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DETAIL SPECIFICATION

MANUALS, TECHNICAL: PERIODIC MAINTENANCE REQUIREMENTS, PREPARATION OF

This specification is approved for use by the Naval Air Warfare Center, Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense, within the distribution limitations noted at the bottom of this page.

1. SCOPE

1.1 Scope. This specification prescribes the general style, format, and minimal technical content for the preparation of Periodic Maintenance Requirements Manuals (PMRMs) for use at the organizational and intermediate maintenance levels. This specification will be used to prepare all types of NAVAIR PMRMs.

1.2 Classification. The types of PMRMs covered by this specification are:

a. Aircraft PMRMs (3.2.1).

b. Quick engine change assembly (QECA) PMRMs (3.2.2).

c. Airborne armament equipment (AAE)/special stores (SS) PMRMs (3.2.3).

d. Support equipment (SE)/automatic test equipment (ATE) PMRMs (3.2.4)

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to Commander, Naval Air Warfare Center Aircraft Division, Code 414100B120-3, Highway 547, Lakehurst, NJ 08733-5100 by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A AREA TMSS

e. Powered aerial target (PAT) PMRMs (3.2.5).

f. Powered surface target (PST) PMRMs (3.2.6).

g. Aviation life support systems (ALSS) PMRMs (3.2.7).

h. Airborne mine countermeasure (AMCM) equipment PMRMs (3.2.8).

i. Unmanned aerial vehicle (UAV) PMRMs (3.2.9).

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3 and 4 of this specification. This section does not include documents in other sections of this specification or recommendation for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3 and 4 of this specification, whether or not they are listed.

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 issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATIONS

DEPARTMENT OF DEFENSE

MIL-PRF-49506	-	Logistics Management Information.

STANDARDS

FEDERAL

FED-STD-313	-	Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities.

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

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

PUBLICATIONS

DEFENSE LOGISTICS AGENCY

Cataloging Handbook H-6	-	Federal Item Name Directory for Supply Cataloging.

LIBRARY OF CONGRESS

Catalog No. Z 253.U58	-	U.S. Government Printing Office Style Manual.

(Application for copies should be addressed to the Superintendent of Documents, Government Printing Office, North Capitol and H Streets NW, Washington, DC 20402-0002.)

NATIONAL ARCHIVES AND RECORDS ADMINISTRATION

29 CFR 1910.1200	-	Code of Federal Regulations.

(Application for copies should be addressed to the Superintendent of Documents, Attn: New Orders, P.O. Box 371954, Pittsburgh, PA 15250-7954.)

NAVAL AIR SYSTEMS COMMAND

NAVAIR 00-25-700	-	Guide to General Style and Format of Work Package Technical Manuals.

(Copies of Cataloging Handbook H-6 are available from the Commander, Defense Logistic Service Center, Battle Creek, MI 49017-3084. Copies of manuals are available by request to: Commanding Officer, Naval Air Technical Services Facility (NATSF), 700 Robbins Avenue, Philadelphia, PA 19111-5097.)

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 (see 6.2).

AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA

AECMA Document PSC-85-16598	-	AECMA Simplified English: A Guide for the Preparation of Aircraft Maintenance Documentation in the International Aerospace Maintenance Language.

(Application for copies should be addressed to Aerospace Industries Association of America, 1250 I Street NW, Washington, DC 20005-3924.)

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Y10.5 (IEEE)	-	Letter Symbols for Quantities Used in Electrical Science and Electrical Engineering. (DoD adopted)
ANSI Y14.5	-	Dimensioning and Tolerancing.

(Application for copies should be addressed to American National Standards Institute, 11 West 42nd Street, New York, NY 10036.)

INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)

ANSI/IEEE Std. 91-84	-	Graphic Symbols for Logic Functions. (DoD adopted)
IEEE Std. 200 (ANSI Y32.16)	-	Reference Designations for Electrical and Electronics Parts and Equipment. (DoD adopted)
ANSI/IEEE Std. 260	-	Letter Symbols for Units of Measurement. (DoD adopted)
IEEE Std. 315 (ANSI Y32.2)	-	Graphic Symbols for Electrical and Electronic Diagrams Including Reference Designation Class Letters. (DoD adopted)
ANSI/IEEE Std. 315A	-	Graphic Symbols Supplement. (DoD adopted)

(Application for copies should be addressed to IEEE Service Center, 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331.)

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. REQUIREMENTS

3.1 General.

3.1.1 Copyrights and advertising. Copyright material shall not be included in any publication prepared in accordance with this specification without written permission of the copyright owner. Proprietary legends shall not be shown. The manual shall not contain advertising matter. All material prepared in accordance with this specification shall be Government property.

3.1.2 Proprietary data. The Government shall have unlimited right to the data prepared under this specification. Proprietary legends are not acceptable in technical manuals. The preparing activity shall disclose, in narrative or pictorial display, that information necessary to fulfill the requirements of this specification without disclosing that portion of the manufacturing process that the preparing activity wishes to safeguard.

3.1.3 General requirements.

a. The PMRMs shall provide general and specific instructions required to perform scheduled maintenance at the organizational and intermediate levels.

b. The PMRMs consist of a series of scheduled maintenance requirements that provide a basis for planning, scheduling, and execution of scheduled maintenance.

c. These requirements are performed at specific intervals that are based upon calendar days, flight hours, operating hours, or other events that affect the equipment performance.

d. Inspection requirements, adjustments, checks, tests, and preventive maintenance that are to be performed on aircraft by an intermediate level of maintenance activity shall be sequenced in the appropriate location on the maintenance task and quality assurance cards.

3.1.4 Source data. The logistics support analysis (LSA), as characterized by MIL-PRF-49506, is the overall systems engineering process for determining logistics support requirements for acquisition programs. An element of this process is maintenance planning and analysis (MPA) which develops, among other maintenance elements, preventive maintenance requirements. The contractor shall develop and document scheduled maintenance requirements from approved maintenance plans derived from the MPA process. PMRMs for aircraft weapon systems, equipment, or SE not using the Reliability Centered Maintenance (RCM) concept shall be developed using existing data, such as 3-M data, safety center reports, engineering investigations, quality deficiency reports, etc.

Note: In order to preclude inconsistencies between airframe and engine PMRMs, coordination between the preparing activities should be maintained throughout the life cycle of the airframe/engine.

3.1.5 Style of writing.

3.1.5.1 Response to intended user. The style of writing shall be in accordance with NAVAIR 00-25-700 and the techniques used to produce a readable and comprehensive technical manual shall be commensurate with the capability of the targeted audience for which they are intended:

a. Text shall be factual, concise and readily understandable. Unnecessary lead-in sentences, descriptive phrases, and vague and ambiguous terms shall not be used.

b. Technical phraseology requiring specialized knowledge shall be used only when no other word or phrase will convey the intended meaning.

c. Words which have more than one meaning, such as "check" instead of "checkout", shall not be used.

d. Third person indicative mood shall be used for descriptive text. Second person imperative mood shall be used for instructions and shall be written as commands, for example: "Install power supply."

e. Articles shall be omitted except when required to prevent ambiguity or to facilitate understanding of the instruction.

f. When space conservation is desirable, the verb may also be omitted, for example: "Power switch ON." The verb may be omitted only if the intent of the statement is clear to the user.

g. The rules and features of simplified English written in AECMA Document PSC-85-16598 may also be used as guidelines in the preparation of technical manuals.

3.1.5.1.1 Work package comprehensibility. Comprehensibility is mandatory in the preparation of all text and illustrations. It is imperative that documents be prepared in an easily understood manner to permit rapid detection and comprehension of all procedures.

a. Paragraphs and sentences. Concentration shall be exercised during the writing phase to ensure adequate paragraphing and sentence structuring. Sentencing shall be directive in nature, short, clear and concise so it supports data retention.

b. Arrangement. Arrangement of information in procedural step format vice narrative descriptive material also enhances comprehension. Text and illustrations shall be closely coordinated.

c. Graphic data. Graphic data is of equal importance to text. Simple, clear graphics reduce text requirement and raise the level of comprehension.

d. Typeface and type size. Text typeface and typesize are controlling factors of legibility. It is preferred that a serif typeface (e.g., Times Roman, Courier, Prestige, Schoolbook) be used for text and tabular data. Leading (vertical line spacing) and kerning (horizontal character spacing) shall be such that clear, legible text is produced. For the purposes of this specification, unless otherwise specified (see 6.2.1), normal (after reduction) size type shall be used for text and text on illustrations and checklists. Type size for the title and phase cover cards shall be in accordance with 3.3.1 or 3.3.2. For the purposes of this specification, the following nominal type sizes shall mean the corresponding measured sizes:

Nominal size	Allowable measured size (points)
small	6-1/2 to 8-1/2
normal	8-1/2 to 9-1/2
large	13-1/2 to 14-1/2

3.1.5.1.2 Readability. Readability is measured using criteria based on the reader's ability to comprehend and retain the written information. To ensure that text material is both readable and comprehensive, the overall writing style shall be directed toward specific standards that will guarantee accomplishment of these objectives. Controlling factors include word length, sentence length, paragraphing, and word usage. Prepared text shall conform to the following readability standards:

a. Word length. The length of a word is measured by its number of syllables. Simple common words of a few syllables shall be used to convey the intended meaning. The average word length shall not exceed 1.60 syllables. The desired average word length is 1 to 1.5 syllables, but 1.51 to 1.60 is acceptable. Military terms and mandatory technical words are excluded from this restriction.

b. Sentence length. Sentences should be short and concise in order to facilitate ease of understanding and retention of thought. The average sentence length shall not exceed 20

words. The desired average is 17 words or less, but 18 to 20 words is acceptable. The use of compound and complex sentences should be avoided in order to achieve maximum comprehensibility.

c. Paragraphing. Paragraphs should deal with a single subject and shall include only as much information as the average reader can comfortably retain. The desired paragraph length is three to four sentences, but five to six sentences is acceptable.

d. Word usage. It is important to choose the correct word for each meaning, situation, or occasion. The consistent choice of correct words and the use of simple or preferred words will reduce a potential source of confusion. Verbs should be selected using the preferred verbs listing contained in NAVAIR 00-25-700. The quality of sentence structure and the correct choice and position of words in a sentence will reduce sentence complexity.

e. Use of shall, will, shall, and may. Use the word "shall" to express a mandatory or binding provision. "Will" may be used to express declaration of purpose. It may be necessary to use "will" in cases where simple futurity is required, such as: "Power to the bombing mode will be provided through the navigational system." Use "should" and "may" whenever it is necessary to express nonmandatory provisions, or an acceptable or preferred means of accomplishment. "Should" may also designate the proper result of an action, e.g., POWER lamp shall light.

f. Use of indefinite words. Indefinite words (such as approximately and about) shall not be used to express specific limits, such as measurements, tolerances and values.

g. Tolerances, limits, and torque values. Tolerances, limits, and torque values shall be expressed in limit dimensions and in terms compatible with the equipment authorized at the maintenance level to which the tolerances and limits apply.

(1) In a procedural step, the acceptable range of a measurement, reading, or similar value shall be expressed using specific limits (e.g., "between 1.5 and 2.5") rather than using a tolerance (e.g., 1±.5 or 1± 50%).

(2) Alternatively, a tolerance window may be used to indicate a range and the preferred value. A measurement or adjustment factor (rising, drooping, flat, etc.) may be added if appropriate, for example, [2.5 **2.6** 3.5] rising.

h. Weights and measures. Weights and measures shall be in U.S. standard units and speed, distance, and meter readings as indicated on the equipment. Conversion to U.S. standards shall follow in parentheses if the equipment is designed and manufactured to the metric system. Metric values are not required unless the equipment is designed and manufactured to the metric system.

i. Temperature readings. Temperature readings shall be given as indicated on the equipment. General temperature readings shall be given in degrees Fahrenheit with Celsius in parentheses.

j. Verb list. NAVAIR 00-25-700 lists preferred verbs commonly used in technical manuals to promote clear understanding of the intent of a command or descriptive sentence. Each verb listed is defined in terms of one or more meanings associated with operation and maintenance of the end item and components. A simple sentence is included for each usage. Where necessary, notes are included.

k. Writing guides. Detailed information on the above writing styles is contained in NAVAIR 00-25-700.

l. Capitalization and punctuation. Detailed information on capitalization and punctuation is contained in the U.S. Government Printing Office Style Manual, Library of Congress publication Z 253.U58

m. Simple tasks. A simple task should not be illustrated or described in detail if a brief statement will suffice. A simple task that is almost self explanatory but requires an illustration for clarification should not be detailed. The primary step should be stated with reference to the illustration. Minimum information should be presented to ensure the step is clear and sufficient for its purpose.

3.1.5.2 Abbreviations. The use of abbreviations or acronyms not listed in OPNAVINST 4790.2 shall be held to a minimum, and each shall be defined the first time it appears in each manual. The complete technical expression shall be fully spelled out followed by the abbreviation or acronym in parentheses. In the event that a nonstandard abbreviation must be used because the manual is being prepared on composing equipment that cannot produce a certain abbreviation or symbol, the abbreviation shall also be explained the first time it appears in each manual. Abbreviations or acronyms shall not be used in the publication or manual title.

3.1.5.3 Warnings, cautions, and notes. Procedures or practices that, if not correctly followed, could result in injury to personnel, damage or destruction of equipment, or improper system operation, shall be highlighted by notes, cautions, or warnings.

a. Warnings and cautions shall precede the text to which they apply.

b. Notes shall normally be placed before the applicable text; however, the note may follow the applicable text, if required for clarity.

c. Warnings, cautions, and notes shall not contain procedural steps or direct maintenance actions, nor shall they be numbered.

d. When a warning, caution, or note consists of two or more paragraphs, the applicable heading shall not be repeated above each paragraph. If it is necessary to use a combination of data, it shall appear in this order: warning, caution, note. Such inserts in text shall be concise and shall be used to emphasize important and critical instructions.

e. Headings for warnings, cautions, and notes shall be prepared in accordance with NAVAIR 00-25-700. Except for copy prepared on automated equipment, the warning heading may be underscored uppercase 10-point boldface type placed in brackets [WARNING], and the caution heading may be underscored uppercase 10-point boldface type CAUTION. Usage is as follows:

(1) Warning: Refers to a procedure or practice that, if not correctly followed, could result in injury, death, or health hazard.

(2) Caution: Refers to a procedure or practice that, if not correctly observed, could result in damage to or destruction of equipment.

(3) Note: Refers to a procedure or condition that requires emphasis.

3.1.5.4 Quality assurance (QA) procedures. Procedures that are essential to equipment performance or to safety of personnel are considered to be QA procedures. It is necessary to ensure that all required tasks, including final testing of the end item (verification of repair), are accomplished prior to completion of work. Control of these required actions is accomplished by two methods: (1) referencing to following actions, and (2) highlighting required in-process QA inspections:

a. Highlighting in-process QA inspections. Procedures that are essential to equipment performance or to safety of personnel and that must be observed or checked by a quality assurance inspector (CDI) prior to the technician proceeding to the next step are considered to be "in-process QA inspections". Therefore, QA required procedures shall be highlighted by the addition of the abbreviation "(QA)" following the procedure/step. An explanation of the requirements and highlighting shall be given in the introduction to the data. Examples are: required gauge readings, torque readings (excluding torque limiting), and tasks that will be subsequently covered and the QA requirements cannot be verified without disassembly.

b. QA referencing. When making reference to following actions, the last procedural step of a procedure shall reference next required action, when applicable.

3.1.5.5 Health hazard precaution data. Procedures prescribed for the operation and maintenance of equipment shall be consistent with the safety standards established by the Occupational Safety and Health Act, Public Law 91-596 and Executive Order 11807. Appropriate warnings shall be included, when hazardous chemicals, adverse health factors in the environment, or use of the equipment cannot be eliminated (see 3.1.5.5.1). Warnings and cautions applicable to hazardous materials shall be based on information contained in Material Safety Data Sheets (MSDS). Under the provisions of FED-STD-313, MSDS are required to be submitted for hazardous materials. In turn, MSDS must be entered into the Hazardous Material Information System as required under the provisions of DOD 6050.5 series and OPNAVINST 5100.23. Appropriate personnel protective devices shall be included.

3.1.5.5.1 Warnings applicable to hazardous materials. Complete warnings applicable to all hazardous materials addressed in the manual shall be provided in the Hazardous Materials Warnings Sheets (HMWS) (see 3.7.4.4). The warnings shall be developed from information provided by chemical manufacturers in MSDS required by Code of Federal Regulations 29 CFR 1910.1200. MSDSs used within DOD are required to be entered into the Hazardous Materials Information System (HMIS) which is addressed in DOD 6050.5 series publications. The DOD 6050.5 series publications contain MSDSs submitted under the provisions of FED-STD-313. Additional information related to hazardous material requirements is provided in OPNAVINST 5100.23, Navy Occupational Safety and Health (NAVOSH) Program Manual.

a. A complete warning shall be provided for all hazardous materials addressed in the manual. Appropriate personnel protective equipment requirements shall be included.

b. Warnings applicable to hazardous materials shall be presented in technical manuals by the use of:

(1) Index number (Arabic numeral identifier),

(2) Nomenclature and specification of the hazardous material, and

(3) Icons (nonverbal graphic symbols).

c. Starting with the number 1, the warnings shall be sequentially numbered. Each hazardous material shall be assigned only one numeric identifier. Repeated use of a specific hazardous material shall reference the numeric identifier assigned at its initial appearance. Warnings added to the technical manual after the initial issue shall be assigned the next consecutive number regardless of the order of placement in the manual.

d. Contractors having an automated publishing system may assign permanent numeric identifiers for hazardous materials warnings in their database; however, the introduction to the manual shall explain that the numeric identifiers may not appear in sequential order, since all warnings contained in the database may not appear in the manual.

