

Army Regulation 750–59

Maintenance of Supplies and Equipment

Corrosion Prevention and Control for Army Materiel

**Headquarters
Department of the Army
Washington, DC
19 March 2014**

UNCLASSIFIED

SUMMARY of CHANGE

AR 750-59

Corrosion Prevention and Control for Army Materiel

This major revision, dated 19 March 2014--

- o Change the title from Army Corrosion Prevention and Control Program to Corrosion Prevention and Control for Army Materiel (cover).
- o Assigns the Assistant Secretary of the Army (Acquisitions, Logistics, and Technology) responsibility for designating the Corrosion Control and Prevention Executive as defined in the Duncan Hunter National Defense Authorization Act for Fiscal Year 2009 (para 2-1).
- o Incorporates the Deputy Chief of Staff, G-3/5/7's role in corrosion prevention and control at the field level (para 2-2).
- o Removes U.S. Army Materiel Command as the Army's corrosion program manager (para 2-5).
- o Identifies corrosion prevention and control resourcing requirements at each organizational level in order to sustain an effective corrosion prevention and control program for Army materiel (para 2-5).
- o Identifies U.S. Army Materiel Command as having responsibility for planning and execution of sustainment of Army materiel (para 2-5).
- o Specifies the corrosion prevention and control responsibilities of the Life Cycle Management Commands (para 2-6).
- o Adds an internal control evaluation (app B).

Effective 19 April 2014

Maintenance of Supplies and Equipment

Corrosion Prevention and Control for Army Materiel

By Order of the Secretary of the Army:

RAYMOND T. ODIERNO
General, United States Army
Chief of Staff

Official:



GERALD B. O'KEEFE
Administrative Assistant to the
Secretary of the Army

History. This publication is a major revision.

Summary. This regulation establishes Army policies for implementing and managing effective corrosion prevention and control for sustainment of all Army materiel and components.

Applicability. This regulation applies to the Active Army, the Army National Guard/Army National Guard of the United

States, and the U.S. Army Reserve, unless otherwise stated.

Proponent and exception authority.

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

Army internal control process. This regulation contains internal controls and provides an Internal Control Evaluation

for use in evaluating key internal controls (see appendix B).

Supplementation. Supplementation of this regulation and establishment of command or local forms are prohibited without prior approval from the Deputy Chief of Staff, G–4 (DALO–MNF), Washington, DC 20310–0500.

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

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

Contents (Listed by paragraph and page number)

Chapter 1

General, page 1

Purpose • 1–1, page 1

References • 1–2, page 1

Explanation of abbreviations and terms • 1–3, page 1

Responsibilities • 1–4, page 1

Concept • 1–5, page 1

Exception • 1–6, page 1

Chapter 2

Responsibilities, page 1

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

Deputy Chief of Staff, G–3/5/7 • 2–2, page 1

Deputy Chief of Staff, G–4 • 2–3, page 1

The Surgeon General • 2–4, page 2

Commanding General, U.S. Army Materiel Command • 2–5, page 2

*This publication supersedes AR 750–59, dated 9 December 2005.

Contents—Continued

Commanding Generals, Life Cycle Management Commands • 2-6, *page 3*

Commanding General, U.S. Army Training and Doctrine Command • 2-7, *page 3*

Commanding Generals, Army commands, Army service component commands, direct reporting units, Chief, U.S. Army Reserve, and the Chief, National Guard Bureau • 2-8, *page 3*

Unit commanders • 2-9, *page 4*

Unit corrosion monitors • 2-10, *page 4*

Chapter 3

Policy Implementation, *page 5*

Design • 3-1, *page 5*

Corrosion test and evaluation • 3-2, *page 5*

Life Cycle Management Command • 3-3, *page 5*

Maintenance and storage • 3-4, *page 6*

Training and awareness • 3-5, *page 7*

Command corrosion prevention and control surveys • 3-6, *page 7*

Appendixes

A. References, *page 9*

B. Internal Control Evaluation, *page 12*

Glossary

Chapter 1 General

1-1. Purpose

This regulation establishes the policies and responsibilities for implementing corrosion prevention and control (CPC) for maintenance and sustainment of Army materiel. This regulation establishes training and survey requirements to support CPC at the field and sustainment levels.

1-2. References

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

1-3. Explanation of abbreviations and terms

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

1-4. Responsibilities

Responsibilities are listed in chapter 2.

1-5. Concept

CPC is a critical consideration in ensuring the sustained performance, readiness, economical operation, and service life of Army systems and equipment throughout their life cycle. CPC will be addressed in the materiel development, acquisition, fielding, operation, modification, upgrade, and storage processes of Army materiel. CPC requires life cycle management planning and execution in design, development, testing, fielding, training, and maintenance.

