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MIL-STD-3001-1(AS)
15 May 2001
SUPERSEDING
(See Section 6.)

DEPARTMENT OF DEFENSE STANDARD PRACTICE

PREPARATION OF DIGITAL TECHNICAL INFORMATION FOR MULTI-OUTPUT PRESENTATION OF TECHNICAL MANUALS

(PART 1 OF 8 PARTS)

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

FOREWORD

1. This eight-part standard establishes the requirements needed to prepare digital technical information for multi-output presentation of NAVAIR work package Technical Manuals (TMs). The technical content and mandatory style and format requirements contained in this eight-part standard can be used to develop and assemble complete TMs for aircraft weapon systems, aeronautical equipment, airborne weapons/equipment, and support equipment work package technical manuals. The requirements are applicable for the output of paper technical manuals or for the display of page-oriented, scrollable and frame-based technical manuals on an Electronic Display System (EDS).

2. MIL-STD-3001-1 is Part 1 of 8 Parts and is incomplete without Parts 2 through 8. Part 1 contains general preparation requirements for the multi-output presentation of NAVAIR work package TMs. Appendix A of Part 1 contains matrixes that list all applicable technical content requirements for the development of complete TMs for aircraft weapon systems, aeronautical equipment, airborne weapons/equipment, and support equipment covering operation and maintenance at all maintenance levels through depot. Appendix B of Part 1 establishes the style, format, and front matter requirements necessary to assemble and print complete work package technical manuals (TMs) in a page-oriented format. Appendix C of Part 1 establishes presentation requirements for the display of frame-based and scrollable technical manuals.

3. MIL-STD-3001-2 through MIL-STD-3001-8 contain specific functional technical content requirements for the preparation of all NAVAIR work package TMs and revisions. Parts 2 through 8 are identified below.

MIL-STD-3001-2	Description, Principles of Operation, and Operation Data.
MIL-STD-3001-3	Testing and Troubleshooting Procedures.
MIL-STD-3001-4	Maintenance Information with IPB.
MIL-STD-3001-5	Aircraft Wiring Information.
MIL-STD-3001-6	Structural Repair Information.
MIL-STD-3001-7	Periodic Maintenance Requirements.
MIL-STD-3001-8	Separate Illustrated Parts Breakdown (IPB).

4. MIL-HDBK-3001, Guide to the General Style and Format of U.S. Navy Work Package Technical Manuals, complements this eight-part standard. MIL-HDBK-3001 provides Navy-preferred, nonmandatory style and format requirements for the preparation of page-oriented, scrollable and frame-based work package technical manuals.

5. 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.

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FIGURE C-4. Example of hazardous materials icons. 175

1. **SCOPE**.

1.1 Scope. This standard establishes the requirements needed to prepare digital technical information for multi-output presentation of NAVAIR work package technical manuals (TMs). The technical content and mandatory style and format requirements contained in this eight-part standard can be used to develop and assemble complete TMs for aircraft weapon systems, aeronautical equipment, airborne weapons / equipment, and support equipment work package technical manuals. The requirements are applicable for both paper and digitally displayed page-oriented TMs.

2. **APPLICABLE DOCUMENTS**.

2.1 General. The documents listed in this section are specified in sections 3, 4, and 5 of MIL-STD-3001-1 through MIL-STD-3001-8. This section does not include documents cited in other sections of this eight-part standard or recommended for additional information, or as examples. While every effort has been made to ensure the completeness of the list, document users are cautioned that they must meet all specified requirement documents cited in sections 3, 4, and 5 of MIL-STD-3001-1 through MIL-STD-3001-8, 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 latest issue of the Department of Defense Index of Specifications and Standards (DoDISS) and supplemented thereto, cited in the solicitation (see 6.2).

SPECIFICATIONS

DEPARTMENT OF DEFENSE

MIL-DTL-15014	Manuals, Technical: Separate Illustrated Parts Breakdown; Technical Content Requirements (Work Package Concept).
MIL-DTL-23618H	Manuals, Technical: Periodic Maintenance Requirements, Preparation of.
MIL-DTL-31000	Technical Data Packages.
MIL-DTL-81218C	Manuals, Technical: Aircraft Engine Intermediate and Depot Maintenance, Preparation of (Work Package Concept).
MIL-DTL-81919C	Manuals, Technical, Equipment Operation and/or Maintenance Instructions, Technical Content Requirements (Work Package Concept).
MIL-DTL-81927C	Manuals, Technical: Work Package Style, Format, and Common Technical Content Requirements; General Specification for (Work Package Concept).
MIL-DTL-81928C	Manuals, Technical: Aircraft Maintenance Instructions, Technical Content Requirements (Work Package Concept).

MIL-DTL-81929C	Manuals, Technical: Illustrated Parts Breakdown Figures; Technical Content Requirements (Work Package Concept).
MIL-DTL-85383A	Manuals, Technical: Aircraft Structure Repair; Preparation of (Work Package Concept).
MIL-PRF-28000	Digital Representation for Communication of Product Data: IGES Application Subsets and IGES Application Protocols.
MIL-PRF-28001	Markup Requirements and Generic Style Specification for Exchange of Text and Its Presentation.
MIL-PRF-28002	Raster Graphics Representation in Binary Format, Requirements for.
MIL-PRF-28003	Digital Representation for Communication of Illustration Data: CGM Application Profile.
MIL-PRF-87268	Manuals, Interactive Electronic Technical - General Content, Style, Format, and User-Interaction Requirements.
MIL-PRF-87269	Data Base, Revisable: Interactive Electronic Technical Manuals, for the Support of.

STANDARDS

FEDERAL

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

DEPARTMENT OF DEFENSE

MIL-STD-17	Mechanical Symbols.
MIL-STD-100	Department of Defense Standard Practices for Engineering Drawings.
MIL-STD-1309	Definition of Terms for Testing, Measurement, and Diagnostics.
MIL-STD-2073/1	Standard Practice for Military Packaging.

HANDBOOKS

DEPARTMENT OF DEFENSE

MIL-HDBK-3001	Guide to the General Style and Format of U.S. Navy Work Package Technical Manuals.
MIL-HDBK-9660	Handbook for DoD-Produced CD-ROM Products.

(Copies of specifications, standards, and handbooks are available by request from Defense Automated Printing Service, Building 4D, DPM-DODSSP, 700 Robbins Ave., Philadelphia, PA 19111-5094.)

2.2.2 Other Government documents and publications. The following other Government documents and publications form a part of this document to the extent specified herein.

PUBLICATIONS

FEDERAL

H4/H8 Cataloging Handbook	Commercial and Government Entity (CAGE) Codes.
Joint Pub 1-02	Department of Defense Dictionary of Military and Associated Terms.

NATIONAL ARCHIVES AND RECORDS ADMINISTRATION

29 CFR 1910.1200	Hazard Communication.
49 CFR 49 100-180	Transportation of Hazardous Materials.

MARINE CORPS

MCO P1200.7	Military Occupational Specialties Manual.

NAVAL AIR SYSTEMS COMMAND

NAVAIR 00-25-100	Technical Manual Program.
NAVAIR 00-25-300	Naval Air Systems Command Technical Directives System.
NAVAIR 00-25-700	Guide to the General Style and Format of Work Package Technical Manuals.
NAVAIR 01-1A-23	Standard Maintenance Practices for Miniature / Microminiature (2M) Electronic Assembly Repair.
NAVAIR 01-1A-505	Installation Practices, Aircraft Electric and Electronic Wiring.
NAVAIR 01-1A-509	Aircraft Weapons Systems Cleaning and Corrosion Control.

NAVAL SEA SYSTEMS COMMAND

NAVSEA OD 30393	Design Principles and Practices for Controlling Hazards of Electro-Magnetic Radiation to Ordnance (HERO Design Guide).

NAVAL SUPPLY SYSTEMS COMMAND

NAVICP P2300 Series	Data Set.

NAVSUP Pub. 700	CD-ROM containing the Navy MIL-STD-2073 Packaging Program.

(Copies of Cataloging Handbooks H-4, H-6, and H-8 are available from the Commander, Defense Logistic Service Center, Battle Creek, MI 49017-3084. Application for copies of CFRs should be addressed to the Superintendent of Documents, Attn: New Orders, P.O. Box 371954, Pittsburgh, PA 15250-7954. Copies of MCO P1200.7 are available from Commandant of Marine Corps, Code ARDC, Headquarter, U.S. Marine Corps, Washington, DC 20830-1775. Copies of NAVAIR and NAVSEA manuals are available by request to Commanding Officer, Naval Air Technical Services Facility (NATSF), 700 Robbins Avenue, Philadelphia, PA 19111-5097. The P2300 series is part of NAVSUP Publication 600. Copies of NAVSUP 600D (for Government personnel) and NAVSUP 600F (for contractors) are available from the Naval Inventory Control Point Philadelphia, Publications/Forms Branch, 700 Robbins Avenue, Philadelphia, PA 19111-5098. Copies of NAVSUP 700 are available by request to Commander, Naval Inventory Control Point, Code 05411, 5450 Carlisle Pike, P.O. Box 2020, Mechanicsburg, PA 17055-0788.).

2.3 Non-Government publications. The following documents form a part of this document to the extent specified therein. Unless otherwise specified, the issues of the documents that are DoD adopted are those listed in the latest issue of the DoDISS, cited in the solicitation. Unless otherwise specified, the issues of the documents not listed in the DoDISS are the issues of documents cited in the solicitation (see 6.2).

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI C95.1	Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 KHZ to 300 GHZ.
ANSI C95.3	Radiation, Electromagnetic, Potentially Hazardous, at Microwave Frequencies, Techniques and Instrumentation for the Measurement of.
ANSI Y10.5	Letter Symbols for Quantities Used in Electrical Science Electrical Engineering.
ANSI Y14.5	Dimensioning and Tolerancing.
ANSI Y14.15	Electrical and Electronics Diagrams.
ANSI Y32.10	Diagrams, Fluid Power, Graphic Symbols for.
ISO 8879	Information Processing - Text and Office Systems - Standard Generalized Markup Language (SGML).

(Copies of the documents listed above are available from the American National Standards Institute Inc., 11 West 42nd Street, New York, NY 10036.)

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ASME-Y14.5M	Dimensioning and Tolerancing.

(Copies of the documents listed above are available from the American Society of Mechanical Engineers, 345 East 47th Street, New York, NY 10017-2392.)

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

IEEE STD 91-84	Graphic Symbols for Logic Functions.
IEEE STD 200 (ANSI Y32.16)	Reference Designations for Electrical and Electronics Parts and Equipments.
IEEE STD 260	Letter Symbols for Units of Measurement.
IEEE 280-85 (ANSI Y10.5)	Letter Symbols for Quantities Used in Electrical Science and Electrical Engineering.
IEEE STD 315 (ANSI Y32.2)	Graphic Symbols for Electrical and Electronic Diagrams.
ANSI/IEEE STD 315A	Graphic Symbols Supplement.

(Copies of the documents listed above are available from the 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. **DEFINITIONS**.

3.1 Acronyms used in this standard. The acronyms used in this standard are defined as follows:

ANSI	American National Standards Institute.
ASCII	American Standard Code for Information Interchange.
ASME	American Society of Mechanical Engineers.
ATE	Automatic Test Equipment.
BIT	Built-in Test.
BITE	Built-in Test Equipment.
CAC	Critical Alloy Code.
CAGE	Commercial and Government Entity.
CAGEC	Commercial and Government Entity Code.
CALS	Continuous Acquisition and Life-cycle Support.
CD	Compact Disk.
CD-ROM	Compact Disk-Read Only Memory.
CFR	Code of Federal Regulations.
CGM	Computer Graphics Metafile.
CRT	Cathode Ray Tube.
CSI	Critical Safety Items.
CSP	Critical Safety Process.
DFAR	Defense Federal Acquisition Regulation Supplement.
DoD	Department of Defense.
DoDISS	Department of Defense Index of Specifications and Standards.

DTD	Document Type Definition.
EDS	Electronic Display System.
EMP	Electro Magnetic Pulses.
ESD	Electrostatic Discharge.
ESDS	Electrostatic Device Sensitive.
ETM	Electronic Technical Manual.
FAR	Federal Acquisition Regulation.
FOSI	Formatting Output Specification Instance.
HCI	Hardness Critical Items.
HCP	Hardness Critical Process.
HMWS	Hazardous Materials Warning Summary/Sheet.
IEC	International Electrotechnical Commission.
IEEE	Institute of Electrical and Electronics Engineers.
IETM	Interactive Electronic Technical Manual.
IGES	Initial Graphics Exchange Specification.
IMM	Intermediate Maintenance Manual.
IPB	Illustrated Parts Breakdown.
IPR	In-Process Review.
ISO	International Organization for Standardization.
kHz	Kilohertz (1000 hertz).
LMI	Logistics Management Information.
LORA	Level of Repair Analysis.
LOX	Liquid Oxygen.
LSA	Logistics Support Analysis.
LSAR	Logistics Support Analysis Record.
MSDS	Material Safety Data Sheet.
NATO	North Atlantic Treaty Organization.
NAVICP	Naval Aviation Inventory Control Point.
NDI	Nondestructive Inspection.
NHA	Next Higher Assembly.
NIIN	National Item Identification Number.
NSA	National Security Agency.
NSN	National Stock Number.
OCI	Observable Critical Items.
OCP	Observable Critical Process.
ODS	Ozone Depleting Substance.
OJCS	Organization of the Joint Chiefs of Staff.
OMM	Organization Maintenance Manual.
OS	Output Specification.
OSD	Office of the Secretary of Defense.
OSHA	Occupational Safety and Health Act.
PMIC	Precious Metal Indicator Code.
PMRM	Periodic Maintenance Requirements Manual.
P/N	Part Number.
QA	Quality Assurance.
QEC	Quick Engine Change.
SGML	Standard Generalized Markup Language.
SM&R	Source, Maintenance and Recoverability.
SRA	Shop Replaceable Assembly.
TM	Technical Manual.
TMINS	Standard Technical Manual Identification System

TMQA	Technical Manual Quality Assurance.
TMSS	Technical Manuals Specifications and Standards.
TREE	Transient Radiation Effects on Electronics.
WP	Work Package.
WRA	Weapons Replaceable Assembly.

3.2 Definitions of selected terms.

3.2.1 Adjust. To maintain or regulate within prescribed limits, by bringing into proper position, or by setting the operating characteristics to specified parameters.

3.2.2 Alert. An alert is any message, communication, notice, or output which requires manual acknowledgment from the user of the ETM/IETM.

3.2.3 Align. To adjust specified variable elements of an item to bring about optimum or desired performance.

3.2.4 American National Standards Institute (ANSI). A private sector organization which plans, develops, establishes or coordinates standards, specifications, handbooks or related documents.

3.2.5 Assembly. Two or more parts or subassemblies joined together to perform a specific function and capable of disassembly (e.g., brake assembly, fan assembly, audio frequency amplifier).

NOTE

The distinction between an assembly and subassembly is determined by the individual application. An assembly in one instance may be a subassembly in another where it forms a portion of an assembly.

3.2.6 Block diagram. A modified schematic diagram in which each group of maintenance-significant components that together perform one or more functions is represented by a single symbol or block. The block or symbol representing the group of components shows simplified relevant input and output signals pertinent to the subject diagram.

3.2.7 Built-in test equipment (BITE). Any identifiable device that is part of the supported end item and is used for testing that supported end item.

3.2.8 Calibrate. To determine and cause corrections or adjustments to be made to instruments or test, measuring, and diagnostic equipment used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

3.2.9 Callout. Anything placed on an illustration to aid in identifying the objects being illustrated, such as index numbers, nomenclature, leader lines, and arrows.

3.2.10 CALS raster. Compressed scanned raster images (CCITT, Group 4) in accordance with MIL-PRF-28002.

3.2.11 Caution. A statement or some other notification about an operating or maintenance procedure, practice, or condition that, if not strictly observed, could result in damage to, or destruction of, equipment or loss of mission effectiveness.

3.2.12 Client area. The area between the menu bar and the footer bar of the window in an ETM/IETM.

3.2.13 Commercial and Government Entity Code (CAGEC). A five-character code assigned to commercial activities that manufacture or supply items used by the Federal Government and to Government activities that control design or are responsible for the development of certain specifications, standards, or drawings which control the design of Government items. CAGE Code assignments are listed in the H4/H8 CAGE Publications.

3.2.14 Comprehensibility. The completeness with which a user in the target audience understands the information in the TM.

3.2.15 Computer Graphics Metafile (CGM). A standard digital form for vector graphics preparation as defined by MIL-PRF-28003.

3.2.16 Continuous Acquisition Life-cycle Support (CALS). A DoD initiative to transition from paper-intensive, non-integrated weapon systems design, manufacturing, and support processes to a highly automated and integrated mode of operation. This transition will be facilitated by acquiring, managing, and using technical data in standardized digital form.

3.2.17 Continuous tone photographs or drawings. Continuous tone photographs or drawings have a continuous gradation of tonal values ranging from light (white) to dark (black), including gray. These tonal values are not created by lines or dots.

3.2.18 Copy freeze date. A date set by the contracting activity after which no additions, deletions, or changes will be accepted to the publication material.

3.2.19 Data pane. Sub areas or a division of a frame on the EDS.

3.2.20 Department of Defense (DoD). The Office of the Secretary of Defense (OSD) (including all boards and councils), the Military Departments (Army, Navy, and Air Force), the Organization of the Joint Chiefs of Staff (OJCS), the Unified and Specified Commands, the National Security Agency (NSA), and the Defense Agencies.

3.2.21 Department of Defense Index of Specifications and Standards (DoDISS). The DoD publication that lists unclassified Federal and military specifications and standards, related standardization documents, and voluntary standards approved for use by DoD.

3.2.22 Depot-level maintenance. Maintenance that is beyond the capability of the organizational and intermediate activities. Depot-level maintenance normally consists of overhaul, recondition, manufacture, repair, or modification and requires technical assistance beyond lower maintenance level capability.

3.2.23 Digital graphics forms. A standard graphics form acceptable for graphics preparation in accordance with graphic standards listed in MIL-STD-3001. These forms include CGM, CALS raster, and Initial Graphics Exchange Specification (IGES).

3.2.24 Direct image copy (DIC). One-on-one reproducible without paste-overs or mortises, suitable for use on a copier or making direct image masters. Quality should be such that if a negative were to be prepared, only the imperfection due to the quality of photolithographic film would require touch up before making the offset plates.

3.2.25 Disassemble. The step-by-step taking apart (or breakdown) of an assembly or subassembly to the lowest level of its parts identification as maintenance-significant (i.e., assigned an SM&R code for the category of maintenance under consideration).

3.2.26 Document Type Definition (DTD). The definition of the markup rules for a given class of documents. A DTD or reference to one should be contained in any SGML conforming document.

3.2.27 Electronic display system (EDS). An electronic device on which display images can be represented; most often a CRT or a liquid-crystal device.

3.2.28 Electronic technical manual. For the purpose of this standard, an ETM is a technical manual normally prepared from a linear SGML document file and not a hierarchically-based database as an IETM. The ETM is also displayed on an EDS as a scrollable, linear structured document and may employ a combination of an automated intelligent index, prompted dialog boxes, and content-driven logical "NEXT" functions.

3.2.29 Expendable items. Items, other than repair parts, that are consumed in use (e.g., paint, lubricants, wiping rags, tape, cleaning compounds, sandpaper).

3.2.30 Footer. One or more lines of text that appear at the bottom of each page (also called feet and running feet).

3.2.31 Formatting Output Specification Instance (FOSI). The FOSI interprets the style and formatting requirements of the Output Specification (OS). The FOSI can include font, leading, hyphenation characteristics, etc.

3.2.32 Frame. An area of the display screen with visible boundaries which displays the information in the IETM.

3.2.33 Frame-based interactive electronic technical manual (IETM). An IETM which has been designed to be displayed frame by frame.

3.2.34 Functional diagram. A type of illustration in which symbols are connected by lines to show relationships among the symbols. The symbols may be rectangles or other shapes, standard electronic symbols representing components or functions, or pictorials representing equipment or components. Where appropriate, voltage readings are shown. The lines may represent procedures or processes, such as signal or logic flow, and physical items, such as wires. Functional diagram includes schematics, wiring and piping diagrams, logic diagrams, flow charts, and block diagrams.

3.2.35 Graphic(s). Any type of presentation or representation which gives a clear visual impression.

3.2.36 Halftones. Halftones are the tonal values of gray and black created by lines or dots. It is a conversion of a continuous tone print.

3.2.37 Header. One or more lines of standard text that appear at the top of each page (also called heads and running heads).

3.2.38 Horizontal (landscape) TM format. Positioning of technical manual content so that page horizontal (width) dimensions are greater than vertical (height) dimensions.

3.2.39 Hotspot. An area of the display which acts as a hidden button. Touching the hotspot selects designated information for display.

3.2.40 Icon. Pictorial representation; visual image to give immediate recognition of a hazard or to provide essential information.

3.2.41 Illustration. A general term meaning graphic presentations of all types. Illustrations include pictorials, functional diagrams, and line graphs. This term is used instead of such terms as figure, graphic, drawing, diagram, and artwork.

3.2.42 Index numbers and letters. A number or letter (on a figure or an illustration) usually attached to a line or an arrow which points to an object on the illustration. This number or letter corresponds to the same number or letter in a legend or text which defines or identifies the object in the illustration.

3.2.43 Initial Graphics Exchange Specification (IGES). A standard digital form for vector graphics preparation as defined by MIL-PRF-28000.

3.2.44 Inspect. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g., by sight, sound, or feel).

3.2.45 Institute of Electrical and Electronics Engineers (IEEE). Membership organization that includes engineers, scientists and students in electronics and allied fields. Founded in 1963, it has over 300,000 members and is involved with setting standards for computers and communications.

3.2.46 Interactive electronic technical manual (IETM). An IETM is a technical manual, prepared (authored) by a contractor and delivered to the Government or prepared by a Government activity, in digital form on a suitable medium, by means of an automated authoring system; designed for electronic screen display to an end user; and possessing the following three characteristics: (1) The format and style of the presented information are optimized for screen presentation to assure maximum comprehension; that is, the information presented is frame-oriented, not page-oriented; (2) The elements of technical information constituting the IETM are so interrelated that a user's access to the information he/she requires is facilitated to the greatest extent possible, and is achievable by a variety of paths; (3) The computer-controlled IETM electronic display system (EDS) can function interactively (as a result of user request and information input) in providing procedural guidance, navigational directions, and supplemental information; and also in providing assistance in carrying out logistic support functions supplemental to maintenance.

3.2.47 International Organization for Standardization (ISO). Organization that sets international standards, founded in 1946 and headquartered in Geneva. It deals with all fields except electrical and electronics, which is governed by the older International Electrotechnical Commission (IEC), also in Geneva. With regard to information processing, ISO and IEC created JTC1, the Joint Technical Committee for information technology.

3.2.48 Landscape mode. To print an image sideways on the page so that the longest edge of the form corresponds to the horizontal axis.

3.2.49 Legend. A tabular listing and explanation of the numbers or symbols on a figure or an illustration.

3.2.50 Logic text. Text that is composed of procedures and actions branching to a series of questions, resulting in a "yes" or "no" answer, leading to determination and resolution of the problem.

3.2.51 Logic tree. Diagram comprised of a branching series of questions, resulting in a "yes" or "no" answer, leading to determination and resolution of the problem.

3.2.52 Logistics Management Information (LMI). The selective application of scientific and engineering efforts undertaken during the acquisition process, as part of the systems engineering process, to assist in acquiring the required support; and providing the required support during the operational phase at minimum cost. Replaces Logistics Support Analysis (LSA).

3.2.53 Logistics Support Analysis (LSA). The selective application of scientific and engineering efforts undertaken during the acquisition process, as part of the systems engineering process, to assist in acquiring the required support; and providing the required support during the operational phase at minimum cost.

3.2.54 Lubricant. Any solid, fluid, or semifluid material that performs a lubricating or related specialty function. Such materials include lubricating oils, greases, hydraulic fluids, damping fluids, dielectric coolants, anti-seize compounds, corrosion preventatives, and bonded or unbonded solid films.

3.2.55 Maintenance level. The separation of maintenance activities or functions in the U.S. Navy according to the required skills and available facilities.

3.2.56 Maintenance step. A single maintenance action, such as setting a switch to the OFF position. Usually, a step has one action, but in certain cases, there may be a series of identical actions, such as removing seven bolts.

3.2.57 Marginal copy. Copy (generally headers and footers) placed outside that portion of the page used for either text, full page tabular data, or full page illustrations, but within the printing area dimensions of the page.

3.2.58 Menu bar. A region located directly under the title bar that displays selectable menu titles.

3.2.59 National item identification number (NIIN). The last nine digits of the National/NATO stock number. The first two digits of the NIIN identify the country assigning the number and the remaining seven digits are a serially assigned number.

3.2.60 National stock number (NSN). A 13-digit number assigned to a repair part to be used for requisitioning purposes.

3.2.61 Next higher assembly (NHA). Assembly or subassembly of which subject component(s) or subassembly are a subpart.

3.2.62 Nomenclature. The approved name or alphanumeric identifier assigned to an item, equipment, or component in agreement with an organized designation system.

3.2.63 Note. A statement or some other notification that adds, emphasizes, or clarifies essential information of special importance or interest.

3.2.64 Novice user. An ETM/IETM user who possesses only a general understanding of, and has had only limited training on, the system being operated, fault-isolated, or maintained.

3.2.65 Overhaul. That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publications.

3.2.66 Part number (P/N). A primary number used to identify an item used by the manufacturer (individual, company, firm, corporation, or Government activity) that controls the design, characteristics, and production of the item by means of engineering drawings, specifications, and inspection requirements.

3.2.67 Pictorial. A type of illustration showing the physical appearance of equipment or component parts. This term is used instead of such general terms as illustration, drawing, and diagram.

3.2.68 Pre-screening. A process in which a clear material with a dot pattern or crossing opaque lines is used through which an image is photographed in making a halftone.

3.2.69 Preventive maintenance (scheduled maintenance). The performance of scheduled inspections and maintenance functions necessary to keep the equipment in serviceable condition and ready for its primary mission.

3.2.70 Readability. Text comprehensibility measured by such variables as number of syllables, words, and sentences.

3.2.71 Reference designator. Letters or numbers, or both, used to identify and locate discreet units, portions thereof, and basic parts of a specific equipment, assembly, or subassembly.

3.2.72 Reliability, availability, maintainability (RAM). Requirements imposed on materiel systems to ensure that they are operationally ready for use when needed, will successfully perform assigned functions, and can be economically operated and maintained within the scope of logistic concepts and policies.

3.2.73 Remove/install. To remove and install the same item when required to perform service or other maintenance functions. Install may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

3.2.74 Repair. The application of maintenance services (inspect, test, service, adjust, align, calibrate, and/or replace), including fault location/troubleshooting, removal/installation, and disassembly/assembly procedures, and maintenance actions to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system. Repair is authorized by the LSA/LMI and the assigned maintenance level is shown as the fourth position code of the SM&R code.

3.2.75 Repair part. Those support items that are an integral part of the end item or weapons system which are coded as not repairable (i.e., consumable items).

3.2.76 Replace. To remove an unserviceable part and install a serviceable counterpart in its place. Replace is authorized by the LSA/LMI and the assigned maintenance level is shown as the third position code of the SM&R code.

3.2.77 Requiring activity. The DoD component, activity, or organization of a using military service, or that organization delegated by a using service, that is responsible for the selection and determination of requirements for TMs.

3.2.78 Revision. A revision is comprised of corrected, updated or additional pages or work packages to the current edition of a manual. It consists of replacement work packages that contain new or updated technical information, or improves, clarifies or corrects existing information in the current edition of the manual.

3.2.79 Scheduled maintenance (preventive maintenance). The performance of scheduled inspections and maintenance functions necessary to keep the equipment in serviceable condition and ready for its primary mission.

3.2.80 Schematic diagram. A graphic representation showing the interrelationship of each component or group of components in the equipment. The essential characteristic of these diagrams is that every maintenance-significant functional component is separately represented. Also, where appropriate, voltage readings shall be shown.

3.2.81 Scroll. Ability to move a text or graphics display up and down, or left and right, or both.

3.2.82 Sentence. A group of words conveying a complete thought and terminated by a semicolon, period, exclamation mark, or question mark. Headers, captions, and paragraph titles are not considered sentences.

3.2.83 Service. Operations required periodically to keep an item operating, i.e., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases.

3.2.84 SGML document instance. The document instance is the part of an SGML document which contains the marked up textual data.

3.2.85 Shop replaceable assembly (SRA). A generic term which includes all the packages within a weapons replaceable assembly (WRA) including chassis and wiring as a unit. (Sub-level mechanization or modular subdivisions within an SRA may occur.) Conversely, a WRA is composed of SRAs.

3.2.86 Source, maintenance, and recoverability (SM&R) code. The five-position code containing supply/requisitioning information, maintenance level authorization criteria, and disposition instruction. The first two positions of the SM&R code determine how to get an item. The third position represents who can install, replace, or use the item. The fourth position dictates who can do complete repair on the item. The fifth position represents who determines disposition action on unserviceable items.

3.2.87 Spare part. Those support items that are an integral part of the end item or weapons system that are coded as repairable (i.e., reparable items).

3.2.88 Special tools. Those tools that have single or peculiar application to a specific end item/system.

3.2.89 Standard Generalized Markup Language (SGML). A language for document representation that formalizes markup and frees it of system and processing dependencies as defined in MIL-PRF-28001.

3.2.90 Standard Generalized Markup Language (SGML) declaration. Defines which characters are used in a document instance, in which syntax the DTD is written, which SGML features are used, etc.

3.2.91 "Sticky". In reference to electronic tables, "sticky" infers that the title and column heads will be continually displayed throughout the scrolling process of the entire table.

3.2.92 Subassembly. Two or more parts that form a portion of an assembly or a component replaceable as a whole, but having a part or parts that are individually replaceable.

3.2.93 Task dialog. A pop-up display window by which the computer solicits user input such as a selection of choices.

3.2.94 Technical Manual Quality Assurance (TMQA) program. A systematic, coordinated effort to establish a high level of confidence that the TM product offered conforms to established, contractually defined technical requirements. A QA program includes efforts by the contracting activity and requiring activity, including, but not limited to, IPRs, validation, and verification.

3.2.95 Technical manuals (TMs). Documents that contain instructions for the installation, operation, maintenance, and support of weapon systems, weapon system components, and support equipment. TM information may be presented, according to prior agreement between the contractor and the Government, in any form or characteristic, including hard printed copy, audio and visual displays, disks, other electronic devices, or other media. They normally include operational and maintenance instructions, parts lists, and related technical information or procedures exclusive of administrative procedures.

3.2.96 Test. To verify serviceability by measuring the mechanical, pneumatic, hydraulic, electrical, or electronic characteristics of an item and comparing those characteristics with prescribed standards.

3.2.97 Text. The written parts of the technical sections excluding labels, legends, and callouts in illustrations.

3.2.98 Title bar. A region located directly above the menu bar that displays the title of the information on an EDS.

3.2.99 Top-down breakdown. The pyramidal breakdown of an end item, with the top item being the complete end item. The process of breakdown is established from the engineering drawing structure in an NHA progression until the lowest repairable in each family tree group is identified. All nonrepairables can be identified in like manner to establish their NHA relationships.

3.2.100 Update. Updates are changes to the initial version of the ETM/IETM or to the latest complete revision of an ETM/IETM. Updates are issued incrementally as necessary, or as required by the contract.

3.2.101 User. A person using the technical manual.

3.2.102 Validation. The process by which the contractor tests a TM for technical accuracy and adequacy, comprehensibility, and usability.

3.2.103 Verification. The final QA iteration by the Government for acceptance of the TM during which a TM is tested to determine its adequacy and operational suitability for operation and maintenance of equipment or systems using target audience personnel.

3.2.104 Vertical TM format. Positioning of technical manual so that page horizontal (width) dimensions are less than vertical (height) dimensions.

3.2.105 Volume. The first separately bound subdivision of a publication.

3.2.106 Warning. A statement or some other notification about an operating or maintenance procedure, practice, or condition that, if not strictly observed, could result in long term health hazard, injury to, or death of personnel performing the task prescribed in the TM.

3.2.107 Weapons replaceable assembly (WRA). A generic term which includes all the replaceable packages of an avionic equipment, pod, or system as installed in an aircraft weapon system with the exception of cables, mounts, and fuse boxes or circuit breakers.

3.2.108 Wiring diagram. Diagram illustrating signal flow or wiring connections. Where appropriate, voltage readings shall be shown.

3.2.109 Word. Any string of characters (including letters, numbers, symbols, and groups of letters) separated from other strings by one or more spaces. Hyphenated words and contractions count as one word. For example, each of the following count as one word: couldn't; GFE; i.e.; 32,008; 19-inch; +25°F; left-hand. Thus a sentence like "The left-hand MLG door shouldn't open more than 25°." consists of 9 words.

3.2.110 Work packages (WPs). Presentation of information functionally divided into individual task packages in the logical order of work sequence. These WPs should be stand-alone general information, descriptive, theory, operating, maintenance, troubleshooting, parts, and supporting information units containing all information required for directing task performance.

4. GENERAL REQUIREMENTS.

4.1 General. Requirements for the preparation of work package technical manuals have been divided into eight parts to enhance documentation usability in performance of weapon systems, aeronautical equipment, airborne weapons/equipment, and support equipment maintenance development. This Part identifies the types of technical manual data that can be developed using the requirements contained in this standard and the methods to be used to develop digital data. Appendix A contains the Technical Manual Content Selection Matrixes that can be used to tailor specific content for each type of TM covered by this standard. Appendix B contains the mandatory style and format requirements needed to produce both paper and digitally displayed page-oriented TMs. Appendix C contains the mandatory style and format requirements needed to produce scrollable Electronic Technical Manuals (hereafter referred to as **ETM**s) and frame-based Interactive Electronic Technical Manuals (hereafter referred to as **IETM**s). MIL-STD-3001, Parts 2 through 8 contain specific functional technical content requirements for the preparation of all TMs and revisions covering maintenance and operation, at all levels through depot. The eight parts of this standard are listed below.

a. MIL-STD-3001-1 — Preparation of Digital Technical Information for Multi-output Presentation of Technical Manuals.

b. MIL-STD-3001-2 — Description, Principles of Operation, and Operation Data.

c. MIL-STD-3001-3 Testing and Troubleshooting Procedures.

d. MIL-STD-3001-4 Maintenance Information with IPB.

e. MIL-STD-3001-5 Aircraft Wiring Information.

f. MIL-STD-3001-6 Structural Repair Information.

g. MIL-STD-3001-7 Periodic Maintenance Requirements.

h. MIL-STD-3001-8 Illustrated Parts Breakdown (IPBs).

4.2 Technical manual classifications. The NAVAIR work package (WP) technical manuals covered by this standard are classified under the assigned maintenance level(s) described in 4.2.1 through 4.2.3.

4.2.1 Organizational level. WP organizational level manuals may be either a single manual or a series of manuals covering organizational level operations and maintenance and its associated illustrated parts breakdown (IPB) data. Organizational level information shall normally be defined as "on" aircraft or equipment tasks arranged on a systems concept. "Off" aircraft organizational level tasks include component and support equipment repair, manufacturing, and assembly.

4.2.2 Intermediate and depot level. WP intermediate and depot level manuals shall be prepared as either individual maintenance level coverage or combined maintenance level coverage manuals, and associated IPB data, based on their application and the approved maintenance plan (MP), logistics support analysis (LSA) or logistics management information (LMI). The documents will normally cover "off" aircraft or "off" equipment tasks arranged by weapons replaceable assembly (WRA) and shop replaceable assembly (SRA). That is, component or assembly maintenance shall be covered instead of the system concept used at organizational level.

4.2.3 Combined maintenance levels. WP manuals may consist of any combination of level coverage and associated IPB data, predicated on the approved maintenance plan or the LSA/LMI, facility requirements, support equipment required, and the volume of information to be presented. Combined maintenance level manuals are most practical when maintenance requirements at each level are fairly consistent, the same support equipment is applied, the same facility requirements are used, and when the overall data volume permits. Organizational level normally shall not be combined with intermediate or depot level data.

4.3 Types of technical manuals. Technical manual content selection matrixes provided in Technical Manual Content Selection Matrixes, Appendix A, list the specific technical content requirements and applicable work packages for each type of WP technical manual, including multilevel TMs, covered by this standard. Each type of TM shall contain, in detail, the maintenance coverage prescribed for the applicable maintenance level(s) based on the maintenance concept in accordance with the LSA or LMI, the Level of Repair Analysis (LORA), or an approved MP. The following types of work package manuals are covered by the requirements of this standard.

a. Aircraft systems and equipment maintenance instruction manuals.

General aircraft information manual
Plane captain's manual
Line maintenance manual
Principles of operation manual

Functional flow diagram manual
Testing and troubleshooting manual
Fault reporting manual
Fault isolation manual
Integrated weapon systems testing and troubleshooting manual
Maintenance instructions with IPB manual
Structural repair manual
Aircraft wiring diagram manual
Aircraft wire bundle manual
Aircraft wire connector repair manual
Power plant build-up manual
Periodic maintenance requirements card sets
Illustrated parts breakdown (IPB) manual.

b. Aeronautical equipment, airborne weapons/equipment, and support equipment operation and maintenance manuals.

Operation instructions manuals
Operation and maintenance instructions with IPB manuals
Maintenance instructions with IPB manuals.

c. Engine intermediate and depot maintenance manuals.

4.4 Maintenance level applicability. Requirements contained in this standard are applicable to all types and maintenance levels of TMs unless specifically noted in bold and in parentheses (i.e., **(Support Equipment Manuals only)**, **(Depot Level only)**, etc.).

4.5 Selective application and tailoring. This standard contains some requirements that may not be applicable to the preparation of all technical manuals. Selective application and tailoring of requirements contained in MIL-STD-3001-1 through MIL-STD-3001-8 shall be accomplished through the use of the Technical Manual Content Selection Matrixes contained in MIL-STD-3001-1, Appendix A. The applicability of some requirements is also designated by one of the following statements: unless specified otherwise by the requiring activity or as/when specified by the requiring activity.

4.6 Style and format. The technical content requirements contained in MIL-STD-3001-2 through -8 have traditionally been used to produce and distribute TMs to the end user in page-oriented paper form. This data can now be printed on paper and also presented electronically in various formats; therefore, Parts 2 through 8 do not contain format direction in the sense of arrangement of text and graphics on a page or screen display. For style and format requirements for WP technical manuals intended for a printed page-oriented presentation, refer to Appendix B. For style and format requirements for the on-screen display of WP technical manuals, refer to Appendix C. For examples of typical technical content for specific work packages covered in this standard, refer to MIL-HDBK-3001.

4.7 Preparation of digital data for electronic delivery. Technical manual information prepared in a work package structure and delivered digitally in accordance with this standard shall be SGML-tagged using modular Document Type Definitions (DTDs). The DTDs have been developed in accordance with MIL-PRF-28001 and ISO 8879. The DTDs are listed below and are available in digital format and can be obtained as instructed in 4.10.

a. Technical manual assembly DTD.

b. Description, principles of operation, and operation data DTD.

c. Testing and troubleshooting procedures DTD.

d. Maintenance information with IPB DTD.

e. Aircraft wiring information DTD.

f. Structural repair information DTD.

g. Periodic maintenance requirements DTD.

h. Illustrated parts breakdown requirements DTD.

4.8 Development of an SGML source file. An SGML-tagged source file is composed of the applicable WP technical content in SGML-coded ASCII, marked up (tagged) in accordance with the applicable modular DTD. In order to tag WP text appropriately, the author inserting the tags should be familiar with the DTD or should provide the text file to a person who is experienced with the DTD and who understands the type of documentation being written, especially when content tags are used.

4.9 Use of the modular DTDs. The modular DTDs referenced in this standard interpret the technical content and structure for the functional requirements contained in this standard and are mandatory for use.

4.10 Obtaining the modular DTDs. The DTDs, and associated tag and attribute descriptions, which are SGML constructs, may be obtained from the requiring activity.

4.11 Standard tables and lists. Standard tables and lists are noted throughout the text of MIL-STD-3001-1 through MIL-STD-3001-8 in bold and in parentheses (i.e., **(standard table)**, **(standard list)**). The table and list head titles and structure of these standard tables and lists shall have no deviations.

4.12 Conflict between standards. When conflict exists between the referenced standards and the technical content requirements described herein, this standard shall take precedence. When conflict exists between the contract and this standard, the contract shall take precedence.

4.13 Copyrights, proprietary names, and advertising.

4.13.1 Copyright/copyright credit line. TMs should not contain copyrighted material except as specified in the Federal Acquisition Regulations (FAR) and Defense Federal Acquisition Regulation (DFAR) Supplement. When copyrighted material is included in a TM, the developer must obtain prior written permission from the copyright owner or authorized agent for its use. The written permission must contain a statement declaring whether or not a copyright credit line is required.

4.13.2 Proprietary names. Do not use trade names, copyrighted names, or other proprietary names applying exclusively to the product of one company unless the items cannot be adequately described because of the technical involvement, construction, or composition. In such instances, list one, and, if possible, several commercial products, followed by the words "or equal." The same applies to manufacturers' part numbers or drawing numbers for minor parts where it is impractical to specify the exact requirements. If possible, define the particular characteristics required for the "or equal" products.

4.13.3 Advertising. Publication material will not contain advertising matter.

5. DETAILED REQUIREMENTS.

5.1 Development of technical information. The preparing activity must apply the requirements of aircraft, system, or equipment engineering design to the development of technical content information. Once developed, this data can be used to create NAVAIR TMs that can be arranged and formatted for screen display presentation or to produce page-oriented paper. The data shall be organized by functional elements in a logical descriptive, operational, and maintenance task sequence. Technical information shall be derived and fully consistent with the maintenance concepts of the baseline documents described below, and in accordance with the technical content requirements contained in MIL-STD-3001-2 through -8.

a. Logistics Support Analysis (LSA) or Logistics Management Information (LMI). The technical data shall be developed in accordance with the LSA/LMI requirements and Department of Defense (DoD) requirements for Logistic Support Analysis Record (LSAR).

b. Approved maintenance plan (MP). The plan for maintenance is a critical requirement for completing in-depth task development. The prime source of maintenance planning information is the NAVAIR Assistant Project Manager, Logistics (APML). The APML is tasked by the Acquisition Project Manager (PM) for the coordination and preparation of maintenance planning information with the cooperation of the various Logistics Element Managers (LEMs). The level of effort performed depends on system complexity, magnitude and projected cost.

(1) Small programs. Small projects do not require the elaborate planning necessary for the management and direction of a major weapon system. They do not require an extensive maintenance and repair program and do not need a large volume of technical manual information. Therefore, the APML, in conjunction with the LEMs, would develop an end item maintenance plan, or Operational Logistics Support Plan (OLSP). The OLSP identifies and defines known and anticipated logistics interface which would contribute to the ability to perform Documentation Requirements Analysis. A part of the OLSP is devoted to technical manuals which is an aid to task development.

(2) Large weapon system programs. Large weapon system projects will normally be supported by the Integrated Logistics Support (ILS) concept. This management approach includes a maintenance analysis known as LSA or LMI. The LSA/LMI is managed by the APML and the LEMs and is contractually controlled by a maintenance policy statement, or general maintenance plan, which stipulates the criteria for LSA/LMI. These documents define the manner in which the end item will be maintained, the maintenance level at which each support phase will be performed, and the depth and scope of the authorized repair.

c. Additional source data. Available engineering drawings shall be used with the other required data. Sound engineering principles and techniques, available engineering analyses service experience, performance data on the item and on similar items, and all other reliability, availability, and maintainability (RAM) data available shall be used in the preparation of specific technical information.

5.2 Work package development. Technical information developed in accordance with this standard shall be divided into individual, stand-alone units of information, hereafter referred to as work packages. A work package is specifically designed to respond to work tasks or to provide direct support of work tasks. Work packages shall contain descriptive, operational, maintenance, testing and troubleshooting, support, and parts information for weapon systems, aeronautical equipment, airborne weapons/equipment, and

support equipment. The technical information contained in these work packages shall be developed to the maintenance concepts described in 5.1.

5.2.1 Types of work packages. There are basically two types of work packages. The first type is an information-oriented work package. It provides information such as general information about the ETM/IETM or weapon system/equipment, principles of operation, and operating instructions. The second type of WP is task-oriented. Task-oriented WPs reflect all required maintenance tasks, including testing and troubleshooting, at the assigned level of maintenance, and environment, materials, and support equipment required for each defined task. WPs are written to reflect the engineering design, Logistics Support Analysis (LSA) or Logistics Management Information (LMI), Level of Repair Analysis (LORA), approved maintenance plan, and the established repair concept (SM&R Codes).

