NOT MEASUREMENT SENSITIVE

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PERFORMANCE SPECIFICATION MANUALS, TECHNICAL:

REQUIREMENTS FOR PREPARATION OF MODIFICATION WORK ORDERS



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1. SCOPE. This specification contains the requirements for the preparation of Modification Work Orders (MWOs).

2. APPLICABLE DOCUMENTS.

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

2.2 Government documents.

2.2.1 <u>Specifications, standards, and handbooks</u>. The following specifications, standards, and handbooks form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

STANDARDS

DEPARTMENT OF DEFENSE

MIL-STD-40051-2 — Preparation of Digital Technical Information for Page-Based Technical Manuals

(Copies of the above standards are available online at http://assist.daps.dla.mil/ or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

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

AR 750-10	 Army Modification Program
DA Pam 738-751	 Functional Users Manual for the Army Maintenance Management System-Aviation (TAMMS-A)
DA Pam 750-8	 The Army Maintenance Management System (TAMMS) Users Manual
TM 750-245-4	 Direct Support and General Support for Quality Control Inspector's Inspection Criteria

(Copies of the above four publications are available from the U.S. Army Publications Distribution Center-St. Louis, 1655 Woodson Rd., St. Louis, MO 63114-6181. Electronic copies of ARs and DA PAMs are available online at www.apd.army.mil. Electronic copies of TMs are available online at https://www.logsa.army.mil.)

DODD 5230.24	— Distribution Statements on Technical Documents
DODD 5230.25	— Withholding of Unclassified Technical Data from
	Public Disclosure

(Copies of DoD documents are available at http://www.dtic.mil/whs/directives/.)

2.3 <u>Order of precedence</u>. 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. <u>REQUIREMENTS</u>.

3.1 <u>General style and format</u>. The general style and format of MWOs shall be in accordance with MIL-STD-40051-2 and this specification.

3.1.1 <u>Paragraphs</u>. Text shall be divided into paragraphs and procedural steps. Procedural steps may be further divided if necessary. Paragraph numbering and formatting as described in 3.1.1.1 and 3.1.1.2 shall be used. See FIGURE 1 for an example.

3.1.1.1 <u>Primary paragraphs</u>. Primary paragraphs shall have a sidehead. The sixteen primary sideheads (see 3.2.2.1) shall be numbered consecutively using Arabic numbers Primary sideheads stand alone (are not run in with text) and shall be flush left. They shall appear bold and be underlined. Primary paragraph text shall begin on the next line immediately below the paragraph title and shall be flush left.

3.1.1.2 <u>Subordinate paragraph</u>. Subordinate paragraphs, procedures, and steps shall be numbered and formatted as follows:

a. First level paragraph, shall be numbered and have a title. The number shall be indented two spaces from the left margin and be lower case alphabetic character(s) followed by a period (e.g., "a."). The first letter of the first word and of each principal word in the title shall be capitalized and the title shall be underlined, followed by a period. The text shall begin on the same line as the title indented two spaces after the period.. The text shall have a hanging indent that begins the wrapped text directly under the beginning of the text of the first line. If paragraph numbering extends beyond the letter "z," numbering shall continue using "aa.," "ab.,"... "az." then go to "ba.," "bb.," etc. Should numbering go to double letters, the number position shall be right justified to maintain a consistent indent of the text.

- b. Second level paragraph or step shall be numbered with an Arabic number enclosed in parentheses (e.g., "(1)"). The number shall be indented two spaces from the preceding number. A title is optional. If a title is given, the first letter of the first word and of each principal word in the title shall be capitalized and the title shall be underlined, followed by a period. The text shall begin on the same line as the title indented two spaces after the period. If no title is given, text shall begin two spaces following the right parenthesis. The paragraph or step shall have a hanging indent that begins the wrapped text directly under the beginning of the text of the first line. For double digit numbering, the number position shall be right justified to maintain a consistent indent of the text.
- c. Third level paragraph or step shall be numbered with a lower case alphabetic characters(s) enclosed in parentheses (e.g., "(a)"). The number shall be indented two spaces from the preceding number. A title is optional. If a title is given, the first letter of the first word and of each principal word in the title shall be capitalized and the title shall be underlined, followed by a period. The text shall begin on the same line as the title indented two spaces after the period. If no title is given, text shall begin two spaces following the right parenthesis. The paragraph or step shall have a hanging indent that begins the wrapped text directly under the beginning of the text of the first line. The same criteria as for first level numbering shall be used.
- d. Fourth level paragraph or step shall be numbered with an underscored Arabic number followed by a period (e.g., "1."). The number shall be indented two spaces from the preceding number. A title is optional. If a title is given, the first letter of the first word and of each principal word in the title shall be capitalized and the title shall be underlined, followed by a period. The text shall begin on the same line as the title indented two spaces after the period. If no title is given, text shall begin two spaces following the period. The paragraph or step shall have a hanging indent that begins the wrapped text directly under the beginning of the text of the first line. The same criteria as for second level numbering shall be used.
- e. Fifth level paragraph or step shall be numbered with an underscored lower case alphabetic character(s) followed by a period (e.g., "a."). The number shall be indented two spaces from the preceding number. A title is optional. If a title is given, the first letter of the first word and of each principal word in the title shall be capitalized and the title shall be underlined, followed by a period. The text shall begin on the same line as the title indented two spaces after the periodperiod. If no title is given, text shall begin two spaces following the period. The paragraph or step shall have a hanging indent that begins the wrapped text directly under the beginning of the text of the first line. The same criteria as for first level numbering shall be used.
- f. Sixth level paragraph or step shall be numbered with a lower case roman numeral followed by a period (e.g., "i."). The number shall be indented two spaces from the preceding number. A title is optional. If a title is given, the first letter of the first word and of each principal word in the title shall be capitalized and the title shall be underlined, followed by a period. The text shall begin on the same line as the title indented two spaces after the periodperiod. If no title is given, text shall begin two spaces following the period. The paragraph or step shall have a hanging indent that begins the wrapped text directly under the beginning of the text of the first line. Should numbering go to double lower case roman numerals, the number position shall be right justified to maintain a consistent indent of the text.