3.1.5.5.1.1 Icons applicable to hazardous material warnings. NAVAIR 00-25-700 depicts the icons that are approved for use in association with warnings for hazardous materials. The introduction of additional icons shall have prior approval of the requiring activity.

a. Icons shall be not less that 3/8 inch in height and 5/8 inch in length. The images shall be sharp and clear. The graphic design shall be in accordance with the above dimensions and maintain quality in the image to provide almost instant recognition.

b. More than one icon shall be used for a warning for a hazardous material when the user will be exposed to more than one hazard.

3.1.5.5.1.2 Hazardous materials referenced in text. In the text of the manual, the caption "WARNING" shall not be used for hazardous materials.

a. Such warnings shall be identified (highlighted) by an:

(1) Index number (numeric identifier, see 3.1.5.5.1c and 3.1.5.5.1d),

(2) Hazardous material nomenclature, including applicable specification, and

(3) The related icon(s).

b. Complete warnings shall be provided in the HMWS pages for each hazardous material used in the manual.

3.1.5.6 Nuclear hardness. Nuclear survivability requirements include such factors as over-pressure and burst, thermal radiation, electromagnetic pulses (EMP) and transient radiation effects on electronics (TREE). If equipment to be operated, maintained or overhauled has nuclear survivability requirements, applicable warnings shall be incorporated into technical publications to ensure that hardness of equipment is not degraded during operation and maintenance. Caution shall be taken not to include classified information in an unclassified publication.

3.1.5.6.1 Symbols. All hardness critical processes/steps/items will be marked with the appropriate symbols [HCP] / [HCI] / [OCP] / [OCI] / [CSP] / [CSI] as follows:

a. In maintenance manuals, when the entire paragraph, including all subparagraphs, is considered hardness critical, only major paragraph shall be marked. The symbol [HCP] shall be placed between paragraph number and title.

b. When only certain processes/steps within a paragraph are hardness critical, only the applicable process/step will be marked. The symbol [HCP] shall be placed between the step number and title.

c. In the Illustrated Parts Breakdown (IPB), when survivability considerations are specified and Hardness Critical Items [HCI] are identified on drawings and parts lists, they must also be marked and identified in the description column of the GAPL. It is preferred that the symbol [HCI] be placed within brackets [HCI]; however, other methods of highlighting the symbol to call attention to its importance are acceptable.

d. The introduction shall include a listing and explanation of the symbols [HCP]/[HCI] respectively and other pertinent information as necessary to emphasize the specialness of hardness features. This shall include an explanation statement that the symbols establish the requirement that all paragraphs and processes/steps in the maintenance manual and the items in the IPB identified by the symbols must be followed as written to ensure nuclear hardness is not degraded. This statement shall be preceded by a caution.

3.1.5.7 Electrostatic discharge [ESD] sensitive parts. If electronic equipment to be handled, inspected, repaired, or assembled is ESD sensitive, the items shall be marked and identified with the symbol [ESD] as follows:

a. In maintenance manuals, when an entire paragraph, including all subparagraphs, is considered ESD sensitive, only the major paragraph shall be marked. The symbol [ESD] shall be placed between paragraph number and title.

b. When only certain processes/steps within a paragraph are ESD sensitive, only the applicable process/step shall be marked. The symbol [ESD] shall be placed between the step number and title.

c. In the IPB, ESD sensitive items shall be identified in the description column of the GAPL. It is preferred that the symbol [ESD] be placed within brackets [ESD]; however, other methods of highlighting the symbol to call attention to its importance are acceptable.

d. The introduction shall include a listing and explanation of the symbol [ESD] and other pertinent information as necessary to emphasize the uniqueness of ESD components.

(1) This will include an explanation statement that the symbols establish the requirement that all paragraphs and processes/steps in the maintenance manual and the items in the

IPB identified by the symbols, must be followed as written to ensure ESD components are not degraded.

(2) This statement shall be preceded by a caution.

3.1.5.8 Ozone depleting substances (ODS). The continued use of ozone depleting substances (ODS) has been prohibited and therefore, the use of ODS materials in NAVAIR manuals is prohibited. A listing of these substances is provided in NAVAIR 00-25-700.

3.1.5.9 Nomenclature consistency. Nomenclature of identical systems, subsystems, equipment, SE, components, and parts of the end item shall be consistent throughout a manual, volumes of a manual, and manuals that are a part of a set of manuals covering an end item. The preparing activity should develop nomenclature lists for associate preparing activities and sub-preparing activities to ensure such consistency. The correct nomenclature shall be derived from one of the following sources (listed in the order of precedence):

a. "AN" nomenclature,

b. Nameplate nomenclature,

c. H-6 assigned nomenclature, or

d. Nomenclature on the drawing from which the item was manufactured.

3.1.5.9.1 Noun modifiers. Noun modifiers shall be added to the description of parts as required to assure positive identification, such as cotter pins/taper pins. These modifiers need not appear on the preparing activity's drawing. Noun modifiers, once added for clarity, shall be used throughout the technical data.

a. Simple identifying modifiers provided for parts may be dropped after the first full identification of the item in the manual. For example, "Remove attaching bolt" is acceptable and preferred to "Remove cadmium plated steel bolt," unless specific identification of one bolt within a group of similar objects is required.

b. When an item is identified by a common name, both this name and the correct technical name shall be clearly identified the first time the item appears in the text of a manual. The listing of common names in IPBs is not required.

3.1.5.9.2 Placard data. If all or a portion of the name of a control or display appears as a label on the equipment, that portion shall be written exactly as on the label, except that the placard shall be written in all capital letters to distinguish it from surrounding text, e.g., "POWER switch"

or "MAIN PWR circuit breaker." It is also permissible to spell out the word for a symbol that cannot be reproduced by the machine used to prepare the manuscript or reproducible copy.

3.1.5.9.3 Designation of equipment. The official designation of aeronautical equipment shall be expressed in specific terms such as model number, type, serial number range, or similar terms. Nomenclature corresponding to that appearing on the equipment in the form of nameplates, decals, engraved legends or other markings shall be stated in text using the same wording that appears on the hardware.

3.1.5.9.4 National item identification numbers. National item identification numbers shall not appear in manuals.

3.1.5.9.5 Part numbers. Part numbers shall not be used in text or on illustrations except for the following:

a. Part numbers identifying specific SE are acceptable in text and on illustrations when more than one item has the same nomenclature, for example: "Position clamp, part number 2468-10, over retaining fixture."

b. When more than one item of SE is assigned the same nomenclature, part numbers identifying items contained in SE kits shall be used in text and on illustrations. The kit part number shall be included in the "Support Equipment Required" list.

c. Part numbers may be included in legends on, or adjacent to, the associated artwork in the maintenance manual.

d. When necessary for clarity (more than one item is assigned the same nomenclature), the specification, standard, or part number of items may be included in text and on illustrations.

3.1.5.10 Symbols. Graphic symbols shall be used in the manual in accordance with the standards specified in 3.1.5.10.1 and 3.1.5.10.2. If possible, new or unusual symbols shall be avoided. When new or unusual symbols are required, they shall be identified at each occurrence or in a key or legend on a diagram. It is permissible to spell out symbols that cannot be reproduced on the machine on which the manuscript or reproducible copy is being prepared, for example, plus for +.

3.1.5.10.1 Electrical and electronic symbols. Graphic symbols for electrical and electronic parts shall be in accordance with IEEE Std. 315, ANSI Y10.5 and IEEE Std. 260, as applicable.

3.1.5.10.2 Logic diagram symbols. Graphic symbols for logic diagrams shall be in accordance with IEEE Std. 91-84.

3.1.5.11 Reference designations. Electrical and electronic reference designations shall be in accordance with IEEE Std. 200.

3.1.5.12 Dimensions and tolerances. Dimensions and tolerances shall be shown in limits dimensions in accordance with ANSI Y14.5.

3.1.5.13 Footnotes. Footnotes shall not be used. Notes may be placed in text, tables, or on illustrations, but not at the bottom of a page deliberately separated from the applicable text, table, or illustration to which they apply.

3.1.5.14 Assignment of titles. Easy access to the data contained in the technical manual (TM) cannot be stressed too strongly. The construction of titles, such as titles of TMs, IPB figures, illustrations, or tables and the placement of those titles in an index will often be the key to a successful search for information. Titles shall be assigned with full consideration of the importance they have in finding information. Titles shall describe the contents of the data element in definitive terms. Ambiguous titles shall be avoided.

3.1.6 References.

3.1.6.1 General requirements.

a. The reference shall insure a terminology match with the referenced data and shall be identical with the terminology used in the index of the referenced TM or chapter or section.

b. Reference to procedures is not authorized when the entire procedure is not required to be performed, e.g., "Remove tach generator NAVAIR 01-XXXXX-2-4 (WP 007 00)" when only the electrical connector is required to be removed. Reference to selected procedural steps is prohibited, e.g., "Perform steps e through h, m and p. of removal procedure" or "Perform only the steps of the disassembly procedure necessary to remove the amplifier".

c. When the entire existing procedure is not required to be performed, in its entirety, the necessary modified procedures shall be added to text, e.g., "Remove the 4 bolts (7, figure 3) and reposition the power supply assembly (PS1) to right to allow access to the amplifier (A3)" or "Remove safety wire and disconnect electrical connector from the tach generator."

3.1.6.2 Mandatory compliance maintenance procedures. Mandatory compliance maintenance practices contained in NAVAIR general series manuals shall be referenced (e. g., Aviation Hydraulics, Aviation Hose and Tube Repair, Cleaning and Corrosion Control, etc.). Refer to NAVAIR 00-25-700 (WP 002 00) for a listing of General Maintenance Engineering Series manuals with anotated mandatory compliance.

3.1.6.3 Standard maintenance tasks. Standard maintenance tasks that may be committed to memory through use and training and are explained in general information manuals available to the technician shall not be detailed, for example, NAVAIR 01- General Aircraft Information Manuals. The primary step shall appear in text, for example: "Connect external electrical power.

3.1.6.4 References to other manuals or volumes. References in the text shall be made by the referenced task title as follows:

a. For non-WP publications, reference shall be made by publication number, e.g., "Refer to AE-172AA-720-100."

b. For WP publications, reference shall be made by publication number and WP number, e.g., "Refer to NAVAIR 05-20ADG-2, WP018 00" or "Perform operational checkout of the hydraulic power system (NAVAIR 01-F14AAA-2-3-4, WP031 00)."

c. For WP concept/conventional format publications, reference shall be made by publication number and chapter number. Section designation (letter) shall be added to the chapter number, when applicable.

d. Reference shall not be made to a paragraph, figure, or table number.

e. When reference is made to a classified supplement and the discussion is incomplete without the data contained in the supplement, the classified supplement shall be listed under "Reference Material" on the WP title page.

3.1.6.5 Reference information. Operational and functional requirements for drones, airborne equipment, avionics, armament equipment including loading and off-loading requirements, shall not be included in maintenance requirements cards (MRCs). Information contained in other TMs shall not be paraphrased, abbreviated, or condensed in MRCs. For aircraft, information considered essential to safety of flight, to avoid hazards to personnel, or to avoid potential damage or degradation of equipment, shall be referenced. Other TMs shall be referenced when they provide adequate criteria in the proper sequence. References to other TMs shall be by publication number or by publication number and WP number when referencing a manual prepared in WP format.

3.1.7 Security classification. Normally, the contents of PMRMs shall be unclassified. If classified information is applicable, it shall be contained in a classified supplement. Handling of classified material and the marking of classified reproducible material, manuscript, and illustrations shall be as specified in DOD 5200.1-R and DOD 5220.22-M.

3.1.8 Procedure criteria.

3.1.8.1 Operational or functional check procedures.

a. Justified procedures for scheduled checks of hidden functions shall be included (not referenced) in the PMRM.

b. Justified procedures longer than four card faces shall be referenced (not included) in the PMRM.

3.1.8.2 Removal and installation procedure.

a. Work around procedures (procedures that do not require complete removal/installation or disassembly/assembly) shall be included in the PMRM and shall be held to a four-card-face maximum.

b. Normally, procedures shall be complete. Instructions such as "reverse removal procedures" shall not be used.

c. If a removal or installation procedure is obvious, the primary step shall be given as a command and the details shall not be required.

3.1.8.3 Inspection procedures.

a. Inspection criteria for all inspections shall be included in the PMRM.

b. Procedures for determining acceptable tolerances and wear limits shall be referenced to the applicable TM.

3.1.8.4 Adjustment, calibration, or repair procedures. Information such as standard shop practices, calibration or adjustment procedures, repair procedures, or means of rectifying

conditions (including the arrestment of corrosion and troubleshooting to find the cause of malfunctions) shall not be included or referenced in the PMRM.

3.1.9 Illustrations. Illustrations shall consist of simple line drawings and shall have sharp, clean, black lines on a white background. Lines shall have sufficient weight to ensure clear reproduction. Unacceptable art includes lead pencil drawings, office copies, photostats, half-tone prints, and illegible lettering.

3.1.10 Zonal inspection. A zonal inspction is a general inspection of a specific area of aircraft or SE where an existing scheduled inspection is being accomplished. These inspections are for obvious defects, such as leaks, frayed cables, cracks, corrosion or physical damage and do not require disassembly, special tools or test equipment. Zonal inspections are performed in

conjunction with other scheduled maintenance tasks by the rating assigned. For example, an AT assigned to perform an inspection on a radar antenna might also be assigned a zonal inspection of the entire compartment for obvious defects.

3.1.11 Duplication of inspections. Inspections performed at one interval shall not be duplicated at any other interval.

3.2 Types of PMRMs. The ordering document provided by the procuring activity shall specify the types of PMRMs to be prepared in accordance with this specification. When preparing PMRMs to the provisions of this specification, the preparing activity shall comply with all applicable portions of the Naval Aviation Maintenance Program as expressed in OPNAVINST 4790.2. PMRM types shall be limited to those described in the following paragraphs (see 6.2.1).

3.2.1 Aircraft PMRMs.

3.2.1.1 PMIC manual (aircraft). The PMIC manual contains the introductory information relative to the aircraft's scheduled maintenance program. It includes a schedule for items having an approved mandatory removal/replacement interval or special tracking requirements; a list, by system and card number, of the inspection requirements to be performed; a list by system and card number of those inspections which remain valid during Aircraft Battle Damage Repair (ABDR) reporting; and conditional inspection requirements to be accomplished after the occurrence of certain overlimit situations. The PMIC manual may also identify inspections necessary to avoid under-inspection of critical systems during implementation of a revised phased PMRM.

3.2.1.1.1 Arrangement. The arrangement of the PMIC manual and the format of each card within it shall be presented as follows:

a. Title card (see 3.3.1).

b. List of effective cards ("A" card) (see 3.3.3).

c. List of Technical Publication Deficiency Reports (TPDRs) incorporated card (TPDR card) (see 3.3.4).

d. Introduction card (see 3.3.6).

e. Removal/Replacement Schedule and Special Tracking Requirements card (see 3.3.10).

f. Inspection Requirements Index cards (see 3.3.11).

g. Conditional Inspection Listing cards (see 3.3.12).

h. Phase Change Implementation card (see 3.3.13).

3.2.1.2 Turnaround checklist (aircraft). The turnaround checklist contains tasks consecutively numbered and sequentially arranged in a logical walkaround order. The requirements are those necessary to identify degradation that has occurred during flight. They consist of:

a. Inspections for obvious defects and integrity of the aircraft exterior and interior. Installed external airborne equipment and special stores shall be considered as part of the aircraft; and

b. Check to determine the need for service of fuels, oils, liquid oxygen, and the critical consumables expended during normal operation. Reference shall be made to the appropriate manual for servicing instructions. If servicing instructions are not available in another manual, they shall be included with the Daily inspection manual and referenced. The title of the daily inspection manual shall be changed to read, "Daily inspection/servicing Manual."

3.2.1.2.1 Arrangement. The overall arrangement of the turnaround checklist and the format of each page within it shall be as follows:

a. Title/introduction/application page (see 3.3.5).

b. Task pages (see 3.3.24).

3.2.1.3 Daily, special, preservation, and conditional manuals (aircraft). The daily manual shall contain the minimum daily maintenance requirements necessary to ensure the aircraft is safe for flight. The special, preservation, and conditional manual(s) shall contain special requirements, preservation/depreservation requirements, conditional inspections (if applicable), and Aircraft Service Period Adjustment (ASPA) requirements (when applicable). The overall requirements of the manuals shall be as follows:

3.2.1.3.1 Daily inspection manual or daily inspection/servicing manual (aircraft). The daily inspection manual shall provide inspection requirements for defects at a greater depth than the turnaround checklist. The inspection shall be accomplished in a logical walkaround sequence (clockwise). If servicing instructions are not available in another manual, they shall be included with the daily inspection manual. The title of the daily inspection manual shall be changed to read, "Daily inspection/Servicing Manual."

