

Army Regulation 750–10

Maintenance of Supplies and Equipment

Army Modification Program

**Headquarters
Department of the Army
Washington, DC
24 February 2006**

UNCLASSIFIED

SUMMARY of CHANGE

AR 750-10

Army Modification Program

This major revision, dated 24 February 2006--

- o Directs the Army Test and Evaluation Command to plan and conduct testing of assigned Army systems where required for modifications, upgrades, and installation of horizontal technology integration equipment (chap 2).
- o Provides a system evaluation of the effectiveness, suitability, and survivability of assigned Army systems (chap 2).
- o Assigns responsibilities to the Deputy Chief of Staff, G-8 (chap 2).
- o Assigns responsibilities to the Central Technical Support Facility (chap 2).
- o Assigns responsibilities to the U.S. Army Test and Evaluation Command (chap 2).
- o Assigns responsibilities to the U.S. Army Installation Management Agency (chap 2).
- o Assigns responsibilities to the U.S. Army Materiel Command major subordinate command modification work order coordinators (chap 2).
- o Assigns responsibilities to the U.S. Army Security Assistance Command (chap 2).
- o Assigns responsibilities to the Chief Information Officer, G-6 (chap 2).
- o Revises the installation's modification work order coordinator's responsibility and process for reporting to the materiel developer and modification management information system (chap 2).
- o Aligns the modification work order release process to the materiel release process (chap 2).
- o Changes the modification work order conference from 2 annual modification work order conferences (continental United States/Pacific and Europe) to 1 annual conference held in the continental United States (chap 2).
- o Requires coordination between platform developers and materiel developers for systems placed on those platforms (chap 3).
- o Updates emergency modification work order process (chap 3).
- o Changes maximum completion time of routine modification work order application from 4 years to 5 years from the effective date of the modification work order (chap 3).

- o Establishes the correct path from the generation of the materiel change number in modification management information system to publications control officer for the assignment of the modification work order number (chap 4).
- o Provides modification work order guidance for foreign military sales equipment (chap 6).

Maintenance of Supplies and Equipment

Army Modification Program

By Order of the Secretary of the Army:

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General, United States Army
Chief of Staff

Official:



SANDRA R. RILEY
Administrative Assistant to the
Secretary of the Army

History. This publication is a major revision.

Summary. This regulation establishes policy and procedures and outlines the organizational structure for the Army Modification Program.

Applicability. This regulation applies to the Active Army, the Army National Guard/Army National Guard of the United States, and the U.S. Army Reserve unless otherwise stated.

Proponent and exception authority.

The proponent of this regulation is the Deputy Chief of Staff, G-4. The proponent has the authority to approve exceptions or waivers to this regulation that are consistent with controlling law and regulations. The proponent may delegate this approval authority, in writing, to a division chief within the proponent agency or its direct reporting unit or field operating agency, in the grade of colonel or the civilian equivalent. Activities may request a waiver to this regulation by providing justification that includes a full analysis of the expected benefits and must include formal review by the activity's senior legal officer. All waiver requests will be endorsed by the commander or senior leader of the requesting activity and forwarded through their higher headquarters to the policy proponent. Refer to AR 25-30 for specific guidance.

Army management control process. This regulation contains management control provisions and identifies key management controls that must be evaluated.

Supplementation. Supplementation of this regulation and establishment of command and local forms are prohibited without prior approval from Headquarters, Department of the Army, Deputy Chief of

Staff, G-4, ATTN: DALO-SMM, 500 Army Pentagon, Washington, DC 20310-0500.

Suggested improvements. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to Headquarters, Department of the Army, Deputy Chief of Staff, G-4, ATTN: DALO-SMM, 500 Army Pentagon, Washington, DC 20310-0500.

Distribution. Distribution of this publication is available in electronic media only and is intended for command levels C, D, and E for the Active Army, the Army National Guard/Army National Guard of the United States, and the U.S. Army Reserve.

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Glossary

Chapter 1 Introduction

1–1. Purpose

This regulation provides a disciplined approach on how to plan, authorize, implement, track, and control hardware and software modifications made to Army materiel and Army–managed materiel used by other Services.

1–2. References

Required and related publications and prescribed and referenced forms are listed in appendix A.

1–3. Explanation of abbreviations and terms

Abbreviations and special terms used in this publication are explained in the glossary.

1–4. Policies for modification of materiel

a. This regulation implements Army policy on modifications to Army equipment and is based on Department of Defense (DOD) 5000– and 7000–series publications.

b. Modification is any alteration, conversion, or modernization of an end item or component of an end item, which in any way changes or improves the original purpose or operational capacity in relation to effectiveness, efficiency, reliability, or safety of that item. This includes, but is not limited to, conversions, field fixes, retrofits, remanufactures, redesigns, upgrades, extended service programs, engineering changes, software revisions, system enhancement programs, service life extension programs, system improvement programs, product improvement programs, preplanned product improvements, modifications developed and applied by contractors as part of a prime vendor support (PVS) or contractor logistics support (CLS) agreements, horizontal technology integration (HTI), continuous technology refreshments (CTR), technology insertions, and all other terms used to describe modifications as defined above.

c. Hardware modifications—

(1) If a system is in production and no equipment has been fielded (DD Form 250 (Materiel Inspection and Receiving Report) has not been signed), modifications will be applied using engineering change proposals (ECP). Technical data packages (TDP) must be updated before fielding.

(2) If a system is in production and an initial fielding of equipment to units has taken place (DD Form 250 has been signed), modifications will be applied as follows:

(a) The ECPs will be used to modify any equipment that is on the production line or is still physically located at the production facility.

(b) The ECPs will be converted into modification work orders (MWO) for application to all equipment that has already been fielded.

(3) If a system is out of production and fielded (DD Form 250 has been signed), modifications will be applied using the MWO process. All ECPs must be developed into an MWO for application to these systems.

(4) If an item is to be modified using CTR, the guidelines, as set forth in paragraph 3–6, below, govern its integration.

d. Software modifications—

(1) If a system is in production (DD Form 250 has not been signed) and no associated software has been fielded to units (excluding field exercises or test beds) or when a software system has no specially produced hardware, modifications are applied using ECPs. The TDP must also be concurrently updated before fielding.

(2) If a system is in production and an initial hardware or software fielding has taken place (DD Form 250 has been signed), modifications will be applied as follows:

(a) The ECPs will be used to modify the software and all evolving versions of the software that are undergoing continuing corrective or adaptive revision (for corrected or enhanced future capabilities) for application to systems still on the production line or still at the production facility.

(b) Software ECPs will be converted into software change packages (SCP) for application to fielded equipment.

(3) If a system is out of production and fielded (DD Form 250 has been signed), software modifications are applied using SCPs. Any SCP that requires or coincides with a hardware modification must be developed into the hardware MWO for application to these systems. Validation and verification of the software MWO must be done in conjunction with, and signed off on by the developer of the hardware to ensure that there is no degradation to the hardware.

(4) If a modification program enhances system software capability and/or functionality and hardware modifications that require embedded software (including operating systems) modifications, the modification program/product/project manager (PM) will ensure that the Chief Information Officer, G–6 (CIO/G–6) is notified of the modification. The modification PM will also ensure that the system software capability and/or functionality modification is documented in the command, control, communications, computers, and intelligence support plan (C4ISP)/information support plan (ISP) per the requirements stated in CJCSI 6212.01C.

e. When a single MWO or a group of concurrent MWOs are combined and applied as a block package, and these modifications exceed the requirements as identified in the initial capabilities document, the capability development

document (CDD) or the capability production document (CPD) of the end item, the end item will be covered under the Army Materiel Release Policy, as stated in AR 700-142, paragraph 3-4h. Specifically, the Army Materiel Release Policy applies to modifications that change the model/type.

(1) If a modification, such as a conversion, remanufacture, System Enhancement Program, system improvement programs, product improvement programs, or preplanned product improvements, changes the operational capabilities of the weapon system and changes the Army model number or nomenclature, that item will, at a minimum, be identified by a new national stock number (NSN). Changes in the operational characteristics require the establishment of a new standard study number.

(2) If the modification or block package requires a materiel release, the preferred method is to establish a new line item number (LIN) for better identification during the funding process. Funding for the new LIN can then be separately identified and tracked through the planning, programming, budgeting, and execution process.

(3) All other modifications will require a change to the item's NSN.

(4) Test and evaluation aids required for all modifications, upgrades, or installations of HTI equipment that change the model/type designator and may or may not require a new type classification but affect operational effectiveness, form, fit, or function; adversely affect safety; have supportability or survivability ramifications; or a new version of software. The level of evaluation required will determine the necessary testing.

f. The MWO execution management is the responsibility of the U.S. Army Materiel Command (AMC), major subordinate commands (MSC), and specialty commands, such as the U.S. Army Intelligence and Security Command (INSCOM) through the designated MWO coordinator. The program executive officer (PEO) or PM is responsible for MWO management in coordination with the MSC MWO coordinator. The MSC MWO coordinator shall coordinate MWO packages with the MSC materiel release office. Additionally, appropriate elements or directorates of the materiel developer (MATDEV), contractor, supporting commands, or activities will be tasked to schedule and execute the Modification Application Program.

g. Funding, scheduling, planning, and the application of MWOs are a coordinated effort between the MATDEV and the MSC MWO coordinator to complete the modification within the required time frame and in the most cost effective manner.

h. A separate memorandum of understanding (MOU) will be negotiated every 5 years between AMC and the Headquarters, U.S. Army Installation Management Agency (IMA), the U. S. Army National Guard (ARNG), and the U.S. Army Reserve Command (USARC) and reviewed annually for applicability. Any changes that either party wants to make may be added by a jointly signed amendment to the MOU, below (see app C).

i. The validation and verification of the MWO is the responsibility of the MATDEV. Validation and verification of procedures, logistics support, and draft procedures for changed or revised publications will be conducted to ensure that any modification achieves its stated goals prior to release of the draft MWO for publication. When commanders or system MATDEVs require the use of a platform (vehicle or other system) to mount/install/carry an additional capability in/on/to that platform, the unit commander or system MATDEV must coordinate with the platform MATDEV to ensure that adding this capability will in no way degrade the performance, safety, or transportability capabilities of the platform.

j. Commercial nondevelopmental item administrative use vehicles are excluded from the modification program.

k. All modified Army software systems are required to complete Intra-Army Interoperability Certification (IAIC) to certify the systems horizontal and vertical interoperability prior to their release for fielding. This requirement applies to all Army operational through tactical-level command, control, communications, computers, and intelligence (C4I) systems and weapons systems, regardless of their modification or their designated acquisition category. The Central Technical Support Facility (CTSF) at Fort Hood, TX is the Army's designated IAIC test facility. The CTSF, with Headquarters, Department of Army (HQDA) coordination, has developed a standard operating procedures document to describe the process for obtaining IAIC. The CTSF will perform the IAIC testing, develop the reports, and provide a recommendation for certification to the CIO/G-6. The CIO/G-6 is the approval authority for IAIC of the modified system.

l. Proposed modifications to Army hardware and software systems previously certified through the IAIC process must be approved by Deputy Chief of Staff, G-8 (DCS, G-8).

m. All modified software systems will be assigned to a software block in order to undergo a System-of-Systems test to ensure both horizontal and vertical interoperability with all systems within an assigned software block is maintained. The PM will coordinate with the DCS, G-8 (use e-mail address— SWBlocking@hqda.army.mil) in order to determine their assigned block.

n. All modified software systems will have completed all information assurance and security accreditation requirements prior to delivery to the CTSF for the IAIC testing.

Chapter 2 Responsibilities

2-1. Assistant Secretary of the Army (Acquisition, Logistics and Technology)

The Assistant Secretary of the Army (Acquisition, Logistics and Technology) (ASA (ALT)) will—

- a. Program and budget funds for the execution of the modification program.
- b. Ensure PM/PEO reporting of applied MWOs into the Modification Management Information System (MMIS).

2-2. Assistant Secretary of the Army (Financial Management and Comptroller)

The Assistant Secretary of the Army (Financial Management and Comptroller) (ASA (FM&C)) will—

- a. Manage the planning, programming, budgeting, and execution process for modification efforts.
- b. Program and budget for modification funding together with ASA (ALT), DCS, G-3/5/7, and DCS, G-4.
- c. Prepare budget justification materials, control, distribute funds, and monitor execution.

2-3. Deputy Chief of Staff, G-3/5/7

The DCS, G-3/5/7 will—

- a. Determine the requirements for the modification program, in conjunction with the DCS, G-8.
- b. Prepare budget submission priorities.
- c. Prioritize and approve acquisition category (ACAT) I- and II-level modifications and any modification purchased by procurement appropriations for an end item costing more than \$300M for research, development, testing, and evaluation (RDTE) or \$1B in life cycle cost, as described in DA Pam 70-3.