1-6. Exception

This regulation does not cover the facilities engineering program as managed by the Assistant Chief of Staff for Installation Management for real property and for the real property installed equipment as defined in AR 420-1.

Chapter 2 Responsibilities

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

The ASA (ALT) will—

- a.* Designate the Corrosion Control and Prevention Executive (CCPE) pursuant to Public Law 110-417. The CCPE will be responsible for coordinating Department of the Army (DA)-level CPC program activities.
- b.* Designate a principal point of contact to coordinate DA-level CPC Program activities with the Army, Department of Defense staff, and Program Executive Offices (PEOs).
- c.* Ensure that CPC is incorporated into DA policy and guidance for management of the following
 - (1) System acquisition and production.
 - (2) Research, development, test, and evaluation (RDT&E) programs and activities.
 - (3) Equipment standardization programs, including international standardized agreements.
 - (4) Research and development initiatives specific to logistics.
 - (5) Supportability analysis as it relates to integrated logistics support (ILS) in the materiel acquisition process in accordance with AR 700-127 and DA Pam 700-56.
- d.* Support the command CPC survey team process.

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

The DCS, G-3/5/7 will—

- a.* Plan, program, and budget resources to train personnel and sustain an effective field level CPC Program for systems through the Army Force Generation (ARFORGEN) cycle, in coordination with U.S. Army Training and Doctrine Command (TRADOC).
- b.* In coordination with TRADOC, ensure CPC is addressed in the generation of capabilities documents for weapon systems and associated materiel.

2-3. Deputy Chief of Staff, G-4

The DCS, G-4 has responsibility for oversight and resourcing CPC for Army materiel. The DCS, G-4 will—

- a.* Advise the Army CCPE in the area of corrosion and corrosion-related issues pertaining to the functional area of logistics.

- b.* Coordinate CPC requirements for systems at Headquarters, Department of the Army, and provide support to CPC efforts during design and production.
- c.* Designate a single DCS, G-4 point of contact to the Army CCPE on CPC activities.
- d.* Plan, program, and budget resources to support an effective sustainment CPC Program for fielded systems through the ARFORGEN cycle.
- e.* Evaluate the program's effectiveness through routine field sampling in coordination with Army commands (ACOMs), Army service component commands (ASCCs), direct reporting units (DRUs), Army National Guard (ARNG), and U.S. Army Reserve (USAR).
- f.* Ensure that CPC requirements are reflected in DA policies for maintenance, supply, and transportation of materiel for all components of the Army.
- g.* Serve as the principle Army staff element for CPC.
- h.* Maintenance and sustainment of fielded Army equipment.
- i.* Leverage the U.S. Army Logistics Innovation Agency, a field operating agency under the DCS, G-4, to advise the DCS, G-4 in the area of innovative corrosion and corrosion-related solutions pertaining to the functional area of logistics.

2-4. The Surgeon General

TSG will—

- a.* Ensure that CPC is a consideration in the following:
 - (1) Drafting of medical materiel requirements documents.
 - (2) Direction, evaluation, and coordination of medical materiel.
 - (3) Medical materiel maintenance programs.
 - (4) Medical materiel life cycle management.
 - (5) Procurement, operation, and evaluation of all food service materiel, food, and potable water contact surfaces.
 - (6) Plan, program, and budget resources for CPC environmental, safety, and occupational health (ESOH) evaluations that support sustainment of fielded systems through the ARFORGEN cycle.
 - (7) Survey of medical materiel during command logistics review and logistics assistance visits.
- b.* Provide guidance to ensure ESOH standards and regulations for human health and environmental protection are observed during corrosion control practices. This guidance is especially important since volatile organic compounds, heavy metals, and other toxic and pollutant materials are commonly used in corrosion control.
- c.* Ensure that CPC technologies recommended by the Army CCPE for use in new weapons systems designs or in sustainment procedures for fielded systems have met applicable ESOH requirements to ensure human health and environmental protection.

2-5. Commanding General, U.S. Army Materiel Command

The CG, AMC has overall responsibility for planning and executing the sustainment of Army materiel. The CG, AMC will—