3.2.1.3.2 Special inspection manual (aircraft). Requirements sensitive to the occurrence of a prescribed number of days, flight hours, operating hours, or cycles/events that are not compatible with phase inspection intervals shall appear on Special Inspection cards (for example 7, 14, or 21

days; 10, 35, or 75 hours; or 100 arrested landings). When assembling Special Inspection cards, every effort shall be made to limit to eight hours elapsed maintenance time (EMT) the time required to perform any special inspection or combination of special inspections which, because of their intervals, become due simultaneously. The following detailed requirements apply:

a. Aviator's equipment/safety and survival systems. Certain aviator's equipment/safety and survival systems that require Aviation Life Support System (ALSS) PMRMs shall have only installation and removal requirements included in the Special Inspection cards.

b. Corrosion inspection requirements. The corrosion inspection program for items that are predominantly calendar sensitive shall consist of special inspections based on a cumulative number of days. These requirements are to inspect corrosion-prone areas for degradation that may have occurred during the preceding inspection interval. Corrosion-prone area illustrations shall be provided where necessary for clarity.

c. Engine removal/installation requirements. Engine removal/installation requirements (when required) shall be contained in the Special Inspection cards by reference to the applicable maintenance manual, for example: "Remove engine in accordance with NAVAIR 01-XXX-X." These cards shall list the total time required, consumable maintenance materials, and replacement parts needed to accomplish the removal or installation of the engine.

d. Engine bay area requirements. Inspections of equipment, components, and/or structures within the engine bay area that are practical only with the engine removed shall be programmed as specials at the same interval as the scheduled engine removal. The applicable cards shall contain the following: "NOTE: To be performed when the QECA is removed for scheduled inspection."

e. Installed engine requirements. All engine, propeller and Quick Engine Change (QEC) maintenance requirements which are performed on the installed engine/QEC that do not have intervals compatible with those established in the phases shall be included as specials.

f. Aircraft service period adjustment (ASPA) requirements. When applicable, special inspection requirements shall be provided for preparation of the aircraft for ASPA evaluations and for restoration of the aircraft to a flight-ready condition upon completion of the inspection.

3.2.1.3.3 Preservation/depreservation requirements (aircraft). Preservation requirements shall be provided for the short term (six months maximum) preservation of aircraft. Preservation requirements for each aircraft system shall be addressed individually and shall include initial preservation procedures, scheduled maintenance to be accomplished while each system is preserved, and depreservation procedures. See 3.3.26c.

3.2.1.3.4 Conditional inspections (aircraft). Conditional inspections are those unscheduled inspections required to be accomplished because of the occurrence of a measurable abnormal operational event which exceeds the design limits of structural components or equipment and may compromise aircraft safety of flight. The exceeding of design limits should be determined at the time of occurrence by predetermined measurement criteria (i.e., G's, pressure, temperature, RPM's, weight, speed, or torque). Defects to components or equipment which occur while operating within designed operating parameters are not considered candidates for conditional inspections. Precarrier/postcarrier inspection requirements are exceptions to these criteria and shall be listed as conditional inspections.

3.2.1.3.5 Zonal inspections. Zonal inspections shall be a requirement of the daily/special/ preservation/conditional and phase PMRMs when the criteria of reliability centered maintenance (RCM) are met.

3.2.1.3.6 Arrangements. The arrangement of the daily manual and the special/preservation/ conditional/ASPA manual and the format of each card within them shall be as identified below. Unless otherwise indicated, all cards listed are required for each manual.

a. Title card (see 3.3.1).

b. List of effective cards ("A" card) (see 3.3.3).

c. List of TPDRs incorporated card (TDPR card) (see 3.3.4).

d. Warnings applicable to hazardous materials card (HMWS card) (see 3.3.4.1).

e. Introduction and application statements card (see 3.3.7.1).

f. Definitions card (see 3.3.9).

g. Abbreviation and index cards (see 3.3.14).

h. Special tools/SE list cards (see 3.3.16).

i. Consumable maintenance material list cards (see 3.3.17).

j. Replacement parts list cards (see 3.3.18).

k. Work area cards or zone cards as applicable (see 3.3.19).

l. Zone title and description cards (not required in daily manual) (3.3.20).

m. Zonal inspection criteria card (not required in daily manual) (see 3.3.21).

n. Access panel cards (see 3.3.22).

o. Antenna location cards (not required in daily manual) (see 3.3.23).

p. Task cards as applicable (see 3.3.26).

(1) Daily

(2) Special (day)

(3) Special (hour)

(4) Special (event)

(5) Preservation

(6) Depreservation

(7) Conditional (as required)

(8) ASPA cards (see 3.2.1.3e).

q. Illustration cards (see 3.3.27).

r. QA cards (see 3.3.31).

3.2.1.4 Phased maintenance requirements manual (aircraft). The phase requirements are formulated by dividing the total applicable scheduled inspection requirements into phases which are performed at specified intervals and have approximately the same work content and EMT. This includes all QEC, propeller and engine requirements which are performed on the installed QECA. The number of phases is established after the scope of the total workload has been identified by maintenance engineering analysis. Through application of this concept, a portion of the total recurring inspection requirements is accomplished at each phase and the cycle will be repeated after completion of the last phase.

3.2.1.4.1 Flight-hour inspections. If a majority of the scheduled maintenance requirements specified for a phase inspection cycle are flight-hour sensitive, the requirements shall divided into phases based on flight hours.

3.2.1.4.2 Phase or calendar inspections. If a majority of the scheduled maintenance

requirements specified for a phase inspection cycle are calendar sensitive, the requirements shall be divided into phases based on calendar time.

3.2.1.4.3 Phase inspection interval. Each phase shall be accomplished at equal flight-hour or calendar intervals. Scheduled flight-hour and calendar requirements shall not be intermixed in the same phase manual. Requirements not compatible with the phase interval shall be accomplished as Special inspections.

3.2.1.4.4 Phase inspection structure. The following guidelines shall be followed in structuring each phase:

a. The amount of work to be accomplished by an inspection team should be limited to eight hours or less of EMT.

b. When practical, divide each phase into approximately equal workloads.

c. Limit repetition of preparation requirements by giving special attention to equipment removal, access openings, use of SE, engine operation, and checkflight requirements.

d. Within time limitations, group requirements that are functionally related in the same phase.

e. Group requirements so that they are compatible with the environment in which they shall be performed, i.e., tasks requiring the aircraft to be on jacks should be put in the same phase.

f. When feasible, group requirements to be accomplished using external power sources.

g. Inspection requirements that are common to all phases shall be consolidated in one deck and shall be titled “Master deck”. Inspection requirements that are performed on a specific phase only shall be titled “Supplemental deck”. To perform the inspection, the master deck shall be issued along with the supplemental deck required for the specific phase.

3.2.1.4.4.1 Zonal inspections. Zonal inspections shall be a requirement of the phase PMRMs when the criteria of reliability centered maintenance (RCM) are met.

3.2.1.4.5 Arrangement. The arrangement of the phased maintenance requirement manual and the format of each card within it shall be as follows:

a. Title card (see 3.3.1).

b. List of effective cards ("A" card) (see 3.3.3).

c. List of TPDRs incorporated card (TPDR card) (see 3.3.4).

d. Warnings applicable to hazardous materials card (HMWS card) (see 3.3.4.1).

e. Introduction and application statement card (see 3.3.7.2).

f. Definitions card (see 3.3.9).

g. Abbreviation, index, and checkflight requirements cards (see 3.3.15).

h. Special tools/SE list cards (see 3.3.16).

i. Consumable maintenance material list cards (see 3.3.17).

j. Replacement parts list cards (see 3.3.18).

k. Work area cards or zone cards (see 3.3.19).

l. Zone title and description cards (3.3.20).

m. Zonal inspection criteria card (see 3.3.21).

n. Access panel cards (see 3.3.22).

o. Antenna location cards (see 3.3.23).

p. Phase Packages (Supplemental):

(1) Phase cover card (see 3.3.2).

(2) Sequence control cards (Master deck only) (see 3.3.25.1).

(3) Task cards (see 3.3.26).

(4) Illustration cards (see 3.3.27).

(5) QA cards (see 3.3.31).

3.2.2 Quick engine change assembly (QECA) manual.

3.2.2.1 PMRM (QECA) . This manual shall contain all scheduled engine inspection requirements necessary to zero time the engine for inspection purposes. This includes

requirements on the engine, Quick Engine Change Kit (QECK), Contractor Furnished Equipment (CFE), and Government Furnished Equipment (GFE) and propellers, if applicable, for all aircraft models which utilize the particular engine mode. For multi-engine aircraft, the requirements applicable to a particular engine position are noted on the applicable MRC. Conditional inspections and zonal inspections shall not be a requirement of the QECA manual. As referenced in this specification, the terms QEC, QECA, and QECK are defined as follows:

a. QEC (quick engine change). Requirements peculiar to a specific airframe for QECK items, GFE, and CFE accessories and for propellers when applicable.

b. QECA (quick engine change assembly). A quick engine change kit completely assembled on a quick engine change stand with the engine and all GFE and CFE accessories installed, less the propeller.

c. QECK (quick engine change kit). A kit containing all items required for a QECA less GFE and CFE accessories, engine, and propeller.

3.2.2.1.1 Arrangement. The arrangement of the QECA manual and the format of each card within it shall be presented as follows:

a. Title card (see 3.3.1).

b. List of effective cards ("A" card) (see 3.3.3).

c. List of TPDRs incorporated card (TPDR card) (see 3.3.4).

d. Warnings applicable to hazardous materials card (HMWS card) (see 3.3.4.1).

e. Introduction and application statements card (see 3.3.7.3).

f. Definitions card (see 3.3.9).

g. Abbreviation and index cards (see 3.3.14).

h. Special tools/SE list cards (see 3.3.16).

i. Consumable maintenance material list cards (see 3.3.17).

j. Replacement parts list cards (see 3.3.18).

k. Work area cards or zone cards (see 3.3.19).

l. Sequence control cards (see 3.3.25.2).

m. Engine task cards (see 3.3.26).

n. Illustration cards (see 3.3.27).

o. Engine QA cards (see 3.3.31).

p. QEC cover card. The cover card shall not be numbered. It shall be printed on one side only and shall contain the TM number and QEC identifying information.

q. QEC task cards (see 3.3.26).

r. Illustration cards (see 3.3.27).

s. QEC QA cards (see 3.3.31).

3.2.3 Airborne armament equipment (AAE) or special stores (SS) PMRMs.

3.2.3.1 Periodic maintenance information cards (AAE/SS). The PMIC manual contains the introductory information relative to the AAE and SS scheduled maintenance program. It includes a schedule for items having an approved mandatory removal/ replacement interval and a list, by system and card number, of the inspection requirements to be performed.

3.2.3.1.1 Arrangement. The arrangement of the PMIC manual and the format of each card within it shall be as follows:

a. Title card (see 3.3.1).

b. List of effective cards ("A" Card) (see 3.3.3).

c. List of TPDRs incorporated card (TPDR card) (see 3.3.4).

d. Introduction card (see 3.3.5).

e. Removal/replacement scheduled and special tracking requirements cards (see 3.3.10).

f. Inspection requirements index cards (see 3.3.11).

3.2.3.2 Daily/special manual (AAE/SS). This manual shall contain all scheduled maintenance requirements for AAE or SS that are not normally separated from the aircraft during flight. Items such as gun pods, multiple ejector racks/triple ejector racks, in-flight refueling stores, and

electronic counter-measure pods fall into this category. The scheduled maintenance requirements are arranged in a logical sequence to ensure a thorough inspection of the equipment. The manual contains the following:

a. Daily inspection (AAE/SS). The daily inspection will provide inspection requirements for uninstalled AAE or SS. The inspection shall be accomplished in a logical walkaround sequence. Inspections performed on installed AAE or SS shall be addressed in the applicable aircraft manual.

b. Special inspection (AAE/SS). Special inspection requirements are tasks on installed or uninstalled AAE or SS which do not fit in the turnaround or daily requirements.

c. Operational checks (AAE/SS). Justified operational checks shall not be included in this manual but shall be included in the appropriate aircraft manual.

d. Zonal inspection (AAE/SS). Zonal inspections shall be a requirement of the daily/special PMRM when the criteria of RCM are met.

3.2.3.2.1 Arrangement (AAE/SS). The arrangement of the daily/special manual and the format of each card within it shall be as follows:

a. Title card (see 3.3.1).

b. List of effective cards ("A" card) (see 3.3.3).

c. List of TPDRs incorporated card (TPDR card) (see 3.3.4).

d. Warnings applicable to hazardous materials card (HMWS card) (see 3.3.4.1).

e. Introduction and application statements card (see 3.3.7.4).

f. Definitions card (see 3.3.9).

g. Abbreviation and index cards (see 3.3.14).

h. Special tools/SE list cards (see 3.3.16).

i. Consumable maintenance material list cards (see 3.3.17).

j. Replacement parts list cards (see 3.3.18).

k. Work area cards or zone cards (see 3.3.19).

l. Task cards (see 3.3.26).

(1) Daily

(2) Special (day)

(3) Special (hour)

(4) Special (event)

m. Illustration cards (see 3.3.27).

n. QA cards (see 3.3.31).

3.2.4 Support equipment, including ATE, PMRMs.

3.2.4.1 Preoperational checklist (SE only). This checklist contains the inspection requirements necessary to identify defects that have occurred between or during SE use. They consist of examinations of the equipment exterior and interior surfaces, required servicing, and functional checks, as required. The cards and tasks are arranged in the most logical order for performing the required tasks. SE preoperational requirements shall be accomplished prior to each use. Preoperational checklists shall not be developed for ATE. ATE, as distinguished from SE, are those units which, being permanently situated at intermediate level maintenance activities, carry out predetermined programs of testing.

3.2.4.1.1 Arrangement. The arrangement of the preoperational checklist and the format of each page within it shall be as follows:

a. Title/introduction/application page (see 3.3.5 and 3.3.5.2).

b. Task pages (see 3.3.24).

3.2.4.2 Daily, special, preservation, and conditional manuals (SE/ATE). The daily manual shall contain the minimum daily maintenance requirements necessary to ensure the SE is ready for use. The special, preservation, and conditional manual(s) shall contain special requirements, preservation/depreservation requirements, and conditional inspections (if applicable). The overall requirements of the manuals shall be as follows:

3.2.4.2.1 Daily inspection manual or daily inspection/servicing manual (SE/ATE). The daily inspection manual shall provide inspection requirements for defects at a greater depth than the preoperational checklist. The inspection shall be accomplished in a logical sequence. If servicing instructions are not available in another manual, they shall be included with the daily inspection

manual. The title of the daily inspection manual shall be changed to read, "Daily Inspection/Servicing Manual."

3.2.4.2.2 Special, preservation, and conditional manual(s) (SE/ATE).

a. Special inspection manual (SE/ATE). Requirements sensitive to the occurrence of a prescribed number of days, operating hours, or cycles that are not compatible with inspection intervals shall appear on Special Inspection cards (for example, 7, 14, or 21 days; 10, 35, or 75 hours). When assembling special cards, every effort shall be made to limit to eight hours EMT the time required to perform any special inspection or combination of special inspections which, because of their intervals, become due simultaneously. The following detailed requirements apply:

(1) Corrosion inspection requirements. The corrosion inspection program for items that are predominantly calendar sensitive shall consist of special inspections based on a cumulative number of days. These requirements are to inspect corrosion-prone areas for degradation that may have occurred during the preceding inspection interval. Corrosion-prone area illustrations shall be provided where necessary for clarity.

(2) Engine removal/installation requirements. Engine removal/installation requirements (when required) shall be contained in the special cards by reference to the applicable maintenance manual (for example: "Remove engine in accordance with NAVAIR 01-XXX-X"). These cards shall list the total time required, consumable maintenance materials, and replacement parts needed to accomplish the removal or installation of the engine.

(3) Engine bay area requirements. Inspections of equipment, components, and/or structures within the engine bay area that are practical only with the engine removed shall be programmed as specials at the same interval as the scheduled engine removal. The applicable cards shall contain the following: "NOTE: To be performed when the QECA is removed for scheduled inspection."

(4) Installed engine requirements. All engine, propeller and QEC maintenance requirements which are performed on the installed engine/QEC that do not have intervals compatible with those established in the phases shall be included as specials.

b. Preservation/depreservation requirements (SE/ATE). Preservation requirements shall be provided for short term (six months maximum) preservation. Preservation requirements shall include initial preservation procedures, scheduled maintenance to be accomplished while the SE or ATE is preserved, and depreservation procedures (see 3.3.26c).

c. Conditional inspections (SE/ATE). Conditional inspections are those unscheduled

inspections required to be accomplished because of the occurrence of a measurable abnormal operational event which exceeds the design limits of structural components or equipment and may compromise safety. The exceeding of design limits should be determined at the time of occurrence by a predetermined measurement criteria (i.e., pressure, temperature, RPMs, weight, speed, or torque). Defects to components or equipment which occur while operating within designed operating parameters are not considered candidates for conditional inspections. Precarrier inspection requirements are exceptions to these criteria and shall be listed as conditional inspections.

3.2.4.2.3 Arrangement (SE/ATE). The arrangement of the manual and the format of each card within it shall be as follows:

a. Title card (see 3.3.1).

b. List of effective cards ("A" card) (see 3.3.3).

c. List of TPDRs incorporated card (TPDR Card) (see 3.3.4).

d. Warnings applicable to hazardous materials card (HMWS card) (see 3.3.4.1).

e. Introduction and application statements card (see 3.3.7.11).

f. Definitions card (see 3.3.9).

g. Abbreviation and index cards (see 3.3.14).

h. Special tools/SE list cards (see 3.3.16).

i. Consumable maintenance material list cards (see 3.3.17).

j. Replacement parts list cards (see 3.3.18).

k. Work area cards (see 3.3.19).

l. Access panel cards (see 3.3.22).

m. Antenna location cards (see 3.3.23).

n. Task cards (see 3.3.26).

(1) Daily, if required.

(2) Special (day).

(3) Special (start).

(4) Preservation.

(5) Depreservation.

(6) Conditional (as required).

o. Illustration cards (see 3.3.27).

p. QA cards (see 3.3.31).

3.2.4.3 Calendar or start maintenance requirements manual (SE/ATE). These manuals contain the scheduled maintenance requirements necessary to maintain the SE. This includes checking, lubrication, servicing and inspection for degradation/corrosion. These manuals shall contain requirements to ensure a thorough and searching examination of the equipment in both the static and functional states. They shall clearly establish inspection procedures that will detect material degradation that may have occurred during the preceding inspection interval. Clearances, pressures, tolerances, illustrations, SE required, and manual references are presented where pertinent. Periodicity shall be established to the occurrence of a prescribed number of days, starts, or cycles, as applicable. When functional checks of the equipment are required, only the applicable maintenance manual(s) shall be referenced. Each inspection shall be accomplished at equal hour or calendar day intervals. Requirements not compatible with the established interval shall be accomplished as special inspections. The overall arrangement of the manual shall be as follows:

a. Calendar or start inspection. The following detailed requirements apply:

(1) Calendar inspections. If most of the scheduled maintenance requirements specified for an inspection cycle are calendar sensitive, the requirements shall be based on calendar time (converted to days).