2-4. Deputy Chief of Staff, G-4

The DCS, G-4 will—

- a. Serve as the proponent for the Army Modification Program.
- b. Develop and promulgate modification policies and procedures.
- c. Validate funding requirements for the modification program, in conjunction with the DCS, G-8.
- d. Assist in the preparation of budget Defense materials.

2-5. Chief Information Officer, G-6

The CIO/G-6 will—

- a. Ensure that the modification program is complies with all Clinger-Cohen Act requirements that apply.
- b. Ensure that software modifications comply with all C4ISP/ISP, IAIC, and software blocking horizontal and vertical interoperability requirements.
- c. Be the approval authority for IAIC.
- d. Provide direction and guidance to the CTSF for the IAIC process.

2-6. Deputy Chief of Staff, G-8

The DCS, G-8 will—

- a. Determine the requirements for the modification program, in conjunction with the DCS, G-3/5/7.
- b. Validate requirements for the modification program, in conjunction with the DCS, G-4.
- c. Approve proposed modifications to Army software systems previously certified through the IAIC process.
- d. Ensure the software block requirements are met and assigns the system to a software block for the System-of-Systems IAIC testing where applicable.

2-7. Materiel developer

The MATDEV, as the MWO sponsor, will—

- a. Coordinate any recommended modification that impacts the form, fit, function, electromagnetic characteristics, safety, and logistics supportability with combat developer, training developer (training aids, devices, simulations, and simulators (TADSS)), with the Army Safety Center for approval and prioritization or recommendation to the DCS, G-3/5/7 for approval and prioritization in accordance with DA Pam 70-3.
- b. Determine the type MWO to be applied, such as emergency, urgent, or routine based on the modification or deficiency being applied/corrected.
- c. Convene a Configuration Control Board (CCB) to review the modification and, if approved, ensure that the MSC MWO coordinator has assigned a materiel change number (MCN). The CCB decision will then be the authorization for the publication control officer to assign a valid MWO number. Both the materiel change and MWO numbers will be recorded in the MMIS and the MATDEV's MWO database (see app E for examples of CCB checklists).
- d. Oversee any modification effort that results in a materiel release action (see AR 700-142) when an MWO or a

group of concurrent MWOs are applied as a block package and these modifications exceed the capabilities development document/capabilities production document (CDD/CPD) and/or the initial capabilities document of the end item. As part of the materiel release process, the MWO and the DA Form 7591 (Modification Work Order Fielding Plan (MWOFP)) will become an annex in the materiel release package. This requires coordination, discussion, and testing (if required) with Army and Test Evaluation Command (ATEC).

e. Develop, apply, and record application of all modifications in MMIS in accordance with all procedures as set forth in this regulation. Ensure that contractors providing CLS to weapon systems and equipment adhere to the requirements of this regulation and AR 700–127, chapter 4, when planning, developing, applying, and recording hardware and software modifications for supported systems and equipment.

f. Plan, program, and execute modifications, including modifications to support fielded and developing TADSS and spares, using the procedures defined in paragraph 4–2, below.

g. Program and budget for the modification process according to DOD 7000.14–R, DFAS–IN Manual 37–1 series, and DFAS–IN Manual 37–100 series (current fiscal year (FY)).

(1) Fund modification applications to include, programming for the acquisition of modification kits in sufficient quantities to modify all applicable serial numbers, as stated in the MWO and the funding for contract or field team support to apply all kits.

(2) Submit budget requirements through ASA (ALT) to the DCS, G–3/5/7. In conjunction with the DCS, G–3/5/7, the DCS, G–4 will validate the requirements.

(3) Monitor, control, and evaluate overall funding execution activity, to include any end–of–year closeout responsibilities.

(4) Ensure that the modification planning and programming address the total funding requirement for each MWO, to include procurement appropriations, RDTE, operational maintenance appropriations, and single stock fund. It is the MATDEV’s responsibility to ensure that funding covers the entire life cycle of the MWO from research and development (R&D) through kit application, to include the electronic reporting of completed applications in MMIS. Completion of the MWO application and reporting the completed application to the MMIS database are mandatory, even if no kit is required to modify the equipment.

(5) If the MWO will be applied by a contract or fielding team, the MATDEV is responsible for planning, coordinating through the appropriate MSC and installation MWO coordinators, and funding the team. It must be stated in the scope of work that the fielding team is responsible for reporting the application of the MWO in MMIS.

(6) Provide funding for shipment of equipment, to include kits, hardware, or software to and from normal modification sites. If the MWO will be applied at locations other than the normal sites, additional funding for shipment of the kits must be provided.

h. Oversee life cycle configuration management of assigned system.

i. If the system has transitioned to post production software support, the designated Software Engineering Center (SEC) assumes all the above responsibilities of the MATDEV.

j. Manage special mission modifications, component modernization, and minor alterations per this regulation.

k. Prepare and negotiate DA Form 7591 with IMA or major Army command (MACOM)–designated organizations.

l. Coordinate with the primary (host) system MATDEV for systems or items mounted or installed on other MATDEV platforms (associated support items of equipment) to ensure the modification will perform its intended function on the primary system during the validation and verification phase and after fielding.

m. Coordinate with the host platform MATDEV to ensure that adding the proposed MWO capability will not degrade the performance, safety, or transportability capabilities of the host platform. The host platform MATDEV must sign off on the verification and validation, ensuring that the MWO will not disrupt any of the host platform’s intended functions.

n. Application of these MWOs will be accomplished using the block modification process to the fullest extent possible, minimizing equipment downtime, manpower, and resource requirements. The MWO MATDEV will apply and electronically record installation of the MWO in MMIS, providing a copy (within 7 working days) of this information to the MATDEV of the primary platform system.

o. Coordinate with ATEC to plan and budget the testing and evaluation required to determine if there is any impact of the modification on effectiveness, suitability, and survivability of the equipment being modified. For HTI programs and MWOs that are applied to different host platforms, the host platform PM is considered the MATDEV.

p. Attend the commanding general (CG), AMC–chaired annual modification coordination workshop as appropriate.

q. Record the MWO data elements, as listed in paragraph 5–2a, below, for all MWOs. These data elements will be maintained and provided to the MMIS in accessible electronic database format on a monthly basis.

r. Coordinate the modification of multiservice equipment and systems with other Services.

s. Coordinate the modification of any applicable foreign military sales (FMS) equipment and systems with the U.S. Army Security Assistance Command (USASAC) ATTN: AMSAC–WP, Fort Belvoir, VA 22060–5940.

t. Coordinate embedded diagnostic strategy with the PM, test, measurement, and diagnostic equipment (TMDE) to ensure that any TMDE is concurrently modified.

- u. Prepare MWOs in accordance with instructions in MIL-PRF-63002H (technical manual (TM)).
- v. Inspect all existing equipment items that are receiving new MWOs to identify missing MWOs and MWOs already applied but not reported to MMIS. In those cases where MWOs are missing or applied MWOs have not been reported to MMIS, the MATDEV's MWO application team will verify and report the equipment's MWO configuration status to MMIS concurrently with the MWOs or block MWOs that are being applied.
- w. Ensure that the system software capability and/or functionality modification is documented in the C4ISP/ISP per the requirements stated in CJCSI 6212.01C.
- x. Ensure the modified system has met all information assurance/security accreditation requirements prior to delivery to the CTSF for IAIC.
- y. Work with the PM and U.S. Army Training and Doctrine Command (TRADOC) to develop the test threads and appropriate documentation necessary prior to delivery of the modified system to the CTSF for IAIC.
- z. Ensure modified system receives IAIC certification prior to release for fielding.
- aa. Ensure the modified system has been an assigned software block for System-of-Systems IAIC testing.

2-8. Commanding General, U.S. Army Materiel Command

The CG, AMC, will—

- a. Serve as Army lead for the Army Modification Program.
- b. Chair the annual modification coordination workshop.
- c. Ensure that each MSC has an MSC MWO coordinator, chartered by the MSC commander, who will serve as the focal point for all MSC MWO efforts.
- d. Ensure that each SEC has a software ECP/SCP coordinator, chartered by the SEC commander, who will serve as the focal point for all software modification efforts.
- e. Serve as approval for aircraft alterations.
- f. Ensure that there is a current signed MOU between Headquarters (HQ), AMC and the IMA, the ARNG, and the USARC (see app C).
- g. Ensure software modifications received IAIC prior to fielding.
- h. Ensure software modifications have been assigned to a software block for the System-of-Systems IAIC testing.

2-9. Commanding Generals of major Army commands

The CG, MACOM will—

- a. Designate an organization or individual as the MACOM MWO coordinator.
- b. Provide full and appropriate level of representation at the annual modification coordination workshop.
- c. Ensure that each division and brigade has an MWO coordinator.
 - (1) Verify application of the MWO and ensure the accurate and timely recording of applied MWO data into MMIS, regardless of who applies the MWO and where it is applied, it is the installation MWO coordinator's responsibility.
 - (2) After coordination with the MSC MWO coordinator, it is the MWO coordinator's responsibility to properly coordinate all fielding team visits with the appropriate points of contact for the corresponding MWO level.
 - (3) If the person or group applying the MWO cannot electronically report that application in MMIS, it is that person's or group's responsibility to report that information to the MATDEV and MMIS on an electronic spreadsheet, such as Microsoft Excel, with the appropriate MMIS data fields.
- d. Ensure that there is a current signed MOU with AMC if there is a post, camp, and station that is in their area of responsibility but not under IMA jurisdiction (see app C).
- e. Ensure reporting of modification of depot and field level workload.
 - (1) The DOD is required by section 2466(e)(1), Title 10, United States Code (10 USC 2466(e)(1)) to submit a report (50/50) to Congress by 1 February of each year for each of the armed forces (other than the Coast Guard) and each Defense agency on the percentage of funds that were expended during the preceding 2 FYs for performance of depot-level maintenance and repair workloads by the public and private sectors. Effective with the enactment of the National Defense Authorization Act for FY98.
 - (2) Title 10 USC 2466(a) requires that not more than 50 percent of the funds made available in an FY to a military department or Defense agency for depot-level maintenance and repair workload may be used to contract for the performance by non-Federal Government personnel of such workload for the military department or Defense agency. Any such funds that are not used for such a contract shall be used for the performance of depot-level maintenance and repair workload by employees of the DOD. The percentage limitation includes depot maintenance interim contractor support, CLS, and similar contracts as required by 10 USC 2466(a).
 - (3) Installation and parts associated with modifications and upgrades are 50/50 reportable when the installation is considered a depot-level service as required by the National Defense Authorization Act for FY98. (whether performed by Defense employees or by non-Federal personnel) (see AR 750-1, chap 8).
- f. Ensure the modified system has received IAIC prior to delivery of the system to the command.

2-10. Commanding General, U.S. Army Training and Doctrine Command

The CG, TRADOC, will—

- a.* Assist the MATDEV with the evaluation of proposed modifications and recommend either a materiel or non-materiel solution.
- b.* Provide representation at the annual modification coordination workshop.
- c.* Approve and prioritize ACAT III- and IV-level modifications.
- d.* Develop the test threads and assist with the documentation to be delivered with the modified system to the CTSF for IAIC testing, in conjunction with the system PM.

2-11. Central Technical Support Facility

The CTSF will—

- a.* Work with the PM and TRADOC system managers to ensure the modified system has met the requirements for delivery to the CTSF for IAIC testing.
- b.* Work with the PM to schedule date for IAIC testing.
- c.* Perform the IAIC testing and develop the IAIC test reports.
- d.* Provide a recommendation for certification to the CIO/G-6.

2-12. Commander, U.S. Army Test and Evaluation Command

- a.* Plan and conduct testing of assigned Army systems.
- b.* Provide a system evaluation of the effectiveness, suitability, and survivability of assigned Army systems.
- c.* Coordinate with the DCS, G-4 regarding information analyzed in support of the MWO process.
- d.* Coordinate with CTSF during the IAIC testing of software modifications for collected data to support the operational evaluation of the system.
- e.* Ensure software modifications have successfully met all IAIC exit criteria prior to the start of operational testing.

2-13. Director, Installation Management Agency

The Director, IMA personnel will—

- a.* Designate an organization or individual as the regional IMA MWO coordinator.
- b.* Provide representation at the annual modification coordination workshop.
- c.* Ensure that each post, camp, and station appoint an installation MWO coordinator and a coordinator for subordinate command units (division/brigade) and tenant units.
 - (1) It is the installation MWO coordinator's responsibility to verify application of the MWO and ensure the accurate and timely recording of applied MWO data into MMIS, regardless of who applies the MWO and where it is applied.
 - (2) After coordination with the MSC MWO coordinator, it is the installation MWO coordinator's responsibility to properly coordinate all fielding team visits with the appropriate points of contact for the corresponding MWO level.
 - (3) If the person or group applying the MWO cannot electronically report that application in MMIS, it is the person's or group's applying the MWO responsibility to report that information to the MATDEV and MMIS on an electronic spreadsheet, such as Microsoft Excel, with the appropriate MMIS data fields.
 - (4) Installation MWO coordinator's responsibility to report that information to the MATDEV and MMIS.
- d.* Ensure that there is a current signed MOU with AMC (see app C).
- e.* Ensure software modifications have successfully completed IAIC certification prior to fielding.

