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Maintenance of Supplies and Equipment Army Materiel Maintenance Policy

By Order of the Secretary of the Army:

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*General, United States Army
Chief of Staff*

Official:


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History. This publication is a major revision. The portions affected by this major revision are listed in the summary of change.

Authorities. The authorities for this regulation are DoDD 4151.18, DoDI 4151.22, and DoDM 4151.22.

Applicability. This regulation applies to the Regular Army, the Army National Guard/Army National Guard of the United States, and the U.S. Army Reserve, unless otherwise stated. This regulation also applies to the maintenance of all materiel owned or supported by the Army; except materiel purchased with non-appropriated funds in accordance with AR 215–1. It is also applicable to special intelligence property, real property, foreign materiel used for training, leased/rented materiel (unless the lease and/or rental agreement dictates otherwise), medical, materiel maintenance in accordance with AR 12–1; and those aspects of combat and materiel development that impact the materiel maintenance function. The provisions of this regulation are applicable to all Army and civil-funded property under the direct control of the U.S. Army Corps of Engineers.

Proponent and exception authority. The proponent on 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 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 command or senior leader of the requesting activity and forwarded through their higher headquarters to the policy proponent. Refer to AR 25–30 for specific requirements.

Army internal control process. This regulation contains internal control provisions in accordance with AR 11–2 and identifies key internal controls that must be evaluated (see appendix B).

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

Distribution. This regulation is available in electronic media only and is intended for the Regular Army, the Army National Guard/Army National Guard of the United States, and the U.S. Army Reserve.

*This publication supersedes AR 750–1, dated 28 October 2019.

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Summary of Change

Chapter 1

Introduction

1–1. Purpose

This regulation establishes policies and assigns responsibilities for the maintenance of Army materiel. It provides and defines requirements for performance and management of the materiel maintenance function. It relates to two levels of maintenance: field and sustainment. Field consists of maintenance functions formerly known as operator and/or crew (equipment operators and vehicle crews), unit, and direct support. Sustainment consists of maintenance functions formerly known as general support and depot operations of the Army maintenance system, which is an Armywide program for commodity-unique maintenance.

1–2. References, forms, and explanation of abbreviations

The abbreviations, brevity codes, and acronyms (ABCAs) used in this electronic publication are defined when you hover over them. All ABCAs are listed in the ABCA database located at <https://armypubs.army.mil/abca/>.

1–3. Associated publications

Procedures associated with this regulation are found in DA Pam 750–1.

1–4. Responsibilities

See chapter 2.

1–5. Records management (recordkeeping) requirements

The records management requirement for all record numbers, associated forms, and reports required by this publication are addressed in the Records Retention Schedule–Army (RRS–A). Detailed information for all related record numbers, forms, and reports are located in Army Records Information Management System (ARIMS)/RRS–A at <https://www.arims.army.mil>. If any record numbers, forms, and reports are not current, addressed, and/or published correctly in ARIMS/RRS–A, see DA Pam 25–403 for guidance.

Chapter 2

Responsibilities

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

The ASA (ALT) will—

- a. Ensure that materiel developers (MATDEVs) promote interoperability in the acquisition of systems and equipment in accordance with AR 700–127.
- b. Advocate maintenance considerations in role of chair for the Army Systems Acquisition Review Council (ASARC).
- c. Coordinate with the MATDEVs to plan sustainment-level maintenance, and ensure the sustainment maintenance source of repair (SOR) analysis has been completed and documented.
- d. Ensure that an organic sustainment core logistics assessment and core sustainment assessment is conducted for all newly acquired systems and/or modifications for systems designated as core.
- e. Co-chair the Army Organic Industrial Base Corporate Board (OIBCB) and provide acquisition and logistics senior executive service (SES) representation to the Army OIBCB (see para 5–2).
- f. In coordination with the Deputy Chief of Staff (DCS), G–4 establish policies and procedures to support maintenance burden data requirements for force documentation as required by the DCS, G–3/5/7.
- g. Provide O–6 (colonel) and/or general schedule (GS)–15 level representation to the Organic Industrial Base Executive Committee (OIBEC) (see para 5–3).
- h. Appoint a Corrosion Control and Prevention Executive to manage the Army Corrosion Prevention and Control (CPC) Program to ensure CPC prior to fielding of all major end-items and weapon systems.
- i. Assist U.S. Army Materiel Command (AMC) in the sustainment of Acquisition Program Candidate (APC) non-standard equipment (NS–E), to include SOR, fielding, coordinating disposition, packaging, storage, and disposal.

j. Establish internal procedures and controls to request and/or assign nonstandard line item numbers for the NS-E; formerly Commercial Off-the-Shelf, or (COTS) procured to fill unit warfighting or force protection capability shortfalls (either through fielding or made available for unit purchase).

k. Establish the overall policy and strategic objectives for the Army Industrial Base Program.

l. Coordinate MATDEV repair cycle float (RCF) requirements with DCS, G-4. Consolidate MATDEV requirements by line item number (LIN), command, unit identification code (UIC), and fiscal year (FY) and submit to DCS, G-4 annually.

m. In support of the Prognostics Predictive Maintenance (PPMx) Program, ASA (ALT) is responsible for establishment and management of the condition-based maintenance (CBM)/PPMx program when required by an approved Joint Capabilities Integration and Development System document, to include—

(1) Update Systems Engineering Plan and Life Cycle Sustainment Plan (LCSP), to include electronic technical manuals (ETMs), to take full advantage of CBM and PPMx capabilities performing maintenance actions based on system and component conditions versus time, mileage, and operating hours.

(2) Develop and procure CBM/PPMx systems, software, hardware, and architecture on applicable Army systems in accordance with capability developers (CAPDEVs) and U.S. Army Training and Doctrine Command (TRADOC) for maintenance doctrine/operations in accordance with AR 700-127.

(3) Develop and procure CBM/PPMx diagnostic tools for field and sustainment maintenance in accordance with AR 700-127.

(4) Direct Army acquisition program managers (PMs) to assess the technical feasibility, affordability, and estimate the return on investment of incorporating PPMx capable hardware in current and newly developed and acquired systems.

(5) Modernize or recapitalize equipment with CBM/PPMx capabilities based on paragraph 2-1m(4).

(6) Prepare a business case analysis to evaluate the expected return on investment of installing CBM/PPMx capable digital equipment and sensors to currently fielded equipment.

(7) Incorporate CBM/PPMx into product support strategies.

(8) Conduct evaluations based on CBM/PPMx data analysis to identify improvements and decision points supporting reliability improvements, overhaul, remanufacture, recapitalization, modernization, or divestiture of equipment.

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

The ASA (FM&C) will—

a. Develop and prescribe financial policy and procedures for the use of appropriated funds and non-appropriated maintenance funds.

b. Develop and prescribe financial policy and procedures for the use of sustainment maintenance funds.

c. Monitor the execution of sustainment maintenance funds.

d. Develop, present, and defend the sustainment maintenance budget.

e. Participate in the program development process through membership in the program evaluation group.

f. Provide general officer (GO) or SES representation as the chief financial officer to the Army OIACB (see para 5-2).

g. Provide O-6 and/or GS-15 level representation to the OIBEC (see para 5-3).

h. Develop and prescribe policy and procedures for the collection of software cost and technical execution data.

2-3. Assistant Secretary of the Army (Manpower and Reserve Affairs)

The ASA (M&RA) will provide representation to the Army OIACB, as required.

2-4. Chief, National Guard Bureau

The CNGB will—

a. Provide overall coordination and administration for developing materiel maintenance plans, programs, and budgetary requirements pertaining to the Army National Guard (ARNG).

b. Manage the ARNG sustainment maintenance.

c. Develop, program, budget, and defend sustainment maintenance requirements for ARNG materiel in accordance with DFAS-IN Manual 37-100.

d. Coordinate ARNG sustainment maintenance requirements determination with AMC life cycle management commands (LCMC) to ensure ARNG sustainment maintenance is programmed in sustainment maintenance workload projections.

e. Be a party to all memorandums of agreement (MOAs) and/or memorandums of understanding (MOUs) involving sustainment maintenance of ARNG materiel.

f. Develop a depot maintenance requirement determination process for ARNG materiel.

g. Provide representation to the Army OIBCB.

h. Provide O-5 (lieutenant colonel)- and/or GS-14-level representation to the OIBEC (see para 5-3).

i. Establish an NS-E maintenance and equipment reset point of contact.

j. Maintain and repair tactical NS-E procured with unit and/or state funds.

k. Conduct maintenance operations in accordance with environmental protection programs and policies.

l. Coordinate with The Adjutant General of each State to ensure the following:

(1) Direct and manage all sustainment maintenance operations applicable to all Federal supplies and equipment issued to ARNG units and activities within the State.

(2) Ensure that commanders provide adequate time for all Soldiers to spend 25 percent of their inactive duty training (IDT) performing required operator preventive maintenance checks and services (PMCS) on individual and organizational equipment.

(3) Ensure that commanders provide adequate time for the armorer; chemical, biological, radiological, and nuclear (CBRN) personnel; communications noncommissioned officer (NCO); and mechanics to spend 50 percent of their IDT and annual training (AT) time engaged in maintenance performance or training, including conducting 25 percent of field-level services on unit equipment in their respective functional areas.

(4) Establish a maintenance assistance and instruction team (MAIT)/command maintenance evaluation and training (COMET) program (see para 14-14).

(5) Evacuate equipment and materiel requiring sustainment maintenance as directed by the CNGB.

(6) Establish field maintenance facilities to provide support for home station equipment.

(7) Designate specific ARNG unit(s) to use and support an approved unit training equipment site (UTES) operation. This will include adjusting operating costs within and between using unit(s) for related maintenance and training.

(8) Designate type and quantity of home station equipment to be located at the UTES.

(9) Establish a Command Maintenance Discipline Program (CMDP).

m. Ensure the surface maintenance manager (SMM) will—

(1) Plan, execute, and direct the surface maintenance human resources program.

(2) Plan, develop, and manage in-State maintenance training and coordinate the out-of-State maintenance training.

(3) Implement and administer the safety, hazardous waste, and industrial hygiene programs for all surface maintenance facilities.

(4) Serve as the principal State adviser to the facilities management office on surface maintenance facilities construction.

(5) Analyze, coordinate, and manage on-hand equipment readiness for the State.

(6) Provide technical supervision to all surface maintenance activities and exercise operational and administrative control over combined support maintenance shops (CSMSs), maneuver area training equipment sites (MATES), UTES, and field maintenance shops (FMSs).

(7) Manage surface maintenance funds.

(8) Appoint in writing a primary and alternate individual to assume duties as CSMS, MATES, FMS, or UTES supervisor as the shop supervisor.

(9) Manage the SMM office, providing control and direction for all matters relating to office administration.

(10) Ensure compliance with the National Maintenance Program (NMP) business procedures when scheduling and executing sustainment maintenance operations.

(11) Ensure each State, including: the District of Columbia, Puerto Rico, Guam, and the U.S. Virgin Islands, will prepare and maintain a current state surface equipment maintenance support plan (MSP) located on the National Guard Bureau (NGB) Guard Knowledge Online website under the Logistics Maintenance Branch.

n. Ensure the State Army Aviation Officer (a member of the State Adjutant General's staff) will—

- (1) Implement and administer the State aviation logistics programs.
- (2) Analyze, coordinate, and manage the operational readiness (OR) of aviation assets.
- (3) Ensure the aviation logistics programs are in accordance with applicable materiel and maintenance regulatory requirements.
- (4) Acquire and maintain a self-sufficient military capability and capacity for field and sustainment maintenance in support of combat, combat support, and combat service support (CSS) elements.
- (5) Supervise implementation of aviation logistics programs.
- (6) Maintain ARNG aviation assets using Department of the Army (DA) readiness goals listed in AR 700–138.
- (7) Ensure compliance with safety of flight requirements and aircraft modifications.
- (8) Program funds for field and sustainment maintenance and rank order any unfinanced requirements.
- (9) Administer the ARNG Aviation Maintenance Program.
- (10) Supervise ARNG maintenance and materiel technical personnel.
- (11) Ensure logistics regulatory requirements are implemented and followed through the complete aviation cycle.
- (12) Maintain ARNG aviation assets in the highest state of readiness.
- (13) Report compliance with safety of flight requirements and aircraft modifications through the Aviation and Missile Command (AMCOM) Message Tracking System at <https://amtracks.redstone.army.mil/>.
- (14) Report deficiencies in quality, materiel, or maintenance in accordance with DA Pamphlet (Pam) 738–751 (aviation only).
- (15) Perform maintenance at the lowest level possible according to the maintenance allocation chart (MAC). This process must preclude table of distribution and allowances (TDA) maintenance activities from absorbing maintenance workloads that should be performed at modification table of organization and equipment (MTOE) field maintenance units.
- (16) Train personnel designated as operators and crewmembers to properly operate and perform PMCS on their assigned equipment.
- (17) Assign maintenance responsibilities for unit equipment to specific individuals.
- (18) Schedule maintenance time and give equal emphasis to preventive maintenance training.
- (19) Require compliance with prescribed preventive maintenance procedures.
- (20) Require that all equipment be maintained to the maintenance standard (see para 3–3).
- (21) Require that all before, during, and after operations checks be accomplished each time the equipment is operated or used.
- (22) Submit the following forms to the supporting maintenance facility for backup maintenance support beyond the unit's capability:
 - (a) DA Form 5990–E (Maintenance Request).
 - (b) DA Form 2407 (Maintenance Request).
 - (c) DA Form 5988–E (Equipment Maintenance and Inspection Worksheet).
 - (d) DA Form 2404 (Equipment Inspection and Maintenance Worksheet).
- (23) Maintain records applicable to hand receipt, operation, maintenance, modification materiel readiness reports, and transfer of equipment as prescribed in appropriate publications.
- (24) Maintain accountability and serviceability of components of end item (COEI), basic issue items (BII), and additional authorization list and ensure shortages are on valid requisition.
 - o. Train maintenance personnel and leaders to execute and manage CBM/PPMx maintenance operations once established for applicable systems.
 - p. Ensure publication requirements are in accordance with AR 25–30.

2–5. Deputy Chief of Staff, G–1

The DCS, G–1 will—

- a. Develop plans for the management of military and civilian maintenance personnel.
- b. Publish assignment instructions and/or request for orders no less than 30 days prior to return.
- c. Ensure the U.S. Army Installation Management Command (IMCOM) has visibility of Soldier assignment instruction and/or request for orders no less than 30 days prior to return to facilitate necessary installation support.

2–6. Deputy Chief of Staff, G–2

The DCS, G–2 will develop procedures related to materiel maintenance of intelligence-unique materiel.

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

The DCS, G-3/5/7 will—

- a. Approve the Army force structure requirements and authorizations for maintenance support.
- b. Approve requirements and priorities for all equipment identified in basis of issue plans (BOIPs) (see AR 71-32).
- c. Direct the coordination and use of operational test (OT) results in the development of force structure training and materiel requirements and authorizations.
- d. Assist in the development of DA maintenance training.
- e. Participate in maintenance requirement reviews to ensure appropriate funding priority of weapon systems is maintained.
- f. Provide and regularly update the management decision package (MDEP) and/or modernization resource information submission crosswalk for intensively managed weapon systems.
- g. Provide representation to the Army OIBCB.
- h. Ensure that peacetime maintenance man-hour shortfalls are identified and documented by the Army commands (ACOMs), Army service component commands (ASCCs), and/or direct reporting units (DRUs) during the planning, programming, budgeting, and execution (PPBE) process.
- i. Approve RCF authorizations as part of the Army acquisition objective (AAO) validation process.

2-8. Deputy Chief of Staff, G-4

The DCS, G-4 is responsible for developing and implementing procedures for Army maintenance operations and will—

- a. Perform general staff supervision of maintenance activities, including regular Army and reserve components (RCs).
- b. Serve as the proponent for the Department of Defense (DoD) inter-Service, interdepartmental, and interagency maintenance support programs, and associated area support designations within the Army.
- c. Verify maintenance requirements for the program objective memorandum (POM).
- d. Ensure the materiel readiness and sustainability of the Army.
- e. Formulate concepts, plans, and program guidance for the following materiel maintenance programs and projects:
 - (1) Maintenance expenditure limits (MELs) (see para 4-7).
 - (2) Maintenance award programs (see para 14-1).
 - (3) Special repair authority (SRA) (see para 3-14b).
 - (4) Sample data collection (SDC).
 - (5) Maintenance regeneration enablers (see para 14-6).
 - (6) NMP (see para 14-13).
 - (7) MAIT/COMET Program (see para 14-14).
 - (8) Hardness maintenance and hardness surveillance (HM/HS) (see para 14-22).
 - (9) Test, measurement, and diagnostic equipment (TMDE) in accordance with AR 750-43.
 - (10) Support CPC program compliance as identified in AR 750-59 to extend the usage of Army weapon systems.
 - (11) Advanced and additive manufacturing for tactical and operational applications (see para 18-1).
- f. Serve as the proponent for the functional requirements for maintenance management of Global Combat Support System-Army (GCSS-Army) to include Logistics Modernization Program (LMP), Aircraft Notebook (ACN), Unit Level Logistics System-Aviation Enhanced, Accountable Property System of Record (APSR) or any other maintenance automated information systems (AISs) used to support Army maintenance programs.
- g. Provide final approval for funding of inter-service support agreements (ISSAs) that exceed programmed support (see para 4-26).
- h. Represent the DA Tire Retread Program involving policy and planning concerning DoD or the Departments of the Navy and Air Force.
- i. Develop basic functional guidance for the automated submission of depot maintenance requirements.
- j. Direct and allocate funds to support all sustainment maintenance programs, including maintenance engineering, maintenance support services, and depot maintenance.
- k. Conduct annual sustainment maintenance requirement reviews with representation from the following organizations when developing the POM:

- (1) AMC.
 - (2) AMC LCMC.
 - (3) U.S. Army Sustainment Command (ASC).
 - (4) ASA (ALT) program executive officers (PEOs).
 - (5) PMs.
 - (6) DCS, G–3/5/7.
 - (7) ASA (FM&C).
 - (8) Army Budget Office.
 - (9) Program Analysis and Evaluation.
 - (10) Other Headquarters, Department of the Army (HQDA), ACOM, ASCC, DRU headquarters staff as required.
- l.* Verify and monitor execution of the Sustainment Maintenance Requirements Plan (OP–29).
 - m.* Direct the Army Materiel Maintenance Management Career Program.
 - n.* Exercise staff supervision for management of the Army sets, kits, outfits, and tools (SKOT)
 - o.* Serve as proponent for the Army Modification Program in accordance with AR 750–10.
 - p.* Establish and maintain a long-term Army Organic Industrial Base (OIB) Strategic Plan for the Army OIBCB approval.
 - q.* Co-chair the Army OIBCB (see para 5–2).
 - r.* Co-chair the OIBEC with AMC (see para 5–3).
 - s.* Serve as the proponent for the Army Oil Analysis Program (AOAP) and approve Army input to the DoD Joint Oil Analysis Program (see para 14–2).
 - t.* Validate ACOM, ASCC, and DRU RCF requirements annually as part of the AAO validation process.
 - u.* Coordinate with ASA (ALT), DCS, G–3/5/7, and DCS, G–8 to validate RCF requirements and requests to redistribute or divest excess.
 - v.* Plan and program resources to support the DCS, G–3/5/7 maintenance burden data requirements and associated logistical data elements needed to determine maintenance force structure requirements.
 - w.* Provide maintenance policy oversight to the following:
 - (1) Execution of equipment reset.
 - (2) Left behind equipment (LBE) storage.
 - (3) Predeployment training equipment (PDTE).
 - (4) Home station training (HST) equipment.
 - (5) Coordinate with the Office of the Secretary of Defense (OSD) and other Military Departments and Services to develop common maintenance management and logistics terminology for use in Army maintenance management documents.
 - x.* Approve source repair analysis and core logistics analysis.
 - y.* Maintain an accounting of the maintenance contractor logistics support (CLS) engaged by the Army and the manpower and/or equipment resources required to replace it—if discontinued or exempt.
 - z.* Approve weapon system and component enrollment into the AOAP through coordination with LCMCs, PEOs, and/or PMs, as well as the ACOMs, ASCCs, and DRUs.
 - aa.* Serve as the Army Staff (ARSTAF) proponent for NS–E maintenance.
 - bb.* Provide oversight for maintenance of the Material Enterprise Nonstandard Equipment Database.
 - cc.* Monitor the repair and reset of tactical NS–E.
 - dd.* In coordination with ASA (ALT), coordinate the development of APC sustainment strategies and sustainment strategies for NS–E identified for long-term storage.
 - ee.* Serve as lead agent to assist in the establishment, development and to update CBM/PPMx policy and provide implementing guidance to support CBM/PPMx operations at the field and sustainment levels.

2–9. Deputy Chief of Staff, G–6

The DCS, G–6 will—

- a.* Assist the DCS, G–4 to coordinate plans, and procedures for the maintenance of Army's command, control, communications, and computers and information technology (IT) equipment and systems using the Army maintenance system.
- b.* Review current HQDA communications policy and procedures for equipment reset support.

2–10. Deputy Chief of Staff, G–8

The DCS, G–8 will—

- a. Participate in annual maintenance requirement reviews to ensure OP-29 maintenance funding and prioritization in compliance with programming goals and objectives.
- b. Provide GO and/or SES level representation to the Army OIBCB (see para 5-2).
- c. Provide O-6 and/or GS-15 level representation to the OIBEC (see para 5-3).
- d. Coordinate with the DCS, G-4 to redistribute or divest excess RCF assets.
- e. Capture, at the LIN and national stock number (NSN) level, DCS, G-3/5/7 approved RCF authorizations in Army Equipping Enterprise System (AE2S) (<https://afm.us.army.mil>).
- f. Evaluate DCS, G-4 validated RCF requirements for affordability and determine the Army procurement objective (APO) quantity as appropriate.
- g. Ensure RCF requirements are the same LIN and modernization as supported assets.
- h. Approve RCF requirements and update AE2S with approved requirements.
- i. Validate asset availability, procure assets, and provide disposition of excess to support the approved RCF requirements.

2-11. Deputy Chief of Staff, G-9

The DCS, G-9 will—

- a. Assist in the development and provide oversight to the implementation of policies related to maintenance support for installation base operations (BASOPS) equipment, performed on a non-reimbursable basis by service providers.
- b. Assist ACOMs, ASCCs, and DRUs, MATDEVs, and other commands and agencies in identifying requirements for maintenance facilities and, when approved in accordance with AR 420-1, their design and construction.
- c. Provide GO and/or SES level representation to the Army OIBCB (see para 5-2).
- d. Provide O-6 and/or GS-15 level representation to the OIBEC (see para 5-3).
- e. Publication requirements will be in accordance with AR 25-30.

2-12. Chief, U.S. Army Reserve

The CAR will—

- a. Develop materiel maintenance plans, policies, programs, and budgetary requirements pertaining to the USAR.
- b. Manage the USAR sustainment maintenance program.
- c. Develop, program, budget, and defend sustainment maintenance requirements for USAR materiel.
- d. Coordinate USAR depot maintenance requirements determination with U.S. Army Materiel Command (AMC) LCMCs to ensure USAR depot maintenance is programmed in depot maintenance workload projections.
- e. Coordinate all MOUs and/or MOAs involving sustainment maintenance of USAR materiel.
- f. Develop a sustainment maintenance requirement determination process for USAR materiel consistent with policy and guidance in this regulation.
- g. Provide representation to the Army OIBCB (see para 5-2).
- h. Provide O-5- and/or GS-14-level representation to the OIBEC (see para 5-3).
- i. Provide administrative, logistical, and technical assistance to Army reserve units outside the continental United States (OCONUS) in support of Army materiel maintenance programs.
- j. Ensure that maintenance supports readiness. Hold commanders at all levels accountable for the conduct of maintenance operations.
- k. Ensure evaluation of maintenance is included in the CMDP.
- l. Supervise maintenance operations at all levels in the command.
- m. Establish and supervise maintenance training for equipment operators and/or crews.
- n. Establish maintenance-training strategy to build personnel military occupational specialties proficiency for the conduct of maintenance operations.
- o. Provide timely and accurate cost, readiness, and maintenance data to management systems.
- p. Acquire and maintain a self-sufficient military capability and capacity for field and sustainment maintenance in support of combat, combat support, and CSS elements.
- q. Program funds for field and sustainment (through AMC) maintenance and prioritize any un-re-sourced requirements.

- r. Perform maintenance at the lowest level possible according to MACs. This process must preclude TDA maintenance activities from absorbing maintenance workloads that should be performed at MTOE field maintenance units.
- s. Minimize the number of TDA maintenance operations to reduce resource requirements without adversely affecting operational and contingency requirements. Ensure only one installation materiel maintenance activity (IMMA) exists on an installation. Installation commanders with the approval of AMC may consolidate Logistics Readiness Center (LRC)/Army Field Support Battalion (AFSBn) and Director of Public Works maintenance operations when cost effective.
- t. Evaluate all available methods of providing maintenance support before forwarding requests to the DCS, G-4 (Maintenance Directorate) for the establishment of IMMAs.
- u. Comply with materiel maintenance standards found in applicable technical publications and maintenance-related logistical performance and readiness standards found in paragraph 3-3 of this regulation, DA Pam 750-1, and related publications.
- v. Coordinate all requirements for USAR TMDE procurement with the product director (PD)-TMDE in accordance with AR 750-43.
- w. Establish a warranty control office and/or officer to implement the Army Warranty Program in accordance with AR 700-139.
- x. Comply with all local, regional, and national regulations governing the inspection and maintenance requirements for prevention of pollution from mobile equipment. For more information, see AR 200-1.
- y. Establish an effective CPC program for assigned equipment in accordance with AR 750-59.
- z. Carry out quality programs under the provisions of AR 702-11 for assigned maintenance and calibration operations.
 - aa. Appoint a designated representative for the SRA, modification work order (MWO), and AOAP maintenance programs.
 - bb. Assist SDC-responsible officials and AMC LCMCs as required in establishing and conducting SDC projects that are implemented in the ACOM, ASCC, and DRU.
 - cc. Plan for and provide maintenance-plus repair parts in support of contingency or emergency plans, as directed.
 - dd. Submit sustainment maintenance funding requirements in accordance with OP-29 resource formulation guidance.
 - ee. Conduct maintenance operations in accordance with environmental protection programs and policies.
 - ff. Train maintenance personnel and leaders to execute and manage CBM/PPMx maintenance operations once established for applicable systems.

2-13. The Surgeon General

TSG will—

- a. Develop concepts, doctrines, and plans for maintenance of medical materiel.
- b. Develop medical force structures, organizations, and capabilities to provide required maintenance services for medical materiel.
- c. Develop, manage, and monitor medical materiel and maintenance programs for the Army.

2-14. Commanders at all levels

Commanders at all levels will—

- a. Implement and execute the CMDP in accordance with DA Pam 750-1.
- b. Emphasize the importance of safety and maintenance, holding subordinates accountable for the conduct of maintenance operations. Maintenance is a command responsibility.
- c. Provide leadership, technical supervision, and management control of materiel maintenance programs of subordinate commands and activities.
- d. Emphasize the conduct and supervision of PMCS performed at unit level. Maintain materiel at the maintenance standard specified in paragraph 3-3 of this regulation and DA Pam 750-1.
- e. Develop and sustain a high degree of maintenance discipline within their commands, including management of repair parts in accordance with AR 710-2.
- f. Establish, maintain, and conduct training with operators, crews, and maintenance personnel to properly use and maintain equipment.

- g.* Establish, maintain, and conduct training of leaders at all levels to supervise maintenance operations and to motivate subordinates to use and maintain equipment properly and safely.
- h.* Exercise management controls sufficient to ensure prudent and efficient use of all resources (people, money, materiel, and time) required to perform assigned maintenance missions.
- i.* Conduct inspections and staff visits to determine the adequacy of command maintenance operations.
- j.* Document all faults to ensure that corrective actions are complete; ensure accuracy of readiness reports.
- k.* Provide materiel maintenance support to all assigned units and activities.
- l.* Recommend improvements to the Army maintenance system.
- m.* Comply with the provisions of AR 750–43 for TMDE used in support of maintenance operations and appoint, in writing, a TMDE Coordinator.
- n.* Ensure that the submissions of product quality deficiency reports (PQDRs) and equipment improvement recommendations (EIRs) are accomplished in accordance with DA Pam 750–8 (ground support and watercraft) or DA Pam 738–751 (aircraft and/or aviation equipment).
- o.* Encourage establishment of an aggressive awards program for operators and maintainers.
- p.* Implement an effective quality program in accordance with AR 702–11. Quality programs will be defined, quantified, specified, measured, and assessed.
- q.* Schedule all PMCS, including field-level services, by building a maintenance plan in GCSS–Army and perform as required by the appropriate technical manual (TM).
- r.* Ensure prompt compliance with requirements dictated by safety of use messages (SOUMs) in accordance with AR 750–6 and AR 95–1.
- s.* Train personnel in various battle damage assessment and repair (BDAR) skills annually in order to achieve combat resilience in wartime operations. For more detail on BDAR training, see Army Techniques Publication (ATP) 4–31.
- t.* Support SDC projects by providing proponent agency contractor personnel reasonable access to equipment and data relevant to the project.
- u.* Emphasize the prompt movement of unserviceable repairable items to maintenance.
- v.* Support the NMP.
- w.* Ensure modifications to assigned equipment are compliant with AR 750–10.
- x.* Conduct field-level maintenance (FLM) in accordance with CBM/PPMx procedures outlined in this regulation and DA Pam 750–1.

2–15. Commanders, Army commands, Army service component commands, and direct reporting units

The commanders of ACOMs, ASCCs, and DRUs will—

- a.* Ensure that maintenance supports readiness. Commanders at all levels are accountable for the conduct of maintenance operations.
- b.* Ensure evaluation of maintenance is included in the command inspection program.
- c.* Ensure that subordinate commanders comply with the policies in this regulation. Send one copy of any implementing instructions to DCS, G–4 (DALO–MP), 500 Army Pentagon, Washington, DC 20310–0500.
- d.* Supervise maintenance operations at all levels within command.
- e.* Establish and supervise training programs for equipment operators, crews, and/or maintenance personnel in the conduct of maintenance operations.
- f.* Provide timely and accurate cost, readiness, and maintenance data to management systems.
- g.* Acquire and maintain a self-sufficient capability and capacity for unit and maintenance provider support of combat, combat support, and CSS elements.
- h.* Program funds for support of equipment and prioritize any unfinanced requirements.
- i.* Ensure that FLM is performed at the unit level or evacuated to the next level (sustainment) for supply disposition if the initial inspection identifies that the cost of repair exceeds the MEL.
- j.* Comply with materiel maintenance standards and maintenance-related logistical performance and readiness standards.
- k.* Coordinate all requirements for TMDE procurement with the PD–TMDE in accordance with AR 750–43.

- l.* Establish a warranty control office and/or officer to implement the Army Warranty Program in accordance with AR 700–139.
- m.* Comply with all local, regional, and national regulations governing the inspection and maintenance requirements for prevention of pollution from mobile equipment. For more information, see AR 200–1.
- n.* Provide air-traffic control materiel support.
- o.* Establish, oversee, and ensure compliance with CPC program for assigned equipment in accordance with AR 750–59.
- p.* Determine if reimbursement for fabrication services of field or sustainment maintenance activities is authorized.
- q.* Carry out quality programs under the provisions of AR 702–11 for assigned maintenance and calibration operations.
- r.* Designate points of contact for the CBM/PPMx, SRA, MWO, AOAP, unique item tracking (UIT), and maintenance float programs.
- s.* Appoint in writing as an additional duty an RCF coordinator and/or manager.
- t.* Establish subordinate RCF managers at the Corp/Expeditionary Sustainment Command-level.
- u.* Submit RCF nominations annually to AMC for fielded ground equipment (see para 14–6).
- v.* Ensure RCF policy compliance (see para 14–6).
- w.* Conduct RCF supply transactions as written in AR 710–2.
- x.* Ensure Joint technical inspection (TI) is conducted and signed by a logistics assistance representative (LAR), LRC/AFSBN representative.
- y.* Ensure aviation RCF follows paragraph 14–6 of this regulation.
- z.* Assist responsible official and AMC LCMCs as required in establishing and conducting SDC projects that are implemented in the ACOM, ASCC, and DRU.
- aa.* Ensure subordinate commanders with sustainment maintenance missions comply with NMP business procedures when scheduling and executing sustainment maintenance operations.
- bb.* Ensure that all assigned personnel, including those assigned supply and maintenance automated systems data entry responsibilities, receive formal technical training appropriate for their duty assignments.
- cc.* Ensure that assigned maintenance and supply personnel are used in the MTOE and/or modification tables of distribution and allowances (MTDA) positions for which they have been requisitioned and trained, including those positions identified with an additional skill identifier (ASI).
- dd.* Be responsible for preparing and submitting the depot maintenance workload distribution (DMWD) requirements report for prior, current, and budget years.
- ee.* Provide MWO application teams with reasonable access to unit MWO coordinators, equipment, and facilities, in accordance with AR 750–10.
- ff.* Schedule MWO application teams on unit training calendars.
- gg.* AMC will implement item unique identification (IUID) for IMCOM items.
- hh.* Forecast and request NS–E required for training prior to deployment, via operational needs statement, to the HQDA Army Requirements and Resourcing Board.
- ii.* Establish a NS–E maintenance and reset point of contact.
- jj.* Fund AMC for maintenance to be executed on all NS–E LBE managed by AMC other than that in the APC category described in this paragraph.
- kk.* Coordinate with AMC for contract maintenance support, as required.
- ll.* Conduct maintenance operations in accordance with environmental protection programs and policies.
- mm.* Ensure that any heavy lifting is complete with a suitable lifting device in accordance with Military Standard (MIL–STD)–1472G.
- nn.* Review the Army's approved Master Divestiture List prior to repairing equipment that should be replaced or divested from the Army inventory.
- oo.* Once the CBM/PPMx end-to-end network architecture is in place, units will submit system/equipment-level CBM/PPMx digital diagnostic data to the national data storage facility through the appropriate Logistics Information System (LIS). Active ACOMs will submit reports no less than once every 21 days for ground systems and 7 days for aviation systems. The Army Reserve and National Guard will submit PPMx data no less than every 45 days. In the future, as wireless capabilities are developed and fielded, this process may occur via an automated interrogation and reporting process and may be a pull vice a push reporting process.

2-16. Commanding General, U.S. Army Forces Command

The CG, FORSCOM, in support of the USAR, will—

- a. Conduct a continuing analysis and evaluation of the USAR materiel maintenance program to attain the objectives of the program by all subordinate commands.
- b. Authorize resources to those TDA maintenance activities established by the U.S. Army Reserve Command (USARC) in the continental United States (CONUS) to support the USAR materiel maintenance program. Use AR 570-4 as a guide for determining work force requirements of maintenance activities.
- c. Maintain Army BASOPS communications-electronics (CE) equipment; other assigned automation, communication, printing, audiovisual and records management equipment; and the Army portion of the Defense Communication System.
- d. Maintain information systems at U.S. Army Intelligence and Security Command (INSCOM) sites.
- e. Execute Non-Combat Operations Maintenance Plans (NCOMP) and CBM/PPMx data collection efforts.

2-17. Commanding General, U.S. Army Training and Doctrine Command

The CG, TRADOC will—

- a. Develop Army maintenance concepts and doctrine for two-level maintenance: field and sustainment.
- b. Determine automated systems for support of the Army maintenance system.
- c. Evaluate fielded systems to update maintenance training for field and sustainment maintenance operations.
- d. Ensure that existing and newly identified maintenance tasks are in the MAC and compatible with training and doctrine.
- e. Ensure that doctrinal, training, and leader development keeps pace with approved maintenance management programs and terminology.
- f. Develop training materials to provide the training required for supporting maintenance military occupational specialties.
- g. Ensure BDAR techniques are included in all resident maintenance training courses and doctrinal literature.
- h. Ensure operator- and leader-level PMCS instruction is included in all resident training courses.
- i. Develop and incorporate AOAP training for appropriate programs of instruction (see para 14-2).
- j. Develop and update concepts and doctrine for employing depot-level repair (DLR) organizations in a theater of operations.
- k. Integrate CPC in all resident maintenance training courses and doctrinal literature.
- l. Support SDC projects by providing proponent agency contractor personnel reasonable access to equipment and data relevant to the project.
- m. Develop operational requirements and concepts of operations leading to a strategy for modifying existing and future tactical logistics IT systems to accommodate IUID implementation.
- n. Identify hardware requirements needed to enable IUID in support of tactical logistics operations.
- o. Include IUID in all Joint Capabilities and Integration Development System documents.
- p. Coordinate with AMC to integrate CBM/PPMx capability requirements into requirements documents, including architecture products that enable CBM/PPMx operations to include embedded training and TM requirements.
- q. Update training plans to support operator, crew and maintainer skills and knowledge supporting CBM/PPMx driven maintenance at the field and sustainment levels.
- r. Develop and incorporate CBM/PPMx programs of instruction to train Soldiers and leaders on CBM/PPMx operations and procedures.
- s. Participate in planning for Logistics Demonstrations and maintenance TM verifications.
- t. Review/concur with acquisition LCSPs.

2-18. Commanding General, U.S. Army Materiel Command

The CG, AMC as the installation and national maintenance manager (NMM) for the Army, will—

- a. With regard to planning, programming, and budgeting:
 - (1) Develop Army sustainment-level maintenance concepts and support systems, with participation by the DCS, G-4 (Maintenance Directorate), CAPDEVs, and MATDEVs.
 - (2) Manage the sustainment maintenance system, including forward repair activities (FRAs).

- (3) Provide timely and accurate cost, readiness, and maintenance data for base commercial equipment.
- (4) Host an annual synchronization meeting with all ACOMs, ASCCs, and DCS, G-4 for QMTO MDEP POM requirements.
- (5) Program and budget DA-approved SDC projects.
- (6) Provide GO or senior executive senior members to the Army OIBCB to serve as the chief operating officer and one additional board member.
- (7) Co-chair the OIBEC with DCS, G-4 (Chief, Sustainment Maintenance Division) (see chap 5).
- (8) Review and verify LCMC, ACOM, ASCC, and DRU nominations for fielded equipment and calculate the total RCF requirement using the formula in DA Pam 750-1 and submit requirements to the DCS, G-4 (Sustainment Maintenance Division) to begin the staffing process for the AAO.
- (9) Submit sustainment- and FLM funding requirements in accordance with the Sustaining Program Evaluation Group (PEG) POM programming guidance.
- b. With regard to programs:
 - (1) Establish, operate, and manage the Logistics Assistance Program (LAP) in accordance with AR 700-4.
 - (2) Ensure that spares and repair parts are available in sufficient quantities to support materiel throughout its life cycle.
 - (3) Manage the Army Warranty Program (see AR 700-139).
 - (4) Manage the Army Chemical Agent Resistant Coating (CARC) and/or camouflage painting pattern (CPP) programs.
 - (5) Establish internal business rules and/or procedures necessary to implement the SRA and/or one-time repair (OTR) processes within AMC and supporting activities. Life Cycle Management Commands (LCMC) may program and authorize Materiel Support Command-Korea (MSC-K) and Theater Logistics Support Center-Europe (TLSC-E) to perform sustainment-level repairs of major end items after validating capability and repair requirement to augment readiness enabling forward sustainment-level repair programs.
 - (6) Manage the depot repair and return program (see para 5-10).
 - (7) As the Army leading organization for the National Tire Retread Program, establish a worldwide program for management of aircraft and vehicle tires.
 - (8) Manage the DoD inter-Service, interdepartmental and interagency maintenance support programs within the Army.
 - (9) Manage and execute the NMP.
 - (10) Serve as the Army lead for the MWO program in accordance with AR 750-10.
 - (11) Manage and maintain Army pre-positioned stocks (APS).
- c. With regard to data collection and warehousing:
 - (1) Support DCS, G-4 requirements for logistical data elements necessary to meet DCS, G-3/5/7 maintenance force structure requirements determination.
 - (2) Responsible for program operations and execution of equipment reset operations.
 - (3) Serve, through ASC, as the Army's lead materiel integrator.
- d. With regard to the AOAP:
 - (1) Manage the operation and execution of the AOAP, by—
 - (a) Designating the ASC as the Army PM for the AOAP.
 - (b) Implementing this regulation and AR 700-132.
 - (c) Incorporating quality assurance (QA) provisions and technician qualification required by the AOAP performance work statements (PWSs) used in solicitation documents for contract operation of AOAP laboratories. Contracting officers reviewing vendor proposals for AOAP laboratory operation will obtain PM AOAP technical review and approval prior to acceptance of the proposal.
 - (2) Ensure AMC LCMCs—
 - (a) Recommend systems for inclusion in the AOAP and sampling intervals for these systems. The PEO and/or PM for the specific weapon systems will approve and submit the recommendations to the PM AOAP.
 - (b) Submit recommendations any time during the year. At the beginning of each calendar year, the PM AOAP will facilitate a formal review process.
 - (c) Configure systems to use oil-sampling valves or coordinate with PEOs and/or PMs for retrofit during depot-scheduled timeframes, where feasible.

(d) Coordinate with PEOs and/or PMs to ensure embedding of inline and/or online diagnostics capabilities in future systems as technology allows.

(e) Provide information to AMC LCMCs and MATDEVs on changes to laboratory capabilities and component metal wear criteria.

(f) Establish AOAP certification criteria for both contract and organic laboratories, as described in AR 700–132 and TM 38–301–1.

(g) Conduct unannounced annual QA laboratory assistance and assessment review visits to review laboratory operations and performance and validate AOAP laboratory certification compliance.

(h) Serve as the functional manager for the Joint Oil Analysis Standard Inter-Service System, the OASIS Data System. The PM AOAP serves as the Army point of contact with the Navy for inter-Service standardization of Oil Analysis Standard Inter-Service System laboratory software.

(i) Approve equipment oil sampling intervals through coordination with LCMCs, PEOs and/or PMs, and the ACOMs, ASCCs, and DRUs.

(j) Ensure procedures prescribed in TM 38–301–1 regarding certification of test instruments, laboratories, and personnel are consistent with requirements for AOAP laboratories.

(k) Plan, program, budget, procure, and deploy mobile AOAP laboratories in support of operations for the Regular Army.

(l) Serve as technical advisor for the development, fabrication, and operation of AOAP mobile laboratory facilities.

(m) Designate AOAP laboratory regional support areas and facilitate laboratory establishment and closures in coordination with appropriate ACOMs, ASCCs, and DRUs.

(n) Serve as the technical advisor for reviewing, recommending, and planning the establishment or closure of AOAP laboratories.

(o) Serve as technical advisor and facilitator for noncontract AOAP laboratory personnel training and for contractors, at the contractor's expense.

(p) Host an annual in-process review with the DCS, G–4, ACOMs, ASCCs, and DRUs, AMC LCMCs, PEOs, and/or PMs to review program operations, requirements, and coordinating program out-year planning objectives. This includes a review of systems and/or components enrolled, sampling intervals, and wear-metal criteria.

(q) Develop and publish, no later than 45 days following the end of the FY, an annual executive summary outlining program operations, benefits, and costs.

(3) Serve as proponent for technical bulletin (TB) 43–0211 and as Army coordinating authority for AOAP procedures and material contained in all Army and Joint Service regulations, TBs, pamphlets, and field manuals (FMs).

e. Manage TMDE functions as the Army lead organization. Manage and execute all responsibilities for coordinating requirements for TMDE procurement, worldwide calibration, and repair of general and selected special-purpose TMDE (see AR 750–43).

f. With regard to requirements development:

(1) Manage and staff requirements for the MAC.

(2) Develop and provide depot maintenance OP–29 results to the DCS, G–4.

(3) Conduct sustainment maintenance requirements reviews with LCMCs.

(4) Perform initial provisioning in accordance with AR 700–18.

g. With regard to supporting major subordinate commands (MSCs):

(1) Provide maintenance support to field-level units, as necessary.

(2) Evaluate and resolve technical and maintenance problems that units provide in deficiency reports.

(3) Manage and update SKOT component listings.

(4) Establish theater foundation Army field support brigade or logistics task force for coordination of AMC maintenance support provided to the theater.

(5) In coordination with HQ, FORSCOM, maintain LBE and HST.

(6) Manage program operations and execution for LBE sustainment.

(7) Manage program operations and execution for HST sustainment.

h. With regard to sustainment maintenance:

(1) Ensure LCMCs and the depots comply with Section 2464, Title 10, United States Code (10 USC 2464) and current core policy.

(2) Maintain RCF assets in accordance with this regulation.

- (3) In coordination with ACOMs, ASCCs, and DRUs, develop specific RCF sustainment and FLM criteria for RCF induction.
- (4) Maintain accountability of RCF assets in LMP and document float transactions in GCSS–Army.
- (5) Establish a written agreement with supporting field maintenance activities to maintain RCF assets according to the Army maintenance standard written in paragraph 3–3 and DA Pam 750–1.
- (6) Ensure depots and supporting field maintenance activities maintain RCF assets according to the maintenance standard in paragraph 3–3 of this regulation and DA Pam 750–1.
- (7) Account for RCF on the APSR.
- (8) Report RCF maintenance readiness in a separate report—monthly—in accordance with AR 700–138.
- (9) Program funding requirements for the sustainment of RCF assets.
- (10) Overall responsibility for consolidating and submitting the DMWD requirements, 50/50 rule, report to DCS, G–4 (Sustainment Maintenance Division).
- (11) Assign sustainment subject matter experts to support MATDEVs in development of depot support analysis and strategies.
- (12) Ensure compliance with NMP business procedures when scheduling and executing sustainment maintenance operations.
 - i. With regard to Installation Maintenance Support:
 - (1) Provide BASOPS and tactical sustainment maintenance; CPC; condition classification of materiel; installation MWO and warranty programs; TMDE calibration and repair support; and NMPs at the installation and/or garrison LRC/AFSBn.
 - (2) Provide timely and accurate cost, readiness, and maintenance data for base commercial equipment.
 - (3) Oversee installation LRC/AFSBn and the performance of the LRC/AFSBn Maintenance Division in its role as a provider of sustainment and evacuated FLM support to LBE, equipment reset, HST, NMP, and other equipment and components. Supervise maintenance operations at all levels within the command.
 - (4) Provide timely and accurate cost, readiness, and maintenance data to management systems.
 - (5) Acquire and maintain a self-sufficient capability and capacity for field and selected sustainment maintenance provider support of combat, combat support, and CSS elements.
 - (6) Program funds to sustain equipment readiness and prioritize any unfinanced requirements.
 - (7) Comply with materiel maintenance standards and maintenance related logistical performance and readiness standards.
 - (8) Establish a warranty control office and/or officer to implement the Army Warranty Program in accordance with AR 700–139.
 - (9) Comply with all local, regional, and national regulations governing the inspection and maintenance requirements for prevention of pollution. For more information, see AR 200–1.
 - (10) Provide air traffic control materiel support.
 - (11) Establish effective CPC programs for assigned equipment in accordance with AR 750–59.
 - (12) Determine if reimbursement for fabrication services of field or sustainment maintenance activities is authorized.
 - (13) Carry out quality programs under the provisions of AR 70–1 for assigned maintenance and calibration operations.
 - (14) Designate point of contacts for the SRA, MWO, AOAP, UIT, and maintenance float programs.
 - (15) Ensure that the LRC/AFSBn provides maintenance support to the USAR when required, as established by AR 5–9.
 - (16) Ensure that all assigned personnel, including those assigned supply and maintenance automated systems data entry responsibilities, receive formal technical training appropriate for their duty assignments.
 - (17) Ensure that assigned maintenance and supply personnel are used in the MTDA positions for which they have been requisitioned and trained, including those positions identified with ASIs.
 - (18) Provide field maintenance as required for USAR units and maintenance activities located in the installation support area; in-house and contractor maintenance will be provided in accordance with this regulation.
 - (19) Provide logistical support to ARNG and USAR units during AT, as required.

- (20) Maintain an effective liaison program to the supported USAR maintenance activities, including ground, air, watercraft, rail, and water and petroleum within the logistical area of responsibility.
- (21) Provide for backup equipment recovery support from commercial sources through the efforts of the supporting installation. Costs will be provided through Operation and Maintenance, Army (OMA) Reserve Program elements.
- (22) Appoint a float coordinator.
- (23) Ensure winterization of equipment destined for geographic regions where temperatures from negative 25 degrees Fahrenheit to negative 60 degrees Fahrenheit are likely, to operate in an inclement weather environment.
- (24) Ensure compliance with primary integrated product support policies and procedures and provide matrix support to the assigned PM.
- (25) Ensure coordination of Army Logistics Product Data program standards, policies, and power logistics software.
- (26) Develop industrial base and/or depot requirements, registry process control, and management of the non-recurring engineering technical data.
- (27) Ensure IUID is implemented in industrial and distribution processes.
- (28) Ensure that management structures and database facilities fully support the safety surveillance requirements.
- (29) Manage the Logistics Civil Augmentation Program and maintain its support contract. The contract is written for peacetime planning and contingency operations.
- (30) Develop and provide the Army standard level of repair analysis (LORA) model, the computerized optimization model for predicting and analyzing support structures.
- (31) In coordination with ASA (ALT), serve as the Army lead to repair and reset NS-E, including arranging for commercial maintenance contract support. Assume responsibility for all sustainment funding (capture all costs associated with maintaining NS-E in serviceable condition) for NS-E held in storage.
- (32) Provide ACOMs, ASCCs, and/or DRUs access to the Material Enterprise NS-E Database for viewing NS-E general maintenance guidance and other relevant NS-E information.
- (33) Manage and update the Material Enterprise NS-E Database in coordination with the DCS, G-4.
- (34) Publish procedures that provide users with specific guidance regarding the repair/reset of tactical NS-E at posts, camps, stations, and forward stationed locations.
- (35) Coordinate with rapid equipping force, Joint Improvised Explosive Device Defeat Office, Robotic Systems Joint Project Office, Army Asymmetric Warfare Group (AAWG), ASA (ALT), and original equipment manufacturers (OEMs) to develop and implement maintenance and sustainment plans, as applicable.
- (36) Receive, store, and account for NS-E LBE as required to support deployed unit requirements. Maintenance and/or repair of NS-E in other than the APC category will not be performed by AMC unless the unit reimburses AMC.
- (37) Maintain tactical NS-E approved by the Army Requirements and Resourcing Board as part of PDTE and provide long-term storage for tactical NS-E as approved by HQDA.
- (38) Establish turn-in procedures for NS-E stored at the depot and dispose of unserviceable NS-E through the local Defense Logistics Agency-Disposition Services (DLA-DS).
- (39) Submit budget request to the DCS, G-4 (DALO-RIR) for tactical NS-E sustainment, reset, and storage costs, including care of supplies in storage.
- (40) Develop a sustainment maintenance reset plan, in coordination with the provider/procuring activity (for example, rapid equipping force and AAWG, for NS-E, whether in storage or used for training).
- (41) Conduct maintenance operations in accordance with environmental protection programs and policies.
- (42) Evaluate all available methods of support for LRC/AFSBn before requesting expansion of existing maintenance provider capabilities beyond current structure. Workload cross leveling inherent in the IMCOM structure, MOUs, or MOAs with other ACOMs, ISSAs, or contracts will be considered prior to expansion.
- j.* With regard to the CBM/PPMx program:
- (1) Manage the daily operations and execution of the CBM/PPMx program.
- (2) Coordinate with ASA (ALT) to develop and procure PPMx architecture, including associated hardware and software for use Army-wide.