(2) Start inspections. If most of the scheduled maintenance requirements specified for an inspection cycle are start sensitive, the requirements shall be based on starts.

3.2.4.3.1 Arrangement (SE and ATE). The arrangement of the SE/ATE calendar or start/special/preservation/conditional manual and the format of each card within it shall be as follows:

a. Title card (see 3.3.1).

b. List of effective cards ("A" card) (see 3.3.3).

c. List of TPDRs incorporated card (TPDR card) (see 3.3.4).

d. Warnings applicable to hazardous materials card (HMWS card) (see 3.3.4.1).

e. Introduction and application statements card (see 3.3.7.5).

f. Definitions card (see 3.3.9).

g. Abbreviation and index cards (see 3.3.14).

h. Special tools/SE list cards (see 3.3.16).

i. Consumable maintenance material list cards (see 3.3.17).

j. Replacement parts list cards (see 3.3.18).

k. Work area cards (see 3.3.19).

l. Access panel cards (see 3.3.22).

m. Task cards (see 3.3.26).

(1) Calendar or

(2) Start

n. Illustration cards (see 3.3.27).

o. QA cards (see 3.3.31).

3.2.5 Powered aerial target (PAT) PMRMs.

3.2.5.1 Acceptance/initial buildup manual (PAT). This manual contains the acceptance inspections, buildup procedures, and testing and servicing requirements for newly issued targets. The cards in this manual are arranged in groups according to the rating or MOS required to perform the tasks.

3.2.5.1.1 Arrangement. The arrangement of the acceptance/initial buildup manual and the format of each card within it shall be as follows:

a. Title card (see 3.3.1).

b. List of effective cards ("A" card) (see 3.3.3).

c. List of TPDRs incorporated card (TPDR card) (see 3.3.4).

d. Warnings applicable to hazardous materials card (HMWS card) (see 3.3.4.1).

e. Introduction and application statements card (see 3.3.7.6).

f. Definitions card (see 3.3.9).

g. Abbreviation and index cards (see 3.3.14).

h. Special tools/SE list cards (see 3.3.16).

i. Consumable maintenance material list cards (see 3.3.17).

j. Replacement parts list cards (see 3.3.18).

k. Work area cards or zone cards (see 3.3.19).

l. Access panel cards (see 3.3.22).

m. Antenna location cards (see 3.3.23).

n. Task cards (see 3.3.26).

(1) Buildup.

(2) Servicing.

(3) Testing.

o. Illustration cards (see 3.3.27).

p. QA cards (see 3.3.31).

3.2.5.2 Prelaunch manual (PAT). This manual contains the prelaunch requirements to inspect the target for defects, to verify servicing, and to ready it for launch. The cards and tasks in this manual are arranged in the most logical order for performing the required tasks. Prelaunch requirements shall be accomplished immediately prior to each use of the target.

3.2.5.2.1 Arrangement. The arrangement of the prelaunch manual and the format of each card within it shall be as follows:

a. Title card (see 3.3.1).

b. List of effective cards ("A" card) (see 3.3.3).

c. List of TPDRs incorporated card (TPDR card) (see 3.3.4).

d. Warnings applicable to hazardous materials card (HMWS card) (see 3.3.4.1).

e. Introduction and application statements card (see 3.3.7.7).

f. Definitions card (see 3.3.9).

g. Abbreviation and index cards (see 3.3.14).

h. Special tools/SE list cards (see 3.3.16).

i. Work area cards or zone cards (see 3.3.19).

j. Access panel cards (see 3.3.22).

k. Antenna location cards (see 3.3.23).

l. Task cards (see 3.3.26).

m. Illustration cards (see 3.3.27).

n. QA cards (see 3.3.31).

3.2.5.3 Postlaunch/servicing manual (PAT). This manual contains the postlaunch maintenance and servicing requirements for the target. These requirements include procedures for decontamination, disassembly and buildup, inspection for degradation, and system servicing.

3.2.5.3.1 Arrangement. The arrangement of the postlaunch/servicing manual and the format of each card within it shall be as follows:

a. Title card (see 3.3.1).

b. List of effective cards ("A" card) (see 3.3.3).

c. List of TPDRs incorporated card (TPDR card) (see 3.3.4).

d. Warnings applicable to hazardous materials card (HMWS card) (see 3.3.4.1).

e. Introduction and application statements card (see 3.3.7.8).

f. Definitions card (see 3.3.9).

g. Abbreviation and index cards (see 3.3.14).

h. Special tools/SE list cards (see 3.3.16).

i. Consumable maintenance material list cards (see 3.3.17).

j. Replacement parts list cards (see 3.3.18).

k. Work area cards or zone cards (see 3.3.19).

l. Access panel cards (see 3.3.22).

m. Antenna location cards (see 3.3.23).

n. Task cards (see 3.3.26).

(1) Decontamination.

(2) Disassembly.

(3) Rehabilitation.

(4) Assembly.

(5) Servicing.

o. Illustration cards (see 3.3.27).

p. QA cards (see 3.3.31).

3.2.6 Powered surface target (PST) PMRMs.

3.2.6.1 Preoperational checklist (PST) . This checklist contains the inspection requirements arranged in the most logical order for performing the required tasks. Preoperational requirements

shall be accomplished prior to each use of the target.

3.2.6.1.1 Arrangement. The arrangement of the checklist and the format of each page within it shall be as follows:

a. Title/introduction/application page (see 3.3 and 3.3.5.2).

b. Task pages (see 3.3.24).

3.2.6.2 Periodic maintenance requirements manual (PST). This manual contains the scheduled maintenance requirements necessary to maintain powered surface targets. This includes lubrication and servicing and inspection for degradation.

3.2.6.2.1 Arrangement. The arrangement of the PST PMRM and the format of each card within it shall be as follows:

a. Title card (see 3.3.1).

b. List of effective cards ("A" card) (see 3.3.3).

c. List of TPDRs incorporated card (TPDR card) (see 3.3.4).

d. Warnings applicable to hazardous materials card (HMWS card) (see 3.3.4.1).

e. Introduction and application statements card (see 3.3.7.9).

f. Definitions card (see 3.3.9).

g. Abbreviation and index cards (see 3.3.14).

h. Special tools/SE list cards (see 3.3.16).

i. Consumable maintenance material list cards (see 3.3.17).

j. Replacement parts list cards (see 3.3.18).

k. Work area cards or zone cards (see 3.3.19).

l. Access panel cards (see 3.3.22).

m. Antenna location cards (see 3.3.23).

n. Task cards (see 3.3.26).

(1) Days.

(2) Hours.

(3) Events.

o. Illustration cards (see 3.3.27).

p. QA cards (see 3.3.31).

3.2.7 Aviation life support systems (ALSS) PMRMs.

3.2.7.1 Periodic maintenance requirements manual (ALSS). This manual contains the requirements necessary to inspect ALSS for degradation that has occurred since the previous inspection. Each ALSS PMRM shall address specific equipment within the scope of a given category of equipment. For example, the manual titled, EMERGENCY PERSONAL PARACHUTES AND DROGUE SYSTEMS shall address the NES-12, A/P-28S-24, etc. The manual titled, SEAT SURVIVAL KITS shall address the SKU-2/A, SKU-3/A, etc.

3.2.7.1.1 Arrangement. The arrangement of the ALSS PMRM and the format of each card within it shall be as follows:

a. Title card (see 3.3.1).

b. List of effective cards ("A" card) (see 3.3.3).

c. List of TPDRs incorporated card (TPDR card) (see 3.3.4).

d. Warnings applicable to hazardous materials card (HMWS card) (see 3.3.4.1).

e. Introduction and application statements card (see 3.3.8).

f. Definitions card (see 3.3.9).

g. Abbreviation and index cards (see 3.3.14).

h. Special tools/SE list cards (see 3.3.16).

i. Consumable maintenance material list cards (see 3.3.17).

j. Replacement parts list cards (see 3.3.18).

k. ALSS cover card (see 3.3.2).

l. Task cards (see 3.3.26).

(1) Days.

(2) Hours.

m. Illustration cards (see 3.3.27).

n. QA cards (see 3.3.31).

3.2.8 Airborne mine countermeasures (AMCM) equipment PMRMs.

3.2.8.1 Periodic maintenance information cards (PMIC) manual (AMCM). The PMIC manual contains the introductory information relative to the AMCM scheduled maintenance program. It includes a schedule for items having an approved mandatory removal/replacement interval or special tracking requirements; a list, by system and card number, of the inspection requirements to be performed; and conditional inspection requirements to be accomplished after the occurrence of certain over-limit situations.

3.2.8.1.1 Arrangement. The arrangement of the PMIC manual and the format of each card within it shall be as follows:

a. Title card (see 3.3.1).

b. List of effective cards ("A" card) (see 3.3.3).

c. List of TPDRs incorporated card (TPDR card) (see 3.3.4).

d. Introduction card (see 3.3.6.1).

e. Removal/replacement schedule and special tracking card (see 3.3.10).

f. Inspection requirements index cards (see 3.3.1).

g. Conditional inspection listing cards (see 3.3.12).

3.2.8.2 Turnaround checklist (AMCM). The turnaround checklist contains tasks consecutively numbered and sequentially arranged in logical walkaround order. The requirements

are those necessary to identify degradation that has occurred during flight. They consist of:

a. Inspections for obvious defects and integrity of the equipment exterior and interior; and

b. Checks to determine the need for servicing fuel, oil, hydraulic fluid, and other critical consumables expended during normal operation.

3.2.8.2.1 Arrangement. The overall arrangement of the turnaround checklist and the format of each page within it shall be as follows:

a. Title/introduction/application page (see 3.3.5 and 3.3.5.1).

b. Task pages (see 3.3.24).

3.2.8.3 Daily manual (AMCM). The daily manual shall contain the minimum daily maintenance requirements and shall be arranged in a logical sequence of events. This includes lubrication and inspections for degradation/corrosion. These requirements are to be in a greater depth than those contained in the turnaround checklist. If servicing instructions are not available in another manual, they shall be included with the daily inspection manual. The title of the daily Inspection manual shall be changed to read, "Daily Inspection/Servicing Manual."

3.2.8.3.1 Arrangement. The overall arrangement of the daily manual and the format of each card within it shall be as follows:

a. Title card (see 3.3.1).

b. List of effective cards ("A" card) (see 3.3.3).

c. List of TPDRs incorporated card (TPDR card) (see 3.3.4).

d. Warnings applicable to hazardous materials card (HMWS card) (see 3.3.4.1).

e. Introduction and application statements card (see 3.3.7.10).

f. Definitions card (see 3.3.9).

g. Abbreviation and index cards (see 3.3.14).

h. Special tools/SE list cards (see 3.3.16).

i. Consumable maintenance material list cards (see 3.3.17).

j. Replacement parts list cards (see 3.3.18).

k. Access panel cards (see 3.3.22).

l. Antenna location cards (see 3.3.23).

m. Task cards (see 3.3.26).

n. Illustration cards (see 3.3.27).

o. QA cards (see 3.3.31).

3.2.8.4 Special, preservation, and conditional manuals (AMCM). The special, preservation, and conditional manual(s) shall contain special requirements, preservation/depreservation requirements, and conditional inspections (if applicable). The overall requirements of the manuals shall be as follows:

a. Special inspection manual (AMCM). Requirements sensitive to the occurrence of a prescribed number of days, operating hours, or cycles that are not compatible with inspection intervals shall appear on Special Inspection cards (for example, 7, 14, or 21 days; 10, 35, or 75 hours). When assembling special cards, every effort shall be made to limit to eight hours EMT the time required to perform any special inspection or combination of special inspections which, because of their intervals, become due simultaneously. The following detailed requirements apply:

(1) Corrosion inspection requirements. The corrosion inspection program for items that are predominantly calendar sensitive shall consist of special inspections based on a cumulative number of days. These requirements are to inspect corrosion-prone areas for degradation that may have occurred during the preceding inspection interval. Corrosion-prone area illustrations shall be provided where necessary for clarity.

(2) Engine removal/installation requirements. Engine removal/installation requirements (when required) shall be contained in the special cards by reference to the applicable maintenance manual (for example: "Remove engine in accordance with NAVAIR 01-XXX-X."). These cards shall list the total time required, consumable maintenance materials, and replacement parts needed to accomplish the removal or installation of the engine.

(3) Engine bay area requirements. Inspections of equipment, components, and/or structures within the engine bay area that are practical only with the engine removed shall be programmed as specials at the same interval as the scheduled engine removal.

The applicable cards shall contain the following: "NOTE: To be performed when the QECA is removed for scheduled inspection."

(4) Installed engine requirements. All engine, propeller and QEC maintenance requirements which are performed on the installed engine/QEC that do not have intervals compatible with those established in the phases shall be included as specials.

b. Preservation/depreservation requirements (AMCM). Preservation requirements shall be provided for short term (six months maximum) preservation. Preservation requirements shall include initial preservation procedures, scheduled maintenance to be accomplished while the SE or ATE is preserved, and depreservation procedures (see 3.3.26c).

c. Conditional inspections (AMCM). Conditional inspections are those unscheduled inspections required to be accomplished because of the occurrence of a measurable abnormal operational event which exceeds the design limits of structural components or equipment and may compromise safety. The exceeding of design limits shall be determined at the time of occurrence by a predetermined measurement criteria (i.e., pressure, temperature, RPMs, weight, speed, or torque). Defects to components or equipment which occur while operating within designed operating parameters are not considered candidates for conditional inspections. Precarrier inspection requirements are exceptions to these criteria and shall be listed as conditional inspections.

3.2.8.4.1 Arrangement (AMCM). The arrangement of the manual and the format of each card within it shall be as follows:

a. Title card (see 3.3.1).

b. List of effective cards ("A" card) (see 3.3.3).

c. List of TPDRs incorporated card (TPDR card) (see 3.3.4).

d. Warnings applicable to hazardous materials card (HMWS card) (see 3.3.4.1).

e. Introduction and application statements card (see 3.3.7.11).

f. Definitions card (see 3.3.9).

g. Abbreviation and index cards (see 3.3.14).

h. Special tools/SE list cards (see 3.3.16).

i. Consumable maintenance material list cards (see 3.3.17).

j. Replacement parts list cards (see 3.3.18).

k. Work area cards (see 3.3.19).

l. Access panel cards (see 3.3.22).

m. Antenna location cards (see 3.3.23).

n. Task cards (see 3.3.26).

(1) Calendar or start.

(2) Special (day).

(3) Special (hour).

(4) Special (start).

(5) Preservation.

(6) Depreservation.

(7) Conditional (as required).

o. Illustration cards (see 3.3.27).

p. QA cards (see 3.3.31).

3.2.8.5 Calendar, hour, or start maintenance requirements manual (AMCM). This manual contains the scheduled maintenance requirements necessary to maintain the SE. This includes checking, lubrication, servicing and inspection for degradation/corrosion. This manual shall contain requirements to ensure a thorough and searching examination of the equipment in both the static and functional states. Coverage shall clearly establish inspection procedures that will detect material degradation that may have occurred during the preceding inspection interval. Clearances, pressures, tolerances, illustrations, SE required, and manual references are presented where pertinent. Periodicity shall be established to the occurrence of a prescribed number of days, starts, or cycles, as applicable. When functional checks of the equipment are required, only the applicable maintenance manual(s) shall be referenced. Each inspection will be accomplished at equal hour or calendar day intervals. Requirements not compatible with the established interval shall be accomplished as special inspections. The overall arrangement of the manual shall be as follows:

a. Calendar, hour, or start inspection. The following detailed requirements apply:

(1) Calendar inspections. If a majority of the scheduled maintenance requirements specified for an inspection cycle are calendar sensitive, the requirements shall be based on calendar time (converted to days).

(2) Hour inspection. If a majority of the scheduled maintenance requirements specified for an inspection cycle are hour sensitive, the requirements shall be based on hours.

(3) Start inspections. If a majority of the scheduled maintenance requirements specified for an inspection cycle are start sensitive, the requirements shall be based on starts.

3.2.8.5.1 Arrangement (AMCM). The arrangement of the manual and the format of each card within it shall be as follows:

a. Title card (see 3.3.1).

b. List of effective cards ("A" card) (see 3.3.3).

c. List of TPDRs incorporated card (TPDR card) (see 3.3.4).

d. Warnings applicable to hazardous materials (HMWS) card (see 3.3.4.1).

e. Introduction and application statements card (see 3.3.7.5).

f. Definitions card (see 3.3.9).

g. Abbreviation and index cards (see 3.3.14).

h. Special tools/SE list cards (see 3.3.16).

i. Consumable maintenance material list cards (see 3.3.17).

j. Replacement parts list cards (see 3.3.18).

k. Work area cards (see 3.3.19).

l. Access panel cards (see 3.3.22).

m. Task cards (see 3.3.26).

(1) Days,

(2) Hours, or

(3) Starts.

n. Illustration cards (see 3.3.27).

o. QA cards (see 3.3.31).

3.2.9 Unmanned Aerial Vehicle (UAV) PMRMs.

3.2.9.1 Periodic maintenance information cards (PMIC) manual (UAV). The PMIC manual contains the introductory information relative to the AMCM scheduled maintenance program. It includes a schedule for items having an approved mandatory removal/replacement interval or special tracking requirements; a list, by system and card number, of the inspection requirements to be performed; and conditional inspection requirements to be accomplished after the occurrence of certain over-limit situations.