2-14. Army Materiel Command major subordinate command modification work order coordinators

The AMC, major subordinate command MWO coordinators will—

- a.* Monitor the MWO program to ensure conformance with this publication.
- b.* Coordinate the MWO program with other MSCs and MACOMs.
- c.* Coordinate with the MATDEV for funding, scheduling, planning, and application of MWOs to complete modifications on time and at optimum cost.
- d.* Represent their respective command on MWO policy matters that involve other commands and higher headquarters.
- e.* Provide administrative and base operations support to sponsoring agency teams as stated in MWO fielding plans.
- f.* Maintain a local MWO database for each system.
- g.* Assign MCN upon approval of ECPs.
- h.* Update the MMIS as required. The MMIS is the MWO master database for each system.
- i.* Ensure efficient and effective DA Form 7591s are developed, coordinated, and implemented.
- j.* Ensure that each DA Form 7591 is reviewed and signed off on by the MWO coordinator and all applicable personnel, and that timely feedback is provided to the MATDEVs.

- k. Coordinate DA Form 7591s between the Installation MWO coordinator and the parties performing the modifications to minimize disruptions to mission performance.
- l. Form and chair a Modification Fielding Review Board for the final release of every MWO.
- m. Ensure that all MWO applications are reported electronically to MMIS in accordance with this publication.
- n. Attend the annual Army modification coordination workshop.
- o. Accept the modified system only if the modified software has successfully completed IAIC where applicable.

2–15. Commander, U.S. Army Security Assistance Command

The USASAC will—

- a. Notify military assistance advisory groups or similar groups if the equipment to be modified is in a foreign government inventory as a result of a U.S. Army government-to-government FMS. This requirement does not apply to equipment in foreign government inventory as a result of direct commercial sales from private U.S. companies.
- b. Ensure software modifications have completed Army IAIC requirements and, if applicable, Joint interoperability certification requirements, prior to delivery of the modified system to the foreign government where applicable.

Chapter 3 Modification Program

3–1. Program overview

a. The Army's Modification Program is the coordinated process that the Army uses to develop, apply, and document changes in both hardware and software made to end items, components, weapons, and information systems. Modifications may result from one or more of the following:

- (1) Technology changes.
- (2) Safety issues—Safety-of-Use Message (SOUM) (see AR 750–6, AR 95–1, and AR 385–16).
- (3) New or improved capabilities.
- (4) Operational changes.
- (5) Software adaptations, corrections, or enhancements.
- (6) Improved TMDE or testing capabilities.
- (7) Corrections of equipment deficiencies or shortfalls.
- (8) Product changes.
- (9) Conversions.
- (10) Validated user requirements.
- (11) Improved reliability, maintainability, and supportability.
- (12) Reduced logistics support through cost reduction and value engineering.
- (13) Simplification or standardization.
- (14) Permit use with new equipment.
- (15) Obsolescence.
- (16) Modifications developed and applied by contractors as part of a PVS or CLS agreement.

b. When a modification is developed it must be identified against an end item's standard study number, LIN, NSN, Army part number, and end item serial number.

c. Changes may occur while the item is under development in a factory environment, while under operational testing/developmental testing at test sites, or after the fielding of the item. Prior to fielding, changes are normally documented to the TDP through ECPs. If the item is still in production, but some items are already fielded (DD Form 250 has been signed) and the need exists to modify the fielded items outside the production area, a formal MWO must be developed for the fielded items. The MWO kits will be purchased and applied to fielded items, and the changes will be incorporated into the appropriate TMs and software-users guides/software-users manuals.

d. When a MATDEV enters into an agreement with a contractor to provide PVS or CLS, the agreement will—

- (1) Include all applicable regulation references relating to the MWO process.
- (2) Require the contractor to follow the MWO process as outlined in said regulations for developing and installing equipment modifications.
- (3) Require the contractor to report the equipment modification to the MATDEV and into MMIS.

e. No MWO is authorized for an application unless it has an approved MWO number that is the product of the MWO process in paragraph 4–2, below. Commanders will not allow their equipment to be modified unless there is an official MWO.

f. Applications and MWO kits are provided at no cost to the user per statutory requirements as interpreted in DOD 7000.14–R.

g. Units will not requisition MWO kits based on the MWO itself without prior approval of the MATDEV.

h. All MWO applications must be reported electronically to the MATDEV and the MMIS.

(1) The organization that actually applies the MWO (contractor, field, or sustainment organization) is responsible for reporting its application. Reporting will be accomplished by electronic means, either directly into MMIS using the MWO applied option, via e-mail submission, or recording elements on a 3.5-inch disk and mailing it to the MMIS administrator. The format for reporting can be downloaded from the MMIS Web site.

(2) The installation MWO coordinator's responsibility is to ensure the accurate and timely reporting of applied MWO data into MMIS.

i. End item conversion programs that establish a new NSN/model designator will be fielded under the provisions of the Army materiel release, fielding, and transfer policy (see AR 700-142).

j. If an item becomes unserviceable, units will not intentionally degrade the item by de-modifying it through the installation of serviceable unmodified repair items, either obtained through the normal supply system or from Directorate, Resource Management Office.

k. In accordance with Section 8053, Public Law 105-56, pg. 111 (Section 8053, PL 105-56), enacted into law as part of the FY98 Appropriations Act, "None of the funds provided in this act and hereafter shall be available for use by a military department to modify an aircraft, weapon, ship or other item of equipment, that the military department concerned plans to retire or otherwise dispose of within 5 years after completion of the modification: Provided, that this prohibition shall not apply to safety modifications: Provided further, that this prohibition may be waived by the Secretary of a military department if the Secretary determines it is in the best national security interest of the United States to provide such waiver and so notifies the congressional Defense committees in writing."

3-2. Engineering change proposals

a. An ECP is the management tool used to propose and apply a configuration change to an end item while that item is still in the production phase. The ECPs document proposed changes in the requirements or design of an item, provide a mechanism for coordination of the proposed changes, and a way to disseminate the change upon approval. The ECP process is documented in MIL-HDBK-61A(SE) and the format for an ECP is in the ANSI/EIA-649. If there is a need or the decision is made to apply the ECP to fielded equipment, the ECP must be developed into an MWO for hardware/software application to fielded items or into an SCP for a software-only application.

b. There are 2 types of ECPs, as referenced in ANSI/EIA-649 and MIL-HDBK-61A(SE). They are—

(1) *Class I ECP.* A Class I ECP is approved by the CCB and authorized with a contract modification. Class I ECPs are assigned an engineering change priority (emergency, urgent, or routine), which determines the relative speed at which the ECP is to be reviewed, evaluated, and, if approved, ordered, and implemented.

(2) *Class II ECP.* A Class II ECP is typically reviewed for concurrence in classification and approved by the MATDEV, unless otherwise specified in the contract.

3-3. Minor alterations (hardware only)

a. Minor alterations cannot be mandatory for organizational or field support level application and reporting, but they are mandatory for application to depot serviceable assets before issue to the user. Minor alterations will be scheduled concurrently with programmed depot maintenance on unserviceable repairable assets. For example, a flashing light installed on a vehicle to lead a convoy.

b. Application done by the user on items located with the user will be at the user's expense.

c. To qualify as a minor alteration, the proposed change must—

(1) Be optional for field application and reported by the user.

(2) Not exceed 4 man-hours (bench time) when performed separately or concurrently with other maintenance actions.

(3) Be cost effective.

(4) Ensure that all parts, components, tools, special tools, fixtures, or skills (military occupational specialty) are available in using units or are provided by the MATDEV.

(5) Result in a change to all technical documentation (TMs, depot maintenance work requirement (DMWR), national maintenance work requirement, TDP, and so forth) and applicable procurement request order numbers for overhaul, rebuild, remanufacture, or repair at depot facilities.

(6) Be authorized in equipment publications and in the DMWR. It may be authorized by the MATDEV in the proper Equipment Improvement Report and Maintenance Digest Technical Bulletin (TB) and will be incorporated in the next revision or update to the publications.

3-4. Component modernization

To the maximum extent possible, component modernization should be accomplished through the normal replenishment requisitioning process. If the item is a repairable component and the old item is being modified to the NSN the modification must be accomplished at a national level facility. This process will be used when—

a. The failure rate does not justify an immediate purge of retail stocks.

b. An improved item can be issued through normal supply procedures.

- c. The user is not required to apply the new component and then report its application.
- d. The improved component can be installed when the old item on fielded equipment fails.
- e. The form, fit, or function is not changed.
- f. The related technical publications are revised/updated.
- g. The application performed by the user is done at the user's expense.
- h. The funding is in accordance with AR 710-1 and AR 700-18.
- i. The improved component has a different NSN.
- j. A system or component level MWO is required if—
 - (1) The model designation changes when the new/modified component is installed (M34A2 to M34A2/C).
 - (2) The new/modified component is being installed to comply with provision of law, treaty, and so on (ozone depleting chemicals, pollution standards, and so on).

3-5. Modification work orders

- a. Mandatory MWOs are developed to achieve one or more of the following objectives:
 - (1) Provide new or improved capabilities.
 - (2) Improve reliability, maintainability, and supportability.
 - (3) Improve or correct faulty performance or product quality.
 - (4) Reduce logistical support requirements.
 - (5) Simplify or standardize equipment.
 - (6) Permit use with new equipment.
 - (7) Prevent injury to personnel and damage to equipment.
 - (8) Meet environmental protection standards.
 - (9) Implement a SOUM.
 - (10) Implement the 5-year computer hardware re-procurement in accordance with the Secretary of the Army, Information Systems-Enterprise Integration policy letter from the Computer Hardware Re-procurement Policy, issued by the Director of Information Systems for Command, Control, Communications, and Computers on 16 October 2001. This does not negate the Department of Defense Information Technology Security Certification and Accreditation Process 3-year review.
- b. The proponent for the MWO is responsible for applying the MWO.
- c. Mandatory modifications will be classified as "emergency," "urgent," or "routine" according to this regulation.
 - (1) *Emergency modification work orders.* Emergency MWOs have the highest priority in the modification program and will immediately deadline all equipment affected until the stated deficiencies are corrected or the risk of communications security or cryptographic compromise is reduced to an acceptable level. The MWO coordinator will notify the command channel that an emergency MWO has been issued and necessitates placing affected equipment into a not mission capable (NMC) status. The unit commander will ensure that equipment under their command is placed in a NMC status. An MWO will be classified "emergency" when the MWO is needed to—
 - (a) Correct a hazardous condition that could result in fatal or serious injury to personnel or in extensive damage or destruction of equipment. A hazardous condition requires a System Safety Risk Assessment per AR 385-16.
 - (b) Change operational characteristics that, if not accomplished without delay, may seriously compromise national security.
 - (c) Prevent operation of equipment with an unapplied emergency MWO. The MATDEV will proceed with the utmost urgency to apply any emergency MWO. Such equipment will be reported as NMC according to DA Pam 750-8, DA Pam 738-751, AR 220-1, and AR 700-138. Emergency safety-related MWOs and deadlining or grounding of equipment is usually preceded by a SOUM or Safety of Flight Message in accordance with AR 750-6 or AR 95-1, respectively. There may be an emergency MWO that does not require a safety message. This type of MWO would correct an operational deficiency (warfighting). The level of urgency for this type of MWO is only approved by the DCS, G-3/5/7.
 - (2) *Urgent modification work orders.* Urgent MWOs have the 2d highest priority and must be applied within 2 years of the MWO effective date. In those cases where the urgent MWO cannot be applied within the 2-year period because of funding, industrial base, or other resource constraints, the PM or system manager will obtain approval from the DCS, G-4 (DALO-SMM) for extending the MWO campaign time frame for completing the MWO. An urgent priority is assigned to a modification for any of the following reasons:
 - (a) To correct a potentially hazardous condition, which if left uncorrected could result in injury to personnel or damage to equipment. A potentially hazardous condition requires a system safety risk assessment per AR 385-16.
 - (b) To cause a change that, if not accomplished expeditiously, may seriously compromise the mission effectiveness of deployed equipment, software, or forces.
 - (c) The equipment may continue to be operated under restrictions determined by the MATDEV. Equipment not modified 2 years from the effective date of the MWO will be reported as NMC according to DA Pam 750-8, DA Pam 738-751, AR 220-1, and AR 700-138. Urgent safety-related MWOs and deadlining or grounding of equipment may

be preceded by a SOUM or Safety of Flight Message in accordance with AR 750-6 or AR 95-1, respectively, but it is not required. This type of MWO would correct an operational deficiency (warfighting). The level of urgency of this type MWO is only approved by the DCS, G-3/5/7.

