

Maintenance of Supplies and Equipment

Army Materiel Maintenance Policy

***This regulation supersedes AE Regulation 750-1, 22 January 2013.**

For the Commander:

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Document Management

Summary. This regulation prescribes maintenance policy in the USAREUR area of responsibility.

Summary of Change. This regulation has been revised to update contact information, mailing addresses, and e-mail addresses throughout.

Applicability. This regulation applies to USAREUR major subordinate and specialized commands with units and support-maintenance activities that use and maintain tactical equipment.

Records Management. Records created as a result of processes prescribed by this regulation must be identified, maintained, and disposed of according to AR 25-400-2. Record titles and descriptions are available on the Army Records Information Management System website at <https://www.arims.army.mil/>.

Supplementation. Organizations will not supplement this regulation without approval by the Materiel Readiness Branch, Sustainment Operations Division, Office of the Deputy Chief of Staff, G4, HQ USAREUR (mil 537-4677).

Forms. AE and higher level forms are available through the Army in Europe Library & Publishing System (AEPUBS) at <https://aepubs.army.mil/>.

Suggested Improvements. The proponent of this regulation is the USAREUR G4 Materiel Readiness Branch (mil 537-4677). Users may suggest improvements to this regulation by sending DA Form 2028 to the USAREUR G4 (AELG-SD), Unit 29351, Box 102, APO AE 09014-9351.

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SECTION I

GENERAL

1. PURPOSE

a. This regulation prescribes maintenance policy in the USAREUR area of responsibility. For contingency operations, the proponent of the operation order will include the applicable policy and procedures prescribed by AR 750-1 and this regulation in the logistics section of the appropriate USAREUR order.

b. Requests for an exception to the policy prescribed by this regulation will be submitted through command channels to the Chief, Materiel Readiness Branch, Sustainment Operations Division (SOD), Office of the Deputy Chief of Staff, G4, HQ USAREUR.

NOTES: 1. This regulation prescribes the use of electronic and paper maintenance forms and records. Some paper forms and records (listed in DA Pam 750-8, chaps 3 and 4) have electronic versions in the Standard Army Maintenance System (SAMS) and Standard Army Maintenance System-Enhanced (SAMS-E). DA Pamphlet 750-8, paragraphs 1-6e through h, apply to the use of maintenance forms prescribed by this regulation.

2. Automated systems that support The Army Maintenance Management System take precedence over manual systems. (The use of the paper version of OF 346 is optional.)

2. REFERENCES

Appendix A list references.

3. EXPLANATION OF ABBREVIATIONS

The glossary defines abbreviations.

4. RESPONSIBILITIES

a. Maintenance responsibilities, policy, and procedures are prescribed in AR 750-1, DA Pamphlet 738-751, DA Pamphlet 750-1, DA Pamphlet 750-3, and DA Pamphlet 750-8. Additional maintenance responsibilities are prescribed in the applicable program or service in this regulation (app B through Q).

b. The Chief, SOD, is the proponent for command memorandums of agreement (MOAs) on equipment transfers.

c. The Chief, Materiel Readiness Branch, is the executive agent for selecting equipment for overhaul, including the Combat Vehicle Evaluation Program as prescribed in AR 750-1, paragraph 6-1.

d. The Seventh United States Army Joint Multinational Training Command (JMTC) provides maintenance training and certification as prescribed by AE Regulation 350-1.

e. Commanders at all levels of command will ensure that military maintenance facilities are not used for the repair of privately owned equipment.

f. Commanders of units operating SAMS-1E or Unit Level Logistics System-Aviation Enhanced (ULLS-AE) will ensure that the maintenance personnel comply with maintenance-reporting requirements.

5. POLICY

Specific policy for USAREUR maintenance programs is prescribed in appendixes B through Q. In general, the following applies:

a. Properly maintained equipment is essential to overall combat readiness. Programs as the Internal Management Control Program and Command Inspection Program and directed or requested staff visits by the Command Logistics Review Team help identify and solve problems and ensure that maintenance is properly supervised and performed at all levels.

b. The goal for USAREUR field-maintenance units and activities is to process technical inspections within 15 workdays after a request has been received.

c. All equipment transfers from USAREUR units to other commands must be coordinated with an MOA between USAREUR and the gaining command. The maintenance standard for equipment transfers in USAREUR is prescribed in AR 750-1, paragraph 3-2, unless the Chief, SOD, indicates otherwise.

d. USAREUR and non-USAREUR using units with tactical vehicles, small arms weapons, and other major end items of equipment but without the requisite organic or field-maintenance capability, will contact Support Operations (SPO), 21st Theater Sustainment Command (21st TSC) (mil 484-8566), to coordinate support. Maintenance support will be provided by the following:

(1) 16th Sustainment Brigade (modified table of organization and equipment maintenance unit).

(2) Theater Logistics Support Center-Europe (TLSC-E) (table of distribution and allowance below sustainment level maintenance activity).

(3) Equipment Storage Site-Expanded, 7th Civil Support Command. The service of this activity may be used at the owning unit commander's discretion on a reimbursable basis (at unit cost).

(4) USAREUR and non-USAREUR tactical units without organic organizational or field-maintenance capability will establish a support agreement using DD Form 1144 according to AE Regulation 1-7, unless USAREUR has agreed in a current MOA or memorandum of understanding (MOU) to provide maintenance support on a nonreimbursable basis. The USAREUR G8 website (<https://portal.eur.army.mil/sites/G8/IAD/default.aspx>) lists current MOAs and MOUs and associated

amendments and annexes. Issues that cannot be resolved between the parties will be referred to the Materiel Readiness Branch (mil 537-4611) for a decision.

e. For the determination of the issue priority designator (AR 750-1, table 3-1) authorized on maintenance requests (DA Form 2407 and DA Form 2407-E), field-maintenance personnel must know the force activity designator (FAD) assigned to units or activities. When a unit or activity FAD is not known, the Materiel Readiness Branch may be contacted for assistance (mil 537-4677).

f. When the maintenance-support unit or activity rejects equipment or returns it to the owning unit because the equipment was cannibalized or damaged by other than fair wear and tear or because operator or crew maintenance was not performed, the technical inspector and maintenance supervisor will do the following:

(1) Close out DA Form 2407 or DA Form 2407-E, whichever is appropriate, using the correct work request status codes from DA Pamphlet 750-8, table B-21, and list the number of workhours used for the maintenance request.

(2) If the maintenance request is on DA Form 2407, state the reason for rejection in block 25.

(3) Sign the appropriate SAMS-E equipment inspection and maintenance worksheet or DA Form 2404 and provide the owning-unit commander a copy of the form indicating equipment deficiencies and shortcomings.

g. In case of a roadside breakdown of a military tactical vehicle, the dispatching unit is responsible for the recovery of the disabled vehicle. When the dispatching unit does not have an organic wrecker truck assigned or available, the supporting field-maintenance unit is responsible for recovering the disabled vehicle. Dispatchers should provide tactical-vehicle operators the unit telephone number in case of an emergency, accident, or breakdown. Emergency-maintenance services should be limited to the repairs that are necessary to enable the equipment's safe return to the home station or operational site, whichever is closer. Towing of a disabled vehicle on the *Autobahn* is limited to the next capable repair facility at a military installation. A disabled vehicle may only be towed past the next available exit (*Ausfahrt*) on the *Autobahn* when the next available or capable repair facility for that type of vehicle is beyond the next available exit.

SECTION II MAINTENANCE STRUCTURE

6. THE ARMY MAINTENANCE SYSTEM

a. Ground Equipment. USAREUR supports its brigades and echelon above brigade (EAB) units in accordance with the Army's evolving two-level maintenance concept (field maintenance and sustainment maintenance). Brigades rely extensively on their organic capability for field maintenance. The 21st TSC provides back-up support for field maintenance to the brigades and EAB units.

b. Aviation Equipment. The 12th Combat Aviation Brigade (12th CAB) provides its own aviation field-maintenance and supply (formerly aviation unit and intermediate maintenance (AVIM)). The 21st TSC provides back-up sustainment maintenance (formerly depot maintenance) and supply support to the 12th CAB. Field-level and limited sustainment maintenance and supply actions are provided to other permanent and transient rotary wing aircraft through the Theater Aviation Sustainment Maintenance-OCONUS (TASM-O). The 21st TSC also supports deployment and redeployment operations for rotary-

wing aircraft through operation of a closed-loop facility at Ramstein Air Base and support to port and barge operations throughout the theater. USAREUR fixed-wing aircraft receive field and sustainment maintenance through logistics support contract.

c. Sustainment Maintenance. USAREUR has no organic sustainment maintenance activities.

d. Cannibalization Point. The designated cannibalization point for ground equipment for Army units in Europe is at the TLSC-E, Rhein Ordnance Barracks, building S-645, Kaiserslautern, Germany (mil 493-2099). There is no designated cannibalization point for aviation equipment in USAREUR.

7. CONTRACTUAL MAINTENANCE SUPPORT

Appendix D prescribes USAREUR tactical equipment maintenance contract policy and procedures.

8. DEPOT MAINTENANCE

a. There is one USAREUR and one non-USAREUR maintenance activity in Europe with the capability to perform depot maintenance tasks on selected major end items of ground support and air equipment and reparable components:

(1) USAREUR: TLSC-E (repairs ground support equipment reparables for the National Maintenance Program.

(2) Non-USAREUR: TASM-O (for aircraft).

b. USAREUR field-maintenance units and activities will not request one-time repair authority or special repair authority (SRA) in accordance with AR 750-1, paragraph 3-12, to perform one or more depot maintenance tasks on major end items of equipment or reparable components. Instead, personnel who believe field or sustainment maintenance facilities have the skills and special tools to perform a specific depot maintenance task should send DA Form 2028 to the proponent of the appropriate TM with justification recommending the task be lowered from depot to field or sustainment maintenance level. Only TLSC-E maintenance activities are authorized to submit SRA requests in accordance with the National Maintenance Program Business Process Manual.

9. ADMINISTRATIVE STORAGE OF MATERIEL

The administrative storage of equipment requires USAREUR approval. Placing equipment in administrative storage will be reported through command channels to the Materials Readiness Branch. AE Regulation 710-2, paragraph 5-18, prescribes responsibilities, policy, procedures, and reporting requirements for USAREUR unit item tracking.

SECTION III MAINTENANCE MANAGEMENT

10. MANPOWER-UTILIZATION STANDARDS

a. Manpower-accounting procedures for maintenance units using Standard Army Maintenance System-Enhanced Level 1 (SAMS-1E) are explained in end-user manuals AISM-25-I21-AHO-ZZZ-EM and AISM-25-L2S-AHN-ZZZ-EM. These manuals can be found under the documentation tab of the computer on which the program is loaded. These manuals can also be found on the SAMS-E website at <https://www.us.army.mil/suite/page/143642>.

b. Users may call military 481-3471/3486 for additional assistance.

11. THE LOGISTICS INTEGRATED DATA BASE MAINTENANCE MODULE

a. Commanders of units operating SAMS-1E are responsible for complying with the following maintenance-reporting requirements:

(1) The *Weekly Work Order (WO) file - Send to Higher* interface at SAMS-1E sites must be run daily to the supported SAMS-2E system. This requirement is driven by near real-time management requirements. File processing at SAMS-1E sites must be completed each day in the following order:

(a) From the Support SAMS-1E system, the *WO History - Send to Lower* interface (AHN4LD file) must be run for each SAMS-1E unit level each morning. This will ensure units receive the *Support Level Work Order* status to update the unit level SAMS-1E work order register when they transmit their *Daily Inop - Send to SAMS-1E/2E* (file AHN4AD) using Secure File Transfer Protocol (SFTP). (SFTP is the primary data-transfer method in USAREUR.)

(b) Units using SAMS-1E must process the AHN4LD transaction file (AHN4LD) into their SAMS-1E system.

(c) Before running any SAMS-1E output (to higher SAMS level or source of supply) processes, SAMS-1E data tables must be backed up and stored off the SAMS-1E system.

(d) The *Transactions - Requisition Send to SOS* (AWACE255 file) process must be run to the supply support activity (SSA) and must be sent to the Standard Army Retail Supply System using SFTP.

(e) The *Transactions - Receive Supply Status* (AJTS7A file) must be received from the SSA using SFTP and processed to the SAMS-1E document register table.

NOTE: According to the standing operating procedure (SOP) issued by the SPO, 21st TSC, steps (a) through (e) above can take place as many times as necessary to provide near real-time not mission capable (NMC) data for the unit's NMC (AHO-026) SAMS-2E report. A backup of all SAMS-E data tables must be performed before doing any SAMS-E output processes. This will ensure the data is not lost in case of a data-transfer failure.

(f) Each of the unit level SAMS-1E systems runs the *Daily Inop - Send to SAMS-1E/2E* (AHN4AD file) to the Support SAMS-1E system.

(g) At the Support SAMS-1E system, all AHN4AD files are processed from unit-level systems.

(h) The status of all work-center work orders must be updated in the Support SAMS-1E system.

(i) The *NMO Extract - Send to Higher* (AHN4CD file) and *TCO Extract - Send to Higher* (AHN4FD file) must be processed in the Support SAMS-1E system.

(j) The *Weekly WO - Send to Higher* (AHN4BD file) must be processed to the SAMS-2E sites.

NOTE: The NMO file contains all work order, work order parts, and work-order document number data. The NMO file must be created before running the *Weekly WO - Send to Higher (AHN4BD file) Transfer* process in the Support SAMS-1E because this process purges all work order data from the Support SAMS-1E system with a closed work order status of "U."

(k) The *Man-hour Accounting - Send to Higher* (AHN4GD file) interface will be run as prescribed by the SOP issued by SPO. The *Man-hour Accounting - Send to Higher interface* must be run before the *Daily Inop - Send to SAMS-1E/2E* (AHN4AD file) interface in order to prevent data from being lost.

(2) The AHN4AD, AHN4BD, AHN4CD, and AHN4FD files must be sent daily using SFTP to the brigade SPO SAMS-2E system at the times described in the SOP issued by the SPO. These files can be processed in SAMS-2E in any order. Each SPO manager will use SFTP to transfer these files daily directly to the Logistics Information Warehouse to populate the Logistics Integrated Data Base Maintenance Module.

(3) Maintenance managers at each brigade-level SPO are responsible for ensuring procedures are in place to—

(a) Follow up on delinquent maintenance-data files from SAMS-1E units. Follow-ups must be completed before transferring the SAMS-2E files (CWO (AHOD1F), NMO (AHN4CD), and TCO (AHN4FD) files to the Logistics Support Activity (LOGSA).

(b) Ensure that accurate data is transmitted to LOGSA. Supervisors and managers at each maintenance level will exercise appropriate supervision over operators to ensure correct data is entered in the Logistics Information System.

(c) The USAREUR standard for units transmitting the daily NMO, TCO, CWO files, and the monthly Army Materiel Status System is 100 percent. Commanders and SPO managers will establish procedures to ensure the reporting standard is met.

APPENDIX A REFERENCES

SECTION I PUBLICATIONS

Title 31, United States Code

DOD Instruction 4715.5, Management of Environmental Compliance at Overseas Installations
(available at <http://www.dtic.mil/whs/directives/corres/pdf/471505g.pdf>)

DOD 7000.14-Regulation, Department of Defense Financial Management Regulation
(available at <http://comptroller.defense.gov/fmr/>)

DOD 4715.05-Guide, Overseas Environmental Baseline Guidance Document
(available at <http://www.dtic.mil/whs/directives/corres/pdf/471505g.pdf>)

DOD Government Charge Card Guidebook for Establishing and Managing Purchase, Travel, and Fuel Card Programs

DFAS Instruction (IN) 37-1, Finance and Accounting Policy Implementation
(available at <http://asafm.army.mil/offices/BU/Dfas371.aspx?OfficeCode=1200>)

DFAS IN 37-100, Financial Management, The Army Management Structure
(available at <http://asafm.army.mil/offices/BU/Dfas37100.aspx?OfficeCode=1200>)

ALARACT 303-2011, 11915ZAUG11, Aircraft Two-Level Repair Authorization (FOUO)

AR 11-1, Command Logistics Review Program

AR 11-34, The Army Respiratory Protection Program

AR 25-400-2, The Army Records Information Management System (ARIMS)

AR 220-1, Army Unit Status Reporting and Force Registration - Consolidated Policies

AR 380-40, Safeguarding and Controlling Communications Security Materiel

AR 700-4 Logistics Assistance

AR 700-127, Integrated Logistics Support

AR 700-138, Army Logistics Readiness and Sustainability

AR 710-2, Supply Policy Below the National Level

AR 725-50, Requisitioning, Receipt, and Issue System

AR 750-1, Army Materiel Maintenance Policy

AR 750-10, Army Modification Program

AR 750-59, Army Corrosion Prevention and Control Program

DA Pamphlet 700-24, Sample Data Collection

DA Pamphlet 710-2-1, Using Unit Supply System (Manual Procedures)

DA Pamphlet 710-2-2, Supply Support Activity Supply System: Manual Procedures

DA Pamphlet 738-751, Functional Users Manual for the Army Maintenance Management System-Aviation (TAMMS-A)

DA Pamphlet 750-1, Commander's Maintenance Handbook

DA Pamphlet 750-3, Soldier's Guide for Field Maintenance Operations

DA Pamphlet 750-8, The Army Maintenance Management System (TAMMS) Users Manual

Army Techniques Publication (ATP) 4-91, Army Field Support Brigade

Automated Information System Manual 25-L21-AHN-ZZZ-EM, SAMS-1, End User Manual

Automated Information System Manual 25-L26-AHO-ZZZ-EM, SAMS-2, End User Manual

Common Table of Allowances 50-909, Field and Garrison Furnishings and Equipment

Federal Supply Classification 2540, Vehicular Furniture and Accessories

Supply Bulletin 700-20, Army Adopted/Other Items Selected for Authorization/List of Reportable Items

TB 9-2300-405-14, Mandatory Brake Hose Inspection and Replacement - Tactical Vehicles

TB 9-2300-426-20, Hydraulic and Air/Hydraulic Brakes Preventive Maintenance

TB 43-0118, Field Instructions for Painting and Preserving Communications-Electronics Equipment

TB 43-0147, Color, Marking and Camouflage Patterns Used on Military Equipment Managed by USATSARCOM

TB 43-0209, Color, Marking and Camouflage Painting of Military Vehicles, Construction Equipment, and Materials Handling Equipment

TB 43-0211, Army Oil Analysis Program (AOAP) Guide for Leaders and Users

TB 43-0213, Corrosion Prevention and Control (CPC) for Tactical Vehicles

TB 43-0242, CARC Spot Painting

TB MED 7, Maintenance Expenditure Limits for Medical Materiel

TB MED 502, Occupational and Environmental Health Respiratory Protection Program
(available at http://armypubs.army.mil/med/dr_pubs/dr_a/pdf/tbmed502.pdf)

TB MED 750-1, Operating Guide for Medical Equipment Maintenance

TM 1-1500-328-23, Aeronautical Equipment Maintenance Management Policies

TM 9-2610-200-14, Operators, Unit, Direct Support and General Support Maintenance Manual for Care, Maintenance Repair, and Inspection of Pneumatic Tires and Inner Tubes

TM 9-6140-200-13, Technical Manual Operator and Field Maintenance for Automotive Lead-Acid Storage Batteries 4HN, 24 Volt (dry) (NSN 6140-00-059- 3528) M11188/2-2 4V; 4HN, 24 Volt (wet) (NSN 6140-01-390-1968) M11188/2-24V; 2HN, 12 Volt (dry) (NSN 6140-00-057-2553) MS35000-2; 2HN, 12 Volt (wet) (NSN 6140-01-3 90-1969) MS35000-2; 2HN 12 Volt (gel) (NSN 6140-01-446-9554) MSE Shelter; 6TAGM 12 Volt (NSN 6140-01-485-1472) or (NSN 6140-15-180-0587) all combat and most tactical, Mil-PRF-32143A; 6TMF-I, 12 Volt (dry) (NSN 6140-0 1- 446-9498) 6TMF-I; 6TMF-II, 12 Volt (wet) (NSN 6140-01-446-9506) 6TMF-II, 6TMF-III, 12 Volt (dry) (NSN 6140-01-469-9184) 6TMF-III; NGB248GTW, 12 Volt (6TGEL) (NSN 6140-01-439-0616) (EIC 559); 34/78 (NSN 6140-01-374-224 3) Generators; D51R (NSN 6140-01-529-7226) Generators; 34/78AGM (NSN 6140-01-556-4352) OGPK; 31AGM (NSN 6140-01-582-5710) BFVS all variants

TM 38-470, Storage and Maintenance of Army Prepositioned Stock Material

TM 43-0139, Painting Instructions for Army Materiel

TM 55-1500-345-23, Painting and Marking of Army Aircraft

Memorandum of Understanding between United States Army Europe (USAREUR) and Army Materiel Command (AMC), Annex P, 2 May 2011, subject: Agreement to Execute the Army Sample Data Collection (SDC) Program in USAREUR

National Maintenance Program Business Process Manual

PCN AHO-039/040, Monthly Float Usage and Accumulation Reports

PCN AHO-041, ORF Status and Utilization Report

Standard Army Maintenance System-Enhanced (SAMS-E), End Users Manual

Unit Level Logistics System-Aviation Enhanced (ULLS-AE), End Users Manual

United States Army Public Health Command, Technical Guide 144, Guidelines for Controlling Health Hazards in Painting Operations
(available at [http://phc.amedd.army.mil/PHC%20Resource%20Library/Revision%20TG%20144%2009%202011%20agg%20\(2\).pdf](http://phc.amedd.army.mil/PHC%20Resource%20Library/Revision%20TG%20144%2009%202011%20agg%20(2).pdf))

AE Regulation 1-7, Support Agreements

AE Regulation 1-40, Hosting Official Visitors

AE Regulation 55-4, Safe Movement of Hazardous Goods by Surface Modes

AE Regulation 200-1, Army in Europe Environmental Quality Program

AE Regulation 200-2, Environmental Guidance for Military Exercises

AE Regulation 350-1, Training in the Army in Europe

AE Regulation 380-40, Safeguarding and Controlling Communications Security Materiel

AE Regulation 385-7, Respiratory Protection Program

AE Regulation 600-700, Identification Cards and Individual Logistic Support

AE Regulation 710-2, Supply Policy Below the Wholesale Level

AE Regulation 715-9, Contractor Personnel in Germany—Technical Expert, Troop Care, and Analytical Support Personnel

AE Regulation 750-1-1, Left Behind Equipment (LBE) Maintenance Program

AE Regulation 750-20, USAREUR/7A Theater Maintenance Program

Memorandum for Record (AEAGB-ISD-SECURITY), 5 October 2011, subject: Army in Europe Regulation (AER) 380-40 Procedural Clarification, Appendix C, Controlled Cryptographic Items (CCI)

SECTION II FORMS

SF 368, Product Quality Deficiency Report (PQDR)

OF 346, US Government Motor Vehicle Operators Identification Card

DD Form 200, Financial Liability Investigation of Property Loss

DD Form 314, Preventive Maintenance Schedule and Record

DD Form 362, Statement of Charges/Cash Collection Voucher

DA Form 348, Equipment Operator's Qualification Record (*Except Aircraft*)

DA Form 348-E, Operator Qualification Record

DD Form 1131, Cash Collection Voucher

DD Form 1144, Support Agreement

DD Form 1348-1, DOD Single Line Item Release/Receipt Document

DD Form 1384-2, DOD Release/Receipt Document With Address Label

DD Form 2026, Oil Analysis Request

DA Form 461-5, Vehicle Classification Inspection

DA Form 1296, Stock Accounting Record

DA Form 1352, Army Aircraft Inventory, Status, and Flying Time

DA Form 2028, Recommended Changes to Publications and Blank Forms

DA Form 2404, Equipment Inspection and Maintenance Worksheet

DA Form 2407, Maintenance Request

DA Form 2407-E, Maintenance Request

DA Form 2408-5, Equipment Modification Record

DA Form 2408-18, Equipment Inspection List

DA Form 2765-1, Request for Issue or Turn-In

DA Form 3161, Request for Issue or Turn-In

DA Form 3254-R, Oil Analysis Recommendation and Feedback Record

DA Form 3590, Request for Disposition or Waiver

DA Form 3953, Purchase Request and Commitment

DA Form 4949, Administrative Adjustment Report (AAR)

DA Form 5987-E, Motor Equipment Dispatch

DA Form 5988-E, Equipment Inspection Maintenance Worksheet

DA Form 5991-E, Oil Analysis Request

DA Form 7591, Modification Work Order Fielding Plan

APPENDIX B

MAINTENANCE EXPENDITURE LIMIT POLICY

B-1. PURPOSE

This appendix applies to USAREUR major subordinate commands (MSCs) and implements the maintenance expenditure limit (MEL) policy for aircraft and ground-support equipment prescribed in AR 750-1, paragraph 4-6, and in the TB 43- and 750-series. The result of the MEL calculation provides the basis for determining whether or not the repair or maintenance of excess or accident-damaged equipment is economical.

B-2. REFERENCES

Appendix A lists references.

B-3. EXPLANATION OF ABBREVIATIONS

The glossary defines abbreviations.

B-4. RESPONSIBILITIES

a. The Chief, Materiel Readiness Branch, Sustainment Operations Division (SOD), Office of the Deputy Chief of Staff, G4, HQ USAREUR, will do the following:

(1) Determine and publish the USAREUR standard military-labor rate each year and revise the rate as required.

(2) Be the approving authority for MEL waiver requests for tactical equipment.

(3) Sends requests for blanket or general MEL waiver for a particular fleet of equipment to the appropriate item manager, United States Army Materiel Command Life-Cycle Management Center, when justified.

b. The Commander, 405th Support Brigade (405th SB), will do the following:

(1) Publishes MEL policy for base operation and installation equipment.

(2) Be the approving authority for MEL waiver requests for base operation and installation equipment.

B-5. GENERAL

USAREUR MSC field-maintenance units and activities do not need to perform an MEL computation each time a tactical major end item of equipment is turned in for routine scheduled and unscheduled maintenance or repair to the field-maintenance unit or activity. Field-maintenance units and activities are, however, required to perform an MEL computation to determine the economic reparability of excess and accidentally damaged tactical major end items of equipment (in accordance with the TB 43- and 750-series). Inspection results, estimated repair costs, and supply-condition codes will be recorded on the forms prescribed by the TB 43- and 750-series.

B-6. POLICY

a. Owning units will submit requests for classification inspections or an estimated cost of damage (ECOD) using DA Form 2407-E or DA Form 2407. The item manager uses the inspection form to decide whether to repair, transfer, or dispose of the equipment item.

b. Field-maintenance activities will use the standard military labor rate for computing MELs and determining the economic reparability of excess and accidentally damaged equipment. The standard military-labor rate—

(1) Is based on the average pay and allowances for Soldiers in the rank of private first class through sergeant and based on the utilization rate of 2,080 hours annually and includes direct, indirect, and 10 percent overhead costs.

(2) Will be used when preparing a classification inspection and ECOD.