g. Seventh level paragraph or step shall be numbered with an upper case alpha followed by a period (e.g., "A."). The number shall be indented two spaces from the preceding number. A title is optional. If a title is given, the first letter of the first word and of each principal word in the title shall be capitalized and the title shall be underlined, followed by a period. The text shall begin on the same line as the title indented two spaces after the periodperiod. If no title is given, text shall begin two spaces following the period. The paragraph or step shall have a hanging indent that begins the wrapped text directly under the beginning of the text of the first line. If paragraph numbering extends beyond the letter "Z," numbering shall continue using "AA.", "AB.",..."AZ." then go to "BA.", "BB.," etc. Should numbering go to double letters, the number position shall be right justified to maintain a consistent indent of the text.

1. Primary paragraph.

- a. First level paragraph, procedure, or step if no procedure.
 - (1) Second level paragraph or step
 - (a) Third level paragraph or step
 - 1. Fourth level paragraph or step.
 - a. Fifth level paragraph or step.
 - i. Sixth level paragraph or step
 - A. Seventh level of paragraph or step

FIGURE 1. Paragraph numbering and formatting example.

3.1.2 <u>Figure and table</u>. All figures and tables shall be numbered and titled. The requirements for numbering and placement of numbers and titles in MIL-STD-40051-2 shall be followed.

3.2 <u>Content</u>. The structure of the MWO includes front matter, specific paragraphs, optional appendix(es), and rear matter. The content of an MWO shall be as described in the following paragraphs.

3.2.1 <u>Front matter</u>. Unless otherwise specified by the contracting activity (see 6.2), the front matter shall consist of the information as described in the following paragraphs.

3.2.1.1 <u>Cover/title page **<frntcover>**</u>. The layout of the cover/title page shall be as shown on FIGURE 3 through FIGURE 5.

3.2.1.2 <u>MWO numbering **<tmno>**</u>. The numbering of MWOs shall be provided by the preparing activity (see 6.2b).

3.2.1.3 <u>Reporting errors and recommending improvements</u>. Every MWO shall contain a reporting of errors statement taken from one of those listed in 3.2.1.3.1 or 3.2.1.3.2.

3.2.1.3.1 <u>Reporting errors and recommending improvements in ROUTINE MWOs <**reporting**>. The following boxed statement, placed immediately below the date of the MWO, shall be included in all ROUTINE MWOs (see 6.2d):</u>

3.2.1.3.2 <u>Reporting errors and recommending improvements in URGENT and EMERGENCY</u> <u>MWOs **<reporting>**. In case of URGENT or EMERGENCY MWOs, the following boxed statement shall be used (see 6.2d):</u>

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this MWO. If you find any technical errors that could cause personal injury or damage to materiel, please let us know. Contact (*insert the name of the contracting activity*) and report the needed corrections by telephoning DSN (*insert number*) or Commercial (*insert area code and number*). Additionally, complete a DA Form 2028, Recommended Changes to Publications and Blank Forms, and mail to (*insert the address of the contracting activity*). You may also submit your recommended changed by e-mail directly to (*insert e-mail address*). A reply will be provided to you.

3.2.1.4 <u>Availability statement **<avail>**</u>. For MWOs used only in depot level maintenance, the front cover shall contain the following availability statement:

"This publication is not available through the St. Louis Media Distribution Division. This publication is available through (*insert the name and address of the proponent activity*)."

3.2.1.5 <u>Distribution statement <dist></u>. All MWOs shall contain a distribution statement. Distribution statement requirements are contained in DoD Directive 5230.24.

3.2.1.6 Export control warning notice **<export>**. All MWOs detailing modifications to equipment or other assets under the purview of the Export Control Act as amended (22 U.S.C. 2778 et seq.) and meeting the requirements of DoD Directive 5230.25 shall contain the following export control notice.