3.2.9.1.1 Arrangement. The arrangement of the PMIC manual and the format of each card within it shall be as follows:

a. Title card (see 3.3.1).

b. List of effective cards ("A" card) (see 3.3.3).

c. List of TPDRs incorporated card (TPDR card) (see 3.3.4).

d. Introduction card (see 3.3.6.1).

e. Removal/replacement schedule and special tracking card (see 3.3.10).

f. Inspection requirements index cards (see 3.3.1).

g. Conditional inspection listing cards (see 3.3.12).

3.2.9.2 Turnaround checklist (UAV). The turnaround checklist contains tasks consecutively numbered and sequentially arranged in logical walkaround order. The requirements are those necessary to identify degradation that has occurred during flight. They consist of:

a. Inspections for obvious defects and integrity of the equipment exterior and interior; and

b. Checks to determine the need for servicing fuel, oil, hydraulic fluid, and other critical consumables expended during normal operation.

3.2.9.2.1 Arrangement. The overall arrangement of the turnaround checklist and the format of each page within it shall be as follows:

a. Title/Introduction/Application Page (see 3.3.5 and 3.3.5.1).

b. Task pages (see 3.3.24).

3.2.9.3 Daily inspection manual or daily inspection/servicing manual (UAV). The daily manual shall contain the minimum daily maintenance requirements necessary to ensure the SE is ready for use. This includes lubrication and inspections for degradation/corrosion. The daily manual shall be arranged in a logical sequence of events. These requirements are to be in a greater depth than those contained in the turnaround checklist. If servicing instructions are not available in another manual, they shall be included with the daily inspection manual. The title of the daily inspection manual shall be changed to read, "Daily inspection/Servicing Manual."

3.2.9.3.1 Arrangement. The overall arrangement of the daily manual and the format of each card within it shall be as follows:

a. Title card (see 3.3.1).

b. List of effective cards ("A" card) (see 3.3.3).

c. List of TPDRs incorporated card (TPDR card) (see 3.3.4).

d. Warnings applicable to hazardous materials card (HMWS card) (see 3.3.4.1).

e. Introduction and application statements card (see 3.3.7.10).

f. Definitions card (see 3.3.9).

g. Abbreviation and index cards (see 3.3.14).

h. Special tools/SE list cards (see 3.3.16).

i. Consumable maintenance material list cards (see 3.3.17).

j. Replacement parts list cards (see 3.3.18).

k. Access panel cards (see 3.3.22).

l. Antenna location cards (see 3.3.23).

m. Task cards (see 3.3.26).

n. Illustration cards (see 3.3.27).

o. QA cards (see 3.3.31).

3.2.9.4 Special, preservation, and conditional manuals (UAV). The special, preservation, and conditional manual(s) shall contain special requirements, preservation/depreservation requirements, and conditional inspections (if applicable). The overall requirements of the manuals shall be as follows:

a. Special inspection manual (UAV). Requirements sensitive to the occurrence of a prescribed number of days, operating hours, or cycles that are not compatible with inspection intervals shall appear on Special Inspection cards (for example, 7, 14, or 21 days; 10, 35, or 75 hours). When assembling special cards, every effort shall be made to limit to eight hours EMT the time required to perform any special inspection or combination of special inspections which, because of their intervals, become due simultaneously. The following detailed requirements apply:

(1) Corrosion inspection requirements. The corrosion inspection program for items that are predominantly calendar sensitive shall consist of special inspections based on a cumulative number of days. These requirements are to inspect corrosion-prone areas for degradation that may have occurred during the preceding inspection interval. Corrosion-prone area illustrations shall be provided where necessary for clarity.

(2) Engine removal/installation requirements. Engine removal/installation requirements (when required) shall be contained in the special cards by reference to the applicable maintenance manual (for example: "Remove engine in accordance with NAVAIR 01-XXX-X."). These cards shall list the total time required, consumable maintenance materials, and replacement parts needed to accomplish the removal or installation of the engine.

(3) Engine bay area requirements. Inspections of equipment, components, and/or structures within the engine bay area that are practical only with the engine removed shall be programmed as specials at the same interval as the scheduled engine removal. The applicable cards shall contain the following: "NOTE: To be performed when the QECA is removed for scheduled inspection."

(4) Installed engine requirements. All engine, propeller and QEC maintenance requirements which are performed on the installed engine/QEC that do not have

intervals compatible with those established in the phases shall be included as specials.

b. Preservation/depreservation requirements (UAV). Preservation requirements shall be provided for short term (six months maximum) preservation. Preservation requirements shall include initial preservation procedures, scheduled maintenance to be accomplished while the SE or ATE is preserved, and depreservation procedures (see 3.3.26c).

c. Conditional inspections (UAV). Conditional inspections are those unscheduled inspections required to be accomplished because of the occurrence of a measurable abnormal operational event which exceeds the design limits of structural components or equipment and may compromise safety. The exceeding of design limits shall be determined at the time of occurrence by a predetermined measurement criteria (i.e., pressure, temperature, RPMs, weight, speed, or torque). Defects to components or equipment which occur while operating within designed operating parameters are not considered candidates for conditional inspections. Precarrier inspection requirements are exceptions to these criteria and shall be listed as conditional inspections.

3.2.9.4.1 Arrangement (UAV). The arrangement of the manual and the format of each card within it shall be as follows:

a. Title card (see 3.3.1).

b. List of effective cards ("A" card) (see 3.3.3).

c. List of TPDRs incorporated card (TPDR card) (see 3.3.4).

d. Warnings applicable to hazardous materials card (HMWS card) (see 3.3.4.1).

e. Introduction and application statements card (see 3.3.7.11).

f. Definitions card (see 3.3.9).

g. Abbreviation and index cards (see 3.3.14).

h. Special tools/SE list cards (see 3.3.16).

i. Consumable maintenance material list cards (see 3.3.17).

j. Replacement parts list cards (see 3.3.18).

k. Work area cards (see 3.3.19).

l. Access panel cards (see 3.3.22).

m. Antenna location cards (see 3.3.23).

n. Task cards (see 3.3.26).

(1) Calendar or start.

(2) Special (day).

(3) Special (hour).

(4) Special (start).

(5) Preservation.

(6) Depreservation.

(7) Conditional (as required).

o. Illustration cards (see 3.3.27).

p. QA cards (see 3.3.31).

3.2.9.5 Calendar, hour, or start maintenance requirements manual (UAV). This manual contains the scheduled maintenance requirements necessary to maintain the equipment. This includes checking, lubrication, servicing and inspection for degradation/ corrosion. These manuals shall contain requirements to ensure a thorough and searching examination of the equipment in both the static and functional states. Coverage shall clearly establish inspection procedures that will detect material degradation that may have occurred during the preceding inspection interval. Clearances, pressures, tolerances, illustrations, SE required, and manual references are presented where pertinent. Periodicity shall be established to the occurrence of a prescribed number of days, starts, or cycles, as applicable. When functional checks of the equipment are required, only the applicable maintenance manual(s) shall be referenced. Each inspection will be accomplished at equal hour or calendar day intervals. Requirements not compatible with the established interval shall be accomplished as special inspections. The overall arrangement of the manual shall be as follows:

a. Calendar, hour, or start inspection. The following detailed requirements apply:

(1) Calendar inspections. If a majority of the scheduled maintenance requirements specified for an inspection cycle are calendar sensitive, the requirements shall be based

on calendar time (converted to days).

(2) Hour inspection. If a majority of the scheduled maintenance requirements specified for an inspection cycle are hour sensitive, the requirements shall be based on hours.

(3) Start inspections. If a majority of the scheduled maintenance requirements specified for an inspection cycle are start sensitive, the requirements shall be based on starts.

3.2.9.5.1 Arrangement (UAV). The arrangement of the manual and the format of each card within it shall be as follows:

a. Title card (see 3.3.1).

b. List of effective cards ("A" card) (see 3.3.3).

c. List of TPDRs incorporated card (TPDR card) (see 3.3.4).

d. Warnings applicable to hazardous materials (HMWS) card (see 3.3.4.1).

e. Introduction and application statements card (see 3.3.7.5).

f. Definitions card (see 3.3.9).

g. Abbreviation and index cards (see 3.3.14).

h. Special tools/SE list cards (see 3.3.16).

i. Consumable maintenance material list cards (see 3.3.17).

j. Replacement parts list cards (see 3.3.18).

k. Work area cards (see 3.3.19).

l. Access panel cards (see 3.3.22).

m. Task cards (see 3.3.26).

(1) Days,

(2) Hours, or

(3) Starts.

n. Illustration cards (see 3.3.27).

o. QA cards (see 3.3.31).

3.3 Card formats. Card formats shall be limited to those described in the following paragraphs. The cards shall be prepared to fit on a 5 x 8 card format. The image area (4 x 7 inches) shall be centered on the card and may be boxed. The normal marginal copy shall be 1/2-inch all around the image area. A 5/8-inch space measured from the top edge of the card down to the top of the lettering shall be established to allow for drilling holes, if required. The appropriate subparagraphs under 3.3 identify the card formats which are authorized for use in each type PMRM.

3.3.1 Title card.

3.3.1.1 Title card format details.

a. Publication number. The publication number assigned by the requiring activity shall be placed in the upper right corner of the card in large bold type.

b. Type of document. The words "TECHNICAL MANUAL" shall be centered in the upper portion of the card in large bold type.

c. Publication title. The publication title shall consist of the type of manual and the end item nomenclature:

(1) Type of manual. (See 3.2.) The type of manual is a combination of the type(s) of coverage, if applicable, and functional element(s) contained in the manual, e.g., “PHASED MAINTENANCE REQUIREMENTS MANUAL”, “DAILY INSPECTION MANUAL”, “DAILY INSPECTION/SERVICING MANUAL” or other types of manuals, as identified in this specification. The type of manual shall be centered on the card below the type of document in large bold type.

(2) End item nomenclature. The end item nomenclature such as the weapon system or equipment (including AN type designation), shall be centered below the type of manual in large bold type. Spacing shall be determined by the number of additional items required on the title page. When applicable, the model(s), and part number(s) shall be placed below the nomenclature. The model(s) and part number(s) shall be in large bold type. If the manual covers more than one model and/or part number and space considerations so dictate, the entries may be made in normal bold type, depending on the number of entries. For PSE PMRMs, the type/model of the aircraft applicable shall be followed by "PECULIAR SE."

d. Type equipment code. The type equipment code shall be centered below the manufacture's name on publications applicable to support equipment, PSE (if applicable), surface or aerial targets, and airborne armament equipment or special stores.

e. Supersedure notice. When a manual is revised, a supersedure notice shall be centered below the end item nomenclature or type equipment code in normal bold type. The notice shall include the superseded publication number and its date plus all previously incorporated Rapid Action Change (RAC) numbers. For example; "This manual supersedes NAVAIR 17-600-117-6-2 dated 1 March 1980 through Change 2 dated 11 April 1981 including previously incorporated RACs 1 through 8." The notice shall be deleted upon incorporation of the first change to the revised manual. If a classified manual is being revised, the supersedure notice shall add the following statement, "which shall be destroyed in accordance with applicable security regulations."

f. Interim Rapid Action Change (IRAC) incorporation notice. A notice that an IRAC has been incorporated, if applicable, shall be centered below the nomenclature or type equipment code.

g. Distribution statement. The distribution statement shall be presented on all title cards as follows:

"DISTRIBUTION STATEMENT C. Distribution authorized to U.S. Government agencies and their contractors to protect publications required for official use or for administrative or operational purposes, determined on (date). Other requests for this document shall be referred to Commanding Officer, Naval Air Technical Services Facility, 700 Robbins Avenue, Philadelphia, PA 19111-5097. The determination date shall be the date of the publication (basic, revision, change date, as applicable) when the distribution statement is applied. If the distribution statement is changed, the determination date will be the date of the issue that effected the change."

h. Destruction notice. The destruction notice shall be placed directly below the distribution statement and shall read as follows:

(1) For unclassified manuals:

"DESTRUCTION NOTICE. For unclassified, limited documents, destroy by any method that will prevent disclosure of contents or reconstruction of the document."

(2) For classified manuals:

"DESTRUCTION NOTICE. For classified documents, follow the procedures in DOD 5220.22-M, Industrial Security Manual, Section II-19 or DOD 5200.1-R, Information

Security Program Regulation, Chapter IX (chapter 17 of OPNAVINST 5510.1)."

i. Authority notice. The publishing approval authority statement shall be presented in capital letters as follows:

"PUBLISHED BY DIRECTION OF THE COMMANDER, NAVAL AIR SYSTEM COMMAND"

j. Publication date. The publication (issue) date or revision date shall be placed in the lower right corner in large bold type. The right margin shall be aligned with that of the publication number. The publication date shall be the copy freeze date.

k. Change number and date. The change number and date, when applicable, shall be positioned below and aligned with the right margin of the issue or revision date. When the change is a formal RAC, the RAC number shall be included.

3.3.2 Phase, QEC, ALSS and PSE cover cards.

a. The publication number assigned by the requiring activity shall be placed in the upper right corner of the card. A 5/8-inch space measured from the top edge of the card down to the top of the lettering shall be established to allow for drilling holes. The cover card shall not be numbered. It shall be printed on one side only.

b. The phase/QEC/ALSS identification shall be centered on the card.

c. The PSE cover card shall show the PSE identification (type/model aircraft followed by "PECULIAR SE," nomenclature, and part number(s) and shall be centered on the cover card. If the type equipment code is different from that listed on the manual title card, then it too shall be included.

3.3.3 List of effective cards ("A" card). A list of effective cards shall be prepared. This card shall back up the title card and shall be identified with the letter "A" in the lower left hand corner. When additional space is required, "B", "C", etc. cards shall be added. The list of effective cards shall be a complete list of all cards, including the title card, "A" card, blank cards, deleted cards and added cards. The words "added", "deleted", or "blank" shall be placed along side of the cards so affected. Appropriate change numbers, including RAC numbers, shall be shown in the "Change No." column. A list of current changes to the manual, including the basic issue or revision, shall be provided, identified by the word "Original" and numeral "0". The list of current changes shall include the numbers and dates of all RACs incorporated since the basic manual or its latest revision. The "A" card shall contain a statement confirming the total number of card faces in the manual.

3.3.4 List of TPDRs incorporated card (TPDR card). A list of TPDRs incorporated card shall be prepared for all changed/revised PMRMs with the exception of 3 1/2" X 5 1/2" checklists and 5" X 8" single card checklists. The list shall reflect the data incorporated in the manual resulting from valid TPDRs. A double column format shall be used. Column headings shall be "Report Control Number (RCN)." and "Location." The RCN shall be assigned by the reporting activity. Under the column heading "Location", the card number(s) shall be indicated as appropriate, identifying the location in the manual where the data has been incorporated. The list shall reflect the data that has been incorporated in that particular issue. The list shall not be cumulative. The card(s) shall follow the List of Effective Cards ("A" card) and be numbered TPDR-1, TPDR-2, etc.

3.3.4.1 Warnings applicable to hazardous materials card (HMWS card). HMWS cards shall be prepared for all hazardous materials addressed in the manual (not to include checklists). The cards shall be titled "WARNINGS APPLICABLE TO HAZARDOUS MATERIALS" and shall be placed in the manual immediately following the TPDR card and shall be numbered in consecutive order, i.e., HMWS-1, HMWS-2, HMWS-3, etc.

a. The following introductory paragraphs shall be verbatim as expressed below:

INTRODUCTION

A Warnings for hazardous materials listed in this manual are designed to warn personnel of hazards associated with such items when they come in contact with them by actual use. Additional information related to hazardous materials is provided in OPNAVINST 5100.23, Navy Occupational Safety and Health (NAVOSH) Program Manual, OPNAVINST 4110.2, Hazardous Material Control and Management (HMC&M), and the DOD 6050.5, Hazardous Materials Information System (HMIS) series publications. For each hazardous material used within the Navy, a Material Safety Data Sheet (MSDS) is required to be provided and available for review by users. Consult your local safety and health staff concerning any questions on hazardous chemicals, MSDS, personal protective equipment requirements, and appropriate handling and emergency procedures and disposal guidance.

Complete warnings for hazardous materials referenced in this manual are identified by use of an icon, nomenclature, specification or part number of the material, and a numeric identifier. The numeric identifiers have been assigned to the hazardous materials in the order of their appearance in the manual. Each hazardous material is assigned only one numeric identifier. Repeated use of a specific hazardous material references the numeric identifier assigned at its initial appearance. Warnings added to the technical manual after the initial issue will be assigned the next consecutive number regardless of its placement in the manual.

In the text of the manual, the WARNING caption will not be used for hazardous materials. Such warnings will be identified by an icon and numeric identifier. The material nomenclature will also

be provided. The user is directed to refer to the corresponding numeric identifier listed below for the complete warning applicable to the hazardous material."

b. Complete warnings shall be provided for all hazardous materials addressed in the manual. The caption "HAZARDOUS MATERIALS WARNINGS" shall be centered on the first full page following the introductory paragraphs. The column headings "Index", "Material", and "Warning" shall appear below the caption.

3.3.4.1.1 Hazardous materials referenced in text. In the text of the manual (not to include checklists), the WARNING caption shall not be used for hazardous materials. Such warnings shall be identified by an icon, nomenclature of the material and a numeric identifier (see 3.1.7b and 3.1.7c). Complete warnings for each hazardous material shall be provided on the HMWS cards.

3.3.5 Checklist title/introduction and application pages. The checklist shall be prepared to fit on 3-1/2 x 5-1/2 inch folded pages. The checklist image area shall be 3 x 5 inches. The normal marginal copy (blank area) shall be 1/4 inch all around. The introduction and application statements shall be integrated on the title pages of the following checklists. The statements may be presented as prescribed herein for each of the respective checklists. The format shall contain the following information in normal type:

a. Publication number. The publication number assigned by the requiring activity shall be placed in the upper right corner of the card in large bold type.

b. Publication title. The publication title shall be centered below the publication number in large bold type and consist of the following:

(1) Type of manual. (See 3.2.) The type of manual is a combination of the type(s) of coverage, if applicable, and functional element(s) contained in the manual, e.g., "TURNAROUND CHECKLIST", "PREOPERATIONAL CHECKLIST", or other types of manuals, as identified in this specification.