- (3) Coordinate with ASA (ALT), TRADOC, and FORSCOM to develop diagnostic tools and interface for units to use at the brigade, battalion, and company/troop/battery levels.
- (4) Coordinate with ASA (ALT) to develop, procure and provide Armywide PPMx data storage capacity and capability.
- (5) Provide analytical tools that provide fleet-level information on the health of CBM/PPMx supported equipment.
- (6) Review CBM/PPMx data, identify trends, and develop programs to address trends and provide feedback to units.
- (7) Develop, maintain, and update the baseline models and applications that perform prognostic functions.
- (8) Establish and maintain the Armywide data storage capacity and capabilities to integrate, store, and safeguard CBM data and monitor fleet equipment health and maintenance transactions performed. CBM/PPMx supported data (usage, diagnostic, engineering, and parametric) and related applications will be stored in a secure unclassified digital environment in accordance with the latest cyber security regulations.
- (9) Ensure CBM/PPMx data is accessible to stakeholders.
- (10) Design, update and maintain the tactical enterprise logistics systems (TELS) tactical, operational, and strategic architecture for PPMx operations including data transfers between the tactical, operational, and strategic levels.
- (11) Support the ASA (ALT) and AFC in conducting a cost benefit analysis to determine whether a fielded system should be supported with PPMx capability.
- (12) Update and publish technical materials in support of CBM/PPMx for programs that are in sustainment.
- (13) Ensure CBM/PPMx is incorporated in current and future depot-level maintenance concepts by coordinating with the DCS, G-4 (Maintenance Directorate), AFC CAPDEVs and MATDEVs.
- (14) Ensure CBM/PPMx is integrated with all program operations and the execution of equipment reset operations.

2-19. Commanding General, U.S. Army Futures Command

The CG, AFC will—

- a. Ensure sustainment for equipment and systems fielded for Army Modernization experimentation and assessment through:
 - (1) Cross-functional teams and partnership with PEOs and AMC.
 - (2) Sustainment of experimental equipment until the capability is transitioned to a MATDEV, AMC, or fully divested.
 - (3) The establishment of a Program of Record, transition sustainment responsibilities to the MATDEV while ensuring uninterrupted support to the fielded force.
- b. Support NCOMP and CBM/PPMx data collection efforts.
- c. Provide life cycle maintenance engineering support for materiel acquired by the DA.

2-20. Commanding General, U.S. Army Installation Management Command

The CG, IMCOM will—

- a. Coordinate field and sustainment maintenance requirements with AMC/ASC LRCs and AFSBns.
- b. Support SDC projects.
- c. Ensure a command discipline program is established.
- d. Ensure each installation, post, camp, and station appoint a Master Driver to perform driver's training/testing and licensing and update proper TELS system for all BASOPS equipment according to AR 600-55.

2-21. Commanding General, U.S. Army Intelligence and Security Command

The CG, INSCOM will operate and maintain assigned command-unique intelligence materiel.

2-22. Capability developers

CAPDEVs, as identified in AR 700-127, will—

- a. Include management and performance of the materiel maintenance function in the development of concepts, doctrine, materiel requirements, organizations, and management information systems.

- b.* Determine the maintenance impact of new materiel or concepts.
- c.* Assist in planning for logistics demonstrations or maintenance assessment/maintenance evaluation and conduct analyses of results.
- d.* Balance performance capabilities with those of reliability, availability, maintainability, and supportability.
- e.* Determine capabilities and develop the documentation for training devices.
- f.* Coordinate with MATDEVs and the LCMCs to ensure materiel maintenance considerations, to ensure ETMs are included in capabilities documents.
- g.* Determine skill requirements for BDAR and develop techniques and criteria for making repair, evacuation, and/or mutilation decisions based on time limits and available skills.
- h.* Review all new and revised technical and equipment manuals at the TM verification in accordance with AR 25–30.
- i.* Review all new and revised MAC no later than the maintenance demonstration.
- j.* Incorporate corrosion resistance into design and ensure CPC measures are taken to extend the life cycle of Army weapon systems prior to fielding as related to reliability, availability, maintainability, and supportability.
- k.* Ensure requirements for winterization kits that facilitate operation in areas where temperatures are from negative 25 degrees Fahrenheit to negative 60 degrees Fahrenheit.
- l.* Incorporate PPMx as a capabilities development document/capabilities production document (CDD/CPD) requirement for new systems and for legacy equipment and support the inclusion of PPMx where it is feasible and cost-effective.
- m.* Represent SKOT users for all matters associated with the review and update of SKOT and corresponding component lists (CLs).
- n.* Support PPMx in accordance with AR 700–127.

2–23. Materiel developers

MATDEVs, as defined by AR 700–127, will—

- a.* Coordinate the materiel maintenance considerations to be included in requirement documents with CAPDEVs, including the LCMCs.
- b.* Ensure that the materiel-fielding plan meets the requirements of the Army maintenance system.
- c.* Ensure that reliability, availability, and maintainability are included in design parameters and demonstrated during operational testing.
- d.* Ensure that reliability centered maintenance (RCM) is a basic precept in developing the maintenance concept (see Aeronautical Design Standard (ADS)–79–Handbook (HDBK)) for aircraft and/or aviation systems).
- e.* Determine, in coordination with the designated MSC, the SOR for sustainment-level maintenance (such as organic or contract).
- f.* Ensure product support management and/or product support analysis results are incorporated in initial maintenance planning and/or development concepts.
- g.* Ensure trained personnel, TMDE, facilities, specialized tools with containerization (if applicable), support equipment, repair parts, and publications are available when the system is delivered to the user.
- h.* Participate in planning and conducting logistics demonstrations and operational maintenance testing.
- i.* Comply with the policy and responsibilities for type classification, material release, fielding, and transfer process as described in AR 770–2 and AR 770–3 in the performance and management of the material maintenance function.
- j.* Establish and monitor MWO programs in accordance with AR 750–10.
- k.* Ensure mandatory modifications to Army equipment are developed, tested, funded, applied, and reported to the Modification Management Information System (MMIS) in accordance with AR 750–10.
- l.* Develop BDAR techniques, procedures, and related tool and materiel requirements in accordance with CAPDEVs. The developers will also incorporate BDAR concepts into new materiel development.
- m.* Determine the RCF maintenance requirement using the methodology in table 14–1 and coordinate requirements with ASA (ALT), DCS, G–4, DCS, G–8, and DCS, G–3/5/7.
- n.* RCF requirements must be documented in the LCSP and be reviewed and updated every 5 years or sooner if dictated by operations availability and readiness requirements.

o. Incorporate PPMx technologies and concepts in the design, development, and improvement of equipment where it is technically feasible and cost-effective based upon a Joint return on investment assessment lead by the MATDEV and supported by AMC, AFC, and DCS, G-4 (see ADS-79-HDBK for aircraft and/or aviation systems) and AR 700-127.

p. Ensure that performance-based product support strategies are compatible with Army maintenance doctrine and that all statutory and regulatory requirements governing depot maintenance are preserved (see AR 700-127).

q. Ensure that data collected from all levels of maintenance are analyzed and used for reliability improvement and updating logistical and manpower data bases used in determining Army force structure maintenance requirements purposes.

r. Design equipment with the need for a minimum number of common and special tools.

s. Ensure development of a system or commodity-based special tools SKOTs as directed by the maintenance CAPDEV and will submit requirements and documentation for special tools to the maintenance CAPDEV for review in accordance with AR 700-127.

t. Establish and maintain an Age Exploration Program (AEP) as part of the Reliability Centered Maintenance strategy. The AEP involves examination throughout the lifetime a system and focusing on the systems individual component life cycle to determine limited overhaul intervals which optimize equipment life cycles. Limited conditions based overhauls only address immediate failure of components and other necessary parts to achieve performance standards consistent with complete overhaul but at less cost.

u. Include requirements for compliance with Federal environmental quality standards for equipment procured and supported by the Army in accordance with AR 200-1.

v. Coordinate BOIP feeder data with the CAPDEV to include the LCMC to facilitate planning for distribution of operator and support personnel and support equipment in accordance with AR 71-32, AR 570-4, and DA Pam 700-27.

w. Implement management controls to ensure support of the manpower requirements criteria program in accordance with guidelines outlined in AR 71-32, AR 70-1, and associated publications.

x. Ensure the BOIP feeder data documents the major item system map.

y. Ensure that maintenance float requirements established for equipment being fielded are based on usage data for similar items or best available engineering data.

z. Coordinate with ASA (ALT), DCS, G-3/5/7, DCS, G-4, and DCS, G-8 to ensure RCF requirements are documented at AMC level in conjunction with materiel fielding plan development.

aa. Provide procedures and help desk assistance to facilitate the repair or replacement of automation system tactical computer exchange (TCX) items authorized for repair or replacement at the field or sustainment maintenance level.

bb. Ensure requirements for lubricant analytical devices or instruments are coordinated with ASC PM AOAP.

cc. Establish sustainment maintenance support programs for a new system and its secondary items so that the depot is ready to perform depot maintenance not later than 4 years after initial operating capability (IOC).

dd. Ensure the acquisition and supportability strategies address CBRN survivability for each Army mission critical system required to withstand nuclear weapons effects and/or chemical, biological, radiological, and environmental contamination. Ensure preservation of survivability features during the system's entire life cycle.

ee. Comply with the policy and responsibilities for the development, authentication, printing, distribution, and sustainment process for technical/equipment publications as described in AR 25-30.

ff. MATDEVs will update TMs for programs before the system is transferred to sustainment.

gg. MATDEVs will support PPMx in accordance with AR 700-127.

hh. MATDEVs will coordinate test equipment and AT/Off Platform diagnostic requirements with the PD-TMDE per AR 750-43.

Chapter 3

Maintenance Policies and Structure

Section I

Maintenance Policies

3–1. Overview

- a. Army maintenance will preserve the required performance capabilities of Army materiel or return those assets to their baseline performance capabilities.
- b. Army maintenance will follow the principle that the useful service life of Army equipment is achieved when the item is operated within its intended purpose and is maintained in accordance with its designed or engineered specifications. When an equipment item reaches its useful service life the Army will use acquisition, recapitalization, rebuild, or overhaul statement of work to replace or extend the equipment service life.
- c. The Army will use four core maintenance processes to manage equipment during its useful service life: performance observation, equipment services, fault repair, and single standard repair. These processes are defined in DA Pam 750–1.

3–2. Sustainable Readiness Model

Maintenance is to be an enabling process for meeting Sustainable Readiness Model (SRM) requirements as outlined in AR 525–29. The SRM is the framework used by the Army to forecast readiness objectives and mission risk for units and Army capabilities over time. The SRM produces a representation of current and planned force unit readiness objectives; it enables resource synchronization (to include the balancing of readiness investments across the total force) while assisting senior leader visualization of risks to mission resulting from projected unmet operational demand requirements. The sustainable readiness process replaces the Army's progressive readiness process known as Army Force Generation.

3–3. The Army maintenance standard

- a. The Army has one maintenance standard. This mandatory standard is defined by the TM–10 series and TM–20 series, and/or in the appropriate or applied technical data plans.
- b. Army equipment meets the maintenance standard when the following conditions exist:
 - (1) The equipment is fully mission capable (FMC).
 - (2) All faults are identified following prescribed intervals using the “items to be checked” column of the applicable TM–10 series and TM–20 series PMCS tables. Aviation faults are determined by using the aircraft preventive maintenance inspection and service in accordance with TM 1–1500–328–23.
 - (3) All repairs, services, and other related work that will correct field-level equipment and/or materiel faults for which the required parts and/or supplies are available have been completed in accordance with DA Pam 738–751 or DA Pam 750–8.
 - (4) Parts and supplies required to complete the corrective actions, but which are not available in the unit, are on a valid funded requisition in accordance with AR 710–2.
 - (5) Corrective actions that are not authorized at field level by the applicable TM's MAC must be evacuated to the next higher level (sustainment) and use appropriate turn-in documentation as specified in AR 710–2 and DA Pam 710–2–1 for turn-in to supply.
 - (6) Scheduled services are performed at the service interval required by the applicable TM or approved NCOMP. Units are authorized a 10 percent variance when performing scheduled services because of competing mission requirements. Procedures to apply this variance are found in DA Pam 750–8 for ground equipment and TM 1–1500–328–23 for aviation equipment. Afloat equipment is excluded from this variance requirement and maintained as instructed by TM 38–470.
 - (7) All routine, urgent, and emergency MWOs are applied to equipment and reported in the MMIS in accordance with AR 750–10 and closed out in GCSS–Army. In addition, actions required by one-time SOUMs and emergency safety of flight messages are completed in accordance with AR 750–6 and AR 95–1.
 - (8) All authorized BII and COEI are present and serviceable or on a valid supply request. For aircraft, all authorized flyaway items and items listed on the aircraft inventory master guide are present and serviceable or on a valid supply request.

(9) All maintenance advisory messages and maintenance information messages providing directives for weapon system software updates are applied to equipment and reported in the MMIS in accordance with AR 750–10.

c. The Army maintenance standard applies to all equipment except:

(1) Equipment used as training aids that require frequent disassembly and assembly.

(2) Equipment used in research, development, testing and evaluation.

d. Proper use, care, handling, and conservation of materiel in accordance with applicable technical publication are mandatory.

3–4. Maintenance priorities

a. Army maintenance tasks and operations will be conducted in mission priority sequence based on the importance of the maintenance work to be done. In the Army's overall logistics management system, relevance, and importance are expressed as urgency of need. Requesting organization commanders will determine the appropriate maintenance priority on any work request, based upon the organization's urgency of need designator (UND) as prescribed in DA Pam 750–1.

b. UND is assigned by the DA G–3/5/7 in accordance with the criteria outlined in DA Pam 750–1.

c. Maintenance units and/or activities manage repair of materiel by maintenance priority designator and analysis of impact on unit readiness. The usual sequence of work will be to repair the oldest job with the highest priority first. However, analysis of unit materiel readiness may dictate re-sequencing maintenance work.

3–5. Maintenance resourcing

a. All Army organizations that have the responsibility to maintain and repair equipment will be adequately equipped, staffed, and funded for that purpose. The PPBE process will be used to implement this policy. Staff advice and assistance in resource development for maintenance programs will be provided to ACOMs, ASCCs, DRUs, and ARSTAF by the DCS, G–4.

b. MTOE and deployable MTDA organizations will be augmented in peacetime garrison operations when maintenance Soldier availability of maintenance man-hours is less than the MTOE and/or MTDA projected wartime availability of maintenance man-hours. This policy is to ensure that MTOE equipment will always be ready to meet Army mission requirements. Augmentation will be programmed along with other training and operations resources under the staff supervision of DCS, G–3/5/7. When ACOM, ASCC, and DRU commanders request contract logistic support or ARNG or USAR augmentation, the methodology in DA Pam 750–1 will be used to compute requirements.

c. All commanders will ensure that assigned and/or attached military maintenance personnel are used in maintenance operations as outlined in paragraphs 3–10 and 3–11.

d. Resource requirements for maintenance operations to support regular Army and RC installations and non-deployable TDA organizations will be programmed and submitted during the PPBE process to the appropriate HQDA staff element in accordance with HQDA resource formulation guidance.

3–6. Army maintenance management metrics

a. All Army MTOE, TDA, and contract maintenance operations will provide maintenance support within the timeframe required by requesting organization commanders. The time required for maintenance organizations to respond to user organization requests for maintenance services will be determined and assigned by following the policy on maintenance priorities outlined in paragraph 3–4 and DA Pam 750–1. All organizations in the Army will implement a system of metrics by which commanders, leaders, and managers will assess the success of maintenance operations for which they are responsible. Metrics, mission performance scorecards, and the historical records that are derived from them will be used as objective evidence for implementing operational improvements where necessary and as justification for additional resources when required.

b. For Army-level maintenance management performance, the primary metrics used at HQDA are located in DA Pam 750–1.

c. Army maintenance organizations will minimize turnaround time (TAT) and total logistics response time–maintenance (TLRT–M). Commanders will—

(1) Manage military maintenance manpower and, when available, contract manpower (in accordance with the terms of the contract). Commanders will adhere to manpower utilization standards as described in paragraph 4–14 of this regulation. Commanders will use metrics in DA Pam 750–1.

(2) Ensure that shop and bench stocks (combat spares, as applicable) are readily available to support maintenance operations.

3-7. General policies

a. An officer, warrant officer, NCO, or civilian equivalent qualified in maintenance management will be appointed as maintenance officer, in writing, at each level of command if not authorized by MTOE/TDA. Maintenance officers will provide staff supervision of materiel maintenance operations within the organization.

b. All Army organizations and activities performing maintenance operations will establish and maintain maintenance standard operating procedures (SOPs) in accordance with DA Pam 750-3.

c. Commanders will achieve readiness objectives in AR 700-138 and meet the Army maintenance TLRT-M and TAT standards and OR rate goals in DA Pam 750-1.

d. Maintenance operations will be performed by military personnel in combat or hazardous duty areas as determined by the combatant commander, except as outlined below. A workforce comprising military personnel, Government employees, and/or contractor maintenance organizations may perform field maintenance operations in garrison and/or sustainment locations. In garrison field maintenance and/or sustainment locations, contractors and contracted maintenance services are authorized to supplement manpower shortfalls in MTOE field maintenance organizations when commanders determine that their maintenance capability cannot perform to the required standard. Commanders will not augment maintenance operations at the expense of Soldier readiness and proficiency in their military occupational specialty (MOS). ACOM, ASCC, and DRU commanders will address contract maintenance requirements during the planning, programming, and budgeting process as outlined in *paragraph 3-7d*.

e. All Army maintenance operations will be conducted in accordance with the environmental security provisions of AR 200-1 and the underlying Federal, State, local and host nation laws and directives. Commanders will aggressively support environmental protection programs and policies in their maintenance and supply operations. Commanders will use the DA standard environmental security AIS for hazardous materials and hazardous waste management to assist them in complying with Federal, State, and local environmental laws and regulations while accomplishing their maintenance support missions. Commanders desiring exemption to the requirement for use of the Army standard environmental security software must submit requests through their ACOM, ASCC, and DRU to the DCS, G-9.

f. Contractor augmentation is authorized during pre/post-deployment, reset, refit/recovery, and to support LBE or unit maintained equipment (UME) while deployed.

g. ACOM, ASCC, and DRU commanders will designate a sustainment maintenance activity for the cleaning of equipment identified to have evidence of human tissue and body fluids when cleaning requirements exceed organic field maintenance capability as determined by the Brigade commander. This activity must have the capability to disassemble and assemble equipment that is returned from field maintenance units to ensure proper cleaning. The ACOM, ASCC, and DRU commanders will augment the unit and/or activity with appropriate resources (mortuary affairs, preventive medicine teams, and local chaplains), as required. Preventive medicine teams will certify cleaning prior to release of equipment to combatant command forces, other repair facilities, or U.S. customs officials for shipments to CONUS.

h. Commanders will not allow their equipment to be modified except under the provisions of a valid MWO. The Army's Critical Safety Item (CSI) Program is fully described in paragraph 14-5 of this regulation.

i. ACOM, ASCC, and DRU commanders may authorize the fabrication of repair parts and components based on valid supply requisitions that cannot be obtained through the supply system in time to meet the requester's required delivery date. Aircraft components that are critical to flight safety, and any other weapon system component designated as a safety related item, are not authorized to be fabricated. Fabrication of parts will not be made for the sole purpose of returning items to stock.

j. Maintenance will be managed at the serial number-level of detail or unique item identifier (UII) in accordance with AR 700-145 and DA Pam 700-145.

k. The maintenance of all end items and class IX repairable items with a maintenance repair code (MRC) of F, H, D, or L will be managed at the serial number-level of detail unless otherwise authorized by the DCS, G-4.

l. Serial numbers for the above items will normally be recorded in maintenance AIS and on data plates permanently affixed to the items and/or in various machine-readable automatic identification technology

(AIT) devices and/or media. Examples of these are affixed or etched bar code labels, affixed or etched data matrix labels, and embedded chips.

m. Field commanders will not change the serial number assigned to an item, regardless of changes in configuration. Under Item Unique Identification (IUID), serial numbers cannot be changed.

n. At the Sustainment-level in AMC, the generation of serial numbers for manufactured items or assignment of serial numbers during depot-level materiel change operations will be governed by applicable DoD and Army policy and implementing AMC instructions.

o. Serial numbers are mandatory entries in the indicated data fields of maintenance management forms and records at all levels located in appendix A.

p. TMDE will be calibrated in accordance with TB 43–180 and AR 750–43.

q. Quality control must be fully integrated into maintenance operations ensuring:

(1) The identification of equipment faults.

(2) Compliance with repair procedures and equipment standards contained in the TMs and equipment-specific publications.

(3) The correct code (X, /, -) is entered in the GCSS–Army for the reported fault.

r. Maintenance policies, programs, and procedures unique to medical materiel will be maintained according to AR 40–61, technical bulletin medical (TB MED) 750–1, and TB MED 750–2.

s. Maintenance policies and procedures unique to those non-type classified and nonstandard items of equipment used to accomplish installation's facilities engineering mission are contained in AR 420–1.

t. Maintenance policies and procedures for non-tactical vehicles (NTVs) will comply with policy in AR 58–1.

u. Consolidated express and military-owned demountable containers will be maintained within the capability of the using unit or activity. Additional maintenance policies are contained in Defense Transportation Regulation (DTR) 4500.9–R Individual Missions, Roles, and Responsibilities.

3–8. Materiel status data flow reporting policy

a. This paragraph establishes and standardizes the materiel condition status report flow, Enterprise Materiel Status Reporting (EMSR), defining the reporting architecture, and identifies the responsibilities for materiel status file transfers to AMC. Daily/weekly/monthly maintenance/readiness data will be electronically submitted to AMC to ensure readiness reports are available for all Army stakeholders that rely on readiness information.

b. All Army agencies, CLS, and activities performing maintenance on Army equipment are responsible for reporting maintenance and readiness information to AMC, following procedures in DA Pam 750–1.

c. Maintenance, logistics, and readiness managers will obtain required access to enterprise systems to view readiness data/reports reported through the EMSR.

d. Aviation units will adhere to the requirements in this policy using procedures in DA Pam 750–1.

e. Readiness reporting at the lowest level (derivative) makes maintenance/readiness reporting within the modular force a plug-and-play capability consistent with modular force redesign policy. In the event GCSS–Army lacks an automated readiness reporting capability through EMSR for a particular system or fleet (that is, APS Fleets and certain Aviation equipment), AMC will provide guidance on reporting equipment readiness directly into the AESIP Portal. Any exception to this policy will be granted on a case by case basis and only with the approval of DCS, G–4.

Section II

The Army Maintenance System

3–9. Army maintenance system components

a. The Army maintenance system will consist of two levels: field maintenance and sustainment maintenance (see DA Pam 750–1).

(1) Field maintenance, also known as on-system maintenance, repairs and returns equipment to the operator or the user.

(2) Sustainment maintenance, also known as off-system maintenance, primarily repairs and returns equipment and components to the supply system. In times of maintenance transformation or contingency operations, the traditional roles and partnership of all AMC organizations and SORs may be blended to meet repair requirements.

b. Maintenance tasks will be performed in accordance with the MAC. Field maintenance organizations are authorized to perform all maintenance tasks coded C, O, and F as outlined in the equipment TM MAC when skilled maintainers, required SKOT, TMDE, and other necessary resources are available to perform the maintenance task.

c. Sustainment maintenance organizations are authorized to perform maintenance tasks coded C, O, F, H, L, and D as outlined in the equipment TM MAC when skilled maintainers, required SKOT, TMDE, and other necessary resources are available to perform the maintenance task.

d. Only AMC designated sustainment maintenance activities are authorized to perform the full range of maintenance tasks.

3–10. Field maintenance

a. The fundamental element of field maintenance is the requirement for PMCS. See DA Pam 750–1 for the characteristics of field maintenance.

b. Operator and/or crew maintenance is the foundation of Army maintenance and requires continuous emphasis from all commanders and leaders. Operator and crew proficiency are critical to readiness and must be made a priority by leaders at all levels.

(1) Commanders must establish a command climate that ensures assigned equipment is maintained to the maintenance standard defined in paragraph 3–3 and DA Pam 750–1 and are responsible for providing resources, assigning responsibility, and training Soldiers to achieve this standard.

(2) Operator and/or crew performing PMCS from the applicable TM–10 series is the cornerstone of the Army maintenance system. NCOs are responsible for ensuring operator and crew proficiency in the use and care of their assigned equipment. Commanders must provide and protect adequate time for NCOs to train and achieve required levels of proficiency.

(a) Deficiencies detected during the before operations portion of the PMCS which render the equipment NMC per the Technical Manual or violate a safety directive must be corrected before the mission.

(b) Deficiencies detected during the mission affecting FMC must be corrected during the mission.

c. Recovery vehicle policy.

(1) Wheeled and tracked recovery vehicles will be operated by properly trained and certified recovery personnel.

(2) At a minimum, there must be at least one wheel recovery ASI H8 certified recovery operations individual in the vehicle while performing recovery missions for wheeled recovery vehicles, and at least two track certified ASI H9 track recovery specialists for tracked recovery operations.

(3) A wheel ASI H8 recovery specialist or a track ASI H9 recovery specialist cannot be substituted to perform recovery operations with equipment they have not been properly trained on and certified for by the U.S. Army Ordnance School.

d. Authority to perform communications security (COMSEC) repair cannot be delegated. Request for waivers will be submitted through command channels to Director, U.S. Army Communications Security Logistics Activity (AMEL–LCA) 2133 Cushing Street, Suite 3600, Fort Huachuca, AZ 85613–7041 for approval.

e. USAR specific requirements—

(1) USAR maintenance activities were established to perform FLM, which is beyond the USAR commander's capability to perform during scheduled training assemblies. Geographical support boundaries are assigned by the USARC. The maintenance activities are designated for ground support equipment (GSE), watercraft, or ground and watercraft.

(2) Equipment concentration sites (ECSs) have a maintenance branch with a mission to support units in the surrounding geographical area and a storage branch for that equipment beyond the capability of the owning unit commander to store, maintain, or use at the home station. Preference for storage location should be at the unit's mobilization or AT site to minimize transportation costs and time delays during mobilization.

(3) Area maintenance support activities (AMSAs) and ECS, with an assigned maintenance support mission for small arms, are authorized to perform field maintenance. This support can be performed at the unit's home station using maintenance contact teams or at the AMSA and/or ECS when the small arms are evacuated to these facilities by the owning unit. MTOE maintenance personnel may perform duties of TDA maintenance activities to reduce backlog, maintain skills, and update MOS training.

(4) USAR TDA maintenance activities are authorized to perform FLM contingent upon availability of required resources and skilled personnel. An alternate field maintenance activity within the geographic

support area may be used. When used, an installation support activity or contract may be required. Items requiring field maintenance may be evacuated to the most cost-effective location for repair or replacement.

f. ARNG specific requirements—

(1) FMS in the ARNG will provide field maintenance that is beyond the capabilities of owning units. Owning units will perform field maintenance, including scheduled services, within the capability of the unit during IDT and AT periods. Unit commanders will advise supporting FMS forepersons of field maintenance requirements that are beyond their unit's capability. FMSs will perform the following maintenance functions for surface equipment—

- (a) Maintain liaison with supported unit commanders.
 - (b) Schedule maintenance services, when feasible, to coincide with quarterly and semiannual services.
 - (c) Service all equipment issued under warranty as specified in the manufacturer's service manual or materiel fielding plan.
 - (d) Maintain authorized repair parts and supplies, for the unit, when the Class IX is located at the FMS.
 - (e) Furnish contact teams to perform field maintenance and inspection when this is more economical than scheduling equipment into the shop.
 - (f) Augment maintenance that is beyond the capability of units using training sites.
 - (g) Provide administrative and operational control support for assigned unit assets, including readiness reporting to parent organizations.
 - (h) Handle equipment evacuation in accordance with DA Pam 750–1.
- (2) The ARNG CSMS will perform field and (repair and return) sustainment maintenance on all Federal surface equipment. The CSMS is under the control and supervision of the surface maintenance manager and provides field and sustainment maintenance to:
- (a) Equipment pre-positioned at a co-located MATES and/or UTES.
 - (b) Augment support to non-collocated MATES.
 - (c) Supported FMSs.
 - (d) Any DoD agency when authorized by CNGB.

3–11. Sustainment maintenance

a. Sustainment maintenance is the second function 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. See DA Pam 750–1 for more information about sustainment maintenance.

b. AMC may grant authority to supported field maintenance units to perform the next-higher level of repair (for repair and return to user only) when the supported unit has the capability and capacity to perform the repair.

c. MTOE sustainment maintenance personnel may perform duties at TDA maintenance activities to maintain skills and update MOS training.

d. Sustainment maintenance personnel will perform TIs of class II, V, VII, VIII, and IX materiel to determine serviceability and completeness.

e. Sustainment maintenance activities may provide support to FLM units for unique item support.

f. Depot maintenance (a distinct subset of sustainment maintenance) supports both the combat forces and the Army supply system. Depot maintenance will normally be performed by TDA industrial-type activities operated by the Army. Depot-level maintenance may also be performed by contract, installation support activities, and interdepartmental or interagency agreement:

- (1) Depot-level maintenance provides combat-ready materiel to the Army supply system.
- (2) Depot-level maintenance provides technical support to field maintenance units and activities. In overseas areas, a depot FRA may be established to support combatant commanders.

(3) An FRA is an AMC-resourced, directed, and controlled activity operated by contractor or organic personnel that provides sustainment-level support forward of the depot. Where possible, FRAs will provide support for multiple weapon systems or commodities.

g. Repair of selected economically reparable components will return the items to a serviceable condition. These items will be repaired and returned to the supply support activity (SSA). Repair and return to supply will be accomplished only at the direction of the NMM.

h. Sustainment maintenance activities, to include Government contractors performing maintenance on Army equipment, will use approved LIS.

Section III

Maintenance Providers

3–12. Logistic Readiness Center/Army Field Support Battalion maintenance operations

a. The core mission of the LRC/AFSBn is to provide BASOPS support at AMC garrison TDA units with BASOPS equipment and FLM, as defined in para 3–10, DA Pam 750–1, and HQDA POM planning guidance per the following:

b. The Senior Commander (SC) as defined in AR–600–20 establishes support requirements for their Area of Responsibility (AOR) in coordination with ACOM, ASCC or DRU as needed. The terms of customer reimbursement for the support provided by the LRC is dependent upon the criteria a unit falls into as follows:

(1) LRC/AFSBn provides FLM, to MTO&E COMPO 1 units that **do not have** HQDA authorized FLM capabilities per unit MTOE or an assigned supporting FLM capable unit (e.g. Support Maintenance Company) within SC AOR. Units will reimburse the LRC/AFSBn for CLIX parts only.

(2) LRC/AFSBn provides FLM, to MTO&E COMPO 1 units that **have** HQDA authorized FLM capabilities per unit MTO&E or an assigned supporting FLM capable unit (e.g. Support Maintenance Company) within SC AOR. Units will reimburse the LRC/AFSBn for CLIX parts and labor.

(3) LRC/AFSBn provides FLM, to COMPO 2&3 (non-deployed or non-mobilized) and non-garrison TDA units on a reimbursable basis to LRC/AFSBn for CLIX parts and labor.

(4) LRC/AFSBn provides FLM, to COMPO 2&3 deployed or mobilized units in accordance with Army Mobilization guidance and criteria listed below // For mobilized or deployed COMPO 2&3 units, FLM at LRC/AFSBn's will be funded in accordance with Army Mobilization guidance.

(5) All other LRC support provided not defined in 3-12b(1) thru (4) or the Installation Baseline Logistics Services (IBLS) Policy will be reimbursable for CLIX parts and labor.

c. Forecasting and programming requirements in the POM—

(1) AMC will program FLM requirements, CLIX parts and labor, in the SS PEG POM to support garrison TDA unit BASOPS equipment.

(2) ACOMs, ASCCs and DRUs will program FLM labor and parts requirements into their POM submission for External Field Level Maintenance support to units and locations that qualify as defined in *paragraph 3–12b 1–5* and to the extent possible in support of *paragraph 3–13b 1–2*.

(3) ACOMs, ASCCs, and DRUs will program in accordance with the Army mobilization policy and coordinate with their LRC and/or Theater Maintenance Activity to forecast FLM requirements and inform annual POM submissions. This prior planning will enable the LRCs to properly plan to support the required level of reimbursable workload.

3–13. External maintenance support operations

a. External maintenance support operations are a support concept to ensure units without HQDA Authorized FLM capability or units lacking the tools or personnel to perform FLM have the means to accomplish repair of equipment. Senior Commanders must maximize all organic maintenance capability and capacity within their AOR logistics footprint (for example, Echelons Above Brigade, Echelons Above Division, Support Maintenance Company before forwarding work for external maintenance support at Logistics Readiness Centers (LRC) or Theater Maintenance Support [Materiel Support Center Korea (MSC – K), Theater Logistics Support Center Europe (TLSC – E), or other FLM operations as outlined in DA Pam 750–1.

(1) HQDA authorized FLM capability is categorized as the authorized personnel and equipment on the MTOE to conduct FLM work.

(2) Maintenance capability is categorized as skills, expertise or specialized repair shops and tools necessary to conduct FLM work.

(3) ACOMs, ASCCs, or DRUs must coordinate procedures and requirements with AMC for work order support.

(4) Units with HQDA authorized FLM or maintenance capability within SC FLM AOR request a support work order from external FLM organizations, the unit will fully reimburse CLIX parts and labor.

- b. Senior commanders assigned Field Level Maintenance capable units within its AOR (for example, Support Maintenance Company) provide Field Level Maintenance support to customer units when:
 - (1) Customer units do not have HQDA authorized Field Level Maintenance capability per unit MTOE or have a dependency statement in their MTO&E narrative as defined in *paragraph 3–12b1–5*.
 - (2) When customer unit is within the confines of the SC assigned FLM (that is, Support Maintenance Company) AOR.
- c. In the event a unit's external FLM provider is unavailable (for example, a Support Maintenance Company deployment), units are authorized to obtain maintenance support from the local LRC and will reimburse CLIX parts and labor.
- d. If SC units incur a shortfall in available funding required to cover the cost of CLIX parts and labor at the LRC, it will be the responsibility of the ACOM, ASCC, or DRU HQ to submit an Un-Funded Requirements (UFR) request.
- e. TDA organizations must adhere to the following guidelines:
 - (1) TDA organizations with authorized BASOPS follow paragraph 3–12.a.
 - (2) TDA organizations which augment MTOEs must request maintenance support through the MTOE chain of command they are directly supporting.
 - (3) TDA organizations not covered in paragraph 3–12 must coordinate with their ACOM for guidance on how to receive external maintenance support.
- f. All units must establish a method to obtain and/or transfer funding for any reimbursable requirements prior to the transfer of work to the external FLM organization.
- g. AMC, the NMM, may workload qualified LRC/AFSBN to perform national maintenance repairs on a reimbursable basis. Any new national maintenance workload requirements must go through the POM process and be recognized and resourced before implementation or execution of new mission.
- h. LRC/AFSBN must be readily expandable to support mobilization and contingency maintenance requirements.

3–14. Delegation of authority to field commands to perform depot maintenance

- a. *General.* Depot maintenance tasks will not be performed by ACOMs, ARNG, USAR, ASCCs, and DRUs unless the authority to do so has been officially delegated by the Commander, AMC. This authority is meant to support near-term readiness when the supply posture for a given item is in a weak position. These tasks are marked with the MRC D or L in the applicable TM MAC. Depot maintenance work in the Army will be tightly controlled to ensure component quality, safety of equipment operation, and to comply with U.S. law. There are two methods of delegations to perform depot maintenance: SRA and OTR.
- b. *Special repair authority (Project Code 065).* SRA (Project Code 065) is an authorization by AMC to provide a maintenance organization with authority to perform maintenance to the national standard on an item of equipment for a period not to exceed 1 year. The following policy applies to SRA:
 - (1) Work performed under an SRA will be directly funded with customer operation and maintenance (O&M) appropriation funds.
 - (2) SRA approval will be based on the overall stock position of an asset. SRAs will not be approved when like serviceable assets are available and/or where assets exist to meet readiness and/or mission needs within required timelines. Army policy is not to repair more than national requirements.
 - (3) Only maintenance organizations that have the technical skills, tools, test equipment, necessary facilities, QA (inspection), and testing capability to perform DLRs will be approved. These qualifications must be confirmed by the appropriate LCMC in accordance with their published internal operating procedures and the NMP Business Process Manual (BPM).
 - (4) SRAs will not be approved for items that are on the NMP current and subsequent FY workload plan.
 - (5) An SRA will not be required for those SORs that have been technically certified to perform DLRs in accordance with the applicable national standard in support of the NMP (Army working capital fund (AWCF)).
 - (6) SRA renewals are allowed when a requirement still exists for the basic SRA approved workload for 1 year. If required, the initiator will begin the renewal process 90 days before the expiration of the original SRA.
 - (7) The NMP solution in LMP will be used to apply for SRA authorizations. Instructions for accessing and using this solution are contained in the NMP BPM. The NMP solution in LMP provides an automated process to manage the creation, workflow, reporting, review, and approval process for SRA's.

(8) Commander, AMC may delegate approval or disapproval authority to the LCMCs. This delegation of authority is addressed in AMC's NMP BPM.

(9) The total processing time for each SRA request will not exceed 60 calendar-days. If the repair of an item involves a CSI, then the LCMC processing time will be extended to 60 days, and the total processing time will be extended to 120 days.

(10) If a requesting organization does not agree with the LCMCs disapproval of an SRA request, they may request the SRA disapproval be reviewed by DCS, G-4 by using the rebuttal process as defined in the NMP BPM.

c. One-time repair (Project Code 064). OTR (Project Code 064) is an authorization by AMC to provide a maintenance organization with a one-time authorization to perform maintenance to the national maintenance standard on an item of equipment when it is in the Army's operational and/or readiness interest or critical to mission accomplishment. The following policy applies to OTRs:

(1) Work performed under an OTR will be directly funded with customer O&M appropriation funds.

(2) OTR approval will be based on the overall stock position of an asset. OTRs will not be approved when like serviceable assets are available and/or where assets exist to meet readiness and/or mission needs within required timelines. Army policy is not to repair more than national requirements.

(3) The approval authority for an OTR is the respective AMC LCMC. Each LCMC will approve and/or disapprove OTRs in accordance with their published internal operation procedures.

(4) OTRs will not be approved for items that are on the NMP current fiscal year (CFY) workload program unless a critical mission readiness need cannot be satisfied by the supply system within the required timeline.

(5) Only maintenance organizations that have the technical skills, tools, test equipment, necessary facilities QA (inspection), and testing capability to perform DLRs will be approved. These qualifications must be confirmed by LCMC in accordance with their internal operating procedures.

d. Organizational functions.

(1) AMC LCMC will be responsible to monitor/validate maintenance operations performed under the SRA and/or OTR to assure the quality, safety, and technical standards are met. LCMCs will, upon review, determine if the number of repairs under a specific SRA warrants that item to be added to the NMP workload. LCMCs will also determine if the frequency of an OTR warrants issuance of an SRA.

(2) The maintenance activity doing repairs under SRA and/or OTR authorization is responsible to maintain work order data specifics; see DA Pam 750-1.

e. Special repair authority and/or one-time repair reporting requirements.

(1) AMC (National Maintenance Division) will develop quarterly reports to the DCS, G-4 (Sustainment Maintenance Division) using the data elements (report control symbol (RCS) exempt: AR 25-98).

(2) ACOMs, ASCCs, DRUs, and/or ARNG having activities performing work under an SRA or OTR will develop a monthly report to the respective LCMC in spreadsheet format using the below data elements (RCS exempt: AR 25-98). Monthly reports will be in accordance with DA Pam 750-1.

f. Monthly Reporting. LCMCs will review each monthly report for accuracy and completeness, and then provide a consolidated report no later than the 15th of each month to Commander, AMC, 4400 Martin Road, Redstone Arsenal, AL 35898-5035 (RCS exempt: AR 25-98).

g. Rules. The Commander, AMC will establish the internal business rules and/or procedures necessary to implement the SRA and/or OTR process within AMC.

h. Quarterly Reporting. The ACOM, ASCC, DRU, or other command performing work under an SRA and/or OTR will submit a quarterly report in accordance with DA Pam 750-1.

3-15. Deferred maintenance

Army commanders may be required to defer the accomplishment of maintenance because of resource shortfalls or other factors.

3-16. Authorization for Army National Guard maintenance facilities

a. Requests for approval to establish surface equipment maintenance facilities and/or Army aviation support facilities or other aviation specific activities will respectively be submitted in accordance with National Guard Regulation (NGR) 415-10.

b. National Guard (NG) Pam 570-1 prescribes the manning criteria for maintenance activities. Criteria, allowances, and functional guidance for the construction of maintenance facilities are prescribed in NGR 415-10, NG Pam 415-12, NG Design Guide 415-2, and NG Design Guide 415-3.

c. Additional references include: NGR 10–1; NGR 750–5; AR 5–10; and Department of Defense instruction (DoDI) 1225.08.

Chapter 4

Maintenance Operations

Section I

Materiel Maintenance, Repair, and Evacuation

4–1. General

a. Proper performance of PMCS by the equipment operator will ensure early detection of faults and need for required maintenance.

b. The MAC specifies tasks that will be performed at each level of maintenance.

c. The economic reparability of unserviceable materiel will be determined by field units in accordance with paragraph 4–5 prior to initiating any repair action to repair the materiel, to ensure the most cost-effective use of maintenance resources.

d. Uneconomically repairable materiel will not be evacuated beyond the level authorized to dispose of or reuse the materiel. Disposal of COMSEC equipment through DLA–DS channels or at the field maintenance level is prohibited. All COMSEC equipment must be turned in by user organizations to the supporting retail level SSA and shipped to Tobyhanna Army Depot for disposal in accordance with AR 710–2.

e. All actions relative to the inspection, classification, verification, and disposition of uneconomically repairable materiel will be accomplished in an accurate and timely manner in accordance with AR 710–2.

4–2. Maintenance plans

a. Maintenance plans (Services) will align maintenance requirements closer to the actual usage of equipment rather than time-based intervals during non-combat operations. Maintenance plans (Services) during wartime will be conducted in accordance with the TM. The PM and the LCMC will approve all NCOMP through the Army Equipment Safety and Maintenance Notification System in accordance with AR 750–6 and post them in MMIS.

b. For mandatory procedures for NCOMP see DA Pam 750–1.

4–3. Low Usage Program maintenance plans

a. Equipment without an approved NCOMP may be placed in the Low Usage Program (LUP) at the commander's discretion in this regulation and DA Pam 750–1, if they meet the low-usage criteria. The implementation of LUP does not relieve commanders of the responsibility for adequate maintenance of their equipment.

b. For mandatory procedures relating to the LUP and specific criteria for equipment to be placed in a low-usage status see DA Pam 750–1.

4–4. Unserviceable materiel

a. Unserviceable end items that cannot be repaired at field level may be repaired by a local sustainment below-depot activity when such capability and capacity is authorized on a reimbursable repair and return basis. If no such capability exists or is insufficient to the requirement, then the item/s must be turned in to a depot or PM's repair activity through the appropriate SSA as a supply transaction, thus removed from unit property record. Exceptions to this are for critical medical equipment, COMPO 2 and 3 equipment undergoing depot or PM's repair activity sustainment level actions. COMPO 2 and 3 equipment unless directed otherwise by HQDA, will remain on COMPO 2 and 3 property records in order to meet the provisions of DoDI 1225.06.

b. Field and sustainment maintenance units are authorized to provide lateral support to other units when maintenance requirements exceed capabilities.

c. Materiel will be protected (packaged and/or crated) to prevent further damage during transfer and/or turn-in. This may include all BII and COEI.

4-5. Technical Inspections

a. A TI will be performed prior to repair, evacuation, or turn-in of unserviceable end items. TIs are to be made by technically qualified individuals assigned to a field-level or sustainment-level maintenance activity. Inspections will be performed according to equipment maintenance and serviceability standards applicable to the maintenance level performing the repair. The results of TIs will be used to determine and/or verify the following:

- (1) Serviceability.
- (2) Economic reparability of the item.
- (3) Extent of maintenance effort and repair parts required to restore the item to the prescribed serviceable condition.
- (4) If unserviceable items were rendered unserviceable due to other than fair wear and tear.
- (5) Estimated cost of damage (ECOD).
- (6) If all applicable MWOs have been applied (applies to items inducted into LBE, RESET, recapitalization, overhaul, rebuild, and life extension programs).

b. An MOS-qualified mechanic trained on the equipment to be inspected can develop the ECOD and/or actual cost of damage. The senior ranking NCO or warrant officer in the maintenance activity and/or repair section will verify all TIs at the level designated in the Source, Maintenance, and Recoverability code in accordance with the TM. If the condition code is determined to be H or P, it will be verified using the procedures prescribed in DA Pam 750-1. Technical inspectors and maintenance personnel will not make any assessment regarding negligence or willful misconduct.

c. For mandatory procedures related to TIs see DA Pam 750-1.

4-6. Verification inspections

a. Verification inspections of major end items will be conducted to ensure the accuracy of a TI when it results in unserviceable, uneconomically reparable condition code (CC) of H or P.

b. ACOM, ASCC, and DRU commanders without subordinate installations and installation commanders will ensure—

(1) TIs resulting in unserviceable, uneconomically reparable CCs of H or P are verified using independent inspections from the LCMC or sustainment activity prior to requesting disposition instructions in accordance with AR 710-2. The individual performing the initial CC classification will not perform verification inspection.

(2) Inspectors conducting verification inspections are technically qualified in the equipment commodity they are inspecting.

c. For mandatory procedures relating to verification inspections see DA Pam 750-1.

4-7. Maintenance expenditure limit

a. MEL is the total acceptable one-time cost to repair an end item or reparable component to a fully serviceable condition as prescribed in the appropriate TM. Current MELs and MEL procedures are listed in DA Pam 750-1, the TB 43-0002 series, TB 750-series, and Materiel Master/ Federal Logistics (FEDLOG) or Web Federal Logistics Information System (WebFLIS). The managing national inventory control point (NICP) should be contacted if unsure of the current MEL. There may be instances when the MEL for a major end item has changed, and the change has not yet posted in either TB 43-0002 series or the TB 750 series.

(1) MEL is to be used to ensure economic and operational effectiveness of Army maintenance at all levels. Request disposition instructions through the decision support tool (DST), in accordance with ACOM, ASCC and/or DRU policy, for equipment that exceeds the MEL. Depot-level assistance may be obtained through the logistics assistance office.

(2) Required repairs will not be broken into separate job estimates to bypass prescribed MELs.

b. MEL will be expressed as a percentage of the Army master data file/unit replacement price.

(1) MEL will be reviewed at least annually and updated as required.

(2) MELs will be established for all items except the following:

(a) Materiel procured with non-appropriated funds.

(b) Installed building equipment (IBE) as defined in AR 420-1.

(c) Non-type classified training devices used exclusively by training institutions and schools.

(d) Non-type classified equipment and items of nonstandard materiel that do not require national level materiel management or logistics support.

- (e) Materiel exempt from type classification.
- (f) Class V materiel.
- c. For mandatory procedures relating to MEL see DA Pam 750–1.
- d. ACOM, ASCC, and DRU commanders have one-time approval authority on requests for waiver of published MEL when the required maintenance can be accomplished at field and/or sustainment level maintenance or by local contract.
- e. One-time approval authority is limited to a specific model or serial numbered major end item. In approving such requests, commanders will ensure the following:
 - (1) A replacement item is not available by the required delivery date.
 - (2) Resources are available or can be made available to the requesting organization to do the repairs prior to the required delivery date.
 - (3) Requesting organizations develop a repair cost estimate and justification for retention.
 - (4) Requests will not exceed the DA Form 7723 (Maintenance Expenditure Limit (MEL) Waiver) ceiling.

4–8. Turn-in policy for serviceable excess and unserviceable reparable parts and components

- a. Unserviceable reparable items will be turned in to the SSA.
- b. All Army commanders and maintenance managers will ensure critical items, intensively managed items, and automatic return items are turned in within the timeframes established by applicable directives, AR 710–2 and AR 725–50. Commanders will use management information and reports from supply and maintenance management automated LIS, to assist them in meeting the turn-in time standards.
- c. For mandatory procedures see DA Pam 750–1.