5.3 Task analysis. The task development phase of technical manual preparation is critical because it will establish the organization and structure of the technical information and, together with the task analysis, will establish the depth and scope of the coverage. Based on maintenance requirements identified by the task analysis, all tasks and support data shall reflect end item operation and fault isolation/maintenance criteria at the appropriate level(s) of maintenance. For further information on the task analysis process, refer to MIL-HDBK-3001. The final output of the task development phase is the technical manual data outline.

5.3.1 Technical manual outline. The first step in the construction of a WP manual is the development of an outline to be reviewed and approved by the requiring activity. Refer to MIL-HDBK-3001.

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 manuals prepared in accordance with the requirements of MIL-STD-3001-1 through MIL-STD-3001-8 are intended for use in the repair of aircraft weapon systems, aeronautical equipment, airborne weapons/equipment, and support equipment at the organizational, intermediate, and depot maintenance levels.

6.2 Issue of DoDISS. When this document is used in acquisition, the applicable issue of the DoDISS must be cited in the solicitation (see 2.2.1).

6.3 Guidance documents. The following documents are cited in this standard and are provided for guidance and information only. Unless otherwise specified, the issues are cited in the solicitation.

FEDERAL

PUBLICATIONS

EO 12856	Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements.
EO 12958	Classified National Security Information
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.

INSTRUCTIONS

DoD INST 6050.5 Series	DoD Hazard Communication Program.

DEPARTMENT OF THE NAVY

INSTRUCTIONS

OPNAVINST 4110.2	Hazardous Material Control and Management (HMC&M).
OPNAVINST 4790.2	The Naval Aviation Maintenance Program.
OPNAVINST 5100.23	Navy Occupational Safety and Health (NAVOSH) Program Manual.
OPNAVINST 5510.1	Department of the Navy Information and Personnel Security Program Regulation.
NAVAIRINST 4423.11	Assignment and Application of Uniform Source, Maintenance, and Recoverability (SM&R) Codes.
NAVAIRINST 13120.1	Fixed Wing Aircraft Structural Life Limits.
NAVAIRINST 13130.1	Rotary Wing Aircraft Structural Life Limits.
NAVPERS 18068	Navy Enlisted Manpower and Personnel Classifications and Occupational Standards.
NAVSUPINST 5100.27	Navy Hazardous Material Control Program.

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

6.4 Tailoring guidance. The contracting activity should tailor any required options offered herein in accordance with Appendix A, Technical Content Selection Matrixes.

6.5 Supersession data. MIL-STD-3001-1 through MIL-STD-3001-8 consolidates, standardizes, and supersedes the requirements contained in the following documents:

MIL-M-23618	Manuals, Technical; Periodic Maintenance Requirements: Preparation and Printing of
MIL-M-81218	Manuals, Technical; Aircraft Engine Intermediate and Depot Maintenance, Preparation of (Work Package Concept)
MIL-M-81310	Manuals, Technical; Airborne Weapons/Stores Loading Conventional and Nuclear) Weapons Assembly/ Disassembly/Support Equipment Configuration
MIL-M-81700	Manual, Technical, Airborne Armament Equipment, Requirements for
MIL-M-81701	Manuals, Technical: Airborne Missiles and Guided Weapons, Preparation of
MIL-M-81702	Manual, Technical, Airborne Weapons (Conventional); Requirements for
MIL-M-81919	Manuals, Technical: Support Equipment; Preparation of (Work Package Concept)
MIL-M-81927	Manuals, Technical: General Style and Format of (Work Package Format)
MIL-M-81928	Manuals, Technical; Aircraft and Aeronautical Equipment Maintenance: Preparation of (Work Package Concept)
MIL-M-81929	Manuals, Technical; Illustrated Parts Breakdown; Preparation of (Work Package Concept)
MIL-M-85383	Manuals, Technical: Aircraft Structure Repair, Corrosion Control, and Nondestructive Inspection; Preparation of (Work Package Concept)
MIL-M-85707	Manual, Technical, Depot Maintenance Requirements for Maintenance/Demilitarization of Airborne Weapons (Conventional); Requirements for
NAVAIR 00-25-700	Guide to the General Style and Format of Work Package Technical Manuals
NAVAIR 00-25-701	Technical Guide for Organizational Level Aircraft Wiring Systems Repair Manuals

6.6 Subject term (key word) listing. The following terms are to be used to identify the MIL-STD-3001 series documents during retrieval searches:

Card deck
Description
Document type definition
Graphics
Hazardous materials warnings
Icons
Illustrated parts breakdown (IPB)
Illustrations
Maintenance instructions
Operation instructions
Operational checkout
Periodic maintenance requirements
Principles of operation
Revisions
Security classification
Structural repair
Testing
Troubleshooting information
Wiring information
Work package.

APPENDIX A - TECHNICAL MANUAL CONTENT SELECTION MATRIXES

A.1 SCOPE.

A.1.1 Scope. This appendix contains tables that list all applicable technical content requirements for the development of the following maintenance level technical manuals (TMs). This Appendix is a mandatory part of this standard. The information contained herein is intended for compliance. Copies of the applicable tables will be completed and added as an attachment to the TMCR.

a. Aircraft systems and equipment maintenance instruction manuals.

General aircraft information manual
Plane captain's manual
Line maintenance manual
Principles of operation manual
Functional flow diagram manual
Testing and troubleshooting manual
Fault reporting manual
Fault isolation manual
Integrated weapon systems testing and troubleshooting manual
Maintenance instructions with IPB manual
Structural repair manual
Aircraft wiring diagram manual
Aircraft wire bundle manual
Aircraft wire connector repair manual
Power plant build-up manual
Periodic maintenance requirements card sets
Illustrated parts breakdown manual.

b. Aeronautical equipment, airborne weapons/equipment, and support equipment operation and maintenance manuals.

Operation instructions manuals
Operation and maintenance instructions with IPB manuals
Maintenance instructions with IPB manuals.

c. Engine intermediate and depot maintenance manuals.

A.2 APPLICABLE DOCUMENTS.

This section is not applicable to this appendix.

A.3 DEFINITIONS.

This section is not applicable to this appendix.

A.4 GENERAL REQUIREMENTS.

This section is not applicable to this appendix.

A.5 **DETAILED REQUIREMENTS.**

A.5.1 General. Tables A-I through A-XXXIV simplify tailoring the technical content requirements of technical manuals prepared using this standard as a guide. The tables indicate which parts of MIL-STD-3001 are applicable and list the content requirements for each type of TM. The content requirements for each applicable TM shall be arranged in the order presented in the tables. Inclusion of the following applicable tables of this appendix is mandatory and is intended for compliance.

a. Aircraft systems and equipment maintenance instruction manuals.

General aircraft information manual (Table A-I)
Plane captain's manual (Table A-I)
Line maintenance manual (Table A-I)
Description and principles of operation manual (Table A-II)
Aircraft functional flow diagram manual (Table A-III)
Aircraft testing and troubleshooting manual (Table A-IV)
Integrated weapon systems testing and troubleshooting manual (Table A-V)
Fault reporting manual (Table A-VI)
Fault isolation manual (Table A-VI)
Maintenance instructions with IPB manual (Table A-VII)
Structural repair manual (Table A-VIII)
Aircraft wiring diagram manual (Table A-IX)
Aircraft wire bundle manual (Table A-X)
Aircraft wire connector repair manual (Table A-XI)
Power plant build-up manual (Table A-XII)
Periodic maintenance requirements card sets:
- Preoperational and turnaround checklist card decks (Table A-XIII)
- Phased maintenance card decks (Table A-XIV)
- Periodic maintenance information card decks (Table A-XV)
- Quick Engine Change (QEC) periodic maintenance requirements card decks (Table A-XVI)
- Powered Surface Target (PST) periodic maintenance requirements card decks (Table A-XVII)
- Aviation Life Support Systems (ALSS) periodic maintenance requirements card decks (Table A-XVIII)
- Aircraft daily, special, preservation, and conditional card decks (Table A-XIX)
- AAE or Special stores daily/special card decks (Table XX)
- Support Equipment (SE)/Automatic Test Equipment (ATE) daily, special, preservation, and conditional card decks (Table A-XXI)
- Airborne Mine Countermeasures (AMCM) daily and Unmanned Aerial Vehicle (UAV) daily inspect/daily inspect and servicing card decks (Table A-XXII)
- AMCM and UAV special, preservation, and conditional card decks (Table A-XXIII)
- SE/ATE, AMCM and UAV calendar, hour, and start card decks (Table A-XXIV)
- PAT prelaunch and postlaunch servicing card decks (Table A-XXV)
- Powered Aerial Target (PAT) acceptance/initial buildup card decks (Table A-XXVI)

Separate Illustrated Parts Breakdown (IPB) manual (Table A-XXVII)

b. Aeronautical equipment, airborne weapons/equipment, and support equipment operation and maintenance manuals.

Operation instructions manual (Table A-XXVIII)
Operation and maintenance instructions with IPB manual (Table A-XXIX)
Maintenance instructions with IPB manuals (Table A-XXX)

c. Engine intermediate and depot maintenance manual. (Table A-XXXI)

d. Electronic technical manuals (ETMs)/interactive electronic technical manuals (IETMs).

Aircraft systems and equipment maintenance ETMs/IETMs (Table A-XXXII)
Aeronautical equipment, airborne weapons/equipment, and support equipment operation and maintenance ETMs/IETMs (Table A-XXXIII)
Engine intermediate and depot maintenance ETMs/IETMs (Table A-XXXIV)

A.5.2 Intended use. Tables A-I through A-XXXIV may be used by the requiring activity or the weapons system contractor to tailor technical content requirements for individual TMs. Those requirements designated with an "R" in the "DTD REQ'D/OPTIONAL" column are considered mandatory and shall be included in the TM. Those requirements designated with an "O" in the "DTD REQ'D/OPTIONAL" column are considered optional and shall be included in the TM if applicable to the equipment. In most instances, the approved maintenance plan (MP), logistics support analysis (LSA) or logistics management information (LMI) shall be used to determine if the optional requirements are to be included. The "REMARKS" column may be used to identify those optional technical requirements that are required or not required by placing an "R" or "NR" in that column.

A.5.3 Acquisition requirements. A properly executed Technical Manual Content Selection Matrix table may be used, filled out either by the requiring activity or the weapons system contractor, as a final TM outline.

TABLE A-I. GENERAL AIRCRAFT INFORMATION MANUAL, PLANE CAPTAIN'S MANUAL AND LINE MAINTENANCE MANUAL*

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
TM FRONT MATTER	1-B.5.3.1		R	
Title page	1-B.5.3.1.1	<titlepg>	R	
Numerical index of effective work packages/pages	1-B.5.3.1.2	<niewp>	R	
TPDR page	1-B.5.3.1.3	<tpdrpg>	O	
HMWS page	1-B.5.3.1.4	<hmwswp>	O	
Alphabetical index	1-B.5.3.1.5	<alphaindxwp>	O	
TM introduction	1-B.5.3.2.1.3.3	<introwp>	R	
Consolidated lists for technical directives, support equipment, materials and references WP	1-B.5.3.2.1.3.4	<consolistwp>	R	
WORK PACKAGE FRONT MATTER				
Title block	2-5.2.1	<titleblk>	R	
Work package information	2-5.2.2	<wpinfo>	R	
Reference material list	2-5.2.2.1	<reflist>	O	
Record of applicable technical directives	2-5.2.2.2	<ratd>	O	
Support equipment required list	2-5.2.2.3	<selist>	O	
DESCRIPTION WORK PACKAGES	2-5.2.4.1		R	
Introduction	2-5.2.4.1	<intro>	O	
Aircraft general description work package	2-5.2.4.1.1	<acdescwp>	O	
Aircraft description	2-5.2.4.1.1.1	<acdesc>	R	
Aircraft dimensions	2-5.2.4.1.1.2	<acdim>	R	
Aircraft materials distribution	2-5.2.4.1.1.3	<acmats>	R	
Aircraft arrangement work package	2-5.2.4.1.2	<acarrgwp>	O	
Aircraft systems description work package	2-5.2.4.1.3	<acsysdescwp>	O	
Aircraft instrument panel location work package	2-5.2.4.1.4	<acpnlwp>	O	
Danger areas and precautionary measures work package	2-5.2.4.1.5	<dangarwp>	O	
Aircraft stations work package	2-5.2.4.1.6	<acstawp>	O	
Aircraft dimensions work package	2-5.2.4.1.7	<acdimwp>	O	
Aircraft access and inspection panels and provisions work package	2-5.2.4.1.8	<acacesswp>	O	
Aircraft external power source connections work package	2-5.2.4.1.9	<acextpwrwp>	O	
ENGINE START AND RUN-UP WORK PACKAGE				
Introduction	4-5.3	<intro>	O	
Engine start and run-up	4-5.3.1.1.15	<engstart>	R	
GROUND OPERATIONS WORK PACKAGES	4-5.3.4	<grndopwp>		
Introduction	4-5.3	<intro>	O	
Ground handling	4-5.3.1.1.3.1	<handling>	R	
Folding and unfolding wings	4-5.3.1.1.3.1a	<fold>	O	
Cockpit entry and safety check	4-5.3.1.1.3.1b	<cock>	O	
Towing	4-5.3.1.1.3.1c	<tow>	O	

TABLE A-I. GENERAL AIRCRAFT INFORMATION MANUAL, PLANE CAPTAIN'S MANUAL AND LINE MAINTENANCE MANUAL*

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Moving	4-5.3.1.1.3.1d	<move>	O	
Parking	4-5.3.1.1.3.1e	<park>	O	
Mooring	4-5.3.1.1.3.1f	<moor>	O	
Jacking	4-5.3.1.1.3.1g	<jack>	O	
Hoisting	4-5.3.1.1.3.1h	<hoist>	O	
Leveling	4-5.3.1.1.3.1i	<level>	O	
Protective covers	4-5.3.1.1.3.1j	<procover>	O	
Ground safety locks and pins	4-5.3.1.1.3.1k	<safelock>	O	
Carrier deck handling	4-5.3.1.1.3.1l	<cardckhdl>	O	
Preparation for catapulting	4-5.3.1.1.3.1m	<prepcat>	O	
Loading	4-5.3.1.1.3.1n	<load>	O	
Unloading	4-5.3.1.1.3.1o	<unload>	O	
Arrested landing operation	4-5.3.1.1.3.1p	<arrlndop>	O	
Fueling	4-5.3.1.1.3.1q	<fuel>	O	
Defueling	4-5.3.1.1.3.1r	<defuel>	O	
SAFETY WORK PACKAGES				
Introduction	4-5.3	<intro>	O	
Safety information	4-5.3.1.1.14	<safe>	R	
SERVICING WORK PACKAGES				
Introduction	4-5.3	<intro>	O	
Servicing work package	4-5.3.3	<servicewp>	R	
GROUND OPERATION WORK PACKAGES	4-5.3.4	<grndopwp>	O	

*The technical content provided in this matrix is normally used to develop a General Aircraft Information Manual, a Plane Captain's Manual and/or a Line Maintenance Manual; the requiring activity shall provide guidance as to the technical content of each manual.

TABLE A-II. AIRCRAFT DESCRIPTION AND PRINCIPLES OF OPERATION MANUAL

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
TM FRONT MATTER	1-B.5.3.1		R	
Title page	1-B.5.3.1.1	<titlepg>	R	
Numerical index of effective work packages/pages	1-B.5.3.1.2	<niewp>	R	
TPDR page	1-B.5.3.1.3	<tpdrpg>	O	
Alphabetical index	1-B.5.3.1.5	<alphaindxwp>	O	
TM introduction	1-B.5.3.2.1.3.3	<introwp>	R	
Consolidated lists for technical directives, support equipment, materials, and references WP	1-B.5.3.2.1.3.4	<consolistwp>	R	
WORK PACKAGE FRONT MATTER				
Title block	2-5.2.1	<titleblk>	R	
Work package information	2-5.2.2	<wpinfo>	R	
Reference material list	2-5.2.2.1	<reflist>	O	
Record of applicable technical directives	2-5.2.2.2	<ratd>	O	
AIRCRAFT SYSTEM, SUBSYSTEM AND COMPONENT DESCRIPTION WORK PACKAGES	2-5.2.4.2.1	<descwp>	R	
Introduction	2-5.2.4.2	<intro>	O	
System description	2-5.2.4.2.1	<sysdesc>	O	
Subsystem description	2-5.2.4.2.1	<sysdesc>	O	
Component description	2-5.2.4.2.1	<sysdesc>	O	
Controls and indicator descriptions	2-5.2.4.2.1.1	<ctrlinddesc>	O	
PROGRAMMING SOFTWARE DESCRIPTION WORK PACKAGES	2-5.2.4.2.4	<softwp>	R	
Introduction	2-5.2.4.2.4	<intro>	O	
Stimulus and measurement programming	2-5.2.4.2.4	<stim-measdesc>	R	
Programming statements	2-5.2.4.2.4	<statedesc>	R	
Programming tests or self tests	2-5.2.4.2.4	<progtestdesc>	R	
PRINCIPLES OF OPERATION WORK PACKAGES	2-5.2.5			
Aircraft weapon systems principles of operation work package	2-5.2.5.1	<popwp>	R	
Introduction	2-5.2.5.1	<intro>	O	
System description	2-5.2.4.2.1	<sysdesc>	O	
Weapon system principles of operation	2-5.2.5.1	<systhry>	O	
Subsystem description	2-5.2.4.2.1	<sysdesc>	O	
Subsystem principles of operation	2-5.2.5.1	<systhry>	O	
Component description	2-5.2.4.2.1	<sysdesc>	O	
Component principles of operation	2-5.2.5.1	<systhry>	O	
SCHEMATIC DIAGRAM WORK PACKAGES	2-5.2.5.4	<schemwp>	O	

TABLE A-III. AIRCRAFT FUNCTIONAL FLOW DIAGRAM MANUAL

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
TM FRONT MATTER	1-B.5.3.1		R	
Title page	1-B.5.3.1.1	<titlepg>	R	
Numerical index of effective work packages/pages	1-B.5.3.1.2	<niewp>	R	
TPDR page	1-B.5.3.1.3	<tpdrpg>	O	
Alphabetical index	1-B.5.3.1.5	<alphaindxwp>	O	
TM introduction	1-B.5.3.2.1.3.3	<introwp>	R	
Consolidated lists for technical directives, support equipment, materials, and references WP	1-B.5.3.2.1.3.4	<consolistwp>	R	
WORK PACKAGE FRONT MATTER			R	
Title block	3-5.3.1	<titleblk>	R	
Work package information	3-5.3.2	<wpinfo>	R	
Reference material list	3-5.3.2.1	<reflist>	O	
Record of applicable technical directives	3-5.3.2.2	<ratd>	O	
FUNCTIONAL FLOW DIAGRAM DATA				
Functional flow diagram WPs	3-5.3.4.7	<ffdiagwp>	R	
Functional flow diagrams	3-5.3.4.7, 3-5.3.4.7.1	<ffdiagram>	R	

TABLE A-IV. AIRCRAFT TESTING AND TROUBLESHOOTING MANUAL

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
TM FRONT MATTER	1-B.5.3.1		R	
Title page	1-B.5.3.1.1	<titlepg>	R	
Numerical index of effective work packages/pages	1-B.5.3.1.2	<niewp>	R	
TPDR page	1-B.5.3.1.3	<tpdrpg>	O	
HMWS page	1-B.5.3.1.4	<hmwswp>	O	
Alphabetical index	1-B.5.3.1.5	<alphaindxwp>	O	
TM introduction	1-B.5.3.2.1.3.3	<introwp>	R	
Consolidated lists for technical directives, support equipment, materials, and references WP	1-B.5.3.2.1.3.4	<consolistwp>	R	
WORK PACKAGE FRONT MATTER	1-B.5.3.1.5			
Title block	1-B.5.3.2.1.3.3	<titleblk>	R	
Work package information	1-B.5.3.2.1.3.4	<wpinfo>	R	
Reference material list		<reflist>	O	
Record of applicable technical directives		<ratd>	O	
Support equipment required list		<selist>	O	
Materials required list		<matlist>	O	
TESTING AND TROUBLESHOOTING DATA	3-5.1, 3-5.1.2, 3-5.2, 3-5.3.4			
OPERATIONAL CHECKOUT AND TROUBLESHOOTING PROCEDURES	3-5.3.4.6			
Operational checkout WPs	3-5.3.4.6.3	<opchkwp>	R	
Introduction	3-5.3.4.6.3a	<intro>	O	
General procedures and precautions	3-5.3.4.6.3b	<genproc>	O	
Pretest setup procedures	3-5.3.4.6.3c	<pretest>	O	
Operational checkout procedures	3-5.3.4.6.3d	<opchk>	R	
Post-operational shutdown procedures	3-5.3.4.6.3e	<shutdown>	O	
		<emergshtdn>	O	
Schematic diagram WPs	3-5.3.4.6.1	<schemwp>	O	
Troubleshooting WPs	3-5.3.4.6.4	<trblshtwp>	R	
Introduction	3-5.3.4.6.4a	<intro>	O	
General procedures and precautions	3-5.3.4.6.4b	<genproc>	O	
Troubleshooting procedures	3-5.3.4.6.4c	<trblproc-a>	O	
		<trblproc-b>	O	
Post-operational shutdown procedures	3-5.3.4.6.4d	<shutdown>	O	
		<emergshtdn>	O	
Schematic diagram WPs	3-5.3.4.6.1	<schemwp>	O	
Combined operational checkout and troubleshooting WPs	3-5.3.4.6.5	<tst-trblwp>	R	
Introduction	3-5.3.4.6.5a	<intro>	O	
General procedures and precautions	3-5.3.4.6.5b	<genproc>	O	
Pretest setup procedures	3-5.3.4.6.5c	<pretest>	O	
Operational checkout and troubleshooting procedures	3-5.3.4.6.5d(1)	<opck-trblproc>	O	
	3-5.3.4.6.5d(2)	<opchk>	O	
	3-5.3.4.6.5d(3)	<trblsht>	O	

TABLE A-IV. AIRCRAFT TESTING AND TROUBLESHOOTING MANUAL

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Post-operational shutdown procedures	3-5.3.4.6.5e	<shutdown> <emergshtdn>	O O	
Schematic diagram WPs	3-5.3.4.6.1	<schemwp>	O	

TABLE A-V. INTEGRATED WEAPON SYSTEMS TESTING AND TROUBLESHOOTING MANUAL

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
TM FRONT MATTER	1-B.5.3.1		R	
Title page	1-B.5.3.1.1	<titlepg>	R	
Numerical index of effective work packages/pages	1-B.5.3.1.2	<niewp>	R	
TPDR page	1-B.5.3.1.3	<tpdrpg>	O	
HMWS page	1-B.5.3.1.4	<hmwswp>	O	
Alphabetical index	1-B.5.3.1.5	<alphaindxwp>	O	
TM introduction	1-B.5.3.2.1.3.3	<introwp>	R	
Consolidated lists for technical directives, support equipment, materials, and references WP	1-B.5.3.2.1.3.4	<consolistwp>	R	
WORK PACKAGE FRONT MATTER				
Title block	3-5.3.1	<titleblk>	R	
Work package information	3-5.3.2	<wpinfo>	R	
Reference material list	3-5.3.2.1	<reflist>	O	
Record of applicable technical directives	3-5.3.2.2	<ratd>	O	
Support equipment required list	3-5.3.2.3	<selist>	O	
Materials required list	3-5.3.2.4	<matlist>	O	
INTEGRATED WEAPON SYSTEMS TESTING AND TROUBLESHOOTING DATA	3-5.1, 3-5.1.2.2, 3-5.2, 3-5.3.4			
OPERATIONAL CHECKOUT AND TROUBLESHOOTING PROCEDURES	3-5.3.4.6			
Operational checkout WPs	3-5.3.4.6.3	<opchkwp>	R	
Introduction	3-5.3.4.6.3a	<intro>	O	
General procedures and precautions	3-5.3.4.6.3b	<genproc>	O	
Pretest setup procedures	3-5.3.4.6.3c	<pretest>	O	
Operational checkout procedures	3-5.3.4.6.3d	<opchk>	R	
Post-operational shutdown procedures	3-5.3.4.6.3e	<shutdown> <emergshtdn>	O O	
Schematic diagram WPs	3-5.3.4.6.1	<schemwp>	O	
Troubleshooting WPs	3-5.3.4.6.4	<trblshtwp>	R	
Introduction	Introduction	<intro>	O	
General procedures and precautions	3-5.3.4.6.4a	<genproc>	O	
Troubleshooting procedures	3-5.3.4.6.4b 3-5.3.4.6.4c	<trblproc-a> <trblproc-b>	O O	
Post-operational shutdown procedures	3-5.3.4.6.4d	<shutdown> <emergshtdn>	O O	
Schematic diagram WPs	3-5.3.4.6.1	<schemwp>	O	
Combined operational checkout and troubleshooting WPs	3-5.3.4.6.5	<tst-trblwp>	R	
Introduction	3-5.3.4.6.5a	<intro>	O	
General procedures and precautions	3-5.3.4.6.5b	<genproc>	O	
Pretest setup procedures	3-5.3.4.6.5c	<pretest>	O	

TABLE A-V. INTEGRATED WEAPON SYSTEMS TESTING AND TROUBLESHOOTING MANUAL

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Operational checkout and troubleshooting procedures	3-5.3.4.6.5d(1)	<opck-trblproc>	O	
	3-5.3.4.6.5d(2)	<opchk>	O	
	3-5.3.4.6.5d(3)	<trblsht>	O	
Post-operational shutdown procedures	3-5.3.4.6.5e	<shutdown>	O	
		<emergshtdn>	O	
Schematic diagram WPs	3-5.3.4.6.1	<schemwp>	O	

TABLE A-VI. FAULT REPORTING AND FAULT ISOLATION MANUALS

TM CONTENTS	FAULT REPORTING	FAULT ISOLATION	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D /OPT
TM FRONT MATTER			1-B.5.3.1		R
Title page	R	R	1-B.5.3.1.1	<titlepg>	R
Numerical index of effective work packages/pages	R	R	1-B.5.3.1.2	<niewp>	R
TPDR page	R	R	1-B.5.3.1.3	<tpdrpg>	R
Alphabetical index	R	R	1-B.5.3.1.5	<alphaindxwp>	O
TM introduction	R	R	1-B.5.3.2.1.3.3	<introwp>	R
Consolidated lists for technical directives, support equipment, materials, and references WP	O	R	1-B.5.3.2.1.3.4	<consolistwp>	R
WORK PACKAGE FRONT MATTER					
Title block	R		3-5.3.1	<titleblk>	R
Work package information	O		3-5.3.2	<wpinfo>	R
Reference material list	O		3-5.3.2.1	<reflist>	O
Record of applicable technical directives	O		3-5.3.2.2	<ratd>	O
Support equipment required list	O		3-5.3.2.3	<selist>	O
Materials required list	O		3-5.3.2.4	<matlist>	O
FAULT REPORTING/FAULT ISOLA TION WORK PACKAGES					
Maintenance code listing WP	R		3-5.3.4.1	<maintcdwp>	
Fault indications WP	R		3-5.3.4.2	<fltindwp>	
Fault descriptor WP	R		3-5.3.4.3	<fltdescrptwp>	
Symbology WPs	R		3-5.3.4.4	<symwp>	
Fault isolation troubleshooting procedure WPs	NR		3-5.3.4.5	<fltrblwp>	

TABLE A-VII. MAINTENANCE INSTRUCTIONS WITH IPB MANUALS

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
TM FRONT MATTER	1-B.5.3.1		R	
Title page	1-B.5.3.1.1	<titlepg>	R	
Numerical index of effective WPs	1-B.5.3.1.2	<niewp>	R	
TPDR page	1-B.5.3.1.3	<tpdrpg>	R	
HMWS page	1-B.5.3.1.4	<hmwswp>	O	
Alphabetical index	1-B.5.3.1.5	<alphaindxwp>	O	
Numerical index of part numbers WP	1-B.5.3.2.1.3.1	<partnoindxwp>	R	
Numerical index of reference designations WP	1-B.5.3.2.1.3.2	<refdesindxwp>	R	
TM introduction WP	1-B.5.3.2.1.3.3	<introwp>	R	
Consolidated lists for technical directives, support equipment, materials, and references WP	1-B.5.3.2.1.3.4	<consolistwp>	R	
WORK PACKAGE FRONT MATTER				
Title block	4-5.2.1	<titleblk>	R	
Work package information	4-5.2.2	<wpinfo>	R	
Reference material list	4-5.2.2.1	<reflist>	O	
Record of applicable technical directives	4-5.2.2.2	<ratd>	O	
Support equipment required list	4-5.2.2.3	<selist>	O	
Facilities required list	4-5.2.2.4	<faclist>	O	
Materials required list	4-5.2.2.5	<matlist>	O	
MAINTENANCE INFORMATION WITH IPB	4-5.3			
Maintenance work packages	4-5.3.1	<maintwp>	R	
Introduction	4-5.3	<intro>	O	
Maintenance tasks	4-5.3.1.1			
Preparation for use and assembly	4-5.3.1.1a, 4-5.3.1.1.2	<prepuse>	O	
Handling	4-5.3.1.1b, 4-5.3.1.1.3	<handling>	O	
Stowage	4-5.3.1.1c	<stow>	O	
Removal	4-5.3.1.1d, 4-5.3.1.1.4	<remove>	O	
Disassembly	4-5.3.1.1e, 4-5.3.1.1.5	<dissam>	O	
Cleaning and corrosion control	4-5.3.1.1f, 4-5.3.1.1.6	<clncorr>	O	
Inspection	4-5.3.1.1g, 4-5.3.1.1.7	<insp>	O	
Service	4-5.3.1.1h	<service>	O	
Repair	4-5.3.1.1i, 4-5.3.1.1.8	<repair>	O	
Alignment	4-5.3.1.1j	<align>	O	
Painting	4-5.3.1.1k	<paint>	O	
Lubrication	4-5.3.1.1l	<lube>	O	
Assembly	4-5.3.1.1m, 4-5.3.1.1.9	<assem>	O	
Test and inspection	4-5.3.1.1n, 4-5.3.1.1.10	<test-inspect>	O	

TABLE A-VII. MAINTENANCE INSTRUCTIONS WITH IPB MANUALS

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Installation	4-5.3.1.1o, 4-5.3.1.1.11	<install>	O	
Rigging	4-5.3.1.1p	<rig>	O	
Adjustment	4-5.3.1.1q	<adjust>	O	
Calibration	4-5.3.1.1r, 4-5.3.1.1.12	<calibrate>	O	
Preparation for storage or shipment	4-5.3.1.1s, 4-5.3.1.1.13	<pss>	O	
Environmental conditioning	4-5.3.1.1t	<envircond>	O	
Safety information	4-5.3.1.1u, 4-5.3.1.1.14	<safe>	O	
Engine start and run-up	4-5.3.1.1v, 4-5.3.1.1.15	<engstart>	O	
Software loading	4-5.3.1.1w	<softload>	O	
Fabrication	4-5.3.1.1x, 4-5.3.1.1.16	<fabricate>	O	
Packing	4-5.3.1.1y	<packing>	O	
Unpacking	4-5.3.1.1z	<unpacking>	O	
Preservation	4-5.3.1.1aa	<preserve>	O	
Tracking	4-5.3.1.1ab	<track>	O	
General maintenance procedures work package	4-5.3.2	<genmaintwp>	O	
Support equipment maintenance work package	4-5.3.5	<semaintwp>	O	
Local manufacturing and assembly work package	4-5.3.6	<locmfgwp>	O	
IPB data (as applicable for maintenance WPs listed above)	4-5.3.11	<ipb>	R	
Wiring/cabling diagram work package	4-5.3.12	<wirediawp>	O	
Wire run lists work package	4-5.3.13	<wirelistwp>	O	

TABLE A-VIII. AIRCRAFT STRUCTURAL REPAIR MANUAL

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
TM FRONT MATTER	1-B.5.3.1		R	
Title page	1-B.5.3.1.1	<titlepg>	R	
Numerical index of effective work packages/pages	1-B.5.3.1.2	<niewp>	R	
TPDR page	1-B.5.3.1.3	<tpdrpg>	R	
HMWS page	1-B.5.3.1.4	<hmwswp>	R	
Alphabetical index	1-B.5.3.1.5	<alphaindxwp>	O	
TM introduction	1-B.5.3.2.1.3.3	<introwp>	R	
WORK PACKAGE FRONT MATTER			R	
Title block	6-5.2.1	<titleblk>	R	
Work package information	6-5.2.2	<wpinfo>	R	
Reference material list	6-5.2.2.1	<reflist>	O	
Record of applicable technical directives	6-5.2.2.2	<ratd>	O	
Support equipment required list	6-5.2.2.3	<selist>	O	
Materials required list	6-5.2.2.4	<matlist>	O	
STRUCTURAL REPAIR INFORMATION WPs	6-5.2.3		R	
AIRCRAFT STRUCTURE VISUAL INDEX WP	6-5.2.3.1	<repindxwp>	R	
Introduction	6-5.2.3	<intro>	O	
Visual index	6-5.2.3.1	<repindx>	R	
GENERAL AIRCRAFT STRUCTURAL INFORMATION WP	6-5.2.3.2	<genstructwp>	R	
Introduction	6-5.2.3	<intro>	O	
Aircraft structural description	6-5.2.3.2.1	<structrepair>	R	
Aircraft leveling and alignment	6-5.2.3.2.2	<structrepair>	R	
Contour data	6-5.2.3.2.3	<structrepair>	R	
In-service tolerance	6-5.2.3.2.4	<structrepair>	R	
Common shop practices	6-5.2.3.2.5	<structrepair>	R	
Repair materials	6-5.2.3.2.6	<structrepair>	R	
Support of structure	6-5.2.3.2.7	<structrepair>	R	
Crash handling and shipping	6-5.2.3.2.8	<structrepair>	R	
TYPICAL REPAIR DATA WPs	6-5.2.3.3	<typrepwp>	R	
Introduction	6-5.2.3	<intro>	O	
Skin patch repair	6-5.2.3.3a	<typrepproc>	R	
Transparent panel repair	6-5.2.3.3b	<typrepproc>	R	
Honeycomb structure repair	6-5.2.3.3c	<typrepproc>	R	
Extrusion repair	6-5.2.3.3d	<typrepproc>	R	
Sealed area repair	6-5.2.3.3e	<typrepproc>	R	
Formed structure repair	6-5.2.3.3f	<typrepproc>	R	
Plastic repair	6-5.2.3.3g	<typrepproc>	R	
New/peculiar structure repair	6-5.2.3.3.1	<typrepproc>	O	
SPECIFIC REPAIR DATA WPs	6-5.2.3.4	<specrepwp>	R	
Introduction	6-5.2.3	<intro>	O	
Damage identification and evaluation data	6-5.2.3.4.1	<damage>	O	
Typical repair procedures	6-5.2.3.4.2	<typrepproc>	O	
Aircraft specific repair procedures	6-5.2.3.4.3	<specrepproc>		

TABLE A-VIII. AIRCRAFT STRUCTURAL REPAIR MANUAL

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Illustrated parts breakdown data	6-5.2.3.4.3.8, 6-5.2.6	<ipb>	O	
CORROSION CONTROL REPAIR INFORMATION	6-5.2.4		R	
CORROSION CONTROL MATERIALS REQUIREMENTS WP	6-5.2.4.1	<cormatwp>	O	
Introduction	6-5.2.4	<intro>	R	
Corrosion control materials list	6-5.2.4.1	<cormatlist>	R	
GENERAL INFORMATION WP	6-5.2.4.2	<geninfowp>	R	
Introduction	6-5.2.4	<intro>	O	
Protective covers	6-5.2.4.2.1	<titledpara>	R	
Corrosion prone areas	6-5.2.4.2.2	<titledpara>	R	
CORROSION CONTROL PRACTICES WPs	6-5.2.4.3			
TYPICAL CORROSION CONTROL DATA WPs	6-5.2.4.3.1	<typcorwp>	R	
Introduction	6-5.2.4	<intro>	O	
Typical procedures	6-5.2.4.3.1	<titledpara>	O	
INSPECTION FOR CORROSION WP	6-5.2.4.3.2	<corinspwp>	R	
Introduction	6-5.2.4	<intro>	O	
Cleaning procedures	6-5.2.4.3.2a	<titledpara>	O	
Inspection by methods appropriate to the area on the aircraft	6-5.2.4.3.2b	<titledpara>	O	
References	6-5.2.4.3.2c	<titledpara>	O	
Criteria for recognizing and evaluating corrosion damage	6-5.2.4.3.2d	<titledpara>	O	
CLEANING WPs	6-5.2.4.3.3	<corclnwp>	R	
Introduction	6-5.2.4	<intro>	O	
Cleaning procedures	6-5.2.4.3.3	<structrepair>	O	
STRIPPING WPs	6-5.2.4.3.4	<stripwp>	R	
Introduction	6-5.2.4	<intro>	O	
Stripping procedures	6-5.2.4.3.4	<proc>	O	
CORROSION REMOVAL WPs	6-5.2.4.3.5	<corremwp>	R	
Introduction	6-5.2.4	<intro>	O	
Corrosion removal procedures	6-5.2.4.3.5	<proc>	O	
CHEMICAL TREATMENT OF METAL SURFACES WPs	6-5.2.4.3.6	<chemtrtwp>	R	
Introduction	6-5.2.4	<intro>	O	
Chemical treatment procedures	6-5.2.4.3.6	<structrepair>	R	
CORROSION CONTROL SEALS AND SEALANTS WPs	6-5.2.4.3.7	<corsealwp>	R	
Introduction	6-5.2.4	<intro>	O	
Seals and sealants procedures	6-5.2.4.3.7	<structrepair>	O	
PAINT SYSTEMS WPs	6-5.2.4.3.8	<paintsyswp>	R	
Introduction	6-5.2.4	<intro>	O	
Exterior marking	6-5.2.4.3.8.1	<titledpara>	R	
Interior markings	6-5.2.4.3.8.2	<titledpara>	R	
NONDESTRUCTIVE INSPECTION (NDI) DATA	6-5.2.5			

TABLE A-VIII. AIRCRAFT STRUCTURAL REPAIR MANUAL

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
NDI GENERAL INFORMATION WP	6-5.2.5.1	<ndigeninfowp>	R	
Introduction	6-5.2.5	<intro>	O	
General information	6-5.2.5.1	<titledpara>	R	
NDI TYPICAL PROCEDURES WPs	6-5.2.5.2	<nditypwp>	R	
Introduction	6-5.2.5	<intro>	O	
Typical procedures	6-5.2.5.2	<structrepair>	R	
NDI INDEX WP	6-5.2.5.3	<ndindxwp>	R	
Introduction	6-5.2.5	<intro>	O	
NDI Index	6-5.2.5.3c	<ndindx>	R	
NDI SPECIFIC PROCEDURES WPs	6-5.2.5.4	<ndispecwp>	R	
Introduction	6-5.2.5	<intro>	O	
Item nomenclature	6-5.2.5.4.1	<itemnom>	R	
Item description	6-5.2.5.4.2	<itemdesc>	R	
Defect description	6-5.2.5.4.3	<defdesc>	R	
Primary NDI procedure	6-5.2.5.4.4	<priproc>	R	
Backup NDI procedure	6-5.2.5.4.5	<bkupproc>	O	

TABLE A-IX. AIRCRAFT WIRING DIAGRAM MANUAL

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
TM FRONT MATTER	1-B.5.3.1		R	
Title page	1-B.5.3.1.1	<titlepg>	R	
Numerical index of effective work packages/pages	1-B.5.3.1.2	<niewp>	R	
TPDR page	1-B.5.3.1.3	<tpdrpg>	R	
Alphabetical index	1-B.5.3.1.5	<alphaindxwp>	R	
TM introduction	1-B.5.3.2.1.3.3	<introwp>	O	
WIRING DIAGRAM IDENTIFICATION AND INFORMATION WP	5-5.2.3.2	<wdiaidwp>	R	
Introduction	5-5.2.3.2a	<intro>	O	
Reference designation system	5-5.2.3.2b	<titledpara>	O	
Individual cable numbering	5-5.2.3.2c	<titledpara>	O	
Electrical connector identification	5-5.2.3.2d	<titledpara>	O	
Splice area identification	5-5.2.3.2e	<titledpara>	O	
Ground point identification	5-5.2.3.2f	<titledpara>	O	
Individual wire identification	5-5.2.3.2g	<titledpara>	O	
WIRING DIAGRAM WPs	5-5.2.3.3	<wdiawp>	R	
WIRE LIST WPs	5-5.2.3.4			
Wire run list WP	5-5.2.3.4.1	<wrunlstwp>	R	
Wiring reference designation list WP	5-5.2.3.4.2	<wrefdeswp>	R	
Wire and connector component identification and location list WP	5-5.2.3.5	<wcomplstwp>	R	

TABLE A-X. AIRCRAFT WIRE BUNDLE MANUAL

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
TM FRONT MATTER	1-B.5.3.1		R	
Title page	1-B.5.3.1.1	<titlepg>	R	
Numerical index of effective work packages/pages	1-B.5.3.1.2	<niewp>	R	
TPDR page	1-B.5.3.1.3	<tpdrpg>	R	
Alphabetical index	1-B.5.3.1.5	<alphaindxwp>	O	
TM introduction	1-B.5.3.2.1.3.3	<introwp>	R	
WORK PACKAGE FRONT MATTER			R	
Title block	5-5.2.1	<titleblk>	R	
Work package information	5-5.2.2	<wpinfo>	O	
Reference material list	5-5.2.2.1	<reflist>	O	
Record of applicable technical directives	5-5.2.2.2	<ratd>	O	
Support equipment required list	5-5.2.2.3	<selist>	O	
Materials required list	5-5.2.2.4	<matlist>	O	
WIRING SYSTEM BUNDLE ASSEMBLY IDENTIFICATION AND INFORMATION WP	5-5.2.4.1	<bunidwp>	R	
Introduction	5-5.2.4.1a	<intro>	O	
Reference designator system	5-5.2.4.1b	<titledpara>	O	
Aircraft section identification	5-5.2.4.1c	<titledpara>	O	
Individual harness identification	5-5.2.4.1d	<titledpara>	O	
Individual cable numbering	5-5.2.4.1e	<titledpara>	O	
Electrical connector identification	5-5.2.4.1f	<titledpara>	O	
Splice area identification	5-5.2.4.1g	<titledpara>	O	
Ground point identification	5-5.2.4.1h	<titledpara>	O	
Individual wire identification	5-5.2.4.1i	<titledpara>	O	
Circuit identification	5-5.2.4.1j	<titledpara>	O	
ACCESS INFORMATION WP	5-5.2.4.2	<accessinfowp>	R	
Introduction	5-5.2.4.2	<intro>	O	
Access information	5-5.2.4.2			
WIRE BUNDLE ASSEMBLY ROUTINGS WPs	5-5.2.4.3	<bunroutewp>	R	
Introduction	5-5.2.4.3	<intro>	O	
Wire bundle assembly routing information	5-5.2.4.3	<titledpara>	O	
Bundle routing parts list	5-5.2.4.3	<bunroutepl>	O	

TABLE A-XI. AIRCRAFT WIRING CONNECTOR REPAIR MANUAL

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
TM FRONT MATTER	1-B.5.3.1		R	
Title page	1-B.5.3.1.1	<titlepg>	R	
Numerical index of effective work packages/pages	1-B.5.3.1.2	<niewp>	R	
TPDR page	1-B.5.3.1.3	<tpdrpg>	R	
HMWS page	1-B.5.3.1.4	<hmwswp>	R	
Alphabetical index	1-B.5.3.1.5	<alphaindxwp>	O	
TM introduction	1-B.5.3.2.1.3.3	<introwp>	R	
WORK PACKAGE FRONT MATTER			R	
Title block	5-5.2.1	<titleblk>	R	
Work package information	5-5.2.2	<wpinfo>	O	
Reference material list	5-5.2.2.1	<reflist>	O	
Record of applicable technical directives	5-5.2.2.2	<ratd>	O	
Support equipment required list	5-5.2.2.3	<selist>	O	
Materials required list	5-5.2.2.4	<matlist>	O	
WIRING SYSTEMS REPAIR IDENTIFICATION AND INFORMATION WP	5-5.2.5.2	<wrepidwp>	R	
Introduction	5-5.2.5.2a	<intro>	O	
Reference designator system	5-5.2.5.2b	<titledpara>	O	
Electrical connector identification	5-5.2.5.2c	<titledpara>	O	
Splice area identification	5-5.2.5.2d	<titledpara>	O	
Ground point identification	5-5.2.5.2e	<titledpara>	O	
Individual wire identification	5-5.2.5.2f	<titledpara>	O	
WIRING SYSTEM COMPONENT REPAIR TOOL LIST WP	5-5.2.5.3	<compreplistwp>	R	
Introduction	5-5.2.5.1	<intro>	O	
Component repair tool list	5-5.2.5.3	<compreplist>	R	
AIRCRAFT SPECIFIC WIRING SYSTEMS REPAIR KIT WP	5-5.2.5.4	<reprkitwp>	R	
Introduction	5-5.2.5.1	<intro>	O	
Repair tool kit parts list	5-5.2.5.4	<reprkitlist>	R	
WIRE TYPE LIST WP	5-5.2.5.5	<wtypelistwp>	R	
Introduction	5-5.2.5.1	<intro>	O	
Wire type list	5-5.2.5.5	<wtypelist>	R	
AIRCRAFT SPECIFIC REPAIR TOOLS WP	5-5.2.5.6	<reptoolwp>	R	
Introduction	5-5.2.5.1	<intro>	O	
General description	5-5.2.5.6a	<inro>	O	
Repair procedures	5-5.2.5.6b	<maintproc>	O	
Adjustments	5-5.2.5.6c	<maintproc>	O	
Inspection	5-5.2.5.6d	<maintproc>	O	
Additional repair data	5-5.2.5.6e	<maintproc>	O	
WIRING SYSTEM COMPONENT REPAIR WP	5-5.2.5.7	<wcomprepwp>	R	
Introduction	5-5.2.5.1	<intro>	O	
Description	5-5-2.5.7	<wiringcompdesc>	R	
Maintenance procedures	5-5.2.5.7	<maintproc>	R	
Terminal crimp data	5-5.2.5.7	<maintproc>	R	