(2) End item nomenclature. The end item nomenclature such as the weapon system or equipment (including AN type designation), shall be centered below the type of manual. Spacing shall be determined by the number of additional items required on the title page. When applicable, the model(s), and part number(s) shall be placed below the nomenclature. For PSE PMRMs, the type/model of the aircraft applicable shall be followed by "PECULIAR SE."

c. Type equipment code. The type equipment code shall be centered below the manufacturer's name on publications applicable to SE, PSE (if applicable), surface or aerial targets, and airborne armament equipment or special stores.

d. Supersedure notice. When a manual is revised, a supersedure notice shall be centered below the end item nomenclature or type equipment code in normal bold type. The notice shall include the superseded publication number and its date plus all previously incorporated RAC numbers (for example, "This manual supersedes NAVAIR 17-600-117-6-2 dated 1 March 1980 through Change 2 dated 11 April 1981 including previously incorporated RAC's 1 through 8.)" The notice shall be deleted upon incorporation of the first change to the revised manual. If a classified manual is being revised, the supersedure notice shall add the following statement, "which shall be destroyed in accordance with applicable security regulations."

e. IRAC incorporation notice. A notice that an IRAC has been incorporated, if applicable, shall be centered below the nomenclature or type equipment code.

f. Abbreviated distribution statement. This statement may be expressed as follows:

"DISTRIBUTION STATEMENT C. Distribution authorized to U.S. Government agencies and their contractors, determined on (date)."

g. Abbreviated destruction notice. This notice may be expressed as follows:

(1) For unclassified manuals:

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

(2) For classified manuals:

"DESTRUCTION NOTICE. Follow procedures in Chapter 17 of OPNAVINST 5510.1."

h. Authority notice. The publishing approval authority statement shall be presented in capital letters as follows:

"PUBLISHED BY DIRECTION OF THE COMMANDER, NAVAL AIR SYSTEM COMMAND"

i. Introduction statement. (Refer to specific application, 3.3.6 through 3.3.8.)

j. Application statement. (Refer to specific application, 3.3.6 through 3.3.8.)

k. Publication date. The publication (issue) date or revision date shall be placed in the lower right corner of the first page in large bold type. The right margin shall be aligned with that of the publication number. The publication date shall be the copy freeze date.

l. Change number and date. The change number and date, when applicable, shall be positioned below and aligned with the right margin of the issue or revision date. When the change is a formal RAC, the RAC number shall be included.

3.3.5.1 Turnaround checklist (introduction and application statements). The introduction and application statements may be presented as expressed below.

INTRODUCTION

This checklist contains abbreviated inspection requirements necessary to ensure the integrity of the (aircraft, equipment or vehicle) for (flight or use) and to determine the need for servicing. Time required to perform these tasks is approximately (insert number) hours EMT. A comprehensive introduction for this equipment is contained in (publication number of the manual containing the complete introduction for the end item).

APPLICATION

Turnaround maintenance requirements shall be accomplished between flights and are valid for the period established in OPNAVINST 4790.2. The accomplishment of the Daily Inspection prior to flight does not satisfy the requirements of the Turnaround Inspection.

3.3.5.2 Preoperational checklists (introduction and application statements). The statements may be presented as expressed below. When hazardous materials are referenced in the manual, the statement in 3.1.7.2 shall be included after the introduction.

INTRODUCTION

This checklist contains inspection requirements necessary to ensure the integrity of the equipment for operation and to determine the need for servicing. Time required to perform these tasks is approximately (insert number) hours EMT. A comprehensive introduction for this equipment is contained in (publication number of the manual containing the complete introduction for the end item).

APPLICATION

Preoperational checklist maintenance requirements shall be accomplished prior to each use.

3.3.6 Introduction card for PMIC manual.

a. The introduction statement contains the purpose, scope, and arrangement of the PMIC manual. The introduction shall also reference the comprehensive introduction contained in the maintenance manual for equipment.

b. The introduction statement may be presented as expressed below:

INTRODUCTION

This manual contains introductory information necessary to ensure proper maintenance of the weapon system. It includes all items having an approved mandatory removal/replacement interval; those items requiring Scheduled Removal Component (SRC) cards as required by OPNAVINST 4790.2; the Inspection Requirements index which lists, by system and card number, those requirements to be performed; and the Conditional Inspection Listing for those requirements that shall be accomplished after the occurrence of an over-limit situation.

The Conditional Inspection requirements include a brief description of what is to be performed and a reference to the manual or directive containing detailed requirements.

The Phase Change Implementation card, if included, identifies additional inspection requirements made necessary by manual update.

In instances where conflict exists between the requirements contained in this manual and other maintenance directives bearing prior dates, this manual shall take precedence.

A comprehensive introduction for this equipment is contained in (publication number of the manual containing the complete introduction for the end item).

3.3.6.1 Introduction card for AMCM or UAV PMIC manual.

a. The introduction statement contains the purpose, scope, and arrangement of the PMIC manual. The introduction shall also reference the comprehensive introduction contained in the maintenance manual for equipment.

b. The introduction statement may be presented as expressed below:

INTRODUCTION

This manual contains introductory information necessary to ensure proper maintenance of the weapons system. It includes all items having an approved mandatory removal/replacement interval; those items requiring Scheduled Removal Component (SRC) cards; Assembly Service Record (ASR) cards, Equipment History Record (EHR) cards, and Module Service Record (MSR) cards as required by OPNAVINST 4790.2; the inspection requirements index which lists, by system and card number, those requirements to be performed; and the conditional inspection listing for those requirements that shall be accomplished after occurrences of an over-limit situation.

The conditional inspection requirements include a brief description of what is to be performed and a reference to the manual or directive containing detailed requirements.

In instances where conflict exists between the requirements contained in this manual and other maintenance directives bearing prior dates, this manual shall take precedence.

A comprehensive introduction for this equipment is contained in (publication number of the manual containing the complete introduction for the end item).

3.3.7 Introduction and application statements card for maintenance requirements manuals.

a. The introduction statement contains the purpose, scope, and arrangement of the manual. The introduction shall also reference the comprehensive introduction contained in the maintenance manual for equipment.

b. The application statement contains inspection interval applicability information.

c. Each of the following PMRM types shall have an introduction and application statement. The statements may be presented as prescribed herein for each of the respective manuals.

3.3.7.1 Aircraft daily manual and special, preservation, and conditional manuals (introduction and application statements). The introduction and application statements may be presented as expressed below. When hazardous materials are referenced in the manual, the statement in 3.3.4.1 shall be included.

DAILY MANUAL

INTRODUCTION

This manual contains the minimum daily requirements necessary to ensure the aircraft is safe for flight. Clearances, pressures, tolerances, illustrations, SE required and manual references are presented where pertinent. Daily requirements include inspections for defects and system degradation at a greater depth than the Turnaround Checklist.
A comprehensive introduction for this equipment is contained in (publication number of the manual containing the complete introduction for the end item).

APPLICATION

Daily requirements are valid for the period established by OPNAVINST 4790.2. The accomplishment of these requirements prior to flight shall not satisfy the requirements of a Turnaround inspection.

Special, preservation, and conditional manuals

INTRODUCTION

This manual contains the minimum Special/Preservation/Conditional and ASPA requirements necessary to ensure the aircraft is safe for flight. Clearances, pressures, tolerances, illustrations, SE required and manual references are presented where pertinent. These requirements are grouped in the following order:

Special requirements are developed from tasks which do not fit in the phased package due to conflicting interval requirements. Inspections performed during turnaround or daily inspections shall not be duplicated by special inspections.

Preservation requirements provide short term preservation procedures, maintenance while preserved and depreservation procedures.

Conditional requirements are presented in this manual when detailed requirements do not exist in an appropriate technical manual.

ASPA requirements provide special inspection requirements for preparation of the aircraft for ASPA evaluation and for restoration to a flight ready condition.

A comprehensive introduction for this equipment is contained in (publication number of the manual containing the complete introduction for the end item).

APPLICATION

Special, Preservation, Conditional and ASPA requirements shall be accomplished at the interval or condition specified on the card.

Level I Short Term Preservation shall be applied when the aircraft has been idle/nonflyable in excess of ( ) days and is valid for up to 93 days.

3.3.7.2 Calendar or phased maintenance requirements manuals (introduction and application statements). The introduction and application statements may be presented as expressed below. When hazardous materials are referenced in the manual, the statement in 3.3.4.1 shall be included.

INTRODUCTION

This manual contains the minimum calendar maintenance requirements to inspect the aircraft for degradation and to perform essential preventive maintenance. Clearances, pressures, tolerances, illustrations, SE required and manual references are presented where pertinent. The cards are

arranged in groups according to the rating/MOS required to perform the tasks. A sequence control card(s) shall be used to program the accomplishment of the requirements in the proper sequence. These requirements provide (insert number) balanced inspection intervals which constitute a (insert number) day calendar inspection cycle. A comprehensive introduction for this equipment is contained in (publication number of the manual containing the complete introduction for the end item).

APPLICATION

The maintenance requirements of each calendar inspection shall be accomplished at the expiration of (insert number) days following the completion of the prior calendar inspection. The calendar inspection cycle is repetitive for the service life of the aircraft.

or

INTRODUCTION

This manual contains the minimum phased maintenance requirements to inspect the aircraft for degradation and to perform essential preventive maintenance. Clearances, pressures, tolerances, illustrations, SE required and manual references are presented where pertinent. The cards are arranged in groups according to the rating/MOS required to perform the tasks. A sequence control card(s) shall be used to program the accomplishment of the requirements in the proper sequence. These requirements provide (insert number) balanced inspection intervals which constitute a (insert number) flight hour phased maintenance cycle. A comprehensive introduction for this equipment is contained in (publication number of the manual containing the complete introduction for the end item).

APPLICATION

The maintenance requirements of each phase interval inspection shall be accomplished at the expiration of (insert number) flight hours following the completion of the prior phase interval inspection. The phased maintenance cycle is repetitive for the service life of the aircraft.

3.3.7.3 QECA maintenance requirements manual (introduction and application statement). The introduction statement, and the appropriate application statement may be presented as expressed below. When hazardous materials are referenced in the manual, the statement in 3.3.4.1 shall be included.

INTRODUCTION

This manual contains the minimum scheduled maintenance requirements to inspect the QECA for degradation and to perform essential preventive maintenance. Clearances, pressures, tolerances,

illustrations, SE required and manual references are presented where pertinent. It includes all aircraft applications of the particular engine model. The cards in this manual are arranged in groups beginning with the engine requirements followed by separate QECA sections for each aircraft application. A sequence control card(s) shall be used to program the accomplishment of the requirements in the proper sequence. A comprehensive introduction for this equipment is contained in (publication number of the manual containing the complete introduction for the end item).

APPLICATION

The QECA maintenance requirements shall be accomplished at the interval of (insert number) hours for the (insert applicable engine type/model). These requirements shall also be accomplished as required by OPNAVINST 4790.2 when an engine is inducted into the Intermediate Maintenance Activity for repair.

Or

APPLICATION

The QECA maintenance requirements shall be accomplished as required by OPNAVINST 4790.2 whenever an engine is inducted into the Intermediate Maintenance Activity for repair.

3.3.7.4 Airborne armament equipment or special stores daily/special manual (introduction and application statements). The introduction and application statement may be presented as expressed below. When hazardous materials are referenced in the manual, the statement in 3.3.4.1 shall be included.

INTRODUCTION

This manual contains the minimum scheduled maintenance requirements for airborne armament equipment or special stores. The periodic maintenance requirements consist of daily and special inspections. The daily requirements include inspection for degradation that has occurred since the previous inspections. Clearances, pressures, tolerances, illustrations, SE required and manual references are presented where pertinent. Tasks presented thereon are sequentially arranged and consecutively numbered in the most logical order to perform the required tasks. Special requirements are scheduled to be performed as dictated by a cumulative number of days, hours, or events as applicable. A comprehensive introduction for this equipment is contained in (publication number of the manual containing the complete introduction for the end item).

APPLICATION

The scheduled maintenance requirements set forth herein shall be accomplished at the intervals

established on the abbreviation and index cards with the exception of the daily requirement. Daily requirements shall be accomplished upon initial installation of the equipment or special store(s) and when usage of the equipment or special store(s) is contemplated.

3.3.7.5 SE/ATE calendar or start/special/preservation/conditional manuals (introduction and application statements). The introduction and application statements may be presented as expressed below. When hazardous materials are referenced in the manual, the statement in 3.3.4.1 shall be included.

INTRODUCTION

This manual contains the minimum calendar or start/special/preservation/conditional (if applicable) requirements necessary to ensure the SE or ATE is safe for operational use. Clearances, pressures, tolerances, illustrations, SE required and manual references are presented where pertinent. These requirements are grouped in the following order:

Calendar or start requirements include inspections for defects and material degradation at a greater depth than the preoperational checklist.

Special requirements are scheduled to be performed on a particular day, or after a cumulative number of operating hours or starts.

Preservation requirements provide short term preservation procedures, maintenance while preserved and depreservation procedures.

Conditional requirements are presented in this manual when detailed requirements do not exist in an appropriate technical manual.

A comprehensive introduction for this equipment is contained in (publication number of the manual containing the complete introduction for the end item).

APPLICATION

The maintenance requirements set forth herein shall be accomplished at the intervals listed on the abbreviation and index card. Level I Short Term Preservation shall be applied when the SE has been idle in excess of ( ) days and is valid for up to 93 days.

3.3.7.5.1 Aircraft peculiar SE (PSE) maintenance requirements manual (introduction and application statements). The introduction and application statement may be presented as expressed below. When hazardous materials are referenced in the manual, the statement in 3.3.4.1 shall be included.

INTRODUCTION

This manual contains the minimum scheduled maintenance requirements necessary to inspect for equipment degradation, and to perform essential preventive maintenance. Clearances, pressures, tolerances, illustrations, SE required, and manual references are presented where pertinent. It includes all PSE applicable to this model/type aircraft. The cards in this manual are arranged in the sequence listed on the Abbreviation and index card. QA requirements are provided at the end of each piece/group of equipment covered within. A comprehensive introduction for this equipment is contained in (publication number of the manual containing the complete introduction for the end item).

APPLICATION

The maintenance requirements set forth herein shall be accomplished at the intervals listed on the Abbreviation and index cards. Level I Short Term preservation shall be applied when the PSE has been idle in excess of ( ) days and is valid for up to 93 days.

3.3.7.6 Powered aerial target (PAT) acceptance/initial buildup manual (introduction and application statements). The introduction and application statements may be presented as expressed below. When hazardous materials are referenced in the manual, the statement in 3.3.4.1 shall be included.

INTRODUCTION

This manual contains the acceptance inspections, buildup procedures, and testing and servicing requirements for the newly issued target. Clearances, pressures, tolerances, illustrations, SE required and manual references are presented where pertinent. The cards in this manual are arranged in groups according to the rating/MOS required to perform the tasks. A comprehensive introduction for this equipment is contained in (publication number of the manual containing the complete introduction for the end item).

APPLICATION

Acceptance/initial buildup requirements shall be accomplished upon issue and uncrating of the new target to prepare it for mission operation.

3.3.7.7 Powered aerial target (PAT) prelaunch manual (introduction and application statements). The introduction and application statements may be presented as expressed below. When hazardous materials are referenced in the manual, the statement in 3.3.4.1 shall be included.

INTRODUCTION

This manual contains the prelaunch maintenance requirements to inspect the target for defects, to verify servicing, and to ready it for launch. Clearances, pressures, tolerances, illustrations, SE required and manual references are presented where pertinent. The cards and tasks thereon are sequentially arranged and consecutively numbered in a logical order for performing the required tasks.

APPLICATION

Prelaunch requirements shall be accomplished prior to each use of the target.

3.3.7.8 Powered aerial target (PAT) postlaunch manual (introduction and application statements). The introduction and application statements may be presented as expressed below. When hazardous materials are referenced in the manual, the statement in 3.3.4.1 shall be included.

INTRODUCTION

This manual contains the postlaunch maintenance requirements to decontaminate the target, inspect it for degradation, and to perform all maintenance and testing necessary to return it to an operationally ready condition. Clearances, pressures, tolerances, illustrations, SE required and manual references are presented where pertinent. The cards in this manual are arranged in groups according to the rating/MOS required to perform the tasks. The cards and tasks are arranged in the most logical order for performing the required tasks. A comprehensive introduction for this equipment is contained in (publication number of the manual containing the complete introduction for the end item).

APPLICATION

Postlaunch requirements shall be accomplished after each recovery or retrieval of the target.

3.3.7.9 Powered surface target (PST) periodic manuals (introduction and application statements). The introduction and application statements may be presented as expressed below. When hazardous materials are referenced in the manual, the statement in 3.3.4.1 shall be included.

INTRODUCTION

This manual contains the minimum scheduled maintenance requirements to inspect for degradation that has occurred since the preceding inspection interval and to perform essential preventive maintenance. A comprehensive introduction for this equipment is contained in (publication number of the manual containing the complete introduction for the end item).

APPLICATION

The maintenance requirements set forth herein shall be accomplished at the intervals listed on the abbreviation and index card.

3.3.7.10 AMCM or UAV daily manual (introduction and application statements). The introduction and application statements may be presented as expressed below. When hazardous materials are referenced in the manual, the statement in 3.3.4.1 shall be included.

