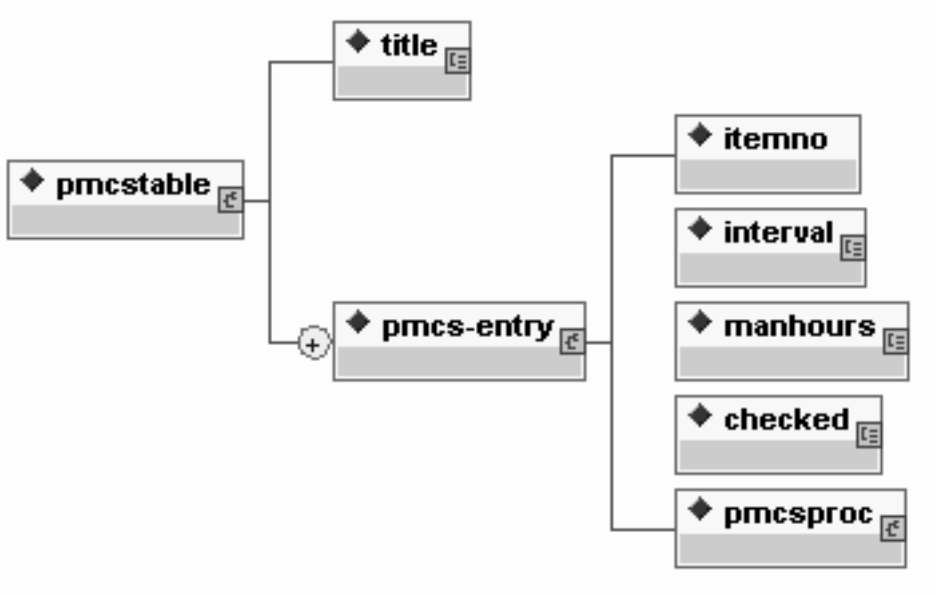

Figure 103 PMCS table DTD hierarchy <pmcstable>.

a. DTD fragment for ***<pmcstable>***:

```
<!ELEMENT pmcstable (title, pmcs-entry+)>
<!ATTLIST pmcstable
   crew-maintained (0 | 1)   #IMPLIED
   tabstyle   NMTOKEN   #IMPLIED
   tocentry   (0 | 1)  "1"
   frame   (top | bottom |
       topbot | all |
       sides | none) "all"
   colsep   (0 | 1) "1"
   rowsep   (0 | 1) "0"
   orient   (port | land) "port"
   %bodyatt;
   %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".

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(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.

(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) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(9) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

c. XML 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>
</pmcsstep1>
<pmcsstep1>
<para>Set controls as indicated in WP0005, page 9.</para>
</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>
</pmcsstep1>
<pmcsstep1>
<para>Set PWR switch to<emphasis emph="bold">ON</emphasis>and Scan Method to
<emphasis emph="bold">MANUAL.</emphasis></para>
</pmcsstep1>
</pmcsproc>
</pmcs-entry>
<pmcs-entry>
```

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<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>
<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>Automatic <ftnref xrefid="testtarget"> 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>

d. Example of a Stylesheet/FOSI Output for a Preventive Maintenance Checks and Services (PMCS) Table<pmcstable>:

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Table 1. Preventive Maintenance Checks and Services for Radar Set, AN/PPS-5XX

ITEM NO	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SER-VICED	PROCEDURES	EQUIPMENT NOT READY AVAILABLE IF:
1	Before	.2	Radar Set, An/PPs-5XX	1. Install radar set (See Chapter 2.) 2. Set controls as indicated in WP 0005 00, 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 indicator	Check to see that **BUBBLE** LEVEL indicator is illuminated when **Antenna Controlswitch** 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	Automatic[1] scanning sector	Run BIT "ANT JOG"	Antenna does not scan, or the results from BIT indicate a failure.

[1] For setting up a test target at a known range/azimuth, refer to procedures in WP 0006 00.

Figure 104 Example of a stylesheet/FOSI output for a Preventive Maintenance Checks and Services (PMCS) table <pmcstable>.

31.3.1.4.2.1 PMCS table entry ***<pmcs-entry>***. The ***<pmcs-entry>*** identifies the detailed requirements of the contents of each column in a PMCS table. PMCS table entry requires a item number (***<itemno>*** see paragraph 33.3.7.1.2.1), interval ***<interval>***, man hours ***<manhours>***, items to be checked or serviced ***<checked>*** and PMCS procedure ***<pmcsproc>***. PMCS table entry is equivalent to entering "row" in a structural table.

a. DTD fragment for ***<pmcs-entry>***:

```
<!ELEMENT pmcs-entry (itemno, interval, manhours, checked, pmcsproc)>
```

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```
<!ATTLIST pmcs-entry
   crewmember CDATA #Implied
   %bodyatt;
   %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) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.4.2.1.1 Interval ***<interval>***. The element ***<interval>*** identifies the PMCS table interval column containing the interval between checks. The element contains the entity (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<interval>***:

```
<!ELEMENT interval (%text)*>
<!ATTLIST interval
   %bodyatt;
   %secur;>
```

b. Attributes for ***<interval>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.4.2.1.2 Man hours ***<manhours>***. The element ***<manhours>*** is the PMCS table column to enter the manhours required to perform lubrication services. The element contains the common text entity (***%text;*** (see paragraph 34.3.16) 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 (%text;)*>
<!ATTLIST manhours
   %bodyatt;
   %secur;>
```

b. Attributes for ***<manhours>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.4.2.1.3 Items to be checked or serviced ***<checked>***. The element ***<checked>*** represents the PMCS table column where the item to be checked or serviced is identified (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<checked>***:

```
<!ELEMENT checked (%text;)>
<!ATTLIST checked
   %bodyatt;
   %secur;>
```

b. Attributes for ***<checked>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.4.2.1.4 PMCS procedure ***<pmcsproc>***. 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 paragraph 34.4.1.5.1), an optional crewmember element ***<crewmember>***, followed by either PMCS

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paragraph ***<pmcspara>*** see paragraph 31.3.1.4.2.1.4.2) or one or more PMCS first-level procedural step ***<pmcsstep1>*** see paragraph 31.3.1.4.2.1.4.3).

a. DTD fragment for ***<pmcsproc>***:

```
<!ELEMENT pmcsproc (title?, crewmember?, (pmcspara | pmcsstep1+))>
<!ATTLIST pmcsproc
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<pmcsproc>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.4.2.1.4.1 Crew member ***<crewmember>***. The optional element ***<crewmember>*** identifies the crew member(s) who performs the preventive maintenance check in the interval column. The data is entered using narrative text (#PCDATA) parsable characters.

a. DTD fragment for ***<crewmember>***:

```
<!ELEMENT crewmember (#PCDATA)>
<!ATTLIST crewmember
   %bodyatt;
   %secur;>
```

b. Attributes for ***<crewmember>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.4.2.1.4.2 PMCS paragraph ***<pmcspara>***. The element ***<pmcspara>*** contains paragraphs , or paragraphs with required alert notices ***<specpara>*** followed by an optional equipment not ready/available ***<eqpnotavail>*** in a PMCS procedure ***<pmcsproc>***. The element is used when only a single step is identified. The element is entered in the procedure column.***<eqpnotavail>***.

a. DTD fragment for ***<pmcspara>***:

```
<!ELEMENT pmcspara ((%p;)+, eqpnotavail?)>
<!ATTLIST pmcspara
   %bodyatt;
   %secur;>
```

b. Attributes for ***<pmcspara>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.4.2.1.4.3 PMCS first-level procedural step ***<pmcsstep1>***. The PMCS first-level procedural step element ***<pmcsstep1>*** contains an optional ***<crewmember>***, followed by parameter entity paragraph type (***%p;*** see paragraph 34.3.5) 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 (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 paragraph 34.5.2) .

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(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.4.2.1.4.3.1 PMCS second-level procedural step ***<pmcsstep2>***. The PMCS second-level procedural step element ***<pmcsstep2>*** contains the parameter entity paragraph type (***%p;*** see paragraph 34.3.5) 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 ((%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 paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.4.2.1.4.3.1.1 PMCS third-level proocedujral step ***<pmcsstep3>***. . The PMCS third-level procedural step element ***<pmcsstep3>*** contains the parameter entity paragraph type (***%p;*** see paragraph 34.3.5) 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>***:

```
<!ELEMENT pmcsstep3 ((%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 paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.4.2.1.4.3.1.1.1 PMCS fourth-level procedural step ***<pmcsstep4>***. . The PMCS fourth-level procedural step element ***<pmcsstep4>*** contains the parameter entity paragraph type (***%p;*** see paragraph 34.3.5) followed by an optional equipment not ready/available ***<eqpnotavail>***.

a. DTD fragment for ***<pmcsstep4>***:

```
<!ELEMENT pmcsstep4 ((%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 paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.4.2.1.4.4 Equipment not ready/availabl ***<eqpnotavail>***. The element ***<eqpnotavail>*** equipment not ready/available defines the condition of the equipment (shortages, malfunctions, etc.) that will make equipment

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not ready or available for use. If this element is entered, it is aligned with PMCS paragraph or step associated with the condition. The data is entered in the last column using the common text entity (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<eqpnotavail>***:

```
<!ELEMENT eqpnotavail (%text;)>
<!ATTLIST eqpnotavail
   %bodyatt;
   %secur;>
```

b. Attributes for ***<eqpnotavail>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.4.3 Mandatory replacement parts ***<mrplpart>***. The element ***<mrplpart>*** is used for describing the mandatory replacement parts for the PMCS. The element ***<mrplpart>*** contains one or more paragraph(s) (***<para>*** see paragraph 34.4.1.5.3) regarding mandatory replacement parts and followed by an optional mandatory replacement parts list (***<mrpl>*** see paragraph 33.3.9.1).

a. DTD fragment for ***<mrplpart>***:

```
<!ELEMENT mrplpart (para+, mrpl?)>
<!ATTLIST mrplpart
   %bodyatt;
   %secur;>
```

b. Attributes for ***<mrplpart>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5 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: identification information required for a work package (***<wpidinfo>*** see paragraph 34.4.5), a work package initial setup (***<wpinfo>*** see paragraph 34.4.6), alert statements (***%alert;*** see paragraph 34.3.1) followed by one or more maintenance tasks ***<maintsk>***. An introductory ***<geninfo>*** may precede the maintenance tasks.

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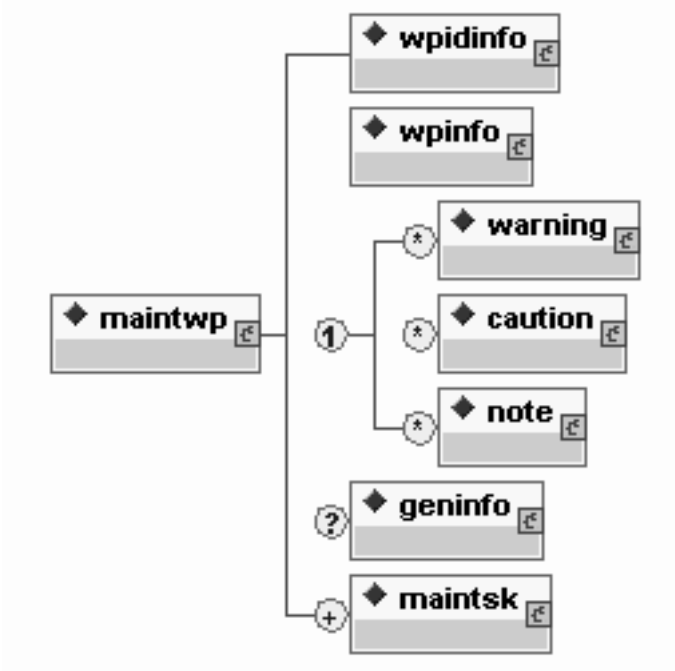

Figure 105 Maintenance work package DTD hierarchy <maintwp>.

a. DTD fragment for ***<maintwp>***:

```
<!ELEMENT maintwp (wpidinfo, wpinfo, %alert; geninfo?, maintsk+)>
<!ATTLIST maintwp
    wpno ID      #REQUIRED
    %tracking;
    %wprsrc-vals;
    %wpbodyatt;
    %secur;>
```

b. Attributes for ***<maintwp>***:

(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 paragraph 34.5.9) .

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

c. XML Document Instance Fragment for a Maintenance Work Package ***<maintwp>***:

<maintwp wpno="tm115840383 13" wpseq= "0024 00">
<wpidinfo>
<maintlvl level="dirsup">
<eicnomen><sysnomen>
<name>RADAR SET***</name>***
<model>AN/PPS-XXX***</model>***
<nsn><fsc>5840***</fsc><niin>***?***</niin>***00-531-7880***</nsn>***

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<eic>Y10</eic>
</sysnomen></eicnomen>
<title>DC/DC CONVERTER CIRCUIT CARD ASSEMBLY REPLACEMENT</title>
</wpidinfo>
<wpinfo>
<tools><tools-setup-item>
<name>Phillips Head Screwdriver</name><identno>8</identno> <itemref><xref callout="8" wpid="S00028-11-5840-383" pretext="(WP" posttext=")"><itemref></tools-setup-item>
<tools-setup-item>
<name>Small Flat Blade Screwdriver</name><identno>42</identno> <itemref><xref callout="42" wpid="S00028-11-5840-383" pretext="(WP" posttext=")"><itemref></tools-setup-item>
<tools-setup-item><name>"¼"</name><identno>48</identno> <itemref><xref callout=xref callout="42" wpid="S00028-11-5840-383" pretext="(WP" posttext=")"><itemref></tools-setup-item>
</tools>
<mtrlpart>
<mtrlpart-setup-item>
<name>Loctite</name>
<xref wpid="S00034-11-5840-383" pretext="(WP" posttext=")">
<mtrlpart-setup-item>
</mtrlpart>
<eqpconds>
<eqpconds-setup-item>
<condition>
<name>DC/DC converter circuit card removed</name>
</condition>
<itemref><xref wpid="Mxxx13-11-5840-383" pretext="See WP" 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>
<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>

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</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="removaltask">
</figure>
</para>
</step1>
</proc>
</remove>
<assem>
<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>
*<para>*Perform procedure for RF Assembly installation (WP0028 RF ASSEMBLY REPLACE-MENT).*</para>*

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</step1>
</proc>
<assem>
</maintsk>
</maintwp>

d. Example of a Stylesheet/FOSI output for a Maintenance Work Package ***<maintwp>***

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TM XX-XXXX-XXXX-12P 0012 00

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 (item 8 WP 0018 00)
Small Flat Blade Screwdriver (item 42 WP 0018 00)
1/4" Hex Nut Driver (item 49 WP 0018 00)

Materials/Parts

Loctite (WP 0031 00)

Equipment Condition

DC/DC converter circut card removed (WP 0034 00)

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 (figure 1, item 1) holding harness connector to DC/DC Converter P1 connector, and remove connector.
2. Gently pull harness (figure 1, item 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 (figure 1, item 3) of the DC/DC Converter card.
4. Gently pull the DC/DC Converter card out of the R-T enclosure.

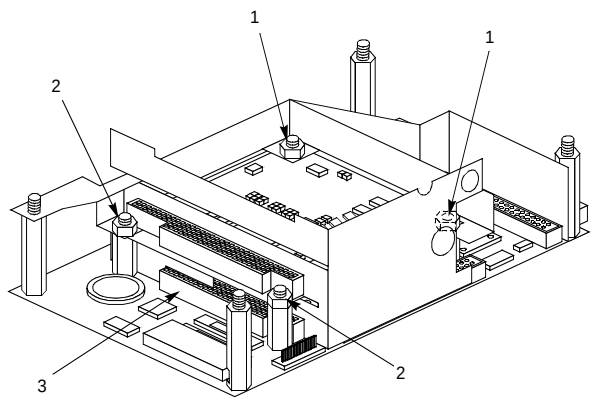

FIGURE 1. *Removal of the DC/DC Converter Circuit Card Assembly*

Figure 106 Example of a stylesheet/FOSI output for a maintenance work package <maintwp>.

31.3.1.5.1 Maintenance Tasks ***<maintsk>***. 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>***,

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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>***. Alert statements ***%alert;*** may be entered prior to the maintenance tasks.

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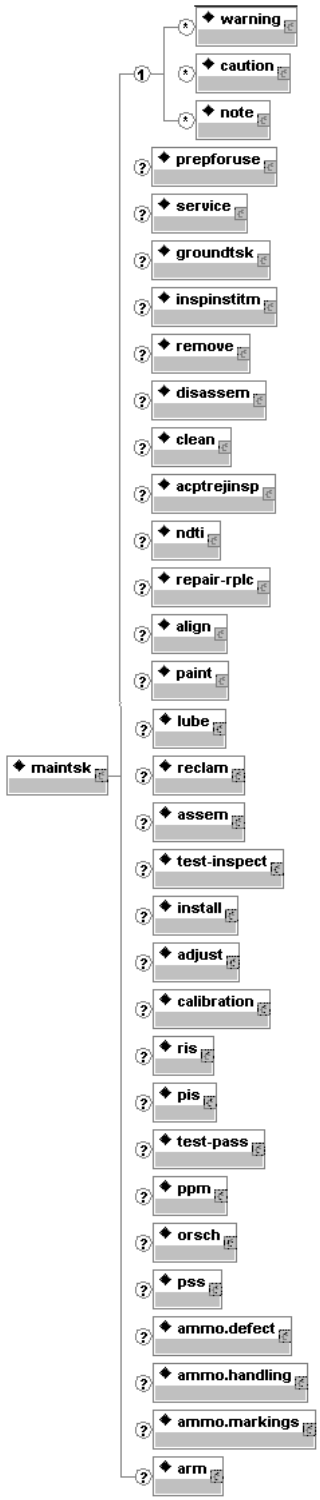

Figure 107 Maintenance tasks DTD hierarchy <maintsk>.

a. DTD fragment for ***<maintsk>*** and ***%maintsk;***:

```
<!ELEMENT maintsk (%maintsk;)>
```

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```
<!ATTLIST maintsk
   %bodyatt;
   %secur;>
<!ENTITY % maintsk "(%alert;, prepforuse?, service?, groundtsk?,
 inspinstitm?, remove?, disassem?, clean?, acptrejinsp?, ndti?, repair-rplc?,
 align?, paint?, lube?, reclam?, 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 paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.1 Preparation for use ***<prepforuse>***. The element ***<prepforuse>*** is a maintenance and service upon receipt task that contains procedures for unpacking, assembly, and installation. The element ***<prepforuse>*** may contain an illustration ***<figure>*** followed by the parameter entity ***%p;*** paragraphs (***<para>*** see paragraph 34.4.1.5.3) and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2) or procedural text (***<proc>*** see paragraph 34.4.1.8.1). **Aircraft only.**

a. DTD fragment for ***<prepforuse>***:

```
<!ELEMENT prepforuse (figure?, (%p; | proc))+>
<!ATTLIST prepforuse
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<prepforuse>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.2 Ground handling tasks ***<groundtsk>***. The element ***<groundtsk>*** contains the procedures for all types of ground handling of the aircraft. The element contains the contains the following tasks: towing ***<tow>***, jacking ***<jack>***, parking ***<park>***, mooring ***<moor>***, covering ***<cover>***, hoisting ***<hoist>***, sling loading ***<sling>***, and external power ***<extpwr>***.

a. DTD fragment for ***<groundtsk>***:

```
<!ELEMENT groundtsk (tow | jack | park | moor | cover | hoist | sling | extpwr)>
<!ATTLIST groundtsk
   %bodyatt;>
```

31.3.1.5.1.3 Towing ***<tow>***. 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 paragraph 34.4.1.8.1) or paragraphs (***<para>*** see paragraph 34.4.1.5.3) and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2) each of which may be preceded by a subtitle (***<subtitle>*** see paragraph 34.4.1.5.2).

a. DTD fragment for ***<tow>***:

```
<!ELEMENT tow (proc | (subtitle?, (%p;)+)+)>
<!ATTLIST tow
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<tow>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

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(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.4 Jacking ***<jack>***. 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 paragraph 34.4.1.8.1) or paragraphs (***<para>*** see paragraph 34.4.1.5.3) and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2) each of which may be preceded by a subtitle (***<subtitle>*** see paragraph 34.4.1.5.2).

a. DTD fragment for ***<jack>***:

```
<!ELEMENT jack (proc | (subtitle?, (%p;)+)+)>
<!ATTLIST jack
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<jack>***:
(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.5 Parking ***<park>***. 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 34.4.1.8.1) or paragraphs (***<para>*** see paragraph 34.4.1.5.3) and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2) each of which may be followed by a subtitle (***<subtitle>*** see 34.4.1.5.2).

a. DTD fragment for ***<park>***:

```
<!ELEMENT park (proc | (subtitle?, (%p;)+)+)>
<!ATTLIST park
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<park>***:
(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.6 Mooring ***<moor>***. 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 34.4.1.8.1) or paragraphs (***<para>*** see paragraph 34.4.1.5.3) and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2) each of which may be followed by a subtitle (***<subtitle>*** see 34.4.1.5.2).

a. DTD fragment for ***<moor>***:

```
<!ELEMENT moor (proc | (proc | (subtitle?, (%p;)+)+)>
<!ATTLIST moor
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<moor>***:
(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

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(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.7 Covering ***<cover>***. 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 34.4.1.8.1) or paragraphs (***<para>*** see paragraph 34.4.1.5.3) and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2) each of which may be followed by a subtitle (***<subtitle>*** see 34.4.1.5.2).

a. DTD fragment for ***<cover>***:

```
<!ELEMENT cover (proc | (subtitle?, (%p;)+)+)>
<!ATTLIST cover
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<cover>***:
(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.8 Hoisting ***<hoist>***. 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 34.4.1.8.1) or paragraphs (***<para>*** see paragraph 34.4.1.5.3) and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2) each of which may be followed by a subtitle (***<subtitle>*** see 34.4.1.5.2).

a. DTD fragment for ***<hoist>***:

```
<!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 paragraph 34.5.2) .
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.9 Sling loading ***<sling>***. 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 34.4.1.8.1) or paragraphs (***<para>*** see paragraph 34.4.1.5.3) and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2) each of which may be followed by a subtitle (***<subtitle>*** see 34.4.1.5.2).

a. DTD fragment for ***<sling>***:

```
<!ELEMENT sling (proc | (subtitle?, (%p;)+)+)>
<!ATTLIST sling
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<sling>***:
(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

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(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.10 External power ***<extpwr>***. 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 34.4.1.8.1) or paragraphs (***<para>*** see paragraph 34.4.1.5.3) and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2) each of which may be followed by a subtitle (***<subtitle>*** see 34.4.1.5.2).

a. DTD fragment for ***<extpwr>***:

```
<!ELEMENT extpwr (proc | (subtitle?, (%p;)+)+)>
<!ATTLIST extpwr
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<extpwr>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.11 Inspection of installed items ***<inspinstitm>***. 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>*** contain paragraphs (***<para>*** see paragraph 34.4.1.5.3), and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2), and/or procedural text (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<inspinstitm>***:

```
<!ELEMENT inspinstitm (%p; | proc)+>
<!ATTLIST inspinstitm
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<inspinstitm>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.12 Removal ***<remove>***. 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 paragraph 34.4.3.1) followed by procedure text (***<proc>*** see paragraph 34.4.1.8.1).

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 paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.13 Disassembly ***<disassem>***. The element ***<disassem>*** is the maintenance task containing procedures regarding the disassembly of an assembly, subassembly or component to the extent authorized by the

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maintenance allocation chart (MAC) and source maintenance and recoverability code (SMR). The element ***<disassem>*** contains procedural text (***<proc>*** see paragraph 34.4.1.8.1). A figure (***<figure>*** see paragraph 34.4.3.1) 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 paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.14 Cleaning ***<clean>***. 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 paragraph 34.4.1.8.1).

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 paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.15 Inspection-acceptance and rejection criteria ***<acptrejinsp>***. 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 paragraph 34.4.1.5.3) and/or procedural text (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<acptrejinsp>***:

```
<!ELEMENT acptrejinsp (para | proc)+>
<!ATTLIST acptrejinsp
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<acptrejinsp>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.16 Nondestructive Testing Inspection (NDTI) ***<ndti>***. The element ***<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. The element ***<ndti>*** contain paragraphs (***<para>*** see paragraph 34.4.1.5.3), and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2), and/or procedural text (***<proc>*** see paragraph 34.4.1.8.1). **Aircraft only.**

a. DTD fragment for ***<ndti>***:

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```
<!ELEMENT ndti (%p; | proc)+>
<!ATTLIST ndti
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<ndti>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.17 Repair or replacement ***<repair-rplc>***. 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 paragraph 34.4.1.8.1).

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 paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.18 Alignment ***<align>***. 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 paragraph 34.4.1.8.1).

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 paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.19 Painting ***<paint>***. 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 paragraph 34.4.1.8.1).

a. DTD fragment for ***<paint>***:

```
<!ELEMENT paint (proc)+>
<!ATTLIST paint
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<paint>***:

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(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.20 Lubrication ***<lube>***. The element ***<lube>*** is used for maintenance task specifying the lubrication of equipment. The element ***<lube>*** contains multiple procedures (***<proc>*** see paragraph 34.4.1.8.1).

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 paragraph 34.5.2) .
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.21 Assembly ***<assem>***. 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 paragraph 34.4.1.8.1). A figure (***<figure>*** see paragraph 34.4.3.1) may be entered prior to the procedure when it is beneficial to clarify the assembly. The attribute final assembly **fin-assem** in a **DMWR** is used to cover the final assembly of the overhauled item by entering a one to the attribute. Zero is the default of the attribute **fin-assem**.

a. DTD fragment for ***<assem>***:

```
<!ELEMENT assem (figure?, proc)+>
<!ATTLIST assem
   fin-assem (0 | 1) "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 paragraph 34.5.2) .
(3) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(4) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8)..

31.3.1.5.1.22 Test and inspection ***<test-inspect>***. 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 paragraph 34.4.1.8.1) 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>***:

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(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.22.1 Classification of material defects table ***<defect.tab>***. The element ***<defect.tab>*** classification of material defects table is a content tagged table that may occur within ***<test-inspect>***. It contains a required title (***<title>*** see paragraph 34.4.1.5.1) followed by one or more classification of material defects row(s) ***<defect-row>***.

a. DTD fragment for ***<defect.tab>***:

```
<!ELEMENT defect.tab (title, defect-row+)>
```

31.3.1.5.1.22.1.1 Classification of Material Defects Row ***<defect-row>***. The element ***<defect-row>*** is a row found in a classification of material defects table***<defect.tab>***. The row contains a component assembly by the type of defect ***<defecttype>***, the condition ***<condition>*** (see paragraph 34.4.6.1.6.1.1), a cross reference (***<xref>*** (see paragraph 34.4.1.3.6) 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-row>***:

```
<!ELEMENT defect-row (defecttype, (condition, (xref | actionreq),
insp-method, acceptqual)+)>
```

31.3.1.5.1.22.1.2 Type of defect ***<defecttype>***. The element ***<defecttype>*** identifies the type of defect for the component.

a. DTD fragment for ***<defecttype>***:

```
<!ELEMENT defecttype 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.

31.3.1.5.1.22.1.3 Action required ***<actionreq>***. The element ***<actionreq>*** identifies the required action to be performed to correct the defect (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<actionreq>***:

```
<!ELEMENT actionreq (%text;)*>
<!ATTLIST actionreq
   %bodyatt;
   %secur;>
```

b. Attributes for ***<actionreq>***:
(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.22.1.4 Inspection method ***<insp-method>***. The element ***<insp-method>*** is used to describe the method (usual, torque, etc.) to correctly determine if the corrective action was accomplished. The data is entered using narrative text (#PCDATA) parsable characters.

a. DTD fragment for ***<insp-method>***:

```
<!ELEMENT insp-method (#PCDATA)>
```

31.3.1.5.1.22.1.5 Acceptable quality ***<acceptqual>***. The element ***<acceptqual>*** identifies the acceptance quality required for the component assembly (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

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a. DTD fragment for ***<acceptqual>***:

```
<!ELEMENT acceptqual (%text;)*>
```

31.3.1.5.1.23 Installation ***<install>***. 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 paragraph 34.4.1.5.3) , paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2) , and/or procedural text (***<proc>*** see paragraph 34.4.1.8.1) 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 paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.24 Adjustment ***<adjust>***. 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>*** see paragraph 34.4.1.8.1).

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 paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.25 Calibration ***<calibration>***. 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 paragraph 34.4.1.8.1).

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 paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

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31.3.1.5.1.26 Radio Interference Suppression ***<ris>***. The element ***<ris>*** is a maintenance task containing radio interference suppression procedures for removal and replacement of defective components. The element ***<ris>*** contain paragraphs (***<para>*** see paragraph 34.4.1.5.3), and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2), and/or procedural text (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<ris>***:

```
<!ELEMENT ris (%p; | proc)+>
<!ATTLIST ris
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<ris>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.27 Placing in service ***<pis>***. The element ***<pis>*** 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 paragraph 34.4.1.5.3), and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2), and/or procedural text (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<pis>***:

```
<!ELEMENT pis (%p; | proc)+>
<!ATTLIST pis
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<pis>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.28 Testing ***<test-pass>***. 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 paragraph 34.4.1.5.3), and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2), and/or procedural text (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<test-pass>***:

```
<!ELEMENT test-pass (%p; | 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 paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.29 Preservation, packaging, and marking ***<ppm>***. 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

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be referenced within this element. This element is for depot equipment level only. The element ***<ppm>*** contains multiple procedures (***<proc>*** see paragraph 34.4.1.8.1).

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 paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.30 Overhaul and retirement schedule ***<orsch>***. 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>*** may contain an introduction ***<intro>*** and an overhaul and retirement schedule table ***<orsch.tab>***.

a. DTD fragment for ***<orsch>***:

```
<!ELEMENT orsch (intro?, orsch.tab)>
<!ATTLIST orsch
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<orsch>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.30.1 Overhaul and retirement schedule table ***<orsch.tab>***. The element ***<orsch.tab>*** is a table containing the following entries: name (***<name>*** see paragraph 34.4.4.15), part number (***<partno>*** see paragraph 34.4.4.17) and the CAGE code (***<cageno>*** see paragraph 34.4.4.2), an optional overhaul interval hours and note(s) ***<overhaul.interval>*** and required retirement interval hours and note(s) ***<retirement.interval>***.

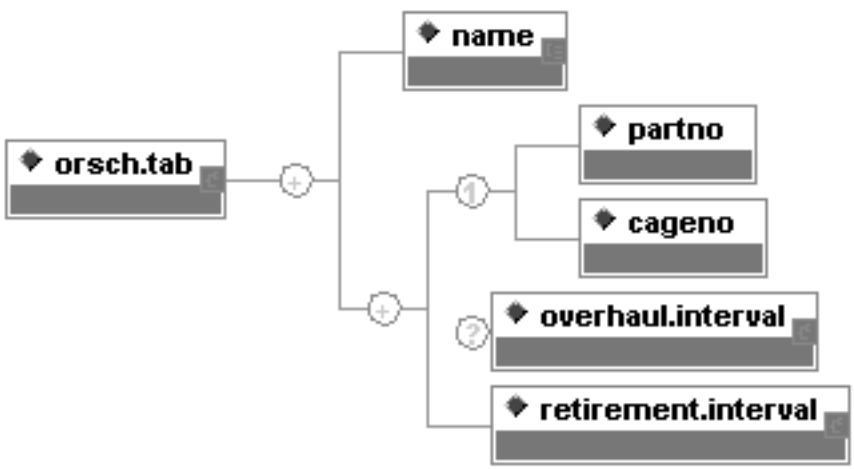

Figure 108 Overhaul and retirement schedule table DTD hierarchy <orsch.tab>.

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a. DTD fragment for ***<orsch.tab>***:

```
<!ELEMENT orsch.tab (name, (partno, cageno, overhaul.interval?,
 retirement.interval)+)+>
<!ATTLIST orsch
   %bodyatt;
   %secur;>
```

b. Attributes for ***<orsch.tab>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.30.1.1 Overhaul and retirement schedule interval ***<orsch.interval>***. The element ***<orsch.interval>*** contains the overhaul interval hours ***<interval.hours>*** and overhaul interval notes ***<.interval.notes>***.

a. DTD fragment for ***<orsch.interval>***:

```
<!ELEMENT orsch.interval (interval.hours, interval.notes?)>
<!ATTLIST orsch
   %bodyatt;
   %secur;>
```

b. Attributes for ***<orsch.interval>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.30.1.1.1 Interval hours ***<interval.hours>***. The element ***<interval.hours>*** contains the maximum operating time allowed on the part before it is to be overhauled. The data is entered using narrative text (#PCDATA) parsable characters.

a. DTD fragment for ***<interval.hours>***:

```
<!ELEMENT interval.hours (#PCDATA)>
```

31.3.1.5.1.30.1.1.2 Interval notes ***<interval.notes>***. The element ***<interval.notes>*** contains any additional information required on the part's overhaul interval. The data is entered using the entity text (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<interval.notes>***:

```
<!ELEMENT interval.notes (%text;)*>
```

31.3.1.5.1.30.1.2 Retirement interval ***<retirement.interval>***. The element ***<retirement.interval>*** contains the retirement interval hours ***<interval.hours>*** and retirement interval notes ***<.interval.notes>***.

a. DTD fragment for ***<retirement.interval>***:

```
<!ELEMENT retirement.interval (interval.hours, interval.notes?)
<!ATTLIST orsch
   %bodyatt;
   %secur;>
```

b. Attributes for ***<retirement.interval>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.5.1.31 Preparation for Storage or Shipment ***<pss>***. 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 paragraph 34.4.1.5.3), and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2), and/or procedural text (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<pss>***:

```
<!ELEMENT pss (%p; | proc)+>
<!ATTLIST pss
   %hcp.esd;
```

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```
%bodyatt;
%secur;>
```

b. Attributes for ***<pss>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.6 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: identification information required for a work package (***<wpidinfo>*** see paragraph 34.4.5), a work package initial setup (***<wpinfo>*** see paragraph 34.4.6), alert statements (***%alert;*** see paragraph 34.3.1), followed by one or more maintence tasks ***<maintsk>*** and/or one or more procedural text (***<proc>*** see paragraph 34.4.1.8.1) or the parameter entity ***%p;*** paragraphs (***<para>*** see paragraph 34.4.1.5.3) and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2) .

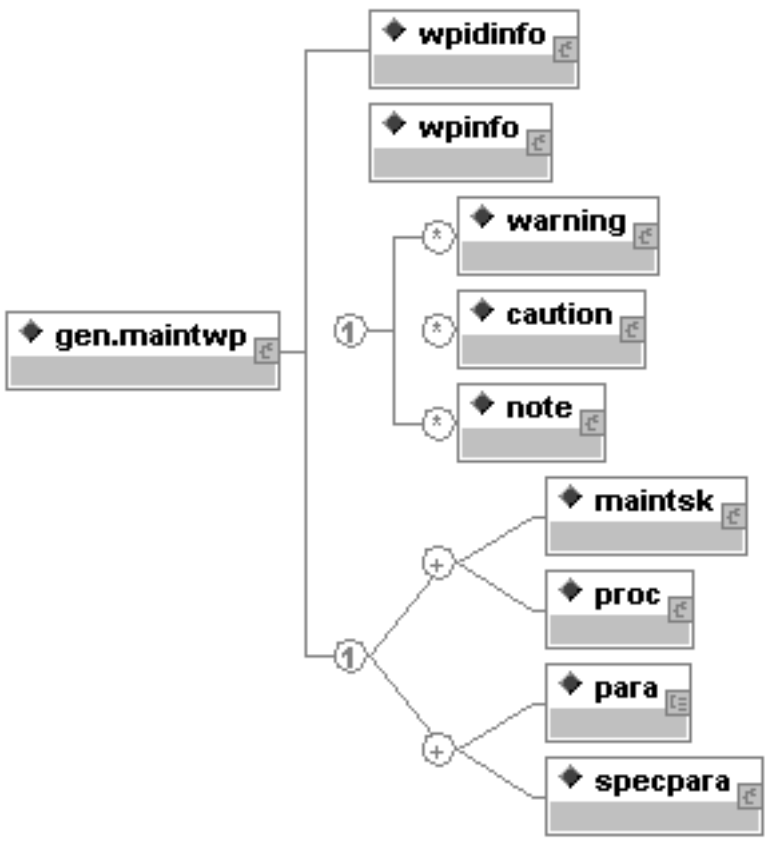

Figure 109 General maintenance work packages DTD hierarchy <gen.maintwp>.

a. DTD fragment for ***<gen.maintwp>***:

```
<!ELEMENT gen.maintwp (wpidinfo, wpinfo, %alert;, ((maintsk | proc)+ |
(%p;)+))>
<!ATTLIST gen.maintwp
```

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```
wpno ID      #REQUIRED
%tracking;
%wprsrc-vals;
%wpbodyatt;
%secur;>
```

b. Attributes for ***<gen.maintwp>***:

(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 paragraph 34.5.9) .

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.7 Phased maintenance inspections work package ***<pmiwp>***. The element ***<pmiwp>*** is used for data required to perform phased maintenance inspections on aircraft. 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: identification information required for a work package (***<wpidinfo>*** see paragraph 34.4.5), a work package initial setup (***<wpinfo>*** see paragraph 34.4.6), an optional introductory section (***<geninfo>*** see paragraph 34.4.4.10), alert statements (***%alert;*** followed by one or more general paragraphs ***<para>*** see paragraph 34.4.1.5.3), and/or one or more procedual text (***<proc>*** see paragraph 34.4.1.8.1) and/or one or more preventive maintenance inspection peculiar inspection table(s) ***<pmi.pecul.tab>***. **Aircraft only.**

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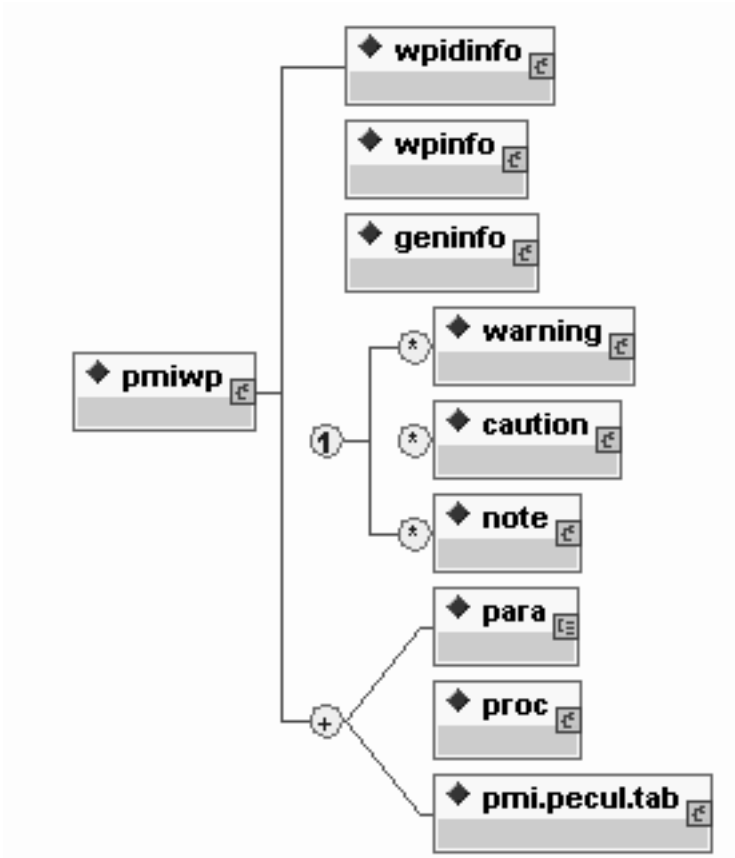

Figure 110 Phased maintenance inspections work package DTD hierarchy <pmiwp>.

a. DTD fragment for ***<pmiwp>***:

```
<!ELEMENT pmiwp (wpidinfo, wpinfo, geninfo, %alert;, (para | proc
| pmi.pecul.tab)+)>
<!ATTLIST pmiwp
    wpno  ID     #REQUIRED
   %tracking;
   %wprsrc-vals;
   %wpbodyatt;
   %secur;>
```

b. Attributes for ***<pmiwp>***:

(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 paragraph 34.5.9) .

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

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31.3.1.7.1 Preventive maintenance inspection peculiar inspection table ***<pmi.pecul.tab>***. 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 one or more preventive maintenance inspection peculiar inspection row(s).