4–9. Equipment transfer and turn-in

- a. All DST directed transfers between ACOMs, ASCCs, and DRUs must be coordinated and formalized through a jointly approved lateral transfer document prepared by the losing accountable officer (see AR 710–2). Transfers to other DoD military departments or other Government agencies must be approved by the applicable NICP in accordance with AR 710–1. Equipment that is transferred between ACOMs, ASCCs, and DRUs, including USAR and ARNG, transferred into the APS, prepared for storage below the national level, and other specified stocks will meet the following requirements:
 - (1) The maintenance standard as defined in DA Pam 750–1.
 - (2) Scheduled services will be current as of the date of shipment from the losing organization. The criteria for services are suspended during shipment and will resume upon acceptance at gaining site.
 - (3) The results of TM–10 series and TM–20 series PMCS and preventive maintenance inspection and service acceptance inspections (record copy of DA Form 2404, DA Form 5988–E, or DA Form 2408–13–3 (Aircraft Technical Inspection Worksheet)) and other records required by DA Pam 738–751 and DA Pam 750–8 will accompany the equipment.
 - (4) Gun tubes will have a minimum of 500 rounds of effective full charge remaining when transferred into APS. On transfers other than into Army war reserve stocks, gun tubes will have a minimum of 75 effective full charge rounds remaining.
 - (5) Winterization of equipment destined for geographic locations where temperatures range from negative 25 degrees Fahrenheit to negative 60 degrees Fahrenheit.
 - (6) Equipment accepted for depot overhaul through the Combat Vehicle Evaluation (CVE) Program or identified as a depot recapitalization candidate will not be directly transferred between ACOMs, ASCCs, and DRUs.
- b. Equipment transfer between ACOMs, ASCCs, and DRUs in unit sets (force package fielding) will meet the requirements listed in *paragraph 4–9a* as well as the following—
 - (1) Requisitions for repair parts with estimated delivery dates past the transfer date will be canceled unless the requisition is from previous FY funds. These requisitions will be moved and allowed to come in to prevent de-obligation of prior year funds. Appropriate funds (price from current Materiel Master and/or FEDLOG or WebFLIS) will be transferred to AMC.
 - (2) Outstanding field and sustainment maintenance requests that cannot be completed prior to transfer will—
 - (a) Require the gaining and losing ACOMs, ASCCs, and DRUs to negotiate an acceptable solution such as delayed transfer dates for specific pieces of equipment. Agreement requires concurrence of DCS, G–3/5/7.

(b) Be cancelled. Appropriate funds (current Materiel Master or FEDLOG or WebFLIS price) will be transferred to AMC as outlined in transfer MOA.

(3) ACOMs, ASCCs, DRUs, and/or agencies are responsible for funding temporary duty related to their responsibilities for transfers as outlined in transfer MOA.

c. AMC responsibilities for unit set transfers between ACOMs, ASCCs, and DRUs include the following:

(1) Serving as an arbitrator for transfers as outlined in *paragraph 4–9a*. If AMC is an active party in the transfer, the DCS, G–4 (Maintenance Directorate) will be the arbitrator.

(2) Receiving funds transferred from losing ACOMs, ASCCs, and DRUs as outlined in *paragraph 4–9b(2)(b)*.

(3) Performing corrective actions at the receiving and/or handoff site to ensure equipment is in the same condition as reflected by record copy of acceptance inspection required in *paragraphs 4–9a(3) and 4–9a(4)*.

(4) Providing total package fielding support to gaining ACOM, ASCC, and DRU.

d. Equipment transferred between ACOMs, ASCCs, and DRUs in other than unit sets will meet the requirements in *paragraph 4–9b(2)(a)*. In addition, equipment will not be transferred until all corrective actions requiring parts are completed and field and sustainment maintenance requests are completed.

e. Exceptions to the turn-in policy are—

(1) Aviation equipment transferred between property accounts will conform to the serviceability criteria contained in TM 1–1500–328–23 or the disposition instructions.

(2) Frequently assembled and disassembled equipment used as training aids (condition code F or less) that requires depot overhaul prior to transfer or reissue.

f. Equipment used for BASOPS or for the original purpose operator and/or crew training that meet the transfer and/or turn-in standard in accordance with *paragraph 4–9a*.

g. For mandatory equipment transfer and turn-in procedures see DA Pam 750–1.

4–10. Controlled exchange

a. Controlled exchange is the removal of serviceable components from unserviceable, economically repairable end items for immediate reuse in restoring a like item or weapon system to an FMC condition. The unserviceable component must be used to replace the serviceable component or retained with the end item that provided the serviceable component.

b. Controlled exchange is authorized only when—

(1) Required components are not available from the source of supply (SOS) within the issue priority designator indicated on the maintenance request.

(2) A valid requisition is submitted to replace the unserviceable item.

(3) The maintenance effort required to restore all the unserviceable repairable materiel involved to a mission capable condition is within the MAC authorization and the capability of the unit performing the controlled exchange.

(4) The end item or weapon system from which the serviceable component is removed is classified not mission capable (NMC) supply.

(5) Aircraft from which a serviceable component is removed must be classified as one of the following: NMC supply, NMC maintenance, or partial mission capable (PMC).

(6) Aircraft maintenance manual instructions require that a known serviceable component be temporarily used while troubleshooting. Such components may be temporarily exchanged from an FMC or PMC aircraft.

(7) The end item or weapon system will not be degraded to an uneconomically repairable condition.

(8) The end item or weapon system from which the serviceable component was removed is protected from further degradation.

(9) The unserviceable component is tagged and installed on, or retained with, the end item or weapon system from which the serviceable like item was removed. In addition, the removal of the component must be recorded on DA Form 5990–E, DA Form 2407, DA Form 5988–E, DA Form 2404, or DA Form 2408–13–3 for the end item or weapon system. This is to retain the identity and integrity of the repairable end item or weapon system.

(10) The organization performing the controlled exchange takes prompt action to restore the unserviceable materiel to an FMC condition.

c. When the controlled exchange satisfies a requirement already in the Army supply system, that requirement will be either canceled or used to restore the unserviceable end item or weapon system to FMC.

d. As a result of a controlled substitution action, record the part source code G in GCSS–Army to indicate the component was taken from another like end item when closing the work order on the end item being returned to FMC status (see GCSS–Army End User Manual Plus).

e. Controlled exchange by using units is authorized only when—

(1) All the unserviceable reparable materiel involved is owned or under control of the organization performing the controlled exchange.

(2) It is the only means reasonably available to eliminate an adverse effect on the OR of the unit, organization, or activity performing the controlled exchange.

(3) Approved by the commander of the organization performing the controlled exchange.

f. Controlled exchange by field and sustainment levels of maintenance will be authorized only when—

(1) It is the only means of providing an FMC end item or weapon system to a supported unit within the time frame indicated by the issue priority designator on the maintenance request.

(2) It is for other than aviation equipment, approved by the first O–5 commander of the owning equipment or sustainment maintenance commander. Approval process for aviation equipment will be in accordance with AR 95–4.

g. During mobilization or combat, ACOM, ASCC, and DRU commanders may modify the controlled exchange conditions as deemed necessary.

h. Controlled exchange is not authorized when the investigating officer has not formally released materiel involved in an accident.

i. Controlled exchange is not authorized on RCF assets.

j. Control exchange documents and a controlled exchange log will be maintained in accordance with AR 25–400–2. Documentation will be filed in accordance with the record retention schedule available at <https://www.arims.army.mil>.

4–11. Army Fire Suppression and Environmental Control System policy

Only technicians who are properly trained and/or certified can service pressurized fire suppression and environmental control systems. This applies to all technicians (uniform, civil service, or contractor) and all weapon systems. Training and certification must be in accordance with the environmental protection agency standards. Air condition technicians must be trained and certified. Fire Suppression System technicians need only be trained. Only MOS 91C (Ordnance Center & School trained) can provide training to other Soldiers for Fire Suppression System bottle(s) refilling.

Section II

Maintenance Management

4–12. Materiel records and reports

Materiel data records and reports for maintenance management and performance of maintenance are prepared and maintained as prescribed in DA Pam 750–1, DA Pam 750–8, DA Pam 738–751, AR 25–400–2, TB MED 750–1, TB MED 750–2, TB MED 521, and AR 700–138.

4–13. Measurement of maintenance performance

a. The management of maintenance operations throughout the Army will be based upon a performance management approach that supports the Army management philosophy described in AR 5–1. This approach will enable the maintenance organization to develop a unified effort around goals and objectives.

b. The planning and controlling functions of management will be emphasized ensuring:

(1) Objectives are established to support mission goals.

(2) Performance is measured against quantifiable standards that reflect the objectives.

(3) Corrective actions taken are based on improving the factors that are constraining performance.

c. Maintenance performance measures are the key element of the control function of maintenance operations management. Through use of performance measures, commanders and managers will ensure that their maintenance operation is providing the best possible support to sustain combat readiness.

4-14. Manpower utilization standards

a. The ACOMs, ASCCs, and DRUs will ensure establishment of a man-hour accounting system where automated capability exists. Man-hour accounting is optional where automation is not available and manual procedures must be used. However, the utilization of maintenance manpower resources for mission accomplishment is a mandatory command/management function in Army organizations.

b. Unit commanders and installation materiel maintenance officers are responsible for using assigned military and civilian maintenance personnel. The maintenance supervisor is directly responsible for using available maintenance personnel. AR 570-4 provides policy for the availability of personnel in peacetime. Appendix B of this regulation provides guidance to commanders and managers on the computation and use of manpower utilization rates. HQDA guidance for maintenance manpower utilization is as follows (percentages expressed in terms of total available time; see app B):

(1) For military manpower, the standard direct labor available man-hour utilization rate is 50 percent; the goal is 75 percent.

(2) For civilian manpower, the standard direct labor available man-hour utilization rate is 85 percent; the goal is 90 percent.

(3) All commanders operating under GCSS-Army have the responsibility to include accurate monthly man-hour utilization in their quarterly command reviews and analyses or similar performance-monitoring programs.

c. In addition to these standards, the procedures outlined in DA Pam750-1 determine the tactical maintenance augmentation requirements for military mechanics during peacetime garrison operations.

4-15. Maintenance management systems

a. The DCS, G-4 mandates the use of approved standard Army LIS, which takes precedence over the manual system when operational.

b. The primary functions of maintenance management include forecasting, distribution, scheduling, and production control of maintenance workloads, including inspections, services, repairs, and warranty claim actions for Army equipment.

c. Approved TELS (GCSS-Army, LMP, ACN, etc.) will be the DA standard for The Army Maintenance Management System (TAMMS) and TAMMS-Aviation automation and will take precedence over all manual systems, ACOM, ASCC, and DRU, installation-unique and CLS automation for Army materiel maintenance management. Materiel management procedures for each authorized TELS can be found in each system applicable end-users-manual. Combat and MATDEVs, as well as contract requirement packages will require contractors to use approved LIS or approved and/or negotiated automated logistical system. Where circumstances do not allow this, data interfaces between CLS-unique systems and authorized logistics systems are required.

d. The DoD Medical Logistics Standard Support is the automated maintenance management system for the TDA medical maintenance activities. MTOE medical maintenance units use GCSS-Army for medical equipment reporting. GCSS-Army, Defense Medical Logistics Standard Support and Theater Army Medical Materiel Information System are the systems used for maintenance management and ordering of class VIII repair parts.

Section III

Technical Assistance and Supply Interface

4-16. Technical assistance

Effective maintenance support of materiel combines the maintenance conducted by the using activity and its supporting maintenance activity. Supporting maintenance activities must maintain a proactive liaison to assist using activities in accomplishing their materiel maintenance responsibilities.

4-17. Logistics Assistance Program

a. LAP is oriented to the early detection and resolution of logistics related problems that affect unit and materiel readiness. Simultaneously making logistical assessments in coordination with the supported commands to determine actual status, historical trends, provide corrective and preventative measures for improving unit and command readiness. This includes the identification and correction of systemic

problems. The LAP provides support to units and Soldiers before, during, and after deployments to exercises, natural disasters, contingencies, and war.

b. AR 700–4 contains the U.S Army Logistics Assistance Program policy and procedures for providing technical assistance to users during and after equipment fielding.

c. The CG, AMC will provide and manage a worldwide LAP for proponent materiel by determining requirements and establishing, staffing, and maintaining logistics assistance offices. The Chief of Engineers, TSG, CG of U.S. Army Signal Command, and CG of INSCOM will provide logistics assistance personnel for materiel as part of their proponent responsibilities.

4–18. Repair parts supply (class IX)

a. Repair parts allocation, stockage, and supply policies and procedures are contained in AR 420–1, AR 710–2, DA Pam 710–2–1, DA Pam 710–2–2, associated automated systems and TMs.

b. Recovery of reparable secondary materiel can be found in AR 710–2.

Section IV

Contract Maintenance Support

4–19. Private enterprise

a. When the Army maintenance system cannot provide required support, the Army will rely on the domestic and foreign competitive private enterprise system to support its maintenance requirements.

b. The ACOMs, ASCCs, and DRUs will ensure that essential quality requirements for maintenance service contracts are defined, quantified, measured, and assessed during the contracted-out support process. Solicitations and contracts for maintenance services will require:

(1) Quantitative measures of quality and performance.

(2) Contractors to submit historical data that will show the capability to achieve these quantitative measures. These data are used in the solicitation review process.

(3) Specific contractual provisions for obtaining contractor conformance, such as award and incentive fee provisions for meeting performance quality and cost standards.

(4) Test and evaluation to be performed to demonstrate performance and corrective actions to be taken on deficiencies revealed.

(5) For medical equipment, only AMC can authorize contract maintenance to support an MTOE unit.

c. Commanders contracting for commercial field or sustainment repair of equipment will ensure that the contract requirements package include provisions for collection of work order DA Form 2407 data from the contractor. Contractors will provide negotiated and/or approved data via TELS to the Enterprise Logistics Portal maintenance master.

d. The MATDEV will ensure any contract requirement package for commercial application of authorized and approved MWOs will include provisions that MWOs will be applied and reported in accordance with AR 750–10.

e. All contracting support is requested by submitting a requirements package to the contracting office in accordance with AR 715–9. The requirements package includes the PWS, Government cost estimate, and QA surveillance plan in addition to other documentation.

f. Only contracting officers may prepare contracts.

g. The requiring activity is responsible for nominating a contracting officer representative in accordance with AR 715–9.

h. In the event of contractor deficiencies or noncompliance with the terms of the contract, the contracting officer representative should document and communicate the deficiencies to the contracting officer for corrective action.

i. All contracts must be administered in accordance with the Federal Acquisition Regulation (FAR).

4–20. Prohibitions

a. Maintenance by contract personnel is prohibited when any of the following conditions exist:

(1) The maintenance workload to be performed is necessary for individual MOS skill set proficiency and unit training.

(2) Qualified contract personnel are not available and cannot be trained and provide maintenance support when needed.

- (3) Organic resources are available and contract maintenance support will result in higher cost of maintenance support to the Army.
- (4) The product or service is available from another DoD component or another Federal department or agency.
- (5) Systems operating forward of the Corps rear boundary during Large Scale Combat Operations (LSCO).
 - b. Approval is required for weapons systems requiring CLS forward of the Corps Rear Boundary. PEOs/PM/LCMCs responsible for weapon systems operating forward of the Corps rear boundary during Large Scale Combat Operations will request approval in accordance with AR 715–9, requiring AMC approval.
 - c. Contractors performing maintenance on COMSEC equipment must comply with training, certification, and security clearance requirements in accordance with AR 25–12.

4–21. Foreign enterprise limitations

- a. Foreign private enterprise can be used for contracts awarded and performed OCONUS when one or more of the following situations exist:
 - (1) U.S. contractor or DoD sources lack the capacity to perform the task in the time required. In this situation, use of foreign private enterprise is interim in nature until U.S. capability can be developed or expanded.
 - (2) Use of foreign private enterprise has been predetermined by international agreement.
 - (3) The necessity for establishing an alternate foreign source has been determined formally by DoD as being in the best interests of U.S. strategic or tactical objectives.
 - (4) Use of foreign private enterprise will not affect the development or maintenance of U.S. national capabilities.
- b. The use of foreign contractual services will be contingent on U.S. contracting authority certification of quality, capability, and capacity.

4–22. Readiness of modification table of organization and equipment units

Contractual services to support readiness of MTOE units will be allowed, but generally limited to a short term—

- a. Pending the attainment of a field or sustainment capability, or to allow for peak workloads of a transitory nature. For OCONUS, when the using FLM organization or activity does not have the capability to provide FLM to an acceptable level of readiness.
- b. When required, programmed, and contracted by the MATDEV for an interim period to attain an earlier operational status for initial fielding of new military materiel.
- c. For the completion of overhaul or modification of military materiel when—
 - (1) The extent or complexity of the modification or modernization work to be accomplished requires the technical qualifications of the OEM.
 - (2) Repairing complex electronic devices that require long-term training for skill development and standalone test equipment.

4–23. Contingency plans

Contingency planners will consider the maintenance potential of facilities in overseas areas that may be operated under military control or by contractual arrangement with commercial sources.

4–24. Classified communications security

All proposals for contract maintenance support of classified COMSEC and/or signals intelligence (SIGINT) and electronic warfare (EW) equipment must undergo an assessment of risks to national security prior to using commercial maintenance sources. The National Security Agency (NSA) must conduct this special risk assessment. The proposal, including PWS with additional information identifying the COMSEC and/or SIGINT and EW equipment, density supported, and levels of maintenance to be performed, should be submitted through DCS, G–3/5/7 (DAMO–C4T), 400 Army Pentagon, Washington, DC 20310–0400, to Director, NSA (S–04), Fort Meade, MD 20755–6000. Classified equipment not under NSA cognizance being considered for maintenance support contracts to contractors other than OEMs will be given an assessment of risk as prescribed above. Approval by HQDA is required prior to contract

award. In the event of approval from NSA and/or HQDA, then the provisions of chapter 4 apply to further processing.

Section V

Inter-Service Maintenance Support

4–25. General

a. The ISSAs will be fully explored prior to submission of requests through ACOMs, ASCCs, and DRUs to the DCS, G–4 (Maintenance Directorate) for additional or expanded maintenance facilities. This includes modernization of tooling and materiel of non-MTOE support and depot-level maintenance facilities. ISSAs will comply with DoDI 4000.19 and AR 5–9.

b. The ISSA will be used to provide maintenance support services when:

- (1) Support is the least costly to the Government.
- (2) Materiel supported is common to the Army or DoD.
- (3) The supporting agency or component has the available capability and capacity to render required support.
- (4) Support will reduce in NMC materiel and/or provides the potential for reducing investment and operating and sustainment costs.

c. The ISSA will not be used:

- (1) To document the transfer of responsibility for a function or mission from one DoD component to another.
- (2) When a support capability and capacity is required to sustain military readiness.

4–26. Provisions of inter-service support agreements

The ISSAs will—

- a. Specify responsibilities for furnishing repair parts and other support materials required for the completion of the maintenance operations.
- b. Make suitable provisions for the interchange of maintenance performance and management data between all parties to the agreement.
- c. Contain provisions for a review every 2 years to determine whether the agreement should be continued, modified, or terminated.
- d. Review the funding annex and cost estimates annually to determine actual billed costs in accordance with DoDI 4000.19.

4–27. Personnel support

When another DoD component or Federal Government agency has the available capability, except for personnel, and the provision of the support is to the overall advantage of the Government. In such a situation, the matter will be referred to DCS, G–4 (Maintenance Directorate) for resolution prior to establishing duplicate facilities.

4–28. Reciprocal support

Upon request, the Army will provide maintenance support to other DoD components and Federal Government agencies to the extent that its military requirements will permit and if available capabilities and capacities exist. This support will be executed at the lowest practicable command level.

4–29. Funding support

Each Army element is responsible for programming, budgeting, and funding to support the ISSAs to which it is a party. Whenever manpower or fund requirements exceed available resources, ACOM, ASCC, and DRU commanders will seek DCS, G–4 (Maintenance Directorate) approval.

4–30. Transfer of resources

a. The transfer of resources (personnel, funds, and materiel) resulting from establishment, modification, or termination of local support agreements will be accomplished in accordance with existing Army and DoD procedures.

b. Army agencies will provide inter-Service support on a reimbursable basis.

- c. Non-reimbursement arrangements are authorized for service provided in combat areas.

Chapter 5

Sustainment Maintenance

5-1. General

- a. This chapter provides policy and responsibilities governing sustainment maintenance.
- b. The term sustainment (depot) maintenance consists of materiel maintenance or repair requiring the overhaul, upgrading, or rebuilding of end items, parts, assemblies, or subassemblies and the testing and reclamation of equipment as necessary, regardless of the source of funds for the maintenance or repair or the location at which the maintenance or repair is performed. The term also includes the following:
 - (1) All aspects of software maintenance classified by DoD as of 1 July 1995 as depot maintenance and repair.
 - (2) Interim contractor support (ICS) or CLS (or any similar contractor support), to the extent that such support is for the performance of services described above.
- c. In accordance with 10 USC 2460, depot maintenance will not include the procurement of major modifications or upgrades of weapon systems that are designed to improve system performance. A major upgrade program covered by this exception could continue to be performed by private or public sector activities. The term also will not include the procurement of parts for safety modifications. However, it will include the installation effort for the excluded modifications and upgrades mentioned above.
- d. For the characteristics of sustainment maintenance see DA Pam 750-1.
- e. MATDEVs will establish depot maintenance support programs for a new system and its secondary items so that the depot is ready to perform depot maintenance not later than 4 years after IOC.
- f. Sustainment maintenance will be performed by selected TDA industrial activities operated by the Army, other military Services or Government agencies, or by private-sector firms.
- g. When directed by the NMM, overseas sustainment maintenance will be performed within the theater of operations to achieve the readiness or sustainability goals of deployed forces or when more cost-effective. When evaluating cost effectiveness, RCF, spare parts, facilities, transportation, plant equipment, test equipment, personnel, supply pipeline costs, and the impact on the CONUS base, including mobilization and/or surge capability, will be considered.
- h. Overseas sustainment maintenance will include the cost accounting and production reporting provisions of DFAS-IN Manual 37-100.
- i. An overseas FRA may be established by AMC when it has been determined, in coordination with the appropriate theater commander, that in-country, forward sustainment support by sustainment personnel or by CLS operations is needed to sustain mission critical systems or components.

5-2. Organic Industrial Base Corporate Board roles and responsibilities

- a. The ASA (ALT) establishes the overall policy and strategic objectives for the Army OIB Program.
- b. The ASA (ALT) relies on DCS, G-4 to implement strategic guidance, monitor and evaluate OIB performance, identify deficiencies, and/or problems and recommend corrective action.
- c. The co-chair of the Army OIBCB is the military deputy, ASA (ALT), and DCS, G-4.
- d. DCS, G-4 establishes and maintains a long-term Army OIB Strategy Implementation Plan for the Army OIBCB approval. The Army OIB Strategy Implementation Plan will be reviewed and/or revised as directed by the Army OIBCB co-chairs.
- e. The Army OIBCB is responsible for—
 - (1) Implementing strategic direction provided by the ASA (ALT).
 - (2) Meet quarterly or as required to provide corporate level strategic direction and policy recommendations across the OIB Enterprise, to include resource guidance, to ensure the OIB effectively supports Army readiness.
 - (3) Govern the implementation of the Army OIB Strategy Implementation Plan by establishing goals, objectives, and strategic indicators and metrics that will define the future Army OIB.
 - (4) Monitor OIB corporate metrics such as: total revenue, productive yield, repair cycle time (RCT), carryover, and performance-to-promise.
 - (5) Meet quarterly or as required to review OIB enterprise programs and statutory compliance such as: capital investments programs, core capabilities, and “Distribution of Depot Maintenance Workloads (50/50 rule).”

(6) Resolving issues associated with OIB enterprise policies, guidance, programs and processes, reviewing each one and directing that the appropriate corrective action(s) be taken, to include establishing forums and study and/or working groups, as required or directed by the Army OIBCB (see AR 15–1).

(7) Resolving OIB enterprise issues raised by other Army agencies, other Services, or OSD.

(8) Providing guidance to the OIBEC, as required.

f. The purpose of the Army OIBCB is to monitor OIB performance including customer requirements and quality of support, capacity, funding, workforce, productivity, efficiency, capital investments, quality workplace environment standards, identifying issues, and directing corrective actions. The Army OIBCB's strategic guidance and direction provided by the ASA (ALT) is implemented by the Army's OIB stakeholders. The OIB primary stakeholders include AMC, ARNG, USAR, ASCCs, ACOMs, Army organic and contractor operated OIB activities at the installation and theater levels, and program executive offices. The Army OIBCB also provides direction to the OIBEC which has day-to-day oversight of inter-Army and intra-Army depot maintenance and manufacturing programs to include sponsored and funded workloads of the organic Army maintenance depots and arsenals. The OIBEC is co-chaired by AMC (Deputy, G–3 (Supply Chain Management Directorate) and (Chief, G44–M (Sustainment Maintenance Division)) and report directly to the co-chairs of the Army OIBCB.

g. The OIBCB provides corporate-level strategic direction and policy recommendations across the various elements of the Army considering the role that depot maintenance plays as a critical component of overall force readiness and logistics transformation. The OIBEC fulfills the oversight and management function necessary to improve the manner and method for which the Army OIB operations are executed.

h. The Army OIBCB will ensure that the Army OIB enterprise complies with all DoD and Army policies, regulations, and guidance, to include the following specific statutory provisions:

(1) *10 USC 2460*: The term does not include the procurement of modifications or upgrades of weapons systems that are designed to improve program performance. An upgrade covered by this exception could continue to be performed by private or public sector activities (see *para 5–1c*).

(2) *10 USC 2466*: As written in 10 USC 2466, not more than 50 percent of the depot maintenance workload will be contracted for performance by non-federal employees.

(a) Although 10 USC 2466 requires the Army to meet an aggregate minimum in DMWD ratio of 50/50, ASA (ALT) requires the ARNG, USAR, AMC LCMCs, and the program executive offices with which the LCMCs work to meet an annual target of 52 percent organic and 48 percent contract.

(b) In the event the Army year-end projections for the current or budget year should project that the work performed by the Federal workforce will be 52 percent or less, the Army will provide OSD with a Management Action Plan outlying actions that the Army will take to meet the provisions of 10 USC 2466 no later than 15 March.

(3) *10 USC 2464*: According to 10 USC 2464, the Secretary of Defense (SECDEF) must maintain core logistics capabilities in Government-owned, Government-operated (GOGO) facilities to ensure a ready and controlled source of technical competence and resources necessary to ensure an effective and timely response to a mobilization, national defense contingency situation, or other emergency requirement.

(4) *10 USC Section 2474*: In accordance with 10 USC 2474, the SECDEF must designate a Center of Industrial and Technical Excellence (CITE) for each non-base realignment and closure affected DoD depot-based on core capabilities and provide appropriate reports to Congress. This statute also authorizes the head of the CITE to enter into public-private partnerships for work related to the CITE designation and consistent with the needs of the department to maximize the utilization of the CITE capacity, reduce the cost of products, and foster cooperation between the armed forces and private industry.

5–3. Organic Industrial Base Execution Council responsibilities

The OIBEC is responsible for—

a. Providing strategic oversight of the integration and execution of intra-service depot maintenance and manufacturing programs accomplished within the OIB, to include sponsored and funded workloads for the organic Army maintenance depots and manufacturing arsenals, program executive offices, RC, inter-Service, and the ACOMs' contractor and organically operated "sustainment-level tasks" performed at the field maintenance level.

b. Assess strategic level indicators, metrics, and/or parameters to ensure Army OIB enterprise goals and objectives are met consistent with all statutory, regulatory, and Army strategic readiness system requirements.

- c. Recommending OIB program policy changes as appropriate to the Army OIBCB.
- d. Recommending to the Army OIBCB the “right-sizing,” that is, the capabilities and capacity, of the organic Army maintenance depots and manufacturing arsenals, as well as the Army’s contractor and organically operated depot maintenance-type activities at the field maintenance level, based on valid workload and core requirements.
- e. Establishing and maintaining a long-term Army OIB strategic plan for Army OIBCB approval. The OIB strategic plan will be reviewed and/or revised accordingly on an annual basis.
- f. Identifying the requirement for the development of DSTs, such as Depot Maintenance Operations Planning System (DMOPS), to assist the Army OIBCB and OIBEC in fulfilling their responsibilities.
- g. Meeting monthly or quarterly as necessary and reporting to the Army OIBCB at a minimum of two times a year. The OIBEC will also support Army OIBCB meetings that may be scheduled as required to resolve issues that cannot be deferred until a quarterly Army OIBCB meeting is held.
- h. Reviewing, streamlining, and/or consolidating all statutory, regulatory, and internal reports to improve the timeliness, accuracy, and utility of the information collected and analyzed, and to identify overlap, gaps, and eliminate duplicative tasking orders and reporting requirements.

5–4. Reporting depot-level workload distribution and execution

- a. 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, per the National Defense Authorization Act for Fiscal Year 1998 (NDAA FY 98). Any such funds that are not used for such a contract will be used for the performance of depot-level maintenance and repair workload by employees of the DoD. The percentage limitation includes depot maintenance ICS, CLS, and similar contracts as required by the National Defense Authorization Act for Fiscal Year 1998 (NDAA FY 98).
- b. All Army ACOMs, ASCCs, and DRUs will report the funding executed to accomplish depot-level tasks designated or coded as D or L, regardless of source of funds or the location where the maintenance is performed. Two types of reports will be submitted to capture this data:
 - (1) *Annual report.* Per 10 USC 2466(d)(1), DoD is required to develop a report to Congress 90 days after submitting the President’s Budget to Congress each FY for each of the Armed Forces (other than the Coast Guard) and each Defense Agency. The report must show the percentage of funds that were obligated or planned for obligation during the prior FY, CFY, and budget year for the performance of depot maintenance and repair workload by the public and private sectors. The DCS, G–4 (Sustainment Maintenance Division) will prepare and issue a data call with supplemental instructions for the completion of the annual 50/50 report no later than 15 December.
 - (2) *Quarterly report.* ACOMs and other reporting activities are required to submit a DMWD quarterly report to the DCS, G–4 (DALO–MPS) on or about the first working day of May, August, and November. Similar to the annual report, the AMC DMWD quarterly report will be a compilation of LCMC reports with each LCMC report prepared at the LCMC level and representing the consolidated data between the AMC LCMCs and the program executive offices they primarily support, as well as all NMP, SRA, and/or OTR workloads. The Joint program executive office for chemical biological defense, the program executive office for Enterprise Information Systems, and the program executive office for Army Simulation, Training and Instrumentation will report directly to DCS, G–4.
- c. Amounts obligated for the performance of depot-level maintenance and repair workload by non-Federal Government personnel at a CITE under any contract will not count for purpose of applying the percentage limitations to 10 USC 2466(a) if the personnel are provided by private industry or other entities outside the DoD pursuant to a public and/or private partnership.
- d. Depot maintenance carryover is that portion of the maintenance program that is not completed during the year of obligation and, therefore, carried into the subsequent FY for completion.
- e. Carryover is inherent in any production or manufacturing process and is required to provide production stability and continuity during the transition between FYs. The industrial base facilities will communicate with their customers early to verify the statement of work and ensure that they have the required capability and capacity, to include skillsets, equipment, and parts, to meet delivery schedules and avoid excessive carryover. All unplanned orders received by AMC’s OIB enterprise will undergo a detailed analysis before accepting the work to improve the management of work carried over from the CFY to the next FY. AMC will execute a structured approval process for all unplanned work, including parameters defining delegation authority.

f. AMC will establish internal controls to ensure LCMCs and OIB activities comply with guidance in DoD Financial Management Regulation (FMR) 7000–14, Volume 11A, Chapter 3, to avoid excessive carryover. This guidance includes:

- (1) Orders accepted should be specific, definite, and certain as to the work and terms of the order.
- (2) Certification that the funds cited on the order are properly chargeable for the purposes cited in the order.
- (3) Project orders must serve as a bona fide need in the FY for which the project order is issued and determined that the order is not reasonably severable between FYs. Multiple year appropriations may be obligated for requirements that constitute bona fide needs of the multiple-year period of availability for the appropriation.
- (4) Work must be expected to begin within a reasonable time after acceptance (usually within 90 days) and completed within the normal production period for specific work orders. If the funded order cites an appropriation that expired for obligation on September 30th and the work does not begin, or is not expected to begin before January 1 of the following calendar year, then the project order funds must be returned to the customer. If the performing activity commander documents that the delay is unavoidable and could not have been foreseen at the time of project order acceptance, and that documentation is retained for audit review, then the project order can be retained and executed.
- (5) Project orders must not be issued for the primary or secondary purpose of continuing the availability of appropriations.

g. AMC will direct the LCMCs and the OIB activities to establish processes and procedures, to include specific managerial approval processes, for analyzing and accepting new orders. These processes and procedures should increase the probability of successful execution with the goals of improving production efficiency and reducing carryover. At a minimum, the processes and procedures must meet the following criteria:

- (1) Skilled labor is available, to include adequate labor hours available with the required skills, to execute the overhaul of the programs.
- (2) Parts, to include sufficient stock, are on hand or on order to complete the program schedule on time given the required depot overhaul factor and scrap rates.
- (3) Tools and equipment are on hand or on order, to include all required special tools, fixtures, jig, and stands.
- (4) Documented internal processes, to include approved technical data and capacity, are available to complete the work.
- (5) Requirements are understood, to include the required depot production, impact of backorders, average monthly demand, potential surge requirements, and alternate SOR.
- (6) Funding is available to adequately support the production.

5–5. Depot maintenance core capability

a. Core is a capability maintained within DoD organic depots, Software Engineering Centers (SECs), and Software Engineering Directorates to meet readiness and sustainability requirements of the Army weapon systems that support the Joint Chiefs of Staff (JCS) contingency scenario(s). The MATDEV must develop the capability to repair new weapon systems identified as requiring core logistics capability at GOGO facilities. For hardware, a core capability must be established at a GOGO facility within 3 years after the new weapon system achieves an initial operational capability. For software, core capability (including software data rights to intellectual property) must be established the year after a software increment production is complete (a system production line may have multiple increments). Core depot maintenance capabilities will comprise only the minimum facilities, equipment, and skill personnel necessary to ensure a ready and controlled source of technical competence to effectively respond to a mobilization, national defense contingency situation, or other emergency requirement.

b. The core logistics workload required to maintain a core logistics capability must be performed at GOGO facilities of a military department. Performance of core logistics workload will not be contracted out to non-Government personnel, which includes contractors working in Government depots, as the intent of core depot maintenance is to ensure the Government possesses the organic competencies to sustain Army equipment to be able to respond to military mobilization, contingencies, and other emergencies.

c. Weapon systems, equipment, components, and/or software designated as mission essential, but not needed to sustain core capability, may be maintained in the private sector if the required capability can be provided with acceptable risk, reliability, and efficiency.

d. DCS, G-4 (Sustainment Maintenance Division) in coordination with DCS, G-3/5/7 and AMC will use the DoD standard methodology in DA Pam 750-1 to determine required depot maintenance core capabilities and the workload needed to sustain these capabilities on a biennial basis.

e. Core capabilities and the workload required to support these capabilities will be reviewed every 2 years or more frequently, as required.

f. The core logistics analysis and applicable core depot analysis will be conducted in accordance with AR 700-127.

g. The PMs are encouraged to develop Joint Government and industry relationships known as depot partnering arrangements for accomplishing depot maintenance. A decision to solicit industry for the performance of work that includes depot maintenance or repair of weapon systems and/or equipment, the solicitation should include language requiring public-private partnerships. Performance based product support strategy (PBPSS) implementation strategies will include public-private partnerships to satisfy the requirements of 10 USC 2464 or 10 USC 2469, as applicable, and the solicitation for a PBPSS will include language requiring partnership with an organic entity for core (and potential noncore) workload. The benefits of depot partnering to the Government include the following:

- (1) Increased productivity.
- (2) Reduced cost.
- (3) Reduction in excess infrastructure.
- (4) Improved responsiveness to the warfighter.

5-6. Inter-Service depot maintenance support

a. The Joint depot maintenance program is applicable to all acquisition and logistic support activities planning, requiring, or providing depot maintenance support. The primary objective of this program is to achieve increased effectiveness through use of the combined service depot maintenance resources. This reduces redundant capabilities while sustaining essential mission support needs. Depot maintenance inter-Service support will be used and provided to the maximum extent possible.

b. ACOMs, activities, and organizations will seek mutually beneficial support arrangements with other Army organizations and with other Services and/or agencies when feasible and not detrimental to mission and military requirements.

c. ACOMs, activities, and organizations will provide support to other Services and/or agencies to the extent possible within given capabilities, and when not detrimental to the mission and military requirements, upon request.

d. A Joint depot maintenance support plan (DMSP) will be developed by the MSCs for all cases where the same supportable materiel system is being procured for use, or being used, by two or more military services. The Joint DMSP will be submitted to AMC for approval before implementation. Each plan will—

- (1) Include an assessment of existing depot maintenance capabilities of the military Services involved.
- (2) Indicate the basic considerations for inter-Service support and how the proposed depot maintenance assignments make maximum use of existing DoD capabilities and reduce to a minimum the need for new investment in additional resources.
- (3) Indicate the planned distribution of depot maintenance workloads among the Army, other DoD, and commercial sources over the expected life of the materiel system.

5-7. Depot maintenance source of repair selection

a. The weapon system PM and/or PEO and the MSC will adhere to current public laws, Department of Defense directives (DoDDs), and Army policies in determining a depot maintenance SOR. Planning for depot maintenance SOR will commence at Milestone A. In accordance with DoDI 4151.24, a logical decision process will be used to assign the depot maintenance SOR to either an Army, inter-Service, or contract source. This process must address legislative and DoD policy requirements such as core depot maintenance, the 50 percent maximum limit on contracted depot maintenance workload, and competition for reassignment of workload valued at \$3 million or greater.

b. To the extent legislation and policy permit, workload determined not to be needed to sustain depot maintenance core capability will be evaluated to determine whether such workload is appropriate for contracting, including contracting under full and open competition, where appropriate. The best-value (the most cost-effective alternative) depot maintenance support will be established from among inter-Service, intra-Service, and contract sources. In the case of systems and equipment used by more than one

military Service or DoD agency, workload must be consolidated into a single common or Joint Service contract consistent with the readiness requirements of the Army.

c. All new depot maintenance workload and planned changes of performance location for existing workload will be subject to a Joint Service review and SOR assignment to a specific depot facility in accordance with the provisions of the Joint depot maintenance program. Changes of performance location from an organic depot-level activity to another SOR must comply with 10 USC 2469. This requires that changes in such workload with a value of \$3 million or more to be made using merit-based selection procedures for competitions among all depot-level activities of the DoD or competitive procedures for competitions among private and public sector entities.

d. The PM and/or PEO will, in conjunction with the MSC inter-Service support office, identify the requirement for the depot maintenance assignment. AMC, as the responsible office for depot maintenance, will take action to initiate the appropriate Joint Service review. AMC will track the Joint Service review to completion and will ensure all necessary inter service coordination actions are properly executed.

e. Upon completion of the Joint Service review and release of the Joint Service decision, AMC will notify the appropriate PM and/or PEO and MSC inter-Service support office of the implementation actions necessary.

f. Each PM and/or PEO will ensure that the decision analysis, including depot core, risk, and best value analysis, supporting the SOR decision is performed and documented in the Milestone ASARC acquisition decision memorandum. The results will be presented and/or reviewed at the Milestone B ASARC. Documentation should be updated, as appropriate, throughout the life cycle of the system.

g. The DCS, G-4 (DALO-MP) will—

(1) Review and validate core logistics analysis, core depot assessment, and depot SOR documents, ensuring all elements of the core depot requirements capabilities and sustaining workload and depot SOR processes are properly addressed in each document in accordance with current DoD and Army policy.

(2) Act as DCS, G-4 representative to the Depot Maintenance Inter-Service Review.

5-8. Special manufacturing authority

a. Special manufacturing authority (SMA) is defined as the authority to manufacture, modify, or fabricate parts, supplies, or components or other materiel within the Defense Logistics Agency (DLA) inventory beyond what is required to support depot level maintenance requirements. AMC may approve depot manufacturing that directly aligns with a depot's CITE.

b. Army depots, through their assigned LCMC, will request approval from AMC to perform manufacturing workloads that are not directly related to an assigned repair program prior to accepting such workload. AMC may approve SMA for depots to manufacture such materiel when the work directly aligns with the depot's CITE designation.

c. Army depots will coordinate directly with the three primary manufacturing Arsenal through AMC to align manufacturing workloads to the appropriate activity as early as possible in the decision-making process. The three primary Arsenal include: Rock Island Arsenal and the Joint Manufacturing and Technology Center, Illinois; Pine Bluff Arsenal, Arkansas; and Watervliet Arsenal, New York.

d. Army depots will provide AMC, through their LCMC, an annual report that identifies all approved SMA for the previous FY by the last business day of each October. The report should include the details for each SMA granted, to include the monetary value of such workloads. AMC must provide DCS, G-4 (Sustainment Maintenance Division), a copy of such report by the first business day of each November.

5-9. Contracting with commercial sources

The negotiating, awarding, funding, and managing of national maintenance contracts are normally the responsibility of AMC. Included are mandatory (proprietary) type contracts and contracts for workload beyond the core workloads required in organic depots. However, a depot is permitted to negotiate, award, and administer a maintenance contract in those instances where the services of a contractor are needed to support the completion of an authorized in-house job order and to surge to meet emerging contingency requirements.

5-10. Reimbursable programs

a. A sustainment repair and return program is a process whereby an item of equipment is forwarded to a depot, FRA, or contract facility for repair and the same and/or like item is returned to the forwarding

activity. An MOA will be established between the customer and the depot. The rate charged to the customer will be a burdened rate to include all local installation overhead and the applicable AWCF surcharge.

b. No COMPO 1 equipment excepting that repaired at a local Sustainment below depot activity for a defined and limited scope of repair will be inducted under a maintenance transaction and be reported as Non-Mission Capable for Maintenance.

c. Maintenance transactions to a depot for repair and return may be executed by COMPOs 2 and 3 in order to ensure the provisions of DoDI 1225.06 are met. An MOA will be established between the customer COMPO and the depot. The rate charged to the customer will be a burdened rate to include all local installation overhead and the applicable AWCF surcharge. Depot maintenance of USAR materiel will be provided by MOU and/or MOA with Office of the Chief of Army Reserve.

5-11. Post-production software support

a. Life cycle software support embraces all software-related activities for a weapon system embedded operational software. Post-production software support (PPSS) is a subset of life cycle software support that begins with completion of the weapon system software increment production in accordance with DoDI 5000.02.

b. Planning and programming for PPSS begins prior to Milestone A of the weapon system. PPSS sustainment programming and execution begins during the first FY after the software increment production of the weapon system is completed.

c. The MATDEV is responsible for all software support and PPBE activities until the weapon system software increment production is complete. The transition to sustainment begins at the full rate production decision and is complete no later than IOC plus 3 years in accordance with DoDD 5000.01.

d. When it is appropriate to transition software support PPBE system responsibility from the MATDEV to the Life Cycle Software Engineering Center (LCSEC) prior to the end of the weapon system software increment production (to include block upgrades), the MATDEV, in coordination with the LCSEC, will obtain DCS, G-4 and ASA (ALT) approval and document the approved transition date.

5-12. Acceptance criteria

A QA and reliability management program will be established and maintained by each Army depot for its depot maintenance activities. Output that fails to meet standards will be scrapped, reworked, repaired, or otherwise disposed of, as appropriate. U.S. Army depots will—

a. Ensure quality requirements are developed and documented early in the life cycle of the weapon system.

b. Establish cost-effective QA procedures that assure product quality and reliability in maintenance shops.

c. Provide a capability for independent and objective assessment of the quality and reliability of depot maintenance output.

d. Ensure that only depot maintenance output that meets quality and reliability standards is distributed.

5-13. Planning, programming, budgeting, and execution of depot maintenance workload

a. Planning.

(1) A flexible depot maintenance base capable of expansion to react to emergency military needs will be established and sustained. Sustainment maintenance support will be planned and completed by the combined use of Government and commercial sources.

(2) An organic sustainment maintenance capability (including trained personnel) will be established and sustained based on workloads generated by those weapon systems and materiel that are essential to completion of the Army's primary roles and missions. This capability will be sized to workload as forecasted in the Army's LMP, will maintain surge capacity, and will sustain the reconstitution capabilities. These capabilities include initial surges of 180 days mobilization, emergencies, and maintenance support to commands with mission essential materiel. DoD 4151.18-H will be used to determine the capacity of depot-level activities.

(3) Workload will be based on expected returns and demands as well as validated performance standards. Where such standards have not been developed or are not available, historical performance data will be used. When neither performance standards nor historical performance data are available,

engineering projections developed during maintenance support planning will be used. Workload standards will be adjusted based on changes in any capacity or as production data matures.

(4) Resource planning for depot maintenance manpower, floor space, and plant equipment will provide for the efficient accomplishment of all depot materiel maintenance programs.

b. Programming and budgeting.

(1) Requirements determination will be based on information from the AAO, initial issue quantity (IIQ), equipment modernization and fielding plans, demand history, field operating costs, readiness factors, and other appropriate sources. Force structure, operating tempo, flying hours, equipment identified for divestiture (retirements and phase-outs), and prior program and budget guidance and decisions are also considered. Items scheduled to be removed from the inventory within 5 years will not normally be considered for depot maintenance. Modification efforts requiring depot maintenance prior to application of the modification and/or conversion kit will be programmed in conjunction with existing overhaul and repair schedules.

(2) Prioritization of depot maintenance end-item requirements, including PPSS, will be in accordance with the latest DCS, G-3/5/7 prioritization guidance and published POM guidance.

(3) All customers of depot maintenance, regardless of source of funds, appropriation, or SOR, will program requirements for the current year, 1 budget-year, and 5 out-years for the POM submission. Any requirements entered in DMOPS should also be entered into LMP where applicable. For execution of requirements, the customer should plan to identify the requirement to the appropriate LCMC no later than the end of the first quarter in the year of execution. When entering requirements in LMP, current year and 1-year schedules should be loaded as a minimum. The remaining 5 years should be loaded as a minimum, in quarterly buckets.

(4) Each year AMC will coordinate with LCMCs to submit their depot maintenance requirements to DCS, G-4, (Maintenance Director), and the Sustaining PEG for consideration in the Army's POM submission.

(5) DCS, G-4, (Maintenance Director) will issue a comprehensive annual POM Program Requirements Guidance to assist ACOMs in developing their POM requirement submission, to include a directed prioritization matrix. The DCS, G-4 (Sustainment Maintenance Division) will lead a functional review of all POM requirements for depot maintenance (this process is referred to as the OP-29) and sustainment system technical support (SSTS) requirements review, sustainment maintenance requirements, and their respective funding are regularly updated in DMOPS to maintain visibility of the balance between required workload programs and approved sustainment maintenance funding.

(6) Automated management information systems will be used to the maximum extent feasible so that the determination and distribution of workloads may be completed in an effective and timely manner and to efficiently manage program execution.

(7) Sustainment maintenance cost and technical data will be collected utilizing LMP to facilitate defensible planning and programming. Data collection will be in accordance with HQDA and/or OSD policy.

(8) Both the MATDEV and the LCSEC will collect cost and technical software execution data to facilitate defensible planning and programming. Data collection will be in accordance with HQDA/OSD policy.

c. Post-production software support programming and budgeting.

(1) For planning and programming purposes, a system will not transition into the PPSS (sustainment) phase of its life cycle until the first full FY after the weapon system software increment production is complete. For those weapon systems whose software development is not tied to a specific software increment production line, transition will not occur prior to the completion of fielding of the software.

(2) The MATDEV will plan, program, budget, and execute all mission-critical computer resources weapon system software support requirements until the transition of PPBE process responsibilities from the MATDEV to the designated LCSEC is completed. The MATDEV and LCSEC will plan and coordinate PPSS with appropriate matrix support elements to synchronize the support needed for PPSS. Once the transition is complete, the LCSEC will assume all PPBE process responsibilities for the PPSS of the weapon system.

(3) Procurement and/or research, development, test, and evaluation funds will be used for all software support requirements until the weapon system software increment production is completed or in support of significant modifications. OMA funds will be used for software support after the weapon system software increment production is complete. OMA dollars will be planned and programmed by the MATDEV in coordination with the LCSEC through the POM until the first FY OMA funds are used. The MATDEV will use the system MDEPs to program and budget all software support prior to transition into PPSS. After that, the LCSEC will plan, program, budget, and execute PPSS requirements.

(4) Total system program funding (such as hardware and software) will be balanced to attain maximum battlefield functionality. The MATDEV MSC and LCSEC will jointly review the system's programmed requirements and funding across all appropriations and ensure the funding profile is sufficient and in compliance with HQDA financial policy to maintain visibility of both PPSS and system hardware requirements and funding.

(5) PPSS requirements will be defined as the level of effort necessary to retain the minimum essential capabilities of the system fielded (this means do no more than keep the system that was fielded operational), correct operational defects, and maintain minimum battlefield functionality. Funding will be included for retention of a software engineering capability.

(6) LCSEC core costs are not to be distributed as part of the system PPSS cost.

(7) COTS software may become a PPSS funding consideration only if the weapon system uses commercial computer hardware or software that has been modified, the software is embedded and cannot be vendor updated, or the software has a life cycle of greater than 5 years.

(8) Both the MATDEV and the LCSEC will collect software cost and technical execution data to facilitate defensible planning and programming. Data collection will be in accordance with HQDA and/or OSD policy.

d. Deferred maintenance and financial reporting.

(1) Procurement request order numbers for depot-level deferred maintenance will be recorded in DMOPS at priority 155 (deferred maintenance).

(2) The Federal Accounting Standards Advisory Board requires the DCS, G-4 to provide supplemental information on deferred maintenance as part of the Army's financial statement. Army financial data will be submitted not later than 10 days after the FY ends. Army will disclose in a financial statement the materiel amounts of unfunded deferred maintenance on the national level, deferred field maintenance, and deferred maintenance on property plant and equipment.