TABLE A-XI. AIRCRAFT WIRING CONNECTOR REPAIR MANUAL

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Connector repairs	5-5.2.5.7	<maintproc>	R	
Silicone rubber tape boot repair	5-5.2.5.7.8	<maintproc>	R	
AIRCRAFT CABLE ASSEMBLY PARTS DATA WP	5-5.2.5.8	<partswp>	R	
Introduction	5-5.2.5.1	<intro>	O	
Repair parts data		<partsdata>	R	

TABLE A-XII. AIRCRAFT POWER PLANT BUILD-UP MANUAL

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
TM FRONT MATTER	1-B.5.3.1		R	
Title page	1-B.5.3.1.1	<titlepg>	R	
Numerical index of effective work packages/pages	1-B.5.3.1.2	<niewp>	R	
TPDR page	1-B.5.3.1.3	<tpdrpg>	O	
HMWS page	1-B.5.3.1.4	<hmwswp>	O	
Alphabetical index	1-B.5.3.1.5	<alphaindxwp>	O	
TM introduction	1-B.5.3.2.1.3.3	<introwp>	R	
Consolidated lists for technical directives, support equipment, materials and references WP	1-B.5.3.2.1.3.4	<consolistwp>	R	
WORK PACKAGE FRONT MATTER				
Title block	4-5.2.1	<titleblk>	R	
Work package information	4-5.2.2	<wpinfo>	R	
Reference material list	4-5.2.2.1	<reflist>	O	
Record of applicable technical directives	4-5.2.2.2	<ratd>	O	
Support equipment required list	4-5.2.2.3	<selist>	O	
Facilities required list	4-5.2.2.4	<faclist>	O	
Materials required list	4-5.2.2.5	<matlist>	O	
POWER PLANT BUILD-UP WORK PACKAGES	4-5.3.7			
General information WP	4-5.3.7.1	<geninfomaintwp>	R	
Quick engine change kit description WP	4-5.3.7.2	<qeckdescwp>	R	
Quick engine change assembly WP	4-5.3.7.3	<qecawp>	R	
Non-quick engine change assembly WPs	4-5.3.7.4	<nonqecawp>	R	
Additional power plant build-up WPs	4-5.3.7.5	<bldupwp>	R	
Illustrated parts breakdown data (as applicable for WPs listed above)	4-5.3.11	<ipb>	O	

TABLE A-XIII. PREOPERATIONAL AND TURNAROUND CHECKLIST CARD DECKS

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
TURNAROUND CHECKLIST REQUIREMENTS				
Aircraft	7-5.1.1.2	<turnchklst>	R	
Airborne mine countermeasure equipment	7-5.1.8.2	<turnchklst>	R	
Unmanned aerial vehicle	7-5.1.9.2	<turnchklst>	R	
PREOPERATIONAL CHECKLIST REQUIREMENTS				
Support equipment	7-5.1.4.1	<preopdk>	R	
Powered surface target	7-5.1.6.1	<preopdk>	R	
CHECKLIST FRONT MATTER	1-B.5.3.1		R	
Title card	1-B.5.3.1.1.2, 1-B.5.3.1.1.3	<titlecd>	R	
INTRODUCTION AND APPLICATION STATEMENT	7-5.2.3			
Introduction and application statements (turnaround checklist)	7-5.2.3.1	<introaplcd>	R	
Introduction and application statements (preoperational checklist)	7-5.2.3.2	<introaplcd>	R	
TASK CARDS (ALL CHECKLIST CARD DECKS)	7-5.2.19	<chklstcd>	R	

TABLE A-XIV. PHASED MAINTENANCE CARD DECKS

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
PHASED MAINTENANCE CARD DECK REQUIREMENTS	7-5.1.1.7	<phmaintdk>	R	
CARD DECK FRONT MATTER	1-B.5.3.1	<fmcds>	R	
Title card	1-B.5.3.1.1.2	<titlecd>	R	
List of effective cards	1-B.5.3.1.2.2	<lecds>	R	
TPDR card	1-B.5.3.1.3.2	<tpdrcard>	O	
HMWS card	1-B.5.3.1.4.2	<hmwscard>	O	
INTRODUCTION AND APPLICATION STATEMENT	7-5.2.3			
Introduction and application statement	7-5.2.3.4	<introaplcd>	R	
DECK CARDS				
Definitions	7-5.2.4	<defcd>	R	
Abbreviations, index, and checkflight requirements	7-5.2.10	<abindxcd>	R	
Special tools/support equipment lists	7-5.2.11	<secd>	R	
Consumable maintenance materials list	7-5.2.12	<consumcd>	R	
Replacement parts list	7-5.2.13	<rplcd>	R	
Work area or zone	7-5.2.14	<wrkareacd>	O	
		<zonecd>	O	
Zone title and description	7-5.2.15	<zonetltcd>	O	
Zonal inspection criteria	7-5.2.16	<zoneinspcd>	O	
Access panels	7-5.2.17	<accpnlcd>	R	
Antenna location	7-5.2.18	<antcd>	R	
PHASE PACKAGE SUPPLEMENT				
Cover card	1-B.5.3.1.1.2			
Phase sequence control cards	7-5.2.20	<phsccd>	O	
Task cards	7-5.2.22	<tskcd>	R	
Illustrations	7-5.2.23	<illustcd>	O	
QA	7-5.2.24	<qacd>	O	

TABLE A-XV. PERIODIC MAINTENANCE INFORMATION CARD DECKS

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
PERIODIC MAINTENANCE INFORMATION CARD SET	7-5.1	<pmrcset>		
Aircraft	7-5.1.1.1	<pmidk>	R	
Airborne armament equipment (AAE)	7-5.1.3.1	<pmidk>	R	
Airborne mine countermeasure equipment (AMCM)	7-5.1.8.1	<pmidk>	R	
Unmanned aerial vehicle (UAV)	7-5.1.9.1	<pmidk>	R	
CARD DECK FRONT MATTER	1-B.5.3.1	<fmcds>	R	
Title card	1-B.5.3.1.1.2	<titlecd>	R	
List of effective cards	1-B.5.3.1.2.2	<lecds>	R	
TPDR card	1-B.5.3.1.3.2	<tpdrcard>	O	
HMWS card	1-B.5.3.1.4.2	<hmwscard>	O	
INTRODUCTION	7-5.2.2			
Introduction (aircraft and AAE)	7-5.2.2.1	<introcd>	R	
Introduction (AMCM and UAV)	7-5.2.2.2	<introcd>	R	
DECK CARDS				
Removal/replacement schedule and special tracking requirements	7-5.2.5	<rrschtrkcd>	R	
Inspection requirements	7-5.2.6	<inspindcd>	R	
Conditional inspection listing (aircraft, AMCM and UAV only)	7-5.2.7	<condinspcd>	R	
Phase change implementation (aircraft only)	7-5.2.8	<phchgcd>	R	

TABLE A-XVI. QEC PERIODIC MAINTENANCE REQUIREMENTS CARD DECKS

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
PERIODIC MAINTENANCE REQUIREMENTS CARD DECK REQUIREMENTS	7-5.1.2	<qecaset>	R	
CARD DECK FRONT MATTER	1-B.5.3.1	<fmcds>	R	
Title card	1-B.5.3.1.1.2	<titlecd>	R	
List of effective cards	1-B.5.3.1.2.2	<lecds>	R	
TPDR card	1-B.5.3.1.3.2	<tpdrcard>	O	
HMWS card	1-B.5.3.1.4.2	<hmwscard>	O	
INTRODUCTION AND APPLICATION STATEMENT	7-5.2.3			
Introduction and application statement	7-5.2.3.5	<introaplcd>	R	
DECK CARDS				
Definitions	7-5.2.4	<defcd>	R	
Abbreviations and index	7-5.2.9	<abindxcd>	R	
Special tools/support equipment list	7-5.2.11	<secd>	R	
Consumable maintenance material list	7-5.2.12	<consumcd>	R	
Replacement parts list	7-5.2.13	<rplcd>	R	
Work area	7-5.2.14	<wrkareacd>	R	
QECA sequence control	7-5.2.21	<qecacd>	O	
Tasks	7-5.2.22	<tskcd>	R	
Illustration	7-5.2.23	<illustcd>	O	
QA	7-5.2.24	<qacd>	O	
QEC cover	1-B.5.3.1.1.2			
QEC task	7-5.2.22	<tskcd>	R	
QEC illustration	7-5.2.23	<illustcd>	R	

TABLE A-XVII. POWERED SURFACE TARGET (PST) PERIODIC MAINTENANCE REQUIREMENTS CARD DECKS

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
POWERED SURFACE TARGET (PST) CARD SET	7-5.1.6	<pstset>		
Periodic Maintenance Requirements Card Deck Requirements	7-5.1.6.2	<pmrdk>	R	
CARD DECK FRONT MATTER	1-B.5.3.1	<fmcds>	R	
Title card	1-B.5.3.1.1.2	<titlecd>	R	
List of effective cards	1-B.5.3.1.2.2	<lecds>	R	
TPDR card	1-B.5.3.1.3.2	<tpdrcard>	O	
HMWS card	1-B.5.3.1.4.2	<hmwscard>	O	
INTRODUCTION AND APPLICATION STATEMENT	7-5.2.3			
Introduction and application statement	7-5.2.3.12	<introaplcd>	R	
DECK CARDS				
Definitions	7-5.2.4	<defcd>	R	
Abbreviations and index	7-5.2.9	<abindxcd>	R	
Special tools/support equipment list	7-5.2.11	<secd>	R	
Consumable maintenance material list	7-5.2.12	<consumcd>	R	
Replacement parts list	7-5.2.13	<rplcd>	R	
Work area or zone	7-5.2.14	<wrkareacd>	R	
		<zonecd>	R	
Access panel	7-5.2.17	<accpnlcd>	R	
Antenna location	7-5.2.18	<antcd>	R	
Tasks (days, hours, events)	7-5.2.22	<tskcd>	R	
Illustration	7-5.2.23	<illustcd>	R	
QA	7-5.2.24	<qacd>	R	

TABLE A-XVIII. AVIATION LIFE SUPPORT SYSTEMS (ALSS) PERIODIC MAINTENANCE REQUIREMENTS CARD DECKS

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
AVIATION LIFE SUPPORT SYSTEMS (ALSS) CARD SET	7-5.1.7	<alsset>	R	
Periodic Maintenance Requirements Card Deck Requirements	7-5.1.7.1	<pmrdk>		
CARD DECK FRONT MATTER	1-B.5.3.1	<fmcds>	R	
Title card	1-B.5.3.1.1.2	<titlecd>	R	
List of effective cards	1-B.5.3.1.2.2	<lecds>	R	
TPDR card	1-B.5.3.1.3.2	<tpdrcard>	O	
HMWS card	1-B.5.3.1.4.2	<hmwscard>	O	
INTRODUCTION AND APPLICATION STATEMENT	7-5.2.3			
Introduction and application statement	7-5.2.3.15	<introaplcd>	R	
DECK CARDS				
Definitions	7-5.2.4	<defcd>	R	
Abbreviations and index	7-5.2.9	<abindxcd>	R	
Special tools/support equipment list	7-5.2.11	<secd>	R	
Consumable maintenance material list	7-5.2.12	<consumcd>	R	
Replacement parts list	7-5.2.13	<rplcd>	R	
ALSS cover	1-B.5.3.1.1.2			
Tasks (days, hours)	7-5.2.22	<tskcd>	R	
Illustration	7-5.2.23	<illustcd>	R	
QA	7-5.2.24	<qacd>	R	

TABLE A-XIX. AIRCRAFT DAILY, SPECIAL, PRESERVATION, AND CONDITIONAL CARD DECKS

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
DAILY INSPECTION OR DAILY INSPECTION/SERVICING REQUIREMENTS	7-5.1.1.3	<dayinspdk>	R	
SPECIAL INSPECTION REQUIREMENTS	7-5.1.1.4	<spinspdk>	R	
PRESERVATION/ DEPRESERVATION REQUIREMENTS	7-5.1.1.5	<presdk>	R	
CONDITIONAL INSPECTION REQUIREMENTS	7-5.1.1.6	<conddk>	R	
CARD DECK FRONT MATTER	1-B.5.3.1	<fmcds>	R	
Title card	1-B.5.3.1.1.2	<titlecd>	R	
List of effective cards	1-B.5.3.1.2.2	<lecds>	R	
TPDR card	1-B.5.3.1.3.2	<tpdrcard>	O	
HMWS card	1-B.5.3.1.4.2	<hmwscard>	O	
INTRODUCTION AND APPLICATION STATEMENT	7-5.2.3			
Introduction and application statement	7-5.2.3.3	<introaplcd>	R	
DECK CARDS				
Definitions	7-5.2.4	<defcd>	R	
Abbreviations and index	7-5.2.9	<abindxcd>	R	
Special tools/support equipment list	7-5.2.11	<secd>	R	
Consumable maintenance material list	7-5.2.12	<consumcd>	R	
Replacement parts list	7-5.2.13	<rplcd>	R	
Work area or zone	7-5.2.14	<wrkareacd> <zonecd>	R R	
Zone title and description (except daily card deck)	7-5.2.15	<zonetltcd>	R	
Zonal inspection criteria (except daily card deck)	7-5.2.16	<zoneinspcd>	R	
Access panel	7-5.2.17	<accpnlcd>	R	
Antenna location (except daily card deck)	7-5.2.18	<antcd>	R	
Tasks (daily, special (day, hour, event), preservation, depreservation, and conditional)	7-5.2.22	<tskcd>	R	
Aircraft service period adjustment (ASPA) (special inspection card deck only)	7-5.1.1.4f	<aspacd>	R	
Illustration	7-5.2.23	<illustcd>	R	
QA	7-5.2.24	<qacd>	R R	

TABLE A-XX. AAE OR SPECIAL STORES DAILY/SPECIAL CARD DECKS

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
DAILY/SPECIAL MAINTENANCE REQUIREMENTS	7-5.1.3.2	<dayinspdk>	R	
CARD DECK FRONT MATTER	1-B.5.3.1	<fmcds>	R	
Title card	1-B.5.3.1.1.2	<titlecd>	R	
List of effective cards	1-B.5.3.1.2.2	<lecds>	R	
TPDR card	1-B.5.3.1.3.2	<tpdrcard>	O	
HMWS card	1-B.5.3.1.4.2	<hmwscard>	O	
INTRODUCTION AND APPLICATION STATEMENT	7-5.2.3			
Introduction and application statement	7-5.2.3.6	<introaplcd>	R	
DECK CARDS				
Definitions	7-5.2.4	<defcd>	R	
Abbreviations and index	7-5.2.9	<abindxcd>	R	
Special tools/support equipment list	7-5.2.11	<secd>	R	
Consumable maintenance material list	7-5.2.12	<consumcd>	R	
Replacement parts list	7-5.2.13	<rplcd>	R	
Work area or zone	7-5.2.14	<wrkareacd>	R	
		<zonecd>	R	
Tasks (daily, special (day, hour, event))	7-5.2.22	<tskcd>	R	
Illustration	7-5.2.23	<illustcd>	R	
QA	7-5.2.24	<qacd>	R	

TABLE A-XXI. SE/ATE DAILY, SPECIAL, PRESERVATION, AND CONDITIONAL CARD DECKS

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
DAILY INSPECTION REQUIREMENTS	7-5.1.4.2	<dayinspdk>	R	
SPECIAL INSPECTION REQUIREMENTS	7-5.1.4.3	<spinspdk>	R	
PRESERVATION/ DEPRESERVATION REQUIREMENTS	7-5.1.4.4	<presdk>	R	
CONDITIONAL INSPECTIONS REQUIREMENTS	7-5.1.4.5	<conddk>	R	
CARD DECK FRONT MATTER	1-B.5.3.1	<fmcds>	R	
Title card	1-B.5.3.1.1.2	<titlecd>	R	
List of effective cards	1-B.5.3.1.2.2	<lecds>	R	
TPDR card	1-B.5.3.1.3.2	<tpdrcard>	O	
HMWS card	1-B.5.3.1.4.2	<hmwscard>	O	
INTRODUCTION AND APPLICATION STATEMENT	7-5.2.3			
Introduction and application statement	7-5.2.3.7	<introaplcd>	R	
DECK CARDS				
Definitions	7-5.2.4	<defcd>	R	
Abbreviations and index	7-5.2.9	<abindxcd>	R	
Special tools/support equipment list	7-5.2.11	<secd>	R	
Consumable maintenance material list	7-5.2.12	<consumcd>	R	
Replacement parts list	7-5.2.13	<rplcd>	R	
Work area	7-5.2.14	<wrkareacd>	R	
Access panel	7-5.2.17	<accpnlcd>	R	
Antenna location	7-5.2.18	<antcd>	R	
Tasks (daily, special (day, start), preservation, depreservation, conditional)	7-5.2.22	<tskcd>	R	
Illustration	7-5.2.23	<illustcd>	R	
QA	7-5.2.24	<qacd>	R	

TABLE A-XXII. AMCM DAILY AND UAV DAILY INSPECT/DAILY INSPECT AND SERVICING CARD DECKS

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
DAILY, DAILY INSPECT/DAILY INSPECT AND SERVICING REQUIREMENTS				
AMCM daily requirements	7-5.1.8.3	<dayinspdk>	R	
UAV daily inspection/daily inspection/servicing requirements	7-5.1.9.3	<dayinspdk>	R	
CARD DECK FRONT MATTER	1-B.5.3.1	<fmcds>	R	
Title card	1-B.5.3.1.1.2	<titlecd>	R	
List of effective cards	1-B.5.3.1.2.2	<lecds>	R	
TPDR card	1-B.5.3.1.3.2	<tpdrcard>	O	
HMWS card	1-B.5.3.1.4.2	<hmwscard>	O	
INTRODUCTION AND APPLICATION STATEMENT	7-5.2.3			
Introduction and application statement	7-5.2.3.13	<introaplcd>	R	
DECK CARDS				
Definitions	7-5.2.4	<defcd>	R	
Abbreviations and index	7-5.2.9	<abindxcd>	R	
Special tools/support equipment list	7-5.2.11	<secd>	R	
Consumable maintenance material list	7-5.2.12	<consumcd>	R	
Replacement parts list	7-5.2.13	<rplcd>	R	
Access panel	7-5.2.17	<accpnlcd>	R	
Antenna location	7-5.2.18	<antcd>	R	
Tasks	7-5.2.22	<tskcd>	R	
Illustration	7-5.2.23	<illustcd>	R	
QA	7-5.2.24	<qacd>	R	

TABLE A-XXIII. AMCM AND UAV SPECIAL, PRESERVATION, AND CONDITIONAL CARD DECKS

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
AMCM SPECIAL INSPECTION REQUIREMENTS	7-5.1.8.4	<spinspdk>	R	
AMCM PRESERVATION/ DEPRESERVATION REQUIREMENTS	7-5.1.8.5	<presdk>	R	
AMCM CONDITIONAL INSPECTIONS REQUIREMENTS	7-5.1.8.6	<conddk>	R	
UAV SPECIAL INSPECTION REQUIREMENTS	7-5.1.9.4	<spinspdk>	R	
UAV SPECIAL PRESERVATION/ DEPRESERVATION REQUIREMENTS	7-5.1.9.5	<presdk>	R	
UAV CONDITIONAL INSPECTIONS REQUIREMENTS	7-5.1.9.6	<conddk>	R	
CARD DECK FRONT MATTER	1-B.5.3.1	<fmcds>	R	
Title card	1-B.5.3.1.1.2	<titlecd>	R	
List of effective cards	1-B.5.3.1.2.2	<lecds>	R	
TPDR card	1-B.5.3.1.3.2	<tpdrcard>	O	
HMWS card	1-B.5.3.1.4.2	<hmwscard>	O	
INTRODUCTION AND APPLICATION STATEMENT	7-5.2.3			
Introduction and application statement	7-5.2.3.14	<introaplcd>	R	
DECK CARDS				
Definitions	7-5.2.4	<defcd>	R	
Abbreviations and index	7-5.2.9	<abindxcd>	R	
Special tools/support equipment list	7-5.2.11	<secd>	R	
Consumable maintenance material list	7-5.2.12	<consumcd>	R	
Replacement parts list	7-5.2.13	<rplcd>	R	
Work area	7-5.2.14	<wrkareacd>	R	
Access panel	7-5.2.17	<accpnlcd>	R	
Antenna location	7-5.2.18	<antcd>	R	
Tasks (calendar or start, special (day, hour, start), preservation, depreservation, conditional)	7-5.2.22	<tskcd>	R	
Illustration	7-5.2.23	<illustcd>	R	
QA	7-5.2.24	<qacd>	R	

TABLE A-XXIV. SE/ATE, AMCM AND UAV CALENDAR, HOUR, AND START CARD DECKS

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
SE/ATE CALENDAR/START INSPECTION REQUIREMENTS	7-5.1.4.6	<calendardk> <startdk>	O O	
AMCM CALENDAR, HOUR, OR START MAINTENANCE REQUIREMENTS	7-5.1.8.7	<calendardk> <hourdk> <startdk>	O O O	
UAV CALENDAR, HOUR, OR START MAINTENANCE REQUIREMENTS	7-5.1.9.7	<calendardk> <hourdk> <startdk>	O O O	
CARD DECK FRONT MATTER	1-B.5.3.1	<fmcds>	R	
Title card	1-B.5.3.1.1.2	<titlecd>	R	
List of effective cards	1-B.5.3.1.2.2	<lecds>	R	
TPDR card	1-B.5.3.1.3.2	<tpdrcard>	O	
HMWS card	1-B.5.3.1.4.2	<hmwscard>	O	
INTRODUCTION AND APPLICATION STATEMENT	7-5.2.3			
Introduction and application statement	7-5.2.3.7, 7-5.2.3.14	<introaplcd>	R	
DECK CARDS				
Definitions	7-5.2.4	<defcd>	R	
Abbreviations and index	7-5.2.9	<abindxcd>	R	
Special tools/support equipment list	7-5.2.11	<secd>	R	
Consumable maintenance material list	7-5.2.12	<consumcd>	R	
Replacement parts list	7-5.2.13	<rplcd>	R	
Work area	7-5.2.14	<wrkareacd>	R	
Access panel	7-5.2.17	<accpnlcd>	R	
Tasks (days, hours, start, calendar)	7-5.2.22	<tskcd>	R	
Illustration	7-5.2.23	<illustcd>	R	
QA	7-5.2.24	<qacd>	R	

TABLE A-XXV. PAT PRELAUNCH AND POST LAUNCH/SERVICING CARD DECKS

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
PAT PRELAUNCH REQUIREMENTS	7-5.1.5.2	<prelnchdk>	R	
PAT POSTLAUNCH/SERVICING REQUIREMENTS	7-5.1.5.3	<postlnchdk>	R	
CARD DECK FRONT MATTER	1-B.5.3.1	<fmcds>	R	
Title card	1-B.5.3.1.1.2	<titlecd>	R	
List of effective cards	1-B.5.3.1.2.2	<lecds>	R	
TPDR card	1-B.5.3.1.3.2	<tpdrcard>	O	
HMWS card	1-B.5.3.1.4.2	<hmwscard>	O	
INTRODUCTION AND APPLICATION STATEMENT	7-5.2.3			
Introduction and application statement (Prelaunch)	7-5.2.3.10	<introaplcd>	R	
Introduction and application statement (Postlaunch/servicing)	7-5.2.3.11	<introaplcd>	R	
DECK CARDS				
Definitions	7-5.2.4	<defcd>	R	
Abbreviations and index	7-5.2.9	<abindxcd>	R	
Special tools/support equipment list	7-5.2.11	<secd>	R	
Consumable maintenance material (postlaunch/servicing only)	7-5.2.12	<consumcd>	R	
Replacement parts list (postlaunch/servicing only)	7-5.2.13	<rplcd>	R	
Work area or zone	7-5.2.14	<wrkareacd> <zonecd>	R R	
Access panel	7-5.2.17	<accpnlcd>	R	
Antenna location	7-5.2.18	<antcd>	R	
Tasks (prelaunch)	7-5.2.22	<tskcd>	R	
Tasks (decontamination, disassembly, rehabilitation, assembly, and servicing) (postlaunch/servicing only)	7-5.2.22	<tskcd>	R	
Illustration	7-5.2.23	<illustcd>	R	
QA	7-5.2.24	<qacd>	R	

TABLE A-XXVI. PAT ACCEPTANCE/INITIAL BUILDUP CARD DECKS

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
ACCEPTANCE/INITIAL BUILDUP REQUIREMENTS	7-5.1.5.1	<acptbldupdk>	R	
CARD DECK FRONT MATTER	1-B.5.3.1	<fmcds>	R	
Title card	1-B.5.3.1.1.2	<titlecd>	R	
List of effective cards	1-B.5.3.1.2.2	<lecds>	R	
TPDR card	1-B.5.3.1.3.2	<tpdrcard>	O	
HMWS card	1-B.5.3.1.4.2	<hmwscard>	O	
INTRODUCTION AND APPLICATION STATEMENT	7-5.2.3			
Introduction and application statement	7-5.2.3.9	<introaplcd>	R	
DECK CARDS				
Access panel	7-5.2.17	<accpnlcd>	R	
Antenna location	7-5.2.18	<antcd>	R	
Tasks	7-5.2.22	<tskcd>	R	
Illustration	7-5.2.23	<illustcd>	R	
QA	7-5.2.24	<qacd>	R	

TABLE A-XXVII. SEPARATE ILLUSTRATED PARTS BREAKDOWN (IPB) MANUAL

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
TM FRONT MATTER	8-5.2		R	
Title page	8-5.2.1	<titlepg>	R	
Numerical index of effective figures/pages	8-5.2.2	<niepage>	R	
TPDR page	8-5.2.3	<tpdrpg>	O	
TM introduction	8-5.2.4	<intro>	R	
Alphabetical Index	8-5.3	<alphaindx>	O	
Numerical Index of Part Numbers	8-5.4	<partnoindx>	R	
Numerical Index of Reference Designations	8-5.5	<refdesindx>	O	
GROUP ASSEMBLY PARTS LIST AND IPB FIGURES	8-5.6		R	
Figures	8-5.6.1	<figure>	R	
Group assembly parts lists	8-5.6.2	<gapl>	R	

TABLE A-XXVIII. OPERATION INSTRUCTIONS MANUAL (AERONAUTICAL EQUIPMENT, AIRBORNE WEAPONS/EQUIPMENT, AND SUPPORT EQUIPMENT)

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
TM FRONT MATTER	1-B.5.3.1		R	
Title page	1-B.5.3.1.1	<titlepg>	R	
Numerical index of effective work packages/pages	1-B.5.3.1.2	<niewp>	R	
TPDR page	1-B.5.3.1.3	<tpdrpg>	R	
HMWS page	1-B.5.3.1.4	<hmwswp>	R	
Alphabetical index	1-B.5.3.1.5	<alphaindxwp>	O	
TM introduction	1-B.5.3.2.1.3.3	<introwp>	R	
Consolidated lists for technical directives, support equipment, materials and references WP	1-B.5.3.2.1.3.4	<consolistwp>	R	
WORK PACKAGE FRONT MATTER				
Title block	2-5.2.1	<titleblk>	R	
Work package information	2-5.2.2	<wpinfo>	R	
Reference material list	2-5.2.2.1	<reflist>	O	
Record of applicable technical directives	2-5.2.2.2	<ratd>	O	
Support equipment required list	2-5.2.2.3	<selist>	O	
DESCRIPTION AND PRINCIPLES OF OPERATION WPs	2-5.2.3, 2-5.2.4, 2-5.2.5			
Description WPs	2-5.2.4.2.2	<descwp>	R	
Introduction	2-5.2.4.2	<intro>	O	
System description	2-5.2.4.2.2	<sysdesc>	R	
Subsystem description	2-5.2.4.2.2	<sysdesc>	O	
Component description	2-5.2.4.2.2	<sysdesc>	O	
Controls and indicators description	2-5.2.4.2.1.1	<ctrlinddesc>	R	
Programming software description work packages	2-5.2.4.2.4	<softwp>	R	
Introduction	2-5.2.4.2.4	<intro>	O	
Stimulus and measurement programming	2-5.2.4.2.4	<stim-measdesc>	R	
Programming statements	2-5.2.4.2.4	<statedesc>	R	
Programming tests or self tests	2-5.2.4.2.4	<progtestdesc>	R	
Principles of operations WPs	2-5.2.5.2	<popwp>	R	
Introduction	2-5.2.5.2	<intro>	O	
System description	2-5.2.4.2.2	<sysdesc>	O	
Subsystem description	2-5.2.4.2.2	<sysdesc>	O	
Component description	2-5.2.4.2.2	<sysdesc>	O	
System principles of operation	2-5.2.5.2	<systhry>	R	
Subsystem principles of operation	2-5.2.5.2	<systhry>	O	
Component principles of operation	2-5.2.5.2	<systhry>	O	
SCHEMATIC DIAGRAM WORK PACKAGES	2-5.2.5.4	<schemwp>	O	
OPERATION DATA	2-5.2.6		O	
Operating instruction WPs	2-5.2.6.1	<operwp>	O	
Introduction	2-5.2.6.1	<intro>	O	
Equipment preparation for use	2-5.2.6.1a	<prepuse>	O	

TABLE A-XXVIII. OPERATION INSTRUCTIONS MANUAL (AERONAUTICAL EQUIPMENT, AIRBORNE WEAPONS/EQUIPMENT, AND SUPPORT EQUIPMENT)

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Pre-operational setup procedures	2-5.2.6.1b	<preop>	O	
Controls and indicators descriptions	2-5.2.6.1c	<ctrlinddesc>	O	
Start-up information	2-5.2.6.1d	<startupop>	O	
Build-in-test or self-test procedures	2-5.2.6.1e	<bit-st-op>	O	
Operating procedures	2-5.2.6.1f	<op-proc>	O	
Emergency operation	2-5.2.6.1g	<emerg-proc>	O	
Emergency shutdown procedures	2-5.2.6.1h	<emshut-proc>	O	
Post-operational shutdown procedures	2-5.2.6.1i	<post-op-proc>	O	
Software loading WPs	2-5.2.6.2	<softldwp>	O	

TABLE A-XXVIX. OPERATION AND MAINTENANCE INSTRUCTIONS WITH IPB MANUALS (AERONAUTICAL EQUIPMENT, AIRBORNE WEAPONS/EQUIPMENT, AND SUPPORT EQUIPMENT)

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
TM FRONT MATTER	1-B.5.3.1		R	
Title page	1-B.5.3.1.1	<titlepg>	R	
Numerical index of effective work packages/pages	1-B.5.3.1.2	<niewp>	R	
TPDR page	1-B.5.3.1.3	<tpdrpg>	R	
HMWS page	1-B.5.3.1.4	<hmwswp>	R	
Alphabetical index	1-B.5.3.1.5	<alphaindxwp>	O	
TM introduction	1-B.5.3.2.1.3.3	<introwp>	R	
Consolidated lists for technical directives, support equipment, materials and references WP	1-B.5.3.2.1.3.4	<consolistwp>	R	
WORK PACKAGE FRONT MATTER			R	
Title block	2-5.2.1	<titleblk>	R	
Work package information	2-5.2.2	<wpinfo>	R	
Reference material list	2-5.2.2.1	<reflist>	O	
Record of applicable technical directives	2-5.2.2.2	<ratd>	O	
Support equipment required list	2-5.2.2.3	<selist>	O	
Facilities required list	4-5.2.2.4	<faclist>	O	
Materials required list	4-5.2.2.5	<matlist>	O	
DESCRIPTION AND PRINCIPLES OF OPERATION WPs	2-5.2.3, 2-5.2.4, 2-5.2.5			
Description WPs	2-5.2.4.2.2	<descwp>	R	
Introduction	2-5.2.4.2	<intro>	O	
System description	2-5.2.4.2.2	<sysdesc>	R	
Subsystem description	2-5.2.4.2.2	<sysdesc>	O	
Component description	2-5.2.4.2.2	<sysdesc>	O	
Controls and indicators description	2-5.2.4.2.1.1	<ctrlinddesc>	R	
Programming software description work packages	2-5.2.4.2.4	<softwp>	R	
Introduction	2-5.2.4.2.4	<intro>	O	
Stimulus and measurement programming	2-5.2.4.2.4	<stim-measdesc>	R	
Programming statements	2-5.2.4.2.4	<statedesc>	R	
Programming tests or self tests	2-5.2.4.2.4	<progtestdesc>	R	
Principles of operations WPs	2-5.2.5.2	<popwp>	R	
Introduction	2-5.2.5.2	<intro>	O	
System description	2-5.2.4.2.2	<sysdesc>	O	
Subsystem description	2-5.2.4.2.2	<sysdesc>	O	
Component description	2-5.2.4.2.2	<sysdesc>	O	
System principles of operation	2-5.2.5.2	<systhry>	R	
SCHEMATIC DIAGRAM WORK PACKAGES	2-5.2.5.4, 3-5.3.4.6.1	<schemwp>	O	
OPERATION DATA	2-5.2.6			
Operating instruction WPs	2-5.2.6.1	<operwp>	R	
Introduction	2-5.2.6.1	<intro>	O	

TABLE A-XXVIX. OPERATION AND MAINTENANCE INSTRUCTIONS WITH IPB MANUALS (AERONAUTICAL EQUIPMENT, AIRBORNE WEAPONS/EQUIPMENT, AND SUPPORT EQUIPMENT)

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Equipment preparation for use	2-5.2.6.1a	<prepuse>	O	
Pre-operational setup procedures	2-5.2.6.1b	<preop>	O	
Controls and indicators descriptions	2-5.2.6.1c	<ctrlinddesc>	O	
Start-up information	2-5.2.6.1d	<startupop>	O	
Build-in-test or self-test procedures	2-5.2.6.1e	<bit-st-op>	O	
Operating procedures	2-5.2.6.1f	<op-proc>	R	
Emergency operation	2-5.2.6.1g	<emerg-proc>	O	
Emergency shutdown procedures	2-5.2.6.1h	<emshut-proc>	O	
Post-operational shutdown procedures	2-5.2.6.1i	<post-op-proc>	O	
Software loading WPs	2-5.2.6.2	<softldwp>	O	
TESTING AND TROUBLESHOOTING DATA	3-5.1, 3-5.1.3, 3-5.2			
Testing and troubleshooting WPs	3-5.3.5			
Testing WPs	3-5.3.4.6.3	<opchkwp>	R	
Introduction	3-5.3.4.6.3a	<intro>	O	
General procedures and precautions	3-5.3.4.6.3b	<genproc>	O	
Pretest setup procedures	3-5.3.4.6.3c	<pretest>	O	
Testing procedures	3-5.3.4.6.3d	<opchk>	R	
Post-testing shutdown procedures	3-5.3.4.6.3e	<shutdown>	O	
		<emergshtdn>	O	
Troubleshooting WPs	3-5.3.4.6.4	<trblshtwp>	R	
Introduction	3-5.3.4.6.4a	<intro>	O	
General procedures and precautions	3-5.3.4.6.4b	<genproc>	O	
Troubleshooting procedures	3-5.3.4.6.4c	<trblproc-a>	O	
		<trblproc-b>	O	
Post-testing shutdown procedures	3-5.3.4.6.4d	<shutdown>	O	
		<emergshtdn>	O	
Combined testing and troubleshooting WPs	3-5.3.4.6.5	<tst-trblwp>	R	
Introduction	3-5.3.4.6.5a	<intro>	O	
General procedures and precautions	3-5.3.4.6.5b	<genproc>	O	
Pretest setup procedures	3-5.3.4.6.5c	<pretest>	O	
Testing and troubleshooting procedures	3-5.3.4.6.5d(1)	<opck-trblproc>	R	
	3-5.3.4.6.5d(2)	<opck>	O	
	3-5.3.4.6.5d(3)	<trblsht>	O	
Post-testing shutdown procedures	3-5.3.4.6.5e	<shutdown>	O	
		<emergshtdn>	O	
MAINTENANCE INFORMATION WITH IPB	4-5.3			
Maintenance work packages	4-5.3.1	<maintwp>		
Introduction	4-5.3	<intro>	O	

TABLE A-XXVIX. OPERATION AND MAINTENANCE INSTRUCTIONS WITH IPB MANUALS (AERONAUTICAL EQUIPMENT, AIRBORNE WEAPONS/EQUIPMENT, AND SUPPORT EQUIPMENT)

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Maintenance tasks	4-5.3.1.1			
Preparation for use and assembly	4-5.3.1.1a, 4-5.3.1.1.2	<prepuse>	O	
Handling	4-5.3.1.1b, 4-5.3.1.1.3	<handling>	O	
Stowage	4-5.3.1.1c	<stow>	O	
Removal	4-5.3.1.1d, 4-5.3.1.1.4	<remove>	O	
Disassembly	4-5.3.1.1e, 4-5.3.1.1.5	<dissam>	O	
Cleaning and corrosion control	4-5.3.1.1f, 4-5.3.1.1.6	<clncorr>	O	
Inspection	4-5.3.1.1g, 4-5.3.1.1.7	<insp>	O	
Service	4-5.3.1.1h	<service>	O	
Repair	4-5.3.1.1i, 4-5.3.1.1.8	<repair>	O	
Alignment	4-5.3.1.1j	<align>	O	
Painting	4-5.3.1.1k	<paint>	O	
Lubrication	4-5.3.1.1l	<lube>	O	
Assembly	4-5.3.1.1m, 4-5.3.1.1.9	<assem>	O	
Test and inspection	4-5.3.1.1n, 4-5.3.1.1.10	<test-inspect>	O	
Installation	4-5.3.1.1o, 4-5.1.1.1.11	<install>	O	
Rigging	4-5.3.1.1p	<rig>	O	
Adjustment	4-5.3.1.1q	<adjust>	O	
Calibration	4-5.3.1.1r, 4-5.3.1.1.12	<calibrate>	O	
Preparation for storage or shipment	4-5.3.1.1s, 4-5.3.1.1.13	<pss>	O	
Environmental conditioning	4-5.3.1.1t	<envircond>	O	
Safety information	4-5.3.1.1u, 4-5.3.1.1.14	<safe>	O	
Engine start and run-up	4-5.3.1.1v, 4-5.3.1.1.15	<engstart>	O	
Software loading	4-5.3.1.1w	<softload>	O	
Fabrication	4-5.3.1.1x, 4-5.3.1.1.16	<fabricate>	O	
Packing	4-5.3.1.1y	<packing>	O	
Unpacking	4-5.3.1.1z	<unpacking>	O	
Preservation	4-5.3.1.1aa	<preserve>	O	
Tracking	4-5.3.1.1ab	<track>	O	
General maintenance procedures work package	4-5.3.2	<genmaintwp>	R	
Support equipment maintenance work package	4-5.3.5	<semaintwp>	R	

TABLE A-XXVIX. OPERATION AND MAINTENANCE INSTRUCTIONS WITH IPB MANUALS (AERONAUTICAL EQUIPMENT, AIRBORNE WEAPONS/EQUIPMENT, AND SUPPORT EQUIPMENT)

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Local manufacturing and assembly work package	4-5.3.6	<locmfgwp>	R	
IPB data (as applicable for WPs listed above)	4-5.3.11	<ipb>	O	
Wiring/cabling diagram WP	4-5.3.12	<wirediawp>	O	
Wire run lists WP	4-5.3.13	<wirelistwp>	O	

TABLE A-XXX. MAINTENANCE INSTRUCTIONS WITH IPB MANUALS (AERONAUTICAL EQUIPMENT, AIRBORNE WEAPONS/EQUIPMENT, AND SUPPORT EQUIPMENT)

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
TM FRONT MATTER	1-B.5.3.1		R	
Title page	1-B.5.3.1.1	<titlepg>	R	
Numerical index of effective work packages/pages	1-B.5.3.1.2	<niewp>	R	
TPDR page	1-B.5.3.1.3	<tpdrpg>	R	
HMWS page	1-B.5.3.1.4	<hmwswp>	R	
Alphabetical index	1-B.5.3.1.5	<alphaindxwp>	O	
TM introduction	1-B.5.3.2.1.3.3	<introwp>	R	
Consolidated lists for technical directives, support equipment, materials and references WP	1-B.5.3.2.1.3.4	<consolistwp>	R	
WORK PACKAGE FRONT MATTER			R	
Title block	4-5.2.1	<titleblk>	R	
Work package information	4-5.2.2	<wpinfo>	R	
Reference material list	4-5.2.2.1	<reflist>	O	
Record of applicable technical directives	4-5.2.2.2	<ratd>	O	
Support equipment required list	4-5.2.2.3	<selist>	O	
Facilities required list	4-5.2.2.4	<faclist>	O	
Materials required list	4-5.2.2.5	<matlist>	O	
DESCRIPTION AND PRINCIPLES OF OPERATION WPs	2-5.2.3, 2-5.2.4, 2-5.2.5			
Description WPs	2-5.2.4.2.2	<descwp>	R	
Introduction	2-5.2.4.2	<intro>	O	
System description	2-5.2.4.2.2	<sysdesc>	R	
Subsystem description	2-5.2.4.2.2	<sysdesc>	O	
Component description	2-5.2.4.2.2	<sysdesc>	O	
Controls and indicators description	2-5.2.4.2.1.1	<ctrlinddesc>	R	
Programming software description work packages	2-5.2.4.2.4	<softwp>	R	
Introduction	2-5.2.4.2.4	<intro>	O	
Stimulus and measurement programming	2-5.2.4.2.4	<stim-measdesc>	R	
Programming statements	2-5.2.4.2.4	<statedesc>	R	
Programming tests or self tests	2-5.2.4.2.4	<progtestdesc>	R	
Principles of operations WPs	2-5.2.5.2	<popwp>	R	
Introduction	2-5.2.5.2	<intro>	O	
System description	2-5.2.4.2.2	<sysdesc>	O	
Subsystem description	2-5.2.4.2.2	<sysdesc>	O	
Component description	2-5.2.4.2.2	<sysdesc>	O	
Controls and indicators description	2-5.2.4.2.1.1	<ctrlinddesc>	O	
System principles of operation	2-5.2.5.2	<systhry>	R	
SCHEMATIC DIAGRAM WORK PACKAGES	2-5.2.5.4, 3-5.3.4.6.1	<schemwp>	O	
TESTING AND TROUBLESHOOTING DATA	3-5.1, 3-5.1.3, 3-5.2			
Testing and troubleshooting WPs	3-5.3.5			

TABLE A-XXX. MAINTENANCE INSTRUCTIONS WITH IPB MANUALS (AERONAUTICAL EQUIPMENT, AIRBORNE WEAPONS/EQUIPMENT, AND SUPPORT EQUIPMENT)