- a.* Appoint a CPC functional manager to administer the command-level program and report the name and contact information to the DCS, G-4 (Director of Maintenance) within 60 days of assignment or re-assignment.
- b.* Establish and oversee command level CPC policy and procedures to include a periodic assessment of the program.
- c.* Emphasize to all subordinate organizations the importance of CPC planning in reducing life cycle costs, improving materiel availability, and/or readiness, and supporting system safety.
- d.* Establish, manage, and execute a command-level CPC program. The program should consider implementing corrosion prevention, detection, and mitigation practices during sustainment of the five major commodity areas (aircraft and missile system, to include support equipment; communications and electronics equipment; munitions and associated equipment; tactical and combat vehicles to include armament; and Soldier equipment and other ground equipment).
- e.* Ensure that corrosion is addressed through the National Maintenance Management Program, the Army Item Depot Maintenance Program, Theater Reserve, War Reserve, and prepositioned stocks, to include the development of budget requests in support of program requirements.
- f.* In cooperation with the ASA (ALT), support the planning, programming, budgeting, and execution of RDT&E to investigate new technologies for the prevention and mitigation of corrosion of fielded systems.
- g.* Support and provide assistance to the PEOs and program managers (PMs) through the Life Cycle Management Commands (LCMCs), Research, Development, and Engineering Command (RDECOM) and depots, in the establishment and implementation of their individual CPC programs, with resources and technical expertise in the planning, programming, budgeting, and execution of CPC.
- h.* Assure that CPC is adequately addressed in the following areas:
 - (1) RDT&E programs and activities.

- (2) Equipment standardization programs, including international standardized agreements.
- (3) Logistics research and development initiatives.
- (4) Supportability analysis as it relates to ILS in the materiel acquisition process.
- (5) Collection, distribution, and feedback of system test and equipment maintenance information relating to corrosion.

2-6. Commanding Generals, Life Cycle Management Commands

The CGs, LCMCs will—

- a.* Appoint a corrosion PM for the CPC Program on the basis of guidance from the AMC responsible official and implement Army Program policy.
- b.* Establish a CPC program office to administer the Army CPC Program.
- c.* In coordination with RDECOM, support and provide assistance to the PEOs, PMs, and depots in the establishment and implementation of their individual CPC programs, to include providing CPC plans and Corrosion Prevention Action Teams (CPATs) with resources and technical expertise in accordance with AR 70-1.
- d.* Assure that CPC is adequately addressed in the following areas:
 - (1) Collection, distribution, and feedback of system test and equipment maintenance information relating to corrosion.
 - (2) Army materiel acquisition, recapitalization, remanufacture, overhaul, and/or product improvement, including the evaluation of each proposal for a new system, equipment, or component.
 - (3) Manufacturing technology and related programs.
 - (4) Testing and evaluation on the equipment, processes, and application techniques within the assigned areas of responsibility. (This specifically includes nondestructive testing and evaluation of commercial material, equipment, or processes.)
 - (5) Evaluation of nondevelopmental items, equipment, and systems.
 - (6) Care of supplies in storage, including preservation, packaging, and exercising requirements.
- e.* Ensure that CPC is included in all applicable materiel, logistics, and maintenance trade studies, tradeoff analysis, and risk mitigation planning. The Corrosion Prevention Action Team will be used to assist in these activities.
- f.* Provide information to and support the weapons systems managers.
- g.* Develop and provide commodity specific corrosion training addressing the causes of corrosion, detection, consequences, and corrective and preventive measures, for appropriate personnel involved in maintenance of Army materiel.
- h.* Provide corrosion control inspection (CCI) checklists for use by personnel performing PMCS.

2-7. Commanding General, U.S. Army Training and Doctrine Command

The CG, TRADOC will—

- a.* Include corrosion and deterioration control considerations in the supportability analyses process early in the materiel acquisition and/or development phase.
- b.* Integrate CPC training into existing programs of instruction for operators and appropriate military and civilian maintenance and supply personnel concerning the causes of corrosion, detection, and corrective and preventive measures.
- c.* Integrate CPC training within Warrior Leader Courses to foster a command emphasis on sustaining Army materiel readiness. Ensure that appropriate course curricula and training materials reflect the current CPC information available from AMC. Corrosion training will include the necessary ESOH requirements.
- d.* Disseminate training materials to all participating commands and furnish, on request, the following:
 - (1) Copies of CPC training materials.
 - (2) Subsequent major revisions that reflect the incorporation of additional or advanced technical corrosion data or the development of new corrosion courses.
- e.* Ensure compatibility with nuclear, biological, and chemical contamination survivability for Army materiel, as described in AR 70-75.

2-8. Commanding Generals, Army commands, Army service component commands, direct reporting units, Chief, U.S. Army Reserve, and the Chief, National Guard Bureau

CGs, ACOMs, ASCCs, and DRUs; Chief, USAR; and the CNGB will establish and maintain an effective command-level program. Each commander and/or chief will (as applicable)—

- a.* Appoint a CPC manager to administer the command-level program and report the name and contact information to the DCS, G-4 (Director of Maintenance) within 60 days of assignment or reassignment.
- b.* Establish and oversee command level CPC policy and procedures.
- c.* Ensure that all subordinate command activities understand and fulfill their responsibilities under the command program.
- d.* Plan, program, and budget resources to comply with the requirements of this regulation.