(3) May be used for classification inspections and ECODs that are conducted by a contractor if no specific labor rate is prescribed by the contract to protect the contractor's propriety information for competitors and if approved by the assigned contracting officer's representative. The actual total repair cost will be charged to each maintenance request.

c. USAREUR MSC commanders will determine labor rates for DA civilians (DACs) and local national (LN) employees for maintenance facilities in their area of responsibility.

d. For the computation of MEL, field-maintenance units and activities will use the official replacement cost of the item from the Logistics Support Activity website at <https://liw.logsa.army.mil/SSN/index.cfm>. The replacement cost of an item can be found through the following procedure:

(1) Logging in using a Common Access Card or an Army Knowledge Online user name and password.

(2) Clicking on *MEL Planning Information*.

(3) In the *Filter Items* window, entering either the national stock number, line item number, or national item identification number to generate a MEL report.

(4) Clicking on *Generate Report*.

(5) The estimated replacement cost will be displayed in the last column, titled *Forecasted MEL*.

NOTE: Units will not use the Army unit price in the current Army Master Data File/Federal Logistics Record (AMDF/FEDLOG), which is usually the cost of the last item procured, to compute the MEL. The Army unit price normally understates the replacement cost for the MEL computation and causes the MEL to be reached prematurely and early wash-out of equipment.

e. The MEL computation worksheet (DA Form 461-5, DA Form 2404, or DA Form 3590) will include the cost for the replacement of reparable items (for example, engines, transmissions), minus the turn-in dollar credit for the unserviceable reparable item, depending on the exchange pricing credit value posted in the AMDF/FEDLOG.

f. Although Standard Army Maintenance System-Enhanced Level 1E (SAMS-1E) and Standard Army Maintenance System-Enhanced Level 2E (SAMS-2E) are not financial accounting systems, a SAMS-1E Work Order Detail Report (PCN AHN-018) will be printed for each customer once the work request is closed. Field-maintenance units and activities will maintain PCN AHN-018 printouts for 180 days in accordance with DA Pamphlet 750-8, paragraph 3-6g, and provide each customer unit an AHN-018 report detailing all repairs completed and workhours used on each closed work order. The SAMS-1E unit identification code parameter file must have the correct direct-labor and indirect-labor rates for military personnel, DAC and LN employees, and contractors; and a standard cost or a percentage entered to accurately compute costs allocated to each maintenance work order. SAMS-1E and SAMS-2E reports will not be used for billing purposes. The correct funding code for the supported unit must be entered when requesting repair parts, and the unit will be charged through the General Fund Enterprise Business System.

g. Field-maintenance units and activities may request an MEL waiver to repair uneconomically repairable equipment that is needed to retain an acceptable level of readiness through one of the following procedures:

(1) Field-maintenance units and activities will send requests for an MEL waiver through S4/G4 technical channels to the Materiel Readiness Branch (a POC will be provided on request, mil 537-5377).

(2) Theater Logistic Support Center-Europe maintenance activities will send requests for exception to the MEL policy by e-mail through the respective 21st Theater Sustainment Command item manager to the Materiel Readiness Branch for processing.

(3) Requests for MEL waivers for base operations and installation equipment will be sent to the 405th SB for review. This equipment includes General Support Administration and locally procured installation type property. Examples include, but are not limited to the following:

- (a) Cameras.
- (b) Car lifts.
- (c) Composite sieves.
- (d) Electric entertainment equipment.
- (e) Floor and hand-held polishers and buffers.
- (f) Hand-operated winter service equipment.
- (g) Intrusion detection systems.
- (i) Lawnmowers.
- (j) Leaf-blowers.
- (k) Projection screens.
- (l) Projectors.

- (m) Riding lawnmowers.
- (n) Road-block barriers.
- (o) Satellite dishes.
- (p) Television sets.
- (q) Trailer-mounted hydroseeders.
- (r) Turbo chillers.
- (s) Weed eaters.

(4) Requests for exception to the MEL policy will include a justification. For example, the unit needs the item to—

- (a) Maintain an acceptable level of readiness until the item is replaced through force modernization and fielding of replacement equipment.
- (b) Fill a unit equipment readiness code A or P shortage.
- (c) Fill another equipment shortage.
- (d) Prepare for deployment.

(5) Requests for an MEL waiver for medical materiel will be processed according to TB MED 7 and TB MED 750-1.

h. Items designated for Military Assistance Programs and Humanitarian Assistance Program are exempt from HQDA and USAREUR MEL policy and procedures.

APPENDIX C

CONTROLLED EXCHANGE POLICY FOR AIRCRAFT

C-1. PURPOSE

This appendix implements the controlled exchange policy for aircraft in USAREUR and must be used with AR 750-1 and TM 1-1500-328-23. The policy in this appendix will remain in effect during transition to war, preparation for deployment, and stability operations. Requests for exception to this policy may be sent to the Sustainment Operations Division, Office of the Deputy Chief of Staff, G4, HQ USAREUR.

C-2. REFERENCES

Appendix A lists references.

C-3. EXPLANATION OF ABBREVIATIONS

The glossary defines abbreviations.

C-4. RESPONSIBILITIES

Local commanders will establish procedures for the controlled exchange of aircraft components to ensure efficiency of the program and maintain readiness.

C-5. GENERAL

a. ALARACT Message 303/2011 implemented the two-level maintenance system for aviation maintenance, which consists of field-level maintenance and sustainment-level maintenance to replace the legacy aviation unit maintenance (AVUM), aviation intermediate maintenance (AVIM), and depot maintenance system. This appendix uses the terms “aviation maintenance company (AMC)” and “aviation support company (ASC)” to identify controlled exchange authorization levels by organization.

b. Controlled exchange is the removal of serviceable components from unserviceable but economically repairable aircraft for immediate reuse in restoring a like item or aircraft to a mission capable (MC) condition. All removable parts, including line-replaceable units, avionics (radios, instruments), and aircraft survivability equipment, are considered components.

c. Controlled exchange should be conducted only as a last resort to support operational mission requirements. Preflight of standby aircraft for missions and use of available MC float aircraft will reduce the controlled exchange requirement. The exchange of components from aircraft entering extensive maintenance to expedite completion of maintenance on other aircraft provides the greatest readiness gain from controlled exchange.

C-6. POLICY

a. The controlled exchange of aviation-system components is authorized only when all of the following apply:

- (1) A valid requisition has been submitted to replace an unserviceable item.
- (2) Required components are not available from the supply system by the required delivery date.

(3) The aircraft from which the component is removed is classified as not mission capable (NMC) supply, NMC maintenance, or partially mission capable (PMC). Controlled exchange from PMC aircraft will be limited to components of the subsystems that were PMC before the exchange requirement arose. In no case will additional subsystems be degraded to PMC.

(4) The maintenance effort required to restore all unserviceable reparable materiel involved to an MC condition is in the maintenance allocation chart authorization for the aircraft and within the capability of the unit performing the controlled exchange or when the unit has a letter of authorization from the supporting ASC.

(5) Controlled exchange is the only way to eliminate an adverse effect on the operational readiness of the unit, organization, or activity performing the exchange.

b. Components will not be removed from aircraft that have been scheduled for or has passed final inspection, maintenance operational check (MOC), or a test flight.

c. Controlled exchange by an AMC is authorized only when—

(1) It is the only way to provide required aircraft to support an operational requirement. Maintenance completion will not be expedited through controlled exchange solely to improve reported readiness rates.

(2) Approved in writing (fig C-1) by an aviation commander or designated representative of the organization before performing the controlled exchange.

d. Controlled exchange by an ASC is authorized only when it is the only way to provide an MC aircraft to a supported unit within the time indicated by the issue priority designator on the maintenance request.

C-7. MANAGEMENT PROCEDURES

a. Local Procedures. Local commanders will establish procedures to ensure that—

(1) Requisitions for replacement components are sent immediately.

(2) Aircraft or subsystems will not be degraded to an uneconomically reparable condition.

(3) Aircraft from which a component was removed is protected from further degradation.

(4) Organizations performing controlled exchange take prompt action to restore unserviceable materiel to an MC condition.

b. Time Limits. AMC and ASC commanders will establish time limits within which aircraft may act as donors for controlled exchange. Time limits should not exceed the average order or shipping time for the unit's normal supply support.

c. Inspection Requirements. Before installing components on receiving aircraft, all components to be exchanged will be inspected and serviced (if applicable) according to the next scheduled—

(1) Hourly maintenance event of the losing aircraft that applies to the component being moved.

(2) Calendar inspection that applies to the component listed on the losing aircraft's DA Form 2408-18.

d. Documentation.

(1) For each item removed or installed, aircraft-maintenance records in accordance with DA Pamphlet 738-751 will be maintained. A locally produced control record will be used to control exchange activities. Exchange-control records will include at least the information in figure C-1.

(2) A copy of the exchange-control record will be attached to the aircraft-maintenance records of both the losing and receiving aircraft. Exchange-control records will be filed and disposed of according to the procedures that apply to the maintenance record to which it is attached.

(3) Commander's statements will be entered on DA Form 1352 to document controlled exchange during the report period. Reports will show the serial numbers of the losing and receiving aircraft, nomenclatures, national stock numbers of exchanged parts, document numbers for replacement parts, and workhours (including workhours for inspections, MOCs, and test flights) for completing the exchange.

e. Controlled Exchange for Troubleshooting.

(1) Components that are exchanged between MC and NMC aircraft to support troubleshooting for periods of less than 1 workday are exempt from the control procedures in this appendix. Removal of components for troubleshooting will be immediately documented on losing and receiving aircraft-maintenance records. The serial numbers of the components involved will be noted on entries for both losing and receiving aircraft. Components will be immediately reinstalled on the losing aircraft after troubleshooting is completed. A qualified technical inspector will inspect every component reinstallation. When a decision is made to leave a troubleshooting component installed for more than 1 workday, the policy in this appendix will apply and the exchange will be documented on an exchange-control record.

(2) Installing a serviceable component in an unserviceable aircraft can lead to the failure of the new component by the same wire or system fault that caused the failure in the unserviceable aircraft. When using controlled exchange for troubleshooting, the suspected unserviceable parts should be tested in a serviceable aircraft.



DEPARTMENT OF THE ARMY
UNITED STATES ARMY EUROPE
UNIT XXXXX
APO AE XXXXX-XXXX

Office symbol

date

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Request for Controlled Exchange

Control no. _____

No maintenance will be performed on either aircraft used for the controlled exchange until the aviation commander or a representative approves this request.

1. Production control authorization: _____
2. From aircraft: _____ Current aircraft hours: _____
3. To aircraft: _____ Current aircraft hours: _____
4. Personnel performing maintenance: _____ workhours: _____
5. Component nomenclature: _____
6. Component NSN: _____
7. Serviceable S/N: _____ Non-serviceable S/N: _____
8. Component requisition number: _____
9. Tech supply verification: _____
10. Quality control verification:
2408-13-1 _____ 2408-13-2 _____ 2408-16 _____ QDR _____ 2410 _____ PID _____
11. Production control verification of paperwork: _____

Approved/disapproved

*Signature block
commander*

Distribution:
PC-1
QC-1
Losing aircraft logbook-1
Receiving aircraft logbook-1

Figure C-1. Format for Aircraft Controlled-Exchange Record

APPENDIX D

CONTRACTUAL MAINTENANCE SUPPORT POLICY

D-1. PURPOSE

This policy provides provisions on contractual maintenance support of all tactical equipment that is authorized by modification tables of organization and equipment, tables of distribution and allowances, or issued as a temporary loan.

D-2. APPLICABILITY

The policy prescribed in this appendix—

- a. Applies at home station to USAREUR major subordinate commands (MSCs).
- b. Does not apply to USAREUR specialized commands. Implementation of this policy by specialized commands, however, is encouraged.
- c. Does not apply to the DA Modification Work Order Program.
- d. Does not apply to the National Maintenance Program.
- e. Does not apply to the Balkans, contingency operations, peacekeeping operations, and operations other than war.

D-3. REFERENCES

Appendix A lists references.

D-4. EXPLANATION OF ABBREVIATIONS

The glossary defines abbreviations.

D-5. RESPONSIBILITIES

a. The Chief, Materiel Readiness Branch, Sustainment Operations Division, Office of the Deputy Chief of Staff, G4, HQ USAREUR will—

- (1) Oversee USAREUR contractual maintenance-support policy and procedures.
- (2) Arbitrate and provide the final decision on disputes between customer units and the 21st Theater Sustainment Command (21st TSC) over the source or location of maintenance support.
- (3) Send requests according to AE Regulation 1-7 for the establishment or amendment of any of the following documents to the Agreements Division, Office of the Deputy Chief of Staff, G8, HQ USAREUR, Unit 29351, APO AE 09014-9351:
 - (a) Interservice support agreements (ISSAs).
 - (b) Memorandums of agreement (MOAs).
 - (c) Memorandums of understanding (MOUs) with other U.S. military organizations (for example, 405th Support Brigade).
 - (d) Acquisition and cross-servicing agreements (ACSAs) with host nations (HNs) to obtain additional military, contractor, and HN maintenance support.

b. The Chief, Support Operations (SPO), 21st TSC, will—

- (1) Monitor compliance with USAREUR contractual maintenance-support policy and procedures.
- (2) Be the approval authority and proponent for maintenance contracts in the European theater valued at more than \$25,000 (including all follow-on requirements).
- (3) Operate the Sustainment Acquisition Management Office (SAMO). The SAMO has assumed maintenance-contract responsibilities formerly performed by the Logistics Contract Management Office.
- (4) Provide a standing operating procedure (SOP) to USAREUR MSCs as well as procedures and applicable links to websites for requesting contractual maintenance support (with an information copy to the Materiel Readiness Branch).
- (5) Send requests for the establishment or amendment of ISSAs, MOAs, and MOUs with other U.S. military organizations or ACSAs with HNs to obtain additional military, contractor, and HN maintenance support by e-mail through the Chief, SOD, to the Agreements Division.
- (6) Ensure maintenance support provided by in-house maintenance facilities is of the same quality or exceeds the quality of service provided by contracted sources. If acceptable maintenance support services are available at a better value to the customer than can be provided by in-house maintenance facilities, those maintenance support services will be used.
- (7) Send requests to settle disputes between customer units and the SAMO over the source or location of maintenance support to the Chief, Materiel Readiness Branch, for arbitration and final decision.
- (8) Manage Government performance on each maintenance contract to ensure performance is to standard.

c. The Chief, SAMO, will—

- (1) Provide central management of all maintenance-support contracts established under the guidelines of this policy.
- (2) Place orders for maintenance support using contracts executed by United States Army Expeditionary Contracting Command-Europe (ECC-E) with DOD umbrella contractors, other open-market commercial contractors, or the North Atlantic Treaty Organization Support Agency (NSPA).
- (3) Determine appropriate action in response to requests for maintenance support.

d. USAREUR MSC commanders will—

- (1) Ensure that requirements for maintenance support exceeding the unit's organic capability or capacity and valued at more than \$25,000 (including follow-on requirements) are sent to the SPO.
- (2) Appoint a knowledgeable and technically capable POC or nominate an individual to serve as the quality-assurance evaluator or contracting officer's representative (COR) for maintenance support contracted by ECC-E.

(3) Provide adequate and suitable maintenance space and contract-defined Government-furnished property and services for use by the contractor when agreed to by the customer unit, SPO, and the contracting officer.

(4) Appeal any disagreement with SPO over the source or location of maintenance support to the Chief, Materiel Readiness Branch (mil 537-4611), for arbitration and final decision.

D-6. GENERAL

a. For the purpose of this policy, the term “contractual maintenance support” pertains to using-unit maintenance, field maintenance, aviation intermediate maintenance (AVIM), and aviation unit maintenance (AVUM) that have or have not been modularized and transformed to field-maintenance units and activities.

b. The terms “AVIM,” “AVUM,” “organizational/using unit maintenance,” “direct support (DS) maintenance,” and “general support (GS) maintenance” will continue to be used in this appendix until DA fully implements the two-level maintenance concept (field maintenance and sustainment maintenance) and all technical manuals have been revised in accordance with the two-level maintenance system. Generally, under the two-level maintenance concept and, to varying degrees, AVIM, AVUM, using unit, and DS maintenance tasks are combined under field maintenance, and GS maintenance tasks are integrated into sustainment or depot maintenance.

c. The repair standards for vehicles and equipment will be as cost-effective as possible without compromising customer service support. The decision on where to perform repairs or who will perform the work must result in the best value for the customer and not be based solely on the lowest cost.

(1) Assigning work to USAREUR in-house maintenance facilities will not be at the expense of the customer unit (for example, costs will not exceed those for similar services available from reputable contractors; the level of service must be the same).

(2) Organizational maintenance support and the application of maintenance work orders will be provided onsite to the maximum extent possible, unless the requesting unit approves otherwise.

d. All tactical vehicles and equipment will be repaired to the Army maintenance standard prescribed in AR 750-1, paragraph 3-2.

D-7. PROCEDURE

a. Customer units will send requests for tactical maintenance support by e-mail through appropriate command channels (for example, through the supporting S4/G4) to the SPO according to the SOP provided by the Chief, SPO. Unit requests for maintenance support must include the following:

(1) National stock number.

(2) Nomenclature (including model number).

(3) Quantity.

(4) Extent of repair or type of service required (for example, preventive maintenance checks and services, unit maintenance, AVIM, AVUM, DS maintenance, field maintenance).

(5) Location.

(6) Estimated required delivery date. If the request is in support of a contingency operation, this must be stated.

(7) A funded purchase request and commitment (PR&C) (DA Form 3953).

(8) A statement as to whether or not the customer unit wants to review the SAMO cost analysis before the unit's requirement is sent to in-house maintenance facilities.

(9) The name and telephone number of the requesting unit POC.

b. The Chief, SAMO will analyze, review, validate, and process customer unit requests for maintenance support within 5 workdays after receipt during normal operations (within 72 hours after receipt during contingency operations) to determine appropriate action (including verification of whether or not in-house maintenance capability and capacity is available). This process may include the following actions:

(1) Conducting a cost analysis to determine the best source and location of the maintenance support to be provided. The cost analysis will include all expenses related to the performance of the maintenance support, including transportation to and from the maintenance facility and temporary duty costs for onsite repair.

(2) Providing a copy of the cost analysis to all customer units for review before a decision is made to provide the support with in-house maintenance resources.

(3) Assigning work to organic in-house maintenance facilities to provide the required maintenance support.

(4) Sending requests to the appropriate ECC-E office. The ECC-E office will place orders for maintenance support using contracts executed by the ECC-E with DOD umbrella contracts, other open-market commercial contracts, or NSPA.

(5) Placing orders for maintenance support under existing DOD umbrella contracts (for example, DynCorp, Defense Support Services, General Dynamics, International Telephone and Telegraph Industries) that were not executed by an ECC-E office.

(6) Sending requests (by e-mail) to establish or amend ISSAs (AE Reg 1-7), MOAs, or MOUs with other U.S. military organizations; or ACSAs with the HN to obtain additional military, contractor, or HN support, as required, through SPO and the Materiel Readiness Branch to the Agreements Division.

(7) Coordinating statements of work (SOWs) with theater senior command representatives (SCRs) (for example, from the United States Army Aviation and Missile Command Life-Cycle Management Center, United States Army Communications-Electronics Command Life-Cycle Management Center, United States Army Tank-Automotive and Armaments Command Life-Cycle Management Center). The SCRs will review SOW requirements to ensure they comply with applicable safety and sustainment policy, procedures, and guidelines. This review will be completed within 3 workdays after it is received for support of normal operations (within 24 hours after it is received for support of contingency operations).

(8) Nominating personnel as the COR and an alternate contracting officer's representative (ACOR) to work with the appropriate ECC-E office, the customer unit POC, and the contractor when it is determined that contract-maintenance action will be taken. These personnel will inspect and ensure the contractor's products and services comply with the performance standards in the contract quality assurance plan.

(a) The COR will be appointed in writing by the contracting officer. The ACOR will be nominated in writing, and the COR will send the nomination to the appropriate contracting activity. On receipt of the ACOR nomination, the contracting officer will appoint the ACOR in writing.

(b) The COR and ACOR will attend all training courses as directed and provided by the ECC-E.

(c) The duties of the COR and ACOR will be the primary responsibilities of the individuals so designated.

(d) The COR, ACOR, and the customer unit POC will define the customer's complete repair requirements to develop the SOW.

(e) The COR or ACOR will forward customer concerns to the contractor, resolve contractor quality deficiencies, and work with the contractor and customer unit on questions about equipment turn-in, equipment pickup, and other related technical or administrative issues.

(f) All recommended changes to the SOW must be sent to the contracting officer. The COR or ACOR are not authorized to communicate additional requirements or changes to the contract SOW directly to the contractor.

(g) The COR or ACOR may train and appoint quality assurance representatives, inspectors, or other personnel to help the COR or ACOR with technical surveillance. These technical surveillance personnel do not have acquisition authority and cannot take direct action with the contractor. They will only review the contractor's performance and report their findings to the COR or ACOR. The COR and the ACOR have authority to take corrective action.

(9) Developing and sending recommendations for a theater-level, umbrella PR&C through appropriate resource-management channels to the USAREUR G8. Consolidated maintenance support for multiple units under an umbrella contract will be awarded by ECC-E, as appropriate.

(10) Ensuring contracts for using unit-, AVIM-, AVUM-, DS-, and GS-level maintenance include provisions for collecting DA Form 2407 or DA Form 2407-E maintenance data from the contractor. The SPO will be included in reports to the Logistics Integrated Database Maintenance Module (LIDB-MM) at the Logistics Support Activity, or require contractors to provide DA Form 2407, DA Form 2407-E, or Standard Army Maintenance System equivalent data using automated means to the LIDB-MM according to AR 750-1, paragraph 4-20c, whichever method is practical and most cost effective.

NOTE: Data collection, standard Logistics Information System (LIS) training, and input costs must be included in the maintenance-contract-decision process, even if this increases the cost of the contract.

(11) Ensuring that repairs are within the maintenance expenditure limit, as published in technical bulletins or approved waivers for all commodities.

(12) Be responsible for cost and workload accounting.

c. The customer unit POC will work with the COR or ACOR on issues relating to equipment turn-in, pickup, quality deficiencies, and customer concerns about costs, scheduling, and contractor performance. The customer unit POC normally does not have the same acquisition authority as the COR or ACOR and will not be designated as an ACOR by the contracting officer. When a requirement for a customer unit ACOR is identified—

(1) The customer unit ACOR will be nominated in writing, and the COR will send the nomination to the appropriate contracting activity. On receipt of the customer unit ACOR nomination, the contracting officer will appoint the customer unit ACOR in writing.

(2) The customer unit ACOR will attend all training courses as directed and provided by ECC-E. The customer unit ACOR must be certified, technically qualified, and trained to the same level as the COR.

(3) The duties of the customer unit ACOR will be the primary responsibilities of the individual so designated.

(4) All recommended changes to the contract SOW must be submitted through the COR to the contracting officer. The customer unit ACOR is not authorized to communicate additional requirements or changes to the contract SOW directly to the contractor. The customer unit ACOR is authorized to perform all duties and responsibilities in the absence of the COR, subject to any limitations specified in the customer unit ACOR appointment letter.

d. The Chief, SPO, as approval authority for maintenance contracts, may elect one of the following options:

(1) Assign maintenance tasks to in-house repair facilities when the customer's required delivery date can be met without having to out-source other work to find the additional in-house maintenance workhours to complete the maintenance task.

(2) Consolidate contract workload requirements for execution through an established umbrella contract.

(a) Umbrella contracts or indefinite delivery/indefinite quantity orders for multiple customer units in Germany will be awarded by ECC-E.

(b) Delivery orders may be awarded against existing DOD umbrella contracts by ECC-E if the USAREUR Principal Assistant Responsible for Contracting determines an offload of the requirement is appropriate.

(3) Grant an exception to this policy on an individual basis for the customer unit to submit a specific requirement to ECC-E if the time constraints in subparagraph b above cannot be met.

D-8. EXCEPTION TO POLICY

Maintenance contract support requirements in support of contingency operations, peacekeeping operations, and operations other than war in other areas, including units participating in training exercises while deployed to areas outside Belgium, Germany, Italy, and the Netherlands, will be submitted according to the applicable operation order or exercise directive.

APPENDIX E

REPAIR OF MILITARY VEHICLE CANVAS, CUSHIONS, AND VINYL WINDOWS

E-1. PURPOSE

This appendix provides policy, procedures, and inspection standards for maintaining canvas components and vinyl windows in tactical and combat vehicles.

E-2. REFERENCES

Appendix A lists references.

E-3. EXPLANATION OF ABBREVIATIONS

The glossary defines abbreviations.

E-4. RESPONSIBILITIES

DA has eliminated military occupational specialty 43M, Fabric Repair Specialist, from the military personnel force structure. This means that support-maintenance units are no longer responsible nor have the resources for repairing vehicle components made of canvas (cotton-duck material) or plastic-coated polyester fabric. The following maintenance activities in USAREUR provide limited vehicle canvas and polyester repair:

a. Theater Logistics Support Center-Europe (TLSC-E), Kaiserslautern, Germany. The TLSC-E operates a small canvas and textile repair facility using civilian labor and is available to repair vehicle canvas and polyester tarpaulins, covers, and end curtains on a partially reimbursable basis. TLSC-E covers labor costs, but the customer unit must pay for material and supplies to repair the items. Units may contact the Maintenance Section, Support Operations, TLSC-E (mil 483-3114, civ 0631-414-3114/3112/3113, fax 483-3103) for details, a control number, and a POC.

b. Installation Materiel Maintenance Activity (IMMA), United States Army Garrison Vicenza, Italy. This activity operates a small canvas and textile repair shop and repairs canvas and tents for the United States Army Africa/Southern European Task Force, 173d Airborne Brigade Combat Team, and tenant units, using civilian labor on a fully reimbursable basis. The IMMA also has contractors to help cover overload and surge requirements. Units may contact the IMMA (mil 634-6902) for details.

E-5. GENERAL

a. Military vehicle canvas components are usually class 9 items of supply in Federal Supply Classification 2540. Vehicle canvas components include the following:

- (1) Cab covers.
- (2) Cargo-body tarpaulins.
- (3) Driver and passenger seats.
- (4) Power-generator-set covers.
- (5) Tailgate-chain covers.

b. Federal Supply Classification 2540 does not set a limit on maintenance expenditures for vehicle canvas or polyester components.

c. A 50-foot roll of sealing tape (national stock number (NSN) 8315-01-423-6231) is available in the supply system for small repairs of both canvas and polyester vehicle components. The tape is 3 inches wide and has pressure-sensitive adhesive on the back for easy application.

d. Seat covers and seat-cover kits are also available through the normal supply system for some tactical wheeled vehicles, including high mobility multipurpose wheeled vehicles, 5-ton series trucks, light medium tactical vehicles, and the family of medium tactical vehicles.