"WARNING - This document contains technical data whose export is restricted by the Arms Export Control Act (Title 22, U.S.C., Sec 2751, et. seq.) or the Export Administration Act of 1979, as amended, Title 50A, U.S.C., App. Violations of these export laws are subject to severe criminal penalties. Disseminate in accordance with provisions of DoD Directive 5230.25."

3.2.1.7 <u>Destruction Notice <destr></u>. All MWOs with a distribution statement "B" through "F" or "X" shall contain the following destruction notice:

HANDLING AND DESTRUCTION NOTICE – Comply with distribution statement and destroy by any method that will prevent disclosure of contents or reconstruction of this document.

3.2.1.8 <u>Copyright notice **<copyrt>**</u>. MWOs should not contain copyrighted information. If copyrighted material is included in an MWO, a copyright notice shall be placed on the cover page of the MWO, immediately following the distribution statement, export warning control statement, or destruction notice, whichever is last. If copyrighted material is used, the MWO preparing activity shall maintain a record of release from the copyright owner.

3.2.2 <u>MWO body</u>.

3.2.2.1 <u>Text</u>. The technical data required for the MWO shall be contained in the following standard titled paragraphs. These paragraphs shall be numbered consecutively and presented in the sequence prescribed herein. The words "Not applicable" shall follow each standard paragraph title when the technical data is not required.

- (1) Purpose <purpose>
- (2) Priority <priority>
- (3) End item(s) or system(s) to be modified <end_item_modify>
- (4) Module(s), (components, assemblies, subassemblies, boards, and cards) to be modified <assem_modify>
- (5) Part(s) to be modified <part_modify>
- (6) Application <application>
- (7) Technical publications affected/changed <changed_pubs>
- (8) MWO kit(s)/part(s) and their disposition <mwo_components>
- (9) Special tools; tool kits; jigs; test, measurement, and diagnostic equipment (TMDE); and fixtures required <special tools>
- (10) Modification procedures <mod_procedures>
- (11) Calibration requirements <calibration_info>
- (12) Weight and balance data <wt_bal>
- (13) Quality assurance requirements <qa_requirement>
- (14) Recording and reporting of the modification <report_mod>
- (15) Materiel change (MC) number <mc_number>
- (16) Modification identification <mod_id>

3.2.2.2 <u>Content of standard paragraphs</u>. The content of the standard titled paragraphs shall be as described in the following paragraphs.

3.2.2.2.1 <u>Paragraph 1 – Purpose $\langle purpose \rangle$ </u>. This paragraph shall contain a brief explanation as to the purpose of the modification; e.g., what the modification will accomplish and how it will benefit the user.

3.2.2.2.2 <u>Paragraph 2 – Priority < priority</u>>. This paragraph shall contain one of the following statements as selected and specified by the contracting activity (see 6.2e):

- a. "This modification is classified ROUTINE."
- b. "This modification is classified URGENT as a result of a Safety of Use/Flight Message *(cite message reference)*. Operating restrictions provided therein remain in effect until this modification is applied."
- c. "This modification is classified EMERGENCY as a result of an Emergency Safety of Use/Flight Message (*cite message reference*). The equipment is deadlined/grounded. The restriction remains in effect until this modification is applied."

3.2.2.2.3 Paragraph 3 - End item(s) or system(s) to be modified <end item modify>. This paragraph shall contain information to identify the end item(s) or system(s) to be modified. This information shall be presented in tabular format, whenever practicable and shall include, but is not limited to, the nomenclature, the line item number (LIN), national stock number (NSN), part number, commercial and government entity codes (CAGECs), type or model number, and serial number(s) or serial number ranges of the end item(s) or system(s) to be modified. When a large number of units are to be modified and the exempt number of units is small, the serial numbers of the exceptions may be listed rather than the serial numbers of the units to be modified.

3.2.2.2.4 <u>Paragraph 4 – Module(s) (components, assemblies, subassemblies, boards, and cards)</u> to be modified <assem modify>. This paragraph shall begin with the following statement: "The following items, whether installed or in PLL/ASL or depot stock, shall be modified." This paragraph shall contain a listing of items to be modified, identified by nomenclature, NSN, CAGEC, part number, and where applicable, by serial number(s) or ranges of serial numbers.

3.2.2.5 <u>Paragraph 5 – Part(s) to be modified **<part_modify>**</u>. This paragraph shall begin with this statement: "The following item(s), whether installed or in PLL/ASL or depot stock, shall be modified. Stocked parts shall be modified before issue and shall be marked so that it can be easily determined that modification has been accomplished." This paragraph shall include a listing of items to be modified, including item identification by nomenclature, NSN, CAGEC, part number, and, where applicable, by serial number(s) or range(s) of serial numbers.