- e. Participate in and provide host support to command CPC survey teams based on survey schedules, as established in paragraph 3–6.
- f. Conduct a statistical sampling of subordinate units and review of the command CPC policies and program at least every 36 months.
- g. Propose and manage CPC training for maintenance, storage, supply, and technical personnel as required by the local command. Ensure that host-tenant agreements include funding for support and training in CPC, as appropriate.
- h. Review and adjust the various periodic system inspection cycles, based on operational and environmental factors, to prevent equipment deficiencies due to corrosion.
- i. Ensure that the CPC program complies with host nation, Federal, State, and local ESOH regulations and standards.
- j. Ensure that Army equipment operators, maintenance, storage and supply personnel in the field are trained to identify, correct, and report corrosion and employ prescribed corrosion control practices.
- k. Ensure that deficiency reports: DA Form 2404 (Equipment Inspection and Maintenance Worksheet)/DA Form 5988–E (Equipment Inspection/Maintenance Worksheet), DA Form 2407 (Maintenance Request), DD Form 1225 (Storage Quality Control Report), Standard Form (SF) 364 (Report of Discrepancy (ROD)), and SF 368 (Product Quality Deficiency Report (PQDR)), on systems and equipment involving corrosion are submitted as specified in DA Pam 738–751 and DA Pam 750–8.
- l. Participate in the coordination and execution of CPC command surveys. The ACOM, ASCC, DRU, ARNG, and/or USAR will assist in determining areas that require improved corrosion control and recommend evaluation of specific systems, equipment, or components susceptible to corrosion damage.
- m. A copy of the command CPC survey will be provided to the appropriate ACOM, ASCC, DRU, ARNG, and/or USAR for assignment and subsequent resolution, action, and feedback by the appropriate AMC LCMCs. The appropriate ACOM, ASCC, DRU, ARNG, and/or USAR will propose action to the DCS, G–4 and the CCPE, act on assigned action items, and submit status quarterly to DCS, G–4 until the action is complete.

2–9. Unit commanders

Unit commanders will—

- a. Appoint corrosion monitor(s) on unit orders, as an additional duty.
- b. Ensure corrosion monitor receives training in corrosion prevention, mitigation, and safety from an accredited corrosion course or program.
- c. Ensure all unit personnel receive CPC training appropriate for their duties.
- d. Integrate CPC awareness into all levels of maintenance including depot, inter-Service contracts and life cycle contractor support.
- e. Ensure that unit SOP CPC procedures are complete, revised as necessary and all unit personnel are aware and comply with them.
- f. Ensure a safe environment is created and maintained for those working in the CPC program. This includes but is not limited to facilities, equipment and supplies.
- g. A training program is established at all maintenance levels to reinforce CPC inspection, detection, and treatment skills. As a minimum, it will include annual refresher training appropriate to the skill level and duties of all maintenance, support, supply and operations personnel involved with preventive maintenance checks and services (PMCS) functions.
- h. Adequately address care of supplies in storage, including preservation, packaging, and exercising requirements in accordance with AR 710–2, AR 740–3, and TM 38–400.
- i. Continuously review the effectiveness of the unit’s CPC Program.

2–10. Unit corrosion monitors

Unit corrosion monitors will—

- a. Implement and coordinate the Commander’s CPC Program.
- b. Maintain training and performance records for the unit’s CPC Program.
- c. Monitor the techniques and proficiency of unit personnel accomplishing CPC functions. This will include, but is not limited to – spot checks of chemicals used, proper dilution of cleaning compounds, and proper application of corrosion preventive and water displacing compounds.
- d. Work with maintenance and supply personnel to ensure that equipment in storage is monitored for corrosion in accordance with AR 710–2, AR 740–3 and TM 38–400.
- e. Work with maintenance supervisors, quality assurance, supply, and maintenance technicians to determine the effectiveness of the unit’s CPC Program. Advise commander of all CPC concerns and findings.
- f. Coordinate with quality assurance and other personnel to ensure corrosion-related problems are reported.
- g. Maintain or ensure access to a current reference library of CPC publications.

- h.* Monitor equipment corrosion inspections to assure TM procedures and/or CCI checklists are followed.

Chapter 3

Policy Implementation

Corrosion prevention is a key aspect of the design influence and/or interface element of ILS. One of twelve ILS elements from AR 700–127, the design influence and/or interface element addresses CPC throughout the system life cycle to preserve acquired capabilities. In concert with other design influences and/or interface elements, CPC facilitates supportability to maximize the availability, effectiveness, and capability of the system. To reduce sustainment costs, improvements in materials, processes, and procedures must be incorporated into the system as early as possible. This includes input from field activities using established feedback mechanisms such as the DA Form 2028, SF 368, and the Army suggestion programs, which consists of the Supply and Maintenance Assessment and Review Team and tool improvements program suggestion.