(3) The two acceptable methods of measuring deferred maintenance are: the condition survey method and the life cycle cost forecast method, both of which are defined in the Federal Accounting Standards Advisory Board, Statement of Federal Financial Accounting Standards No. 6, Accounting for Property, Plant, and Equipment.

(4) The DoD FMR allows the DCS, G-4 to report deferred maintenance on weapon systems using the cost assessment survey. The survey is based on the condition of reportable assets, life cycle cost forecast of cumulative deferred maintenance, or other methods if the accounting method is adequately described in the financial statements.

(a) When reporting deferred maintenance, deferred maintenance scheduled to be completed in future years must be addressed.

(b) Cost assessment of depot-level maintenance requirements are completed annually for weapon systems and related support equipment. The cost assessments are based on condition assessments, scheduled recapitalization, and other special depot maintenance programs that may involve reconstitution of the force.

5-14. Mobilization planning

a. Requirements identified specifically for mobilization, surge, or reconstitution purposes will be separately identified to prevent mixing of mobilization requirements with normal maintenance requirements.

b. Maintenance mobilization workload requirements include cyclic, normal overhaul, rebuild, battle, crash damage overhaul, rebuild, activation of items taken from long-term storage, modifications, fabrication and/or manufacture, reclamation and/or disassembly, and maintenance assistance (support for deployed and deploying units).

c. A sustainment maintenance mobilization plan will be developed and include major and secondary items, ARNG and USAR requirements, inter-Service and interdepartmental orders, and essential contracts.

d. Sustainment maintenance mobilization secondary items requirements will be forecast in accordance with the mobilization schedule.

e. The principal for the agent's commitment at the time of the initial depot maintenance ISSA will project inter-Service maintenance mobilization requirements. Negotiated depot maintenance ISSAs will remain in effect after the date of mobilization.

f. Mobilization requirements to support allies will consist of continuation of agreements in effect on date of mobilization. Unless more specific information is available for a program, depot maintenance workloads

generated through international logistics for those engaged or mobilized countries will increase at the same rate as a comparable Army item during a period of mobilization.

g. Closed loop support procedures will be implemented for critical items for which production cannot satisfy mobilization demands (see AR 710–1). Closed loop support programs will be identified with the appropriate management interest item code.

h. Repair and/or overhaul MELs will be relaxed or eliminated.

i. Plans will be reviewed at least every 2 years in conjunction with the core computation process.

j. Depot maintenance mobilization plans will include the following:

(1) Depot maintenance mobilization requirements for materiel that is not the responsibility of AMC but is accomplished in CONUS sustainment.

(2) Requirements in terms of man-hours, skills, and support equipment required by deploying and deployed units. AMC will coordinate with FORSCOM in identifying these requirements.

(3) Requirements in terms of man-hours, skills, and support equipment required for reconstitution of equipment based on increased operational tempo, equipment availability data, and defense guidance.

(4) A depot maintenance mobilization workload (DMMW) distribution plan developed using mathematical modeling techniques. The techniques used should provide for a gradual post mobilization buildup from peacetime to full capacity within 6 months after mobilization. This technique will incorporate the requirements to reconstitute force structure capabilities at the end of conflicts based on timeframes identified in the defense guidance.

(5) To identify DMMWs in excess of capacity (see AR 700–90), DMMW will be initially assessed against core capability and capacity (see AR 700–90). If DMMW is less than core capability, core will be reassessed using approved methodology. DMMW in excess of organic capacity and beyond the capability of all depots will be assigned to an alternate source.

5–15. Depot maintenance plant equipment

a. Depot maintenance plant equipment (DMPE) requirements will be identified in the DMSP for all new equipment entering the Army inventory that will require DLR in DoD depots. DMPE may consist of items on hand not requiring modification, on hand requiring modification or adapters, and new equipment.

b. MATDEVs will ensure that required DMPE capability is developed and/or procured for new weapon systems to coincide with the generation of the first repairable assets.

c. AMC is responsible for coordination to assure DMPE is available at the maintenance activity to support assigned depot maintenance programs. The programs will be based on requirements developed during programming and budget cycles.

d. An annual commitment for DMPE will be established against the AWCF and programmed DMPE projects.

e. Depot manuals will be acquired and/or prepared for DMPE. Maximum use will be made of COTS manuals as prescribed by AR 25–30.

5–16. Training

a. AMC will provide maximum support to the ARNG and the Army Reserve training at AMC installations and/or activities at minimum cost to RC units. Identifiable incremental costs for installation support furnished to the RC in support of active duty for training or IDT are reimbursable in accordance with AR 5–9. Incremental costs are only those costs that would not have been incurred had the unit not been supported.

b. Depot and/or depot activities will—

(1) Provide advice and technical assistance in support of the premobilization training of assigned RC units to improve their training level, overall readiness, and mission capability. RC units may also be in an affiliation status with their depot and/or activity.

(2) Participate in the AT scheduling process for RC units and be given priority for training dates at all AMC installations.

(3) Coordinate required training assistance and support with the Army Reserve and NGB.

c. RC units will—

(1) Develop plans for accomplishing designated depot and unit mission tasks.

(2) Train at designated AMC installations a minimum of 1 year out of each three while assigned to the AMC depot.

(3) Periodically exercise plans developed for employment when the unit conducts training at the depot and/or depot activity it will augment upon mobilization.

d. AMC will allocate not more than 10 percent of its potentially contractual cargo and/or equipment movements as training opportunities for USAR and/or Active Component transportation and related troop units. Hazardous cargo movements will also be included as RC training opportunities.

5-17. Aviation depot maintenance round-out units

a. The Aviation Depot Maintenance Round-Out Unit (ADMRU) program consists of four Theater Aviation sustainment maintenance groups (TASMGs) and the HQ, ADMRU. Respective State Adjutant Generals operationally control the four TASMGs and the HQ, ADMRU during garrison operations with direct doctrinal and operational guidance from the NGB Aviation and Safety Division. TASMGs perform back up field and sustainment-level maintenance on ARNG aircraft and components in support of the ARNG Army Aviation Support Facilities. Performing NMP work, SRAs, and OTRs maintains required skill sets, as well as supports the ARNG aviation aircraft fleet. The HQ, ADMRU is responsible for mobilization planning and coordination with AMCOM and AMC to include specialized training and classification missions in support of AMC. HQ, ADMRU, in conjunction with AMC and AMCOM, is responsible for controlling, maintaining, refurbishing and new procurements in support of the Theater Aviation Maintenance Program (TAMP) equipment package.

b. When mobilized, AMC may direct that the TASMGs perform surge workload at home station. AMC may direct the TASMGs in whole or in part to augment CONUS depots or to send teams to support mobilization and deployment of aviation units from CONUS installations. AMC may also mobilize the TASMGs, as well as the HQ, ADMRU (to be converted to a TASMG HQ & HQ Detachment) and deploy them to augment AMC forward commands in operations. The TASMGs will operate the TAMP when deployed to an area of operations. The TAMP equipment package is a like set of equipment (that each TASMG has and operates) that will deploy forward to be used and operated by the TASMG personnel during deployments. The TAMP equipment package plus the sustainment level skills of the TASMG personnel provide the aviation sustainment capability forward at the TAMP. The TAMP equipment package is deployable, but not mobile once set up in Theater, the TAMP becomes a fixed base operation. The TAMP equipment requires a cement floor or transportable maintenance facilities to secure and calibrate the equipment.

c. The TASMGs and HQ, ADMRU units remain under the command of their respective State Adjutant Generals during pre-mobilization. AMCOM assumes command and control of the mobilized units or teams when the unit or team arrives onsite (for example, CONUS depot). If the HQ, ADMRU and/or TASMGs deploys in whole or part, the AMC forward command assumes operational control when the unit arrives in theater. The HQ, ADMRU will perform the mission of the fifth (rotational) TASMG HQ with military and contractor maintenance support, if required. During mobilization, the TASMGs provide AMC with an employable mobilization surge workload capability for depot-level classification and repair of aviation materiel.

d. AMCOM will—

(1) Establish formal mobilization planning, work loading, programming, and training guidance to include unit mission, mobilization station, and related subordinate command responsibilities; premobilization training; and evaluation and training exercise participation.

(2) Establish training criteria for and evaluate the training of the HQ, ADMRU and TASMGs. Periodic evaluations will be designed to measure mobilization readiness in aviation logistics support, mobilization planning system, operations, training, safety, and administration as a minimum. Coordination of evaluation schedules with the respective State Adjutant Generals will be accomplished before each FY.

(3) Establish mobilization-training objectives based on wartime missions and/or workloads.

(4) Provide guidance and assistance to HQ, ADMRU and TASMGs in implementing the Army training management system.

(5) Provide management guidance necessary to enhance HQ, ADMRU and TASMGs mobilization readiness through training together with the CNGB.

(6) Provide necessary resources for peculiar training requirements as funds are available and identify and assist in securing resources not available in peacetime channels but required for special depot-level training to meet mobilization requirements.

(7) Provide necessary equipment and subject matter experts as required and as funds are available.

(8) Provide highly qualified aircraft maintenance personnel to HQ, ADMRU and TASMGs, on request, to perform onsite training and assistance.

e. HQ, ADMRU and TASMGs will be prepared to deploy within 30 days of mobilization. The HQ, ADMRU and TASMGs will also be prepared to augment CONUS depots within 30 days of mobilization.

(1) In case of full mobilization, from the day of mobilization to M+90, the remainder of the CONUS TASMGs clears in-house workload and provides depot assistance to the deploying FORSCOM forces.

(2) At M+91 day and until termination of mobilization, the CONUS HQ, ADMRU and TASMGs perform the assigned AMC mobilization workload in support of the national aviation pipeline.

5-18. U.S. Army Materiel Command forward commands

AMC has established forward commands in theater. They are AMC-Southwest Asia, AMC-CONUS, AMC-Far East, and AMC-Europe. During operations, AMC may augment the forward commands with a combination of military, DA civilian, and contractor personnel. The mission of the augmented command is to enhance unit readiness by bringing U.S.-based technical capabilities and resources to the battlefield. AMC can tailor the command to fit the situation. Standard missions include logistics assistance, sustainment maintenance, oil analysis, calibration of equipment, ammunition surveillance, release of APS, materiel fielding, and technology insertion. The AMC forward commands will work in coordination and cooperation with the DLA contingency support team.

5-19. Reclamation at the national level

a. Reclamation is the process of removing required serviceable and economically repairable components from potential DoD excess or surplus property. These parts are returned to the proper supply activity for future requirements. Residue is processed as disposable property. AR 710-1 contains the policy for controlling the reclamation of Army-managed equipment at the national level.

b. The commander of each LCMC will establish and fund controlled reclamation programs.

(1) Depots with maintenance missions and/or contractor reclaiming sites will perform the task of dismantling end items to obtain component parts.

(2) Depot reclamation work breakdown structure (WBS) numbers will be classified as priority or routine. Priority reclamation procurement request order numbers (issue priority designators 01-08, used to meet priority requirements) will take precedence over a maintenance program with an equal or lower priority. Routine reclamation orders will be scheduled according to assigned priorities of depot workload.

c. Materiel managers at the LCMCs will prepare save lists, with appropriate narrative, for items to be recovered and will forward the lists to the recovery program control officer at the depot performing the recovery operation. Repairable recovered items may be exempted from MEL control if required for high priority programs and there is no practical alternative SOS. Exemption will be noted on the save list.

d. Depot commanders will designate a recovery program control officer responsible for the coordination of all reclamation programs with LCMCs and within the depot. The recovery program control officer will—

(1) Establish and maintain the status and suspense file on all reclamation programs.

(2) Ensure that enough of the major items and/or assemblies are on hand.

(3) Close out the reclamation programs only after supply has verified that the receipt action is complete.

e. Only the cost of the reclamation actions will be charged against the reclamation maintenance procurement request order number.

f. QA procedures will be instituted to—

(1) Inspect and classify removed components as serviceable, unserviceable repairable, or uneconomically repairable.

(2) List missing assemblies and/or components or shortages from major items in the recovery operation other than those identified as recovered.

(3) Inspect and reclassify the major item on which reclamation was performed.

5-20. Bill of material for materiel requirements planning

a. A BOM is the formally structured list of basic parts and materiel contained in equipment weapon systems, their components and/or assemblies, depending on the type of BOM. The primary purpose or function of a BOM, in the maintenance sustainment process, is to provide the official basis to identify and determine material requirements and shortages (planned or actual) as a result of the materiel requirements planning (MRP). The MRP process works to ensure the correct repair parts and components are identified and available to meet the maintenance, repair, overhaul, or fabrication schedule while

maintaining the lowest possible level of materiel on hand. LCMCs are to ensure that current BOM and other updated technical and/or engineering data are the basis for MRP and long-term decision-making in support of depot maintenance work request (DMWR) and WBS actions.

b. For BOM for MRP see DA Pam 750–1.

5–21. Repair parts support

a. Army depot maintenance activities performing DLRs are authorized to requisition and store spares, repair parts, and consumable items to support their maintenance programs and fabrication requirements. Details on funding for repair parts, (for example when to fund a parts requisition for the various types of OMA and AWCF and what type program each should pay for) are contained in AMC Resource Management Policy. These materials, when on hand at depot maintenance activities, are not available for redistribution until identified as excess to production requirements by the depot commander.

b. For repair parts support planning and procedures see DA Pam 750–1.

5–22. Sustainment maintenance reporting and recording

All applicable documents and records will be processed in accordance with DA Pam 750–8 during depot maintenance. Government contractors are required to report work order information for sustainment maintenance reset contracts to Army maintenance systems as directed by DCS, G–4. Personnel preparing maintenance contract requirements packages will ensure that the provisions of this regulation are included in all applicable maintenance contracts.

Chapter 6 Commodities Maintenance

Section I

Combat Vehicles

6–1. Sustainment maintenance

Combat vehicles will be selected as candidates for recapitalization and overhaul during peacetime under the CVE Program. ACOMs, ASCCs, and DRUs will report combat vehicles requiring sustainment maintenance support to, and receive disposition instructions from, the appropriate commodity command. Selection criteria for equipment:

a. Combat vehicles reaching a mileage or hour interval prescribed by AMC will be inspected by sustainment-level teams to identify vehicles requiring overhaul. Only the vehicles meeting the scoring criteria will be directed for return to AMC depot. A copy of the evaluation will accompany the vehicle when it is sent to an overhaul facility. Approved repair candidates will be scheduled and turned in to depot maintenance shops in accordance with the CVE Program. (See para 4–9 for transfer/turn-in standards.)

b. Combat vehicles that do not yet reach the prescribed mileage or hour threshold but are considered to be overhaul candidates by the user ACOM, ASCC, and DRU may be nominated by the ACOM, ASCC, and DRU for evaluation by the teams.

c. Combat vehicles requiring extensive modernization or recapitalization in a depot facility may be inducted without benefit of the CVE. These vehicles will be overhauled and/or rebuilt to a like-new condition in conjunction with the modernization or recapitalization DMWR, national maintenance work requirement (NMWR), or statement of work.

d. When a replacement item is not available and the depot cannot overhaul and return it to user, the ACOM, ASCC, and DRU commander can authorize units to continue using the item.

6–2. Army National Guard sustainment maintenance

a. All sustainment maintenance for ARNG end items (except aircraft) will be on an exchange or repair-and-return basis. Surface equipment that requires unscheduled or urgent sustainment repair will be reported to NGB–Maintenance Office for consideration on a case-by-case basis. Army surface equipment will be selected for sustainment repair under the following criteria:

(1) All major end items that are type classified standard and meet condition requirements as determined by the commodity command concerned.

(2) All major end items type classified standard in an unserviceable condition beyond the capability of sustainment maintenance.

(3) Major end items that have a record of frequent maintenance failure requiring extensive repairs and for which the repair of recurring failures, if overhauled at a depot facility, would be cost effective.

(4) Combat vehicles will be selected for sustainment repair on a condition basis (not on mileage) when TI by sustainment maintenance indicates that depot repair is in the best interest of economy and readiness.

(5) Towed and self-propelled artillery weapons, mortars, and recoilless rifles will be selected for sustainment repair in accordance with TMs.

b. The following will be provided for current year requirements:

(1) The NGB Logistics Maintenance Branch will provide the commodity commands with the DD Form 448 (Military Interdepartmental Purchase Request) for major end items and calibration services and/or repair support.

(2) Calibration services and red tag repair of TMDE will be funded by the NGB and provided by the Army TMDE activity to the States.

(3) A schedule for sustainment work input will be provided to each State concerned. The State will provide the necessary forms and shipping documents. The State will retain ownership of the item during the entire repair-and-return process, or the item may be exchanged. Transportation costs of a major item to and from sustainment facility will be coordinated by NGB Army Logistics Division.

(4) Reconditioning and repair of combat vehicle tracks and road wheels and related rubber products will be funded directly by the NGB.

(5) For repairs and/or services for non-major items provided through the AMC sustainment system, requests for secondary items and fuel tank recoating will require units to do the following:

(a) For field-level or sustainment-level maintenance assistance states will request support from the commodity command having responsibility for the item.

(b) For aviation field support, they should request assistance through NGB–AVN or their regional Aviation Classification and Repair Activity Depot (AVCRAD).

Section II

Army Aircraft

6–3. Functional responsibilities, program objectives, and maintenance support concept

a. The functional responsibilities of the Army aviation maintenance activities are to—

(1) Provide safe, reliable, and FMC aircraft to the user.

(2) Sustain materiel in an operational status and/or restore equipment to an FMC condition.

(3) Enhance or upgrade aircraft functional usefulness through MWO, materiel change, and product improvement.

b. The program objective of Army aviation maintenance is to provide robust modular maintenance and logistics support to aviation weapon systems end item users. This includes, but is not limited to, repair of airframes, engines, aircraft subsystems, avionics, communications, navigation, aircraft survivability equipment, aerial weapon systems, fire control and/or fire direction items, and other airborne mission equipment packages necessary to support the total aviation weapon system life cycle support.

c. The maintenance support concept to accomplish these objectives, will transition from its current three levels of aviation maintenance to the Army maintenance system consisting of field and sustainment maintenance levels. The Aviation Logistics Transformation Plan will restructure aviation maintenance organizations from the current three levels of maintenance, which employs redundant echelons of pass-back aviation maintenance, to tailored, robust, and mobile aviation maintenance units. This modular maintenance concept allocates personnel, tools, and equipment resources where they are most effective. This change will result in a robust aviation maintenance operation. The goal is to eliminate redundancy where possible while retaining core capabilities. These long-term efforts will culminate in significant reductions to the aviation logistics tail.

d. Designation and utilization of the former aviation unit maintenance (AVUM) and/or aviation intermediate maintenance (AVIM) is no longer applicable under the Army maintenance system. Commands will not use AVUM and AVIM designations in maintenance determination and execution. Any published reference to either term will be disregarded, and the required level of maintenance will be considered field maintenance. Specific tasks will be accomplished based on MTOE SKOTs assigned to the command and

qualified personnel available to perform the required tasks. The combat aviation brigade commander has the authority to locate and assign all FLM capabilities in support of the combat aviation brigade's mission.

6-4. Aviation field maintenance

The field maintenance operation is resident in each aviation brigade.

a. An aviation support company within an aviation support battalion (ASB) is organic to each aviation brigade and will—

(1) Perform forward sustainment maintenance for selected high-value components and subassemblies under the authority of the assigned logistics engineer and or applicable maintenance engineering call.

(2) Perform authorized field maintenance as defined in *paragraph 6-3d* that was formerly classified as unit and intermediate maintenance (current terminology in aviation TMs) in the applicable MAC.

(3) Have appropriate resources (both the personnel and equipment) to perform field maintenance.

(4) Have appropriate resources to support operational battalions with aviation support platoons.

b. The flight companies and/or flight troops and aviation maintenance companies/aviation maintenance troops will—

(1) Perform authorized field maintenance as defined in *paragraph 6-3d* that was formerly classified as unit and intermediate maintenance (current terminology in aviation TMs) in the applicable MAC.

(2) Have appropriate resources (both the personnel and equipment as authorized by the applicable TDA and/or table of organization and equipment TOE to perform field (current unit-level tasks) maintenance.

(3) Be staffed and equipped to perform high frequency—on aircraft—maintenance tasks.

c. ASBs and/or aviation support companies and AVCRAD or Army aviation support facility will furnish mobile, responsive, one-stop maintenance support and perform all maintenance functions as designated by the MAC in materiel publications as either field or sustainment maintenance, as required.

(1) Authorized maintenance includes the following:

(a) Replacement and repair of modules and components.

(b) Repair of end items that can be efficiently accomplished with available skills, TMDE, tools, and materiel.

(2) Repair materiel for return to user and emphasize support of OR requirements.

(3) Establish a program to support AMC and/or Army aviation flight activity units by repairing selected items for return to stock when such repairs cannot be accomplished at the AMC and/or Army aviation flight activity level.

(4) Inspect, troubleshoot, test, diagnose, repair, adjust, calibrate, and align aircraft system modules and components. Module and component disassembly and repair normally will be limited to tasks requiring cleaning and the replacement of seals, fittings, and items of common hardware.

(5) Determine the condition of specified modules and components removed prior to the expiration of the time between overhaul or finite life.

(6) Perform aircraft weight and balance inspections and other special inspections that exceed AMC and/or Army aviation flight activity capability.

(7) Furnish quick response maintenance support and technical assistance using mobile maintenance support teams and aircraft recovery and evacuation.

(8) Furnish collection and classification services for serviceable and unserviceable materiel.

(9) Operate a cannibalization point activity under AR 710-2.

(10) Inspect, troubleshoot, test, diagnose, repair, adjust, calibrate, and alignment of aircraft system specific GSE. Concern lies within systems required to attain and maintain an airworthiness standard as defined in AR 70-62 regardless of the GSE being a flight or non-flight capable system. Examples of non-flight GSE of concern are aircraft jacks and stands and the aviation ground power unit which provides alternating current and/or direct current electricity, pneumatic air, and hydraulic ground power to the aircraft. An example of a flight capable GSE is the unit maintenance aerial recovery kit which is used to recover damage aircraft via sling load operations. Commanders will ensure GSE is maintained and sustained to standard ensuring the safety and airworthiness of the aircraft and or systems the GSE is used with will not be compromised.

d. Maintenance functions that exceed field-level repair capability will be passed back to sustainment-based maintenance activity.

e. Unserviceable repairable modules, components, and end items that are beyond the capability of an ASB and/or Army aviation support facility to repair will be evacuated to the designated sustainment base maintenance activity.

f. GSE and TMDE will be evacuated to the appropriate field or sustainment unit of action and/or ground maintenance when it is beyond the capability of an aviation support company and/or ASB to repair.

g. Calibration and repair of TMDE will be performed as indicated in AR 750–43, DA Pam 750–43, and TB 43–180.

6–5. Army National Guard aviation field maintenance

ARNG aviation maintenance support will conform to NGB policy contained in NG Pam 750–2. Army aviation flight activity and Army aviation support facilities will perform FLM actions authorized by and detailed in NG Pam 750–2. These include diagnosis, servicing, preventive maintenance intermediate, phased maintenance, special inspections, aircraft recovery and evacuation, aircraft weighing, maintaining authorized RCF aircraft, minor airframe repair, avionics, and armament repair.

a. Requests to exceed maintenance authority will be forwarded to the supporting AVCRAD. Requests to exceed expenditure limits (funds and/or work hours) will be forwarded to Chief, NGB (NGB–AVN–A) through the supporting AVCRAD.

b. A USAR aviation support facility collocated with a supported aviation support company and/or ASB unit is authorized by DCS, G–4 (Maintenance Directorate) to perform FLM using tools and/or equipment authorized to the supported unit.

6–6. Aviation sustainment maintenance

a. Aviation sustainment as defined by aircraft TM MAC or AMC agency executed maintenance not classified as FLM is sustainment-level maintenance and will only be accomplished by authorized agencies as permitted in this regulation.

b. The sustainment base comprises the ARNG AVCRADs or TASMGS, sustainment, the OEMs maintenance and overhaul facilities, installation support activities, and AMCOM contract maintenance support. The TASMGS is the name for an AVCRAD when it deploys and receives all the additional attachments it requires to perform its wartime missions.

c. Army aircraft will be maintained and supported to the extent authorized in this policy and TB 43–0002–3. Army aircraft may be accepted into national base facilities for programmed or un-programmed maintenance. Accountability will be transferred to the NICP when aircraft are accepted for programmed depot maintenance. Aircraft accepted for un-programmed depot maintenance will normally be processed on a repair-and-return-to-user basis.

d. In peacetime, the ARNG TASMGS perform field and sustainment base maintenance in support of regional ARNG aviation assets. In addition to field and sustainment maintenance, the TASMGS performs NMP repair, limited sustainment airframe repair, aircraft painting, major airframe repair, sustainment-level component repair, and component repair and management, as directed by AMC. These functions are specifically discussed in NG Pam 750–2. Requests to exceed maintenance authority and/or expenditure limits (funds and/or work hours) will be forwarded to AMCOM.

e. The Aviation Sustainment Maintenance Program consists of sustainment maintenance such as aircraft recapitalization, rebuild, and overhaul, crash and battle damage repair, major airframe modifications, and on-condition maintenance.

f. Aircraft will be selected as candidates for recapitalization and overhaul during peacetime under the aircraft condition evaluation program as described in DA Pam 750–1.

g. Aircraft requiring crash or battle damage repair will be reported to, and disposed of, in accordance with instructions received from the NMP and/or NICP, using procedures prescribed in TB 43–0002–3.

h. Aircraft programmed for sustainment overhaul or crash and battle damage repair will have MWOs installed during the overhaul process. Aircraft requiring sustainment modifications that are not scheduled for sustainment overhaul or crash and battle damage repair will be modified by contractor or sustainment modification teams in accordance with AR 750–10. All modifications installed will be documented in accordance with AR 750–10. Sustainment modification programs for converting aircraft to later series (for example, AH–64A to AH–64D) will normally include overhaul as a part of the total program. Candidates for conversion should also be overhaul candidates whenever practicable. Conversion and modification programs will be coordinated between NICP and ACOMs, ASCCs, and DRUs.

i. All applicable documents and records will be processed in accordance with DA Pam 738–751 during sustainment maintenance. Personnel preparing maintenance contract requirement packages will ensure that the provisions of this regulation are included in all applicable maintenance contracts.

6–7. Army National Guard sustainment maintenance

Aircraft that require unscheduled or urgent sustainment repair will be reported to ARNG. Aircraft will be selected for recapitalization or sustainment repair based on rebuild induction criteria or when estimated cost of repair exceeds FLM capability. When aircraft RCFs are available at the NICP, the aircraft will be scheduled on an exchange basis. When RCF is not resourced, aircraft will be repaired and returned to the owning ARNG unit.

6–8. Aircraft parts that have been exposed to fire and/or saltwater immersion

Aircraft parts, components, or assemblies that have been subjected or exposed to fire and/or saltwater immersion will not be reused locally under any circumstance. Such items will be inspected locally, and if considered repairable, returned through maintenance or supply channels for national-level inspection and overhaul. All items that are to be condemned or returned for inspection and overhaul will require a statement on all applicable accompanying documentation, including DD Form 1577 (Unserviceable (Condemned) Tag – Materiel) or DD Form 1577–2 (Unserviceable (Reparable) Tag – Materiel), stating the item has been subjected or exposed to fire and/or saltwater immersion.

6–9. Items removed from crash-damaged aircraft

Pending the outcome of an aircraft investigation, in accordance with AR 385–10 and DA Pam 385–90, extreme caution will be exercised in the reuse of items removed from crash-damaged aircraft or aircraft that have been involved in accidents. Items removed from a crashed aircraft or an aircraft that has been involved in an accident will not be reused regardless of apparent serviceability until such items have been subjected to a thorough inspection in accordance with paragraphs 6–8 and 6–10.

6–10. Inspection and testing of crash-damaged components and assemblies

a. All functional components and assemblies (such as engines, transmissions, pumps, valves, generators, and blades) will be inspected and tested in accordance with the applicable sustainment maintenance work requirement. Components not designed as overhaul items will be inspected and tested in accordance with the applicable maintenance manual. An item will either be condemned locally or evacuated to a sustainment maintenance facility according to the recoverability code assigned to the item.

b. All items that are to be locally condemned will require a completed DD Form 1577. This tag will be annotated to reflect that the item has been removed from a crashed aircraft or an aircraft that has been involved in an accident. Mutilation of condemned aeronautical items will be accomplished in accordance with TM 1–1500–328–23.

c. All items that are to be evacuated to a sustainment maintenance facility will require a statement on all applicable accompanying documentation, including DD Form 1577–2, stating that the item has been removed from a crashed aircraft or an aircraft that has been involved in an accident.

6–11. Nondestructive testing of structural parts and assemblies of aircraft

The inspection and testing of structural parts and assemblies will, at a minimum, require a complete visual inspection but may require additional nondestructive testing in accordance with the applicable maintenance manual. Army military personnel performing nondestructive testing will be a graduate of MOS 15D initial entry training school and have been awarded the ASI–N2 through an approved training course. For all Civilian DoD personnel and non-DoD personnel performing inspections in accordance with the technical order, they will be qualified and certified to the current National Aerospace Standard (NAS) 410. At a minimum, the local organization will document its procedure on training and certifying their inspectors in accordance with NAS 410.

6–12. Shipment of unserviceable aircraft

Unserviceable items selected for disposal by AMCOM will not be reinstalled in an aircraft. Action will be taken to ensure that the airframe attaching elements of the removed items are protected from deterioration or contamination while awaiting the replacement item. However, if the unserviceable aircraft is to be shipped or transferred off post or off station for repair, the unserviceable or interchangeable item must be

installed or completely secured to prevent possible damage, deterioration, or contamination during movement of the aircraft. All unserviceable components will be individually tagged with DD Form 1577-2 and suitable entries made in the aircraft equipment records.

6-13. Maintenance training aircraft

a. General. Maintenance training aircraft, these are aircraft employed for ground technical training that do not require airborne operations. Training aircraft are further classified as follows:

(1) *Category A.* Aircraft that can be returned to flyable status through minimum maintenance and modification. This category covers aircraft assigned on a temporary basis not to exceed 365 days to meet special training requirements. Extensions may be granted by AMCOM.

(2) *Category B.* Aircraft that is capable of ground operation if all components are installed. Category B aircraft can be returned to flyable status by sustainment rebuild or overhaul.

(3) *Maintenance training airframes.* Retired and condemned aircraft used to train maintenance personnel. Aircraft in this category are retired or have been damaged or deteriorated beyond the MEL established in TB 43-0002-3. Classification to maintenance training airframe status results in the aircraft being permanently grounded. Maintenance training airframes will be reported on DA Form 1352 (Army Aircraft Inventory, Status and Flying Time).

(4) *Maintenance parts task trainers.* These are portions of condemned aircraft (such as the cockpit, tail boom or cabin section) used to train Soldiers on maintenance tasks. They are not reportable on DA Form 1352.

(5) *Maintenance training devices.* Aeronautical equipment other than Category A or Category B aircraft or maintenance training airframes that are used to facilitate aircraft maintenance training. Items in this category range from uninstalled elements to mockups of major assemblies or functional groups.

b. Training aircraft responsibilities.

(1) Commander, AMCOM will—

(a) Provide aircraft for use as maintenance training aircraft based upon known requirements and as directed by AMC.

(b) Submit recommendations through AMC to the DCS, G-4 (Maintenance Directorate) for approval to classify and reclassify aircraft for maintenance training.

(c) Control current inventory of all maintenance training aircraft and distribute maintenance-training aircraft to meet training requirements.

(d) Provide required repair parts support and MWO kits for Category A and Category B maintenance training aircraft to the full extent required to complete maintenance.

(e) Provide required repair parts support for maintenance training that will ensure accomplishment of the training mission. Serviceable high-dollar value items (for example, engines, transmissions, rotor blades, and propellers) are not authorized except when approved by AMCOM.

(f) Develop funding requirements for resourcing repair of crash-damaged aircraft for use as maintenance trainers.

(g) Provide training activities with unserviceable or crash-damaged components as they become available.

(2) CG, FORSCOM; CG, TRADOC; major overseas commanders; and CNGB will—

(a) Present projected FY consolidated requirements for maintenance training aircraft, maintenance trainers, components, and test equipment. Institutional training equipment requirements for the subsequent FY will be obtained from annual requirements presented to the DCS, G-3/5/7 in May and/or June each year.

(b) Receive, evaluate, and provide command approval or disapproval of all requests for maintenance training aircraft received from subordinate activities.

(c) Ensure that all maintenance training aircraft assigned to subordinate activities are maintained under this regulation.

(d) Prior to repairs being accomplished, determine if crash-damaged aircraft or aircraft that is not economically feasible to repair can be exchanged for Category A or Category B aircraft already assigned to a training activity.

(3) Commanders of activities possessing maintenance training aircraft will—

(a) Maintain maintenance-training aircraft as prescribed herein.

(b) Report to AMCOM all excess maintenance training aircraft.

(4) Provide monthly reports of all maintenance training aircraft in their possession on DA Form 1352 in accordance with AR 700–138.

c. Maintenance policy.

(1) Category A aircraft will be maintained in accordance with applicable publications to a standard so that the aircraft can be returned to a completely operational flight status by the ASB within 60 working-days. Category A aircraft should meet transfer serviceability standards outlined in TM 1–1500–328–23 prior to shipment to or from a designated training activity.

(2) Configuration control of Category B maintenance training aircraft will be maintained through incorporation of all applicable MWOs and, to the extent possible, ensure that training is consistent with the field operational aircraft systems. All systems and/or components required for program of instruction will be maintained operational and updated in accordance with the latest applicable MWOs. Removal and turn-in of systems and/or components not required for program of instruction may be approved by AMCOM. Category B aircraft and components will be maintained so they can be returned to flight operational status by sustainment overhaul or repair. Aircraft transfer standards are not mandatory for transfer to sustainment or any activity authorized the use of Category B aircraft.

(3) Serviceable components and/or systems not covered in paragraph 6–13d(1) will be preserved and periodically inspected, operated in accordance with appropriate TMs, and re-preserved.

(4) Components of maintenance training airframes that are not required for training purposes should be removed and returned to sustainment through normal supply channels. DD Form 1577–2 will be attached to each item. Disposition is in accordance with AR 710–2.

(5) AMCOM authorizes the control, classification, and reclassification of aircraft defined as maintenance training aircraft.

(6) A predetermined quantity of aircraft will be assigned to TRADOC as maintenance training aircraft to satisfy initial distribution requirements. Total requirements will be satisfied by subsequent phased deliveries as aircraft become available from production or from the operational fleet.

(7) Category A and Category B maintenance training aircraft and aircraft designated as maintenance training airframes will be reported on DA Form 1352 in accordance with AR 700–138.

(8) Uneconomically repairable, crash-damaged, or retired aircraft may be used, when economically feasible, as a source for maintenance training airframes that will, whenever possible, be used as a replacement for Category A and Category B maintenance training aircraft and then be made available for return to flyable status, should a requirement exist. Any item removed from a crash-damaged aircraft for reuse will meet the criteria established by paragraphs 6–9 and 6–10. Final airframe classification will be made by AMCOM using TB 43–0002–3.

(9) Category A and Category B maintenance training aircraft that are no longer required will be reported to HQ, TRADOC. HQ, TRADOC will report excess maintenance training aircraft to HQ, AMCOM.

(10) Maintenance training airframes and devices that are no longer required will be reported to HQ, TRADOC. Excess maintenance training airframes and devices will be reported by HQ, TRADOC to AMCOM for disposition instructions.

(11) Categories assigned to maintenance training aircraft will not be re-designated without AMCOM approval.

(12) Aircraft items recorded on DA Form 2408–17 (Aircraft Inventory Record), when not required for training purposes on Category B maintenance training aircraft, will be returned to stock using normal supply procedures.

d. Controlled exchange.

(1) Controlled exchange of serviceable components from Category A and Category B maintenance training aircraft to any flyable aircraft is authorized. These components must be determined serviceable or economically repairable by a qualified inspector and must be of proper configuration and have all modifications applied. The component or assembly removed from a Category A or Category B maintenance aircraft will be replaced with a like component. These actions must receive concurrence from AMCOM.

(2) Controlled exchange of components from maintenance training airframes or maintenance training devices may be made only between other maintenance training airframes or maintenance training devices. Removal or installation of components listed in TB 1–1500–341–01 will call for the submission of DA Form 2410 (Component Removal/Repair/Install/Gain/Loss Record) in accordance with DA Pam 738–751 and TM 1–1500–328–23.

(3) Accountability of demands/consumption will be maintained in the unit shop stock for controlled exchange transactions.

e. Maintenance of equipment record folder.

(1) Equipment logbooks and historical records will be maintained in accordance with DA Pam 738–751 and TM 1–1500–328–23 for all training aircraft, maintenance training airframes, and maintenance training devices.

(2) Ground operating time will be recorded on DA Form 2408–13 (Aircraft Status Information Record). A combination of flight time and ground run time will be used to determine time change requirements. Requests for time change extensions of components on ground-run aircraft will be submitted to AMCOM for disposition.

(3) DA Form 2408–18 (Equipment Inspection List) inspections are required on Category A and Category B aircraft unless a waiver is granted by AMCOM.

Chapter 7

Maintenance of Watercraft and Rail Equipment

Section I

Watercraft

7–1. General

a. The purpose of this section is to establish policies that are specific to the maintenance of DA watercraft.

(1) The materiel maintenance system that supports Army watercraft is made up of diverse maintenance activities that share the common goal of creating and sustaining watercraft combat readiness.

(2) The four major functional responsibilities of the Army watercraft maintenance activities are—

(a) Sustaining materiel in an operational status.

(b) Restoring it to a serviceable condition.

(c) Updating or upgrading its functional usefulness through MWO, materiel change, and product improvement.

(d) Maintaining materiel to field level TMs and Commercial Manufacturer TM standards.

b. The objective of Army watercraft maintenance is to ensure safe, seaworthy, reliable, and FMC watercraft.

c. Watercraft units are not subjected to the Army's standard of replace forward and repair rear.

d. Watercraft FLM is characterized by on/off-system maintenance and includes inspect, test, service, adjust, replace, and repair of watercraft components, modules, sub-assemblies, assemblies, and systems returning them to a serviceable condition.

e. This section applies to all Army watercraft worldwide and all operators and support personnel of watercraft, up to sustainment level:

(1) Army Watercraft is defined in AR 56–9 and TM 55–500.

(2) Tactical river crossing materiel or non-MTOE and/or TDA watercraft used by the U.S. Army Corps of Engineers in its civil works projects and/or activities (except those items of marine engineering materiel to be activated in the time of mobilization) are excluded from the requirements herein.

7–2. Maintenance policies

a. The PD Army watercraft systems (AWS), Program Executive Office Combat Support and Combat Service Support, (PEO CS&CSS) is the life cycle manager for Army watercraft. The PD AWS, in partnership with U.S. Tank-automotive and Armaments Command (TACOM) LCMC, is responsible for all facets of life cycle management, to include sustainment maintenance and logistics support management processes of watercraft throughout its life cycle.

b. Field maintenance is comprised of crew and maintainer level maintenance.

(1) Crew-level maintenance is characterized by on-system maintenance performed by watercraft operators and engineers.

(2) Maintainer-level maintenance is characterized by on/off-system maintenance performed by watercraft engineers.

(3) In some cases, maintainer-level maintenance actions are performed, in accordance with the applicable MAC, by a maintenance contractor using best commercial practices.

(4) The makeup of a vessel crew is such that, it includes equipment operators as well as equipment operator/maintainers. For this reason, vessel crews will be treated in the same regard as a ground-based maintenance support team.

c. All regulations, policies, apportionments, and allocations that apply to a maintenance support team apply to a vessel crew. For instance, a vessel is authorized a shop stock and bench stock the same as a maintenance support team.

d. Sustainment maintenance is comprised of below sustainment and sustainment-level maintenance.

(1) Below depot-level maintenance does not require dry-dock or shipyard facilities but in most cases does require tools and/or support equipment and/or personnel resources exceeding the authorizations of FLM activities. Below depot-maintenance is routinely performed pier side by contracted maintenance support or occasionally through the installation maintenance activity using best commercial practices according to the language of a specific service(s) contract tailored to those repairs.

(2) Sustainment-level maintenance actions are of an intensive nature and are typically performed by contractors, requiring dry-dock and/or shipyard facilities using best commercial practices according to the language of a specific service(s) contract tailored to those repairs.

(3) On-condition, cyclic-maintenance is a sustainment-level service. This service is required to meet numerous, vessel specific, federal statutory and regulatory requirements.

e. TACOM, through the Watercraft Inspection Branch (WIB), will provide the following maintenance support and services for the performance of maintenance and/or repair actions on Army watercraft:

(1) Service, overhaul, and/or repair of end items should be outlined in the MAC. The MAC will cross-walk the maintenance task to the part, special tools, and test equipment to diagnose and/or repair to include times of task completion. When the MAC does not include service, overhaul, repair and/or troubleshooting references, PD AWS or commercial manufacturers TM will provide referencing guidance.

(2) Maintenance actions within watercraft legacy MACs identified in column F of the MAC are a shared responsibility between field and sustainment levels of maintenance. Availability of manpower, tools, and support equipment at the field level will be the primary factor in determining at which level the repair will be performed. Maintenance actions within watercraft legacy MACs identified in column H of the MAC are the responsibility of sustainment maintenance. When the MAC does not identify the maintenance level for a maintenance function of a component assembly it will be performed by sustainment-level maintenance. Maintenance activity level subjectivity will be clarified by TACOM Watercraft Group.

(3) All sustainment maintenance performed by WIB or contractors will be performed utilizing approved TELS in accordance with this regulation.

f. Perform a marine survey and/or TI by a WIB marine inspector or surveyor. The inspection will determine the statement of work required at the field and sustainment levels to return a watercraft to a serviceable condition (TM-10 series and TM-20 series standard).

g. Sustainment maintenance is contracted through the WIB utilizing the LIS work order process. Sustainment maintenance will be accomplished on a case by case basis according to the language of a specific service(s) contract tailored to the required repairs, specified by WIB, as follows:

(1) When repairs dictate that a watercraft be dry-docked to accomplish the necessary maintenance tasks, the WIB will provide a dry-dock report.

(2) When operational conditions dictate, TACOM LCMC may authorize lower-level maintenance activities to perform repairs beyond their authorized level of repair action. The QA and TELS work order data responsibility remains as designated in the MAC and/or commercial manufacturer's TMs.

h. Emergency repairs are immediate maintenance actions required to return the watercraft to a seaworthy, safe, and operable condition.

(1) The vessel master is authorized to perform emergency repairs at any level of maintenance when engaged in sailing operations (underway and/or deployed away from home port) when faults or deficiencies occur which are outside their authorized level of repair. This decision will be based upon the availability of resources at sea, the skill of the crew, and the impact of repairs to seaworthiness and operability.

(2) Sustainment emergency repairs made at the field-level must be inspected by work order to the appropriate maintenance activity as designated by the MAC for determination of the proper repair. This inspection will be requested as communications are available with that activity. Vessel configuration control will be maintained. Any deviations to the original configuration will be reported through the departure from specifications process in accordance with DA Pam 750-8 and returned to its original configuration upon return to home port.

(3) In cases where commands await disposition instructions, watercraft will be maintained in accordance with guidance provided by the PD AWS.

7-3. On condition cyclic maintenance

a. *General.* On condition cyclic maintenance (OCCM) is a sustainment level service. This service is required to meet numerous, vessel specific, federal statutory and regulatory requirements. All Army watercraft will undergo OCCM in accordance with the intervals established in DA Pam 750-1. The intervals are maximum time intervals. When a deviation of more than 3 months is anticipated, the using unit may request a waiver with justification through the appropriate ACOM, ASCC, and DRU commander to the TACOM LCMC. The equipment status reporting will follow standard EMSR guidelines after the waiver period (90 days after the service due date) has expired. OCCM is the sustainment-level maintenance that is performed to ensure compliance with international and national maritime regulatory guidance for minimum safety standards at sea. OCCM consists of a series of inspections and maintenance service actions that are designed to ensure that a watercraft's structure (internal and external), piping, main and auxiliary engines, electrical installations, lifesaving appliances, fire detecting and extinguishing equipment, pollution prevention equipment, and other equipment is maintained in a suitable, seaworthy, and safe condition. TACOM will provide policy and procedures applicable for watercraft inspections and surveys other than operator PMCS. Marine condition surveys are TIs and written evaluations performed by qualified WIB marine surveyors in accordance with TB 55-1900-201-45/1; Title 46, Code of Federal Regulations (46 CFR); American Bureau of Shipping (ABS) criteria; and International Convention for Safety of Life at Sea standards—

(1) A marine condition survey will be performed 180 days prior to the scheduled OCCM cycle. This survey will provide the basis for written specifications by which OCCM is accomplished. This will be a dockside inspection. When possible, the services of qualified divers will be used to ascertain the condition of the watercraft's hull and appendages below the deep load waterline.

(2) At the time of dry-docking, a dry-dock inspection will be performed to identify additional repair and/or maintenance requirements not observable at the time of the 180 day inspection (dockside).

(3) Scheduled surveys required by the U.S. Coast Guard and the ABS for retention of "load line" certification will be accomplished in accordance with 46 CFR 41-69 and TB 55-1900-201-45/1. When such inspections are required, the services of the ABS will be employed.

b. *Surveys.* In addition to the 180 day marine condition survey, TACOM LCMC whenever possible will also arrange an underwater hull survey as defined by TB 55-1900-201-45/1.

c. *Inspector qualifications.* Only experienced and qualified technical experts will perform marine condition surveys on Army watercraft. This requires the surveyor to be thoroughly familiar with, and capable of interpreting, written standards, Federal laws, rules, and regulations affecting watercraft inspection, common watercraft construction, maintenance, and repair procedures. The marine surveyor must also be capable of preparing written repair specifications and estimating repair costs (man-hour and materiel costs) for repairs required to return a watercraft to condition code B as defined by AR 725-50 to ensure the vessel is safe, seaworthy, and FMC.

d. *Responsibilities.*

(1) The WIB is responsible for the performance of all marine condition surveys incident to the repair and/or overhaul of Army watercraft when the maintenance and/or repair action is to be accomplished at the sustainment level. This includes all marine condition surveys incident to the accomplishment of OCCM as defined by this regulation.

(2) Support maintenance organizations and activities at the retail level are responsible for performing marine condition surveys incident to the repair of Army watercraft at their level or evacuation by TELS work order to the next highest level.

(3) When qualified marine surveyors are not available at support facilities, assistance may be requested through normal channels to TACOM in accordance with *paragraph 7-2e*.

e. *Maintenance.* The statement of work to be accomplished during OCCM will vary, depending upon watercraft condition, class of vessel, and other factors. As a minimum, the following maintenance and repair actions will be accomplished during OCCM:

(1) Bottom cleaning and painting up to the deep-load waterline in accordance with TB 43-0144.

(2) All repairs below the deep-load waterline as identified during dry-dock inspection/underwater hull survey.

(3) Overhaul, replacement, and/or renewal of all major components identified for overhaul at the sustainment level. The requirements will be determined through diagnostic testing, hours of operation, and inspection of internal components as directed by TACOM LCMC.

(4) All other maintenance and/or repairs identified by the marine and/or ship surveyor required to affect a permanent change in the watercraft's condition, to ensure the following:

(a) Capability of operating in an unrestricted manner for the purposes intended.

(b) Capability of being maintained and operated in accordance with all applicable regulations, rules, laws, and policies.

(c) Sustainability of the inherent reliability and maintainability designed and manufactured into the equipment between repair cycles.

(d) Sustainability of acceptable rates of watercraft readiness between OCCM cycles.

(5) TM review and update following vessel maintenance and repair resulting in a permanent change in watercraft condition. All minimum maritime safety inspections required by the ABS; 46 CFR 41–69; and International Convention for Safety of Life at Sea to maintain the load-line documentation in a status.

7–4. Watercraft command, control, communications, computers, intelligence, surveillance, and reconnaissance

TACOM LCMC, through support agreement with U.S. Army Communications-Electronics Command (CECOM) LCMC, Tactical (PEO C3T) provides centrally managed and executed sustainment maintenance support for command, control, communications, computers, intelligence, surveillance, and reconnaissance (C5ISR) subsystems of Army watercraft.

a. All requests for Army watercraft C5ISR support will be routed through the Mission Command Support Center (MCSC) in accordance with DA Pam 750–8. All C5ISR faults which cannot be resolved at the field-level will be reported to the MCSC to facilitate and/or initiate diagnosis and repair.

b. Emergency repairs to C5ISR subsystems otherwise covered under this paragraph may be performed by lower-level activities in accordance with paragraph 7–4; however, all attempts will be made and documented to contact MCSC for remote technical assistance.

c. Parts repair and replacement information from lower-level activities should be provided to the MCSC within 5 business-days to support the centralized data and configuration management process. All C5ISR maintenance actions will be recorded through GCSS–Army, LIS, or the AMC Enterprise Portal in accordance with this regulation.

Section II

Rail Materiel

7–5. General

The term rail materiel includes locomotive power, general rolling stock, and special-purpose mobile rail materiel owned and operated by the Army.

7–6. Maintenance policies

Field and sustainment maintenance will be accomplished in accordance with the policies set forth in chapters 3, 4, and 5 in this regulation and in this section as supplemented by materiel publications and directives. Army-owned rail materiel will conform to standards established by Government regulatory bodies in the country where such rail materiel is operated in interchange service and is subject to the rules of such regulatory bodies.

7–7. Maintenance operations

a. Field and sustainment maintenance.

(1) Rail transportation companies that may be expanded by Army mobile rail teams will provide field and sustainment maintenance to using units. For support of DA utility rail materiel in CONUS where no support companies are available, the field and sustainment maintenance will perform all functions with the mobile rail repair shops (see AR 56–3).