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Testing WPs	3-5.3.4.6.3	<opchkwp>	R	
Introduction	3-5.3.4.6.3a	<intro>	O	
General procedures and precautions	3-5.3.4.6.3b	<genproc>	O	
Pretest setup procedures	3-5.3.4.6.3c	<pretest>	O	
Testing procedures	3-5.3.4.6.3d	<opchk>	R	
Post-testing shutdown procedures	3-5.3.4.6.3e	<shutdown>	O	
		<emergshtdn>	O	
Troubleshooting WPs	3-5.3.4.6.4	<trblshtwp>	R	
Introduction	3-5.3.4.6.4a	<intro>	O	
General procedures and precautions	3-5.3.4.6.4b	<genproc>	O	
Troubleshooting procedures	3-5.3.4.6.4c	<trblproc-a>	O	
		<trblproc-b>	O	
Post-testing shutdown procedures	3-5.3.4.6.4d	<shutdown>	O	
		<emergshtdn>	O	
Combined testing and troubleshooting WPs	3-5.3.4.6.5	<tst-trblwp>	R	
Introduction	3-5.3.4.6.5a	<intro>	O	
General procedures and precautions	3-5.3.4.6.5b	<genproc>	O	
Pretest setup procedures	3-5.3.4.6.5c	<pretest>	O	
Testing and troubleshooting procedures	3-5.3.4.6.5d(1)	<opck-trblproc>	O	
	3-5.3.4.6.5d(2)	<opck>	O	
	3-5.3.4.6.5d(3)	<trblsht>	O	
Post-testing shutdown procedures	3-5.3.4.6.5e	<shutdown>	O	
		<emergshtdn>	O	
MAINTENANCE INFORMATION WITH IPB	4-5.3			
Maintenance work packages	4-5.3.1	<maintwp>	O	
Introduction	4-5.3	<intro>	O	
Maintenance tasks	4-5.3.1.1			
Preparation for use and assembly	4-5.3.1.1a, 4-5.3.1.1.2	<prepuse>	O	
Handling	4-5.3.1.1b, 4-5.3.1.1.3	<handling>	O	
Stowage	4-5.3.1.1c	<stow>	O	
Removal	4-5.3.1.1d, 4-5.3.1.1.4	<remove>	O	
Disassembly	4-5.3.1.1e, 4-5.3.1.1.5	<dissam>	O	
Cleaning and corrosion control	4-5.3.1.1f, 4-5.3.1.1.6	<clncorr>	O	
Inspection	4-5.3.1.1g, 4-5.3.1.1.7	<insp>	O	
Service	4-5.3.1.1h	<service>	O	

TABLE A-XXX. MAINTENANCE INSTRUCTIONS WITH IPB MANUALS (AERONAUTICAL EQUIPMENT, AIRBORNE WEAPONS/EQUIPMENT, AND SUPPORT EQUIPMENT)

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Repair	4-5.3.1.1i, 4-5.3.1.1.8	<repair>	O	
Alignment	4-5.3.1.1j	<align>	O	
Painting	4-5.3.1.1k	<paint>	O	
Lubrication	4-5.3.1.1l	<lube>	O	
Assembly	4-5.3.1.1m, 4-5.3.1.1.9	<assem>	O	
Test and inspection	4-5.3.1.1n, 4-5.3.1.1.10	<test-inspect>	O	
Installation	4-5.3.1.1o, 4-5.1.1.1.11	<install>	O	
Rigging	4-5.3.1.1p	<rig>	O	
Adjustment	4-5.3.1.1q	<adjust>	O	
Calibration	4-5.3.1.1r, 4-5.3.1.1.12	<calibrate>	O	
Preparation for storage or shipment	4-5.3.1.1s, 4-5.3.1.1.13	<pss>	O	
Environmental conditioning	4-5.3.1.1t	<envircond>	O	
Safety information	4-5.3.1.1u, 4-5.3.1.1.14	<safe>	O	
Engine start and run-up	4-5.3.1.1v, 4-5.3.1.1.15	<engstart>	O	
Software loading	4-5.3.1.1w	<softload>	O	
Fabrication	4-5.3.1.1x, 4-5.3.1.1.16	<fabricate>	O	
Packing	4-5.3.1.1y	<packing>	O	
Unpacking	4-5.3.1.1z	<unpacking>	O	
Preservation	4-5.3.1.1aa	<preserve>	O	
Tracking	4-5.3.1.1ab	<track>	O	
General maintenance procedures work package	4-5.3.2	<genmaintwp>	O	
Support equipment maintenance work package	4-5.3.5	<semaintwp>	O	
Local manufacturing and assembly work package	4-5.3.6	<locmfgwp>	O	
IPB data (as applicable for WPs listed above)	4-5.3.11	<ipb>	O	
Wiring/cabling diagram WP	4-5.3.12	<wirediawp>	O	
Wire run lists WP	4-5.3.13	<wirelistwp>	O	

TABLE A-XXXI. ENGINE INTERMEDIATE AND DEPOT MAINTENANCE MANUALS

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
TM FRONT MATTER	1-B.5.3.1		R	
Title page	1-B.5.3.1.1	<titlepg>	R	
Numerical index of effective work packages/pages	1-B.5.3.1.2	<niewp>	R	
TPDR page	1-B.5.3.1.3	<tpdrpg>	R	
HMWS page	1-B.5.3.1.4	<hmwswp>	R	
Alphabetical index	1-B.5.3.1.5	<alphaindxwp>	O	
TM introduction	1-B.5.3.2.1.3.3	<introwp>	R	
Consolidated lists for technical directives, support equipment, materials and references WP	1-B.5.3.2.1.3.4	<consolistwp>	R	
WORK PACKAGE FRONT MATTER			R	
Title block	4-5.2.1	<titleblk>	R	
Work package information	4-5.2.2	<wpinfo>	R	
Reference material list	4-5.2.2.1	<reflist>	O	
Record of applicable technical directives	4-5.2.2.2	<ratd>	O	
Support equipment required list	4-5.2.2.3	<selist>	O	
Facilities required list	4-5.2.2.4	<faclist>	O	
Materials required list	4-5.2.2.5	<matlist>	O	
DESCRIPTION WORK PACKAGES	2-5.2.3, 2-5.2.4			
Engine, engine systems, and engine component description WPs				
Engine description WP	2-5.2.4.2.3	<descwp>	R	
Introduction	2-5.2.4.2	<intro>	O	
Engine description	2-5.2.4.2.3	<sysdesc>	O	
Engine systems description WPs	2-5.2.4.2.3	<descwp>	R	
Introduction	2-5.2.4.2	<intro>	O	
Engine systems description	2-5.2.4.2.3	<sysdesc>	R	
Engine component description WPs	2-5.2.4.2.3	<descwp>	O	
Introduction	2-5.2.4.2	<intro>	O	
Engine component description	2-5.2.4.2.3	<sysdesc>	O	
SCHEMATIC DIAGRAM WORK PACKAGES	2-5.2.5.4	<schemwp>	O	
ENGINE AND ENGINE SYSTEMS PRINCIPLES OF OPERATION WPs	2-5.2.5			
Engine principles of operation WP	2-5.2.5.3	<popwp>	R	
Introduction	2-5.2.5.3	<intro>	O	
Engine description	2-5.2.4.2.3	<sysdesc>	R	
Engine systems description	2-5.2.4.2.3	<sysdesc>	R	
Engine principles of operation	2-5.2.5.3	<systhry>	R	
Engine systems principles of operation WPs	2-5.2.5.3	<popwp>	R	
Introduction	2-5.2.5.3	<intro>	O	

TABLE A-XXXI. ENGINE INTERMEDIATE AND DEPOT MAINTENANCE MANUALS

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Engine system description	2-5.2.4.2.3	<sysdesc>	R	
Component description	2-5.2.4.2.3	<sysdesc>	R	
Engine system principles of operation	2-5.2.5.3	<systhry>	R	
Component principles of operation	2-5.2.5.3	<systhry>	R	
Engine component principles of operation WPs	2-5.2.5.3	<popwp>	R	
Introduction	2-5.2.5.3	<intro>	O	
Component description	2-5.2.4.2.3	<sysdesc>	R	
Component principles of operation	2-5.2.5.3	<systhry>	R	
TESTING AND TROUBLESHOOTING WPs	3-5.1, 3-5.1.4, 3-5.3.3			
Engine testing and troubleshooting WPs	3-5.3.6			
Engine testing procedures WP	3-5.3.6.1	<engtestwp>	R	
Introduction	3-5.3.6.1a	<intro>	O	
General procedures and precautions	3-5.3.6.1b	<genproc>	O	
Standard charts and conversion tables	3-5.3.6.1c	<perfevaldata>	O	
Testing required after special repairs	3-5.3.6.1d	<specreptst>	O	
Test requirements	3-5.3.6.1e	<testreq>	O	
Engine inspection	3-5.3.6.1f	<enginspect>	O	
Abnormal conditions during operation	3-5.3.6.1g	<abnormcond>	O	
Engine operation under unusual conditions	3-5.3.6.1h	<unusualcond>	O	
Engine operating limits	3-5.3.6.1i	<oplimit>	O	
Engine start	3.5.3.6.1j	<engstart>	R	
Preparation for test	3-5.3.6.1k	<testprep>	R	
Engine test	3-5.3.6.1l	<engtest>	R	
Engine shutdown	3-5.3.6.1m	<shutdown> <emergshtdn>	O O	
Engine post-test	3-5.3.6.1n	<postest>	O	
Engine troubleshooting WPs	3-5.3.6.2	<trblshtwp>	R	
Introduction	3-5.3.6.2a	<intro>	O	
General procedures and precautions	3-5.3.6.2b	<genproc>	O	
Troubleshooting procedures	3-5.3.6.2c	<trblproc-a> <trblproc-b>	O O	
Post-operational shutdown procedures	3-5.3.6.2d	<shutdown> <emergshtdn>	O O	
ENGINE MAINTENANCE WPs	4-5.3			
Maintenance work packages	4-5.3.1	<maintwp>	R	
Introduction	4-5.3	<intro>	O	
Maintenance tasks	4-5.3.1.1			
Preparation for use and assembly	4-5.3.1.1a, 4-5.3.1.1.2	<prepuse>	O	

TABLE A-XXXI. ENGINE INTERMEDIATE AND DEPOT MAINTENANCE MANUALS

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Handling	4-5.3.1.1b, 4-5.3.1.1.3	<handling>	O	
Stowage	4-5.3.1.1c	<stow>	O	
Removal	4-5.3.1.1d, 4-5.3.1.1.4	<remove>	O	
Disassembly	4-5.3.1.1e, 4-5.3.1.1.5	<dissam>	O	
Cleaning and corrosion control	4-5.3.1.1f, 4-5.3.1.1.6	<clncorr>	O	
Inspection	4-5.3.1.1g, 4-5.3.1.1.7	<insp>	O	
Service	4-5.3.1.1h	<service>	O	
Repair	4-5.3.1.1i, 4-5.3.1.1.8	<repair>	O	
Alignment	4-5.3.1.1j	<align>	O	
Painting	4-5.3.1.1k	<paint>	O	
Lubrication	4-5.3.1.1l	<lube>	O	
Assembly	4-5.3.1.1m, 4-5.3.1.1.9	<assem>	O	
Test and inspection	4-5.3.1.1n, 4-5.3.1.1.10	<test-inspect>	O	
Installation	4-5.3.1.1o, 4-5.1.1.1.11	<install>	O	
Rigging	4-5.3.1.1p	<rig>	O	
Adjustment	4-5.3.1.1q	<adjust>	O	
Calibration	4-5.3.1.1r, 4-5.3.1.1.12	<calibrate>	O	
Preparation for storage or shipment	4-5.3.1.1s, 4-5.3.1.1.13	<pss>	O	
Environmental conditioning	4-5.3.1.1t	<envircond>	O	
Safety information	4-5.3.1.1u, 4-5.3.1.1.14	<safe>	O	
Engine start and run-up	4-5.3.1.1v, 4-5.3.1.1.15	<engstart>	O	
Software loading	4-5.3.1.1w	<softload>	O	
Fabrication	4-5.3.1.1x, 4-5.3.1.1.16	<fabricate>	O	
Packing	4-5.3.1.1y	<packing>	O	
Unpacking	4-5.3.1.1z	<unpacking>	O	
Preservation	4-5.3.1.1aa	<preserve>	O	
Tracking	4-5.3.1.1ab	<track>	O	
General maintenance procedures work package	4-5.3.2	<genmaintwp>	R	
Support equipment maintenance work package	4-5.3.5	<semaintwp>	R	
Local manufacturing and assembly work package	4-5.3.6	<locmfgwp>	R	
Preinduction and mandatory inspection WP	4-5.3.8	<preindinspwp>	R	
External tubing, cabling and clamping WPs	4-5.3.9			

TABLE A-XXXI. ENGINE INTERMEDIATE AND DEPOT MAINTENANCE MANUALS

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Numerical index WP	4-5.3.9.1	<compindwp>	R	
Bracket installation WP	4-5.3.9.2	<brktwp>	R	
External components WP	4-5.3.9.3	<extcompwp>	R	
External tubing, cabling and clamping installation WP	4-5.3.9.4	<extubwp>	R	
Critical clearances WP	4-5.3.9.5	<critclwp>	R	
IPB data (as applicable for WPs listed above)	4-5.3.11	<ipb>	O	
Wiring/cabling diagram WP	4-5.3.12	<wirediawp>	O	
Wire run lists WP	4-5.3.13	<wirelistwp>	O	

TABLE A-XXXII. AIRCRAFT SYSTEMS AND EQUIPMENT MAINTENANCE ETMs/IETMs

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
TM FRONT MATTER	1-C.5.3		R	
Preface information	1-C.5.3.3			
Distribution statement	1-C.5.3.3	<distrib>	R	
Authority notice	1-C.5.3.3	<authnote>	R	
Export warning, handling and destruction notice	1-C.5.3.3	<destr>	R	
Title data	1-C.5.3.5	<titlepg>	R	
Publication number	1-C.5.3.5	<tmidno>	R	
Publication date	1-C.5.3.5	<pubdate>	R	
Type of document	1-C.5.3.5		R	
Publication title	1-C.5.3.5	<prtitle>	R	
Supersedure notice	1-C.5.3.5	<super>	R	
Effectivity notice	1-C.5.3.5	<effect>	R	
Revision summary data	1-C.5.3.7	<revsummarydata>	O	
Work package title	1-C.5.3.7	<wptitle>	O	
Description of change	1-C.5.3.7	<desc>	O	
List of contents	1-C.5.3.8	<contentlist>	O	
Subject matter title	1-C.5.3.8	<sysnomen>	O	
Subject matter sub-title	1-C.5.3.8	<sysnomen>	O	
Task type	1-C.5.3.8	<subject>	O	
How to use this ETM information	1-C.5.3.9	<howtouseetm>	O	
How to use this IETM information	1-C.5.3.9	<howtouseietm>	O	
Introduction	1-C.5.3.9	<intro>	O	
General information	1-C.5.3.9		O	
Acronyms and abbreviations list	1-C.5.3.10	<abbrevlist>	R	
Configuration identification list	1-C.5.3.11	<configlist>	R	
Supporting information data	1-C.5.2a, 1-C.5.4		R	
Hazardous materials warning summary (HMWS)	1-C.5.2a, 1-C.5.4.1	<hmwswp>	R	
Consolidated numerical index of part numbers work package Part numbers	1-C.5.2a, 1-C.5.4.2	<partnoindxwp>	R	
Consolidated numerical index of reference designations work package Reference designations	1-C.5.2a, 1-C.5.4.3	<refdesindxwp>	R	
Historical record of applicable technical directives	1-C.5.2a, 1-C.5.4.4	<hratd>	R	

TABLE A-XXXII. AIRCRAFT SYSTEMS AND EQUIPMENT MAINTENANCE ETMs/IETMs

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Consolidated list of support equipment required	1-C.5.2a, 1-C.5.4.5	<sereq>	R	
Consolidated list of materials required	1-C.5.2a, 1-C.5.4.6	<matreq>	R	
Consolidated list of reference material	1-C.5.2a, 1-C.5.4.7	<refmat>	R	
NOTE: As applicable, all work packages shall include work package title and setup information.				
DESCRIPTION AND PRINCIPLES OF OPERATION DATA	2-5.1			
DESCRIPTION WORK PACKAGES	2-5.2.4.1		R	
Aircraft general description work packages	2-5.2.4.1			
Introduction	2-5.2.4.1	<intro>	O	
Aircraft general description work package	2-5.2.4.1.1	<acdescwp>	O	
Aircraft description	2-5.2.4.1.1.1	<acdesc>	O	
Aircraft dimensions	2-5.2.4.1.1.2	<acdim>	O	
Aircraft materials distribution	2-5.2.4.1.1.3	<acmats>	O	
Aircraft arrangement work package	2-5.2.4.1.2	<acarrgwp>	O	
Aircraft systems description work package	2-5.2.4.1.3	<acsysdescwp>	O	
Aircraft instrument panel location work package	2-5.2.4.1.4	<acpnlwp>	O	
Danger areas and precautionary measures work package	2-5.2.4.1.5	<dangarwp>	O	
Aircraft stations work package	2-5.2.4.1.6	<acstawp>	O	
Aircraft dimensions work package	2-5.2.4.1.7	<acdimwp>	O	
Aircraft access and inspection panels and provisions WP	2-5.2.4.1.8	<acacesswp>	O	
Aircraft external power source connections work package	2-5.2.4.1.9	<acextpwrwp>	O	
Aircraft system, subsystem, and component description WPs	2-5.2.4.2.1	<descwp>	R	
Introduction	2-5.2.4.2	<intro>	O	
System description	2-5.2.4.2.1	<sysdesc>	O	
Subsystem description	2-5.2.4.2.1	<sysdesc>	O	
Component description	2-5.2.4.2.1	<sysdesc>	O	
Controls and indicator description	2-5.2.4.2.1.1	<ctrlinddesc>	O	
PROGRAMMING SOFTWARE DESCRIPTION WORK PACKAGES	2-5.2.4.2.4	<softwp>	R	
Introduction	2-5.2.4.2.4	<intro>	O	
Stimulus and measurement programming	2-5.2.4.2.4	<stim-measdesc>	R	
Programming statements	2-5.2.4.2.4	<statedesc>	R	
Programming tests or self tests	2-5.2.4.2.4	<progtestdesc>	R	

TABLE A-XXXII. AIRCRAFT SYSTEMS AND EQUIPMENT MAINTENANCE ETMs/IETMs

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
PRINCIPLES OF OPERATION WORK PACKAGES	2-5.2.5			
Aircraft principles of operation work packages	2-5.2.5.1	<popwp>	R	
Introduction	2-5.2.5.1	<intro>	O	
System description	2-5.2.4.2.1	<sysdesc>	O	
System principles of operation	2-5.2.5.1	<systhry>	O	
Subsystem description	2-5.2.4.2.1	<sysdesc>	O	
Subsystem principles of operation	2-5.2.5.1	<systhry>	O	
Component description	2-5.2.4.2.1	<sysdesc>	O	
Component principles of operation	2-5.2.5.1	<systhry>	O	
SCHEMATIC DIAGRAM WORK PACKAGES	2-5.2.5.4, 3-5.3.4.6.1	<schemwp>	O	
OPERATION INSTRUCTION WORK PACKAGES	2-5.2.6		O	
Operating instruction WPs	2-5.2.6.1	<operwp>	O	
Introduction	2-5.2.6.1	<intro>	O	
Equipment preparation for use	2-5.2.6.1a	<prepuse>	O	
Pre-operational setup procedures	2-5.2.6.1b	<preop>	O	
Start-up information	2-5.2.6.1c	<startupop>	O	
Build-in-test or self-test procedures	2-5.2.6.1d	<bit-st-op>	O	
Operating procedures	2-5.2.6.1e	<op-proc>	O	
Emergency operation	2-5.2.6.1f	<emerg-proc>	O	
Emergency shutdown procedures	2-5.2.6.1g	<emshut-proc>	O	
Post-operational shutdown procedures	2-5.2.6.1h	<post-op-proc>	O	
Software loading WPs	2-5.2.6.2	<softldwp>	O	
TESTING AND TROUBLESHOOTING DATA	3-5.1, 3-5.1.2, 3-5.2, 3-5.3.4			
Aircraft and aircraft systems testing and troubleshooting WPs	3-5.3.4			
Maintenance code listing WP	3-5.3.4.1	<maintcdwp>	R	
Fault indications WP	3-5.3.4.2	<fltindwp>	R	
Fault descriptor WP	3-5.3.4.3	<fltdescrptwp>	R	
Symbology WPs	3-5.3.4.4	<symwp>	R	
Fault isolation troubleshooting procedure WPs	3-5.3.4.5	<fltrblwp>	NR	
Operational checkout WPs	3-5.3.4.6.3	<opchkwp>	R	
Introduction	3-5.3.4.6.3a	<intro>	O	
General procedures and precautions	3-5.3.4.6.3b	<genproc>	O	
Pretest setup procedures	3-5.3.4.6.3c	<pretest>	O	
Operational checkout procedures	3-5.3.4.6.3d	<opchk>	R	
Post-operational shutdown procedures	3-5.3.4.6.3e	<shutdown> <emergshtdn>	O O	
Troubleshooting WPs	3-5.3.4.6.4	<trblshtwp>	R	
Introduction	3-5.3.4.6.4a	<intro>	O	
General procedures and precautions	3-5.3.4.6.4b	<genproc>	O	

TABLE A-XXXII. AIRCRAFT SYSTEMS AND EQUIPMENT MAINTENANCE ETMs/IETMs

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Troubleshooting procedures	3-5.3.4.6.4c	<trblproc-a>	O	
		<trblproc-b>	O	
Post-operational shutdown procedures	3-5.3.4.6.4d	<shutdown>	O	
		<emergshtdn>	O	
Combined operational checkout and troubleshooting WPs	3-5.3.4.6.5	<tst-trblwp>	R	
Introduction	3-5.3.4.6.5a	<intro>	O	
General procedures and precautions	3-5.3.4.6.5b	<genproc>	O	
Pretest setup procedures	3-5.3.4.6.5c	<pretest>	O	
Operational checkout and troubleshooting procedures	3-5.3.4.6.5d(1)	<opck-trblproc>	O	
	3-5.3.4.6.5d(2)	<opchk>	O	
	3-5.3.4.6.5d(3)	<trblsht>	O	
Post-operational shutdown procedures	3-5.3.4.6.5e	<shutdown>	O	
		<emergshtdn>	O	
Functional flow diagram WPs	3-5.3.4.7	<ffdiagwp>	R	
Functional flow diagrams	3-5.3.4.7, 3-5.3.4.7.1	<ffdiagram>	R	
MAINTENANCE INFORMATION WITH IPB	4-5.3			
Maintenance work packages	4-5.3.1	<maintwp>	R	
Introduction	4-5.3	<intro>	O	
Maintenance tasks	4-5.3.1.1			
Preparation for use and assembly	4-5.3.1.1a, 4-5.3.1.1.2	<prepuse>	O	
Handling	4-5.3.1.1b, 4-5.3.1.1.3	<handling>	O	
Stowage	4-5.3.1.1c	<stow>	O	
Removal	4-5.3.1.1d, 4-5.3.1.1.4	<remove>	O	
Disassembly	4-5.3.1.1e, 4-5.3.1.1.5	<dissam>	O	
Cleaning and corrosion control	4-5.3.1.1f, 4-5.3.1.1.6	<clncorr>	O	
Inspection	4-5.3.1.1g, 4-5.3.1.1.7	<insp>	O	
Service	4-5.3.1.1h	<service>	O	
Repair	4-5.3.1.1i, 4-5.3.1.1.8	<repair>	O	
Alignment	4-5.3.1.1j	<align>	O	
Painting	4-5.3.1.1k	<paint>	O	
Lubrication	4-5.3.1.1l	<lube>	O	
Assembly	4-5.3.1.1m, 4-5.3.1.1.9	<assem>	O	
Test and inspection	4-5.3.1.1n, 4-5.3.1.1.10	<test-inspect>	O	
Installation	4-5.3.1.1o, 4-5.1.1.1.11	<install>	O	
Rigging	4-5.3.1.1p	<rig>	O	

TABLE A-XXXII. AIRCRAFT SYSTEMS AND EQUIPMENT MAINTENANCE ETMs/IETMs

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Adjustment	4-5.3.1.1q	<adjust>	O	
Calibration	4-5.3.1.1r, 4-5.3.1.1.12	<calibrate>	O	
Preparation for storage or shipment	4-5.3.1.1s, 4-5.3.1.1.13	<pss>	O	
Environmental conditioning	4-5.3.1.1t	<envircond>	O	
Safety information	4-5.3.1.1u, 4-5.3.1.1.14	<safe>	O	
Engine start and run-up	4-5.3.1.1v, 4-5.3.1.1.15	<engstart>	O	
Software loading	4-5.3.1.1w	<softload>	O	
Fabrication	4-5.3.1.1x, 4-5.3.1.1.16	<fabricate>	O	
Packing	4-5.3.1.1y	<packing>	O	
Unpacking	4-5.3.1.1z	<unpacking>	O	
Preservation	4-5.3.1.1aa	<preserve>	O	
Tracking	4-5.3.1.1ab	<track>	O	
General maintenance procedures work package	4-5.3.2	<genmaintwp>	O	
Ground operations work package	4-5.3.4	<grndopwp>	O	
Support equipment maintenance work package	4-5.3.5	<semaintwp>	O	
Local manufacturing and assembly work package	4-5.3.6	<locmfgwp>	O	
IPB data (as applicable for maintenance WPs listed above)	4-5.3.11	<ipb>	O	
Wiring/cabling diagram WP	4-5.3.12	<wirediawp>	O	
Wire run lists WP	4-5.3.13	<wirelistwp>	O	
POWER PLANT BUILD-UP WORK PACKAGES	4-5.3.7			
General information WP	4-5.3.7.1	<geninfomaintwp>	R	
Quick engine change kit description WP	4-5.3.7.2	<qeckdescwp>	R	
Quick engine change assembly WP	4-5.3.7.3	<qecawp>	R	
Non-quick engine change assembly WPs	4-5.3.7.4	<nonqecawp>	R	
Additional power plant build-up WPs	4-5.3.7.5	<bldupwp>	R	
Illustrated parts breakdown data (as applicable for WPs listed above)	4-5.3.11	<ipb>	O	
AIRCRAFT WIRING INFORMATION	5-5.2.3			
WIRING DIAGRAM INFORMATION				
Wiring diagram identification and information work package	5-5.2.3.2	<wdiaidwp>	R	
Introduction	5-5.2.3.2a	<intro>	O	
Reference designator system	5-5.2.3.2b	<titledpara>	O	
Individual cable numbering	5-5.2.3.2c	<titledpara>	O	
Electrical connector identification	5-5.2.3.2d	<titledpara>	O	
Splice area identification	5-5.2.3.2e	<titledpara>	O	
Ground point identification	5-5.2.3.2f	<titledpara>	O	
Individual wire identification	5-5.2.3.2g	<titledpara>	O	

TABLE A-XXXII. AIRCRAFT SYSTEMS AND EQUIPMENT MAINTENANCE ETMs/IETMs

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Wiring diagram work packages	5-5.2.3.3	<wdiawp>	R	
Wire list work packages	5-5.2.3.4		R	
Wire run list WP	5-5.2.3.4.1	<wrunlstwp>	R	
Wiring reference designation list WP	5-5.2.3.4.2	<wrefdeswp>	R	
Wire and connector component identification and location list WP	5-5.2.3.5	<wcomplstwp>	R	
AIRCRAFT WIRE BUNDLE INFORMATION	5-5.2.4			
Wiring system bundle assembly identification and information WP	5-5.2.4.1	<bunidwp>	R	
Introduction	5-5.2.4.1a	<intro>	O	
Reference designator system	5-5.2.4.1b	<titledpara>	O	
Aircraft section identification	5-5.2.4.1c	<titledpara>	O	
Individual harness identification	5-5.2.4.1d	<titledpara>	O	
Individual cable numbering	5-5.2.4.1e	<titledpara>	O	
Electrical connector identification	5-5.2.4.1f	<titledpara>	O	
Splice area identification	5-5.2.4.1g	<titledpara>	O	
Ground point identification	5-5.2.4.1h	<titledpara>	O	
Individual wire identification	5-5.2.4.1i	<titledpara>	O	
Circuit identification	5-5.2.4.1j	<titledpara>	O	
Access information work package	5-5.2.4.2	<accessinfowp>	R	
Introduction	5-5.2.4.2	<intro>	O	
Access information	5-5.2.4.2		R	
Wire bundle assembly routing WPs	5-5.2.4.3	<bunroutewp>	R	
Introduction	5-5.2.4.3	<intro>	O	
Wire bundle assembly routing information	5-5.2.4.3	<titledpara>	O	
Bundle routing parts list	5-5.2.4.3	<bunroutepl>	O	
AIRCRAFT WIRING CONNECTOR REPAIR IDENTIFICATION	5-5.2.5			
Wiring systems repair identification and infomation work package	5-5.2.5.2	<wrepidwp>	R	
Introduction	5-5.2.5.2a	<intro>	O	
Reference designator system	5-5.2.5.2b	<titledpara>	O	
Electrical connector identification	5-5.2.5.2c	<titledpara>	O	
Splice area identification	5-5.2.5.2d	<titledpara>	O	
Ground point identification	5-5.2.5.2e	<titledpara>	O	
Individual wire identification	5-5.2.5.2f	<titledpara>	O	
Wiring system component repair tool list WP	5-5.2.5.3	<compreplistwp>	R	
Introduction	5-5.2.5.1	<intro>	O	
Component repair tool list	5-5.2.5.3	<compreplist>	R	
Aircraft specific wiring systems repair kit WP	5-5.2.5.4	<reprkitwp>	R	

TABLE A-XXXII. AIRCRAFT SYSTEMS AND EQUIPMENT MAINTENANCE ETMs/IETMs

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Introduction	5-5.2.5.1	<intro>	O	
Repair tool kit parts list	5-5.2.5.4	<reprkitlist>	R	
Wire type list WP	5-5.2.5.5	<wtypelistwp>	R	
Introduction	5-5.2.5.1	<intro>	O	
Wire type list	5-5.2.5.5	<wtypelist>	R	
Aircraft specific repair tools WP	5-5.2.5.6	<reptoolwp>	R	
Introduction	5-5.2.5.1	<intro>	O	
General description	5-5.2.5.6a	<inro>	O	
Repair procedures	5-5.2.5.6b	<maintproc>	O	
Adjustments	5-5.2.5.6c	<maintproc>	O	
Inspection	5-5.2.5.6d	<maintproc>	O	
Additional repair data	5-5.2.5.6e	<maintproc>	O	
Wiring system component repair WP	5-5.2.5.7	<wcomprepwp>	R	
Introduction	5-5.2.5.1	<intro>	O	
Description	5-5.2.5.7	<wiringcompdesc>	O	
Maintenance procedures	5-5.2.5.7	<maintproc>	R	
Terminal crimp data	5-5.2.5.7	<maintproc>	R	
Connector repairs	5-5.2.5.7	<maintproc>	R	
Silicone rubber tape boot repair	5-5.2.5.7.8	<maintproc>	R	
Aircraft cable assembly parts data WP	5-5.2.5.8	<partswp>	R	
Introduction	5-5.2.5.1	<intro>	O	
Repair parts data	5-5.2.5.8	<partsdata>	R	
STRUCTURAL REPAIR INFORMATION	6-5.2.3		R	
AIRCRAFT STRUCTURAL REPAIR DATA	6-5.2.3		R	
Aircraft structure visual index WP	6-5.2.3.1	<repindxwp>	R	
Introduction	6-5.2.3	<intro>	O	
Visual index	6-5.2.3.1	<repindx>	R	
General aircraft structural information work package	6-5.2.3.2	<genstructwp>	R	
Introduction	6-5.2.3	<intro>	O	
Aircraft structural description	6-5.2.3.2.1	<structrepair>	R	
Aircraft leveling and alignment	6-5.2.3.2.2	<structrepair>	R	
Contour data	6-5.2.3.2.3	<structrepair>	R	
In-service tolerance	6-5.2.3.2.4	<structrepair>	R	
Common shop practices	6-5.2.3.2.5	<structrepair>	R	
Repair materials	6-5.2.3.2.6	<structrepair>	R	
Support of structure	6-5.2.3.2.7	<structrepair>	R	
Crash handling and shipping	6-5.2.3.2.8	<structrepair>	R	
Typical repair data WPs	6-5.2.3.3	<typrepwp>	R	
Introduction	6-5.2.3	<intro>	O	
Skin patch repair	6-5.2.3.3a	<typrepproc>	R	
Transparent panel repair	6-5.2.3.3b	<typrepproc>	R	
Honeycomb structure repair	6-5.2.3.3c	<typrepproc>	R	

TABLE A-XXXII. AIRCRAFT SYSTEMS AND EQUIPMENT MAINTENANCE ETMs/IETMs

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Extrusion repair	6-5.2.3.3d	<typrepproc>	R	
Sealed area repair	6-5.2.3.3e	<typrepproc>	R	
Formed structure repair	6-5.2.3.3f	<typrepproc>	R	
Plastic repair	6-5.2.3.3g	<typrepproc>	R	
New/peculiar structure repair	6-5.2.3.3.1	<typrepproc>	R	
Specific repair data WPs	6-5.2.3.4	<specrepwp>	R	
Introduction	6-5.2.3	<intro>	O	
Damage identification and evaluation data	6-5.2.3.4.1	<damage>	O	
Typical repair procedures (when applicable)	6-5.2.3.4.2	<typrepproc>	O	
Specific repair procedures	6-5.2.3.4.3	<specrepproc>	O	
Illustrated parts breakdown data*	6-5.2.3.4.3.8, 6-5.2.6	<ipb>	O	
Structural group repair visual index illustrated WP (*included in all specific repairs for structural repair data)	6-5.2.3.4	<repindxwp>	O	
CORROSION CONTROL DATA	6-5.2.4			
Corrosion control materials requirements WP	6-5.2.4.1	<cormatwp>	R	
Introduction	6-5.2.4	<intro>	O	
Corrosion control materials lists	6-5.2.4.1	<cormatlist>	R	
General information WP	6-5.2.4.2	<geninfowp>	R	
Introduction	6-5.2.4	<intro>	O	
Protective covers	6-5.2.4.2.1	<titledpara>	R	
Corrosion prone areas	6-5.2.4.2.2	<titledpara>	R	
Typical corrosion control data WPs	6-5.2.4.3.1	<typcorwp>	R	
Introduction	6-5.2.4	<intro>	O	
Typical procedures	6-5.2.4.3.1	<titledpara>	O	
Inspection for corrosion WP	6-5.2.4.3.2	<corinspwp>	R	
Introduction	6-5.2.4	<intro>	O	
Cleaning procedures	6-5.2.4.3.2a	<titledpara>	O	
Inspection by methods appropriate to the area on the aircraft	6-5.2.4.3.2b	<titledpara>	O	
References	6-5.2.4.3.2c	<titledpara>	O	
Criteria for recognizing and evaluating corrosion damage	6-5.2.4.3.2d	<titledpara>	O	
Cleaning WPs	6-5.2.4.3.3	<corclnwp>	R	
Introduction	6-5.2.4	<intro>	O	
Cleaning procedures	6-5.2.4.3.3	<structrepair>	O	
Stripping WPs	6-5.2.4.3.4	<stripwp>	R	
Introduction	6-5.2.4	<intro>	O	
Stripping procedures	6-5.2.4.3.4	<proc>	O	
Corrosion removal WPs	6-5.2.4.3.5	<corremwp>	R	
Introduction	6-5.2.4	<intro>	O	
Corrosion removal procedures	6-5.2.4.3.5	<proc>	O	
Chemical treatment of metal surfaces	6-5.2.4.3.6	<chemtrtwp>	R	

TABLE A-XXXII. AIRCRAFT SYSTEMS AND EQUIPMENT MAINTENANCE ETMs/IETMs

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
WPs				
Introduction	6-5.2.4	<intro>	O	
Chemical treatment procedures	6-5.2.4.3.6	<structrepair>	R	
Corrosion control seals and sealants	6-5.2.4.3.7	<corsealwp>	R	
WPs				
Introduction	6-5.2.4	<intro>	O	
Seals and sealants procedures	6-5.2.4.3.7	<structrepair>	O	
Paint systems WPs	6-5.2.4.3.8	<paintsyswp>	R	
Introduction	6-5.2.4	<intro>	O	
Exterior marking	6-5.2.4.3.8.1	<titledpara>	R	
Interior markings	6-5.2.4.3.8.2	<titledpara>	R	
NONDESTRUCTIVE INSPECTION (NDI) DATA	6-5.2.5		R	
NDI general information WP	6-5.2.5.1	<ndigeninfowp>	R	
Introduction	6-5.2.5	<intro>	O	
General information	6-5.2.5.1	<titledpara>	R	
NDI typical procedures WPs	6-5.2.5.2	<nditypwp>	R	
Introduction	6-5.2.5	<intro>	O	
Typical procedures	6-5.2.5.2	<structrepair>	R	
NDI index WP	6-5.2.5.3	<ndindxwp>	R	
Introduction	6-5.2.5	<intro>	O	
NDI index	6-5.2.5.3c	<ndindx>	R	
NDI specific procedures WPs	6-5.2.5.4	<ndispecwp>	R	
Introduction	6-5.2.5	<intro>	O	
Item nomenclature	6-5.2.5.4.1	<itemnom>	R	
Item description	6-5.2.5.4.2	<itemdesc>	R	
Defect description	6-5.2.5.4.3	<defdesc>	R	
Primary NDI procedure	6-5.2.5.4.4	<priproc>	R	
Backup NDI procedure	6-5.2.5.4.5	<bkupproc>	R	
Illustrated parts breakdown data** (**included in all specific repairs for NDI data)	6-5.2.6	<ipb>	R	

TABLE A-XXXIII. AERONAUTICAL EQUIPMENT, AIRBORNE WEAPONS/EQUIPMENT, AND SUPPORT EQUIPMENT OPERATION AND MAINTENANCE ETMS/IETMS

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
TM FRONT MATTER	1-C.5.3		R	
Preface information	1-C.5.3.3			
Distribution statement	1-C.5.3.3	<distrib>	R	
Authority notice	1-C.5.3.3	<authnote>	R	
Export warning, handling and destruction notice	1-C.5.3.3	<destr>	R	
Title data	1-C.5.3.5	<titlepg>	R	
Publication number	1-C.5.3.5	<tmidno>	R	
Publication date	1-C.5.3.5	<pubdate>	R	
Type of document	1-C.5.3.5		R	
Publication title	1-C.5.3.5	<prtitle>	R	
Supersedure notice	1-C.5.3.5	<super>	R	
Effectivity notice	1-C.5.3.5	<effect>	R	
Revision summary data	1-C.5.3.7	<revsummarydata>	O	
Work package title	1-C.5.3.7	<wptitle>	O	
Description of change	1-C.5.3.7	<desc>	O	
List of contents	1-C.5.3.8	<contentlist>	O	
Subject matter title	1-C.5.3.8	<sysnomen>	O	
Subject matter sub-title	1-C.5.3.8	<sysnomen>	O	
Task type	1-C.5.3.8	<subject>	O	
How to use this ETM information	1-C.5.3.9	<howtouseetm>	O	
How to use this IETM information	1-C.5.3.9	<howtouseietm>	O	
Introduction	1-C.5.3.9	<intro>	O	
General information	1-C.5.3.9		O	
Acronyms and abbreviations list	1-C.5.3.10	<abbrevlist>	R	
Configuration identification list	1-C.5.3.11	<configlist>	R	
Supporting information data	1-C.5.2a, 1-C.5.4		R	
Hazardous materials warning summary (HMWS)	1-C.5.2a, 1-C.5.4.1	<hmwswp>	R	
Consolidated numerical index of part numbers work package Part numbers	1-C.5.2a, 1-C.5.4.2	<partnoindxwp>	R	
Consolidated numerical index of reference designations work package Reference designations	1-C.5.2a, 1-C.5.4.3	<refdesindxwp>	R	
Historical record of applicable technical directives	1-C.5.2a, 1-C.5.4.4	<hratd>	R	

TABLE A-XXXIII. AERONAUTICAL EQUIPMENT, AIRBORNE WEAPONS/EQUIPMENT, AND SUPPORT EQUIPMENT OPERATION AND MAINTENANCE ETMS/IETMS

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Consolidated list of support equipment required	1-C.5.2a, 1-C.5.4.5	<sereq>	R	
Consolidated list of materials required	1-C.5.2a, 1-C.5.4.6	<matreq>	R	
Consolidated list of reference material	1-C.5.2a, 1-C.5.4.7	<refmat>	R	
Maintenance allocation work package (engine intermediate maintenance only)	1-C.5.2a, 1-C.5.4.8	<maintalwp>	O	
NOTE: As applicable, all work packages shall include work package title and setup information.				
DESCRIPTION AND PRINCIPLES OF OPERATION DATA	2-5.1, 2-5.2.3			
DESCRIPTION WORK PACKAGES	2-5.2.4		R	
Aeronautical equipment, airborne weapons/equipment, and support equipment description WPs	2-5.2.4.2.2	<descwp>	R	
Introduction	2-5.2.4.2	<intro>	O	
System description	2-5.2.4.2.2	<sysdesc>	O	
Subsystem description	2-5.2.4.2.2	<sysdesc>	O	
Component description	2-5.2.4.2.2	<sysdesc>	O	
Controls and indicator description	2-5.2.4.2.1.1	<ctrlinddesc>	O	
PROGRAMMING SOFTWARE DESCRIPTION WORK PACKAGES	2-5.2.4.2.4	<softwp>	R	
Introduction	2-5.2.4.2.4	<intro>	O	
Stimulus and measurement programming	2-5.2.4.2.4	<stim-measdesc>	R	
Programming statements	2-5.2.4.2.4	<statedesc>	R	
Programming tests or self tests	2-5.2.4.2.4	<progtestdesc>	R	
PRINCIPLES OF OPERATION WORK PACKAGES	2-5.2.5			
Aeronautical equipment, airborne weapons/equipment, and support equipment principles of operation work packages	2-5.2.5.2	<popwp>	R	
Introduction	2-5.2.5.2	<intro>	O	
System description	2-5.2.4.2.2	<sysdesc>	O	
System principles of operation	2-5.2.5.2	<systhry>	O	
Subsystem description	2-5.2.4.2.2	<sysdesc>	O	
Subsystem principles of operation	2-5.2.5.2	<systhry>	O	
Component description	2-5.2.4.2.2	<sysdesc>	O	
Component principles of operation	2-5.2.5.2	<systhry>	O	
SCHEMATIC DIAGRAM WORK PACKAGES	2-5.2.5.4, 3-5.3.4.6.1	<schemwp>	O	
OPERATION INSTRUCTION WORK PACKAGES	2-5.2.6		O	
Operating instruction WPs	2-5.2.6.1	<operwp>	O	

TABLE A-XXXIII. AERONAUTICAL EQUIPMENT, AIRBORNE WEAPONS/EQUIPMENT, AND SUPPORT EQUIPMENT OPERATION AND MAINTENANCE ETMS/IETMS

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Equipment preparation for use	2-5.2.6.1a	<prepuse>	O	
Pre-operational setup procedures	2-5.2.6.1b	<preop>	O	
Controls and indicators descriptions	2-5.2.6.1c	<ctrlinddesc>	O	
Start-up information	2-5.2.6.1d	<startupop>	O	
Build-in-test or self-test procedures	2-5.2.6.1e	<bit-st-op>	O	
Operating procedures	2-5.2.6.1f	<op-proc>	O	
Emergency operation	2-5.2.6.1g	<emerg-proc>	O	
Emergency shutdown procedures	2-5.2.6.1h	<emshut-proc>	O	
Post-operational shutdown procedures	2-5.2.6.1i	<post-op-proc>	O	
Software loading WPs	2-5.2.6.2	<softldwp>	O	
TESTING AND TROUBLESHOOTING DATA	3-5.1, 3-5.1.3, 3-5.2			
Aeronautical equipment, airborne weapons/equipment, and support equipment testing and troubleshooting WPs	3-5.3.5			
Testing WPs	3-5.3.4.6.3	<opchkwp>	R	
Introduction	3-5.3.4.6.3a	<intro>	O	
General procedures and precautions	3-5.3.4.6.3b	<genproc>	O	
Pretest setup procedures	3-5.3.4.6.3c	<pretest>	O	
Testing procedures	3-5.3.4.6.3d	<opchk>	R	
Post-testing shutdown procedures	3-5.3.4.6.3e	<shutdown>	O	
		<emergshtdn>	O	
Troubleshooting WPs	3-5.3.4.6.4	<trblshtwp>	R	
Introduction	3-5.3.4.6.4a	<intro>	O	
General procedures and precautions	3-5.3.4.6.4b	<genproc>	O	
Troubleshooting procedures	3-5.3.4.6.4c	<trblproc-a>	O	
		<trblproc-b>	O	
Post-testing shutdown procedures	3-5.3.4.6.4d	<shutdown>	O	
		<emergshtdn>	O	
Combined testing and troubleshooting WPs	3-5.3.4.6.5	<tst-trblwp>	R	
Introduction	3-5.3.4.6.5a	<intro>	O	
General procedures and precautions	3-5.3.4.6.5b	<genproc>	O	
Pretest setup procedures	3-5.3.4.6.5c	<pretest>	O	
Testing and troubleshooting procedures	3-5.3.4.6.5d(1)	<opck-trblproc>	O	
	3-5.3.4.6.5d(2)	<opck>	O	
	3-5.3.4.6.5d(3)	<trblsht>	O	
Post-testing shutdown procedures	3-5.3.4.6.5e	<shutdown>	O	
		<emergshtdn>	O	
MAINTENANCE INFORMATION WITH IPB	4-5.3			
MAINTENANCE WPs	4-5.3.1	<maintwp>	R	