3–1. Design

a. CPC plans will be prepared and CPATs will be established to ensure that corrosion prevention is incorporated in equipment/system designs. CPC Plans and CPATs will consider the following:

- (1) CPC is a continuous process whereby the equipment design provides for corrosion resistance.
- (2) Over time, new technologies, policies, procedures, tools, and test equipment will be incorporated in the original equipment design.

b. The complete CPC plan will be part of the programs acquisition strategy and discussed during technical reviews. The CPC plan will identify risks to meeting key performance parameters and key system attributes impacted by corrosion issues in accordance with AR 70–1.

c. To minimize the negative effects of the corrosion sustainability practices will consider the following:

- (1) System safety.
- (2) Equipment design.
- (3) Manufacturing processes that address selection of materials.
- (4) Coatings and surface treatments
- (5) Production processes.
- (6) Process specifications.
- (7) System geometry.
- (8) Material limitations.
- (9) Environmental extremes.
- (10) Storage and ready conditions.
- (11) Preservation and packaging requirements.
- (12) Repairs, overhaul, and spare part requirements.
- (13) Minimizing total ownership costs.

d. In accordance with memorandum: Providing Corrosion Resistant Materials and Infrastructure to the Army, by the Office of the Assistant Secretary of the Army Acquisition Logistics and Technology, dated 27 October 2011, the approved CPC plan will be a mandatory document for assessment in determining the appropriate materiel release in accordance with AR 700–142.

3–2. Corrosion test and evaluation

a. Planning for T&E begins with the development of user needs and continues throughout the acquisition processes. Specific T&E responsibilities, organizations, policies, and procedures are identified in AR 73–1 and DA Pam 73–1 in accordance with AR 70–1.

b. Project managers and material developers will ensure corrosion related issues are discussed, identified and included in all test programs to detect corrosion problems and correct designs prior to production.

c. The ILS manager is the lead for the logistics portion of the test and evaluation master plan in accordance with AR 70–1, AR 73–1, and AR 700–127.

d. Testing will be tailored for specific weapons systems and/or ground support equipment using procedures in accordance with MIL–STD–810G, American Society for Testing and Materials (ASTM)–GMW–14872, ASTM–G85, ASTM–B117, or other test methods as appropriate. Tests will include exposure and performance tests in natural and accelerated environments. Tests will correlate to the expected service life and mission profile of the system and focus on equipment components and areas where corrosion is most likely to occur.

3–3. Life Cycle Management Command

a. LCMC's will carry out aggressive and effective programs to control material deterioration and corrosion in

collaboration with the PEO and/or PM. This requires implementation of the supportability analyses process and the establishment of dedicated integrated product teams early in the acquisition life cycle in accordance with the Army Strategic Corrosion Plan, Army CPC Program Policy.

b. LCMC's CPC will be considered as a significant factor in design and in such ILS elements as:

- (1) Maintenance.
- (2) Technical Manuals (TMs).
- (3) Training.
- (4) Planning.
- (5) Programming.
- (6) Budgeting for CPC.
- (7) Development oversight.
- (8) Acquisition of prototypes.
- (9) Production and deployment of hardware.

c. CPC design practices will be addressed at design and program reviews. CPC will be incorporated into the following and tracked throughout the systems' life cycle:

- (1) The supportability analyses process.
- (2) Performance work statements.
- (3) Development.
- (4) Acquisition.
- (5) Maintenance contracts.

d. LCMCs Corrosion Program Offices will maintain an approved products list and provide to personnel performing PMCS.

e. LCMCs will establish equipment specific CCI checklists and provide to personnel performing PMCS.

3-4. Maintenance and storage

a. Corrosion control efforts will continue into field deployment. In accordance with AR 750-1, field maintenance is the first function of the Army Maintenance System. Maintenance operations normally assigned to operator and/or crew to address corrosion include: identification, annotation and those corrective and preventive actions, outlined in AR 750-1, that are within the operator's capability including storage, wash, and paint procedures, and the application of corrosion inhibiting compounds.

(1) For each system and equipment item, TMs, and technical bulletins (TBs) will contain corrosion inspection procedures and techniques for preventing and controlling corrosion. The TM that will include a section for operator, crew, field, and sustainment-level maintenance, as appropriate.

(2) The TM will reference existing TBs for CPC that have specific details and procedures, to include the national stock numbers, units of issue, and nomenclatures of coatings; preservatives; abrasive materials; papers; tools; brushes; and applicators that will be used by equipment operators and/or maintainers.

b. When specific methods are required for prevention and mitigation of corrosion and/or application of coatings, paints, and preservatives, these methods will be in accordance with AR 750-1.

(1) *Painting.* The primary purpose for painting of Army materiel is to protect metals from corrosion.