(3) *Routine modification work orders.* A modification will be classified as routine when emergency or urgent priorities are not applicable.

(a) Application of all routine MWOs will be completed within the stated time frame on the MWO, which cannot exceed a maximum period of 5 years from the effective date of the MWO.

(b) Equipment not modified within the maximum 5-year period will be reported to the MATDEV through command channels within 45 days of the published completion date. Exceptions to the stated time frame in the MWO will be approved by HQDA, DALO-SMM. Equipment not modified 5 years from the effective date of the MWO will be reported as NMC according to DA Pam 750-8, DA Pam 738-751, AR 220-1 and AR 700-138 (applicable to only routine MWOs published after the publication date of this publication).

d. When the MATDEV applies a mandatory MWO, the MATDEV must concurrently modify all spares. Retail level spares, prescribed load list (PLL), and authorized stockage list (ASL) items must be modified as the MWO is applied to the organization. Depot-level spares must be modified proportionally to coincide with the modification of all fielded assets.

e. As applicable, supporting TMDE must be modified concurrently with the end item of equipment and materiel being modified. This includes equipment and test program spares and test program sets (TPS) required to diagnose and repair modified items. Any MWO that introduces a new TMDE or automatic test equipment requirement must coordinate with and gain approval from the U.S. Army TMDE Activity for the recommended calibration and repair support requirements.

f. When MWOs are applied to automated data processing equipment, provisions must be made to ensure that associated software is not rendered obsolete by the automated data processing hardware modifications.

g. All supporting TADSS must be modified concurrently with the end item of equipment and materiel or software being modified.

h. The MWOs will be annotated in the applicable maintenance Standard Army Management Information System with an appropriate fault code based on the classification of the MWO.

3-6. Continuous technology refreshment

a. A CTR is an acquisition strategy for spares applied throughout the materiel acquisition cycle to maintain readiness, modernize equipment, and reduce total ownership costs. It is based on technology insertion and the use of state-of-the-art commercial products, processes, and practices to extend a system's useful life in an economical manner.

b. Any modernization efforts that meet the requirements in subparagraphs *c* or *d*, below, can be considered for CTR and may be incorporated during the normal maintenance and repair process. Modernization efforts that do not meet the requirements in subparagraphs *c* or *d*, below, must be applied using the MWO procedures.

c. An item modernized through the CTR process must—

(1) Be 2-way compatible or interchangeable with the original item it replaces.

(2) Be issueable and supportable within the normal supply system.

(3) Be documented in accordance with interchangeability and substitutability (I&S) family structures and coding in accordance with AR 710-1 and AR 725-50. Cataloging will be in accordance with AR-1.

d. An item modernized through the CTR process does not—

(1) Require additional repair at or below GS/DS level, except for minor changes in maintenance procedures.

(2) Require revised, new, or special TMDE.

(3) Require changes in system software beyond the scope of necessary documentation consistent with 2-way hardware interchangeability noted in subparagraph *b*, above.

(4) Increase, intentionally, the operational capability of the end item of equipment to be modified. Incidental improvements obtained as a result of CTR are permitted.

3-7. Software modifications – post production software support

a. Software modifications may be applied by—

(1) The SCP.

(2) Software revisions.

(3) Software updates.

(4) The MWOs.

b. Software modifications that require modification of the hardware or affect the form, fit, function, or operational capabilities of the equipment will be applied as an MWO.

c. When a software modification is applied, the operator, organization, and unit must be able to identify what

version or type of software is installed on their systems. Approved ways of identifying the version or type of software installed are as follows:

(1) The software will be self-reporting. When the system is turned on, the operator will see on the display what version or type of software is operating on the system.

(2) The hardware item will be identified by a new NSN or by clear and distinguishing markings as to what version or type of software is applied to the system.

d. The MATDEV reports a current listing of software changes or versions to the MMIS, in accordance with paragraph 5-2, below.

3-8. Alternate changes to equipment

When commanders or system MATDEVs require the use of a platform (vehicle or other system) to mount/install/carry an additional capability in/on/to that platform, the unit commander or system MATDEV must coordinate with the platform MATDEV to ensure that adding this capability will in no way degrade the performance, safety, or transportability capabilities of the platform. The 2 recognized alternate methods to make changes to equipment are—

a. Special mission modification of materiel.

(1) A special mission modification is a change to fielded equipment that is designed to assist the commander in accomplishing a special mission.

(2) Approval requests of a special mission modification of equipment must be sent to the MATDEV. (This includes communications security (COMSEC) and electronic warfare/signals intelligence (EW/SIGINT) equipment.) To qualify as a special mission, a change must—

(a) Be temporary (or later approved for permanent application).

(b) Be easily removed by field support personnel to return the equipment or software to its standard design before evacuation, transfer to another command, or upon completion of the special mission.

(c) Not require changing technical documentation such as DMWR, TDP, or TMs.

(d) Apply only to a limited quantity of the total U.S. Army inventory.

(3) Report applications of special mission modifications to the appropriate MATDEV.

(4) The requesting command is responsible for total funding to include engineering, testing, evaluation, special mission modification kits, logistical support, training, training devices, TMDE, installation of kits, maintenance, removal of kits, and so forth. The following elements must be included in the special mission modification request to the MATDEV:

(a) Equipment description.

(b) Purpose and justification.

(c) Technical description and drawing of the modification.

(d) Propose a date for installation.

(e) Estimated length of time the modification will remain installed on the equipment and estimated time frame as to when the equipment will be restored to its standard design.

(5) Before approval, the sponsor of the special mission modification, in coordination with the MATDEV, will analyze the proposed change to determine engineering feasibility and the total cost. The sponsor of the special mission modification will also ensure that equipment reliability or personnel safety is not adversely affected. Exceptions to this must be approved in advance by HQDA (DALO-SMM). For aircraft, the MATDEV will certify the special mission modification and issue an airworthiness release to the requesting unit or activity on approval for application of the modification.

(6) An aircraft will not be altered in any way without prior approval of AMC, U.S. Army Aviation and Missile Command in coordination with HQDA Aviation Logistics Division (DALO-SMV). Unauthorized alterations include, but are not limited to, all important person configurations, additions or changes in bulkheads, windows, autopilots, distance-measuring equipment, air conditioners, radar, altimeters, flight control, and navigational, weapon, or sensor system software.

(7) Commercial manufacturer-approved auxiliary/accessory items are authorized for adapting commercial equipment to handicapped personnel requirements.

(8) Commercial-type vehicles, when used solely for facilities engineering, may be modified at the local level. Examples are mounting sprayers, foggers, compressors, generators, and other equipment and items used to perform real property maintenance activities. Vehicles will be returned to their original configuration when evacuated, transferred, or when the need for the special mission modification ends. Vehicles that will be salvaged need not be returned to the original configuration.

(9) Policy, responsibilities, and procedures for application or removal of the special mission modification must be included in TBs and TMs.

b. Special purpose modification of materiel.

(1) These modifications must meet climactic, geographic, or equipment interface requirements. Examples are winterization kits, weapon mounting kits, tie down kits, radio/TV frequency-interference-shielding kits, telemetry kits,

distribution panel, and auxiliary kits or accessories that are accountable items and authorized by table of organization and equipment or modification table of organization and equipment. When authorized, this equipment will be issued through normal supply procedures. Instructions for the installation, operation, maintenance, and removal of these kits will be included in the technical publications or in the TB of the affected equipment.

(2) Funding for special purpose modifications will be provided by the requesting command unless directed by HQDA to be programmed and budgeted under provisions of DOD 7000.14R, DFAS-IN Manual 37-1, and DFAS-IN Manual 37-100 series (current FY).

(3) The COMSEC EW/SIGINT equipment that is type-classified "standard" and is used in INSCOM fixed field stations will be returned to its original design when evaluation or need ends.

(4) Special purpose modifications will be reported electronically to the appropriate MATDEV.

3-9. Modification funding

The funding of MWOs is based upon guidance in DOD 7000.14-R and DFAS-IN Manual 37-100 series (current FY). Subject to and in accordance with that guidance—

a. Modification to an item currently in production may be applied by an ECP. If an item that is in production has assets that have already been delivered to field units, the ECP must be developed into an MWO to apply the modifications to the fielded equipment. The development, testing, kits, and associated installation costs of this type of modification will be financed by the procurement appropriation.

b. Modification to an item that is already fielded and no longer in production but still in the operational inventory will be applied by an MWO. The development and testing of this type of modification should be financed by operations and maintenance appropriations, while the cost to procure the kits and the associated installation costs will be financed by the procurement appropriation.

c. Outside the factory R&D testing (for example, FORCE XXI) involves equipment that has been diverted from the Army's inventory specifically for rapidly developing modifications. Records of changes to equipment must be documented because this type of testing may or may not be developed into an MWO. The RDTE account will finance the development, testing, and any cost necessary to return the item to its pre-existing configuration. If the decision is made to develop the MWO, the cost to procure the kits and the associated installation costs will be financed by the procurement appropriation.

3-10. Components of end items

a. The MATDEVs for systems (sponsor), components, and items mounted on, or installed in, another MATDEV's platforms (host) must provide the kit that mounts or installs the item onto the host/primary platform.

b. The MATDEV of the associated support items of equipment (sponsor) who is fielding, installing, or modifying equipment that is mounted on, or installed in, another MATDEV's platform will coordinate with the primary system's MATDEV to ensure that—

(1) The components of end items (COEI) and mounting/installation hardware are compatible and will fit onto or into the host/primary platform's design without degrading performance of the platform or the modification. The MATDEV of the COEI (sponsor) must develop, test, and validate/verify this in coordination with the MATDEV of the host/primary platform.

(2) The COEI MATDEV (sponsor) must develop, procure, install, and report the modification to the mount/installation hardware if a modification to a mount or installation hardware currently on the host/primary platform is required. Validation/verification of the modification must be done in coordination with the host/primary platform MATDEV of the installed hardware or mount to ensure that there is no degradation of performance.

(3) Mount/installation hardware spares are modified in accordance with paragraphs 3-5c and 3-5e, above.

(4) To the fullest extent possible, application of these MWOs will be accomplished using the block modification process to minimize manpower, resource requirements, and equipment downtime.

(5) The COEI MATDEV developing (sponsor) the modification applies and electronically records installation of the modification in MMIS in accordance with chapter 5. The COEI MATDEV (sponsor) will provide a copy of this information to the host/primary platform systems MATDEV within 7 working days.

c. The primary platform MATDEV will ensure that—

(1) Any required changes are made to the TDP.

(2) All applicable information is changed in primary system technical manuals.

(3) The application of the modification, as reported by the COEI MATDEV (sponsor), is recorded in the host/primary system's configuration database and MMIS.

Chapter 4

Modification Process

4-1. General

This chapter sets forth procedures for developing, budgeting, applying, and recording MWOs. The development, budget, application, and historical documentation of MWOs is a joint ASA (ALT), DCS, G-3/5/7, DCS, G-4, DCS, G-8, TRADOC, IMA, and AMC process.

4-2. Modification process

a. The MATDEV receives recommendations for changes from many sources and evaluates them. These recommendations can be for reasons such as, safety, capability, technology change, software change, equipment deficiency, or logistical, operational, support changes, and so forth. If the MATDEV rejects the recommendation, the MATDEV will provide the originator the rationale for rejection and no further action is necessary. If the MATDEV accepts the recommendation, the MATDEV and combat developer will evaluate the recommendation jointly (see DA Pam 70-3). The recommendation, if accepted, could require a nonmateriel solution (see fig 4-1 for the modification process).

