

## **Attachment 11.....General Publications Requirements**

1.0 PREPARATION INSTRUCTIONS. You shall deliver DA Technical Manuals (TM), National Maintenance Work Requirements (NMWRs), Electronic TMs (ETM) in Portable Document Format (PDF) In Accordance With (IAW) guidance below:

2.0 Requirements for publication deliveries shall be as follows:

2.1 Draft Equipment Publication (DEP). For DEP delivery, the Contractor shall provide complete publication(s), that is, validated draft data in DA TMs and ETMs. DEP manual(s) 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. The term DEP in this contract refers to the Preliminary Technical Manual (PTM) terminology used in MIL-STD-40051-2. **See Paragraph 5 below for PDF ETM requirements.**

2.2 Final Draft Equipment Publication (FDEP). For FDEP delivery you shall provide complete publication(s). FDEP shall include all changes and final resolutions resulting from government reviews and tests as well as your quality reviews and final edit. Illustrations shall be inked and all call-outs and text shall be typeset. The term FDEP in this contract represents the final PTM that represents what the Final Reproducible Copy (FRC) will look like and it includes all corrections and resolutions of government DEP review comments and verification comments. FDEP manual(s) delivery shall include quantities as stated on the Contract Data Requirements List (CDRL) and consists of the following:

2.2.1 Copies of final paper manual(s) in the necessary quantities as per the proper CDRLs each reproduced back-to-back, collated and assembled, and drilled for standard three-hole punch.

2.2.2 Final Reproducible Copy (FRC) shall be single-sided reproducible pages, collated 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.

2.2.3 Intelligent text PDF file of the FDEP as described in paragraph 5 below.

3.0 SPECIFICATIONS:

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

3.2 MIL-HDBK-1222C (TM), DoD Handbook, Guide to the General Style and Format of US Army Work Package TMs. This Handbook contains style and format guidance for both IETMs and paper/PDF TMs. It should be used in conjunction with both MIL-STD-40051-1 and MIL-STD-40051-2.

3.3 MIL-PRF-63004D, Lubrication Order (if a separate lubrication order is required).

## Attachment 11.....General Publications Requirements

### 4.0 CLARIFICATIONS:

4.1 Safety information, army unique warnings and noise hazard profile related to noise hazards shall be added to commercial manual supplemental data or DA TMs if 85 dB9A noise level is exceeded. NOTE: DO NOT include any Class I Ozone Depleting Chemicals (ODC's) or reference to ODC's in the commercial manuals with supplemental data or DA TMs.

4.2 All illustrations shall be line drawings or digital photographs, 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.

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

4.4 Incorporate appropriate lubrication instructions into the Operator and Field Preventive Maintenance Checks and Services (PMCS) at the applicable hard time intervals IAW Military Standard (MIL-STD)-40051-2. Or develop and deliver lubrication information in a Lubrication Order, IAW MIL-PRF-63004D. Include Army Oil Analysis Program (AOAP) instructions, if applicable and any initial, onetime or warranty related requirements.

4.5 Prepare an operator/crew PMCS IAW MIL-STD-40051-2. The operator/crew checks and services must require only the common tools which are included in the Basic Issue Item's 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.

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

4.7 Develop and update a Maintenance Allocation Chart (MAC) IAW MIL-STD-40051-2. The MAC shall be in Functional Group Code (FGC) sequence to conform to structure of Technical Manuals and MIL-STD-40051-2. You shall update the MAC throughout the performance period of the contract, including results of your analysis, vehicle testing, validation, verification and review of applicable Logistics Management Information (LMI) data. You 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 3, paragraphs 3-8 through 3-11), which can be found at the following WEB address:

<http://www.atsc-army.org/cgi-bin/atdl.dll/ar/750-1/ar7501topc.htm>

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 Logistics Control Numbers are to be used as FGCs within the TMs.

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

## Attachment 11.....General Publications Requirements

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

4.10 Prepare an updated, revised Appendix A, References: see MIL-STD-40051-2.

4.11 Functional Group Codes (FGC) shall be used for Maintenance Allocation Chart (MAC) and Repair Parts and Special Tools List (RPSTL) manuals. The FGC system used can be either Logistics Control Numbers (LCNs) or FGCs per the TACOM TB.