E-6. POLICY

a. Owning-unit repair is limited to the simple repair of small holes, leaks, and tears that can be made by unit personnel using instructions and supplies prescribed in the major end item's technical manual and sealing tape.

b. For driver and passenger seats and backrests that cannot be repaired by owning-unit personnel, replacement seat covers as prescribed in some equipment technical manuals may be ordered rather than submitting these items to support maintenance for repair or ordering a complete set of seat and backrests covers.

c. For driver and passenger seats that cannot be repaired by replacing the seat covers, complete seats and backrests may be ordered through the supply system using the Federal stock numbers prescribed in the end item's repair parts technical manual rather than submitting the items to field maintenance for repair.

E-7. CLASSIFICATION INSPECTION AND DISPOSAL

a. Field-maintenance repairers are responsible for classifying unserviceable tactical vehicle canvas and polyester items to ensure items are properly coded before turn-in to the Supply Support Activity (SSA). Supply condition codes are prescribed in AR 725-50, table C-38.

b. Any standard DOD vehicle component made of canvas or polyester fabric that has an NSN, regardless of the demilitarization code assigned to the unserviceable item in the Army Master Data File/Federal Logistics Record, must be turned in through the supporting SSA. Only the SSA can directly turn in items to the nearest Defense Logistics Agency Disposition Services Office (formerly the Department of Defense Reutilization and Marketing Office), using DD Form 1348-1 for reutilization or disposal.

E-8. SERVICEABILITY STANDARDS

When military vehicle preventive maintenance and checks (PMCS) tables do not provide serviceable or unserviceable criteria for canvas items and seat cushions, the following inspection standard is provided for guidance:

a. Canvas Items.

(1) Side, cab, cargo-bed covers, and doors will be free of tears, rips, and unsightly or excessive patching; fit properly; and be in good usable condition.

(2) All zippers, fasteners, hooks, and attaching hardware must be present and function properly.

(3) All tie-ropes, buckles, snaps, and similar items will be present and free of damage.

(4) Slight discoloration between sections is acceptable, providing all canvas is intact.

b. Cushions.

(1) Seats, backrests, and cushions or cushion-like parts will be free of ripped, torn, or deteriorated covering; and free of sagged or broken springs.

(2) Frames will be in good condition.

(3) Adjuster assemblies will be complete and free of any damage or misalignment that restricts or prevents locking.

(4) Seat covers will be clean, without rips, holes, rot, or loose seams. Patching of seat covers is acceptable until a replacement cover is ordered and received.

(5) Mismatched color shades are acceptable.

c. Vinyl Windows. Vinyl windows must not be broken. Scratches and discoloration restricting vision over an area greater than 20 percent of the total area are not acceptable.

d. Soiled Canvas Items and Cushions. Specific standards for these items do not exist. When inspecting these items, inspectors will rely on their experience of previous inspections of identical or similar equipment. The inspector's judgment must be based on willingness to accept or reject equipment in like condition for the users that the inspecting activity supports.

APPENDIX F

ARMY OIL ANALYSIS PROGRAM

F-1. PUROSE

The policy in this appendix—

- a. Implements HQDA transformation, modularity, and the emerging two-level maintenance system (field maintenance and sustainment maintenance) described in AR 750-1, paragraph 3-8.
- b. Implements Army Oil Analysis Program (AOAP) policy and procedures as prescribed by AR 750-1, DA Pamphlet 738-751, DA Pamphlet 750-3, DA Pamphlet 750-8, TB 43-0211, TM 1-1500-328-23, and the Standard Army Maintenance System-Enhanced (SAMS-E). Oil analyses are performed for—
 - (1) Aeronautical equipment, which includes fixed and rotary-wing aircraft.
 - (2) Nonaeronautical equipment, which includes selected combat vehicles and support equipment.
- c. Applies to all transformed and nontransformed USAREUR major subordinate and specialized commands with support-maintenance units that operate or provide maintenance support to aeronautical and nonaeronautical equipment and components that are required to be enrolled in the AOAP.

NOTE: Equipment and component enrollment tables for aircraft, combat vehicles, and support equipment are available from the Logistics Information Warehouse (LIW) website at <https://liw.logsa.army.mil> (under the menu tab *Enrolled Equipment*).

F-2. REFERENCES

Appendix A lists references.

F-3. EXPLANATION OF ABBREVIATIONS

The glossary defines abbreviations.

F-4. RESPONSIBILITIES

- a. The Chief, Materiel Readiness Branch, Sustainment Operations Division, Office of the Deputy Chief of Staff, G4, HQ USAREUR will—
 - (1) Designate a command AOAP monitor to administer and control the program in USAREUR.
 - (2) Implement AOAP policy and procedures in USAREUR.
 - (3) Submit requests for exception to AOAP policy to the Army G-4 (DALO-MNF).
 - (4) Include USAREUR AOAP compliance and delinquency rate charts (para F-6g) in the USAREUR G4 Sustainment Readiness Review.
 - (5) Complete and submit internal management control evaluation checklist (AR 750-1, app H, sec IV) once every 5 years or when requested.
 - (6) Ensure the USAREUR Sustainment Assistance Review Team reviews the AOAP standing operating procedure (SOP) of field-maintenance units operating or supporting AOAP-enrolled equipment during assistance visits.

b. Commanders of nontransformed using and field-maintenance units that operate or provide maintenance support to AOAP-designated equipment will—

(1) Appoint at least one primary and two alternate AOAP monitors (sergeant or higher). Each monitor will be trained and certified within 30 calendar days after the date of appointment to administer the AOAP (para F-7).

(2) Include the AOAP process in the units' internal maintenance SOP within 30 calendar days after publication of this regulation to ensure the program is implemented and followed. The commander must ensure that the maintenance SOP provides clear guidance on the responsibilities of the maintenance platoon or section motor sergeant or SAMS-E clerks.

(3) Comply with the external SOP of the Army Laboratory Europe.

(4) Ensure that all AOAP-designated equipment and components are enrolled in the program.

(5) Ensure that oil samples are drawn from equipment components as prescribed in TB 43-0211 and TM 1-1500-328-23, and DA Form 5991-E or DD Form 2026 are completed.

(6) Ensure unit-maintenance personnel comply with laboratory recommendations and notify the Army Laboratory Europe using DA Form 3254-R within 5 calendar days after maintenance is completed.

(7) Ensure AOAP monitors sign-up for access to the LIW.

(8) Ensure that maintenance personnel maintain an adequate supply of oil-sampling kits and related supplies to meet routine and deployment requirements. Ordering guidance can be found in TB 43-0211, paragraph 4-1, tables 1 and 2.

c. Commanders of transformed sustainment brigades, brigade combat teams, forward support companies, and combat repair teams that are responsible for providing AOAP support to transformed using units and activities with equipment required to be enrolled in AOAP will—

(1) Implement, administer, manage, and control AOAP as a nonreimbursable service to supported using units.

(2) Appoint at least one primary and two alternate AOAP monitors (sergeant or higher) with a maintenance military occupation specialty to administer the AOAP. Ensure each monitor is trained and certified in the proper technique to take oil samples and in the preparation of AOAP forms within 30 calendar days after the date of the appointment.

(3) Incorporate the AOAP process in the field-maintenance unit maintenance SOP within 60 calendar days after publication of this regulation to ensure the program is implemented and followed. The maintenance SOP must provide clear guidance to the maintenance platoon or section motor sergeant and SAMS-E clerks on its responsibilities. Using units with AOAP-enrolled equipment will use the field-maintenance units SOP to obtain AOAP support.

(4) Be familiar with and comply with the external Army Laboratory Europe SOP.

(5) Provide complete and timely AOAP support to supported using units.

(6) Ensure AOAP monitors sign-up for access to the LIW.

(7) Ensure using unit equipment and components required to be enrolled in AOAP are enrolled in the AOAP.

(8) Ensure AOAP monitors obtain copies of DA Form 5991-E or DD Form 2026 from the supporting SAMS-E clerk and draw oil samples from AOAP-enrolled equipment at the prescribed intervals.

(9) Ensure AOAP monitors accurately complete DA Form 5991-E or DD Form 2026 and deliver or mail oil samples to the Army Laboratory Europe (para F-6e).

(10) Ensure maintenance personnel comply with laboratory recommendations and notify the Army Laboratory Europe using DA Form 3254-R within 5 calendar days after maintenance is completed.

(11) Maintain an adequate supply of oil-sampling kits and related supplies to meet routine and deployment requirements. Ordering guidance can be found in TB 43-0211, paragraph 4-1, tables 1 and 2.

(12) Ensure AOAP monitors use the LIW AOAP site for real-time reports and information.

(13) Ensure compliance with delinquency goal and standard requirements (para F-6g).

NOTE: In nontransformed using-units, commanders usually appoint the motor sergeant to serve as the unit AOAP monitor. Under transformation, the using unit motor sergeant position is eliminated. The field-maintenance unit (sustainment brigade, brigade support battalion, forward support company, and combat repair team unit) assumes the AOAP monitor's responsibilities. This includes assigning responsibility to a maintenance noncommissioned officer in a military occupational specialty and providing AOAP service to supported using units. This responsibility includes taking oil samples, a duty that cannot be delegated to using-unit operators and crews unless they have been trained and certified in the AOAP.

d. The Army Laboratory Europe is the only approved AOAP laboratory in Europe that provides service to all customers in Europe (mil 483-7980/7982, e-mail: usarmy.kaiserslautern.405-afsb.list.aopap-customer-service@mail.mil). The laboratory will—

(1) Provide an external SOP to all units with aeronautical and nonaeronautical AOAP-enrolled equipment and components.

(2) Send the following monthly AOAP delinquency reports to the USAREUR AOAP POC before the 10th day of every month:

(a) A 12-month history of the delinquency rate for the delinquent unit.

(b) A summary report for each USAREUR major subordinate and specialized command.

(c) A summary for all of USAREUR.

(3) Supply red or yellow adhesive-backed AOAP labels with black lettering to supported units when DA Form 3254-R is issued with results of the oil lab analysis.

F-5. GENERAL

a. Under transformation and modularity, the emerging two-level maintenance system essentially gets transformed using units out of the day-to-day AOAP operations and management. At endstate, the field-maintenance unit commander (sustainment brigades, brigade support battalions, forward support companies, and combat repair teams) will provide AOAP support to transformed using units with aeronautical and nonaeronautical equipment that is required to be enrolled in the AOAP. The two levels of units are—

(1) Field maintenance. Former using-unit and direct support maintenance level tasks are being combined under field maintenance, also known as on-system maintenance. Field-maintenance units provide services on, repair, and return equipment to the operator or the user (owning or using unit).

(2) Sustainment maintenance. General support (GS) maintenance tasks are generally being integrated into depot maintenance and become sustainment maintenance, also known as off-system maintenance and national maintenance. Sustainment-maintenance units primarily repair and return equipment and components to the supply system. USAREUR has no organic modification tables of organization and equipment (MTOE) or table of distribution and allowances (TDA) GS-maintenance units.

b. The AOAP is an effective maintenance diagnostic tool, not a maintenance substitute. The AOAP is part of a DOD-wide effort to determine impending component failures and to determine lubricant condition through periodic laboratory evaluation of oil samples.

c. The AOAP alerts using-unit and field-maintenance personnel when an expensive engine or transmission is worn, about to fail, or needs to be repaired or replaced to avoid untimely and catastrophic failure and costly repairs.

d. Most engines and transmissions have factory-installed oil sampling valves for collecting oil samples.

F-6. POLICY

Participation in the AOAP is mandatory for all units that operate or provide maintenance support to aeronautical equipment and components listed on the LIW AOAP website. The most current AOAP list can be downloaded, printed, and kept in the front of TB 43-0211.

a. Nontransformed Units.

(1) Nontransformed using and support-maintenance units will continue to operate and manage the AOAP in accordance with references in paragraph F-1b and policy and procedures in this appendix.

(2) Approximately 90 days before deploying with AOAP-enrolled equipment, nontransformed units must request that the AOAP laboratory places all of its deploying equipment in temporary duty (TDY) status. Deploying units will print and carry a DA Form 5991-E for each component to be enrolled at the deployed location and submit it within 30 days after arriving at the deployed location to ensure AOAP support is provided by the fixed or mobile oil laboratory, as specified in the operation plan, operation order, or by the unit's next higher headquarters.

b. Transformed Units.

(1) Approximately 90 days before a transformed unit deploys with AOAP-enrolled equipment, the supporting field-maintenance unit must request that the AOAP laboratory place all of the deploying equipment in TDY status. The supporting field-maintenance unit will print DA Form 5991-E for each component to be enrolled in the AOAP at the deployed location, so the deploying unit can provide the copies of the form to the new supporting field-maintenance unit within 30 days after arriving at the deployed location, as specified in the operation plan, operation order, or by the unit's next higher headquarters.

(2) Approximately 90 days before deploying with AOAP-enrolled equipment, field-maintenance units must request that the AOAP laboratory places all of its deploying equipment in TDY status. Deploying field-maintenance units will print and carry a DA Form 5991-E for each component to be enrolled at the deployed location and submit a copy within 30 days after arriving at the deployed location for AOAP support from the fixed or mobile oil laboratory as specified in the operation plan, operation order, or by the unit's next higher headquarters.

c. Aeronautical Equipment. Schedules for collecting oil samples for recurring special inspections are provided in TM 1-1500-328-23.

d. Nonaeronautical Equipment. Oil will be changed based on condition and as directed by the laboratory analysis rather than on calendar days, operating hours, or miles specified by the equipment's lubrication order. There are two exceptions to this policy:

(1) Oil and oil-filter changes on equipment under warranty will be made according to the manufacturer's warranty.

(2) Nonaeronautical equipment that does not require enrollment in the AOAP will normally have oil and oil filters changed according to the applicable lubrication order.

e. Requesting AOAP Service. Nontransformed using and field-maintenance units and transformed field-maintenance units and activities operating under the Standard Army Maintenance System-Enhanced (SAMS-E) will use the automated DA Form 5991-E to request an oil analysis. DD Form 2026 may be used instead of DA Form 5991-E when SAMS-E is inoperable or not available. Oil samples will be mailed or delivered to one of the following addresses:

(1) Military Postal System. AOAP Laboratory Europe (AMXLS-GOE), Unit 29331, APO AE 09054-9331.

(2) German Postal System. AOAP Laboratory Europe, Kaiserslautern Army Depot (KAD), Bldg 2256, Ludwigshafener Str. 31, 67619 Kaiserslautern.

f. Cleaning and Packaging Requirements. Steam cleaning of major assemblies and components, taping of openings, and draining of lubricants are not required before turning in equipment to the supporting supply support activity (SSA). When a metal shipping container is not available or the major assembly cannot otherwise be safely transported to the SSA or repair location, the unit may waive the oil-draining requirement (AR 750-1, para 4-7).

g. USAREUR Delinquency Goal and Standard. USAREUR commands (sustainment brigades, brigade combat teams, forward support companies, and combat repair teams) and USAREUR specialized commands will include AOAP performance in their review and analysis or similar program. USAREUR AOAP delinquency goals and standards for units with AOAP-enrolled aeronautical and nonaeronautical equipment are as follows:

(1) The delinquency goal is to have no more than 2 percent of the equipment enrolled in the AOAP as delinquent.

(2) The delinquency-rate standard is to have no more than 5 percent of the equipment enrolled in the AOAP as delinquent. When the delinquency rate exceeds the USAREUR standard by a deviation of 2 percent or more for 2 consecutive months, commands will conduct an analysis in coordination with the AOAP laboratory to determine the reasons for this and will take action to improve AOAP performance. Commands will promptly refer AOAP problems beyond their ability to satisfactorily resolve to the Materiel Readiness Branch.

(3) The enrollment standard requires 100 percent of the equipment to be enrolled in the AOAP.

F-7. TRAINING

a. Computer-based training for unit AOAP monitors is available at the Army Laboratory Europe. The training includes a test, which the student must pass. On completion of the training, the student will send an e-mail message to the AOAP Program Manager's Office (PMO), AOAP/Condition Based Maintenance Division, United States Army Logistics Support Activity, to announce completion of the training. The AOAP PMO will then send the student a certificate of course completion.

b. AOAP monitors (sample takers) must be—

(1) Trained and certified to take oil samples from equipment components.

(2) Familiar and comply with AOAP policy and procedures in AR 750-1, DA Pamphlet 738-751, DA Pamphlet 750-3, DA Pamphlet 750-8, TB 43-0211, and TM 1-1500-328-23, as applicable.

NOTE: Sample takers must be aware of AOAP safety procedures and dangers. Drawing oil from a hot component can result in spray or spillage of hot oil on the skin and cause serious burns. Taking samples from an operational component exposes the sample taker to hot metal surfaces and moving parts, such as V-belts and cooling fan blades. Special care must be taken to prevent clothing from getting caught or coming into contact with these moving components. Sample takers will wear safety goggles.

c. After SAMS-E complete the online training, the supervisor will annotate section III of the clerk's DA Form 348 with "Satisfactorily completed AOAP training" and sign DA Form 348. The unit AOAP monitor will also annotate the Other Records Section on OF 346 with "AOAP Qualified (date qualified)" and initial it.

APPENDIX G

SAMPLE DATA COLLECTION PROGRAM

G-1. PURPOSE

a. This appendix implements the Army Sample Data Collection (SDC) Program on combat systems, tactical wheeled vehicles, aircraft, and other equipment in USAREUR units located in the USEUCOM area of responsibility (AOR). (The AOR includes all Europe, large portions of Asia, and parts of the Middle East.)

b. The SDC program is applicable to USAREUR units and United States Army Materiel Systems Analysis Activity (AMSAA) personnel in the USEUCOM AOR.

c. Decreasing DOD funding has reduced the Army's capability to modernize its weapons systems and combat equipment fleets. The Army has some of the best military equipment in the world and will continue to use this equipment well into the 21st century; in many cases well beyond its original designed service life. The Army, however, through its Sustainment Systems Technical Support (SSTS), has set priorities for funding distribution to ensure Soldiers will have high system-readiness levels to conduct all assigned missions. The SDC Program supports Army Prioritized Sustainment Initiatives, such as Force Package 1 and 2 near-term readiness and sustainment; force modernization; service-life extensions; logistics support maintenance work orders; technology inspections; equipment upgrades; safety; operating and support-cost reductions; recapitalization; and depot maintenance.

G-2. REFERENCES

Appendix A lists references.

G-3. EXPLANATION OF ABBREVIATIONS

The glossary defines abbreviations.

G-4. RESPONSIBILITIES

a. The Chief, Sustainment Operations Division (SOD), Office of the Deputy Chief of Staff, G4, HQ USAREUR, will—

(1) Comply with the provisions prescribed by AR 750-1, DA Pamphlet 700-24, and the Memorandum of Understanding between United States Army Europe (USAREUR) and Army Materiel Command (AMC), Annex P, 2 May 2011, subject: Agreement to Execute the Army Sample Data Collection (SDC) Program in USAREUR.

(2) Administer, manage, and monitor all USAREUR SDC programs.

(3) Coordinate proposed and approved SDC and Field Exercise Data Collection (FEDC) plans with USAREUR commands and the in-country contracting officer's technical representative of sponsoring agencies.

(4) Review and approve or disapprove SDC requests, plans, and field procedures guides from AMSAA, 405th Support Brigade (405th SB), including extension requests.

(5) Prepare a USAREUR G3/5/7 tasking message with an information copy to the AMSAA (AMSRD-AMS-LR), 405th SB (ASEU-SO), and the unit's next higher headquarters, tasking the unit to participate in the SDC program. This includes tasking the approved SDC participating unit to posting the date and time of all data-collection periods to the unit's training schedule for the duration of the data-collection effort to minimize confusion and obtain command emphasis required to support the SDC Program.

(6) Help resolve SDC issues among USAREUR major subordinate commands (MSCs) and specialized commands, the AMSAA, and the 405th SB.

(7) Attend SDC planning meetings and conferences, as deemed necessary.

(8) Retain authority to terminate the SDC Program immediately in effected units when justified.

b. The Commander, 405th SB, has overall responsibility for AMC activities and personnel in theater. This includes disciplinary control of U.S. and contractor personnel. Contractor personnel will act under the guidance of AMSAA with direct reporting responsibility to the SDC Program Manager, AMSAA, and contracting officer's representative (COR). U.S. contractor personnel are subject to host-nation law. The Commander, 405th SB, will ensure the following:

(1) Arrangement of logistic and base support consistent with the needs of U.S. Government personnel and contractor employees in Germany. This support will be provided on a reimbursable basis or as available in accordance with the terms of the contract and current laws and regulations.

(2) Arrangement of logistic and base support for data-collecting U.S. Government and contractor personnel in deployed areas. These include office space, telephones, e-mail accounts, transportation, and similar support, under the AMC Logistics Support Element concept according to Army Techniques Publication 4-91.

(3) Processing theater clearances in a timely manner.

(4) Providing command support under the terms of the basic USAREUR and AMC umbrella Memorandum of Understanding between United States Army Europe (USAREUR) and Army Materiel Command (AMC), Annex P, 2 May 2011, subject: Agreement to Execute the Army Sample Data Collection (SDC) Program in USAREUR.

(5) Granting access to civilian maintenance contractor standard Army maintenance and supply records.

(6) Ensuring AMSAA compliance with AE Regulation 600-700, AE Regulation 715-9, and the Unit Level Logistics System-Aviation (Enhanced) (ULLS-AE) End Users Manual, and coordinating technical-expert status for contractor personnel (as required) with the DOD Contractor Personnel Office, Unit 29150, APO AE 09100-9150.

c. The Director, AMSAA, as the SDC responsible official for DA and AMC, will—

(1) Ensure the COR is familiar with all matters related to USAREUR SDC contract-administrative requirements.

(2) Submit new SDC Program unit-enrollee requests to the Chief, SOD, at least 60 calendar days before the start of SDC.

(3) Ensure that U.S. Government and U.S. contractor personnel coordinate and submit requests for country clearance in accordance with the Electronic Foreign Clearance Guide and the Aircraft and Personnel Automated Clearance System in accordance with AE Regulation 1-40.

(4) Ensure U.S. contractor personnel comply with AE Regulation 715-9, which outlines procedures to be followed for contracts that will involve performance in Germany by technical experts and troop care, before departing for Germany.

(5) Ensure that all U.S. Government and contractor personnel comply with requirements for pre-deployment processing, as prescribed by the Chief, SOD; the S3, 405th SB; and the Emergency Operations Center, 60 days before departing for Germany.

(6) Provide timely reports on in-theater personnel and activities, as requested, to meet 405th SB requirements.

(7) Identify systems for data collection, including recommendations from the Chief, SOD; the Commander, 405th SB; and participating units.

(8) Provide an SDC feedback report after each FEDC to the owning and support-maintenance unit; the G4, 405th SB; and the Chief, SOD.

(9) Conduct additional analyses on training rotation, as required.

(10) Provide a general orientation to participating owning and field-maintenance unit commanders, and conduct a training program on owning-unit and support-maintenance unit data-access-and-collection procedures, as required.

(11) Ensure participating unit personnel are aware of specific collection procedures to be followed during the SDC in accordance with DA Pamphlet 700-24, appendix B.

(12) Provide on-site contractor personnel to gather information from owning and support unit historical maintenance and supply records, and review completed forms for accuracy and required entries.

(13) Receive, review, process, and store SDC data and provide SDC feedback reports and summaries within 35 calendar days after completing the report to the participating unit, the 405th SB, and the Chief, SOD.

(14) Monitor contractor work to ensure completeness and accuracy of the data and ensure minimal interference with the unit mission.

(15) Arrange for office space and office furniture for data-collection locations off base, when not locally available.

(16) Have the COR brief the Chief, SOD, annually on the status of current SDC programs in USAREUR units.

d. Commanders of USAREUR MSCs and specialized commands will do the following:

(1) Not enter into a separate agreement to take part in a level-1, -2, or -3 SDC without written approval by the Chief, SOD.

(2) Help select units to take part in SDC.

- (3) Coordinate SDC requests from the Chief, SOD, with subordinate units.
 - (4) Help resolve SDC issues between subordinate units and the AMSAA or the 405th SB.
 - (5) Designate the office of the S4/G4 to serve as the SDC coordinator.
 - (6) Provide a POC for the SDC and future coordination.
 - (7) Help the AMSAA coordinate on-site support for SDC personnel.
 - (8) Provide command emphasis to ensure that the objectives of the SDC Program are achieved.
 - (9) Ensure subordinate units do not enter into a separate agreement with the AMSAA or the 405th SB to take part in an SDC without written approval of the Chief, SOD.
 - (10) Ensure commanders of participating units schedule contractor data-collection periods on the units training schedule to allocate sufficient resources to support the SDC.
- e. Commanders of units participating in SDC and FEDC programs will—
- (1) Schedule data-collection team visits on the unit training schedule.
 - (2) Give data collectors access to required data at a time when data collection does not interfere with the unit's mission.
 - (3) Ensure the SDC is carried out according to the field-procedures guide and the approved USAREUR SDC plan.
 - (4) Not enter into a separate agreement with the SDC sponsoring agency to perform SDC in the command.

G-5. GENERAL

- a. The SDC Program helps improve weapons system performance, logistics supportability, maintainability, reliability, and supports the Army staff (ARSTAF) by collecting and analyzing maintenance and class IX repair-parts consumption in field units. The SDC Program also collects usage data on selected equipment to record miles, hours, and rounds fired, if applicable.
- b. The SDC Program also uses maintenance data and class IX repair parts and other classes of supply consumption for computing stock lists for designated weapons systems and combat equipment for contingency operations.
- c. USAREUR units may participate in any of the following three SDC types after coordinating with the Chief, SOD. For the purpose of this regulation, all types of SDC are referred to as the SDC Program:
- (1) Conventional SDC.** This type of SDC encompasses specific equipment end items as well as mandatory and discretionary projects. The Army G-4 directs and funds mandatory SDC projects. The equipment proponent selects discretionary projects. When properly justified, any activity requiring data may request that the SDC proponent establish a discretionary SDC project. Discretionary projects are normally funded by the activity identifying the need for information. USAREUR and AMSAA will agree on funding discretionary projects before they are implemented. Conventional projects normally have an indefinite duration, unless terminated by the requesting activity.

(2) FEDC. The FEDC encompasses collection of maintenance and operational data on mission-essential end items (normally equipment readiness codes P and A during selected major field-training exercises and during other contingency operations, military operations other than war, stabilizing operations, and peacekeeping operations). Contingency operation FEDC programs can occur with approval of the contingency operation task commander.

(3) Special Field Information Tasks (SFITs). SFITs are generally short-term and designed to support program executive officers and program managers of any Army Service component command that do not dictate a full-scale SDC project. SFITs also may be used to augment selected ARSTAF objectives, but must not duplicate other ongoing efforts. An activity that needs materiel-system field-performance data may request an SFIT through the SDC Program. SFITs are normally funded by the requesting activity. This data-collection method is highly detailed and is associated with data collection during intensive usage scenarios in which SDC representatives will collect highly complex reliability, availability, and maintainability data, including data reported through various standard Army systems. The SFITs may be conducted during either of the two major collection efforts in (1) and (2) above or as an independent data collection.

d. AMSAA data collectors will collect data from standard Army logistics information-system supply and maintenance forms and records prepared by unit personnel in accordance with DA Pamphlet 750-8, ATP 4-91, and the ULLS-AE End Users Manual, as well as through observations and communication with unit-maintenance personnel.

e. The AMSAA will use U.S. Government and U.S. civilian contractor personnel to collect data from participating units in the USEUCOM AOR. Contractor personnel must comply with theater-clearance and host-nation requirements before arriving in USAREUR.