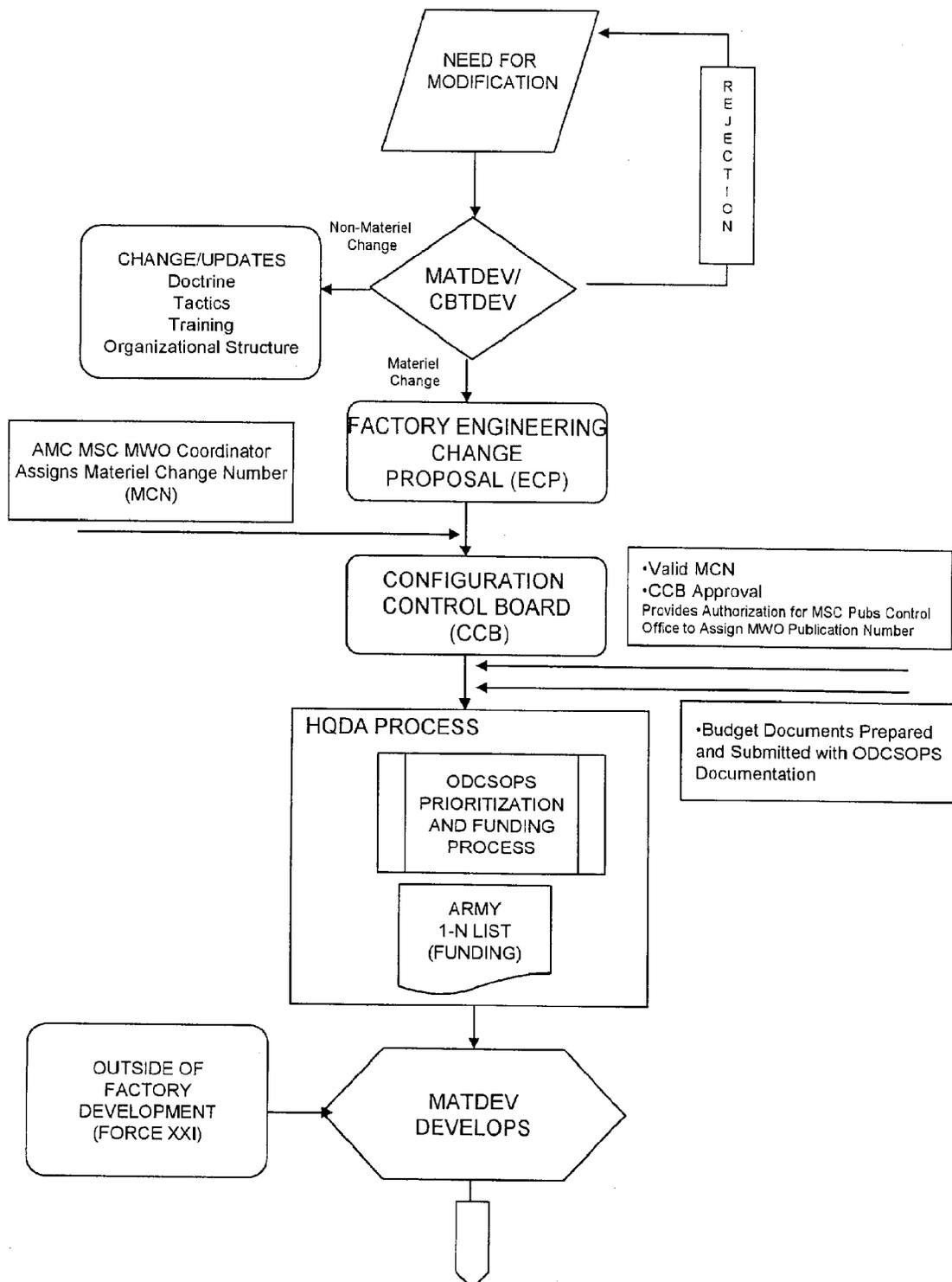


Figure 4-1. Modification process

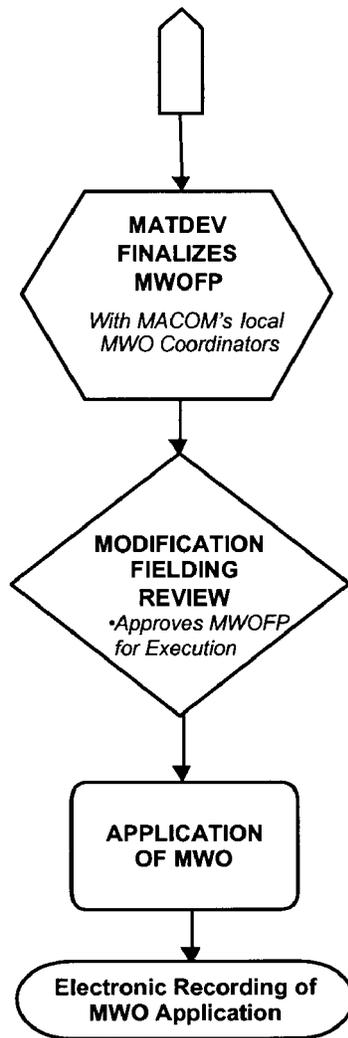


Figure 4-1. Modification process-Continued

(1) *Materiel solutions.* For materiel solutions, the MATDEV is responsible for development of the modification. There are 2 ways that a modification can be developed.

(a) The 1st way is from an ECP that has been developed in the factory and been applied to equipment that is still in production; however, if there is equipment in the field (a DD Form 250 has been signed) the ECP must be developed into an MWO for application to the fielded equipment.

(b) The 2d way is from an accelerated R&D outside of the factory developmental testing (for example, FORCE XXI). Scenarios such as FORCE XXI, or any other developmental testing project, simulate a factory environment where a section of configuration items are used to develop changes and to test those changes (validation). Any such changes are truly engineering-based changes and must be documented in a manner that, if/when approved for application to the rest of the Army, will allow the orderly transition to a valid ECP/MWO. In essence, the only difference is how and where the Army develops, tests, and approves the change.

(2) *Nonmateriel solution.* Combat developers should use changes in doctrine, tactics, training, or organizational

structure changes as the primary method to meet the users capability requirements eliminating a need for a materiel solution or modification.

b. During development of the ECP/MWO, the MATDEV must document all changes to components within the kits. This must include TM and software user manual updates, repair parts definitions, I&S family structures and coding in accordance with DOD 4100.39-M, cataloging in accordance with AR 708-1, and disposition.

c. To ensure a timely flow of the modification through this process, the MSC MWO coordinator must assign a MCN, per appendix D. After the MATDEV-approved MWO authorization is entered into MMIS by the MCS MWO coordinator, the MCN is self-generated. Ideally, each MWO will have its own MCN. However, if the decision is made to have a block package of fully related MWOs applied, these MWOs can either be identified to one MCN or maintain separate MCNs that will be entered into both the MMIS and the MATDEV's database. After the MCN has been generated, it is reported to the MATDEV and the supporting (matrix) MSC publications control officer is requested to assign an MWO number. The MATDEV then provides the MWO number to the original equipment manufacturer, contractor, or MSC technical writers to draft the MWO. The MATDEV will record the MWO number into the MATDEV's database and will then report the MWO number, along with a brief description of the MWO, to the MSC MWO Coordinator who will then enter it into the MMIS.

d. The MSC MWO coordinator will review the proposed modification to ensure that the following items have been addressed and sufficiently planned in the solution:

- (1) Training manuals and software users manuals are being updated and funding for distribution is being identified.
- (2) Management plan identifies fleet density and projected application schedule. This plan must include the modification of spares at unit through depot levels.
- (3) Proposed funding requirements are identified, including quantity requirements and spares.
- (4) Provisioning master record will be updated.
- (5) Technical data package will be updated.
- (6) Interchangeability and substitutability in accordance with AR 708-1, will be established and documented.
- (7) New test equipment or tools will be identified and available.
- (8) Test program set will be updated to be available when needed.
- (9) Software and hardware changes have been coordinated to ensure that all needed changes are made and tested and that changes to one do not negatively impact the other.
- (10) Training aids, devices, simulations, and simulators will be modified and updated.
- (11) Use of embedded instrumentation to include embedded diagnostics, prognostics, testing and training.
- (12) Environmental Impact.
- (13) Major subordinate command MWO coordinator will coordinate with the MATDEV for resolution, if shortcomings are discovered.

e. Prior to application of the first MWO kit to field units, the MATDEV will perform full validation/verification. At this time, any coordination with the platform, hardware, or software MATDEV for validation/verification must be done.

f. When notified that funding is available, MATDEVs will review DA Form 7591 for any changes that need to be integrated. The DA Form 7591 establishes a coordinated agreement between users and MATDEVs on application of the MWO. The application scheduling plan within DA Form 7591 will be derived from the HQDA DCS, G-3/5/7 approved prioritized sequence of MWOs in the equipment distribution scheduling system. The MATDEV will ensure maximum use of block and/or block package modifications whenever and wherever possible. The MSC MWO coordinator will coordinate DA Form 7591 with the IMA designated installation or activity MWO coordinator prior to shipment of any MWO kits.

g. Installation MWO coordinators or units will review the proposed DA Form 7591 for inclusion of application schedule and will request out-of-sequence approval from the MATDEV. Approved changes with a proposed new date for field application will be forwarded to HQDA. A signed DA Form 7591 forms the basis for MWO application.

h. Commanders at all levels will assist in developing and providing needed resources to accomplish MWO applications. MWOs will only be applied through the MSC MWO coordinators.

i. The MSC MWO coordinator will form and chair the MWO fielding review board, which approves the final release of the MWO. This review will confirm that all actions outlined in paragraph 4-2d(1) through 4-2d(12), above, have been accomplished to the satisfaction of all members of the review. At the direction of the MWO fielding review board, DA Form 7591 will be approved for execution.

j. Using the signed DA Form 7591, the MATDEV will apply the MWO, recording the data elements per paragraph 5-2a, below. These data elements will be sent electronically or on disk to the MMIS. The MATDEV will also record the application of the MWO into the configuration database.

Chapter 5 Modification Management Information System

5-1. General

a. The MMIS is a Web-based system available to any Army MWO user with Internet access. If other communications capabilities fail, e-mail queries can be sent. Entry into the system is password-protected. New users can register online and receive an approved user ID and password within 48 hours. The level of access within the MMIS is determined based on the user-provided information concerning their duties and responsibilities at the time of registration. Most users will not have access to all modules within MMIS, as certain modules are restricted to overall Army PMs and system administrators.

b. The MMIS is designed to assist users at all levels (unit level through Army leadership) in determining the status of modifications to equipment end items and components at the serial number level.

c. There are 13 modules within the MMIS—

(1) *Modification work order end-item information.* This module identifies the MWOs that are applicable to a serial-numbered piece of equipment, those MWOs that have been applied, and those MWOs that have not yet been applied. As in all of the modules, if the MWO number is hyper-linked, the user can click on the link to view a copy of the actual MWO.

(2) *Modification work order component information.* This module provides MWO status information for components. Like the previous module, it displays this information at the serial number and unit identification code (UIC) level of detail.

(3) *Modification work order library.* This module allows the user to do basic research concerning MWOs that are applicable to equipment items. The user can search by equipment model designation series, MWO priority, keyword, or MWO number.

(4) *Budget information.* This module provides budget-level financial information (quantity and cost) about the MWO kits that the MATDEV plans to acquire and install and the time frame for completing these actions. This module also allows users to array the budget data by LIN, MWO number, or UIC. In addition, this module allows the user to develop an estimated cost for completing a particular MWO program at the UIC level and to compare MWOs reported as applied against the planned quantity in the budget documents.

(5) *Modification work order reporting.* This module provides the user with an online capability to report through the Internet and an off-line capability to report applied MWOs using disks which can be mailed to the MMIS system administrator. Additionally, this module has the capability to generate the DA Form 2408-5 (Equipment Modification Record) based on MMIS user input.

(6) *Modification work order management.* This module is for the MSC MWO coordinator to use to create or enter a new MWO into the MMIS. It is then reviewed and/or revised by the MWO coordinators.

(7) *Modification work order template.* This module is used to develop the official MWO. Once the MWO is developed and loaded in MMIS, all MSC, MACOM, IMA, and installation MWO coordinators are notified by e-mail through this module that there is a new MWO for their review and comment.

(8) *The modification work order fielding plan.* This module is used to create and coordinate all MWOFPs. The MSC, MACOM, IMA, and installation MWO coordinators have access to this module and can provide input for developing the MWOFPs to include application scheduling dates and costs.

(9) *User information.* This module allows the user to update profile information to include address, telephone number, e-mail address, and so on. The user can also change passwords and access and rerun saved data queries.

(10) *Administration.* This module provides the user with the capability to review and submit questions and inquiries regarding the data and sources from which MMIS pulls and checks its information.

(11) *Frequently asked questions.* This module allows the user to view questions submitted by other MMIS users and the responses to these questions.

(12) *Links.* This module provides links to the DCS, G-4 home page and this publication.

(13) *Help.* This is the online MMIS tutorial and users manual, which is organized along the lines of the MMIS menu. The tutorial describes how each module works and shows examples of the MMIS screen captures. The user can also print out a hard copy of the users manual.

5-2. System inputs

a. The baseline for the MMIS is the MATDEV's configuration database. The MATDEV does not have a formal configuration database, but does provide essential data to the MWO coordinators for input into MMIS. However, MATDEVs that apply MWOs will maintain a configuration database that as a minimum, contains the following data elements:

- (1) The MCN.
- (2) The MWO number being applied.
- (3) The UIC.

