

ATTACHMENT 0012 – General Publications Requirements for Page-Based Manuals

1.0 PREPARATION INSTRUCTIONS

1.1 The Contractor shall deliver a Department of the Army Technical Manual (DATM) and Electronic Technical Manual (ETM) in Portable Document Format (PDF) in accordance with (IAW) guidance below:

2.0 REQUIREMENTS FOR PUBLICATION DELIVERIES

2.1 Draft Equipment Publication (DEP). For DEP delivery, the Contractor shall provide a complete publication, that is, a validated draft DATM and ETM. DEP manual shall be hardcopy and shall be representative of the final product. Contents must be clearly legible with content and format as for final. DEP TM hardcopies shall be reproduced back-to-back, collated, and assembled, with each copy drilled for standard three-hole punch. See Paragraph 5 below for PDF ETM requirements.

2.2 Final Draft Equipment Publication (FDEP). For FDEP delivery, the Contractor shall provide a complete publication. FDEP shall include all changes and final resolutions resulting from Government reviews and tests as well as Contractor quality reviews and final edits. Illustrations shall be inked and all callouts and text shall be typeset. FDEP manual delivery shall consist of the copies of the final paper manual in the necessary quantities as per the proper CDRL, each reproduced back-to-back, collated and assembled, and drilled for standard three-hole punch. See Paragraph 5 below for PDF ETM requirements.

2.3 Final Reproducible Copy (FRC) shall be back-to-back reproducible pages, collated and assembled, drilled for standard three-hole punch, and ready for one-to-one reproduction. FRC pages produced from a 600 dot-per-inch (minimum) laser printer or Photo Mechanical of original master paste-up boards are acceptable. The intent is to receive crisp, clear, reproducible pages without paste-up, ready for one-to-one reproduction without additional work or loss of quality due to handling or storage. See Paragraph 5 below for PDF ETM requirements.

3.0 SPECIFICATIONS

3.1 MIL-STD-40051-2B, DoD Standard Practice, Preparation of Digital Technical Information for Page-Based TMs.

3.2 MIL-HDBK-1222E, DoD Handbook, Guide to the General Style and Format of US Army Work Package TMs. This Handbook should be used in conjunction with MIL-STD-40051-2B.

4.0 CLARIFICATIONS

4.1 All illustrations shall be line drawings, unless otherwise directed or approved by the Government. Digital photographs may be used where the clarity of information is better than line drawings would provide or where there are other advantages to the TM users; however, the use of digital photographs must be approved by the Government.

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4.2 Illustrations in operation and maintenance instructions shall be isometric and provide a view as seen by the user. Illustrations shall appear on same or facing page as applicable text; quantity and type of illustration shall allow the user to locate items and operate and maintain equipment in an accurate and efficient manner.

4.3 Incorporate appropriate lubrication instructions into the Operator and Field Preventive Maintenance Checks and Services (PMCS) at the applicable hard time intervals IAW MIL-STD-40051-2B. Include Army Oil Analysis Program (AOAP) instructions, if applicable, and any initial, onetime, or warranty-related requirements.

4.4 Prepare an operator/crew PMCS IAW MIL-STD-40051-2B. The operator/crew checks and services must require only the common tools that are included in the Basic Issue Items furnished with and stored on the vehicle during operation. Operator/crew PMCS will include intervals such as: Before, During, After, Weekly and Monthly, as applicable.

4.5 Prepare a Field PMCS containing Field level tasks IAW MIL-STD-40051-2B. The Field PMCS will include intervals such as: Quarterly, Semiannually, or Annually.

4.6 Develop and update a Maintenance Allocation Chart (MAC) IAW MIL-STD-40051-2B. The MAC shall be in Functional Group Code (FGC) sequence to conform to the structure of the Technical Manual and MIL-STD-40051-2B. The Contractor shall update the MAC throughout the performance period of the contract, including results of Contractor analysis, vehicle testing, Validation, Verification, and review of applicable Logistics Management Information (LMI) data. The Contractor shall perform an analysis to identify the extent of repair for each potentially repairable item and recommend the maintenance level to perform the work within the Army Maintenance System (AR 750-1, Chapter 3, Section II, paragraphs 3-8 through 3-10).

Variables such as item price, parts prices, failure rates of the repairable item, and piece parts, labor costs, and the cost of special tools and equipment shall be considered.

Functional Group Code (FGC) as used for MAC, RPSTL, and TMs is defined as the engineering breakdown of the equipment as accomplished within the LMI. The FGC system used can be either Logistics Control Numbers (LCNs) or FGCs per TB 750-93-1.

4.7 Prepare Components of End Item (COEI) and Basic Issue Items (BII) lists as supplemental data page(s) IAW MIL-STD-40051-2 w/Change 3.

4.8 Prepare Additional Authorized List (AAL) as supplemental data page(s) IAW MIL-STD-40051-2B.

4.9 Prepare an updated, revised Appendix A, References. See MIL-STD-40051-2B.

4.10 Prepare Initial Setup information for all maintenance tasks IAW MIL-STD-40051-2B. Setup information includes, but is not limited to: Test Equipment, Tools and Special

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Tools, Materials/Parts (expendables/durables and mandatory replacement parts), Personnel Required, Equipment Condition, and References. Time to Complete Task shall not be included, unless permission is granted by the Government publications manager.