G-6. PROCEDURES

a. The Chief, SOD, in coordination with USAREUR MSC and subordinate unit commanders, is the approval authority for determining on a case-by-case basis which field units will participate in SDC programs. Owning unit and support-maintenance personnel will allow SDC data collectors to review and copy paper and electronic DA forms in accordance with the applicable unit procedures guide prescribed by AR 750-1. The AMSAA SDC contractor representative is authorized to collect additional data elements through communication with or direct observation of operators and crews, owning units, and support units. The AMSAA SDC contractor representative is granted access to standard DA forms prepared by the unit, perform quality checks, transcribe data to specially designed forms, reduce data if required, and forward forms or reduced data to a designated site. No additional reporting or administrative burden will be placed on participating unit personnel.

b. SDC requirements for new equipment will be addressed in the respective new equipment materiel fielding plan in accordance with AR 700-127.

c. The SDC contract representative will not enter a separate agreement with owning and support-maintenance units in USAREUR to take part in an SDC without written approval of the Chief, SOD.

d. Participating units may continue operating equipment during an SDC.

G-7. POINTS OF CONTACT

SDC and FEDC POCs are as follows:

- a. Chief, SOD (AELG-SD), Unit 29351, Box 102, APO AE 09014-9351, military 537-4677.
- b. 405th SB (ASEU-SO), Unit 23152, APO AE 09227-3152, military 483-4905.
- c. AMSAA, Rose Barracks, Building V324, APO AE 09112, military 476-3051.

APPENDIX H

MODIFICATION WORK ORDER PROGRAM

H-1. PURPOSE

a. This appendix—

(1) Implements the Army Modification Work Order (MWO) Program prescribed by DOD 7000.14-R, DFAS Instruction 37-1, DFAS Instruction 37-100, AR 750-1, and AR 750-10 for combat, tactical wheeled vehicles, aircraft, and other equipment assigned to USAREUR major subordinate commands (MSCs) and specialized commands.

(2) Provides policy and procedures for controlling, reporting, and managing the application of DA emergency, urgent, and routine MWOs on aeronautical and nonaeronautical weapons systems and end items in Europe (except medical and nonstandard equipment).

b. There are no MWOs for commercial equipment. AR 750-10, paragraph 1-4j, specifically excludes commercial nondevelopmental items and administrative-use vehicles from the modification program.

c. AR 750-10 and DA Pamphlet 738-751 prescribe policy and procedures for applying MWOs to aircraft and aviation-associated equipment.

d. For the purpose of this appendix, the term “materiel developer (MATDEV)” (para H-5b(1)) is synonymous with the MWO “sponsoring agency.”

H-2. REFERENCES

Appendix A lists references.

H-3. EXPLANATION OF ABBREVIATIONS

The glossary defines abbreviations.

H-4. RESPONSIBILITIES

a. The Chief, Sustainment Operations Division (SOD), Office of the Deputy Chief of Staff, G4, HQ USAREUR, is the proponent for the USAREUR MWO Program policy and procedures prescribed in this appendix. The Chief, SOD, will—

(1) Designate a USAREUR MWO Program Manager (PM).

(2) Publicize DA modification policy and procedures and develop Army in Europe policy and procedures.

(3) Prepare and send requests for exception to DA MWO policy to HQDA (DALO-MNF).

(4) Ensure the USAREUR MWO PM and USAREUR MWO Program Coordinator (para H-4b(2)) attend the annual MWO Coordination Workshop chaired jointly by representatives from the Army G-4 and the United States Army Materiel Command (AMC).

(5) Review and update annex C to the Memorandum of Understanding Between HQ USAREUR and AMC every 5 years.

b. The CG, 21st Theater Sustainment Command (21st TSC), will—

(1) Operate, coordinate, and control the MWO Program on behalf of the USAREUR G4. The MWO Program includes weapons systems and major end items in USAREUR MSCs and specialized commands.

(2) Appoint in writing a 21st TSC DA civilian for long-term continuity to serve as the USAREUR MWO Program Coordinator. The 21st TSC will provide the coordinator's name, telephone number, and office symbol to the 405th SB MWO coordinator and the MWO sponsoring agency or the MWO proponent.

(3) Sign and date modification work order fielding plans (MWOFPs) to indicate USAREUR acceptance of terms and conditions or present alternative terms and conditions.

(4) Budget for and ensure the USAREUR MWO Program Coordinator accompanies the USAREUR MWO PM to the AMC-chaired annual MWO Coordinating Workshop.

c. The USAREUR MWO Program Coordinator will—

(1) Coordinate MWOFPs and return them to the proponent within 45 calendar days after the receipt date.

(2) Notify the MWO proponent within 14 calendar days after MWOFPs are received.

(3) Validate MWOFPs and determine USAREUR MWO application requirements for major end items or components (based on automated asset files, when available) or require inventory and reporting action from using units to establish MWO application requirements.

(4) Ensure that equipment in the following USAREUR-owned stocks is included in MWO requirements and that unmodified equipment is not introduced into USAREUR after application of the MWO has started:

(a) Chemical defense equipment/individual protective equipment stocks.

(b) Emergency set-aside stocks.

(5) Include operational readiness float in MWO requirements.

(6) Ensure that equipment undergoing repair in USAREUR Theater Logistics Support Center-Europe (TLSC-E) maintenance activities is included in MWO requirements.

(7) Help commands implement the MWO Program and comply with the provisions of this appendix.

(8) Help ensure communications security materiel, controlled cryptographic items, and intelligence and electronic warfare items are modified in accordance with appendixes N through P.

(9) Attend the jointly-sponsored Army G-4/AMC-chaired annual MWO Coordinating Workshop.

(10) Implement internal procedures to follow-up on all AMC LCMCs, program executive officers (PEOs), PMs, depot teams, and contractors who are applying MWOs on equipment in USAREUR to ensure that they comply with the AR 750-10 requirement to promptly enter MWO completions in the Modification Management Information System (MMIS) (para H-8).

(11) Submit requests for exception to MWO Program policy to the Chief, SOD, Unit 29351 (AELG-SD), Box 102, APO AE 09014-9351. Requests must include a justification and a recommendation to approve or disapprove the request.

(12) Ensure that MWO application personnel inspect each specific weapon system or major item of equipment for application of earlier MWOs and compare them with entries in the MMIS database. The proponent of the current MWO must therefore allow sufficient time for the current MWO to be completed. This will—

(a) Help MATDEVs validate earlier MWO applications in an orderly and timely manner.

(b) Enable MWO application personnel to routinely identify and report missed MWOs to the materiel developer for immediate corrective action. Corrective action includes expeditiously pushing and prepositioning MWO kits for unapplied MWOs to the application team, so the team can apply missed MWOs and post MWO completion in the MMIS before leaving USAREUR.

(c) Ensure the weapons systems, major end items, and the DA MWO and MMIS databases are current and synchronized.

d. The Commander, 405th SB, will—

(1) Ensure that PEOs, PMs, sponsoring agencies, and CONUS contractors coordinating or applying MWOs have a theater clearance from the 405th SB before they arrive in Europe.

(2) Help MSC MATDEVs and the USAREUR MWO Program Coordinator solve MWO application problems.

e. PEOs and MATDEVs will—

(1) Coordinate MWOFPs for USAREUR equipment and components with the USAREUR MWO program coordinator.

(2) Fully fund MWO kits, special tools, labor, and application costs.

(3) Give the USAREUR MWO program coordinator 45 calendar days after the date of receipt to complete negotiations of MWOFPs.

(4) Ship MWO kits for aeronautical equipment to the Theater Aviation Sustainment Maintenance-OCONUS (TASM-O) storage area at Stork Barracks, Illesheim, Germany, and kits for nonaeronautical equipment to the 405th SB staging area at the Germersheim Army Depot.

f. Commanders of USAREUR MSCs—

(1) Implement the MWO Program in their subordinate units.

(2) Ensure each subordinate brigade, battalion, and using unit commander with SAMS-E capability appoints an MWO coordinator in writing and provides the coordinator's name, telephone number, and office symbol to the USAREUR MWO Program Coordinator (AERLO), Unit 23203, APO AE 09263-3203.

(3) Distribute MWO information to subordinate units. On request, commanders will help the USAREUR MWO Program Coordinator determine MWO requirements. When possible, the property book, not maintenance records, will be used to initially determine MWO requirements. This includes identifying and reporting all items by serial number or U.S. Army registration number or both that require modification according to the applicable MWOFP.

(4) Help the USAREUR MWO Program Coordinator review and finalize the MWOFP. This assistance will include approving a primary and alternate MWO application date and planning and implementing possible deactivation of units or equipment to ensure MWOs are applied expeditiously and effectively.

(5) Take part in preparing the MWO application schedule with the USAREUR MWO Program Coordinator, equipment managers, and representatives from depot or contractor application teams.

(6) Ensure subordinate MWO coordinators attend all in-country MWO workshops, in progress reviews, and application-schedule coordination and preparation meetings.

(7) Ensure brigade, battalion, and using unit MWO coordinators obtain a user identification and password for the MMIS or log-in using a CAC.

g. Commanders of brigades, battalions, and using units with SAMS-E capability will—

(1) Appoint an MWO coordinator.

(2) Ensure contract field team (CFT) MWO application dates are posted on the unit-training schedule.

(3) Comply with MWOFPs.

(4) Ensure the MWO coordinator helps the MWO team leader and maintain daily contact with the team leader until all equipment in the unit requiring modification has been modified.

(5) Ensure the MWO team receives the logistics support agreed to in the MWOFP and has reasonable access to the shop area.

(6) Report unapplied MWOs that have passed the MWO completion date specified at the top of each MWO to the USAREUR MWO Program Coordinator (mil 484-7161/7133).

H-5. POLICY

a. Using and field-maintenance units are not responsible for funding, applying, and reporting aircraft and ground-equipment MWOs, regardless of the level of maintenance and military occupational specialty specified in the MWO. The cost of all MWO kits, applications, and reports sent to the MMIS are provided at no cost to the user according to Title 31, United States Code, as interpreted in DOD 7000-14R (AR 750-10, para 3-1f).

b. TASM-O is responsible for obtaining funding, applying, and reporting the application of all MWOs on USAREUR aircraft at no cost to the user regardless of the MWO number printed on the cover of the MWO and the level of maintenance specified in paragraph 6 of each MWO (AR 750-10, para 3-1f). Owning-unit repairers may volunteer to assist TASM-O personnel apply an MWO for potential training benefits.

NOTE: It is unlawful to use Operations and Maintenance, Army, funds to purchase MWO kits or individual piece parts and special tools for the initial application of an MWO. Doing so is a violation of the Antideficiency Act and punishable by a fine of up to \$25,000, 2 years in prison, or both.

(1) In accordance with AR 750-10, the MWO PEO or materiel developer is responsible for applying all emergency, urgent, and routine MWOs on equipment in USAREUR active Army units and theater stocks using depot-maintenance personnel or CFTs, regardless of the amount of time it takes to apply the MWO. The glossary in AR 750-10 defines the MATDEV as the research, development, and acquisition command, agency, or office that is assigned mission-area responsibility for the system under development or being acquired. The term can also refer to the specific organization assigned primary responsibility for matrix functional support to a PEO or a PM. Examples include the Office of the Surgeon General; the United States Army Aviation and Missile Command (AMCOM) Life-Cycle Management Command, the United States Army Communications-Electronics Command (CECOM) Life-Cycle Management Command, United States Army Tank-Automotive and Armaments Command (TACOM) Life Cycle Management Command, and the Program Executive Office of the Soldiers System Center (formerly Soldiers Biological and Chemical Command (SBCCOM)).

(2) AR 750-10, paragraph 1-4, defines modification as “any alteration, conversion, or modernization of an end item or component of an end item, which in any way changes or improves the original purpose or operational capacity in relation to effectiveness, efficiency, reliability, or safety of that item. This includes, but is not limited to, conversions, field fixes, retrofits, remanufactures, redesigns, upgrades, extended service programs, engineering changes, software revisions, system enhancement programs, service life extension programs, system improvement programs, product improvement programs, preplanned product improvements, modifications developed and applied by contractors as part of a prime vendor support (PVS) or contractor logistics support (CLS) agreements, horizontal technology integration (HTI), continuous technology refreshments (CTR), technology insertions, and all other terms used to describe modifications as defined above.”

c. The USAREUR MWO Program Coordinator will incorporate the option to apply the MWO using depot-maintenance personnel or a CFT into the MWOF, DA Form 7591, or equivalent plan if it is not written into the MWOF during coordination. MATDEVs may apply only MWOs with an approved MWOF. Commanders will not allow their equipment to be modified without an official MWO and an approved MWOF signed by the USAREUR MWO Program Coordinator.

d. Commanders at every level will—

(1) Not enter a separate agreement to apply the MWO. Direct coordination by the MATDEV with responsibility for the equipment (including PEOs and PMs) with the user is not authorized. Unit modification tables of organization and equipment do not authorize additional personnel or time for applying MWOs.

(2) Not order MWO kits through the normal supply system or request kits directly from the AMC LCMC item manager. The MATDEV will reject unit requests for MWO kits (DA Pam 710-2-1, para 2-14). The MATDEV must ship all MWO kits for USAREUR equipment to a central storage facility designated by the 405th SB, unless an alternate site is specifically designated in the MWOF by the USAREUR MWO Program Coordinator.

(3) Provide logistic support to the MWO application team according to the approved MWOF. Logistic support includes office, shop, and storage space; use of telephones, fax, and copiers; forklift and wrecker-truck support; and welding and cutting equipment available in the unit. Logistic support also includes providing enough personnel to move MWO-designed end items and weapons systems to and from the MWO shop to meet the MWO application schedule.

(4) Apply alterations prescribed in equipment improvement report maintenance digests and technical bulletins when it is in their best interest, organic resources are readily available, and the operational situation permits. These alterations are optional. Commanders, however, are encouraged to apply these alterations.

e. The using unit MWO program coordinator will—

(1) Stay in daily contact with the MWO application team leader to ensure all applicable equipment scheduled for modification is modified.

(2) Use the property book list to ensure all applicable equipment is modified before the MWO team is released.

f. The Support Operations Office (SPO), 21st TSC, will—

(1) Send requests for exceptions to this policy to the Chief, SOD, with a justification and a recommendation to approve or disapprove the request.

(2) Ensure the MWO application team is not denied access to the shop during training holidays, physical training, or other activity without first coordinating with the MWO team leader.

(3) Negotiate with each sponsoring agency to combine the agency's MWO into blocks of time when more than one MWOFP is being coordinated for the same item of equipment in a calendar year. Use of the block-modification concept will reduce disruption of tactical units.

g. When an item of equipment or component missed application of an MWO during the modification period, the USAREUR MWO Program Coordinator will report the omission to the sponsoring agency or MWO proponent and arrange to apply the MWO.

H-6. PROCEDURES

a. Application of MWOs begins in Europe when—

(1) The MWOFP is signed by the USAREUR MWO Program Coordinator.

(2) At least 50 percent of the application kits are on hand at the MWO storage site. USAREUR must not incur any second-destination transportation costs associated with MWO application. However, the unit with equipment requiring modification may use organic transportation assets to transport MWO kits from the storage site to the unit area on request of the application team and approval of the unit commander.

b. When required by the MWOFP, the SAMS-E operator must prepare DA Form 2407 or DA Form 2407-E and give it to the CFT applying the MWO along with the equipment to be modified. After the CFT has applied the MWO, completed DA Form 2407 or DA Form 2407-E, and returned the equipment to the owning unit, the SAMS-E operator will file DA Form 2407 or DA Form 2407-E until the MWO proponent posts application of the MWO to MMIS in accordance with paragraph 14 of each MWO.

H-7. DA FORM 2408-5

SAMS-E operators will maintain and record MWO applications on DA Form 2408-5 for the equipment specified in DA Pamphlet 750-8, figure E-1, or in the SAMS-E Users Guide.

H-8. THE MODIFICATION MANAGEMENT INFORMATION SYSTEM

a. The MMIS is the United States Army National Modification Work Order Registry and the sole system for recording MWO management.

b. The MMIS was developed to help PEOs, PMs, AMCOM LCMC, CECOM LCMC, and TACOM LCMC manage their MWO programs. MWO coordinators, maintenance warrant officers, maintenance supervisors, equipment inspectors, and AMC logistics assistance representatives can check the status of MWOs for aviation and ground equipment from any location.

c. The MMIS allows users to determine the overall MWO status of one or more items of equipment in a unit by unit identification code and equipment NSN, model number, and serial number. The MMIS also allows users to determine MWOs that—

- (1) Apply to a particular piece of equipment, including items with DA funding status.
- (2) Have been applied.
- (3) Have not been applied.

d. Additionally, the MMIS provides automated templates to be used by AMC MSC MATDEVs and equipment commands for drafting and coordinating MWO documents. MWO specifications and MWOFPs are also included.

e. AR 750-10, chapter 5, prescribes MMIS policy and procedures.

f. MWO proponents are responsible for reporting completed MWOs to the MMIS in accordance with paragraph 14 of each MWO.

H-9. EXCEPTION TO POLICY

a. The Theater Logistics Support Center-Europe (TLSC-Europe) may apply emergency, urgent, and routine MWOs (excluding MWOs for medical equipment, communications security equipment, signal intelligence and electronic warfare items, and controlled cryptographic items) that have passed the completion date specified at the top of each MWO on left-behind equipment and other ground-support equipment that has been submitted to a maintenance shop when—

- (1) The level at which the MWO will be applied is below depot maintenance.
- (2) The maintenance is within TLSC-E organic maintenance capability and capacity.
- (3) MWO kits (or equivalent repair parts), special tools, test equipment, technically qualified personnel, and workhours are readily available at the MWO application site. In these cases, work orders must—

(a) Be held over to apply emergency MWOs.

(b) Not be held over when resources are not readily available to apply urgent and routine MWOs to comply with maintenance standards as prescribed in the TM 10- and 20- series (AR 750-1, para 3-2).

b. TLSC-E maintenance personnel will enter application of MWO in the MWO MMIS database in accordance paragraph 14 of each MWO.

c. If additional clarification or assistance is needed, the USAREUR MWO Coordinator at military 484-7161 or the USAREUR MWO Manager at military 537-4677 may be contacted.

APPENDIX I

OPERATIONAL READINESS FLOAT PROGRAM

I-1. APPLICABILITY

The policy in this appendix applies to USAREUR major subordinate commands.

I-2. REFERENCES

Appendix A lists references.

I-3. EXPLANATION OF ABBREVIATIONS

The glossary defines abbreviations.

I-4. RESPONSIBILITIES

a. The Chief, Sustainment Operations Division, Office of the Deputy Chief of Staff, G4, HQ USAREUR—

(1) Is responsible for the USAREUR Operational Readiness Float (ORF) policy.

(2) Will prepare and send requests for exception to DA policy to HQDA (DALO-MNZ).

(3) Will schedule annual staff assistance visits by the USAREUR G4 and 21st Theater Sustainment Command (21st TSC) ORF subject-matter experts (SMEs) to provide training and assistance to each USAREUR unit that is authorized ORF. This will ensure that unit ORF managers are technically trained and ORF authorizations are determined in accordance with DA guidance.

b. The Chief, Materiel Readiness Branch, Support Operations (SPO), 21st TSC—

(1) Has overall authority for distributing and redistributing ORF assets in USAREUR.

(2) Will provide guidance to Army units in Europe on managing ORF management.

c. The USAREUR ORF Manager (21st TSC, mil 484-7150) will—

(1) Manage the USAREUR ORF Program.

(2) Be the primary POC and controller of USAREUR ORF.

(3) Be the central collection agent for USAREUR ORF accounts.

(4) Announce (45 calendar days before) and conduct annual ORF review boards and ORF conferences.

(5) Review and approve or disapprove ORF authorization levels for USAREUR ORF accounts.

(6) Prepare and distribute annual ORF authorization lists and ORF excess reports.

(7) Provide ORF-demand data to the United States Army Materiel Command (AMC).

(8) Review and approve or disapprove the establishment of ORF accounts in the European theater in coordination with the Chief, Materiel Readiness Branch.

d. Commanders of field-maintenance units (formerly direct support (DS) maintenance units) and brigade support battalions (BSBs) will—

(1) Formally appoint the stock-record account officer to manage the ORF account.

(2) Oversee the management of the unit's ORF account and maintenance of ORF.

(3) Establish procedures to ensure ORF exchange decisions are approved by field-maintenance unit commanders who are lieutenant colonels or above after coordination through the S3 or G3 of the next higher command level, or the S3 or G3 on behalf of a colonel commander (or above) (AR 750-1, para 8-7b(1)(i)1).

e. Unit ORF accounting officers will—

(1) Account for ORF assets according to AR 710-2 and DA Pamphlet 710-2-2 and ensure ORF assets are hand-receipted appropriately.

(2) Maintain DA Form 1296 according to DA Pamphlet 710-2-2.

(3) Report and turn in excess ORF equipment.

(4) Send requests for disposition instructions for excess ORF equipment to the Materiel Readiness Branch.

(5) Document on-hand balance changes and send them to the Materiel Readiness Branch.

(6) Ensure ORF shortages are requested by submitting a memorandum through command channels to the Materiel Readiness Branch.

(7) Attend ORF conferences and review boards.

f. The ORF POC of field-maintenance unit or BSB (when designated by the ORF hand-receipt holder) will—

(1) Provide, in coordination with the ORF accounting officer, the following information to the Materiel Readiness Branch within 30 calendar days before the ORF review board is scheduled:

(a) Demand data for all authorized ORF items and ORF candidates. This must be reported for the calendar year.

(b) Authorized ORF items where resources are not available to maintain the items. Disposition instructions must be provided to the ORF accounting officer.

(2) Provide resources for turning-in excess ORF equipment as it is identified.

(3) Request and process lateral transfers from the USAREUR ORF Manager and notify the USAREUR ORF Manager when transfers are completed.

(4) Use ORF equipment as prescribed by AR 750-1.

(5) Take part in annual ORF review boards and conferences.

(6) Direct the maintenance of ORF equipment.

I-5. GENERAL

a. The terms direct support (DS) and general support (GS) maintenance are used in this appendix. However, under the two-level maintenance system, DA plans to systematically redistribute the maintenance tasks now performed by aviation intermediate maintenance (AVIM), aviation unit maintenance (AVUM), and DS and GS maintenance-units into field-maintenance and sustainment-maintenance units. The intent is to transition ORF authorizations from DS maintenance-units to BSBs.

b. The only authorized maintenance float in USAREUR is the ORF. The USAREUR ORF is used for replacing like items for which an immediate replacement is required to maintain an acceptable level of readiness during peacetime. Using ORF, customer units can meet unprogrammed maintenance requirements when repair of these items cannot be made in a specified time. ORF consists of a controlled quantity of selected items of equipment authorized in units with a field maintenance mission.

I-6. POLICY

a. USAREUR ORF Accounts. USAREUR ORF is accounted for under stock-record account procedures in AR 710-2 and DA Pamphlet 710-2-2. The stock-record account officer is the ORF accounting officer.

b. DS Maintenance Units and BSBs. DS maintenance units and BSBs must do the following to request the establishment of an ORF account and to be added to the USAREUR ORF List:

- (1) Send a request for a derivative unit identification code (UIC) through command channels to the Force Management Division, Office of the Deputy Chief of Staff, G3/5/7, HQ USAREUR (Unit 29351, APO AE 09014-9351).
- (2) Request a Department of Defense activity address code (DODAAC) according to AR 725-50.
- (3) Complete a memorandum with at least the following information:
 - (a) The UIC and DODAAC.
 - (b) The line-item number (LIN), national stock number (NSN), nomenclature, and demand data of equipment requested for authorization in the ORF account.
 - (c) The quantity of equipment requested for the ORF account.
 - (d) The quantity of requested equipment supported.
 - (e) The justification for requesting an ORF account (including difficulties getting repair parts, geographic area supported, forced issues of ORF items as a result of materiel fielding, and other pertinent reasons).
- (4) Send the memorandum of justification to the USAREUR ORF Manager (21st TSC (AETS-LOD-MR), Unit 23203, APO AE 09263-3203).

c. Changes to, Additions to, and Deletions from Unit ORF Authorization Lists. Units may add or delete items from their ORF list throughout the year if a new requirement emerges or the account was established the previous January. A memorandum of justification is required when requesting changes in ORF authorizations (b above).

d. USAREUR ORF Authorization Lists. The 21st TSC publishes a consolidated ORF authorization list quarterly. This list is the only source to be used for sending and revising ORF requisitions in the Army in Europe. This list is the formal authorization to requisition and retain ORF stocks. The list provides approved ORF authorizations by UIC for each unit (c above). It also lists LINs, NSNs, and the total authorization for each LIN and NSN with subtotals for each command in the Army in Europe.

e. Continuing Balance System-Expanded Reporting.

(1) Accounting officers must report changes to the on-hand balance of their ORF equipment (c above) to the USAREUR ORF Manager within 15 calendar days after the transaction has occurred.

(2) Accounting officers must provide a copy of the following ORF supply transaction records (c above) to the USAREUR ORF Manager:

- (a) DD Form 200.
- (b) DD Form 362.
- (c) DD Form 1131.
- (d) DA Form 2765-1.
- (e) DA Form 3161.
- (f) DA Form 4949.

f. Readiness Reporting. ORF Army Materiel Status System reporting will be processed through the Standard Army Maintenance System-Enhanced and further to the Logistics Support Activity (LOGSA) using the automated Logistics Information System.

g. Excess ORF Equipment.

(1) ORF accounting officers will—

(a) Send a request for disposition instructions to the USAREUR ORF Manager (21st TSC (AETS-LOD-MR), Unit 23203, APO AE 09263-3203) for excess ORF and for authorized ORF when resources are not available to maintain ORF to maintenance standards prescribed by the TM 10- and 20-series.

(b) Request and process lateral transfers as directed by the USAREUR ORF Manager and inform the USAREUR ORF Manager when transfers are completed.

(2) Requests for disposition instructions should include the following information and supporting documents according to the applicable maintenance expenditure limit technical bulletin (TB):

- (a) DODAAC.
- (b) DD Form 1384-2.
- (c) DA Form 461-5.
- (d) DA Form 2404.
- (e) DA Form 3590.

(3) The USAREUR ORF Manager will accept only serviceable ORF equipment for disposition. Equipment classified as supply condition code “H” (unserviceable/condemned) or “P” (unserviceable/reclamation) must be reported through normal supply channels. Combat vehicles with supply code “H” must be reported to the USAREUR ORF Manager for disposition instructions.

I-7. REQUESTS FOR WAIVER

Requests for exceptions to this policy must be sent to the USAREUR ORF Manager (21st TSC (AETS-LOD-MR), Unit 23203, APO AE 09263-3203).