3.2.2.2.6 <u>Paragraph 6 – Application **<application>**</u>. This paragraph shall include:

- a. The following time compliance statement: "Time compliance schedule: MWO effective date is (*insert date*) and completion date is (*insert date*) <compliance_dates>." The same MWO effective date/completion date statement shall be printed on the cover/title page of the MWO (see 6.2g). For examples, see FIGURE 3 through FIGURE 5.
- b. A level of maintenance statement indicating the lowest level of maintenance authorized to apply the MWO (see 6.2h) <maintlvl>.
- c. Work force and man-hour requirements for application of the MWO to a single unit, end item, or system <work_hours_required> (see 6.2i). A sample computation and format for the presentation of this information is shown in FIGURE 2.
- d. A listing of all MWOs that must be applied before or concurrently with the application of this MWO <other_mwos_required>. This listing shall include MWOs required for other end items, systems, and TMDEs that impact this MWO.
- e. Any additional information deemed necessary to assist in the application of the MWO <other_information>.

WORK FORCE/SKILLS	MAN-HOURS	MAN-HOURS W/O DISASSEMBLY
1 Radio Repairer (MOS 35e) or equivalent civilian OCC code	0.6 hours	0.3 hours
1 Tactical Systems Repairer (MOS 33T) or depot maintenance personnel	2.1 hours	1.1 hours
2 Avionic Flight Systems Repairer (MOS 68Q) or equivalent	1.7 hours each (3.4 hours total)	0.8 hours each (1.6 hours total)

- 1. Work force and man-hour requirements shall be provided in the above sample format for each different module and part to be modified.
- 2. Work force and man-hour requirements shall be provided in the above sample format when accomplished alone and when accomplished in conjunction with some other action that caused disassembly.

FIGURE 2. Sample computation and format for presentation of work force and man-hour requirements.

3.2.2.2.7 <u>Paragraph 7 – Technical publications affected/changed <changed_pubs></u>. This paragraph shall list, by publication number and date (including changes and their dates), all the technical publications (i.e., Technical Manuals (TMs), Depot Maintenance Work Requirements (DMWRs), Field Manuals (FMs), etc.) that have been or are being changed as a result of this MWO.

3.2.2.2.8 <u>Paragraph 8 – MWO kit(s)/part(s) and their disposition <mwo_components></u>. This paragraph shall contain general information as to MWO kits, parts, and bulk material needed to apply the MWO and shall specifically address the following:

- a. Kit(s)/part(s) needed to apply the MWO <kits_needed>. All kits needed to apply the MWO shall be listed and identified by NSN, nomenclature, CAGEC, and part number. Additionally, security classification of the MWO kit along with shipping data; e.g., weight, dimensions, and cubic displacement; shall be provided.
- b. Contents of the MWO kits <kit_contents>. Complete contents of each MWO kit shall be listed and shall provide the nomenclature, NSN, CAGEC, part number, and the quantity of each item needed for the modification. This data may be provided in a tabular format and shall include the appropriate figure numbers for each item listed when illustrations are used to clarify the MWO kit contents information.

- c. Bulk and expendable material <bulk-expendable_material>. When applicable, a listing shall be provided of all bulk and expendable material needed to apply the MWO. The listing may be presented in a tabular format and shall include information as to the nomenclature, NSN, CAGEC, part number, and the quantity of the material needed to accomplish a single MWO application.
- d. Parts disposition <parts_disposition>. Instructions shall be provided and shall cover the disposition of replaced/removed parts/components and those items in excess of the requirements for the completion of the MWO (see 6.2j).
- e. Mandatory replacement parts <mandatory_replacement>. When applicable, this paragraph shall contain a list of parts that must be replaced during the modification.

3.2.2.2.9 Paragraph 9 – Special tools; tool kits; jigs; test, measurement, and diagnostic equipment (TMDE); and fixtures required **<special tools>**. This paragraph shall contain a list of tool kits, special tools, jigs, fixtures, and TMDE, including associated test program sets and software that are required for the application of the MWO. This listing shall identify the item(s) by nomenclature, NSN, CAGEC, part number, and quantity. When applicable, this paragraph shall contain instructions for the disposition of the special tools, tool kits, jigs, TMDE, and fixtures after application of the MWO.

3.2.2.10 <u>Paragraph 10 – Modification procedures < mod_procedures></u>. This paragraph shall provide instructions for the application of the MWO. Instructions for disassembly/assembly of the end item/assembly/system to be modified shall be provided by referencing appropriate TMs or DMWRs. Instructions for complex procedures may be included in an appendix when a standalone document is necessary for the expeditious accomplishment of the modification. Illustrations shall provide adequate detail to support the written procedures. Recommended illustration callouts and part number, and figure identification are provided in MIL-STD-40051-2. Additionally, the modification procedures paragraph shall provide the following information:

- a. Include instructions for operational checks before application and upon completion of the entire MWO or portion of the MWO. Instructions for operational checks shall be provided in the text or by reference to appropriate TM(s) and shall include values of all pertinent performance characteristics and tolerances.
- b. When parts are to be removed and not used in reassembly, the procedures shall state "Remove and set aside for disposition per para 8." The term "discard" shall not be used in the modification procedures.

3.2.2.2.11 <u>Paragraph 11 – Calibration requirements <calibration info></u>. This paragraph shall identify all calibration requirements upon completion of the MWO and shall reference the appropriate publications prescribing the calibration procedures and schedules. The level of required calibration support shall be specified for each separate calibration action and affected item(s) shall be identified by nomenclature and NSN.