- (4) The NSN of the end item to which the MWO is applied. If the MWO results in a change to the NSN, report the old NSN here.
- (5) Report the new NSN here, if the MWO results in a change to the NSN.
- (6) Serial number of the item to which the MWO is applied.
- (7) Registration number.
- (8) Date the MWO is applied.
- (9) Actual hours required for application.
- (10) Software version.
- (11) Original Equipment Manufacturer identification code as applicable.
- b.* If any of the data elements mentioned above are not available or no record is found, the following will be entered for that element:
- (1) For information not available, use N/A.
- (2) For no record found, use N/R.
- c.* The MATDEV will maintain the required data elements in an accessible electronic database that must be forwarded to the MMIS administrator on a monthly basis or as requested by the administrator. The data elements should be arranged like the sample database in figure 5–1.
- d.* The organization that actually applies the MWO (contractor, field, or sustainment organization) is responsible for reporting its application. Reporting will be accomplished by electronic means, either directly into MMIS using the MWO applied option, via e–mail submission, or recording elements on a 3.5–inch disk and mailing it to the MMIS administrator. The format for reporting can be downloaded from the MMIS.
- e.* The MMIS baseline and reported MWO applications will be cross–walked against established Army databases to ensure that the most accurate modification information by serial number is provided to the users. A sample of the MMIS database is in figure 5–1.

SAMPLE DATABASE FORMAT
FOR USE IN THE MODIFICATION MANAGEMENT INFORMATION SYSTEM

<u>END ITEM NSN</u>	<u>END ITEM SERIAL NO.</u>	<u>END ITEM REGISTRATION NO.</u>	<u>UIC</u>	<u>MCN</u>	<u>MWO APPLIED</u>	<u>DATE APPLIED</u>	<u>HRS TO APPLY</u>	Software Revision
2350-01-087-1095 Note 1	D12135 Note 2	N/R Note 3	WAE0AA Note 4	1-89-04-1442 Note 5	9-2350-200-20-12 Note 6	3/1/1996 Note 7	2.5 Note 8	

For any of the data elements, if the information is not available, record an "N/A". If there is no record of the data element, record "N/R".

Note 1: The 13 digit National Stock Number of the end item piece of equipment which is being modified.

Note 2: The serial number of the end item piece of equipment being modified.

Note 3: The registration number of the end item piece of equipment being modified. This number is different than the NSN or the serial number.

Note 4: The unit identification code of the military unit which owns the end item piece of equipment being modified.

Note 5: The MCN can be obtained from the official MWO, item 15.

Note 6: The MWO number of the modification being applied to the end item piece of equipment.

Note 7: The date that the modification was completed and accepted for the serial number end item piece of equipment.

Note 8: The actual maintenance hours required to apply the modification to the serial numbered end item piece of equipment. This may be different from the estimated maintenance man-hours identified in the MWO announcement.

Figure 5–1. Sample materiel management information systems database

Chapter 6

Modification of Multiservice or Foreign Military Sales Equipment and Systems

6-1. General

This chapter applies to multiservice equipment and systems for which the Army has either been named executive Service/lead military department, or is a participating Service for equipment assigned to another Service, or modifications to former Army equipment and systems that have been sold to another country through the USASAC FMS program.

6-2. Army executive Service or lead military department

a. All proposed equipment and system modifications will be processed and controlled by mutual agreement between the affected Services. No changes will be made nor will an MWO be issued unless the CCB has approved the change.

b. All multiservice changes will be made through publication of a multiservice-numbered MWO. Changes will not be made before the published MWO is available. Exceptions are authorized where safety to personnel, security, emergency mission requirements, or loss of property warrant them. When exceptions are made, the modification will be confirmed by expediting a multiservice MWO.

c. The MACOM commanders may authorize field emergency changes only when life, safety, or security dictates. All emergency changes will be documented and processed through the internal CCB and through the multiservice CCB.

d. Integrated logistics-support planning, including the development or update of a joint supportability strategy, for proposed modification of equipment or systems may begin only after it has been approved by the MATDEVs of all the military Services. This planning will be done according to AR 700-127. All approved multiservice equipment or system modifications will be reported when complete. The activity or organization applying an MWO reports application of the MWO in accordance with DA Form 7591. The Army MATDEV, along with other Service MATDEVs, will develop methods of communication for data exchange.

e. If the Army is the lead Service, for multiservice consideration, the Army MATDEV is responsible for funding the engineering leading to the modification. However, funding of all modifications and acquisition of modification kits will normally be carried out by each Service based upon stated requirements. Navy, Marine Corps, and Air Force or other Federal agencies, operation and maintenance commands/components are responsible for funding the application of modifications for their respective commands or by designated Army depot and reporting the application in accordance with DA Form 7591. The Army MATDEV has the responsibility for advising other Services that an MWO is being proposed/pending for Army-managed equipment and weapon systems that may be owned or possessed by the services.

6-3. Army participating Service responsibility

a. The principles in the paragraphs above apply to multiservice equipment and systems changes for which any Service other than the Army is the designated executive Service or lead military department and should be applied as appropriated and agreed upon.

b. The Army MATDEV will adopt the modification instruction or authorization format prescribed by the lead Service. Army managers will provide MWO numbers for multiservice-numbered change instructions prepared by the responsible Service.

c. The Army modification field reporting will be done in accordance with DA Form 7591. Other responsible Services' MATDEVs will be consulted to determine procedure and method of reporting data exchange.

6-4. Foreign military sales equipment

a. If an MWO is released for equipment that once belonged to the Army inventory and is now owned by a FMS customer or was procured specifically by the Army for a FMS customer, the MATDEV and MSC MWO coordinator will work application of the MWOs with the USASAC, ATTN: AMSAC-WP, Fort Belvoir, VA 22060-5940. The USASAC will be provided estimated cost data for application of a MWO to FMS customer owned materiel to facilitate FMS customer surveys.

b. A minimum of 270 days, after USASAC is contacted by the MATDEV and the MSC MWO coordinator, will be allowed for foreign customers to submit funded requirements for inclusion into DA Form 7591.

Appendix A References

Section I Required Publications

AR 220-1

Unit Status Reporting (Cited in paras 3-5c(1)(c), 3-5c(2)(c), 3-5c(3)(b).)

AR 385-16

System Safety Engineering and Management (Cited in paras 3-1a(2), 3-5c(1)(a), 3-5c(2)(a).)

AR 700-18

Provisioning of U.S. Army Equipment, Internal Control System (Cited in para 3-4h.)

AR 700-127

Integrated Logistics Support (Cited in paras 2-7e, 6-2d.)

AR 700-138

Army Logistics Readiness and Sustainability (Cited in paras 3-5c(1)(c), 3-5c(2)(c), 3-5c(3)(b).)

AR 700-142

Materiel Release, Fielding and Transfer (Cited in paras 1-4e, 2-7d, 3-1i.)

AR 710-1

Centralized Inventory Management of the Army Supply System (Cited in paras 3-4h, 3-6c(3).)

AR 725-50

Requisition Receipt and Issue System (Cited in para 3-6c(3).)

DA Pam 70-3

Army Acquisition Procedures (Cited in paras 2-3c, 2-7a, 4-2a.)

DA Pam 738-751

Functional Users Manual for the Army Maintenance Management System – Aviation (TAMMIS-A) (Cited in paras 3-5c(1)(c), 3-5c(2)(c), 3-5c(3)(b).)

DA Pam 750-8

The Army Maintenance Management System (TAMMS) Users Manual (Cited in paras 3-5c(1)(c), 3-5c(2)(c), 3-5c(3)(b).)

Section II Related Publications

A related publication is a source of additional information. The user does not have to read it to understand the publication.

ANSI/EIA-649

National Consensus Standard for Configuration Management (Available for purchase at ANSI, ATTN: Customer Service Department, 25 W. 43rd Street, 4th Floor, New York, NY 10036.)

AR 708-1

Logistics Management Data and Cataloging of Supplies and Equipment

AR 750-1

Army Materiel Maintenance Policy

AR 750-6

Ground Safety Notification System

AR 750-10
Army Modification Program

DOD 4100.39-M
Federal Logistics Information System (FLIS) Procedures Manual (Available at <http://www.dtic.mil/whs/directives/>.)

DODD 5000 series
Acquisition and Administrative Management, Organizational Charters, Security, and Public and Legislative Affairs (Available at <http://www.dtic.mil/whs/directives/>.)

DODD 7000 series
Budget, Finance, Audits, and Information Control (Available at <http://www.dtic.mil/whs/directives/>.)

DOD 7000.14-R
Department of Defense Financial Management Regulations (Available at <http://www.dtic.mil/whs/directives/>.)

DFAS-IN Regulation 37-1
Finance and Accounting Policy Implementation (Available at <http://www.asafm.army.mil/budget/di/di.asp>.)

DFAS-IN Regulation 37-100
Financial Management, The Army Management Structure (Available at <http://www.asafm.army.mil/budget/di/di.asp>.)

FMR 7000-14R
Department of Defense Financial Management Regulation (Available at <http://www.defenselink.mil/comptroller/fmr/>.)

CJCSI 6212.01C
Interoperability and Supportability of Information Technology and National Security Systems (Available at http://www.dtic.mil/cjcs_directives/cjcs/instructions.htm.)

MIL-HDBK-61A (SE)
Configuration Management Guidance (Available at <http://www.assist.caps.dla.mil/quicksearch>.)

10 USC 2466
Limitations on the performance of depot-level maintenance of materiel. (Available at <http://www.gpoaccess.gov/uscode/index.html>.)

PL 105-56
Availability of appropriations for the Department of Defense for the fiscal year ending September 30, 1998, and for other purposes (Available at <http://www.gpoaccess.gov/plaws/>.)

Section III **Prescribed Forms**

Except where otherwise indicated below, the following forms are available as follows: DA Forms are available on the APD Web site at (<http://www.apd.army.mil>); DD Forms are available from the OSD Web site at (<http://www.dtic.mil/whs/directives/infomgt/forms/formsprogram.htm>); and Standard Forms are available from the GSA Web site at (<http://www.gsa.gov>).

DA Form 7591
Modification Work Order Fielding Plan (MWOFPP) (Prescribed in para 2-7d.)

DA Form 7592
Modification Work Order (MWO) Exhibit of Concurrence (Prescribed in para E-1.)

Section IV **Referenced Forms**

DA Form 11-2-R
Management Control Evaluation Certification Statement

DA Form 2028

Recommended Changes to Publications and Blank Forms

DA Form 2408-5

Equipment Modification Record

DD Form 250

Materiel Inspection and Receiving Report

SF1080

Voucher for Transfer Between Appropriations and/or Funds

Appendix B**Instruction for Preparation of a Modification Work Order Fielding Plan for Modification Work Orders****B-1. Purpose**

The DA Form 7591 defines and schedules a FY MWO application program (1 October through 30 September) with user commands, installations, or activities. If policy requires coordination with MACOM headquarters, the DA Form 7591 will be provided no later than 90 calendar days prior to negotiations.

B-2. Tasks

a. The MATDEVs will—

(1) Develop proposed fielding plans based on Program Objective Memorandum funding guidance to serve as the initial point of negotiations.

(2) Ensure that a fielding plan is developed and implemented on a weapon system basis where applicable.

(3) Serve as lead command for fielding plan development, negotiation, and implementation when their MWO requirements impact another MATDEV's component, assembly, weapon system, end item, or TADSS.

(4) Serve as supporting command when another MATDEV establishes an MWO requirement that impacts their supported component, assembly, weapon system, end item, or TADSS.

(5) Negotiate the terms and conditions, including quality assurance of each fielding plan with the IMA installation MWO coordinators at their supported post, camps, stations, and organizations for the affected MACOM units and other tenants stationed there.

(a) When negotiating fielding plans for U.S. Army Forces Command (FORSCOM) units with the IMA installation MWO coordinators, include USARC requirements. The fielding plans should also be coordinated individually with USARC units scheduled to receive the MWO, with a copy provided to the HQ USARC MWO point of contact (POC) and the regional IMA office, per the HQ AMC/HQ IMA MOU on the application of the U.S. Army MWO program.

(b) Negotiate fielding plans directly with the Director, IMA installation MWO coordinators at installations with Army activities that are predominantly TRADOC installations and provide a copy of the fielding plan to the HQ TRADOC MWO POC, per the HQ AMC/HQ IMA MOU on the application of the U.S. Army MWO program. An information copy of all DA Form 7591s, pertaining to modification of FORSCOM owned systems and equipment, will be provided to HQ, FORSCOM MWO coordinator.

(c) Provide a notice 30 calendar days prior to arrival of the MWO fielding team and a 7 calendar days reconfirmation notice.