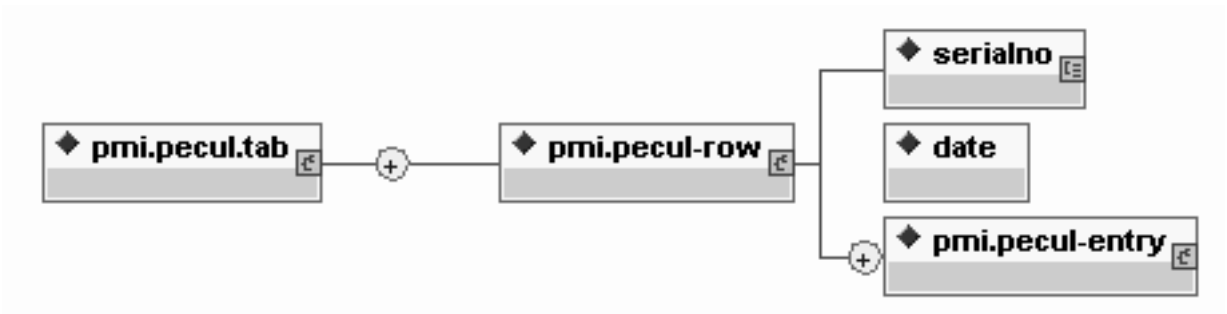

Figure 111 Preventive maintenance inspection peculiar inspection table DTD hierarchy <pmi.pecul.tab>.

a. DTD fragment for ***<pmi.pecul.tab>***:

```
<!ELEMENT pmi.pecul.tab (pmi.pecul-row)+
<!ATTLIST pmi.pecul.tab
   %bodyatt;
   %secur;>
```

b. Attributes for ***<pmi.pecul.tab>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.7.1.1 Preventive maintenance inspection peculiar inspection row ***<pmi.pecul-row>***. The element ***<pmi.pecul-row>*** is used in 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 an aircraft tail serial number (***<serialno>*** see paragraph 34.4.1.8.1), inspection date (***<date>*** see paragraph 27.2.1.1.4.1.2), and one or more preventive maintenance inspection peculiar inspection entry(s) ***<pmi.pecul-entry>***.

a. DTD fragment for ***<pmi.pecul-row>***:

```
<!ELEMENT pmi.pecul-row (serialno, date, pmi.pecul-entry+)
```

31.3.1.7.1.1.1 Preventive maintenance inspection peculiar inspection entry ***<pmi.pecul-entry>***. The element ***<pmi.pecul-entry>*** is used in a preventive maintenance inspection peculiar inspection row 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 an area number (***<areano>*** see paragraph 31.3.1.7.1.2), item number (***<itemno>*** see paragraph 33.3.7.1.2.1), inspection interval (***<interval>*** see paragraph 31.3.1.4.2.1.1), component name (***<compname>*** see paragraph 30.3.3.1.4) and inspection procedure (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<pmi.pecul-entry>***:

```
<!ELEMENT pmi.pecul-row (areano, itemno, interval, compname, proc)+)>
```

31.3.1.7.1.2 Area number ***<areano>***. The element ***<areano>*** is used to enter the area number from the diagram. The data is entered using narrative text (#PCDATA) parsable characters.

a. DTD fragment for ***<areano>***:

```
<!ELEMENT areano (#PCDATA)>
<!ATTLIST areano
   %bodyatt;>
```

b. Attributes for ***<areano>***:

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(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

31.3.1.8 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. 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: identification information required for a work package (***<wpidinfo>*** see paragraph 34.4.5), a work package initial setup (***<wpinfo>*** see paragraph 34.4.6), alert statements ***%alert;***, an optional introductory section (***<geninfo>*** see paragraph 34.4.4.10), followed by an optional subtitle (***<subtitle>*** see paragraph 34.4.1.5.2) and one or more general paragraph(s) (***<para>*** see paragraph 34.4.1.5.3) or one or more procedure(s) (***<proc>*** see paragraph 34.4.1.8.1). The generated text for the element work package title for ***<lubewp>*** is **"Aircraft Lubrication Instructions"**. **Aircraft only.**

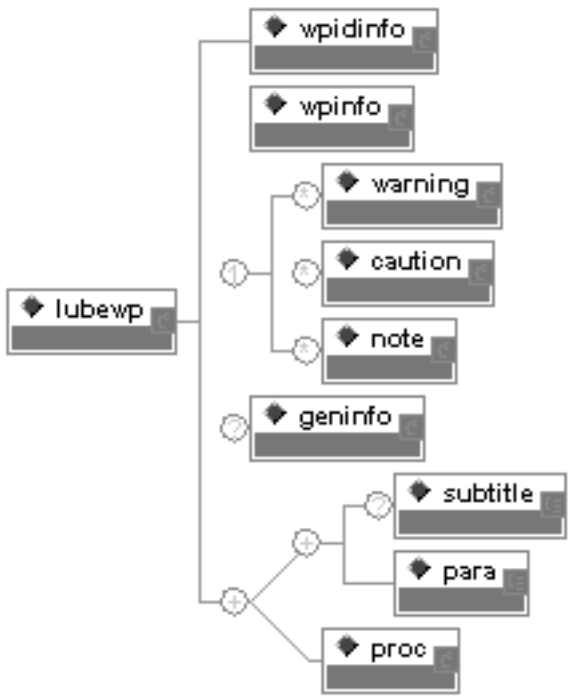

Figure 112 Lubrication instructions work package DTD hierarchy <lubewp>.

a. DTD fragment for ***<lubewp>***:

```
<!ELEMENT lubewp (wpidinfo, wpinfo, %alert;, geninfo?,
 ((subtitle?,para)+ | proc)+)>
<!ATTLIST lubewp
   wpno  ID       #REQUIRED
   %tracking;
   %wprsrc-vals;
   %wpbodyatt;
   %secur;>
```

b. Attributes for ***<lubewp>***:

(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) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.9 Facilities work package ***<facilwp>***. 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 paragraph 34.4.5), followed by initial setup information (***<wpinfo>*** see paragraph 34.4.6), and paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 34.3.10). The generated text for the element work package title for ***<facilwp>*** is **"Facilities"**. **DMWR/NMWR only**.

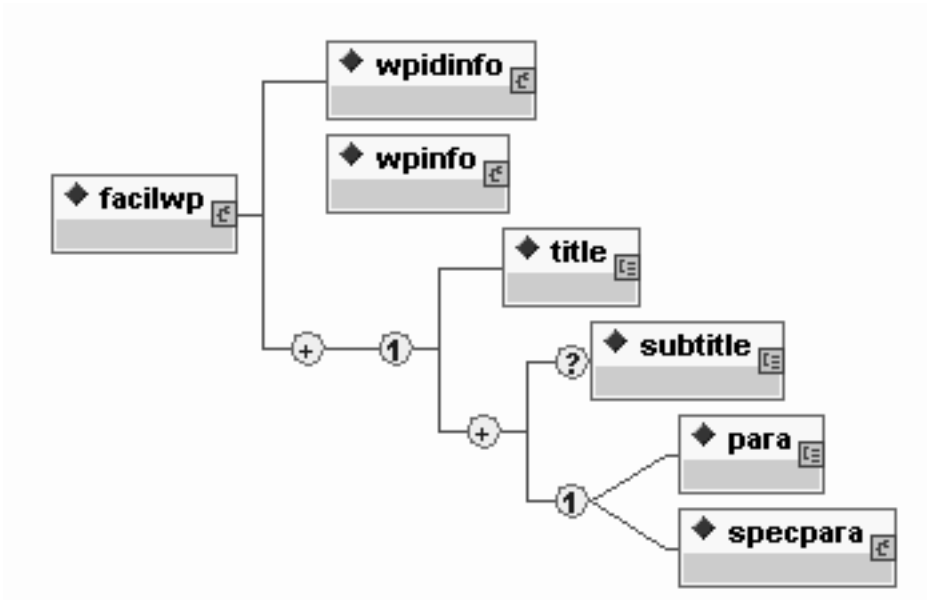

Figure 113 Facilities work package DTD hierarchy <facilwp>.

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 paragraph 34.5.9) .
(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .
(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.10 Overhaul inspection procedure work package(s) ***<oipwp>***. 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: identification information required for a work package (***<wpidinfo>*** see paragraph 34.4.5), a work package initial setup (***<wpinfo>*** see paragraph 34.4.6), alert statements (***%alert;*** see paragraph 34.3.1), an introductory section (***<geninfo>*** see paragraph 34.4.4.10), followed by one or more grouping(s) of an overhaul inspection procedure table (***<oiptab>*** see paragraph 31.3.1.10.1) or a table (***<table>*** see paragraph 34.4.2.1) with one or more graphics identifying the illustration(s) (***<graphic>*** see paragraph 34.4.3.1.2). The generated text for the element work package title for ***<oipwp>*** is **"Overhaul Inspection Procedures"**. **DMWR/NMWR only**.

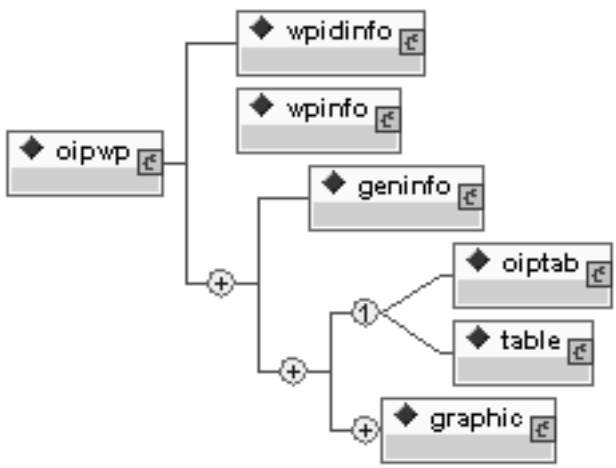

Figure 114 Overhaul inspection procedure work package DTD hierarchy <oipwp>.

a. DTD fragment for ***<oipwp>***:

```
 <!ELEMENT oipwp (wpidinfo, wpinfo, (geninfo, ((oiptab | table),
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

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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) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.10.1 Overhaul inspection procedures table ***<oiptab>***. The element overhaul inspection procedures table ***<oiptab>*** contains the content elements in the common overhaul inspection procedures table. It contains a required title (***<title>*** see paragraph 34.4.1.5.1) follow by optional alert statements (***%alert;*** see paragraph 34.3.1) and one or more required overhaul inspection procedure item(s) (***<oipitem>*** see paragraph 31.3.1.10.1.1).

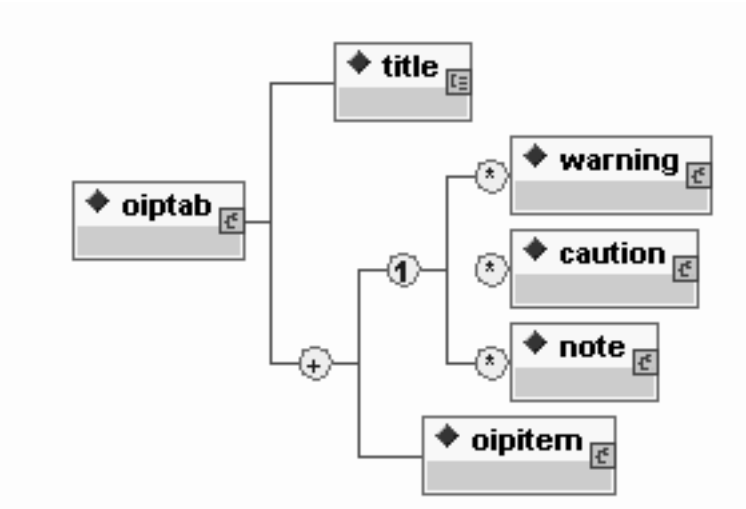

Figure 115 Overhaul inspection procedures table DTD hierarchy <oiptab>.

a. DTD fragment for ***<oiptab>***:

```
<!ELEMENT oiptab (title, (%alert;, 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 paragraph 34.5.8).

c. XML Document Instance Fragment Output for an Overhaul Inspection Procedures Table ***<oiptab>***:

<oiptab oipno="rg38631-2">
<title>Pump Housing***</title>***
<oipitem qa="0">
<itemno>1***</itemno>***
<callout label="">

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```
<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 qa="0">
<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 qa="0">
<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>
<oipitem qa="0">
<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 qa="0">
<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 qa="0">
<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. Example of a Stylesheet/FOSI Output Overhaul Inspection Procedures Table **<oiptab>**:

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lynn in table in figureTable 14. Oip RG38631–2 Pump Housing

QA REQ	NO.	REF LTR	CHARACTERIST METHOD	INSP	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.

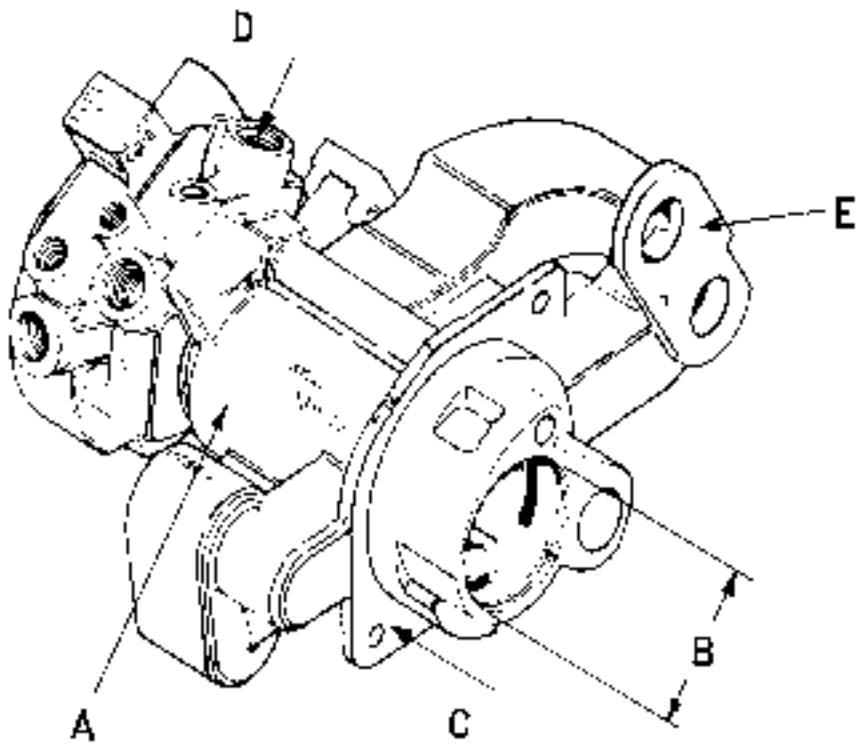

Figure 116 Example of a stylesheet/FOSI output overhaul inspection procedures table <oiptab>.

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31.3.1.10.1.1 Overhaul inspection procedure item ***<oipitem>***. 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. The element contains the following subdivided elements and content requirements: item number (***<itemno>*** see paragraph 33.3.7.1.2.1), call out (***<callout>*** see paragraph 34.4.1.3.2), description (***<desc>*** see paragraph 33.3.5.1.1.2.2.1), inspection method (***<insp-method>*** see paragraph 31.3.1.5.1.22.1.4), action required (***<actionreq>*** see paragraph 31.3.1.5.1.22.1.3).

a. DTD fragment for ***<oipitem>***:

```
<!ELEMENT oipitem (itemno, callout, desc, insp-method, actionreq)>
<!ATTLIST oipitem
   %qa;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<oipitem>***:

(1) **%QA;** Refer to common parameter entities for a complete description (see paragraph 34.5.6).

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.11 Depot mobilization requirements work package ***<mobilwp>***. 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>*** see paragraph 34.4.5), a work package initial setup (***<wpinfo>*** see paragraph 34.4.6), an introductory section (***<intro>*** see paragraph 34.4.4.12) and requirements to modify, delete, or add data to the DMWR/NMWR during mobilization (***<mobilreq>*** see paragraph 31.3.1.11.1). The generated text for the element work package title for ***<mobilwp>*** is **"Depot Mobilization Requirements"**. **DMWR/NMWR only.**

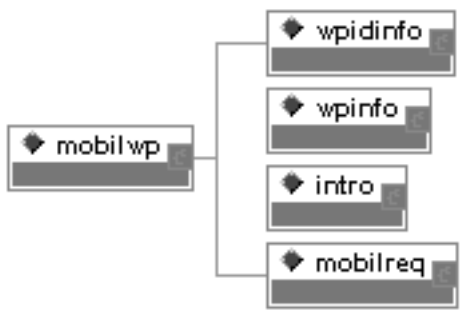

Figure 117 Depot mobilization requirements work package DTD hierarchy <mobilwp>.

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>***:

(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 paragraph 34.5.11) .

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.11.1 Mobilization requirements ***<mobilreq>***. 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 paragraph 34.4.1.5.3), followed by a mobilization requirement table ***<mobiltab>***.

a. DTD fragment for ***<mobilreq>***:

```
<!ELEMENT mobilreq (para, mobiltab)>
<!ATTLIST mobilreq
   %bodyatt;
   %secur;>
```

b. Attributes for ***<mobilreq>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.11.1.1 Mobilization table ***<mobiltab>***. 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 paragraph34.4.1.5.1), and one or more mobilization requirements entry(s) (***<mobil-entry>*** see paragraph 31.3.1.11.1.1.1).

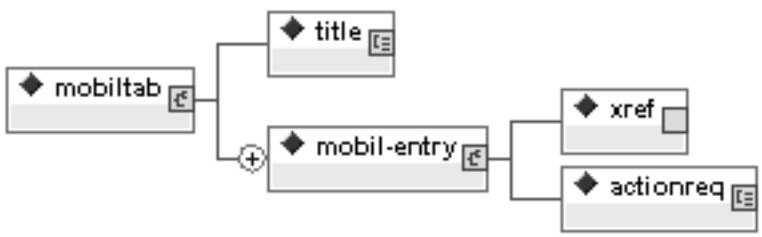

Figure 118 Mobilization table DTD hierarchy <mobiltab>.

a. DTD fragment for ***<mobiltab>***:

```
<!ELEMENT mobiltab (title, mobil-entry+)>
<!ATTLIST mobiltab
   %bodyatt;
   %secur;>
```

b. Attributes for ***<mobiltab>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

c. XML Document Instance Fragment for Depot Mobilization Requirements ***<mobiltab>***:

<mobiltab>

<title>

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```
Mobilization Requirements</title>
<mobil-entry>
<xref wpid="0088 00"/>
<actionreq>
Materials and Fabrication, step 6
Add "Depending on the urgency of requirements,
availability of materials, and fabrication lead time, provisions of this
work package may be relaxed. When that occurs, any practical method may
be used to inscribe or attatch the data to the equipment, i.e., decals."
</actionreq>
</mobil-entry>
<mobil-entry>
<xref wpid="Mxxx88-11-5840-383"/>
<actionreq>Cleaning, step 3
Add "Clean only to the extent necessary to
perform preshop analysis."</actionreq></mobil-entry>
<mobil-entry>
<xref wpid="Mxxx92-11-5840-38"/>
<actionreq>Cleaning, step 8
Add "Clean only to the extent necessary to
inspect components."</actionreq>
</mobil-entry>
<mobil-entry>
<xref wpid="Mxxx98-11-5840-38"/><actionreq>Painting, step 3 Add "Painted
surfaces will be treated for corrosion and scratches that expose bare
metal. Touch-up painting need not correlate in hue and gloss."</actionreq>
</mobil-entry>
<mobil-entry>
<xref wpid="Mxxx99-11-5840-38"/><actionreq>Delete.</actionreq>
</mobil-entry>
</mobiltab>
```

d. Example of a Stylesheet/FOSI Output for Depot Mobilization Requirements **<*mobiltab*>**:

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Table 1. Mobilization Requirements.

WORK PACKAGE	ACTION
0088 00	Materials and Fabrication, step 6 Add "Depending on the urgency of requirements, availability of materials, and fabrication lead time, provisions of this work package may be relaxed. When that occurs, any practical method may be used to inscribe or attatch the data to the equipment, i.e., decals."
0090 00	Cleaning, step 3 Add "Clean only to the extent necessary to perform preshop analysis."
0092 00	Cleaning, step 8 Add "Clean only to the extent necessary to inspect components."
0098 00	Painting, step 3 Add "Painted surfaces will be treated for corrosion and scratches that expose bare metal. Touch-up painting need not correlate in hue and gloss."
0099 00	Delete.

Figure 119 Example of a stylesheet/FOSI output for depot mobilization requirements <mobiltab>.

31.3.1.11.1.1.1 Mobilization requirements entry ***<mobil-entry>***. The element ***<mobil-entry>*** is an element that wraps an entry in the mobilization requirements table. It contains a required cross-reference (***<xref>*** see paragraph 34.4.1.3.6) and an action requirement (***<actionreq>*** see paragraph 31.3.1.5.1.22.1.3).

a. DTD fragment for ***<mobil-entry>***:

```
<!ELEMENT mobil-entry (xref, actionreq)>
<!ATTLIST mobiltab
   %bodyatt;
   %secur;>
```

31.3.1.12 Quality assurance requirements work package ***<qawp>***. 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>*** see paragraph 34.4.5), followed by initial setup information (***<wpinfo>*** see paragraph 34.4.6), a responsibility statement (***<responsibility>*** see paragraph 34.4.1.5.1), an definition statement (***<def>*** see paragraph 34.4.1.2.3.1.2), 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>***. The generated text for the element work package title for ***<qawp>*** is **"Quality Assurance Requirements"**. **DMWR/NMWR only**.

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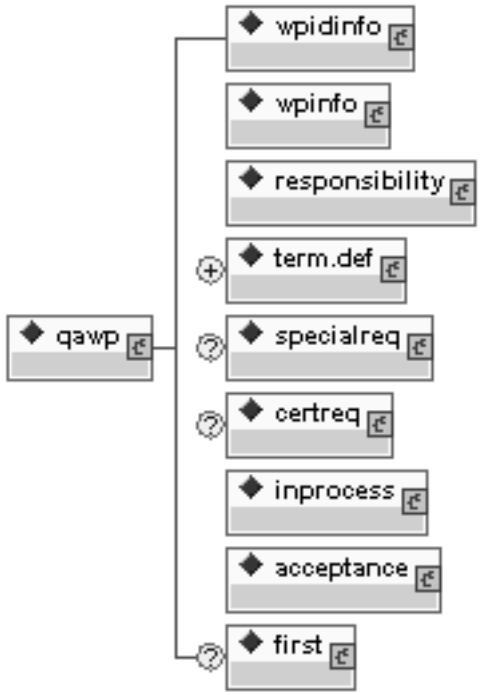

Figure 120 Quality assurance requirements work package DTD hierarchy <qawp>.

a. DTD fragment for ***<qawp>***:

```
<!ELEMENT qawp (wpidinfo, wpinfo, responsibility, term.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 paragraph 34.5.9) .

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.12.1 Responsibility statement ***<responsibility>***. The element ***<responsibility>*** is used for the responsibility statement that defines the responsibilities of the depot/contractor. The element ***<responsibility>*** contains a general text paragraph (***<para>*** see paragraph 34.4.1.5.3). The paragraph(s) may be entered using an entity

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reference (see paragraph 36.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051.

a. DTD fragment for ***<responsibility>***:

```
<!ELEMENT responsibility (para)>
<!ATTLIST responsibility
   %bodyatt;
   %secur;>
```

b. Attributes for ***<responsibility>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.12.2 Special requirements ***<specialreq>***. 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 34.3.10).

a. DTD fragment for ***<specialreq>***:

```
<!ELEMENT specialreq (%titldtext;)>
<!ATTLIST specialreq
   %bodyatt;
   %secur;>
```

b. Attributes for ***<specialreq>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.12.3 Certification requirements ***<certreq>***. 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 34.3.10).

a. DTD fragment for ***<certreq>***:

```
<!ELEMENT certreq (%titldtext;)>
<!ATTLIST certreq
   %bodyatt;
   %secur;>
```

b. Attributes for ***<certreq>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.12.4 In-Process inspections ***<inprocess>***. 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 paragraph 34.4.1.5.3) . The paragraph(s) may be entered using an entity reference (see paragraph 36.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051.

a. DTD fragment for ***<inprocess>***:

```
<!ELEMENT inprocess (para)>
<!ATTLIST inprocess
   %bodyatt;
   %secur;>
```

b. Attributes for ***<inprocess>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.12.5 Acceptance inspections ***<acceptance>***. The element ***<acceptance>*** is used for a statement that defines the method used for acceptance inspection. The element ***<acceptance>*** contains a paragraph (***<para>***

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see paragraph 34.4.1.5.3). The paragraph(s) may be entered using an entity reference (see paragraph 36.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051.

a. DTD fragment for ***<acceptance>***:

```
<!ELEMENT acceptance (para)>
<!ATTLIST acceptance
   %bodyatt;
   %secur;>
```

b. Attributes for ***<acceptance>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.12.6 First article inspection ***<first>***. 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 34.3.10).

a. DTD fragment for ***<first>***:

```
<!ELEMENT first (%titldtext;)>
<!ATTLIST first
   %bodyatt;
   %secur;>
```

b. Attributes for ***<first>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.13 Illustrated list of manufactured items work package ***<manuwp>***. 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 paragraph 34.4.5) followed by initial setup information (***<wpinfo>*** see paragraph 34.4.6) , an introductory section (***<intro>*** see paragraph 34.4.4.12), a required index of the manufactured items ***<manuindx>*** see paragraph 31.3.1.13.1), illustration(s) (***<graphic>*** see paragraph 34.4.3.1.2) followed by either an optional subtitle (***<subtitle>*** see paragraph 34.4.1.5.2) with a general paragraphr and/or a procedure or note. One or more part description ***<partdesc>*** and materials/parts (***<mtrlpart>*** see paragraph 34.4.6.1.3) are required proceed the graphics. The generated text for the element work package title for ***<manuwp>*** is **"Illustrated List of Manufactured Items"**. **Unit level and above technical equipment manuals only**.

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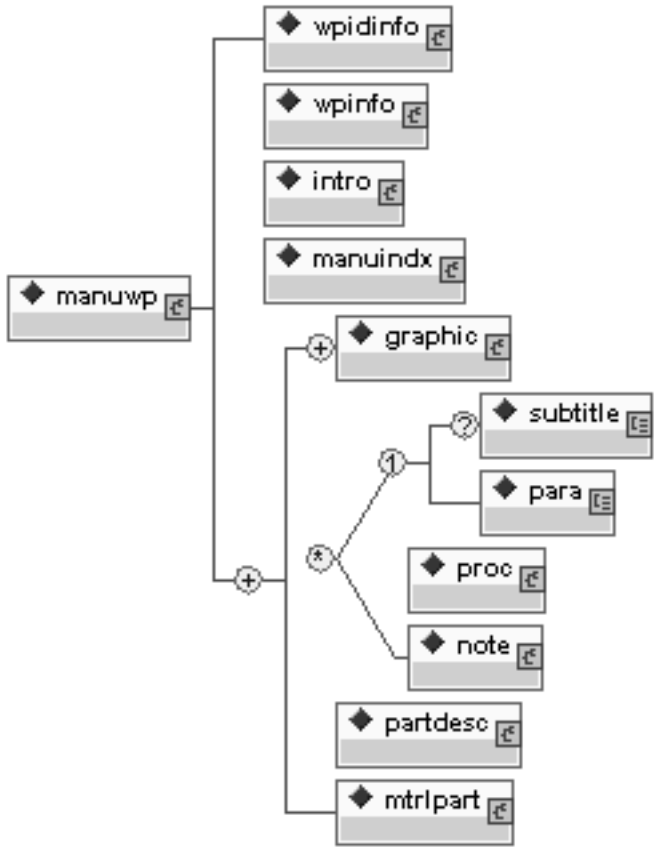

Figure 121 Illustrated list of manufactured items work package DTD hierarchy <manuwp>.

a. DTD fragment for ***<manuwp>***:

```
<!ELEMENT manuwp (wpidinfo, wpinfo, intro, manuindx, (graphic+,
 ((subtitle?, para) | proc | note)*, partdesc, mtrlpart)+)>
<!ATTLIST manuwp
   wpno   ID  #REQUIRED
   %tracking;
   %wprsrc-vals;
   %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 paragraph 34.5.9) .

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

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(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.13.1 Illustrated list of manufactured items index ***<manuindx>***. 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>*** see paragraph 31.3.1.13.1.1) followed by one or more figure number reference(s) (***<figno>*** see paragraph 31.3.1.13.1.2) for each item.

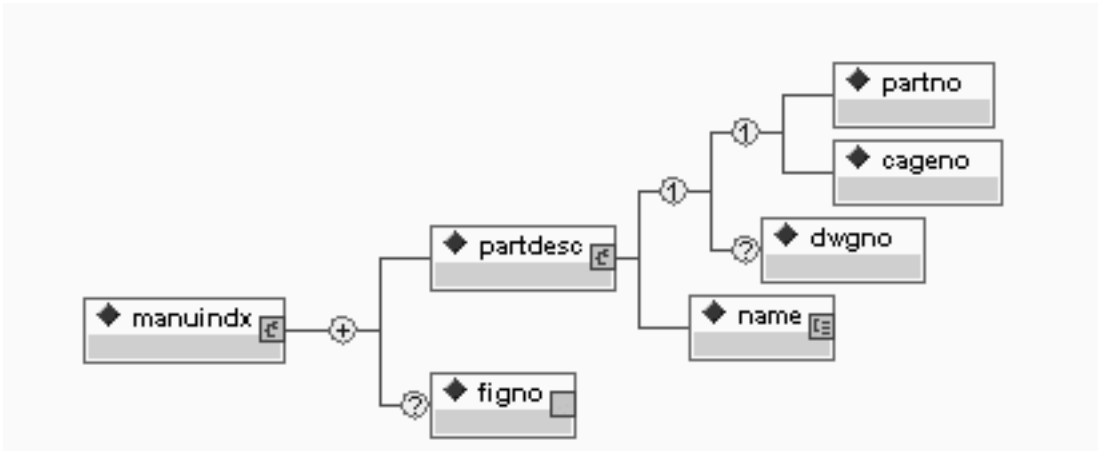

Figure 122 Illustrated list of manufactured items index DTD hierarchy <manuindx>.

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 paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.13.1.1 Part description ***<partdesc>***. The element ***<partdesc>*** contains the manufactured part description which includes the part number (***<partno>*** see paragraph 34.4.4.17), and the CAGE code (***<cageno>*** see paragraph 34.4.4.2) followed by an optional \drawing number (***<dwgno>*** see paragraph 34.4.4.7) and the required name of the item (***<name>*** see paragraph 34.4.4.15).

a. DTD fragment for ***<partdesc>***:

```
<!ELEMENT partdesc (((partno, cageno), dwgno?), name)>
<!ATTLIST partdesc
   %bodyatt;
   %secur;>
```

b. Attributes for ***<partdesc>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.13.1.2 Figure number ***<figno>***. The element ***<figno>*** contains the reference to the applicable figure. The reference figure number is entered thru the idref of the **figno**.

a. DTD fragment for ***<figno>***

```
<!ELEMENT figno EMPTY>
<!ATTLIST figno
    idref IDREF #REQUIRED>
```

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b. Attributes for ***<figno>***:

(1) **IDREF** - References the identifier of the figure bearing the figure number.

31.3.1.14 Torque limits work package ***<torquewp>***. 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 paragraph 34.4.5), followed by an introductory section (***<intro>*** see paragraph 34.4.4.12) and torque values (***<torqueval>*** see paragraph 31.3.1.14.1). The generated text for the element work package title for ***<torquewp>*** is **"Torque Limits"**. **Unit level and above technical equipment manuals only**.

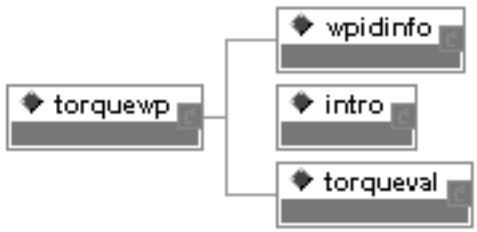

Figure 123 Torque limits work package DTD hierarchy <torquewp>.

a. DTD fragment for ***<torquewp>***:

```
<!ELEMENT torquewp (wpidinfo, 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.

(2) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.14.1 Torque values ***<torqueval>***. 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 paragraph 34.4.1.5.1) followed by the parameter entity ***%p;*** paragraphs (***<para>*** see paragraph 34.4.1.5.3) and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2) and/or procedural text (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<torqueval>***:

```
<!ELEMENT torqueval (title?, (%p; | proc)+)>
<!ATTLIST torqueval
   %bodyatt;
```

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```
%secur;>
```

b. Attributes for ***<torqueval>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.15 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 paragraph 34.4.5), followed by initial setup information (***<wpinfo>*** see paragraph 34.4.6), introductory section (***<intro>*** see paragraph 34.4.4.12), a security classification notice (***<security>*** see paragraph 31.3.1.15.1), inventoriable items (***<inventoriable>*** see paragraph 31.3.1.15.2), and periods of inventory (***<prdinv>*** see paragraph 31.3.1.15.3). The generated text for the element work package title for ***<inventorywp>*** is **"Aircraft Inventory Master Guide"**.

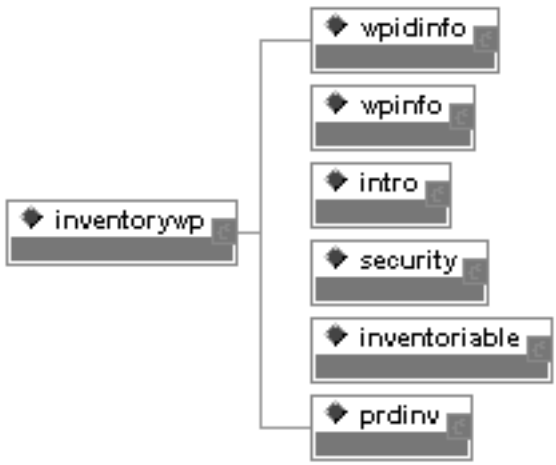

Figure 124 Inventory work package DTD hierarchy <inventorywp>.

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>***:

(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 paragraph 34.5.9) .

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

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(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.15.1 Security statement ***<security>***. 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 34.3.10).

a. DTD fragment for ***<security>***:

```
<!ELEMENT security (%titldtext;)>
<!ATTLIST security
   %bodyatt;
   %secur;>
```

b. Attributes for ***<security>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.15.2 Inventoriable ***<inventoriable>***. 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 34.3.10).

a. DTD fragment for ***<inventoriable>***:

```
<!ELEMENT inventoriable (%titldtext;)>
<!ATTLIST inventoriable
   %bodyatt;
   %secur;>
```

b. Attributes for ***<inventoriable>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.15.3 Periods of inventory ***<prdinv>***. 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 34.3.10). The paragraph(s) may be entered using an entity reference (see paragraph 36.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051.

a. DTD fragment for ***<prdinv>***:

```
<!ELEMENT prdinv (%titldtext;)>
<!ATTLIST prdinv
   %bodyatt;
   %secur;>
```

b. Attributes for ***<prdinv>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.16 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 paragraph 34.4.5), followed by initial setup information (***<wpinfo>*** see paragraph 34.4.6), a general information section (***<geninfo>*** see paragraph 34.4.4.10), and the types of aircraft storage (***<flyable>*** see paragraph 31.3.1.16.1), (***<short>*** see paragraph 31.3.1.16.2) and (***<intermediate>*** see paragraph 31.3.1.16.3). The generated text for the element work package title for ***<storagewp>*** is **"Storage of Aircraft"**. **Aircraft only**.

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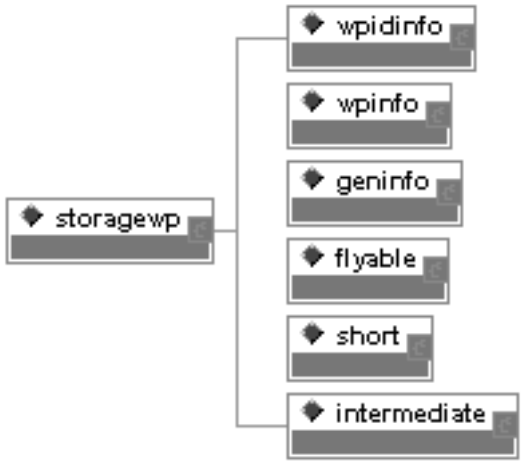

Figure 125 Storage of aircraft work package DTD hierarchy <storagewp>.

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 paragraph 34.5.9) .

(3) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(4) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.16.1 Flyable storage ***<flyable>***. The element ***<flyable>*** is used for procedures for flyable storage of aircraft. The element ***<flyable>*** contains an optional title (***<title>*** see paragraph 34.4.1.5.1), followed by one or more groupings of an optional subtitle ***<subtitle>*** and the parameter entity ***%p;*** paragraphs (***<para>*** see paragraph 34.4.1.5.3) and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2) and/or procedure(s) (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<flyable>*** and ***<short>***:

```
<!ELEMENT (flyable |
   short) (title?, ((subtitle?, (%p;)) | proc)+)+>
<!ATTLIST (flyable |
   short)
    %hcp.esd;
    %bodyatt;
    %secur;>
```

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b. Attributes for ***<flyable>*** and ***<short>***:
   (1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .
   (2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
   (3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.16.2 Short storage ***<short>***. The element ***<short>*** is used for criteria for short length storage of aircraft. The element ***<short>*** contains an optional title (***<title>*** see paragraph 34.4.1.5.1), followed by either paragraph(s) (***<para>*** see paragraph 34.4.1.5.3), paragraph(s) with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2) and/or procedure(s) (***<proc>*** see paragraph 34.4.1.8.1) .

a. The DTD fragment of ***<short>***: (See paragraph a.)
b. The attributes of ***<short>***: (See paragraph b.)

31.3.1.16.3 Intermediate Storage ***<intermediate>***. The element ***<intermediate>*** is used for criteria for intermediate-length storage of aircraft. The element ***<intermediate>*** contains an optional title (***<title>*** see paragraph 34.4.1.5.1) followed by either paragraph(s) (***<para>*** see paragraph 34.4.1.5.3), paragraph(s) with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2) and/or procedure(s) (***<proc>*** see paragraph 34.4.1.8.1) .

a. DTD fragment for ***<intermediate>***:

```
<!ELEMENT (intermediate (title?, (%p; | proc)+)+>
<!ATTLIST (intermediate)
    %hcp.esd;
    %bodyatt;
    %secur;>
```

b. Attributes for ***<intermediate>***:
   (1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .
   (2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
   (3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.17 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 paragraph 34.4.5), followed by initial setup information (***<wpinfo>*** see paragraph 34.4.6), a general information section (***<geninfo>*** see paragraph 34.4.4.10) , a form chart (***<formchart>*** see paragraph 31.3.1.17.1) and weight instructions (***<weightinst>*** see paragraph 31.3.1.17.2) are intended to be used. The generated text for the element work package title for ***<wtloadwp>*** is **"Weighing and Loading"**.

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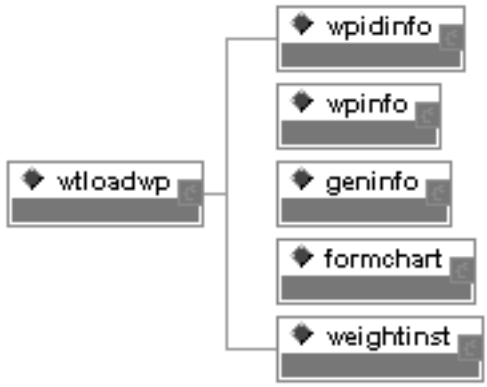

Figure 126 Weighing and loading work package DTD hierarchy <wtloadwp>.

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 paragraph 34.5.9) .

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.17.1 Form chart ***<formchart>***. 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 (Basic Weight 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 34.3.10), and/or procedure(s) (***<proc>*** see paragraph 34.4.1.8.1), and/or figure(s) (***<figure>*** see paragraph 34.4.3.1).

a. DTD fragment for ***<formchart>***:

```
<!ELEMENT formchart (proc | %titldtext; | figure)+>
<!ATTLIST formchart
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<formchart>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

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(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.17.2 Weighing instructions ***<weightinst>***. 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>*** see paragraph 31.3.1.17.2.1) followed by the weighing equipment instructions ***<weighteqp>***.

a. DTD fragment for ***<weightinst>***:

```
<!ELEMENT weightinst (prelim, weighteqp)>
<!ATTLIST weightinst
   %bodyatt;
   %secur;>
```

b. Attributes for ***<weightinst>***:
(1) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.17.2.1 Preliminary weighing instructions ***<prelim>***. 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 34.3.10).

a. DTD fragment for ***<prelim>***:

```
<!ELEMENT prelim (%titldtext;)>
<!ATTLIST prelim
   %bodyatt;
   %secur;>
```

b. Attributes for ***<prelim>***:
(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.17.2.2 Weighing equipment ***<weighteqp>***. 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 34.3.10).

a. DTD fragment for ***<weighteqp>***:

```
<!ELEMENT weighteqp (%titldtext;)>
<!ATTLIST weighteqp
   %bodyatt;
   %secur;>
```

b. Attributes for ***<weighteqp>***:
(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.18 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 paragraph 34.4.5), followed by initial setup information (***<wpinfo>*** see paragraph 34.4.6) an introductory section (***<intro>*** see paragraph 34.4.4.12), a wire identification explanation (***<wireid>*** see paragraph 31.3.1.18.1), an abbreviations used list (***<abbrev>*** see paragraph 31.3.1.18.2), and wiring diagrams (***<wiringdiag>*** see paragraph 31.3.1.18.3). The generated text for the element work package title for ***<wiringwp>*** is **"Wiring Diagrams"**. **Unit level or above technical equipment manuals.**

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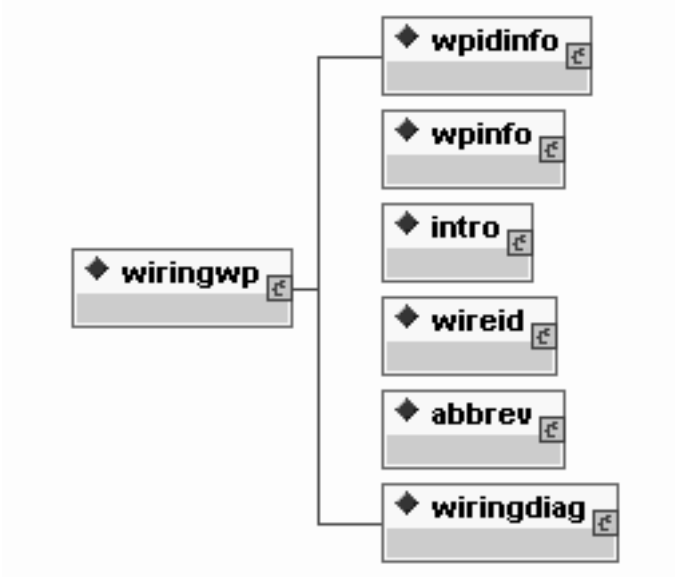

Figure 127 Wiring diagrams work package DTD hierarchy <wiringwp>.

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 paragraph 34.5.11) .

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.18.1 Wire identification ***<wireid>***. 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 34.3.10).

a. DTD fragment for ***<wireid>***:

```
<!ELEMENT wireid (%titldtext;)>
<!ATTLIST wireid
   %bodyatt;
   %secur;>
```

b. Attributes for ***<wireid>***:

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(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.18.2 Abbreviations ***<abbrev>***. 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 paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 34.3.10).

a. DTD fragment for ***<abbrev>***:

```
<!ELEMENT abbrev (%titldtext;)>
<!ATTLIST abbrev
   %bodyatt;
   %secur;>
```

b. Attributes for ***<abbrev>***:
(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.18.3 Wiring diagrams ***<wiringdiag>***. 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 paragraph 34.4.3.1).

a. DTD fragment for ***<wiringdiag>***:

```
<!ELEMENT wiringdiag (figure)+)>
<!ATTLIST wiringdiag
   %bodyatt;
   %secur;>
```

b. Attributes for ***<wiringdiag>***:
(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.19 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: identification information required for a work package (***<wpidinfo>*** see paragraph 34.4.5), a work package initial setup (***<wpinfo>*** see paragraph 34.4.6), alert statements (***%alert;*** see paragraph 34.3.1), an optional introductory section (***<geninfo>*** see paragraph 34.4.4.10) followed by either ammunition markings (***<ammo.markings>*** see paragraph 31.3.1.1.10) or ammunition defect (***<ammo.defect>*** see paragraph 31.3.1.1.11) or ammunition handling (***<ammo.handling>*** see paragraph 31.3.1.1.9) and/or a service (***<service>*** see paragraph 31.3.1.19.1). The generated text for the element work package title for ***<ammowp>*** is **"Ammunition Maintenance"**.

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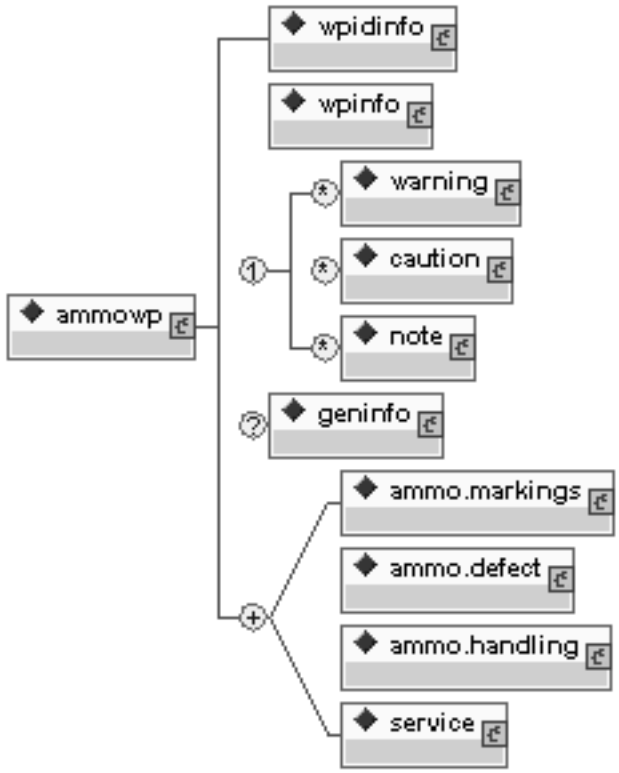

Figure 128 Ammunition maintenance work package DTD hierarchy <ammowp>.

a. DTD fragment for ***<ammowp>***:

```
<!ELEMENT ammowp (wpidinfo, wpinfo?, %alert;, geninfo?,
 (ammo.markings | ammo.defect | ammo.handling | service)+)>
<!ATTLIST ammowp
   wpno ID        #REQUIRED
   %tracking;
   %wprsrc-vals;
   %wpbodyatt;
   %secur;>
```

b. Attributes for ***<ammowp>***:

(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 paragraph 34.5.9) .

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

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31.3.1.19.1 Service ***<service>***. 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 the parameter entity ***%p;*** paragraphs (***<para>*** see paragraph 34.4.1.5.3) and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2) and/or procedural text (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<service>***:

```
<!ELEMENT service ((subtitle?, (%p;)) | proc)+>
<!ATTLIST service
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<service>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.20 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: (***<wpidinfo>*** see paragraph 34.4.5), a work package initial setup (***<wpinfo>*** see paragraph 34.4.6), alert statements (***%alert;*** see paragraph 34.3.1), an optional introductory section (***<geninfo>*** see paragraph 34.4.4.10) followed by either ammunition markings (***<ammo.markings>*** see paragraph 31.3.1.1.10) or ammunition handling (***<ammo.handling>*** see paragraph 31.3.1.1.9) and/or ammunition type (***<ammotype>*** see paragraph 31.3.1.20.1). The generated text for the element work package title for ***<ammo.markingwp>*** is **"Ammunition Marking Information"**.