3.2.2.2.12 <u>Paragraph 12 – Weight and balance data $\langle wt_bal \rangle$ </u>. Whenever weight and balance affect the performance of the equipment to be modified, this paragraph shall include instructions for weight and balance procedures and the completion of appropriate DD Form 365, Record of Weight and Balance Personnel. These instructions shall be provided by referencing the applicable publication(s). This paragraph shall not duplicate weight and balance information contained in the reference documents. When weight and balance do not affect the performance of the equipment or the change made is negligible, this paragraph shall contain the following statement: "Weight and balance are not significantly affected."

3.2.2.2.13 <u>Paragraph 13 – Quality assurance requirement <qa_requirement></u>. This paragraph shall contain information as to the quality assurance techniques and methods necessary to ensure proper application of the MWO. General quality assurance criteria cited shall be in accordance with TM 750-245-4.

3.2.2.14 <u>Paragraph 14 – Recording and reporting of the modification **<report_mod>**</u>. This paragraph shall contain the following information:

- a. Records and reports <records_reports>. Detailed recording and reporting procedures shall be provided by referencing AR 750-10 and if necessary, DA Pamphlet 750-8 or DA Pamphlet 738-751. AR 750-10 contains the mandatory reporting/recording requirements for MWO applications. DA PAM 750-8 and DA PAM 738-751 contain the general reporting/recording requirements and provide detailed instructions for the completion of the various maintenance historical records.
- b. Marking equipment <equipment_marking>. Specific instructions shall be provided for marking the modified item(s) to facilitate MWO application identification.
- c. Identification data <identification_data>. When the modification results in a change in LIN, NSN, and model designation, information shall be provided about the nomenclature, LIN, model number, CAGEC, part number, and NSN changes on each affected item (end item, system, assembly, component, or part). This data may be presented in the following format:

	Before Modification	After Modification
Nomenclature LIN Model No. CAGEC/Part No. NSN		
Nomenclature		

3.2.2.15 <u>Paragraph 15 – Material Change Number (MCN) **<mc_number>**</u>. This paragraph shall contain the following statement: "This MWO is authorized by materiel change number (*insert complete MCN*)." The MCN shall be provided by the preparing activity (see 6.21).

3.2.2.2.16 <u>Paragraph 16 – Modification identification <**mod_id>**</u>. This paragraph shall contain a narrative description and supporting illustration(s) of the completed modification to aid in physical inspection of the materiel to verify the modification has been completed.

3.2.3 <u>Appendixes **(appendix)**</u>. When specified by the acquiring activity (see 6.2), complex modification procedures may be included in an appendix. When used, the appendix(es) shall follow the modification identification paragraph. Each appendix shall consist of the following:

- a. Appendix title
- b. Task title
- c. Setup
- d. Procedures

3.2.4 <u>Rear matter **<mwo_rear>**</u>.

3.2.4.1 <u>DA Form 2028 **<da2028>**</u>. When specified by the acquiring activity, one filled-out sample copy of a DA Form 2028, provided by the acquiring activity, and a minimum of three blank DA Forms 2028 with the respective TM number, date, and title shall be included.

3.2.4.2 <u>Authentication <**authent**></u>. An MWO shall be DA-authenticated if field level personnel will apply it. MWOs applied by someone other than field level personnel (e.g., depot, contractor, command level, etc.) shall be command authenticated. See FIGURE 7 for examples of authentication blocks.

3.2.4.3 <u>Foldout section **<foldsect>**</u>. If the MWO contains foldouts, they shall be placed at the end of the MWO before the DA Form 2028 or authentication page.

3.2.5 <u>Abbreviated MWO (Short Form)</u>. (See 6.2m). When specified by the contracting activity (see 6.3.2), the MWO shall be prepared in an abbreviated format. In an abbreviated MWO, the requirements of 3.2.2.2.9, 3.2.2.2.10, 3.2.2.2.11, and 3.2.2.2.13 shall be satisfied by referencing the appropriate portion(s) of the applicable DMWR (see 6.3.3), engineering drawings, and other technical data. Additionally, 3.2.2.2.6 shall be abbreviated to include only the time compliance schedule, the level of maintenance information, and work force and man-hour requirements.

4. <u>VERIFICATION</u>.

4.1 <u>Verification</u>. The validation and/or verification requirements shall be in accordance with the statement of work and as specified by the contracting activity (see 6.2n).

5. PACKAGING.

5.1 <u>Packaging</u>. For acquisition purposes, the packaging requirements shall be specified in the contract or order (see 6.20). When packaging of materiel is to be performed by DoD or in-house contractor personnel, these personnel need to contact the responsible packaging activity to ascertain packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activities within the Military Service or Defense Agency, or within the military service's System commands. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

6. NOTES.

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

6.1 <u>Intended use</u>. MWOs are to be used as an authenticated and uniform means of providing instructions for modification of materiel.