(d) Identify special equipment and facilities if needed. If none, so state.

b. The organization that applies the modification (user applied or MATDEV) will—

(1) Accomplish MWO application as stated in fielding plans.

(2) Constantly monitor MWO programs to prevent any problem from impeding completion of the change.

(3) Perform and bill reimbursable applications, SF1080 (Voucher for Transfer between Appropriations and/or Funds), as negotiated in the fielding plan.

(4) Ensure that the application of the MWO, hours it took to apply, and the date of application are reported in MMIS.

B-3. Modification work order fielding plan format

The MWOFP will clearly define the work, assign responsibilities, and schedule resources for each signatory command. The standard required format for the MWOFP is DA Form 7591.

B-4. Additional elements

In addition to the above data, the MATDEV and MACOM may add or request that more data elements be included to provide essential data as an appendix to DA Form 7591.

B-5. Distribution of the fielding plans

All fielding plans will be directed to action addresses. In addition, copies will be furnished to the following:

- a.* The HQ TRADOC (ATBO-HM).
- b.* A minimum 270 days, after USASAC is contacted by the MATDEV and the MSC MWO coordinator, will be allowed for foreign customers to submit funded requirements for inclusion into DA Form 7591.

Appendix C Memorandum of Understanding

C-1. Memorandum of understanding

This document represents the basic agreement between AMC and other commands and agencies for the application of Department of Army Modification Work Order as pertains to equipment assigned to or supported by the Directorate of Logistics, Directorate of Installation Operations, Directorate of Installation Support, Readiness Business Centers, or Materiel Management Centers. This MOU establishes broad policies and procedures, which will govern implementation of this program and responsibilities of each command or agency and their supported installations. This document shall serve as the master agreement for further development of individual DA Form 7591 between AMC and other commands or agencies. The signature of their representatives indicates full agreement.

C-2. Sample memorandum of understanding

A sample MOU is shown in figure C-1.



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
HEADQUARTERS, U.S. ARMY MATERIEL COMMAND
5001 EISENHOWER AVENUE
ALEXANDRIA VA 22333-0001



**MEMORANDUM OF UNDERSTANDING
BETWEEN
THE U.S. ARMY MATERIEL COMMAND
AND
THE U.S. ARMY XXXX/AGENCY/COMMAND**

SUBJECT: Application of the Army Modification Work Order (DAMWO) Program

1. Purpose. This document represents the basic agreement between U.S. Army Materiel Command (AMC) and U.S. Army XXX XXXXXXXXXXXX Command for the application of DAMWO as pertains to equipment assigned to or supported by XXX Directorate of Logistics (DOL), Directorate of Installation Operations (DIO), Directorate of Installation Support (DIS), Readiness Business Centers, or Materiel Management Centers. This Memorandum of Understanding (MOU) establishes broad policies and procedures, which will govern implementation of this program and responsibilities of each XXX Regional Offices and their supported installations. This document shall serve as the master agreement for further development of individual Modification Work Order Fielding Plans (MWOFP) between AMC Major Subordinate Commands (MSC) and XXX Regional Offices and installations as authorized agents for HQ, AMC, and HQ, XXX. The signature of their representatives indicates full agreement by HQ, AMC and HQ, XXX.
2. Fiscal years involved: FY03 through FY07.
3. Modifications involved:
 - a. Current Modification Work Orders (MWO) (backlog modifications not applied by October 2002).
 - b. New and future MWOs (issued after 1 October 2002).
4. General.
 - a. The AMC MSC having logistic support responsibility for the weapon system/end item will establish a centralized control point for all modifications to be applied to that system, to ensure all applicable modifications are applied concurrently on a weapon system/end item basis to maximum extent possible.

Figure C-1. Sample format for memorandum of understanding

SUBJECT: Application of the Army Modification Work Order (DAMWO) Program

b. The XXX installations will only participate in modification of equipment after a DAMWO is published and after a MWOF, which has been signed by the MSC MWO coordinator, has been negotiated. Specific details of support to be provided by the MSCs and the HQ, XXX installation in applying the modification will be incorporated in a separately negotiated and executed MWOF for each weapon system/end item application. A copy of the MWOF will be provided to the MACOM Deputy Chief of Staff, G-4 MWO point of contact (POC) by the issuing AMC MSC MWO office for informational purposes. The contents of these MWOFs are outlined in AR 750-10, Army Modification Program, 8 August 2000. The XXX authorizes installations to negotiate modifications within current resources. Any agreement using XXX labor, that is not reimbursable, will require approval by HQ, XXX. When civilian labor is used, AMC will reimburse the XXX installation applying the DAMWO.

c. The AMC MSC may require a validation of the national level MWO data in the Modification Management Information System (MMIS) based on XXX installation records. The AMC MSC will forward a validation listing to XXX installations, with information copy to HQ, XXX, ATTN: XXX-XX-X, using separate formats for serial number-managed and non-serial number-managed items. A copy of the validation listing will also be furnished to the MACOM Deputy Chief of Staff, G-4 MWO POC. Information will be provided for each MWO identifying the unit identification code (UIC) and location of the serial-numbered item and a brief description (graphic or narrative) to assist in determining whether the modification has been applied. A concurrent request will be made for information on the quantity of MWO kits available within each XXX installation. Installations will annotate the validation listings by physical inspection of the equipment for those modifications, which are visible and do not require disassembly of the equipment. When a physical inspection requires disassembly of equipment, this will be accomplished as negotiated between the MSC and the installation. All labor charges will be reimbursed to the XXX installation performing the inspection. Listings will be processed and returned to the MSC within 60 days (the return date for negotiated inspections will be documented in the letter of request). Validation of MWO Application Status Accounting (RCS DRC-855) applies to all validation listings. The AMC MSCs and the Logistics Assistance Representatives (LAR) will assist the installations in the equipment inspection upon request. Based on validation by XXX installations, the AMC MSC will update the MMIS.

5. Responsibilities.

a. HQ, AMC:

(1) Arrange for and chair coordinating/negotiating MWO workshop between MSC and XXX installations at least annually or more frequently, if required. Reference AR 750-10, Army Modification Program, 8 August 2000, (para 2-6).

SUBJECT: Application of the Army Modification Work Order (DAMWO) Program

(2) Keep MMIS POC listing updated with current MWO coordinators, phone numbers, and e-mail addresses.

b. HQ, XXX Command:

(1) Establish or designate an office with the responsibility for monitoring MWO requirements and applications to equipment assigned to XXX installations and support areas.

(2) Keep MMIS POC listing updated with current MWO coordinators, phone numbers, and e-mail addresses.

c. XXX Command:

(1) Designate an individual with the responsibility for managing the MWO requirements and applications to equipment assigned to XXX installations and support areas. This person/organizational element will coordinate directly with AMC MSC representatives. Reference AR 750-10, Army Modification Program, 8 August 2000, (para 2-7).

(2) Maintain coordination with local Aviation Project OLR Contract Field Team managers, located in Germany, Korea, Fort Hood, TX, Fort Campbell, KY, Fort Lewis, WA, and Fort Stewart, GA, for application of MWOs on aviation weapon systems and equipment in their geographical OLR areas of responsibility. (Each Project OLR site has a specific geographical area in which to apply MWOs.)

(3) Forward a concurrence or recommended changes to the appropriate AMC MSC 45 days after receipt of MWOFPs from AMC MSCs (see d. (4) below). This will require close coordination with all customer activities. Information copies of all correspondence between installations and HQ, AMC will be provided to HQ, XXX, ATTN: XXXX-XX-X, and the MACOM Deputy Chief of Staff, G-4 MWO office.

(4) Budget for and attend modification program negotiating/ coordinating workshops. Reference AR 750-10, Army Modification Program, 8 August 2000, (para 2-7).

(5) Provide administrative and logistical support (base operation support per AR 310-25) required for modifications applied by MWO application teams as agreed to in the MWOFP.

(6) Ensure timely and proper recording and reporting of DAMWO applications in the MMIS, in accordance with DA Pam 738-750 and individual MWOFP. Reference AR 750-10, Army Modification Program, 8 August 2000, (para 2-5-2.d).

SUBJECT: Application of the Army Modification Work Order (DAMWO) Program

(7) Installations may negotiate MWOFP with AMC MSC to perform Quality Assurance (QA) inspections and acceptance on low-density modifications.

(8) Provide personnel to augment AMC MSC application teams as negotiated in individual MWOFPs.

(9) Notify equipment users to deliver equipment, as scheduled, to the modification site upon call from the modification team.

(10) Responsible for all repairs discovered prior to, during and after modification, except those incurred by modification teams during modification of MWO. Be responsible for ensuring that equipment meets -10/-20 standards before modification.

(11) Responsible for the security and proper storage of all MWO kits from receipt until issue to MWO application team.

(12) Responsible for quality of work when MWO is applied by the installation.

(13) Responsible for scheduling and coordinating the application of MWOs to same type other service equipment located on XXX installations and used for training (i.e., M939 Family of Vehicles (FOV) and Family of Medium Tactical Vehicles (FMTV) used by the Marine Corps). In the event other services refuse to coordinate the modification of their equipment or do not want their equipment modified, the installation MWO coordinator will notify HQ, XXX. The HQ, XXX or the XXX Region Office will notify the other service MWO office that unless their equipment is modified, its use for training will be curtailed. Reference AR 750-10, Army Modification Program, 8 August 2000, (Chapter 6).

(14) Assist the AMC MSC with periodic validation of the MMIS based on XXX installation records and forward information copy to HQ, XXX, ATTN: XXXX-XX-X, and MACOM Deputy Chief of Staff, G-4 MWO office, per para 4c in this document.

d. AMC MSCs:

(1) Responsible for funding, programming, scheduling, applications, and QA requirement functions not negotiated with and accepted by XXX, on all equipment modifications, managed by AMC PMs, AMC MSC managers, and PEO-managed systems being modified using AMC MSC matrix support.

(2) Apply MWOs with depot/contract field teams except when the nature of the modification precludes efficient or economical team application. When modifications are proposed for application by an XXX installation, MSCs will obtain a prior agreement in the SUBJECT: Application of the Army Modification Work Order (DAMWO) Program

MWOFP from the XXX installation and a commitment to apply modifications within a specified time.

(3) Forward MWOFPs with unresolved issues to XXX installations with copy furnished to HQ, XXX, ATTN: XXXX-XX-X, and the MACOM Deputy Chief of Staff, G-4 MWO office, 75 days before MWO workshop. The MSCs will meet with XXX and MACOM POCs during the workshop to resolve issues.

(4) Arrange for timely reimbursement to XXX installations for MWOs applied using XXX funded resources, as negotiated in the MWOFP.

(5) Army Materiel Command MSC will update the MMIS as required based on XXX installation validations.

6. Review and Termination. This MOU will be reviewed annually and updated every 5 years by both parties at HQ, XXX. Conduct the review and updates at least 90 days before expiration of FY identified in paragraph 2 of this MOU, or prior to Command Operating Budget preparation, as mutually agreed, to ensure orderly resource planning. The MOU will remain in effect until terminated by mutual agreement or by either party upon 180 days written notice. This MOU will remain in force after mobilization, but may be modified by mutual agreement if existing conditions require such action.

JOHN B. HANCOCK
Major General, USA
Director
HQ, XXX

XXXXXX G. STEEL
Major General, USA
G-3
HQ, AMC

(date)

(date)

Appendix D

Matériel Change Number Assignment Process

D–1. Matériel change numbers

The MSC MWO coordinators generate MCN from data inputted to MMIS. The MCN is a 9–digit number that identifies the modification in the early part of the modification process all the way through to the application and recording of the modification. The MCN, once assigned, will never change. One MCN will be assigned for each modification. If more than 1 MWO is assigned to an MCN, the MSC MWO coordinator is responsible for keeping track of all MWOs assigned to an MCN. The MCN will be used on all modification documentation, including all procurement documentation (P forms) per DOD 7000.14R, and in the formal MWO.

D–2. Explanation of matériel change numbers

The MCN is formed as follows:

a. The 1st digit (for example, 1–99–03–1004) stands for the matériel developer.

- (1) 1 – U.S. Army Matériel Command
- (2) 2 – Army Acquisition Executive
- (3) 3 – Chief of Engineers
- (4) 4 – U.S. Army Signal Command
- (5) 5 – The Surgeon General

b. The 2^d and 3^d digits are separated from the 1st by a hyphen (for example, 1–99–03–1004). These 2 digits stand for the FY in which the modification is first submitted to the matériel developer for approval or the FY approved by the modification approval authority.

c. The 4th and 5th digits are separated from the 2^d and 3^d by a hyphen (for example, 1–99–03–1004). These digits stand for the general category of equipment being modified.