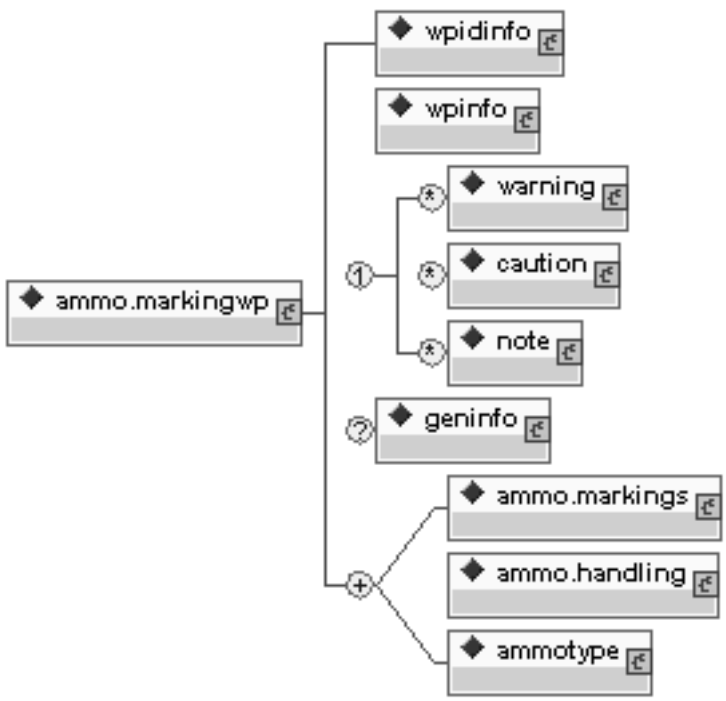

Figure 129 Ammunition markings work package DTD hierarchy <ammo.markingwp>.

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a. DTD fragment for ***<ammo.markingwp>***:

```
<!ELEMENT ammo.markingwp (wpidinfo, wpinfo?, %alert;, geninfo?,
 (ammo.markings | ammo.handling |ammo.type)+)>
<!ATTLIST ammo.markingwp
   wpno ID      #REQUIRED
   %hcp.esd;
   %tracking;
   %wprsrc-vals;
   %wpbodyatt;
   %secur;>
```

b. Attributes for ***<ammo.markingwp>***:

(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) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(4) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

(5) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(6) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.20.1 Ammunition type ***<ammotype>***. The element ***<ammotype>*** contains the name and information pertaining to a type of ammunition. After the name (***<name>*** see paragraph34.4.4.15), the information is entered using paragraphs of parameter entity paragraph type (***%p;*** see paragraph34.3.5).

a. DTD fragment for ***<ammotype>***:

```
<!ELEMENT ammotype (name, (%p;)+)>
<!ATTLIST ammotype
   %bodyatt;
   %secur;>
```

b. Attributes for ***<ammotype>***:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.7).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.21 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: identification information required for a work package (***<wpidinfo>*** see paragraph 34.4.5), a work package initial setup (***<wpinfo>*** see paragraph 34.4.6), alert statements (***%alert;*** see paragraph 34.3.1), an optional introductory section (***<geninfo>*** see paragraph 34.4.4.10) followed by either or ammunition handling (***<ammo.handling>*** see paragraph 31.3.1.1.9) and/or ammunition type (***<ammotype>*** see paragraph 31.3.1.20.1). The generated text for the element work package title for ***<natowp>*** is **"Foreign Ammunition (NATO)"**.

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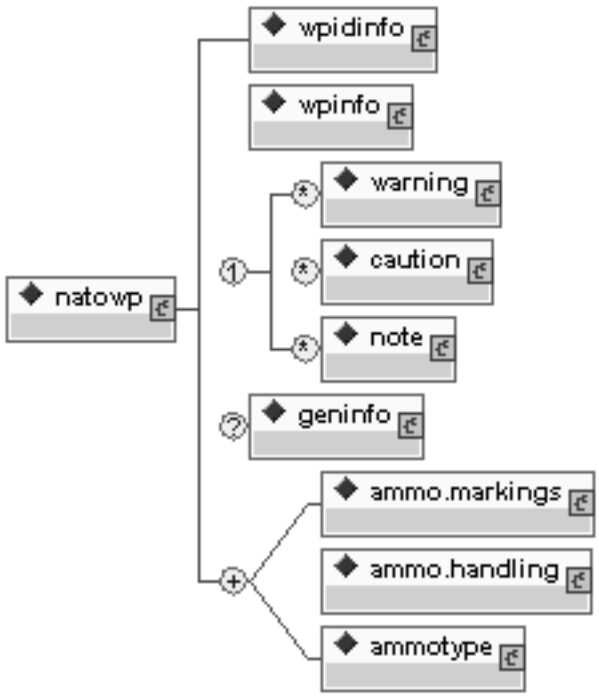

Figure 130 Foreign Ammunition (NATO) marking information work package DTD hierarchy <natowp>.

a. DTD fragment for ***<natowp>***:

```
<!ELEMENT natowp (wpidinfo, wpinfo?, %alert;, geninfo?,
 (ammo.markings | ammo.handling | ammo.type)+)>
<!ATTLIST natowp    wpno ID       #REQUIRED
   %hcp.esd;
   %tracking;
   %wprsrc-vals;
   %wpbodyatt;
   %secur;>
```

b. Attributes for ***<natowp>***:

(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) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(4) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

(5) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(6) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.22 Auxiliary equipment work package ***<auxeqpwp>***. 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: identification information

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required for a work package (***<wpidinfo>*** see paragraph 34.4.5), a work package initial setup (***<wpinfo>*** see paragraph 34.4.6), alert statements (***%alert;*** see paragraph 34.3.1), an optional introductory section (***<geninfo>*** see paragraph 34.4.4.10) followed by either maintenance task(s) (***<maintsk>*** or the parameter entity paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 34.3.10). The generated text for the element work package title for ***<auxeqpwp>*** is **"Auxiliary Equipment Maintenance"**.

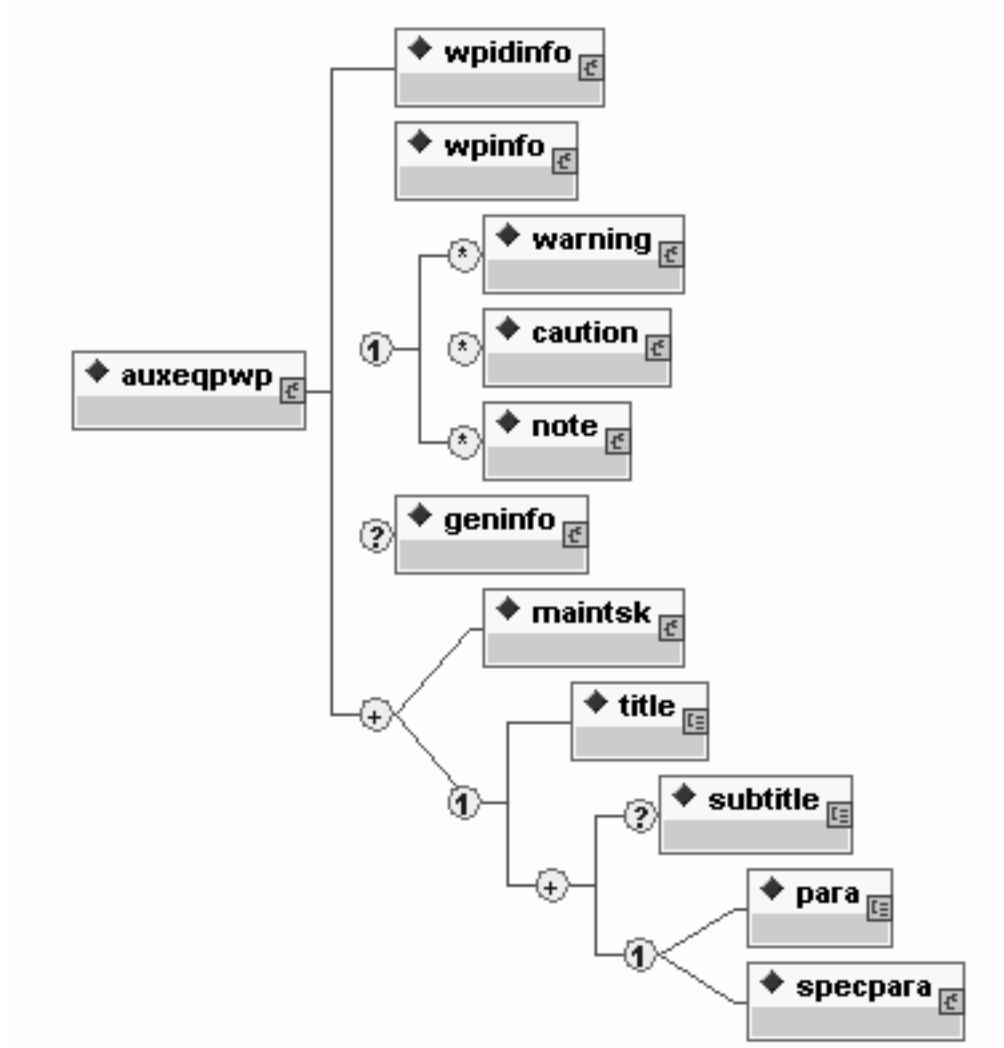

Figure 131 Auxiliary equipment work package DTD hierarchy <auxeqpwp>.

a. DTD fragment for ***<auxeqpwp>***:

```
<!ELEMENT auxeqpwp (wpidinfo, wpinfo, %alert;, geninfo?, (maintsk |%titldtext;)+)>
<!ATTLIST auxeqpwp
   wpno   ID      #REQUIRED
   %tracking;
   %wprsrc-vals;
   %wpbodyatt;
   %secur;>
```

b. Attributes for ***<auxeqpwp>***:

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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 paragraph 34.5.9) .
(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .
(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.23 Preventive maintenance service inspection work package ***<pms-inspecwp>***. The element ***<pms-inspecwp>*** contains all data regarding preventive maintenance inspection for aircraft preventive maintenance services (PMS). The preventive maintenance service inspection work package is subdivided into the following elements and content requirements: identification information required for a work package (***<wpidinfo>*** see paragraph 34.4.5), a work package initial setup (***<wpinfo>*** see paragraph 34.4.6), followed by one or more preventive maintenance services form (***<pms-form>*** see paragraph 31.3.1.23.1). The generated text for the element work package title for ***<pms-inspecwp>*** is **"Preventive Maintenance Services Inspection"**. **This work package is for PMS only.**

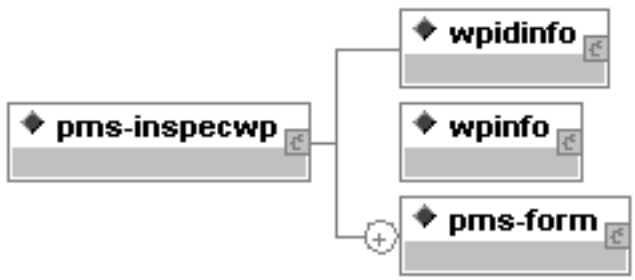

Figure 132 Preventive maintenance service inspection work package DTD hierarchy <pms-inspecwp>.

a. DTD fragment ***<pms-inspecwp>***:

```
<!ELEMENT pms-inspecwp (wpidinfo, wpinfo, (pms-form)+)>
<!ATTLIST pms-inspecwp
   wpno ID        #REQUIRED
   %tracking;
   %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 paragraph 34.5.9) .
(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

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(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.23.1 Preventive Maintenance Services Form ***<pms-form>***. 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>*** see paragraph31.3.1.23.1.1), a component assembly (***<compnt-assem>*** see paragraph 31.3.1.1.3.2.1.2.1), and one or more PMS items (***<pms-item>*** see paragraph 31.3.1.23.1.2).

a. DTD fragment ***<pms-form>***:

```
<!ELEMENT pms-form (perioddef+, compnt-assem, pms-item+)>
<!ATTLIST pms-form
   power (on | off) #IMPLIED
   avionics (0 | 1) #IMPLIED
   lube  (0 | 1) #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.

31.3.1.23.1.1 Period definitions ***<perioddef>***. The period definitions ***<perioddef>*** are used when the format of the ***<pms-form>*** see paragraph 31.3.1.23.1) 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 EMPTY>
<!ATTLIST perioddef
    abbrev CDATA #IMPLIED
    colno CDATA #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.

31.3.1.23.1.2 Preventive maintenance inspection item ***<pms-item>***. 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 paragraph 31.3.1.23.1.2.1), an optional location (***<location>*** see paragraph 31.3.1.1.3.2.2.2) , an item-condition (***<item-condition>*** see paragraph 31.3.1.23.1.2.2) and one or more inspection periods (***<period>*** see paragraph 31.3.1.23.1.2.3).

a. DTD fragment ***<pms-item>***:

```
<!ELEMENT pms-item (seqno, location?, item-condition, period+)>
<!ATTLIST pms-item
   %bodyatt;
   %secur;>
```

b. Attributes for ***<pms-item>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.23.1.2.1 Sequence number ***<seqno>***. The element ***<seqno>*** identifies the sequence number for the procedure to perform.

a. DTD fragment for ***<seqno>***:

```
<!ELEMENT seqno %text;)*>
```

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31.3.1.23.1.2.2 Item condition ***<item-condition>***. 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>*** see paragraph 31.3.1.23.1.2.2.1).

a. DTD fragment for ***<item-condition>***:

```
<!ELEMENT item-condition (pms-proc)>
<!ATTLIST item-condition
   safeflght (0 | 1) #IMPLIED>
```

b. Attributes for ***<item-condition>***:

(1) **SAFEFLGHT** - Specifies whether or not the condition is of safe flight.

31.3.1.23.1.2.2.1 Preventive maintenance services procedures ***<pms-proc>***. The element ***<pms-proc>*** contains an optional title (***<title>*** see paragraph 34.4.1.5.1), followed by alert statements (***%alert;*** see paragraph 34.3.1), followed by either at least one paragraph (***<para>*** see paragraph 34.4.1.5.3) or at least one primary level step (***<step1>*** see paragraph 34.4.1.8.2).

a. DTD fragment for ***<pms-proc>***:

```
<!ELEMENT pms-proc (title?, (%alert;), (para+ | step1+))>
<!ATTLIST pms-proc
   safeflght  (0 | 1)  #IMPLIED>
```

b. Attributes for ***<pms-proc>***:

(1) **SAFEFLGHT** - Specifies whether or not the condition is of safe flight.

31.3.1.23.1.2.3 Period ***<period>***. The associated attribute **colno** of the element ***<period>*** is used to specify the inspection period identified in ***<perioddef>***.

a. DTD fragment for ***<period>***:

```
<!ELEMENT period EMPTY>
<!ATTLIST period
   colno CDATA #REQUIRED>
```

b. Attributes for ***<period>***:

(1) **COLNO** - Specifies the period column number to be marked.

31.3.1.24 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. The phased maintenance inspection checklist work package is subdivided into the following elements and content requirements: identification information required for a work package (***<wpidinfo>*** see paragraph 34.4.5), a work package initial setup (***<wpinfo>*** see paragraph 34.4.6), followed by one or more illustrations (***<figure>*** see paragraph 34.4.3.1), a note (***<note>*** see paragraph 34.4.1.1.5), a general inspection (***<geninspec>*** see paragraph 31.3.1.24.1), area inspection (***<areainspec>*** see paragraph 31.3.1.24.2), power-on-inspection (***<pwron-inspec>*** see paragraph 31.3.1.24.3) and (***<finalinspec>*** see paragraph 31.3.1.24.4). The generated text for the element work package title for ***<pmi-cklistwp>*** is **"Phased Maintenance Inspection"**. **Aircraft only.**

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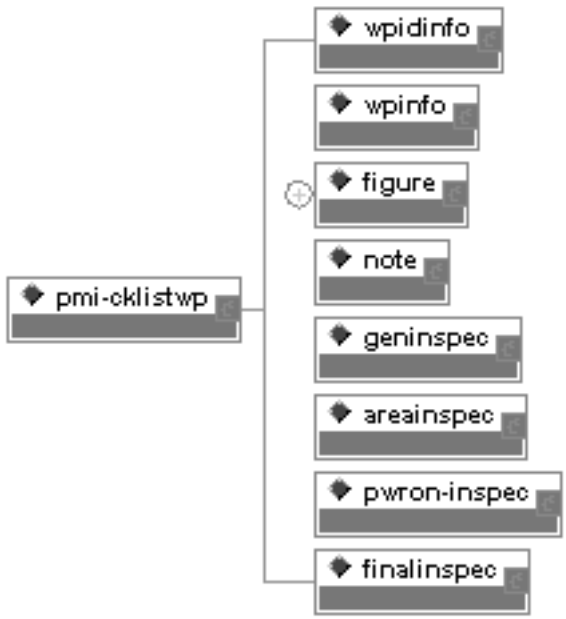

Figure 133 Phased maintenance inspection checklist work package DTD hierarchy <pmi-cklistwp>.

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 paragraph 34.5.9) .

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.24.1 General inspection ***<geninspec>***. The element ***<geninspec>*** contains the general inspection items specified by the procuring activity. This element contains a required title (***<title>*** see paragraph 34.4.1.5.1), an optional figure (***<figure>*** see paragraph 34.4.3.1), and the inspection formation (***<inspec-form>*** see paragraph 31.3.1.24.1.1).

a. DTD fragment for ***<geninspec>***, ***<areainspec>***, ***<pwron-inspec>***, and ***<finalinspec>***:

```
<!ELEMENT (geninspec |
```

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```
      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 paragraph 34.5.1).

(b) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.24.1.1 Inspection form ***<inspec-form>***. 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>*** see paragraph31.3.1.24.1.1.1) and one or more inspection items (***<inspec-item>*** see paragraph 31.3.1.24.1.1.2) are contained within the ***<inspec-form>***.

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 paragraph 34.5.1).

(b) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.24.1.1.1 Inspection items heading information ***<inspec-head>***. The element ***<inspec-head>*** contains the heading information for the PMI check list. The headings fall under (***<phaseno>*** see paragraph 31.3.1.24.1.1.1.1), (***<inspec-area>*** see paragraph 31.3.1.24.1.1.1.2), (***<serialno>*** see paragraph 30.3.3.1.1), (***<date>*** see paragraph 27.2.1.1.4.1.2), and (***<totalhrs>*** see paragraph 31.3.1.24.1.1.1.5).

a. DTD fragment for ***<inspec-head>***:

```
<!ELEMENT inspec-head (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 paragraph 34.5.1).

(b) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.24.1.1.1.1 Phase number ***<phaseno>***. The element ***<phaseno>*** contains the phase number of the inspection item (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<phaseno>***, ***<inspec-area>***, ***<requiremnt>***, ***<status>*** and ***<indent-fault>***:

```
<!ELEMENT (phaseno |
   inspec-area |
   requirement |
```

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```
   status |
   ident-fault ) (%text;)
<!ATTLIST (phaseno |
   inspec-area |
   totalhrs |
   requirement |
   status |
   identfault |
   initials)
    %bodyatt;
    %secur;>
```

b. Attributes for ***<phaseno>***, ***<inspec-area>***, ***<requiremnt>***, ***<status>*** and ***<indentfault>***:

(1)

(a) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(b) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.24.1.1.1.2 Inspection area name ***<inspec-area>***. The element ***<inspec-area>*** is used to enter the area of the inspection (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<inspec-area>***: (See paragraph 31.3.1.24.1.1.1.1) a.).

b. Attributes for ***<inspec-area>***: (See paragraph 31.3.1.24.1.1.1.1) .

The element ***<serialno>*** (see paragraph 30.3.3.1.1) is used to enter the aircraft tail serial number (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

The element ***<date>*** is used to enter the inspection date (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

31.3.1.24.1.1.1.5 Total number of hours ***<totalhrs>***. The element ***<totalhrs>*** is used to enter the total number of hours needed for the inspection. The data is entered using narrative text (#PCDATA) parsable characters.

a. DTD fragment for ***<totalhrs>***:

```
<!ELEMENT totalhrs (#PCDATA)>
<!ATTLIST totalhrs
   %bodyatt;
   %secur;>
```

b. Attributes for ***<totalhrs>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.24.1.1.2 Inspection items ***<inspec-item>***. The element ***<inspec-item>*** indicates an inspection item. Each item will indicate a new row. Each item will contain an inspection phase (***<inspecphase>*** see paragraph 31.3.1.24.1.1.2.1), requirement (***<requiremnt>*** see paragraph 31.3.1.24.1.1.2.2), status (***<status>*** see paragraph 31.3.1.24.1.1.2.3), fault identity (***<ident-fault>*** see paragraph 31.3.1.24.1.1.2.4), action required (***<actionreq>*** see paragraph 31.3.1.5.1.22.1.3) and inspector's initials (***<initials>*** see paragraph 31.3.1.24.1.1.2.6).

a. DTD fragment for ***<inspec-item>***:

```
<!ELEMENT inspec-item (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 paragraph 34.5.1).

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(b) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.24.1.1.2.1 Inspection Phase ***<inspecphase>***. The element ***<inspecphase>*** is used to enter the phase of the inspection (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<inspecphase>***:

```
<!ELEMENT inspecphase (%text;)>
<!ATTLIST inspecphase
   combat-inspec  (0 | 1 ) #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 paragraph 34.5.1).

(c) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

31.3.1.24.1.1.2.2 Requirements ***<requiremnt>***. The element ***<requiremnt>*** is used to enter the requirements for the inspection (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<requiremnt>***: (See paragraph 31.3.1.24.1.1.1.1 a.).

b. Attributes for ***<requiremnt>***: (See paragraph 31.3.1.24.1.1.1.1 b.).

31.3.1.24.1.1.2.3 Status ***<status>***. The element ***<status>*** is used to enter the status of the inspection (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<status>***: (See paragraph 31.3.1.24.1.1.1.1 a.)

b. Attributes for ***<status>***: (See paragraph 31.3.1.24.1.1.1.1 b.)

31.3.1.24.1.1.2.4 Fault and/or remarks ***<ident-fault>***. The element ***<ident-fault>*** is used to identify the fault (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<ident-fault>***: (See paragraph 31.3.1.24.1.1.1.1) a.)

b. Attributes for ***<ident-fault>***: (See paragraph 31.3.1.24.1.1.1.1)b.).

31.3.1.24.1.1.2.5 Action required ***<actionreq>***. The element ***<actionreq>*** is used to enter any actions required for the inspection (***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<actionreq>***: (see paragraph 31.3.1.5.1.22.1.3 a.)

b. Attributes for ***<actionreq>***: (see paragraph 31.3.1.5.1.22.1.3b.)

31.3.1.24.1.1.2.6 Initials ***<initials>***. The element ***<initials>*** of the person performing the inspection. The data is entered using narrative text (#PCDATA) parsable characters.

a. DTD fragment for ***<initials>***:

```
<!ELEMENT initials (#PCDATA)>
<!ATTLIST inspec-item
   %bodyatt;
   %secur;>
```

b. Attributes for ***<initials>***:

(1)

(a) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(b) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

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31.3.1.24.2 Area inspection ***<areainspec>***. The element ***<areainspec>*** contains inspection by area including all surfaces, materials, components and equipment. This element contains a required title (***<title>*** see paragraph 34.4.1.5.1), an optional figure (***<figure>*** see paragraph 34.4.3.1), and the inspection formation ***<inspec-form>*** see paragraph 31.3.1.24.1.1).

a. DTD fragment for ***<areainspec>***: (see paragraph 31.3.1.24.1 a.)
b. Attributes for ***<areainspec>***: (see paragraph 31.3.1.24.1 b.)

31.3.1.24.3 Power-on-inspection ***<pwron-inspec>***. The element ***<pwron-inspec>*** contains the aircraft power on inspection as specified by the procuring activity. This element contains a required title (***<title>*** see paragraph 34.4.1.5.1), an optional figure (***<figure>*** see paragraph 34.4.3.1), and the inspection formation ***<inspec-form>***.

a. DTD fragment for ***<pwron-inspec>***: (see paragraph 31.3.1.24.1 a.)
b. Attributes for ***<pwron-inspec>***: (see paragraph 31.3.1.24.1 b.)

31.3.1.24.4 Final inspection list ***<finalinspec>***. The element ***<finalinspec>*** contains the aircraft final inspection requirements as specified by the procuring activity. This element contains a required title (***<title>*** see paragraph 34.4.1.5.1), an optional figure (***<figure>*** see paragraph 34.4.3.1), and the inspection formation ***<inspec-form>***.

a. DTD fragment for ***<finalinspec>***: (see paragraph 31.3.1.24.1 a.)
b. Attributes for ***<finalinspec>***: (see paragraph 31.3.1.24.1 b.)

32 PARTS INFORMATION.

32.1 Scope. The following paragraphs give a description and use of the elements used in the MIL-STD-2361 Parts Information Chapter DTD.

32.2 Applicable documents. Refer to paragraph 2

32.3 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 paragraph 34.4.4.22), followed by introduction RPSTL work package (***<introwp>*** see paragraph 32.3.2), repair parts list work package(s) (***<plwp>*** see paragraph 32.3.3), special tools list work package(s) (***<stlwp>*** see paragraph 32.3.4), a NSN index work package (***<nsnindxwp>*** see paragraph 32.3.5), a part number index work package (***<pnindxwp>*** see paragraph 32.3.6), an optional reference designator index work package (***<refdesindxwp>*** see paragraph 32.3.7), or a parts information data base ***<pidb>***. The element consist of the following elements described below:

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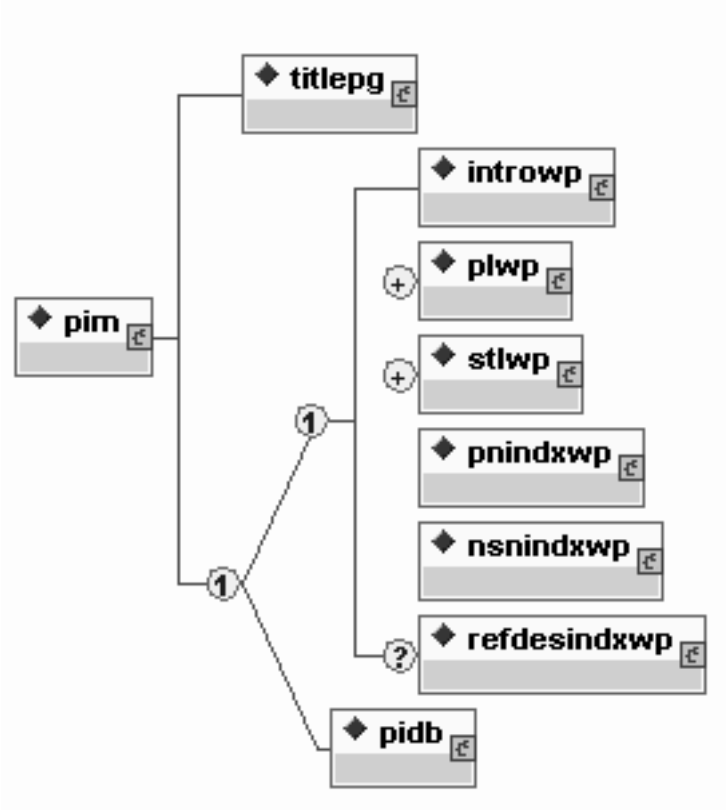

Figure 134 Parts information chapter DTD hierarchy <pim>.

a. DTD fragment for pim:

```
<!ELEMENT (titlepg, ((introwp, plwp+, stlwp+, pnindxwp, nsnindxwp,
 refdesindxwp?) | pidb))>
<!ATTLIST pim
    tmno    CDATA     #REQUIRED
    imctrlabel  CDATA     #IMPLIED
    %chapterlevel;
    dmwr-inclus (parts | parts-tools | none) #REQUIRED
   revno    CDATA     #REQUIRED
   chngno   CDATA     #REQUIRED
   date    CDATA     #IMPLIED
   pubno    CDATA     #IMPLIED
   %bodyatt;
    %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) "DEPOT" – Applies to depot maintenance level.

(b) "OPERATOR" – Applies to operator maintenance level.

(c) "GENSUP" – Applies to general support (GS) maintenance level.

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(d) "DIRSUP" – Applies to direct support (DS) maintenance level.
(e) "UNITLVL" – Applies to unit maintenance level.
(f) "INTER" – Applies to intermediate (DS/GS) maintenance level.
(g) "AVUM-AVIM" – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.
(h) "TMLVLS" – Applies to all maintenance levels.

(4) **%CHAPTERLEVEL;** - The maintenance level of the information chapter. Any of the attributes in the associated attribute set may be used with this element. Refer to %chapterlevel; see paragraph 34.5.5) for a complete description.
(5) **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.
(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) **PUBNO** - Specifies the technical manual publication number.
(10) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(11) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.1 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>***.

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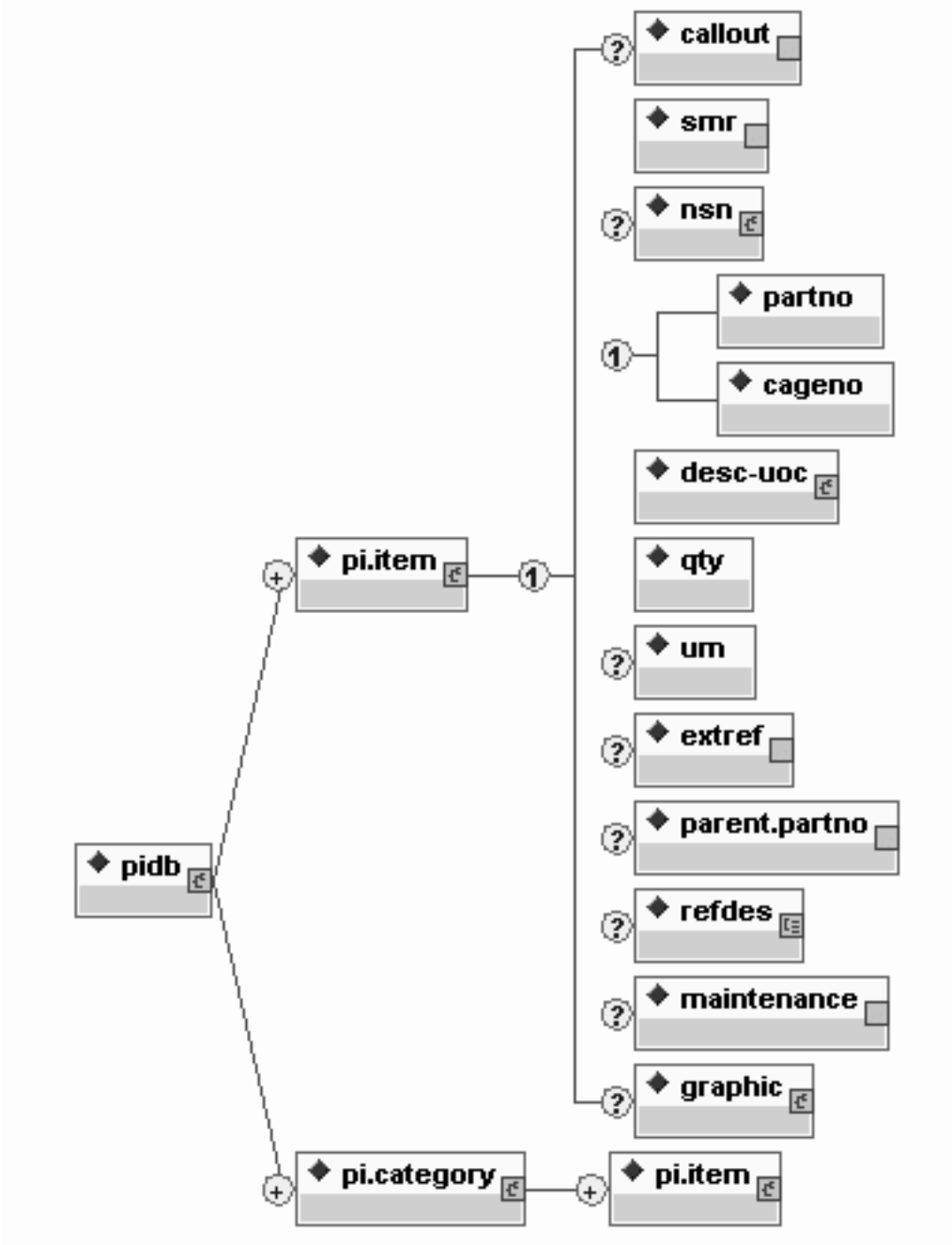

Figure 135 Parts information data base DTD hierarchy <pidb>.

a. DTD fragment for ***<pidb>***:

```
<!ELEMENT pidb (pi.item+ | pi.category+)>
```

32.3.1.1 Parts information name ***<pi.item>***. The element ***<pi.item>*** parts information name lists the part description in the parts information data base. The element ***<pi.item>*** contains the parameter entity parts list (***%partlist;*** (see paragraph 34.3.7) to enter the part description for the part list item).

a. DTD fragment for ***<pi.item>***:

```
<!ELEMENT pi.item (%partlist;)>
```

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```
<!ATTLIST pi.item
    hci   (0 | 1)     "0"
    esd  (0 | 1)   "0"
    fscap (0 | 1)   "0"
    mrp  (0 | 1)   "0"
    exp  (0 | 1)   "0"
    coei  (0 | 1)   "0"
    stool (0 | 1)   "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.

c. XML Document Instance Fragment for Parts Information Data Base ***<pidb>***

```
<pidb>
<pi.item hci="0" esd="0"><smr sourcecode="PA" maintcode="HZ"><" recovercode="Z">
<nsn>
<fsc>5310</fsc>
<niin>-00-167-0801</niin>
</nsn>
<partno>AN960C10</partno>
<cagec>38044</cagec>
<desc-uoc><name>washer,  flat</name>
<desc>washer,  flat</desc>
</desc-uoc>
<qty>72</qty>
</pi.item>
<pi.item hci="0" esd="0"><smr sourcecode="PA" maintcode="HZ"><" recovercode="Z">
<nsn>
<fsc>5120</fsc>
<niin>-00-114-5207</niin>
</nsn>
<partno>11655788-3</partno>
<cagec>81349</cagec>
<desc-uoc><name>socket  wrench</name>
<desc>socket  wrench,  1/2  inch-3/4  inch</desc>
</desc-uoc>
<qty>5</qty>
</pi.item>
<pi.item hci="0" esd="0"><smr sourcecode="PA" maintcode="HZ"><" recovercode="Z">
<nsn>
<fsc>5120</fsc>
<niin>-00-399-1157</niin>
</nsn>
<partno>2588756</partno>
<cagec>81349</cagec>
<desc-uoc><name>torque  wrench</name>
<desc>torque  wrench,  1/2  inch  drive</desc>
</desc-uoc>
<qty>22</qty>
```

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</pi.item>
</pidb>

d. Example of a Stylesheet/FOSI Output for Parts Information Data Base ***<pidb>***

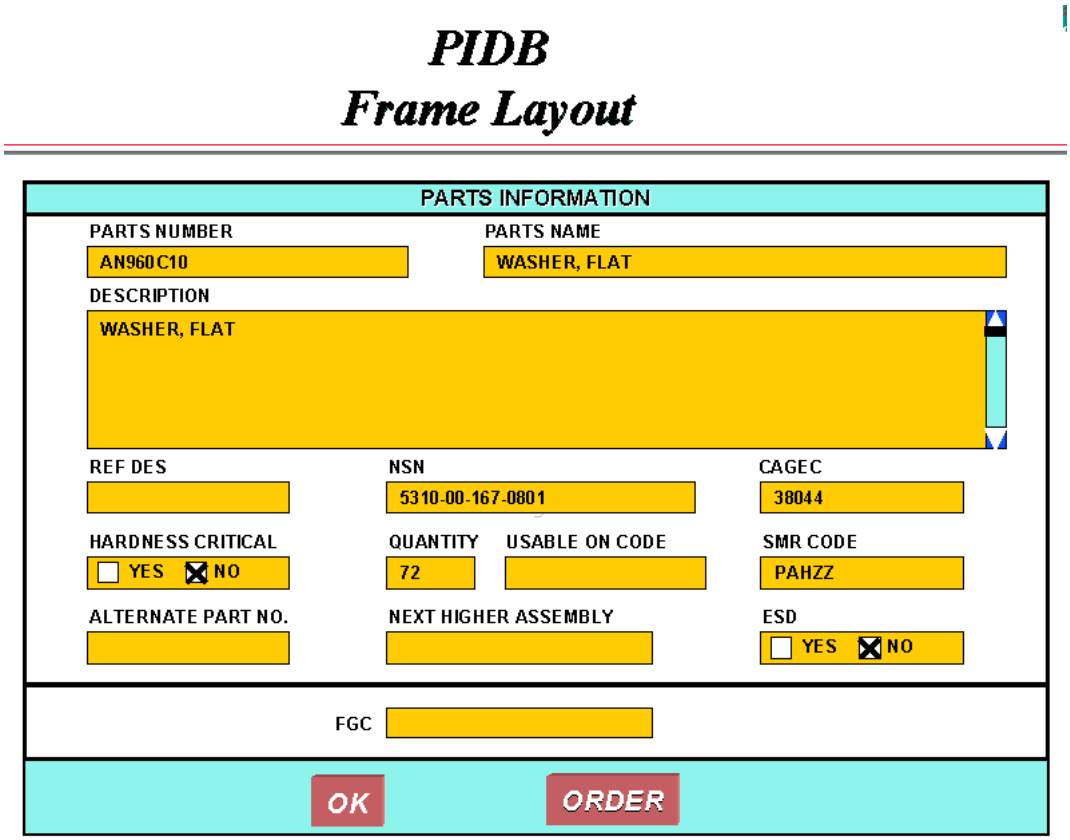

Figure 136 Example of a stylesheet/FOSI output for parts information data base <pidb>.

32.3.1.1.1 Next higher assembly ***<parent.partno>***. 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 EMPTY>
 <!ATTLIST parent.partno
    parent IDREF #REQUIRED>
```

b. Attributes for ***<parent.partno>***:

(1) **PARENT** - References the parent of the part ***<pi.item>***.