4.11 Equipment Conditions must be limited to avoid a concept described as nested equipment conditions. This occurs when an excessive number of equipment conditions are listed and each of those referenced tasks contains an excessive number of equipment conditions, and so on. The result is that a TM user may be forced to go to many layers of referenced work packages to complete a single work package.

It may be difficult to define excessive number of equipment conditions. Generally, more than five equipment conditions is considered to be excessive. Equipment conditions should be limited to those actions necessary to prepare the end item for the maintenance actions to be taken in that work package. Removing components for access to the component to be worked on are not equipment conditions: these are to be listed as steps within the work package, as long as the maintenance steps and associated illustrations required are of a reasonable number.

4.12 Transportability Data for disassembly and assembly for all vehicles required to meet all transport modes called out in the contract shall be added to the Operator's manual. This data may be added as an appendix to the manual. The contractor shall include a reference identifying the location of tools and equipment required for preparation of transport.

4.13 A list of components susceptible to damage from the biological/chemical-decontaminant DS2 must be included in the TM.

4.14 TMs must provide a reference to decontamination procedures. (Field Manual [FM] 3-5, entitled "NBC Decontamination.")

4.15 TMs must include a list of components susceptible to High-altitude Electromagnetic Pulse (HEMP), as applicable.

4.16 Operator TMs and/or maintenance TMs must include long-term and short-term storage requirements and any exercise of equipment needed to prevent deterioration. Preparation for shipment information must also be included.

5.0 ADOBE ACROBAT ETM

5.1 The Contractor shall develop a separate ETM from the DATM using the portable document exchange system Acrobat (Adobe Systems Acrobat Version 6.0 or higher) PDF. The content of the ETM must match exactly that of the DATM. This file will not have any linking done, but it shall be editable, searchable, and have fonts embedded. Eterna, Century Schoolbook, and Helvetica fonts shall not be used. Arial is the preferred font (although most of the basic Windows System fonts are embeddable).

5.2 The Contractor shall create editable files (Microsoft Word, FrameMaker v. 5.0 or

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higher, PageMaker v. 6.5 or higher, or RTF files) containing all the text and graphic information in the ETM. The PDF ETM must be distilled or produced electronically from these editable files (converting to PDF from scanned hardcopy is not acceptable). The contractor will also create Computer Graphics Metafile (CGM) or Consultative Committee on International Telephony and Telegraphy (CCITT) Group 4 files or Tag Image Format Files (TIFF) containing all the graphics/line drawings of the ETM.

5.3 The contractor shall deliver the Acrobat PDF ETM on an International Organization for Standardization (ISO) 9660 CD-ROM. Deliver the separate editable files and graphic files on separate ISO 9660 CD-ROMs.

5.4 The Contractor shall provide the Government with validated DEP, FDEP, and FRC ETMs in addition to validated paper DEP, FDEP, and FRC versions. The Contractor, at no additional charge to the Government, shall correct all errors discovered by the Government or Contractor during Validation, Verification, and reviews. Any and all configuration changes to the equipment shall be accurately reflected in both the paper DATM and ETM versions at no additional cost to the Government.

6.0 QUALITY ASSURANCE

6.1 The Contractor shall be responsible for the quality of the DATM and ETM and for developing effective processes to develop, test, and inspect the deliverables, ensuring technical accuracy, usability, completeness (within the scope of the contract), consistency, and adherence to contract requirements prior to delivery.

6.2 Validation is a process where the Contractor must physically perform 100 percent of the procedures supporting the equipment configuration being procured. Validation is an action performed on text and illustrations developed to meet contract requirements; therefore, development and Validation of data cannot be done simultaneously. Validation also includes the Contractor's comparative review of all other technical data to the configuration of the item being procured. The Validation effort shall ensure that both text and illustrations are mutually supportive and accurately describe and reflect the equipment configuration being procured. If the Government requests, the Contractor will provide a Validation Plan to the Government outlining when the Validation will be held and in what order the tasks will be accomplished. This Plan is due no later than (NLT) 30 days before the start of the Validation. The Government reserves the right to witness the Contractor's Validation efforts and to review complete Validation records. The Contractor shall deliver to the Government a Validation Report certifying that Validation has been completed, listing in detail the effort undertaken during Validation (processes, corrections, etc.), and showing the TM deliverable has had QA applied with use of the Equipment Publications Defects List (Attachment 0019).

6.3 The Government reserves the right to perform separate reviews and testing (Verification) for accuracy and usability at the Government's discretion prior to acceptance of the final deliverables. Verification is the Government's hands-on performance check of tasks and deliveries to confirm the adequacy of the Contractor's preparation and Validation efforts. The Government will not proceed with its Verification until it determines the DEP is a complete publication in the same format as the final

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publication and it conforms to the governing content and format Military Specifications and Standards.