INTRODUCTION

This manual contains the minimum daily maintenance requirements. Daily requirements include inspections for defects at a greater depth than the turnaround checklist and inspection for system degradation. These inspections are designed to ensure the equipment is safe for operation. The daily cards and tasks are sequentially arranged and consecutively numbered in the most logical order to perform the required tasks. A comprehensive introduction for this equipment is contained in (publication number of the manual containing the complete introduction for the end item).

APPLICATION

Daily requirements are valid for the period established by OPNAVINST 4790.2. The accomplishment of these requirements prior to flight shall not satisfy the requirements of a turnaround inspection.

3.3.7.11 AMCM or UAV calendar or start/special/preservation/conditional manual (introduction and application statements). The introduction and application statements may be presented as expressed below. When hazardous materials are referenced in the manual, the statement in 3.3.4.1 shall be included.

INTRODUCTION

This manual contains the minimum calendar or start/special/preservation/ conditional requirements necessary to ensure the equipment is safe for operation. Special requirements are scheduled to be performed on a particular day or after a cumulative number of operating hours or cycles/events. Preservation requirements provide short term preservation procedures, maintenance while preserved, and depreservation procedures. Conditional requirements are contained in this manual if no detailed requirements exist in an appropriate technical manual for references in the PMIC. The cards have been arranged in groups in this manual in the following order: calendar or start/special/preservation/ conditional. Each card defines the group to which the card belongs. Clearances, pressures, tolerances, illustrations, SE required, and manual references are presented where pertinent. A comprehensive introduction for this equipment is contained in (publication

number of the manual containing the complete introduction for the end item).

APPLICATION

Calendar or start/special/preservation/conditional (if applicable) requirements shall be accomplished at the interval or condition specified on the card. Level I short term preservation shall be applied when the equipment has been idle/non-operational in excess of ( ) days and is valid for up to 93 days.

Note: It is the cognizant field activities' responsibility to determine the maximum time the equipment may remain idle before short term(level I) preservation is required.

3.3.8 Introduction and application statements and applicable equipment list cards for ALSS maintenance requirements manuals.

a. The introduction statement contains the purpose, scope, and arrangement of the manual. The introduction shall also reference the comprehensive introduction contained in the maintenance manual for equipment.

b. The application statement contains inspection interval applicability information.

c. The introduction and application statements may be presented as expressed below. When hazardous materials are referenced in the manual, the statement in 3.3.4.1 shall be included.

INTRODUCTION

This manual contains the scheduled maintenance requirements to inspect for degradation and to perform essential preventive maintenance of the ALSS equipment identified in the Applicable Equipment List. Clearances, pressures, tolerances, illustrations, SE required and manual references are presented where pertinent. The cards in this manual are arranged in the sequence listed on the Abbreviation and index card. QA requirements are provided at the end of each section. A comprehensive introduction for this equipment is contained in (publication number of the manual containing the complete introduction for the end item).

APPLICATION

The maintenance requirements set forth herein shall be accomplished at the intervals listed on the Abbreviation and index card.

d. The applicable equipment list shall identify, by nomenclature and part number, each unit of

equipment requiring inspection within the specified category of ALSS specified by the PMRM.

3.3.9 Definitions card. Except for the Checklist and PMICs, the text of this card may be prepared as prescribed herein for all PMRMs.

3.3.10 Removal/replacement schedule and special tracking requirements card . The prefacing statement contains the established criteria for removal and replacement of approved scheduled removal components (SRCs).

a. All items having an approved mandatory removal/replacement interval and those items requiring SRC cards, Assembly Service Record (ARC) cards, Equipment History Record (EHR) and Module Service Record (MSR) cards required by OPNAVINST 4790.2 shall be listed. Information shall be included for each aircraft and its critical components indicating their assigned structural life limits as required by NAVAIRINST 13120.1 or NAVAIRINST 13130.1, as applicable. Items requiring a scheduled removal component card shall be preceded by an asterisk (*). All other requirements shall be identified by reference to notes which shall be provided within each system, e.g. airframe, power plant, electrical power system, landing gear, etc. The information shall be presented in five columns and arranged in the sequence appearing in the work unit code (WUC) manual index.

b. SRC items shall be grouped together within the applicable section of the PMIC, clearly indicating the tracking vehicle, all time/cycle requirements, and respective cognizant field activity (CFA), if different from the aircraft, weapon system, or SE CFA. A note shall be added to the Remarks column identifying all depot life limited items and stating these items do not require visual verification of component or assembly serial number during O and I level maintenance.

c. All ASR items shall be grouped together within the applicable section of the PMIC, clearly indicating the tracking vehicle. All internal ASR time/cycle sensitive items shall be listed under the respective ASR with their time/cycle requirements. A note shall be added to the Remarks column identifying all depot life limited items and stating these items do not require visual verification of component or assembly serial number during O and I level maintenance.

d. MSR items shall be grouped together within the applicable section of the PMIC, clearly indicating the tracking vehicle. If time/cycle requirements are not applicable, it shall so state. A note shall be added to the Remarks column identifying all depot life limited items and stating these items do not require visual verification of component or assembly serial number during O and I level maintenance.

e. EHR items shall be grouped together within the applicable section of the PMIC, clearly indicating the tracking vehicle and the respective CFA. If time/cycle requirements are not applicable, it shall so state.

(1) Nomenclature. The item nomenclature shall be in consonance with applicable source data and existing technical manuals. When conflict exists, the noun nomenclature presented in the IPB (IPB) shall take precedence.

(2) Part/model number. The part number as shown in the IPB shall be listed. If the part number is not available, the approved model number shall be used.

(3) Disposition. The action to be taken with the removed item shall be stated as either "turn in", "scrap", or "retire."

(4) Removal interval. The removal interval in calendar time, hours, cycles, or events shall be expressed.

(5) Remarks. Remarks provide notification of additional requirements or information concerning a particular component.

3.3.11 Inspection requirements index cards.

a. The first card contains the following:

(1) The identification code of each type of inspection applicable to the aircraft under consideration, i.e., "D" for "daily," "S" for "special," etc.

(2) The index by systems, listed in the sequence provided by the WUC manual index and the identity of the PMIC card(s) which list the task cards for each system.

b. The second and succeeding cards of the index contain the following:

(1) A list of the systems having inspection requirements arranged in the order appearing in the WUC manual index.

(2) A list, adjacent to each system, identifying all applicable prime task cards.

3.3.12 Conditional inspection listing cards. These cards contain the following:

a. A list, by system, of conditional inspections required to be accomplished because of the occurrence of a measurable abnormal event which exceeds the design limits of the structural components or equipment and may compromise aircraft safety of flight.

b. A list of the task requirements including a brief description of what is to be performed and a reference to the publications containing the detailed inspection requirements.

3.3.13 Phase change implementation card.

a. This card is required only if during a change or revision of the phased maintenance manual, specific inspection or maintenance requirements are resequenced among the phases causing an unacceptable under inspection of critical systems or components upon implementation of the change or revised PMRM.

b. This card may convey special instructions applicable to implementation of the changed or revised PMRM.

3.3.14 Abbreviations and index cards.

a. The abbreviation list identifies each abbreviation and acronym used in the manual. The list is arranged in alphabetical order. The use of abbreviations shall be in accordance with the style of writing requirements (see 3.1.5).

b. The index provides a list of the inspections contained in the manual and an inclusive listing of the cards applicable to each. The index for PSE provides a list, by part number and nomenclature, of the inspections contained in the manual and an inclusive listing of the cards applicable to each.

3.3.15 Phased maintenance manual abbreviations, index, and checkflight requirements cards.

a. The abbreviation list identifies each abbreviation and acronym used in the manual. The list is arranged in alphabetical order. The use of abbreviations shall be in accordance with the style of writing requirements (see 3.1.5).

b. The phased manual index provides:

(1) An inclusive listing of the cards applicable to each phase inspection; and

(2) A checkflight requirement list which identifies the cards applicable to checkflight requirements. Checkflight requirements shall be determined utilizing the conditions set forth in OPNAVINST 4790.2.

3.3.16 Special tools/SE list cards. The cards shall also reference the comprehensive listing contained in the introduction of the maintenance manual for equipment.

a. These cards contain a list of special tools and SE required to accomplish the maintenance task requirements listed in the manual.

b. Special tools and SE are listed alphabetically by noun nomenclature. The list includes the part number and type or model number. For tasks requiring the simultaneous use of two or more identical items, the quantity is also included.

c. Special adapters, jacks, slings, preoilers, hydraulic test stands, torque wrenches, spring scales, electrical power units, and bomb hoists are examples of items to be included in this list.

d. The list shall not include common hand tools such as screwdrivers, pliers, etc., which are normally found in the mechanic's tool box.

e. Special tools with several alternate part numbers and easily identified by noun nomenclature shall not be identified by part number, i.e., oil cans, grease guns, push/pull scales, torque wrenches, etc.

f. Special tools/SE list cards shall conform to required formats.

3.3.17 Consumable maintenance material list cards. The cards shall also reference the comprehensive listing contained in the introduction of the maintenance manual for equipment.

a. The cards shall contain an alphabetically itemized list, by noun nomenclature, of all consumable maintenance materials necessary to accomplish the tasks listed in the manual. Consumable maintenance materials are those supplies that are consumed through use or for which a definite fixed quantity cannot be specified for each task, such as oil, hydraulic fluid, paint, cleaning solvents, thread, leak detection compounds, dry film lubricant, preservation materials, and lockwire.

b. HMWS index number, when applicable, shall be listed in a column following the nomenclature for all hazardous materials used in the manual.

c. Materials shall be listed by Government specification unless alternate identification is approved by the requiring activity. Manufacturer brand names are prohibited except where no manufacturer's part number, military specification, or federal specification is assigned to the desired material and the requiring activity has specifically authorized their use or application.

d. Consumable maintenance material list cards shall conform to required formats.

3.3.18 Replacement parts list cards. The cards shall also reference the comprehensive listing contained, within the materials required list, in the introduction of the maintenance manual for equipment.

a. The cards shall contain an alphabetically itemized list, by noun nomenclature, of all mandatory replacement parts necessary to accomplish the tasks listed in the manual. Mandatory replacement parts are those items that are not intended for reuse, such as O-rings, gaskets, packing, inspection seals, and cotter pins.

b. The part number and quantity required for each to accomplish the task in the manual shall be included.

c. Replacement parts list cards shall conform to required formats.

3.3.19 Work area cards or zone cards. These cards contain the following:

a. Illustrations that clearly identify the location of the work areas or zones as identified in the applicable aircraft structural manual.

b. Numerically sequenced lists of the work area or zone titles as identified by the illustrations.

3.3.20 Zone title and description cards.

a. These are required only if a zonal inspection is necessary.

b. The "zones" definition may be presented as expressed below.

ZONES

A work area or zone is a general area, such as "RH Outer Wing" or "pilot compartment." Each work area or zone is assigned a prime number in accordance with the aircraft structural manual. Work areas and zones are divided into smaller areas to facilitate accomplishment of zonal inspections. These smaller areas are zones within the prime numbered work area or zone and are assigned a decimal suffix of the prime number.

c. These cards provide a description of that portion of each work area or zone requiring a zonal inspection.

d. The boundaries of the zonal inspection required are numbered, titled, and may be defined in detail.

3.3.21 Zonal inspection criteria card.

a. This is required only if a zonal inspection is necessary.

b. The card lists zonal inspection criteria.

c. The zonal inspection definition may be presented as expressed below:

ZONAL INSPECTION DEFINITION

A zonal inspection is a general inspection of a specific area of aircraft or SE where an existing scheduled inspection is being accomplished. These inspections are for obvious defects, such as leaks, frayed cables, cracks, corrosion or physical damage and do not require disassembly, special tools or test equipment. Zonal inspections are performed in conjunction with other scheduled maintenance tasks by the rating assigned. For example, an AQ assigned to perform an inspection on a radar antenna might also be assigned a zonal inspection of the entire compartment for obvious defects.

3.3.22 Access panel cards.

a. These cards contain illustrations depicting the views of the aircraft showing the locations of all access panels required to be opened, removed, or inspected.

b. Access panel nomenclature, numbering, and location shall be the same as that used in related technical manuals.

c. In Phase Maintenance Manuals, provide a consolidated numerical list of all access panels required to be opened or removed in order to accomplish the maintenance task requirements listed. Applicable phase cycle shall be annotated accordingly.

3.3.23 Antenna location cards.

a. These cards contain illustrations depicting the views of the aircraft showing the locations of all antennas to be inspected.

b. Antenna nomenclature and location shall be the same as that used in related technical manuals.

3.3.24 Checklist task pages.

a. These cards contain the inspection requirements necessary to inspect for integrity and to perform servicing checks prior to flight or operation of:

(1) Aircraft (see 3.2.1.2);

(2) Support equipment (see 3.2.4.1); and

(3) Powered surface targets (see 3.2.6.1).

b. Tasks are consecutively numbered and sequentially arranged in logical walkaround order.

3.3.25 Sequence control cards.

3.3.25.1 Phase sequence control card(s). A sequence control card(s) shall be provided for each phase in the Phase manual, which sequences the inspection requirements task cards to be performed. The sequence control card(s) shall be plotted from left to right, starting with the personnel rating and number column, the prephase column, and continuing horizontally into the inspection. The graph coordinate for time shall be divided into equal vertical increments of one hour each. Each hourly increment shall be subdivided into five equal parts. EMT shall be presented in multiples of not less than one-tenth hour. The electrical power, hydraulic power, and conditioned air requirements shall indicate ON when required to complete the applicable tasks; OFF when application of power or air would be dangerous to personnel or damaging to the equipment. The NA notation shall not be used on the sequence control card(s). Power or air ON or OFF requirements shall be sequenced and grouped whenever possible to avoid frequent changes.

3.3.25.2 QECA sequence control card(s). A sequence control card(s) shall be provided in the QECA manual, which sequences the QECA inspection requirements for all airframe applications. The upper portion of the first card only shall display the engine work areas/zones and engine illustration. The lower portion shall be divided into horizontal and vertical time graph columns to program the personnel requirements and the accomplishment of the QECA inspection requirements. The graph coordinate for time shall be divided into equal vertical increments of one hour each. Each hourly increment shall be subdivided into five equal parts. EMT shall be presented in multiples of not less than one-tenth hour.

3.3.26 Task cards.

a. Coverage. The task cards contain the maintenance requirements for each type of inspection.

b. Development. The task cards shall be prepared as follows:

(1) When a task requires the use of one or more skilled assistants whose responsibilities are well defined, the prime card shall indicate which assistants are required and identify the assistant's card number(s), for example, "assisted by AMS No. 3, card 19." When a task requires the use of one or more skilled assistants whose responsibilities are not well defined, the prime card shall include the rating of the assistants and the amount of

assist time required, for example, "Assisted by AMS No. 2 (0.3 hrs)." When a task requires the use of multiple assistants whose responsibilities are of an unskilled nature and not well defined, the prime card shall state, "assistance as required."

(2) A list identifying the noun nomenclature and part, type, or specification number of special tools and SE required to accomplish all tasks shall precede the consumable/ replacement parts list or in the absence of the consumable/replacement parts list, shall precede the first task of the prime card. However, special tools with several alternate part numbers which are easily identified by noun nomenclature do not require further identification by part number, i.e., oil cans, grease guns, torque wrenches, etc. Common hand tools (tools commonly found in the maintenance worker's toolbox) are not included in this list. If only one special tool or item of SE of a particular type is listed, then only its noun nomenclature shall appear in the task or step requiring it. An exception to this requirement is allowed in the QECA manual when due to the close similarity of certain items, such as spanner wrenches and bearing pullers, there is a distinct possibility that the wrong tool could be selected. When more than one special tool or item of SE with the same noun nomenclature is listed, each item shall be identified by part, type, or specification number in the tasks or steps to which they apply.

(3) A list of consumables and replacement parts necessary to accomplish the task shall precede the first task of the prime card. When more than one consumable or replacement part with the same noun nomenclature is listed, the part, type, or specification number shall be specified in each applicable task or step. If, however, only one consumable or replacement part of a particular nomenclature is listed, then only the nomenclature shall be identified in the applicable task or step. An exception to this requirement is allowed in the QECA manual when due to the close similarity of certain consumables and replacement parts, there is a distinct possibility that the wrong item could be selected and installed if not fully identified.

(4) Each task and its related steps shall be arranged in a logical sequence to provide a means of performing the requirements in the most accurate and efficient manner. Task cards may be grouped alphabetically by rating or numerically by MOS when more than one rating or MOS is applicable.

(5) When two or more assemblies have identical task requirements, only the first assembly's task need by fully identified. Subsequent assemblies requirements shall state, "repeat task (number) through task (number)."

(6) Requirements appearing on each primary card and its associated decimal card(s) shall be limited to a single system, subsystem, assembly, or component. If, however, the requirements to be listed are not extensive enough to warrant individual primary cards,

they may be grouped by rating or MOS group, one rating or MOS group per primary card.

(7) Except for illustration cards, the requirements for electrical power, hydraulic power and conditioned air shall be consistent throughout all maintenance requirements decimal cards as indicated on the prime card.

(8) Requirements shall be grouped by one work area or zone or, when necessary, by a limited number of work areas or zones.

(9) The EMT shall be limited to two hours on the primary card and its associated decimal card(s) when possible.

c. Preservation requirements.

(1) On preservation cards, a note shall be added on each prime task card to identify the preservation card sequence.

(2) The following note shall be added to the prime task card in the preservation deck listing all special inspection MRCs which must be complied with in conjunction with preservation MRCs.

"Note: The following special cards remain valid during short term preservation: (list applicable cards)."

(3) For each special inspection card which remains valid during preservation, the following note shall be added:

"NOTE: The requirements of this card remain valid when the aircraft is in a level I short term preservation status."

d. QA requirements.

(1) Functions which require a QA inspector to observe the actual accomplishment of the maintenance task, i.e., torquing, assembly, etc., shall have the following note placed immediately preceding the task to be observed:

"NOTE: QA (card number) shall witness (task/step number)."