32.3.1.2 Parts information category ***<pi.category>***. The element ***<pi.category>*** parts information 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 ***<pi.item>*** may be entered for that category.

a. DTD fragment for ***<pi.category>***:

```
<!ELEMENT pi.category pi.item+>
<!ATTLIST pi.category
   catg-name CDATA #REQUIRED
   %bodyatt;
   %secur;>
```

b. Attributes for ***<pi.category>***:

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(1) **CATG-NAME** - Specifies the category name which is the heading that will appear in the table.
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.2 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 34.4.5), followed by either introductory paragraphs of text that may be grouped into sections or subsections (***%titldtext;*** see 34.3.10) and/ or how to use this chapter (***<howtouse>*** see paragraph 27.2.1.1.7). Index reference markers (***<indxref>*** see paragraph 34.4.1.3.4) may precede the introductory paragraphs of text ***%titldtext;*** and the how to use ***<howtouse>***. The generated text for ***<introwp>*** the element work package title for is **"Introduction".**

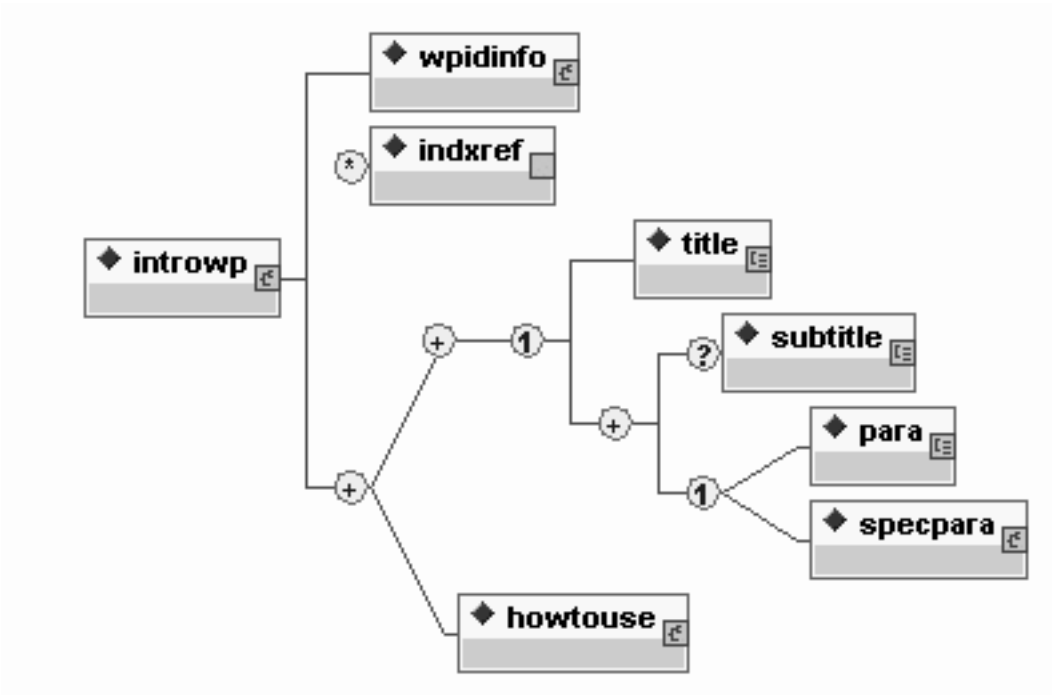

Figure 137 Introductory work package DTD hierarchy <introwp>.

a. DTD fragment for ***<introwp>***:

```
<!ELEMENT introwp (wpidinfo, indxref*, ((%titldtext;)+ | howtouse)+))>
 <!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.

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(2) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .
(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .
(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.3 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 paragraph 34.4.5), may have one or more index marker reference(s) ***<indxref>*** see paragraph 34.4.1.3.4) may have a repair parts list title ***<pltitle>*** and a required repair parts list(s) ***<pl>***.

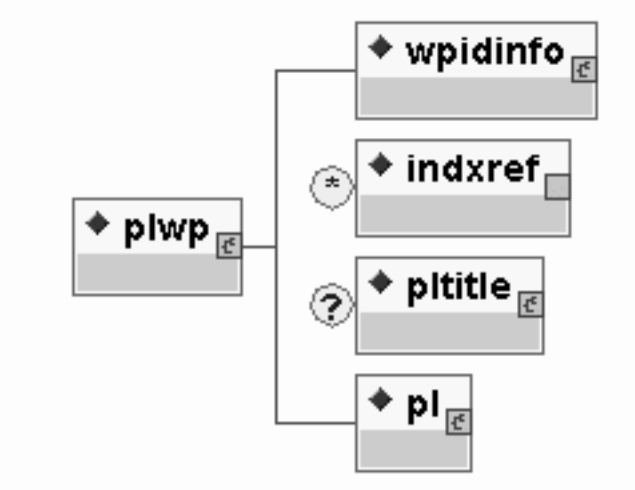

Figure 138 Repair parts list work package DTD hierarchy <plwp>.

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>***:
(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 paragraph 34.5.11) .
(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .
(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

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c. XML Document Instance Fragment for Repair Parts List Work Package **<plwp>**:

```
<plwp wpno="pxxxx26-11-5840-383" wpseq="0032 00">
<wpidinfo>
<maintlvl level="operator">
<eicnomen>
<sysnomen>
<name>RADAR SET</name>
<modelno>AN/PPS-5XX</modelno>
<nsn>
<fsc>5340</fsc>
<niin>-00-051-5555</niin>
</nsn>
<eic>R10</eic>
</sysnomen>
</eicnomen>
<title></title>
</wpidinfo>
<pl>
<figure>
<title>Adapter, Mount Radar Set</title>
<graphic boardno="adaptermount">
</figure>
<pltbl>
<fncgrp>
<fnccode>16</fnccode>
<fnctitle>ADAPTER, MOUNT</fnctitle>
<figref>85</figref>
</fncgrp>
<plitem>
<callout id="fig25-1" numref="fig25-1" label="1">
<smr sourcecode="XD" maintcode="FZ" recovercode="Z">
<cageno>80063</cageno>
<partno>SMB505778</partno>
<desc-uoc>
<name>T-BOLT</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><fsc>5305</fsc><niin>-00-175-3230</niin></nsn>
<cageno>96906</cageno>
<partno>MS21318</partno>
<desc-uoc>
<name>SCREW, MACHINE</name>
</desc-uoc>
<qty>4</qty>
</plitem>
<plitem>
<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>PLATE IDENTIFICATION</name>
```

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```
</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><fsc>5305</fsc><niin>-00-981-3512</niin></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>
<name>PINTLE,50 CALIBER</name>
</desc-uoc>
<qty>1</qty>
</plitem>
<plitem>
<callout id="fig25-9" numref="fig25-9" label="9">
```

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```
<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. Example of a Stylesheet/FOSI Output for a Repair Parts List Work Package ***<plwp>***: see paragraph 34.4.1.3.6)

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TM X-XXXX-XXX-12P 0032 00

OPERATOR
FOR
RADAR SET, AN/PPS-5XX
NSN XXXX-XX-XXX-XXXX EIC Y10
REPAIR PARTS LIST

GROUP 16 Adapter Mount

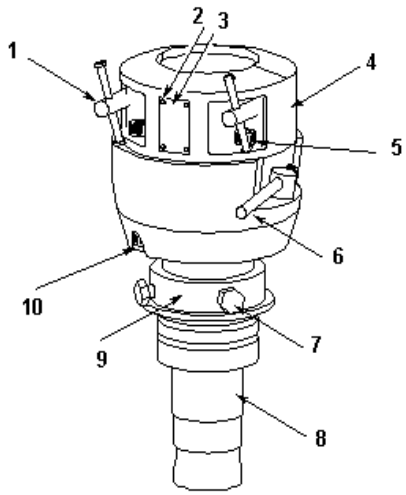

Figure 4. Adapter Mount

(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. 4 ADAPTER MOUNT	
1	XDFZZ		80063	SMB505778	T-BOLT	1
2	XDFZZ	5305-00-175-3230	96906	MS21318	SCREW, MACHINE	4
3	XDFZZ		80063	SMB505780	PLATE IDENTIFICATION	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 WORK PACKAGE

Figure 139 Example of a stylesheet/FOSI output a repair parts list work package <plwp>.

32.3.3.1 Parts list title ***<pltitle>***. The element ***<pltitle>*** contains the repair parts nomenclature ***<pleqp>*** and the functional group number code ***<fnccode>***.

a. DTD fragment for ***<pltitle>***:

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```
<!ELEMENT pltitle (fnccode, pleqp>
 <!ATTLIST pltitle %refs;
      %secur;>
```

b. Attributes for ***<pltitle>***:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.7).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.3.1.1 Functional group code ***<fnccode>***. The element ***<fnccode>*** is used to display the functional group code ***<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 (#PCDATA)>
 <!ATTLIST fnccode
   %bodyatt;
   %secur;>
```

b. Attributes for ***<fnccode>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.3.1.2 Repair parts list equipment equipment ***<pleqp>***. The element ***<pleqp>*** is used for the repair parts nomenclature. The element contains the parameter entity ((***%text;*** (see paragraph 34.3.16) is available to enter inline formatting and contextual characteristics).

a. DTD fragment for ***<pleqp>***:

```
<!ELEMENT pleqp (%text;)*
```

32.3.3.2 Repair parts list ***<pl>***. The element ***<pl>*** repair parts list is used for repair parts list and will consist of an illustration (***<figure>*** see 34.4.3.1) with an associated repair parts list table ***<pltbl>***.

a. DTD fragment for ***<pl>***:

```
<!ELEMENT pl (figure, pltbl)>
 <!ATTLIST pl
   %bodyatt;
   %secur;>
```

b. Attributes for ***<pl>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.3.2.1 Repair parts list table ***<pltbl>***. 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 paragraph 32.3.3.2.1.1), 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
   %bodyatt;
   %secur;>
```

b. Attributes for ***<pltbl>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.3.2.1.1 Functional group ***<fncgrp>***. The element ***<fncgrp>*** functional group 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 paragraph 32.3.3.1.1), followed by an optional functional group code title ***<fnctitle>***, and followed by an optional illustration reference ***<figref>*** or a subfunctional group ***<subfncgrp>***.

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a. DTD fragment for ***<fncgrp>***:

```
<!ELEMENT fncgrp ((fnccode, fnctitle?, figref?)+ | subfncgrp)>
 <!ATTLIST fncgrp
    %bodyatt;
    %secur;>
```

b. Attributes for ***<fncgrp>***:

(1) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.3.2.1.1.1 Function group code title ***<fnctitle>***. 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 paragraph 34.3.16) is available to enter inline formatting and contextual characteristics)..

a. DTD fragment for ***<fnctitle>***:

```
<!ELEMENT fnctitle (%text;)*>
 <!ATTLIST fnctitle
   %bodyatt;
   %secur;>
```

b. Attributes for ***<fnctitle>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.3.2.1.1.2 Figure reference ***<figref>***. 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 EMPTY>
<!ATTLIST figref
   %bodyatt;
   %secur;>
```

b. Attributes for ***<figref>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.3.2.1.1.3 Sub functional group ***<subfncgrp>***. 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
    %bodyatt;
    %secur;>
```

b. Attributes for ***<subfncgrp>***:

(1) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.3.2.1.2 Repair parts list item ***<plitem>***. 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 parameter entity parts list (***%partlist;*** (see paragraph 34.3.7) to enter the part description for the part list item).

a. DTD fragment for ***<plitem>***:

```
<!ELEMENT plitem (%partlist;)>
 <!ATTLIST plitem
     id ID #REQUIRED;>
```

b. Attributes for ***<plitem>***:

(1) **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

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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 on another element or with a cross-reference.

32.3.3.2.1.2.1 Source maintenance recovery code **<*smr*>**. 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 attributes SOURCECODE , MAINTCODE , and RECOVERCODE .

a. DTD fragment for **<*smr*>**:

```
<!ELEMENT smr (EMPTY)>
 <!ATTLIST smr
   sourcecode CDATA #REQUIRED
   maintcode  CDATA #REQUIRED
   recovercode CDATA #REQUIRED
   eic   CDATA #IMPLIED
   %bodyatt;
   %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) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(6) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.3.2.1.2.2 Description and usable on code **<*desc-uoc*>**. The element **<*desc-uoc*>** contains the part name (**<*name*>** see paragraph 34.4.4.15), optional description (**<*desc*>** see paragraph 33.3.5.1.1.2.2.1), and may be followed by usable on code **<*uoc*>**, basis of issue (**<*boi*>** see paragraph 32.3.3.2.1.2.2.2)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 (name, desc?, (uoc|boi|usbefserno)*)>
 <!ATTLIST desc-uoc
    eic   CDATA  #IMPLIED
    hci   (0 |1) "0"
    repairpart (1|2)  #IMPLIED
    %bodyatt;
    %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) **REPAIRPART**- Format of option one or two per MIL-STD-40051-5A.
(4) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.3.2.1.2.2.1 Usable on cocde **<*uoc*>**. 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 paragraph 34.3.16) is available to enter inline formatting and contextual characteristics). The code is entered after (**<*desc*>** see paragraph 33.3.5.1.1.2.2.1) in the description and usable on code (**<*desc-uoc*>** see paragraph 32.3.3.2.1.2.2) sixth column of the repair parts list table.

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a. DTD fragment for ***<uoc>***:

```
<!ELEMENT uoc (%text;)*>
 <!ATTLIST uoc
    %bodyatt;
    %secur;>
```

b. Attributes for ***<uoc>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.3.2.1.2.2.2 Basis of issue ***<boi>***. 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 paragraph 34.3.16) is available to enter inline formatting and contextual characteristics). 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 (%text;)*>
<!ATTLIST boi
   %bodyatt;
   %secur;>
```

b. Attributes for ***<boi>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.3.2.1.2.2.3 Usable effective serial numbers ***<usbefserno>***. 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 paragraph 33.3.5.1.1.2.2.1) in the description and usable on code (***<desc-uoc>*** see paragraph 32.3.3.2.1.2.2) sixth column of the repair parts list table.

a. DTD fragment for ***<usbefserno>***:

```
<!ELEMENT usbefserno (EMPTY)> <!ATTLIST usbefserno
    beginserno  CDATA  #REQUIRED
    endserno  CDATA  #IMPLIED>
```

b. Attributes for ***<usbefserno>***:

(1) **BEGINSERNO** - The first part of the usable effective serial number.

(2) **ENDSERNO** - The last part of the usable effective serial number.

32.3.3.2.1.3 Parts list component ***<plcomp>***. 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 (%partlist;)>
 <!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 paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

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32.3.3.2.1.4 Kits ***<kit>***. 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 (%partlist;, kititem*)>
 <!ATTLIST kit
     id   ID  #REQUIRED
   idref  IDREFS #IMPLIED
   assocfig IDREFS #IMPLIED
     inschlvl CDATA  #IMPLIED
   delchlvl CDATA  #IMPLIED
   label  CDATA  #IMPLIED
   texttype CDATA  #IMPLIED
   itemid  NMTOKEN #IMPLIED
   config  CDATA  #IMPLIED
   skilltrk CDATA  #IMPLIED
     %secur;>
```

b. Attributes for ***<kit>***:

(1) **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 on another element or with a cross-reference.

(2) **IDREF**- References one or more identifiers; the use of this attribute must be specified in the stylesheet/FOSI as it has no implied or default use.

(3) **ASSOCFIG**- A reference to a figure or figures associated with the current element; generally best applicable to text elements.

(4) **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.

(5) **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.

(6) **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.

(7) **TEXTTYPE** - (pending information from OSD)

(8) **ITEMID**- Supplies an identifier of the item, such as SSSN, LRU, part number, or reference designator.

(9) **CONFIG**- Specifies the equipment configurations to which element applies.

(10) **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.

(11) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.3.2.1.4.1 Kit items ***<kititem>***. 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 paragraph 34.4.4.15). 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 paragraph 34.4.6.1.3.1.1) 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?)>
```

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```
<!ATTLIST kititem
   %bodyatt;
   %secur;>
```

b. Attributes for ***<kititem>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.3.2.1.4.1.1 Figure item number ***<figitemno>***. The element ***<figitemno>*** is used for the figure and the item number after quantity (***<qty>*** see paragraph 34.4.6.1.3.1.1) located in a kit repair parts ***<kititem>***. The element contains the parameter entity (***%text;*** see paragraph 34.3.16).

a. DTD fragment for ***<figitemno>***:

```
<!ELEMENT figitemno (#PCDATA)>
 <!ATTLIST figitemno
   %bodyatt;
   %secur;>
```

b. Attributes for ***<figitemno>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.4 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 paragraph 34.4.5) and should have one or more special tools (repair part) list(s) ***<stl>***. Index reference markers (***<indxref>*** see paragraph 34.4.1.3.4) may precede special tools list ***<stl>***. The generated text for ***<stlwp>*** the element work package title for is **"Part Number List".**

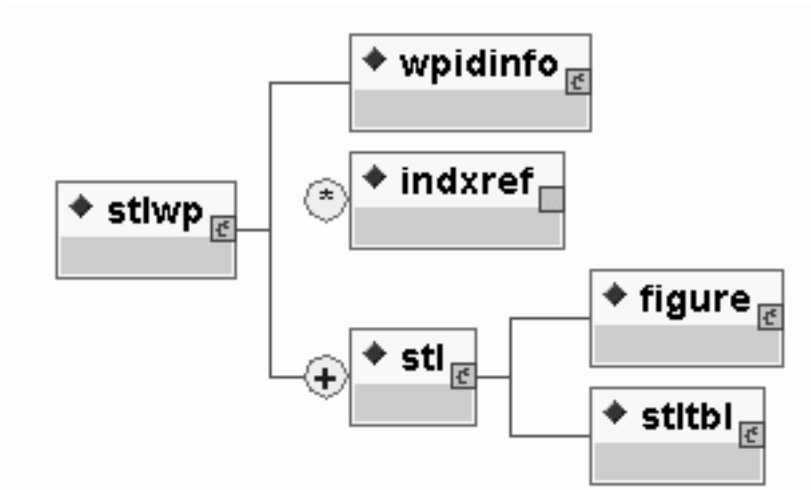

Figure 140 Special tools lists DTD hierarchy <stlwp>.

a. DTD fragment for ***<stlwp>***:

```
<!ELEMENT stlwp (wpidinfo, indxref*, stl+)>
 <!ATTLIST stlwp
   wpno   ID   #REQUIRED
   %wprsrc-vals;
   %tracking;
   %wpbodyatt;
   %secur;>
```

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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 paragraph 34.5.11) .

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.4.1 Special tools list ***<stl>***. The element ***<stl>*** is used for each special tools (repair parts) list and will consist of an illustration (***<figure>*** see paragraph 34.4.3.1) with an associated special tools (repair parts) list table ***<stltbl>***.

a. DTD fragment for ***<stl>***:

```
<!ELEMENT stl (figure, stltbl)>
 <!ATTLIST stl
   %bodyatt;
   %secur;>
```

b. Attributes for ***<stl>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.4.1.1 Special tools list table ***<stltbl>***. 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 paragraph 32.3.3.2.1.1), followed by either one or more, repair parts list item(s) ***<plitem>*** see paragraph 32.3.3.2.1.2) one or more repair parts list component(s) ***<plcomp>*** or one or more kits (***<kit>*** see paragraph 32.3.3.2.1.4).

a. DTD fragment for ***<stltbl>***:

```
<!ELEMENT stltbl (fncgrp, ((plitem, | plcomp | kit)+)>
 <!ATTLIST stltbl
   %bodyatt;
   %secur;>
```

b. Attributes for ***<stltbl>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.4.1.1.1 Special Tools List Item. 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 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 paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

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32.3.4.1.1.2 Special Tools List Component. 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 paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.5 National Stock Number 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 34.4.5), may be followed by one or more index references (***<indxref>*** see 34.4.1.3.4), followed by a required NSN index ***<nsnindex>***.

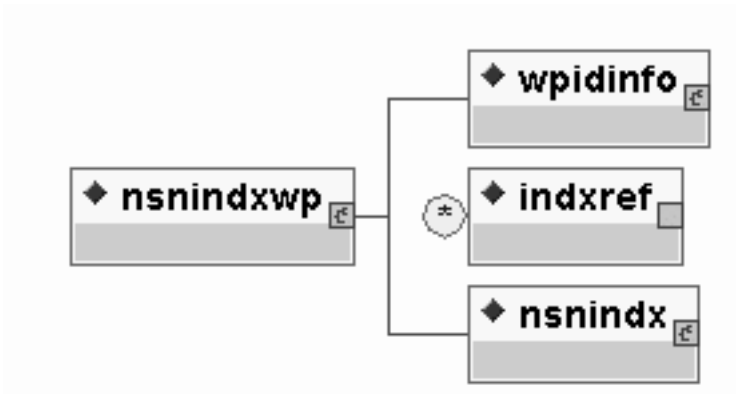

Figure 141 NSN index work package DTD hierarchy <nsnindxwp>.

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.

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(2) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

c. XML Document Instance Fragment for NSN Index Work Package ***<nsnindxwp>***:

```
<nsnindxwp wpno = "Sxxxx30-11-5840-383" wpseq = "1001 00">
<wpidinfo>
<maintlvl level = "operator">
<eicnomen>
<sysnomen pretext = "FOR">
<name>RADAR SET</name>
<modelno>AN/PPS-XXX</modelno>
<partno>XX-XXXXXX</partno>
<eic>Y10</eic>
<title>NATIONAL STOCK NUMBER INDEX</title>
<nsnindx>
<nsnindxrow><nsn><fsc>5840</fsc><niin>-00-450-3561</niin></nsn>
<dwgno>15</dwgno>
<callout assocfig="fig15 wp 0018 00" label = "1"></nsnindxrow>
<nsnindxrow><nsn><fsc>5840</fsc><niin>-00-450-3561</niin></nsn>
<dwgno>8</dwgno>
<callout assocfig="fig8 wp 0018 00" label = "7"></nsnindxrow>
<nsnindxrow><nsn><fsc>5840</fsc><niin>-00-450-3562</niin></nsn>
<dwgno>14</dwgno>
<callout assocfig="fig14 wp 0018 00" label = "6"></nsnindxrow>
<nsnindxrow><nsn><fsc>5315</fsc><niin>-00-832-6785</niin></nsn>
<dwgno>4</dwgno>
<callout assocfig="fig4 wp 0018 00" label = "11"></nsnindxrow>
<nsnindxrow><nsn><fsc>5310</fsc><niin>-00-832-5543</niin></nsn>
<dwgno>3</dwgno>
<callout assocfig="fig3 wp 0022 00" label = "5"></nsnindxrow>
<nsnindxrow><nsn><fsc>5310</fsc><niin>-00-832-5546</niin></nsn>
<dwgno>9</dwgno>
<callout assocfig=""fig9 wp 0022 00"" label = "2"></nsnindxrow>
<nsnindxrow><nsn><fsc>5315</fsc><niin>-00-531-7880</niin></nsn>
<dwgno>6</dwgno>
<callout assocfig=""fig6 wp 0022 00"" label = "7"></nsnindxrow>
<nsnindxrow><nsn><fsc>5340</fsc><niin>-00-832-5096</niin></nsn>
<dwgno>10</dwgno>
<callout assocfig="fig10 wp 0005 00" label = "9"></nsnindxrow>
<nsnindxrow><nsn><fsc>5315</fsc><niin>-00-619-2949</niin></nsn>
<dwgno>17</dwgno>
<callout assocfig="fig17 wp 0021 00" label = "11"></nsnindxrow>
<nsnindxrow><nsn><fsc>5365</fsc><niin>-00-812-1525</niin></nsn>
<dwgno>12</dwgno>
<callout assocfig="fig12 wp 0005 00""label = "5"></nsnindxrow>
<nsnindxrow><nsn><fsc>5330</fsc><niin>-00-458-1979</niin></nsn>
<dwgno>1</dwgno>
<callout assocfig="fig1 wp 0005 00" label = "13"></nsnindxrow>
<nsnindxrow><nsn><fsc>5310</fsc><niin>-00-457-6892</niin></nsn>
<dwgno>5</dwgno>
<callout assocfig="fig5 wp 0066 00"label = "15"></nsnindxrow>
<nsnindxrow><nsn><fsc>5840</fsc><niin>-00-129-6053</niin></nsn>
```

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```
<dwgno>15</dwgno>
<callout assocfig="fig15 wp 0064 00" label ="16"></nsnindxrow>
<nsnindxrow><nsn><fsc>5325</fsc><niin>-00-291-9366</niin></nsn>
<dwgno>33</dwgno>
<callout assocfig="fig33 wp 0065 00" label =
"18"></nsnindxrow><nsnindxrow><nsn><fsc>5360</fsc><niin>-00-458-1982</niin></nsn>
<dwgno>1</dwgno>
<callout assocfig="fig1 wp 0066 00" label = "9"></nsnindxrow>
<nsnindxrow><nsn><fsc>5305</fsc><niin>-00059-3660</niin></nsn>
<dwgno>15</dwgno>
<callout assocfig="fig2 wp 0012 00" label = "22"></nsnindxrow>
<nsnindxrow><nsn><fsc>5310</fsc><niin>-00-019-9222</niin></nsn>
<dwgno>10</dwgno>
<callout assocfig="fig10 wp 0060 00" label = "7"></nsnindxrow>
<nsnindxrow><nsn><fsc>5340</fsc><niin>-00-935-3918</niin></nsn>
<dwgno>8</dwgno><callout assocfig="fig8 wp 0060 00" label = "24"></nsnindxrow>
<nsnindxrow><nsn><fsc>5340</fsc><niin>-00-143-0318</niin></nsn>
<dwgno>9</dwgno>
<callout assocfig="fig9 wp 0066 00" label = "12"></nsnindxrow>
<nsnindxrow><nsn><fsc>5340</fsc><niin>-00-242-5851</niin></nsn>
<dwgno>18</dwgno>
<callout assocfig="fig18 wp 0012 00" label = "1"></nsnindxrow>
<nsnindxrow><nsn><fsc>5305</fsc><niin>-00-051-4496</niin></nsn>
<dwgno>12</dwgno>
<callout assocfig="fig12 wp 0018 00" label = "4"></nsnindxrow>
<nsnindxrow><nsn><fsc>5305</fsc><niin>-00-832-6340</niin></nsn>
<dwgno>4</dwgno>
<callout assocfig="fig4 wp 0060 00"label = "2"></nsnindxrow>
<nsnindxrow><nsn><fsc>5310</fsc><niin>-00-832-6663</niin></nsn>
<dwgno>21</dwgno>
<callout assocfig="fig21 wp 0014 00" label = "3"></nsnindxrow>
<nsnindxrow><nsn><fsc>5310</fsc><niin>-00-832-5547</niin></nsn><dwgno>5</dwgno>
<callout assocfig="fig5 wp 0058 00" label = "4"></nsnindxrow>
<nsnindxrow><nsn><fsc>5840</fsc><niin>-00-937-9065</niin></nsn>
<dwgno>7</dwgno>
<callout assocfig="fig7 wp 0058 00" label = "5"></nsnindxrow>
<nsnindxrow><nsn><fsc>5305</fsc><niin>-00-403-7718</niin></nsn>
<dwgno>21</dwgno>
<callout assocfig="fig7 wp 0058 00" label = "7"></nsnindxrow>
<nsnindxrow><nsn><fsc>5305</fsc><niin>-00-763-6961</niin></nsn>
<dwgno>7</dwgno>
<callout assocfig="fig7 wp 0032 00" label = "10"></nsnindxrow>
</nsnindx>
</nsnindxwp>
```

d. Example of a Stylesheet/FOSI Output for NSN Index Work Package ***<nsnindxwp>***:

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TM X-XXXX-XXX-23P 1001 00

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	8	7
5840-00-450-3562	14	6
5315-00-832-6785	4	11
5310-00-832-5543	3	5
5310-00-832-5546	9	2
5315-00-531-7880	6	7
5340-00-832-5096	10	9
5315-00-619-2949	17	11
5365-00-812-1525	12	5
5330-00-458-1979	1	13
5310-00-457-6892	5	15
5840-00-129-6053	15	16
5325-00-291-9366	33	18
5360-00-458-1982	1	9
5305-00059-3660	15	22
5310-00-019-9222	10	7

STOCK NUMBER	FIG.	ITEM
5340-00-935-3918	8	24
5340-00-143-0318	9	12
5340-00-242-5851	18	1
5305-00-051-4496	12	4
5305-00-832-6340	4	2
5310-00-832-6663	21	3
5310-00-832-5547	5	4
5840-00-937-9065	7	5
5305-00-403-7718	21	7
5305-00-763-6961	7	10
5310-00-016-7216	28	12
5310-00-061-7326	29	19
5305-00-066-7327	88	37
5305-00-066-7369	34	9
5365-00-067-3836	46	4
5305-00-068-0543	2	23
5365-00-068-8011	70	14

END OF WORK PACKAGE

1001 00-1

Figure 142 Example of a stylesheet/FOSI output NSN index work package <nsnindxwp>.

32.3.5.1 National Stock Number Index***<nsnindx>***. The element ***<nsnindx>*** is a cross reference listing of National Stock Number(s) (NSN) with illustration numbers and callouts. The element contains one or more NSN index row(s) ***<nsnindxrow>***.

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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 paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.5.1.1 National Stock Number index row ***<nsnindxrow>***. 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>*** see paragraph 34.4.4.16), the applicable figure number ***<dwgno>*** see paragraph 34.4.4.7) and item number for which the stock number is applicable ***<callout>*** see paragraph 34.4.1.3.2). 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 paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.6 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 34.4.5), may be followed by one or more index references (***<indxref>*** see 34.4.1.3.4), followed by a required parts number list ***<pnindx>***.

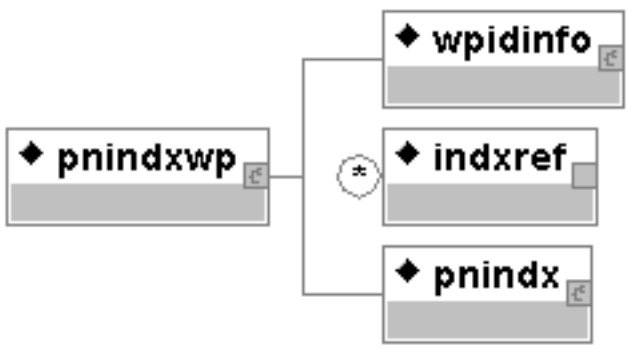

Figure 143 Part number index work package DTD hierarchy <pnindxwp>.

a. DTD fragment for ***<pnindxwp>***:

```
<!ELEMENT pnindxwp (wpidinfo, indxref*, pnindx)>
 <!ATTLIST pnindxwp
   wpno  ID   #REQUIRED
   %wprsrc-vals;
   %tracking;
   %wpbodyatt
   %secur;>
```

b. Attributes for ***<pnindxwp>***:

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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 paragraph 34.5.11) .
(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .
(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.6.1 Part number index table ***<pnindx>***. 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>***.

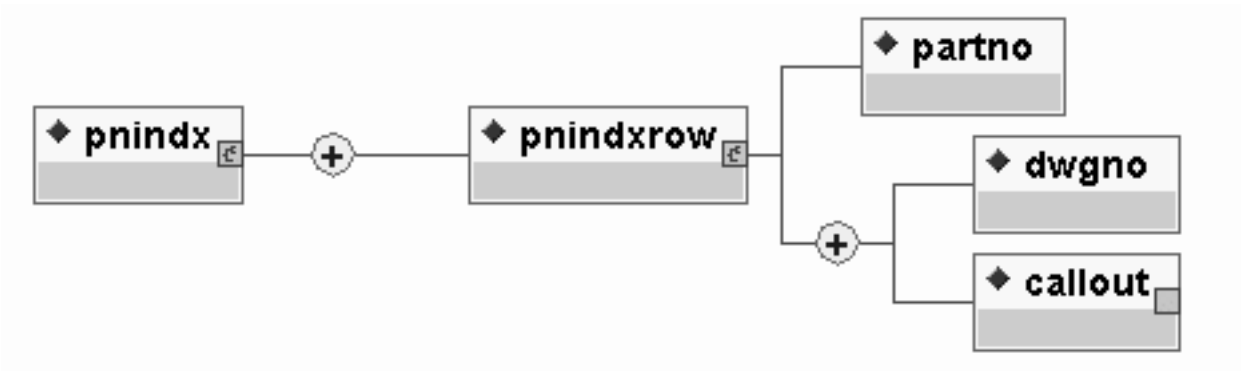

Figure 144 Part number index table DTD hierarchy <pnindx>.

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 paragraph 34.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.6.1.1 Part number index row ***<pnindxrow>***. The element ***<pnindxrow>*** contain entries and should be arranged in ascending alphanumeric sequence by part number. The line entry contains a part number ***<partno>***see paragraph 34.4.4.17) and CAGEC ***<cageno>*** see paragraph 34.4.4.7), the applicable figure number ***<dwgno>*** see paragraph 34.4.4.7) and item number ***<callout>*** see paragraph 34.4.1.3.2). This element is equivalent to a "row" element in a structural table.

a. DTD fragment for ***<pnindxrow>***:

```
<!ELEMENT pnindxrow ((partno, cageno), (dwgno, callout)+)
 <!ATTLIST pnindxrow
   %bodyatt;
   %secur;>
```

b. Attributes for ***<pnindxrow>***:

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(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.7 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 paragraph 34.4.5), reference designator list ***<refdesindx>*** and may contain one or more index reference(s) ***<indxref>*** see paragraph 34.4.1.3.4).

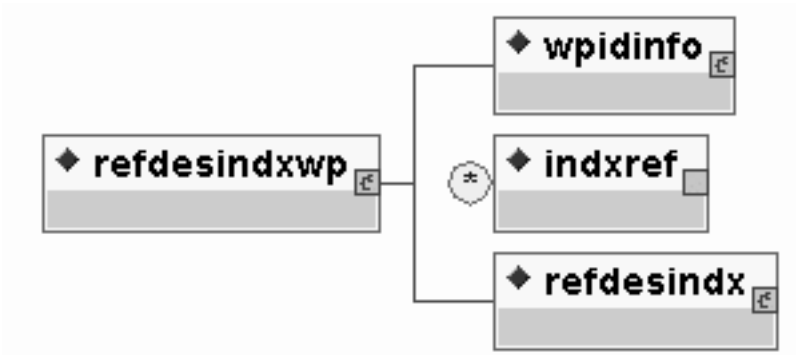

Figure 145 Reference designator index DTD hierarchy <refdesindxwp>.

a. DTD fragment for ***<refdesindxwp>***:

```
<!ELEMENT refdesindxwp (wpidinfo, indxref*, refdesindx)>
  <!ATTLIST refdesindxwp
    wpno  ID   #REQUIRED
    %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 paragraph 34.5.11) .
(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .
(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.7.1 Reference designator table ***<refdesindx>***. 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>***.

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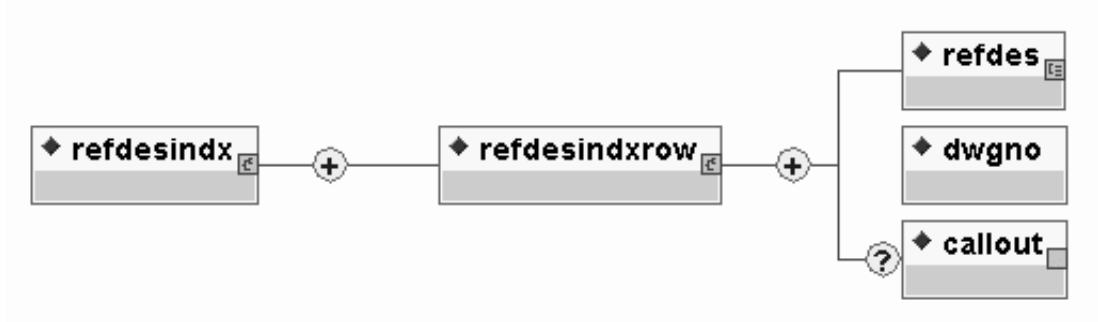

Figure 146 Reference designator table DTD hierarchy <refdesindx>.

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 paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.7.1.1 Reference designator row ***<refdesindxrow>***. 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 paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

32.3.7.1.1.1 Reference designation part ***<refdes>***. The element ***<refdes>*** list the callout reference designation part. The element contains the parameter entity ((***%text;*** (see paragraph 34.3.16) 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
   %bodyatt;
   %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) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(4) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

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33 SUPPORTING INFORMATION .

33.1 Scope. The following paragraphs give a description and use of the elements used in the MIL-STD-2361 Supporting Information Chapter DTD.

33.2 Applicable documents. Refer to paragraph 2

33.3 Supporting Information Chapter ***<sim>***. Supporting information is prepared as work packages and contained in a Supporting Information Chapter ***<sim>***. The chapter contains a required title page (***<titlepg>*** see paragraph 34.4.4.22), a required Reference Work Package (***<refwp>*** see paragraph 33.3.1), optional Maintenance Allocation Chart Introduction Work Package (***<macintrowp>*** see paragraph 33.3.2), optional Maintenance Allocation Chart Work Package (***<macwp>*** see paragraph 33.3.3), optional Repair Parts and Special Tools List (RPSTL) Work Package (***<rpstlwp>*** see paragraph 33.3.4), one of the following group of optional work packages; Components of End Item (COEI) and Basic Issue Items (BII) Lists Work Package (***<coeibiiwp>*** see paragraph 33.3.5), optional Additional Authorization List (AAL) Work Package (***<aalwp>*** see paragraph 33.3.6), optional Expendable and Durable Items List Work Package (***<explistwp>*** see paragraph 33.3.7), optional Tool Identification List Work Package (-20 AVUM Level or Above) (***<toolidwp>*** see paragraph 33.3.8), optional Mandatory Replacement Parts List Work Package (***<mrplwp>*** see paragraph 33.3.9), optional Critical Safety Items and Flight Safety Critical Aircraft Parts Work Package (***<csi.fscap.wp>*** see paragraph 33.3.10) or a required Support Items Work Package (***<supitemwp>*** see paragraph 33.3.11), and an optional Generic Appendix Work Package (***<genwp>*** see paragraph 33.3.12).

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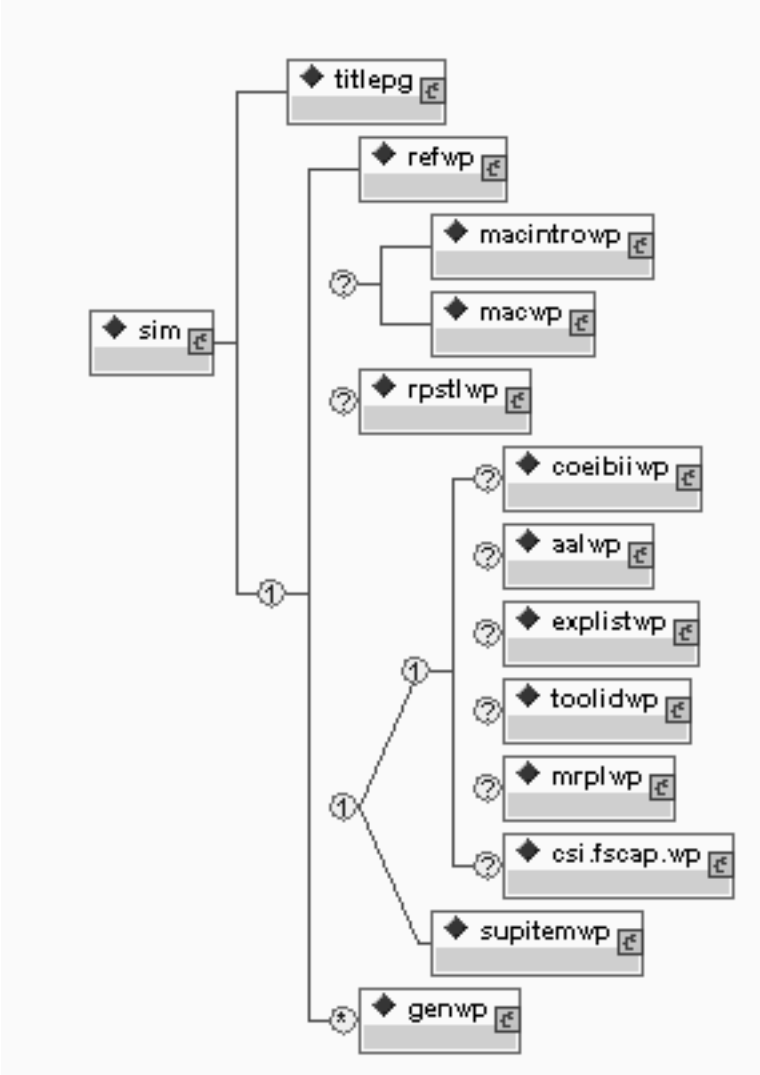

Figure 147 Supporting information chapter DTD hierarchy <sim>.

a. DTD fragment for ***<sim>***:

```
<!ELEMENT sim (titlepg,(refwp, (macintrowp, macwp)?, rpstlwp?,
 ((coeibiiwp?, aalwp?, explistwp?, toolidwp?, mrplwp?,
 csi.fscap.wp?) | supitemwp), genwp*))>
<!ATTLIST sim
   tmno    CDATA  #REQUIRED
   tmlabel   CDATA  #IMPLIED
   eic    CDATA  #REQUIRED
   imno    CDATA  #REQUIRED
   imctrlabel  CDATA  #REQUIRED
   %chapterlevel;      #REQUIRED
   revno    CDATA  #REQUIRED
   chngno   CDATA  #REQUIRED
   date    CDATA  #IMPLIED
   pubno    CDATA  #IMPLIED
   %imrsrc-vals;
   %refs;
```

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%secur;>

b. Attributes for ***<sim>***:

(1) **TMNO** - 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) **TMLABEL** - The number of the current TM. The prefix TM must be included in the 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) **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) "DEPOT" – Applies to depot maintenance level.

(b) "OPERATOR" – Applies to operator maintenance level.

(c) "GENSUP" – Applies to general support (GS) maintenance level.

(d) "DIRSUP" – Applies to direct support (DS) maintenance level.

(e) "UNITLVL" – Applies to unit maintenance level.

(f) "INTER" – Applies to intermediate (DS/GS) maintenance level.

(g) "AVUM-AVIM" – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.

(h) "TMLVLS" – Applies to all maintenance levels.

(7) **%CHAPTERLEVEL;** - The maintenance level of the information chapter.

(8) **REVNO** - the overall revision number for the information chapter.

(9) **CHNGNO** - the overall change number for the information chapter.

(10) **DATE** - The date of the current version of the chapter.

(11) **PUBNO** - Specifies the technical manual publication number.

(12) **%IMRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.3) .

(13) **%REFS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.7).

(14) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.1 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: identification information required for a work package (***<wpidinfo>***see paragraph 34.4.5), a required brief statement of what is covered in the reference work package scope (***<scope>*** see paragraph 34.4.4.21) and a required publication list ***<publist>*** see paragraph 33.3.1.1).

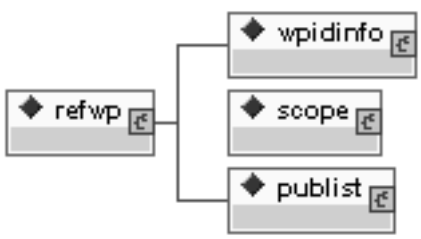

Figure 148 References work package DTD hierarchy <refwp>.

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a. DTD fragment for ***<refwp>***:

```
<!ELEMENT refwp (wpidinfo, scope, publist)>
<!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 paragraph 34.5.11) .

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

c. XML Document Instance Fragment for References Work Package ***<refwp>***:

```
<refwp wpno="tmx-xxxx-xxx-10" wpseq="0030 00">
<wpidinfo>
<maintlvl level ="operator”>
<eicnomen><sysnomen pretext="FOR">
<name>ENGINE OIL PUMP ASSEMBLY</name>
<modelno>M303</modelno>
<partno>12286924</partno> <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>
<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>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 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>
```

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```
<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 750-244-6</pubident> <name>Destruction of TACOM
Equipment</name> </publist></refwp>
```

d. Example of a Page-based stylesheet/FOSI Output of a References Work Package ***<refwp>***:

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TM X-XXXX-XXX-12P 0043 00

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
FM 31-71	Northern Operations
FM 90-3	Desert Operation

FORMS

DA Form 2028	Recommended Changes to Publications and Blank Forms
DA Form 2062	Hands Receipt
DA Form 2404	Equipment Inspection and Maintenance Worksheet
DA Form 2408-4	Weapon Record Data
DA Form 2408	Equipment Log Assembly (Records)
DA Form 2408-9	Equipment Control Record
DA Form 2408-14	Uncorrected Fault Record
DD 518	Accident Identification Card
SF 91	Motor Vehicle Accident Report
SF 368	Product Quality Deficiency Report

Technical Manuals

TM 9-1300-200	Ammunition, General
TM 750-244-6	Destruction of TACOM Equipment

END OF WORK PACKAGE

0043 00-1

Figure 149 Example of a page-based stylesheet/FOSI output a references work package <refwp>.