TABLE A-XXXIII. AERONAUTICAL EQUIPMENT, AIRBORNE WEAPONS/EQUIPMENT, AND SUPPORT EQUIPMENT OPERATION AND MAINTENANCE ETMS/IETMS

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Introduction	4-5.3	<intro>	O	
Maintenance tasks	4-5.3.1.1			
Preparation for use and assembly	4-5.3.1.1a, 4-5.3.1.1.2	<prepuse>	O	
Handling	4-5.3.1.1b, 4-5.3.1.1.3	<handling>	O	
Stowage	4-5.3.1.1c	<stow>	O	
Removal	4-5.3.1.1d, 4-5.3.1.1.4	<remove>	O	
Disassembly	4-5.3.1.1e, 4-5.3.1.1.5	<dissam>	O	
Cleaning and corrosion control	4-5.3.1.1f, 4-5.3.1.1.6	<clncorr>	O	
Inspection	4-5.3.1.1g, 4-5.3.1.1.7	<insp>	O	
Service	4-5.3.1.1h	<service>	O	
Repair	4-5.3.1.1i, 4-5.3.1.1.8	<repair>	O	
Alignment	4-5.3.1.1j	<align>	O	
Painting	4-5.3.1.1k	<paint>	O	
Lubrication	4-5.3.1.1l	<lube>	O	
Assembly	4-5.3.1.1m, 4-5.3.1.1.9	<assem>	O	
Test and inspection	4-5.3.1.1n, 4-5.3.1.1.10	<test-inspect>	O	
Installation	4-5.3.1.1o, 4-5.1.1.1.11	<install>	O	
Rigging	4-5.3.1.1p	<rig>	O	
Adjustment	4-5.3.1.1q	<adjust>	O	
Calibration	4-5.3.1.1r, 4-5.3.1.1.12	<calibrate>	O	
Preparation for storage or shipment	4-5.3.1.1s, 4-5.3.1.1.13	<pss>	O	
Environmental conditioning	4-5.3.1.1t	<envircond>	O	
Safety information	4-5.3.1.1u, 4-5.3.1.1.14	<safe>	O	
Engine start and run-up	4-5.3.1.1v, 4-5.3.1.1.15	<engstart>	O	
Software loading	4-5.3.1.1w	<softload>	O	
Fabrication	4-5.3.1.1x, 4-5.3.1.1.16	<fabricate>	O	
Packing	4-5.3.1.1y	<packing>	O	
Unpacking	4-5.3.1.1z	<unpacking>	O	
Preservation	4-5.3.1.1aa	<preserve>	O	
Tracking	4-5.3.1.1ab	<track>	O	
General maintenance procedures work package	4-5.3.2	<genmaintwp>	O	
Support equipment maintenance work package	4-5.3.5	<semaintwp>	O	

TABLE A-XXXIII. AERONAUTICAL EQUIPMENT, AIRBORNE WEAPONS/EQUIPMENT, AND SUPPORT EQUIPMENT OPERATION AND MAINTENANCE ETMS/IETMS

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Local manufacturing and assembly work package	4-5.3.6	<locmfgwp>	O	
IPB data (as applicable for maintenance WPs listed above)	4-5.3.11	<ipb>	O	
EQUIPMENT WIRING INFORMATION	5-5.2.3			
WIRING DIAGRAM INFORMATION				
Wiring diagram identification and information work package	5-5.2.3.2	<wdiaidwp>	R	
Introduction	5-5.2.3.2a	<intro>	O	
Reference designator system	5-5.2.3.2b	<titledpara>	O	
Individual cable numbering	5-5.2.3.2c	<titledpara>	O	
Electrical connector identification	5-5.2.3.2d	<titledpara>	O	
Splice area identification	5-5.2.3.2e	<titledpara>	O	
Ground point identification	5-5.2.3.2f	<titledpara>	O	
Individual wire identification	5-5.2.3.2g	<titledpara>	O	
Wiring diagram work packages	5-5.2.3.3	<wdiawp>	R	
Wire list work packages	5-5.2.3.4		R	
Wire run list WP	5-5.2.3.4.1	<wrunlstwp>	R	
Wiring reference designation list WP	5-5.2.3.4.2	<wrefdeswp>	R	
Wire and connector component identification and location list WP	5-5.2.3.5	<wcomplstwp>	R	

TABLE A-XXXIV. ENGINE INTERMEDIATE AND DEPOT MAINTENANCE ETMs/IETMs

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
TM FRONT MATTER	1-C.5.3		R	
Preface information	1-C.5.3.3			
Distribution statement	1-C.5.3.3	<distrib>	R	
Authority notice	1-C.5.3.3	<authnote>	R	
Export warning, handling and destruction notice	1-C.5.3.3	<destr>	R	
Title data	1-C.5.3.5	<titlepg>	R	
Publication number	1-C.5.3.5	<tmidno>	R	
Publication date	1-C.5.3.5	<pubdate>	R	
Type of document	1-C.5.3.5		R	
Publication title	1-C.5.3.5	<prtitle>	R	
Supersedure notice	1-C.5.3.5	<super>	R	
Effectivity notice	1-C.5.3.5	<effect>	R	
Revision summary data	1-C.5.3.7	<revsummarydata>	O	
Work package title	1-C.5.3.7	<wptitle>	O	
Description of change	1-C.5.3.7	<desc>	O	
List of contents	1-C.5.3.8	<contentlist>	O	
Subject matter title	1-C.5.3.8	<sysnomen>	O	
Subject matter sub-title	1-C.5.3.8	<sysnomen>	O	
Task type	1-C.5.3.8	<subject>	O	
How to use this ETM information	1-C.5.3.9	<howtouseetm>	O	
How to use this IETM information	1-C.5.3.9	<howtouseietm>	O	
Introduction	1-C.5.3.9	<intro>	O	
General information	1-C.5.3.9		O	
Acronyms and abbreviations list	1-C.5.3.10	<abbrevlist>	R	
Configuration identification list	1-C.5.3.11	<configlist>	R	
Supporting information data	1-C.5.2a, 1-C.5.4		R	
Hazardous materials warning summary (HMWS)	1-C.5.2a, 1-C.5.4.1	<hmwswp>	R	
Consolidated numerical index of part numbers work package Part numbers	1-C.5.2a, 1-C.5.4.2	<partnoindxwp>	R	
Consolidated numerical index of reference designations work package Reference designations	1-C.5.2a, 1-C.5.4.3	<refdesindxwp>	R	
Historical record of applicable technical directives	1-C.5.2a, 1-C.5.4.4	<hratd>	R	

TABLE A-XXXIV. ENGINE INTERMEDIATE AND DEPOT MAINTENANCE ETMs/IETMs

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Consolidated list of support equipment required	1-C.5.2a, 1-C.5.4.5	<sereq>	R	
Consolidated list of materials required	1-C.5.2a, 1-C.5.4.6	<matreq>	R	
Consolidated list of reference material	1-C.5.2a, 1-C.5.4.7	<refmat>	R	
Maintenance allocation work package (engine intermediate maintenance only)	1-C.5.2a, 1-C.5.4.8	<maintalwp>	O	
NOTE: As applicable, all work packages shall include work package title and setup information.				
DESCRIPTION AND PRINCIPLES OF OPERATION DATA	2-5.1			
DESCRIPTION WORK PACKAGES	2-5.2.3, 2-5.2.4		R	
Engine and engine systems description work packages	2-5.2.4.2.3	<descwp>	R	
Introduction	2-5.2.4.2	<intro>	O	
System description	2-5.2.4.2.3	<sysdesc>	O	
Subsystem description	2-5.2.4.2.3	<sysdesc>	O	
Component description	2-5.2.4.2.3	<sysdesc>	O	
Controls and indicator description	2-5.2.4.2.1.1	<ctrlinddesc>	O	
PRINCIPLES OF OPERATION WORK PACKAGES	2-5.2.5			
Engine systems principles of operation work packages	2-5.2.5.3	<popwp>	R	
Introduction	2-5.2.5.3	<intro>	O	
System description	2-5.2.4.2.3	<sysdesc>	O	
System principles of operation	2-5.2.5.3	<systhry>	O	
Subsystem description	2-5.2.4.2.3	<sysdesc>	O	
Subsystem principles of operation	2-5.2.5.3	<systhry>	O	
Component description	2-5.2.4.2.3	<sysdesc>	O	
Component principles of operation	2-5.2.5.3	<systhry>	O	
SCHEMATIC DIAGRAM WORK PACKAGES	2-5.2.5.4	<schemwp>	O	
TESTING AND TROUBLESHOOTING DATA	3-5.1, 3-5.1.4, 3-5.3.3			
Engine testing and troubleshooting WPs	3-5.1, 3-5.1.4, 3-5.3.3			
Engine testing and troubleshooting WPs	3-5.3.6			
Engine testing procedures WP	3-5.3.6.1	<engtestwp>	R	
Introduction	3-5.3.6.1a	<intro>	O	
General procedures and precautions	3-5.3.6.1b	<genproc>	O	
Standard charts and conversion tables	3-5.3.6.1c	<perfevaldata>	R	
Testing required after special repairs	3-5.3.6.1d	<specreptst>	O	

TABLE A-XXXIV. ENGINE INTERMEDIATE AND DEPOT MAINTENANCE ETMs/IETMs

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Test requirements	3-5.3.6.1e	<testreq>	R	
Engine inspection	3-5.3.6.1f	<enginspect>	O	
Abnormal conditions during operation	3-5.3.6.1g	<abnormcond>	O	
Engine operation under unusual conditions	3-5.3.6.1h	<unusualcond>	O	
Engine operating limits	3-5.3.6.1i	<oplimit>	R	
Engine start	3.5.3.6.1j	<engstart>	R	
Preparation for test	3-5.3.6.1k	<testprep>	R	
Engine test	3-5.3.6.1l	<engtest>	R	
Engine shutdown	3-5.3.6.1m	<shutdown>	O	
		<emergshtdn>	O	
Engine post-test	3-5.3.6.1n	<postest>	O	
Engine troubleshooting WPs	3-5.3.6.2	<trblshtwp>	R	
Introduction	3-5.3.6.2a	<intro>	O	
General procedures and precautions	3-5.3.6.2b	<genproc>	O	
Troubleshooting procedures	3-5.3.6.2c	<trblproc-a>	O	
		<trblproc-b>	O	
Post-operational shutdown procedures	3-5.3.6.2d	<shutdown>	O	
		<emergshtdn>	O	
MAINTENANCE INFORMATION WITH IPB	4-5.3			
MAINTENANCE WPs	4-5.3.1	<maintwp>	R	
Introduction	4-5.3	<intro>	O	
Maintenance tasks	4-5.3.1.1			
Preparation for use and assembly	4-5.3.1.1a, 4-5.3.1.1.2	<prepuse>	O	
Handling	4-5.3.1.1b, 4-5.3.1.1.3	<handling>	O	
Stowage	4-5.3.1.1c	<stow>	O	
Removal	4-5.3.1.1d, 4-5.3.1.1.4	<remove>	O	
Disassembly	4-5.3.1.1e, 4-5.3.1.1.5	<dissam>	O	
Cleaning and corrosion control	4-5.3.1.1f, 4-5.3.1.1.6	<clncorr>	O	
Inspection	4-5.3.1.1g, 4-5.3.1.1.7	<insp>	O	
Service	4-5.3.1.1h	<service>	O	
Repair	4-5.3.1.1i, 4-5.3.1.1.8	<repair>	O	
Alignment	4-5.3.1.1j	<align>	O	
Painting	4-5.3.1.1k	<paint>	O	
Lubrication	4-5.3.1.1l	<lube>	O	
Assembly	4-5.3.1.1m, 4-5.3.1.1.9	<assem>	O	
Test and inspection	4-5.3.1.1n, 4-5.3.1.1.10	<test-inspect>	O	
Installation	4-5.3.1.1o, 4-5.1.1.1.11	<install>	O	

TABLE A-XXXIV. ENGINE INTERMEDIATE AND DEPOT MAINTENANCE ETMs/IETMs

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Rigging	4-5.3.1.1p	<rig>	O	
Adjustment	4-5.3.1.1q	<adjust>	O	
Calibration	4-5.3.1.1r, 4-5.3.1.1.12	<calibrate>	O	
Preparation for storage or shipment	4-5.3.1.1s, 4-5.3.1.1.13	<pss>	O	
Environmental conditioning	4-5.3.1.1t	<envircond>	O	
Safety information	4-5.3.1.1u, 4-5.3.1.1.14	<safe>	O	
Engine start and run-up	4-5.3.1.1v, 4-5.3.1.1.15	<engstart>	O	
Software loading	4-5.3.1.1w	<softload>	O	
Fabrication	4-5.3.1.1x, 4-5.3.1.1.16	<fabricate>	O	
Packing	4-5.3.1.1y	<packing>	O	
Unpacking	4-5.3.1.1z	<unpacking>	O	
Preservation	4-5.3.1.1aa	<preserve>	O	
Tracking	4-5.3.1.1ab	<track>	O	
General maintenance procedures work package	4-5.3.2	<genmaintwp>	O	
Support equipment maintenance work package	4-5.3.5	<semaintwp>	O	
Local manufacturing and assembly work package	4-5.3.6	<locmfgwp>	O	
Preinduction and mandatory inspection WP	4-5.3.8	<preindinspwp>	O	
External tubing, cabling and clamping WPs	4-5.3.9			
Numerical index WP	4-5.3.9.1	<compindwp>	R	
Bracket installation WP	4-5.3.9.2	<brktwp>	R	
External components WP	4-5.3.9.3	<extcompwp>	R	
External tubing, cabling and clamping installation WP	4-5.3.9.4	<extubwp>	R	
Critical clearances WP	4-5.3.9.5	<critclwp>	R	
IPB data (as applicable for maintenance WPs listed above)	4-5.3.11	<ipb>	O	
ENGINE WIRING INFORMATION	5-5.2.3			
WIRING DIAGRAM INFORMATION				
Wiring diagram identification and information work package	5-5.2.3.2	<wdiaidwp>	R	
Introduction	5-5.2.3.2a	<intro>	O	
Reference designator system	5-5.2.3.2b	<titledpara>	O	
Individual cable numbering	5-5.2.3.2c	<titledpara>	O	
Electrical connector identification	5-5.2.3.2d	<titledpara>	O	
Splice area identification	5-5.2.3.2e	<titledpara>	O	
Ground point identification	5-5.2.3.2f	<titledpara>	O	
Individual wire identification	5-5.2.3.2g	<titledpara>	O	
Wiring diagram work packages	5-5.2.3.3	<wdiawp>	R	
Wire list work packages	5-5.2.3.4		R	
Wire run list WP	5-5.2.3.4.1	<wrunlstwp>	R	

TABLE A-XXXIV. ENGINE INTERMEDIATE AND DEPOT MAINTENANCE ETMs/IETMs

TM CONTENTS	MIL-STD-3001 REFERENCE	ELEMENT NAME	DTD REQ'D/OPT	REMARKS
Wiring reference designation list WP	5-5.2.3.4.2	<wrefdeswp>	R	
Wire and connector component identification and location list WP	5-5.2.3.5	<wcomplstwp>	R	

APPENDIX B - PREPARATION REQUIREMENTS FOR PAGE-ORIENTED TECHNICAL MANUALS

B.1 **SCOPE**.

B.1.1 Scope. This appendix establishes the style, format, and front matter requirements necessary to assemble and print complete work package technical manuals (TMs) for aircraft weapon systems, aeronautical equipment, airborne weapons/equipment, and support equipment in a page-oriented format.

B.2 **APPLICABLE DOCUMENTS**.

The applicable documents in section 2 of MIL-STD-3001-1 apply to this appendix.

B.3 **DEFINITIONS**.

The definitions in section 3 of MIL-STD-3001-1 apply to this appendix.

B.4 **GENERAL REQUIREMENTS**.

B.4.1 General. The requirements for style and format, front matter, supporting information, and TM assembly instructions contained in this appendix can be used in conjunction with the technical content parts of this standard (Part 2 through Part 8) to assemble individual descriptive, operational, and task-oriented WPs into complete TMs. TMs and revisions to TMs prepared in accordance with these requirements can be printed and distributed on paper or can be presented in page form on a computer display. For additional nonmandatory style and format requirements preferred by NAVAIR for page-oriented WP technical manuals, refer to MIL-HDBK-3001.

B.4.2 Development of technical information. The preparing activity must apply the requirements of aircraft, system, or equipment engineering design to the development of the technical content information. Once developed, this data can be used to create NAVAIR TMs that can be arranged and formatted for screen display or printed, page-oriented presentation.

B.4.2.1 Work package development. Technical information developed in accordance with this standard shall be divided into individual, stand-alone units of information, hereafter referred to as work packages. A work package is specifically designed to respond to work tasks or to provide direct support of work tasks. Work packages shall contain descriptive, operational, maintenance, testing and troubleshooting, support, and parts information for weapon systems, aeronautical equipment, airborne weapons/equipment, and support equipment. The technical information contained in these work packages shall be prepared and assembled in accordance with the requirements provided in this appendix.

B.5 **DETAILED REQUIREMENTS**.

B.5.1 General. Requirements for front matter and supporting information are provided in B.5.3 through B.5.3.2. Style and format requirements for work package TMs printed and distributed on paper or presented in page form on a computer display are provided in B.5.4 through B.5.7.

B.5.2 Mandatory and nonmandatory requirements. The requirements provided in this appendix for front matter and supporting information and style and format are considered mandatory and are intended for compliance. The requirements contained herein shall be followed to ensure that the conforming DTDs

can be used to develop digital data in accordance with MIL-PRF-28001. Additional nonmandatory writing and graphics preparation guidance is contained in MIL-HDBK-3001.

B.5.3 Front matter and supporting information organization. In addition to the technical content requirements contained in Parts 2 through 8 of this standard, all technical manuals shall include front matter and additional supporting information that are necessary to produce these manuals in a page-oriented format. The front matter and supporting information are required to organize, assemble and locate the applicable technical content information provided in Parts 2 through 7 into complete technical manuals. Appendix A of this standard provides detailed assembly and content requirements for all TMs covering operation, maintenance and parts data, at all maintenance levels through depot. The front matter identifies the manual and includes information on what is included in the manual, where the information is located and how to locate the technical information within the manual. The supporting information provides the user with an overview of the technical manual and an explanation of how the manual is used and how it is used with other manuals, when necessary. Front matter and supporting information consist of the following items:

a. Title page.

b. Numerical index of effective work packages/pages.

c. TPDR page.

d. HMWS work package.

e. Alphabetical index work package.

f. Numerical index of part numbers work package.

g. Numerical index of reference designations work package.

h. Introduction work package.

i. Consolidated lists for technical directives, support equipment, materials, and references work package.

j. Maintenance allocation work package.

B.5.3.1 Front matter. Format and content requirements for page-oriented, printed manual front matter are contained in B.5.3.1.1 through B.5.3.1.5.1.

B.5.3.1.1 Title page <**titlepg**>. A title page shall be prepared for all manuals. The format of the title page is shown in figure B-1. The title page shall contain the following content information:

a. Publication number <**tmidno**>. The publication number assigned by the requiring activity shall be placed in the extreme upper left corner of the page. Each manual or volume thereof shall have a separate publication number assigned. If the manual is to be used jointly with other services, the requiring activity's publication number shall be placed above the other services' publication number(s).

b. Former publication number <**pretmidno**>. If the manual has been renumbered, the former publication number will appear below the new number and shall be preceded by the word "Formerly." At the next revision, only the new number shall appear.

c. Publication date <**pubdate**>. The publication date or revision date shall be placed in the upper left corner, below the publication number, joint usage number, and/or former publication number.

d. Change number <**chgnum**> and date <**chgdate**>. The change number and date for a pickup revision, if applicable, shall be placed in the upper left corner, below the publication date.

e. Type of document. The words "TECHNICAL MANUAL" shall be centered on the page.

f. Publication title<**prtitle**>. The publication title shall consist of the level of maintenance, the manual type, and the end item nomenclature:

(1) Level of maintenance <**maintlvl**>. The level(s) of maintenance coverage, such as "ORGANIZATIONAL MAINTENANCE."

(2) Manual type <**manualtype**>. If applicable, the manual type such as "PRINCIPLES OF OPERATION" that is contained in the manual.

(3) End item nomenclature <**sysnomen**>. The end item nomenclature such as the system, subsystem, or equipment (including AN type designation), shall be centered below the type of manual. When applicable, the model(s), and part number(s) shall be placed below the nomenclature.

(a) Multiple AN type designations. When the manual covers more than one AN type designation, each AN type designation shall be placed sequentially below the end item nomenclature followed by the applicable model and/or part number, e.g.,

AN/ARC-300(V)1, MODEL NUMBER MXD 507, PART NUMBER 123456-801

AN/ARC-300(V)2, MODEL NUMBER MXD 508, PART NUMBER 123456-802

or

RT-2099/ARC-300 (V), P/N 45678-801

RT-2099/ARC-300 (V), P/N 45678-802.

If applicable, an effectivity statement reflecting tail numbers, BuNos, model numbers, serial numbers, etc., covered by the TM shall be added immediately following the end item nomenclature.

(b) System coverage of multiple end items <**syscomp**>. When a single manual is authorized to cover a system, all system components shall be listed below the system nomenclature. The caption "Consisting of" shall be centered below the system data. The system components shall be listed below the caption "Consisting of" in the same manner as the system data. AN type designations may be listed on the same line as the model and part numbers.

g. Cognizant Facility Activity (CFA) Notice <**cfa**>. A notice, indicating the cognizant facility activity responsible for the TM preparation, shall be included on the title page preceding the supersedure notice, for example, "This manual prepared by NAVSURFWARCENDIV, Crane, IN, Code 8024."

h. Supersedure notice <**super**>. When a manual is revised, a supersedure notice shall be placed below the end item nomenclature, designator, model, and/or part number(s). The notice shall always

include the publication number and date, and if applicable, the revision number and date of the superseded manual. For example: "This manual supersedes AE-172AA-720-l00, dated 15 November 1978." 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."

i. Cross-reference notices <**suppl**>. When required, a cross-reference notice to supplements shall be placed below the supersedure notice or publication title.

j. Continuation notice <**continue**>. When a manual must be divided, a continuation notice shall appear on the title page of each volume below the supersedure notice or publication title. The title page of each volume shall contain a statement that the applicable volume is incomplete without the other volume(s) of the set.

k. Interim rapid action change (IRAC) <**irac**>. A statement reflecting that IRACs have been incorporated into the TM.

l. Distribution statement <**distrib**>. A distribution statement shall be placed above the authority notice. The distribution statement shall read 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 only, determined on (date). Other requests for this document shall be referred to Commanding Officer, Naval Air Technical Data and Engineering Service Command, Naval Air Station North Island, P.O. Box 357031, Building 90 Distribution, San Diego, CA 92135-7031."

(1) Determination date. The determination date shall be the date of the publication (basic or revision date, as applicable) when the distribution statement is applied.

(2) Changed distribution statement. If the distribution statement is changed, the determination date will be the date of issue that effected the change.

m. Destruction notice <**destr**>. The destruction notice shall be placed directly below the distribution statement and shall read as follows:

(1) For classified manuals:

"DESTRUCTION NOTICE - For classified documents follow the procedures in DoD 5220.22M, Industrial Security Manual, Section 11-19 or DoD 5200.1R, Information Security Program Regulation, Chapter IX (Chapter 17 of OPNAVINST 5510.1)."

(2) For unclassified manuals:

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

n. Authority notice <**authnote**>. The authority notice shall be centered directly below the destruction notice.

o. National stock number <**nsn**>. National stock number (NSN) should be included immediately following the authority notice.

p. Electronic manual designation. For TMs to be published electronically, the words "NATEC ELECTRONIC MANUAL" shall be included, centered below the NSN.

B.5.3.1.1.1 Title page - classified work package manuals. The title page of a classified manual shall show the classification of the equipment nomenclature as specified in DoD 5220.22M. The following additional data is applicable to classified manual title pages:

a. The security classification assigned by the requiring activity shall be placed on the top and bottom of the title page.

b. Classified text may not appear on the last page of a classified manual. A blank page shall be furnished as the last page of a classified manual. The overall classification of the manual shall be placed at the top and bottom center of the back page.

c. Manuals classified Top Secret shall have the statement "This Publication consists of ___ Top Secret pages of ___ total pages. Copy No. of ___ copies."

d. The applicable downgrading and declassification notation in accordance with DoD 5220.22M shall be placed at the bottom of the page below the classification marking. The notation shall be boxed.

B.5.3.1.1.2 Title and cover cards (**Periodic Maintenance Requirements Card Set Decks only**). A title card <**titlecd**> or cover card shall be prepared for all Periodic Maintenance Requirements Card (PMRC) decks. The format of the title card is shown in figures B-2, B-3, and B-4. The title page shall contain the following content information:

a. Publication number <**tmidno**>. The publication number assigned by the requiring activity should be placed in the upper right corner of the card in large bold type. For Phase, QEC, ALSS and PSE cover cards a 5/8-inch space measured from the top edge of the card down to the top of the lettering should be established to allow for drilling holes. The cover card should not be numbered. It should be printed on one side only.

b. Type of document. The words "CARD DECK" should be centered in the upper portion of the card in large bold type.

c. Publication title <**prtitle**>. The publication title should consist of the type of card deck and the end item nomenclature:

(1) Type of card deck <**manualtype**>. The type of card deck is a combination of the type(s) of coverage, if applicable, and functional element(s) contained in the card deck, e.g., "PHASED MAINTENANCE REQUIREMENTS CARD DECK," "DAILY INSPECTION CARD DECK," "DAILY INSPECTION/SERVICING CARD DECK" or other types of card decks, as identified in MIL-STD-3001-7. The type of card deck should be centered on the card below the type of document in large bold type. For the Phase/QEC/ALSS card decks cover cards, identification should be centered on the card as illustrated in figure B-5. The PSE cover card should show the PSE identification (type/model aircraft followed by "PECULIAR SUPPORT EQUIPMENT," nomenclature, and part number(s)) and should be centered on the cover card as illustrated in figure B-6. If the type equipment code is different from that listed on the card deck title card, then it, too, should be included.

(2) End item nomenclature <**sysnomen**>. The end item nomenclature, such as the weapon system or equipment (including AN type designation), should be centered below the type of card deck in

large bold type. Spacing should be determined by the number of additional items required on the title page. When applicable, the model(s) and part number(s) should be placed below the nomenclature. The model(s) and part number(s) should be in large bold type. If the card deck 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 PMRCs, the type/model of the applicable aircraft will be followed by "PECULIAR SUPPORT EQUIPMENT."

d. Type equipment code <**typeeqpcode**>. The type equipment code should be centered below the manufacturer's name on publications applicable to support equipment, peculiar support equipment (if applicable), surface or aerial targets, and airborne armament equipment or special stores.

e. Supersedure notice <**super**>. When a card deck is revised, a supersedure notice should be centered below the end item nomenclature or type equipment code in normal bold type. The notice should include the superseded publication number and its date plus all previously incorporated rapid action change numbers. For example; "This card deck 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." (See figure B-3.) The notice should be deleted upon incorporation of the first change to the revised card deck. If a classified card deck is being revised, the supersedure notice should add the following statement: "which should be destroyed in accordance with applicable security regulations."

f. Interim rapid action change (IRAC) incorporation notice <**irac**>. A notice that an interim rapid action change (IRAC) has been incorporated, if applicable, should be centered below the nomenclature or type equipment code (see figure B-2).

g. Distribution statement <**distrib**>. The distribution statement should 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 only, determined on (date). Other requests for this document shall be referred to Commanding Officer, Naval Air Technical Data and Engineering Service Command, Naval Air Station North Island, P.O. Box 357031, Building 90 Distribution, San Diego, CA 92135-7031."

The determination date should 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 <**destr**>. The destruction notice should be placed directly below the distribution statement and should read as follows:

(1) For unclassified card decks:

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

(2) For classified card decks:

"DESTRUCTION NOTICE. For classified documents, follow the procedures in DoD 5220.22M, Industrial Security Manual, Section II-19 or DoD 5200.1R, Information Security Program Regulation, Chapter IX (chapter 17 of OPNAVINST 5510.1)."

i. Authority notice <**authnote**>. The publishing approval authority statement should be presented in capital letters as follows:

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

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

k. Change number <**chgnum**> and date <**chgdate**>. The change number and date, when applicable, should 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 should be included (see figure B-2).

B.5.3.1.1.3 Checklist title page. The checklist title page (see figure B-7) shall contain the following information:

a. Publication number <**tmidno**>. The publication number assigned by the requiring activity should be placed in the upper right corner of the card.

b. Publication title <**prtitle**>. The publication title should be centered below the publication number and consist of the following:

(1) Type of checklist. The type of checklist 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 checklists, as identified in MIL-STD-3001-7.

(2) End item nomenclature <**sysnomen**>. The end item nomenclature, such as the weapon system or equipment (including AN type designation), should be centered below the type of checklist. When applicable, the model(s), and part number(s) should be placed below the nomenclature. For PSE checklists, the type/model of the aircraft applicable will be followed by "PECULIAR SUPPORT EQUIPMENT."

c. Type equipment code <**typeeqpcode**>. The type equipment code should be centered below the manufacturer's name on publications applicable to support equipment, peculiar support equipment (if applicable), surface or aerial targets, and airborne armament equipment or special stores.

d. Supersedure notice <**super**>. When a checklist is revised, a supersedure notice should 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 numbers. For example: "This checklist 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." (See figures B-3 and B-7.) The notice shall be deleted upon incorporation of the first change to the revised checklist. If a classified checklist is being revised, the supersedure notice should add the following statement: "which should be destroyed in accordance with applicable security regulations."

e. Interim rapid action change (IRAC) incorporation notice <**irac**>. A notice that an interim rapid action change (IRAC) has been incorporated, if applicable, shall be centered below the nomenclature or type equipment code.

f. Abbreviated distribution statement <**distrib**>. This statement shall be expressed as follows:

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

g. Abbreviated destruction notice <**destr**>. This notice may be expressed as follows:

(1) For unclassified checklists:

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

(2) For classified checklists:

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

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

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

i. Publication date <**pubdate**>. The publication (issue) date or revision date should be placed in the lower right corner of the first page. The right margin shall be aligned with that of the publication number. The publication date shall be the copy freeze date.

j. Change number <**chgnum**> and date <**chgdate**>. The change number and date, when applicable, should 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 (see figure B-2).

k. Introduction and application statement. An introduction and application statement shall be integrated on the title page. See figure B-7 and the introduction and application statement requirements in MIL-STD-3001-7.

B.5.3.1.2 Numerical index of effective work packages/pages (A page) <**niewp**>. A numerical index of effective work packages/pages shall be included for all manuals. The "A" page shall back up the title page and shall be prepared as shown in figure B-8.

B.5.3.1.2.1 List of current revisions. A list of current pickup revisions (designated as Change 1, Change 2, etc.) to the manual, including the basic issue or complete revision, shall be listed. The list of current revisions shall account for and include the numbers and dates of all rapid action changes (RACs) issued and all interim rapid action changes (IRACs) incorporated since the basic manual or its latest revision. All manual revisions shall reflect the cumulative status of all RACs issued and incorporated. To maintain continuity of all issued RAC numbers, canceled RAC numbers, including those assigned but never issued, are to be included in the cumulative status of RACs incorporated.

B.5.3.1.2.2 List of effective cards (Periodic Maintenance Requirements Card Set Decks only) <**lecds**>. A list of effective cards (see figure B-9) should be prepared. This card should back up the title card and should be identified with the letter "A" in the lower left-hand corner. When additional space is required, "B", "C", etc., cards should be added. The list of effective cards should 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" should be placed along side of the cards so affected. Appropriate change numbers, including Rapid Action Change (RAC) numbers, should be shown in the "Change No." column. A list of current changes to the card deck, including the basic issue or revision should be identified by the word "Original" and numeral "0" should be listed. The list of current changes should include the numbers and dates of all Rapid Action Changes (RACs) incorporated since the basic card deck or its latest revision. The "A" card should contain a statement confirming the total number of card faces in the card deck. A notice that an interim rapid action change (IRAC) has been incorporated, if applicable, should be inserted between the Note and the Dates of issue for original and changed cards.

B.5.3.1.3 Technical publication deficiency reports (TPDR) incorporated pages <**tpdrpg**>. A list of TPDRs incorporated shall be prepared for all revised manuals (see figure B-10). The TPDR list shall begin on the first right-hand page following the A-page (numerical index of effective work packages/pages). In multivolume sets, each volume shall contain a list of technical publication deficiency reports incorporated for the volume.

B.5.3.1.3.1 Development of the technical publication deficiency reports incorporated. The list (**standard list**) shall reflect the data incorporated in the technical manual resulting from valid technical publication deficiency reports (TPDRs). The "Identification No." column shall indicate the reporting activity and its TPDR file number. The "Location" column shall indicate the work package number (WP)/page number (pg)/paragraph number (p)/figure number (F)/table number (T), 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 TPDR page shall be prepared at the first formal revision to the manual. If no TPDRs are to be incorporated, the word "None" shall be entered.

B.5.3.1.3.2 Technical publication deficiency reports (TPDR) incorporated cards (**Periodic Maintenance Requirements Card Set Decks only**). A list of technical publications deficiency reports incorporated card <**tpdrcard**> (see figure B-11) should be prepared for all changed/revised Periodic Maintenance Requirements Card Decks with the exception of 3-1/2" x 5-1/2" checklists and 5" x 8" single card checklists. The list (**standard list**) should reflect the data incorporated in the card deck resulting from valid Technical Publications Deficiency Reports (TPDRs). A double column format should be used. Column headings should be "Report Control Number (RCN)" and "Location." The RCN should be assigned by the reporting activity. Under the column heading "Location" the card number(s) should be indicated as appropriate, identifying the location in the card deck where the data has been incorporated. The list should reflect the data that has been incorporated in that particular issue. The list should not be cumulative. The card(s) should follow the List of effective cards ("A" card) and be numbered TPDR-1, TPDR-2, etc.

B.5.3.1.4 Hazardous Materials Warning Sheets (HMWS) work package <**hmwswp**>. The complete warnings applicable to hazardous materials and related information shall be placed in the manual's front matter as warning sheets. The acronym "HMWS" (Hazardous Material Warning Sheets) will be used to identify the warning sheets. The HMWS pages shall be placed in the manual starting on the first right-hand page following the A-page (initial issue) or TPDR pages (revision). The HMWS pages shall be prepared as shown in figure B-12.

B.5.3.1.4.1 Explanation of hazardous materials icons. Each of the nine authorized icons, with related explanation, shall be provided (see figure B-13). Immediately following the explanation of the nine authorized icons, complete warnings shall be listed for all hazardous materials used in the manual. For multivolume sets, each volume should contain a complete listing of the hazardous materials used in the multivolume set. The warnings shall be listed in the following manner:

a. Icons and material. Provide all applicable icons above the hazardous material's nomenclature and applicable specification.

b. Index number. Assign the hazardous material warning Arabic numeral identifier; either the manual's sequentially assigned index number or the contractor's database permanent numeric identifier as outlined below:

(1) Sequentially assigned numbers. 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.

(2) Contractor-assigned numbers. Contractors having an automated publishing system may assign permanent numeric identifiers for hazardous materials warnings in their database. When contractor-assigned numbers are used, 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.

c. Warning. Enter complete warning with appropriate personnel protective equipment requirements.

d. Multivolume set notation. If applicable, a note shall be placed at the bottom of the first page of the list of hazardous material warnings stating that not all numbered warnings may appear in all volumes of the manual.

e. Contractor's index number notation. If applicable, a note shall be placed at the bottom of the first page of the list of hazardous material warnings stating that the missing index numbers are not applicable to this manual.

B.5.3.1.4.2 Warnings applicable to hazardous materials card (HMWS card) (**Periodic Maintenance Requirements Card Set Decks only**). Hazardous material warning cards <**hmwscard**> (see figure B-14) shall be prepared for all hazardous materials addressed in the card deck (not to include checklists). The cards shall be titled "WARNINGS APPLICABLE TO HAZARDOUS MATERIALS" and shall be placed in the card deck immediately following the TPDR card and should 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

"Warnings for hazardous materials listed in this card deck 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, MSDSs, personal protective equipment requirements, and appropriate handling and emergency procedures and disposal guidance.

Complete warnings for hazardous materials referenced in this card deck 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 card deck. 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 card deck after the initial issue will be assigned the next consecutive number regardless of its placement in the card deck.

In the text of the card deck, 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 card deck. The caption "HAZARDOUS MATERIALS WARNINGS" should be centered on the first full page following the introductory paragraphs. The column headings "Index," "Material," and "Warning" should appear below the caption. (See figure B-14.)

B.5.3.1.4.2.1 Hazardous materials referenced in text. In the text of the card deck (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 (refer to B.5.3.1.4.1). Complete warnings for each hazardous material shall be provided on the HMWS cards.

B.5.3.1.5 Alphabetical index work package <**alphaindxwp**>. The alphabetical index WP shall be the first WP and should begin on the first right-hand page following the HMWS sheets. The primary purpose of this index is to provide access to the technical content work packages contained in the manual and further to the primary technical content information contained within each work package. (See figure B-15.)

B.5.3.1.5.1 Development of the alphabetical index work package. The primary consideration in the development of the alphabetical index shall be the accessibility of the data. Entries shall be listed as follows:

a. WP end item's nomenclature. Each WP contained in the manual shall be listed by nomenclature and the applicable WP number. The WP end item's nomenclature shall be identical with the WP title block, except for arrangement of wording.

(1) Nomenclature for the assembly/subassembly shall be arranged with the noun name preceding the modifiers; e.g., "Power Driven Rotary Vacuum Pump" shall be listed as "Pump, Rotary, Vacuum Power Driven."

(2) Nomenclature shall also be listed under significant modifiers as functional task or element cross-reference entries, e.g., "Vacuum Pump, Rotary, Power Driven."

(3) "AN" nomenclature should not be used as a main entry, but shall be used as a subordinate (cross-reference entry); e.g., "Mount, Antenna, Coupler, UHF, MT-1995/A (34A1)" shall be listed as "MT-1995/A UHF Antenna Coupler Mount (34A1)."

(4) WP end item's reference designation shall not be used as a main entry, but shall be listed following applicable entries to improve access to data. This is extremely critical when more than one item has similar nomenclature.

b. Additional alphabetical index entries. The content of each WP shall be entered under the primary WP nomenclature. Content to be listed shall include, but not be limited to system, subsystem, equipment, and component name entries and each supporting information and maintenance task included in the WP. These subordinate content listings shall be listed alphabetically. For each entry, the WP number and page that the information can be found on shall be included.

c. Effectivity notice. The effectivity shall be listed as a subordinate entry when the same basic item is covered in more than one WP by effectivity.

B.5.3.1.6 Alphabetical index work package <**alphaindxwp**> for multivolume TMs. When a TM is divided into volumes due to its thickness, the first volume of the set shall include a complete alphabetical index WP for the entire set. The primary purpose of this index is to provide access to the technical content work packages contained in all the volumes in the set. The alphabetical index work package content requirements are identical to those described in B.5.3.1.5 and B.5.3.1.5.1 except that publication number column is required. (See figure B-16.)

B.5.3.2 Supporting information. Supporting information shall be logically subdivided into the support-oriented work packages that are required to supplement or complement the technical information and task-oriented work packages developed in accordance with this standard. The format and content requirements for supporting information are contained in B.5.3.2.1 through B.5.3.2.1.3.5.

B.5.3.2.1 Work package content. Each work package developed for supporting information shall consist of the following:

a. Title block.

b. Required technical support information.

B.5.3.2.1.1 Title block <**titleblk**>. The title block (see figure B-17) shall contain the following data:

a. Work package title <**wptitle**> data. The work package title block shall contain the following title information.

(1) Maintenance levels <**maintlvl**>. The maintenance level(s) shall be stated, for example: "INTERMEDIATE AND DEPOT."

(2) WP general title <**subject**>. The title shall describe the general subject or maintenance task and follow the maintenance level, for example: "NUMERICAL INDEX OF PART NUMBERS." For **Fault Isolation Manuals only**, the specific symptom or malfunction shall be used in lieu of a general subject or maintenance task.

(3) End item nomenclature <**sysnomen**>. The end item nomenclature such as the system, subsystem, or equipment (including AN type designation), shall follow the WP general title. When applicable, the models (s) and part number (s) shall be placed below the nomenclature. When the WP covers more than one model and/or part number, all models and/or part numbers shall be listed.

b. Effectivity notice. If applicable, an effectivity notice shall be included in the title block.

c. Supersedure notice <**super**>. If applicable, a supersedure notice shall be placed below the effectivity notice. If the WP supersedes a WP in the same manual, the supersedure notice shall be as follows: "This WP supersedes (WP number), (date)." If the superseded WP is contained in another manual, the notice shall include the publication number as follows: "This WP supersedes (WP number), (date), contained in (publication number)." If an unclassified or classified WP supersedes a classified WP, the notice shall be as follows: "This WP supersedes (WP number), (date), which shall be destroyed in accordance with applicable security regulations."

d. Cross-reference notice <**suppl**>. If applicable, cross-reference notes to supplements shall be included, for example: "This WP is incomplete without WP042 00 contained in confidential supplement, NAVAIR 16-30XYZ-20."

B.5.3.2.1.2 Fault isolation title block **<fititleblk>**. For **Fault Isolation Manuals only**, the title block (see figure B-17) shall contain the following data:

a. Work package title <**wptitle**> data. The work package title block shall contain the following title information.

(1) Maintenance levels <**maintlvl**>. The maintenance level(s) shall be stated, for example: "INTERMEDIATE AND DEPOT."

(2) WP general title <**subject**>. The title shall describe the general subject or maintenance task and follow the maintenance level, for example: "NUMERICAL INDEX OF PART NUMBERS." For **Fault Isolation Manuals only**, the specific symptom or malfunction <**trblshtsym**> shall supplement the subject.

(3) End item nomenclature <**sysnomen**>. The end item nomenclature, such as the system, subsystem, or equipment (including AN type designation), shall follow the WP general title. When applicable, the models (s) and part number (s) shall be placed below the nomenclature. When the WP covers more than one model and/or part number, all models and/or part numbers shall be listed.

b. Effectivity notice. If applicable, an effectivity notice shall be included in the title block.

c. Supersedure notice <**super**>. If applicable, a supersedure notice shall be placed below the effectivity notice. If the WP supersedes a WP in the same manual, the supersedure notice shall be as follows: "This WP supersedes (WP number), (date)." If the superseded WP is contained in another manual, the notice shall include the publication number as follows: "This WP supersedes (WP number), (date), contained in (publication number)." If an unclassified or classified WP supersedes a classified WP, the notice shall be as follows: "This WP supersedes (WP number), (date), which shall be destroyed in accordance with applicable security regulations."

d. Cross-reference notice <**suppl**>. If applicable, cross-reference notes to supplements shall be included, for example: "This WP is incomplete without WP042 00 contained in confidential supplement, NAVAIR 16-30XYZ-20."

B.5.3.2.1.3 Required technical support information. Technical support information shall be developed and divided into the following types of work packages. All work packages described in B.5.3.2.1.3.1 through B.5.3.2.1.3.5 may include some general explanatory information about the content of the work package.

a. Numerical index of part numbers work package.

b. Numerical index of reference designations work package.

c. Introduction work package.

d. Consolidated lists for technical directives, support equipment, materials, and references work package.

e. Maintenance allocation work package.

B.5.3.2.1.3.1 Numerical index of part numbers work package **<partnoindxwp>**. This work package shall contain a complete list (**standard list**) of part numbers consolidated from all maintenance work packages containing group assembly parts lists (GAPLs). (See figure B-18.) The primary purpose of this index is to provide direct access to the maintenance WP and figure related to a specific part number. The heading "NUMERICAL INDEX OF PART NUMBERS" shall appear in the title block of this work package. The list shall be prepared as described below:

a. For all maintenance manuals, parts contained in the maintenance work package GAPLs shall be listed by "PART NUMBER" and "WP/FIGURE/INDEX NUMBER."

b. For an IPB manual divided into volumes, parts contained in the GAPLs shall be listed by "PUBLICATION," "PART NUMBER," and "FIGURE/INDEX NUMBER." A sufficient portion of the publication number of the manual/volume in which each part number listed appears should be identified. For example, if the publication number of the first manual is A1-F18AA-110-100 and the second manual is numbered A1-F18AA-120-100, only the numbers 110-100 and 120-100 would be listed. If the first volume is numbered A1-610AA-IMM-010 and the second volume is numbered A1-610AA-IMM-020, only the numbers 010 and 020 would be listed. The method of identification should be explained in the applicable introduction.

c. All part numbers listed in the GAPL part number column of every IPB figure contained in the maintenance work packages shall be listed. Superseded parts that have continued application shall be listed. Attaching parts shall not be listed. In order to reduce unnecessary redundant entries in the index, Government standard parts may be listed in the index only for the first work package in which they appear. Part numbers for items listed more than once in multiple work packages (except for Government standard and attaching parts) shall have entries for each listing. Part numbers shall be listed in alphanumeric sequence as follows:

(1) First position of the part number in order of precedence: the letters A through Z, the numerals zero through nine.