(2) Functions which require a QA inspection after accomplishment of the maintenance task shall have the following note placed immediately preceding it:

"NOTE: QA (card number) required after accomplishment of (task/step number)."

e. Continued notation. If the task is continued on additional card faces, the lower right-hand corner of each card face shall have the word "Continued."

f. End of card notation. If the task is completed on one card face, the words "End of card" shall appear in the lower right-hand corner of the card face.

g. Blank card notation. When a blank card face appears, the blank card face shall be assigned a number which shall appear on the preceding card face only. For example, if card 9.1 is blank, card 9 shall have the notation "(card 9.1 Blank)" in the lower right-hand corner below the "End of card" notation.

3.3.27 Illustration cards.

a. Illustrations shall be used only when needed to clarify the maintenance task.

b. Illustrations, whenever possible, shall be on the same or adjacent card to the text to which they apply. They shall depict the affected area as it appears to the maintenance personnel conducting the associated maintenance task.

c. When feasible, illustrations from associated manuals shall be used.

d. Normally, illustrations shall be framed.

3.3.28 Assist cards. The following requirements apply in addition to the requirements of 3.3.26.

a. Assist cards shall contain step-by-step tasks for supporting the requirements of primary cards when assist responsibilities are well defined and close coordination is required.

b. The rating/MOS and card number of the related primary task shall be designated, for example, "Assist AD No. 1, card A-16."

c. Separate assist cards shall not be prepared when a task requires the use of an assistant whose responsibilities are of an unskilled nature or are not well defined. The prime card shall include the rating of the assistant and time required in this case.

d. It is not necessary to provide an assist card for one or more assistants of same RTG/MOS conducting the same task of the prime card.

3.3.29 Lubrication task cards.

a. The following information shall be presented in four columns:

(1) Item - designates the lubrication points as identified on the lubrication illustration card. Numbers are assigned in a clockwise fashion.

(2) Nomenclature - identifies the item being lubricated. The item nomenclature shall be in consonance with applicable source data and existing technical manuals. When conflict exists, the noun nomenclature presented in the IPB shall take precedence.

(3) No. of points - lists the number of lubrication points of each item.

(4) Specification - identifies the type of lubrication to be applied to each point.

b. A lubrication illustration card shall be used to clarify the maintenance task described on this card.

3.3.30 Lubrication illustration cards.

a. Lubrication illustrations shall include all scheduled lubrication requirements identified on the lubrication task card (see 3.3.29). Items shall be numerically sequenced in a clockwise fashion around the major assembly to which the lubrication task applies.

b. The lubrication application symbols, abbreviation lubrication specification numbers, and item numbers shall be depicted. The item number shall have a leader line extending to each point on the illustration that requires servicing. The item number may designate more than one point of servicing. Dashed leader lines shall be utilized to designate lubrication points on the opposite side of the assembly.

c. The number of lubrication points listed on the task card shall be the same number as those shown on the illustration card.

d. When two or more assemblies have similar lubrication requirements, a note stating which assembly is shown and which assemblies are similar shall be provided on the illustration card, i.e., "left side shown, right side similar."

e. A point of servicing which has been designated by a lubrication symbol in one view shall not be redesignated in another view.

f. Special notes may appear when necessary to explain special circumstances not otherwise provided by standard lubrication symbols.

3.3.31 QA cards.

a. QA cards contain requirements to inspect systems and components whose integrity has been disturbed during scheduled maintenance and where maintenance, if improperly performed, could cause equipment failure or jeopardize the safety of personnel. QA inspections are performed as necessary either during or after task performance.

b. When a task is referenced to another technical manual and a QA task is included, there is no requirement for a QA task card if QA is called for in the manual.

c. The following note shall be used to refer the QA inspector to the task requiring the inspection:

"NOTE: Refer to task card (card number/step number)."

d. Requirements on QA cards shall be limited to a single system, subsystem, assembly, or component.

e. Card sequencing shall be as follows:

(1) QA cards for the aircraft daily/special/preservation manual shall be sequenced immediately following the task card set for the respective inspection interval. For example, all QA cards required for the 28-day special inspection shall be sequenced behind the last 28-day special task card.

(2) QA cards for each aircraft phase inspection shall be sequenced in back of each phase card set.

(3) QA cards in the QECA manual shall follow their respective card sets, i.e., QA cards pertaining to the engine shall follow the engine task cards; QA cards pertaining to a particular QEC shall follow that QEC's task cards.

(4) QA cards for the airborne armament or special stores daily/special manual shall be sequenced immediately following the card set for the respective inspection interval. For example, all QA cards required for the 28-day special inspection shall be placed behind the last 28-day special task card.

(5) QA cards shall be sequenced in the back of the following manuals:

(a) Support equipment PMRM.

(b) Powered aerial target acceptance/initial buildup manual.

(c) Powered aerial target prelaunch manual.

(d) Powered aerial target postlaunch/servicing manual.

(e) Powered surface targets PMRM.

(6) QA cards for the aviation life support systems PMRM shall be sequenced in back of the task cards of each type of equipment covered by the manual.

(7) QA cards for the Peculiar SE (PSE) PMRM shall be sequenced in back of the task cards of each piece/group of equipment covered by the manual.

3.4 Card numbering.

3.4.1 PMIC manual (numbering).

a. The title card shall not be numbered.

b. "A" cards shall be sequenced alphabetically using capitalized letters. Card A shall be printed on the back of the title card.

c. List of TPDRs incorporated card (TPDR card) shall follow the "A" cards and be numbered TPDR-1, TPDR-2, etc.

d. The preface card (introduction card) shall be numbered using the lower case Roman numeral i.

e. When hazardous materials are addressed in the manual, the cards shall be numbered using the prefix AHMWS@ followed by consecutive numbers, e.g., AHMWS-1", AHMWS-2", etc.

f. All cards, except the title, "A" card, TPDR card and preface cards, shall be assigned consecutive Arabic numerals.

g. The addition of new cards to an existing manual shall be accomplished in accordance with 3.4.7.

3.4.2 Checklists (numbering).

a. The title/introduction/application page shall not be numbered.

b. Task pages shall be assigned consecutive Arabic numerals.

3.4.3 Daily, special, preservation, and conditional manuals (numbering). These manuals shall be numbered as follows:

a. The title card shall not be numbered.

b. "A" cards shall be sequenced alphabetically using capitalized letters. Card A shall be printed on the back of the title card.

c. List of TPDRs incorporated card (TPDR card) shall follow the "A" cards and be numbered TPDR-1, TPDR-2, etc.

d. When hazardous materials are addressed in the manual, the cards shall be numbered using the prefix “HMWS” followed by consecutive numbers, e.g., “HMWS-1", “HMWS-2", etc.

e. Preface cards (does not include title card, "A" cards or TPDR cards) shall be consecutively numbered using lower case Roman numerals.

f. Task cards shall be assigned consecutive Arabic numerals. Prime cards shall be sequenced using integers, i.e., 1, 2, 3, 4, etc. Decimal cards, when required, shall use decimal suffixes, i.e., 1.1, 1.2, or 2.1, 2.2, 2.3, etc. The word "Continued" shall be printed in the lower right corner of the card to indicate that the task continues to a successive decimal card. The words "End of card" shall be printed in the lower right corner of the card to indicate that the task requirements have been completed and that no decimal card follows. A prime card shall not be printed on the reverse side of a decimal card but shall be established on a new card. Blank card faces generated by this restriction shall not be numbered. The words "(card (card number) Blank)" shall be printed in the lower right corner of a card to indicate that the succeeding card face is blank.

3.4.4 Phased maintenance requirements manual (numbering). This manual shall be numbered as follows:

a. The title card and phase cover cards shall not be numbered.

b. "A" cards shall be sequenced alphabetically using capitalized letters. Card A shall be printed on the back of the title card.

c. The list of TPDRs incorporated card (TPDR card) shall follow the "A" cards and be numbered TPDR-1, TPDR-2, etc.

d. When hazardous materials are addressed in the manual, the cards shall be numbered using the prefix “HMWS” followed by consecutive numbers, e.g., “HMWS-1", “HMWS-2", etc.

e. Preface cards (does not include title card or "A" card or TPDR card) shall be consecutively numbered using lower case Roman numerals.

f. Task cards within each phase shall be grouped alphabetically by rating or numerically by MOS. They shall be assigned consecutive Arabic numerals preceded by the appropriate phase designator, i.e., A-1, A-2 or B-1, B-1.1, B-1.2, etc. Prime cards shall be sequenced using integers, i.e., A-1, A-2, A-3, etc. Decimal cards, where required, shall use decimal suffixes, i.e., A-1.1, A-1.2 or B-2.1, B-2.2, B-2.3, etc. The word "Continued" shall be printed in the lower right corner of the card to indicate that the task continues to a successive decimal card. The words "End of card" shall be printed in the lower right corner of the card to indicate that the task requirements have been completed and that no decimal card follows. A prime card shall not be printed on the reverse side of a decimal card but shall be established on a new card. Blank card faces generated by this restriction shall not be numbered. The words "(card (card number) Blank)" shall be printed in the lower right corner of a card to indicate that the succeeding card face is blank.

3.4.5 QECA PMRM (numbering). Engine cards shall be numbered as outlined in 3.4.3. Consecutive hundred series cards shall be assigned to each QEC required. If the engine cards are numbered 1 through 69, for example, the QEC cards applicable to the first airframe would be numbered starting with 101, the QEC cards applicable to the second airframe would be numbered starting with 201, etc.

3.4.6 ALSS PMRM (numbering). Cards shall be numbered as outlined in 3.4.3 with the following exception. Each type of equipment being inspected shall be assigned consecutive hundred series cards. For example, the LR-1 life raft would be assigned task card numbers 101-199; the LRU-12/A (MK-4) life raft would be assigned task card numbers 201-299, etc.

3.4.7 Aircraft PSE PMRM (numbering). Cards shall be numbered as outlined in 3.4.3 with the following exception. Each piece or group of peculiar SE being inspected shall be assigned consecutive hundred series cards. For example, the AV 57-213, AV 57-214, and AV 57-217 wedges are a group of PSE and would be assigned task card numbers 101-199.

3.4.8 Added cards. When a new card is added to an existing PMRM, the new card shall be identified by using the appropriate existing card number plus an alphabetical suffix. For example, new cards inserted between task cards, 12.1 and 12.2 would be identified as 12.1A, 12.1B, 12.1C, etc. Similarly, a new primary card added between cards 15 and 16 would be identified as card 15A. When cards are added to preface cards (introduction), the added preface card(s) shall be identified by using the appropriate Roman numeral plus an alphabetical suffix.

3.4.9 Deleted cards. When card number continuity is broken by deletion of a card, a statement indicating the deletion shall be placed in the bottom margin of the preceding card, for

example, "all data on card (card number), including figure number (figure number) deleted." This also applies when two back-to-back cards are deleted.

3.4.10 Renumbering. During a revision, all preface, task, and illustration cards shall be renumbered, as necessary, to eliminate card number alphabetic suffixes and to reestablish the correct card sequence.

3.5 Changes and revisions. PMRMs covered herein shall be changed or revised to reflect all approved changes. Checklists shall always be revised, not changed (see 6.2.1).

3.5.1 Changes. A change is any alteration of a manual already in existence. It is accomplished by replacement, addition, or deletion of cards, including backup cards, but not sufficient in number to require a complete revision of the manual. Vertical change bars or the letter "R" shall be used to highlight changes. Change bars or symbols shall not be depicted on a complete revision.

3.5.2 Revisions. A PMRM shall be revised when the percentage of an anticipated change plus all previously incorporated changes affect a total of sixty percent of the card faces in the PMRM. The following criteria shall be used to determine the need for a revision:

a. A change is defined as any information that has been incorporated, deleted, or resequenced in a PMRM since the last revision.

b. Any change to a card face except for correction of typographical errors shall be counted as one card face.

c. Each card face affected shall be counted as one card change.

d. Only Arabic numbered cards only shall be counted for change purposes.

e. Percentage of change shall be computed utilizing the following formula:

$$\frac{\text{Number of Arabic numbered card face changes}}{\text{Number of Arabic numbered cards}} \times 100 = \text{percent of change}$$

Example: number of Arabic numbered card face changes (200) divided by the total number of Arabic numbered cards in the manual (300) multiplied by 100 equals 66.66 percent change.

f. Each card added or deleted shall count as one card face change. For example, if 100 new cards are added while 100 cards are deleted, the total number of cards changed shall equal 200 cards.

g. Change symbols are not required for revised manuals.

3.6 Printing and binding. Printing and binding shall be in accordance with the contract.

4. VERIFICATION

4.1 Verification. Verification shall be conducted as prescribed in the contract.

5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of material is to be performed by DoD personnel, these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Department or Defense Agency, or within the Military Department's System Command. Packaging data retrieval is available from the managing Military Department or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. Technical data prepared to this specification is intended for use by U.S. Navy organizational and intermediate activities for performing periodic maintenance on aircraft systems, equipment, and SE under the cognizance of the Naval Air Systems Command.

6.1.1 Military unique specification. Technical manuals prepared in accordance with this specification are military unique because they describe periodic maintenance tasks performed on naval aircraft by trained military personnel. This specification does not impact the design or manufacturing of commodity items, and complies with the stated policy of the Defense Standards Improvement Council (Policy Memo 98-1).

6.2 Ordering data.

6.2.1 Acquisition requirements. Acquisition documents must specify the following:

a. Title, number, and date of this specification.

b. Types of manuals (see 1.2).

c. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.2.1).

d. Type size (see 3.1.2.1).

e. Form to be furnished (see 3.1.3).

f. Changes/revisions (see 3.5).

6.3 Guidance documents. The following documents are cited in section 3 of this specification and are provided for guidance and information only. Unless otherwise specified, the issues are those cited in the solicitation.

FEDERAL

Public Law 91-596	-	Occupational Safety and Health Act, dated December 29, 1970, and Executive Order 11807.

DEPARTMENT OF DEFENSE

DIRECTIVES

DOD 5200.1R	-	Information Security Program Regulation
DOD 5220.22M	-	Industrial Security Manual for Safeguarding Classified Information.
DOD 6050.5 Series	-	DoD Hazard Communication Program.

DEPARTMENT OF THE NAVY

INSTRUCTIONS

OPNAVINST 4790.2	-	The Naval Aviation Maintenance Program (NAMP).
OPNAVINST 5100.23-		Navy Occupational Safety and Health (NAVOSH) Program Manual.
NAVAIRINST 13120.1	-	Fixed Wing Aircraft Structural Life Limits.
NAVAIRINST 13130.1	-	Rotary Wing Aircraft Structural Life Limits.

(Copies of directives and instructions are available by request to Commander, Naval Inventory Control Point, Philadelphia Publication/Forms Branch, Code 03334, 700 Robbins Ave., Philadelphia, PA 19111-5098.)

6.4 Technical manuals. The requirements for technical manuals should be considered when this specification is applied on a contract. If technical manuals are required, specifications and standards that have been cleared and listed in DoD 5010.12-L, Acquisition Management Systems and Data Requirements Control List (AMSDL) must be listed on a separate Contract Data Requirements List (DD Form 1423), which is included as an exhibit to the contract. The technical manuals must be acquired under separate contract line item in the contract.

6.5 Definitions.

6.5.1 Requiring activity. The organization of a using military service or that organization delegated by a using service which is responsible for the selection of, and determines requirements for, a specific support element.

6.5.2 Copy freeze date. The copy freeze date is a date set by the requiring activity after which no additions, deletions, or changes must be incorporated in the PMRMs. Additions, deletions, and changes after that date will be accumulated for preparation of a subsequent change or revision of the publication.

6.6 Specification figures. The figures previously included in this specification were intended to illustrate methods of presentation of technical data. They are being revised for incorporation into NAVAIR 00-25-700. Sample illustrations can be provided by the requiring activity, if requested. The sample figures should not be interpreted as limiting the technical content requirements that are established by the text. The text should take precedence over all examples shown in the sample figures.

6.7 Subject term (key word) listing.

Airborne armament equipment
Assist cards
Daily manual
Illustration cards
PMIC
PMRM
Task cards
Turnaround checklist

6.8 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

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CONCLUDING MATERIAL

Preparing activity:
Navy - AS

Project TMSS-N271

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS

1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
2. The submitter of this form must complete blocks 4, 5, 6, and 7.
3. The preparing activity must provide a reply within 30 days from receipt of the form.
   NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

I RECOMMEND A CHANGE:	1. DOCUMENT NUMBER MIL-DTL-23618H(AS)	2. DOCUMENT DATE (*YYMMDD*) 971212

3. DOCUMENT TITLE
MANUALS, TECHNICAL: PERIODIC MAINTENANCE REQUIREMENTS, PREPARATION OF

4. NATURE OF CHANGE (*Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.*)

5. REASON FOR RECOMMENDATION

6. SUBMITTER

a. NAME (*Last, First, Middle Initial*)	b. ORGANIZATION	
c. ADDRESS (*Include Zip Code*)	d. TELEPHONE (*Include Area Code*) (1) Commercial: (2) DSN: (*If Applicable*)	7. DATE SUBMITTED (*YYMMDD*)

8. PREPARING ACTIVITY

a. NAME COMMANDER NAVAL AIR WARFARE CENTER AIRCRAFT DIVISION	b. TELEPHONE NUMBER (*Include Area Code*) (1) Commercial: (732) 323-2947 (2) DSN: 624-2947
c. ADDRESS (*Include Zip Code*) CODE 414100B120-3 HIGHWAY 547 LAKEHURST, NJ 08733-5100	IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT: Defense Quality and Standardization Office, 5203 Leesburg Pike, Suite 1403, Falls Church, VA 22041-3466 Telephone (703) 756-2340 DSN 289-2340