33.3.1.1 Publication list ***<publist>***. 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

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without the row and column lines. The element ***<publist>*** contains a required title (***<title>*** see paragraph 34.4.1.5.1), followed by either optional introductory paragraph(s) (***<para>*** see paragraph 34.4.1.5.3) and/or optional introductory paragraph(s) with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2), followed by at least one row containing publication identification number ***<pubident>*** and the publication name (***<name>*** see paragraph 34.4.4.15). 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 (title, (para | specpara)*, (pubident, name )+)+>
<!ATTLIST publist
   %bodyatt;
   %secur;>
```

b. Attributes for ***<publist>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.1.1.1 Publication identification number ***<pubident>***. The element ***<pubident>*** publication identification number is the technical manual, Army Regulation number, or other identification number. The publication identification number is entered into the first column of a publication list ***<publist>***.

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 paragraph 34.5.7).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.2 Maintenance Allocation Chart (MAC) introduction work package ***<macintrowp>***. 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 paragraph 34.4.5), and an introduction section (***<intro>*** see paragraph 34.4.4.12). The introduction may contain paragraph(s) which may be entered using an entity reference (see paragraph 36.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051. The generated text for ***<macintrowp>*** the element work package title for is **"Maintenance Allocation Chart (MAC) Introduction". Unit level only.**

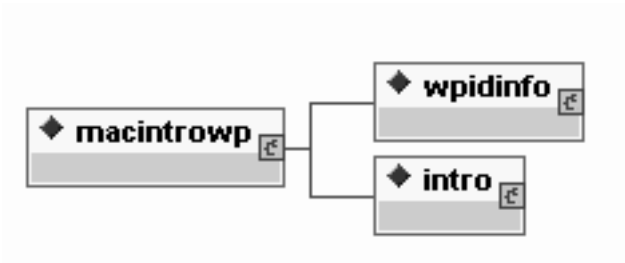

Figure 150 Maintenance Allocation Chart (MAC) introduction work package DTD hierarchy <macintrowp>.

a. DTD fragment for ***<macintrowp>***:

```
<!ELEMENT macintrowp (wpidinfo, intro)>
<!ATTLIST macintrowp
   wpno   ID  #REQUIRED
   %wprsrc-vals;
   %tracking;
```

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```
%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 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 paragraph 34.5.11) .

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.3 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. The element contains identification information required for a work package (***<wpidinfo>*** see paragraph 34.4.5), either a MAC (***<mac>*** see paragraph 33.3.3.1) or an aviation MAC (***<avmac>*** see paragraph 33.3.3.2), required tools and equipment references (***<tereqtab>*** see paragraph 33.3.3.3), and MAC's remarks references (***<remarktab>*** see paragraph 33.3.3.4). The generated text for ***<macwp>*** the element work package title for is **"Maintenance Allocation Chart (MAC) ". This work package is for -20 or AVUM Levels only.**

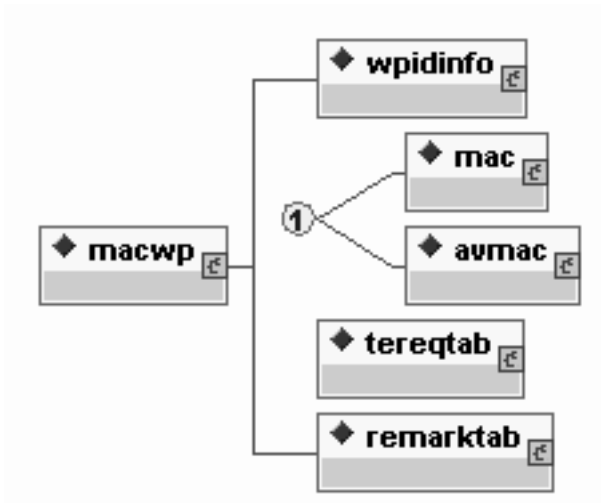

Figure 151 Maintenance Allocation Chart (MAC) work package DTD hierarchy <macwp>.

a. DTD fragment for ***<macwp>***:

```
<!ELEMENT macwp (wpidinfo, (mac | avmac), tereqtab, remarktab)>
<!ATTLIST macwp
   wpno   ID  #REQUIRED
   %wprsrc-vals;
   %tracking;
   %wpbodyatt;
```

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```
%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 paragraph 34.5.11) .

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

c.

33.3.3.1 Maintenance Allocation Chart (MAC) ***<mac>***. The element ***<mac>*** is a standard Maintenance Allocation Chart lists for the maintenance functions, levels and times assigned to each item. The element ***<mac>*** contains a required MAC title (***<title>*** see paragraph 34.4.1.5.1), 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)) . This element is equivalent to a ***<table>*** element in a structural table.

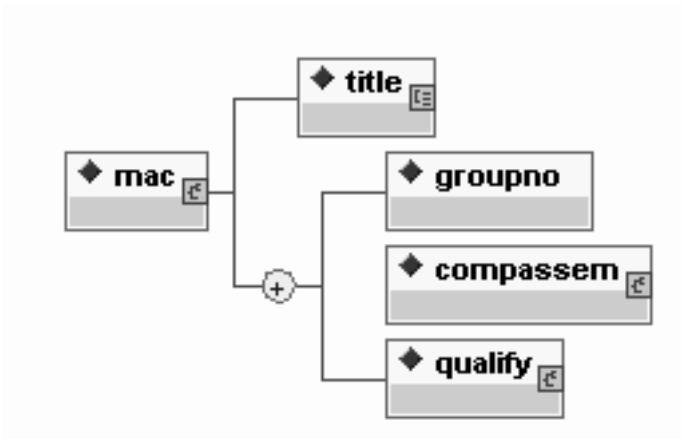

Figure 152 Maintenance Allocation Chart (MAC) DTD hierarchy <mac>.

a. DTD fragment for ***<mac>***:

```
<!ELEMENT mac (title, (groupno, compassem, qualify)+)>
<!ATTLIST mac
   %bodyatt;
   %secur;>
```

b. Attributes for ***<mac>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

c. XML Document Instance Fragment for Maintenance Allocation Chart ***<mac>***:

```
<mac>
<title>MAC for TSEC/ST-34</title>
<groupno>00</groupno>
```

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<compass><name>TSEC/ST-34</name><typedes></typedes></compass>
<qualify>
<maintfunc>Inspect</maintfunc><maintclass><unit>
<crew>.01</crew></unit></maintclass><remarkrefs idrefs="A"/>
<qualify>
<maintfunc>Ser-
vice</maintfunc><maintclass><unit><crew>.02</crew></unit></maintclass><remarkrefs
idrefs="B">
</qualify>
<qualify>
<maintfunc>Replace</maintfunc><maintclass><unit>
<crew>.04</crew></unit>
<terefs idrefs="1"/>
<remarkrefs idrefs="C,D"/>
</qualify>
<qualify>
<maintfunc>Test</maintfunc><maintclass><unit><crew>0.3</crew></unit></maintclass>
<remarkrefs idrefs="E"/>
</qualify>
<qualify>
<maintfunc>Repair</maintfunc><maintclass><direct>1.5</direct></maintclass>
<terefs idrefs="1-2"/><remarkrefs idrefs="F"/>
</qualify>
<qualify>
<maintfunc>Repair</maintfunc><maintclass><gensup>2.0</gensup></maintclass><terefs
idrefs="1-5"/><remarkrefs idrefs="G,H"/>
</qualify>
<qualify>
<maintfunc>Repair</maintfunc><maintclass><depot>2.0</depot></maintclass><terefs
idrefs="1-9"/><remarkrefs idrefs="I"/>
</qualify>
<qualify>
<maintfunc>Overhaul</maintfunc>
<maintclass>
<depot>16.0</depot>
<terefs idrefs="1–9"/><remarkrefs idrefs="J"/>
</qualify>
<groupno>01</groupno>
<compass><name>POWER UNIT</name><typedes>STP-34</typedes></compass>
<qualify>
<maintfunc>Inspect</maintfunc><maintclass><unit>
<crew>.01</crew></unit></maintclass><remarkrefs idrefs="A"/>
</qualify>
<qualify>
<maintfunc>Test</maintfunc><maintclass><unit><crew>.03</crew></unit></maintclass><remarkrefs
idrefs="E"/>
</qualify>
<qualify>
<maintfunc>Repair</maintfunc><maintclass><direct>1.8</direct></maintclass><terefs
idrefs="1–2"/><remarkrefs idrefs="F"/>
</qualify>
<qualify>
<maintfunc>Repair</maintfunc><maintclass><gensup>2.0</gensup></maintclass><terefs
idrefs="1–5"/><remarkrefs idrefs="G,J"/>
</qualify>
<qualify>

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```
<maintfunc>Repair</maintfunc><maintclass><depot>2.0</depot></maintclass><terefs
idrefs="1–9"/><remarkrefs  idrefs="H"/>
</qualify>
<groupno>0101</groupno>
<compass><name>PRINTED CIRCUIT BOARDS, STP-34</name><typedes>STP-
34</typedes></compass>
<groupno>010101</groupno>
<compass><name>E-EB0/1</name></compass>
<qualify>
<maintfunc>Inspect</maintfunc><maintclass>
<direct>.01</direct></maintclass><remarkrefs  idrefs="A"/></qualify>
<qualify>
<maintfunc>Test</maintfunc><maintclass>
<direct>.05</direct></maintclass><terefs  idrefs="1–2"/><remarkrefs  idrefs="E"/></qualify>
<qualify>
<maintfunc>Test</maintfunc><maintclass>
<depot>1.0</depot></maintclass><terefs  idrefs="1-3,6-8"/><remarkrefs  idrefs="I"/></qualify>
<qualify>
<maintfunc>Replace</maintfunc><maintclass>
<direct>.05</direct></maintclass><terefs  idrefs="1"/></qualify>
<qualify>
<maintfunc>Repair</maintfunc><maintclass>
<depot>2.0</depot></maintclass><terefs  idrefs="1-4,6-8"/><remarkrefs  idrefs="G"/></qualify>
</mac>
```

d. Example of a stylesheet/FOSI output for a Standard Maintenance Allocation Chart (MAC) Table **<*mac*>**:

Table 1. MAC for TSEC/ST-34.

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT		
			C	O	F	H	D		
00	TSEC/ST-34	Inspect	0.1						A
		Service	0.2						B
		Replace	0.4					1	C,D
		Test	0.3						E
		Repair			1.5			1-2	F
		Repair				2.0		1-5	G,H
		Repair					2.0	1-9	I
		Overhaul					16.0	1-9	J
01	POWER UNIT, STP-34	Inspect	0.1						A
		Test	0.3						E
		Repair			1.8			1-2	F
		Repair				2.0		1-5	G,J
		Repair					2.0	1-9	H
0101	PRINTED CIRCUIT BOARDS, STP-34								
010101	E-EB0/1	Inspect			0.1				A
		Test			0.5			1,2	E
		Test					1.0	1-3,6-8	I
		Replace			0.5			1	
		Repair					2.0	1-4,6-8	G

Figure 153 Example of a stylesheet/FOSI output for a standard Maintenance Allocation Chart (MAC) table <mac>.

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33.3.3.1.1 Group number ***<groupno>***. 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 (#PCDATA)>
<!ATTLIST groupno
   %bodyatt;
   %secur;>
```

b. Attributes for ***<groupno>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.3.1.2 Component/Assembly ***<compassem>***. The element ***<compassem>*** contains item names of components, assemblies, subassemblies, and modules (***<name>*** see paragraph 34.4.4.15) 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 (name, typedes?)>
<!ATTLIST compassem
   %bodyatt;
   %secur;>
```

b. Attributes for ***<compassem>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.3.1.2.1 Type designation ***<typedes>***. The element ***<typedes>*** contains the type designation for the unit which is presented after the component in the second column of the MAC.

a. DTD fragment for ***<typedes>***:

```
<!ELEMENT typedes (#PCDATA)>
```

33.3.3.1.3 Qualifier ***<qualify>***. 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 (maintfunc, maintclass, terefs?, remarkrefs?)+>
```

33.3.3.1.3.1 Maintenance function ***<maintfunc>***. 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 (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.

(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.

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(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.

33.3.3.1.3.2 Maintenance classification ***<maintclass>***. 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 (unit | direct | gensup | depot)>
```

33.3.3.1.3.2.1 Unit ***<unit>***. 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 ((crew | operator), org)>
```

33.3.3.1.3.2.1.1 Crew-level maintenance ***<crew>***. 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 (#PCDATA)>
```

33.3.3.1.3.2.1.2 Direct support maintenance ***<direct>***. 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.

a. DTD fragment for ***<direct>***:

```
<!ELEMENT direct (#PCDATA)>
```

33.3.3.1.3.2.1.3 General support maintenance level ***<gensup>***. 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 (#PCDATA)>
<!ATTLIST gensup
   %refs;
   %secur;>
```

33.3.3.1.3.2.1.4 Operator maintenance level ***<operator>***. 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).

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a. DTD fragment for ***<operator>***:

```
<!ELEMENT operator (#PCDATA)>
```

33.3.3.1.3.2.1.5 Organizational maintenance level ***<org>***. 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 (#PCDATA)>
```

33.3.3.1.3.2.2 Depot maintenance level ***<depot>***. 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 (#PCDATA)>
```

33.3.3.1.3.3 Tools and equipment references ***<terefs>***. 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 (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.

33.3.3.1.3.4 Remark references ***<remarkrefs>***. 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 (EMPTY)>
<!ATTLIST remarkrefs
   refs IDREFS #REQUIRED
>
```

b. Attributes for ***<remarkrefs>***:

(1) **REFS** - The cross reference identifier to the remark(s) in the remarks table.

33.3.3.2 Aviation Maintenance Allocation Chart (AVMAC) ***<avmac>***. 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 paragraph 34.4.1.5.1), followed by at least one row containing a group number (***<groupno>*** see paragraph 33.3.3.1.1), a component/assembly (***<compassem>*** see paragraph 33.3.3.1.2), 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 (title, (groupno, compassem, avqualify)+)>
<!ATTLIST avmac
   %bodyatt;
   %secur;>
```

b. Attributes for ***<avmac>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

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33.3.3.2.1 Aviation qualifier ***<avqualify>***. The element ***<avqualify>*** contains a qualification of components in an aviation MAC. The component qualifier contains maintenance function (***<maintfunc>*** see paragraph 33.3.3.1.3.1), aviation maintenance level (***<avmaintclass>***), optional required tools and equipment reference(s) (***<terefs>*** see paragraph 33.3.3.1.3.3), and optional MAC remarks reference(s) (***<remarkrefs>*** see paragraph 33.3.3.1.3.4). This element contains the remaining columns in the table.

a. DTD fragment for ***<avqualify>***:

```
<!ELEMENT avqualify (maintfunc, avmaintclass, terefs?, remarkrefs?)+>
```

b. Attributes for ***<avqualify>***:

33.3.3.2.1.1 Aviation maintenance classification ***<avmaintclass>***. 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 paragraph 33.3.3.1.3.2.2) 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 (avum | avim | depot)>
```

33.3.3.2.1.1.1 Aviation unit maintenance ***<avum>***. 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 (#PCDATA)>
```

33.3.3.2.1.1.2 Aviation intermediate maintenance ***<avim>***. 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 (#PCDATA)>
```

33.3.3.3 Tools and equipment references table ***<tereqtab>***. 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 paragraph 34.4.1.5.1), 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 paragraph 34.4.4.15), the NSN number (***<nsn>*** see paragraph 34.4.4.16) and the tool number ***<toolno>***.

a. DTD fragment for ***<tereqtab>***:

```
<!ELEMENT tereqtab (title, (terefcode, maintenance, name, nsn,
      toolno)+)>
<!ATTLIST tereqtab
   %bodyatt;
   %secur;>
```

b. Attributes for ***<tereqtab>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.3.3.1 Tools and equipment reference code ***<terefcode>***. 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 (#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.

33.3.3.3.2 Maintenance ***<maintenance>***. The element ***<maintenance>*** is used to identify the lowest level of maintenance authorized that requires the listed item. The lowest level of maintenance is enter through the required attribute level **lvl**. The element is entered in the second column of the tools and equipment reference table.

a. DTD fragment for ***<maintenance>***:

```
<!ELEMENT maintenance EMPTY>
<!ATTLIST maintenance
   lvl  (c | o | f | h | d) #REQUIRED
   aviation (0 | 1) "0">
```

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:

(f) "O" - AVUM.
(g) "F" - AVIM.
(h) "D" - Depot.

33.3.3.3.3 Tool number ***<toolno>***. 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 (#PCDATA)>
<!ATTLIST toolno
   %bodyatt;>
```

b. Attributes for ***<toolno>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

33.3.3.4 Remarks table ***<remarktab>***. 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 paragraph 34.4.1.5.1), 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 (title, (remarkcode, remarks)+)>
<!ATTLIST remarktab
   %bodyatt;
   %secur;>
```

b. Attributes for ***<remarktab>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.3.4.1 Remarks code ***<remarkcode>***. 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 (#PCDATA)>
```

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```
<!ATTLIST remarkcode
   id ID  #REQUIRED>
```

b. Attributes for ***<remarkcode>***:

(1) **ID** - Specifies the unique identifier of the remark entry.

33.3.3.4.2 Remarks ***<remarks>***. The element ***<remarks>*** contains remarks information (***%text;*** see paragraph 34.3.16) pertinent to the maintenance function performed as indicated in the MAC.

a. DTD fragment for ***<remarks>***:

```
<!ELEMENT remarks (%text;)*>
<!ATTLIST remarks
   %bodyatt;
   %secur;>
```

b. Attributes for ***<remarks>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.4 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 Section32, Parts Information. The ***<rpstlwp>*** contains the following elements: one (***<introwp>*** see paragraph 32.3.2), one or more (***<plwp>***see paragraph 32.3.3), one or more (***<stlwp>***see paragraph 32.3.4), one (***<nsnindxwp>***see paragraph 32.3.5), one (***<pnindxwp>***see paragraph 32.3.6) and may have an optional (***<refdesindxwp>***see paragraph 32.3.7)

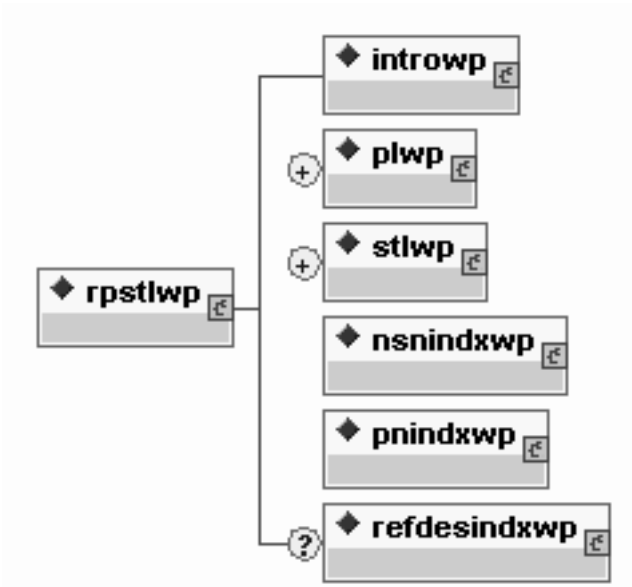

Figure 154 Repair parts and special tools list work package DTD hierarchy <rpstlwp>.

a. DTD fragment for ***<rpstlwp>***:

```
<!ELEMENT rpstlwp (introwp, plwp+, stlwp+, nsnindxwp, pnindxwp,
      refdesindxwp?)>
```

33.3.5 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 paragraph 34.4.5), followed by a required usable on code (***<uoc>*** see paragraph 32.3.3.2.1.2.2.1), may have one or more model numbers ***<modelno>*** see paragraph

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34.4.4.14). The paragraph(s) may be entered using an entity reference (see paragraph 36.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051. See paragraph 33.3.5.1 for a COEI list ***<coei>*** and see paragraph 33.3.5.2 for a BII list (***<bii>***. The generated text for ***<coeibiiwp>*** the element work package title for is **"Components of End Item (COEI) and Basic Issue Items (BII) Lists".**

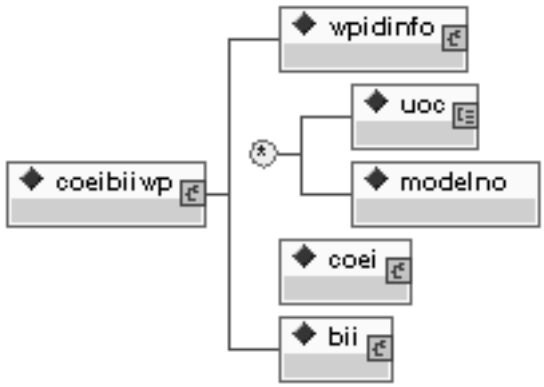

Figure 155 Components of End Item (COEI) and Basic Issue Items (BII) work package DTD hierarchy <coeibiiwp>.

a. DTD fragment for ***<coeibiiwp>***:

```
<!ELEMENT coeibiiwp (wpidinfo, uoc, modelno*, 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 paragraph 34.5.9) .

(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.5.1 Components of End Item (COEI) list ***<coei>***. 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 paragraph 34.4.3.1) followed by a components of end item table ***<coeitab>***.

a. DTD fragment for ***<coei>***:

```
<!ELEMENT coei (figure+, coeitab)>
<!ATTLIST coei
   %bodyatt;
   %secur;>
```

b. Attributes for ***<coei>***:

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(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.5.1.1 Components of End Item (COEI) List table ***<coeitab>***. 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>***. **The COEI table*<coei>* element generates the standard table including the table heading by using a stylesheet or FOSI.**

a. DTD fragment for ***<coeitab>***:

```
<!ELEMENT coeitab (coei-category+ | coei-entry+)>
<!ATTLIST coeitab
   %bodyatt;
   %secur;>
```

b. Attributes for ***<coeitab>***:
(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.5.1.1.1 Components of End Item (COEI) list category of supporting information ***<coei-category>***. 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 paragraph 33.3.5.1.1.2). There is at least one category in the table.

a. DTD fragment for ***<coei-category>***:

```
<!ELEMENT coei-category (coei-entry)+>
<!ATTLIST coei-category
   catg-name CDATA #REQUIRED
   %bodyatt;
   %secur;>
```

b. Attributes for ***<category>***:
(1) **CATG-NAME** - Specifies the category name which is the heading that will appear in the table.
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.5.1.1.2 Components of End Item (COEI) List entry ***<coei-entry>***. The element ***<coei-entry>*** contains the entries of a components of end item list table which are contained within this element. The element entry consist of a required illustration number (***<illno>*** see paragraph 33.3.5.1.1.2.1), one or more groups of NSN (***<nsn>*** see paragraph 34.4.4.16), the end item description, part number and (CAGEC) (***<dcpno>*** see paragraph 33.3.5.1.1.2.2), unit of issue (***<um>*** see paragraph 33.3.5.1.1.2.2.2), and quanity (***<qty>*** see paragraph 34.4.6.1.3.1.1). It is equivalent to a "row" element in a structural table.

a. DTD fragment for ***<coei-entry>***:

```
<!ELEMENT coei-entry (illno, (nsn, dcpno, um, qty)+)>
<!ATTLIST coei-entry
   %bodyatt;
   %secur;>
```

b. Attributes for ***<coei-entry>***:
(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.5.1.1.2.1 Illustration number ***<illno>***. 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)

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a. DTD fragment for ***<illno>***:

```
<!ELEMENT illno (#PCDATA)>
<!ATTLIST illno
   %bodyatt;
   %secur;>
```

b. Attributes for ***<illno>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.5.1.1.2.2 Description, cagec and part number ***<dcpno>***. The element ***<dcpno>*** contains the required name ***<name>***, may be followed by a description ***<desc>***, a required part number (***<partno>*** see paragraph 34.4.4.17) and (CAGEC) (***<cageno>*** see paragraph 34.4.4.2), 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 (name, desc?, ((partno, cageno), uoc)+)>
<!ATTLIST dcpno
   %bodyatt;
   %secur;>
```

b. Attributes for ***<dcpno>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.5.1.1.2.2.1 Description ***<desc>***. 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 paragraph 34.3.16).

a. DTD fragment for ***<desc>***:

```
<!ELEMENT desc (%text;)*>
<!ATTLIST desc
   %bodyatt;
   %secur;>
```

b. Attributes for ***<desc>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.5.1.1.2.2.2 Unit of issue ***<um>***. The element ***<um>*** contains the unit of issue which is specified in the sixth column of the COEI List. The element ***<um>*** contains parsable data #PCDATA..

a. DTD fragment for ***<um>***:

```
<!ELEMENT um (#PCDATA)>
<!ATTLIST um
   %bodyatt;
   %secur;>
```

b. Attributes for ***<um>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.5.2 Basic issue items list ***<bii>***. 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 paragraph 34.4.3.1), and a required basic issue items table ***<biitab>*** see paragraph 33.3.5.2.1).

a. DTD fragment for ***<bii>***:

```
<!ELEMENT bii (figure+, biitab)>
<!ATTLIST bii
```

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```
      %bodyatt;
      %secur;>
```

b. Attributes for ***<bii>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.5.2.1 Basic issue items list table ***<biitab>***. 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 paragraph 33.3.5.2.1.1) or at least one BII entry (***<bii-entry>***).

a. DTD fragment for ***<biitab>***:

```
<!ELEMENT biitab (bill-category+ | bii-entry+)>
<!ATTLIST biitab
   %bodyatt;
   %secur;>
```

b. Attributes for ***<biitab>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.5.2.1.1 Basic issue items category of supporting information ***<bii-category>***. 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>***. There is at least one category in the table.

a. DTD fragment for ***<bii-category>***:

```
<!ELEMENT bii-category (bii-entry)+>
<!ATTLIST bii-category
   catg-name CDATA #REQUIRED
   %bodyatt;
   %secur;>
```

b. Attributes for ***<bii-category>***:

(1) **CATG-NAME** - Specifies the category name which is the heading that will appear in the table.

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.5.2.1.2 Basic issued items list entry ***<bii-entry>***. The element ***<bii-entry>*** contains the entries for basic issued items list table. The element entry consist of a required illustration number (***<illno>*** see paragraph 33.3.5.1.1.2.1), one or more groups of description, cagec and part number (***<dcpno>*** see paragraph 33.3.5.1.1.2.2), unit of issue (***<um>*** see paragraph 33.3.5.1.1.2.2.2), and quanity (***<qty>*** see paragraph 34.4.6.1.3.1.1). It is equivalent to a "row" element in a structural table.

a. DTD fragment for ***<bii-entry>***:

```
<!ELEMENT bii-entry (illno, (dcpno, um, qty)+)>
<!ATTLIST bii-entry
   %bodyatt;
   %secur;>
```

b. Attributes for ***<bii-entry>***:

c. **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

d. **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.6 Additional Authorization List (AAL) Work Package ***<aalwp>***. 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 paragraph 34.4.5), an introduction to the work package (***<intro>*** see paragraph 34.4.4.12), and the AAL table ***<aal>***. The generated

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text for ***<aalwp>*** the element work package title for is **"Additional Authorization List (AAL)". Operator only work package.**

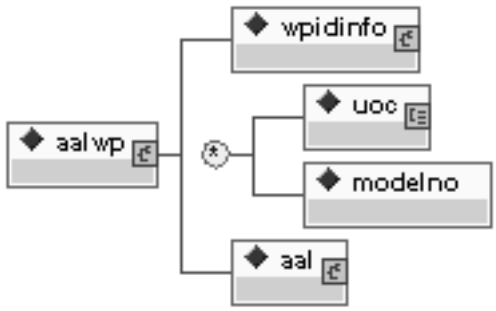

Figure 156 Additional Authorization List (AAL) work package DTD hierarchy <aalwp>.

a. DTD fragment for ***<aalwp>***:

```
<!ELEMENT aalwp (wpidinfo, (uoc, modelno)*, 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 paragraph 34.5.11) .

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

c. XML 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">12286924</partno> <eic>H6U</eic>
</sysnomen>
</eicnomen>
<title>ADDITIONAL AUTHORIZATION LIST</title>
</wpidinfo>
INTRODUCTION
SCOPE
This work package lists additional items you are authorized
for the support of the M3A3.
```

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General This appendix lists additional items you are authorized for the support of the M3A3. Explanations 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, CAGEC, and Part Number, 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.
Code Used on
<*uoc*>XXX</*uoc*> Model <*modelno*>XXX </*modelno*>
<*uoc*>XXX</*uoc*> <*modelno*>Model XXXX</*modelno*>
Column (4), U/I (unit of issue), indicates how the item is issued for the National Stock Number shown in column (1).
Column (5), Qty Recm, indicates the quantity recommended.
<*aal*><*aal-entry*>
<*nsn*><*fsc*>6665</*fsc*><*niin*>-00-935-6955</*niin*></*nsn*>
<*dcpno*>
<*name*>ALARM, CHEMICAL AGENT,</*name*> <*desc*>M-8 A1 W/ACCESSORIES (INTERIOR-LEFT SPONSON<*desc*>
<*partno*>C5-15-8803</*partno*>
<*cageno*>(81361)</*cageno*>
<*uoc*>1A1</*uoc*>
</*dcpno*>
<*um*>EA</*um*>
<*qty*>1</*qty*>
</*aal-entry*>
<*aal-entry*>
<*nsn*><*fsc*>6665</*fsc*><*niin*>-00-859-2215</*niin*></*nsn*>
<*dcpno*>
<*name*>ALARM UNIT, CHEMICAL</*name*><*desc*>M42E1<*desc*>
<*partno*>D5-15-4826</*partno*>
<*cageno*>81361</*cageno*>
<*uoc*>2D2</*uoc*>
</*dcpno*>
<*um*>EA</*um*>
<*qty*>1</*qty*>
</*aal-entry*>
<*aal-entry*>
<*nsn*><*fsc*>6135</*fsc*><*niin*>-00-935-8738</*niin*></*nsn*>
<*dcpno*>
<*name*>BATTERY,</*name*>
<*desc*>DRY CELL<*desc*>
<*partno*>BA3202UF</*partno*>
<*cageno*>xxxxx</*cageno*>
<*uoc*>5B5</*uoc*>
</*dcpno*>
<*um*>EA</*um*>
<*qty*>4</*qty*>
</*aal-entry*>
<*aal-entry*>
<*nsn*><*fsc*>5820</*fsc*><*niin*>-00-086-7651</*niin*></*nsn*>
<*dcpno*>
<*name*>ANTENNA, AT-784/PRC</*name*><*desc*>(SQD LDR ONLY) (IN-TERIOR-LEFT SPONSON)<*desc*>

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<*partno*>AT-784/PRC</*partno*>
<*cageno*>80058</*cageno*>
<*uoc*>3A3</*uoc*>
</*dcpno*>
<*um*>EA</*um*>
<*qty*>1</*qty*></*aal-entry*></*aal*></*aalwp*>

d. Example of a page-based stylesheet/FOSI output for an Additional Authorization List Work Package <*aalwp*>:

TM9-1375-225-12P 0048 00

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 (NSN). Identifies the stock number of the item to be used for requisitioning purposes.
Column (2), Description, Commercial and Government Entity Code (CAGEC), and Part Number (P/N). 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 (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), Unit of Issue (U/I). Indicates how the item is issued for the National Stock Number shown in column (1).
Column (5), Qty Recm.. Indicates the quantity recommended.

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 (XXXXX). 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

0048 00-1

Figure 157 Example of a page-based stylesheet/FOSI output for an additional authorization list work package <aalwp>.

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33.3.6.1 Additional authorization list ***<aal>***. 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 paragraph 33.3.6.1.1) or at least one AAL entry (***<aal-entry>***). This element ***<aal>*** is equivalent to a ***<table>*** element in a structural table.

a. DTD fragment for ***<aal>***:

```
<!ELEMENT aal (aal-category+ | aal-entry+)>
<!ATTLIST aal
   %bodyatt;
   %secur;>
```

b. Attributes for ***<aal>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.6.1.1 Additional authorization list category of supporting information ***<aal-category>***. 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 paragraph 33.3.6.1.2). There is at least one category in the table.

a. DTD fragment for ***<aal-category>***:

```
<!ELEMENT aal-category (aal-entry)+>
<!ATTLIST aal-category
   catg-name CDATA #REQUIRED
   %bodyatt;
   %secur;>
```

b. Attributes for ***<aal-category>***:

(1) **CATG-NAME** - Specifies the category name which is the heading that will appear in the table.

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.6.1.2 Additional authorization list entry ***<aal-entry>***. The element ***<aal-entry>*** contains entries of an additional authorization list table consisting of one or more NSN(s) (***<nsn>*** see paragraph 34.4.4.16), one description, cagec and part number (***<dcpno>*** see paragraph 33.3.5.1.1.2.2), one unit of issue (***<um>*** see paragraph 33.3.5.1.1.2.2.2) and a quanity (***<qty>*** see paragraph 34.4.6.1.3.1.1). It is equivalent to a "row" element in a structural table.

a. DTD fragment for ***<aal-entry>***:

```
<!ELEMENT aal-entry (nsn+, dcpno, um, qty)>
<!ATTLIST aal-entry
   %bodyatt;
   %secur;>
```

b. Attributes for ***<aal-entry>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.7 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 paragraph 34.4.5), a required maintenance (***<maintenance>*** see paragraph 33.3.3.3.2) . (The paragraph(s) may be entered using an entity reference (see paragraph 36.3.5.2) when the text of the paragraph(s) contains the verbatim statement found in MIL-STD-40051.), and expendable and durable items list (***<explist>*** see paragraph 33.3.7.1).

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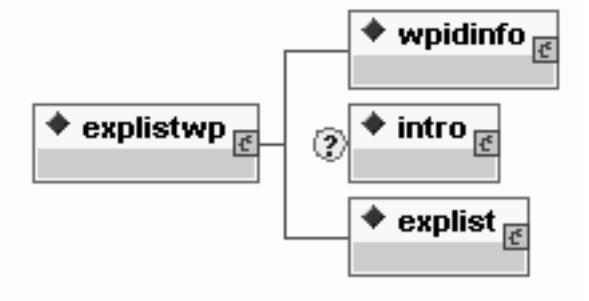

Figure 158 Expendable and durable items list work package DTD hierarchy <explistwp>.

a. DTD fragment for ***<explistwp>***:

```
<!ELEMENT explistwp (wpidinfo, maintenance, 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 paragraph 34.5.11) .

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.7.1 Expendable and durable items table ***<explist>***. 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>***.

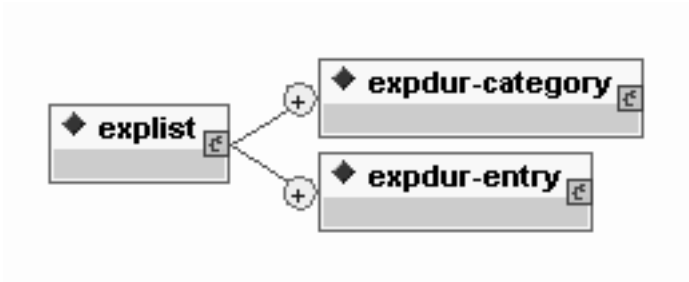

Figure 159 Expendable and durable items list DTD hierarchy <explist>.

a. DTD fragment for ***<explist>***:

```
<!ELEMENT explist (expdur-category+ | expdur-entry+)>
```

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```
<!ATTLIST explist
   %bodyatt;
   %secur;>
```

b. Attributes for ***<explist>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.7.1.1 Expendable and durable items list category of supporting information ***<expdur-category>***. 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 paragraph 33.3.7.1.2). There is at least one category in the table.

a. DTD fragment for ***<expdur-category>***:

```
<!ELEMENT expdur-category (expdur-entry)+>
<!ATTLIST expdur-category
   catg-name CDATA #REQUIRED
   %bodyatt;
   %secur;>
```

b. Attributes for ***<expdur-category>***:

(1) **CATG-NAME** - Specifies the category name which is the heading that will appear in the table.

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.7.1.2 Expendable and durable items list entry ***<expdur-entry>***. The element ***<expdur-entry>*** contains entries for an expendable and durable items list consisting of an item number (***<itemno>*** see paragraph 33.3.7.1.2.1), a maintenance level (***<maintenance>*** see paragraph 33.3.3.3.2), a NSN (***<nsn>*** see paragraph 34.4.4.16), a name (***<name>*** see paragraph 34.4.4.15), the description (***<desc>*** see paragraph 34.4.4.15), a part number (***<partno>***see paragraph 34.4.4.17) and (CAGEC) (***<cageno>***see paragraph 34.4.4.2), and an unit of issue (***<um>*** see paragraph 33.3.5.1.1.2.2.2). It is equivalent to a "row" element in a structural table.

a. DTD fragment for ***<expdur-entry>***:

```
<!ELEMENT expdur-entry (itemno, maintenance, nsn, name, desc,
(partno, cageno), um)>
<!ATTLIST expdur-entry
   %bodyatt;
   %secur;>
```

b. Attributes for ***<expdur-entry>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.7.1.2.1 Item number***<itemno>***. 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 paragraph 34.3.16)

a. DTD fragment for ***<itemno>***:

```
<!ELEMENT itemno (#PCDATA)>
<!ATTLIST itemno
   %refs;
   %secur;>
```

b. Attributes for ***<itemno>***:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.7).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.8 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

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contains identification information required for a work package (***<wpidinfo>*** see paragraph 34.4.5), and a tabular listing of all tools required by the technical equipment manual (-20/AVUM level or above) ***<toolidlist>***.

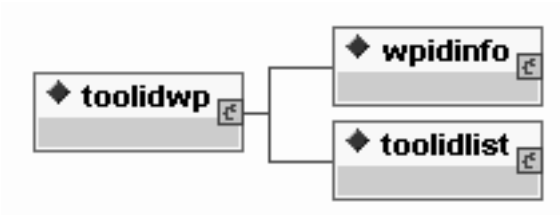

Figure 160 Tool identification list work package DTD hierarchy <toolidwp>.

a. DTD fragment for ***<toolidwp>***:

```
<!ELEMENT toolidwp (wpidinfo, 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 paragraph 34.5.11) .

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.8.1 Tool identification list ***<toolidlist>***. 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 either at least one tool category ***<tool-category>*** or at least one tool entry ***<tool-entry>*** or one or more of both elements ***<tool-category>*** and ***<tool-entry>***.

a. DTD fragment for ***<toolidlist>***:

```
<!ELEMENT toolidlist (tool-category+ | tool-entry+)>
<!ATTLIST toolidlist
   %bodyatt;
   %secur;>
```

b. Attributes for ***<toolidlist>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.8.1.1 Tool identification list category of supporting information***<tool-category>***. The element ***<tool-category>*** is used to represent a table that is subdivided into parts, for example by sub-assemblies. The element contains at least one tool entry (***<tool-entry>*** see paragraph 33.3.8.1.2).

a. DTD fragment for ***<tool-category>***:

```
<!ELEMENT tool-category (tool-entry)+>
```

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```
<!ATTLIST tool-category
   catg-name CDATA #REQUIRED
   %bodyatt;
   %secur;>
```

b. Attributes for ***<tool-category>***:

(1) **CATG-NAME** - Specifies the category name which is the heading that will appear in the table.

(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.8.1.2 Tool identification list entry ***<tool-entry>***. The element ***<tool-entry>*** contains entries of a tool identification list table consisting of one item number (***<itemno>*** see paragraph 33.3.7.1.2.1), name (***<name>*** see paragraph 34.4.4.15), one NSN (***<nsn>*** see paragraph 34.4.4.16), one or more part number(s) (***<partno>*** see paragraph 34.4.4.17), and may have an external reference (***<extref>*** see paragraph 34.4.1.3.3). 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
   %bodyatt;
   %secur;>
```

b. Attributes for ***<tool-entry>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.9 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 paragraph 34.4.5), an introductory section (***<intro>*** see paragraph 34.4.4.12) and mandatory replacement parts list ***<mrpl>***. The generated text for ***<mrplwp>*** the element work package title for is **"Mandatory Replacement Parts List".**

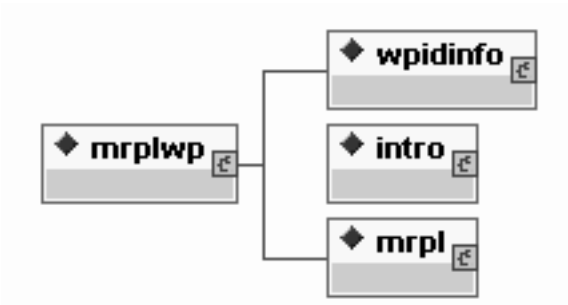

Figure 161 Mandatory Replacement Parts List Work Package DTD Hierarchy <mrplwp>.

a. DTD fragment for ***<mrplwp>***:

```
<!ELEMENT mrplwp (wpidinfo, intro, mrpl)>
<!ATTLIST mrplwp
   wpno   ID  #REQUIRED
   %wprsrc-vals;
   %tracking;
   %wpbodyatt;
   %secur;>
```

b. Attributes for ***<mrplwp>***:

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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 paragraph 34.5.11) .
(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .
(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.9.1 Mandatory Replacement Parts List ***<mrpl>***. The element ***<mrpl>*** A list of all mandatory replacement parts referenced in the initial setups of maintenance work packages.

a. DTD fragment for ***<mrpl>***:

```
<!ELEMENT mrpl (mrpl-category+ | mrpl-entry+)>
<!ATTLIST mrpl
   %bodyatt;
   %secur;>
```

b. Attributes for ***<mrpl>***:
(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.10 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 paragraph 34.4.5), followed by either a critical safety items (***<csi>*** see paragraph 33.3.10.1)and an optional flight safety critical aircraft parts (***<fscap>***see paragraph 33.3.10.2) or a flight safety critical aircraft parts ***<fscap>***. The generated text for ***<csi.fscap.wp>*** the element work package title for is **"Critical Safety Items (CSI) and Flight Safety Critical Aircraft Parts (FSCAP) ".**

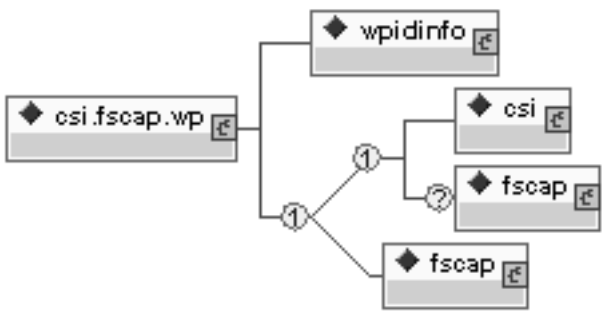

Figure 162 Critical Safety Items and Flight Safety Critical Aircraft Parts (FSCAP) work package DTD hierarchy <csi.fscap.wp>.

a. DTD fragment for ***<csi.fscap.wp>***:

```
<!ELEMENT csi.fscap.wp (wpidinfo, ((csi, fscap?) | fscap))>
<!ATTLIST csi.fscap.wp
   wpno   ID  #REQUIRED
```

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```
%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 paragraph 34.5.11) .

(3) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.10.1 Critical safety items ***<csi>***. The element ***<csi>*** lists the critical safety itemsprovided by the acquiring activity. The element contains the parameter entity ***%p;*** paragraphs (***<para>*** see paragraph 34.4.1.5.3) and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2) and/or procedural text (***<proc>*** see paragraph 34.4.1.8.1).

a. DTD fragment for ***<csi>***:

```
<!ELEMENT csi (%p; | proc)+>
<!ATTLIST csi
   %bodyatt;
   %secur;>
```

b. Attributes for ***<csi>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.10.2 Flight safety critical aircraft parts ***<fscap>***. The element ***<fscap>*** lists all the flight safety critical aircraft parts and installations identified under the FSCAP program. The element contains the parameter entity ***%p;*** paragraphs (***<para>*** see paragraph 34.4.1.5.3) and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2) and/or procedural text (***<proc>*** see paragraph 34.4.1.8.1) and a required flight safety critical aircraft parts table ***<fscap.tab>***. **(Aviation only.)**

a. DTD fragment for ***<fscap>***:

```
<!ELEMENT fscap ((%p; | proc)+, fscap.tab)>
<!ATTLIST fscap
   %bodyatt;
   %secur;>
```

b. Attributes for ***<fscap>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.10.2.1 Flight safety critical aircraft parts table ***<fscap.tab>***. The element ***<fscap.tab>*** flight safety critical aircraft parts table contains a required title (***<title>*** see paragraph 34.4.1.5.1) followed by at least one or more flight safety critical aircraft parts entry ***<fscap-entry>***.

a. DTD fragment for ***<fscap.tab>***:

```
<!ELEMENT fscap.tab (title, fscap-entry+)>
<!ATTLIST fscap.tab
   %bodyatt;
   %secur;>
```

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b. Attributes for ***<fscap.tab>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

c. XML Document Instance for DTD fragment for Flight Safety Critical Aircraft Parts Table ***<fscap.tab>***:

```
<fscap.tab>
<title>Flight Safety Critical Aircraft Parts</title>
<fscap-entry>
<partno>7-211310027-3</partno>
<cageno>02731</cageno>
<name>Cluster Gear</name>
<desc>Process core and surface hardness.</desc>
</fscap-entry>
<fscap-entry>
<partno>7-113100029-3</partno>
<cageno>02731</cageno>
<name>Spur Gear</name>
<desc>Dimensions and contour of root area.</desc>
</fscap-entry>
<fscap-entry>
<partno>7-113100121-3 </partno>
<cageno>02731</cageno>
<name>Nut</name>
<desc>Process surface hardness.</desc>
</fscap-entry>
<fscap-entry>
<partno>7-113100141-3</partno>
<cageno>02731</cageno>
<name>Spindle</name>
<desc>Process core hardness.</desc>
</fscap-entry>
<fscap-entry>
<partno>7-311310016-3</partno>
<cageno>02731</cageno>
<name>Carrier Hub</name>
<desc>Process core and surface hardness.</desc>
</fscap-entry>
<fscap-entry>
<partno>7-211310035-3</partno>
<cageno>02731</cageno>
<name>Gearshaft</name>
<desc>Process core and surface hardness.</desc>
</fscap-entry>
<fscap-entry>
<partno>7-211310039-5</partno>
<cageno>02731</cageno>
<name>Gearshaft</name>
<desc>Process core and surface hardness.</desc>
</fscap-entry>
<fscap-entry>
<partno>7-311310025-3</partno>
<cageno>02731</cageno>
<name>Gear</name>
<desc>Process core and surface hardness.</desc>
</fscap-entry>
```

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d. Example of a page-based stylesheet/FOSI output for a Flight Safety Critical Aircraft Parts Table ***<fscap.tab>***:

Table 1. Flight Safety Critical Aircraft Parts.