(2) Second and succeeding positions of the part number in order of precedence, from left to right: space (blank position), diagonal (/), point (.), dash (-), letters A through Z, and numerals zero through nine.

(3) Items without part numbers (listed with a dash (-) in the GAPL part number column) shall be listed alphabetically, using the identifying noun in lieu of a part number.

d. The diagonal lines (/) in “WP/FIGURE/INDEX NUMBER” are used to separate the entries. When more than one entry is required for a part number, the entries shall be listed in the following order of precedence: WP number, figure number, and index number. When the entry is for the IPB figure's end

item, the index number shall be left blank. Each entry shall list the WP number first, followed by a diagonal line, the figure number second, followed by a diagonal line, and the index number.

B.5.3.2.1.3.2 Numerical index of reference designations work package <**refdesindxwp**>. This work package shall contain a complete list (**standard list**) of reference designations consolidated from all maintenance work packages containing GAPLs. (See figure B-19.) The primary purpose of this index is to provide direct access to the maintenance WP and figure related to a specific reference designation. The heading "NUMERICAL INDEX OF REFERENCE DESIGNATIONS" shall appear in the title block of this work package. The list shall be prepared as described below.

a. All parts listed with a reference designation contained in the maintenance work package GAPLs shall be listed by "REF DES," and "WP/FIGURE/INDEX NUMBER." The entry "USABLE ON CODE" may be added (refer to B.5.3.2.1.3.2 c. (3)), if required.

b. For an IPB manual divided into volumes, all parts listed with a reference designation in the GAPLs shall be listed by "PUBLICATION," "REF DES," and "WP/FIGURE/INDEX NUMBER." A sufficient portion of the publication number of the manual/volume in which each part number listed appears should be identified. For example, if the publication number of the first manual is A1-F18AA-110-100 and the second manual is numbered A1-F18AA-120-100, only the numbers 110-100 and 120-100 would be listed. If the first volume is numbered A1-610AA-IMM-010 and the second volume is numbered A1-610AA-IMM-020, only the numbers 010 and 020 would be listed. The method of identification should be explained in the applicable introduction.

c. Reference designations shall be listed in reference designation sequence.

(1) Multiple identical assemblies (same reference designations). When multiple reference designations apply to the same IPB figure (e.g., circuit card assembly), all detail part reference designations shall be listed in the first work package that they appear.

(a) Second and subsequent items may reference the first item to reduce unnecessary redundant entries in the index.

(b) The second and subsequent reference designations shall reference the end item breakdown figure and reference first related item, e.g., "BKDN same as A3" or "See A3 for BKDN."

(2) Multiple end items. When more than one unit is covered by one manual, a unit reference designation must be assigned or the same reference designation may apply to subassemblies of different end items.

(3) Effectivity difference. When a reference designation applies to more than one IPB figure (e.g., effectivity difference), a "USABLE ON CODE" may be added to the index. An explanation of the "USABLE ON CODE" application and usage shall be added to the WP. When usable on codes are used, the "USABLE ON CODE" entry shall be contained on all index pages. When figure-specific usable on codes were used in different IPB figures, a modified coding must be used for this index.

d. The diagonal lines (/) in "WP/FIGURE/INDEX NUMBER" are used to separate the entries. When more than one entry is required for a reference designation, the entries shall be listed in the following order of precedence: WP number, figure number, and index number. When the entry is for the IPB figure's end item, the index number shall be left blank. Each entry shall list the WP number first, followed by a diagonal line, the figure number second, followed by a diagonal line, and the index number.

B.5.3.2.1.3.3 Introduction work packages <**introwp**>. An introduction shall be developed for all TMs. The primary purpose of the introduction is to provide information necessary to use the data provided in the TM and respective work packages as effectively as possible. The heading "INTRODUCTION" shall appear in the title block of this work package. The introduction WP shall include the following information.

a. Purpose and scope <**intropara**>. The purpose and scope of the manual, including the subject matter being covered.

b. Description and designated nomenclature <**intropara**>. The designated nomenclature and a brief description of the end item. The introduction shall not include an illustration of the equipment.

c. Requisitioning and automatic distribution of NAVAIR technical publications **<intropara>.** The following statement relative to requisitioning and automatic distribution of NAVAIR technical publications shall be included:

> "Procedures to be used by naval activities and other Department of Defense activities requiring NAVAIR technical manuals are defined in NAVAIR 00-25-100."

Additional information such as how to automatically receive future revisions and to order replacement or additional copies shall also be included.

d. Manual issue date <**intropara**>. An explanation of the manual issue date.

e. Effectivities <**intropara**>. If applicable, an explanation of the effectivities used throughout the TM.

f. Technical directives <**intropara**>. An explanation and purpose of technical directives.

g. Technical publications deficiency report (TPDR) <**intropara**>. An explanation and purpose of the TPDR.

h. Quality assurance requirements and highlighting techniques <**intropara**>. If applicable, an explanation of the quality assurance requirements and methods of highlighting QA provisions. (Refer to B.5.4.6.3).

i. Support equipment availability statement <**intropara**>. If applicable, the statement "When an item of support equipment is not available, an approved alternate identified in the activity's Individual Material Readiness List (IMRL) may be substituted." shall be included.

j. Abbreviations, symbols, new and unusual terms <**intropara**>. An explanation of the abbreviations, symbols, and new and unusual terms used in the WPs and not included in OPNAVINST 4790.2. (e.g., LOX, QEC, MAG, HCP, HCI, ESD, etc.) shall be included.

k. Safety precautions <**intropara**>. If applicable, a reference to other documents containing general safety precautions and an explanation of specific safety precautions used throughout the WPs.

l. Nuclear Survivability Requirements <**intropara**>.

(1) The introduction shall include an explanation of the [HCI] symbol's usage and method of highlighting and other pertinent information as necessary to emphasize uniqueness of Hardness Critical Items (HCI).

(2) The introduction shall include a caution statement explaining that the symbol establishes the requirement that all paragraphs and processes/steps in the WPs and items in the GAPL identified by the symbol must be followed as written to ensure nuclear hardness is not degraded.

m. Electrostatic discharge (ESD) sensitive parts <**intropara**>.

(1) The introduction shall include an explanation of the [ESD] symbol's usage and method of highlighting and other pertinent information as necessary to emphasize uniqueness of ESD sensitive components.

(2) The introduction shall include a caution statement explaining that the symbol establishes the requirement that all paragraphs and processes/steps in the maintenance WPs and items in the IPB identified by the symbol must be followed as written to ensure ESD sensitive components are not degraded. The caution shall reference OPNAVINST 4790.2 for standard maintenance practices and handling procedures and precautions.

n. Warnings, cautions, and notes <**intropara**>. An explanation of the use of warnings, cautions, and notes.

o. Other specific introductory information <**intropara**>. Additional introductory information related to a specific type of TM shall be included, as necessary.

p. How to use the manual <**how-to-use**>. When necessary, an explanation of how to use the manual and how the manual is used with other manuals shall be provided.

B.5.3.2.1.3.3.1 Introductory information for structural repair, corrosion control, and nondestructive inspection information. In addition to the introduction information contained in B.5.3.2.1.3.3, the following additional introductory information shall be developed for structural repair, corrosion control, and nondestructive inspection information.

a. Terms <**intropara**>. Definitions for commonly used structural repair, corrosion control and nondestructive methods, symbols, and repair terms of a general nature.

b. Damage evaluation <**intropara**> (**structural repair information only**). Information on how to evaluate damage to structural areas.

c. Installation procedure symbols <**intropara**> (**structural repair information onl**y). Symbols used in skin, structural, and fastener indexes and repair and replacement procedures shall be explained and illustrated.

d. Dimensions <**intropara**>. An explanation of the use of dimensions and tolerances.

e. Nondestructive inspection (NDI) methods <**intropara**> (**NDI information only**). An explanation of NDI methods which may be applied to structure, parts, or material to determine its integrity without causing change in any of its physical characteristics.

B.5.3.2.1.3.3.2 Introductory information for testing and troubleshooting procedures. In addition to the introduction information contained in B.5.3.2.1.3.3, the following additional introductory information shall be developed for all manuals containing testing and troubleshooting procedures.

a. Test procedures <**intropara**>. An explanation of how the test procedures are structured and how they are to be used in conjunction with the troubleshooting procedures.

b. Troubleshooting procedures <**intropara**>. An explanation of scope and how the troubleshooting procedures are structured and how they are to be used in conjunction with the testing procedures.

B.5.3.2.1.3.3.3 Introductory information for illustrated parts breakdown (IPB) data. All manuals containing WPs with one or more IPB figures shall include an explanation of the IPB listings and figures. The IPB explanation shall follow all other introductory information in the introduction WP (B.5.3.2.1.3.3, B.5.3.2.1.3.3.1 and B.5.3.2.1.3.3.2). The IPB explanation shall include, but not be limited to, the following:

a. Joint Service requirements <**intropara**>. Complete identifying information is required if the IPB is to be used by another service that designates the end item by its own type, model or serial numbers.

b. Numerical indexes of part numbers and reference designations <**intropara**>. An explanation, including how to use the numerical index of part numbers and reference designations.

c. Source, maintenance, and recoverability (SM&R) codes <**intropara**>. An explanation of SM&R codes, with an appropriate supporting illustration, shall be included. Reference to the specific issue of the NAVAIR instruction to which the end item was provisioned shall be made. Explain the method of provisioning used for multiple application of identical parts and the specific impact on the listed SM&R codes (e.g., first occurrence coding). In addition, the NAVICP P2300 series publications shall be cited as the source for the most current SM&R code listed in an IPB and if different than the manual, the manual requires an update to reflect any related maintenance instructions.

d. Part Number entry. Explain the meaning of a dash (-) or "COML."

e. Description entry. Explain the following entries, if applicable:

(1) Indention to show relationship, numbers and leaders (periods).

(2) Preceding symbols (HCI or ESD).

(3) Manufacturer's code.

(4) Any "make-from" parts shall include specific part number and source for the source stock item.

(a) Appearance in listing, including suppression of the Government and/or prime contractor's codes. When the prime contractor's code is suppressed, the code must be identified in the introduction.

(b) Reference shall be made to the H-4/H-8 catalog series for detailed information.

(5) Conditional acronym or abbreviation (LOX/QEC/MAG).

(6) Method of listing attaching parts.

(7) Parts kits. Method of listing, including indention.

(8) Amplifying information.

f. Units per assembly entry. Any unusual entries.

g. Useable on code entry. Application and Alternate/Equivalent/Redesigned parts.

B.5.3.2.1.3.3.4 Introductory information for separate illustrated parts breakdown (IPB) manuals. All separate IPB manuals and all multi-volume IPB manuals shall have an introduction. The introduction shall consist of the applicable requirements described in B.5.3.2.1.3.3 and B.5.2.3.1.3.3.3.

B.5.3.2.1.3.4 Consolidated lists for technical directives, support equipment, materials, and references work package <**consolistwp**>. This WP shall contain a historical list of applicable technical directives and consolidated lists for support equipment required, materials required, and references (see figure B-20). The heading "CONSOLIDATED LISTS FOR TECHNICAL DIRECTIVES, SUPPORT EQUIPMENT, MATERIALS, AND REFERENCES" shall appear in the title block of this work package. The data required for these lists are provided in B.5.3.2.1.3.4.1 through B.5.3.2.1.3.4.4.

B.5.3.2.1.3.4.1 Historical record of applicable technical directives **<hratd>**. A consolidated historical list of the technical directives (**standard list**) applicable to all WPs shall be prepared. The historical record of technical directives shall be prepared in accordance with the following guidelines.

a. An introduction shall precede the listings and shall include an explanation of the historical record of technical directives listing entries.

b. A statement that approved technical directives effecting a specific work package will be listed at the beginning of the applicable work package shall also be included.

c. The following entries are applicable for all technical directives and related engineering change proposals (ECPs) or Rapid Action Minor Engineering Changes (RAMEC):

(1) "TD Type/No." - Enter the type and number of the technical directive, e.g., "A6 AFC 454" or "AVC 1492." Note: The "TD Type/No." is identified on the Change Control Board (CCB) formal letter of ECP or RAMEC approval. Refer to NAVAIR 00-25-300.

(2) "TD Date" - Enter the date of issue of the technical directive. If the number of the technical directive has been assigned but the directive has not been issued, a dash (-) shall be entered.

(3) "Title and ECP/RAMEC No." - The title of the technical directive and ECP number or RAMEC, if applicable, shall be listed. If a technical directive listed is the direct result of an approved ECP or RAMEC, the acronym ECP or RAMEC and number shall be shown in parentheses following the technical directive title.

(4) "Date Inc." - The date the information affected by the technical directive or the ECP was incorporated into the WP.

(a) If the technical directive number has been assigned and the directive has not yet been issued (retrofit program), but the ECP that incorporates the change in the production program has been

approved, the production ECP coverage shall be included, and the notation "Production coverage only." shall be entered under "Remarks."

(b) When the retrofit TD is approved and incorporated in a change or revision following the incorporation of the production ECP coverage, the TD date of issue shall be entered under "TD Date," the notation "Production coverage only" shall be removed from under "Remarks," and the date of retrofit coverage incorporation shall be listed under "Date Inc." (in lieu of the production ECP coverage incorporation date).

(5) "Remarks" - Enter any applicable remarks.

B.5.3.2.1.3.4.2 Consolidated list of support equipment required **<sereq>**. A list of support equipment and special tools required (**standard list**) to perform the operational checkout, troubleshooting, and maintenance procedures contained in all WPs shall be prepared. The list shall be prepared in accordance with MIL-STD-3001-4 and the following additional requirements:

a. Total quantity. The total quantity is not applicable to the consolidated list of support equipment.

b. Alternate items. If an alternate item can be used, it shall be listed below the prime item to which they apply and shall be indented.

(1) Alternate item nomenclature is not required to match the prime item.

(2) The term "or equivalent" shall not be used to identify alternate part numbers.

(3) The requirement to list alternates shall not be interpreted to mean the preparing activity shall perform research to include such alternates.

(4) If information on an equivalent item is passed to the preparing activity for inclusion in the WPs, the item shall be listed as required above.

B.5.3.2.1.3.4.3 Consolidated list of materials required **<matreq>**. A list of all materials (consumable materials and/or expendable items) (**standard list**) required to perform maintenance type procedures contained in all WPs shall be prepared. The list shall be prepared in accordance with MIL-STD-3001-4, except the total quantity is not applicable to the consolidated list of materials required.

B.5.3.2.1.3.4.4 Consolidated list of reference material <**refmat**>. A complete list of reference material (**standard list**) consolidated from all technical content WPs shall be prepared. The list shall be prepared in accordance with MIL-STD-3001-4, except references to work packages in the same manual shall not be included.

B.5.3.2.1.3.5 Maintenance allocation work package <**maintalwp**> (**engine intermediate maintenance only**). This work package shall include identification of tasks applicable to each degree of intermediate maintenance for the engine and its assemblies and components. A table (**standard table**) shall be developed identifying "1st," "2nd," and "3rd" for each degree of intermediate maintenance (see figure B-21). The work package shall also include an explanation of the maintenance allocation headings and a statement that allowable maintenance shall be consistent with spare parts provisioning, support equipment and maintenance site capability and that if these conditions are not met, the engine shall be declared beyond capability of maintenance (BCM) and shall be transferred to a maintenance activity having repair capability in accordance with OPNAVINST 4790.2.

B.5.4 Style and format guidelines. The technical writing style and format guidelines provided in B.5.4.1 through B.5.7 are considered mandatory and are intended for compliance. The requirements contained herein shall be followed to ensure that the conforming DTDs can be used to develop digital data in accordance with MIL-PRF-28001. Additional nonmandatory writing and graphics preparation guidance is contained in MIL-HDBK-3001.

B.5.4.1 Printed manuals. When manuals are intended to be printed and distributed on paper, the guidelines contained in B.5.4.1.1 through B.5.4.1.3 shall be followed.

B.5.4.1.1 Page size of reproducible copy. Page sizes authorized for use in manuals prepared to this specification are 8-1/2 x 11 inches and 17 x 11 inches. Other page sizes may be used when authorized by the requiring activity.

B.5.4.1.2 Image area of reproducible copy. The image area (including marginal copy) for an 8-1/2 x 11 page is 7 x 10. The image area for a 17 x 11 page is 15-1/2 x 10.

B.5.4.1.3 Authorized printed manual size by thickness. The thickness of a printed copy shall not exceed the following limits:

Page Size (Inches)	Thickness (Inches)	Approximate Sheet Count (Sheets of Paper)
8-1/2 x 11	3	600
17 x 11	1	150 (Heavy Stock Paper)

A manual that exceeds the above limits shall be subdivided into volumes.

B.5.4.2 Text development and placement.

a. Except for description and principles of operation work packages, all text shall be single (page wide) column, single spaced (double spaced between procedural steps). Text for description and principles of operation shall be double column, single spaced.

b. Procedural step text shall not be placed on illustrations.

c. Text shall not be wrapped around an illustration.

B.5.4.3 Placement of graphics. Graphics shall be placed as close to their reference in text as possible. Foldout illustrations shall be placed at the end of a work package.

B.5.4.4 Marginal copy. The marginal copy for all pages, except the TM manual title page, consists of the items listed below:

a. Classified markings (if applicable). The security classification markings for manuals shall be identified in accordance with DoD 5200.1R, DoD 5220.22M, and OPNAVINST 5510.1.

b. Publication number(s) (all pages). The publication number shall be assigned by the requiring activity and shall be placed in the extreme upper left corner of the reproduction area.

(1) Standard Technical Manual Identification System (TMINS). Publication numbers derived by utilizing "TMINS" shall not be preceded by the authorizing activities acronym.

(2) Joint usage publications. If the publication is jointly used, the requiring activity's publication number shall be placed as required above, and the other publication number(s) shall be placed below the requiring activity's publication number.

c. Publication date. The publication date shall be one of the following: (1) Basic (initial issue) date or (2) Revision date (see B.5.6.2). The publication date and revision number shall be assigned by the requiring activity.

(1) WP title page (first page). The publication date shall be placed below the publication number.

(2) Second and subsequent pages. The basic or revision date shall not appear on the page; the revision number only shall be placed on each revision page in the upper left corner.

d. "Blank" page numbers. "Blank" pages shall be assigned a page number, but the number and the word "blank" shall appear in parentheses on the preceding page following the preceding page number in normal bold type (e.g., "Page 15/(16 blank)").

B.5.4.5 Equations. The use of equations shall be held to the minimum use required by the needs of the TM user.

NOTE

MATHPACK 911001 as included in MIL-PRF-28001 shall be used for preparing equations. The use of some equations may be limited by the Mathpack and the output system.

B.5.4.6 Writing guidelines.

B.5.4.6.1 Abbreviations and acronyms. 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 WP. The complete technical expression shall be fully spelled out followed by the abbreviation or acronym in parentheses. Abbreviations or acronyms shall not be used in a WP title.

B.5.4.6.2 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 warnings, cautions, and notes.

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 should 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 MIL-HDBK-3001.

B.5.4.6.3 Quality assurance procedures. Procedures that are essential to equipment performance or to safety of personnel are considered to be "Quality Assurance 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 the following two methods:

a. Highlighting in-process QA inspections. "In-process QA inspections" are those procedures that are essential to equipment performance or to safety of personnel. These procedures shall be observed or checked by a quality assurance inspector prior to the technician proceeding to the next step in the procedure. Therefore, quality assurance 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 quality assurance requirements cannot be verified without disassembly.

b. Quality assurance referencing. Reference to following actions (the last procedural step of a procedure) shall reference the next required action.

B.5.4.6.4 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 B.5.4.6.4.1. Warnings and cautions applicable to hazardous materials shall be based on information contained in Material Safety Data Sheets (MSDS). Under the provisions of Federal Standard No. 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. Lists of appropriate personnel protective devices shall be included.

B.5.4.6.4.1 Warnings applicable to hazardous materials. Complete warnings applicable to all hazardous materials addressed in the WPs, including appropriate personnel protective equipment requirements, shall be provided in the Hazardous Materials Warnings Sheets (HMWS). Refer to B.5.3.1.4. The warnings shall be developed from information provided by chemical manufacturers in Material Safety Data Sheets (MSDS) required by 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 Federal Standard No. 313. Additional information related to hazardous material requirements is provided in OPNAVINST 5100.23 and OPNAVINST 4110.2.

a. Warnings applicable to hazardous materials shall be presented in WPs by the use of:

(1) Index number (Arabic numeral identifier),

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

(3) Icons (nonverbal graphic symbols).

b. 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 WPs after the initial issue shall be assigned the next consecutive number regardless of the order of placement in the manual.

B.5.4.6.4.2 Hazardous materials referenced in text. In WP text, the caption "WARNING" shall not be used for hazardous materials.

B.5.4.6.5 Nuclear hardness. If equipment to be operated, maintained or overhauled has nuclear survivability requirements such as Overpressure and Burst, Thermal Radiation, Electro Magnetic Pulses (EMP) and Transient Radiation Effects on Electronics (TREE), applicable warnings shall be incorporated into the WP to ensure that hardness of equipment is not degraded during operation and maintenance.

B.5.4.6.5.1 Hardness critical symbols. All hardness critical processes/steps/items will be marked with the appropriate symbols [HCP] / [HCI] / [OCP] / [OCI] / [CSP] / [CSI].

B.5.4.6.6 Electrostatic discharge [ESD] sensitive parts. If the electronic equipment to be handled, inspected, repaired, or assembled is ESD sensitive, the ESD icon (the acronym ESD enclosed in a box) and the symbol (ESD) shall be incorporated into the applicable tasks and procedures of the technical publications to ensure that ESD sensitive parts are not degraded during handling or operation. The ESD icon shall precede the procedure title. The specific step(s) in the procedure addressing handling or operation which could damage ESD sensitive parts shall be labeled by placing the symbol (ESD) between the step number and the text.

B.5.4.6.7 Ozone depleting substances (ODS). The continued use of ozone depleting substances (ODS) has been prohibited by Executive Order 12856 of 3 August 1993. Describing the use of ODS materials in NAVAIR manuals is prohibited. A listing of these substances may be obtained from the requiring activity.

B.5.4.6.8 Nomenclature consistency. Nomenclature of identical systems, subsystems, equipment, support equipment, components, and parts of the end item shall be consistent throughout the manual. The preparing activity shall develop nomenclature lists for associate preparing activities and sub-preparing activities to ensure consistency throughout the work packages. 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.

B.5.4.6.8.1 Noun modifiers. Noun modifiers should 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 consistently throughout the technical data.

B.5.4.6.8.2 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 equipment used to prepare the data.

B.5.4.6.8.3 Designation of equipment. The official designation of 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.

B.5.4.6.8.4 National stock numbers. National stock numbers shall not appear in WPs.

B.5.4.6.8.5 Part numbers. Part numbers shall not be used in text or on illustrations except when necessary for clarity.

B.5.4.6.9 Symbols. Graphic symbols shall be used in accordance with the standards specified in B.5.5.7 If possible, new or unusual symbols should 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 equipment on which the data is being prepared.

B.5.4.6.10 Footnotes. Footnotes shall not be used. Notes shall be used when applicable.

B.5.4.6.11 References. The use of references in text can create undue hardship and/or confusion for the user of the technical data. It is recognized that use of references is required to avoid inordinate duplication of data; however, references should be kept to a minimum. A high amount of referencing in text frequently indicates improper task analysis or LSA/LMI.

a. Reference shall not be made to coverage contained in a higher maintenance level WP or NAVAIR manual from a lower maintenance level WP or NAVAIR manual (i.e., from an OMM to an IMM).

b. Reference shall not be made to coverage contained in other than NAVAIR manuals, except when the manual has been formally assigned a NAVAIR publication number.

NOTE

Commercial or joint usage manuals must be formally reviewed and approved for use prior to use by NAVAIR activities. When approved, the manuals are assigned NAVAIR publication numbers. Information related to review, approval and assigned number status can be provided by the requiring activity. The NAVAIR number is normally added during the next update of the manual and may not be listed on existing copies of the manual. Clarification can be provided by the requiring activity.

B.5.4.6.11.1 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 annotated mandatory compliance.

B.5.4.6.11.2 Maintenance procedures contained in other manuals. Maintenance procedures that are required to complete maintenance tasks that are contained in another maintenance manual shall be referenced by publication number.

B.5.4.6.11.3 Tasks performed by other work centers. Procedures that require performance of tasks by technical personnel other than those normally assigned to the subject task shall be referenced on the WP title page and in the text. For example, if the primary task is removal of a component of the flight control system that is inaccessible without removal of the power plant, a preparatory step of the procedure would be, "Remove power plant (A1-F77AA-220-300)."

B.5.4.6.11.4 Quality assurance referencing. Reference to following actions, the last procedural step of a procedure, shall reference next required action, when applicable, e.g.:

a. The last step of an installation procedure shall reference testing (Operational Checkout) or a required maintenance action, e.g., "Service hydraulic system (WP017 00)," when the maintenance procedure (installation of a hydraulic system component) required an open line.

b. The last step of a required maintenance action shall reference testing (Operational Checkout) or an additional required maintenance action, e.g., when a hydraulic actuator is replaced.

B.5.4.6.11.5 References to other manuals or volumes. References in the text shall be made by the referenced task title as follows:

a. For non-work package concept publications, reference shall be made by publication number.

b. For work package format publications, reference shall be made by publication number only.

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

d. 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 the "Reference Material" list at the beginning of the WP.

B.5.4.6.11.6 References within a manual or volume. References in the text shall be made by the referenced task title as follows:

a. Work package number.

b. Paragraphs within a work package by paragraph title and number.

c. Figures within a work package by number.

d. Index numbers on illustrations. Detail view identification and sheet numbers should be added for clarity.

e. Tables within a work package by number (if assigned).

f. Materials such as lubricants, cleaning fluid, or fuel by Government specification number.

g. Government specifications and standards by the basic number unless it is essential to reference a specific revision to the specification or standard. Government specifications and standards shall not be referenced for completion of maintenance tasks.

h. Parts on diagrams by complete reference designation.

i. Switch positions and panel markings by name as marked on the equipment.

B.5.4.6.12 Typeface and type size. Typeface, type size and spacing shall be in accordance with best commercial practices for producing the printed page. Type shall be proportionally spaced (non mono spaced). Fonts shall be selected for a balance between readability and economy of space. Setting text in capital letters shall be limited to appropriate uses, such as major headings, acronyms, equipment markings, and other instances as indicated in MIL-HDBK-3001. Typeface and type size requirements for TMs designed for interactive screen display shall be in accordance with the contracting and requiring activities.

B.5.4.6.13 Numbering.

B.5.4.6.13.1 Numerical index of effective work packages/pages (A page). The first page shall be numbered using the word "PAGE," followed by the upper case letter "A." The second and subsequent pages shall be numbered using the word "PAGE," followed by sequentially assigned upper case letters, e.g., "PAGE A, PAGE B." Numbering shall be placed in the upper right corner of the page on the same line as the requiring activity's publication date.

B.5.4.6.13.2 Technical Publications Deficiency Reports (TPDR) incorporated pages. TPDR pages shall be numbered using the acronym "TPDR," followed by sequentially assigned Arabic numerals (e.g., "TPDR-1, TPDR-2, etc."). Numbering shall be placed in the upper right corner of the page on the same line as the requiring activity's publication date.

B.5.4.6.13.3 Warnings applicable to hazardous materials page(s). The warning pages shall be numbered using the acronym "HMWS" (hazardous materials warning sheet) followed by sequentially assigned Arabic numerals (e.g., "HMWS-1, HMWS-2"). Numbering shall be placed in the upper right corner of the page on the same line as the requiring activity's publication date.

B.5.4.6.13.4 Work package number. Each WP shall be assigned a permanent number. The WP number shall be considered permanent upon distribution of the basic issue of the manual and shall not change. WP numbers may be changed only when a complete revision to a manual is authorized by the requiring activity. The WP number shall be placed on each page of the WP in the extreme upper right corner of the reproduction area.

B.5.4.6.13.4.1 Work package numbering system. Each WP number shall be a five-digit number, beginning with the number 001 00. There shall be one blank space between the third and fourth numerals. The basic WP number is identified by the first three digits of the WP number. The last two digits can be used to add work packages that reflect related coverage for the same basic descriptive information or operational or maintenance task when there is a permanent configuration difference, different support equipment, or preferred and alternate procedures required. Normally all technical content WP's last two digits should be assigned "00," indicating all required coverage for the WP subject

(task). If additional work packages are required to provide permanent configuration differences, different support equipment, or preferred and alternate procedures for the same WP subject contained in the "00" WP, the additional WPs shall be assigned a "01," "02," "03," etc.

B.5.4.6.13.4.2 WP number assignment. WP numbers 001 00 and WP 002 00 are used for front and introductory information for the applicable technical manual. WP 003 00 through WP 999 00 shall be used in sequence for the remaining technical content work packages. Refer to MIL-HDBK-3001 for additional guidance on assignment of WP numbers. The last two digits of the WP number should be "00" indicating that it is reserved during the preparation of the basic issue of the manual to permit expansion of the manual to incorporate changed or new configuration data without affecting the WP numbers previously assigned.

B.5.4.6.13.4.3 Work package page numbers. The page number shall be centered at the bottom of the page. The pages of each WP shall be numbered consecutively in Arabic numerals beginning with the number 1.

B.5.4.6.13.4.4 Work package foldout page numbers. Foldout illustrations shall be page numbered with Arabic numbers. The first foldout page of a WP shall be assigned the next number after the last standard size text or illustration page number of the WP. The page number for a foldout page shall be so placed that the number will be visible when the page is folded. The reverse side of foldout pages shall be blank. Each foldout page number shall include a blank page notation (e.g., "27/(28 blank)").

B.5.4.6.13.4.5 Work package foldout figure numbers. All foldout figures within a WP shall be identified by an Arabic numeral. Foldouts are placed at the end of each work package; therefore, foldout figure numbers shall start with the next number after the last standard size illustration figure number of the WP. When a foldout consists of more than one sheet, the sheets shall be numbered in consecutive order following the figure title.

B.5.4.6.13.5 Paragraph numbering. Primary paragraphs within a WP shall be numbered consecutively in Arabic numerals beginning with the number 1-1, 2-1, 3-1, etc. When subordinate paragraphs are required, they shall be assigned consecutive Arabic numerals under their primary paragraph (i.e., 1-2, 1-3, 2-2, 2-3, etc.).

B.5.4.6.13.6 Procedural step numbers. Procedural steps shall be numbered consecutively in Arabic numerals beginning with the number 1. If different levels of substeps and subordinate substeps are required to enhance clarity, these substeps shall also be numbered. Each level of substep numbering used shall be different. Once a numbering sequence is established, it shall remain consistent throughout the work packages. Refer to MIL-HDBK-3001 for the NAVAIR preferred numbering sequence.

B.5.4.6.13.7 Figure and table numbers.

a. Figures and tables within a work package shall be numbered consecutively in Arabic numerals beginning with the number 1.

b. For multi-sheet tables, the second and subsequent sheets shall be identified by the notation “Cont” in parentheses following the table number and title.

c. Each sheet of a multi-sheet figure shall be identified by a sheet number (e.g., Sheet 1, Sheet 2, etc.) following the figure number and title.

d. Foldouts are placed at the end of each work package; therefore, foldout figure numbers shall start with the next number after the last standard size illustration figure number of the WP.

B.5.5 Graphics guidelines.

B.5.5.1 Graphic format. All graphics developed in accordance with this standard shall be delivered in one of the three graphic formats: MIL-PRF-28003, Computer Graphic Metafile (CGM); MIL-PRF-28002, Continuous Acquisition Life-cycle Support (CALS) Raster; or MIL-PRF-28000, Initial Graphics Exchange Specification (IGES). Other commercial graphic formats may be acceptable if approved by the requiring activity.

a. The CGM file format is the preferred graphics file format.

b. All graphics files for a particular TM should be applied in the same graphics format if practical. Otherwise, files may be delivered in any combination of the allowable formats.

B.5.5.2 Illustration consistency. A standard referencing system for associated text, signal flow and equipment nomenclature shall be used between illustrations and text.

a. Standard graphic symbols shall be used when possible.

b. If special graphic symbols are required, they shall be made visually distinctive from other graphic symbols used and included in a special symbols chart.

c. Official nomenclature shall be used for hardware, controls, indicators, switches, etc. Consistent, standard nomenclature shall be used for functions, signals, etc.

B.5.5.3 Types of graphics. The following types of graphics shall be used in the preparation of TMs. Refer to MIL-HDBK-3001 for examples.

a. Line drawings.

b. Photographs.

c. Engineering drawings.

d. Diagrams.

e. Charts and graphs.

B.5.5.4 Use of photographs and halftones. Photographs may be used for illustrations. When a photograph provides for better clarity than a line drawing, the photograph should be used. Photographs should not be used on foldouts. If the intention is to use photographs in lieu of line art, it is preferred that a digital camera be used to produce the required photos. This will negate the use of halftones and the need for retouching and screening. However, if the final reproducible copy is intended to produce paper output, it may be better to prepare line art in lieu of photographs. Obtain approval from the requiring activity for the use of photographs in paper TMs.

B.5.5.4.1 Exceptions to use of halftone illustrations. In certain instances, such as the requirement to illustrate corrosion damage or wear patterns, a line drawing or a line tracing of a photograph will not contain the necessary detail and clarity. When such illustrative material must be contained in a technical

manual, photographic (halftone) illustrations or color overlays (see B.5.5.11) may be used. Such information may be contained in a supplement to the maintenance manual if approved by the requiring activity. The supplement shall contain sufficient information on the purpose of the supplement and technical data (test) to ensure understanding and maintain continuity of information. The basic manual shall identify the supplement and its usage.

B.5.5.5 Multiple use of illustrations. Whenever possible, one illustration should be used in support of two or more requirements. For example, illustrations prepared to support the parts list data shall be used to support the maintenance procedures contained in the same maintenance WP. However, additional illustrations may be developed to support the maintenance procedures if the parts list illustration does not adequately provide the guidance to perform the maintenance procedures.

B.5.5.6 Engineering drawings. Unless specified otherwise by the requiring activity, engineering drawings shall not be used as illustrations. When used,

a. They shall be in accordance with MIL-STD-100 and MIL-T-31000 (required for new designs after 01 July 1990) and shall be modified, as necessary, to meet the content, style, arrangement, legibility, format, and production requirements described in this document and the contract.

b. All unnecessary data that would reduce the comprehension or clarity of the illustration shall be removed.

c. They must be reduced or redrawn to meet page size restrictions

B.5.5.7 Diagrams. Diagrams shall be prepared in accordance with the specifications listed below.

Subject	Equipment Covered	Specification
Abbreviations	All	OPNAVINST 4790.2
Drafting Practices	Mechanical, Electrical and Electronic	ANSI Y14.15-1966 (R1973)
Engineering Drawing Practices	All	MIL-STD-100, MIL-T-31000, ANSI Y14.15
Graphic Symbols	Electrical and Electronic	IEEE 315A-86, IEEE 280-85 (ANSI Y10.5)
	Mechanical	MIL-STD-17
	Digital (Logic)	IEEE 91-84
	Fluid Power	ANSI Y32.10
Reference Designators	Electrical and Electronic	IEEE 200-75
Unit Symbols	All	IEEE 260-78
Logic	All	IEEE 91-84
Dimensions and Tolerances	All	ASME Y14.5M-94

B.5.5.7.1 Types of diagrams. The following types of diagrams may be included in the TM. Refer to MIL-HDBK-3001 for examples of style, format, and content.

a. Block diagrams.

b. Schematic diagrams.

c. Pictorial diagrams.

d. Cutaway diagrams.

e. Troubleshooting logic diagrams.

f. Wiring diagrams/wire lists.

g. Cable diagrams.

h. Piping diagrams.

i. Test setup diagrams.

B.5.5.8 Test point identification symbols on diagrams. Identification of test points by symbols should not be employed where the test points are readily identifiable by other means; for example: "Test jacks (TP-5)," "Connector pins (J100-M)," and "Component pins (X4-2, Q1-E, and Z5-14)" are readily identifiable points and do not require symbols. Test points that are not otherwise identifiable (artificial test points) should be identified by test point symbols. The test point symbol should be an encircled uppercase letter and an Arabic numeral. These test points will be referred to in the text such as "Test point A2." Artificial test points should be used when specific voltage and resistance test points, used in checking a circuit, are otherwise unidentifiable. Different letters should be assigned to each component (on a diagram), for example: test points Al, A2, and A3 in component l; test points B1, B2 and B3 in component 2.

B.5.5.9 Signal flow. Signal flow, especially for electrical and electronic equipment, critically affects the understandability of diagrams. To assist the TM user in following the diagram, where possible, major signal or pressure flow shall be from left to right, and feedback or return flow shall be from right to left.

B.5.5.10 Charts and graphs. Charts and graphs shall be prepared as illustrations. Instructions shall be provided for use and interpretation of complex graphs.

B.5.5.11 Use of color. Color may be used in artwork only with specific authorization of the requiring activity.

B.5.5.12 Credit lines. The photographer's or artist's name shall not appear on artwork; neither shall a manufacturer's name, symbol, or trademark appear thereon for the purpose of identifying the illustration. A preparing activity's illustration identification number may be used for artwork.

B.5.5.13 Callouts. Items such as index numbers, reference designator, nomenclature, leader lines, legends, and keys shall be used to identify significant features.

B.5.5.14 Index numbers. Index numbers for each separate figure shall begin with number one and continue consecutively. All sheets of a multi-sheet illustration shall be considered one figure.

B.5.5.14.1 Index numbers for maintenance with IPB data. Index numbers assigned to the parts list shall be used on illustrations that support the maintenance procedures. Nomenclature callouts may be added to the same illustrations to supplement the parts list index numbers when additional identification is required to support the maintenance procedure text.

B.5.5.14.2 Legends (keys). A legend consisting of a numerical listing and associated identification shall be included on the artwork and shall not be included as part of the text.

B.5.5.15 Leader lines. Normally, leader lines should touch the object to which the lines apply. Arrowheads are preferred for clarity.

B.5.5.16 Procedures on illustrations. Procedural steps shall not be used on illustrations.

B.5.5.17 Figure titles. Illustrations shall be assigned figure titles. The title shall follow the figure number and shall be placed below the applicable illustration. Figure titles of foldout illustrations shall be visible when the illustration is folded.

B.5.5.18 Cartoons. Cartoon-type drawings shall not be used.

B.5.6 Revisions. There are two types of revisions that can be prepared for a NAVAIR TM: a pickup revision and a complete revision. The requiring activity will determine the type of revision required.

B.5.6.1 Pickup revisions. A pickup revision incorporates the basic issue or latest revision of a manual, all previous change pages, and the new change pages that would require the issuance of an additional revision. Only those updated or added change pages will have the current change number and date. Those pages not affected by the current change shall retain the previous change symbols and change number/date.

B.5.6.1.1 Changed pages/work packages. When change pages are ordered, the deliverable product for printing and distribution will be a pickup revision. Change pages will be written in the same style and format as the existing manual.

B.5.6.1.2 Change numbers. Following the basic issue or a complete revision, change pages shall be numbered beginning with "Change 1." Subsequent change pages shall be numbered consecutively until a complete revision is issued. If a page has been previously changed, the previous change number and date shall be removed and replaced by the current change number and date. The change number and date shall be placed below the publication number on all pages affected by the change. The change number and date of the current affected pages shall coincide with the change number and date of the pickup revision and shall be placed on the TM title page below the date of the basic or latest revision of the publication. When change pages are prepared to work packages, the manual change number and date will also appear on the title block page of the work package below the manual number.

B.5.6.2 Complete revisions. A complete revision requires rewrite and reorganization of the technical content of the data. All pages, paragraphs, illustrations and tables shall be renumbered to establish correct sequence. WPs will be renumbered and assigned new WP sequence numbers in consecutive order (see B.5.4.6.13.4). All existing change numbers, change bars, dates and change symbols will be removed. Change symbols will be inserted only on those pages incorporating new or changed data during the preparation of the complete revision. The revision date will be assigned by the requiring activity.

B.5.6.3 Change symbols. Changes to text and tables shall be indicated by a change bar or the letter "R." A miniature pointing hand, change bar, or "MAJOR CHANGE" symbol shall be used for illustrations. (Change symbols are not required for the Alphabetical Index, IPB illustrations, and Numerical Index of: (1) Effective Work Packages/Pages, (2) Effective Pages, (3) Part Numbers, or (4) Reference Designations.) All existing change symbols shall be eliminated from the pages affected by the current change. After removal of previous change symbols, new change symbols shall be inserted highlighting material changed or added during the current change. For guidance on the use and insertion of change symbols, refer to MIL-HDBK-3001.

B.5.6.4 Supersedure notice. A supersedure notice is always required when a revision is issued and may be required when a TM issue supersedes other TMs or portions of TMs.

B.5.6.4.1 Title page supersedure notice. The supersedure notice is placed on the title page of the manual and must be tailored to the application (see B.5.3.1.1).

B.5.6.4.2 WP title block supersedure notice. When a work package is completely revised, the supersedure notice is placed in the title block below the effectivity notice (see B.5.3.2.1.1).

B.5.7 Security classification markings. The security classification markings for manuals shall be identified in accordance with DoD 5200.1R, DoD 5220.22M, and OPNAVINST 5510.1. For guidance on security classification and handling restrictive markings on Compact Disk-Read Only Memory (CD-ROM), refer to MIL-HDBK-9660.

A1-F18AC-130-100
1 May 1995

TECHNICAL MANUAL

ORGANIZATIONAL MAINTENANCE
PRINCIPLES OF OPERATION

LANDING GEAR AND RELATED SYSTEMS

NAVY MODEL

F/A-18A/B/C/D

161353 AND UP

This manual prepared by NAVSURFWARCENDIV
Crane, IN, Code 8024

This manual supersedes A1-F18AC-130-100, dated 1 June 1989, changed 1 October 1994.

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Published by Direction of the
Commander, Naval Air Systems Command

NSN 0801LP3105060

NATEC ELECTRONIC MANUAL

FIGURE B-1. Example of a title page.

A1-C3AAA-MRC-400

CARD DECK
PHASED MAINTENANCE REQUIREMENTS MANUAL
MODEL C-3A AIRCRAFT

THIS CHANGE INCORPORATES IRAC 7.

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1 JANUARY 1982

CHANGE 3 - 1 NOVEMBER 1986

FIGURE B-2. Example of an aircraft, QECA or ALSS card deck title card.

NAVAIR 17-600-117-6-2

CARD DECK
PERIODIC MAINTENANCE REQUIREMENTS MANUAL
HELICOPTER ENGINE AND AFT TRANSMISSION WINCH,
A02E5808-43 AMERICAN CHAIN AND CABLE COMPANY, INC.
GMAC

This card deck 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.

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1 JUNE 1983

FIGURE B-3. Example of an armament/special stores, support equipment or target (surface or aerial) card deck title card.

AG-500QA-MRC-000

CARD DECK
PERIODIC MAINTENANCE REQUIREMENTS MANUAL
SH-60B PECULIAR SUPPORT EQUIPMENT

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1 DECEMBER 1992

FIGURE B-4. Example of a PSE card deck title card.

NAVAIR 01-XXX-6-4

CARD DECK
PHASED
MAINTENANCE REQUIREMENTS MANUAL
PHASE A

or

NAVAIR 02B-XXX-6-3

CARD DECK
QUICK ENGINE CHANGE
MAINTENANCE REQUIREMENTS MANUAL

MODEL A-4E AIRCRAFT

FIGURE B-5. Example of phase/QEC/ALSS cover cards.

AG-500QA-MRC-000

CARD DECK

SH-60B PECULIAR SUPPORT EQUIPMENT

COVER, ENGINE INLET

217C396P01

FIGURE B-6. Example of a PSE cover card.

A1-C3AAA-MRC-100

TURNAROUND CHECKLIST
MODEL C-3A AIRCRAFT

This checklist supersedes NAVAIR A1-C3AAA-MRC-100 dated 1 April 1977, including previously incorporated RACs 1 through 8.

DISTRIBUTION STATEMENT C. Distribution authorized to U.S. Government agencies and their contractors, determined on 1 Jan. 1987.