- (1) 01 – Aircraft
- (2) 03 – Missiles
- (3) 04 – Soldier, chemical and biological
- (4) 05 – Weapons and tracked combat vehicles
- (5) 06 – Tactical and support vehicles
- (6) 07 – Communications and electronics equipment
- (7) 08 – Other support equipment
- (8) 09 – Ammunition

d. The 6th through 9th digits are separated from the 4th and 5th by a hyphen (for example, 1–99–03–1004). These are assigned by the MSC MWO coordinator to identify each modification. It is the responsibility of the MWO coordinators to ensure that no 2 MCNs have the same number.

Appendix E

Sample Modification Work Order Control Release Checklist and Exhibit of Concurrence

E–1. Examples of documentation to use during modification work order fielding review boards

Included in this section are sample documents for use during MWO release boards. Regardless of the complexity of the MWO, each MSC is required to maintain a signed copy of that MSC's DA Form 7592 (Modification Work Order (MWO) Exhibit of Concurrence). The purpose is to maintain a record of all concurrences or nonconcurrences during MWO release and to ensure that all aspects of the release have been evaluated and discussed.

E–2. Modification work order fielding review board checklist

Below is a sample list of questions and statements that may be used to construct a checklist for use at the MWO board to facilitate discussion and ensure that all aspects of the MWO fielding process have been acknowledged and addressed as required.

a. Validation/verification.

- (1) Where was the verification site located?
- (2) Where was the verification site located?

- (3) Who were the personnel involved in the verification?
- (4) Has coordination been accomplished with the MSC materiel release office to determine if the provisions of materiel release apply?
 - b. Technical data availability.* Have the following been developed, approved and available?
 - (1) A MAC.
 - (2) Final MWO.
 - (3) Verified TM.
 - (4) A DMWR.
 - (5) A repairs, parts, and special tools list.
 - (6) A provisioning master record.
 - (7) A support list allowance card, or ASL, or PLL.
 - (8) Software.
 - c. Support and test, measurement, and diagnostic equipment.* Have the following support items been developed, approved, or otherwise available?
 - (1) Spares.
 - (2) A TPS.
 - (3) A TMDE.
 - (4) Special tools.
 - (5) Kits.
 - (6) Management documents.
 - (7) A DA Form 7591.
 - d. Training and training devices.* Is training required to instruct operators and maintainers on the modified equipment or weapon system? If so, have the following item been identified or scheduled?
 - (1) Training required.
 - (2) A new equipment training team scheduled.
 - (3) Publication required.
 - (4) Equipment and weapon systems available.
 - e. Safety.* Have safety and environmental issues been analyzed and satisfied?
 - f. Test and evaluation.* Did the MWO successfully pass quality assurance specifications and checks, acceptance test and Interoperability certification?
 - g. Release statements.* Are there any actions, concerns or conditions that would prohibit the full release of the MWO for application? If so, would a conditional release be possible?
 - (1) Full— No conditions.
 - (2) Conditional— List all actions which must be completed before release approval is granted.

E-3. Exhibit of concurrence

The DA Form 7592 is used at the MWO release board to ensure that all aspects of the MWO fielding process have been acknowledged and addressed as required. Each MSC MWO coordinator is required to maintain the signed copy of this form. Release statements must be signed by the director/chief of the related section. All DA Forms can be found at <http://www.apd.army.mil/>.

Appendix F Management Control Evaluation Checklist

F-1. Function

The function covered by this checklist is Army Modification Program.

F-2. Purpose

The purpose of this checklist is to assist AMC, assistant division commander–support/MACOM/IMA in evaluating the key management controls listed below. It is not intended to cover all controls.

F-3. Instructions

Answers must be based upon the actual testing of controls (for example, document analysis, direct observation, interviewing, sampling, simulation, or other). Answers which indicate deficiencies must be explained and corrective action indicated in supporting documentation. These management controls must be accomplished on DA Form 11-2-R (Management Control Evaluation Certification Statement).

F-4. Test questions

a. Army Materiel Command test questions—

- (1) Does each MSC have an MWO coordinator chartered by the MSC commander?
- (2) Does each life cycle SEC have a software ECP/SCP coordinator chartered by the SEC commander?
- (3) Are the MSC MWO coordinators assigning materiel change numbers?
- (4) Are MSC MWO coordinators conducting MWO fielding reviews prior to the MWO execution?
- (5) Is MWO MATDEV coordinating DA Form 7591 with the MACOM's designated installation or activity MWO coordinator prior to shipping the MWO kits?

b. Assistant Division Commander–Support/MACOM, DCS, G-4/IMA test questions—

- (1) Is there an individual/organization designated as the MACOM MWO coordinator?
- (2) Does each post, camp, and station have an individual appointed as the installation MWO coordinator?
- (3) Is the MWO coordinator attending the annual Modification Coordination Workshop?
- (4) Is the MWO coordinator reviewing all DA Form 7591s and providing timely feedback to MATDEVs, including the complete ship-to address, POC for management of kits once received, and quantity of items in ASL/PLL and fielding schedule?
- (5) Is the MWO coordinator properly coordinating DA Form 7591s between the MWO coordinators at the equipment owning units and the parties performing the modifications to minimize disruptions to mission performance?
- (6) Is the MSC materiel release office providing an assessment concerning the applicability of materiel release to the MSC MWO coordinator?

F-5. Supersession

This checklist supersedes the Army Modification checklist, dated 8 August 2003.

F-6. Comments

Help make this a better review tool. Submit comments to the HQDA functional proponent: HQDA, DCS, G-4 ATTN: DALO-SMM, 500 Army Pentagon, Washington, DC 20310-0500. (Provide an information copy to Commander, USALIA, ATTN: LOIA-LM, New Cumberland, PA 17070).

Glossary

Section I Abbreviations

ACAT

Acquisition category

AMC

U.S. Army Materiel Command

ANSI/EIA

American National Standards Institute/Electronic Industries Alliance

AR

Army regulation

ARNG

Army National Guard

ASA (ALT)

Assistant Secretary of the Army for Acquisition, Logistics, and Technology

ASA (FM&C)

Assistant Secretary of the Army for Financial Management and Comptroller

ASL

authorized stockage list

ATEC

Army Test and Evaluation Command

C4I

command, control, communications, computers, and intelligence

C4ISP

command, control, communications, computers, and intelligence support plan

CCB

Configuration Control Board

CDD

Capability Development Document

CG

commanding general

CIO/G-6

Chief Information Officer, G-6

CJCSI

Chairman Joint Chiefs of Staff Instruction

CLS

contractor logistics support

COEI

components of end items

COMSEC

communications security

CPD

Capabilities Production Document

CTR

Continuing Technology Refreshment

CTSF

Central Technology Support Facility

DA

Department of the Army

DCS, G-3/5/7

Deputy Chief of Staff, G-3/5/7

DCS, G-4

Deputy Chief of Staff, G-4

DCS, G-8

Deputy Chief of Staff, G-8

DFAS-IN

Defense Finance & Accounting Service-Indianapolis

DMWR

Depot Maintenance Work Requirement

DOD

Department of Defense

ECP

engineering change proposal

EW/SIGINT

electronic warfare/signals intelligence

FMS

foreign military sales

FORSCOM

U.S. Army Forces Command

FY

fiscal year

HQ

Headquarters

HQDA

Headquarters, Department of the Army

HTI

horizontal technology integration

I&S

interchangeability and substitutability

IAIC

Intra-Army Interoperability Certification

IMA

Installation Management Agency

INSCOM

U.S. Army Intelligence and Security Command

ISP

Information Support Plan

LIN

line item number

MACOM

major Army command

MATDEV

materiel developer

MCN

materiel change number

MMIS

Modification Management Information System

MOU

memorandum of understanding

MSC

Major subordinate command

MWO

modification work order

MWOFP

modification work order fielding plan

N/A

information not available

NMC

not mission capable

N/R

no record found

NSN

National Stock Number

PEO

program executive officer

PL

Public Law

PLL

prescribed load list

PM

program/product/project manager

POC

point of contact

PVS

prime vendor support

R&D

research and development

RDTE

research and development/test and evaluation

SEC

Software Engineering Center

SCP

software change packages

SOUM

Safety-of-Use Message

TADSS

training aids, devices, simulations, and simulators

TB

Technical Bulletin

TDP

technical data package

TM

Technical Manual

TMDE

test, measurement, and diagnostic equipment

TPS

Test program set

TRADOC

U.S. Army Training and Doctrine Command

UIC

unit identification code

USARC

U.S. Army Reserve Command

USC

United States Code

USASAC

U.S. Army Security Assistance Command

Section II**Terms****Block modification**

The combining of equipment changes into blocks of MWOs that are applied concurrently regardless of MSC/MATDEV responsibility.

Block package modification

The combining of related concurrent MWOs that are specific to one system.

Canceled modification work order

A published MWO that is rescinded before any application is performed or, if applied, kits are removed and all references to the MWO are removed from all publications.

Commodity command

The AMC major subordinate command or activity that performs life cycle management functions, including item management and logistic support for specific commodity groups.

Configuration status accounting

That status accounting function that provides traceability of configuration baselines and changes thereto and acts as management tool for accomplishing all related tasks resulting from such changes.

Current modification work order

A MWO that has been published, released, and for which the required resources are available for application within a specified time (FY). Required resources, as a minimum, include the availability of funds, kits, and manpower.

Deadlining

The act of removing an item of equipment from operation or use because it is inoperative due to damage or malfunction, is in need of repairs, is unsafe, or would be damaged by further use.

Deferred modification work order

Current MWO for which application has been rescheduled because of resource diversion or shortfall, reprogramming action, or HQDA direction.

Embedded diagnostics

A capability that accomplishes self-diagnosis using on-board resources as an integrated system (that is, sensors, analytical software, and embedded devices); collects, correlates, and synthesizes systems performance data to provide a system level assessment via on-board processing.

Embedded prognostics

A further refinement of embedded diagnostics to address system condition, support failure prediction and enable anticipatory logistics by use of software algorithms. Prognostic capabilities identify impending failures and provide appropriate actionable logistics support direction.

Equipment Distribution Support System

The Force Management subsystem used to establish Army priorities for equipment fielding of major end items and their modifications because of resource constraints.

Effective date (modification work orders)

For emergency and urgent MWOs, the first day on which the MWO is authorized for application. For routine MWOs, the 1st day of the FY in which application will start or the actual date on which application is scheduled. This will be made clear on the MWO itself.

Field maintenance

Field maintenance is the 1st operation of the Army maintenance system. Field maintenance is characterized by the performance of maintenance tasks "on system" in a tactical environment using trained personnel, tools, and TMDE. Field maintenance is typically operator/crew maintenance and repair and return to user maintenance operations.

Force builder

The DCS, G-3/5/7 system for building the structure and composition systems output (for example, LOGSACS, PERSACS) and establishing the Army acquisition objective (the requirement for end items based upon force modernization decisions).

Hazard categories

Descriptions established to determine classification of vehicle safety recall campaigns. Category I-Emergency— Will cause death or severe injury to personnel or will cause system loss. Category II-Urgent— Will cause personnel injury

or major system damage or will require immediate corrective action for personnel or system survival. Category III—Routine— Can be counteracted or controlled without injury to personnel or without major system damage.

Installation kit

That assemblage of hardware and software that interfaces between the modified host system and the mounted system. The installation kit is intended for removal from the host system upon disposition. It is not a permanent part of the host.

Mandatory modification

Any permanent modification made after production to an end item. It must meet the criteria for designation as a modification and exceed the criteria for accomplishment as another type of nonmandatory modification.

Materiel developer

The research, development, and acquisition command, agency, or office, which is assigned mission area responsibility for the system under development or being acquired. Can also refer to the specific organization assigned primary responsibility for matrix functional support to a PEO/PM.

Modification

The alteration, conversion, or modernization of an end item or component of investment equipment that changes or improves the original purpose or operational capacity in relation to effectiveness, efficiency, reliability, or safety of that item.

Modification kit

That assemblage of hardware and software necessary to modify the host system to accept the mounted system. The modification kit is a permanent part of the host system and remains with it.

Publication date (modification work order)

The date the MWO was published or revised that appears in the upper right corner of the MWO title page.

Special mission modification

A temporary materiel change required to achieve a special mission that may be published in a TB.

Special purpose modification

Materiel change incorporating a special modification and designed to meet a specialized requirement.

Suspended modification work order

A published and released mandatory MWO on which no further action will be taken in regard to application or removal of kits pending modification re-evaluation. After re-evaluation, the MWO will be reinstated, revised, canceled, or completed.

Sustainment maintenance

Sustainment maintenance is the second operation of the Army maintenance system. Sustainment maintenance is characterized by the performance of maintenance tasks, “off system” in a secure environment using trained personnel, tools, and TMDE. Sustainment maintenance is typically repair and return to stock and depot maintenance operations.

Section III

Special Abbreviations and Terms

This section contains no entries.

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