6.2 Acquisition requirements. Acquisition documents should specify the following:

- a. Title, number, and date of this specification
- b. Title and number of the MWO (3.2.1.1, 3.2.1.2)
- c. Distribution Statement (3.2.1.3)
- d. Reporting errors and recommending improvements (3.2.1.3.1, 3.2.1.3.2)
- e. MWO priority classification (3.2.2.2.2)
- f. Whether items are to be shown in tabular form or in narrative text (3.2.2.2.3, 3.2.2.2.4, and 3.2.2.2.5)
- g. Time compliance schedule information (3.2.2.2.6a)
- h. Level of maintenance information (3.2.2.2.6b)
- i. Workforce and man-hour information (3.2.2.2.6c)
- j. Parts disposition information (3.2.2.2.8)
- k. Separate modification procedures appendix (3.2.2.2.10).
- 1. Materiel Change (MC) number (3.2.2.2.15).
- m. Abbreviated MWO (3.2.5).
- n. Verification requirements (4.1).
- o. Packaging requirements (5.1).
- p. Content/Format Selection Summary (APPENDIX A of this document).

6.2.1 <u>Technical Manuals (TMs)</u>. The requirement for TMs should be considered when this specification is applied on contract. If TMs are required, specifications and standards that have been authorized and assigned an Acquisitions Management Systems Control (AMSC) number must be listed on a separate Contract Data Requirements List (DD Form 1423), which is included as an exhibit to the contract. The TMs must be acquired under separate contract line item in the contract.

6.2.2 <u>Document Type Definition (DTD)</u>. <u>APPENDIX B</u>, DTD Use and Access, provides information on the use of the MWO DTD and how to access it.

6.3 Definitions.

6.3.1 <u>Abbreviated MWO (Short Form)</u>. This is a Department of the Army publication that is used for reporting configuration and fiscal accounting procedures. An abbreviated MWO is used in lieu of a fully scripted MWO for situations where other documents adequately describe the work to be done and the modification is performed only by a depot, contractor, or command team (3.2.5).

6.3.2 <u>Contracting Activity</u>. An element of an agency designated by the agency head and delegated broad authority regarding acquisition functions.

6.3.3 <u>Depot Maintenance Work Requirement (DMWR)</u>. A maintenance serviceability standard for depot maintenance operations. It prescribes the following: scope of work to be performed on an item by organic depot maintenance facilities or contractors; types and kinds of materiel to be used; quality of workmanship; repair method; procedures and techniques; modification requirements; fits and tolerances; equipment performance parameters to be achieved; quality assurance discipline; and other essential factors which ensure that an acceptable and cost-effective product is obtained.

6.3.4 <u>Emergency</u>. Emergency is the highest priority in the modification program. Affected materiel is deadlined/grounded by an Emergency Safety of Use/Flight Message. The materiel remains deadlined/grounded until the modification is applied.

6.3.5 <u>Modification Work Order (MWO)</u>. This is a Department of the Army or command publication that provides authority and instructions for the modification of Army materiel (see 1). An MWO is a Department of the Army publication if it is performed at the field maintenance level. It is a command publication if it is performed at the depot, contractor, or command team level.

6.3.6 <u>Routine</u>. Routine is the lowest priority in the modification program. Routine MWOs may be applied anytime from the effective date of the MWO to the prescribed completion date of the MWO.

6.3.7 <u>Urgent</u>. Urgent is the second highest priority in the modification program. Affected materiel may continue to be operated under the restrictions prescribed by an Operational Safety of Use/Flight Message until the modification is applied.

6.4 Subject term (keyword) listing.

Materiel change (MC)

6.5 <u>Changes from previous issue</u>. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

ROUTINE

MWO effective date is (insert date) and completion date is (insert date).

* MWO X-XXXX-XXX-XX

MODIFICATION WORK ORDER

(INSERT NOMENCLATURE)

NSN (INSERT-NSN) (INSERT EIC)

U.S. Army Aviation and Missile Command (Insert Date)

REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this MWO. If you find any errors or if you know of a way to improve these procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to: Commander, US Army Aviation and Missile Command, ATTN: AMSAM-MMC-MA-NP, Redstone Arsenal, AL 35898-5000. A reply will be furnished to you. You may also provide DA Form 2028 information to AMCOM via e-mail, fax or the World Wide Web. Our fax number is: DSN 788-6546 or Commercial (256) 842-6546. Our e-mail address is 2028@redstone.army.mil. Instructions for sending an electronic 2028 may be found at the back of this manual. For the World Wide Web use: https://amcom2028.redstone.army.mil.

<u>AVAILABILITY NOTICE</u> - This publication is not available through U.S. Army Publication Distribution Centers. It must be obtained from U.S. Army Aviation and Missile Command, ATTN: AMSAM-MMC-MA-NP, Redstone Arsenal, AL 35898-5230.

This MWO 1-1520-251-50-05 supersedes MWO 1-1520-251-50-05 dated 2 November 2006.

<u>DISTRIBUTION STATEMENT D.</u> Distribution authorized to the Department of Defense and U.S. DoD contractors only Critical Technology (26 June 2000). Other requests shall be referred to test.