4.12 Prepare set-up pages (Task Boxes) information for all maintenance tasks IAW MIL-STD-40051-2. Set-Up information includes (but not limited to): Test Equipment, Tools and Special 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 (normally task times are included only in the MAC).

4.12.1 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 then each of those referenced tasks contains 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.

4.12.2 It can 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 that are 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 (the work can be referenced to another work package, if more than a single illustration and two steps are required to do the work).

4.13 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.

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

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

4.16 TMs must include a list of components susceptible to High-altitude Electromagnetic Pulse (HEMP).

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

## **Attachment 11.....General Publications Requirements**

4.18 Safety information, army unique warnings and noise hazard profile related to noise hazards shall be included in TMs if 85 dBA noise level is exceeded. Class I Ozone Depleting Chemicals (ODC's) are not to be used in TM procedures. NBC Warnings shall be added to service information for air cleaner systems.

### **5.0 ADOBE ACROBAT ETMs:**

5.1 The contractor shall develop separate ETMs from the DA TMs using the portable document exchange system Acrobat (Adobe Systems Acrobat Version 6.0 or higher) PDF. These files will not have any linking done, but they shall be editable and searchable. Content of DA TMs shall meet the content requirements of MIL-STD-40051-2 as appropriate. The PDF files of each Technical Manual must be distilled from the TM and shall match exactly the content of the TM.

5.2 The contractor shall create editable files containing all the text and graphic information in the TM. The PDF ETM must be distilled or produced electronically from these editable files (converting to PDF from scanned hardcopy is not acceptable). These PDF files must contain embedded fonts. 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). 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 ETMs.

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

5.4 The contractor shall provide the government with validated draft DA TMs IAW the CDRLs. The contractor's validation shall be hands-on live testing, desk-top review, or a combination of these methods to ensure that the draft ETMs are fully operational so that the government can evaluate their operation, navigation, and structure. The paper copy draft and the ETMs shall be mutually inclusive of data, text and art, and format. The contractor shall give the government a 30-day notice of the time and place of their validation so the government may attend.

5.5 The contractor shall provide the government with final draft ETMs and paper final draft DA TMs IAW the CDRLs. All errors discovered by the government or contractor during validation, verification, and reviews shall be corrected by the contractor at no additional charge. Final corrections shall be made as directed by the government and Final Reproducible Copy (FRC) ETMs shall be delivered as required by CDRLs in this contract.

5.6 The Acrobat PDF ETMs shall not contain linking, unless permission to link is granted by government publications representatives. If approved by government publications representative, linking must meet LOGSA PDF linking requirements.

### **6.0 Preparation for storage or shipment.**

6.1 Prepare information covering actions to be taken to prepare vehicles for storage or shipment. Include any special preservation requirements for outside storage or controlled-humidity storage and any unique non-cyclic exercising requirements.

## Attachment 11 General Publications Requirements

6.2 Develop instructions for environmental deterioration prevention processing of vehicles and related equipment during shipment and storage in the following conditions:

6.2.1 SHORT TERM STORAGE/IMMEDIATE USE TRANSPORT. This is defined as shipment within the continental United States (CONUS) and temporary storage for a period not to exceed 90 days, in unfavorable conditions, without exercising or maintenance.

6.2.2 LEVEL A and LEVEL B processing for Long Term Storage/Transport. 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 (Level A) from the date of processing, preferably without exercising, inspection, or maintenance and for a period of 48 months in a favorable, humidity controlled environment (Level B). **For Level A and B instructions, the TM shall refer to TM 38-470 and MIL-STD 3003.**

6.3 Instructions for short term storage/immediate use transport processing shall provide appropriate vehicle protection and drivability. 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.

6.4 Prepare processing instructions for dismounted equipment and attachments of the vehicle at a preservation level equal to that of the vehicle. Provide for environmental, physical protection and security against pilferage of these items.

6.5 Prepare instructions for the preservation, packaging, packing, and marking of the Basic Issue Items, Initial Service Package, and Components of End Item. Provide for environmental, physical protection and security against pilferage of these items.