PUBLISHED BY DIRECTION OF
THE COMMANDER,
NAVAL AIR SYSTEMS COMMAND

This checklist contains abbreviated inspection requirements that are necessary to inspect the integrity of the aircraft for flight and to determine the need for servicing. Time required to perform these tasks is approximately (1) hour EMT.

WARNINGS/CAUTIONS APPLICABLE TO HAZARDOUS MATERIALS

Warnings and cautions 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)

1 January 1987

A1-C3AAA-MRC-100

Program Manual, NAVSUPINST 5100.27, Navy Hazardous Material Control Program 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 materials, MSDS, personal protective equipment requirements and appropriate handling and emergency procedures.

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.

WARNING: Do not use ejection seat safety pin (MDE 32722-311) on ejection seats before ACC 187.

Area must be free of foreign objects and the following safety items Installed/removed or properly positioned as applicable.

a. Centerline stores rack (if installed).
b. External wing fuel tanks (if installed).
c. Wing missile launchers (if installed).
d. Arresting gear.
e. Landing gear actuator struts (3).
f. Arresting hook uplock.

1

FIGURE B-7. Example of a title / introduction / application page for checklists.

A1-H53CD-SEC-000
1 March 1996 **PAGE A**

NUMERICAL INDEX OF EFFECTIVE WORK PACKAGES/PAGES

List of Current Changes

Original 0.....1 March 1996

Only those work packages/pages assigned to the manual are listed in this index. Dispose of the superseded issues of the technical manuals. Superseded classified technical information shall be destroyed in accordance with applicable regulations. The portion of text affected in a changed or revised work package is indicated by change bars or the change symbol “R” in the outer margin of each column of text. Changes to illustrations are indicated by pointing hands or change bars, as applicable.

Total number of pages in this manual is 62 consisting of the following:

WP/Page No.	Change No.	WP/Page No.	Change No.	WP/Page No.	Change No.
Title.....	0	001 00.....	0	003 00.....	0
A	0	1.....	0	1 thru 25.....	0
TPDR-1	0	2 Blank.....	0	26 Blank.....	0
TPDR-2 Blank	0	002 00.....	0	004 00.....	0
HMWS-1 thru HMWS-3.....	0	1 thru 6.....	0	1 thru 20.....	0
HMWS-4 Blank	0				

FIGURE B-8. Example of a numerical index of effective work packages / pages.

NAVAIR 13-600-4-6-3

LIST OF EFFECTIVE CARDS

Insert latest changed cards. Dispose of superseded cards in accordance with applicable regulations.

NOTE: The portion of the text affected by the change is indicated by a vertical line or the change symbol "R" in the outer margin of the card.

Dates of issue for original and changed cards:

Original.....1 JAN 82 incl. RACs 1 thru 66
Change 1.....1 JUN 82
RAC 7..... 10 SEP 83
Change 2 .....15 APR 85
Change 3 .....1 NOV 86 (IRAC 8 inc.)

The total number of card faces in this manual is 83 consisting of the following:

CARD NO.	CHANGE NO.	CARD NO.	CHANGE NO.	CARD NO.	CHANGE NO.
Title	3	vi	1	2.2	3
A	3	vii	2	2.3	2
B	3	viii	2	3	2
C	3	1	2	3.1	3
i	1	1.1	0	3.2	3
ii	2	1.2	3	3.3	2
iii	1	1.3 Blank	3	3.4	2
iv	2	2	3	3.5	1
v	2	2.1	3	3.6	1

A CHANGE 3

FIGURE B-9. Example of an "A" card.

AW-394AC-750-000 **TPDR-1**
1 February 1997 **(TPDR-2 blank)**

INTERMEDIATE AND DEPOT MAINTENANCE WITH ILLUSTRATED PARTS BREAKDOWN

LIST OF TECHNICAL PUBLICATION DEFICIENCY REPORTS INCORPORATED

AIRCRAFT GUIDED MISSILE LAUNCHER LAU-115/A
PART NUMBERS 74A730351-1003 AND 74A730351-1007

AIRCRAFT GUIDED MISSILE LAUNCHER LAU-115A/A
PART NUMBERS 74A730351-1009 AND 74A730351-1011

AIRCRAFT GUIDED MISSILE LAUNCHER LAU-115C/A
PART NUMBERS 74A730351-1013 AND 74G730351-1015

1. The TPDRs listed below have been incorporated in this issue.

IDENTIFICATION NUMBER	LOCATION
NAVAL AIR STATION LEMOORE / N44321-92-0146	WP008 00
NAWC WEAPONS DETACHMENT NAS MIRAMAR/ R09111-96-025	WP011 02
NAWC WEAPONS DETACHMENT NAS MIRAMAR/ R09111-96-0026	WP011 02
NAWC WEAPONS DETACHMENT NAS MIRAMAR/ R09111-96-0027	WP011 02
NAWC WEAPONS DETACHMENT NAS MIRAMAR/ R09111-96-028	WP011 02
USS THEODORE ROOSEVELT (CVN 71)/ V21247-95-0049	WP012 00

FIGURE B-10. Example of a technical publication deficiency report.

CARD TPDR-1	A1-C3AAA-MRC-000 DATE: 1 January 1984	CHANGE NO.	TECHNICAL PUBLICATIONS DEFICIENCY REPORTS

LIST OF TECHNICAL PUBLICATIONS DEFICIENCY REPORTS INCORPORATED

Report Control Number (RCN)	Location
VP-49, No. 0016/56652	Card No. 3.16
NAS Whidbey Island, No. 0141/60348	Card No. 3.20
HSL-43, No. 0037/70849	Card No. 4.5
NAF Mayport, No. 0221/70849	Card No. 5.9

FIGURE B-11. Example of technical publications deficiency report (TPDR) card.

AW-642LA-741-000 **HMWS-1**
Change 1

INTERMEDIATE MAINTENANCE
WITH ILLUSTRATED PARTS BREAKDOWN

WARNINGS APPLICABLE TO HAZARDOUS MATERIALS

ELECTRICAL EQUIPMENT RACK MT-6809/APG-73
PART NUMBER 3525078-110

This WP supersedes HMWS WP, dated 15 March 1994.

1-1 **INTRODUCTION**.

1-2 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, NAVSUPINST 5100.27, Navy Hazardous Material Control Program, 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) must be provided and available for review by users. Consult your local safety and health staff concerning any questions regarding hazardous materials, MSDSs, personal protective equipment requirements, and appropriate handling and emergency procedures and disposal guidance.

1-3 Under the heading **HAZARDOUS MATERIALS WARNINGS,** complete warnings, including related icon(s) and a numeric identifier, are provided for hazardous materials used in this manual. Each hazardous material is assigned only one numeric identifier. Since only those hazardous materials addressed in this manual will be listed, the numeric identifiers may not appear in sequential order.

1-4 In the text of the manual, the caption **WARNING** is not used for hazardous material warnings. Hazards are cited with appropriate icon(s), the nomenclature of the hazardous material, and the numeric identifier that relates to the complete warning. Users of hazardous materials shall refer to the complete warnings.

EXPLANATION OF HAZARDOUS MATERIALS ICONS

Biological
The abstract symbol shows that a material may contain bacteria or viruses that present danger to life or health.

Chemical
The symbol of a liquid dripping onto a hand shows that the material will cause burns or irritation to human skin or tissue.

Eye Protection
The symbol of a person wearing goggles shows that the material will injure the eyes.

Fire
The symbol of a fire shows that the material may ignite and cause burns.

Poison
The symbol of a skull and crossbones shows that the material is poisonous or is a danger to life.

FIGURE B-12. Example of hazardous materials warnings sheets.

AW-642LA-741-000

HMWS-2

Cryogenic
The symbol of a hand in a block of ice shows that the material is extremely cold and can injure human skin or tissue.

Explosion
This rapidly expanding symbol shows that the material may explode if subjected to high temperature, sources of ignition, or high pressure.

Radiation
The symbol of three circular wedges shows that a material emits radioactive energy and can injure human tissue or organs.

Vapor
The symbol of a human figure in a cloud shows that material vapors present a danger to life or health.

HAZARDOUS MATERIALS WARNINGS

Acrylic Lacquer, MIL-L-81352 **2**

Acrylic lacquer, MIL-L-81352, is toxic, flammable, and highly irritating to the eyes. Protection: chemical splashproof goggles, gloves, and good ventilation; keep container closed; keep sparks, flames, and heat away. Keep lacquer off skin, eyes, and clothes; do not breathe vapors.

Electrical Insulating Enamel, MIL-E-22118 **22**

Electrical insulating enamel, MIL-E-22118, is toxic and flammable. Protection: chemical splashproof goggles, gloves, and forced ventilation (or respirator); keep container closed; keep sparks, flames, and heat away. Keep enamel off skin, eyes, and clothes; do not breathe vapors. Wash hands thoroughly after handling.

Drycleaning Solvent, P-D-680 **20**

Drycleaning solvent, P-D-680, Type II, is toxic and combustible. Protection: chemical splashproof goggles, gloves, and forced ventilation (or respirator). Keep container closed; keep sparks, flames, and heat away. Keep solvent off skin, eyes, and clothes. Do not breathe vapors.

Epoxy Polyamide Primer, MIL-P-23377 **26**

Epoxy polyamide primer, MIL-P-23377, is toxic and flammable. Protection: chemical splashproof goggles, gloves, and forced ventilation (or respirator). Keep container closed; keep sparks, flames, and heat away. Keep primer off skin, eyes, and clothes.

FIGURE B-12. Example of hazardous materials warnings sheets - continued.

Biological

The abstract symbol shows that a material may contain bacteria or viruses that present danger to life or health.

Chemical

The symbol of a liquid dripping onto a hand shows that the material will cause burns or irritation to human skin or tissue.

Cryogenic

The symbol of a hand in a block of ice shows that the material is extremely cold and can injure human skin or tissue.

Explosion

This rapidly expanding symbol shows that the material may explode if subjected to high temperature, sources of ignition, or high pressure.

Eye Protection

The symbol of a person wearing goggles shows that the material will injure the eyes.

Fire

The symbol of a fire shows that the material may ignite and cause burns.

Poison

The symbol of a skull and crossbones shows that the material is poisonous or is a danger to life.

Radiation

The symbol of three circular wedges shows that a material emits radioactive energy and can injure human tissue or organs.

Vapor

The symbol of a human figure in a cloud shows that material vapors present a danger to life or health.

FIGURE B-13. Example of icons applicable to hazardous materials warnings.

CARD HMWS-1	A1-C3AAA-MRC-300 DATE: 1 January 1982	CHANGE NO.	WARNINGS APPLICABLE TO HAZARDOUS MATERIALS

INTRODUCTION

Warnings for hazardous materials listed in this card deck 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, MSDSs, personal protective equipment requirements, and appropriate handling and emergency procedures and disposal guidance.

Complete warnings for hazardous materials referenced in this card deck 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 card deck. 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 card deck after the initial issue will be assigned the next consecutive number regardless of its placement in the card deck. The approved icons and their application are shown on cards HMWS-2 through HMWS-4.

In the text of the card deck, 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.

Continued

FIGURE B-14. Example of warnings applicable to hazardous materials card.

CARD HMWS-2	A1-C3AAA-MRC-300 DATE: 1 January 1982	CHANGE NO.	WARNINGS APPLICABLE TO HAZARDOUS MATERIALS - CONTINUED

Biological Chemical Cryogenic Explosion Eye Protection Fire Poison

Radiation Vapor

EXPLANATION OF HAZARD SYMBOLS

The abstract symbol bug shows that a material may contain bacteria or viruses that present a danger to your life or health.

The symbol of drops of a liquid onto a hand shows that the material will cause burns or irritation of human skin or tissue.

The symbol of a hand in a block of ice shows that the material is extremely cold and can injure human skin or tissue.

Continued

FIGURE-B-14. Example of warnings applicable to hazardous materials card - continued.

CARD HMWS-3	A1-C3AAA-MRC-300 DATE: 1 January 1982	CHANGE NO.	WARNINGS APPLICABLE TO HAZARDOUS MATERIALS - CONTINUED

EXPLANATION OF HAZARD SYMBOLS – CONT.

This rapidly expanding symbol shows that the material may explode if subjected to high temperature, sources of ignition, or high pressure.

The symbol of a person wearing goggles shows that the material will injure the eyes.

The symbol of a fire shows that the material may ignite and cause burns.

The symbol of a skull and crossbones shows that the material is poisonous or is a danger to life.

The symbol of three wedges shows that a material emits radioactive energy and can injure human tissue or organs.

The symbol of a human figure in a cloud shows that material vapors present a danger to life or health.

Continued

FIGURE B-14. Example of warnings applicable to hazardous materials card - continued.

CARD HMWS-4	A1-C3AAA-MRC-300 DATE: 1 January 1982	CHANGE NO.	WARNINGS APPLICABLE TO HAZARDOUS MATERIALS - CONTINUED

HAZARDOUS MATERIALS WARNINGS

Index	Material	Warning
1	SOLVENT, DRY CLEANING P-D-680 Type II	Dry cleaning solvent is combustible. Do not use near open flames, welding areas, or on hot surfaces. Prolonged contact on skin with liquid can cause dermititus. Repeated inhalation of vapor can irritate nose and throat and can cause dizziness. If any liquid contacts skin or eyes, immediately flush affected areas with water. Remove solvent saturated clothing. If vapor causes dizziness, go to fresh air. When handling liquid or applying it in an air exhausted, partially covered tank, wear approved gloves. When handling liquid or applying in an unexhausted, uncovered tank or workbench, wear approved respirator and gloves.

Continued

FIGURE B-14. Example of warnings applicable to hazardous materials card - continued.

A1-F18AC-742-300 **001 00**
1 April 1995

ORGANIZATIONAL MAINTENANCE

SYSTEM MAINTENANCE WITH IPB

ALPHABETICAL INDEX

RADAR SYSTEM

Title	WP/Page Number
Antenna AS-3254/APG-65 (60E-A501	008 00
Illustrated Parts Breakdown	008 00/5
Illustrated Parts Breakdown, Antenna AS-3254/APG-65 (60E-A501)	008 00/6
Illustrated Parts Breakdown, Antenna Holding Fixture	008 00/10
Installation	008 00/3
Removal	008 00/2
Repair	008 00/4
Gimbal Bumper	008 00/4
Installation	008 00/4
Removal	008 00/4
Upper/Lower Shell Assembly-163985 AND UP	008 00/4
Installation	008 00/4
Removal	008 00/4
Antenna, Flood, (60E-A512)	011 00
Installation	011 00/2
Illustrated Parts Breakdown	011 00/2
Removal	011 00/1
Array, Planar	021 00
Cable Assembly (60W-A539)	021 00/2
Installation	021 00/2
Removal	021 00/2
Flexible Waveguides	021 00/2
Installation	021 00/3
Removal 021 00/2	
Illustrated Parts Breakdown	021 00/4
Repair	021 00/2
Screw Replacement	021 00/3
Torque Requirements	021 00/4
Cable Assembly (60W-A523)	018 00
Illustrated Parts Breakdown	018 00/3
Installation	018 00/2
Removal	018 00/2
Cable Assembly (60W-A538)	018 00
Illustrated Parts Breakdown	018 00/3
Installation	018 00/2
Removal	018 00/2

FIGURE B-15. Example of an alphabetical index work package.

NAVAIR 01-F14AAA-3-2.1 **001 00**
15 January 1987

ORGANIZATIONAL MAINTENANCE
AND DEPOT MAINTENANCE
STRUCTURAL REPAIR - REPAIR INSTRUCTIONS

ALPHABETICAL INDEX

This work package supersedes WP 001 00, dated 20 September 1980.

Title	NAVAIR 01-F14AAA-	WP/Page Number
Accelerometer Interface Gage, Part No. A51W61160-3, Lateral	3-2.5	0088 009
Access and Inspection Provisions	3-2.1	007 00
Access Guide, Component	3-2.1	008 00
Access Numbering System	3-2.1	006 00
Location of Access Numbers on Aircraft	3-2.1	006 00/1
Access Numbering System	3-2.1	006 00/1
Accessory Set, Part No. A51W63060-1, Cutting Tool and Adjustment Procedures, Inspection, and Repair for Latch Assemblies GL51OAP GL51OAR GL51OAV GL511D, GL510AY, and A51B918063	3-2.2	068 00
Aerodynamic Contour Smoothness	3-2.1	023 00
Aerodynamic Contour Smoothness Requirements	3-2.1	023 00/1
Wing Surfaces	3-2.1	023 00/7
Airborne Weapons Control System Interface Gage, Part No. A51W61080-1	3-2.5	087 03
Aircraft and Systems Alignment	3-2.1	011 00
Aircraft Cleaning Procedures	3-2.1	034 00/1
Surface Maintenance	3-2.1	034 00/1
Aircraft Exterior and Interior - Refinishing	3-2.1	035 00
Aircraft Leveling	3-2.1	010 00
Bearings and Bushings	3-2.5	022 16
Bushing Replacement	3-2.1	022 00/1
Antifriction Bearing Replacement	3-2.1	022 00/5
Staked Bearing Replacement	3-2.1	022 00/6
Sleeve Bearing Replacement	3-2.1	022 00/14
Blind Holes, Locating	3-2.1	019 00
Boarding Ladder, Pilot-or-NFO Swingout Step and Repair, Removal and Installation	3-2.3	070 32
Boron-Epoxy Structure and Repair Procedures	3-2.4	077 05
Boron-Epoxy Structure Inspection, Damage Limitations and Recommended Repairs - Horizontal Stabilizer	3-2.4	077 03
Boron-Epoxy Structure Repair Data, Horizontal Stablizer	3-2.4	077 04
Bottom Access Panel Installation (A51B16007) (Fuselage Station 345.00 to 395.00) - Specific Repair Data	3-2.3	070 23
Bottom Nacelle Inlet Duct Panel (A15B24004) (Fuselage Station 437.50 to 491.00) - Specific Repair Data	3-2.3	070 18
Bulkhead (A51B27517) (Fuselage Station 495.75) - Specific Repair Data	3-2.3	070 26
Bushings and Bearings	3-2.1	071 09
Button Retainer, Overwing Fairing Repair, Removal and Installation	3-2.3	022 00

FIGURE B-16. Example of an alphabetical index work package for a multi-volume TM.

ORGANIZATIONAL MAINTENANCE

SYSTEM MAINTENANCE WITH IPB

LANDING GEAR CONTROL UNIT
(12A-A004)

LANDING GEAR SYSTEM

EFFECTIVITY: 162394 AND UP; ALSO 161 THRU 161987 AFTER F/A-18 AFC 48

This WP supersedes WP003 01, dated 15 April 1992.

This WP is incomplete without WP007 01 contained in NAVAIR A1-F18AC-130-300.

EXAMPLE OF A MAINTENANCE MANUAL TITLE BLOCK

ORGANIZATIONAL MAINTENANCE

FAULT ISOLATION MANUAL

TROUBLESHOOTING PROCEDURE

Code 827, Cabin Air Temperature High

EXAMPLE OF A FAULT ISOLATION MANUAL TITLE BLOCK

FIGURE B-17. Examples of a work package title block.

AW-394AC-750-000 **001 01**
1 February 1997

INTERMEDIATE AND DEPOT MAINTENANCE WITH ILLUSTRATED PARTS BREAKDOWN

NUMERICAL INDEX OF PART NUMBERS

AIRCRAFT GUIDED MISSILE LAUNCHER LAU-115/A
PART NUMBERS 74A730351-1003 AND 74A730351-1007

AIRCRAFT GUIDED MISSILE LAUNCHER LAU-115A/A
PART NUMBERS 74A730351-1009 AND 74A730351-1011

AIRCRAFT GUIDED MISSILE LAUNCHER LAU-115C/A
PART NUMBERS 74A730351-1013 AND 74G730351-1015

PART NUMBER	WP/FIGURE/ INDEX NUMBER	PART NUMBER	WP/FIGURE/ INDEX NUMBER
AIC-L-11V6-11	004 00 / 5/ 12	AIC-L-644-6-7	004 00 / 5/ 42
	004 00 / 6/ 12		004 00 / 5/ 48
	004 01 / 3/ 12		004 00 / 6/ 41
AIC-L-11V6-5	004 00 / 5/203		004 00 / 6/ 47
	004 00 / 6/190		004 01 / 3/ 32
	004 01 / 3/157		004 01 / 3/ 38
	006 00 / 5/ 14	AIC-L-644-8-5	006 00 / 5/ 26
	006 00 / 6/ 14		006 00 / 6/ 27
	006 01 / 4/ 14		006 01 / 4/ 40
AIC-L-11V6-6	004 00 / 5/ 93	AIC763-4-22	003 00 / 3/ 31
	004 00 / 6/ 89	AN316-4	008 00 / 4/ 22
	004 01 / 3/ 80	AN565FC1032H3	014 00 / 5/ 84
	006 00 / 5/ 6	AN565F1032H3	014 00 / 5/ 84
	006 00 / 5/ 34	AN735D10	012 00 / 1/ 60
	006 00 / 6/ 6		012 00 / 2/ 60
	006 00 / 6/ 35		012 01 / 1/ 60
	006 01 / 4/ 6	AN735D19	012 00 / 1/ 7
	006 01 / 4/ 48		012 00 / 2/ 7
AIC-L-11V6-7	004 00 / 5/201		012 01 / 1/ 7
	004 00 / 6/188	AN742D4	014 00 / 5/ 16
	004 01 / 3/155	AN960-10L	005 00 / 2/ 66
AIC-L-11V6-8	006 00 / 5/ 9	AN960-6L	014 00 / 5/ 12
	006 00 / 5/ 41		014 00 / 5/ 18
	006 00 / 6/ 9	AN960C10L	005 00 / 2/ 16
	006 00 / 6/ 42		005 00 / 2/ 21
	006 01 / 4/ 9		005 00 / 3/ 16
	006 01 / 4/ 55		005 00 / 3/ 21
AIC-L-41-6-3	006 01 / 4/ 27		005 01 / 2/ 8
AIC-L-41-6-4	006 01 / 4/ 25		010 00 / 3/ 10
	006 01 / 4/ 29		010 00 / 3/ 24
	006 01 / 4/ 35	AN960C416	010 00 / 3/ 5

1

FIGURE B-18. Example of numerical index of part numbers work packages.

AW-394AC-750-000 **001 02**
1 February 1997

INTERMEDIATE AND DEPOT MAINTENANCE WITH ILLUSTRATED PARTS BREAKDOWN

NUMERICAL INDEX OF REFERENCE DESIGNATIONS

AIRCRAFT GUIDED MISSILE LAUNCHER LAU-115/A
PART NUMBERS 74A730351-1003 AND 74A730351-1007

AIRCRAFT GUIDED MISSILE LAUNCHER LAU-115A/A
PART NUMBERS 74A730351-1009 AND 74A730351-1011

AIRCRAFT GUIDED MISSILE LAUNCHER LAU-115C/A
PART NUMBERS 74A730351-1013 AND 74G730351-1015

REF DES	WP/FIGURE/ INDEX NUMBER	REF DES	WP/FIGURE/ INDEX NUMBER	REF DES	WP/FIGURE/ INDEX NUMBER
GND7- W001	004 00/ 5/ 74	61B- W210-S3	014 00/ 5/ 69	61K- W211	012 00/ 2/107
61A- Y502	003 00/ 3/		014 00/ 5/ 69		012 01/ 1/ 98
	003 00/ 3/	61B- W210-S4	014 00/ 5/ 69	61K- W224	012 00/ 1/ 92
	003 00/ 3/		014 00/ 5/ 69		012 00/ 2/113
	003 00/ 3/	61J- W095A	012 00/ 1/ 47		012 01/ 1/104
	003 00/ 3/		012 00/ 2/ 47	61K- W225	012 00/ 1/ 92
	003 00/ 3/		012 01/ 1/ 47		012 00/ 2/113
61B- W210	007 00/ 4/ 24	61J- W095B	012 00/ 1/ 78		012 01/ 1/104
	007 00/ 4/ 24		012 00/ 2/ 78	61K- W226	012 00/ 1/ 88
	007 00/ 4/ 24		012 01/ 1/ 81		012 00/ 1/ 88
	014 00/ 5/	61J- W239	012 00/ 1/ 54		012 00/ 2/115
	014 00/ 5/		012 00/ 2/ 54		012 01/ 1/106
	014 00/ 5/		012 01/ 1/ 54	61K- W227	012 00/ 1/ 88
61B- W210-B1	014 00/ 5/ 37	61J- W253	012 00/ 2/ 86		012 00/ 1/ 88
61B- W210-E1	014 00/ 5/ 87		012 01/ 1/ 89		012 00/ 2/115
	014 00/ 5/ 87	61J- W254	012 00/ 2/ 86		012 01/ 1/106
61B- W210-S1	014 00/ 5/ 73		012 01/ 1/ 89	61K- W228	012 00/ 1/ 88
	014 00/ 5/ 73	61J- Y287	012 01/ 1/ 77		012 00/ 1/ 88
61B- W210-S2	014 00/ 5/ 73	61K- W211	012 00/ 1/ 90		012 00/ 2/113
	014 00/ 5/ 73		012 00/ 2/ 97		012 01/ 1/104

1

FIGURE B-19. Example of a numerical index of reference designations work package.

AW-394AC-750-000 **002 00**
1 February 1997

INTERMEDIATE AND DEPOT MAINTENANCE WITH ILLUSTRATED PARTS BREAKDOWN

CONSOLIDATED LISTS FOR TECHNICAL DIRECTIVES, SUPPORT EQUIPMENT, MATERIALS, AND REFERENCES

AIRCRAFT GUIDED MISSILE LAUNCHER LAU-115/A PART NUMBERS 74A730351-1003 AND 74A730351-1007

AIRCRAFT GUIDED MISSILE LAUNCHER LAU-115A/A PART NUMBERS 74A730351-1009 AND 74A730351-1011

1-1 HISTORICAL RECORD OF APPLICABLE TECHNICAL DIRECTIVES

1-2 The Historical Record of Applicable Technical Directives is a list of all technical directives that have ever affected this manual. Current technical directives now affecting this manual are listed in the Record of Applicable Technical Directives of each affected work package. When a technical directive is rescinded, the before configuration is removed from the manual and the technical directive entry is removed from each affected work package.

Historical Record of Applicable Technical Directives

TD Type/ No.	TD Date	Title and ECP / RAMEC No.	Date Inc.	Remarks
AAC 855	31 May 91	Launcher Guided Missile Aircraft LAU-115/A, Modification of (ECP-MDA-F/A-18-00090C1)	1 Sep 84	
AAC 901	-	Missile Rail Launcher LAU-115A/A Relay/Diode Assembly, Addition of (ECP-MDA-F/A-18-00336R1)	15 Sep 92	
AAC 928	-	LAU-115A/A Missile Launcher AMRAAM Jettison Adapter, Installation of (ECP-MDA-F/A-18-00422)	1 Jun 94	
IAAC 889	-	Positive Latch Addition to LAU-115/A Rail Launcher (ECP-MDA-F/A-18-00269R1)	15 May 88	

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FIGURE B-20. Example of a consolidated lists of technical directives, support equipment, materials, and references work package.

AW-394AC-750-000 **002 00**
1 February 1997

2-1 SUPPORT EQUIPMENT REQUIRED

2-2 This list identifies all equipment required to support the procedures contained in the manual.

Nomenclature	Part Number	CAGE Code
Shear Wafer, AIM-7 Dale Electronics	917AS8809 or 917AS9881 or QX32P-SW	09969
Socket, Spline Snap-On Tools Corp.	TES10	55719

3-1 MATERIALS REQUIRED

3-2 This list identifies all materials required to support the procedures contained in the manual.

Nomenclature	Specification / Part Number	HMWS Index Number
Cloth, Cheesecloth	CCC-C-440 TYPE 1 CLASS 1	
Epoxy Primer Coating	MIL-P-23377 TY1	22
Epoxy Primer Coating	MIL-P-23377 TY2	22
Humidity Indicator Plug	MIL-I-26860, TYPE 2	
Lubricant, Solid Film	MIL-L-23398 TYPE 2	15

4-1 REFERENCE MATERIAL

4-2 This list identifies reference material required to support the manual.

Reference Material

Abbreviations for Use on Drawings, and in Specifications, Standards and Technical Documents MIL-STD-12
Airborne Weapons and Associated Equipment .....NAVAIR 01-1A-75
Aircraft Corrosion Control.....A1-F18AC-SRM-500
Aircraft/Armament Monitor and Control.....AE-199AG-580-000/(S)
Assignment and Application of Uniform Source, Maintenance, and Recoverability Codes .....NAVAIRINST 4423.11
Aviation Supply Office Publications.....P2300 (series)
Commercial and Government Entity (CAGE) Cataloging Handbook.....H4/H8
Distribution of NAVAIR Technical Publications.....NAVAIRINST 5605.5A

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FIGURE B-20. Example of a consolidated lists of technical directives, support equipment, materials, and references work package - continued.

NAVAIR 02B-105AHE-6-1 **003 00**
1 August 1996

INTERMEDIATE MAINTENANCE

MAINTENANCE ALLOCATION

EFFECTIVITY: Engine Serial No. 216001 and Subsequent

Reference Material

T58-GE-16 Maintenance Plan PMP-0007

1-1 INTRODUCTION

1-2 This Work Package (WP) contains maintenance allocation information for Intermediate Maintenance Activities (IMA).

1-3 Maintenance allocation is divided into three maintenance levels - First degree, Second degree and Third degree. Table 1 lists the maintenance work which can be performed at each of these levels.

2-1 MAINTENANCE LEVEL DIFFERENCES

2-2 Each maintenance level/degree is responsible for the functions of all lower level/degree maintenance. Maintenance levels/degrees at which specific maintenance function may be performed are defined in paragraphs 2-3 through 2-6.

2-3 **FIRST DEGREE.** This maintenance degree includes disassembly and repair to a depth which includes and goes beyond maintenance functions authorized for Second and Third Degree IMAs but not to the extent required to perform Depot Level Maintenance. First Degree Maintenance is Complete Engine Repair (CER) which includes capability of power turbine and compressor rotor replacement or disassembly to a degree that the power turbine rotor or compressor rotor assembly could be removed. Activities designated as First Degree Maintenance will be equipped to accomplish CER as well as lesser degrees of maintenance including incorporation of all technical directives (PPCs, PPBs, and SECs) below depot level of maintenance.

2-4 **SECOND DEGREE.** This maintenance degree includes restoration of a damaged or nonoperating engine, its accessories or components to an acceptable operating condition, including repair or replacement of gas generator turbine rotor and combustion section. Also authorized is replacement of externally damaged, deteriorated or time-limited components, gearboxes, or accessories and conducting engine calendar (or equivalent) inspections. In addition, minor repair to the compressor section is authorized (replacement of compressor rotor blades with rotor installed and dressing nicks in compressor vanes and blades within limits specified in this manual).

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FIGURE B-21. Example of a maintenance allocation work package.

TABLE 1. Breakdown of Engine Maintenance for Intermediate Level Activities.

NOMENCLATURE	DEGREE OF INTERMEDIATE MAINTENANCE 1	2	3	FUNCTION	WP
FAN MODULE					
Fan Module	X			Assembly	056 00
	X			Disassembly	056 00
	X	X	X	Installation	027 00
	X	X	X	Removal	024 00
	X	X	X	Repair	056 00
Fan Stator Assembly	X			Assembly	059 00
	X			Disassembly	059 00
	X			Installation	056 00
	X			Removal	056 00
	X			Repair	056 00, 059 00
Fan Rotor Assembly	X			Installation	056 00
	X			Removal	056 00
	X			Repair	058 00
(Horizontal Maintenance)	X	X	X	Repair	062 00
Front Frame Assembly	X			Assembly	057 00
	X			Disassembly	057 00
	X			Installation	056 00
	X			Removal	056 00
	X			Repair	056 00, 057 00
(Horizontal Maintenance)	X	X	X	Repair	062 03
Fan Variable Geometry	X			Installation	056 00
	X			Removal	056 00
Fan Stator Case	X			Installation	056 00
	X			Removal	056 00
	X	X		Repair	056 00
No. 1 Bearing	X	X		Installation	056 00
	X	X		Removal	056 00
Fan Stages 1, 2, and 3 Vanes	X			Installation	059 00
	X			Removal	059 00
Inlet Guide Vanes	X	X		Installation	057 00
	X	X		Removal	057 00
Stage 1 Fan Rotor Blades	X	X		Installation	058 00
	X	X		Removal	058 00

FIGURE B-21. Example of a maintenance allocation work package - continued.

APPENDIX C - PREPARATION REQUIREMENTS FOR FRAME-BASED AND SCROLLABLE TECHNICAL MANUALS

C.1. **SCOPE**.

C.1.1 Scope. This appendix establishes the style and format requirements for the display of linear structured, scrollable Electronic Technical Manuals and frame-based Interactive Electronic Technical Manuals required to operate and maintain the various types of equipment and weapon systems within the Department of the Navy. Linear, scrollable Electronic Technical Manuals (hereafter referred to as **ETM**s) and frame-based Interactive Electronic Technical Manuals (hereafter referred to as **IETM**s) are digital in form and designed for interactive display to maintenance technicians or system operator end users by means of a computer controlled Electronic Display System (EDS).

C.2. **APPLICABLE DOCUMENTS**.

The applicable documents in section 2 of MIL-STD-3001-1 apply to this appendix.

C.3. **DEFINITIONS**.

The definitions in section 3 of MIL-STD-3001-1 apply to this appendix.

C.4. **GENERAL REQUIREMENTS**.

C.4.1 General. The mandatory style and format requirements provided in this appendix supplement the technical content requirements in the other parts of this 8-part standard. These requirements shall apply for the presentation of technical manual information in either a linear, scrollable or interactive, frame-based format on a computer display. For additional nonmandatory style and format requirements preferred by NAVAIR, refer to MIL-HDBK-3001.

C.4.2 Development of work package ETMs/IETMs. A work package ETM/IETM is specifically designed to support individual functional information or maintenance work tasks for a weapon system or equipment. Technical manual data developed for scrollable or frame-based display in work package format shall be prepared in accordance with the requirements of MIL-STD-3001-1 through MIL-STD-3001-7. Technical manual data shall be tagged using Standard Generalized Markup Language (SGML). This is accomplished by applying the applicable Document Type Definitions (DTDs) and style sheets. The DTDs interpret the technical content and structure of the functional requirements explained in MIL-STD-3001-1 through MIL-STD-3001-7 and are mandatory for use. The use of a specific style sheet will dictate the style and format as it appears on the display device. Style sheets shall be developed using the style and format requirements contained in this appendix. Development of ETMs/IETMs is accomplished through the use of the DTDs combined with the requirements contained in MIL-PRF-87268 and MIL-PRF-87269. The requirements contained in MIL-PRF-87268 and MIL-PRF-87269 apply unless they conflict with the requirements in MIL-STD-3001. The requirements in MIL-STD-3001 take precedence over the requirements contained in MIL-PRF-87268 and MIL-PRF-87269.

C.4.3 ETM/IETM definitions.

C.4.3.1 ETM definition. An **ETM** is a technical manual normally prepared from a linear SGML document file and not a hierarchically-based database as an IETM (refer to C.4.3.2). The ETM is also displayed on an electronic display system (EDS) as a scrollable, linear structured document and may

employ a combination of an automated intelligent index, prompted dialog boxes, and content-driven logical "NEXT" functions.

C.4.3.2 IETM definition. An **IETM** is a technical manual, prepared (authored) by a contractor and delivered to the Government or prepared by a Government activity, in digital form on a suitable medium, by means of an automated authoring system; designed for electronic screen display to an end user; and possessing the following three characteristics:

a. The format and style of the presented information are optimized for screen presentation to assure maximum comprehension; that is, the information presented is frame-oriented, not page-oriented.

b. The elements of technical information constituting the **IETM** are so interrelated that a user's access to the information he/she requires is facilitated to the greatest extent possible and is achievable by a variety of paths.

c. The computer-controlled **IETM** EDS can function interactively (as a result of user request and information input) in providing procedural guidance, navigational directions, and supplemental information; and also in providing assistance in carrying out logistic support functions supplemental to maintenance.

C.4.4 ETMs/IETMs developed in accordance with MIL-STD-3001 series standards. This appendix shall be used in conjunction with MIL-STD-3001-1 through MIL-STD-3001-7 to develop work package ETMs/IETMs for aircraft weapon systems, engines, aeronautical equipment, airborne weapons / equipment, and support equipment. MIL-STD-3001-1 through MIL-STD-3001-7 contain the technical content and mandatory style and format requirements for the preparation of technical manuals at all maintenance levels through depot.

C.4.5 Navigational, access, and other commands. The user should be provided with a comprehensive set of commands to navigate and sequence through the information. The following are a recommended minimum set of navigation and control functions which should be available to the user and common to all ETMs/IETMs. Additional functions may be specified by the requiring activity.

a. Back - This action is to move to the previous window (displays previous page in the history list) or to review all windows which have led to the current state. "Back" should be the opposite of "Next." The "Back" function should display the previous module or frame of information from which the user came.

b. Bookmark - The user should have the capability to record a bookmark to mark a displayed information element for later recall. The user should be given the capability to create, delete, modify, or go to bookmarks. The user should be given the capability to name the bookmark with a unique alphanumeric name.

c. History - By selecting this item, a list of all information elements accessed during the current browsing session should be displayed in an ordered list. The user should be able to call up any item on the list by selecting it. The history list may be deleted upon exiting the current session. (The system should automatically log information elements that have been viewed and also provide an interface where the user can call up any item on the list by selecting it.)

d. Home - Activating the "Home" function should return the user to the main screen or opening window.

e. Next - This action is to move forward to the succeeding window. The "Next" function should display the next section or frame of information that the user requires, based on the context of the situation.

f. Notes - This function is for user-defined "Post-Its" attached to specific locations within the ETM/IETM.

g. Print - This function should print the current information element to the window's default printer.

h. Refresh - Accessing the "Refresh" function should reload the currently viewed information element so that it has the latest available information.

i. Stop - Using the "Stop" function should stop the loading of the current page.

j. Suspend - This function should allow the browser to mark the spot where the maintenance procedure was interrupted while maintaining the state table at time of interrupt.

C.5. **DETAILED REQUIREMENTS**.

C.5.1 General. The guidance for development and display of ETMs/IETMs contained in this appendix is based on the general requirements contained in MIL-PRF-87268 and MIL-PRF-87269. The requirements specified in this appendix are intended to bring about the following results on a consistent basis in designing a scrollable ETM or a frame-based IETM:

a. Designing a common look and feel.

b. Designing a standard user interface.

c. Standardizing the visual elements.

C.5.1.1 Level of detail. Navy ETMs/IETMs shall be authored and displayed to a level of detail suitable for the novice user. In this usage, novice means a technician with the lowest level of experience and training who will be minimally qualified to perform and be assigned the functions described by the ETM/IETM. All Navy ETM/IETM procedures shall be written once for the novice technician level.

C.5.2 ETM/IETM divisions. The hierarchy of an ETM/IETM consists of front matter and a series of work packages that include the types of data listed below.

a. Supporting information. Supporting information includes information such as the Hazardous Materials Warnings Summary; Historical Record of Applicable Technical Directives; Consolidated Lists of Support Equipment, Materials, and References; Numerical Index of Part Numbers; Numerical Index of Reference Designations; and Maintenance Allocation (engines intermediate maintenance only). Supporting information is divided into the support-oriented WPs that are required to supplement or complement the technical information and task-oriented WPs developed in accordance with MIL-STD-3001 series.

b. Descriptive information. Descriptive information provides information on how system, subsystem, and components function or operate and is intended to provide the user with an understanding

of the system process. This information may consist of physical arrangement, functions, processing, theory of operation, modes of operation, built-in test (BIT), controls, indicators, and displays.

c. Testing and troubleshooting information. Testing and troubleshooting (fault isolation information) is the data necessary to isolate faults found in a system, equipment, or component. Fault data basically contains outcomes, faults, and corrective actions.

d. Procedural information (operator and maintenance tasks). Procedural information is primarily corrective or scheduled maintenance procedures, such as adjustment, servicing, inspection, removal, installation, and repair.

e. Parts information. Parts information is the necessary information required to identify and order a new part, generally called IPBs (illustrated parts breakdowns) in a conventional TM.

C.5.3 Front matter. The following ETM/IETM front matter is necessary to supplement the technical content WPs. Typical examples for the display of front matter data are provided in MIL-HDBK-3001.

a. ETM/IETM installation data.

b. CD label and flyleaf data (if applicable).

c. Preface information.

d. Content data.

e. Title data.

f. Log on information.

g. Revision summary data.

h. List of Contents.

i. "How To Use This ETM" information or "How To Use This IETM" information.

j. Acronyms and abbreviations list.

k. Configuration identification list.

C.5.3.1 ETM/IETM installation data. When ETMs/IETMs are distributed on a CD-ROM, information on installing the CD-ROM on the computer and launching the ETM/IETM shall be prepared. Minimum hardware and software requirements shall be included. The preferred method of operation is to perform a minimal software installation to the display device and access the programmed data from the CD or other distribution media. However, an option to install to the hard drive shall be available. In cases where compressed data is on the CD or medium and must be expanded onto the hard drive, the install routine must determine if sufficient hard drive space is available. All installation routines shall have an un-install option and when updating to a newer version, shall remove earlier version software/data prior to the installation of updated software/data. This information shall be printed and should be part of the packaging and shipment of the CD-ROM. When ETMs/IETMs are not distributed on CD-ROM but electronically transferred, any relevant installation data shall become part of a "read me" file.

C.5.3.2 CD label and flyleaf data. The CD-ROM shall have a label and flyleaf insert that includes the following information, as applicable.

Publication number
Equipment nomenclature
Application
CD number
Version
Data cutoff date
CD creation date
Compression information, if applicable
Copyright information
Distribution statement
Authority notice
Destruction notice
ETM/IETM install data (refer to C.5.3.1)

C.5.3.3 Preface information. Preface information includes the Distribution Statement <**distrib**>, Authority Notice <**authnote**>, Export Warning, Handling and Destruction Notice <**destr**>. The words; "NATEC ELECTRONIC MANUAL" shall follow the Authority Notice and NSN. Preface information shall be a part of the ETM/IETM and shall be the first information to appear on the display when the ETM/IETM is launched. If the ETM/IETM is on a CD, this information shall be identical to the Distribution Statement, Authority Notice, Export Warning, Handling and Destruction Notice provided on the CD label or flyleaf data.

C.5.3.4 Content data. When more than one ETM/IETM is resident on a CD, content data should appear on the display immediately following the preface information. This content data should provide the ETM/IETM number and title of all technical manuals that are contained on the CD. CD content is displayed either frame by frame or scrollable.

C.5.3.5 Title data.

a. Frame-by-frame. Basic title information such as the publication number <**tmidno**>, publication date <**pubdate**>, type of document, publication title <**prtitle**>, etc., shall be displayed in the overall client area of the title frame. "Narrative type" information such as the Supersedure Notice <**super**>, Effectivity Notice, etc., shall be displayed full screen, frame by frame or inside a scrollable area. In a frame by frame presentation the user should be prompted to click on [NEXT] before proceeding to the next frame.

b. Scrollable. All title data (as described in C.5.3.5 a. above) shall be displayed in the client scrollable area.

C.5.3.6 Log on information. When specified by the requiring activity, users shall be required to log on before accessing the ETM/IETM. User IDs and passwords shall be required. When applicable, tail number, BuNos, model number, serial number, part number, effectivity, or other data specified by the requiring activity shall also be required. When a user log on is required, fill-in the blanks or selecting from a list of choices (or a combination screen) should be used to capture the information.

C.5.3.7 Revision summary data. When a revision to an ETM/IETM is issued, a revision summary should be provided. The revision summary should be user-invoked from the List of Contents. The revision summary shall contain a list of work packages by title that have been revised and for each work package listed, a brief description of the major changes shall be provided. Revision summary information is

displayed full screen, frame by frame or inside a scrollable area. The titles of revised work packages listed in the revision summary shall be linked to the work package containing the revised information.

C.5.3.8 List of Contents. A List of Contents should be prepared. Official nomenclature from the parts information should be used. The subject matter should be listed by system/subsystem and equipment. To facilitate access, subsystems, subassemblies, installations, and individual components may be indented and listed under the main system. Further subdivisions should be included to list all descriptive, operation, troubleshooting, and maintenance tasks for each of the system/subsystem, equipment, subassemblies, and individual components included in the ETM/IETM. When displayed, the List of Contents should provide a search capability. All entries in the List of Contents should be linked to the actual subject matter in the WPs.

a. For **IETM**s, the subject matter should be in alphabetical order first by system/subsystem and equipment. Subsystems, subassemblies, installations, and individual components indented and listed under the main system should be in alphabetical order. This list should be in a scrollable area on the left side of the frame. When the user clicks on an item in the list, this action may bring up a second scrollable list of subject matter entries for the item selected.

b. For **ETM**s, the List of Contents may be in "traditional" order (i.e., in the order of occurrence) as found in conventional, paper TMs. Users must be able to initially access information by function according to the type of data the user is seeking, e.g., by maintenance work packages, description work packages, testing and troubleshooting work packages, etc. Once the List of Contents is accessed by function, additional entries may be indented under each primary entry in the List in more detail (e.g., Testing and Troubleshooting of Gas Turbine Starter/Auxiliary Power Unit as the primary entry with Fuel Sprayers indented as a subentry).