(2) TACOM will furnish the services of the mobile rail support shop for DA utility railroads on an as required basis and will direct its operation as follows:

(a) Army-owned rail equipment will receive free mobile rail services.

(b) Defense supply depots and other DoD agencies may receive mobile shop services on a reimbursable basis.

(3) DA rolling stock moving over interchange in CONUS will have running repairs performed in accordance with AR 56–3.

b. Sustainment maintenance. Sustainment maintenance will be programmed by TACOM based on inspections by rail maintenance technicians.

c. Maintenance reporting and recording. Maintenance reporting and recording for Army rail materiel will be accomplished in accordance with DA Pam 750–8.

d. Installations electing not to use mobile rail support shops. These installations may contract the service to an outside source if cost-effective or may retain the work in-house if qualified personnel are available and support equipment is authorized.

Chapter 8

Maintenance of Electronics, Digital Systems, Network and Test Measurement and Diagnostic Measurement Systems

Section I

Communications Security Materiel

8–1. General

a. The maintenance of COMSEC materiel is greatly influenced by the security training and certification requirements concerning personnel, operations, and maintenance of COMSEC materiel. These requirements are contained in AR 25–12 and AR 380–67.

b. COMSEC materiel consists of the following:

(1) Publications and classified equipment that are managed within the COMSEC materiel control system.

(2) Publications and unclassified COMSEC equipment that are managed within the Army maintenance and supply systems.

c. The CG, AMC is responsible for the national logistics support of Army COMSEC materiel.

d. Commanders at all levels are responsible for the proper maintenance of COMSEC materiel under this regulation.

e. This section applies to the following:

(1) All elements of the regular Army, ARNG, and USAR that maintain, inspect, or requisition COMSEC materiel.

(2) Contracting officers who administer Army contracts that require or authorize the issue of COMSEC materiel to a contractor.

8–2. Maintenance policies

a. TMDE used for maintenance of COMSEC materiel will be calibrated under AR 750–43, TB 43–180, or specifications issued by the CG, AMC.

b. All maintenance will be accomplished on COMSEC materiel under the concepts and policies set forth in chapter 3 of this regulation and in this section as modified by COMSEC directives and materiel publications.

c. General technical instructions for completion of maintenance operations and testing of COMSEC materiel are contained in DA materiel publications. AR 25–30 contains a listing of those publications that apply to COMSEC materiel and gives requisitioning instructions for DA publications.

d. The provisions of DoDM 5220.22 Volume 2 and the FAR that pertain to contract maintenance apply to COMSEC materiel. In addition, commanders and contracting officers will ensure that contractors meet all applicable criteria contained in this regulation, AR 380–40, and TB 380–41. Requests for policy waivers and exceptions to established COMSEC procedures will be submitted through command channels to the Director, U.S. Army Communications Security Logistics Activity (AMEL–LCA–D), 2133 Cushing Street, Suite 3600, Fort Huachuca, AZ 85613–7041 for approval.

8-3. Modification of communications security materiel

Modification of Army-owned COMSEC material is prohibited unless authorized in writing by U.S. Army Communications Security Logistics Activity and will be reported in accordance with AR 750-10. Unauthorized modification of COMSEC equipment is a reportable COMSEC incident.

8-4. Records and reports

Performance of maintenance operations on COMSEC materiel will be recorded in accordance with DA Pam 750-8.

8-5. Qualification and maintenance training policy for communications security equipment

a. The personnel qualification requirements for training and certification of COMSEC materiel maintenance technicians are established in AR 25-12.

b. National policy for COMSEC materiel maintenance training standards and maintenance operations, as promulgated by the NSA, is contained in DoDI 8523.01. This regulation provides general policy for all services on the requirements and security considerations applicable to the training of COMSEC maintenance personnel.

c. DoDI 8523.01 also provides criteria for security awareness training requirements for all other CE technicians. Such security awareness training is a prerequisite to their performing maintenance at any level on COMSEC equipment end items and other major CE, weapons, or information systems containing embedded cryptographic components.

d. Adherence to the COMSEC training and maintenance policies and procedures contained in the referenced publications is compulsory. Security awareness training for all CE technicians will be documented on DD Form 2625 (Controlled Cryptographic Item (CCI) Briefing) and copies retained in personnel files and unit security records. In addition, maintenance supervisors will establish a file containing a copy of DD Form 2625 for each assigned technician under their control in maintenance facilities authorized to work on systems containing cryptographic components.

e. The special instructions below for supply of parts and special tools must be followed:

(1) COMSEC maintenance activities will establish and maintained on shop stocks in accordance with AR 710-2 for both classified and unclassified repair parts.

(2) Cannibalization of COMSEC materiel will be accomplished according to *paragraph 8-13b*, after approval by Commander, U.S. Army Communications-Security Logistics Activity, (AMEL-LCA-D), 2133 Cushing Street, Suite 3600, Fort Huachuca, AZ 85613-7041.

(3) Tools and TMDE required for the maintenance of COMSEC materiel are authorized by the appropriate MTOE, TDA, or non-tactical telecommunications development projects. They will be obtained in accordance with AR 710-2.

(4) Repairable exchange procedures for COMSEC materiel are in AR 710-2.

8-6. Evacuation of unserviceable communications security materiel

a. COMSEC equipment will be evacuated to a capable repair activity only after a qualified CE equipment operator and/or maintainer certified for that equipment determines that evacuation is required in accordance with AR 25-12.

b. Unserviceable classified COMSEC materiel will be evacuated through the Communications Security Materiel Control System (CMCS) by COMSEC accounts to the Commander, Tobyhanna Army Depot (COMSEC) account 5B1099, 11 Hap Arnold Blvd., Building 73, Tobyhanna, PA 18466-5110. Unserviceable unclassified COMSEC materiel, including CCIs, will be evacuated through supply channels to the Commander, Tobyhanna Army Depot (Department of Defense Activity Address Code (DoDAAC)) W81U11, 11 Hap Arnold Blvd., Building 73, Tobyhanna, PA 18466-5110.

c. Components, assemblies, and parts that have manufacturing defects will be removed from the materiel at the authorized maintenance level. The removal will be reported on SF 368 as a Category II quality deficiency report (QDR) under DA Pam 750-8. When practical, exhibits (defective components, parts, or assemblies), QDRs will be submitted through Product Data Reporting and Evaluation Program at <https://www.pdrep.csd.disa.mil/>. Those parts not forwarded will be tagged with DA Form 2402 (Maintenance Tag) and held for further disposition instructions.

8–7. Controlled cryptographic items

- a. CCIs are declassified COMSEC items. Accounting and requisitioned and/or issued procedures are in AR 710–2.
- b. CCI end items must be un-keyed prior to storage when not in operational status or when being turned in through channels for maintenance.
- c. All COMSEC equipment, including unclassified items (for example, CCIs), in an inoperable or tamper condition, and containing classified cryptographic key that cannot be destroyed, will be safeguarded, controlled, and protected based on the classification of the key. Under such circumstances, the equipment must be shipped through CMCS account 5B1099 for service.

Section II

Army Tactical Intelligence, Electronic Warfare, and Sensors Materiel

8–8. General

a. This section applies to the maintenance of Army tactical communications, command, control, and computer, intelligence, EW, and sensors equipment, including MTOE, TDA, and loaned materiel. Communications, command, control, computer, intelligence, EW, and sensors equipment includes, but is not limited to, the following:

- (1) Army intelligence and electronic warfare (IEW) equipment fielded to corps, divisions, armored cavalry regiments, separate brigades, and battalions.
- (2) INSCOM tactical IEW equipment, including select equipment items in U.S. Army field stations and regional support centers (RSCs).
- (3) ACOM, ASCC, and DRU-developed; ACOM, ASCC, and DRU-procured; and ACOM, ASCC, and DRU-fielded IEW equipment, including non-developmental items and COTS items.
- (4) Other selected communications, command, control, computer, intelligence, EW, and sensors equipment that receives sustainment and/or sustainment forward support from the Electronic Sustainment Support Center (ESSC).

b. The CG, AMC is responsible for the support of Army IEW materiel with CECOM being designated as the Army lead organization for tactical IEW logistics sustainment.

(1) The Field Sustainment Support Division, Field Support Directorate, CECOM Integrated Logistics Support Center (ILSC) mission is to develop, plan and provide forward maintenance, supply, logistics and field maintenance for nonstandard and COTS C5ISR to the warfighter, at deployed and home station locations. Field Sustainment Support Division is comprised of DA Civilian logisticians and maintenance managers who develop and deliver cost-effective, timely and efficient solutions to worldwide C5ISR customers. This support is executed through our worldwide RSC construct.

(2) Joint operations equipment developed for special operations forces units are exempt from the requirements of this section.

c. The IEW sustainment RSC is an integrated repair activity that provides the field with a dedicated support structure for low-density IEW systems.

d. C5ISR Sustainment maintenance: C5ISR equipment/systems requiring DLR, overhaul, rebuild or recapitalization during peacetime will be candidates for the CECOM C5ISR Life-cycle Analysis Team (CLAT) and Sustainment Maintenance Forward initiative. ACOMs, ASCCs, will report C5ISR equipment requiring depot maintenance support to, receive disposition instructions from, the appropriate system integrated support manager.

(1) C5ISR equipment selected for the CLAT will be provided a subject matter expert evaluation and certification of the C5ISR asset with a focus on physical condition and corrosion. CLAT will utilize a standardized inspection criteria and inspection work sheets for each family of C5ISR equipment, that is, TMs, special TI and repair, inspections workbook/checklist.

(2) C5ISR equipment identified as being part of this inspection program will normally be evaluated every 5 years but may be evaluated more frequently as field conditions or usage factors dictate. C5ISR evaluations and Physical Inspections will provide a metric based assessment of the condition of the evaluated systems. The CECOM CLAT will provide the Weapon System Directorate, Integrated Logistic Support (ILS) Managers the evaluation and/or inspection data for their review and analysis assisting them in identifying and prioritizing candidate assets for the C5ISR depot maintenance program.

8–9. Intelligence, electronic warfare, and sensors maintenance policies

a. CECOM ILSC has sole responsibility within the Army for IEW logistics sustainment. As part of this responsibility, all sustainment contracts will be consolidated under the control of CECOM LCMC. Centralized support for IEW materiel will be extended to all fielded systems, including systems fielded for prototyping analysis, independent of current level of acquisition management.

b. The emerging generation of IEW systems requires a sustainment concept that provides for repair as far forward on the battlefield as possible. The RSC provides this support to the field as well as system and maintenance troubleshooting and PPSS repair, along with a reconfiguration capability. All these capabilities are integrated under the ESSC when possible.

8–10. Intelligence, electronic warfare, and sensors unit maintenance

a. Assigned IEW field maintenance personnel perform field levels of maintenance. This typically includes replacement of line replaceable units (LRUs), circuit card assemblies, and piece parts when authorized by the MAC.

b. CECOM RSCs provide direct, on-site, and forward maintenance and repair support for C4, Intelligence, Electronic Warfare, and Sensors and non-standard electronics systems fielded to corps, divisions, armored cavalry regiments, separate brigades, and battalions. The RSC also provides MATDEV ICS for managed systems prior to completion of the Depot Source of Repair Analysis.

c. IEW maintenance activities are authorized to establish and maintain bench and shop stock, in accordance with the FAR, Defense Federal Acquisition Regulation (DFAR) Supplement, AR 710–2, and/or contract for supporting IEW equipment repair.

d. Shop stock will be maintained using the approved LIS.

e. Appropriate MTOE, TDA, TM, or letter authorization authorizes tools and TMDE required for the maintenance of IEW materiel. Materiel will be obtained in accordance with the FAR, DFAR Supplement, or AR 710–2.

f. Maintenance requirements beyond FLM require a DA Form 5990–E or DA Form 2407 to be processed through the unit's TELS to the RSC.

8–11. Intelligence and electronic warfare sustainment reporting committee symbol maintenance

The ESSC will centralize IEW maintenance management and maximize the integration of the military sustainment maintainers in the sustainment brigade with the contractors and/or civilians in the C5ISR RSC. The C5ISR RSC will provide maintenance support for items not reparable at the IEW field level. The C5ISR RSC is a tailored activity based on the type of units and equipment supported in the regional area.

Section III

Logistics Information Technology

8–12. General

a. *Logistics information technology domain maintenance and life cycle management.* Logistics IT provides automation capability to the warfighter during operational and tactical operations. Sustainment is the provision of the logistics, personnel services, and health service support necessary to maintain operations until mission accomplishment. See DA Pam 750–1 for COTS computer repair and/or upgrade methodology. This section applies to the maintenance of logistics IT domain equipment identified on MTOE and TDA authorization documents and loaned materiel. The logistics IT domain includes LIS, GCSS–Army, Unit Level Logistics System–Aviation (Enhanced), CSS very small aperture terminal (VSAT), Combat Service Support Automated Information Systems Interface (CAISI), personal digital assistants, mobile support devices, and ACN computers. Equipment will be identified with LINs in support of life cycle management. Logistics IT equipment with LINs are readiness reportable. This section will detail Logistics IT domain maintenance and life cycle management for both field and sustainment level of maintenance. Each level of maintenance will address logistics IT in five support elements: 1) hardware, 2) software, 3) network and communications, 4) operator functional business tasks, and 5) training.

b. *Logistics information technology field-level maintenance.*

(1) Operators of logistics IT systems will perform PMCS in accordance with the manufacturer owner manual, hardware end user manuals and system user manuals for each LIS. This regulation provides Army maintenance standards and FLM instructions (see paras 3–3 and 3–11). Logistics IT equipment

faults discovered during PMCS will be recorded in the approved LIS. Recording of faults may include life cycle management of automation equipment and the use of AIT. The use of AIT will enhance accuracy of equipment repair management, serial number tracking, and property accountability. When TELS hardware becomes inoperative, the recording of an NMC fault will be entered upon recovery. Date and/or times will be recorded to reflect the NMC time.

(2) At operator level, logistics IT, hardware becoming NMC will be evacuated to the Sustainment Automation Support Management Office (SASMO) without delay. The operator will record the discrepancy upon discovery in the approved LIS. Screen print of error messages will be printed and provided to SASMO to isolate or target malfunctions when possible.

(3) The SASMO will replace NMC equipment with TCX stock to return the customer to FMC. The NMC TCX item will be work ordered to sustainment-level maintenance without delay.

(4) Operator will take the necessary action to ensure correct power source/supply is provided during tactical and/or non-tactical operations. Operator will become familiar with manufacturer hardware power specifications. Computers and associated peripherals may require stable uninterrupted power from a reliable source.

(5) Maintenance of VSAT and CAISI hardware includes daily PMCS by the owning organization. Daily check of CAISI antenna for obstructions is needed to ensure continued uninterrupted operations. Operator will ensure the Pedestal unit is properly secured during inclement weather and free from vehicle traffic. The 250-foot fiber optic cord must be secure to prevent possible damage. VSAT hardware failure will be reported to the SASMO.

(6) The SASMO will support the user and/or operator in diagnosis and restoration of logistics IT equipment to an operational status. Failed LRUs will be turned into the supporting Tobyhanna Army Depot FRA (sustainment level maintenance) through the SASMO.

(7) To the greatest extent possible, the SASMO, in coordination with the maintainer, will provide a mobile support team to restore and repair logistics IT equipment onsite.

(8) TCX for logistics IT equipment will be managed at FLM as follows:

(a) The SASMO or supporting maintenance activity will provide a replacement logistics IT LIN to unit personnel using a TCX asset from on-hand TCX assets and work order the inoperative (NMC) TCX to the supporting Tobyhanna FRA maintenance activity.

(b) Accountability for TCX assets is maintained by the SSA on the stock record account. The SASMO manages TCX assets as operational exchange or swap-out. The SASMO will ensure TCX and SASMO MTOE equipment remain separate. Once SASMO has an NMC TCX item, it will be work ordered to supporting FRA facility without delay.

(c) TCX will be used to replace customer logistics IT LIN equipment and annotated on appropriate GCSS-Army business processes. The SASMO will make notations on DA Form 2407/DA Form 5990-E when serial number item is exchanged. Unit APSR must be updated with current serial numbers. The tactical situation may require that the SASMO and support operations determine best and safe customer support business practices. IUID marking of computers may enhance this procedure.

(d) TCX will be managed in accordance with AR 710-2.

(e) Prior to issue of TCX to a customer, the SASMO will determine fair wear and tear in accordance with *paragraph 3-11d*.

(f) TCX is composed of NS-E computer systems and their associated peripheral equipment used to operate or support logistics IT applications. TCX will be located at the SASMO and must be 100-percent deployable (see para 14-6). Management of NS-E is provided in chapter 9 of this regulation.

(g) When TCX is zero balance and the SASMO cannot replace or swap out hardware, the SASMO will work order the customer hardware to the supporting FRA and inform them that the item requires priority. Logistics IT systems are unit reportable and sustainment maintenance must provide increased support.

(9) The SASMO provides logistics IT management, plans, policies, and procedures for logistics automation functions and/or systems to the sustainment brigade, area support and backup support to the battalion support battalion SASMO in the support footprint. The SASMO will task organize to meet operational and tactical missions. The SASMO is a staff element of support operations and reports logistics IT equipment and tactical network status, as needed.

(10) Logistics IT Software management is defined as Operating and Application Software. The SASMO will receive logistics IT new and/or change TELS software updates from Communications-Electronics Command, Software Engineering Center-Lee (CECOM, SEC-Lee). The SASMO will ensure all

customers are current with Logistics IT Software configurations. Information assurance (IA) updates must be uploaded upon notification from CECOM, SEC-Lee.

(11) Physical security requirements of logistics IT equipment are the responsibility of both the unit and the SASMO.

(12) Information security is the responsibility of the operator and unit commander. Operators will logout when not physically located at GCSS-Army client workstation or LIS. Operators will complete IA training in accordance with AR 25-2. Operators will ensure other operators do not perform tasks with current credentials of login. Do not share passwords.

(13) Logistics IT Hardware maintenance management is recorded and managed in APSR. All LINs must be entered and configured as unit MTOE and/or TDA equipment. The SASMO will utilize approved TELS to receive hardware and/or software work orders and document FLM activities.

(14) Units will ensure logistics IT equipment is recorded in the APSR and match approved equipment records.

(15) Warranty management of logistics IT equipment at FLM includes maintaining manufacturer integrity at operator and SASMO levels. The program executive office for Enterprise Information Systems and the CECOM LCMC Logistics Readiness Center are the Army lead organizations for logistics IT sustainability and are responsible for the management of Life Cycle Management of LINs.

(16) Any computers procured by an ACOM, ASCC, and DRU to support a logistics IT may be repaired using these procedures, provided the ACOM, ASCC, and DRU has coordinated and funded that support. Sustainment costs are directed to commanders who purchase this equipment. CECOM, SEC-Lee will provide software and functional operator support through the Customer Support Office.

(17) Tactical Logistics IT Network "configuration" using CSS VSAT and wireless CAISI will be provided by the SASMO. Network maintenance includes the planning, configuring, supervising, and controlling of systems authorized to operate on the tactical network. CSS VSAT and CAISI is organizational property and may require support operations assistance in positioning of network devices throughout the area of operations.

(18) SASMO will develop a "Tactical Network Diagram" for the purpose of network troubleshooting, supporting theater positioned equipment requirements and geographical locations, providing support to incoming forces during rotational operations, documenting network security information, and detailing geographical obstacles for CAISI "line-of-sight." The SASMO will maintain the "Tactical Network Diagram" to brief commanders and support operations. Network recovery is essential for GCSS-Army since equipment master records are managed at the Enterprise Server. SASMO will support disconnected operations when tactical operations prevent connectivity, during actual movements and during routine "downtime" maintenance. The SASMO will develop and maintain a "Tactical Network Diagram" detailing CSS VSAT and/or CAISI geographic locations, client workstations on the network, configuration security settings and internet protocol addressing, systems on network such as MC4, Transportation Coordinator's Automated Information for Movements System, Movement Tracking System, and other logistics systems. The SASMO must maintain control to ensure maximum bandwidth.. The diagram will also detail public and private networks established to enhance user access. The diagram is used for network maintenance and hand-off to incoming rotational units.

(19) The SASMO will provide operator functional business task (over-the-shoulder) support to customers. The SASMO is the organic asset to provide limited support when information business process becomes a problem. Communications to a central help desk may be limited during tactical operations and thus SASMO provides that support. The logistics community has an enormous operator and supervisor customer base. Communications to sustainment level support (help desks) may not be available during contingency operations or deployments.

(20) The SASMO will not perform computer internal component repair unless directed by ACOM, ASCC, and/or DRU G-4.

(21) Training is a maintenance enabler at the lowest level. Business process information may not find its way to the operator. SASMO provides that enabler to enhance automated logistics readiness through recovery operator training. SASMO will provide information to commanders related to sources of training. Resident and online, interactive baseline training are a few of the sources. Academic training is a supervisor responsibility and not a SASMO responsibility. SASMO is organized and staffed to provide limited customer functional support for logistics IT business activities.

c. *Logistics information technology sustainment-level maintenance.* All AIS Standard Army management information systems will be maintained as follows:

(1) Hardware maintenance at sustainment levels includes various organizations. Tobyhanna FRA provides logistics IT equipment repair minus the CSS VSAT. Field support representatives in support of PM Defense Wide Transmission Systems provide sustainment maintenance for the CSS VSAT. The FRA has trained warranty certified technicians for specific computer products. If the FRA has no trained certified technicians, the equipment will be forwarded to the manufacturer from the FRA. The SASMO, in most cases, will not be required to seek warranty support. This relieves the SASMO of that responsibility. Sustainment level maintenance requires the FRA to code out each LIN when not repairable this station condition exists. The FRA will contact CECOM, SEC-Lee for replacement of equipment. The FRA may manage RCF at each facility. This capability provides additional recovery capability. The local FRA manager will determine when replacement of SASMO work ordered equipment is needed.

(2) The decision to repair and/or upgrade NS-E computers, personal digital assistants, AIT, and associated devices will be based upon a cost-benefit analysis of replacing versus repairing and/or upgrading the system. With the rapid advancement in technology, the repair and/or upgrade of logistics IT equipment may not be the best economic choice. The following factors should be considered during the decision process:

- (a) Cost of replacement from General Services Administration (GSA) schedule.
- (b) Warranty and/or no warranty.
- (c) Age of the equipment (consider substantially improved technology).
- (d) Mission impact while the system is being repaired and/or upgraded.
- (e) Extent of repair and/or upgrade.
- (f) Cost of repair and/or upgrade versus the MEL constraints.
- (g) Availability of parts.
- (h) Manpower availability versus manpower required in accomplishing the repair and/or upgrade.
- (i) Estimated service life after repair and/or upgrade.
- (j) Most timely method of getting system back into the hands of the end user.

(3) The maintenance of MTOE and/or TDA military equipment and standard/common and/or unique Army systems will have priority over the repair of locally procured logistics IT computer systems. The cumulative cost to repair or upgrade a logistics IT computer must not exceed 65 percent of the replacement cost of the individual LRU (the central processing unit, monitor, and printer). Accounting of expenditures for each LRU (by serial number) is the responsibility of the repair activity. Units must be able to produce records when required, such as—

(a) Copy of buy versus repair cost-benefit analysis. If audited, the unit must be able to produce these reports upon direction from higher HQs.

(b) Cost of expenditures and work requests in support of the logistics IT computer repair and/or upgrade effort must be maintained. If audited, the repair shop must be able to produce these reports upon direction from higher HQs.

(4) Logistics IT equipment computer will not be upgraded if the upgrade requires replacement of more than 50 percent of the internal major shop replaceable units or assemblies (motherboard, hard drive, disk drive, compact disk, central processor, and memory chips).

(5) Upgrade of a logistics IT computer must retain the original system configuration integrity of fit and form. The upgrade may improve the function but must not change fit or form (for example, a logistics IT computer will not be upgraded if the upgrade requires replacement of the external LRU case (the black box) or modification of the internal chassis).

(6) After redeployment to home station, units coordinate with SASMO, FRA, and TELS System Managers to:

- (a) Wipe hard drives and reimage computers with software and all updates.
- (b) Load home-station unit information (UICs and DoDAACs).
- (c) Inspect and clean computer hardware.
- (d) Inspect and test VSATs and CAISIs in an operational scenario to confirm they are mission capable.
- (e) Coordinate FRA repair, as required.
- (f) Coordinate replacement of hardware classified “non-repairable” by the FRA (through SASMO and/or system managers).

(7) Residual modules will not be used to assemble additional logistics IT equipment. After repair or upgrade of a NS-E computer, removed SRUs will not be retained. Cascading is authorized; residual assemblies may be used for an upgrade to another NS-E computer. However, this additional upgrade must be coordinated between the SASMO and supporting FRA. All residual parts must be sanitized and turned in

to the supporting FRA for approved disposition action. During deployments, mission requirements will dictate the scope of this requirement, but all modules must be accounted for. The program executive office for Enterprise Information Systems and the CECOM LCMC are the Army lead organizations for logistics IT sustainability and are responsible for the management of the FRA.

(8) The procurement of limited additional equipment and/or software (special tools and/or diagnostic software to support logistics IT systems) is authorized. Owning organizations will fund this requirement. TMDE will not be required to support Logistics IT equipment repair efforts.

(9) Any computers procured by an ACOM, ASCC, and DRU to support a logistics IT may be repaired using these procedures, provided the ACOM, ASCC, and DRU has coordinated and funded that support.

(10) The ESSC at the Tobyhanna Army Depot FRA is an integrated maintenance activity that provides the field with a dedicated support structure for TELS hardware. The FRA also supports tier III office automation equipment at selected installations and, when deployed, as part of the AMC logistics support element.

(11) Software support is provided by CECOM, SEC-Lee. Each TELS has a system manager for life cycle management of software maintenance. Updates are distributed by software change packages and interim change packages. Each SASMO receives these packages and must maintain baseline configuration management for all customers. GCSS-Army client workstations operating software and application software is also a SASMO responsibility. IA security updates must be also managed by SASMO. Maintenance recovery of software includes information security. Violations of IA must be reported to the commander. This causes reduced readiness of logistics IT.

(12) Fielding of hardware will be coordinated with ACOM, ASCC and DRU G-4 (Logistics Automation Office).

(13) DA messages and/or all Army activities taskings for logistics IT system testing, requests for information and status reports will be coordinated with ACOM, ASCC, and DRU G-4 (Logistics Automation Office).

d. Information system and network configuration management plan. All information system and network configuration management plans will include strategy to ensure the latest security and application updates are applied in a proactive and controlled manner. Specific requirements can be found in AR 25-2.

8-13. Repair parts supply for information technology

- a. Repair parts for IT are obtained under provisions of AR 710-2.
- b. Cannibalization of uneconomically reparable IT prior to turn in to DLA Disposition Services is limited to those serviceable parts immediately needed to repair inoperable IT.
- c. Commanders may authorize controlled exchange of IT repair parts based on automation systems readiness. This is a sustainment maintenance capability only.
- d. Logistics IT computer parts required for non-warranty repairs should be purchased as needed using the Government purchase credit card with ACOM and ASCC (G-4, Logistics Automation Office) coordination and support. During deployment, mission requirements will dictate the scope of this requirement.

8-14. Army Warranty Program for information technology

- a. Items for Army use should be acquired with warranties only when the warranty is in the Army's best interest. The decision must be made case by case. Acquiring commands or activities will establish local warranty implementation procedures (see AR 700-139).
- b. In warranty applications, unit readiness and mission effectiveness will take priority. If the FLM activity is not able to get an effective response (within the warranty-specified timeframes), the maintenance activity will contact the acquiring command or activity for resolution. When resolution is not timely enough to meet mission requirements, the maintenance activity commander may authorize repair of the item and will notify the acquiring command or activity in writing of the necessity to repair the item now and settle any warranty issues later.
- c. To the greatest extent possible, IT warranties will be structured to allow onsite or mail-in processes to maintain their warranties. FRAs are authorized at the AMC LCMC commander's discretion to facilitate logistics IT repairs by the warranty vendors. FRAs should take action to become OEM certified warranty providers. Field maintenance will be performed on automation systems hardware when it does not violate the warranty.

d. Warranty support, which is contracted for prior to IOC but occurs after IOC, will be counted as depot maintenance and repair when reporting under the 50/50 rule. However, warranty support that is contracted for and occurs prior to IOC will not be counted as depot maintenance and repair when reporting under the 50/50 rule.

8–15. Base operations information technology

IT obtained for BASOPS support through the information management area process is supported through the directors of information management and the DCS, G–6. Although these systems are not part of tactical automation, maintenance may be obtained through the depot after coordination with the appropriate AMC LCMC.

Section IV

Test, Measurement, and Diagnostic Equipment

8–16. Test, Measurement, and Diagnostic Equipment

a. TMDE repair will be accomplished in accordance with AR 750–43, DA Pam 750–43, and TB 43–180. The objectives of the Army TMDE Program are to improve OR of Army equipment, enhance safety, detect impending component failure and conserve TMDE resources through the application of interval analysis and TB 43–180.

b. AMC will manage and execute responsibilities for calibration and repair of general purpose TMDE and selected special purpose TMDE civilian operated calibration support activities (laboratories), facilitate TMDE quality control, and provide backup support to the MTOE area TMDE support teams.

c. The U.S. Army TMDE Activity executes the primary laboratory for the Army's TMDE program.

d. Field units must promote the support of calibration intervals as recommended by TB 43–180. The TB 43–180 does not replace or modify procedures for equipment under manufacturer's warranty.

e. ACOMs, ASCCs, and DRUs will ensure subordinate commands participate in the Army TMDE Program and incorporate TMDE program processes, as outlined in DA Pam 750–43, in local SOPs.

f. Enrollment of TMDE in the Army TMDE Program is mandatory for all Army commodities unless the DCS, G–4 approves the exception. For a list of TMDE enrolled in the program, see TB 43–180.

8–17. Support concept

TMDE repair support will normally be based on the concept that repair should be accomplished by the element designated in TB 43–180 as being responsible for calibration support. The support concept for general purpose TMDE will make maximum use of existing assets and Army calibration and repair system standards.

8–18. Test, measurement, and diagnostic equipment support and management

TMDE repair support will be provided by the following:

a. Equipment owners and/or users will perform FLM on their assigned TMDE.

b. Regionally aligned TMDE support teams and/or area support TMDE Centers will support and repair general-purpose and selected special-purpose TMDE.

c. Maintenance organization responsible for maintaining the associated system or end item will provide repair support for the remaining special-purpose TMDE.

d. Medical TDA activities will refer to AR 40–61 and paragraph 12–2 of this regulation.

e. Field and sustainment maintenance activities will perform FLM on TMDE and furnish support services for organic and supported unit's special-purpose TMDE.

8–19. Army National Guard test, measurement, and diagnostic equipment support

States will coordinate directly with supporting area TMDE support teams for calibration services and repairs provided to the State under NGB-funded programs.

Chapter 9

Maintenance of Conventional Ammunition

9-1. General

- a. Ammunition maintenance consists of all actions necessary to retain ammunition in, or restore it to, an FMC condition.
- b. Provisions must be made to accomplish maintenance at the unit storage location to the maximum extent possible.
- c. The munitions maintenance program will be managed by the NICP and executed based on requirements determined by unit of employment "x" (brigade combat team) or division and/or corps from the theater inventory control point and/or NICP. The maintenance to be performed by an activity will be based on the activity's assigned mission or as directed by the brigade combat team, or division, and/or corps from the NICP.
- d. The condition code of ammunition will be determined by the surveillance inspection conducted by quality assurance specialist—ammunition surveillance (QASAS), ammunition inspector or NICP according to the QA specialist.

9-2. Field maintenance policies

- a. Field maintenance focuses on preventing deterioration of ammunition due to rough handling and exposure, returning ammunition to a serviceable condition. Field maintenance is not required or intended to perform major repair of components or disassembly and reassembly of ammunition. Field maintenance is to maintain stocks in a serviceable condition code for immediate issue and use at all levels without special tools and equipment. Functions performed as field maintenance includes the following:
 - (1) Cleaning, drying, and protection of individual items and/or packing material.
 - (2) Spot painting and re-stenciling.
 - (3) Removal of rust and/or corrosion.
 - (4) Painting and stenciling of ammunition items, to include containers.
 - (5) Repair and fabrication of boxes, containers, and crates.
 - (6) Submission of ammunition condition reports.
 - (7) Demilitarization as directed by the Joint Munitions Command and/or when materiel which has been determined by QASAS to be unserviceable and does not meet the repair criteria.
 - (8) Replacement of readily removable external parts and components such as fuses of artillery and mortar ammunition, grommets, and nose plugs, humidity indicator housing/cards.
 - (9) Initial receipt inspection.
 - (10) Receipt inspection.
 - (11) Inspect packaging and loading during shipment (retrograde) process.
 - (12) Certification of ammunition residue to be explosive free.
 - (13) Periodic inspections.
 - (14) Storage monitoring inspection.
 - (15) Pre-inspection.
 - (16) Safety in storage inspection.
 - (17) Special inspection.
 - (18) Verification inspection.
 - (19) Basic load inspection.
 - (20) Determining and assigning condition codes.
 - (21) Maintaining depot surveillance record cards on locally stored and/or managed ammunition.
- b. Using units will perform field maintenance on items prescribed to be done at the unit in accordance with the appropriate TM. Field maintenance is performed to prevent corrosion and deterioration of ammunition because of rough handling and exposure.
- c. Conventional ammunition renovation detachments will normally furnish sustainment maintenance on conventional ammunition in large ammunition supply points or depot complexes located in the communications zone. However, when practical, they should be deployed forward to perform maintenance rather than to evacuate repairable ammunition.
- d. Sustainment maintenance reporting for conventional ammunition is described in accordance with AR 700-28 and DA Pam 750-8.

9-3. Sustainment maintenance policies

a. Sustainment maintenance accomplishes that portion of the maintenance mission that is beyond the capability or capacity of the field-level environment.

b. Sustainment maintenance is performed at or in a depot environment. Specific depot-level capabilities may be deployed forward, as required, to the Army service area to perform certain tasks. Selected overseas installations coordinate with AMC to perform sustainment maintenance that augments the procurement program.

(1) Sustainment maintenance reporting for conventional ammunition is described in accordance with AR 700-28 and DA Pam 750-8.

(2) Sustainment maintenance may be performed in an active theater of long standing or CONUS. Sustainment maintenance on ammunition consists of but is not limited to the following:

(a) Actions primarily comprising renovation, modification, or reconfiguration.

(b) Servicing actions comprising removal of extensive rust and or corrosion; painting and stenciling class V materiel; and major repairs to or fabrication of boxes, containers, and crates.

(c) Renovation and modification comprising the replacement of either internal or external components that require the use of operational shields or barricades.

(d) Acceptance inspection in accordance with DA Pam 742-1.

(e) Surveillance function test inspection in accordance with DA Pam 742-1.

9-4. Munitions maintenance planning

a. Munitions maintenance and surveillance procedures will be complied with in accordance with DA Pam 742-1.

b. The munitions maintenance program will be managed by the NICP and executed based on requirements determined by unit of employment "x" or unit of employment "y" from the theater inventory control point and/or NICP. The maintenance to be performed by an activity will be based on the activity's assigned mission or as directed by the unit of employment "x" or unit of employment "y" from the NICP.

c. Personnel in MOS 89B and MOS 890A and QASAS assigned to conventional ammunition units will perform maintenance of ammunition only after receipt of a properly validated work authorization. Work authorization can be a DA Form 2407-1, DA Form 2415 (Ammunition Condition Report), or letter of authorization. An assignment sheet (work order) can be added where a validated work authorization does not furnish sufficient information. The assignment sheet will be used within the organization and will normally provide for, but is not limited to, the following:

(1) The scope of the maintenance work.

(2) The lot number and quantity of rounds to be processed.

(3) The lot number and quantity of replacement parts or components to be used.

(4) Special instructions on inspection, operations, hazards, and disposition of unserviceable components resulting from operations.

(5) Operations that must be performed to process the material, consisting of replacing parts, painting, changing nomenclature, adding a suffix, and preparing data cards.

(6) Materials to complete the work, including quantity.

(7) DMWRs for renovation or disposal of ammunition are composed of a series of sheets in the form of a pamphlet. Each sheet is an operational study of the technical features of the operation to be accomplished. The DMWR is approved and issued by the U.S. Army Combat Capabilities Development Command (CCDC) Armaments Center. The DMWR will be used as a guide for the ammunition officer preparing the details and procedures for completing the work in a theater of operation. DMWRs and letters of instruction are the only procedural guidance authorized for performance of maintenance and demilitarization at installations. Exceptions to this policy must have the approval of the NMP.

d. Provisions must be made to request a Lot Suffix assignment prior to beginning any maintenance in accordance with MIL-STD-1168C (for example, item requiring 100 percent inspection). Lot Suffix requests can be made by going to site: <https://prod.jmc.army.mil/als/app/default.aspx>. Any questions regarding Lot Suffixes can be made by contacting HQ, Joint Munitions Command (AMSJM-QAS), Rock Island, IL 61299-6000 at DSN (312) 793-7535 or commercial (309) 782-7535.

Chapter 10

Maintenance of Organizational Clothing and Equipment

Section I

Organization Clothing Items and Individual Equipment

10–1. Maintenance policy

a. The organization clothing and individual equipment issued to Soldiers will be inspected to determine serviceability in accordance with AR 700–84 and DA Pam 710–2–1. The individual to whom the organization clothing or equipment is assigned must perform maintenance that would reasonably be expected to be performed within a unit, such as: cleaning, spot removal, repair of tears or rips, and replacement of buttons. Field maintenance and repair procedures for organization clothing and individual equipment are in TM–10–8400–203–23.

b. Each installation or activity will ensure clothing and materiel beyond organizational repair capability is turned in to a central location for either repair or return to stock or classification as unserviceable and turned in to DLA–DS.

c. The U.S. property and fiscal officer may authorize negotiation of local contracts for maintaining clothing and equipment for the ARNG as follows:

- (1) Minor alterations and repairs of individual clothing.
- (2) Minor repairs of U.S. property and fiscal officer stocks to reclassify items to a serviceable status for reissue.

d. Major alterations for the purpose of modifying items will require prior approval of CNGB.

e. Laundry and dry-cleaning services are authorized as follows:

- (1) Laundry services in support of AT in accordance with NG Pam 350–1.
- (2) Laundry and dry-cleaning services in support of IDT should be obtained at the lowest possible cost for the following items:

- (a) White organizational clothing and equipment issued to medical and food service personnel.
- (b) Sheets, pillowcases, and mattress covers.
- (c) U.S. property and fiscal officer stocks of serviceable individual and organizational clothing and equipment prior to reissue.
- (d) Individual clothing for interment of deceased personnel when Federal funds are authorized.
- (e) Blankets and sleeping bags.
- (f) Army band distinctive uniforms as authorized by common table of allowances (CTA) 50–900.

10–2. Maintenance expenditure limits

MELs can be found in TB 43–0002–27.

Section II

Heavy Canvas

10–3. General

Heavy canvas classification and repair was previously performed by MOS 43M (Fabric Repair Specialist) Soldiers within maintenance units. With the consolidation of MOS 43M and MOS 57E (Laundry and Shower Specialist) into MOS 92S (Shower/Laundry and Clothing Repair Specialist), the capability to repair heavy canvas was eliminated. The rationale for eliminating the capability is that heavy canvas items are no longer being procured. The replacement items are made from a vinyl material that can be repaired by the owning organization using a repair kit.

10–4. Maintenance policy

a. As heavy canvas items, such as tents and vehicle canopies, become non-repairable at the field level, the units will turn in the items through normal supply channels (see AR 710–2 and chapter 3 of this regulation). Class IX items, such as vehicle canopies, may be disposed of by the maintenance unit.

b. Class II items, such as tents, must be classified and turned in to the DLA–DS. ACOMs, ASCCs, and DRUs installations must establish procedures for classification and turn in of class II items. Supporting installation LRC/AFSBn will provide disposition instructions.

- c. Heavy canvas items will be replaced through attrition and purchased with the unit's O&M funds. CTA 50–909 provides authorization for these items.
- d. Repairs to vinyl items beyond the capacity of the unit (for example, zippers, windows, and frame components can be repaired by the IMMA, if within their capability and the MEL).
- e. Repair kits are available.

Chapter 11

Maintenance of Non-Tactical Equipment and Training Aids

Section I

Non-tactical Vehicles

11–1. General

a. Commanders are responsible for ensuring all maintenance is performed in accordance with manufacturer TMs for Army owned NTVs. Performance of all field and sustainment level maintenance for Army owned NTVs in accordance with AR 58–1. For external maintenance support see AR 750–1, specifically paragraph 3–13.

b. MEL for an NTV is in AR 58–1.

c. LRC/AFSBn will not provide scheduled or unscheduled maintenance for GSA vehicles without an approved exception to policy from DCS, G–9, coordinated through GSA.

11–2. Modifications

Modifications of an NTV are covered in AR 58–1.

11–3. Repair parts supply

a. Repair parts for an NTV are obtained under the provisions of AR 710–2.

b. Cannibalization of uneconomically repairable Army owned NTVs prior to turn in to DLA–DS is authorized if serviceable parts are deemed mission critical and not available by local vendor or through LIS.

c. Authorization of controlled exchange for repair parts on Army owned NTVs is only authorized in accordance with paragraph 4–10 in this regulation when repair parts are not available by local vendor or LIS.

Section II

Training Aids and Devices and Visual Information Equipment and Systems

11–4. Training aids and devices

This section provides maintenance policy for training aids and devices. It supplements policies in AR 25–1, AR 350–38, and AR 700–127. Training aids and devices used by the Army can be categorized as follows:

a. Training aids and devices assigned to a MTOE unit are type classified and include simulators or end items.

b. Training aids and devices managed by TDA activities include the following:

(1) Non-type classified training aids and devices developed or commercially acquired to support general military training and training on more than one type item of materiel. These are usually assigned to and maintained by training and visual information (VI) support centers for loan to units and activities.

(2) Type classified training aids and devices used to support a special training requirement.

c. Maintenance policy is as follows:

(1) Type classified and non-type classified training aids and devices will be maintained in accordance with this regulation.

(2) Operator and/or crew training equipment will be maintained to the Army maintenance standard outlined in paragraph 3–3 and the turn-in and/or transfer standard in paragraph 4–9.

(3) Equipment (end items and major assemblies) that is frequently disassembled and assembled for instructional purposes will not be maintained to Army maintenance standard. Additionally, this equipment will be transferred or turned in to the national system under condition code F and not –10/–20. If required

for reissue, equipment will be routed through sustainment maintenance before issue. Equipment will remain disassembled for instructional purposes.

(4) A maintenance plan as part of the logistic support plan will be developed and fielded with the materiel. COTS materiel procurement will include an MSP or justification for contract maintenance or inter-Service support.

(5) Type classified training aids and devices that are identified on MTOE or TDA documents will be maintained in accordance with the MAC. Support requirements beyond the user's authority or capability will be referred to the supporting IMMA.

(6) Locally fabricated training aids and devices will be maintained by the training and VI support center. Maintenance above the capability of the training and VI support center will be referred to the supporting IMMA.

(7) User commands are responsible for programming and budgeting funds for contract maintenance support for all training aids and devices under their control.

(8) Sustainment maintenance will be furnished by AMC.

11–5. Visual information equipment and systems

This paragraph provides maintenance policy for VI equipment and systems. It supplements policies in AR 25–1 and AR 700–127.

a. VI materiel includes photographic, television, audio and graphic art items that furnish an audiovisual product or service.

b. The DCS, G–6 will validate authorization of type classified VI materiel prior to documentation in a CTA, TDA, or TOE, and/or MTOE to ensure compliance with DoDI 5040.02.

c. Class VI materiel assigned to an audiovisual facility or other TDA activity, including broadcast radio and television, will be commercially acquired. The logistics supportability of commercially acquired materiel is the responsibility of the procuring activity. Local procurement will be coordinated with the local common support audiovisual activity for consolidation of contracts for maintenance services and adherence to standards and class VI architecture; see DA Pam 25–91 for guidance. Broadcast radio and television materiel and systems costing over \$5,000 will be procured, managed, and supported by the television-audio support activity, the Office of the Assistant Secretary of Defense (Public Affairs), and the American Forces Information Service.

d. Maintenance policy is as follows:

(1) A maintenance plan as part of the logistics support plan will be developed and fielded with the materiel. COTS materiel procurement will include the equivalent of an MSP or justification for contract maintenance or inter-Service support.

(2) Type classified VI materiel will be maintained in accordance with the MAC. Support requirements beyond the user's authority or capability and all non-type classified audiovisual materiel will be referred to the common support VI activity or the Director of Information Management.

(3) The training community may, at the option of the ACOM, ASCC, and DRU, manage maintenance of class VI equipment and activities integrated with training device support activities. Otherwise, contract requirements will be submitted to the supporting Director of Information Management, who will coordinate the support.

(4) User commands are responsible for contract maintenance support for all class VI materiel under their control and are responsible for budgeting funds for it. Funds will be made available by the user to the supporting Director of Information Management or class VI activity to support its contract efforts.

Chapter 12

Maintenance of Medical Devices

12–1. General guidance

a. *Purpose.* Establish Army policy specific to medical materiel.

(1) Maintenance of medical materiel includes maintenance and medical maintenance operations.

(2) The objective of medical maintenance operations is to provide robust maintenance and logistics support to medical commodity end item users. This includes, but is not limited to installation, maintenance and repair of medical devices (MD), individual and unit training, medical maintenance proficiency training programs (see AR 350–1), and rotation base assignments to ensure readiness for peacetime and mobilization surge requirements.

- (3) The five major functional responsibilities of the Army medical maintenance activities are—
 - (a) Sustaining materiel in an operational status.
 - (b) Restoring materiel to a serviceable condition.
 - (c) Responding to safety recalls and health device alerts.
 - (d) Performing scheduled and unscheduled services on MD to the Army maintenance standard defined in paragraph 3–3.
 - (e) Implement total life cycle management ILS on medical equipment.
- b. *Scope.* This section applies to TOE Army medical forces including both field and sustainment levels.
- c. *Specific policies.* For policies that are specific to medical materiel maintenance in TDA Army medical organizations, to include U. S. Army Center for Health Promotion and Preventative Medicine and Armed Forces Institute of Pathology, refer to AR 40–61.

12–2. Medical maintenance policies

- a. TSG, command surgeons, RMCs and/or MSCs will task the medical materiel maintenance functions to medical activities to support the Army Medical Department (AMEDD) mission. TOE commanders will report the status of selected medical items of equipment in accordance with AR 220–1 and AR 700–138.
- b. AMEDD has transitioned to the Army maintenance system consisting of field and sustainment (two level) maintenance.
- c. Medical maintenance support missions will be accomplished with applicable standards pertaining to the maintenance of medical MD including, but not limited to:
 - (1) Documenting maintenance of radiation emitting equipment in accordance with 21 CFR, TB MED 750–2, and TB MED 521.
 - (2) Maintaining a safe environment of care for the patient and staff in accordance with 29 CFR.
 - (3) Performing electrical safety in accordance with the National Fire Protection Association (NFPA) 99.
 - (4) Ensuring preventive life safety measures are considered as outlined in NFPA 101(R).
 - (5) Managing MD program according to TB MED 750–2, FM 4–02 and TM 3–34.46.
- d. AMC through the U.S. Army Medical Logistics Command (AMLC) must approve the use of field and sustainment contract maintenance for materiel fielded under MTOE.
- e. ILS plans will be adhered to throughout the life cycle of medical materiel to ensure adequate logistics support (see AR 700–127 for additional information on ILS).
- f. Medical materiel acquisition policies and procedures will be followed in accordance with AR 40–60 to minimize logistics support requirements. Nonstandard equipment procurement will include MSPs, justifications for contract maintenance, or ISSAs.
- g. Each medical device will be tested for serviceability, current leakage, and ground resistance. Tests will be performed prior to initial use, upon completion of electrical repairs and at least annually or more frequently if recommended by the manufacturer. Proper testing will ensure equipment operates within manufacturer-specified limits and guidelines and with *paragraph 12–1c*.
- h. The specific maintenance policies that apply to the ARNG are as follows:
 - (1) State maintenance officers must coordinate medical maintenance support.
 - (2) Medical maintenance requirements beyond unit capabilities may be supported from the following resources:
 - (a) Other ARNG medical maintenance resources in the State.
 - (b) Defense Health Agency organizations with area support responsibilities.
 - (c) U.S. Army Medical Materiel Agency (USAMMA) Medical Maintenance Operations Divisions (MMOD).
 - (3) The Supply Bulletin 8–75–S10 provides additional ARNG-specific MD guidance.

12–3. Maintenance management

- a. Commanders of Army medical forces will publish written directives which govern field-level and sustainment-level biomedical equipment maintenance management programs for their organizations as appropriate. Commanders will appoint qualified medical maintenance managers.
- b. Commanders may use field or sustainment support to provide for organizational level maintenance operations; the records of services will remain with each organization UIC. Primarily, maintenance records will be documented using TELS applications and using the approved reporting architecture for medical technologies.

- c. Medical maintenance managers will obtain an approved DoDAAC and derivative UIC, as necessary for their TELS from the UIC and/or DoDAAC coordinator.
- d. Medical maintenance managers at each organization will publish internal and external SOPs that detail equipment maintenance management programs. The SOPs will be updated at least every 18 months and an electronic copy will be provided to the AMLC's Medical Maintenance Policies and Analysis (M2PA) via e-mail at usarmy.detrick.amlc.mbx.m2pa@mail.mil.
- e. Medical maintenance managers will use MOAs and delegations of authority documents to develop equipment support relationships between field and sustainment support organizations.
- f. Use assigned biomedical equipment specialists (BES) for medical maintenance support on medical devices. Do not assign BES additional duties that may adversely affect the performance of medical maintenance mission or routinely use BES for other than the maintenance of MD.