(a) CARC (Military Detail 53072E) is the approved paint system for all combat and combat support equipment; tactical vehicles; aircraft, including unmanned; and essential ground support equipment and repairable containers such as engine, transmission, and all ammunition containers, including appropriate kits (see AR 750-1).

(b) Scratches, chips, or marring of the paint surface observed during PMCS will be repaired at field level to prevent corrosion damage (see TB 43-0242, for all CARC paint schemes and TM 55-1500-345-23 for aircraft).

(c) Proper paint touch-up involves a series of preparatory steps prior to top-coat application. These steps include contaminant removal, cleaning, pretreatment, and priming (see TM 43-0139 and TM 1-1500-344-23).

(2) *Corrosion inhibiting preventive maintenance applications.* CPC inhibitors can be applied by field-level personnel and are encouraged as a minimum measure to prevent the effects of corrosion (see TB 43-0213 for Army tactical vehicles and TM 1-1500-344-23 series for aircraft, aerospace systems, and ground support equipment).

(a) Only the use of approved CPC products is authorized.

(b) Authorized products will be contained in equipment TMs or approved by the appropriate engineering authority.

(3) *Cleaning.* Cleaning is a necessary first step in preventing corrosion and wear. Army materiel will be cleaned on a routine basis as part of the Army maintenance program and to prevent equipment degradation and/or deterioration. Frequency of cleaning will vary depending on the operating environment, surface contamination, and equipment usage. Cleaning instruction and frequency will be published in the appropriate TMs for equipment. Aircraft washes will be performed at a minimum of every 30 days in accordance with TM 1-1500-328-23.

(4) *Inspections.* A thorough Corrosion Program will include inspections. Corrosion inspections will be performed on equipment on a recurring basis. Instructions will be included in the equipment specific TM. When no TM has been

developed for the item or if a CPC inspection interval is not included, a CPC inspection will be due every 180 days as a minimum.

(a) Visual inspections will be performed in accordance with equipment TMs or CCI checklists.

(b) Nondestructive test inspections will be performed in accordance with the equipment specific TMs, ASTMs, or applicable industrial specifications.

c. Equipment technical publications maintained by PMs will appropriately address CPC, to include a brief description of the forms of corrosion. The CPAT will be used to develop, validate, verify, and maintain currency of the CPC requirements within these publications in accordance with this publication and AR 750-1.

d. Corrosion control efforts will include those proven technologies and/or procedures that units can employ to reduce the effects of corrosion on their equipment. To include but not limited to:

(1) A Controlled Humidity Preservation Program in accordance with AR 750-1.

(2) CPC inhibitors can be applied by field-level personnel and are encouraged as a minimum measure to prevent the effects of corrosion.

(3) Only the use of approved CPC products are authorized and AMC, U.S. Army Research Laboratory is the approval authority for these products.

3-5. Training and awareness

a. Organizations will integrate CPC procedures into training of personnel to increase awareness and improve Army materiel readiness. Individuals must have knowledge of the types and the causes of corrosion, the ability to detect and recognize corrosion, and the expertise to select and implement preventative measures.

b. All new equipment training, for both operators and maintainers, will include a block of instruction intended to aid the user in the identification and mitigation of the effects of corrosion on that equipment to include, nondestructive inspection and testing.

c. As a minimum, unit personnel engaged in duties that use CPC procedures will receive initial and annual corrosion training. This CPC training will include the following:

(1) Corrosion Theory.

(2) CPC publications.

(3) Cleaning.

(4) Inspection.

(5) Preservation.

(6) Storage.

(7) Mitigation.

(8) Reporting.

(9) Aviation, missile, and aerospace systems—training for corrosion monitors and nondestructive test inspectors is available through the Aviation and Missile Command LCMC in accordance with TM 1-1500-328-23.

(10) Nondestructive test training will be in accordance with National Aerospace Standard-410 and National Guard Regulation 750-410, as appropriate.

3-6. Command corrosion prevention and control surveys

a. The purpose of the command CPC survey is to identify corrosion trends on Army materiel. The results will report corrosion-prone areas of Army weapon systems (for example, vehicles, aircrafts, and trailers) to determine the cause of the corrosion problem. The survey team will discuss corrosion problems with operators and maintainers, and provide guidance and assistance in solving corrosion problems.

b. A survey of Army weapon systems and associated materiel based within the continental United States and outside the continental United States, in units, depots, USAR, and ARNG will be conducted at least every 4 years.

c. The survey team will consist of representatives from AMC LCMCs, RDECOM, and the host command. When necessary, the team may supplement its membership with representatives from the Army Materiel Systems Analysis Activity and other organizations.

d. The team will—

(1) Visit installations, depots, and activities to survey the condition of aircraft, communications and electronics equipment, missiles, munitions, nontactical vehicles, combat vehicles, tactical vehicles, mobility equipment, support equipment, watercraft, floating equipment, and, if necessary, prepositioned war reserve materiel, including prepositioning ships. Visits will be coordinated with the ACOM, ASCC, DRU, ARNG, and/or USAR G-4.