I-8. OPERATIONAL READINESS FLOAT AND DEMANDS

a. Support Operations Office managers at transformed modularized BSBs must retrieve the Master Maintenance Data File (MMDF) from the Logistics Support Activity (LOGSA) through the 21st TSC SPO Standard Army Maintenance System-Enhanced Level-2 Enhanced (SAMS-2E) system, update authorized ORF assets, and provide the updated equipment master file (EMF) to subordinate SAMS-2E systems and to field-maintenance unit Standard Army Maintenance System Level-1 Enhanced (SAMS-1E) systems. This will ensure ORF demands are accurately captured and reported on all NSNs identified as ORF items identified by LOGSA. The 21st TSC SAMS-2E manager is responsible for updating USAREUR maintenance significant items and locally managed items on the command’s MMDF and providing copies to other SAMS-2E sites in the USAREUR theater.

b. SAMS-1E correlates each new maintenance request NSN with the EMF and looks for the presence of an ORF indicator (“Y” or “N”) in the ORF DA field. SAMS-1E does this each time a maintenance request is registered in the system and when NSNs on maintenance requests are modified. If the ORF DA field in the EMF contains a “Y” and the maintenance request priority is 01 through 06, SAMS-1E will enter an “L” (current ORF codes are listed in table I-1) in the ORF transaction code indicator field when the maintenance request is registered. The “L” means the item is on the DA-approved ORF list and has no purpose other than to “capture” a demand.

Table I-1 ORF Codes		
ORF Code	Definition	Qualifies as Demand
I	Issue from ORF stock	Yes
R	An authorized ORF asset in for repair	Yes
L	A DA-authorized ORF asset	Yes
Z	An ORF asset repaired and returned to stock	No

c. If the ORF DA field contains “Y” and the ORF AUTH field contains “Y,” SAMS-1E operator will enter an “R” (repair) in the ORF transaction code indicator field. If a decision is made not to issue a float but to repair the item instead, the “R” in the ORF transaction code indicator field will cause the system to capture a demand for the NSN. If a decision is made to float an ORF asset, the SAMS-1E operator must enter maintenance request status code “7” (awaiting float transaction) to update the maintenance request record. When the maintenance request status code “7” is entered, the system requests that the operator enter the serial number of the serviceable (float) item. After the operator enters the serial number of the serviceable (float) item, SAMS-1E will change the ORF transaction code to an “I” (issue), create a new maintenance request, and change the ORF transaction code on the original maintenance request from an “R” (repair) to a “Z” (no demand). The issue demand (one only) is then captured for this transaction.

d. When a serviceable float is issued against a maintenance request and the original, unserviceable item belongs to the ORF account, the utilization code must equal “4” and the ORF transaction code field must equal “Z.” The “Z” code means an ORF asset is being or was repaired and no demand will be captured (the demand has already been accounted for). SAMS-1E will not allow a maintenance request with an ORF transaction code of “Z” to be closed (with maintenance request status code “V”, Closed—Requirement satisfied by ORF exchange).

e. Demands will be transferred with maintenance requests, tasks, and parts data to SAMS-2E during the weekly maintenance request transfer process. When the weekly maintenance request transfer (AHN4BD file) is processed at the SAMS-2E, closed work order data is entered in the AHO041 file in SAMS-2 or closed work order table in SAMS-2E. For each record in the table with an NSN that shows an ORF indicator of “Y” in the EMF, has a priority of 01 through 06, and has an ORF transaction code of “I”, “L”, or “R”, SAMS-2E will capture a demand to the ORF AH0251 master file in SAMS-2 and correct table in SAMS-2E. To properly post ORF fully mission capable (FMC) and not mission capable (NMC) quantities, SAMS-2E operators must first establish a record in the ORF table for each ORF item stocked. The record must indicate the quantity authorized by LIN and quantity on hand by NSN. The sum of the FMC and NMC quantities equals the quantity on hand. When the Update ORF Demand (Master Files—Operational Readiness Float tab) process is run, the program changes ORF transaction codes “I”, “L”, or “R” to a numeric value. The numeric value precludes the record from being counted in subsequent runs of the ORF Demands Process. The update ORF Demands Process can be run as often as the maintenance manager deems necessary. The Monthly Float Usage and Accumulative Report (by support UIC) (PCN AHO-039), the Monthly Float Usage and Accumulative Report (by LIN) (PCN AHO-040), and the ORF Status and Utilization Report (PCN AHO-041), all use the ORF table as source data.

f. At the end of the annual reporting period, after all AHN4BD files have been processed, SAMS-2E operators will use the “Update ORF Demands” process to produce required reports. SAMS-2E operators must run the “Purge ORF File” process to purge quantities in the cumulative fields of the ORF table (ORF quantity demanded, ORF quantity issued, and ORF turn-around time). This resets the demand counters to begin accumulating data in the new year. Purged data is written to diskette and the fields in the ORF table are reset to zero. This process allows purged data to be restored from a previous period for reporting purposes. Up-to-date backups of the current year’s data file must be maintained when finished. The “Update ORF Demands” process must be executed using purged data.

g. Equipment undergoing field-maintenance repair qualify as candidates for an ORF transaction, when the piece of equipment—

(1) Directly affects the unit readiness posture (maintenance repair must be priority designator 01 through 06).

(2) Is job-ordered for field maintenance-level repair.

h. The decision to issue an ORF asset is normally made by the maintenance officer maintaining the ORF.

(1) The decision will be made as rapidly as possible to ensure maximum mission capability of the supported customer unit. ORF assets will normally be issued only when the priority designator of the accepted job order is 01 through 06 and the turnaround time is expected to be 8 calendar days or more.

(2) All decisions to issue an ORF must be approved by field-maintenance unit commanders who are lieutenant colonels or above after coordination with the operations office (S3 or G3) or the next higher command level or the S3 or the G3 on behalf of the commander who is a colonel or above. (AR 750-1, para 8-7b(1)(i)1).

(3) Customer units will accept the ORF item as long as it is a like item or an authorized substitute according to SB 700-20, appendix H, and meets the Army maintenance standard prescribed in AR 750-1, paragraph 3-2. This requirement does not apply to *urgent* and *routine* modification work orders. Those are covered by AR 750-10 and appendix I of this regulation.

(4) The customer unit's unserviceable major end item must be repairable by the field-maintenance activity maintaining the ORF. Field-maintenance activities will use priority designator 02 on the job order to repair the customer unit's unserviceable turned-in item once it becomes an ORF asset.

(5) The exchange of an unserviceable customer-unit repairable major end item for an ORF asset will be made as a simultaneous turn-in and issue transaction. SAMS-1E automatically captures ORF transactions. Basic issue items and components of an end-item common to the major end item will not be exchanged.

i. ORF aircraft will—

(1) Be used to help units maintain mission readiness.

(2) Not be used by aviation field or sustainment-maintenance units as mission aircraft.

(3) Not be flown more than a maximum of 4 hours each month. This includes maintenance test flights. Exceeding the maximum flight time for other than maintenance test flights is prohibited.

I-9. SAMS-E ORF PROCEDURES

a. SAMS-1E and SAMS-2E.

(1) Demand data for ORF assets will be recorded by SAMS-1E each time a new maintenance request is registered and the NSN is on the MMDF with a "Y" in the ORF DA field and the maintenance request priority is 01 thru 06.

(2) Once the decision is made to float an item, SAMS-1E handles the exchange of unserviceable assets for serviceable ORF assets. SAMS-1E transactions, however, are not a substitute for property book and stock-record accounting procedures.

(3) SAMS-1E and SAMS-2E ORF procedures are in the following end-user manuals (available at <https://www.us.army.mil/suite/page/143642>):

(a) SAMS-1E: AISM-25-L21-AHO-ZZZ-EM.

(b) SAMS-2E: AISM-25-L26-AHO-ZZZ-EM.

b. SAMS-E.

(1) The SAMS-1E computer-based training, tutorial, and end-user manuals are available on each SAMS-E computer fielded. Personnel may register for the LOG 80 (SAMS-1E) and LOG 81 (SAMS-2E) classes at 7th CATC, Rose Barracks, Vilseck (school code 757) at <https://www.atrrs.army.mil>.

(2) If additional assistance is needed, the SAMS-E manager may be contacted at military 481-3471/3486.

APPENDIX J

CHEMICAL-AGENT RESISTANT COATING PAINT, CAMOUFLAGE, AND MARKING PROGRAM

J-1. PURPOSE

This appendix provides guidance and establishes procedures for managing the Department of the Army Chemical Agent Resistance Coating (CARC), Camouflage, and Marking Program in USAREUR. CARC paint protects tactical vehicles and other ground-support equipment from corrosion and provides chemical-agent resistance and camouflage. This appendix also provides responsibilities, policies, and procedures on safety, fire, environmental, and health requirements, proper disposal of hazardous materials, unit-identification marking, and the annual repainting program.

J-2. REFERENCES

Appendix A lists references.

J-3. EXPLANATION OF ABBREVIATIONS

The glossary defines abbreviations.

J-4. RESPONSIBILITIES

a. The Chief, Materiel Readiness Branch, Sustainment Operations Division, Office of the Deputy Chief of Staff, G4, HQ USAREUR, will address CARC-painting requirements for pre- and post-deployment, the Reset Phase, and left behind equipment on a case-by-case basis.

b. For CARC painting at nontraditional installations, such as Novo Selo Training Area (NSTA), Bulgaria, and Mihalikoalnicenau (MK), Romania, or during exercises at any installation in a country outside the United States, either as part of an exercise or where no Final Governing Standards (FGS) exist, DOD 4715.05-G applies.

c. Most large-scale CARC painting and touch-up painting will be done at IMCOM-Europe installations in accordance with AE Regulation 200-1.

d. Where small-scale painting and spot painting is done as part of an exercise on a location not considered a traditional Army installation, and therefore not covered by DOD 4715.5-G, AE Regulation 200-2, applies. AE Regulation 200-2 provides information on hazardous waste (HW) and hazardous-material (HAZMAT) management, as well as spill clean-up, both of which would apply to CARC paint storage and usage. For example, both DOD 4715.05-G and AE Regulation 200-2 apply at exercise locations such as Yavoriv Training Area (YTA), Ukraine, for the Rapid Trident exercises.

e. The Theater Logistics Support Center-Europe (TLSC-E) has two maintenance facilities with a paint booth that meet Occupational Safety and Health Administration (OSHA) standards for complete vehicle repainting:

(1) Maintenance Activity Kaiserslautern (MAK).

(2) Maintenance Activity Pirmasens (MAP).

NOTE: The TLSC-E covers labor costs, but the customer unit must pay for water dispersible (WD) CARC paint, primers, thinners, solvents, as well as material and supplies for complete vehicle repainting. For complete vehicle repainting, units should contact the Maintenance Section, Support Operations, TLSC-E (mil 483-3114), for details, a control number, and a POC.

f. Complete vehicle repainting requirements that exceed the capability or capacity of TLSC-E must be outsourced in accordance with appendix D of this regulation.

g. Field-maintenance units (transitioning from using and direct support (DS) maintenance units) not equipped with a proper CARC paint booth should do touch-up or spot painting in accordance with TB 43-0242. Unit commanders are responsible for requisitioning required personal protective equipment, respirators, paints, primers, thinners, solvents, rollers, and brushes that are necessary to support CARC painting. Touch-up and spot painting must be covered in detail in the DS and field-maintenance unit's standing operating procedure.

h. Supporting safety, fire prevention, environmental, and industrial hygiene offices are responsible for surveying and evaluating maintenance facilities and motor pools that use and store CARC paint and related products and provide assistance and guidance to prevent safety, fire, environmental, and health hazards in accordance with local directives.

J-5. POLICY

a. WD CARC is the approved coating for all combat and combat-support equipment, tactical wheeled vehicles, aircraft, and other ground-support equipment, to include secondary item containers such as engine, transmission, and ammunition containers and appropriate kits. More detailed painting information and procedures are covered by TM 43-0139 for ground equipment and TM 55-1500-345-23 for Army aircraft. For the purpose of this policy, military vehicles and other ground-support equipment will be referred to as tactical vehicles, as they represent the vast majority of recurring requirements for CARC and camouflage paint.

b. CARC repainting as well as touch-up and spot painting are maintenance tasks.

c. There is no DA or Army in Europe requirement to completely repaint individual unit vehicles (for example, every 5 years), regardless of condition. The complete repainting of individual unit military vehicles will be based on the condition of the vehicle's external surface or topcoat. Paragraph J-9 provides guidelines for determining requirements for complete repainting.

d. Field-maintenance units will touch-up or spot paint CARC surfaces with scratches, chips, and marring observed during preventive maintenance checks and services (PMCS) or technical inspections in accordance with TB 43-0242 using a brush and roller to prevent corrosion damage. Touch-up or spot painting includes restoration of CARC surfaces after welding and repair.

e. Complete vehicle repainting should be done only when the existing finish is not CARC, has deteriorated to the extent that it no longer protects the underlying surface, or when a higher authority requires it. Complete repainting will be at a TLSC-E maintenance facility (para J-4e) or contractor-operated facility with equipment and paint booths that meet OSHA standards.

f. Only CARC will be used to touch-up or spot paint vehicles painted with single- or three-color CARC and to add unit-identification markings (bumper markings), the U.S. national symbol (5-pointed black star), and technical markings.

g. Certain small-arms weapons may be CARC-painted in accordance with United States Army Tank-Automotive and Armaments Command Life Cycle Management Command (TACOM LCMC) Maintenance Advisory Message Number 10-40, DTG 011829Z Apr 10, subject: Maintenance Information (MI) Message, TACOM LCMC Control No. MI 10-040, Camouflaging Specific Small Arms, Items Affected: M16A2 Rifle, NSN 1005-01-128-9936, LIN R95035; M16A4 Rifle, NSN 1005-01-383-2872, LIN R97175; M4 Carbine, NSN 1005-01-231-0973, LIN R97234; M4A1 Carbine, NSN 1005-01-382-0953, LIN C06935.

h. The decision to paint weapon systems and major end items of equipment undergoing repair as part of the USAREUR Theater Maintenance Program will be made according to AE Regulation 750-20.

i. The following items will not be painted with CARC:

(1) Items made of fabric or that have anodized or parkerized surfaces, except small-arms weapons as described in subparagraph g above.

(2) Painted items that attain surface temperatures of more than 400 degrees Fahrenheit or that serve a heat-conducting, expanding, or contracting function during operation (engine manifolds, turbochargers, cooling fans, rubber hoses and other rubber products).

(3) Aluminum transmissions that are enclosed in combat vehicle engine-pack compartments. However, ferrous components of the transmission must be protected with CARC or other rust-preventive products.

(4) Installation, base operations, and tables of distribution and allowances equipment, such as military police cars, nontactical fire trucks, busses, fixed power-generating systems.

j. CARC-painted major assemblies and components will have the word “CARC” stenciled near the data plate.

k. CARC-protected surfaces will not be covered with petroleum or other products to improve the appearance of the equipment. Use of these products reduces the chemical protection provided by CARC and increases the probability of injury.

l. Painting using a brush or roller at the using unit or field-maintenance level must be limited to touch-up or spot painting. This includes restoration of painted surfaces after repair.

(1) Touch-up or spot painting indoors routinely requires proper ventilation and the use of approved respirators and accessories. Each respiratory system (cartridge, face piece, organic vapor cartridge, N- or P-95, or N- or P-100 prefilter and accessory) must be from the same manufacturer to meet Mine Safety and Health Administration/National Institute for Occupational Safety and Health (MSHA/NIOSH) requirements. Respiratory protection for touch-up painting indoors is required unless the unit has quantitative sampling data to show that respiratory support is not needed) (United States Army Public Health Command, Technical Guide 144). The supporting industrial hygiene office should be contacted for quantitative sampling.

(2) Touch-up or spot painting outdoors is authorized without respiratory protection when natural ventilation is adequate and the local industrial hygienist has determined that respiratory protection is not required before the painting begins.

m. Only maintenance activities with a paint booth meeting OSHA standards are authorized to spray-paint vehicles. The use of air-line respirators is the only way to ensure protection when spray-painting, unless there is enough ventilation to ensure exposures are below the OSHA permissible exposure limit (PEL) or American Conference of Governmental Industry Hygienists Threshold Limit Value (ACGIH TLV), and workplace monitoring proves that exposures do not exceed the PEL or TLV.

J-6. HEALTH AND SAFETY REQUIREMENTS

a. Confined-Space Program. A confined space is one that is large enough and configured for an employee to enter and work. It has limited means of entry and exit and is not designed for continuous occupancy. Employees are prohibited from entering confined spaces unless they are covered by an approved confined-space program that includes training (including equipment training), written procedures to issue permits, and entry and emergency-rescue procedures. Safety officers are not trained in issuing these permits. The supporting industrial hygiene or safety office should be contacted for additional information about confined space requirements.

b. Medical Clearance. The industrial hygienist will identify the workareas that require respiratory protection and employees who are required to wear respirators. The supervisor of these employees will refer employees to the supporting occupational health nurse for a medical clearance before the employees use respirators.

c. Medical Surveillance. If the industrial hygienist identifies potential exposure to occupational hazards, employees will be referred to the supporting occupational health nurse for enrollment in a medical surveillance program.

d. Respiratory Protection Program.

(1) Respiratory protection may be required as WD CARC contains potential carcinogens (could cause cancer in some people) and respiratory sanitizers. Silica chromates and some of the solvent components are potential carcinogens and the isocyanate component is a potential respiratory sensitizer that can cause occupational asthma.

(2) Commanders of personnel who completely paint, touch-up, or spot paint vehicles with CARC paint will establish a local respiratory protection program (AR 11-34, AE Reg 385-7, and TB MED 502). The local industrial hygiene office will help the commander develop a respiratory protection program. Individuals must be medically cleared by the local occupational health nurse and trained in the wear of respirators before being fit-tested. Medical clearance is required because certain medical conditions, such as asthma, allergies, or high blood pressure could prevent personnel from being issued a respirator.

(3) The industrial hygienist will identify and measure the hazards in the workarea, decide which type of respirator is required for each job, and provide training for the respiratory protection monitor (RPM). The hygienist will also explain why the respirator is required, what it protects against, how to tell if it fits properly, and how to care for it. DS, field-maintenance, and civilian maintenance-shop commanders must appoint an RPM as part of the respiratory protection program. The RPM is required to conduct the respirator fit-test and training.

e. Respirator Fit-Test and Operational Testing.

(1) In military units, the unit nuclear, biological, and chemical (NBC) noncommissioned officer (NCO) is trained to fit-test the chemical protective mask and, therefore, authorized to perform respirator fit-testing and testing training. The NBC NCO may require only minimal training from the local industrial hygienist to fit-test and test respirators used in the occupational environment.

(2) In civilian-operated maintenance facilities (for example, TLSC-E), the facility safety officer or RPM is responsible for fit-testing and testing the operation of respirators. The servicing industrial hygienist will ensure that the respiratory protection program is in place and followed, to include proper selection, care, and wearing of respirators when required.

(3) The industrial hygienist is not responsible for fit-testing U.S. and German respirators, as this is the responsibility of the appointed RPM.

f. Respirators Approved by the *Deutsches Institut für Normung (DIN)* (German Institute for Standardization) and MSHA/NIOSH-Approved Respirators.

(1) *DIN*-approved respirators may be used only by local national employees.

(2) MSHA/NIOSH-approved respirators must be used by U.S. Soldiers and DA civilian employees.

(3) Only the United States Army Public Health Command Region-Europe (USAPHCR-Europe) may approve the use of *DIN*-approved respirators by Soldiers and DA civilians.

(4) Before buying a *DIN*-approved respirator, the commander will request in writing that an approval be granted for the respirator.

(a) Requests must include—

1. The make, model, description, and *DIN*-approval number of the respirator.
2. Hazards that the respirator is designed to protect against.
3. POC information.

(b) Commanders will send requests to the USAPHCR-Europe (MCHB-AE-MIH), CMR 402, APO AE 09180.

J-7. AUTHORIZED CHEMICAL-AGENT RESISTANT COATINGS

a. Type I (single-component paint) and type II (two-component paint) WD CARC top coats are available in the supply system and can be ordered in accordance with AR 710-2.

b. TB 43-0242, appendix B, provides a list of approved WD CARC, primers, strippers, and solvents and information on the following, portable, hand-held WD CARC, type-II products:

- (1) Several NSNs for a 70 millimeter (2.7fluid ounce) aerosol spray can.
- (2) Several NSNs for a 70 millimeter (2.7fluid ounce) brush-top applicator.
- (3) Several NSNs for a 70 millimeter (2.7fluid ounce) roller-top applicator.

NOTE: These aerosol brush-top, brush-top, and roller-top products were developed to simplify, expedite, and promote touch-up or spot painting at using-unit and field-maintenance levels to protect equipment from corrosion.

J-8. SURFACE PREPARATION

a. To prepare a surface for touch-up painting according to TB 43-0242 and TM 43-0139, all loose paint and rust must be removed by sanding or with an orbital grinder before touch-up painting. Filtering face-piece respirators (dusk masks) may be worn to keep exposures to dust containing silica or chromates generated during sanding or grinding to the lowest level possible.

b. Chemical strippers will not be used because they are a neurotoxin. Surface preparation at the unit level is limited to wire and wet sanding.

c. Spray-painting, power-sanding, and sandblasting must be conducted only by using, DS, and field-maintenance facilities that meet applicable safety, fire, environmental, and health standards.

J-9. GUIDELINES FOR DETERMINING WHEN COMBAT OR WHEELED VEHICLES QUALIFY FOR COMPLETE CHEMICAL AGENT RESISTANT COATING REPAINTING

a. When it is estimated that more than approximately 25 percent of the total external surface area of a military vehicle is unserviceable or varied in appearance, the vehicle may be completely repainted by field and sustainment-maintenance activities and paint contractors in a CARC-approved paint booth.

b. Unserviceable is defined as painted surfaces showing rust, cracking, blistering, flaking, or peeling. However, the undercarriage (frame) of individual unit tactical wheeled vehicles is not usually painted when the complete vehicle is repainted unless stage 3 and 4 rust is evident. TB 43-0213 provides the definitions of stage 3 and 4 rust.

c. Using-unit and field maintenance personnel may determine the percentage of the unserviceable area by—

(1) Visually inspecting the painted metal and fiberglass surface for serviceability.

(2) Using a 1-square-foot cardboard, wooden, or plexiglas template to measure each unserviceable painted area and adding the areas of the 1-foot squares.

(3) Calculating the vehicle's approximate total painted surface (left, right, front, rear, top, bottom) by referring to the length, width, and height specifications in the item's operator's technical manual (combat vehicles only).

(4) Computing the percentage of the unserviceable or varied surface areas by dividing the sum of these surface areas by the vehicle's complete surface area.

d. To resolve disputes between the using-unit and field maintenance activity personnel regarding the need to completely repaint a vehicle, the local TACOM logistics assistance representative (LAR) may be contacted. If the name of the LAR is unknown, the office of the TACOM senior command representative may be contacted at military 483-4090 to request the name and telephone number of the nearest LAR.

J-10. DISPOSAL OF HAZARDOUS CARC MATERIAL

Unusable WD CARC paint mixture, paint components, primers, thinners, as well as blasted, sanded, chipped, or peeled CARC are hazardous waste and require disposal according to hazardous-waste standards. The local environmental office must be consulted for proper disposal guidance.

J-11. PAINTING INSTRUCTIONS AND ASSISTANCE

The supporting TACOM LAR should be contacted for providing training assistance in painting.

J-12. VEHICLE AND EQUIPMENT MARKINGS

a. Unit-Identification Markings (Bumper Markings). In the Army in Europe, markings will be applied using black vinyl decals or black CARC paint on a desert-tan, number 686 background (1-quart can, NSN 8010-01-276-3638; 1-gallon can, NSN 8010-01-276-3639; or 5-gallon can, NSN 8010-01-276-3640). The markings will be centered in a rectangular desert-tan block. The block will be large enough to hold unit-identification markings. The desert-tan background will not extend more than 1 inch around the unit markings except for the marking surface on bumperettes, which may be painted entirely in desert-tan. Markings currently on vehicles will not be changed solely to comply with this provision. Markings must be changed when the vehicle is in unit maintenance or when the markings have been damaged and remarking is considered necessary. Commanders have 6 months to ensure markings are updated after a unit designation change. Commanders should schedule remarking so that it will not disrupt the unit's mission. The desert-tan background will not be used behind any other vehicle markings (for example, tire pressure, diesel fuel only).

b. National Symbol. The U.S. national symbol (NSN 7690-01-042-0671) is a five-pointed star in contrasting lusterless black 383 (37030) that fits inside a 3-inch-diameter circle. The star will be applied to every tactical and combat vehicle. The star will be placed on the front and rear of vehicles and equipment as stated in TB 43-0209, section VIII, item 17. It will not be applied to ambulances or other medical vehicles affected by international agreements.

c. Safety, Instructions, Technical, and Other Markings. Safety, instructional, technical, and other markings will be applied as prescribed by technical bulletins and technical manuals.

d. Weight Classification Signs. Standard colors for weight classification signs (NSN 9905-00-565-6267) on the front and right side of selected camouflaged-painted vehicles will be lusterless black numerals on a lusterless forest-green background. Yellow signs received from the supply system must be repainted using the same or similar shade of green background when used on single-color green and three-color CARC-painted vehicles before use.

NOTE: TB 43-0118 and TB 43-0147 provide additional instructions for equipment color, marking, and camouflage not covered by TB 43-0209.

APPENDIX K

MAINTENANCE OF TACTICAL WHEELED VEHICLE AND OTHER GROUND-SUPPORT EQUIPMENT TIRES

K-1. APPLICABILITY

The policy in this appendix—

- a. Provides interim policy and procedures to commanders of units that service, order, issue, turn in, or perform classification inspections of tactical wheeled vehicles (TWVs) and other ground-support equipment pneumatic tires. This appendix will be revised periodically until the respective Army regulations, technical bulletins (TBs), technical manuals (TMs), and maintenance allocation charts (MACs) are updated to reflect changes resulting from the Army's new Tire and Wheel Assembly Program, modularity, and the two-level maintenance system.
- b. Applies to all transformed and nontransformed using and direct support (DS) field-maintenance units in USAREUR major subordinate and specialized commands that operate or provide maintenance support to TWVs and other ground-support equipment equipped with automotive pneumatic tires.
- c. Implements transformation, modularity, and the emerging two-level maintenance system (field maintenance and sustainment maintenance). Under transformation, using and support maintenance repairers are no longer responsible, trained, or certified to demount and mount tires from wheels (rims). Generally, vehicle and other equipment operators must know how to properly and safely remove the spare tire (tire and wheel assembly) from a vehicle's normal storage position (when equipped), mount the spare to replace a flat or worn tire, and check and maintain proper tire pressure.
- d. Tables K-1 through K-8 provide national stock numbers of 79 replacement tire and wheel assemblies (as of April 2012).

K-2. REFERENCES

Appendix A lists references.

K-3. EXPLANATION OF ABBREVIATIONS AND TERMS

The glossary defines abbreviations and terms.