12-4. Preventive maintenance checks, electrical safety inspections, and calibration, verification, and certification services

- a. All TOE Army medical forces must provide safe environments to prevent electrical shock and other safety hazards related to medical equipment usage.
- b. Organization's medical maintenance programs will perform calibration, verification, and certification (CVC) services on medical devices in accordance with all applicable standards referenced in paragraph 12-1.
- c. Perform CVC services on organic medical device in accordance with the applicable MAC or other reference document, for example, manufacturer literature or TB MED 521 and TB MED 750-2.
- d. Refer to TB 38-750-2 for instructions to complete manual forms located in appendix A.
- e. Only MOS-qualified 68A/670A personnel or industry and/or DoD trained civilians and contractor personnel are authorized to perform maintenance and calibration services on medical devices producing ionizing radiation to verify that the equipment meets performance requirements outlined in the applicable MAC or manufacturer's literature.
 - (1) As in accordance with 21 CFR 1020, the manufacturers of MD that produces ionizing radiation must provide assembly instructions, written maintenance instructions and those maintenance interval schedules required to keep the equipment in compliance with all specific performance criteria.
 - (2) BES will perform annual CVC services on medical devices that produces ionizing radiation in accordance with TB MED 750-2 and TB MED 521.
 - (3) Army medical forces BES will also perform CVC service on MD immediately after any unscheduled service that could affect the equipment's overall calibration integrity. This includes repair parts replacement or certified component exchanges.
- f. Defibrillators will be thoroughly evaluated and tested, using defibrillator analyzers in accordance with TB MED 750-2, at least semiannually.
- g. Scheduled CVC services will be performed on all MD in accordance with the manufacturer's guidance or device TM. These services will be performed as stated in the applicable MAC and/or manufacturer's literature prior to patient use. In the event MAC is unavailable or does not specify, CVC services will be performed at the first authorized level of maintenance that has the capability and TMDE to do so.

12-5. Test, measurement, and diagnostic equipment

- a. Medical special-purpose TMDE is medical materiel used specifically for the test, calibration, and repair of medical equipment. TMDE does not include items used to diagnose or treat patients.
- b. As the AMEDD TMDE manager, USAMMA will manage, direct, and control the AMEDD special-purpose TMDE Program.
 - (1) U.S. Army Medical Materiel Development Activity (USAMMDA) will provide life cycle management for all type classified medical special-purpose TMDE in support of TOE medical organizations. Special-purpose TMDE life cycle management includes the acquisition, approval, repair, calibration, and the modernization of special-purpose TMDE.
 - (2) All TMDE will be calibrated in accordance with calibration intervals specified in TB 43-180.
 - (3) TMDE required by the AMEDD Army school curriculum to provide individual training will not require cyclic calibration unless training efficiency or safety is adversely affected. U.S. Army Medical Command policy specifies that all general-purpose TMDE and special-purpose TMDE used in AMEDD school training courses will be calibrated.

(4) U.S. Army Medical Materiel Center–Europe is the designated alternate source to provide repair and calibration support services for type classified medical special-purpose TMDE within the European Command.

(5) USAMMA Medical Maintenance Operations Divisions, Tracy, CA and U.S. Army Medical Materiel Center–Europe activities providing special-purpose TMDE Calibration and Repair Support will establish and maintain an instrument master record file.

c. Non-type classified medical special-purpose TMDE support will be accomplished as follows:

(1) All special-purpose TMDE owners or users will perform operator level maintenance.

(2) Special-purpose TMDE repair and calibration support will be obtained in accordance with TB 43–180 or by contract maintenance support.

(3) Special-purpose TMDE calibration intervals are specified in TB 43–180 or manufacturer instructions.

d. Units are responsible to validate current requirements with on-hand TMDE.

(1) Coordination must be done with the USAMMA and the TMDE support center to ensure that excess or obsolete TMDE has proper disposition.

(2) Commanders will coordinate through Army Futures Command (AFC) and TRADOC (U.S. Army Combined Arms Support Command) for requests to modify or change TOE documents and forward to the DCS, G–3/5/7 Organizational Integrator for review by DCS, G–3/5/7 (DAMO). Requests for changes to TDA documents will be made by using the Automated 4610 TDA Equipment Request Tool in the Force Management System Website (FMSWeb).

e. The Medical Center of Excellence Fielded Force Integration Directorate and USAMMDA ILS Managers must confirm the BOIP for all LIN special-purpose TMDE requirements.

12–6. Reliability-centered maintenance, condition based maintenance, and remote diagnostic assessment

a. All organizations and activities that are responsible to plan for acquisition of equipment used in the medical environment are responsible to address and comply to the extent possible, with the following elements:

(1) Application of the RCM process from inception of the requirement, during acquisition, and development of maintenance support strategies, to procurement, and deployment, leads to a maintenance program that uses the limited resources of parts and personnel effectively to limit equipment downtime and failure on critical items while allowing tolerable risk on systems that are not as critical.

(2) RCM is the foundation for CBM/PPMx. The incorporation of diagnostic and prognostic systems of CBM/PPMx into the equipment creates a shift from performing scheduled services to an analytical process that discloses degradation of product performance before failure.

(3) Research, development, and acquisition is a program and capability that allows remote access, interrogation and corrective actions to medical devices and equipment via internet protocol or by direct connection to on-the-ground diagnostic equipment.

b. These capabilities are described collectively as a single logistics operational environment under the Common Logistics Operating Environment Program.

12–7. Army Medical Logistics Command

AMLC has principal responsibility for and serves as the Army's lead for class VIII medical device maintenance and support. AMLC provides a National Maintenance Sustainment Program for medical materiel, operates sustainment-level medical maintenance capability, and implements national-level medical maintenance programs, policies, and procedures.

12–8. Forward repair activity–medical

a. The forward repair activity (FRA)–medical is an AMLC-resourced, AMLC-directed, and AMLC-controlled activity operated as a deployable section within the USAMMA's sustainment maintenance activities. FRA–medical will provide support for medical equipment or commodities.

b. An overseas FRA–medical may be established by AMLC when it has been determined, that in-country, forward sustainment support by sustainment-level personnel or by CLS operations are needed to sustain mission critical systems or components.

c. Determination of the need for an FRA—medical to provide depot-level maintenance on select items that directly impact materiel readiness of critical systems and/or equipment will be given priority during the depot-level maintenance planning phase.

12–9. Army Medical Logistic Command Medical Maintenance Policies and Analysis Division

a. M2PA provides national-level oversight of maintenance and sustainment functions for Army medical forces. M2PA manages all sustainment repairable items which are composed of items that cannot be repaired at FLM. All sustainment-level repairable items will be repaired to the Army maintenance standard defined in paragraph 3–3 and for nonstandard equipment, manufacturers' literature or documentation developed by sustainment organizations.

b. M2PA will—

(1) Enhance responsiveness to sustainment maintenance requirements generated during peacetime, contingency, and wartime conditions by linking all levels of sustainment maintenance under the appropriate commodity command.

(2) Implement the Army policy of repair as the primary SOS.

(3) Implement the highest published standard as the national standard and the single standard for those items repaired and returned to the supply system.

(4) Optimize workload across existing maintenance capabilities and allows for reductions in capital investments to maintenance facilities and TMDE used in maintenance operations.

(5) Develop and maintain a database of maintenance facilities, both organic and contract, and is responsible for ensuring minimal redundancy of maintenance capabilities and capacities.

(6) Ensure all repairs will be demand supported and based on Army requirements.

(7) Consolidate all sustainment maintenance workload in depots, on national maintenance contracts or at FLM activities.

c. M2PA responsibilities—

(1) Develop strategic plans to support class VIII equipment requirements for maintenance that effectively and efficiently support contingency operations through strategic maintenance points and capabilities that project maintenance subject matter expertise across the continuum of care.

(2) Support the maintenance vision of ensuring 100 percent readiness for field medical, dental, and veterinary units.

(3) Monitor processes that foster improvements in readiness of medical equipment and materiel issued to TOE medical units to include readiness assessments through SDC, training support, maintenance automation development and special programs implementation.

(4) Manage non-depot repair programs for all class VIII repairable items for the Army.

(5) Maintain visibility of the Army's sustainment maintenance capabilities and capacities.

(6) Provide input on national maintenance related to doctrine, strategic direction, and policy documents.

(7) Develop and coordinate maintenance management procedures, guidance, and metrics.

(8) Serve as a resource for national maintenance information to ILS processes.

(9) As part of the Integrated Concept Development Team, coordinate maintenance data requirements with logistics automation developers.

(10) Track cost effectiveness and efficiency of national repair programs.

(11) Maintain databases and/or files.

(12) Ensure Army medical materiel maintenance policies are updated and remain applicable to current field tactical and sustainment business procedures for biomedical systems, technologies, and equipment.

(13) Ensure medical maintenance management processes fully supports the Army's Medical Logistics Enterprise.

Chapter 13 Life Cycle Maintenance Support

13–1. General

a. Total ownership cost reduction is an Army objective throughout the life cycle of the weapon system. The Chief of Staff, Army and the Army Acquisition Executive identified the reduction of operating and support costs as a high priority and vital to realizing modernization efforts. The system's total ownership cost includes costs associated with acquiring, operating, modifying, maintaining, supplying, and disposing of

weapon and/or materiel systems. Reducing total ownership cost is instrumental, not only to reducing fiscal demands on the operational commander, but also to generating savings that can be reinvested in support of Army modernization objectives.

b. Establishing and sustaining comprehensive maintenance support throughout the entire life cycle is required to assure that materiel can be maintained in its operational environment with minimum resources for achieving OR and sustainability. The engineering and technical capability required to ensure Army equipment is maintainable within the Army standard maintenance system is called systems technical support (STS) for systems that are in production and SSTS when systems are out of production. Engineering and technical support capabilities include the following functions:

- (1) Conduct of logistics support analyses.
- (2) Development and update of the maintenance concept, including the LORA, the MSP, the depot support plan, logistics management data, the MAC, and all equipment publications, including the depot maintenance work requirements.
- (3) Establishment and sustainment of a stockpile reliability program.
- (4) Management of the Army's SDC projects.
- (5) Providing LARs for major weapon systems and/or commodities of equipment.
- (6) Processing EIRs and QDRs.
- (7) Engineering services/Engineering design changes for:
 - (a) Safety and capability modifications.
 - (b) Correction of systemic deficiencies.
 - (c) Re-engineering to compensate for obsolescence.
 - (d) Integration with new systems/requirements.
- (8) Maintenance and use of technical data packages.
- (9) TM updates/ interactive electronic technical manual (IETM).
- (10) Airworthiness certification.
- (11) Technical/maintenance guidance/assistance to field units; maintenance help desk support.
- (12) PPMx/CBM/CBM Plus (CBM+).
- (13) Life cycle logistic tools.

c. For guidance and procedures relating to Life Cycle Management support see AR 700–127 and DA Pam 750–1.

13–2. Use of military, civilian, contractor, local national maintenance personnel

a. Contractors, DA civilians, and local national augmentation may be used in a supporting role to meet the defense objective of ensuring that enough trained personnel are available to maintain the DoD-wide force and support structure in accordance with AR 70–1, AR 700–127, and the requirements of this regulation.

(1) Military personnel will perform maintenance in combat or hazardous duty areas as much as possible. The employment of civilians in hazardous duty areas for the performance of maintenance of field equipment that can be maintained by a Soldier is strongly discouraged.

(2) Where conditions are not conducive civilians will not be permanently stationed in combat areas or hazardous duty areas as determined by the combatant commander (see AR 715–9). Civilians may travel forward to a brigade combat team operational area on a case-by-case basis as individual equipment failures occur to provide temporary onsite maintenance and technical advice, for example, sustainment-level maintenance assistance teams and modification application teams.

(3) Outside the brigade operational area, in addition to military personnel, civilian maintenance personnel (contract, TDA, and local nationals) may be acceptable as a prudent risk on the probability of maintenance services being continued in wartime and in support of other contingency operations.

b. The Army will rely on the competitive private enterprise system, both U.S. and foreign, for maintenance support service to the maximum extent that is consistent with effective and efficient accomplishment of Army programs and missions.

c. The use of foreign private enterprise will be limited to the following situations:

- (1) DoD organic or DoD contract maintenance support activities lack the capacity to perform the task in the time required.
- (2) Use of foreign private enterprise has been predetermined by international agreement.
- (3) Use of foreign private enterprise will not affect the development or maintenance of U.S. national capabilities.

(4) The use of foreign contractual services will be contingent on U.S. contracting authority certification of quality, capability, and capacity.

d. Contract maintenance will not be used when:

- (1) In-house activities are necessary for individual and unit training of military personnel.
- (2) It will result in higher cost of current maintenance support to the Army than organic support.
- (3) The product or service is available from another DoD component or other Federal department or agency.

13–3. Planning for contractor support, fielding and/or post fielding

a. Logistics support of Army materiel performed under contract by commercial organizations, including the original manufacturer, is considered contractor support. Support may include materiel and facilities as well as services such as maintenance, supply, distribution, training, software support, repair, overhaul, and the collection and development of maintenance data as required by AR 700–127. Contractor maintenance personnel will not normally be allowed to perform field maintenance tasks except the following:

- (1) To address manpower requirements criteria shortfalls during peacetime operations.
- (2) To address HQDA approved maintenance programs such as reset.
- (3) To support equipment services when the equipment maintenance plan designates contract support as part of the materiel acquisition strategy.

b. The decision to use contractor maintenance support is accomplished as part of the SOR analysis during the ILS process in accordance with AR 700–127 and must be documented as part of the Milestone B ASARC. The plan for use of maintenance CLS will include a plan for the capture of contractor man-hours expended in support of Army equipment.

c. Proposals for contract maintenance support of classified equipment will adhere to the following:

(1) All contract maintenance support of COMSEC, SIGINT, and EW equipment must undergo an assessment of risks to national security before a cost study is performed to use commercial maintenance sources. The installation security manager in coordination with the ACOM, ASCC, and DRU (security and commercial activity managers) must conduct this special risk assessment. HQDA, NSA, and the AMC LCMC NMP must approve this assessment and selection of a contractor facility. The proposal, including PWSs with additional information identifying the COMSEC and/or SIGINT and EW equipment, density supported, and levels of maintenance to be performed, will be submitted through the appropriate AMC LCMC and DCS, G–3/5/7 (DAMO–FDI), 400 Army Pentagon, Washington, DC 20310–0400, to the Director, NSA (S–04), Fort Meade, MD 20755–6000.

(2) Classified equipment not under NSA cognizance being considered for maintenance support contracts to contractors other than OEMs will be given an assessment of risk as prescribed above.

13–4. Planning, programming, and budgeting for systems technical support and sustainment systems technical support

a. During the development and production phases of the weapon system life cycle, STS will be planned, programmed, and budgeted for by the PM of the weapon system. STS will be funded with procurement dollars.

b. Commencing with the first full FY after production ends, STS will transition, with funding, to SSTS and will be planned, programmed, and budgeted for by the supporting AMC MSC. SSTS will be funded with OMA dollars. STS funding will transition from procurement to OMA concurrent with the transition of programming responsibility from the PM and/or PEO to AMC. The PM, as the total life cycle systems manager and in collaboration with the AMC, is responsible for presenting all sustainment cost estimates for their systems and providing to DCS, G–4 (Maintenance Directorate) for inclusion in the sustainment program evaluation group as part of the POM submission.

c. For those weapon systems currently managed by PEOs and/or PMs that are forecasted to go out of production during the POM years, the PEOs and/or PMs will develop weapon system schedules in coordination with the gaining AMC MSC. PMs will develop a process to track and monitor STS costs prior to the system transitioning from production to operations and support so that data can be used as baseline information for SSTS projected requirements during the validation process. For programs being terminated, program termination plans will include all total life cycle considerations with commensurate resourcing requirements for areas, such as SSTS, PPSS, and all depot maintenance.

d. SSTS requirements will be developed by weapon system and function (LARs) and/or type of program. The AMC MSCs will validate and certify all SSTS requirements and cost estimates, whether

contractual or organic, prior to submission. Annual HQDA onsite reviews are conducted with MSCs to assist in the validation process. Supporting documentation used in support of the MSC SSTS requirements validation will be retained for HQDA review. Supporting documentation will show how the work was quantified in terms of both workload (such as hours, quantities, and tasks) and associated costs. Examples of supporting documentation include workload and cost projections derived from estimating tools such as engineering estimates, models, and simulations. The MSC commander will certify in writing the SSTS requirements for submission to AMC. AMC will compile the MSC data for submission to HQDA in support of the POM each year, and the Commander, AMC or a designated representative will certify in writing the SSTS POM submission. The documentation will include an accounting of the execution of SSTS dollars by spending category against those dollars originally budgeted.

e. The latest DCS, G-3/5/7 prioritization guidance for sustainment of fielded equipment will be used, and a priority will be assigned based on the criteria established in the guidance. Funds will be applied in priority order. AMC will provide justification for any deviation. A copy of the latest prioritization guidance may be obtained from DCS, G-3/5/7 (DALO-SMM), 500 Army Pentagon, Washington, DC 20310-0500.

13-5. Interactive Authoring Display Software

PMs will use interactive authoring display software (IADS) to simplify and expedite maintenance of ETMs and IETMs. The IADS viewer will be used to support the high functionality requirements of simple and complex systems such as aircraft, ground combat systems and all other Army systems/equipment utilizing ETMs and IETMs. Effective First Quarter, FY24, IADS will be the only authorized viewer for all ETMs and IETMs.

Chapter 14 Maintenance Programs

14-1. Maintenance Award Program

a. *Purpose.* The Chief of Staff, Army Award for Maintenance Excellence (AAME) Program is conducted each year to recognize Army units and/or activities that have demonstrated excellence in maintenance operations.

b. *Objective.* The objectives of the AAME Program are to—

- (1) Improve and sustain field maintenance readiness.
- (2) Assess the maintenance component of unit readiness.
- (3) Improve efficiency and reduce waste.
- (4) Recognize outstanding maintenance accomplishments and initiatives.
- (5) Ensure the best units compete.
- (6) Promote competition at ACOM, ASCC, DRU, HQDA, and DoD levels.

c. *Responsibilities.*

(1) The Chief of Staff, Army has delegated the awards ceremony down to Senior Commander. The Senior Commander will present the AAME plaques to the winners for their superior maintenance operations. Any changes will be published at <https://goordnance.army.mil/aame/aame.html>.

(2) The DCS, G-4 will—

- (a) Provide program funding guidance, policy, and overall supervision of the program.
- (b) Determine the most appropriate means of award presentation and coordinate the annual award ceremony.

(c) Establish guidance for the AAME field- and depot-level competitions.

(d) Conduct the Army board that selects 6 nominees to the Secretary of Defense (SECDEF) Maintenance Awards Program.

(3) The Commander, U.S. Army Ordnance School (USAOS) will—

- (a) Serve as responsible official for administration of the AAME Program.
- (b) Assist the DCS, G-4 in the development and coordination of updates and modifications to policy and administrative instructions.

(c) Develop, revise, and maintain security of assessment protocols used to select semifinalists, runners-ups, and winners.

(d) Convene the HQDA assessment board and conduct onsite evaluation team visits.

(e) Assist the DCS, G-4 in determining the most appropriate means of award presentation and coordinating the annual award ceremony.

(f) Assist the DCS, G-4 with the development and preparation of the nomination packet instructions for the AAME field- and depot-level competitions.

(g) Publish the full instructions and guidance for nomination packets on the USAOS website, that is available at <https://goordnance.army.mil/aame/aame.html>.

(h) Assist the Army board that selects 6 nominees to the SECDEF Maintenance Awards Program.

(i) Host an annual after-action review with DCS, G-4; ACOM; ASCC; and DRU representatives.

(4) ACOM, ASCC, and DRU commanders will—

(a) Promote competition at all levels of command and develop awards to recognize units and/or activities participating in all levels of the competition process.

(b) Validate, select, and endorse nomination packets submitted by subordinate organizations in accordance with published guidelines and forward to USAOS.

(c) Work with and mentor units to improve their competitiveness. Provide board members and onsite evaluation team members to support the assessment process as required by the USAOS.

(d) Commanders (or equivalent) will conduct their programs within the guidelines established in this paragraph and in the official USAOS website (<https://goordnance.army.mil/aame/aame.html>).

d. *Categories of competition and evaluating procedures.* Categories of competition and unit nominating and evaluation procedures can be found in DA Pam 750-1.

e. *Secretary of Defense Maintenance Award Program.*

(1) The SECDEF Maintenance Award Program annually recognizes the top six field maintenance units and one organic depot across all military Services. The SECDEF Maintenance awards are presented to the two top units in each of the three field categories and one organic depot in the depot category. The SECDEF Phoenix trophy is awarded to the best of the six field-level units. The Robert T. Mason Award for Maintenance Excellence trophy is awarded to the best organic depot.

(2) The AAME Program and AMC depot competition is used as the gateway to determine the SECDEF Maintenance Award Program submissions for the Army. Army units and AMC depots must compete and be selected winners and/or runners-up in the AAME Program to be nominated for the SECDEF Maintenance Award Program. DCS, G-4 will hold a selection board and nominate two field-level AAME winners and/or runners-up in each of the three categories as follows:

(a) Small: 10 to 100 authorized personnel.

(b) Medium: 101 to 300 authorized personnel.

(c) Large: 301 or more authorized personnel.

(3) AMC will select the depot-level AAME winner for the SECDEF Maintenance Award Program. The DCS, G-4 will review the competitor to ensure that the submission meets the competition criteria prior to submission.

14-2. Army Oil Analysis Program

a. The objectives of the AOAP are to improve OR of Army equipment, enhance safety, detect impending component failures, and conserve petroleum resources through application of the on condition oil change (OCOC) policy. AOAP monitors lubricants for the presence of contaminants, abrasive part wear, and review of prescribed physical properties and consolidates analytical data in support of diagnostic and/or prognostic maintenance processes.

b. Program policies.

(1) The AOAP PM manages the Army's oil analysis program. Enrollment in the AOAP is mandatory for all Army aircraft, combat vehicles, watercraft, and locomotives unless the DCS, G-4 approves the exception. Selected non-aeronautical equipment may be enrolled in the AOAP on a case-by-case basis when resources are available. For a list of equipment and components enrolled in the AOAP, see TB 43-0211 or the Army Enterprise Portal <https://enterprise.armyerp.army.mil>.

(2) AOAP daily operations and capabilities will be executed between the laboratory and the customer unit.

(3) Field maintenance units must promote and use OCOC as recommended by the AOAP to the highest extent possible. If OCOC is not followed, reasons for not doing so must be provided to the ACOM, ASCC, and DRU for approval and subsequently coordinated with the AOAP Program Management Office. OCOC eliminates unnecessary changing of component oil based on a schedule of hard-time intervals, as currently specified by lubrication order (LO). The OCOC policy does not replace or modify procedures for equipment under manufacturer's warranty.

c. ACOMs will—

- (1) Ensure subordinate commands participate in the AOAP.
- (2) Coordinate all requirements for lubrication analytical devices and/or instrument procurements with ASC PM AOAP.
- (3) Ensure resources are available for the winterization of equipment being transferred to geographic regions where temperatures from -25 Fahrenheit to -60 Fahrenheit are likely.
- (4) Ensure each organization owning enrolled equipment appoints an AOAP monitor who will ensure that subordinate units—
 - (a) Implement AOAP procedures within the command.
 - (b) Ensure AOAP monitors are trained by the supporting AOAP laboratory staff or through a training program approved by the PM AOAP.
 - (c) Ensure AOAP enrolled equipment and component oil samples are submitted to the regional oil analysis laboratory.
 - (d) Ensure personnel are properly trained in AOAP procedures.
 - (e) Ensure subordinate units record a laboratory-identified deficiency in equipment maintenance records. Units will notify the laboratory, on DA Form 3254–R (Oil Analysis Recommendation and Feedback), within 5 days of maintenance action taken.
 - (f) Ensure units incorporate AOAP processes in local SOPs.
- (5) Incorporate QA provisions and technician qualification required by the AOAP PWSs in the statement of work used in solicitation documents for contract operation of AOAP laboratories. Contracting officers reviewing vendor proposals for AOAP laboratory operation will be required to obtain PM AOAP technical review and approval prior to acceptance of the proposal.
- (6) Sustain the mobile AOAP laboratories upon arrival in the ASCC area of operation based on DCS, G–3/5/7 approval of deployment.
- d. For AOAP procedures see DA Pam 750–8 and DA Pam 738–751. Laboratory products and services are identified in TB 43–0211.

14–3. Army Warranty Program

- a. Materiel under warranty will be identified and maintained in accordance with the detailed policies and guidance contained in AR 700–139.
- b. Warranty actions will be completed as directed in AR 700–139 and reported under DA Pam 750–8 and DA Pam 738–751.

14–4. Army Modification Program

Modifications to Army materiel are either mandatory MWOs that are emergency, urgent, or routine or are alternate changes that include minor alterations and special-purpose or special-mission modifications. Detailed policy guidance and procedures are outlined in AR 750–10, AR 220–1, AR 700–138, DA Pam 750–1, and DA Pam 738–751.

14–5. Army’s Critical Safety Item Program

- a. An item will be identified as CSI when failure of that item could result in loss of or serious damage to the aircraft or weapon system, an unacceptable risk of personal injury or loss of life, or an uncommanded engine shutdown that jeopardizes safety. Damage sufficient to create a class A accident or a mishap of severity category I constitutes substantial damage. All CSIs will be considered as flight safety critical aircraft parts.
- b. CSIs will be purchased or repaired and/or overhauled only from sources approved by AMCOM. The objective is to achieve competition among approved CSI suppliers and their products and to ensure that potentially new CSI suppliers and their products are effectively evaluated prior to delivery of CSIs to the Army.
 - (1) Unless otherwise authorized by the AMCOM, offers of surplus material of CSIs will be considered only for procurement provided the AMCOM has approved documentation substantiating the following criteria:
 - (a) Government contract QA inspections will be performed on the surplus offers to ensure the criteria are met and all critical characteristics identified on the component drawings, in the solicitation or contract, and in the QA letter of instruction are acceptable.
 - (b) Supplementary QA provisions may be provided where verification of critical safety characteristics cannot be performed without degradation of the CSI.

(2) Local purchase of CSIs is prohibited unless justified by unusual and compelling urgency. Local purchase of CSIs is not authorized unless approved by the AMCOM. When CSIs are procured locally, the buying activity will notify the cognizant integrated materiel manager.

(3) Prior to installation of replacement CSIs not drawn from “ready for issue” inventory (for example, CSIs obtained from aircraft recovery sites or other salvage and/or cannibalization activities), AMCOM will ensure that all required maintenance actions and configuration changes are in conformance with current fleet technical documentation and that applicable acceptance test procedures have been satisfied.

c. Service depots and other Government organic facilities are authorized to manufacture CSIs in accordance with the following:

(1) *Alternate source for recurring production.* Depots and other Government facilities are candidates to be alternate sources for routine, repetitive, production lot manufacturing of CSIs provided AMCOM confirms they meet all the requirements established for alternate source qualification.

(2) *One-time manufacture.* Depots and other Government facilities are authorized to manufacture CSIs in limited quantities on a one-time basis without undergoing the full alternate source qualification process only when AMCOM confirms the following conditions are satisfied.

(a) Execution of all phases of one-time manufacture processing will be done on an emergency basis and will be given high priority.

(b) Quantities in excess of the immediate need may be manufactured where additional items are necessary for testing (for example, first article, fatigue strength, other destructive tests, etc.) or the economics of production, part usage, and production processes indicate this is clearly advantageous to the Government. This authority for one-time manufacture will not be used to circumvent alternate source qualification requirements for repeat or routine production. This one-time manufacture requirement does not apply to items produced to support research, development, test, or evaluation. The parts produced in accordance with this process will be coded, tracked, and disposed of as military unique CSIs.

d. Modifications of CSIs during installation or repair to make the item fit or function are prohibited unless approved by AMCOM. CSIs that need to be modified to make them fit or function properly will not be installed until the problem has been reported to AMCOM and disposition is provided in accordance with discrepant material review processes.

e. In the repair and/or overhaul of aviation systems and equipment, only conforming CSIs purchased from sources approved by AMCOM will be used. This is regardless of whether the repair/overhaul is performed by the Government or a contractor.

f. PQDRs will be submitted, investigated, and tracked where deficiencies are identified or suspected on CSIs. PQDRs will be submitted on CSIs where there is a defect or nonconforming condition detected on new or newly reworked Government-owned products, premature equipment failures, or products in use that do not fulfill their expected purpose, operation, or service because of deficiencies in design, specification, material, manufacturing, and workmanship. Deficiencies relating to critical characteristics or those that potentially impact safety will be classified as category 1 PQDRs.

g. When CSIs are no longer required by an Army aviation activity, the CSIs and associated documentation will be provided to the DLA Disposition Services for disposal as required by DoD 4140.1–R and in accordance with DoD 4160.21–M. When it is not economically practical to send consumable CSIs to Defense Reutilization and Marketing Service, the Army may dispose of the CSIs in the following ways:

(1) Prior to disposal, CSIs that are defective, nonconforming, have exceeded their life or time/use critical limits, or for which there is either no documentation or no reliable documentation regarding the manufacture, acquisition, use, modification, repair, or overhaul, will be mutilated beyond repair. CSIs that contain military offensive or defensive capabilities will be demilitarized in accordance with DoD 4160.28–M, Volume 1.

(2) Contracts requirement packages for the repair, overhaul or modification of aviation systems, subsystems, or equipment will include requirements for the proper disposal of CSIs.

14–6. Army Maintenance Floats

a. Authorized Army maintenance regeneration enablers include RCF and TCX.

b. RCF is a DA authorized quantity of selected class VII and VIII end items with a LIN and national item identification number (NIIN). The goal of the RCF program is to maintain established readiness levels at the Corps/Theater levels. RCF requirements are part of the AAO.

c. The system of record for RCF asset accountability is the LMP. RCF assets must be coded as a readiness float within the system of record maintenance master data file (MMDF).

d. AMC will account for RCF assets, not to exceed the established MEL, and issue or exchange floats in the LMP to/from GCSS–Army in support of requesting unit or depot in accordance with DCS, G–3/5/7 SRM priorities.

e. When OR is below the Army standard and available RCF assets are not sufficient to mitigate readiness gaps, AMC may program for funding needed to repair available assets to establish seeds for the RCF program.

f. AMC will establish a written agreement with ACOM/ASCC, as appropriate, to authorize overseas field support maintenance activities (for example: MSC–K and TLSC–E) to account for, maintain and issue RCF assets that are forward positioned within their respective overseas area of responsibilities.

g. Supporting maintenance activities will evacuate approved RCF assets (if available) to requesting units:

(1) CONUS within 10 days, to include transportation requirements.

(2) OCONUS within 30 days, to include transportation requirements.

h. Receiving Corps/ theater unit will ship approved NMC asset to the supporting maintenance activity:

(1) CONUS within 10 days, to include transportation requirements.

(2) OCONUS within 30 days, to include transportation requirements.

i. Ground equipment RCF assets may be issued to fill higher Army requirements, such as:

(1) Sustainment-level repair replacement.

(2) Planned sustainment repair replacement.

(3) Fill shortages due to RCF transaction.

j. Aviation equipment RCF assets may be issued to fill higher Army requirements, such as:

(1) Phase maintenance replacement.

(2) Attrition replacement.

(3) Sustainment-level repair replacement.

(4) Planned sustainment repair replacement.

(5) Test bed aircraft surge requirement.

(6) Training base aircraft surge requirement.

k. RCF assets will not be used to—

(1) Provide a SOR parts (controlled exchange or cannibalization).

(2) Expand currently assigned missions or set up new operational missions.

(3) Replace items that have been cannibalized.

(4) Satisfy temporary loan requirements.

(5) Set up a peacetime pool of equipment to reconstitute the force.

l. RCF transaction requirements—

(1) Units will request RCF to meet operational requirements through their chain of command.

(2) Units will reimburse gaining support maintenance activity for FLM CLIX parts and labor within 10 days of disposition instructions approval.

(3) ACOMs, ASCCs, and/or DRUs will approve all RCF transactions.

(4) Corps/Theater will manage fleets/system OR rates and approve RCF transaction requests that effectively mitigate long term Corps/Theater-level readiness gaps in accordance with the induction criteria in paragraph 14–6l(8).

(5) Joint TIs will be completed within 5 days upon approval.

(6) Joint TIs will be, recorded within the system of record and verified by a supporting LAR, LRC/AFSBn representative.

(7) AMC will take ownership of equipment upon completion of the Joint TI.

(8) RCF Criteria—the below criteria will be considered when approving an RCF transaction:

(a) Sustainment-level maintenance: 1) Identified sustainment-level faults cannot be fixed locally within 30 days 2) LCMC approved CVE candidate (not funded) 3) LCMC approved Shelf Life Extension Program candidate (not funded) 4) un-economically repairable (repairs exceed life cycle management sustainment cost) 5) modernization 6) recapitalization.

(b) FLM: 1) corp/theater fleet has averaged below 90 percent goal for the past 12 months (oldest equipment has induction priority) 2) estimated ship date is over 365 days 3) battle loss/battle damaged 4) condition code H.

m. Responsibilities.

(1) The ASA (ALT)—

(a) In coordination with the combat developer assess whether there is a maintenance float requirement and provide this information to the combat developer. The combat developer will calculate RCF requirements using the formula in table 14–1 for new ground acquisition or RCF formula for Aviation programs as part of the requirements process. This will establish the initial RCF component with the overall approved AAO. Coordinate with the DCS, G–8, DCS, G–4 and DCS, G–3/5/7 (DAMO–AV) to determine the APO quantity associated with RCF quantity.

(b) Request access to the RCF requirements in DCS, G–8, Force Development AE2S to facilitate AAO and APO reviews and confirm RCF requirements by LIN, NIIN, command, UIC, and FY no later than the second quarter of each FY utilizing previous FY data.

Table 14–1
Repair cycle float and tactical computer exchange authorization formulas

Time frame	Formula
RCF Formula for Systems- Before Fielding (Used by MATDEVs)	Requirement = (RG x IIQ) x [MTTR/(MTBF+MTTR)]
RCF Formula for- Nominated Fielded Ground Systems (Used by ACOMs, ASCCs, and DRUs)	Requirement = (RG - annual fleet OR rate) x LIN density
RCF Formula for- Fielded Ground Systems (Used by AMC)	Requirement = (RCT divided by MTBO) x LIN (IIQ) density
RCF Formula for- Aviation Systems (Used by DAMO–AV/AMCOM)	Requirement = (FS) + (DR + MR)

Note:

¹ RG = readiness goal from AR 700–138.

² For initial computation during acquisition development, MTTR and MTBF is in days.

³ The MTBF and MTTR are those operational requirements specified for that system by the CAPDEV, documented in the initial capabilities document, and included in the product support analysis requirements.

⁴ When these elements are in rounds, hours, miles, or events, they must be converted to days. During development, MTBF and MTTR data will be obtained from the product support analysis requirements.

⁵ Supported assets and supported LIN on hand exclude RCF assets.

⁶ MTBO = Mean Time Between Overhauls.

⁷ IIQ = Initial Issue Quantity.

⁸ FS = Force Structure: Number of Aviation Battalions with like Mission Design Series Aircraft.

⁹ DR = Depot Repair: Previous 5-year annual average number of aircraft inducted into Corpus Christi Depot for DLR.

¹⁰ MR = Modernization Requirements: Next 5-year annual average number of aircraft projected to be inducted into a modernization program (Remanufacture (AH64), Recapitalization (UH60, CH47).

¹¹ MTTR = mean time to repair.

¹² MTBF = mean time between failure.

¹³ RCT = repair cycle time.

(2) The DCS, G–3/5/7 will, annually—

(a) Evaluate DCS, G–4 proposed AAO RCF adjustments and approve RCF requirements in accordance with Army priorities and established modernization plan.

(b) Provide approved AAO for execution.

(c) Update MMDF based on DCS, G–3/5/7 approved RCF requirements.

(3) DAMO–AV will review, validate, approve, and centrally manage aircraft RCF requirements to meet the needs of the Army and are accounted for based on evolving distribution priorities. Central management of float aircraft is required due to low density of the population, aircraft production timelines, DLR timelines, rate of attrition, and evolving operational requirements.

(4) Combat Developer (PEO/PM) will—

(a) Determine the RCF maintenance float requirement using the methodology in table 14–1 in coordination with the MATDEV and coordinate this requirement with DCS, G–8; DCS, G–4; and DCS, G–3/5/7.

(b) RCF requirements must be documented in the LCSP and be reviewed and updated every 5 years or sooner if dictated by operational availability and readiness requirements.

(5) The DCS, G–4 will, annually—

- (a) Provide oversight of the RCF computation and annual submission process to assess the effectiveness of the program and provide any updates based on OR/availability and fleet readiness.
- (b) Recommend to DCS, G-3/5/7 approval and/or disapproval of RCF requirements.
- (c) Validate the requirements for ground systems that are fielded and in the operations and sustainment life cycle phase; specifically the DCS, G-4 (Sustainment Maintenance Division) at (usarmy.pentagon.hqda-dcs-g-4.mbx.dcs-g44s-mps@mail.mil).
- (d) Validate aviation system RCF requirements; specifically the DCS, G-4 (Aviation Maintenance Division), in coordination with DAMO-AV.
- (e) Validate combat developer RCF requirements for new ground systems acquisitions that have not been fielded; specifically, the G-4 Integrated Logistics Support Division, in coordination with the DCS, G-8, Synchronization Staff Officers.
- (6) The DCS, G-8 will—
 - (a) Evaluate DCS, G-4 validated RCF requirements for affordability and determine the APO quantity as appropriate.
 - (b) Ensure RCF requirements are the same LIN and modernization as supported assets.
 - (c) Approve RCF requirements and update AE2S with approved requirements.
 - (d) Validate asset availability, procure assets, and provide disposition of excess to support the approved RCF requirements.
- (7) AMC will—
 - (a) Review and verify LCMC, ACOM, ASCC and DRU RCF nominations for fielded equipment and calculate the total RCF requirement using the formula in table 14-1 and submit requirements to the DCS, G-4 (Sustainment Maintenance Division) to begin the staffing process for the AAO.
 - (b) Fund second destination transportation requirements.
 - (c) Account for RCF in accordance with AR 750-1.
 - (d) Coordinate with ACOMs, ASCCs, and DRUs to develop specific RCF sustainment and FLM maintenance criteria for RCF induction.
 - (e) Maintain accountability of RCF assets in LMP and ensure float transactions are documented in GCSS-Army.
 - (f) Establish a written agreement with supporting field maintenance activities to account for RCF assets in accordance with the Army maintenance standard in paragraph 3-3 and DA Pam 750-1.
 - (g) Ensure depots and supporting field maintenance activities account for RCF assets in accordance with Army maintenance standard in paragraph 3-3 and DA Pam 750-1.
 - (h) Ensure RCF is accounted for on the APSR.
 - (i) Ensure RCF maintenance readiness is separately reported monthly in accordance with AR 700-138.
 - (j) Program funding requirements for the sustainment of RCF assets.
- (8) Commanders of ACOMs, ASCCs, and DRUs will—
 - (a) Appoint in writing as an additional duty an RCF coordinator/manager.
 - (b) Establish subordinate RCF managers at the Corp/ Expeditionary Sustainment Command-level.
 - (c) Submit RCF nominations 3rd quarter annually to AMC for fielded ground equipment in accordance with the formula in table 14-1 of this regulation.
 - (d) Ensure aviation RCF is in accordance with this paragraph.
 - (e) Ensure RCF policy compliance.
 - (f) Ensure RCF supply transactions are conducted according to AR 710-2.
 - (g) Ensure Joint TI is conducted and signed by a LAR, LRC/AFSBn representative.

14-7. Battlefield damage assessment and repair

- a. The purpose of BDAR is to return disabled equipment rapidly to combat or to enable the equipment to self-recover. BDAR is the commander's responsibility, based on mission, enemy, terrain and weather, troops and support available, time available, and civil considerations and is accomplished by the operator and/or crew and field maintenance personnel. Realistic training must be performed during peacetime to ensure wartime proficiency.
- b. For mandatory BDAR procedures see DA Pam 750-1.

14–8. Army Chemical Agent Resistant Coating, Camouflage, and Marking Program

a. CARC refers to a coating system, not a single coating. Application of the CARC system consists of four distinct steps, each of which is critical to the performance of the overall system. The steps are cleaning, pretreating, priming and top coating. Missing a step can result in failure of an entire coating system. Lists of approved elements of the CARC system are in the current revision of MIL–DTL–53072. The CARC system (or other approved coating system) used on equipment protects the underlying materials, often metal, from corrosion as one of its primary functions. Each specification within the CARC system has an approved and validated qualified product database (QPD). Use only those items validated and listed on the QPD.

b. CARC coating system and/or CPP responsibilities are as follows—

(1) The CG, AMC is the lead Army organization for providing management and direction of the CARC painting and marking program. AMC, MSCs will ensure that the CARC system requirements are included in all sustainment maintenance. AMC in coordination with DCS, G–3/5/7, PEO, and PMs provide appropriate CARC color schemes for new procurement processes.

(2) The CG, AFC provides management and direction for CPP, of Army materiel as follows—

(a) The CCDC Army Research Laboratory (ARL), Materials and Manufacturing Sciences Division, Materials Development and Transition Branch (FCDD–RLW–MC), Coatings and Corrosion Team is the technical authority for CARC systems. ARL is responsible for researching, developing and maintaining CARC protective coatings, the testing and qualification of these products, the technical instruction on paints and painting procedures, providing technical content to the specification and related CARC documents and the shelf life validation and extension. The ARL, Materials and Manufacturing Sciences Division, which includes the ARL Specifications & Standards Office, is also responsible for developing, writing, managing and maintaining these material specifications along with the QPD.

(b) Development of camouflage patterns, and color or colors for Army materiel.

c. Policies for painting.

(1) The CARC system is the approved coating for all combat and combat support equipment; tactical vehicles; aircraft, including unmanned; and essential GSE and reparable containers such as engine, transmission, and all ammunition containers, including appropriate kits, except as stated in paragraphs 14–8c(9)(a) through 14–8c(9)(f).

(2) Coatings (paint) will be applied only when the present paint is unserviceable or if directed by HQDA. Vehicles may be completely recoated (repainted) when 25 percent or more of the total vehicle painted area has been determined to be unserviceable by supervisory maintenance personnel. For aircraft, repair painting is restoration of a noncompliant coating system to an area equal to or less than 50 percent, and complete painting is restoration of a noncompliant coating system to an area greater than 50 percent.

(3) Repainting for the sole purpose of achieving uniformity or for cosmetic purposes is prohibited.

(4) Tactical equipment designed for single-color CARC system requirement will be painted with an approved color based upon contingency mission environment.

(5) Complete repainting may be performed at field and sustainment levels where Occupational Safety and Health Administration approved facilities are available in accordance with TM 43–0139 for GSE and TM 55–1500–345–23 for aircraft. Aircraft complete painting will be performed at sustainment level. For vehicles, the threshold for complete repainting is 25 percent or more of the total vehicle area deemed unserviceable. Below this threshold, spot painting to repair damaged CARC system and prevent corrosion will be done at the field level.

(6) Spot painting of the coating system to prevent corrosion at the field level using a brush, roller, or spray can (or other approved CARC repair product forms) will be done in accordance with TB 43–0242 for ground support and TM 1–1500–345–23 for aircraft. Spot painting includes restoration of painted surfaces after repair.

(7) Spot painting of equipment painted with the CARC system will be with CARC system only. The use of any unauthorized, non-CARC system coating on any equipment painted with the CARC system is strictly prohibited.

(8) Damaged paint, particularly the primer(s), must be repaired in a timely manner to maintain or re-establish corrosion protection. Scratches, chips, or marring of the paint observed during PMCS will be repaired at field level to prevent corrosion damage (see TB 43–0242 for ground support and TM 55–1500–345–23 for aircraft).

(9) Items that do not require painting will not be painted. For example, items made of fabric, that have anodized, or parkerized surfaces will not be typically painted. Do not paint the following with the CARC system:

(a) Painted items that attain surface temperatures of 400 degrees Fahrenheit and higher, serve a heat-conducting function, or serve a function of expanding and contracting during operation. Examples are manifolds, turbo chargers, cooling fins, and rubber hoses.

(b) Displacement watercraft that will be subject to prolonged saltwater immersion, such as the logistical support vessel and the landing craft utility.

(c) Non-deployable equipment and fixed installation systems such as railroad rolling stock and fixed power generation systems.

(d) Installation/TDA equipment such as military police cars, non-tactical fire trucks, and buses.

(e) Aluminum transmissions that are enclosed in combat vehicle power pack compartments. However, any ferrous components of the transmission must be protected with CARC or other rust-preventive agent.

(f) Medical equipment.

(10) Environmentally acceptable coatings that do not violate Federal, State, and local laws will be used at all times in accordance with technical data packages provided to depots, arsenals, and contractors.

(11) CARC system-protected surfaces are not to be covered with petroleum or other products to improve the appearance of the equipment. Use of these products will reduce the chemical protection provided by the CARC system and increase the probability of injury.

(12) Waivers and exceptions for CARC system requirements will be considered on a case-by-case basis and may only be authorized by the exception of authority of this regulation after considering stakeholder recommendations and justification. At a minimum, stakeholders should include the Army Corrosion Control Prevention Executive; DCS, G-4's ARL; CCDIC's ARL; and the appropriate centers (for example Ground Vehicle System Center or Aviation and Missile Center) and AMC MSC in their recommendation and justification. Full coordination with stakeholders must be made at least 30 calendar days prior to any deadline for decision.

(a) The requestor will coordinate the DA Form 5 (Army Staffing Form) with stakeholders who will provide concur or non-concur recommendation to AMC and the milestone decision authority (MDA) for review and consideration.

(b) For equivalency of corrosion protection, the requestor will provide ARL actual data or objective quality evidence by an independent third-party who validates the non-CARC coating(s) as intended to be applied meets, at least, the same level of corrosion protection as would be provided by the CARC system components for pretreatments, primers, and topcoats for the same application, with preference given to the highest performing CARC. The data or objective quality evidence will include outdoor exposure testing and the testing required in the latest versions of the applicable CARC system specifications covered by MIL-DTL-53072 for cleaning, pretreatments, primers and topcoats. For equivalency of critical attributes such as chemical agent resistance, spectral reflectance, visual color and gloss the requestor will provide a detailed survivability and protection analysis to ensure the assets, assets in nearby vicinity and unit or battalion the asset will be deployed with will not be compromised in terms of survivability and protection. Analysis will include a percentage of enhancement or vulnerability for requested waiver. This will include perception test and similar to ensure zero compromise of all mission assets and rigorous data collected. Commercial comparisons are not considered valid data.

(c) The 30 day coordination period begins when ARL agrees they have sufficient information to evaluate whether the proposed coating system can provide corrosion performance equivalency and data to support dismissal of critical attributes such as chemical agent resistance, spectral reflectance, visual color and gloss or any element being requested to be exempted. Any decision to accept less than the corrosion performance equivalency of CARC or other requirements—such as chemical agent resistance, spectral reflectance, visual color, gloss—will be documented in the Systems Engineering Plan, the Test and Evaluation Master Plan and the LCSP. All supporting rationale and life cycle cost estimates used in making the decision will be provided to ARL upon approval of the waiver and exception.

(13) Waivers or exceptions to CARC system policy for CBRN mission critical systems or CBRN contamination survivability requirements require a waiver/change approval from DCS, G-3/5/7 in accordance with AR 15-41.

(14) Temporary color change will only be approved by AMC (G-4) or MDA. This action will be coordinated with ARL.

d. Policies for CPP.

- (1) CPP is a camouflage designed to improve concealment by making materiel blend in with their surroundings and falsify information about the asset.
- (2) CPP may include a single color, such as tan or green, or use a multiple color design as developed by the Ground Vehicle Systems Center and approved by CG, AFC.
- (3) CPP is required for all equipment having an area greater than nine square feet on any side.
- (4) CPP for new equipment will be specified in the technical data package and will be applied at the time of manufacture.
- (5) Camouflage colors must meet requirements for spectral (gloss) and infrared reflectance, in addition to color as established by CCDC ARL Coatings and Corrosion Team.
- (6) When available, CPP will be applied to equipment during depot rebuild/overhaul, product improvement programs, and recapitalization or refurbishment programs. If the three-color pattern has not been developed, a single color base coat will be applied. Where possible, depots will apply colors that conform to unit contingency missions if requested.
- (7) Field and sustainment activities will accomplish CPP of equipment having only a base coat. Patterns may be obtained from the CCDC Ground Vehicle System Center. If requirements exist that differ from the approved patterns and color scheme, ACOMs, ASCCs, and DRUs must request development of the required pattern and/or color scheme thru CCDC Ground Vehicle Systems Center for all ground equipment.
- (8) ACOM, ASCC, and DRU commanders are assigned responsibility and authority to camouflage paint equipment with patterns appropriate for contingencies. When a unit has more than one contingency plan, the CPP for the primary contingency will be used. Priority should be given to early deploying units.
- (9) CPP will not be changed for training exercises.
- (10) CPP will not be applied to—
 - (a) Equipment not requiring open-area concealment.
 - (b) Non-deployable equipment and fixed installation systems.
 - (c) Equipment that must be painted in accordance with regulation or policy established by other Services or Government agencies.
 - (d) Rotary and fixed-wing aircraft. However, GSE must have CPP applied in accordance with this regulation.
 - (e) Components of systems or items that can be transported in various modes and can be constructed or assembled into a variety of configurations.
 - (f) Stackable containers used in the Defense Transportation System, except missile containers that are a component of a weapon system.
 - (g) Canvas covers, tarpaulins, end curtains, seats, and backrests.
- (11) Equipment will not be decorated with individual characteristic designs such as caricatures or cartoons.
- (12) The style, size, and exact location of markings for all Army materiel will be specified in applicable TB 43-series and other DA technical publications, including technical data packages.
- (13) Aviation equipment will be marked according to TM 55-1500-345-23.
- (14) Special markings for NTVs are included in AR 58-1.
- (15) Technical data, where appropriate, will be contained on metal or plastic plates or decals.
- (16) The Red Cross insignia for AMEDD equipment will consist of a red cross composed of four square-shaped arms bordering on a center square of the same size and superimposed on a square white field slightly larger than the cross.
- (17) Under tactical conditions, when requirements for concealment outweigh those for recognition, all conspicuous markings may be obscured or removed by the authority and at the discretion of the major organization commander present. Protective Red Cross markings may be obscured only at the direction of the responsible major tactical commander.
- (18) Overseas commanders may deviate from this regulation when host countries require special markings in accordance with international agreements. For aviation, refer to TM 55-1500-345-23.
- (19) Before Army materiel is sold or permanently transferred from the jurisdiction of the DA, all Army identification markings will be removed or permanently obliterated by sanding or chipping.
- (20) Markings on the exterior of tactical equipment will be applied or over-sprayed with materials resistant to chemical agents.
- (21) Safety marking, including hazard warning and caution information, for non-tactical equipment, tactical equipment not subject to the Army camouflage policy, and equipment at fixed facilities will comply

with the provisions of AR 58–1. Materiel painted in camouflage requiring hazard warning and caution information will have this information applied in a contrasting color.