6.4 The Contractor shall support the Government's Verification (a pre-determined location will be agreed upon) by providing facilities, common support equipment, and appropriate personnel. The Contractor will provide an approved configuration of the end item. The Contractor will provide all necessary hardware, mandatory replacement parts, special tools, and support equipment that will be required during the Government Verification.

6.4.1 Detailed description of the Verification team membership/responsibilities will be provided by the Government in a written Verification Plan to be developed before this effort starts.

6.4.2 The Contractor shall support the Government Verification by correcting and returning all tasks marked "No Go" within 24 hours for re-Verification. The Contractor shall also provide personnel who know the development of the DATM and who can answer questions about the equipment operation and maintenance to support this effort. These persons shall be available at all times during the Verification.

6.5. The Government will evaluate the DATMs and ETMs for compliance with contract requirements to determine their acceptance. All information in the DATMs and ETMs must be presented in such a way that data may be easily identified, found, read, and understood, and shall include illustration support where the Government deems necessary.

6.6. The Contractor shall support in-process reviews (IPRs) by providing samples of work accomplished to date or other requested data and shall identify improvements to the manuals or QA processes required as a result of IPR comments.

7.0 Preparation for storage or shipment.

7.1 Actions to be taken to process the system to Level A and Level B protection are defined below. Include special preservation requirements for outside storage, Controlled Humidity Storage and any unique non-cyclic exercising requirements. If there are any unique mechanisms such as, hydraulic systems, pumps, electric motors, engines, transmissions, etc., requiring exercising at a frequency level other than the specified maintenance cycle, develop and include these requirements.

7.1.1 Level A protection is processing of the system for outside storage for a period of up to 2 years in any environment and for storage up to 48 months in an unheated warehouse environment without any exercising or maintenance. Systems processed to Level A are not authorized for deck loading on ships without additional protection. Systems processed to Level A may require disassembly and tarping.

7.1.2 Level B protection is processing of the system for controlled humidity storage for a period of up to 48 months and temporary outside storage not to exceed 90 days without any exercising or maintenance. Vehicles processed to Level B must be processed for

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shipment and shall be operational with drive-on drive-off capabilities. Vehicles processed to Level B are not authorized for deck loading on ships and may require additional care of supplies in storage to maintain the system or equipment.

7.2 Develop instructions for environmental deterioration (includes corrosion, rust, UV attack, mold, mildew, rodent, and insect damage) prevention processing of systems and related equipment for shipment and storage in the following conditions:

7.2.2 Level A. Instructions shall include special preservation, packaging, packing, marking, electrostatic discharge (ESD) protective and control measures, shelf-life, instructions on special use of corrosion-preventive compounds, moisture barriers, and desiccant materials. Instructions are required for both placing the equipment into storage and for the removal from storage. Instructions shall be developed for shipment and storage worldwide in an unfavorable, non-humidity controlled environment, such as the weather deck of an ocean going vessel, for a period up to 24 months from the date of processing, preferably without exercising, inspection, or maintenance.

7.2.3 Level B. Instructions shall provide for all fluids and lubricants to be at operating levels and fuel tanks to contain enough fuel to permit loading, off loading, and movement of 10 miles at the receiving point (detail amount of fuel). All batteries are to be activated and fully charged. Battery cables are to be disconnected from battery terminals and protective wrapped/secured from movement while vehicle is in storage or transit mode.

7.2.4 For Level A & Level B. Prepare processing instructions for mounted equipment and attachments of the system at a preservation level equal to that of the system. Processing instructions shall include direction for environmental, physical protection and security against pilferage of the mounted equipment and attachments.

7.2.4.1 Prepare instructions for the preservation, packaging, packing, marking and shelf-life of the Basic Issue Items, Initial Service Package and Components of End Item shall be in accordance with MIL-STD-2073. BII shall be packed separately from the COEI. Provide for environmental, physical protection and security against pilferage of these items.

7.2.4.2 Include de-preservation instructions for all levels of preservation.

7.2.4.3 Large items that cannot withstand exposure to the elements shall be consolidated into containers. Examples of consolidation containers include ISO and MILVAN containers. Packing lists shall be included and developed IAW MIL-STD-129P.

7.3 Compliance with Federal and Industry Transportation Requirements: The Government ships using truck, rail, plane, and ship. The contractor shall develop shipment and storage instructions for each mode of transportation and identify their unique requirements. This will allow the Government to process each shipment based on the intended mode of transport. The contractor shall comply with the following applicable codes and standards: (1) Code of Federal Regulation Titles 29, 40 and 49, (2) International Maritime Dangerous Goods Code, for vessel transport, and (3) AFMAN 24-204, Preparing Hazardous Materials for Military Air Shipments. The contractor shall

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include disassembly procedures to meet the requirements of the aforementioned codes and standards.

7.4 MIL-STD-3003 (available at <http://quicksearch.dla.mil/>) is the Standard Practice for the Preparation for Shipment and Storage of Wheeled Vehicles and can be used as a guiding document.

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