<u>WARNING</u> - This document contains technical data whose export is restricted by the Arms Export Control Act (Title 22, U.S.C., Sec 2751, et. seq.) or the Export Administration Act of 1979, as amended, Title 50, U.S.C., App. 2401 et. seq. Violations of these export laws are subject to severe criminal penalties. Disseminate in accordance with provisions of DoD Directive 5230.25.

HANDLING AND DESTRUCTION NOTICE - Comply with distribution statement and destroy by any method that will prevent disclosure of contents or reconstruction of this document.

FIGURE 3. Example of a ROUTINE MWO.

URGENT

MWO effective date is (insert date) and completion date is (insert date).

* MWO X-XXXX-XXX-XX-XX

MODIFICATION WORK ORDER

(INSERT NOMENCLATURE)

NSN (INSERT-NSN) (INSERT EIC)

U.S. Army Aviation and Missile Command (Insert Date)

REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this MWO. If you find any errors or if you know of a way to improve these procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to: Commander, US Army Aviation and Missile Command, ATTN: AMSAM-MMC-MA-NP, Redstone Arsenal, AL 35898-5000. A reply will be furnished to you. You may also provide DA Form 2028 information to AMCOM via e-mail, fax or the World Wide Web. Our fax number is: DSN 788-6546 or Commercial (256) 842-6546. Our e-mail address is 2028@redstone.army.mil. Instructions for sending an electronic 2028 may be found at the back of this manual. For the World Wide Web use: https://amcom2028.red-stone.army.mil.

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FIGURE 4. Example of an URGENT MWO.

XXXX EMERGENCY XXXX

MWO effective date is (insert date) and completion date is (insert date).

* MWO X-XXXX-XXX-XX-XX

MODIFICATION WORK ORDER

(INSERT NOMENCLATURE)

NSN (INSERT-NSN) (INSERT EIC)

U.S. Army Aviation and Missile Command (Insert Date)

REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this MWO. If you find any errors or if you know of a way to improve these procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to: Commander, US Army Aviation and Missile Command, ATTN: AMSAM-MMC-MA-NP, Redstone Arsenal, AL 35898-5000. A reply will be furnished to you. You may also provide DA Form 2028 information to AMCOM via e-mail, fax or the World Wide Web. Our fax number is: DSN 788-6546 or Commercial (256) 842-6546. Our e-mail address is 2028@redstone.army.mil. Instructions for sending an electronic 2028 may be found at the back of this manual. For the World Wide Web use: https://amcom2028.redstone.army.mil.

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HANDLING AND DESTRUCTION NOTICE - Comply with distribution statement and destroy by any method that will prevent disclosure of contents or reconstruction of this document.

FIGURE 5. Example of an EMERGENCY MWO.

ROUTINE

MWO effective date is (insert date) and completion date is (insert date).

* MWO X-XXXX-XXX-XX-XX

MODIFICATION WORK ORDER

(INSERT NOMENCLATURE)

NSN (INSERT-NSN) (INSERT EIC)

(INSERT NOMENCLATURE)

COMMANDER (Insert name of applicable command) (Insert Date)

REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this MWO. If you find any technical errors that could cause personal injury or damage to materiel, please let us know. Contact Commander, US Army Tank-auto-motive & Armament Command, ATTN: AMSTA-LC-CECT and report the needed corrections by telephoning DSN 256-6276 or Commercial 508-233-6276. Additionally, complete a DA Form 2028, Recommended Changes to Publications and Blank Forms, and mail to Command-er, US Army Tank-automotive & Armament Command, ATTN: AMSTA-LC-CECT, Kansas Street, Natick, MA 01760. You may also submit your recommended changes by E-mail directly to amssbriml@natick.army.mil. A reply will be provided to you.

AVAILABILITY NOTICE - This publication is not available through U.S. Army Publication Distribution Centers. It must be obtained from U.S. Army Aviation and Missile Command, ATTN: AMSAM-MMC-MA-NP, Redstone Arsenal, AL 35898-5230.

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HANDLING AND DESTRUCTION NOTICE - Comply with distribution statement and destroy by any method that will prevent disclosure of contents or reconstruction of this document.

FIGURE 6. Example of a command-authenticated MWO.

		X-XXXX-XXX
	TH X-3000(-300(-30)	
By Order of the Secretary of	f the Army:	
	PETER J. SCHOOMAKI General, United States Arn Chief of Staff	
Official:		
(Signature) JOEL B. HUDSON Administrative Assistant to th Secretary of the Army 0232913	ze	
DA At	uthenticated MWO	
FOR THE COMMANDER:		
	JOHN B. SMITH Colonel, QM Chief of Staff	
OFFICIAL:		
(Signature)		

Command Authenticated

FIGURE 7. Examples of Authentication Blocks.

APPENDIX A CONTENT/FORMAT SELECTION MATRIX.

A.1 SCOPE.