(22) Tactical equipment in CONUS and OCONUS units and activities without an identifiable contingency mission or plan may maintain equipment in single color CARC that best conforms to the local terrain to minimize repainting costs without affecting unit readiness:

(a) Equipment with three-color camouflage paint may not be repainted in single color CARC for the sole purpose of achieving uniformity.

(b) It is acceptable to have a mix of three and single color vehicles in a unit or activity.

(c) Equipment may be repainted from three color to single color CARC only when a qualified field sustainment or depot maintenance personnel determines 25 percent or more of the total vehicle painted area is unserviceable.

14–9. Product quality deficiency and/or improvement reports

a. All Army materiel is subject to QDR and EIR. The purpose of submitting a QDR is to report conditions that are the result of below-standard quality workmanship or materiel deficiencies and to file claims for initial failure credit from the AWCF for DLRs. The purpose of an EIR is to suggest materiel improvements in design, operations, or manufacture. Reporting instructions for QDRs and EIRs are contained in AR 702–7–1, DA Pam 738–751, DA Pam 750–1, and DA Pam 750–8.

b. AMC will—

(1) Establish responsibilities and procedures for managing and evaluating recommended improvements in design, operation, and manufacture.

(2) Establish responsibilities and procedures for managing and evaluating reports of product quality deficiencies in design, specifications, materiel, manufacturing, and workmanship.

(3) Ensure that defects and failures, as reported by user personnel, are promptly analyzed for failure trends and management action, and summarized for command use.

(4) Ensure that user experience reported on the deficiency report is considered in the design, engineering, and production phases of new equipment.

(5) Prepare the Army TB 43–0002 series.

14–10. Administrative storage of materiel

a. Administrative storage is the placement of materiel in a limited care and preservation status for short periods of time. This applies to MTOE and TDA units. The policy for administrative storage of TDA equipment is in AR 71–32. Procedures for the administrative storage of materiel can be found in DA Pam 750–1.

b. ACOM, ASCC, and DRU commanders responsible for administrative storage will—

(1) Furnish assistance to commanders as required in carrying out an administrative storage program.

(2) Monitor the status of materiel in administrative storage in their commands.

(3) Designate an installation representative to conduct a command-level review of administrative storage at 6 month intervals to reassess and revalidate the requirement.

(4) Forward results of these reviews, with appropriate recommendations, to the DCS, G–4 (Maintenance Directorate) when circumstances are beyond the capability of the ACOM, ASCC, and DRU commander to resolve.

c. Equipment in administrative storage will have all major subsystems exercised as directed by applicable TMs. Any faults detected will be corrected. The materiel will then be completely reprocessed as directed by applicable TMs if it is to be returned to administrative storage.

d. Before equipment is placed in administrative storage, it must meet the maintenance standard outlined in paragraph 3–3 and DA Pam 750–1.

e. Equipment in administrative storage is accounted for in accordance with AR 710–2; asset reports are submitted under AR 710–3 and materiel condition status reports under AR 220–1 and AR 700–138.

f. Administrative storage of aircraft will be considered in the same category as short-term storage and accomplished in accordance with the applicable TM. In no case will aircraft remain continuously in administrative (short-term) storage for more than 45 days. At the end of that time, aircraft will be restored to an FMC status or placed in intermediate storage up to, but not exceeding, 180 days.

14–11. The Army Tire Program

a. Command emphasis is required at all levels to obtain maximum safety when personnel are working with tires.

b. Responsibilities specific to the Army Tire Program:

(1) AMC is responsible for management of all DA aircraft and vehicle tires.

(2) AMC will participate as a member of the Tri-Service Aircraft Tire Coordination Group to improve aircraft tire management by—

(a) Reviewing Tri-Service aircraft tire maintenance data and/or analysis reports.

(b) Coordinating procurement cost of new tires with the U.S. Air Force (USAF) and Navy.

(c) Coordinating with the USAF and Navy to revise specifications tires based on the latest technology.

(d) Coordinating with the USAF and Navy to consolidate and upgrade technical data concerning tire and inner tube publications.

(e) Designating program proponents for developing and managing vehicle and aircraft tire programs.

(3) Program proponents will—

(a) Develop policy and procedures to manage and control tires.

(b) Establish reporting procedures needed to determine the cost effectiveness of retreaded tires and report savings under the Army Resources Conservation Program.

(c) Ensure only new tires for foreign military sales items.

(d) Negotiate and sign all tire support agreements.

(e) Participate jointly with USAF and Navy in qualifying aircraft tire retread contractors who repair tires common to all services.

(4) In developing and managing pneumatic tires, proponents will adhere to the following repair policy criteria:

(5) Major Army commanders, TSG, and the Chief of Engineers will and maximize safety during pneumatic tire use by—

(a) Maximizing the use of training courses.

(b) Ensuring thorough inspection of pneumatic tires mounted on vehicles and aircraft during PMCS and removal when tread depths reach the dimension for retreading.

(c) Ensuring that all maintenance personnel are complying with the requirements of TM 9–2610–200–14.

(d) Developing accurate workload requirement forecasts.

(e) Reporting excess serviceable (new and retread) and economically repairable tires to the NICP for disposition in accordance with AR 725–50.

(f) Developing aircraft tire usage and performance data upon request from DoD.

(g) When required, TACOM or AMCOM will provide technical assistance to field and sustainment maintenance personnel.

c. Training.

(1) All commanders will ensure training is provided to all individuals who service single-piece or multi-piece rims and wheels used on large vehicles. These individuals will demonstrate proficiency in their ability to perform specific tire, rim, and wheel tasks. Individual ability to perform these tasks will be evaluated and a record maintained documenting this evaluation. Contact the local TACOM LAR for tire care, maintenance, repair, demounting, and demounting training.

(2) In-depth tire training pertaining to pneumatic tire inspection, classification, repair, care, maintenance, and rebuild standards is conducted through TACOM. This in-depth training is targeted for all CONUS and OCONUS sustainment-level tire inspectors and maintenance managers.

(3) TACOM also provides onsite general tire maintenance training classes for CONUS and OCONUS at the unit location. This onsite training includes the basics needed for pneumatic tire inspection, classification, care, repair, and use of tire inflation safety cage and maintenance of tires. Safety cage training will include a pneumatic tire inflation gage and 10-foot air hose. This training will be offered by TACOM at the unit's expense.

(4) CONUS and OCONUS tire maintenance training requirements may be coordinated with the Commander, U.S. Army Tank-automotive and Armaments Command (AMSTA–IM–LC–CJT (Tire Group)), Warren, MI 48397–5000.

(5) Training must be justified under criteria prescribed in AR 5–20.

14–12. Tool improvement program suggestions

a. Tool improvement program suggestions (TIPS) is a means for the users of tools to report deficiencies in tools; to recommend tools for deletion from, or addition to, SKOT; and to suggest modifications to tools that will improve the usefulness of the tools.

b. The DCS, G–4 (Maintenance Directorate) is the proponent for TIPS and will—

(1) Approve Army policy for TIPS.

(2) Resolve conflicts between Army agencies.

(3) Review and approve TIPS documentation developed by U.S. Army Combined Arms Support Command (CASCOM).

c. Commander, CASCOM is the responsible official for the Supply and Maintenance Assessment Review Team and TIPS programs and will—

(1) Propose Army policy for TIPS.

(2) Establish procedures for functional and operational control of TIPS as follows:

(a) Receive, analyze, evaluate, coordinate, and staff suggestions and recommendations.

(b) Approve or disapprove TIPS initiatives and provide feedback to the suggester and evaluators.

(c) Ensure that approved initiatives are implemented.

(d) Maintain files and statistics for TIPS.

(3) Publicize the program to ensure Army wide awareness of TIPS and improvements and/or changes to SKOT.

d. Procedures can be found in DA Pam 750–1.

14–13. National Maintenance Program

a. *General.* The NMM is responsible for managing all sustainment-level reparable, including selected field reparable. All sustainment-level reparable will be repaired to the national standard that is defined as the highest published standard. Any exceptions, such as requirements to support contingency operations, must be approved by the NMM. The NMP distributes sustainment maintenance workload across non-depot activities based on national need through a national requirements determination process. Implementation is the responsibility of the CG, AMC, with guidance and oversight by DCS, G–4 (Maintenance Directorate).

b. *National Maintenance Plan purpose.*

(1) Enhances responsiveness to sustainment maintenance requirements generated during peacetime, contingency, and wartime conditions by linking all levels of sustainment maintenance under the appropriate commodity command.

(2) Implements the Army policy of repair as the primary SOS.

(3) Implements the highest published standard as the national standard and the single standard for those items repaired and returned to the supply system.

(4) Optimizes workload across existing maintenance capabilities and allows for reductions in capital investments to maintenance facilities and TMDE used in maintenance operations.

(5) Develops and maintains a database of maintenance facilities, both organic and contract, and is responsible for ensuring minimal redundancy of maintenance capabilities and capacities.

(6) Ensures all repairs will be demand supported and based on Army requirements. The program will not repair items in long supply.

(7) Consolidates all sustainment maintenance workload in depots, on national maintenance contracts or at non-depot maintenance activities.

c. *Responsibilities.*

(1) The NMM is the focal point for all AMC Integrated Materiel Management Center requirements and for ensuring that the Army sustainment maintenance workload is based on national need. Responsibilities include—

(a) Ensuring that sustainment maintenance providers possess a documented quality management system.

(b) Ensuring that sustainment maintenance providers possess the facilities, tools, TMDE, skills, and workforce required to meet the national standard.

(c) Determining, in coordination with ACOMs, ASCCs, and DRUs, based on need, the non-depot activities to be surveyed for qualified national provider qualification.

(d) Balancing repair capacity, cost, and production schedules to meet total Army requirements, including requirements to support repair parts no longer in production and repair parts for older equipment in the Army inventory.

(2) The AMC MSCs will have management responsibility to consolidate all maintenance requirements and present them to the NMM, to technically certify sources of repair and to develop appropriate maintenance procedures to meet the Army standard.

14–14. Maintenance Assistance and Instruction Team Program/Command Maintenance Evaluation and Training

a. The MAIT/COMET Program is designed to—

(1) Increase readiness of equipment and units consistent with assigned goals needed to carry out the Army mission.

(2) Assist commands in readiness inspections.

(3) Provide effective and responsive assistance and instruction to commanders at all levels in resolving logistic issues to meet mobilizations and contingency operations within organic, attached, and supported units.

(4) Augment the commander's capability for providing maintenance and associated logistic assistance, instruction assistance, and instruction to organic, attached, and supported units.

(5) Identify systemic problems in maintenance management and provide assistance to improve management of maintenance workload at field and sustainment levels.

b. The DCS, G–4 will—

(1) Develop the MAIT/COMET Program.

(2) Approve or disapprove requests for program changes or deviation.

(3) Schedule periodic conferences between ACOM, ASCC, DRU, CONUS, and/or installation MAIT coordinators to highlight and resolve conflicts in policy and procedures.

c. Major Army commanders, except the CG, AMC; CG, TRADOC; CG, U.S. Army Criminal Investigation Command; and the Commander, Military Traffic Management Command will—

(1) Establish a MAIT/COMET Program to support regular Army units.

(2) Establish a MAIT/COMET Program at the Regional Readiness Command or comparable level to support Army Reserve units.

(3) Ensure that MAITs/COMETs are technically self-sufficient for the routine support mission.

(4) Provide for the temporary augmentation of MAIT/COMET to fill short-term or infrequent requirements for equipment and management skills not available from local resources.

(5) Ensure that sufficient funds and personnel are budgeted and allocated for MAIT/COMET operations.

(6) Coordinate technical assistance programs to provide maximum benefit to supported units with minimum resources.

(7) Ensure that any acronym that could be misconstrued as being MAIT/COMET is not used.

(8) Review MAIT/COMET operations annually to ensure maximum program effectiveness.

(9) Submit recommendations for MAIT Program improvement or deviation to DCS, G–4 (DALO–MPF), 500 Army Pentagon, Washington, DC 20310–0500.

(10) Upon request, provide backup MAIT/COMET support to units of the ARNG. Such support should be reciprocal and is normally reimbursable.

d. The CNGB will ensure that MAIT/COMET Program services are furnished to units of the ARNG.

e. Corps, divisions, separate brigades, installations, senior-level ARNG and USAR Geographical Functional Commands commanders will—

(1) Have operational control of assigned MAITs/COMET.

(2) Ensure that MAIT/COMET members are technically competent and possess the ability to provide quality assistance and instruction.

(3) Ensure that assigned MAIT/COMET personnel receive training to maintain technical competence and remain current with changing logistics policies and procedures and instructional techniques. The MAIT/COMET will receive new equipment training.

(4) Request assistance from supporting activities and/or higher HQs to correct problems that cannot be corrected within the command.

(5) Request, through channels, modifications to TOE and/or MTOE or TDA for personnel and equipment in support of the MAIT Program.

- (6) Provide resources needed to carry out the MAIT/COMET Program.
- (7) Periodically evaluate MAIT/COMET performance and effectiveness.
- (8) Provide for periodic conferences between MAITs/COMETs evaluation and inspection teams to highlight and resolve possible conflicts in interpretation of logistic policy and procedures.
- f. Commanders of units visited will—
 - (1) Ensure that appropriate personnel, materiel, and records are available for the MAIT/COMET during scheduled assistance and instruction visits.
 - (2) Take prompt action to correct identified problems.
 - (3) Request assistance from supporting activities and/or higher HQs to correct problems that cannot be corrected by the unit.
- g. For mandatory procedures relating to the MAIT/COMET Program see DA Pam 750–1.

14–15. Command Maintenance Discipline Program

- a. The CMDP is a commander's program. It does not prohibit or replace the formal or informal evaluation of maintenance programs conducted at the discretion of commanders such as MAIT, COMET or Inspector General inspections. The CMDP is a tool to evaluate unit maintenance programs on a day-to-day basis. The CMDP is oriented to combat readiness and sustainability. The overriding principle of CMDP is the Soldier's and units' abilities to maintain their equipment in any environment.
- b. The overall procedures for the CMDP can be found in DA Pam 750–1.

14–16. Unique item tracking program

- a. The objective of the UIT Program is to maintain visibility of each uniquely identified asset for the primary purpose of inventory control and/or engineering analysis. Security, accountability, safety, maintenance, OR, warranty applicability, and other areas that may benefit from the tracking process will be subsets of the inventory control or engineering analysis functions. UIT by serial number of selected items and installed components is required by Defense Logistics Manual 4000.25–2 Volume 2, DoDI 4140.07, and AR 710–3.
- b. UIT reporting requirements for Army-controlled small arms, security risk I nonnuclear missiles and rockets, CCIs, and radiological testing and tracking assets are set forth in AR 710–3. Additional assets for which serial number tracking via UIT is deemed necessary will be approved by the DCS, G–4 (Maintenance Directorate).
- c. All assets within the supply system subject to UIT will be tagged with a UII that specifically identifies individual assets being controlled or managed. A UII can be the item's serial number, and the vehicle identification number, if no other UIT asset has the same identifier within the NSN or NIIN. Installed components, as specified in AR 710–3, also require UII assignment.
- d. All UIT programs will include provisions for data entry and tracking using AIT. In that regard, MATDEVs will ensure that new procurements of serial-number-tracked assets include provisions for AIT-readable serial number markings to be applied during manufacture.

14–17. Serialized Item Management Program

- a. DoDI 4151.19 establishes a serialized item management (SIM) program, which tasks the Military Departments and Defense Agencies to—
 - (1) Identify populations of select items (parts, components, and end items).
 - (2) Mark each item in each population with a UII.
 - (3) Generate, collect, and analyze maintenance, logistics, and usage data about each specific item.
- b. The overarching goals of the Army SIM is to increase weapons system readiness, reliability, and safety; create life cycle asset visibility; and provide a reduction in ownership costs through enhanced, efficient, and effective weapons system sustainment operations. These goals will be achieved by creating a global, unified supply chain—one that is capable of projecting, sustaining, maintaining, and reconstituting combat power under the full range of operational scenarios—that performs with complete visibility and control of all relevant assets, equipment, and materiel.
- c. This policy applies to all Army activities and directs the development and execution of broad-based SIM programs that make data about specific items, unique within their respective total populations, readily available for life cycle management.
- d. SIM programs will enable an effective life cycle management of items by identifying populations of select items (parts, components, and end items), requiring all items within these select populations to be

marked with a UII, and enabling the generation, collection and analysis of logistics data about each uniquely identified item.

e. All Army activities will update applicable policy directives, regulations, and pamphlets for which they are the policy proponent. In addition, AIS and related software will be updated as required to implement this policy. To optimize the process, all references to management by serial number will be modified to require and enable management by UII.

14–18. Ground safety notification system

a. The Ground Safety Notification System is used to disseminate maintenance information or maintenance action messages to the field. These messages include the SOUM and the ground safety action.

b. Mandatory procedures for the Ground Safety Notification System can be found in AR 750–6 and DA Pam 750–1.

14–19. Maintenance messages

Maintenance messages (maintenance, sustainment, logistics supply, technical, or operational) that are not related to safety can provide new or different pertinent non-safety information (see AR 750–6). Prior to publishing, all maintenance advisory messages will be coordinated through the appropriate AMC commodity command safety office to ensure their content is not safety related. The only authorized method of informing ACOMs, ASCCs, and DRUs of hazardous equipment conditions is through the Ground Safety Notification System.

14–20. Army Corrosion Prevention and Control Program

a. The Army CPC Program responsibilities and guidance are in accordance with AR 750–59.

b. CPC is a critical consideration in assuring the sustained performance, readiness, economical operation, and service life of Army systems and equipment. It requires active consideration in the materiel development, acquisition, fielding, operation, and storage processes. CPC requires life cycle management planning and action in design, development, testing, fielding, training, and maintenance.

c. CPC will be achieved by incorporation of the latest state-of-the-art corrosion control technology in the original equipment design, in the manufacturing, in all levels of maintenance, in supply, and in the storage processes. The objective is to minimize corrosion by using design and manufacturing practices that address selection of materials; coatings and surface treatments; production processes; process specifications; system geometry; material limitations; environmental extremes; storage and ready conditions; preservation and packaging requirements; and repairs, overhaul, and spare parts requirements.

d. See DA Pam 750–1 for procedures.

14–21. Army Battery Program

The Army Battery Program provides policy guidance on the use and maintenance of military and commercial standard batteries and rechargeable and/or reusable batteries. The procedures outlined in DA Pam 750–1 are mandatory.

14–22. Nuclear Hardness Maintenance and Hardness Surveillance Program

a. *Objective.* The objective of the Nuclear HM/HS Program is to ensure the survivability of mission critical systems to the effects of nuclear weapons; to protect the investment made in hardening systems; and to ensure compliance with DoDI 3150.09, which directs the Secretary of the Army to “Ensure an Nuclear HM/HS Program is established and maintained for those CBRN mission critical systems that are hardened for nuclear survivability.”

b. *Applicability.*

(1) The Nuclear HM/HS Program applies to those systems that are identified as mission critical by their capabilities documents, that have nuclear survivability requirements, and that incorporate hardening to meet those requirements, in accordance with DoDI 3150.09. The U.S. Army Nuclear and Combating Weapons of Mass Destruction Agency maintains the list of Army mission critical systems with nuclear hardness requirements.

(2) The systems hardness are the aspects of the system that protect it from initial nuclear weapons effects, including high-altitude electromagnetic pulse, initial nuclear radiation, blast, and thermal radiation.

(3) This maintenance policy is independent of hardness assurance.

c. *Program policy.*

(1) Hardness maintenance is a unit responsibility. Effective nuclear hardness maintenance depends on proper maintenance in accordance with a system's TMs. Hardness maintenance begins with routine PMCS. MATDEVs will develop checks and services requirements and ensure they are included in mission critical systems' TMs.

(2) Hardness surveillance is the responsibility of the MATDEV. Hardness surveillance will be conducted while the system is located at depot maintenance and inspected by a U.S. Army Test and Evaluation Command (ATEC) engineer. Hardness maintenance service checks must be completed before any standard maintenance work is done. The intent of hardness surveillance is to monitor the hardness maintenance program and ensure the system's integrity remains intact through its life cycle. Hardness surveillance will be based on a portion of the fielded fleet.

d. Responsibilities.

(1) The MATDEV will—

(a) Ensure that nuclear hardness maintenance checks and services are incorporated into a system's TMs. These checks and services include but are not limited to ensuring wire casings are serviceable, critical items are properly grounded, and electrical connections are free of corrosion.

(b) Ensure that detailed life cycle HM/HS Programs are incorporated into the supportability strategy (SS), in accordance with DA Pam 700–127. In the SS, include maintenance concepts, requirements, and procedures for nuclear HM/HS procedures to assure the nuclear hardness of the system throughout its life cycle. Maintenance actions, replacement of parts, modifications and other life cycle changes require a reassessment of the system's vulnerability.

(c) Include life cycle surveillance and maintenance of electromagnetic environmental effects shielding or hardening features in the ILS assessment and planning processes, in accordance with DA Pam 70–3. The MATDEV will consider the following in support of HM/HS planning: maintenance planning, technical data, training and training support, computer resources support, and design interface. Equipment technical publications will delineate and describe nuclear HM/HS requirements.

(d) Verify HM/HS maintenance procedures and review the technical publications during the logistics demonstration, in accordance with DoD 3235.2–R. The MATDEV will incorporate HM and/or HS into logistics demonstration testing. Implement maintenance test, evaluation, and demonstration requirements through the ILS process in AR 700–127. Summarize the logistics demonstration requirements system's Test and Evaluation Master Plan in accordance with DA Pam 700–127.

(e) Coordinate with AMC to plan, program, and budget for HM/HS requirements as part of the life cycle cost estimate in accordance with DA Pam 70–3.

(2) CAPDEV, in coordination with the MATDEV, will prepare the SS during the initial phase of drafting the CDD in accordance with DA Pam 700–56. The SS ensures that only support analysis tailored to the program needs are accomplished for development of ILS element requirements and constraints and to identify the supportability design requirements. This information must be consistent with the ILS information contained in the initial capabilities document.

(3) AMC will—

(a) Coordinate with MATDEVs to ensure sufficient funds and personnel are budgeted and allocated for HM/HS.

(b) Incorporate hardness surveillance into depot-level maintenance for mission critical systems.

(c) Integrate into existing quality control procedures.

(4) ATEC will—

(a) Provide technicians to AMC upon request to support hardness surveillance.

(b) Set up a schedule in coordination with AMC for inspection of vehicles at depot maintenance.

(5) Chief, USAR; CNGB; and ACOM, ASCC, DRU commanders will—

(a) Ensure hardness maintenance inspections, in accordance with a system's TMs, are incorporated into unit maintenance.

(b) Ensure maintenance personnel are trained in nuclear hardness maintenance.

Chapter 15

Equipment Reset

15–1. General guidance

The Army conducts activities to restore the Army's personnel and equipment to a desired level of combat capability commensurate with future missions and maintains accurate visibility over equipment repair,

replacement, recapitalization and expenditures in order to sustain equipment availability and meet operational requirements. Equipment reset is a subset process for field and sustainment maintenance within the Army RESET of the SRM strategy. AR 525–29 contains specifics regarding SRM.

15–2. Equipment Reset principles

The Army will measure unit RESET as the unit leaves the mission phase of SRM until it enters the prepare/ready phase. The Army will track unit RESET via the unit status report and Army reset common operating picture. The correct nomenclature for the date to start RESET is reset start date or in time, the day the unit leaves the available phase +1 day. Redeploying units will begin RESET at return + 51 percent of personnel and equipment returning to home station. Procedures for executing reset are outlined in DA Pam 750–1.

Chapter 16

Left Behind Aviation Equipment

16–1. General

Left behind aviation (LBA) procedures are used during contingency operations upon HQDA approval. LBA are maintenance significant aviation related items on the unit APSR that remain at home station after the unit deploys.

16–2. Left Behind Aircraft–sustainment

a. AMC will coordinate the transfer of aircraft with the losing and/or gaining command and the aviation and missile LCMC for sustainment operations.

b. ACOM and/or ASCC will identify aircraft as left behind at home station 120 days prior to available load date.

c. LBA will be transferred in accordance with the maintenance standards for serviceability requirements as listed in TM 1–1500–328–23 and the phase requirements listed below. Requests for exception to this standard will be submitted to the DCS, G–4 (DALO–MPV).

(1) A transfer inspection will be conducted in accordance with the aircraft TM preventive maintenance daily checklist and the results provided to AMC (Aviation Field Maintenance Directorate), prior to transferring LBE–aircraft.

(2) All aircraft will be inventoried in accordance with DA Form 2408–17 by military occupation specialty qualified personnel by losing and gaining organizations. AMC will coordinate with the AMCOM for assistance with qualified personnel if necessary, to assist in TIs on aircraft.

d. If the gaining and losing organizations cannot come to agreement on the condition of LBA–aircraft prior to induction or redistribution, they will contact the DCS, G–4, Aviation for adjudication and final decision.

e. Maintenance and historical records for all LBA–aircraft will be transferred to gaining organization electronically in the current authorized Standard Army Maintenance Information System format with required paper backup copies by the losing organization. Deviations are not authorized.

f. Aircraft work ordered in accordance with DA Pam 738–751 to an SOR upon designation as LBA and transferred to AMC. Units are responsible to notify the SOR that the aircraft has transferred as LBA. Prior coordination is required to facilitate AMCOM (Aviation Field Maintenance Directorate) assistance with and/or completion of maintenance required on aircraft identified as LBE. Phase, component, and times to major inspections will be in accordance with TM 1–1500–328–23. Exceptions will be forwarded to the DCS, G–4 (DALO–MPV) through the ACOM and/or ASCC G–4, Aviation office—

(1) Aircraft will be maintained in flyable storage at an FMC status in accordance with AR 700–138, and the applicable TMs. Aircraft incapable of transferring in an FMC status will transfer with prior coordination.

(2) LBA–aircraft will transfer and or be inducted with all equipment required to maintain the aircraft in an FMC status as outlined in AR 700–138. Specific instructions will be provided in the transfer order.

g. Loans as previously outlined in the definitions of this chapter are not permitted for aircraft. Lateral transfers will be accomplished in accordance with the procedures outlined in this message.

Chapter 17

Unit Maintained Equipment

17–1. General

UME is equipment on the unit APSR that remains at home station after the main body deploys for a rotational programmed mission and is accounted for and sustained by the rear detachment until the main body redeploys from the rotational programmed mission. UME procedures in DA Pam 750–1 are mandatory.

Chapter 18

Advanced and Additive Manufacturing in the Field

18–1. General

a. Advanced manufacturing refers to new ways to manufacture existing products and the manufacture of new products resulting from advances in technology. Advanced manufacturing depends on use and coordination of information, automation, computation, software, sensing, and networking, and making use of cutting-edge materials and emerging capabilities enabled by the physical and biological sciences. Advanced manufacturing includes, but is not limited to, additive manufacturing (also known as three-dimensional (3D) printing).

b. The objective of this policy is to promote the Army's use of additive manufacturing technologies for supporting and improving readiness and enabling unit capability to solve problems while minimizing risk to Soldiers, mission, and materiel.

c. The guidance in this regulation is for maintenance activities and not intended to apply to other uses the commander may have.

d. Use of additive manufacturing is applicable for items which authority exists for local fabrication and for items developed through unit innovation.

e. Additive manufacturing refers to manufacturing or fabrication processes that involve the joining of materials to make objects from three-dimensional model data, usually layer upon layer. Examples of available additive manufacturing technologies are 3D printing, powder bed fusion, and cold spray.

f. Additive manufacturing technologies provide a unique and flexible expeditionary capability for returning equipment to a mission capable status during BDAR, returning NMC equipment to a ready status, overcoming issues of parts obsolescence or responding to disruptions in the supply system.

g. The policies in this chapter apply to operational (field) units and activities.

h. For procedures relating to additive manufacturing see DA Pam 750–1 and the Additive Manufacturing Guidebook.

18–2. Additive manufacturing

a. The ASA(ALT) in accordance with existing authorities and responsibilities will—

(1) Provide policy in the acquisition and use of technical data, computer software documentation, and computer software in support of advanced and additive manufacturing.

(2) Obtain, as necessary, copyright permission and/or licenses for the appropriate technical data, computer software documents, and computer software to support utilization of additive manufacturing.

(3) Serve as the proponent for, and exercise overall supervision of Army additive and advanced manufacturing policy and execution.

(4) Provide, through the respective product managers, configuration management of weapon systems when an additive manufactured part is approved to replace a configuration-controlled part.

b. The DCS, G–4 will assist the ASA(ALT) in the development of policy integrating advanced and additive manufacturing into the Army maintenance system.

c. The CG, AMC will—

(1) Coordinate with CG, AFC to establish software, hardware, and feedstock standards for all additive manufacturing systems utilized to support the supply chain for Army field and sustainment maintenance operations.

(2) Identify candidate repair parts and items for fabrication using additive manufacturing techniques for Army systems in sustainment.

(3) Document approved additive manufacturing items and uses in applicable TMs.

(4) Establish metrics, with support from the ASA (ALT); CG, TRADOC; and CG, AFC to track the progress of additive manufacturing implementation and its effect on readiness.

d. The CG, AFC will—

(1) Establish and maintain processes and procedures for developing, testing, and qualifying advanced and additive manufacturing capabilities.

(2) Establish the processes and procedures for certifying the parts produced by additive manufacturing technologies that meet specifications.

(3) Develop, evaluate, certify, and integrate advanced manufacturing technologies for use by the Army.

(4) Coordinate with CG, AMC to establish software, hardware, and feedstock standards for all additive manufacturing systems utilized for Army field and sustainment maintenance.

(5) Identify candidate repair parts and items for fabrication using additive manufacturing technologies for Army systems in the acquisition phase.

(6) Serve as the advisor for the development, fabrication and operation of additive manufacturing and supporting advanced manufacturing technologies supporting field and sustainment maintenance operations.

e. The CG, TRADOC will establish and maintain appropriate training and qualification programs for additive manufacturing for enlisted Soldiers, warrant officers, and officers.

f. Commanders, U.S. Army OIB activities—

(1) The Army's organic depots and arsenals will develop additive and advanced capabilities consistent with AMC command guidance to produce OEM quality parts for use to meet obsolescence and other readiness requirements as required and within the abilities of available engineering support.

(2) Depot and Arsenal activities will establish, consistent with AMC guidance, appropriate process qualifications and part certifications with the commodity aligned CCDC Center.

(3) Will ensure the accountability, maintenance, and safe operation of advanced and additive manufacturing equipment within their operations.

(4) Will ensure that only trained personnel operate additive manufacturing systems.

g. Commanders, Battalion and above will—

(1) Ensure the accountability, maintenance, and safe operation for additive manufacturing equipment in the unit's possession.

(2) Ensure only trained personnel operate additive manufacturing systems.

(3) Document to the data repository of record, locally developed uses of additive manufacturing to include, the item, use, quantity, and source of design.

(4) Nominate repair parts for fabrication using additive manufacturing technologies to the data repository for engineering and technical evaluation as identified.

(5) Ensure subordinate commanders with supply and maintenance missions comply with additive manufacturing business procedures when scheduling and performing maintenance operations.

(6) Coordinate with appropriate technical, engineering, and legal expertise, as necessary, to effectively manage risk when utilizing additive manufacturing.

h. Authorized uses and approvals for the following—

(1) Commands are authorized to use Army approved additive manufacturing technologies to produce or fabricate items whose fit, form, and function characteristics require no analysis of performance impacts prior to use.

(2) Use of additive manufacturing technologies will be in a manner that protects patents, trademarks, or other forms of intellectual property in accordance with DFAR subpart 227.7102–2 and DFAR subpart 7103–5.

Appendix A

References

Section I

Required Publications

Unless otherwise indicated, all Army publications are available on the Army Publishing Directorate website at <https://armypubs.army.mil>. DoD publications are available on the ESD website at <https://www.esd.whs.mil>.

AR 5–9

Installation Agreements (Cited in para 2–18i(15).)

AR 70–1

Army Acquisition Policy (Cited in para 2–18i(13).)

AR 71–32

Force Development and Documentation Consolidated Policies (Cited in *para 2–7b.*)

AR 95–1

Flight Regulations (Cited in *para 2–14r.*)

AR 215–1

Military Morale, Welfare, and Recreation Programs and Nonappropriated Fund Instrumentalities (Cited on title page.)

AR 220–1

Army Unit Status Reporting and Force Registration–Consolidated Policies (Cited in *para 12–2a.*)

AR 700–127

Integrated Product Support (Cited in *para 2–1a.*)

AR 700–138

Army Logistics Readiness and Sustainability (Cited in para 2–4n(6).)

AR 700–139

Army Warranty Program (Cited in *para 2–12w.*)

AR 710–1

Centralized Inventory Management of the Army Supply System (Cited in *para 4–9a.*)

AR 710–2

Supply Policy Below the National Level (Cited in *para 2–14e.*)

AR 715–9

Operational Contract Support Planning and Management (Cited in *para 4–19e.*)

AR 750–6

Army Equipment Safety and Maintenance Notification System (Cited in *para 2–14r.*)

AR 750–10

Army Modification Program (Cited in *para 2–8o.*)

AR 750–43

Army Test, Measurement, and Diagnostic Equipment (Cited in para 2–8e(9).)

AR 750–59

Corrosion Prevention and Control for Army Materiel (Cited in para 2–8e(10).)

DA Pam 738–751

Functional Users Manual for the Army Maintenance Management System–Aviation (Cited in *para 2–14n.*)

DA Pam 750–8

The Army Maintenance Management System (TAMMS) Users Manual (Cited in *para 2–14n.*)

DoD 4151.18–H

Depot Maintenance Capacity and Utilization Measurement Handbook (Cited in para 5–13a(2).)

DoDI 1225.06

Equipping the Reserve Forces (Cited in *para 4–4a.*)

DoDI 3150.09

The Chemical, Biological, Radiological, and Nuclear (CBRN) Survivability Policy (Cited in *para 14–22a.*)

DoDI 4151.19

Serialized Item Management (SIM) for Life-Cycle Management of Materiel (Cited in *para 14–17a.*)

DoDI 4151.24

Depot Source of Repair (DSOR) Determination Process (Cited in *para 5–7a.*)

DoDI 8523.01

Communications Security (Cited in *para 8–5b.*)

DoDM 5220.22 Volume 2

National Industrial Security Program: Industrial Security Procedures for Government Activities (Cited in *para 8–2d.*)

MIL–DTL–53072

Chemical Agent Resistant Coating (CARC) System Application Procedures and Quality Control Inspection (Cited in *para 14–8a.*) (Available at <https://quicksearch.dla.mil/qssearch.aspx>)

NFPA 99

Health Care Facilities Code, 2012 Edition (Cited in para 12–2c(3).) (Available at <https://www.nfpa.org/>.)

NFPA 101®

Life Safety Code® (Cited in para 12–2c(4).) (Available at <https://catalog.nfpa.org/>.)

NG Design Guide 415–2

Logistics Facilities (Cited in *para 3–16b.*) (Available at https://www.wbdg.org/ffc/army-coe/army-national-guard-criteria_)

NG Design Guide 415–3

Aviation Facilities (Cited in *para 3–16b.*) (Available at https://www.wbdg.org/ffc/army-coe/army-national-guard-criteria_)

NGR 750–5

Army National Guard Maneuver Area Training Equipment Sites and Unit Training Equipment Site Operations (Cited in *para 3–16c.*) (Available at <https://www.ngbpdc.ngb.army.mil/>.)

TB 1–1500–341–01

Aircraft Components Requiring Maintenance Management and Historical Data Reports (Cited in para 6–13d(2).)

TB 43–180

Calibration and Repair Requirements for the Maintenance of Army Materiel (Cited in *para 3–7p.*)

TB 43–0211

Army Oil Analysis Program (AOAP) Guide for Leaders and Users (Cited in para 2–18d(3).)

TB 380–41

Security: Procedures for Safeguarding, Accounting, and Supply Control of COMSEC Material (Cited in *para 8–2d.*)

21 CFR 1020

Performance Standards For Ionizing Radiation Emitting Products (Cited in para 12–4e(1).) (Available at <https://www.ecfr.gov/>)

Section II**Prescribed Forms**

Unless otherwise indicated, DA Forms are available on the APD website (<https://armypubs.army.mil/>).

DA Form 7723

Maintenance Expenditure Limit (MEL) Waiver (Prescribed in para 4–7e(4).)

Appendix B

Internal Control Evaluations

Section I

Equipment Maintenance (Assistant Division Commander for Support/Army Command, G-4)

B-1. Function

The function covered by this evaluation is equipment maintenance.

B-2. Purpose

The purpose of this evaluation is to assist the Assistant Division Commander for Support (ADCS), ACOM, ASCC, and DRU G-4 in evaluating the key internal controls listed below. It is not intended to cover all controls.

B-3. Instructions

Answers must be based on the actual testing of key internal controls (for example, document analysis, direct observation, sampling, simulation, and/or other). Answers that indicate deficiencies must be explained and the corrective action identified in supporting documentation. These internal controls must be evaluated at least once every 5 years. Certification that the evaluation has been conducted must be accomplished on DA Form 11-2 (Internal Control Evaluation Certification).

B-4. Test questions

- a. Are commanders actively involved in their maintenance programs?
- b. Are subordinates held accountable for proper maintenance operations?
- c. Is equipment being maintained to the Army maintenance standard?
- d. Are units assigning proper priorities to unserviceable equipment?
- e. Is a maintenance officer appointed in writing to supervise maintenance operations?
- f. Are maintenance SOPs established and trained?
- g. Are maintenance operations performed by military personnel in combat areas or hazardous duty areas as determined by the combatant commander?
- h. Is standard Army TMDE, to include embedded diagnostics, used during maintenance operations to diagnose and repair equipment?
- i. Are maintenance personnel effectively using TMDE and embedded diagnostics in maintenance operations?
- j. Are controlled exchanges made only under authorized circumstances?
- k. Are maintenance operations performed using the Army maintenance system?
- l. Are maintenance operations performed in accordance with environmental security provisions?

B-5. Supersession

This evaluation replaces the evaluation for equipment maintenance previously published in AR 750-1.

B-6. Comments

Help make this a better tool for evaluating internal controls. Submit comments to the DCS, G-4 (DALO-MPF), 500 Army Pentagon, Washington, DC 20310-0500.

Section II

Maintenance Management System (Assistant Division Commander for Support/Major Army Command, G-4)

B-7. Function

The function covered by this evaluation is maintenance management systems.

B-8. Purpose

The purpose of this evaluation is to assist the Division ADCS, ACOM, ASCC, and DRU, G-4 and commanders in evaluating the key internal controls listed below. It is not intended to cover all controls.

B-9. Instructions

Answers must be based on the actual testing of key internal controls (for example, document analysis, direct observation, sampling, simulation, and/or other). Answers that indicate deficiencies must be explained and the corrective action identified in supporting documentation. These internal controls must be evaluated at least once every 5 years. Certification that the evaluation has been conducted must be accomplished on DA Form 11-2.

B-10. Test questions

See paragraph 4-14.

- a. Is GCSS-Army the primary means of managing maintenance?
- b. Are maintenance activities using automated procedures, processes, and forms located in appendix A?
- c. Are maintenance man-hour expenditure data being entered into GCSS-Army and/or the appropriate TELS and are the data being forwarded to higher level automations systems/databases?

B-11. Supersession

This evaluation replaces the evaluation for maintenance management systems previously published in AR 750-1.

B-12. Comments

Help make this a better tool for evaluating internal controls. Submit comments to DCS, G-4 (DALO-MPF), 500 Army Pentagon, Washington, DC 20310-0500.

Section III**Manpower Utilization Standards (Assistant Division Commander for Support and/or Army Command, G-4)****B-13. Function**

The function covered by this evaluation is manpower utilization.

B-14. Purpose

The purpose of this evaluation is to assist the Division ADCS, ACOM, ASCC, and DRU G-4 and commanders in evaluating the key internal controls listed below. It is not intended to cover all controls.

B-15. Instructions

Answers must be based on the actual testing of key internal controls (for example, document analysis, direct observation, interviewing, sampling, simulation, and/or other). Answers that indicate deficiencies must be explained and the corrective action identified in supporting documentation. These internal controls must be evaluated at least once every 5 years. Certification that the evaluation has been conducted must be accomplished on DA Form 11-2.

B-16. Test questions

See DA Pam 750-1, appendix B-3.

- a. Are commanders that operate under GCSS-Army including accurate monthly man-hour utilization statistics in their quarterly review and analysis or similar performance monitoring program?
- b. Are military maintenance personnel assigned to positions that maximize the use of their MOS skills daily?
- c. Do military maintenance personnel perform maintenance mission tasks at least 50 percent of total available time?
- d. Do civilian maintenance personnel perform maintenance mission tasks at least 85 percent of total available time?

B-17. Supersession

This evaluation replaces the replaces the evaluation for manpower utilization standards previously published in AR 750-1.

B-18. Comments

Help make this a better tool for evaluating internal controls. Submit comments to the DCS, G-4 (DALO-MPF), 500 Army Pentagon, Washington, DC 20310-0500.

Section IV**Army Oil Analysis Program (Assistant Division Commander for Support/Army Command, G-4)****B-19. Function**

The function covered by this evaluation is the AOAP.

B-20. Purpose

To assist the ACOM, ASCC, and DRU G-4, Division ADCS, and senior leaders in evaluating key internal controls. It is not intended to cover all controls.

B-21. Instructions

Answers must be based on the actual testing of key internal controls (for example, document analysis, direct observation, sampling, simulation, and/or other). Answers that indicate deficiencies must be explained and the corrective action identified in supporting documentation. These internal controls must be evaluated at least once every 5 years. Certification that the evaluation has been conducted must be accomplished on DA Form 11-2.

B-22. Test questions

See paragraph 14-2.

- a. Have AOAP monitors at each level of command been assigned and properly trained?
- b. Are commanders executing AOAP for those items listed in TB 43-0211?
- c. Is maintenance feedback being sent to laboratories by units?
- d. Are supported units properly responding to laboratory recommendations?

B-23. Comments

Help make this a better tool for evaluating internal controls. Submit comments to the DCS, G-4 (DALO-MPF), 500 Army Pentagon, Washington, DC 20310-0500.

Section V**Army Oil Analysis Program (U.S. Army Materiel Command)****B-24. Function**

The function covered by this evaluation is the AOAP.

B-25. Purpose

The purpose of this evaluation is to assist the AMC DCS, G-3/5/7 in evaluating the key internal controls. It is not intended to cover all controls.

B-26. Instructions

Answers must be based on the actual testing of key internal controls (for example, document analysis, direct observation, sampling, simulation, and/or other). Answers that indicate deficiencies must be explained and the corrective action identified in supporting documentation. These internal controls must be evaluated at least once every 5 years. Certification that the evaluation has been conducted must be accomplished on DA Form 11-2.

B-27. Test questions

See paragraph 8-2.

- a. Is required laboratory equipment being programmed, funded, and procured?
- b. Are AOAP laboratory operations adequately funded?
- c. Are laboratory instruments and personnel properly certified?
- d. Are weapon systems and sampling intervals evaluated at least annually and regulatory guidance revised accordingly?
- e. Is the AOAP equipment component list being reviewed and approved annually?
- f. Is TB 43–0211 being updated annually to reflect approved changes?

B–28. Comments

Help make this a better tool for evaluating internal controls. Submit comments to the DCS, G–4 (DALO–MPF), 500 Army Pentagon, Washington, DC 20310–0500.

Section VI

Maintenance Expenditure Limits (Assistant Division Commander for Support/Major Army Command, G–4)

B–29. Function

The function covered by this evaluation is MELs.

B–30. Purpose

The purpose of this evaluation is to assist the Division ADCS, ACOM, ASCC, and DRU, G–4 in evaluating the key internal controls listed below. It is not intended to cover all controls.

B–31. Instructions

Answers must be based on the actual testing of key internal controls (for example, document analysis, direct observation, sampling, simulation, and/or other). Answers that indicate deficiencies must be explained and the corrective action identified in supporting documentation. These internal controls must be evaluated at least once every 5 years. Certification that the evaluation has been conducted must be accomplished on DA Form 11–2.

B–32. Test questions

See paragraph 4–6 and DA Pam 750–1.

- a. Are field and sustainment maintenance units and activities using MELs to determine if excess and accident-damaged equipment is economically repairable?
- b. Are conditions for waivers of published MELs being met?
- c. Is a repair or upgrade decision process established for COTS computers, personal digital assistants, and associated devices, to include MEL of 65 percent of replacement costs?
- d. Are prescribed MELs being bypassed by using separate job estimates to repair an item?

B–33. Supersession

This evaluation replaces the evaluation for MELs previously published in AR 750–1.

B–34. Comments

Help make this a better tool for evaluating internal controls. Submit comments to the DCS, G–4 (DALO–MPF), 500 Army Pentagon, Washington, DC 20310–0500.

Section VII

Special Repair Authorities/One-Time Repair Authorities (Deputy Chief of Staff, G–3/5/7, U.S. Army Materiel Command)

B–35. Function

The functions covered by this evaluation are SRAs and/or one-time repair authorities (OTRAs).

B-36. Purpose

The purpose of this evaluation is to assist AMC in evaluating the key internal controls listed below. It is not intended to cover all controls.

B-37. Instructions

Answers must be based on the actual testing of key internal controls (for example, document analysis, direct observation, sampling, simulation, and/or other). Answers that indicate deficiencies must be explained and the corrective action identified in supporting documentation. These internal controls must be evaluated at least once every 5 years. Certification that the evaluation has been conducted must be accomplished on DA Form 11-2.

B-38. Test questions

- a. Has a primary point of contact for SRAs and/or OTRAs been assigned?
- b. Is the SRA and/or OTRA database being maintained with status?
- c. Are quarterly reports being provided?
- d. Are SRA and/or OTRA requests acted upon (approvals and disapprovals) within the specified time-lines?

B-39. Supersession

This evaluation replaces the evaluation for specialized repair authorities previously published in AR 750-1.

B-40. Comment

Help make this a better tool for evaluating internal controls. Submit comments to the DCS, G-4 (DALO-MPF), 500 Army Pentagon, Washington, DC 20310-0500.

Section VIII**Special Repair Authority (U.S. Army Materiel Command Life Cycle Management Commander and/or Maintenance Inspector)****B-41. Function**

The functions covered by this evaluation are SRA and/or OTRA.

B-42. Purpose

The purpose of this evaluation is to assist the AMC LCMC commander and/or maintenance inspector in evaluating the key internal controls listed below. It is not intended to cover all controls.

B-43. Instructions

Answers must be based on the actual testing of key internal controls (for example, document analysis, direct observation, sampling, simulation, and/or other). Answers that indicate deficiencies must be explained and the corrective action identified in supporting documentation. These internal controls must be evaluated at least once every 5 years. Certification that the evaluation has been conducted must be accomplished on DA Form 11-2.

B-44. Test questions

See paragraph 3-14.

- a. Are SRA/OTRA requests being processed timely?
- b. Are requests for SRA/OTRA carefully screened on obsolescent and obsolete items?
- c. Are maintenance operations under the SRA/OTRA monitored to assure quality, safety, and technical standards are met?
- d. Is the AMC's SRA/OTRA database being maintained for managed items?

B-45. Supersession

This evaluation replaces the evaluation for SRA previously published in AR 750-1.

B-46. Comment

Help make this a better tool for evaluating internal controls. Submit comments to the DCS, G-4 (DALO-MPF), 500 Army Pentagon, Washington, DC 20310-0500.

Section IX**Special Repair Authorities/One-time Repair Authorities (Division Assistant Division Commander for Support/Overseas Major Command Deputy Chief of Staff, G-4)****B-47. Function**

The functions covered by this evaluation are SRAs/OTRAs.

B-48. Purpose

The purpose of this evaluation is to assist the division ADCS/overseas ACOM, ASCC, and DRU G-4 in evaluating the key internal controls listed below. It is not intended to cover all controls.

B-49. Instructions

Answers must be based on the actual testing of key internal controls (for example, document analysis, direct observation, sampling, simulation, and/or other). Answers that indicate deficiencies must be explained and the corrective action identified in supporting documentation. These internal controls must be evaluated at least once every 5 years. Certification that the evaluation has been conducted must be accomplished on DA Form 11-2.

B-50. Test questions

See paragraph 3-14.

- a. Are requests for SRA and/or OTRA being prepared with all required information/data?
- b. Has SRA been obtained before depot repairs are performed at sustainment maintenance?
- c. Are annual reports, which show number and costs of DLRs performed being submitted in a timely manner?
- d. Is workload being reported to AMC quarterly?
- e. Has work ceased on expired SRAs?

B-51. Supersession

This evaluation replaces the evaluation for specialized repair activities previously published in AR 750-1.