PART NUMBER/ CAGEC	NOMENCLATURE	CRITICAL CHARACTERISTICS
7-211310027-3 (02731)	Cluster Gear	Process core and surface hardness.
7-113100029-3 (02731)	Spur Gear	Dimensions and contour of root area.
7-113100121-3 (02731)	Nut	Process surface hardness.
7-113100141-3 (02731)	Spindle	Process core hardness.
7-311310016-3 (02731)	Carrier Hub	Process core and surface hardness.
7-211310035-3 (02731)	Gearshaft	Process core and surface hardness.
7-211310039-5 (02731)	Gearshaft	Process core and surface hardness.
7-311310025-3 (02731)	Gear	Process core and surface hardness.

Figure 163 Example of a page-based stylesheet/FOSI output for a Flight Safety Critical Aircraft Parts Table <fscap.tab>.

33.3.10.2.1.1 Flight safety critical aircraft parts entry ***<fscap-entry>***. The element ***<fscap-entry>*** contain the entries of a flight safety critical aircraft parts list consisting of a part number (***<partno>***see paragraph 34.4.4.17), a NSN (***<nsn>*** see paragraph 34.4.4.16), name (***<name>*** see paragraph 34.4.4.15), and a description (***<desc>*** see paragraph 34.4.4.15). The element ***<fscap-entry>*** is equivalent to a "row" element in a structural table.

a. DTD fragment for ***<fscap-entry>***:

```
<!ELEMENT fscap-entry (partno, name, desc)>
<!ATTLIST fscap-entry
   %bodyatt;
   %secur;>
```

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b. Attributes for ***<fscap-entry>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1) .

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.11 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 paragraph 34.4.5), may be followed by an introductory section (***<intro>*** see paragraph 34.4.4.12), and one or more of the supporting lists: component of end item list (***<coei>*** see paragraph 33.3.5.1), additional authorization list (***<aal>*** see paragraph 33.3.6.1), expendable and durable item list (***<explist>*** see paragraph 33.3.7.1), tool identification list (***<toolidlist>*** see paragraph 33.3.8.1), mandatory replacement parts list (***<mrpl>*** see paragraph 33.3.9.1), critical safety items (***<csi>*** see paragraph 33.3.10.1), and a flight safety critical aircraft parts list (***<fscap>*** see paragraph 33.3.10.2).

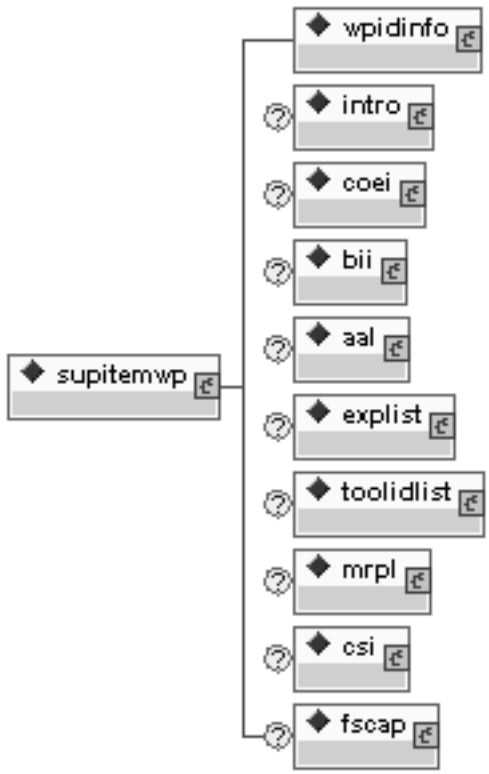

Figure 164 Support items work package DTD hierarchy <supitemwp>.

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;
```

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```
%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 paragraph 34.5.9) .

(4) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

33.3.12 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 paragraph 34.4.5), followed by the parameter entity ***%p;*** paragraphs (***<para>*** see paragraph 34.4.1.5.3) and/or paragraphs with required alert notices (***<specpara>*** see paragraph 34.4.1.1.2) and/or procedural text (***<proc>*** see paragraph 34.4.1.8.1) that may be grouped into section(s) (***<title>*** see paragraph 34.4.1.5.1), or subsection(s) (***<subtitle>*** see paragraph 34.4.1.5.2).

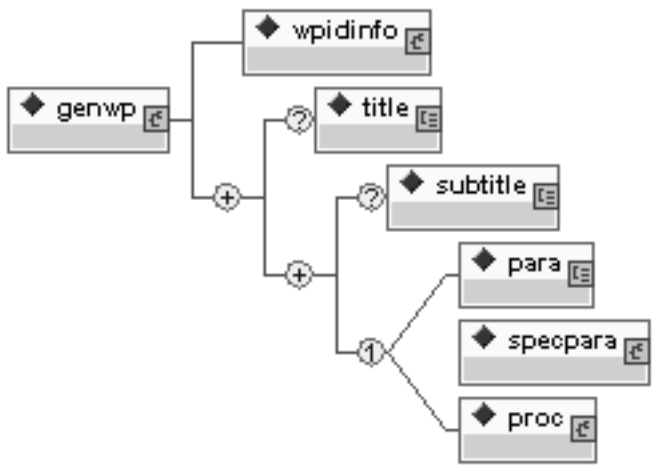

Figure 165 Generic supporting information work package DTD hierarchy.

a. DTD fragment for ***<genwp>***:

```
 <!ELEMENT genwp (wpidinfo, (title?, (subtitle?, (%p;| proc))+)+)>
<!ATTLIST genwp
   wpno   ID  #REQUIRED
   subject  CDATA #REQUIRED
   %wprsrc-vals;
   %tracking;
   %wpbodyatt;
   %secur;>
```

b. Attributes for ***<genwp>***:

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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) **SUBJECT** - Specifies the subject of the work package for database indexing.
(3) **%WPRSRC-VALS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.11) .
(4) **%TRACKING;** - Refer to common parameter entities for a complete description (see paragraph 34.5.9) .
(5) **%WPBODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.10) .
(6) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34 SHARED COMMON ELEMENTS.

34.1 Scope. The following parameter entities and elements are common throughout MIL-STD-2361 and are shared elements used with the various information chapters.

34.2 Applicable documents . Refer to paragraph 2

34.3 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 34.4

34.3.1 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 followed. The parameter entity contains warning statement (**<*warning*>** see 34.4.1.1.3), caution statement (**<*caution*>** see 34.4.1.1.4), and note statement (**<*note*>** see 34.4.1.1.5).

a. DTD fragment for Parameter Entity Alert Notices ***%alert;***:

```
<!ENTITY % alert "(warning*, caution*, note*)">
```

34.3.2 List of common distribution reasons ***%commondistreason;***. The parameter entity ***%commondistreason;*** defines a list of common distribution reasons that are used in most of the distribution statements.

a. DTD fragment for ***%commondistreason;***

```
<!ENTITY % commondistreason "(frgngvt | softwaredoc | crittech |
 adminops | specauth)">
```

34.3.3 Lists ***%list;***. The parameter entity ***%list;*** defines the available list types, which are random (unordered) list (**<*randlist*>** see 34.4.1.2.2), sequential (numbered) list (**<*seqlist*>** see 34.4.1.2.1) and definition list (**<*deflist*>** see 34.4.1.2.3).

a. DTD fragment for Parameter Entity Lists ***%list;***:

```
<!ENTITY % list "seqlist | randlist | deflist">
```

34.3.4 Miscellaneous***%misc;***. The parameter entity ***%misc;*** identifies common miscellaneous elements. The following elements are controls and indicators **<*ctrlind*>**, reading on control or indicator **<*ctrlind-val*>** see paragraph 34.4.4.4), lubricant (**<*lubricant*>** see paragraph 34.4.4.13), page location **<*pageloc*>**, symbol **<*symbol*>**, torque value or limit **<*torque*>**, voltage **<*voltage*>** and null **<*null/*>**

a. DTD fragment for ***%misc;***

```
<!ENTITY % misc "(ctrlind | ctrlind-val | lubricant | pageloc | symbol |
 torque | voltage | null)">
```

34.3.5 Paragraph Type ***%p;***. The parameter entity ***%p;*** identifies the type of paragraph whether it is a specific paragraph (**<*specpara*>** see 34.4.1.1.2) that is associated with warnings (**<*warning*>** see 34.4.1.1.3), cautions (**<*caution*>** see 34.4.1.1.4), and/or notes (**<*note*>** see 34.4.1.1.5) or a general paragraph of text (**<*para*>** see 34.4.1.5.3).

a. DTD fragment for Parameter Entity Paragraph Type ***%p;***:

```
<!ENTITY % p "(para | specpara)">
```

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34.3.6 Part information ***%partinfo;***. The entity ***%partinfo;*** consist of supporting elements providing information on a part. The parameter entity contains: callout ***<callout>*** see 34.4.1.3.2), Department of Defense Ammunition Code***<dodac>*** see 34.4.4.5), drawing name ***<dwgname>*** see 34.4.4.6), drawing number ***<dwgno>*** see 34.4.4.7), model number ***<modelno>*** see 34.4.4.14), name ***<name>*** see 34.4.4.15), NSN ***<nsn>*** see 34.4.4.16), part number ***<partno>*** see 34.4.4.17) and supply catalog ***<sc>*** see 34.4.4.20).

a. DTD fragment for ***%partinfo;***

```
<!ENTITY % partinfo "(callout | dodac | dwgname | dwgno | modelno |
 name | nsn | partno | sc)">
```

34.3.7 Part list ***%partlist;***. The entity ***%partlist;*** is a common grouping of elements to define part's information. The model is used for both frame and page based manuals. The entity consist of the elements callout (***<callout>*** see 34.4.1.3.2), source maintenance recovery code (***<smr>*** see 32.3.3.2.1.2.1), NSN (***<nsn>*** see 34.4.4.16), part number (***<partno>*** see 34.4.4.17), Description and Usable On Code (***<desc-uoc>*** see 32.3.3.2.1.2.2), quanity (***<qty>*** see 34.4.6.1.3.1.1), unit of issue (***<um>*** see 33.3.5.1.1.2.2.2), external reference (***<extref>*** see 34.4.1.3.3), parent part number (***<parent.partno>*** see 32.3.1.1.1), reference description (***<refdes>*** see 32.3.7.1.1.1), maintenance (***<maintenance>*** see 33.3.3.3.2) and graphic (***<graphic>*** see 34.4.3.1.2).

a. DTD fragment for ***%partlist;***

```
<!ENTITY % partlist "(callout?, smr, nsn?, (partno, cageno), desc-uoc, qty,
 um?, extref?, parent.partno?, refdes?, maintenance?, graphic?)">
```

34.3.8 Parsed data ***%pcdata;***. The parameter entity ***%pcdata;*** describes the basic elements used as a minimum for many elements.. The parameter entity contains: narrative text parsable character data (#PCDATA) , emphasis (***<emphasis>*** see 34.4.1.6.3), external reference (***<extref>*** see 34.4.1.3.3), footnote (***<ftnote>*** see 34.4.1.4.1), footnote reference (***<ftnref>*** see 34.4.1.4.2), index reference marker (***<indxref>*** see 34.4.1.3.4), subscript (***<subscrpt>*** see 30.3.2.1.1.1.6.1), superscript (***<supscrpt>*** see 30.3.2.1.1.1.6.2) and internal cross reference (***<xref>*** see 34.4.1.3.6).

a. DTD fragment for ***%pcdata;***

```
<!ENTITY % pcdata "#PCDATA | emphasis | extref | ftnote | ftnref | indxref |
 subscrpt | supscrpt | xref">
```

34.3.9 Section 508 of the Americans With Disabilities Act ***%section508;***. The entity is to provide support under the Section 508 of the Americans With Disabilities Act. Public law Section 508 is the requirement for the disabled to view information on the Internet. The requirement specifies that a graphic must have a description of the contents of the illustration. The parameter entity contains: detailed description ***<disable.long>*** or brief description***<disable.short>***.

a. DTD fragment for ***%section508;***

```
<!ENTITY % section508 "(disable.long | disable.short)">
```

34.3.10 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 34.4.1.5.1) followed by an optional subsection title (***<subtitle>*** see 34.4.1.5.2) followed by parameter entity paragraph type ***%p;***.

a. DTD fragment for Parameter Entity Titled Paragraph ***%titldtext;***:

```
<!ENTITY % titldtext "(title, (subtitle?, (%p;))+)">
```

34.3.11 Trim paragraph type model. ***%trim.content;***. The entity ***%trim.content;*** describes the elements used for trim paragraph type elements ***<trim.para>>*** see paragraph 34.4.1.5.4) and ***<trim.specpara.>*** see paragraph 34.4.1.1.1). The model contains entity common text ***%text;*** see paragraph 34.3.16), anchor reference (***<anchor>*** see paragraph 34.4.1.3.1), internent address (***<internet>*** see paragraph 34.4.4.1.6), proponent information (***<proponent>*** see paragraph 34.4.4.19), phone number (***<phone>*** see paragraph 34.4.4.18), and instruction plate or decal (***<instructpl>*** see paragraph 34.4.4.11).

a. DTD fragment for ***%trim.content;***

```
<!ENTITY % trim.content "%text; | anchor | internet | proponent | phone |
 instructplt">
```

34.3.12 Trimmed titled paragraph. ***%trim.titldtext;***. The parameter entity ***%trimtitldtext;*** is provided to allow sections and/or subsections in general data format. The parameter entity contains a section title (***<title>*** see

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34.4.1.5.1) followed by an optional subsection title (***<subtitle>*** see 34.4.1.5.2) followed by parameter entity trim paragraph type ***%trim.p;***.

a. DTD fragment for ***%trim.titldtext;***

```
<!ENTITY % trim.titldtext "(title, (subtitle?, (%trim.p;))+)">
```

34.3.13 Trimmed paragraph type. ***%trim.p;***. Used primarily for information inside alerts. Describes the elements used for trim paragraph type elements ***<trim.para>***see paragraph 34.4.1.5.4) and ***<trim.specpara>*** see paragraph 34.4.1.1.1).

a. DTD fragment for ***%trim.p;***

```
<!ENTITY % trim.p "(trim.para | trim.specpara)">
```

34.3.14 Troubleshooting data ***%tsdata;***. The parameter entity ***%tsdata;*** describes the troubleshooting work package main procedures. The entity consists of the elements (***<sysdesc>*** see paragraph 30.3.4.1.1), (***<interconnect>*** see paragraph 30.3.4.1.2), (***<testflow>***see paragraph 30.3.4.1.3), (***<funcdepend>*** see paragraph 30.3.4.1.4), (***<schematic>*** see paragraph 30.3.4.1.5), (***<comp-locator>*** see paragraph 30.3.4.1.6) and (***<harness-indx>*** see paragraph 30.3.4.1.7).

a. DTD fragment for ***%tsdata;***:

```
<!Entity %tsdata (sysdesc?, (interconnect | testflow | funcdepend |
      schematic | comp-locator | harness-indx)*)>
```

34.3.15 Volume separation ***%vol.group;***. The entity ***%vol.group;*** is the volume separations for large TMs. The element contains a volume front matter (***<volume>*** see 27.2.1.3) and/or volume rear matter (***<vol-rear>*** see 27.2.1.4).

a. DTD fragment for ***%vol.group;***

```
<!ENTITY % vol.group "(volume | (vol-rear, volume?))?">
```

34.3.16 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 the entity parsable data ***%pcdata;*** see paragraph 34.3.8) or part information ***%partinfo;*** see paragraph 34.3.6), or miscellaneous ***%misc;*** see paragraph 34.3.4) or change ***<change>*** see paragraph 34.4.1.7).

a. DTD fragment for Parameter Entity Inline Text ***%text;***:

```
<!ENTITY % text "%pcdata; | %partinfo; | %misc; | change">
```

34.4 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.

34.4.1 Structural elements. The elements have structural or formatting type information and is subdivided into various functional groups.

34.4.1.1 Alert notices.

34.4.1.1.1 Reduced specific paragraph associated with an alert ***<trim.specpara>***. The element ***<trim.specpara>*** reduced specific paragraph associated with an alert has the same usage as the element specific paragraph associated with an alert ***<specpara>*** see paragraph 34.4.1.1.2), but reducing the content model. Several elements require the removal of graphic, figure, table, and list.

a. DTD fragment for Reduced Specific Paragraph Associated with an Alert ***<trim.specpara>***:

```
<!ELEMENT trim.specpara (%alert;, trim.para, note*)>
<!ATTLIST trim.specpara
   parahead CDATA #IMPLIED
    %hcp.esd;
   %bodyatt;
    %secur;>
```

b. Attributes for ***<trim.specpara>***:

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- **PARAHEAD** - Used to enter a paragraph heading before the paragraph narrative. The composition system specifies the text to be inlined and bold.
- **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .
- **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
- **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.1.1.2 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 34.4.1.5.3) 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>***:

```
<!ELEMENT specpara (warning*, caution*, note*, para, note*)>
<!ATTLIST specpara
   %bodyatt;
   %secur;>
```

b. Attributes for ***<specpara>***:

- **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
- **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.1.1.3 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 one or more trimmed general paragraph(s) (***<trim.para>*** see 34.4.1.5.4) and/or sequence list(s) (***<seqlist>*** see 34.4.1.2.1) and maybe preceded by one or more icon set(s) (***<icon-set>*** see 34.4.3.3) to display hazardous icon symbol to identify quickly the type of warning being discussed.

a. DTD fragment for Warning Statement ***<warning>***:

```
<!ELEMENT warning (icon-set*, (trim.para | seqlist)+)>
<!ATTLIST warning
   keyword   CDATA   #IMPLIED
   xrefid   IDREF   #IMPLIED
   warnsum-entry  (0 | 1)  #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.
(4) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.1.1.4 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 one or more trimmed general paragraph(s) (***<trim.para>*** see 34.4.1.5.4) and/or sequence list(s) (***<seqlist>*** see 34.4.1.2.1) and maybe preceded by one or more icon set(s) (***<icon-set>*** see 34.4.3.3) to display hazardous icon symbol to identify quickly the type of warning being discussed.

a. DTD fragment for Caution Statement ***<caution>***:

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```
<!ELEMENT caution (icon-set*, (trim.para | seqlist)+)>
<!ATTLIST caution
   keyword   CDATA   #IMPLIED
   xrefid   IDREF   #IMPLIED
   warnsum-entry  0 | 1   #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 paragraph 34.5.1).

(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.1.1.5 Note statement ***<note>***. A procedure, condition, or statement that is important enough to highlight as a note. The element ***<note>*** contains either one or more trimmed paragraph(s) ***<trim.para>*** see 34.4.1.5.4) used to describe instructions and/or at least one sequence list (***<seqlist>*** see 34.4.1.2.1) which provides a sequential number or letter list used to describe the instruction to follow.

a. DTD fragment for Note Statement ***<note>***:

```
<!ELEMENT note (trim.para | seqlist)+>
<!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 paragraph 34.5.1).

(4) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.1.2 List elements.

34.4.1.2.1 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 34.4.1.5.1) 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. The list item maybe preceded by one or more alert statements ***%alert;***.

a. DTD fragment for ***<seqlist>***:

```
<!ELEMENT seqlist (title?, (%alert;, item)+)>
<!ATTLIST seqlist
   %bodyatt;
   %secur;>
```

b. Attributes for ***<seqlist>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.1.2.1.1 Item ***<item>***. The element ***<item>*** is an entry in a sequential or random list or an equipment item. The element contains the entity trimmed contents ***%trim.content;*** see 34.3.11) or sequence list(s)

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<seqlist> see 34.4.1.2.1) or random list(s) ***<randlist>*** see 34.4.1.2.2) or graphic(s) ***<graphic>*** see 34.4.3.1.2) or figure(s) ***<figure>*** see 34.4.3.1)..

a. DTD fragment for ***<item>***:

```
<!ELEMENT item (%trim.content; | seqlist | randlist | graphic | figure)*>
<!ATTLIST item
   %bodyatt;
   %secur;>
```

b. Attributes for ***<item>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.1.2.2 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 34.4.1.5.1) followed by at least one list item ***<item>*** see 34.4.1.2.2). 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+)>
<!ATTLIST randlist
   bullet  (0 | 1) '0'
   prefix  CDATA  #IMPLIED
   %bodyatt;
   %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) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(4) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.1.2.3 Definition List ***<deflist>***. The element ***<deflist>*** identifies a list of terms and definitions. The element contains an optional title list (***<title>*** (see 34.4.1.5.1) followed by one or more term definition row(s) ***<term.def>***.

a. DTD fragment for ***<deflist>***:

```
<!ELEMENT deflist (title?, (term.def)+)>
<!ATTLIST deflist
   %bodyatt;
   %secur;>
```

b. Attributes for ***<deflist>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.1.2.3.1 Term definition ***<term.def>***. The element ***<term.def>*** identifies an information row containing a term and a definition. Equivalent to entering "row" in a structural table. The element contains a term ***<term>*** (see paragraph 34.4.1.2.3.1.1) and a definition ***<def>*** (see 34.4.1.2.3.1.2).

a. DTD fragment for ***<term.def>***:

```
<!ELEMENT term.def (term, def)>
<!ATTLIST term
   id  ID  #REQUIRED>
```

b. Attributes for ***<term.def>***:

(1) **ID** - Specifies the identifier of the term definition element.

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34.4.1.2.3.1.1 Term ***<term>***. The element ***<term>*** is a word, phrase, acronym, symbol or abbreviation to be defined in a definition list. The element may contain one or more narrative text #PCDATA parsable character data see 34.3.8), and/or emphasis ***<emphasis>*** see 34.4.1.6.3) and/or subscript ***<subscrpt>*** see 30.3.2.1.1.1.6.1) and/or superscript ***<supscrpt>*** see 30.3.2.1.1.1.6.1) and/or cross reference ***<xref>*** see 34.4.1.3.6).

a. DTD fragment for ***<term>***:

```
<!ELEMENT term (#PCDATA | emphasis | subscrpt | supscrpt | xref)*>
<!ATTLIST term
   %bodyatt;
   %secur;>
```

b. Attributes for ***<term>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.1.2.3.1.2 Definition ***<def>***. The element ***<def>*** is a definition for the term in a definition list. The element contains a general paragraph (***<para>*** see 34.4.1.5.3).

a. DTD fragment for ***<def>***:

```
<!ELEMENT def (para)>
<!ATTLIST def
   %bodyatt;
   %secur;>
```

b. Attributes for ***<term>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.1.3 Reference elements.

34.4.1.3.1 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.

a. DTD fragment for ***<anchor>***:

```
<!ELEMENT anchor 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.

34.4.1.3.2 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 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.

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(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.

34.4.1.3.3 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 EMPTY>
<!ATTLIST extref
   docno  CDATA  #IMPLIED
   revno  CDATA  #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.
(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 paragraph 34.5.8).

34.4.1.3.4 Index marker reference ***<indxref>***. The element ***<indxref>*** establishes a document location and index text to be referenced within the alphabetic index (***<aindx>*** see 27.2.1.2.2). The element is EMPTY and all pertinent information is entered through its attributes.

a. DTD fragment for Index Marker Reference ***<indxref>***:

```
<!ELEMENT indxref EMPTY>
<!ATTLIST indxref
   ref1  CDATA  #IMPLIED
   ref2  CDATA  #IMPLIED
   ref3  CDATA  #IMPLIED
   ref4  CDATA  #IMPLIED
   id   ID  #IMPLIED
   indxref  IDREF  #IMPLIED>
```

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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.

34.4.1.3.5 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 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 paragraph 34.5.8).

34.4.1.3.6 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 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
   termdefid  IDREF  #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).

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(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) **ITEMNO** - Supplies the reference number of the item in an entry such as overhaul inspection procedure item, PMCS entry, tool entry, entry of mandatory replacement parts list and preventive maintenance inspection entry.
(7) **ITEMID** - Supplies an identifier of the item, such as SSSN, LRU, part number, or reference designator.
(8) **CALLOUT** - Supplies the literal callout value.
(9) **TABLEID** - Reference to a table identifier. The composition system will generate the literal "table " and the table number.
(10) **TSLOCID** - Reference to a troubleshooting procedure object locator identifier defined in ***<tswp>***. The composition system will generate the literal "page" and the page number.
(11) **PAGELOCID** - References to a page location identifier defined in ***<pageloc>***. The composition system will generate the literal "page" and the page number.
(12) **PRETEXT** - Supplies any text that precedes the cross reference when resolved for display.
(13) **POSTTEXT** - Supplies any text that follows the cross reference when resolved for display.References the unique identifier of a term and definition.
(14) **TERMDEFID** - References the unique identifier of a term and definition.
(15) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.1.4 Footnote elements.

34.4.1.4.1 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) **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.
(3) **LABEL** - Used to specify the number or symbol assigned to the footnote and overrides autogeneration of the number or symbol by the composition system.
(4) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.1.4.2 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 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.

34.4.1.5 Textual elements.

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34.4.1.5.1 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 element contains parsable character data (***%pcdata ;*** see paragraph 34.3.8). Generally, the narrative is entered using #PCDATA.

a. DTD fragment for Title ***<title>***:

```
<!ELEMENT title (%pcdata;)>
<!ATTLIST title
   %bodyatt;
   %secur;>
```

b. Attributes for ***<title>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.1.5.2 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 parsable character data (***%pcdata ;*** see paragraph 34.3.8). Generally, the narrative is entered using #PCDATA.

a. DTD fragment for Subtitle ***<subtitle>***:

```
<!ELEMENT subtitle (%text;)>
<!ATTLIST subtitle
   %bodyatt;
   %secur;>
```

b. Attributes for ***<subtitle>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.1.5.3 General paragraph ***<para>***. The element ***<para>*** is used for paragraphs of text and can also contain embedded in line formatting, structural, referencing and content specific elements which may be contained within either one or more of the parameter entity in line text ***%text;*** see paragraph 34.3.16), and/or parameter entity lists ***%list;*** see 34.3.3), and/or figure anchor ***<anchor>*** see 34.4.1.3.1), and/or internet ***<internet>*** see 34.4.4.1.6), and/or figure ***<figure>*** see 34.4.3.1), and/or graphic ***<graphic>*** see 34.4.3.1.2), and/or proponent ***<proponent>*** see 34.4.4.19), and/or table ***<table>*** see 34.4.2.1), and/or telephone ***<phone>*** see 34.4.4.18), and/or decals and instruction plates ***<instructplt>*** see 34.4.4.11), and/or verbatim text ***<verbatim>*** see 34.4.1.6.5).

a. DTD fragment for General Paragraph ***<para>***:

```
<!ELEMENT para (%text; | %list; | anchor | internet | figure |graphic
 | proponent | table | phone | instructplt | verbatim)*>
<!ATTLIST para
   bullet  (0 |1) '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 paragraph 34.5.2) .

(4) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

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(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.1.5.4 Reduced paragraph ***<trim.para>***. The element ***<trim.para>*** reduced paragraph has the same usage as general paragraph (***<para>*** see paragraph 34.4.1.5.3), but reducing the content model. Several elements require the removal of graphic, figure, table, and list.

a. DTD fragment for Reduced Paragraph ***<trim.para>***:

```
<!ELEMENT trim.para (trim.content)*>
<!ATTLIST trim.para
   %hcp.esd;
    parahead  CDATA  #IMPLIED
    %bodyatt;
    %secur;>
```

b. Attributes for ***<trim.para>***:

(1) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

(2) **PARAHEAD** - Used to enter a paragraph heading before the paragraph narrative. The composition system specifies the text to be inlined and bold.

(3) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(4) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.1.6 Formatting elements.

34.4.1.6.1 Detailed disability statement ***<disable.long>***. The element ***<disable.long>*** detailed disability statement is used in accordance with public law section 508, computer assisted informations require the disabled to able to interprete the information. This element allows a detailed description on the illustration or table being displayed.

a. DTD fragment for Detailed Disability Statement ***<disable.long>***:

```
<!ELEMENT disable.long (trim.para)+>
```

34.4.1.6.2 Simple disability statement ***<disable.short>***. The element ***<disable.short>*** simple disability statement is used in accordance with public law section 508, computer assisted informations require the disabled to able to interprete the information. This element allows a short or simple description on the illustration or table cell being displayed.

a. DTD fragment for Simple Disability Statement ***<disable.short>***:

```
<!ELEMENT disable.short (%pcdata;)*>
```

34.4.1.6.3 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 34.3.16) 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
```

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```
        |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.
(g) "2LINE" - Specifies the data is two lines of underlined text.
(h) "SMALLCAPS" - Specifies the data is small capitalized all text.
(i) "OVERLINE" - Specifies the data is over line text.
(j) "COLOR" - Specifies the data is color text.

(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).

34.4.1.6.4 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 EMPTY>
<!ATTLIST null
   insert  (NA | NR |
      dash | secure |
      none)    'none'
   %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) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.1.6.5 Verbatim ***<verbatim>***. The element ***<verbatim>*** is used for text to be presented verbatim as it is sequenced in the text stream and implies that XML record ends (carriage returns) are to be treated as a new line separators. The element is presented in a monospaced font and contains narrative text #PCDATA parasable character data.

a. DTD fragment for Verbatim ***<verbatim>***:

```
<!ELEMENT verbatim #PCDATA>
<!ATTLIST verbatim
   xml:space  (preserve) #FIXED 'preserve'
   %secur;>
```

b. Attributes for ***<verbatim>***:

(1) **XML:SPACE** - Specifies XML will perserve space and line break characters.

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.1.7 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 from either one or

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more of the parameter entity ***%pcdata;*** see 34.3.8), and/or parameter entity ***%partinfo;*** see 34.3.6) and/or parameter entity ***%misc;*** see 34.3.4).

a. DTD fragment for Changed Text ***<change>***:

```
<!ELEMENT change (%pcdata; | %partinfo; | %misc;)*>
<!ATTLIST change
   level CDATA  #REQUIRED
   date  CDATA   #IMPLIED
   change (mod | add |
     delete)  #IMPLIED
   mark  (0 |1)  #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 paragraph 34.5.8).

34.4.1.8 Procedural elements.

34.4.1.8.1 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>*** see paragraph34.3.1), parameter entity alert statements (***%alert;*** see 34.3.1), optional and repeatable general paragraph(s) ***<para>*** see paragraph34.4.1.5.3), and followed by required and repeatable step(s) ***<step1>*** see paragraph34.4.1.8.2).

a. DTD fragment for Procedure ***<proc>***:

```
<!ELEMENT proc (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 paragraph 34.5.2) .
(4) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.1.8.2 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 34.3.5) followed by optional second-level step ***<step2>***.

a. DTD fragment for Primary Step Level ***<step1>***:

```
<!ELEMENT step1 ( (%p;), step2*))>
<!ATTLIST step1
   crewmember  CDATA  #IMPLIED
   applic   CDATA  #IMPLIED
```

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```
%qa;
%hcp.esd;
%bodyatt;
%secur;>
```

b. Attributes for ***<step1>***:

(1) **CREWMEMBER** - The crew member specifically assigned to the step.
(2) **APPLIC** - Specifies the equipment configuration applicable to the step.
(3) **%QA;** - Refer to common parameter entities for a complete description (see paragraph 34.5.6) .
(4) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .
(5) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(6) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.1.8.3 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 34.3.5) followed by optional third-level step ***<step3>***.

a. DTD fragment for Second-Level Procedural Step ***<step2>***:

```
<!ELEMENT step2 ((%p;), step3*)>
<!ATTLIST step2
   crewmember  CDATA  #IMPLIED
   applic   CDATA  #IMPLIED
   %qa;
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<step2>***:

(1) **CREWMEMBER** - The crew member specifically assigned to the step.
(2) **APPLIC** - Specifies the equipment configuration applicable to the step.
(3) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .
(4) **%QA;** - Refer to common parameter entities for a complete description (see paragraph 34.5.6) .
(5) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(6) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.1.8.4 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 34.3.5) followed by one or more optional fourth-level step ***<step4>***.

a. DTD fragment for Third-Level Procedural Step ***<step3>***:

```
<!ELEMENT step3 ((%p;)+, step4*)>
<!ATTLIST step3
   crewmember  CDATA  #IMPLIED
   applic   CDATA  #IMPLIED
   %qa;
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<step3>***:

(1) **CREWMEMBER** - The crew member specifically assigned to the step.
(2) **APPLIC** - Specifies the equipment configuration applicable to the step.
(3) **%QA;** - Refer to common parameter entities for a complete description (see paragraph 34.5.6) .
(4) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .

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(5) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(6) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.1.8.5 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 34.3.5) followed by one or more optional fifth-level step ***<step5>***.

a. DTD fragment for Fourth-Level Procedural Step ***<step4>***:

```
<!ELEMENT step4 ((%p;)+, step5*)>
<!ATTLIST step4
   crewmember  CDATA  #IMPLIED
   applic   CDATA  #IMPLIED
   %qa;
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<step4>***:
(1) **CREWMEMBER** - The crew member specifically assigned to the step.
(2) **APPLIC** - Specifies the equipment configuration applicable to the step.
(3) **%QA;** - Refer to common parameter entities for a complete description (see paragraph 34.5.6) .
(4) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .
(5) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(6) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.1.8.6 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 34.3.5) followed by one or more optional sixth-level step ***<step6>***.

a. DTD fragment for Fifth-Level Procedural Step ***<step5>***:

```
<!ELEMENT step5 ((%p;), step6*)>
<!ATTLIST step5
   crewmember  CDATA  #IMPLIED
   applic   CDATA  #IMPLIED
   %qa;
   %hcp.esd;
   %bodyatt;
   %secur;>
```

b. Attributes for ***<step5>***:
(1) **CREWMEMBER** - The crew member specifically assigned to the step.
(2) **APPLIC** - Specifies the equipment configuration applicable to the step.
(3) **%QA;** - Refer to common parameter entities for a complete description (see paragraph 34.5.6) .
(4) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .
(5) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(6) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.1.8.7 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 34.3.5)

a. DTD fragment for Sixth-Level Procedural Step ***<step6>***:

```
<!ELEMENT step6 ((%p;)+))>
<!ATTLIST step6
   crewmember  CDATA  #IMPLIED
   applic   CDATA  #IMPLIED
```

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```
%qa;
%hcp.esd;
%bodyatt;
%secur;>
```

b. Attributes for ***<step6>***:

(1) **CREWMEMBER** - The crew member specifically assigned to the step.
(2) **APPLIC** - Specifies the equipment configuration applicable to the step.
(3) **%QA;** - Refer to common parameter entities for a complete description (see paragraph 34.5.6) .
(4) **%HCP.ESD;** - Refer to common parameter entities for a complete description (see paragraph 34.5.2) .
(5) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(6) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.2 Table elements.

34.4.2.1 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 34.4.1.5.1) followed by table group(s) (***<tgroup>***).

a. DTD fragment for CALS Table ***<table>***:

```
<!ELEMENT table (title, tgroup+)>
<!ATTLIST table
   tabstyle NMTOKEN    #IMPLIED
   tablenum (0 | 1)    '1'
   tocentry (0 | 1)    '1'
   frame  (top | bottom |
       topbot | all |
       sides | none)  #IMPLIED
   colsep  (0 | 1)    #IMPLIED
   rowsep  (0 | 1)    #IMPLIED
   orient  (port | land)  #IMPLIED
   %bodyatt;
   %secur;>
```

b. Attributes for ***<table>***:

(1) **TABSTYLE** - Specified an unique table style defined in the stylesheet.
(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.

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(b) “LAND” - The table writing direction is 90° counterclockwise to marginal text.

(8) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(9) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.2.1.1 Table group ***<tgroup>***. The element ***<tgroup>*** identifies a new portion of a table. If a new ***<colspec>*** is provided, it replaces a previous one. The element contains optional column specification(s) (***<colspec>***), an optional table header (***<thead>***), 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 (colspec*, thead?, tbody)>
<!ATTLIST tgroup
   cols  CDATA     #REQUIRED
   tgroupstyle NMTOKEN    #IMPLIED
   colsep  (0 | 1)    #IMPLIED
   rowsep  (0 | 1)    #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 stylesheet.

(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.

(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 paragraph 34.5.8).

34.4.2.1.1.1 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 EMPTY>
<!ATTLIST colspec
   colnum CDATA    #IMPLIED
   colname NMTOKEN    #IMPLIED
   align  (left | right |
      center | justify
```

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```
    | char)   #IMPLIED
  charoff CDATA    #IMPLIED
  char  CDATA    #IMPLIED
  colwidth CDATA    #IMPLIED
  colsep (0 | 1)    #IMPLIED
  rowsep (0 | 1)    #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.

(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.

34.4.2.1.1.2 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 34.4.2.1.1.1) and rows (***<row>*** see 34.4.2.1.1.3.1).

a. DTD fragment for Table Head ***<thead>***:

```
<!ELEMENT thead (colspec*, row+)>
<!ATTLIST thead
   valign (top | middle | bottom) 'bottom'
   %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.

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.2.1.1.3 Table body ***<tbody>***. Identifies the body of the table. The element contains rows ***<row>*** .

a. DTD fragment for Table Body ***<tbody>***:

```
<!ELEMENT tbody (row)+>
<!ATTLIST tbody
   valign (top | middle | bottom) 'top'
```

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```
%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.

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.2.1.1.3.1 Row ***<row>***. The element row ***<row>*** identifies the row information in a table group. The element contains one or more cell entries ***<entry>***.

a. DTD fragment for Row ***<row>***:

```
<!ELEMENT row (entry)+>
<!ATTLIST row
   rowsep (0 |1) #IMPLIED
   %bodyatt;
   %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) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.2.1.1.3.1.1 Entry ***<entry>***. The element entry ***<entry>*** identifies an entry in a table. When no attribute value is specified in "COLNAME", "NAMEST" or "NAMEEND", the cell entries will fill consecutively in the column. The element contains table content in line text of either one or more of the parameter entity ***%text;*** see 34.3.16) and/or parameter entity***%list;*** see 34.3.3)and/or***%trim.p;*** see 34.3.13), and/or graphic(s) ***<graphic>*** see 34.4.3.1.2), and/or procedure ***<proc>*** see 34.4.1.8.1), and/or step 1 ***<step1>*** see 34.4.1.8.2), and/or title ***<title>*** see 34.4.1.5.1).

a. DTD fragment for Entry ***<entry>***:

```
<!ELEMENT entry (%text; | %list; | %trim.p; | graphic
 | proc | step1 | title)*>
<!ATTLIST entry
   colname NMTOKEN    #IMPLIED
   namest  NMTOKEN    #IMPLIED
   nameend NMTOKEN    #IMPLIED
   morerows CDATA    '0'
   colsep  (1 | 0)    #IMPLIED
   rowsep  (1 | 0)    #IMPLIED
   rotate  (0 | 1)    '0'
   valign  (top | bottom |
      middle)    'top'
   align  (left | right |
      center | justify |
      char)    #IMPLIED
   charoff CDATA     #IMPLIED
   char  CDATA     #IMPLIED
   %bodyatt;
   %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.

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(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) **MOREROWS** - Specifies if more then one row is needed.
(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) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(13) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.3 Figures and graphics.

34.4.3.1 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 34.4.1.5.1), followed by either at least one subfigure ***<subfig>*** or at least one illustration ***<graphic>*** followed by optional table(s) (***<table>*** see 34.4.2.1) or legend(s) (***<legend>***. The verbatim narrative group contains the verbatim narrative ***<verbatim>*** and a figure title (***<title>*** see 34.4.1.5.1).

a. DTD fragment for Figure ***<figure>***:

```
<!ELEMENT figure ((title?, (subfig+ | graphic+), (table | legend)*)
|(verbatim, title))>
<!ATTLIST figure
   application (page | frame | both)  'both'
   figtype  (normal-page | fo-rear)  'normal-page'
   fo-size  (25x11 | 35x11 | 45x11)  #IMPLIED
   tocentry  (0 | 1)      '1'
   placement  (above | above-anchor |
```

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```
        below | below-anchor |
        facingpg | facing-anchor |
        immediate)     'immediate'
    orient  (port | land)    'port'
    %bodyatt;
    %secur;>
```

b. Attributes for ***<figure>***:

(1) **APPLICATION** - The illustration is used in page-based, frame-based, or both presentation applications.

(2) **FIGTYPE** - Specifies the figure size and location.

(a) "NORMAL-PAGE" - Current page size and inline with the narrative.

(b) "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 attribute **FIGTYPE** value is other than "normal-page, "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.

(b) "ABOVE-ANCHOR" - Float the graphic to the top of the same page the figure anchor (***<anchor>*** see 34.4.1.3.1) 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 34.4.1.3.1) 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 34.4.1.3.1) 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) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(8) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.3.1.1 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 34.4.2.1) or legend(s) (***<legend>*** see 34.4.3.1.3).

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.

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(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.
   (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).

34.4.3.1.2 Illustration ***<graphic>***. The element ***<graphic>*** identifies an illustration, which is contained in an external entity. The illustration is stored either as vector (MIL-PRF-28000 or MIL-PRF-28003) or raster (MIL-PRF-28002) data and is used as an illustration in the document.

a. DTD fragment for Illustration ***<graphic>***:

```
<!ELEMENT graphic (%section508;, mapref*)>
<!ATTLIST graphic
    boardno  ENTITY                          #REQUIRED
    graphsty NMTOKEN                         #IMPLIED
    reprowid CDATA                           #IMPLIED
    reprodep CDATA                           #IMPLIED
    hscale   CDATA                           #IMPLIED
    vscale   CDATA                           #IMPLIED
    scalefit (0 | 1)                        #IMPLIED
    hplace   (left | right | center | none) #IMPLIED
    vplace   (top | bottom | middle | non)  #IMPLIED
    rotation CDATA                           #IMPLIED
    %bodyatt;
    %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 stylesheet/FOSI is to be used.

(3) **REPROWID** - Specifies the repro area width.

(4) **REPRODEP** - Specifies the repro area depth.

(5) **HSCALE** - Specifies the horizontal scaling factor. The number 100 is unscaled graphic.

(6) **VSCALE** - Specifies the vertical scaling factor. The number 100 is unscaled graphic.

(7) **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.

(8) **HPLACE** - Specifies the horizontal placement in the available repro area. The position is flushed left, flushed right, centered or none.

(9) **VPLACE** - Specifies the vertical placement in the available repro area. The position is top, bottom, centered or none.

(10) **ROTATION** - Specifies the degree of rotation of the graphic.

(11) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(12) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

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34.4.3.1.3 Legend ***<legend>***. The element ***<legend>*** identifies a legend occurring as part of a figure. The element contains a list of callouts (***<callout>*** see paragraph 34.4.1.3.2) followed by callout definition (***<def>*** see paragraph 34.4.1.2.3.1.2).

a. DTD fragment for Legend ***<legend>***:

```
<!ELEM (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.