A.1.1 <u>Scope</u>. This appendix is to be used by the contracting activity to specify which optional requirements of this specification are to be contractually imposed in the acquisition of MWOs. This appendix is a mandatory part of this specification. The information contained herein is intended for compliance.

A.2 APPLICABLE DOCUMENTS.

This section has been tailored out as not applicable.

A.3 PROCEDURE.

A.3.1 <u>Application</u>. This appendix is intended to be copied/reproduced, completed, and become a part of the Technical Manual Contract Document Summary List for solicitation/contract application.

A.3.2 <u>Explanation of columns in TABLE 1 Content Matrix for MWO</u>. Column 1, TM Content, is self-explanatory. Column 2, MWO, is the type of requirement where R indicates required content and O indicates optional content. Shaded cells indicate that content shall be required when needed to support the equipment. Column 3, MIL-PRF-63002 Reference, identifies the applicable paragraph in this specification. Column 4, Element Name, is self-explanatory.

APPENDIX A

TABLE 1 Content Matrix for MWO

TM Requirements Matrix for Modification Work Orders			
TM Content	MWO	MIL-PRF-63002 Reference	Element Name
FRONT MATTER	R	3.2.1	
Front cover/title page	R	3.2.1.1	<frntcover></frntcover>
Reporting of errors	R	3.2.1.3.1 or 3.2.1.3.2	<reporting></reporting>
Availability statement		3.2.1.4	<avail></avail>
Distribution statement		3.2.1.5	<dist></dist>
Export control warning notice		3.2.1.6	<export></export>
Destruction notice		3.2.1.7	<destr></destr>
Copyright notice		3.2.1.8	<copyrt></copyrt>
MWO BODY	R	3.2.2	
Purpose	R	3.2.2.1	<purpose></purpose>
Priority	R	3.2.2.2.2	<priority></priority>
End item or system to be modified	R	3.2.2.3	<end_item_mo dify></end_item_mo
Module(s), (components, assemblies, subassemblies, boards, and cards) to be modified	R	3.2.2.2.4	<assem_modif y></assem_modif
Part(s) to be modified.	R	3.2.2.2.5	<part_modify></part_modify>
Application	R	3.2.2.2.6	<application< td=""></application<>
Technical publications affected/changed	R	3.2.2.2.7	<changed_pub s></changed_pub
MWO kit(s)/part(s) and their disposition	R	3.2.2.2.8	<mwo_compone nts></mwo_compone
Special tools; tool kits, TMDE, etc. required	R	3.2.2.2.9	<special_too ls></special_too
Modification procedures	R	3.2.2.2.10	<mod_procedu res></mod_procedu
Calibration requirements	R	3.2.2.11	<calibration _info></calibration
Weight and balance data	R	3.2.2.12	<wt_bal></wt_bal>
Quality assurance requirements	R	3.2.2.2.13	<qa_requirem ent></qa_requirem
Recording and reporting of the modification	R	3.2.2.14	<report_mod></report_mod>
Materiel change (MC) number	R	3.2.2.15	<mc_number></mc_number>
Modification identification	R	3.2.2.2.16	<mod_id></mod_id>
APPENDIX	0	3.2.3	<appendix></appendix>
REAR MATTER	R	3.2.4	<mwo_rear></mwo_rear>
DA Form 2028		3.2.4.1	<da2028></da2028>
Authentication	R	3.2.4.2	<authent></authent>

APPENDIX A

TM Requirements Matrix for Modification Work Orders			
TM Content	MWO	MIL-PRF-63002 Reference	Element Name
Foldout section		3.2.4.3	<foldsect></foldsect>
ABBREVIATED MWO (SHORT FORM)	0	3.2.4.3	
Legend: R Required NR Not Required			

O Optional Shaded As Required

Completed by: _____

(authorized signature)

Publications Activity: _____ Date: _____

MIL-PRF-63002K(TM) APPENDIX A

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APPENDIX B

APPENDIX B DTD USE AND ACCESS.

B.1 Use of the DTD. The DTD referenced in this specification interprets the technical content and structure for the requirements contained in this specification and its use is mandatory. For additional information on DTDs, refer to MIL-STD-2361.

B.2 Obtaining the DTD. The DTD may be obtained from the Army SGML Registry and Library (ASRL). The ASRL assets may be obtained using the methods described in MIL-STD-2361 as follows:

- a. World Wide Web (WWW): ASRL homepage Uniform Resource Locator (URL) http://www.asrl.com/
- b. U.S. Mail: Requested files will be mailed on DOS formatted or UNIX tar formatted CD-ROM. Requests may be submitted as follows:

Written request: Director, APD- Army Publishing Directorate ATTN: JDPSO-PAT-S 2461 Eisenhower Avenue Alexandria, VA 22331-0302

Telephone Request: Commercial: (703) 325-6231 DSN: 221-6231

CONCLUDING MATERIAL

Custodians:

Army - TM

Review Activities:

Army - AR, AT, AV, CR,

EA, GL, MI NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at http://assist.daps.dla.mil/online/start.

Project Number: TMSS 2008-007

Preparing Activity:

Army - TM