(2) Schedule activities to ensure that host commanders are afforded maximum notification of planned visits, including the identification of support and/or assistance required.

(3) Provide an entrance briefing to the local commander of the unit, installation or activity being visited. The CPC team will identify all equipment items, CPC maintenance procedures, facilities, and maintenance personnel that will be surveyed. The briefing will provide the commander with an overview of the CPC Program and indicate how the results of the survey will be used.

- (4) Augment reports with photographs and/or video to accurately document findings where allowed.
- (5) Where possible, samples of recurring problems should be collected for better evaluation. Points of contact or persons with knowledge on the corrosion problems should be identified and noted in the survey report. Appropriate command survey team members will coordinate with the item manager for proper release of samples desired.
- (6) Evaluate CPC program management, CPC procedures (plating, painting, cleaning, stripping, and preservation), and equipment maintenance facilities.
- (7) Compile the results of the survey, with each member preparing general comments and specific action items in their assigned area of survey responsibility.
- (8) Make note of CPC awareness, training, wash facilities, cleaning and stripping compounds in use, paint facilities, repair procedures, products in use, and any deficiencies in surveyed organizational capabilities in CPC.
- (9) Provide an exit briefing to the local commander.
- (10) Within 45 days of survey completion forward the findings through the AMC G-4 for distribution to the ACOMs, ASCCs, DRUs, ARNG, and/or USAR G-4 (or equivalent), DCS, G-4 and the Army CCPE. If requested, the AMC-designated representative will brief the findings of the survey to the ACOMs, ASCCs, DRUs, ARNG, and/or USAR G-4 (or equivalent), the DCS, G-4 and the Army CCPE representative. The team chief, in coordination with DCS, G-4 and the Army CCPE, will prepare and distribute a formal survey report that assigns specific action items to the responsible LCMC, PEOs, and/or PMs for resolution.
 - e.* Within 60 days of receipt of the survey report in paragraph 3-6d(10) the responsible LCMC, PEOs, and/or PMs will provide their proposed action and milestones for corrective actions to the survey team chief. The status of the action will be reported quarterly to the DCS, G-4 and the Army CCPE until the problem has been resolved.

Appendix A References

Section I Required Publications

AR 70-75

Survivability of Army Personnel and Materiel (Cited in para 2-7e.)

AR 420-1

Army Facilities Management (Cited in para 1-6.)

AR 700-142

Type Classification, Materiel Release, Fielding, and Transfer (Cited in para 3-1.)

AR 750-1

Army Materiel Maintenance Policy (Cited in paras 3-4a, 3-4b, 3-4c, and 3-4d.)

DA Pam 700-56

Logistics Supportability Planning and Procedures in Army Acquisition (Cited in para 2-1c(5).)

DA Pam 738-751

Functional Users Manual for the Army Maintenance Management System - Aviation (TAMMS-A) (Cited in paras 2-8k, 3-4a.)

DA Pam 750-8

The Army Maintenance Management System (TAMMS) Users Manual (Cited in paras 2-8k, 3-4a.)

Section II Related Publications

A related publication is a source of additional information. The user does not have to read it to understand this regulation. Military Detail, MIL-HDBKs, MIL-PRFs, and MIL-STDs are available at <http://assist.daps.dla.mil/quicksearch>.

AR 11-2

Managers' Internal Control Program

AR 25-30

The Army Publishing Program

AR 58-1

Management, Acquisition, and Use of Motor Vehicles

AR 70-1

Army Acquisition Policy

AR 73-1

Test and Evaluation Policy

AR 335-15

Management Information Control System

AR 700-15/NAVSUPINST 4030.28E/AFJMAN 24-206/MCO 4030.33/DLAR 4145.7

Packaging of Materiel

AR 700-127

Integrated Logistics Support

AR 700-141

Hazardous Materials Information Resource System

AR 700–143/DLAD 4145.41/AFJI 24–210/NAVSUPINST 4030.55B/MCO 4030.40B

Packaging of Hazardous Material

AR 702–7/DLAR 4155.24/SECNAVINST 4855.5A/AFR 74–6

Product Quality Deficiency Report Program

AR 702–7–1

Reporting of Product Quality Deficiencies within the U.S. Army

AR 702–11

Army Quality Program

AR 708–1

Logistics Management Data and Cataloging Procedures for Army Supplies and Equipment

AR 710–2

Supply Policy Below the National Level

AR 725–50

Requisitioning, Receipt, and Issue System

AR 735–5

Property Accountability Policies

AR 740–3/DLAI 4145.4/AFMAN 23–125(IP)/NAVSUPINST 4400.100A/MCO 4450.15A

Stock Readiness

ASTM B–117

Standard Practice for Operating Salt Spray (Fog) Apparatus (Available at ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428–2959.)