K-4. RESPONSIBILITIES

- a. The Chief, Materiel Readiness Branch, Office of the Deputy Chief of Staff, G4, HQ USAREUR, will—
 - (1) Maintain a current master list of tire and wheel assemblies.
 - (2) Oversee and direct the maintenance aspect of the tire and wheel assembly program.
 - (3) Ensure the USAREUR Sustainment Assistance Review Team reviews the standing operating procedures (SOP) of using units (not transformed units) and DS as well as field-maintenance units (transformed units) that operate or support TWVs and other equipment with pneumatic tires.

b. Commanders of transformed using units and nontransformed units will develop and ensure application of the unit's internal SOP to—

(1) Provide clear, step-by-step guidance to operators and platoon or section sergeants explaining how operators are to report and process an unserviceable or excess tire and wheel assembly to field maintenance personnel.

(2) Establish procedures to ensure TWVs and other ground-equipment operators maintain and inspect pneumatic tires and wheels before, during, and after preventive maintenance checks and services (PMCS) in accordance with applicable TMs. This includes checking and correcting tire pressure in accordance with the operator's TM PMCS table and proper use of the tire inflation cage and tire-inflation hose in accordance with TM 9-2610-200-14. The tire pressure should be checked before operating the TWV when tires are still cold.

(3) Ensure that operators perform the following additional checks and services prescribed in TM 9-2610-200-14, chapter 4 (which are not prescribed in the operator's TM), record discrepancies on the vehicle's DA Form 5988-E and DA Form 2404 each day, and promptly report the following to the platoon or section sergeant or unit motor sergeant or assigned field-maintenance personnel:

(a) Inspection of tires before operation for cuts, bruises, nails, rocks, and uneven wear. Tires designed with built-in wear-bar indicators will show solid bars of rubber across the tread-crown area when wear is sufficient to require the tire and wheel assembly to be removed from the vehicle and turned in for repair.

(b) Checking for loose lugnuts and elongated lugnut holes on the rim. This is evident when rust (a reddish color) exists between the lugnut and rim-mating surface. In this situation, the lugnut must be loosened using the lug wrench in the vehicle's basic issue items (BIIs) to tighten the nut or correct the torque before dispatching the vehicle.

(c) Checking tires for missing valve caps and replacing them if missing.

c. Operators of TWVs and other ground-support equipment operators will—

(1) Replace flat and unserviceable tires with the vehicle's spare (tire and wheel assembly), when equipped, using the hydraulic jack and lug wrench provided with the BIIs of most TWVs.

(2) Record flat or worn tires (including the spare) on DA Form 5988-E and DA Form 2404 each day.

(3) Report unserviceable spare tire and wheel assemblies to the unit motor sergeant (if the unit has not yet transformed) or supporting field-maintenance representative for classification and turn-in to supporting SSA.

(4) Not repair flat tires or dismount and mount tires on rims.

(5) Inspect tires before operation by looking for cuts, bruises, nails, rocks, and uneven wear. Tires designed with built-in wear-bar indicators will show solid bars of rubber across the tread-crown area when wear is sufficient to require the tire and wheel assembly to be removed from the vehicle and turned in for repair.

(6) Check for loose lugnuts and elongated lugnut holes on the rim. This is evident when rust (a reddish color) exists between the lugnut and rim-mating surface. In this situation, the lugnut must be loosened by using the lug wrench in the vehicle's BII to tighten or correct the torque before dispatching the vehicle.

(7) Check the tires for missing valve caps and replace them if missing.

(8) Ensure unserviceable tire and wheel assemblies are reasonably free of mud, dirt, liquid, and debris for classification inspection and turn-in to the field-maintenance unit for inspection and classification. The term "reasonably free" means tires may be washed with an ordinary cold-water garden hose and hair-brush or with a high-pressure water cleaner (when readily available) in accordance with applicable environmental regulations to accommodate technical classification by a field-maintenance repairer and turn-in to the supply support activity. Tires and wheel assemblies will not be cleaned with a steam cleaner, as steam irreversibly damages tires.

d. Commanders of field-maintenance units will—

(1) Establish procedures to ensure technical inspectors and maintenance repairers (when the using unit has already transformed) inspect tires and wheel assemblies of TWVs and other ground-support equipment during performance of weekly, monthly, quarterly, semiannually, and annually scheduled maintenance services, as prescribed in the applicable operators TM and unit maintenance TM PMCS tables, and TM 9-2610-200-14, chapters 5 and 6, to help ensure tires and wheels are safe and serviceable for continued operation.

(2) Establish procedures to ensure wheelstops (when equipped) are properly adjusted and locked.

(3) Ensure discrepancies are recorded on the field-maintenance DA Form 5988-E and DA Form 2404 and promptly reported to the maintenance supervisor.

(4) Establish procedures to ensure wheel balance and alignment checks prescribed by the applicable unit maintenance TM PMCS are performed correctly, completely, and on schedule, adjusting them as required.

e. Standard Army Maintenance System-Enhanced operators in using units and field-maintenance units will—

(1) Receive and process unserviceable tire and wheel assemblies from operators.

(2) Turn in unserviceable tire and wheel assemblies to the supporting DS or field-maintenance supply support activity (SSA).

K-5. GENERAL

a. Under transformation and modularity, the emerging two-level maintenance system consists of the two following categories of maintenance:

(1) Field Maintenance. Former using units and DS maintenance tasks are being combined under field maintenance, also known as on-system maintenance. In this system, field-maintenance personnel service, repair, and return equipment to the operator or the user (owning-using unit).

(2) Sustainment Maintenance. General support (GS) maintenance tasks are generally being integrated into depot maintenance and become sustainment maintenance, also known as off-system maintenance and national maintenance. In this system, sustainment-maintenance personnel primarily repair and return equipment and components to the supply system.

b. Under the new DA Tire and Wheel Assembly Replacement Program, field-maintenance personnel are required to order a complete tire and wheel assembly through the supporting field maintenance SSA and turn in the unserviceable like item to the SSA. The two-level maintenance system essentially takes owning-unit and field-maintenance repairers out of the tire repair and replacement functions. Commanders of brigade support battalions, forward support companies (FSCs), and other field-maintenance unit commanders are responsible for providing tire service to supported using units as a supply transaction.

c. AR 750-1, paragraph 8-12c, requires commanders to ensure that training is provided to individuals who service single-piece or multi-piece rims and wheels used on TWVs and other ground-support equipment. Individuals who perform these maintenance tasks must demonstrate proficiency in their ability to perform specific tire, rim, and wheel tasks correctly and safely. The training requirement applies to any person who is responsible for deflating, demounting, mounting, and inflating tires, including repairing or replacing flat or worn tires.

NOTE: This training is no longer needed or offered where the HQDA Tire and Wheel Assembly Replacement Program is fully implemented.

K-6. POLICY

a. Operators and crews will maintain pneumatic tires and wheel assemblies in accordance with before, during, and after operation PMCS tables in the respective equipment operators TM and unit tire-maintenance SOP.

b. Unserviceable tire and wheel assemblies generated by transformed and nontransformed units will be reported to supporting field-maintenance unit personnel for classification and turn-in to the supporting SSA.

c. All transformed and nontransformed using and field-maintenance units will replace individual flat and worn tires with a complete tire and wheel assembly as listed in tables K-1 through K-8. Using unit and field-maintenance repairers will not order replacement tires, demount or mount tires, or repair these unserviceable tire and tire and wheel assemblies themselves or by contract. Pneumatic tire and wheel assemblies not listed in tables K-1 through K-8 will be processed in accordance with standard maintenance, supply, and disposal procedures.

d. Until all tires are supported by a tire and wheel assembly NSN, the method for servicing worn and flat tires not listed in table K-1 through K-8 is with a local economy tire shop or vehicle dealership, unless the USAREUR unit or activity has suitable tire demounting and mounting equipment and a trained and certified repairer in accordance with AR 750-1, paragraph 8-12c.

e. SSAs will stock tire and wheel assemblies listed in tables K-1 through K-8 in accordance with the stockage requirements prescribed in AR 710-2, DA Pamphlet 710-2-2, and interim directives.

f. Exchange pricing (EP) system and non-EP tire and wheel assembly NSNs are listed in tables K-1 through K-8. The difference between an EP and non-EP NSN is that the EP NSN has a dollar value in the EP block of the Army Federal Logistics (FEDLOG), whereas the EP block for a non-EP NSN is either zero or blank.

(1) Units will be charged the full price for the tire and wheel assembly according to the current FEDLOG for EP tire and wheel assemblies listed in tables K-1 through K-8 or items that enter the EP system after this appendix is published, when a unit requisition is processed.

(2) Units will be granted turn-in credit per the EP credit value posted in the current FEDLOG when the corresponding unserviceable or unserviceable tire and wheel assembly is turned in within 10 calendar days in accordance with AR 710-2. If the corresponding unserviceable tire and wheel assembly is not processed through the Standard Army Retail Supply System (SARSS) at the SSA within 60 calendar days after the date of issue, the national-level EP system will charge the unit with a delta-bill penalty, which brings the price of the tire and wheel assembly to the FEDLOG full unit price. The national level EP system matches issues to turn-in based on Department of Defense activity address codes (DODAACs) and national item identification numbers (NIINs). If there is no match on DODAAC and NIIN, the system tries to match on the first four of the unit's identification code (UIC).

(3) A serviceable EP return credit is given for the turn-in of serviceable EP tire and wheel assemblies, but only if the turn-in occurs within 60 calendar days after the issue and matches the DODAAC (for first four digits of unit identification code) and NIIN.

g. Tires and wheel assemblies not listed in tables K-1 through K-8, excluding tire and wheel assemblies added to the EP after this policy is published, will continue to be requisitioned and turned in by their individual NSN. Units will be charged the current FEDLOG Army unit price when the requisition is processed and will receive no monetary credit for serviceable and unserviceable tire and wheel assembly on turn-in to the SSA.

h. Every using and field-maintenance unit with TWVs and other ground-support equipment with pneumatic tires will include tire and wheel policy and procedures in their own custom SOP.

K-7. TIRE INSPECTION AND CLASSIFICATION

a. Forward support company, brigade support battalion, support brigade field-maintenance units with organic TWV and equipment repairers will—

(1) Classify tires and tire-and-wheel assemblies in accordance with TM 9-2610-200-14, before turning them in to the supporting SSA.

NOTE: This technical classification inspection responsibility may be delegated to vehicle and equipment operators or other individuals who have an automotive maintenance military occupation specialty (MOS).

(2) Have at least two technically MOS-qualified field-maintenance repairers designated to receive unserviceable tire-and-wheel assemblies from using units, inspect and classify unserviceable and serviceable pneumatic tire-and-wheel assemblies in accordance with TM 9-2610-200-14 (chap 7), and turn them into the supporting SSA. This includes—

(a) Obtaining DA Form 2407-E and DA Form 2407.

(b) Documenting classification-inspection results on DA Form 2404 or DA Form 5988-E.

NOTE: For management purposes, the classification of up to 10 of the same NSN tire in the same supply condition code may be documented on one DA Form 5988-E and DA Form 2404.

(c) Using the supply condition codes prescribed in AR 725-50, table C-38, to identify the serviceability or condition of tires and wheel assemblies.

(d) Preparing, packaging, and shipping unserviceable tire-and-wheel assemblies from USAREUR to a CONUS depot. Tire-and-wheel assemblies must be cleaned before shipping to meet local environmental and U.S. Department of Agriculture inspection standards.

b. The assigned United States Army Tank-Automotive and Armaments Command (TACOM) Life Cycle Management Command logistics assistance representative (LAR) for classification-inspection training may be contacted for training needs. If the name of the local TACOM LAR is unknown, the TACOM senior command representative may be contacted at military 483-4090 for the name of the servicing LAR.

Table K-1 High Mobility Multipurpose Wheeled Vehicles (HMMWV) and Light Tactical Wheeled Vehicles		
Vehicle Type	Assembly NSN	Size
HMMWV / M1101 Trailer L/R D	2530-01-493-5859	37.0/12.5R16.5
HMMWV / M1101 Trailer L/R D (24 Bolt Rim w/ Michelin Baja / Goodyear MTR tire)	2530-01-558-2138	37.0/12.5R16.5
HMMWV / M1101 Trailer L/R E (24 or 20 Bolt Rim w/ Goodyear MTR tire / Michelin Baja T/A)	2530-01-563-8620	37.0/12.5R16.5
M35A2/M200A1 Trlr/M149A2/M105A2/ M373A2/M332/M313/M750	2530-01-506-5910	9.00-20
M35A3Truck	2530-01-506-5915	14.50R20

Table K-2 Medium Tactical Wheeled Vehicles		
Vehicle Type	Assembly NSN	Size
FMTV FOV (M1078-M1090, M1092, M1093, M1096, M1148, M1157)	2530-01-500-4619	LT395/85R20
M923A1 & M939A1/A2	2530-01-506-7243	14.00R20
M818/M926/M939 w/o ABS, M939 FOV	2530-01-506-7244	11.00R20
M939 with ABS	2530-01-506-8319	11.00R20

Table K-3 Medium and Light Trailers		
Vehicle Type	Assembly NSN	Size
M1076 PLS Trailer	2530-01-500-4991	15.50/80R20
M860A1 Trailer (Patriot)	2530-01-506-7315	445/65R22.5
M870 Trailer	2530-01-508-6677	10.00R15
M870A1 Trailer	2530-01-506-7646	10.00R15
M870A3 Trailer	2530-01-571-7223	275/70R22.5
M1062 Trailer	2530-01-506-7648	11.00R22.50
M172A1 Trailer	2530-01-506-7650	10.00R15
M129A4 Semitrailer	2530-01-514-7903	11.00R22.50
M1061A1	2530-01-514-7909	12.00-16.50
M119A2 (left side)	2530-01-541-7004	9.00-16
M119A2 (right side)	2530-01-541-7001	9.00-16
LHS Trailer, M1147, FMTV Trailer, M1082, M1095	2530-01-542-7405	275/70R22.5
M871, M871A1, M871A2	2530-01-506-4129	11.00R22.50
M871A3	2530-01-508-2786	255/70R22.5
M872 Trailer Series	2530-01-547-4136	11.00R22.50
M872A4, M871R, M871A1R & M871A2R	2530-01-584-7914	11.00R22.5
M200A1	2530-01-528-9461	10.00R22.5
M967A2/M969A3	2530-01-527-4609	11.00R22.50

Table K-4 Heavy Equipment Transporters and Trailers		
Vehicle Type	Assembly NSN	Size
M977 HEMTT w/o CTIS	2530-01-477-1660	16.00R20
M1070/74/75 PLS/HET Truck (with central tire inflation system)	2530-01-506-2715	16.00R20
M1000 HET Trailer	2530-01-506-5762	215/75R17.50
M989A1 Trailer HEMAT	2530-01-506-7324	385/65R22.50
M117 ASV (armored security vehicle)	2530-01-478-0593	14.00R20
LAV	2530-01-532-5635	325/85R16

Table K-5 Line Haul Tractor Trucks		
Vehicle Type	Assembly NSN	Size
M915A2 (front), M969, M969A1/A2, M871	2530-01-506-4125	11.00R22.50
M915A3	2530-01-506-4128	11.00R22.50
M915A4/A2 (Rear), M871A1, M871A2 Trucks	2530-01-506-4129	11.00R22.50
M917A1 (front)	2530-01-506-4131	385/65R22.50
M917A1 (rear)	2530-01-506-4132	315/80R22.50
M916A1/A2 (rear)	2530-01-506-4133	315/80R22.50
M916A3 (up armor front)	2530-01-557-2625	425/65R22.50
M916A3 (up armor rear, right outer, left inner)	2530-01-584-7917	315/80R22.50
M916A3 (up armor rear, left outer, right inner)	2530-01-584-7915	315/80R22.50
M920	2530-01-506-4136	11.00R24
M915a2 (up armor)	2530-01-537-8294	12.00R22.5
M915a3 (up armor)	2530-01-537-8297	12.00R22.5
M915a4 (up armor)	2530-01-537-8299	12.00R22.5
M878A2	2530-01-514-5105	11.00R22.50

Table K-6 Mine-Resistant Ambush Protected Vehicles		
Vehicle Type	Assembly NSN	Size
BAE RG33/RG33 HAGA	2530-01-555-4810	395/85R20 XZL
BAE RG33/RG33 HAGA PLUS	2530-01-563-0583	16.00R20 XZL
BAE TVS Caiman	2530-01-555-4749	395/85R20 XML
BAE TVS Caiman PLUS	2530-01-565-2137	395/85R20
Navistar MaxxPro & MaxxPro PLUS (front axle)	2530-01-555-5456	395/85R20 XZL
Navistar MaxxPro PLUS (rear axle)	2530-01-565-5657	12.00R20
MaxxPro Dash	2530-01-584-5955	1600R20 XZL
Navistar DASH	2530-01-570-6352	395/85R20 XZL+LRJ
GDLS RG31 365 with steel rim	2530-01-560-8477	365/85R20XZL
GDLS RG31A2 365 with alum rim	2530-01-572-5907	365/85R20 XZL LRJ
GDLS RG31A2 395 with alum rim	2530-01-572-5445	395/85R20 XZL LRJ
MATV UIK	2530-01-592-6682	395/85R20 XZL LRJ
MATV	2530-01-576-5896	395/85R20 XZL LRJ

Table K-7 Construction and Material-Handling Equipment		
Vehicle Type	Assembly NSN	Size
10K ATLAS Forklift (right side)	2530-01-446-1035	17.50-25
10K ATLAS Forklift (left side)	2530-01-514-8514	17.50-25
4K RTFL (JI CASE M4K)	2530-01-506-6873	15.00-19.50
4K Entwistle Forklift	2530-01-596-0860	15.00-19.50
M10A 10K (right side)	2530-01-506-6884	20.50-25
M10A 10K (left side)	2530-01-527-9583	20.50-25
50K RTCH (Caterpillar)	2530-01-506-6885	35.00/65R33
50K RTCH (Kalmar)	2530-01-484-1419	29.5R35
6KVRRTFL (right side)	2530-01-518-3656	17.50-25
6KVRRTFL (left side)	2530-01-518-3659	17.50-25
IHMEE (right side)	2530-01-543-8303	14.00R24
IHMEE (left side)	2530-01-543-8304	14.00R24
130G Grader (right side)	2530-01-549-6588	13.00-24
130G Grader (left side)	2530-01-582-3904	13.00-24
MW24C (right side)	2530-01-581-5782	20.50-25
MW24C (left side)	2530-01-584-7913	20.50-25
CS-563D Vibration Roller	2530-01-572-7187	23.1-26
SEE (small emplacement excavator)	2530-01-527-9584	12.50R20

Table K-8 Route Clearance Vehicles		
Vehicle Type	Assembly NSN	Size
Buffalo Mine Clearing Vehicle (front)	2530-01-535-9462	16.00R20
Buffalo Mine Clearing Vehicle (rear)	2530-01-535-9459	16.00R20
Buffalo Mine Clearing Vehicle (front for Hull #s 65-current)	2530-01-554-6621	16.00R20
RG31 (MK2 and MK3)	2530-01-541-5364	365/80R20

APPENDIX L

MAINTENANCE ASSISTANCE AND INSTRUCTION TEAM PROGRAM

L-1. PURPOSE

The Maintenance Assistance and Instruction Team (MAIT) Program is designed to accomplish the following logistics objectives (AR 750-1, para 8-15a) through assistance and instruction (A&I) visits.

- a. Upgrading Army materiel and units to a state of readiness consistent with assigned goals needed to carry out the Army mission.
- b. Developing unit capabilities to meet mobilization and contingency operations.
- c. Ensuring commanders are provided assistance in identifying and solving maintenance, supply, and maintenance-management problems in their units.
- d. Providing effective and responsive assistance and instruction to units and activities.
- e. Enhancing the commander's capability for providing maintenance and associated logistic A&I to organic, attached, and supported units.
- f. Identifying systemic problems in maintenance management and provide assistance to improve the management of maintenance workload at field and sustainment levels.
- g. Generating an atmosphere of mutual trust between MAIT personnel and the supported unit. This enables unit personnel to take part in identifying and solving problems without fear that any derogatory information will be used as a basis for adverse command action.

L-2. REFERENCES

Appendix A lists references.

L-3. EXPLANATION OF ABBREVIATIONS

The glossary defines abbreviations.

L-4. RESPONSIBILITIES

- a. The Deputy G4, USAREUR, will—

- (1) Oversee the USAREUR MAIT Program.

- (2) Visit MAIT sites and review MAIT operations yearly to ensure maximum program effectiveness (AR 750-1, para 8-15c(8)).

- (3) Schedule periodic conferences for USAREUR commanders and CONUS installation MAIT coordinators to highlight and resolve conflicts in policy and procedures (AR 750-1, para 8-15c(11)).

- b. The Deputy G4, USAREUR, and the 21st Theater Sustainment Command (21st TSC) MAIT Coordinator will—

- (1) Establish a MAIT program to support each assigned and attached unit listed in subparagraphs (4)(a)1 through 9 below.

(2) Budget and allocate sufficient funds and personnel for MAIT operations.

(3) Ensure MAIT personnel attend applicable Seventh United States Army Joint Multinational Training Command (JMTC) courses and new-equipment training.

(4) Provide MAIT A&I according to AR 750-1 to the commands listed in (a) and (b) below.

(a) Commands with MAIT overseen by the Deputy G4, USAREUR:

Command.

1. Headquarters and Headquarters Battery, 10th Army Air and Missile Defense

2. 2d Calvary Regiment.

3. 173d Airborne Brigade Combat Team.

4. 12th Combat Aviation Brigade.

5. 1-214th Aviation Regiment.

6. 30th Medical Command.

7. JMTC.

8. 5th Signal Command.

9. 66th Military Intelligence Brigade.

(b) Commands with MAIT overseen by the 21st TSC MAIT Coordinator:

1. 18th Engineer Brigade.

2. 18th Military Police Brigade.

3. 16th Sustainment Brigade.

4. 7th Civilian Support Command.

5. Task Force Falcon (TFF).

NOTE: Information about the 21st TSC MAIT and its schedule is at <https://portal.eur.army.mil/sites/21tsc/staff/g4/mait/default.aspx>.

(5) Ensure that supported units are aware of—

(a) The DOD Phoenix Award.

(b) The Chief of Staff Army Award for Maintenance Excellence.

(c) The Supply, Maintenance, and Assessment Review Team (SMART) Program (DA Pam 750-8, chap 9).

(d) Quality Deficiency Reports (DA Pam 750-8, chap 10).

(e) The Logistics Assistance Program (AR 700-4).

(f) The Army Oil Analysis Program (app F).

(g) USAREUR Modification Work Order Program, including the Modification Management Information System (app H).

(h) USAREUR Brake-Testing Policy for Tactical Vehicles (app M).

(i) Automotive battery maintenance responsibilities for vehicle operators, vehicle crews, and unit maintenance repairers (TM 9-6140-200-13).

(j) Scheduled services (including training and certification in preventive maintenance checks and services (PMCS) and associated user-level maintenance programs).

(k) The Command Logistics Review Program (AR 11-1).

(6) Promote tire and wheel assembly program policy and procedures (app K).

L-5. GENERAL

a. The MAIT Program is normally a peacetime operation intended to help develop unit capabilities to meet mobilization and contingency operations. During deployments, the MAIT will remain at home station and provide A&I support to stay-behind units, rear-detachment commanders, and redeploying units.

b. There are two operational MAITs in USAREUR:

(1) Sustainment Assist Review Team, Office of the Deputy Chief of Staff, G4, HQ, USAREUR (mil 537-4201).

(2) Materiel Assistance and Instruction Team, Office of the Deputy Chief of Staff, G4, HQ, 21st TSC (mil 484-7804).

c. AR 750-1, paragraph 8-15, requires corps, divisions, and separate brigades to have an operational MAIT, but military and civilian positions to staff those MAITs have not been documented in authorization documents nor has USAREUR been provided resources for these positions.

d. Unit commanders may request A&I by contacting their assigned MAIT (para L-4b(4)). Commanders should also select specific topics that require A&I support. The headquarters having operational control of the MAIT and higher headquarters may direct a MAIT for a specific unit that does not meet acceptable readiness standards or levels (AR 700-138, para 5-6b(2)). A directed visit is not an inspection.

L-6. POLICY

a. Military and civilian personnel assigned to the MAIT will—

(1) Have clearly identified missions and functions in accordance with prescribing regulations to preserve an atmosphere of trust between the MAITs and supported units.

(2) Not take part in command inspections, annual general inspections, annual training evaluations, spot checks, roadside inspections, command logistics review teams, or any other command evaluation program (AR 750-1, para 8-15g(2)).

(3) Not take part in field exercises and be exempt from all duty-roster details, including courts-martial duties.

(4) Not be used to fill positions elsewhere.

b. Unit commanders (including commanders of tactical units without organic or field-maintenance capability) should request assistance from supporting activities or higher headquarters to correct systemic readiness, maintenance, and supply management problems that cannot be corrected by the unit.

c. MAITs will not provide A&I services to United States Army garrisons (USAGs) without the approval of the Sustainment Assist Review Team, Office of the Deputy Chief of Staff, G4, HQ USAREUR (mil 537-4201). The USAREUR G4 and 21st TSC MAITs may, however, visit USAG maintenance activities to help resolve support issues, concerns, or problems between tactical units without organic unit or field maintenance capability (formerly orphan units) and the USAG when the unit commander requests this help.

L-7. QUARTERLY REPORT

a. MAITs will send a written report by 31 January, 30 April, 31 July, and 31 October each year to the G4 of the headquarters to which they are assigned (AR 750-1, para 8-15g(24)(f)). Each report will—

(1) Provide information on personnel spaces authorized, personnel assigned, number of units visited, workdays expended, number of telephone inquiries completed, workdays lost to temporary duty (TDY) or leave, number of unit requests not completed and the reasons why, and suggestions for improving the MAIT Program.

(2) Include a general summary of systemic problems, identified trends, and recurring deficiencies that may require site-assistance visits.

b. MAITs will provide semiannual overview briefings or publish status reviews to brigade, division, and corps commanders. Briefings should highlight significant problems that apply command-wide, but will not identify the specific units involved. Special emphasis will be placed on providing other commanders an overall assessment of the conduct and supervision of preventive maintenance checks and services in the command (AR 750-1, para 8-15g(7)).

APPENDIX M

TESTING BRAKES OF TACTICAL WHEELED VEHICLES

SECTION I

GENERAL

M-1. PURPOSE

This appendix—

- a. Provides brake-testing policy and procedures for tactical wheeled vehicles in Europe.
- b. Provides a list of vehicles that are exempt from the brake-testing requirement because of their design or size (para M-5).
- c. Supplements brake-system checks and inspections required by equipment operator and maintenance manuals.
- d. Tactical owning and field-maintenance units with tactical wheeled vehicles that are required to be brake-tested in accordance with this appendix will use procedures prescribed by this appendix and brake-testing machine operator manuals to test assigned and attached tactical wheeled vehicles and trailers with service-brake systems.

M-2. REFERENCES

Appendix A lists references.

M-3. EXPLANATION OF ABBREVIATIONS

The glossary defines abbreviations.