C.5.3.9 "How To Use This ETM" information or "How To Use This IETM" information.

a. Information to familiarize the user with special or unusual features of the ETM/IETM should be prepared. Coverage should lead the user through the ETM/IETM and explain important features of the organization and content. For example, the format is explained; operating and troubleshooting information is explained; and repair, maintenance instructions, and other pertinent information is explained.

b. Any peculiarities in the basic structure of the ETM/IETM should be described. "How to use" information should not repeat instructions given within the work packages.

c. For all ETMs/IETMs (excluding operators) the "how to use" information should include an explanation on how and where parts information is available in the work packages, how the parts information is accessed, and if applicable, how the parts can be ordered.

d. For troubleshooting, an explanation on how troubleshooting data is presented in the ETM/IETM should be included. If applicable, an explanation on how failure symptom indexes and malfunction codes correspond to maintenance operational checks and troubleshooting procedures for individual systems and components should be included.

e. An explanation should be included on how to identify hotspots and how they are used and activated.

f. If a double king sized, paged-based, paper TM containing the supporting schematic and wiring diagrams has been authorized and developed, a reference to this TM by TM number should be provided.

g. When a standard form must be used in the process of performing a task, instructions should be provided on how these forms are accessed, used, and filled out.

C.5.3.9.1 Display of "How to Use This ETM/IETM" information. "How to Use This IETM" information is prepared in narrative format and should be displayed full width, frame by frame or scrollable. The "How To Use This ETM" information or "How To Use This IETM" information shall be user-invoked from the List of Contents.

C.5.3.10 Acronyms and abbreviations list. A consolidated list of abbreviations, acronyms, and uncommon terms shall be developed explaining all abbreviations, acronyms, and unusual terms used in ETM/IETM.

C.5.3.11 Configuration identification list. A consolidated list of tail numbers, BuNos, model numbers, serial numbers, part numbers, etc., covered by the ETM/IETM shall be included.

C.5.4 Supporting information work packages. Supporting information should be logically subdivided into the support-oriented work packages that are required to supplement or complement the technical information and task-oriented work packages. The information may be displayed in tables and lists or linked to the specific row(s) in the table or item(s) in a list instead of displaying the entire table or list. If the entire table or list is displayed, the table or list shall be scrollable. Supporting information includes:

a. Hazardous materials warning summary.

b. Consolidated numerical index of part numbers.

c. Consolidated numerical index of reference designations.

d. Historical record of applicable technical directives.

e. Consolidated lists of support equipment, materials, and references.

f. Maintenance allocation, as applicable (engine intermediate maintenance only).

C.5.4.1 Hazardous Materials Warning Summary (HMWS). The complete warnings applicable to hazardous materials and related information shall be prepared. The acronym "HMWS" will be used to identify the warning information.

C.5.4.1.1 Explanation of hazardous materials icons. Each of the nine authorized icons, with related explanation, shall be provided. Immediately following the explanation of the nine authorized icons, complete warnings shall be listed for all hazardous materials used in the manual.

C.5.4.2 Consolidated numerical index of part numbers work package **<partnoindxwp>**. This work package shall contain a complete list of part numbers consolidated from all maintenance work packages containing group assembly parts lists (GAPLs). The primary purpose of this index is to provide direct linking to the maintenance WP related to a specific part number. The list shall be prepared as described below:

a. For all maintenance manuals, parts contained in the maintenance work package GAPLs shall be listed by part number.

b. All part numbers listed in the GAPL part number column of every IPB figure contained in the maintenance work packages shall be listed. Superseded parts that have continued application shall be listed. Attaching parts shall not be listed. In order to reduce unnecessary redundant entries in the index, Government standard parts may be listed in the index only for the first work package in which they appear. Part numbers for items listed more than once in multiple work packages (except for Government standard and attaching parts) shall have entries for each listing. Part numbers shall be listed in alphanumeric sequence as follows:

(1) First position of the part number in order of precedence: the letters A through Z, the numerals zero through nine.

(2) Second and succeeding positions of the part number in order of precedence, from left to right: space (blank position), diagonal (/), point (.), dash (-), letters A through Z, and numerals zero through nine.

(3) Items without part numbers (listed with a dash (-) in the GAPL part number column) shall be listed alphabetically, using the identifying noun in lieu of a part number.

C.5.4.3 Consolidated numerical index of reference designations work package <**refdesindxwp**>. This work package shall contain a complete list of reference designations consolidated from all maintenance work packages containing GAPLs. The primary purpose of this index is to provide direct linking to the maintenance WP related to a specific reference designation.

a. All parts listed with a reference designation contained in the maintenance work package GAPLs shall be listed.

b. Reference designations shall be listed in reference designation sequence.

C.5.4.4 Historical record of applicable technical directives **<hratd>**. A consolidated historical list of the technical directives (**standard list**) applicable to all WPs shall be prepared. The historical record of technical directives shall be prepared in accordance MIL-STD-3001-4.

C.5.4.5 Consolidated list of support equipment required **<sereq>**. A list of support equipment and special tools required (**standard list**) to perform the operational checkout, troubleshooting, and maintenance procedures contained in all WPs shall be prepared. The list shall be prepared in accordance with MIL-STD-3001-4 and the following additional requirements:

a. Total quantity. The total quantity is not applicable to the consolidated list of support equipment.

b. Alternate items. If an alternate item can be used, it shall be listed below the prime item to which it applies and shall be indented.

(1) Alternate item nomenclature is not required to match the prime item.

(2) The term "or equivalent" shall not be used to identify alternate part numbers.

(3) The requirement to list alternates shall not be interpreted to mean the preparing activity shall perform research to include such alternates.

(4) If information on an equivalent item is passed to the preparing activity for inclusion in the WPs, the item shall be listed as required above.

C.5.4.6 Consolidated list of materials required **<matreq>**. A list of all materials (consumable materials and/or expendable items) (**standard list**) required to perform maintenance type procedures contained in all WPs shall be prepared. The list shall be prepared in accordance with MIL-STD-3001-4, except the total quantity is not applicable to the consolidated list of materials required.

C.5.4.7 Consolidated list of reference material <**refmat**>. A complete list of reference material (**standard list**) consolidated from all technical content WPs shall be prepared. The list shall be prepared in accordance with MIL-STD-3001-4.

C.5.4.8 Maintenance allocation work package <**maintalwp**> (**engine intermediate maintenance only**). This work package shall include identification of tasks applicable to each degree of intermediate maintenance for the engine and its assemblies and components. A table (**standard table**) shall be developed identifying "1st," "2nd," and "3rd" for each degree of intermediate maintenance. The work package shall also include an explanation of the maintenance allocation headings and a statement that allowable maintenance shall be consistent with spare parts provisioning, support equipment and maintenance site capability and that if these conditions are not met, the engine shall be declared beyond capability of maintenance (BCM) and shall be transferred to a maintenance activity having repair capability in accordance with OPNAVINST 4790.2.

C.5.5 Style, format and display of work package text and graphics. In general the style and format shall be in accordance with MIL-PRF-87268 and the requirements provided below. MIL-HDBK-3001 provides typical examples of specific technical content work package text and graphics displayed on an EDS.

C.5.5.1 Work packages. Work packages (WP) are used to logically divide all data required for a certain function (i.e., descriptive information, operator's instructions, maintenance with IPB, troubleshooting, etc.). These data types can be further divided into tasks, subtasks (procedures), paragraphs; procedural steps; tables; lists; warnings, cautions, and notes; and supporting graphics, etc. Parts information shall be accessible in any of the data types, as necessary.

C.5.5.1.1 Work package content. Each work package shall consist of a title, work package initial setup information, and the specific data necessary to develop the types of technical content work packages described in MIL-STD-3001-2 through -7.

C.5.5.1.2 Work package identification number. For database retrieval purposes, a unique number should be assigned to each work package. This WP identification number shall not appear when viewed on the user's EDS display.

C.5.5.1.3 Work package title. Each WP shall have a title that identifies the general subject or maintenance or troubleshooting task contained in the WP. The title shall be identical to the title in the List of Contents. The title shall be displayed in the title bar area of the user's EDS in all capital letters.

C.5.5.1.4 Work package initial setup information. Work package initial setup information should be included for each work package, as required by MIL-STD-3001-2 through MIL-STD-3001-7.

C.5.5.1.4.1 Display of work package initial setup information. This information may be displayed full screen or split screen on one or multiple frames, or scrollable. The maintenance level and effectivity data need not be displayed.

C.5.5.2 Descriptive text. Work packages containing descriptive text are generally formatted in paragraphs.

C.5.5.2.1 Paragraphs. Paragraphs within a WP for ETM/IETM display shall be unnumbered. Paragraphs may have titles. When used, paragraph titles should be in bold capital letters. Ensure that the style of paragraph presentation is consistent throughout the entire ETM/IETM.

C.5.5.3 Procedural information. Task-oriented WPs reflect all maintenance tasks at the assigned level of maintenance, and environment, materials, and support equipment required for each defined task. The hierarchical organization for dividing procedural information is into tasks, subtasks (procedures), and steps (substeps, if required).

a. For **IETM**s, text developed for procedural types of data, such as maintenance, testing and troubleshooting procedures, shall be displayed frame by frame. As a default the text shall be on the left half of the frame with any applicable illustration on the right. (Refer to MIL-PRF-87268 for additional, acceptable methods of dividing the data panes.)

b. **ETM**s shall display procedural information as scrollable.

C.5.5.3.1 Display of procedural steps for scrollable ETMs. For scrollable **ETM**s, there shall be no limit to the number of steps and substeps that can be displayed at any one time. Each step may include a feature that permits the user to acknowledge that individual steps have been performed, e.g., a check box or an icon. For diagnostics, testing, and troubleshooting, where there is a decision point, there shall be hotspots to navigate the user to the next step in the process.

C.5.5.3.2 Display of procedural steps for frame-based IETMs. Procedural steps for **IETM**s shall be displayed in one of the methods described below. Once a specific method is chosen, that method shall be used consistently throughout the **IETM**.

a. No limit to the number of steps and substeps that appear on a frame. When this method is used, acknowledgement that all the steps have been performed must occur before the next set of steps appear on the frame. The entire procedure should be scrollable in a browse mode feature. Functionality such as highlighting active steps (bold text), dimming completed steps, or dimming or keeping steps that have yet to be performed in normal text may be used.

b. Only one primary step displayed at a time. Acknowledgement that the step has been performed must occur before the next step appears on the screen. The entire procedure (all steps) should be scrollable in a browse mode feature.

c. A maximum of up to three primary steps at any one time may be displayed. Acknowledgement that the step has been performed must occur before the next step(s) appears on the screen. The entire procedure (all steps) should be scrollable in a browse mode feature.

d. A maximum of up to three primary steps at any one time may be displayed. Following the performance of each step and after the "Next" button is selected, the completed steps will dim and the current step will appear in bold text. Acknowledgement that the step has been performed must occur before the next step(s) appears on the screen. The entire procedure (all steps) should be scrollable in a browse mode feature.

e. For procedural testing and troubleshooting procedures, the number of steps that appear on any one frame shall be limited to the number of steps between decision points or dialog queries. A complete testing and troubleshooting procedure need not be scrollable in the browse mode.

C.5.5.3.3 Quality assurance procedure summary for procedural maintenance data. A summary of QA procedures or QA steps(s) shall be provided for each maintenance task containing a procedure or step(s) designated for QA. This QA summary shall be able to be user-invoked at any time during the performance of the entire maintenance task.

C.5.5.3.4 Maintenance procedure leading to IPB information. Individual parts referenced in steps shall be called out on graphics using hotspot index numbers or nomenclature that link the user to the applicable IPB information.

C.5.5.3.5 Tasks. A task is a sequential list of steps to be performed by a technician or a collection of subtasks (procedures) directed toward accomplishment of a specific objective. Research has proven that long series of actions constituting a task should be broken up into sequential increments with the use of new subtask titles, even if the sets have to be arbitrary. For **IETM**s, each new task shall begin on a new display.

C.5.5.3.5.1 Subtasks (procedures). Each subtask shall include all steps required to achieve a specific objective. Each new subtask shall begin on a new display. Subtasks are generally done sequentially, and their specific objectives differ. Usually, the subtasks have to be broken up into steps.

C.5.5.3.5.1.1 Steps. A step is a unit of a procedural sequence which consists of a single technician action. Steps compose subtasks (procedures). Procedural steps shall be used to present detailed step-by-step instructions for performing an operational or maintenance task. In each set of steps, individual steps shall be perceptually separated from each other. (Refer to C.5.5.3.)

C.5.5.3.5.1.1.1 Step numbering. Unless specified by the requiring activity, procedural steps shall be numbered consecutively with Arabic numerals. Substeps shall be numbered consecutively with lower case letters.

C.5.5.4 Titles.

C.5.5.4.1 Assignment of titles. Easy access to technical data contained in the ETM/IETM is key to a successful search for specific data. Titles shall be assigned with full consideration of the importance they have in finding information quickly.

a. Titles should be assigned to all systems, subsystems, and components, as applicable, and to all tasks and descriptive information for each system, subsystem, and component.

b. The titles provided in the List of Contents shall be identical to those assigned to systems, subsystems, components, and individual tasks.

c. Each title shall be exclusive within the system of which the data is a part. A complete title shall be definitive and descriptive of the content of the data.

C.5.5.5 Alerts.

C.5.5.5.1 Use of alerts. An alert is any message, communication, notice, or output which requires manual acknowledgment from the user of the ETM/IETM. Alert messages shall be displayed within a border. Alerts shall be used to convey the following types of information:

a. Warnings, cautions, and notes.

b. Hardness-critical processes.

c. Electrostatic discharge (ESD) sensitive parts.

C.5.5.5.2 Use and placement for 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 warnings, cautions, and notes.

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 should 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 should be concise and shall be used to emphasize important and critical instructions

C.5.5.5.2.1 Display of warnings, cautions, and notes.

a. Warnings, cautions, and notes shall be treated as an alert. The warning, caution, and note alert shall stay active as long as the condition exists. The alert shall have a method for the user to manually acknowledge the alert, such as an [OK] button or a check box. The warnings and cautions shall be contained within a border. The border shall consist of diagonal bars, alternating between the background color or white, and the designated message color. The appropriate word (warning or caution) shall appear in capital letters, horizontally and vertically centered on the upper portion of the border. In addition, when related warnings or cautions of the same category apply to the same block of technical information, it is permissible to group them within a common alert border, but they shall be visually distinct. In such a case the title should indicate the combined danger. (See figure C-1 for an example of a warning, caution, and note displayed as an alert.)

b. Warnings, cautions, and notes which do not require the use of any of the standard safety icons described in C.5.5.5.3 shall use a general warning, caution, and note icon. (See figure C-2.) When the warning, caution, or note is manually acknowledged (by a method such as described in C.5.5.5.2.1 a.), the warning, caution, or note shall disappear from the display, but the icon shall appear in the footer region of the display screen.

C.5.5.5.3 Use of standard safety icons for warnings and cautions. Standard safety icons for warnings and cautions that are used over and over throughout the ETM/IETM shall be displayed. These standard safety icons are used for quick recognition of the hazard by the user. Standard safety icons shall

accompany the text of the warning or caution contained within the alert border. When the warning or caution is acknowledged by the user, the warning or caution text need no longer be displayed, but the standard safety icon shall remain visible somewhere on the display as long as the condition exists. Whenever a standard safety icon is visible on the display, it shall be linked to the appropriate warning or caution text. See figure C-3 for these standard warning and caution safety icons.

C.5.5.5.4 Use of common alerts. Common alerts are those alerts that are used (linked to) by many different steps or tasks and /or systems. Common alerts shall be used as much as possible. A common alert shall be prepared only one time and use consistent alert wording so it appears the same wherever it is used. If a common alert requires modification, it will only be required to be changed once for all uses.

C.5.5.5.5 Hazardous materials warnings. Complete warnings applicable to all hazardous materials addressed in the WPs, including appropriate personnel protective equipment requirements, shall be provided in the Hazardous Materials Warnings Summary (HMWS). The warnings shall be developed from information provided by chemical manufacturers in material safety data sheets (MSDS) required by 29 CFR 1910.1200. Warnings applicable to hazardous materials should be presented in WPs by the use of:

a. Nomenclature and specification of the hazardous material, and

b. Icons (nonverbal graphic symbols). (See figure C-4.)

C.5.5.5.5.1 Hazardous materials referenced in text. In WP text, the caption "WARNING" shall not be used for hazardous materials.

C.5.5.6 Highlighting QA procedures. Procedures that are essential to equipment performance or to safety of personnel are considered to be "Quality Assurance 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. These QA procedures and steps may be summarized. Refer to C.5.5.3.3.

C.5.5.6.1 Highlighting in-process QA inspections. "In-process QA inspections" are those procedures that are essential to equipment performance or to safety of personnel. Quality assurance required procedures shall be highlighted by the addition of the abbreviation "(QA)" preceding the procedure / step. An explanation of the requirements and highlighting shall be given in the introduction to the data.

C.5.5.7 Nuclear hardness. If equipment to be operated, maintained or overhauled has nuclear survivability requirements such as Overpressure and Burst, Thermal Radiation, Electro Magnetic Pulses (EMP) and Transient Radiation Effects on Electronics (TREE), applicable warnings shall be incorporated into the WP to ensure that hardness of equipment is not degraded during operation and maintenance.

C.5.5.7.1 Hardness critical symbols. All hardness critical processes/steps/items will be marked with the appropriate symbols [HCP] / [HCI] / [OCP] / [OCI] / [CSP] / [CSI].

C.5.5.8 Electrostatic discharge [ESD] sensitive parts. If the electronic equipment to be handled, inspected, repaired, or assembled is ESD sensitive, the ESD icon (the acronym ESD enclosed in a box) and the symbol (ESD) shall be incorporated into the applicable tasks and procedures of the technical publications to ensure that ESD sensitive parts are not degraded during handling or operation. The ESD icon shall precede the procedure title. The specific step(s) in the procedure addressing handling or operation which could damage ESD sensitive parts shall be labeled by placing the symbol (ESD) between the step number and the text.

C.5.5.9 Ozone depleting substances (ODS). The continued use of ozone depleting substances (ODS) has been prohibited by Executive Order 12856 of 3 August 1993. Including information on the use of ODS materials in NAVAIR manuals is prohibited. A listing of these substances may be obtained from the requiring activity.

C.5.5.10 Numbering.

C.5.5.10.1 Table numbering. Tables for ETM/IETM display shall not be numbered.

C.5.5.10.2 Figure numbering. Figure numbers for illustrations contained in work packages for ETMs/IETMs may be used.

C.5.5.11 Figure and table titles.

C.5.5.11.1 Table titles. In general, tables should have a title. Each title should be descriptive and unique. The guidelines listed below should be followed:

a. Table titles should appear above the table. The table title should also appear in the display title bar.

b. If the table is scrollable, the table should have a "sticky" table title and all column heads. "Sticky" infers that the title and column heads will be continually displayed throughout the scrolling process of the entire table.

C.5.5.11.2 Figure titles. For **ETMs**, figure titles may be used. For **IETMs**, figure titles for illustrations should not be used.

C.5.5.12 Abbreviations and acronyms. Abbreviations, acronyms, and unusual terms may be used in any WP text, when applicable. It is not necessary to spell out the words completely after the first use of an acronym or abbreviation. Hotspots should be used to link all abbreviations, acronyms, and uncommon terms to the WP containing the complete explanation and listing of abbreviations, acronyms, and uncommon terms.

C.5.5.13 Type size and style. Type style, size, and spacing shall be in accordance with MIL-PRF-87268.

C.5.5.14 Display of text. All descriptive information and task text should be displayed in accordance with this document and MIL-PRF-87268.

C.5.5.15 Nomenclature.

C.5.5.15.1 Nomenclature consistency. Nomenclature of identical systems, subsystems, equipment, support equipment, components, and parts of the end item shall be consistent throughout the manual. The preparing activity shall develop nomenclature lists for associate preparing activities and sub-preparing activities to ensure consistency throughout the work packages. 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.

C.5.5.15.2 Noun modifiers. Noun modifiers should 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 graphic. Noun modifiers, once added for clarity, should be used throughout the technical data.

C.5.5.15.3 Military terms. Military terms used will be in accordance with Joint Pub 1-02, or any approved dictionary or glossary of Navy military terms.

C.5.5.15.4 Automatic electronic test and checkout terminology. Terms used for automatic electronic test and checkout will be in accordance with MIL-STD-1309.

C.5.5.15.5 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 equipment used to prepare the data.

C.5.5.15.6 Designation of equipment. The official designation of equipment should 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 should be stated in text using the same wording that appears on the hardware.

C.5.5.15.7 National stock numbers. National stock numbers shall not appear in WPs but may be included in the parts data information (refer to MIL-STD-3001-4).

C.5.5.15.8 Part numbers. Part numbers should not be used in text or on illustrations except when necessary for clarity.

C.5.5.16 Symbols. When new or unusual graphics symbols are required, they shall be identified at each occurrence. It is permissible to spell out symbols that cannot be reproduced on the equipment on which the data is being prepared.

C.5.5.17 Footnotes. Footnotes shall not be used. A note shall be used in lieu of a footnote. There shall be an identifiable indication, such as an icon, to indicate the presence of a note.

C.5.5.18 References. The use of references in text can create undue hardship and/or confusion for the user of the technical data. References should be kept to a minimum. A high amount of referencing in text frequently indicates improper task analysis or LSA/LMI. As a practical consideration, linking shall be used. Hotspots shall be used to link cross-referenced material.

a. Reference should not be made to coverage contained in a higher maintenance level WP or NAVAIR manual from a lower maintenance level WP or NAVAIR manual (i.e., from an OMM to an IMM).

b. Reference should not be made to coverage contained in other than NAVAIR manuals, except when the manual has been formally assigned a NAVAIR publication number.

NOTE

Commercial or joint usage manuals must be formally reviewed and approved for use prior to use by NAVAIR activities. When approved, the manuals are assigned NAVAIR publication numbers. Information related to review, approval and assigned number status can be provided by the requiring activity. The NAVAIR number is normally added during the next update of the manual and may not be listed in existing copies of the manual. Clarification can be provided by the requiring activity.

C.5.5.18.1 Mandatory compliance maintenance procedures. Mandatory compliance maintenance practices contained in NAVAIR general series manuals should 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 annotated mandatory compliance.

C.5.5.18.2 Maintenance procedures contained in other manuals. Maintenance procedures that are required to complete maintenance tasks that are contained in another maintenance manual shall be referenced by publication number.

C.5.5.18.3 Tasks performed by other work centers. Procedures that require performance of tasks by technical personnel other than those normally assigned to the subject task shall be referenced in the WP title data and in the text. For example, if the primary task is removal of a component of the flight control system that is inaccessible without removal of the power plant, a preparatory step of the procedure would be, "Remove power plant (A1-F77AA-220-300)."

C.5.5.18.4 Post maintenance action referencing. When the last step of a maintenance task has been completed, any post maintenance actions required to ensure that the maintenance task has been successfully completed should be included. For example:

a. The last step of an installation procedure should reference testing (Operational Checkout) or a required maintenance action, e.g., "Service hydraulic system," when the maintenance procedure (installation of a hydraulic system component) required an open line.

b. The last step of a required maintenance action should reference testing (Operational Checkout) or an additional required maintenance action, e.g., such as when a hydraulic actuator is replaced.

C.5.5.18.5 References to other manuals or volumes. References in the text shall be made by the referenced task title as follows:

a. For non-work package concept publications, reference shall be made by publication number.

b. For work package format publications, reference shall be made by publication number only.

c. Reference shall not be made to a paragraph or table number.

d. 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 the "Reference Material" list at the beginning of the WP. The reference to the classified supplement shall include the classification of the classified supplement.

e. Reference to another ETM/IETM shall be by the ETM/IETM publication number and the task title.

C.5.5.18.6 Referencing within the ETM/IETM. When it becomes necessary to reference to other work packages, descriptive information, maintenance tasks, or other data within the same ETM/IETM, it shall be by title. The title shall be the same used in the List of Contents. A hotspot icon shall be used to indicate a link to the referenced data.

C.5.5.18.7 Frequently used maintenance tasks (ETMs). **For ETMs**, when it becomes necessary to reference to another step or group of steps within the same procedure or task or to another procedure or task in the same WP, the reference shall be by the step number(s). A hotspot icon shall be used to indicate a link to the referenced data. A reference link shall always be provided for procedures presented for a scrollable display. This reference linking shall also apply to procedural data prepared in tabular format.

C.5.5.18.8 Frequently used maintenance tasks. Frequently used maintenance tasks, such as applying external electrical or hydraulic power, shall be prepared once as a common maintenance task and linked as a common step in all other maintenance tasks requiring the need of external electrical or hydraulic power. It is not necessary to link supporting graphics to common steps with linked tasks.

C.5.5.19 Equations. The use of equations should be held to the minimum use required by the needs of the ETM/IETM user. MATHPACK 911001 as included in MIL-PRF-28001 should be used for preparing equations. The use of some equations may be limited by the Mathpack and the output system.

C.6. **GRAPHICS REQUIREMENTS**.

C.6.1 Display of illustrations. Illustrations should be displayed on the user's EDS in accordance with MIL-PRF-87268. (Refer to MIL-HDBK-3001 for typical examples of types of graphics that can be prepared for ETMs/IETMs.)

a. If the graphic is scrollable, the user should have the capability to activate scroll, zoom, or full screen functions to manipulate the graphic whenever the entire graphic exceeds the size of the data pane.

b. The user should have the capability to scroll the graphic through the use of scroll up, scroll down, scroll left, and scroll right features. Scroll bars should appear on the display to provide the user with a visual cue that the capability to scroll the displayed information exists.

c. The user should also have the capability to enlarge and reduce the displayed graphical information by activating a zoom feature.

C.6.1.1 Illustration detail and size. Refer to MIL-PRF-87268.

C.6.2 Multiple use of illustrations. Whenever possible, one illustration should be used in support of two or more requirements. For example, illustrations prepared to support the parts list data shall be used to support the maintenance procedures contained in the same maintenance WP. However, additional illustrations may be developed to support the maintenance procedures if the parts list illustration does not adequately provide the guidance to perform the maintenance procedures.

C.6.3 Engineering drawings. Unless specified otherwise by the requiring activity, engineering drawings shall not be used as illustrations. When used,

a. They shall be in accordance with MIL-STD-100 and shall be modified, as necessary, to meet the content, style, arrangement, legibility, format, and production requirements described in this document and the contract.

b. All unnecessary data that would reduce the comprehension or clarity of the illustration shall be removed.

c. They must be reduced or redrawn to meet frame size restrictions.

C.6.4 Diagrams. Diagrams shall be prepared in accordance with the specifications listed below.

Subject	Equipment Covered	Specification
Abbreviations	All	OPNAVINST 4790.2
Drafting Practices	Mechanical, Electrical, and Electronic	ANSI Y14.15-1966 (R1973)
Engineering Drawing Practices	All	MIL-STD-100, MIL-T-31000, ANSI Y14.15
Graphic Symbols	Electrical and Electronic	IEEE 315A-86, IEEE 280-85 (ANSI Y10.5)
	Mechanical	MIL-STD-17
	Digital (Logic)	IEEE 91-84
	Fluid Power	ANSI Y32.10
Reference Designators	Electrical and Electronic	IEEE 200-75
Unit Symbols	All	IEEE 260-78
Logic	All	IEEE 91-84
Dimensions and Tolerances	All	ASME Y14.5M-94

C.6.4.1 Types of diagrams. The following types of diagrams may be included in the ETM/IETM. Refer to MIL-HDBK-3001 for examples of the style, format, and content of these diagrams.

a. Block diagrams.

b. Schematic diagrams.

c. Pictorial diagrams.

d. Cutaway diagrams.

e. Troubleshooting logic diagrams.

f. Wiring diagrams/wire lists.

g. Cable diagrams.

h. Piping diagrams.

i. Test setup diagrams.

C.6.4.2 Test point identification symbols on diagrams. Identification of test points by symbols should not be employed where the test points are readily identifiable by other means; for example: "Test jacks (TP-5)," "Connector pins (J100-M)," and "Component pins (X4-2, Q1-E, and Z5-14)" are readily identifiable points and do not require symbols. Test points that are not otherwise identifiable (artificial test points) should be identified by test point symbols. The test point symbol should be an encircled uppercase letter and an Arabic numeral. These test points will be referred to in the text such as "Test point A2." Artificial test points should be used when specific voltage and resistance test points, used in checking a circuit, are otherwise unidentifiable. Different letters should be assigned to each component (on a diagram); for example: test points Al, A2, and A3 in component l, test points B1, B2 and B3 in component 2.

C.6.4.3 Signal flow. Signal flow, especially for electrical and electronic equipment, critically affects the understandability of diagrams. To assist the ETM/IETM user in following the diagram, where possible, major signal or pressure flow shall be from left to right, and feedback or return flow shall be from right to left.

C.6.5 Charts and graphs. Charts and graphs shall be prepared as illustrations. Instructions shall be provided for use and interpretation of complex graphs.

C.6.6 Use of color. Color may be used when it will enhance the understanding of the data. The use of some colors may not be appropriate for certain environmental conditions. The following color limitations shall apply.

a. For ETMs/IETMs that may be displayed on a monochrome system, reverse video and/or underlining shall be used for hotspots rather than color.

b. The use and choice of colors may be as specified by the requiring activity.

C.6.7 Credit lines. The photographer's or artist's name shall not appear on artwork; neither shall a manufacturer's name, symbol, or trademark appear thereon for the purpose of identifying the illustration. A preparing activity's illustration identification number may be used for artwork (but shall not be displayed on the user's EDS).

C.6.8 Callouts. Index numbers, reference designators, and nomenclature are used as callouts on illustrations to identify equipment, components, and significant features. Leader lines and sweep arrows are used, in combination with the callouts, to enhance the illustration. When hotspot techniques are used in conjunction with callouts, an explanation should be provided in the "How to Use" portion of the ETM/IETM.

C.6.9 Legends. Illustration legends should not be used for ETM/IETM display.

C.6.10 Leader lines. Normally, leader lines should touch the object to which the lines apply. Arrowheads are preferred for clarity.

C.6.11 Procedures on illustrations. Procedural steps shall not be used on illustrations.

C.6.12 Cartoons. Cartoon-type drawings shall not be used.

C.6.13 Use of animation and video. Audio, video, and animation techniques shall only be used in an ETM/IETM when it results in enhancing the presentation of the information or makes the procedures more effective. Every instance of use must be discussed with and approved by the requiring activity before any audio, video, or animation presentation is included in an ETM/IETM. Multimedia standards to be used for presentation techniques will be specified by the requiring activity.

C.7. **REVISIONS AND UPDATES**.

C.7.1 Revisions and updates. When changes to ETMs/IETMs are ordered, the deliverable product shall be either an update or a complete revision. The requiring activity will determine the type and frequency of the change required.

C.7.1.1 Revisions. A complete ETM/IETM revision requires rewrite of the technical content of the data to ensure that all new data and past updates are included. When applicable, all existing change numbers, change bars, dates, and change symbols shall be removed. When required by the requiring activity, a revision summary shall be provided. (Refer to C.5.3.7.) Revisions will be incremental and the frequency of revisions will be defined in the contract. Each revision to an ETM/IETM shall be identified by a revision date.

C.7.1.2 Updates. Updates are changes to the initial version of the ETM/IETM or to the latest complete revision of an ETM/IETM. Updates are issued incrementally as necessary, or as required by the contract. When authorized by the requiring activity, updates shall include change symbols and change dates to inform the user what has changed and where the changes or additional information is located. When required by the requiring activity, a revision summary shall be provided. (Refer to C.5.3.7.)

C.7.1.3 Change symbols. When authorized by the requiring activity, change symbols shall be inserted to identify technical changes in text, illustrations, and tables.

a. Text and tabular data. The text and tabular data affected by a change shall be indicated by the letter "R" or a change bar in the outer margin.

b. Illustrations. Change symbols for illustrations shall be as follows:

(1) Miniature pointing hand. A miniature pointing hand shall be used to highlight the area containing the changed material.

(2) Change bar. When several changes are made in one area, or the area is congested, a change bar may be used to indicate a general area. The change bar should be placed in such a manner as to clearly indicate the changed area without confusing the user. If an illustration has been extensively changed, a change bar may be placed along the outer margin of the illustration.

(3) Alternate method. An acceptable alternate method for use with an extensively changed illustration is the use of the words “MAJOR CHANGE” enclosed in a box. The enclosed words should be placed in a clear space of the illustration image area.

C.8. **COMPREHENSIBILITY**.

ETM/IETM comprehensibility requirements are provided in MIL-PRF-87268.

C.9. **SECURITY CLASSIFICATION MARKINGS**.

C.9.1 Security classification markings. When preparation of a classified ETM/IETM is specified by the requiring activity, the security classification markings shall be identified in accordance with DoD 5200.1R, DoD 5220.22M, OPNAVINST 5510.1, and Executive Order 12958. For guidance on security classification and handling restrictive markings on Compact Disk-Read Only Memory (CD-ROM), refer to MIL-HDBK-9660.

C.9.2 Display of security classification markings. Whenever classified information is displayed, the classification level should be indicated in the left-hand corner of the footer area. The indication should be the upper case spelling of the words corresponding to the classification level (e.g., CONFIDENTIAL or SECRET). When color is used, these indications should be displayed with a consistent color. The classification indication should be clearly distinguishable from the function indicators in the same area. If any classified information is contained in the ETM/IETM, the classification of the entire ETM/IETM is that of the highest classification level used, e.g., SECRET. In an IETM, if a given frame is unclassified, the label UNCLASSIFIED should appear in the footer bar.

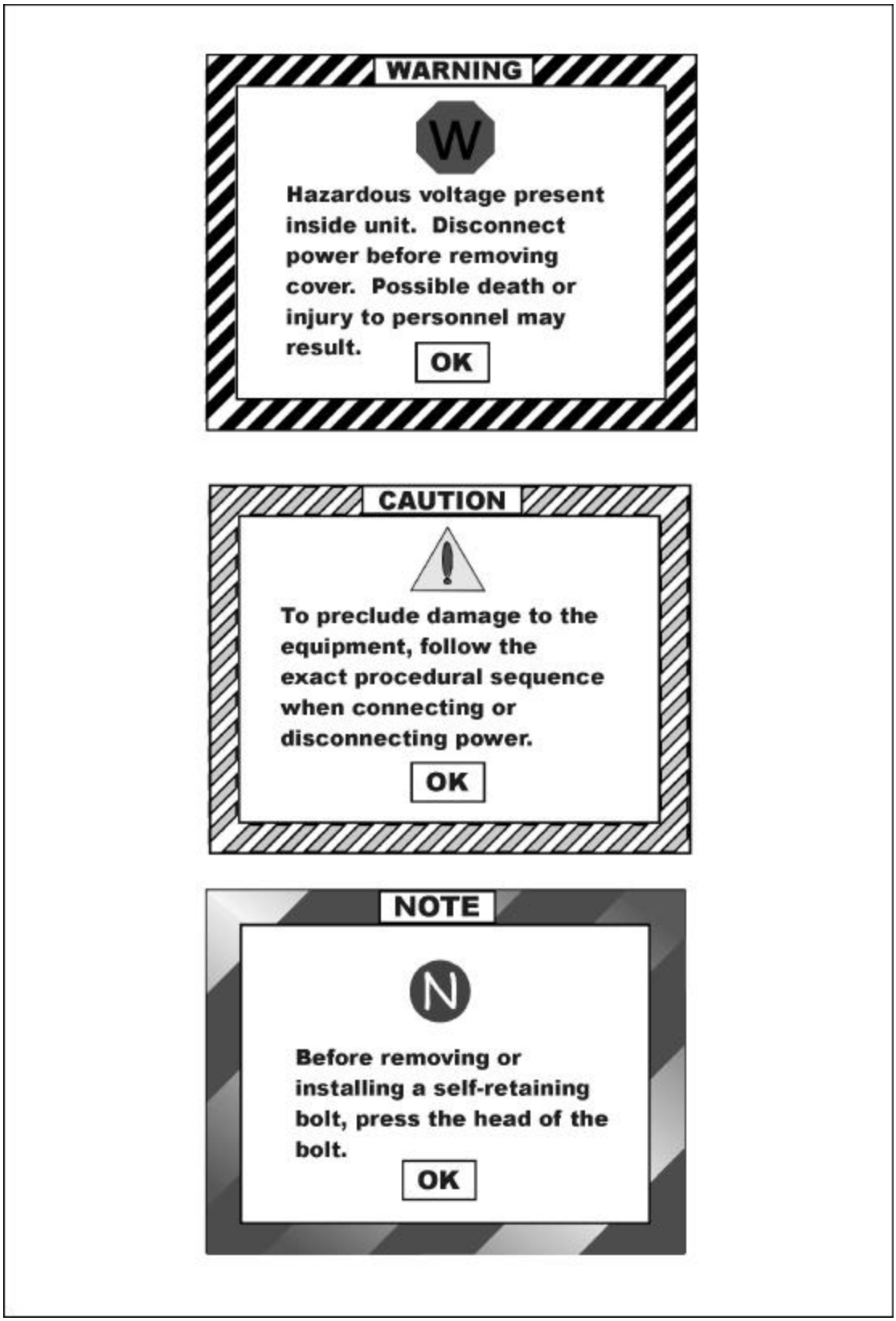

FIGURE C-1. Example of display of warnings, cautions, and notes.

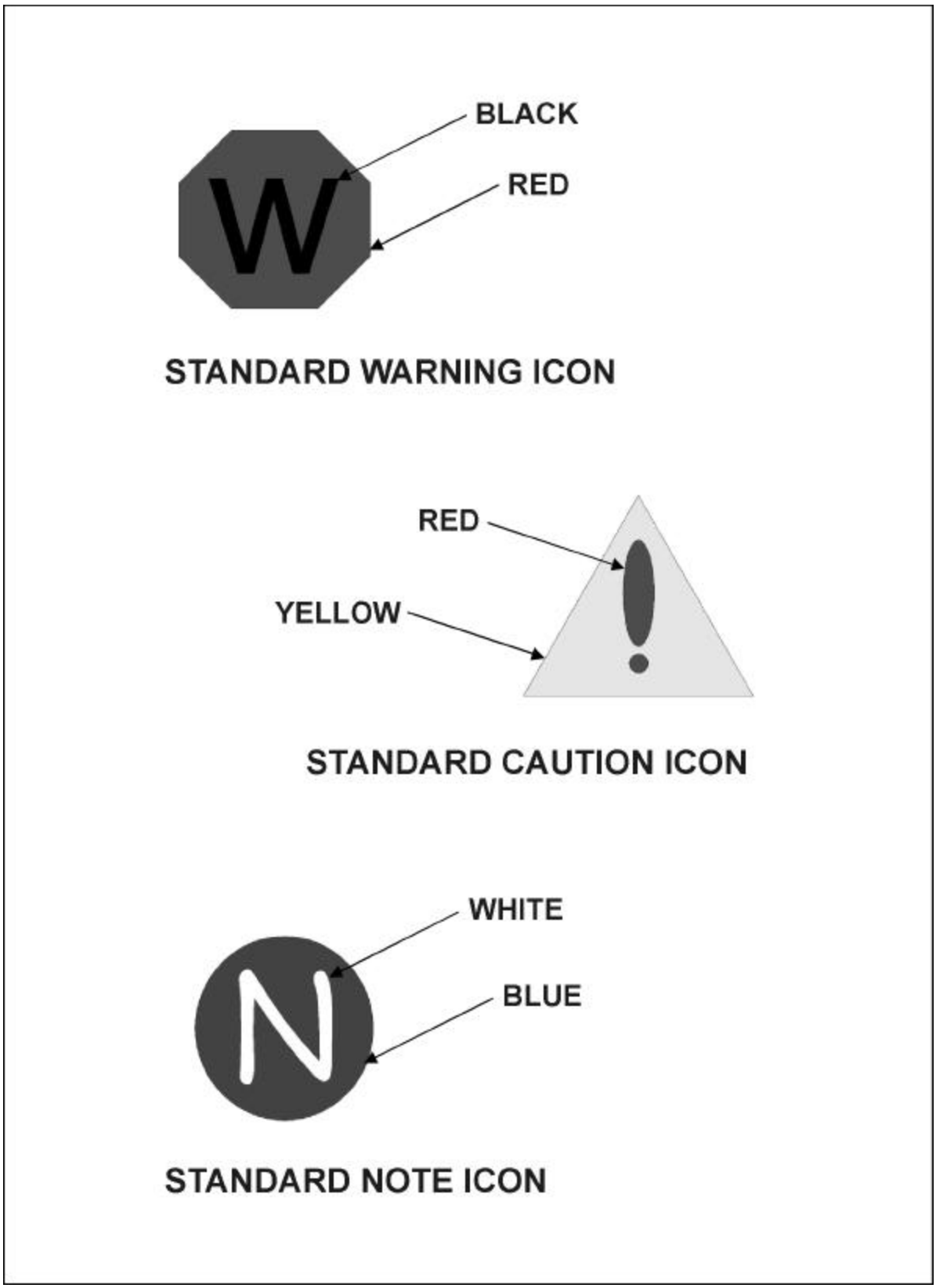

FIGURE C-2. Example of standard icons for warnings, cautions, and notes.

SAFETY WARNINGS ICONS

EAR PROTECTION - headphones over ears shows that noise level will harm ears.

ELECTRICAL - electrical wire to arm with electricity symbol running through human body shows that shock hazard is present.

ELECTRICAL - electrical wire to hand with electricity symbol running through hand shows that shock hazard is present.

FALLING PARTS - arrow bouncing off human shoulder and head shows that falling parts present a danger to life or limb.

FLYING PARTICLES - arrows bouncing off face shows that particles flying through the air will harm face.

FLYING PARTICLES - arrows bouncing off face with shield shows that particles flying through the air will harm face.

HEAVY OBJECT - human figure stooping over heavy object shows physical injury potential from improper lifting technique.

FIGURE C-3. Example of safety warnings icons.

SAFETY WARNINGS ICONS - Continued

HEAVY PARTS - hand with heavy object on top shows that heavy parts can crush and harm.

HEAVY PARTS - foot with heavy object on top shows that heavy parts can crush and harm.

HEAVY PARTS - heavy object on human figure shows that heavy parts present a danger to life or limb.

HEAVY PARTS - heavy object pinning human figure against wall shows that heavy, moving parts present a danger to life or limb.

HELMET PROTECTION - arrow bouncing off head with helmet shows that falling parts present a danger.

HOT AREA - hand over object radiating heat shows that part is hot and can burn.

LASER LIGHT - laser light hazard symbol indicates extreme danger for eyes from laser beams and reflections.

FIGURE C-3. Example of safety warnings icons - continued.

SAFETY WARNINGS ICONS - Continued

MOVING PARTS - human figure with an arm caught between gears shows that the moving parts of the equipment present a danger to life or limb.

MOVING PARTS - hand with fingers caught between gears shows that the moving parts of the equipment present a danger to life or limb.

MOVING PARTS - hand with fingers caught between rollers shows that the moving parts of the equipment present a danger to life or limb.

SHARP OBJECT - pointed object in hand shows that a sharp object presents a danger to limb.

SHARP OBJECT - pointed object in hand shows that a sharp object presents a danger to limb.

SHARP OBJECT - pointed object in foot shows that a sharp object presents a danger to limb.

SLICK FLOOR - wavy line on floor with legs prone shows that slick floor presents a danger for falling.

FIGURE C-3. Example of safety warnings icons - continued.

ICON	Description	ICON	Description
	Eye Hazard		Skin Hazard
	Corrosive		Poison
	Breathing Hazard		Radiation
	Explosion Hazard		Cryogenic
	Fire Hazard		Oxidizer
	Ingestion Hazard		Biohazard

FIGURE C-4. Example of hazardous materials icons.

CONCLUDING MATERIAL

Preparing activity:
Navy - AS
(Project TMSS N272)

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I RECOMMEND A CHANGE:	1. DOCUMENT NUMBER MIL-STD-3001-1(AS)	2. DOCUMENT DATE (*YYYYMMDD*) 2000/11/15

3. DOCUMENT TITLE

Preparation of Digital Technical Information for Multi-output Presentation of Technical Manuals

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

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