B-52. Comment

Help make this a better tool for evaluating internal controls. Submit comments to the DCS, G-4 (DALO-MPF), 500 Army Pentagon, Washington, DC 20310-0500.

Section X**Life cycle maintenance support (Headquarters, Department of the Army Materiel Developer, U.S. Army Materiel Command)****B-53. Function**

The function covered by this evaluation is life cycle maintenance support.

B-54. Purpose

The purpose of this evaluation is to assist AMC and MATDEVs in evaluating the key internal controls listed below. It is not intended to cover all controls.

B-55. Instructions

Answers must be based on the actual testing of key internal controls (for example, document analysis, direct observation, sampling, simulation, and/or other). Answers that indicate deficiencies must be explained and the corrective action identified in supporting documentation. These internal controls must be evaluated at least once every 5 years. Certification that the evaluation has been conducted must be accomplished on DA Form 11-2.

B-56. Test questions

See chapter 3, section II and DA Pam 750-1.

- a. Is equipment being designed, developed, and supported within the Army maintenance system?
- b. Have the top design priorities for supportability been considered during the design and development phase?
- c. Are MATDEVs providing materiel maintenance inputs to their Test and Evaluation Master Plan, Program Acquisition Plan, request for proposal, cost estimates, SS, reliability, availability, and maintainability rationale report, statement of requirements analysis, and the core determination analysis?
- d. Is use of existing Army parts stressed in the design and acquisition of the weapon system?
- e. Has PPMx been considered during the design and development phase?
- f. Are technical and equipment publications being published in electronic media such as ETMs and IETMs?
- g. Are maintenance service kits being developed and provided to optimize delivery of services throughout the force structure?
- h. Are MATDEVs and AMC MSCs planning, programming, and budgeting for SSTS the first full FY after production ends?
- i. Are SSTS requirements and cost estimates validated and certified?
- j. Have the SSTS POM submissions been certified by appropriate authority?
- k. Are post fielding LORA or other analyses being run using actual reliability data from fielded equipment?
- l. Is the MAC updated to reflect any changes in the LORA outcome?
- m. Are analyses performed and documented to ensure warranties are cost effective?
- n. Are LOs being analyzed, adjusted, and published not less than every 5 years to leverage lubricant technology advances and synchronize the maintenance effort with current technology?
- o. Is the use of contractor maintenance support being considered as part of the statement of requirements analysis during the ILS process in accordance with AR 700-127 and documented as part of the Milestone B ASARC?
- p. Do solicitations and contracts for maintenance services require that essential quality requirements be defined, quantified, measured, and assessed during the contracted-out support process?

B-57. Supersession

This evaluation replaces the previously published evaluation(s) for life cycle maintenance support.

B-58. Comments

Help make this a better tool for evaluating internal controls. Submit comments to the DCS, G-4 (DALO-MPF), 500 Army Pentagon, Washington, DC 20310-0500.

Section XI

National Maintenance Program (Deputy Chief of Staff, G-3/5/7, U.S. Army Materiel Command)

B-59. Function

The function covered by this evaluation is the NMP.

B-60. Purpose

The purpose of this evaluation is to assist the DCS, G-3/5/7, AMC in evaluating the key internal controls listed below. It is not intended to cover all controls.

B-61. Instructions

Answers must be based on the actual testing of key internal controls (for example, document analysis, direct observation, sampling, simulation, and/or other). Answers that indicate deficiencies must be explained and the corrective action identified in supporting documentation. These internal controls must be evaluated at least once every 5 years. Certification that the evaluation has been conducted must be accomplished on DA Form 11-2.

B-62. Test questions

- a. Do sources of repair possess a documented quality system?
- b. Is the technical certification database being maintained with status?
- c. Are the AMC MSC quarterly reports submitted?
- d. Is repair used as the primary SOS when unserviceable reparables are available to support repair programs?
- e. Is the highest published national standard used as the single standard for repair for those items repaired and returned to the supply system (see this regulation for exceptions)?
- f. Is the maintenance program precluding repair of items in long supply?

B-63. Supersession

This evaluation replaces the evaluation for NMP previously published in AR 750-1.

B-64. Comment

Help make this a better tool for evaluating internal controls. Submit comments to the DCS, G-4 (DALO-MPF), 500 Army Pentagon, Washington, DC 20310-0500.

Section XII**Army Depot Maintenance****B-65. Function**

The function covered by this evaluation is Army Depot Maintenance.

B-66. Purpose

The purpose of this evaluation is to assist the MATDEV and the DCS, G-3/5/7, AMC in evaluating the key internal controls listed below. It is not intended to cover all controls.

B-67. Instructions

Answers must be based on the actual testing of key internal controls (for example, document analysis, direct observation, sampling, simulation, and/or other). Answers that indicate deficiencies must be explained and the corrective action identified in supporting documentation. These internal controls must be evaluated at least once every 5 years. Certification that the evaluation has been conducted must be accomplished on DA Form 11-2.

B-68. Test questions

- a. Are adequate controls in place to ensure that no more than 50 percent of depot maintenance workload will be contracted to be done by non-Federal employees?
- b. Did MATDEVs for new systems develop a core logistics capacity at GOGO facilities within 4 years of achieving initial operational capability?
- c. Has a depot maintenance mobilization plan been developed that includes major and secondary items, ARNG and USAR requirements, inter-Service and interdepartmental orders, and essential contracts?
- d. Have the MATDEV (for new systems) and AMC ensured that DMPE is available to support assigned depot maintenance programs including special repair authorities?
- e. Have maintenance activities performing depot repairs, initiated procurement action in advance of the induction schedule, considering administrative and procurement lead times?

B-69. Supersession

This evaluation replaces the evaluation for Army depot maintenance previously published in AR 750-1.

B-70. Comment

Help make this a better tool for evaluating internal controls. Submit comments to the DCS, G-4 (DALO-MPF), 500 Army Pentagon, Washington, DC 20310-0500.

Glossary of Terms

Accountable property system of record

The government system used to control and manage accountable property records. A subset of existing organizational processes related to the lifecycle management of property; the system that is integrated with the core financial system.

Adjust and/or align

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

Administrative deadline

Procedure for taking equipment out of service if the commander or FLM officer determines it is necessary. Administratively deadlined equipment is FMC in accordance with the applicable PMCS tables, AR 385–10, and is reported FMC in accordance with AR 700–138 and DA Pam 750–8 but is not used or dispatched. The following conditions are examples of typical situations (not an all-inclusive list) when administrative deadline of equipment would apply:

- a. Operation would result in a violation of published Federal, DA, local commander, or host-nation safety regulations if the equipment were dispatched or used.
- b. Pending completion of an official investigation.
- c. Pending transfer, turn-in, or disposition instructions.
- d. Pending inspection for a safety deficiency detailed under a SOUM.
- e. Pending receipt of oil resample or special sample results.
- f. Pending completion of a required service.

Advanced manufacturing

Advanced manufacturing refers to new ways to manufacture existing products and the manufacture of new products resulting from advances in technology. Advanced manufacturing depends on use and coordination of information, automation, computation, software, sensing, and networking, and making use of cutting-edge materials and emerging capabilities enabled by the physical and biological sciences. Advanced manufacturing includes, but is not limited to, additive manufacturing (also known as three-dimensional (3D) printing), artificial intelligence, robotics, and advanced composite materials.

After operation checks

PMCS performed in accordance with the TM– and/or ETM–10 series PMCS tables at the conclusion of the mission to identify and correct faults that will preclude the next mission and to maintain the equipment to TM–10 series and TM–20 series PMCS maintenance standard. Faults that render the equipment NMC and are within the authorized level of repair of the operator and/or crew to correct must be corrected immediately. Faults above the operator and/or crew-authorized level of repair are immediately reported to field maintenance for correction prior to start of the next mission. Field maintenance performs unscheduled correction required by reports from operator and/or crew and performs required services in accordance with TM– and/or ETM–20 series to maintain the equipment to the TM–10 series and TM–20 series PMCS maintenance standard.

Ammunition

All Army-adopted class V items.

Ammunition peculiar equipment

Equipment used in depot to perform maintenance, surveillance, demilitarization, or preservation/packaging work on ammunition.

Area maintenance support activity

Provides, on an assigned geographical area basis, technical assistance, and unit maintenance support beyond the supported units' capabilities to accomplish during scheduled training assemblies. AMSA will be designated as follows:

- a. AMSA(G)—Maintenance support for USAR ground equipment, other than aircraft, medical, and watercraft.
- b. AMSA(W)—Support for USAR watercraft.
- c. AMSA(G/W)—Support for USAR ground and watercraft.

Army aviation flight activity

An ARNG TDA activity that provides FLM functions in support of ARNG aviation assets.

Army aviation operating facility

An ARNG TDA activity that provides FLM functions.

Army aviation support facility

An ARNG TDA maintenance activity that provides field- and AVCRAD-authorized sustainment-level maintenance functions to support ARNG aviation assets.

Army Oil Analysis Program

HQDA directed program to enhance crew safety, improve equipment readiness and reduce the consumption of resources through application advanced diagnostic technology to detect premature materiel degradation and support failure trend analysis.

Army oil analysis program evaluation criteria

Factors, including quantitative metal wear expressions, against which the results of oil analysis are compared to determine the condition of a component or lubricant and the necessity for maintenance.

Assembly

A combination of components and/or modules and parts used as a portion of, and intended for, further installation in an equipment end item (for example, engine, transmission, rotor head, electronic chassis, rack, and/or cabinet).

Associated support items of equipment

An end item required to support the operation, maintenance, and/or transportation of a BOIP item. Associated support items of equipment (ASIOE) is listed on the BOIP of the item it supports. ASIOE has its own LIN and is separately documented into TOE and/or Vertical—The Army Authorization and Documents System.

Automatic test equipment

Equipment designed to automatically evaluate the degree of unit under test performance degradation. It may be used to perform fault isolation of unit under test malfunctions.

Available days

The hours equipment is on hand in an organization and fully able to do its mission; the time that equipment is FMC.

Aviation classification and repair activity depot

An ARNG TDA maintenance activity that provides AVIM and authorized depot-level functions.

Aviation support facility

TDA activity of USARC that exercises centralized control and assures proper use and operation of USAR aviation assets, providing aviation training and logistics support beyond the capability of the supported units during training assemblies.

Battle damage assessment and repair

A wartime procedure to rapidly return disabled equipment to operational condition by expeditiously repairing, substituting, fabricating, short-cutting, bypassing, cannibalizing, or jury-rigging components to restore the minimum essential systems required for the support of a specific combat mission or to enable equipment to self-recover.

Before operation checks

Checks performed by the operator and/or crew in accordance with TM and/or ETM–10 series PMCS tables to identify faults that will prevent performance of the mission and must be corrected prior to start of the mission. All faults are corrected or, if above operator and/or crew authorized level of repair, are reported to field maintenance before the mission.

Built-in test

A test approach using built-in test equipment or other integral hardware designed into equipment or components under test to self-test and fault diagnose all and/or part of the equipment or component under test.

Built-in test equipment

Any identifiable, removable device that is part of equipment or components under test that is used for the express purpose of testing.

Calibration

Comparison of an instrument with an unverified accuracy to an instrument of known or greater accuracy to detect and correct any discrepancy in the accuracy of the unverified instrument.

Cannibalization

The authorized removal of components from materiel designated for disposal. Cannibalization supplements supply operations by providing assets not immediately available through the Army supply system. Costs to cannibalize, urgency of need, and degradation to resale value of the end item should be considered in the determination to cannibalize.

Capability

A measure of operational performance to quantify contribution to the warfighter. Measure consists of an evaluation of range, lethality, and effectiveness.

Combined support maintenance shop

An ARNG TDA activity that provides field- and sustainment-levels of maintenance on Federal surface equipment issued to the ARNG.

Commercial activities

Army-operated and Army-managed organizations that provide products or services that may be obtained by contract with private commercial sources. Commercial activities may be identified with an organization or a type of work but must be separate facilities that can perform either in house or by contract. Further, the commercial activities must provide products and services regularly needed. Commercial activities will not provide products and services that will be used only once, for a short time, or for support of a special project.

Communications security logistics support unit

Field and/or sustainment maintenance activity for the maintenance of COMSEC equipment.

Compliance

Compliance refers to the first phase of the process to qualify national maintenance providers. A national SOR is compliant once the NMM determines it has a documented quality management system in place. Continued compliance is determined by annual surveillance audits.

Component and/or module

A combination of parts mounted together during manufacturing that may be tested, replaced as a unit, or repaired (for example, starter, generator fuel pump, and printed circuit board (PCB)). The term "module" is normally associated with electronic equipment.

Condition based maintenance

CBM is a set of maintenance processes and capabilities derived primarily from real-time assessment of weapon system condition obtained from embedded sensors and/or external test and measurements using portable equipment.

Configuration

The functional/physical characteristics of hardware and/or software set forth in technical documentation and achieved in a product.

Configuration status accounting

Recording and reporting of information needed to manage the configuration of a system or item effectively, including the approved technical documentation as set forth in specifications, drawings, and associated lists and documents referenced therein; the status of proposed changes to a configuration; and the implementation status of approved changes.

Contract maintenance

Any materiel maintenance operation performed under contract by commercial organizations (including the original manufacturers of the materiel).

Controlled exchange

Removal of serviceable parts, components, and assemblies from unserviceable, but economically repairable, equipment and their immediate reuse in restoring a like item of equipment to a combat mission capable condition.

Critical characteristics

Features (tolerance, finish, material composition, manufacturing, assembly, or inspection process) of a product, material, or process that, if nonconforming or missing, could cause the failure or malfunction of the item.

Critical safety item

Any part, assembly, subassembly, installation procedure, or production process that would have hazard probability level A, B, C, or D chance of resulting in an unsafe condition if not in accordance with design data or quality requirements.

Deferred maintenance

Authorized delay of maintenance and/or repair of uncorrected faults.

Deficiency

A fault or problem that causes equipment to malfunction. Faults that make the equipment NMC are deficiencies.

Department of Defense activity address code

A six-digit code that gives a DoD delivery address for supplies and equipment.

Depot maintenance activity

An industrial-type facility established to perform depot maintenance on weapon systems, equipment, and components. The term includes DoD installations and commercial contractors.

Depot maintenance capability

The availability of resources (facilities, tools, test equipment, drawings, technical publications, training, maintenance personnel, engineering support, and spare parts) required to carry out a specified depot maintenance task.

Depot maintenance capacity

This is the amount of direct labor hours (maintenance man-hours) that can be applied within a specified industrial facility or other entity during a 40-hour week.

Depot maintenance core capability

Depot maintenance core is the capability maintained within defense depots to meet readiness and sustainability requirements of the weapon systems that support the JCS scenario(s). Core capability exists to minimize operational risks and to guarantee required readiness for weapon systems. It will comprise only the minimum essential required facilities, equipment, and skilled personnel required to ensure a ready and controlled source of required technical competence.

Depot maintenance public private partnership

A public-private partnership for depot maintenance agreement may exist between an organic depot maintenance activity and one or more private industry or other entities to perform work or use facilities and equipment. Program offices, inventory control points, and materiel, systems, and/or logistics commands may also be parties to such agreements or be designated to act on behalf of organic depot maintenance activities.

Depot maintenance work requirement

A maintenance serviceability standard for depot-level reparable designated for repair and return to AWCF stock. It prescribes the statement of work to be performed on an item by organic depot maintenance facilities or contractors, and/or qualified below-depot sources of repair; types and kinds of materiel to be used, and quality of workmanship. The DMWR also addresses repair methods, procedures and techniques, modification requirements, fits and tolerances, equipment performance parameters to be achieved, quality assurance discipline, and other essential factors to ensure that an acceptable and cost-effective product is obtained.

Depot maintenance workload

A specific depot repair requirement for a specific item to be repaired. Units of measure include man-hours, work years, costs, and sale prices.

Depot-level reparable

A class IX item with an MRC of D or L.

Discard and replace

Procedure to follow if selected items are designated as nonrepairable and become inoperable.

During operations checks

Checks performed by the operator and/or crew in accordance with the TM and/or ETM–10 series PMCS tables that monitor operation of equipment and identify faults in equipment performance during the mission. Faults that render the equipment NMC require immediate correction or authorization for limited operation using circle x status condition. All other faults are corrected (if above operator and/or crew authorized level of repair to correct) or reported during or after the mission.

Electromagnetic environmental effect

Any failure (or serious effect) apparently caused by, or related to, radio waves, electromagnetism, voltage, or current pulses (static discharge, lightning, electromagnetic pulse, or transient electricity), from whatever source.

End item code

The end item code is a 3-position alphanumeric code assigned to each end item managed or used by the Army, which meets all the following criteria:

- a. End items with an NSN recorded in the Army master data file.
- b. Type classified standard, low-rate production, or limited procurement-urgent in accordance with AR 700–142.
- c. Assigned appropriation/budget activity account code A through Q inclusive.

Equipment category code

A two-position alphabetical code. The first letter identifies the primary category of equipment. The two-position equipment category code is used in automated data processing systems to produce the complete description of an item of equipment by make, model, noun nomenclature, line number, and NSN if desired or required. It is also entered in specified blocks or positions on manually produced data source documents.

Equipment concentration site

Area for equipment storage and support to USAR and other authorized units during IDT, AT, and mobilization; includes a maintenance and storage branch.

Equipment end item

A final combination of assemblies, components, modules, and parts that is designed to perform an operational function and is ready for intended use. These end items are normally type classified and assigned line item identification numbers (EM 0007 FED LOG) but may require other end items to perform a mission (for example, tank, truck, radio, generators, and machine guns).

Equipment improvement recommendation

Written reports on an SF 368 to report equipment faults in design operations and manufacturing of new equipment received that is below standard quality in workmanship under AR 702–7 and AR 702–7–1.

Equipment performance data

Historical information relating to the maintainability, reliability, and supportability characteristics of systems, subsystems, and components of weapons and equipment end items accumulated during their operational application or tests simulating actual operations.

Equipment readiness code

A one-digit code explaining an item's importance to a unit's combat, combat support, or service support mission. The codes are assigned to items on MTOEs.

Equipment services

Specified maintenance actions performed on equipment, components, and systems when required, including providing routine checks, adjustments, changes, analysis, and lubrication, in accordance with designer and engineer specifications.

Failure

The event, or inoperable state, in which any item or part of an item does not, or would not, perform as previously specified.

Fault

A term used to indicate that a piece of equipment has a deficiency or shortcoming.

Fault isolation

Test performed to isolate faults within a piece of equipment.

Fault repair

The process used by operators and maintenance personnel to restore an equipment item to full functionality as originally designed or engineered.

Fleet management

Fleet Management is the administrative approach to organize, coordinate, and oversee routine and ad hoc system maintenance to improve efficiency and reduce cost. The fleet manager is the individual on written orders responsible for: maintaining knowledge and utilization of all fleet information and user feedback to forecast new maintenance requirements, arrange staff to provide support, maintain and monitor data management systems to organize fleet maintenance activities based on mission demands, monitor fuel requirements, develop and implement operational standards to maintain best practices, and plan and prepare an annual budget that accounts for all expenditures against financial objectives.

Field maintenance

Field maintenance is the first 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 and/or crew maintenance and repair and return to user maintenance operations.

Field maintenance activity

A USAR and/or ARNG activity that provides field maintenance for Federal surface equipment issued to supported units.

Field maintenance sub-activity

A USAR and/or ARNG FLM sub-facility established to supplement limited available workspace authorized a parent FMS or geographic separation of supported units.

Fleet planning

Fleet plans provide a common operational picture for all impacted stakeholders of a weapon system's age, capability (protection/payload/performance), and affordability. Fleet plans may involve proactive plans for independent or concurrent efforts to buy new assets (Procure), modernize an existing fleet (Upgrade), increase maintainability, reliability, supportability, and/or survivability (Improve), repair assets to TM-10/20 (Reset), repair assets to zero-miles/zero-hours (RECAP), or remove assets from the Army inventory (Divest).

Focused recapitalization

Rebuilding and upgrading systems to the extent determined necessary through detailed engineering and economic analyses.

Forward support maintenance

Maintenance oriented toward quick turnaround to the user to maximize combat time by minimizing repair and evacuation time.

Full recapitalization

Rebuilding and upgrading systems to the extent required to meet the recapitalization standard.

Fully mission capable

A materiel condition indicating that systems and equipment are safe and have all mission-essential sub-systems installed and operating as designated by applicable AR. An FMC vehicle or system has no faults that are listed in the “not FMC ready if” columns of the TM/ETM XX–10 and XX–20 series PMCS tables and AR 385–10 provisions that apply to the vehicle and/or system or its sub-system required by AR 700–138. The terms ready and/or available and FMC refer to the same status: equipment is on hand and able to perform its combat missions.

General support forces

Training, logistics, and other support activities of the CONUS base; field activities; administrative headquarters and forces provided for peacetime-peculiar activities. Units/activities included in general support forces do not report status/readiness under AR 220–1. They are identified in DA Force Accounting System by a three-position force planning code beginning with a C.

General-purpose test, measurement, and diagnostic equipment

TMDE that is used or possesses the potential to be used without significant modifications for test, measurement, and diagnosis of a range of parameters for two or more items of equipment or systems.

Go/no-go (system)

Condition or state of operability of a system that can have only two parameters:

- a. Go: Functioning properly.
- b. No-go: Not functioning properly. Such conditions are displayed using meters and/or visual or audible alarms, sensors, or similar mechanisms.

Hardness assurance

Processes, procedures, and methodologies applied in the preproduction and production phases of the acquisition cycle to achieve nuclear hardness.

Hardness maintenance

Comprehensive procedures that are applied during the post-production phase of the acquisition cycle to ensure that the designated hardness does not degrade.

Hardness surveillance

Periodic tests, analysis, and inspections performed at the system level throughout a system’s life cycle to monitor hardness integrity.

Home station training equipment

A pool of theater-unique equipment specifically authorized by HQDA to be prepositioned at selected installations to support training requirements for equipment that would otherwise not be available to deploying units. HST provides deploying units with standard and nonstandard equipment for individual and collective training that duplicates the equipment they will use in the theater.

Initial operating capability

First attainment by the MTOE unit of the capability to operate and support effectively in their operational environment a new, improved, or displaced Army Materiel System.

Inspection

To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination.

Installation materiel maintenance activity

TDA maintenance organization set up to provide field and/or sustainment maintenance support for troop and/or installation operating equipment. An IMMA operates at one or more fixed locations.

Installed building equipment

IBE includes items of real property affixed to or built into a facility that are an integral part of the facility.

Integrated logistics support

A composite of all the support considerations necessary to ensure the effective and economical support of a system for its life cycle. ILS is an integral part of all aspects of system acquisition and fielding. The principal elements of ILS related to the overall system life cycle are contained in AR 700–127.

Integrated materiel manager

The materiel manager responsible for the execution of assigned materiel management functions for selected items or selected Federal supply classification classes.

Inter-Service maintenance support

Maintenance operations performed by the organic maintenance capability of one military Service in support of another military Service.

item unique identification

A system of marking items delivered to the DoD with UIIs that have machine-readable data elements to distinguish an item from all other like and unlike items. UIIs assigned to items are registered in the DoD IUID Registry.

Left behind equipment

Maintenance significant items on the unit APSR that remains at home station after the unit deploys. LBE is accounted for and sustained at home station until the unit returns or is redistributed in support of HQDA equipping priorities, or as otherwise directed by the ACOM, ASCC, or DRU to which it is assigned. The ASC assumes accountability and responsibility for the equipment and ensures that it is properly accounted for and maintained to support the SRM process.

Line item number

A six-position alphanumeric number that identifies the generic nomenclature of specific types of equipment. Standard LINs consist of one alpha character followed by five numeric characters. Standard are assigned by the AMC and are listed in EM 0007 FED LOG.

Line replaceable unit

A combination of components and/or modules installed in an item of equipment or system that is replaceable in the operational environment (that is, under field or combat conditions). An LRU may be a PCB, black box, component, major component, alternator, carburetor, avionics, tank engine, and road wheel assembly installed weapons. This repair by replacement is normally accomplished as far forward as possible by unit (organizational) maintenance personnel.

Logistic Readiness Center/Army Field Support Battalion

The LRC/AFSBn provides global logistical support to individual Soldiers and units assigned to or mobilize units. The LRC/AFSBn manages installation supply, maintenance, and transportation to include food service, ammunition supply, clothing issue facilities and clothing initial issue points, hazardous material, bulk fuel, personal property and household goods, passenger travel, nontactical vehicles, rail, and garrison equipment.

Logistics information system

Legacy automated systems used to communicate with other units on vertical and horizontal flow of logistics and maintenance information and status.

Maintainability

Characteristics of design that inherently provide for the retention of and/or restoration of a specified condition within a given period when maintenance is performed by prescribed procedures and resources.

Maintenance

All actions necessary for retaining an item in or restoring it to a specified condition.

Maintenance capability

Availability of those resources—facilities, tools, TMDE, drawings, technical publications, trained maintenance personnel, engineering and management support, and repair parts—required to perform maintenance operations.

Maintenance capacity

A quantitative measure of maintenance capability usually expressed as the number of man-hours or direct labor that can be applied within a specific maintenance activity or shop during a 40 hour-week (one shift, 5 days).

Maintenance concept

The maintenance concept briefly defines the intended maintenance workload distribution within the Army Maintenance System and the force structure required to maintain the end item or weapon system. It is

largely based on the organization and operation plan and is an integral portion of the logistics section of the requirement document.

Maintenance engineering

The application of techniques, engineering skills, and effort organized to ensure that the design and development of weapon systems and equipment provide adequately for their effective and economical maintenance.

Maintenance operations

The management and physical performance of those actions and tasks involved in servicing, repairing, testing, overhauling, modifying, calibrating, modernizing, and inspecting materiel in the operational inventory and the provision of technical assistance to equipment users in support units of the Army Logistics System.

Maintenance parts explosion

A process/system that provides the information necessary to accomplish the functional mission required in forecasting repair parts requirements for depot-level, inhouse, contract, and cross-service maintenance programs worldwide. This process also provides data to be used in computing supply central studies and planning depot-level maintenance.

Maintenance significant item and/or materiel

An end item, assemblage, component, or system intended for issue to the Army in the field that will require corrective maintenance services on a recurring basis. End items, assemblages, components, or systems that require maintenance while in storage; generally, these are LINs contained within the Army MMDF.

Maintenance standard

A measure that specifies the minimum condition to which materiel must be restored by repair, overhaul, or some other maintenance function to ensure its satisfactory performance for a specified period of service.

Maintenance support team

A team formed from the resources of a maintenance activity, organization, or unit and specifically tailored to provide maintenance support to a designated unit or operation for specified tasks.

Maintenance technician

Full-time technician normally having dual status as a member of a USAR or ARNG unit; military technician assigned to a USAR or ARNG TDA maintenance activity.

Major assembly

Separately identified by type, model, and series and assigned item identification number (EM 0007 FED LOG). For example, receivers or receiver transmitters in radio sets and machine guns or other weapons in secondary armaments subsystems of combat vehicles.

Materiel change

Configuration change involving substantial engineering and testing efforts on major end items to increase system/combat effectiveness or extend the useful military life.

Materiel developer

The principal Army MATDEVs are the Army PEOs and/or PMs. For non-PEO and/or PM-managed systems, other MATDEVs include AMC, U.S. Army Information Systems Command, INSCOM, Chief of Engineers, TSG, and Strategic Defense Command.

Materiel maintenance

The function of sustaining materiel in an operational status, restoring it to a serviceable condition, or updating and upgrading its functional usefulness through modification or other alteration.

Mean time between failure

A basic measure of reliability. The average number of failures of a specific item occurring during a specified time interval.

Mean time to repair

A basic measure of maintainability. The sum of corrective maintenance times at any specific level of repair, divided by the total number of failures within an item repaired at that level, during a interval under stated conditions.

Medical equipment (including dental and veterinary items)

Consists of devices used in the medical diagnosis, therapy, and treatment of injury or disease. This equipment consists primarily of Federal Supply Catalog 6500 items that are standardized by the Defense Medical Standardization Board and are procured by the appropriate acquisition agency for TSG to implement health service support for the Army. It also consists of similar commercial, nonstandard items, approved by the Food and Drug Administration and marketed as medical devices, used to provide state-of-the-art patient care. The equipment is maintained and repaired by trained BES.

Medical standby equipment program

Medical assets used in support of critical health care equipment; includes end items, components, or assemblies used to provide supported activities with serviceable items to replace unserviceable, economically reparable items.

Mission—essential materiel

That materiel authorized and assigned to approved combat and combat support forces that should be immediately employed to: destroy the enemy or its capacity to continue war; provide battlefield protection of personnel; communicate under war conditions; detect, locate, or maintain surveillance over the enemy; and permit contiguous combat transportation and support of forces and materiel. Equipment assigned to training missions of the same type and configuration as that assigned to combat and combat support forces and designated to be immediately employed for the purposes enumerated above is also mission-essential materiel.

Mobile contact team

USAR field maintenance personnel and AMSA and/or ECS maintenance technicians who visit units to provide technical assistance, make inspections, and perform maintenance when this procedure is more economical than transporting equipment or personnel to the activity.

Mobilization and training equipment site

An ARNG TDA maintenance facility which, when collocated with a CSMS, provides full-time field support to ARNG equipment assigned to the site. When not collocated, MATES provide field and sustainment support to equipment and units assigned.

Modernization

Modernization is the development and/or procurement of new systems with improved warfighting capabilities. The Army's recapitalization effort does not encompass modernization.

Module

An assembly containing a complete self-contained circuit or sub-circuit. It may consist of a single PCB; in which case it is synonymous with a PCB or may comprise two or more PCBs mechanically attached to one another and removable from the next high assembly as a single unit.

National maintenance manager

The CG, AMC is designated as the NMM and as such is responsible for implementing the NMP.

National maintenance program

The NMP supports the Army's strategy to move to a centrally coordinated and controlled, repair-based logistics system. Distribution-based maintenance operations are identified as operator and/or crew maintenance, field maintenance, and sustainment maintenance (formerly known as national maintenance). The CG, AMC, as the NMM for the Army, is responsible for sustainment maintenance operations. Sustainment maintenance consists of tactical, installation and depot activities and is characterized by repair to a single standard, that is, the national standard, and return to stock. The primary focus is sustainment readiness.

National maintenance program repair standard

An NMP repair standard is the standard recognized as the single Army sustainment standard for a reparable NSN. It is defined as the highest published standard and as such may be a DMWR, a NMWR, an

AMCOM engineering directive, a TM, a commercial manual, or a statement of work. It is the single standard recognized by the item manager as the sustainment repair standard.

National maintenance work requirement

A maintenance serviceability standard for field-level reparable designated for repair and return to AWC stock. It prescribes the statement of work to be performed on an item by organic depot maintenance facilities, certified non-depot national providers, or contractors; types and kinds of materiel to be used; and quality of workmanship. The NMWR also addresses repair method, procedures and techniques, modification requirements, fits and tolerances, equipment performance parameters to be achieved, quality assurance discipline, and other essential factors to ensure that an acceptable and cost-effective product is obtained.

Nonavailable days

The number of hours the equipment was not able to do its mission; the time the equipment is NMC. This term is used on DA Form 2406 (Maintenance Condition Status Report) to rate equipment's ability to do its combat or combat support job.

Not mission capable

A materiel condition indicating that equipment cannot perform any one of its combat missions. NMC time is divided into NMC maintenance or NMC supply.

Not mission capable maintenance

Equipment that cannot perform its combat mission because maintenance work is underway or needed.

Not mission capable supply

Equipment that cannot perform its combat mission because of maintenance work stoppage due to supply backorders.

Off-site maintenance

Maintenance authorized to be performed by designated maintenance facilities not located where the equipment is operated.

Oil analysis

A test or series of tests (spectrometric and physical property) that provide an indication of equipment component and oil condition by applying methods of quantitative measurement of wear metals and detection of contaminants in an oil sample.

On condition oil change

An oil change directed by the AOAP laboratory as a result of diagnostic test findings relative to the serviceability of the oil and its lubricating capability.

Onsite maintenance

Maintenance authorized to be performed where the equipment is operated.

Operator and/or crew maintenance

Operator and/or crew maintenance is the cornerstone of Army maintenance, the first and most critical operation of the Army Maintenance System. It starts with the operator and/or crew performing PMCS using the applicable TM-10 series. The before- and during-PMCS concentrate on ensuring equipment is FMC. Maintenance operations normally assigned to operator and/or crew include the following:

- a. Performance of PMCS.
- b. Inspections by sight and touch of accessible components in accordance with the TM-10 series and CBM indicators or instrumentation.
- c. Lubrication, cleaning (including corrective actions to repair corrosive damage), preserving (including spot painting), tightening, replacement, and minor adjustments authorized by the MAC.
- d. Limited diagnosis and fault isolation as authorized by the MAC. This requires appropriate resources on-board the equipment or system to perform these tasks.
- e. Replacement of combat spares (unserviceable parts, modules, and assemblies) as authorized by the MAC and carried on board the equipment or system.

Overhaul

Overhaul is maintenance that restores equipment or components to a completely serviceable condition with a measurable (expected) life. This process involves inspection and diagnosis according to the

DMWRs, NMWRs, or similar technical directions that identify components exhibiting wear and directs the replacement or adjustment of those items in accordance with the applicable technical specifications.

Pacing items

Major weapons or equipment systems of such importance that they are subject to continuous monitoring and management at all levels of command. Pacing items are identified in AR 220–1. Pacing items are noted on DA Form 5990–E or DA Form 2407.

Part

An item that cannot normally be disassembled or repaired or is of such a design that disassembly or repair is impractical (for example, bracket, gear, resistor, or toggle switch).

Partially mission capable

Material condition of an aircraft or training device indicating that it can perform at least one but not all of its missions because of maintenance requirements existing on the inoperable subsystem(s). PMC is divided into PMC maintenance and PMC supply.

Performance observation.

The process by which the operator observes equipment performance against established standards and reports problems that degrade equipment before they become catastrophic. Performance observation is the foundation of the Army maintenance program and is the basis of PMCS that is required by all equipment TMs in the before, during, and after operation checks.

Physical property tests

Analytical tests of used oil samples to detect oil property changes resulting from changing equipment conditions or maintenance practices.

Possible days/hours

The number of calendar days/hours an item was on hand on the APSR during the DA Form 2406 report. For an item received during the reporting period, the first day/hour it was on hand is counted as a possible day. The last day an item was on hand (that is, the day it was lost from the APSR) is not counted as a possible day.

Precombat checks

Essential functional and safety checks performed by the operator/crew in accordance with the system's precombat checklist to ensure the system can perform its warfighting mission. Faults that will prevent the performance of the mission must be corrected prior to the start of the mission. All other faults are corrected or, if above operator/crew authorization to correct, reported during or after the mission.

Pre-deployment software support

Software engineering and development that occurs prior to the weapon systems achieving the Full Deployment Decision. It is software that has not been certified for release to a fielded unit and is still under-going development.

Pre-deployment training equipment

A pool of standard Army and NS–E pre-positioned at select installations to support pre-deployment training that replicates the equipment units require to accomplish its deployed mission. PDTE is low density, high demand, theater specific equipment not available on the installation or determined unavailable for hand receipt or lateral transfer from another unit or installation to support training requirements for 90-days or less.

Predictive maintenance

Maintenance actions based on the observation of data analysis; trends, models, and/or algorithms to assign replacement of (Class IX) components or sub-assemblies in advance of functional failure.

Preliminary source of repair decision

The SOR decisions for the system and each subsystem scheduled for depot repair/overhaul as developed by the MATDEV as soon as the system and subsystems are developed enough to conduct an SOR analysis and make analysis-based decisions. This will be the SOR decision used for planning purposes until Milestone C, when the MSC assumes the SOR decision responsibility.

Preventive maintenance

All actions performed to retain an item in a specified condition by providing systematic inspection, detection, and prevention of incipient failures.

Preventive maintenance checks and service

Preventive maintenance checks and service is the care, servicing, inspection, detection, and correction of minor faults before these faults cause serious damage, failure, or injury. The procedures and the category of maintenance to perform PMCS are found in the TM, LO, and ETM 10– and 20–series.

Prognostic maintenance

Maintenance actions related to using condition data to influence mitigation of functional failures of (Class VII) repairable systems/subsystems through replacement or repair of subordinate assemblies or related components.

Prognostics predictive maintenance

PPMx is the data- and machine learning-driven capability to measure equipment health and performance characteristics to support the commander and life cycle manager's ability to plan and execute data-informed and fleet management readiness decisions. It is achieved through the application and integration of processes, technologies, and knowledge-based capabilities that will allow the Army to achieve and maintain targeted availability, reliability, and cost targets for weapon systems across their life cycle.

Qualification

Qualification refers to the NMP process for certifying sources of repair as national maintenance providers. This process has two parts: compliance and technical certification. All sources of repair must be compliant. To be compliant, an SOR must demonstrate a documented quality management system. For each component for which the national standard is a DMWR or NMWR, the SOR must pass a technical certification. The technical certification validates that the SOR possesses the necessary facilities, tools, TMDE, skills, and manpower required for the repair. A technical certification is not required for components repaired to TM standard (see qualified national provider).

Qualified national provider

A qualified national provider is an SOR that possesses a documented quality management system and the necessary facilities, tools, TMDE, skills, and manpower required to repair a specific component(s) to the national standard. Qualified national provider qualification is required before facilities may initiate national maintenance repairs. Exceptions may only be granted by the NMM.

Readiness

The capability of a unit and/or formation, ship, weapon system, or equipment to perform the mission or functions for which it is organized or designed.

Rear detachment equipment

Nondeploying equipment that is accounted for on the units APSR by rear detachment personnel.

Rebuild

Rebuild is maintenance that restores the system to a like-new condition in appearance, performance, and life expectancy. It inserts new technology where practical to improve reliability and maintainability. The rebuild process is a total end item tear down and replacement of all expendable components, all aged components, reconditioning of structural components, and the procedures identified for overhaul of the end item. For rebuild, like-new condition includes technology insertion and results in same model new measurable (expected) life.

Recapitalization

Recapitalization is the rebuild and selected upgrade of currently fielded systems to ensure OR and a near zero-time/zero-mile system.

Recapitalization standard

Recapitalization standard is near zero time/zero miles. Near zero-time standard means that selected components within the system will be replaced with new items or items overhauled to NMP repair standards, which is overhaul with a measurable (expected) life. Obsolete parts will be replaced, and selected technology insertions will be made. For recapitalization, near zero time/zero mile includes technology insertion and results in a new model-new life.

Recapitalization through spares

Replacement of components as they wear out with recapitalized components.

Regional maintenance center

A CE field and/or sustainment maintenance activity with fixed shops and contact teams that are managed by ASC.

Release action

An order rescinding a suspension or restriction. It puts materiel back in use or releases it from restriction(s). See TB 9–1300–385 for more information.

Reliability–centered maintenance

A logical discipline for developing a scheduled-maintenance program that will realize the inherent reliability levels of complex equipment at minimum cost.

Repair

Restoration or replacement of parts and/or units to maintain efficient operating conditions.

Repairable item

An item that can be restored to perform all its required functions by corrective maintenance.

Reparable

Class IX secondary items that carry an MRC of D, F, H, or L.

Replace

Replace is defined as removal of consumable and/or repairable unserviceable item and/or component, and installation of a serviceable item and/or component in its place. Replace is authorized by the MAC and assigned a maintenance level which is shown as the third position of the source, maintenance, and recoverability code (class II, III, V, and IX).

Reset

A set of actions to restore equipment to a desired level of combat capability commensurate with a unit's future mission. Reset reverses the effects of combat stress on equipment.

RESET

When viewed in all capital letters, RESET refers to the Army imperative that will systematically restore deployed units to an appropriate level of equipment, Soldier, and Family readiness in preparation for future deployments and contingencies.

Restriction

An order placing special working limits on materiel. The limits are set for safety or because of degraded performance.

Retail inter–service support

Support accomplished at the post, installation, and base level and between operating commands with resources that are available to the installation commander.

Satellite material maintenance activity

A maintenance activity geographically removed from its parent installation. A satellite material maintenance activity is authorized equipment maintenance mission to provide economical and timely support maintenance to units and activities whose parent installation cannot meet their needs.

Scheduled preventive maintenance checks and services

Checks and services performed by unit maintenance personnel with assistance from the operation and/or crew in accordance with the TM and/or ETM XX–10 series PMCS tables and lube orders. Some equipment also requires scheduled PMCS tasks to be performed by field personnel in accordance with the equipment TM and/or ETM XX–20 series. All equipment faults are corrected or, if above the unit maintenance level authorization (in accordance with MAC) to correct, job ordered to field maintenance. Deferred maintenance is completed during the scheduled service. Upon conclusion of the service, equipment should meet the TM and/or ETM XX–10 and XX–20 series maintenance standards.

Selected upgrade

Selected upgrade rebuilds the system and adds warfighting capability improvements that address capability shortcomings. The result of a recapitalization selected upgrade is a system with a new model and a new life and improved warfighting capability.

Sensitive source of repair

SOR decision made by the MATDEV prior to the data being available for a detailed cost-based analysis. Based on the combat developer's maintenance concept and other judgment factors. The tentative SOR will be used for early depot workload planning but is subject to change as the system is developed. The tentative SOR decision will be replaced by the preliminary SOR decisions as soon as the data are available to do an analysis using the decision-tree methodology.

Serious defect (applies to ammunition)

Defect resulting from bad design, manufacturing, handling, or storage that may cause malfunctions when ammunition is handled or fired.

Service life surveillance

Post-production inspection, test, and analysis activity that verifies the actual condition of items after periods of use or storage.

Shelf-life

The total period of time beginning with the manufactured date, cured date (elastomeric and rubber products only), assembled date, packed date (subsistence only), or packaging date (SAE AS5502 items only) and terminated by the date which an item must be used (expiration date) or subjected to inspection or test (inspect/test date), restoration, or disposal action. Shelf-life is not to be confused with service life.

Shop replacement unit

A component and/or module installed in an end item of equipment, system, or LRU that is replaceable only in a repair facility (shop environment) designated in the applicable MAC.

Shortcoming

A fault that requires maintenance or supply action on a piece of equipment but does not render equipment NMC.

Single-standard repair

A process that seeks to ensure a single repair standard is applied to all end items, secondary items, and components that have been repaired and returned to supply.

Special mission alteration

A materiel change, normally of a temporary nature, required for the accomplishment of a special mission.

Special purpose alteration

Materiel changes authorized in appropriate TMs to enable the operation and use of equipment for specific climatic or geographic conditions.

Special repair authority

The specific approval given to a sustainment maintenance unit or activity, with the authorized special tools, test equipment and capability, to repair DA-designated items of materiel coded D or L in MACs for a period of time not to exceed 1 year.

Spectrometric analysis

A method to determine the concentration of various chemical elements in an oil sample by means of spectroscopy, primarily to detect the presence of abnormal amounts of wear metal that may indicate the potential failure of a component.

Sub-shops

Sub-elements of AMSAs, CSMSs, ECSs, or organizational maintenance sub-shops established when the density of equipment is sufficient to make such an operation cost effective.

Substitute item

An item authorized issue instead of, or in place of, an authorized standard item of like nature and quality. EM 0007 FED LOG identifies items and procedures for making substitutions.

Subsystem

A separately authorized item issued or intended to work with other items to form an operational unit/system.

Support equipment

All ancillary and associated equipment (mobile or fixed) required to separate and support a materiel system. This includes ASIOE such as trucks, air conditioners, generators, ground handling and maintenance equipment, tools metrology, calibration and communications equipment, test equipment, and automatic test equipment with diagnostic software for both on and off equipment maintenance.

Support system

Collectively, those tangible logistic support resources required to maintain a materiel system in an operationally ready condition. It is developed with the materiel system and merged with the ongoing logistic systems upon production and development. The following elements of ILS constitute the support system such as support and test equipment, supply support, transportation and handling, technical data, facilities, and trained personnel. The other elements of ILS are how the support system is developed and implemented.

Supportability

A measure of impacts to the logistical system consisting of such things as an evaluation of reliability, sustainment costs, and number of configurations.

Surge

The act of expanding an existing depot maintenance repair capability to meet increased requirements by adjusting shifts; adding skilled personnel, equipment, spares, and repair parts to increase the flow of repaired or manufactured materiel to the using activity; or for serviceable storage.

Suspended munitions

Munitions removed from issue, movement, test, and use with or without limitations. These are removed because of a suspected or known unsafe or defective condition. Reference TB 9–1300–385 for definitions and instructions on suspensions, restrictions, and release of ammunition.

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.

Sustainment test support package

An assemblage of support elements provided prior to and used during development and OTs to validate the field and sustainment maintenance requirements and capability. The maintenance test support package includes all required draft equipment publications (operator through sustainment maintenance equipment manuals); parts accessories; special and common tools; test, support, calibration, and maintenance shop facilities; and personnel skill requirements.

System

A combination of equipment end items, assemblies, major components, components, modules, and parts assembled as a single functional unit to perform a task or mission.

System peculiar test, measurement, and diagnostic equipment

TMDE dedicated to peculiar test and repair of a single materiel system or item of equipment.

Test program sets

The combination of interface devices, software test programs (such as those residing in logic storage media or in permanent digital memory), and documentation (for example, TMs and technical data packages) that together allows the automatic test equipment operator to perform the testing/diagnostic action on the unit under test.

Test, measurement, and diagnostic equipment

Any system or device used to evaluate the operational condition of an end item or subsystem thereof to identify and/or isolate any actual or potential malfunction. This TMDE includes diagnostic and prognostic equipment; semiautomatic and automatic test equipment, to include test program sets (with issued

software); and calibration test or measurement equipment. When the term TMDE is used, it refers to both general-purpose TMDE and special-purpose TMDE.

Theater provided equipment

Permanent theater equipment that has been identified, collected, and positioned forward to offset equipment deployment requirements, fill shortages, fill DA approved operational need statements or to fill Minimum Essential Equipment Lists.

Unique item identifier

The UII is a globally unique and unambiguous identifier that distinguishes an item from all other like and unlike items. The UII is a concatenated value that is derived from a UII data set of one or more data elements. For DoD purposes, a compliant UII is either a Construct 1, Construct 2, global individual asset identifier, serialized global returnable asset identifier, vehicle identification number, or electronic serial number (for cell phones only), all of which have their data elements encoded in a DoD compliant two-dimensional data matrix.

Unit identification code

A six-character code assigned to a specific unit. All units' organizations and activities use their own UIC. Contractors, manufacturers, and commercial activities do not have UICs.

Unit maintenance shop

Maintenance facility located in conjunction with a USAR center or Armed Forces Reserve Center for unit training and equipment support.

Unit training equipment sites

An ARNG TDA maintenance facility, which provides full-time field maintenance support to ARNG equipment assigned to the site.

Unsafe condition

An occurrence of hazard severity Category I or II or Military Standard–882. This includes the conditions that cause loss or serious damage to the end item or major components, loss of control, death, serious injury, or illness.

User representative

The combat developer designated to represent the user in development and testing of new or improved systems.

Winterization and/or winterized

The application or installation of auxiliary kits and/or equipment which may include engine pre-heaters, personnel heater kits and hardtop or insulated closures necessary to pre-heat and start equipment within one hour and maintain a temperature of 41 degrees Fahrenheit in troop compartments when in a temperature range of negative 25 degrees Fahrenheit to negative 60 degrees Fahrenheit. Also includes the use of arctic grade lubricants and fluids for engines, transmissions, gear cases and other assemblies, as necessary.

SUMMARY of CHANGE

AR 750–1

Army Materiel Maintenance Policy

This major revision, dated 2 February 2023—

- Updates roles and responsibilities (chap 2).
- Incorporates Army Directive 2019–29, Enabling Readiness and Modernization Through Advanced Manufacturing (para 2–8e(11)).
- Incorporates Army Directive 2018–07–16, Prioritizing Efforts – Readiness Lethality (Update 16), by eliminating the requirement for commanders to appoint logistics readiness officers (formerly *para 2–14t.*)
- Adds Sustainable Readiness Model (para 3–2).
- Updates the Army maintenance standard (para 3–3).
- Updates general policies (para 3–7).
- Updates Logistic Readiness Center/Army field support battalion maintenance operations (para 3–12).
- Updates External Maintenance Support Operations (para 3–13).
- Adds Maintenance Plans (paras 4–2 through 4–3).
- Updates Unserviceable Materiel (para 4–4).
- Updates Maintenance Expenditure Limit (para 4–7).
- Updates turn-in policy for serviceable excess and unserviceable reparable parts and components (para 4–8).
- Updates policy on equipment transfer and turn-in (para 4–9).
- Updates maintenance management systems (para 4–15).
- Updates Logistics Assistance Program (para 4–17).
- Updates Provisions of Inter-Service Support Agreements (para 4–26).
- Updates Maintenance Award Program (para 14–1).
- Updates Army Maintenance Floats policy (para 14–6).
- Updates Army Chemical Agent Resistant Coating, Camouflage, and Marking Program (para 14–8).
- Updates the Army Tire Program (para 14–11).

- Updates Maintenance Assistance and Instruction Team Program/Command Maintenance Evaluation Team (para 14–14).
- Updates Equipment RESET general guidance (para 15–1).
- Updates Left Behind Aviation Equipment general guidance (para 16–1).
- Adds Additive Manufacturing in the Field (chap 18).
- Transfers DA Form 5480 (Maintenance Request and Assignment Register) on a DA Form 7567 (Special Repair Authority (SRA)) Approval/Disapproval Sheet) to DA Form 750–1 (app A).
- Removes maintenance metrics and performance measures for Army Field Organizations and incorporate them in DA Pam 750–1 (throughout).
- Deletes appendix (app D).
- Removes procedural information (throughout).
- Eliminates Army Force Generation (throughout).
- Eliminates Sample Data Collection and Analysis Program (throughout).
- Replaces “depot maintenance” with “sustainment maintenance” and updates policies (throughout).
- Adds Condition-Based Maintenance Plus and Prognostics/Predictive Maintenance (throughout).

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