M-4. RESPONSIBILITIES

- a. Commanders of nontransformed owning units with a brake-testing machine are authorized to continue testing assigned equipment until the unit modularizes, loses its organic maintenance capability, and transitions to the two-level maintenance system.
- b. Commanders of field-maintenance units will provide brake-testing service to supported owning units as a nonreimbursable service when the unit transforms, modularizes, and transitions to the two-level maintenance system.
- c. Commanders of nontransformed owning and field-maintenance units with a brake-testing machine will—
 - (1) Ensure that assigned and attached tactical wheeled vehicles and trailers with service-brake systems are tested according to the procedures prescribed in this appendix.
 - (2) Budget and allocate funds for operator training. To the maximum extent possible and to minimize operational costs, commanders should include operator training whenever the brake-testing machine requires calibration, service, or maintenance.
 - (3) Submit requests for exemptions to this policy in this appendix through command channels to the Sustainment Operations Division, Office of the Deputy Chief of Staff, G4, HQ USAREUR.

M-5. EXCEPTIONS

a. The service and parking-brake systems of the following vehicles are exempt from testing with the brake-testing machine and will be maintained and operationally tested according to the respective equipment technical manual:

- (1) Armored security vehicles.
- (2) Construction equipment.
- (3) Heavy equipment transporters (70-ton, M1070).
- (4) Materiel-handling equipment, including forklifts.
- (5) Mine resistant ambush protected vehicles.
- (6) Semitrailers (70-ton, M1000).
- (5) Stryker family of vehicles.
- (8) Trailers ($\frac{3}{4}$ -ton, M101-series).
- (9) Trailers ($\frac{3}{4}$ -ton M1101 and M1102-series).

b. Units based in or deployed to a country that does not use brake-testing machines for brake testing are exempt from the requirements in this appendix. Vehicles, however, that will transport hazardous material (HAZMAT) such as chemicals, lead-acid and nickel-cadmium (NiCad) batteries, munitions, paint, and petroleum products must pass the machine testing before transporting HAZMAT in countries that require vehicles to be brake-tested using a brake-testing machine. Paragraph M-6 provides guidance on moving of HAZMAT on and off U.S. Forces military installations.

c. All tractors and trailers must pass the brake testing as independent vehicles. The only exception is for the tractor and trailer used as part of the M901 Patriot Launcher System. The two axles on the M860 trailer do not provide enough “total stopping force” compared with the kinetic energy in Newtons of the combined weight of the trailer and the mounted equipment to enable the M860 trailer, with mounted equipment, to pass brake-test standards. The solution is to brake-test the M901 Patriot Launcher System, which includes the M983 tractor and the M860 trailer with mounted equipment, as one system. This means that the brake-test operator will compute the combined total stopping force of all axles on both the tractor and the trailer, and compare these totals with the combined total kinetic energy in Newtons of both the tractor and the trailer with mounted equipment. The total stopping force standard for the M901 system is 45 percent. This is the same standard used for individual heavy trucks and trailers.

M-6. HAZMAT MOVEMENT

a. According to AE Regulation 55-4, tactical wheeled vehicles that move HAZMAT must pass a brake test using a brake-testing machine every 6 months, even when a vehicle is enrolled in a “low Usage Program.” This applies to vehicles operating anywhere in Europe.

b. The Standard Army Maintenance System - Enhanced (SAMS-E) - generated DA Form 5988-E and DA Form 2404 will serve as a hazardous vehicle certification permit when certified (overstamped) according to AE Regulation 55-4.

c. The date of the next required brake test must be annotated on DA Form 5987-E, DA Form 5988-E, and DA Form 2404. The process for doing this is outlined in table M-1. Vehicles used for carrying HAZMAT must have a previous brake-test date that is less than 6 months old. The date of the last brake test can be found on the DA Form 2404 that is part of the vehicle dispatch book.

d. Completed copies of DA Form 5987-E, DA Form 5988-E, and DA Form 2404 must be included as part of the dispatch book.

Table M-1	
Instructions on How to Post the Due Date of the Next Required Brake Test on DA Form 5988-E	
Step	Instructions
1	From the SAMS-E main menu, select Equipment Management.
2	Select the vehicle Admin Number to be serviced.
3	Click the Equipment update button.
4	Click the Service Data button.
5	Create service due and select <i>T</i> from the drop down menu.
6	Service Description Box: Type <i>Brake Test</i> .
7	Service Interval in days: Post 180 for HAZMAT vehicles and 365 for non-HAZMAT vehicles.
8	Service Interval in Mi/Hr/Km: Post the number according to the TM for that specific vehicle.
9	Last Completion Date: Use the drop-down calendar menu. The actual date is on last DA Form 2404, which is included in the vehicle dispatch book.
10	Next Service Due: Use the drop-down calendar menu. The date will be either 180 days since the last brake test for HAZMAT vehicles or 360 days since the last brake test for non-HAZMAT vehicles.
11	Next Service Due Mi/Hr/Km: Use the drop-down calendar menu and post the number according to the TM for the specific vehicle.
12	Click Apply.
13	Done. DA Form 5988-E and DA Form 5987-E are completed with the next brake-test due date annotated.

M-7. TRAINING ASSISTANCE

United States Army Tank-Automotive and Armaments Command (TACOM) Life Cycle Management Command (LCMC) logistics assistance representatives (LARs) are not responsible (or qualified) for providing brake-machine-test training. However, units requiring technical training assistance in motor vehicle brake maintenance and troubleshooting should contact their supporting TACOM LAR. The TACOM senior command representative (mil 483-4090) should be contacted for assistance if the name of the LAR is unknown. Paragraph M-15b provides guidance on where and how to obtain brake-machine-test training.

M-8. TESTING FREQUENCY

a. Vehicle brakes must be visually inspected and pass a brake test according to the following:

(1) Every 6 months for—

(a) Vehicles that transport ammunition.

(b) Fuel tankers.

(c) Vehicles that regularly transport HAZMAT. Vehicles transporting HAZMAT must have passed the brake test within the last 6 months before transporting HAZMAT.

(2) Once a year for vehicles that do not normally transport HAZMAT. Owning unit and field-maintenance (formerly direct support (DS) and general support (GS) maintenance) personnel will combine brake testing with annual services when practical.

(3) After brake systems are repaired or adjusted.

b. Commanders are encouraged to have vehicle brakes tested in the following situations:

(1) Before field exercises or road marches.

(2) When the vehicle is not regularly used.

(3) When the vehicle has been involved in an accident with alleged brake failures (if the inspection and brake-machine tests are feasible).

c. Brakes of new, used, or reconditioned vehicles must be tested according to this appendix. The brake test will be performed along with other maintenance tasks prescribed by the respective unit maintenance technical manual. The vehicle must pass a brake-machine test within 10 workdays after the date of acceptance or delivery, or before dispatch, whichever occurs first.

SECTION II PROCEDURES

M-9. BRAKE TEST

The brake test using a brake-testing machine will be the final factor for determining the serviceability of vehicle brakes. Brake tests will be conducted according to the brake-testing machine manufacturer operator manual.

a. Before and during operation of the equipment, drivers and equipment operators will inspect tactical wheeled vehicles and trailers using preventive maintenance checks and service checks before conducting brake tests. Owning and field-maintenance unit mechanics will correct inspection deficiencies before performing a machine test. The five-stop test may be used under specific conditions (para M-14) to operationally test the brake system.

b. Maintenance-personnel supervisors in nontransformed units and field-maintenance units with brake-testing machines will—

(1) Ensure that funds are budgeted and allocated for operator training (para M-15). In keeping with European standard commercial practices, operator training certifications will be valid for 3 years. Maintenance supervisors, however, should take refresher training annually.

(2) Ensure that brake-testing machine operators receive training to operate brake-testing machines correctly.

(3) Ensure brake testing is performed according to procedures in the brake-testing machine operator manual.

(4) Review brake-test results at least once a month and use the results to improve brake maintenance.

c. When a brake-testing machine is not available in the owning unit, support will be coordinated with and provided by the nearest supporting field-maintenance unit. Owning units should have a vehicle's brakes machine-tested when the vehicle is sent in for field-maintenance repairs and reschedule the next brake test accordingly.

d. When brake-testing machines at U.S. facilities are not available, inoperable, or too small, testing by an approved host-nation (HN) vehicle inspection station is authorized. Such testing is charged as a per-axle cost in HN currency. Testing by an HN vehicle inspection station may be purchased with a Government purchase card (GPC) according to the DOD Government Charge Card Guidebook.

M-10. USAREUR-OWNED STOCKS

a. The storage or repairing activity will test brakes on wheeled vehicles from USAREUR stocks.

b. Brake testing will be incorporated in the maintenance cycle of tactical wheeled vehicles in USAREUR stocks.

c. Unit storage sites with brake-testing machines will test brakes of tactical wheeled vehicles required to be brake-tested before issuing the vehicles.

d. Unit storage sites without a brake-testing machine may use the five-stop test (para M-14) in addition to visual inspection (para M-11). The owning unit must test brakes of tactical vehicles issued from USAREUR stocks using a brake-testing machine within 10 workdays after the date of acceptance or delivery.

M-11. VISUAL INSPECTION

The unit motor sergeant, maintenance supervisor, or other qualified person designated by the commander will perform a visual inspection as stated in subparagraphs a through f below. The vehicle operator or assistant operator will help the inspector perform the visual inspection. The following items will be checked:

a. Brake Pedal.

(1) The brake pedal will be checked using the applicable manual for free travel with acceptable tolerances. If the manual does not specify tolerances, the brake pedal will be pressed with normal foot pressure. The pedal should stop no more than halfway to the floor.

(2) The pedal should not stick and must return properly when pressed.

(3) The pedal height should remain constant when pressing the brake pedal with normal foot pressure three times and holding it down the third time. The brake pressure retention-check procedure, which is outlined in some vehicle manuals, may be used if applicable.

b. Vehicle Air Compressor or Hydraulic Pump and Belts. The vehicle air compressor or hydraulic pump and belts will be checked for proper operation, tightness, and cracks using the applicable manual for acceptable tolerances.

c. Vehicle Undercarriage.

(1) Before inspecting the undercarriage, operators must ensure that—

(a) The vehicle engine is off and the transmission is in neutral.

(b) The handbrake is set properly and at least the front and rear of one wheel is chocked.

(2) The vehicle operator will press the brake pedal with normal foot pressure three times and maintain foot pressure on the third depression. Using a creeper, rag, and flashlight or droplight, the mechanic will proceed to the front of the vehicle undercarriage to do the following:

(a) Thoroughly check the flexible rubber brake hoses on air and hydraulic-brake systems; check the hoses for wear, chafes, cracks, cuts, crimps, leaks, bulges, or evidence of internal damage; and ensure that proper securing and mounting hardware are present and serviceable.

(b) Thoroughly check the brake-system steel tubing (lines), connections, fittings, and bleeder valves for proper mounting and for leaks or restrictions that can hinder the flow of air or fluid. If copper has been used for the hydraulic-brake line, the vehicle will be removed from service until the copper line is replaced with a steel line.

(c) Check the lower portion of the wheel backing plate for evidence of air or hydraulic fluid leaks.

d. Stoplights. The vehicle operator will press and release the brake pedal for the inspector to check the stoplights for proper operation.

e. Air-Pressure Testing. The compressed air system of American- and European-manufactured vehicles with full air and air-assisted brake systems will be operationally checked according to the manufacturers manual to ensure—

(1) The low-air-pressure warning buzzer and light function correctly.

(2) Air pressure gauges are operational and dry.

(3) Air pressure builds up to minimum and maximum operating pressures in the prescribed times according to the vehicle TM.

(4) The brake system is free of brake fluid and air leaks.

f. Tire Pressure. Mechanics will ensure that tires are serviceable, free of foreign material, and inflated to the correct pressure.

NOTE: Over-inflated tires can cause the vehicle to bounce during the brake testing and affect testing results.

M-12. BRAKE-TESTING WITH BRAKE-TESTING MACHINE

Tractors and trailers will be tested separately based on curb weight.

a. Brake-Testing. A brake-testing machine measures the braking force in Newtons of each wheel or pair of wheels on a vehicle. A trained brake-testing machine operator will—

(1) Conduct brake tests according to the machine's operating manual and the provisions of this appendix.

(2) Run the brake test until the machine locks up or the maximum readings are achieved, whichever occurs first.

b. Test Results. Brake-testing machine operators will record test results on DA Form 2404. Units may print copies of the sample DA Form 2404 (fig M-1 and M-2) and use them to record brake-test results. DA Form 2404 will be used to transcribe test results to the corresponding SAMS-E DA Form 5987-E and DA Form 5988-E in accordance with instructions in table M-1.

NOTE: A brake-test calculator is available in automated excel format on the USAREUR G4 portal at <https://portal.eur.army.mil/sites/g4/sod/tmb/default.aspx>.

c. Service Brake-Testing Requirement. The total braking force of service brakes for trucks and trailers in relation to the vehicle weight must be as indicated in (1) and (2) below (service-brake percentage).

(1) Vehicles weighing less than 3.5 tons must achieve a service-brake percentage of 50 percent or more.

(2) Vehicles weighing 3.5 tons and more must achieve a service-brake percentage of 45 percent or more.

(3) The service-brake percentage is computed by dividing the total vehicle braking force (in Newtons) by the curb weight of the vehicle (in Newtons) and multiplying by 100.

(4) The total measured braking force is the measured braking force on all wheels or pairs of wheels (test total).

(5) The vehicle weight is shown as the curb weight on the vehicle-data plate or in the specification section of the operator manual. The curb weight is the weight of the vehicle with basic issue items installed and fluids and lubricants filled. Permanently loaded cargo vehicles, including vehicles with shelters, are not required to be unloaded before the brake test. The weight of the cargo and shelter may be estimated and combined with the curb weight of the vehicle. For safety reasons, vehicles carrying ammunition, missiles, and petroleum products will be unloaded for the brake test.

d. Uniform Braking Requirement. The braking-force difference between wheels (or pairs of wheels) on the same axle may not be greater than 25 percent of the higher force measurement. Two formulas will be used to determine the percentage of the braking-force difference:

(1) Divide the lower braking force measurement (in Newtons) by the higher braking force measurement (in Newtons) and multiply the result by 100.

(2) Subtract the axle braking percentage from 100.

NOTE: When HN requirements in c and d above differ from those prescribed by other NATO countries, the standards of the HN where the vehicle is tested will apply.

EQUIPMENT INSPECTION AND MAINTENANCE WORKSHEET For use of this form, see DA PAM 750-8; the proponent agency is DCS, G-4.										
1. ORGANIZATION					2. NOMENCLATURE AND MODEL TRUCK:					
3. REGISTRATION/SERIAL/NSN		4a. MILES	b. HOURS	c. ROUNDS FIRED NA	d. HOT STARTS NA	5. DATE		6. TYPE INSPECTION Machine Brake Test		
7. APPLICABLE REFERENCE										
TM NUMBER			TM DATE		TM NUMBER			TM DATE		
COLUMN a – Enter TM item number. COLUMN b – Enter the applicable condition status symbol. COLUMN c – Enter deficiencies and shortcomings.					COLUMN d – Show corrective action for deficiency or shortcoming listed in Column c. COLUMN e – Individual ascertaining completed corrective action initial in this column.					
STATUS SYMBOLS "X" – Indicates a deficiency in the equipment that places it in an inoperable status. CIRCLED "X" – Indicates a deficiency, however, the equipment may be operated under specific limitations as directed by higher authority or as prescribed locally, until corrective action can be accomplished. HORIZONTAL DASH "(-)" – Indicates that a required inspection, component replacement, maintenance operation check, or test flight is due but has not been accomplished, or an overdue MWO has not been accomplished. DIAGONAL "/" – Indicates a material defect other than a deficiency which must be corrected to increase efficiency or to make the item completely serviceable. LAST NAME INITIAL IN BLACK, BLUE-BLACK INK, OR PENCIL - Indicates that a completely satisfactory condition exists. FOR AIRCRAFT - Status symbols will be recorded in red.										
ALL INSPECTIONS AND EQUIPMENT CONDITIONS RECORDED ON THIS FORM HAVE BEEN DETERMINED IN ACCORDANCE WITH DIAGNOSTIC PROCEDURES AND STANDARDS IN THE TM CITED HEREON.										
8a. SIGNATURE (Person(s) performing inspection)			8b. TIME		9a. SIGNATURE (Maintenance Supervisor)			9b. TIME		10. MANHOURS REQUIRED
TM ITEM NO. <i>a</i>	STATUS <i>b</i>	DEFICIENCIES AND SHORTCOMINGS <i>c</i>			CORRECTIVE ACTION <i>d</i>			INITIAL WHEN CORRECTED <i>e</i>		
		I SERVICE BRAKE RESULT			(Uniform braking requirement for wheels on same axle)					
Front Axle	Left Right:	_____ NEWTONS WITHIN 25%			YES, PASSED [] NO, FAILED []					
Rear Axle 1	Left Right:	_____ NEWTONS WITHIN 25%			YES, PASSED [] NO, FAILED []					
Rear Axle 2	Left Right:	_____ NEWTONS WITHIN 25%			YES, PASSED [] NO, FAILED []					
Rear Axle 3	Left Right:	_____ NEWTONS WITHIN 25%			YES, PASSED [] NO, FAILED []					
Total Axles:		_____ NEWTONS (Total braking force)								
		II SERVICE BRAKE RESULTS			(Total braking force of all axles)					
		a. Compute curb weight of vehicle in Newtons:								
		Curb/empty weight (in lbs) _____ x 4.54 = _____ Newtons								
		b. Compute ratio of BRAKING FORCE in Newtons			to VEHICLE WEIGHT in Newtons and multiply by 100:					
		Braking force _____ divided by vehicle weight _____ x 100 = _____% service brake percentage								
		c. Standard for trucks weighing 3.5 tons or more is 45 percent or greater. Standard for trucks weighing less than 3.5 tons is 50 percent or greater.								
		d. Results: Compare service brake percentage (b above) _____ with standard (c above).								
		RESULT EQUALS OR EXCEEDS STANDARD:			VEHICLE PASSED []					
		RESULT IS LESS THAN STANDARD:			VEHICLE FAILED []					

DA FORM 2404, FEB 2011

PREVIOUS EDITIONS ARE OBSOLETE.

APD PE v1.00ES

Figure M-1: Sample DA Form 2404 for Trucks

EQUIPMENT INSPECTION AND MAINTENANCE WORKSHEET For use of this form, see DA PAM 750-8; the proponent agency is DCS, G-4.										
1. ORGANIZATION					2. NOMENCLATURE AND MODEL TRAILER:					
3. REGISTRATION/SERIAL/NSN		4a. MILES	b. HOURS	c. ROUNDS FIRED NA	d. HOT STARTS NA	5. DATE		6. TYPE INSPECTION Machine Brake Test		
7. APPLICABLE REFERENCE										
TM NUMBER			TM DATE		TM NUMBER			TM DATE		
COLUMN a – Enter TM item number. COLUMN b – Enter the applicable condition status symbol. COLUMN c – Enter deficiencies and shortcomings.					COLUMN d – Show corrective action for deficiency or shortcoming listed in Column c. COLUMN e – Individual ascertaining completed corrective action initial in this column.					
STATUS SYMBOLS "X" – Indicates a deficiency in the equipment that places it in an inoperable status. CIRCLED "X" – Indicates a deficiency, however, the equipment may be operated under specific limitations as directed by higher authority or as prescribed locally, until corrective action can be accomplished. HORIZONTAL DASH "(-)" – Indicates that a required inspection, component replacement, maintenance operation check, or test flight is due but has not been accomplished, or an overdue MWO has not been accomplished. DIAGONAL "(/)" – Indicates a material defect other than a deficiency which must be corrected to increase efficiency or to make the item completely serviceable. LAST NAME INITIAL IN BLACK, BLUE-BLACK INK, OR PENCIL - Indicates that a completely satisfactory condition exists. FOR AIRCRAFT - Status symbols will be recorded in red.										
ALL INSPECTIONS AND EQUIPMENT CONDITIONS RECORDED ON THIS FORM HAVE BEEN DETERMINED IN ACCORDANCE WITH DIAGNOSTIC PROCEDURES AND STANDARDS IN THE TM CITED HEREON.										
8a. SIGNATURE (Person(s) performing inspection)			8b. TIME		9a. SIGNATURE (Maintenance Supervisor)			9b. TIME		10. MANHOURS REQUIRED
TM ITEM NO. <i>a</i>	STATUS <i>b</i>	DEFICIENCIES AND SHORTCOMINGS <i>c</i>			CORRECTIVE ACTION <i>d</i>			INITIAL WHEN CORRECTED <i>e</i>		
		I SERVICE BRAKE RESULT			(Uniform braking requirement for wheels on same axle)					
Front Axle	Left Right:	_____ NEWTONS WITHIN 25%			YES, PASSED [] NO, FAILED []					
Rear Axle 1	Left Right:	_____ NEWTONS WITHIN 25%			YES, PASSED [] NO, FAILED []					
Rear Axle 2	Left Right:	_____ NEWTONS WITHIN 25%			YES, PASSED [] NO, FAILED []					
Rear Axle 3	Left Right:	_____ NEWTONS WITHIN 25%			YES, PASSED [] NO, FAILED []					
Total Axles:		_____ NEWTONS (Total braking force)								
		II SERVICE BRAKE RESULTS			(Total braking force of all axles)					
		a. Compute curb weight of vehicle in Newtons:								
		Curb/empty weight (in lbs) _____ x 4.54 = _____ Newtons								
		b. Compute ratio of BRAKING FORCE in Newtons to VEHICLE WEIGHT in Newtons and multiply by 100:								
		Braking force _____ divided by vehicle weight _____ x 100 = _____% service brake percentage								
		c. Standard for trailers is 45 percent or greater.								
		d. Results: Compare service brake percentage (b above) _____ with standard (c above).								
		RESULT EQUALS OR EXCEEDS STANDARD:			VEHICLE PASSED []					
		RESULT IS LESS THAN STANDARD:			VEHICLE FAILED []					

DA FORM 2404, FEB 2011

PREVIOUS EDITIONS ARE OBSOLETE.

APD PE v1.00ES

Figure M-2: Sample DA Form 2404 for Trailers

e. Parking-Brake Requirement. Parking brakes should not be tested on a brake-testing machine. Parking brakes should be inspected and tested according to the vehicle's TM.

f. Reporting Brake-Testing Failures.

(1) The motor sergeant will report vehicles that have not passed the brake-testing but have passed the five-stop test (para M-14) as "Ready/Available" for readiness reporting purposes (AR 700-138). Vehicles that fail the five-stop test are unsafe to operate and will be rated "not mission capable" (NMC) for readiness reporting purposes.

(2) Vehicles that have not been brake-tested or retested or that have not passed a brake test within 20 workdays after the due date for the brake test will be considered "not ready" or "not available" for readiness reporting purposes. Commanders may clear vehicles that have passed the five-stop test for limited operation (for example, readiness test, mission) by following "circled X" instructions in the SAMS-E User Guide or DA Pamphlet 750-8, as appropriate.

g. Disposition of Brake-Testing Record. The results of the last successful brake test, as recorded on SAMS-E DA Form 5988-E or DA Form 2404, will be kept in the vehicle equipment-record folder until the next annual brake test is conducted. Units with brake-testing machines that print test results on ticker tapes may attach the tape to the completed DA Form 5988-E or DA Form 2404. The paper ticker-tape copy from the machine does not replace the dispatch DA Form 5988-E or DA Form 2404.

h. Tightening Vehicle Brakes. Unit personnel will not tighten vehicle brakes to pass the brake-machine test. Unit personnel will perform major and minor brake adjustments according to instructions in the vehicle's maintenance manual. The wheels of vehicles with manually adjusted brakes must be raised from the ground to adjust brakes properly.

M-13. TRANSCRIBING BRAKE-MACHINE TEST RESULTS FROM DA FORM 2404 TO DA FORM 5897-E AND DA FORM 5988-E

a. Standard Army Maintenance Management System (SAMS-E) Automated Procedures.

(1) Both DA Form 5987-E and DA Form 5988-E must be used. DA Form 5987-E will be automatically filled out while filling out DA Form 5988-E.

(2) Instructions for posting the due date for the next required brake test on DA Form 5988-E are provided in table M-1.

(3) DA Form 2404, DA Form 5987-E, and the current DA Form 5988-E must be issued with each vehicle dispatched.

b. The Army Maintenance Management System (TAMMS) (Manual Procedures). The motor sergeant or maintenance supervisor will—

(1) Transcribe results of the last successful brake tests from DA Form 2404 (fig M-1 and M-2) to the associated DD Form 314 as prescribed in DA Pamphlet 750-8. The letter "T" (in ink) will be used to indicate successful inspections in the date block. The "T" will be annotated as "Brake Tests" in the remarks section of DD Form 314.

(2) Enter "Next brake test due" and a date no later than 6 months for vehicles that transport HAZMAT (para M-8a(1)) or 12 months for other vehicles (para M-8a(2)) from date of the last successful brake test in the remarks section in pencil.

M-14. THE FIVE-STOP TEST

a. Personnel may use the five-stop test instead of the brake-testing machine to test brakes for determination of the serviceable condition of service brakes of tactical vehicles only—

(1) When the supporting brake-testing machine is temporarily out of order. This one-time authorization must be administered before the brake-test due date and is valid for 20 workdays.

(2) That have undergone major repair or adjustment while in the field. This authority expires 20 workdays after the vehicle returns to the home station.

(3) That have failed the machine test or retest. Unit commanders may authorize a mission-capable vehicle that has passed the five-stop test to be driven directly to a repair facility when the vehicle cannot be repaired quickly at the test site.

(4) As an exception to policy for a period not to exceed 6 months with approval of the Chief, Sustainment Operations Division, Office of the Deputy Chief of Staff, G4, HQ USAREUR (mil 537-4616), to give commanders sufficient time to acquire and install the proper brake-testing machine. Commanders will submit requests for exception to policy through command channels.

b. Only the unit motor sergeant or other personnel appointed by the commander will conduct the five-stop test—

(1) In a safe area and in a manner that will not injure personnel or damage property if the brake system fails.

(2) As follows:

(a) Driving the vehicle forward on a hard, level, preferably dry road surface at 25 miles per hour.

(b) Pressing the brake pedal with maximum effort until the vehicle stops.

(c) Bringing the vehicle back to 25 miles per hour and repeating the procedure in (a) and (b) above at least four times. The vehicle must come to a stop when the brakes are applied without pulling to either side. This result must happen five times for the vehicle to pass the five-stop test.

c. The unit motor sergeant or other personnel appointed by the commander will—

(1) Immediately remove any vehicle that fails the five-stop test from service.

(2) Verify brake capability using the five-stop test when the vehicle must be moved to a different facility.

(3) Refer to section II of this appendix for tips to solve brake imbalance problems and preventive maintenance procedures for hydraulic and air-hydraulic brake systems.

M-15. OPERATOR SELECTION AND TRAINING

a. Supervisors of owning units that have not transformed and field-maintenance units with a brake-testing machine will—

(1) Interview maintenance personnel and carefully screen their records to determine whether or not they have the technical ability, judgment, and proper attitude to become competent operators before they are trained to operate brake-testing machines.