34.4.3.2 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-PRF-28000 or MIL-PRF-28003) or raster (MIL-PRF-28002) data.

a. DTD fragment for Symbol ***<symbol>***:

```
<!ELEMENT symbol (%section508;)
<!ATTLIST symbol
   symbolcall  CDATA           #IMPLIED
   symbolnot   CDATA           #IMPLIED
   symbolid    ID              #REQUIRED
   symrefid    IDREF           #IMPLIED
   symlocid    IDREF           #IMPLIED
   reprowid    NUTOKEN         #IMPLIED
   reprodep    NUTOKEN         #IMPLIED
   hscale      NUTOKEN         #IMPLIED
   vscale      NUTOKEN         #IMPLIED
   scalefit    (0 | 1)         #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) **SYMBOLNOT** - The external entity containing the symbol's graphic file.
(3) **SYMBOLID** - Specifies the symbol identifier.
(4) **SYMREFID** - References a symbol identifier for the external entity name.
(5) **SYMLOCID** - References a symbol identifier for the location attributes.
(6) **REPROWID** - Specifies the repro area width.
(7) **REPRODEP** - Specifies the repro area depth.
(8) **HSCALE** - Specifies the horizontal scaling factor. The number 100 is unscaled graphic.
(9) **VSCALE** - Specifies the vertical scaling factor. The number 100 is unscaled graphic.
(10) **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.
(11) **HPLACE** - Specifies the horizontal placement in the available repro area. The position is flushed left, flushed right, centered or none.
(12) **VPLACE** - Specifies the vertical placement in the available repro area. The position is top, bottom, centered or none.
(13) **ROTATION** - Specifies the degree of rotation of the graphic.
(14) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.3.3 Icon set ***<icon-set>***. The element ***<icon-set>*** is the hazard icon-set to identify graphically the dangerous condition associated to the warning statement.

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a. DTD fragment for Icon Set ***<icon-set>***:

```
<!ELEMENT icon-set (%section508;)>
<!ATTLIST icon-set
    boardno  ENTITY #REQUIRED
    reprowid CDATA  #IMPLIED
    reprodep CDATA  #IMPLIED>
```

b. Attributes for ***<icon-set>***:

(1) **BOARDNO** - Specifies the name of the entity containing the external icon file.
(2) **REPROWID** - Specifies the repro area width.
(3) **REPRODEP** - Specifies the repro area depth.

34.4.4 Content specified elements.

34.4.4.1 Address ***<address>***. The element ***<address>*** is used to enter the address. The element contains the service nomenclature (***<servnomen>*** see 27.2.1.1.1.3), followed by one or more street(s) (***<street>*** see 34.4.4.1.1), a required city (***<city>*** see 34.4.4.1.2), a required state (***<state>*** see 34.4.4.1.3), a required zip code (***<zip>*** see 34.4.4.1.4), an optional country (***<country>*** see 34.4.4.1.5), may have one or more phone(s) (***<phone>*** see 34.4.4.18) and may have one or more internet addresses (***<internet>*** see 34.4.4.1.6).

a. DTD fragment for Address ***<address>***:

```
<!ELEMENT address (servnomen, street+, city, state, zip, country?,
 phone*, internet*)>
<!ATTLIST address
   %bodyatt;
   %secur;>
```

b. Attributes for ***<address>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.4.1.1 Street ***<street>***. The element ***<street>*** is used to enter the name of the street. The element contains narrative text #PCDATA parasable character data.

a. DTD fragment for Street ***<street>***:

```
<!ELEMENT street (#PCDATA)>
```

34.4.4.1.2 City ***<city>***. The element ***<city>*** is used to enter the name of the city. The element contains narrative text #PCDATA parasable character data.

a. DTD fragment for City***<city>***:

```
<!ELEMENT city (#PCDATA)>
```

34.4.4.1.3 State ***<state>***. The element ***<state>*** is used to enter the name of the state. The element contains narrative text #PCDATA parasable character data.

a. DTD fragment for State ***<statey>***:

```
<!ELEMENT state (#PCDATA)>
```

34.4.4.1.4 Zip ***<zip>***. The element ***<zip>*** is used to enter the name of the zip. The element contains narrative text #PCDATA parasable character data.

a. DTD fragment for Zip ***<zip>***:

```
<!ELEMENT zip (#PCDATA)>
```

34.4.4.1.5 Country ***<country>***. The element ***<country>*** is used to enter the name of the zip. The element contains narrative text #PCDATA parasable character data.

a. DTD fragment for Country ***<country>***:

```
<!ELEMENT country (#PCDATA)>
```

34.4.4.1.6 Internet ***<internet>***. The element ***<internet>*** is used to enter the email address or the address of the homepage. The element contains either email address ***<email>*** or homepage address ***<homepage>***.

a. DTD fragment for Country ***<internet>***:

```
<!ELEMENT internet (email | homepage)>
```

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```
!ATTLIST internet
   narrative     CDATA  #IMPLIED
   show.address (0 | 1) '1'>
```

b. Attributes for ***<internet>***:

(1) **NARRATIVE** - Narrative to use instead of the email or home page address.

(2) **SHOW.ADDRESS** - Show the internet address with narrative attribute text.

34.4.4.2 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 34.3.16) 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
   %secur;>
```

b. Attributes for ***<cageno>***:

(1) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.4.3 Control/Indicator ***<ctrlind>***. The element ***<ctrlind>*** control or indicator can be embedded within the text stream to further identify the data. The element contains parsable character data (***%pcdata ;*** see paragraph 34.3.8). Generally, the narrative is entered using #PCDATA.

a. DTD fragment for Control/Indicator ***<ctrlind>***:

```
<!ELEMENT ctrlind (%pcdata;)*>
<!ATTLIST ctrlind
   %bodyatt;>
```

b. Attributes for ***<ctrlind>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

34.4.4.4 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 narrative text #PCDATA parasable character data.

a. DTD fragment for Control/Indicator Value ***<ctrlind-val>***:

```
<!ELEMENT ctrlind-val (#PCDATA)>
<!ATTLIST ctrlind-val
   %bodyatt;
   measurement CDATA #IMPLIED>
```

b. Attributes for ***<ctrlind-val>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **MEAUREMENT** - Measurement value (i.e. feet, meter, mile).

34.4.4.5 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. The element contains narrative text #PCDATA parasable character data

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 paragraph 34.5.7).

34.4.4.6 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 either contains narrative text #PCDATA parasable character data, and/or subscript ***<subscrpt>*** and/or superscript ***<supscrpt>***.

a. DTD fragment for Drawing Name ***<dwgname>***:

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```
<!ELEMENT dwgname (#PCDATA | subscrpt | supscrpt)*>
<!ATTLIST dwgname
   %bodyatt;>
```

b. Attributes for ***<dwgname>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

34.4.4.7 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 narrative text #PCDATA parsable character data.

a. DTD fragment for Drawing Number ***<dwgno>***:

```
<!ELEMENT dwgno (#PCDATA)>
<!ATTLIST dwgno
   %bodyatt;>
```

b. Attributes for ***<dwgno>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

34.4.4.8 Electronic mail ***<email>***. The element ***<email>*** is used to enter the email address. The element is EMPTY and all pertinent information is entered using its attribute **address**.

a. DTD fragment for Electronic Mail ***<email>***:

```
<!ELEMENT email EMPTY)>
<!ATTLIST email
   address CDATA #REQUIRED>
```

34.4.4.9 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 34.3.16) 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-par
   %bodyatt;>
```

b. Attributes for ***<flghtsafe-part>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

34.4.4.10 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 34.3.10).

a. DTD fragment for General or Introductory Information ***<geninfo>***:

```
<!ELEMENT geninfo (%titldtext;)+>
<!ATTLIST geninfo
   %bodyatt;
   %secur;>
```

b. Attributes for ***<geninfo>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.4.11 Instruction plates and decals ***<instructplt>***. The element ***<instructplt>*** is used to specify the decals and instruction plates that are located on the equipment. This element may include one or more paragraph(s) (***<para>*** see 34.4.1.5.3) each of which may be preceded by a figure (***<figure>*** see 34.4.3.1).

a. DTD fragment for ***<instructplt>***:

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```
<!ELEMENT instructplt (graphics*)>
<!ATTLIST instructplt
   %bodyatt;
   %secur;>
```

b. Attributes for ***<instructplt>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.4.12 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 34.3.10).

a. DTD fragment for Introductory ***<intro>***:

```
<!ELEMENT intro (%titldtext;)+>
<!ATTLIST intro
   %bodyatt;
   %secur;>
```

b. Attributes for ***<intro>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.4.13 Lubricant ***<lubricant>***. The element ***<lubricant>*** identifies a lubricant within text, primarily within a lubrication work package. The element contains narrative text (#PCDATA) parsable characters.

a. DTD fragment for Lubricant ***<lubricant>***:

```
<!ELEMENT lubricant (#PCDATA)>
<!ATTLIST lubricant;
   %bodyatt;>
```

b. Attributes for ***<lubricant>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

34.4.4.14 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
   %bodyatt;>
```

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) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

34.4.4.15 Name ***<name>***. The element ***<name>*** is used to identify the official name of a component/assembly. The element contains parsable character data (***%pcdata ;*** see paragraph 34.3.8). Generally, the narrative is entered using #PCDATA.

a. DTD fragment for Name ***<name>***:

```
<!ELEMENT name (%pcdata;)>
<!ATTLIST name
   applic    CDATA  #IMPLIED
   partno    CDATA  #IMPLIED
```

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```
      nsn       CDATA  #IMPLIED
      %bodyatt;
      %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) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(5) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.4.16 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. The element contains the Federal Supply Class (FSC) (***<fsc>*** see paragraph 34.4.4.16.1) and the National Item Identification Number (NIIN) (***<niin>*** see paragraph 34.4.4.16.2).

a. DTD fragment for NSN ***<nsn>***:

```
<!ELEMENT nsn (fsc, niin)>
<!ATTLIST nsn
   eic   CDATA  #IMPLIED
   %bodyatt;>
```

b. Attributes for ***<nsn>***:

(1) **EIC** - Used to specify the end item code of the current NSN, if applicable.
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

34.4.4.16.1 Federal supply classification ***<fsc>***. The element ***<fsc>*** Federal Supply Classification is the first four-digits code for the NSN. It is the classification of all items of supply used by the federal government. Each item of supply will be included in one and only one FSC. The FSC is made up of 2 two-digit numeric codes: the federal supply group and the federal supply class. Each Federal Supply Classification (FSC) code is derived from the Federal Supply Groups (FSG). The FSG is the first two digits of the FSC code. The element contains narrative text (#PCDATA) parsable character data.

a. DTD fragment for NSN ***<fsc>***:

```
<!ELEMENT fsc (#PCDATA)>
```

34.4.4.16.2 National Item Identification Number (NIIN) ***<niin>***. The element ***<niin>*** is the National Item Identification Number (NIIN) and is a nine-digit code that identifies each item of supply. The first two numbers of the NIIN represent the National Codification Bureau Code. This code identifies the country that entered the item into the supply system. The remaining seven digits are sequentially assigned and serve to individually identify each item in the Federal Catalog System (FCS). The element contains narrative text (#PCDATA) parsable character data.

a. DTD fragment for NSN ***<niin>***:

```
<!ELEMENT niin (#PCDATA)>
```

34.4.4.17 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. The element contains narrative text #PCDATA parsable character data.

a. DTD fragment for Part Number ***<partno>***:

```
<!ELEMENT partno (#PCDATA)>
<!ATTLIST partno
   nsn   CDATA  #IMPLIED
   eic   CDATA  #IMPLIED
   %bodyatt;>
```

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) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

34.4.4.18 Phone ***<phone>***. The element ***<phone>*** is used to enter the telephone number. The element contains narrative text (#PCDATA) parsable characters.

a. DTD fragment for phone ***<phone>***:

```
<!ELEMENT phone (#PCDATA)>
<!ATTLIST phone
   type    (dsn | com1 | cell | other) #REQUIRED
   receive (voice | fax) 'voice'
   other   CDATA                       #IMPLIED>
```

b. Attributes for ***<phone>***:

(1) **TYPE** - Specifies the type of the phone.
(2) **RECEIVE** - Specifies if the phone is being used as a voice or a fax
(3) **OTHER** - Specifies for other data in reference to the phone.

34.4.4.19 Proponent ***<proponent>***. The element ***<proponent>*** is used to enter the name (***<name>*** see 34.4.4.15) and address (***<address>*** see 34.4.4.1) of the supporter of the activity.

a. DTD fragment for Proponent***<proponent>***:

```
<!ELEMENT proponent (name, address)>
<!ATTLIST proponent
   %bodyatt;>
```

b. Attributes for ***<proponent>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

34.4.4.20 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 narrative text #PCDATA parsable character data.

a. DTD fragment for Supply Catalog ***<sc>***:

```
<!ELEMENT sc (#PCDATA)>
<!ATTLIST sc
   %bodyatt;>
```

b. Attributes for ***<sc>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

34.4.4.21 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 contains one or more general paragraph(s) ***<para>***.

a. DTD fragment for Scope ***<scope>***:

```
<!ELEMENT scope (para)+>
<!ATTLIST scope
   %bodyatt;
   %secur;>
```

b. Attributes for ***<scope>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.4.22 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 34.4.4.15), with optional part number(s) (***<partno>*** see 34.4.4.17), equipment model number(s) (***<modelno>*** see 34.4.4.14), and/or NSN(s) (***<nsn>*** see 34.4.4.16).

a. DTD fragment for Title Page ***<titlepg>***:

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```
<!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) "DEPOT" – Applies to depot maintenance level.
(b) "OPERATOR" – Applies to operator maintenance level.
(c) "GENSUP" – Applies to general support (GS) maintenance level.
(d) "DIRSUP" – Applies to direct support (DS) maintenance level.
(e) "UNITLVL" – Applies to unit maintenance level.
(f) "INTER" – Applies to intermediate (DS/GS) maintenance level.
(g) "AVUM-AVIM" – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.
(h) "TMLVLS" – Applies to all maintenance levels.

34.4.4.23 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 narrative text #PCDATA parsable character data.

a. DTD fragment for Torque Value ***<torque>***:

```
<!ELEMENT torque (#PCDATA)>
<!ATTLIST torque
   %bodyatt;
   measurement  CDATA  #IMPLIED>
```

b. Attributes for ***<torque>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **MEASUREMENT** - Units measuring the torque (lb-in).

34.4.4.24 Voltage ***<voltage>***. The element ***<voltage>*** identifies a critical voltage measurement embedded in the text. The element contains narrative text #PCDATA parsable character data.

a. DTD fragment for Voltage ***<voltage>***:

```
<!ELEMENT voltage (#PCDATA)>
<!ATTLIST voltage
   %bodyatt;
   measurement CDATA #IMPLIED>
```

b. Attributes for ***<voltage>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **MEASUREMENT** - Units the volts are measured with.

34.4.4.25 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 hyper-link. The element is EMPTY and the work package number is entered using its attribute **wpref**.

a. DTD fragment for Work Package Number ***<wpno>***:

```
<!ELEMENT wpno EMPTY>
<!ATTLIST wpno
   wpref  idref  #REQUIRED
   %secur;>
```

b. Attributes for ***<wpno>***:

(1) **WPREF** -

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(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 paragraph 34.5.8).

34.4.5 Work package identification information ***<wpidinfo>***. The element ***<wpidinfo>*** lists the identification information required for a work package. The element contains a maintenance level ***<maintlvl>*** (see paragraph 34.4.5.1), end item nomenclature ***<eicnomen>*** (see paragraph 34.4.5.2) , title ***<title>*** (see 34.4.1.5.1), an optional applicable configuration ***<appconfig>*** (see paragraph 34.4.5.3) and an optional supersedure notice ***<wpsupersede>*** (see paragraph 34.4.5.4).

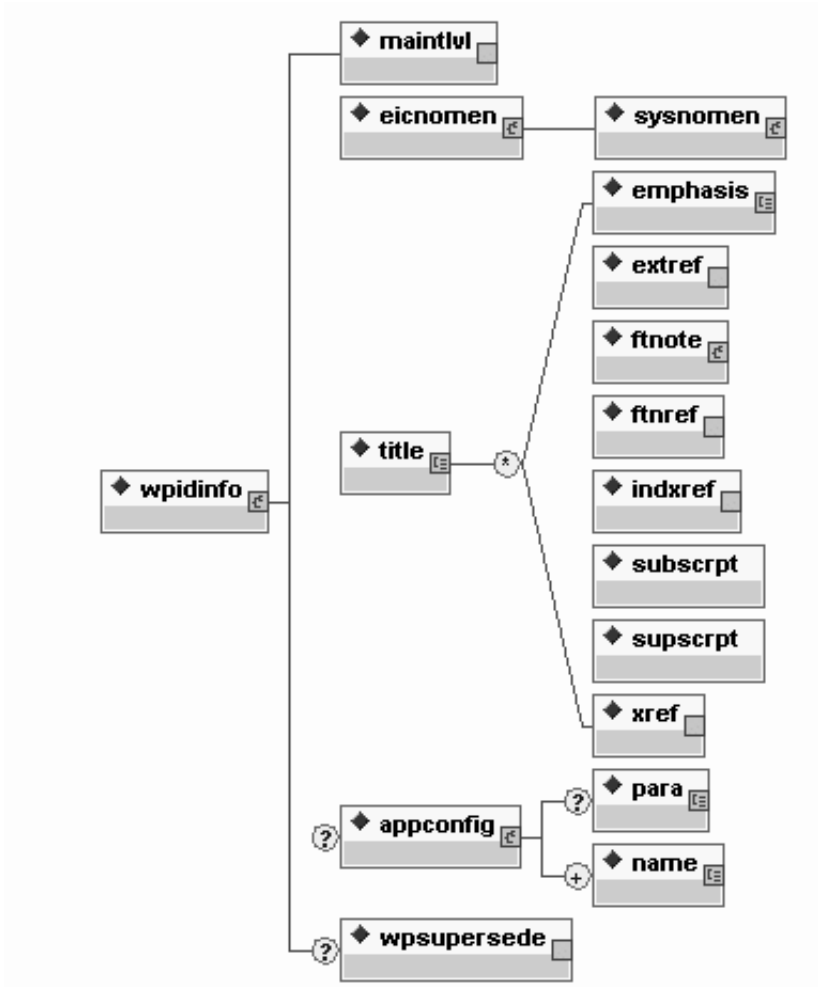

Figure 166 Work package identification information DTD hierarchy <wpidinfo>.

a. DTD fragment for Work Package Identification Information ***<wpidinfo>***:

```
<!ELEMENT wpidinfo (maintlvl, eicnomen, title, appconfig?, wpsupersede?)>
```

34.4.5.1 Maintenance level ***<maintlvl>***. The element ***<maintlvl>*** maintenance level is the work package maintenance level. The element is EMPTY and the level of maintenance is entered using its attribute **level**.

a. DTD fragment for Maintenance Level ***<maintlvl>***:

```
<!ELEMENT maintlvl EMPTY>
<!ATTLIST maintlvl
   level (depot | operator |
```

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```
            gensup | dirsup |
            unitlvl | inter |
            avum-avim | tmlvls)  #REQUIRED>
```

b. Attributes for ***<maintlvl>***:

(1) **LEVEL** - Specifies the work package maintenance level.

(a) "DEPOT" – Applies to depot maintenance level.
(b) "OPERATOR" – Applies to operator maintenance level.
(c) "GENSUP" – Applies to general support (GS) maintenance level.
(d) "DIRSUP" – Applies to direct support (DS) maintenance level.
(e) "UNITLVL" – Applies to unit maintenance level.
(f) "INTER" – Applies to intermediate (DS/GS) maintenance level.
(g) "AVUM-AVIM" – Applies to aviation unit (AVUM) and intermediate (AVIM) maintenance level.
(h) "TMLVLS" – Applies to all maintenance levels.

34.4.5.2 End item nomenclature ***<eicnomen>***. The element ***<eicnomen>*** contains the nomenclature of the end item and the system, subsystem, equipment or component name ***<sysnomen>*** (see paragraph 34.4.5.2.1) covered in the work package.

a. DTD fragment for End Item Nomenclature ***<eicnomen>***:

```
<!ELEMENT eicnomen (sysnomen)>
```

34.4.5.2.1 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. The element contains a required name ***<name>*** (see paragraph 34.4.4.15), one or more group(s) consisting of either NSN ***<nsn>*** (see paragraph 34.4.4.16), model number ***<modelno>*** (see paragraph 34.4.4.14)and a part number ***<partno>*** (see paragraph 34.4.4.17)followed by a required end-item code ***<eic>*** (see paragraph 34.4.5.2.1.1).

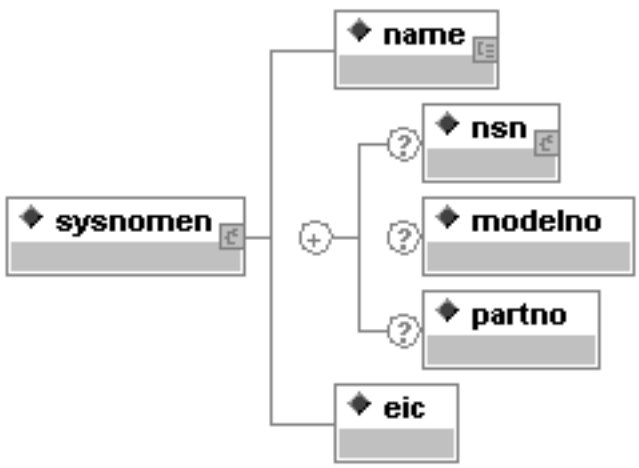

Figure 167 System, subsystem, equipment or component name DTD hierarchy <sysnomen>.

a. DTD fragment for System, Subsystem, Equipment or Component Name ***<sysnomen>***:

```
<!ELEMENT sysnomen (name, (nsn?, modelno?, partno?)+, eic)>
<!ATTLIST sysnomen
   pretext  CDATA  #IMPLIED
   %bodyatt;
   %secur;>
```

b. Attributes for ***<sysnomen>***:

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(1) **PRETEXT** - Used to specify any text that precedes the external reference when resolved for display.
(2) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(3) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.5.2.1.1 End item code ***<eic>***. 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/NMWR. The element contains (#PCDATA see paragraph 34.3.8).

a. DTD fragment for ***<eic>***:

```
<!ELEMENT eic (#PCDATA)>
<!ATTLIST eic
   %bodyatt;
   %secur;>
```

b. Attributes for ***<eic>***:
(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.5.3 Applicable configuration ***<appconfig>***. The element ***<appconfig>*** defines the applicable configurations that lists the configurations covered by the work package. The element may contain a paragraph ***<para>*** and requires one or more name(s) (***<name>*** see paragraph 34.4.4.15) .

a. DTD fragment for Applicable Configuration ***<appconfig>***:

```
<!ELEMENT appconfig (para?, name+)>
<!ATTLIST appconfig
   %bodyatt;
   %secur;>
```

b. Attributes for ***<appconfig>***:
(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).
(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.5.4 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 its data is derived from its attributes.

a. DTD fragment for Supersedure Notice ***<wpsupersede>***:

```
<!ELEMENT wpsupersede EMPTY>
<!ATTLIST wpsupersede
   supersede.wpseq  CDATA   #REQUIRED
   supersede.dated  CDATA   #REQUIRED
   from.tmno        CDATA   #IMPLIED
   supersed.secur   (0 | 1) '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.

34.4.6 Work package initial setup.

34.4.6.1 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:

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test equipment list (***<testeqp>*** see 34.4.6.1.1), tools list (***<tools>*** see 34.4.6.1.2), expendable materials and parts required list, (***<mtrlpart>*** see 34.4.6.1.3), personnel requirements (***<persnreq>*** see 34.4.6.1.4), drawing requirements (***<dwgreq>*** see 34.4.6.1.7), document reference materials (***<refs>*** see 34.4.6.1.5), , equipment condition (***<eqpconds>*** see 34.4.6.1.6), special environment ***<specenv>*** see 34.4.6.1.8), and estimated time to complete the task (***<time.to.comp>*** see 34.4.6.1.9) or null (***<null/>*** see 34.4.1.6.4). Each setup category may only be referenced once.

a. DTD fragment for Work Package Setup Information ***<wpinfo>***:

```
<!ELEMENT wpinfo ((testeqp, tools?, mtrlpart?, persnreq?, ref?, eqpconds?,
 dwgreq?, specenv?, time.to.comp?) | (tools, mtrlpart?, persnreq?, ref?,
 eqpconds?, dwgreq?, specenv?, time.to.comp?) | (mtrlpart, persnreq?, ref?,
 eqpconds?, dwgreq?, specenv?, time.to.comp?) | (persnreq, ref?, eqpconds?,
 dwgreq?, specenv?, time.to.comp?) | (ref, eqpconds?, dwgreq?, specenv?,
 time.to.comp?) | (eqpconds, dwgreq?, specenv?, time.to.comp?) |
 (dwgreq, specenv?, time.to.comp?) | (specenv, time.to.comp?) |
 time.to.comp | null)>
<!ATTLIST wpinfo
   %bodyatt;
   %secur;>
```

b. Attributes for ***<wpinfo>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.6.1.1 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 one or more test equipment setup item(s) (***<testeqp-setup-item>*** see paragaraph 34.4.6.1.1.1).

a. DTD fragment for Test Equipment List ***<testeqp>***:

```
<!ELEMENT testeqp (testeqp-setup-item)+>
```

34.4.6.1.1.1 Test equipment setup item ***<testeqp-setup-item>***. The element ***<testeqp-setup-item>*** test equipment setup item is an element that wraps each item in the test equipment initial setup. Information is entered identifying the equipment/tool name (***<name>*** see paragraph 34.4.4.15), identifying number (***<identno>*** see paragraph 34.4.6.1.1.1.1) , and may contain an setup item reference information (***<itemref>*** see paragraph 34.4.6.1.1.1.2).

a. DTD fragment for Test Equipment Setup Item DTD Hierarchy ***<testeqp-setup-item>***:

```
<!ELEMENT testeqp-setup-item (name, identno, itemref?)>
```

34.4.6.1.1.1.1 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 34.4.4.17) and CAGEC (***<cageno>*** see 34.4.4.2) , and/or model number (***<modelno>*** see 34.4.4.14), and/orTM number (***<tmno>*** see 27.2.1.1.1.1.1.2), and/or NSN (***<nsn>*** see 34.4.4.16), and/or supply category (***<sc>*** see 34.4.4.20).

a. DTD fragment for Identifying Number ***<identno>***:

```
<!ELEMENT identno ((partno, cageno) | modelno | tmno | nsn |
sc)+>
<!ATTLIST identno
   %bodyatt;
   %secur;>
```

b. The attributes for ***<identno>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.6.1.1.1.2 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 34.4.1.3.6), or a cross reference external to the document (***<extref>*** see 34.4.1.3.3).

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a. DTD fragment for Setup Item Reference Information ***<itemref>***:

```
<!ELEMENT itemref (xref | extref)>
```

34.4.6.1.2 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 ***<tools-setup-item>*** .

a. DTD fragment for Tools ***<tools>***:

```
<!ELEMENT tools (tools-setup-item)+>
```

34.4.6.1.2.1 Tools setup item ***<tools-setup-item>***. The element ***<tools-setup-item>*** test equipment setup item is an element that wraps each item in the test equipment initial setup. Information is entered identifying the equipment/tool name (***<name>*** see paragraph 34.4.4.15), identifying number (***<identno>*** see paragraph 34.4.6.1.1.1.1) , and may contain an setup item reference information (***<itemref>*** see paragraph 34.4.6.1.1.1.2).

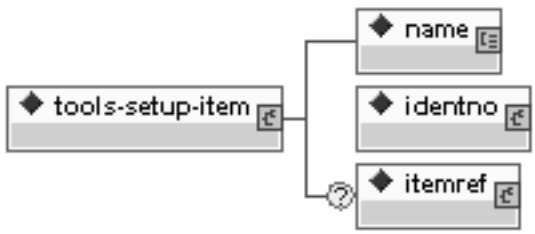

Figure 168 Tools setup item DTD hierarchy <tools-setup-item>.

a. DTD fragment for Test Equipment Setup Item DTD Hierarchy ***<tools-setup-item>***:

```
<!ELEMENT tools-setup-item (name, identno, itemref?)>
```

34.4.6.1.3 Materials/Parts required ***<mtrlpart>***. The element ***<mtrlpart>*** materials/parts required is the list of expendable materials and parts required to perform the procedures in the work package. It consists of at least one materials/parts required setup item(s) (***<mtrlpart-setup-item>*** .

a. DTD fragment for Materials/Parts Required ***<mtrlpart>***:

```
<!ELEMENT mtrlpart (mtrlpart-setup-item)+>
<!ATTLIST mtrlpart
   %refs;
   %secur;>
```

b. Attributes for ***<mtrlpart>***:

(1) **%REFS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.7).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.6.1.3.1 Materials/Parts required setup item ***<mtrlpart-setup-item>***. The element ***<mtrlpart-setup-item>*** materials/parts required setup item is an element that wraps each item in the materials/parts equipment initial setup. Information is entered identifying the required materials/parts name (***<name>*** see paragraph 34.4.4.15) and the required part number (***<partno>*** see paragraph 34.4.4.17) and CAGEC (***<cageno>*** see paragraph 34.4.4.2). and may contain a setup item quantity (***<qty>*** see paragraph 34.4.6.1.3.1.1), item reference information (***<itemref>*** see paragraph 34.4.6.1.1.1.2) and mandatory replacement part (***<mrp>*** see paragraph 34.4.6.1.3.1.2).

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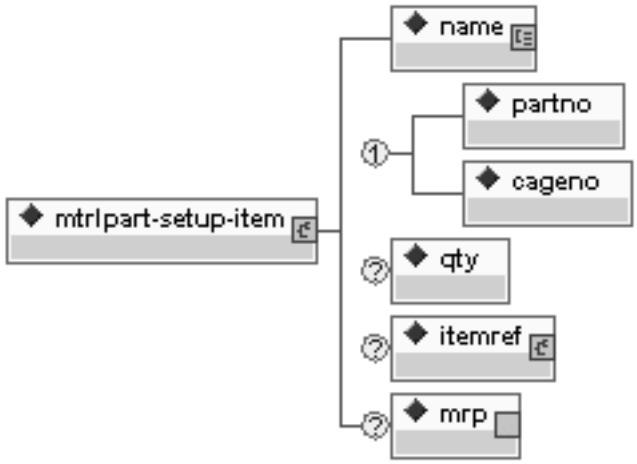

Figure 169 Materials/Parts required setup item DTD hierarchy <mtrlpart-setup-item>.

a. DTD fragment for Materials/Parts Required Setup Item DTD Hierarchy ***<mtrlpart-setup-item>***:

```
<!ELEMENT mtrlpart-setup-item (name, (partno, cageno), qty?, itemref?, mrp?)>
```

34.4.6.1.3.1.1 Quantity ***<qty>***. The element quantity ***<qty>*** indicates the recommended quantity.

a. The DTD fragment Quantity ***<qty>***:

```
<!ELEMENT qty (#PCDATA)>
<!ATTLIST qty
   %bodyatt;
   %secur;>
```

b. The attributes for ***<qty>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.6.1.3.1.2 Mandatory replacement parts ***<mrp>***. The element ***<mrp>*** mandatory replacement parts is a element within the work package setup information to identify all items/parts that must be replaced during repair and overhaul of equipment.

a. DTD fragment for Mandatory Replacement Parts DTD Hierarchy ***<mrp>***:

```
<!ELEMENT mrp EMPTY>
```

34.4.6.1.4 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 personnel required setup item(s) (***<persnreq-setup-item>*** .

a. DTD fragment for Personnel Required ***<persnreq>***:

```
<!ELEMENT persnreq (persnreq-setup-item)+>
<!ATTLIST persnreq
   %bodyatt;
   %secur;>
```

b. Attributes for ***<persnreq>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.6.1.4.1 Personnel required setup item ***<persnreq-setup-item>***. The element ***<persnreq-setup-item>*** personnel required setup item is an element that wraps each item in the materials/parts equipment initial setup. Information is entered identifying the required materials/parts name (***<name>*** see paragraph 34.4.4.15). Military

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Occupational Specialty (MOS) name identification (***<nameid>*** see paragraph 34.4.6.1.4.1.1) and quantity of personel (***<qty>*** see paragraph 34.4.6.1.3.1.1) data may be entered following name ***<name>***.

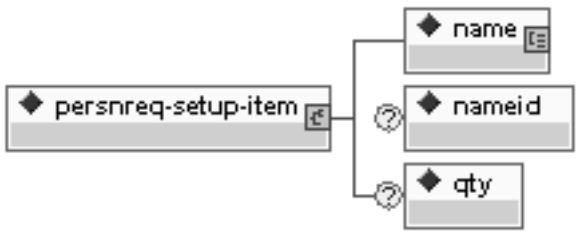

Figure 170 Personnel required setup item DTD hierarchy <persnreq-setup-item>.

a. DTD fragment for Personnel Required Setup Item DTD Hierarchy ***<persnreq-setup-item>***:

```
<!ELEMENT persnreq-setup-item (name, nameid?, qty?)>
```

34.4.6.1.4.1.1 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 narrative text #PCDATA parsable character data.

a. DTD fragment for Military Occupational Specialty (MOS) ***<nameid>***:

```
<!ELEMENT nameid (#PCDATA)>
<!ATTLIST nameid
   %bodyatt;
   %secur;>
```

b. Attributes for ***<nameid>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.6.1.5 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 reference required setup item(s) (***<ref-setup-item>*** see 34.4.6.1.5.1).

a. DTD fragment for Work Package Reference Material ***<ref>***:

```
<!ELEMENT ref (ref-setup-item)+>
```

34.4.6.1.5.1 Reference required setup item ***<ref-setup-item>***. The element ***<ref-setup-item>*** personnel required setup item is an element that wraps each item in the materials/parts equipment initial setup. Information is entered identifying the required cross-reference (***<xref>*** see paragraph 34.4.1.3.6) or the external cross-reference (***<extref>*** see paragraph 34.4.1.3.3) that is being referenced.

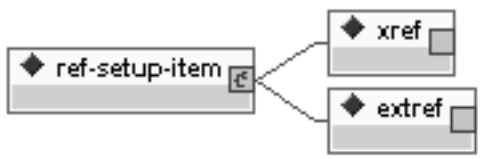

Figure 171 Reference required setup item DTD hierarchy <ref-setup-item>.

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a. DTD fragment for Reference Required Setup Item DTD Hierarchy ***<ref-setup-item>***:

```
<!ELEMENT ref-setup-item (xref | extref)>
```

34.4.6.1.6 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 setup item (***<eqpconds-setup-item>*** .

a. DTD fragment for Equipment Condition ***<eqpconds>***:

```
<!ELEMENT eqpconds (eqpconds-setup-item)+>
```

34.4.6.1.6.1 Equipment condition required setup item ***<eqpconds-setup-item>***. The element ***<eqpconds-setup-item>*** personnel required setup item is an element that wraps each item in the materials/parts equipment initial setup. Information is entered identifying the required cross-reference***<xref>*** or the external cross-reference ***<extref>*** that is being referenced.

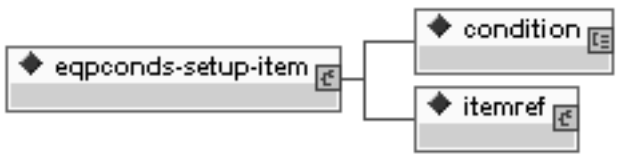

Figure 172 Equipment condition setup item DTD hierarchy <eqpconds-setup-item>.

a. DTD fragment for Equipment Condition Required Setup Item DTD Hierarchy ***<eqpconds-setup-item>***:

```
<!ELEMENT eqpconds-setup-item (condition, itemref)>
```

34.4.6.1.6.1.1 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 34.3.16) which allows the embedding of data elements. Generally, the narrative is entered using #PCDATA.

a. DTD fragment for Condition Statement ***<condition>***:

```
<!ELEMENT condition (%text;)*>
<!ATTLIST condition
   %bodyatt;
   %secur;>
```

b. Attributes for ***<condition>***:

(1) **%BODYATT;** - Refer to common parameter entities for a complete description (see paragraph 34.5.1).

(2) **%SECUR;** - Refer to common parameter entities for a complete description (see paragraph 34.5.8).

34.4.6.1.7 Drawing requirements ***<dwgreq>***. The element drawing requirements ***<dwgreq>*** lists drawings required to perform the tasks within the work package but which are not included in the work package. The element contains at least one drawing setup item ***<dwgreq-set-up-item>***.

a. DTD fragment for Drawing Requirements ***<dwgreq>***:

```
<!ELEMENT dwgreq (dwgreq-setup-item)+>
```

34.4.6.1.7.1 Drawing required setup item ***<dwgreq-setup-item>***. The element ***<dwgreq-setup-item>*** drawing required setup item is an element that wraps each item in the materials/parts equipment initial setup. Information is entered identifying the required drawing name (***<dwgname>*** see paragraph 34.4.4.6) and the drawing number (***<dwgno>*** see paragraph 34.4.4.7) that is being referenced.

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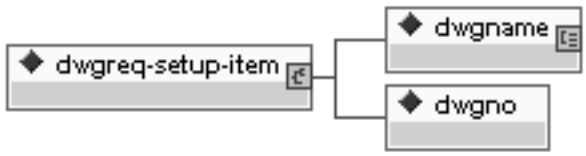

Figure 173 Drawing setup item DTD hierarchy <dwgreq-setup-item>.

a. DTD fragment for Drawing Required Setup Item DTD Hierarchy ***<dwgreq-setup-item>***:

```
<!ELEMENT dwgreq-setup-item (dwgname, dwgno)>
```

34.4.6.1.8 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 environment condition setup item (***<specenv-setup-item>*** .

a. DTD fragment for Special Environment Condition ***<specenv>***:

```
<!ELEMENT specenv (specenv-setup-item)+>
```

34.4.6.1.8.1 Special environment condition required setup item ***<specenv-setup-item>***. The element ***<specenv-setup-item>*** special environment required setup item is an element that wraps each item in the materials/parts equipment initial setup. Information is entered identifying the required condition (***<condition>*** see paragraph 34.4.6.1.6.1.1) and reason (***<reason>*** see paragraph 30.3.2.1.1.1.2).

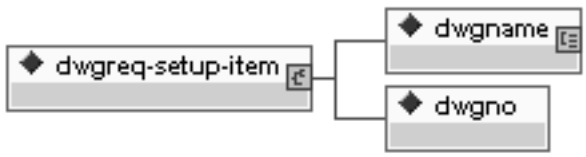

Figure 174 Special environment condition setup item DTD hierarchy <specenv-setup-item>.

a. DTD fragment for Special Environment Condition Required Setup Item DTD Hierarchy ***<specenv-setup-item>***:

```
<!ELEMENT specenv-setup-item (condition, reason)>
```

34.4.6.1.9 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 EMPTY>
<!ATTLIST time.to.comp
   hrs  CDATA  #REQUIRED>
```

b. Attributes for ***<time.to.comp>***:

(1) **HRS** - The estimated amount of hours to complete the operating task.

34.5 Common attributes. The following attributes are common throughout MIL-STD-2361 and are entered in the DTDs using parameter entity references.

34.5.1 Body attribute set ***%bodyatt;***. The attributes are for general use for any XML 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;***:

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```
<!ENTITY % bodyatt "inschlvl CDATA  #IMPLIED
                    delchlvl  CDATA  #IMPLIED
                    label     CDATA  #IMPLIED
                    texttype  NUMBER #IMPLIED
                    itemid    CDATA  #IMPLIED
                    config    CDATA  #IMPLIED
                    skilltrk  CDATA  #IMPLIED
                    %refs;">
```

b. Attributes for ***%bodyatt;***:

(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) **%REFS;** - Refer to common parameter entities for a complete description (see paragraph 34.5.7).

34.5.2 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  (0 | 1) '0'
      esd  (0 | 1) '0'">
```

b. Attributes for ***%hcp.esd;***:

(1) **HCP** - Marks the task or a step in a procedure relating or contributing to establishing nuclear hardness.

(2) **ESD** - Marks a task or a step in a procedure relating to handling or maintenance actions which could damage electrostatic sensitive parts.

34.5.3 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   (0 | 1)  '0'
      summary-detail (0 | 1)  '0'
      chap-toc   (0 | 1)  '1'">
```

b. Attributes for ***%imrsrc-vals;***:

(1) **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.

(2) **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

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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.

(3) **COLUMNS** - Specifies the either single or dual columns on a composed page. If no value is entered the default value is single column.

(4) **CHAP-TOC** - Specifies whether the chapter includes a table of chapter contents on the chapter title page. The stylesheet 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.

34.5.4 Maintenance level ***%maintlevel;***. The attributes are for the separation of maintenance activities or functions in the U.S. Army according to the required skills.

a. DTD fragment for Maintenance Level ***%maintlevel;***:

```
<!ENTITY % maintlevel "(depot | operator | gensup | dirsup | unitlvl |
 avum-avim | inter | tmlvls)">
```

34.5.5 Chapter level ***%chapterlevel;***. List the allowable maintenance levels that will appear on the chapter's title page. At least one attribute in the list must be used. The declaration of the chapter level entity is %chapterlevel;.

a. DTD fragment for Chapter Level ***%chapterlevel;***:

```
<!ENTITY chapterlevel "imlevel %maintlevel; #REQUIRED">
```

b. Attributes for ***%chapterlevel;***:

(1) **IMLEVEL** - Information chapter lowest maintenance level.

34.5.6 Quality Assurance ***%qa;***. 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 attribute is available to the associated element.

a. DTD fragment for Quality Assurance ***%qa;***:

```
<!ENTITY % qa "qa (0 | 1) '0'">
```

b. Attributes for ***%qa;***:

(1) **QA** - Specifies whether or not the step in the procedure has a major quality assurance effect; a non-zero value indicates that it does.

34.5.7 Referencing Attribute Set ***%refs;***. Attributes in this set supply identifiers for the current element and references to other element's identifiers. These attributes may be used with any element type that references this attribute set (***%refs;***) in the document type declaration.

a. DTD fragment for Referencing Attribute Set***%refs;***:

```
<!ENTITY % refs "id   ID  #IMPLIED
     idref  IDREFS #IMPLIED
     assocfig IDREFS #IMPLIED">
```

b. Attributes for ***%refs;***:

(1) **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.

(2) **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.

(3) **ASSOCFIG** - A reference to a figure(s) associated with the current element.

34.5.8 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
     release   NMTOKENS    #IMPLIED
```

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```
codeword  NMTOKENS    #IMPLIED
scilevel  (0 | 1)     '0'
diglyph   NMTOKENS    #IMPLIED">
```

b. Attributes for ***%secur;***:

(1) **SECURITY** - Specifies the security classification of the element. If no value is entered the implied value is unclassified.
   (a) "UC" - Indicates the element is unclassified.
   (b) "FOUO" - Indicates the element is for official use only.
   (c) "C" - Indicates the element is confidential.
   (d) "S" - Indicates the element is secret.
   (e) "TS" - Indicates the element is top secret.

(2) **RESTRICT** - Specifies the restrictions to the information. The value might include: No Foreign Distribution, NATO, etc.

(3) **RELEASE** - Specifies the countries to which the document may be released.

(4) **CODEWORD** - Specifies any associated code words.

(5) **SCILEVEL** - Flag to indicate if element has a Special Compartmentalized Information level; a non-zero value indicates the element has such a designation.

(6) **DIGLYPH** - One or more two-letter codes defining the classification of the element. Values are determined by contract.

34.5.9 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   (0 | 1) '0'
      deletewp   (0 | 1) '0'">
```

b. Attributes for ***%tracking;***:

(1) **FGC** - Specifies the functional group code that applies to the subject of the element.

(2) **WRITTEN-BY** - Specifies the original author of a document.

(3) **WRITTEN-ON** - Specifies the original creation date.

(4) **CHANGELVL** - Specifies the change level.

(5) **LAST-MOD** - Specifies the last modification date.

(6) **LSA-ID** - Specifies the identification of the subject of the element in logistic support analysis applying to the equipment covered in the TM.Identifies the work package sequence number in a paper composition system. It is not used in an IETM.

(7) **WPSEQ** - Identifies the work package sequence number in a paper composition system. It is not used in an IETM.

(8) **INSERTWP** - Specifies the new work package since last TM revision. The work package must be added after the last inserted work package or between two existing work packages in a revision. After a revision is completed, the attribute is reset to '0' and is resequenced in the correct order.

(9) **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 default value is '0'. The IDREF to reference is the deleted work package. The reference is used for a placeholder for output sequence number, until a revision is performed. After a revision is completed the work package is deleted from the assembly.

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34.5.10 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 "config  CDATA  #IMPLIED
      delchlvl CDATA   #IMPLIED
      inschlvl CDATA   #IMPLIED
      label    CDATA   #IMPLIED
      texttype CDATA   #IMPLIED
      itemid   NMTOKEN #IMPLIED
      skilltrk CDATA   #IMPLIED
      idref    IDREFS  #IMPLIED
      assocfig IDREFS  #IMPLIED">
```

b. Attributes for ***%wpbodyatt;***:

(1) **CONFIG** - Specifies the equipment configurations to which element applies.

(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) **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.

(4) **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.

(5) **TEXTTYPE** - (pending information from OSD)

(6) **ITEMID** - Supplies an identifier of the item, such as SSSN, LRU, part number, or reference designator.

(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.

34.5.11 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 (0 | 1) #IMPLIED
      army       (0 | 1) '0'
      airforce   (0 | 1) '0'
      navy       (0 | 1) '0'
      marines    (0 | 1) '0'">
```

b. Attributes for ***%wprsrc-vals;***

(1) **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.

(2) **ARMY**-United States Army

(3) **AIRFORCE** - United States Airforce

(4) **NAVY** - United States Navy

(5) **MARINES** - United States Marines

:

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PART III
TRAINING INFORMATION

35 BASIC TM, DMWR AND NMWR TRAINING.

35.1 Scope. This section contains training-type information on developing TMs, DMWR(s) and NMWRsusing 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 TMs, DMWR(s) and NMWRs.

35.2 MIL-STD-40051 Content Selection Matrixes. The training packet contains information on using MIL-STD-40051 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-40051(TM) matrixes for developing TMs, DMWR(s) and NMWRs. The Content Selection Matrixes are found in MIL-STD-40051, Chapter 1, Appendix A. They are also available as a PDF file by downloading them from the ASRL Website, **htp\\www.asrl.com**, under the link "CONSTRUCTS".

35.3 MIL-STD-40051 and MIL-STD-2361 Crosswalk. The crosswalk is a user friendly chart which maps out the relationship between MIL-STD-40051 and MIL-STD-2361 by comparing what work packages would be used in a -20 TM to a DMWR NMWR. The crosswalk gives the location of the work package detail in MIL-STD-40051 and the location of the work package detail in MIL-STD-2361. A copy of the Crosswalk can be obtained by downloading it from the ASRL Website, **htp\\www.asrl.com**, under the link "CONSTRUCTS".

35.4 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, **htp\\www.asrl.com**, under the link "CONSTRUCTS".

35.5 XML Basic Training. The training packet provides a general overview of XML. A copy of the XML Basic Training can be obtained by downloading it from the ASRL Website, **htp\\www.asrl.com**, under the link "CONSTRUCTS".

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PART IV
XML AND FOSI TUTORIAL

36 XML TUTORIAL.

36.1 Scope. This appendix contains tutorial-type information on MIL-STD-2361 XML. The information contained in this version of the handbook is intended to provide a overview of the use of XML.

36.2 Applicable Documents. Refer to paragraph 2

36.3 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.

36.3.1 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 declaration component is either declared content or a content model. Declared content is either "PCDATA" 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 a model group that identifies the elements as having either mixed content or element content. " Sequence and occurrence indicators contained in the content model determine whether or not a sub-element will be in the document (see paragraph 37.3.3) and in what order the sub-elements may occur. 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)+)>
```

36.3.2 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 sub-elements are allowed. unless the current content model or higher-level permits inclusions.

36.3.3 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 XML codes.

36.3.3.1 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 ***<term.def>*** . (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.

36.3.3.2 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.

36.3.3.3 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.

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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.

36.3.4 Attribute declaration. Attribute declarations is prefaced in the DTDs by the (MDO) "!" and the XML 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 XML element to which it is associated. The example, upon which the above descriptions are based, is as follows:

```
<!ATTLIST ginfowp wpno CDATA #REQUIRED>
```

36.3.4.1 Attribute value types and reserved XML names. The attribute value types and reserved XML names should be used in the context presented and should follow the rules contained in the definitions associated with the respective terms.

a. NMTOKEN - Will consist of either valid digits or letters.
b. NMTOKENS- Contains multiple occurrences of NMTOKEN.
c. CDATA - Free text that is not parsed internally.
d. ID - Unique identifier that may be referenced by the attribute with NAME value.
e. IDREF - Used to generate cross-references and to link elements, such as footnote text and foot note reference. The IDREF references the ID value.
f. IDREF - Contains multiple occurrences of IDREFS.
g. ENTITY - Used to reference a general entity. The general entity must be declared to identify the data being declared. See paragraph 36.3.5.3 on details using the graphic data type.
h. ENTITYS - Contains multiple occurrences of ENTITYS.
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.
j. True-False (0 |1) - A value of an attribute may be given as true or false in which "0" implies "no" or "false" and "1" (or any non-zero number) implies "yes" or "true.
k. 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.
l. Notation - Identifies permissible notation types.
m. Name Group - Lists permissible values.

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36.3.4.2 Keyword Attribute Defaults. The following keyword attribute defaults are used by MIL-STD-2361.

a. #REQUIRED - Indicates that the value must 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. 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 "insert" has the default value of "none".

```
<!ATTLIST null
   insert (NA | NR | dash | secure | none) "none"
    %secur;>
```

36.3.5 Entities. There are two types of entity declarations: parameter and general.

36.3.5.1 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 XML 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.

36.3.5.1.1 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 (%titldtext;)+>
```

Resolved as:

```
 <!ELEMENT eqpdesc ((title, (subtitle?, (para | specpara))+))+>
```

36.3.5.1.2 Nested Entities. Parameter entities may be nested. That is, one entity may occur within another entity declaration. In the MIL-STD-2361 example below, the entity ***%text;*** reference ***%pcdata;***,***%partinfo;%misc;***. In essence, ***%pcdata;***,***%partinfo;*** and ***%misc;*** have been "nested" within ***%text;***. Note however, an entity being referenced, should have been declared prior to its reference.

```
<!ENTITY % text "%pcdata; | %partinfo; | %misc; | change">
<!ENTITY % pcdata "#PCDATA | emphasis | extref | ftnote | ftnref  | indxref |
      subscrpt | supscrpt | xref">
<!ENTITY % partinfo "cageno | callout | dodac |
     dwgname | dwgno  | modelno | name | nsn | partno | sc">
<!ENTITY % misc "ctrlind | ctrlind-val | lubricant | pageloc  | symbol | torque |
     voltage | null">
```

36.3.5.1.3 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 paragraph 36.3.5.2), sets of graphic entities (see paragraph 36.3.5.3), or ISO character sets (see paragraph 36.3.5.4). 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

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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;
```

36.3.5.2 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 XML 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:

```
<para>If your &siname; needs improvement, let us know.<para>
```

c. The resolved general entity:

```
<para>If your Driver's Night Vision Viewer needs improvement, let
us know.<para>
```

36.3.5.2.1 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>">
```

36.3.5.2.2 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.

```
<!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.">
```

36.3.5.3 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'>
```

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36.3.5.3.1 Graphic Notation Identifier. The graphic notation identifier must be declared in a separate notation declaration located in the document file. A graphic notation states the graphical format type. The notation declaration example below states that Portable Network Graphics (PNG) are recognized in the document file.

```
<!NOTATION png SYSTEM "PNG">
```

36.3.5.3.2 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 175). 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-APD//ENTITIES BFV Left Side 19971001//EN"
                "c:\graphics\bfvleft.cgm"
PUBLIC "-//DA-APD//ENTITIES BFV Right Side 19971001//EN"
             "c:\graphics\revised\bfvright.cgm"
```

Figure 175 Sample XML Catalog

36.3.5.3.3 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.

36.3.5.3.4 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-XML 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 -->
```

36.3.5.4 Unicode character set. XML recognizes Unicode as its primary character set. A major subset of Unicode is UTF-8 character set. UTF-8 is the default character encoding for XML. If the XML file does not contain an encoding statement in either the XML declaration or text declaration, the parser will assume UTF-8 text encoding.

36.3.5.4.1 Unicode two-byte value. Unicode allows for over 65,000 characters. At this point in time, Unicode is the basis for the more universal character International Standard ISO/IEC 10646. Both the ISO 10646 and Unicode encoding provide a unique number for each character defined in the applicable standard. Unicode uses a two–byte value for each character. Compared to the single byte used for the characters defined in the ASCII or ISO-8859 series character sets. ISO 10646 will use a four–byte value for each character. ISO 10646 can encode over two billion individual characters.

36.3.5.4.2 UTF-8. Though there are numerous character sets available for use, the two defined for use with the 40051 XML DTD are UTF-8 and ISO-8859-1 (Latin-1). These two character sets use the first 127 character values to define the characters that make up the ASCII (keyboard) set. UTF-8 and the extended Latin-1 set also define values for characters commonly used, but not available from the keyboard. These non-keyboard characters are often represented by character entities.

36.3.5.5 ISO character entities.

36.3.5.5.1 Non-keyboard characters. ISO character entities are normally used to insert non-keyboard characters, such as the plus/minus sign, in text. As Unicode or ISO 10646 gain support, non-keyboard characters will most likely be accessed through their character number rather than an entity name.

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a. Plus or minus declared as an entity name in the ISOnum (ISO 8879:1986 Numeric and Special Graphic) entity declared in ISO 8879. %plusmn; <!ENTITY plusmn "[plusmn]">.
b. Plus or minus sign declared as through character value. %plusmn; <!ENTITY plusmn "#176;">

At this time, all non keyboard characters should be declared using the character entity name method.

36.3.5.5.2 MIL-STD-2361 DTDs ISO character sets. A general entity must be declared for the character and the replacement text 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. XML 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">
```

37 INTRODUCTION TO MIL-STD-2361 XML MARKUP.

37.1 Scope. This section describes methods to markup XML documents in accordance with MIL-STD-2361 SGML constructs. Adhering to the methods defined in this appendix will assisted in applying MIL-STD-2361 XML constructs to both legacy and new document development.

37.2 Introduction to MIL-STD-2361 XML Markup.

37.2.1 Types of Tags in MIL-STD-2361. 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-40051. 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-2361 tags mix content identification and structural uses, such as ***<step1>***, ***<step2>***, etc.

37.2.1.1 Applying Content Tags. Each of MIL-STD-2361 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.

37.2.1.2 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 or XML-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 XML to legacy data. These procedures are oriented toward the TM requirements set forth in MIL-STD-40051, 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. XML tagging of legacy data in compliance with this standard can be accomplished only after the publication data has been restructured into functional groupings.

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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 in MIL-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-40051,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 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

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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-40051. 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.

37.2.1.3 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. XML 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.

37.2.1.3.1 Titles. Many elements contain a title (***<title>*** see paragraph 34.4.1.5.1) 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 paragraph 34.4.5. Most title ***<title>*** elements are mandatory and contain only character data. If a title ***<title>*** is associated with a counter, the stylesheet/FOSI will specify the appropriate automatic numbering. Titles are tagged ***<title>*** ***</title>*** for a title.

37.2.1.3.2 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 XML 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-2361.

Subparagraphs. 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 in line with the paragraphs.

a. DTD fragment for ***<systhry>***:

```
<!ELEMENT systhry (title, (specpara | para)+, (ssysthry* |
(lruthry*, sruthry*)*))>.
```

b. Sample of a XML 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>***

37.2.1.3.3 Procedures. A procedure ***<proc>*** 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.

37.2.1.3.4 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

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document instance developer will be required to analyze the legacy data to determine its intent for portraying either procedures, tasks, or work packages.

37.2.1.3.5 Steps . The XML 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 paragraph 34.4.1.8.2) 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 stylesheet/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 stylesheet/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. 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> <warning.group><trim.para> Sodium peroxide can cause caustic burns
from prolonged skin contact.  </trim.para> </warning.group></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>
```

37.2.1.3.6 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 XML lists: random, sequential, and definition lists.

37.2.1.3.6.1 Random Lists. Random lists (***<randlists>*** see paragraph 34.4.1.2.2) are not numbered. Each item starts a new line of text as is regulated by the stylesheet/FOSI. If the "bullet" attribute is changed to "yes" (by entering ***<randlist bullet ="1">*** in the document instance, the items will be bulleted.

37.2.1.3.6.2 Sequential Lists. The numbers on sequential lists ***<seqlist>*** see paragraph 34.4.1.2.1 are provided by the stylesheet/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.

37.2.1.3.6.3 Definition Lists. Definition lists ***<deflist>*** see paragraph 34.4.1.2.3) 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/definition element wrapper ***<term.def>*** each of which must be followed by a ***<term>*** and a definition ***<def>***.

37.2.1.3.6.4 Numbered Lists. The numbers on numbered lists ***<seqlist>*** are provided by the stylesheet/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.

37.2.1.4 Tables . There are two types of table structures allowed for use with MIL-STD-2361. DTDs: CALS table model ***<table>*** (see paragraph 34.4.2.1), and MIL-STD-40051 defined standard tables, in which columns and rows are inferred from content-specific tags. **All tables are numbered in accordance with MIL-STD-40051.**

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37.2.1.4.1 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.

a. CALS table structure and markup. The CALS table model follows the general model:

TABLE	***<table>***
COLUMN SPECIFICATION	***<colspec>***
TABLE GROUP	***<tgroup>***
TABLE HEAD	***<thead>***
TABLE BODY	***<tbody>***

The head, body, and foot each contain:

ROWS	***<row>***
CELL ENTRY	***<entry>***

b. Column specifications ***<colspec>***. Colspec are used to define the column characteristics of a ***<table>***. Column specifications can be specified separately for head and body (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 EMPTY>
<!ATTLIST colspec
      colnum  CDATA         #IMPLIED
      colname NMTOKEN         #IMPLIED
      align  (left | right | center |justify | char) #IMPLIED
     charoff CDATA         #IMPLIED
      char  CDATA         #IMPLIED
      colwidth CDATA         #IMPLIED
      colsep (0 | 1)         #IMPLIED
       rowsep (0 | 1)         #IMPLIED>
```

c. Table columns and spans. Columns are assigned both a column number **colnum** and a name **colname** in ***<colspec>***. The column names are referenced in a cell ***<entry>*** in **namest** and **nameend** to specify start and end of a spanning column. Spanned rows are controlled in ***<entry>*** by the attribute more rows **morerows**. The attribute more rows **morerows** is use to define the additional rows to be spanned. An example of spanning three rows :

```
<entry morerows="2">.
```

d. 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 ***<faultproc>*** table consists of a ***<symptom>*** (which appears in the first column) and one or more ***<malfunc>*** tags. The ***<malfunc>*** tag includes the contents the second column. It contains an ***<action>*** (in third column) to be taken in response to the ***<malfunc>***. The ***<action>*** contains a para or steps in the third column.Each ***<malfunc>*** and ***<action>*** are aligned. If a second ***<malfunc>*** 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 ***<entry>*** group above.

37.2.1.4.2 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 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.

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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.

37.2.1.4.3 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-2361and is similar to MIL-STD-28001.

```
<!ELEMENT graphic (%section508;, mapref*)>
<!ATTLIST graphic
  boardno CDATA #REQUIRED
  type NOTATION (%notation.class;) #REQUIRED
  graphsty NMTOKEN #IMPLIED
  reprowid CDATA #IMPLIED
  reprodep CDATA #IMPLIED
  hscale CDATA #IMPLIED
  vscale CDATA #IMPLIED
  scalefit (0 | 1) #IMPLIED
  hplace (left | right | center | none) #IMPLIED
  vplace (top | bottom | middle | non) #IMPLIED
  rotation CDATA #IMPLIED
  %bodyatt;
  %secur;>
```

37.2.1.4.4 Alphabetic Index ***<aindx>***. 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 XML 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.

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

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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 (alphaindx?, indexentry)*>
<!ATTLIST aindx  %bodyatt;   %secur;>
```

37.2.1.4.5 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.

37.2.1.4.6 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.
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 paragraph 34.4.1.3.6). 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 paragraph 34.4.1.3.3) is used to reference

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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 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
  termdefid IDREF #IMPLIED
  %secur;>
```

(2) External reference :

```
<!ELEMENT extref EMPTY>
<!ATTLIST extref
  docno CDATA #IMPLIED
  revno CDATA #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 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).

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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-XML notations, such as graphic files. “Empty tags” contain the information your composition system needs to resolve reference values in a series of attributes.

38 STYLESHEET/ FOSI APPLICATION AS A STYLE GUIDE.

38.1 Scope. This section contains information on the application of stylesheets/FOSIs as style guides.

38.2 Using stylesheets or Formatting Output Specification Instances (FOSIs). 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 stylesheets/FOSI interprets the style and formatting requirements specified in the DTD.

38.2.1 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-2361DTDs, with the stylesheet/FOSI, the resulting publication will preserve the information content of the original and allow similar presentation. The stylesheet/FOSI values for the style characteristics are passed to, or used by, the program that performs layout and final composition.

38.2.2 The Output Specification (OS). The Output Specification (OS) uses SGML/XML to define style characteristics and provide methods of linking style to elements in an SGML/XML 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.

38.3 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-28001 Amendment 1. The Army-approved FOSIs contained in the ASRL will facilitate the reuse of DoD SGML/XML 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.

38.4 Using a FOSI. A FOSI is developed to present the formatting information of a specific document, or class of documents, based on theMIL-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 stylesheet and is designed to be read by both humans and machines. However, for a person to read through a FOSI, some knowledge of the SGML/XML 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/XML 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, sans-serif, in 10 on 12 type. The document being tagged using SGML/XML tags would simply have the SGML/XML 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

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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.

38.5 Stylesheets. Stylesheets define how documents are presented on screens and in print. A stylesheet provides a set of formatting characteristic values used to describe composition processing functions to be performed on the elements of a text document to provide the format style required by a functional specification or standard, such as MIL-STD-40051, AR 25-30 or TRADOC Reg 350-70. A stylesheet (i.e. FOSI, XPath, XSL, XSL-T and XSL-FO) delivered with the document should contain values of characteristics for every tag used in the DTD, in every context in which the tag has a unique formatting requirement, and with its attributes if they affect the formatting. Stylesheets also provide generated text (see paragraph 23.5.4.7.1). Generated text is specified text that is automatically output by the stylesheet for your application during the formatting of the document.

38.5.1 XPath (XPATH). XPath is a type of stylesheet used with XML documents. XPath is fabricated to be an integral part in a host language such as XSLT. It uses a constrain, non-XML syntax for locating parts of an XML document. Xpath locator syntax uses essential functions based on the node hierach of a document and evaluate expressions to determine a location object. Its locations are used by XSLT. Addition information on XPath may be obtained from the W3C's XSL website: **http://www.w3.org/Style/XSL/WhatIsXSL.html**.

38.5.2 Extensible stylesheet language (XSL). XSL is a language for formulating stylesheets to be use with XML documents. The XSL stylesheet describes how the XML document is presented as a page-based document or frame-based being displayed by a web browser. The XSL stylesheet is also an XML document in itself. Addition information on XSL may be obtained from the W3C's XSL website: **http://www.w3.org/TR/xsl**.

38.5.3 Extensible Stylesheet Language Transformations (XSLT). XSLT is a type of stylesheet developed to use with XML to transform a document from one XML application to be used by another application. XSLT is fabricated to be used with XPath. Its instructions are written in a document resembling a stylesheet and then it uses a transformation engine to generate a new form of the document. Addition information may be on XSLT obtained from the W3C's XSLT website: **http://www.w3.org/TR/xslt**.

38.5.4 Extensible Stylesheet Language for Formatting Objects (XSL-FO). XSL-FO is a type of stylesheet developed to use with XML for formatting objects. It is a pagination markup language describing a rendering vocabulary capturing the semantics of formatting information for paginated presentation. The paginated presentation may be displaying multiple separated pages on a screen, on paper or audibly. Addition information on XSL may be obtained from the Seybold Report website: **http://www.seybold-dreports.com/TSR/free/0217/techwatch.html**.

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VOLUME 6
ARMY SGML REGISTRY AND LIBRARY (ASRL)

39 ARMY SGML REGISTRY AND LIBRARY (ASRL).

39.1 Introduction. Volume 6 provides MIL-HDBK-2361 users with guidance and instruction about the ASRL, operated and maintained by Army Publishing Directorate (APD) . Volume 6 is comprised of the following four major subject areas:

a. ASRL Description.
b. ASRL Concept of Operation.
c. ASRL Operations.
d. Submittal Package Delivery.

39.2 ASRL description. The ASRL is the central SGML/XML data repository and single-point source for Army-approved SGML/XML objects and constructs for departmental media developers. The U.S. Army Standard Generalized Markup Language (SGML) and Extensible Markup Language (XML) Registry and Library (ASRL) contains Army-approved SGML/XML objects and constructs, such as Document Type Definitions (DTD), stylesheets, Formatting Output Specification Instances (FOSI), and SGML/XML Tag description lists authorized for use in the preparation of Army Publications. DTDs, stylesheets, FOSIs, and SGML/XML 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/XML within the Army. The ASRL is the Army operational site for the Department of Defense (DoD) Continuous Acquisition Life-cycle Support (CALS) SGML/ XML Registry, and CALS SGML Library (CSL). Throughout this section DTDs, stylesheets, FOSIs, and tag description lists are referred to as SGML/XML objects and constructs.

39.2.1 ASRL capabilities. The ASRL may be used by publications developers to provide capabilities for the standardization and reuse of Army SGML/XML 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/XML objects and constructs.
b. Processes to encourage use of standard objects and constructs by Army and defense contractor publication developers.
c. Processes to encourage timely submission of requirements not covered by existing SGML/XML objects and constructs by Army and defense contractor's publications developer.
d. Procedures for evaluation of requirements to determine whether or not they can be satisfied by approved SGML/XML objects and constructs and, if required, development of new objects and constructs.

39.2.2 Standardization and reuse. The two primary ASRL methods for SGML/XML standardization and reuse are direct reuse of existing, Army-approved SGML/XML objects and constructs; and development of new objects and constructs by APD to satisfy requirements not covered by existing SGML/XML objects and constructs.

39.2.2.1 Direct reuse. Direct reuse refers to the development of an SGML/XML document instance (which represents some class of Army publication under development) based upon Army-approved SGML/XML 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/XML document instance.

39.2.2.2 New SGML/XML object and construct development. This refers to the development of new SGML/XML 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

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procedures are contained in 39.5. Review of the ASRL Registry will determine if existing SGML/XML 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/XML objects and constructs are justified, they will be developed and tested by APD and included in the ASRL Library for Army-wide use.

39.3 ASRL concept of operations. This section describes the purpose, background, and overall concept of operations involving the ASRL and its related environment.

39.3.1 Purpose of the ASRL. The ASRL will contain all SGML Document Type Definitions (DTD), XML DTDs, stylesheets, Formatting Output Specification Instances (FOSI), and associated SGML/XML tags authorized for use in the preparation of Army Publications. All DTDs, stylesheets, FOSIs, and SGML/XML 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).

39.3.2 Background. The ASRL is a part of the Army strategy to achieve the digitalization and integration of technical and business data. Employing SGML/XML facilitates the digital exchange and integration of textual data. A component of an SGML/XML application is the DTD. The DTD defines the rules that apply SGML/XML 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/XMLDTDs.

39.3.3 ASRL organization. Functional capabilities for the standardization and reuse of SGML/XML objects and constructs are provided by the ASRL. The Army proponent for the ASRL is the Army Publishing Directorate (APD) Technology After Next (TAN) Program. The ASRL is comprised of the Registry and Library. Figure 176 illustrates the organizational structure of the ASRL.

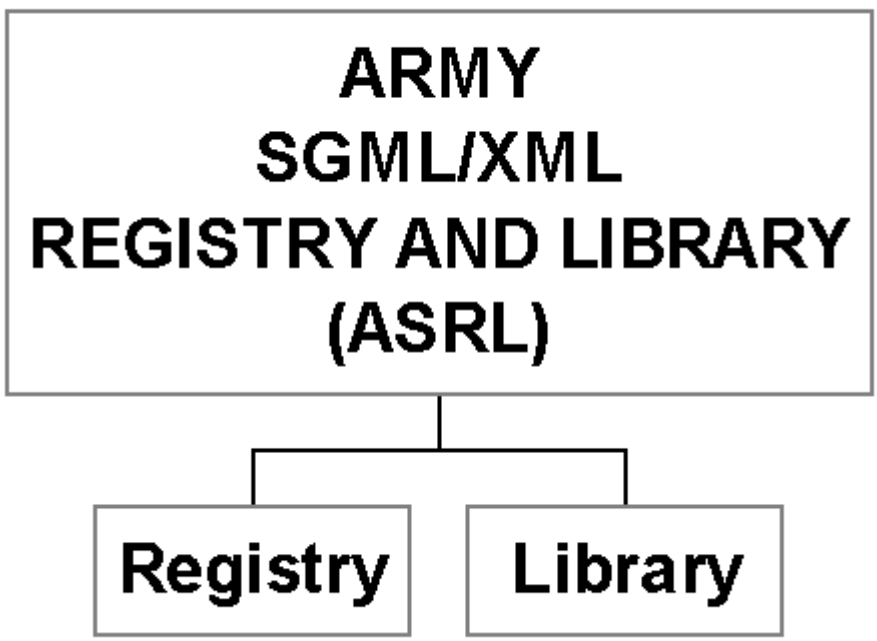

Figure 176 ASRL organizational structure.

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39.3.4 ASRL services. The Library will provide the publications developers with a set of services that will enhance the SGML/XML 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/XML objects and constructs.
b. SGML/XML 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/XML requirements.

39.3.5 ASRL assets. ASRL assets will include, but are not limited to:

a. SGML/XML objects and constructs.
b. Army requirements and guidance documents, such as this handbook.
c. General SGML/XML reference documents or pointers.
d. ISO 8879 compliant parser list.
e. Government Furnished Information (GFI), such as stylesheets and instance processors.
f. Parser and SGML/XML system tips, examples, and lessons learned.
g. Information regarding frequently asked questions about SGML /XML , using the ASRL, etc.
h. Point-of-Contact (POC) listings.
i. ASRL access data, such as user statistics and library usage statistics.
j. SGML/XML -based Freeware.

39.3.6 Procedures for submitting existing SGML /XML 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/XML 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/XML 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 APD. Information and guidance regarding “grandfathering” SGML objects and constructs will be established and distributed by APD. 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/XML objects and constructs to the ASRL Registry as candidates for evaluation and acceptance into the ASRL.

a. Existing SGML/XML objects and constructs (i.e., DTDs, stylesheets, FOSIs and associated tag descriptions) will be submitted to the ASRL for registration using the format and procedures described in 39.5 of this handbook.
b. Each submitted SGML/XML object and construct will be reviewed by Army Publishing Directorate (APD) to assess its compliance with guidance in this handbook, MIL-STD-2361(AC), Digital Publication Development MIL-PRF-28001, Standard Generalized Markup Language, and other specifications or standards, as required.
c. SGML/XML 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/XML 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, Army Publishing Directorate (APD) will coordinate with submitting organizations to establish a common tag.
e. SGML/XML 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.

39.3.7 Procedures for submitting new SGML/XML object and construct requirements. The ASRL Registry provides a capability for evaluating new SGML/XML requirements to determine whether or not they are covered by Army-approved SGML/XML objects and constructs. This capability is used only after a

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publications developer has identified a set of specific structure and content requirements that are not addressed, or only partially addressed, by approved SGML/XML 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 39.5.
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 Army Publishing Directorate (APD) to determine whether or not there are Army-approved SGML/XML objects and constructs that satisfy the submitted requirements.
d. When Army-approved SGML/XML objects and constructs are identified that satisfy the submitted requirements the objects and constructs will be provided to a submitting organization. These SGML/XML 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/XML objects and constructs will be identified by the ASRL Registry evaluation process. Army Publishing Directorate (APD) will develop new SGML/XML 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/XML objects and constructs. New SGML/ XML 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/XML objects and constructs for the development or acquisition of Army publications. Once SGML or XML 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.

39.4 ASRL operations.

39.4.1 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 39.4.3 for additional information). All of the current means of access to the ASRL are provided in Table 6 below. Additional assistance may be obtained through the ASRL/Army Publishing Directorate (APD) home page. All users must apply for a user account at the ASRL/APD 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/XML Registry and Library (ASRL) are available for free downloading from the Files directory on the ASRL/APD World Wide Web Site **(http://www.asrl.com)**.

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Table 6. ASRL access.

Access	Number/Address	Comments
WWW	http://www.asrl.com	ASRL direct.
U.S. Mail	Army Publishing Directorate Attn: JDSO-PAT-S 2461 Eisenhower Avenue Alexandria, VA 22331–0320	May request 3.5″ DOS formatted diskettes or .25" UNIX tar formatted tape.
Telephone	Commercial: (703) 325-6231	APD telephone numbers.
	DSN: 221-6231	
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).

39.4.2 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.

39.4.3 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 177), developers will be able to view, search, find, and download SGML/XML 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 through the ASRL Home Page (see Figure 178). A library card is required for downloading SGML/XML constructs from the library (see Figure 179).

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Welcome to the Army Publishing Directorate (APD) Standard Generalized Markup Language (SGML)/Extensible Markup Language (XML) Registry and Library (ASRL). The ASRL is part of the Technology After Next (TAN) Program, and is the Army operational site for the DOD CALS SGML Registry (CSR) and CALS SGML Library (CSL). The ASRL is the central SGML/XML data repository and single-point source for Army-approved SGML/XML objects and constructs for departmental media developers. APD is the approving authority for all Army standard SGML/XML 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: 4 February 2003

The ASRL is operated for APD by Computer Sciences Corporation (CSC) under Contract No. DAHC 94-96-D-0003.

Figure 177 ASRL home page.

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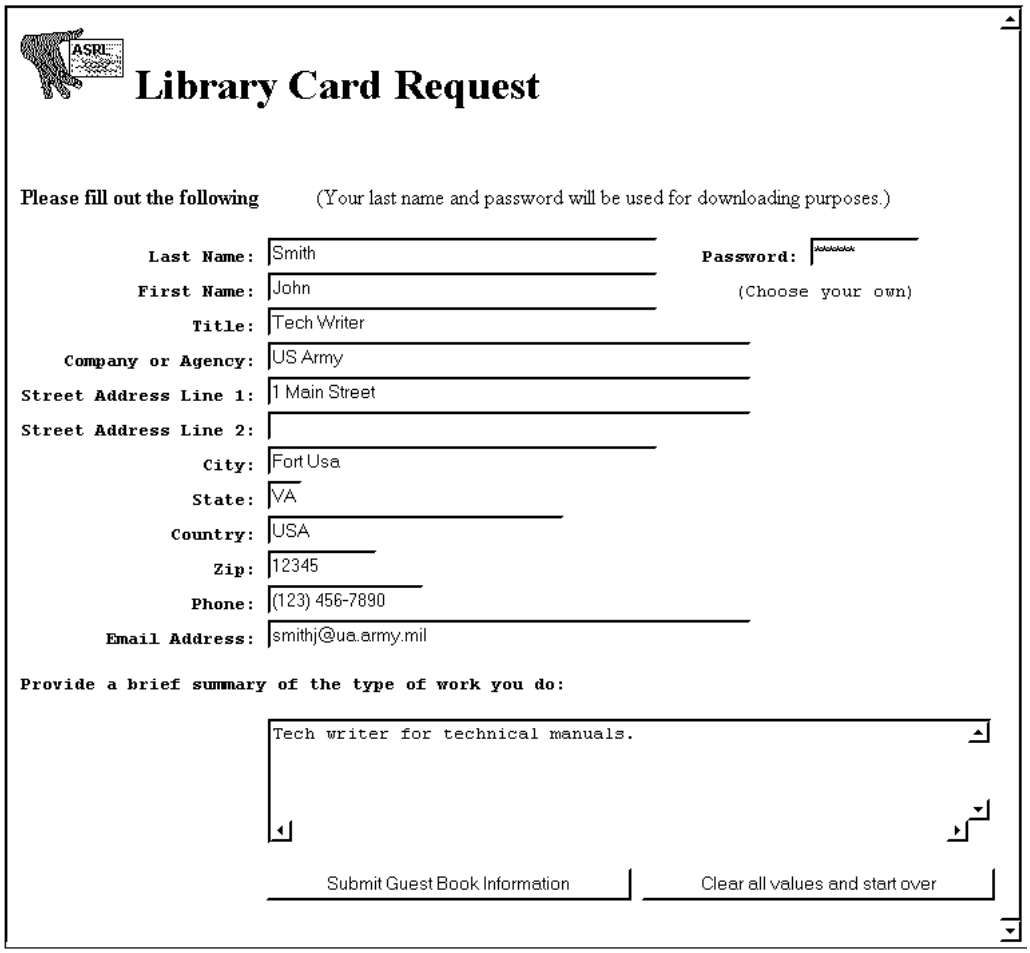

Figure 178 ASRL library card request.

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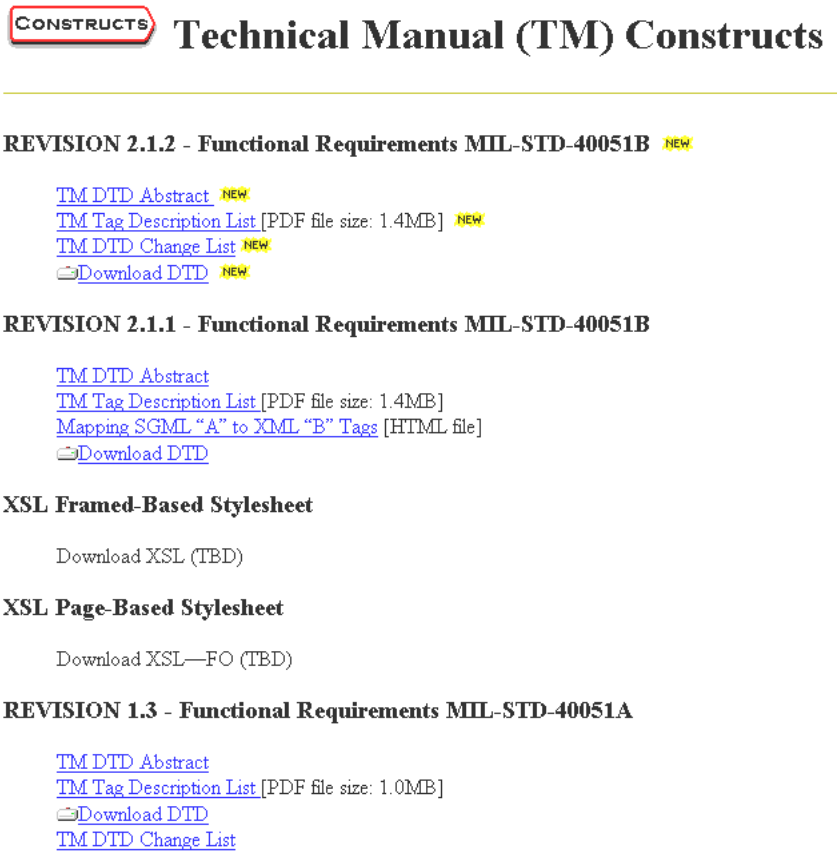

Figure 179 SGML/XML constructs

39.5 Submittal package delivery. Submissions via E-Mail will be directed to the ASRL at asrl@monmouth.com. The submission must contain all nine parts for a variant DTD or eight parts for a new submission in one message. Each part will be delimited on a dedicated line as described in Table 1. The following paragraphs after the table describe each part of the submission package.

Table 7. Nine parts of a submittal package.

SUBMISSION PART	PART DELIMITER
Submission Rationale	=====PART 1
DTD Information	=====PART 2
DTD Abstract	=====PART 3
DTD	=====PART 4
Parse Log	=====PART 5
Element/Attribute List	=====PART 6
Stylesheet	=====PART 7
Sample Document Instance	=====PART 8
Variant DTD Filter (if applicable)	=====PART 9

39.5.1 Rationale for submission. The submission package will contain a rationale for inclusion into the ASRL.

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39.5.1.1 New Requirements. A DTD submission not presently covered by registered DTDs will identify the new functional requirements and identify that current registered DTD do not duplicate these new requirements. An example is for Modification Work Orders under MIL-PRF-63002H.

39.5.1.2 Variant Requirements. A DTD submission previously covered by a registered DTD will identify the additional requirements and modifications to the registered DTD. The rationale will identify where the changes occurred and reason for the changes.

39.5.2 DTD Information. Table 8 describes the data elements, which comprise the DTD Information part of the submission package.

Table 8. DTD information.

ELEMENT NAME	DESCRIPTION	EXAMPLE
name	This is the DTD title. It is all capital letters as per asset process requirements.	CECOM XML DTD Variant from MIL-STD-2361A SGML DTD
title	DTD Subject Matter. This format is in normal writing standard.	Provides additional management metadata and XML needs for CECOM
version	Use "-" if no version info.	–
release_date	The date the DTD was released for submission (DD_MMM_YYYY)	20 Sep 2002
alternate_name	This is the DTD's public identifier. Describes DTDs owner [USA-DOD], SGML or XML [XML], variant owner (if applicable) [CECOM from], title [MIL-STD-2361A TM SGML], date (YYYYMMDD) [20020902], and language written [EN] in.	-//USA-DOD//DTD XML Variant CECOM from MIL-STD-2361A TM SGML 20020920//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.	
support available	Y or N	Y
producer	Personnel email address	jdoe@army.mil

DTD information will be submitted in ASCII Format using the format template in Figure 180. Each data entry must immediately follow the "=>" character in the template.

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```
begin asset
name =>
title =>
version =>
release_date =>
fpi_name =>
system_name =>
asset_size =>
keyword =>
keyword =>
keyword =>
keyword =>
keyword =>
support_available =>
producer =>
end asset
```

Figure 180 ASCII format for DTD information.

39.5.3 DTD abstract. Each DTD submitted will have an abstract. An abstract is a registry term for a user-provided narrative entry describing the DTD. The abstract shall should provide a title, entity definition including formal public identifier (FPI) and file name identifier, overview of the DTD's purpose, and other information identifying the DTD.

39.5.3.1 Abstract Contents. Table 9 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 9. 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" "m38804bsup.dtd"
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	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.

39.5.3.2 Sample Abstract. Figure 181, 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" "m38804bsub.dtd".

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 181 Sample abstract.

39.5.4 Sample DTD. The DTD for which registration is being requested must be included in the submission package.

39.5.5 Parse logs. The submission package must contain parse logs (e.g., records of parsing) from at least two SGML or XML validating parsers. 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).

39.5.6 Element/Attribute list. The submission package will have a DTD Element/Attribute List. This list defines all the elements and attributes used in the DTD. Figure 182 provides a sample element from the element/attribute list.

39.5.6.1 Element components. Each element has the name, long name, description, and if applicable specification paragraph where requirement was derived.

39.5.6.2 Attribute components. Under each element, list the required and/or optional attributes. Each attribute has the name, description, declared value, and if applicable, default value. If parameter entities are used, indicate where the definitions are located. The declared values are described in either common terminology or as specified in the DTD. The declared value common terminology are:

- Any character - CDATA
- ID - ID
- ID Reference - IDREF
- ID Reference (one or more) - IDREFS
- Pointer - ENTITY
- List (List item value (List item name), ...) - Enumerated List
- Name Token - NAMETOKEN
- Name Token (one or more) - NAMETOKENS

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<maintwp>	Maintenance Work Packages All of the maintenance tasks required to maintain all types of equipment at all maintenance levels are contained within the maintenance work package.
Specification Paragraph:	MIL-STD-40051-4A Para. 5.3.4.9
Required Attribute(s)	
LEVEL	The maintenance level of the work package.
Declared Value :	List (DEPOT (depot level), OPERATOR (operator level), GENSUP (general support), DIRSUP (direct support), UNITLVL (unit level), and INTER (intermediate level))
WPNO	The unique number assigned to this work package by the original contracting activity. This number remains the same when the work package is reused.
Declared Value :	Any character
Optional Attribute(s)	
%WPBODYATT;	Any of the attributes in the associated attribute set may be used with this element. Refer to %wpbodyatt; for a complete description.
%SECUR;	Any of the attributes in the associated attribute set may be used with this element. Refer to %secur; for a complete description.
%TRACKING;	Any of the attributes in the associated attribute set may be used with this element. Refer to %tracking; for a complete description.
%WPRSRC-VALS;	Any of the attributes in the associated attribute set may be used with this element. Refer to %wprsrc-vals; for a complete description.

Figure 182 Sample element/attribute list.

39.5.7 Stylesheet. The submission package will have a stylesheet(s). Accompanying the stylesheet is a description of the stylesheet type (e.g. XSL-T, FOSI, DSSSL), identify the processing engine(s) to derive the output, information for obtaining the processing engine(s), and instructions to execute the stylesheet.

39.5.8 Sample document instance. Each submission package will have a sample document instance. The document instance will be used by the ASRL Register to verify the document instance parses against the new or variant DTD, output is produced from the stylesheet, and if applicable, the filter produces a compliant document instance to the specified Army DTD.

39.5.9 Variant DTD filter. Each variant DTD submission requires a filter to export the variant DTD source data to a specified Army DTD source data. Accompanying the filter is a description of the filter, identifying the processing engine(s) to transform the source data, information for obtaining the processing engine(s), and instructions to execute the filter.

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