(2) Coordinate initial and refresher training with the unit's GPC holder, as required.

(3) Evaluate operators at least once a year to ensure they are conducting the brake testing properly.

(4) Will permit only maintenance personnel who have been properly trained, tested, and certified (paras (5)(a) and (b) below)) to conduct brake-machine testing.

(5) The two approved sources of brake-testing training are as follows:

(a) The brake-testing machine manufacturer (the name and address of the manufacturer is on the data-plate that is normally affixed to the machine).

(b) Dealerships where the brake-testing machine was purchased (the name and address of the dealer is normally affixed to the data-plate on the machine).

(6) Commanders may have a maintenance warrant officer or noncommissioned officer (NCO) (staff sergeant or higher) receive brake-testing machine operator training from a manufacturer. Commanders may use the manufacturer-trained warrant officer or NCO to train and certify other maintenance personnel to operate the same model of brake-testing machine. These maintenance personnel, however, may not train or certify other maintenance personnel.

b. According to the DOD Government Charge Card Guidebook and the DA Standing Operating Procedure for the GPC Program, the GPC may be used to obtain brake-testing machine operator training. Most commercial brake-testing machine manufacturers provide training for less than \$200 per person. The purchase must not exceed \$2,500, providing the resource management office of the unit's higher headquarters has not imposed a lower budgetary limit.

c. Commanders will certify trained brake-testing machine operators using the format in figure M-3 or by making an entry on DA Form 348, DA Form 348E, or OF 346.

M-16. BRAKE-TESTING MACHINE MAINTENANCE

a. Unit-Level Services. Maintenance of brake-testing machines varies from model to model. Unit maintenance personnel should apply the maintenance services prescribed in the respective owners manuals. Most machines require owners only to keep them clean and free of debris; some require greasing of chains and gears according to a set schedule.

CERTIFICATION OF BRAKE-TESTING MACHINE OPERATOR'S TRAINING

This is to confirm that *(name)* received *(number)* hours of training from *(instructor)* on *(date)* in operation of the *(model)* brake-testing machine and is qualified to test motor vehicle brakes.

(Commander's signature block)

Figure M-3. Format for Certification of Brake-Testing Machine Operator's Training

b. Calibration. All brake-test machines must be calibrated by the manufacturer at the owning unit's expense at least once every other year, unless the manufacturer's manual says otherwise. This biannual calibration requirement is consistent with standard European commercial practices. The one exception is that if the operator believes that the machine may be out of calibration, the operator should immediately take action to get the machine recalibrated.

c. Repairs. The BASOPS Maintenance Center - Europe provides brake-testing-machine repair service. Units should coordinate with the BASOPS Maintenance Center - Europe, Customer Service Office, to coordinate the required workorder processing procedures. Repairs will be on a nonreimbursable basis.

M-17. AUTHORIZATION, ACQUISITION, AND ACCOUNTABILITY

a. Brake-testing machines are nonstandard items that must be procured locally. Commanders may use a GPC to buy new machines. Depending on availability of funds, commanders may elect to obtain funding through the unfunded requirement program.

b. This appendix and Common Table of Allowances (CTA) 50-909 provide authority for brake-testing stands (line-item number T54171). CTA 50-909, table 66, authorizes one brake-testing machine per maintenance activity required to test braking systems on wheeled vehicles with approval of the unit's next higher headquarters. Maintenance activities include—

(1) Tactical owning units with organic maintenance (motor pool) capability.

(2) Field maintenance (formerly DS and GS maintenance units) modification table of organization and equipment (MTOE) and table of distribution and allowances (TDA) maintenance activities.

(3) The Theater Logistics Support Center-Europe (TLSC-E).

NOTE: Under the two-level maintenance system, DA plans to systematically replace the terms “using unit,” “DS maintenance unit,” and “GS maintenance unit” with “field maintenance” and “national maintenance.”

c. A brake-testing machine costs between \$30,000 and \$60,000, depending on its size and optional features.

d. Brake-testing machines must be purchased through the local contracting office according to the Federal Acquisition Regulation, Army Contracting Agency, and prescribing directives by the 409th Support Brigade, United States Army Expeditionary Contracting Command, Europe. A list contracting offices is available at <http://www.409csb.army.mil>.

e. Property accountability of brake-testing machines will be according to AR 710-2.

M-18. OTHER BRAKE-TESTING EQUIPMENT

Only brake-testing machines that measure braking retardation at each wheel on the same axle and between wheels on different axles may be used. To use other types of brake machines, commanders must have approval from the Chief, Sustainment Operations Division.

SECTION II BRAKE-TESTING TIPS

M-19. GENERAL

This section lists problem areas that could cause vehicles with shoe or disc brakes of air, hydraulic, air-hydraulic, and air-service-brake systems to have unacceptable imbalance limits and fail the brake-machine test.

M-20. BACKING PLATE

Extreme mechanical friction may be caused by the indentation made in a backing plate at the point of brake-shoe contact. This will cause retarding of the brake application on the wheel. This condition usually appears after brake shoes are replaced. The new shoe “hangs up” in the ledge until enough hydraulic or air pressure has developed to move it.

M-21. BRAKE ADJUSTMENT

Unequally adjusted brakes will cause one brake to make contact with the drum before the other. Some brakes are designed with self-adjusters that eliminate the need for periodic manual adjustment. Occasionally, one of the self-adjusters fails to compensate for lining wear. This will cause the properly adjusted brake to apply before the wheel with the defective adjuster.

M-22. BRAKE DRUM

Actual stretching of the brake drum is possible if drums are worn or beyond prescribed limits. A rise in temperature increases the radius of the drum and, in many instances, reduces contact of the brake shoe with the drum surface. When these factors exist, the drum friction surface is reduced, which results in an even higher temperature and an increased rate of brake fade.

M-23. BRAKE LINING

A brake lining worn beyond prescribed limits causes brake imbalance. Overheated brakes destroy the lining by forming a glaze on the lining surface. The glazed surface offers less friction to the brake drum or rotor, which reduces brake efficiency.

M-24. BRAKE SHOES AND BRAKE LININGS

The entire set of four brake shoes or linings on single-axle military vehicles must be replaced for safety and brake balance. The four must be either all asbestos or all non-asbestos and should have the same color-coded markings. These markings indicate they are of the same composition. Brake shoes must be replaced in sets on a given axle assembly or suspension system to preserve brake balance.

M-25. BRAKE-SHOE RETRACTING SPRING

A weak or broken shoe-retracting spring will allow one shoe to come into contact with the drum before the other. This will result in brake imbalance.

M-26. BRAKE-TESTING VEHICLES WITH COUPLED DOUBLE AXLES ON ROLL TEST BEDS

Limited brake-testing of vehicles with two coupled driving axles is possible. The following must be considered when brake-testing these vehicles:

a. If a differential is installed between the two coupled axles that permits different speeds of approximately 2.5 kilometers per hour (the speed of the brake-testing stand) at the axles during the brake test (2 to 5 minutes), the brake test may be executed on the roll testbed without problems. The two axles may be tested as single axles in this case.

b. If no differential between the axles exists, both axles are rigidly coupled. In this case, one of the following procedures will be used:

(1) The wheel of the axle that is not placed on the test stand will be lifted and the compressed-air line of the wheel-brake cylinder will be pinched. During the brake test, the lifted wheel must be able to turn with the wheels standing on the brake-testing stand (at a double rate of revolution). Since the wheel-brake cylinder has been pinched off, there will be almost no retroactive effect on the braking forces of the wheels on the brake-test stand.

(2) Idling rollers will be installed in front of and behind the testing stand. The wheels of the double axel not being brake-tested can then move freely on the idling rollers after the compressed air supply to those wheels is blocked.

NOTE: An accurate brake test cannot be conducted unless the compressed air supply to the axle not being tested is blocked.

(3) The drive shaft between the axles will be loosened or the stub shaft on the axle that will not be tested will be removed. In general, loosening the drive shaft or removing the stub shaft is not easy and should be done only as an exception.

c. On plate testbeds, the braking forces of the two right and left wheels of the double axel may be measured using the same method used to measure vehicles with rigidly coupled axles.

d. Instructions in the brake-machine operator manual must be followed.

M-27. HYDRAULIC LINE

A brake imbalance may be caused by a hydraulic-line restriction in a one-wheel-brake line. This is usually caused by an internally deteriorated flexible hose between the frame and wheel assembly. Foreign matter in a line could partially block fluid passage. Accidental flattening of a metal-brake line (for example, from a flying stone) also could cause the problem.

M-28. IMPROPER BRAKE ASSEMBLY

Some vehicle-brake systems have primary and secondary-brake shoes. A brake imbalance will occur if the shoes are incorrectly positioned.

M-29. LINING CONTAMINATION

a. Lining contaminated with fluid such as brake fluid, grease, oil, or water will cause a brake imbalance. The behavior of the brakes will vary depending on the age, amount, and type of fluid. In some instances, the brake force will be momentarily very high. As the lining surface is heated, the contaminant becomes a lubricant, causing the brake force to fall below that of the opposite wheel. If liquid contamination is great (for example, immediately after crossing a stream) or very low, no brake force will develop in the wheel.

b. A small amount of contamination on a lining will cause an imbalance until the lining is replaced. A small amount of brake fluid on a lining may not be visible. After several applications, brakes may appear normal. However, when the brakes cool down, the imbalance returns. Often the brake assembly may appear dry.

(1) Closer examination should be made by looking for fluid leakage under the dust boots of the wheel cylinders. Dampness at this point indicates leaking wheel-cylinder cups. This seepage turns to gas in the heated brake assembly. As it cools, it permeates the lining and causes the contamination.

(2) Contamination may be evident in the brake dust. Normal dust is dry and powdery, and the dust in contaminated brakes appears dark and heavy.

(3) Disc-brake pads can become contaminated from road splash.

M-30. SPONGY BRAKE PEDAL

Air in hydraulic lines can cause a spongy brake pedal because of air compressibility. This usually occurs if the mechanic forgets to bleed the system thoroughly after replacing the wheels, brake hoses, lines, and master or air-hydraulic cylinders.

M-31. TIRES

a. Worn tires reduce rolling resistance; low tire pressure increases rolling resistance. This type of resistance is observable on the brake-force gauge.

b. Wet or icy tires may not come up to the speed of the brake motors. If this occurs, the brake motors may continue to rotate the wheels for a few seconds to dry the tires.

M-32. WHEEL CYLINDERS

Corrosion buildup between the piston and wheel-cylinder bore will cause unwanted mechanical friction. Disc-brake pistons can also become sticky or seize, causing improper mechanical application. This corrosion may make the piston sluggish in application or totally inoperative.

M-33. OTHER TROUBLESHOOTING

TB 9-2300-426-20 provides additional methods of troubleshooting hydraulic and air-hydraulic brake systems of tactical wheeled vehicles.

APPENDIX N

COMMUNICATIONS SECURITY MATERIEL

N-1. PURPOSE

This appendix applies to the maintenance of communications security (COMSEC) materiel (AR 750-1, para 6-22). This appendix must be used with AR 380-40 and AE Regulation 380-40.

N-2. REFERENCES

Appendix A lists references.

N-3. EXPLANATION OF ABBREVIATIONS

The glossary defines abbreviations.

N-4. RESPONSIBILITIES

a. Operator maintenance of COMSEC materiel in transformed and nontransformed units is the responsibility of the owning unit commander. Commanders will ensure COMSEC materiel is properly maintained in accordance with the associated operator and field maintenance technical manual (TM).

b. Commanders of units and activities stationed in Benelux, Bulgaria, Germany, Italy, Kosovo, Romania, and the Netherlands, will immediately turn in unserviceable COMSEC materiel beyond the operator's maintenance capability to the assigned COMSEC manager for repair or disposition in accordance with AR 750-1. If the name of the assigned COMSEC manager is unknown, the Intelligence Support Division, Office of the Deputy Chief of Staff, G2, HQ USAREUR, at military 537-2104/2103, may be contacted for assistance.

N-5. GENERAL

a. All COMSEC materiel is classified.

NOTE: The Controlled Item Inventory Code for COMSEC materiel is listed in the Army Master Data File/Federal Logistics Record.

b. Examples of COMSEC materiel include the following:

(1) Line-item number (LIN) E03568, national stock number (NSN) 5810-01-111-4081, KG-83, Electric key.

(2) LIN K23146, NSN 5810-01-082-8411, HGX-83, Key distribution center.

(3) LIN K23146, NSN 5810-01-357-4949, HGX-83A, Key distribution center.

(4) LINK23214, NSN 5810-01-212-8128, KGX-93, Key distribution center.

(5) LIN Z62433, NSN 5810-01-248-6018, KOK-13, Transfer unit, Cryptographic key.

c. The modification work order (MWO) application and reporting process will be funded by the proponent of the MWO with procurement Army financial appropriations at no cost to the using unit or activity in accordance with AR 750-10 and appendix H of this regulation.

d. Additional COMSEC materiel assistance is available from the USAREUR G2 Security Specialist at military 370-7213/8824.

APPENDIX O

CONTROLLED CRYPTOGRAPHIC ITEMS

O-1. PURPOSE

This appendix applies to the maintenance of controlled cryptographic items (CCI) (AR 750-1, para 6-28). This appendix must be used with AR 380-40 and AE Regulation 380-40, as clarified in Memorandum for Record (AEAGB-ISD-SECURITY), 5 October 2011, subject: Army in Europe Regulation (AER) 380-40 Procedural Clarification, Appendix C, Controlled Cryptographic Items (CCI), until AE Regulation 380-40 is revised.

O-2. REFERENCES

Appendix A lists references.

O-3. EXPLANATIONS OF ABBREVIATIONS

The glossary defines abbreviations.

O-4. RESPONSIBILITIES

- a. Operator maintenance of CCI in transformed and nontransformed units is the responsibility of the owning unit commander. Commanders will ensure that proper maintenance procedures are used to maintain CCI in accordance with the associated operator and field maintenance technical manual.
- b. In-country CCI maintenance support is not available in USAREUR.
- c. Unserviceable CCI beyond the operator's maintenance capability will be turned in through supply channels in accordance AR 380-40 and AE Regulation 380-40.
- d. The modification work order (MWO) application and reporting process will be funded with procurement Army financial appropriations at no cost to the using unit or activity in accordance with AR 750-10.
- e. Additional CCI assistance is available from the USAREUR G2 Security Specialist at military 537-2104/2103 and the supporting Communications-Electronics Life Cycle Management Command (CECOM) logistics assistance representative (LAR). If the name of the CECOM LAR is unknown, the CECOM senior command representative may be contacted for assistance (mil 483-4926/4918).

O-5. GENERAL

- a. CCI are declassified communications security (COMSEC) materiel (AR 750-1, para 6-28).

NOTE: The Controlled Item Inventory Code for COMSEC materiel is listed in the Army Master Data File/Federal Logistics Record.

- b. Examples of CCI include:

- (1) Line-item number (LIN) C52700, national stock number (NSN) 5810-01-376-1380, KY-100, Cryptographic speech equipment.
- (2) LIN D78995, NSN 5810-01-393-1973, ANCYZ-10V2, Transfer unit, cryptographic key.
- (3) LIN E08690, NSN 5810-01-431-8264, KIV-7, Encryption-decryption equipment.
- (4) LIN R71604, NSN 5810-01-026-9623, Z-AHP, Control, light source remote.
- (5) LIN S01441, NSN 5810-01-449-0154, KY-58, Speech security equipment.

APPENDIX P

INTELLIGENCE AND ELECTRONIC WARFARE ITEMS

P-1. PURPOSE

This appendix applies to maintenance of intelligence and electronic warfare (IEW) items (AR 750-1, sec VI).

P-2. REFERENCES

Appendix A lists references.

P-3. EXPLANATIONS OF ABBREVIATIONS

The glossary defines abbreviations.

P-4. RESPONSIBILITIES

- a. Commanders of transformed and nontransformed units will ensure that IEW materiel is properly maintained in accordance with the associated operator maintenance technical manual.
- b. Field-maintenance units (formerly “direct support maintenance units”) are responsible for providing field maintenance support to customer units within their capability and capacity in accordance with the unit’s modified table of organization and equipment.
- c. Unserviceable IEW materiel beyond the field-maintenance unit’s capability will be job-ordered through the Theater Logistics Sustainment Command-Europe (TLSC-E) to the Maintenance Activity Pirmasens (MAP) for repair on a repair-and-return-to-customer basis. (The MAP communications and electronics mission will be merged with the Maintenance Activity Kaiserslautern (MAK) in 2013.)
- d. Customers will call military 483-3538 for paperwork requirements and a delivery date and location to start a field maintenance work order at MAP or MAK.
- e. In-country sustainment maintenance support for IEW is not available in USAREUR. Unserviceable IEW materiel beyond field maintenance repair capability will be turned in to the supply system as “not repairable at this station” and a replacement will be ordered simultaneously in accordance with AR 710-2.
- f. The proponent of a modification work order (MWO) for IEW materiel is responsible for installing the associated MWO at no cost to the owning unit in accordance with AR 750-10 and appendix H of this regulation.
- g. Additional IEW materiel assistance is available from the supporting Communications-Electronics Life Cycle Management Command (CECOM) logistics assistance representative (LAR). If the name of the CECOM LAR is unknown, the CECOM senior command representative may be contacted for assistance (mil 483-4926/4918).

P-5. GENERAL

a. The Controlled Item Inventory Code for all IEW materiel is listed in the Army Master Data File/Federal Logistics Record as “9.”

b. Examples of IEW materiel include the following:

- (1) Harris radios.
- (2) Multiband inter/intra team radios.
- (3) Sinegars radios.
- (4) Spitfire/shadow radios.

APPENDIX Q

PRODUCT QUALITY DEFICIENCY REPORTS

Q-1. PURPOSE

a. The Product Quality Deficiency Report (PQDR) Program provides an opportunity for units in USAREUR to receive a 100-percent refund for defective nonconsumable and consumable repair parts received through the normal Army supply system. Additionally, after the reported defective repair part is confirmed, the National-level item manager uses the PQDR to purge the same defective repair parts in stock, file a claim against the manufacturer, and alert users DOD-wide of the defective materiel, as necessary.

b. This appendix must be used with AR 750-1, paragraph 8-10.

Q-2. REFERENCES

Appendix A lists references.

Q-3. EXPLANATIONS OF ABBREVIATIONS

The glossary defines abbreviations.

Q-4. RESPONSIBILITIES

a. Aviation maintenance company (AMC) (formerly aviation unit maintenance (AVUM)) and aviation support company (ASC) (formerly aviation intermediate maintenance (AVIM)) personnel will prepare and submit PQDRs for aviation equipment and materiel to the Customer Complaint Team (CCT), Theater Logistics Support Command-Europe (TLSC-E), in accordance with DA Pamphlet 738-751.

b. Personnel assigned to field-maintenance units (formerly “using units” and “direct support maintenance units”) will submit PQDRs for ground-support equipment and materiel to the CCT.

c. The CCT will execute the PQDR program with existing personnel, financial, and other organic resources and is responsible for the following:

(1) For quality problems reported directly to the CCT, a CCT representative will visit the customer unit and validate the problem within 48 hours on workdays or in coordination with the customer after receiving notification by telephone, fax, or e-mail (d(1) below).

(2) If the defective part was produced by an in-country maintenance facility, the CCT coordinates to either have the problem fixed on site or arranges to rapidly get a replacement item to the unit at no additional cost to the unit.

(3) If the defective part came from CONUS, the CCT prepares SF 368 in coordination with the customer unit subject-matter expert and submits the form on behalf of the unit to the online Product Data Reporting and Evaluation (PDREP), Joint Deficiency Reporting System, at <http://www.jdrs.mil>. The CCT also tracks the status of each PQDR until the report is disapproved or approved or the unit receives a full refund for the defective part.

(4) Send a copy of the monthly PQDR review and analysis briefing slides to the USAREUR PQDR subject-matter expert, Sustainment Operations Division, Office of the Deputy Chief of Staff, G4, HQ USAREUR.

d. Customer units will report quality problems in either of the following ways:

(1) For nonconsumable repair parts, such as major assemblies that are rebuilt in USAREUR, the CCT will be contacted for rapid assistance (mil 483-3333, fax 483-3303, or e-mail: cct@us.army.mil).

(2) For nonconsumables repair parts rebuilt in CONUS and new parts received from the supply system, the customer may either—

(a) Contact the CCT for assistance ((1) above).

(b) Submit an online PQDR directly to the PDREP (c(3) above) and send a copy of the online PQDR to the CCT.

e. All field and sustainment-maintenance activities with access to the Standard Army Maintenance System-Enhanced (SAMS-E) are required to conspicuously post at least two CCT posters in the shop area with CCT contact information. The contract information is available from the CCT.

Q-5. GENERAL

a. Most nonconsumable repairable or major assemblies are rebuilt in CONUS, but some are rebuilt in USAREUR. A tag is affixed to most items during rebuilding with the name of the facility or contractor that rebuilt the item. Examples of nonconsumable repair parts are the following:

(1) Alternators.

(2) Axle assemblies.

(3) Electrical distribution-box engines.

(4) Fuel-burning heaters.

(5) Fuel-injection pumps.

(6) Power supplies.

(7) Receiver-transmitters.

(8) Starters.

(9) Tire and wheel assemblies as listed in appendix K, tables K-1 through K-8.

(10) Transmissions.

b. Consumable repair parts include all parts listed in the repair parts and special tools list in the TM 20- and 30-series for assigned equipment and parts that are used to rebuild repairables or major assemblies. Examples of repair parts are—

(1) Brake calipers and rotors.

(2) Brake pads and shoes.

(3) Exhaust system parts.

(4) Fan belts.

(5) Hoods and grills.

(6) Oil filters.

(7) Radiators.

(8) Rear- and side-view mirrors.

(9) Water hoses and pumps.

c. Nonconsumable and consumable repair parts are considered defective when any of the following, which is not an all-inclusive list, applies:

(1) The part does not work when it is installed, plugged in, or turned on for the first time.

(2) The part leaks fluid, lacks power, slips, overheats, or makes unusual noises when the end item is operated for the first time.

(3) The part appears to be substandard and needs to re-engineered or redesigned.

(4) The part is out of specification (for example, wrong dimensions, unfinished surface, wrong shape, hole drilled in the wrong place).

GLOSSARY

12th CAB	12th Combat Aviation Brigade
21st TSC	21st Theater Sustainment Command
405th SB	405th Support Brigade
A&I	assistance and instruction
ABS	antilock braking system
ACOR	alternate contracting officer's representative
ACSA	acquisition and cross-servicing agreement
AMC	United States Army Materiel Command, aviation maintenance company
AMDF	Army master data file
AMSAA	United States Army Materiel Systems Analysis Agency
AOAP	Army Oil Analysis Program
AR	Army regulation
ASC	aviation support company
ASV	armored security vehicle
AVIM	aviation intermediate maintenance
AVUM	aviation unit maintenance
BII	basic issue items
BSB	brigade support battalion
CARC	chemical agent resistant coating
CCI	controlled cryptograph items
CCT	Customer Complaint Team, Theater Logistics Support Command-Europe
CECOM	Communications-Electronics Life Cycle Management Command
CFT	contract field team
COMSEC	communications security
CONUS	continental United States
COR	contracting officer's representative
CTIS	central tire inflation system
DA	Department of the Army
DAC	Department of the Army civilian
<i>DIN</i>	<i>Deutsches Institut für Normung</i>
DODAAC	Department of Defense activity address code
DS	direct support
ECC-E	United States Army Expeditionary Contracting Command-Europe
ECOD	estimated cost of damages
EP	exchange pricing
FAD	force activity designator
FEDC	field exercise data collection
FEDLOG	Federal Logistics Record
FMC	fully mission capable
FMTV	family of medium tactical vehicles
FOV	family of vehicles
FSC	forward support company
GS	general support
HAZMAT	hazardous material
HEMAT	heavy expanded mobility ammunition trailer
HET	heavy equipment transporter
HN	host nation
HQDA	Headquarters, Department of the Army

HW	hazardous waste
IEW	intelligence and electronic warfare
IMMA	Installation Materiel Maintenance Activity
ISSA	interservice support agreement
JMTC	Seventh United States Army Joint Multinational Training Command
LAR	logistics assistance representative
LCMC	United States Army Life Cycle Management Command
LIDB-MM	Logistics Integrated Database Maintenance Module
LIN	line-item number
LIS	Logistics Information System
LIW	Logistics Information Warehouse
LMRC	life cycle management command
LN	local national
LOGSA	Logistics Support Activity
MAIT	maintenance assistance and instruction team
MC	mission capable
MEL	maintenance expenditure limit
MMIS	Modification Management Information System
MOA	memorandum of agreement
MOC	maintenance operational check
MOS	military occupation specialty
MOU	memorandum of understanding
MRAP	mine resistant ambush protected
MSC	major subordinate command
MSHA	Mine Safety and Health Administration
MTOE	modified table of organization and equipment
MWO	modification work order
MWOFP	modification work order fielding plan
NATO	North Atlantic Treaty Organization
NBC	nuclear, biological, and chemical
NCO	noncommissioned officer
NIIN	national item identification number
NIOSH	National Institute for Occupational Safety and Health
NMC	not mission capable
NMCM	not-mission-capable maintenance
NMCS	not-mission-capable supply
NSN	national stock number
NSPA	North Atlantic Treaty Organization Support Agency
OF	optional form
ORF	operational readiness float
OSHA	Occupational Safety and Health Agency
PDQR	product quality deficiency report
PDREP	Product Data Reporting and Evaluation
PEL	permissible exposure limit
PLS	palletized load system
PMC	partially mission capable
PMCS	preventive maintenance checks and services
POC	point of contact
RPM	respiratory protection monitor
SA	support agreement

SAMO	Sustainment Acquisition Management Office, Support Operations, 21st Theater Sustainment Command
SAMS	Standard Army Maintenance System
SAMS-1E	Standard Army Maintenance System-Enhanced Level 1
SAMS-2E	Standard Army Maintenance System-Enhanced Level 2
SAMS-E	Standard Army Maintenance System-Enhanced
SCR	senior command representative
SDC	sample data collection
SFIT	special field information tasks
SFTP	secure file transfer protocol
SME	subject matter expert
SOD	Sustainment Operations Division, Office of the Deputy Chief of Staff, G4, Headquarters, United States Army Europe
SOP	standing operating procedure
SOW	statement of work
SPO	Support Operations, 21st Theater Sustainment Command
SRA	special repair authority
SSA	supply support activity
TACOM	United States Army Tank-Automotive and Armaments Command
TAMMS	The Army Maintenance Management System
TASM-O	Theater Aviation Sustainment Maintenance-OCONUS
TB	technical bulletin
TDA	table of distribution and allowances
TDY	temporary duty
TLSC-E	Theater Logistics Support Center-Europe
TM	technical manual
TWV	tactical wheeled vehicle
ULLS-AE	Unit Level Logistics System-Aviation Enhanced
UIC	unit identification code
UIT	unit item tracking
USAG	United States Army garrison
USAPHCR-E	United States Army Public Health Command Region-Europe
USAREUR	United States Army Europe
WD	water dispersible