ASTM G–85

Standard Practice for Modified Salt Spray (Fog) Testing (Available at ASTM International, 100 Barr Harbor Drive, P. O. Box C700, West Conshohocken, PA 19428–2959.)

GMW 14872

Cyclic Corrosion Laboratory Test (Available at IHS Global Inc., 15 Inverness Way East, Englewood, CO 80112–5776.)

Memorandum, Assistant Secretary of the Army (Acquisition, Logistics and Technology), dated 27 October 2011

Providing Corrosion Resistant Materials and Infrastructure to the Army (Available at http://armypubs.army.mil/epubs/Active_Collection_1.html.)

Military Detail 53072E

Chemical Agent Resistant Coating (CARC) System Application Procedures and Quality Control Inspection

MIL–HDBK–502

Product Support Analysis

MIL–HDBK–729

Corrosion and Corrosion Prevention Metals

MIL–PRF–49506

Logistics Management Information

MIL–STD–171F

Finishing of Metal and Wood Surfaces

MIL–STD–186F

Protective Finishing for Army Missile Weapon Systems

MIL-STD-810G

Environmental Engineering Considerations and Laboratory Tests

National Aerospace Standard-4110

NAS Certification and Qualification on Nondestructive Test Personnel (Available at Aerospace Industries Association of America Inc., 1000 Wilson Blvd, Arlington, VA, 22209.)

National Guard Regulation 750-410

Army National Guard Aviation Nondestructive Testing Program (Available at http://www.ngbpdc.ngb.army.mil/pubs/750/ngr750_410.pdf.)

PL 110-417

Duncan Hunter National Defense Authorization Act for Fiscal Year 2009

TB 43-0213

Corrosion Prevention and Control (CPC) for Tactical Vehicles

TB 43-0242

WD Carc Sopt Painting

TC 3-04.7

Army Aviation Maintenance

TM 38-400

Joint Service Manual (JSM) for Storage and Materials Handling (Available at Director, U. S. Army Materiel Command, Packaging, Storage, and Containerization Center (SDSTO-TM), Tobyhanna, PA 18466-5097.)

TM 38-470

Storage and Maintenance of Army Prepositioned Stock Materiel

TM 43-0139

Painting Instructions for Army Material

TM 1-1500-328-23

Aeronautical Equipment Maintenance Management Policies and Procedures

TM 55-1500-344-23

Aircraft Weapons System Cleaning and Corrosion Control (NAVAIR 01-1A-509; to 1-1-1/to 1-1-2)

TM 55-1500-345-23

Painting and Marking of Army Aircraft

Section III**Prescribed Forms**

This section contains no entries.

Section IV**Referenced Forms**

Unless otherwise indicated, DA Forms are available on the APD Web site (<http://www.apd.army.mil>) and DD forms are available on the OSD Web site (<http://www.dtic.mil/whs/directives/infomgt/forms/>). SFs are available on the GSA Web site (<http://www.gsa.gov/portal/forms/type/SF>).

DA Form 11-2

Internal Control Evaluation Certification

DA Form 2028

Recommended Changes to Publications and Blank Forms

DA Form 2404

Equipment Inspection and Maintenance Worksheet

DA Form 2407

Maintenance Request (Available through normal forms supply channels.)

DA Form 5988-E

Equipment Inspection/Maintenance Worksheet (This is generated electronically through SAMS-I/IE.)

DD Form 1225

Storage Quality Control Report

SF 364

Report of Discrepancy (ROD)

SF 368

Product Quality Deficiency Report (PQDR)

**Appendix B
Internal Control Evaluation****B-1. Function**

The function covered by this evaluation is corrosion prevention and control of Army materiel.

B-2. Purpose

The purpose of this evaluation is to assist AMC, ACOMs, ASCCs, DRUs, ARNG, and the USAR in evaluating key internal controls listed. It is intended as a guide and does not cover all controls.

B-3. Instructions

Answers must be based upon the actual testing of controls (for example, document analysis, direct observation, interviewing, sampling, simulation, or other). Answers that indicate deficiencies must be explained and corrective action indicated in supporting documentation. These internal controls must be evaluated at least once every 5 years. Certification that the evaluation has been conducted must be accomplished on DA Form 11-2 (Internal Control Evaluation Certification).

B-4. Test questions

- a. Has the command appointed a CPC manager in writing?
- b. Has the command established a written CPC Program?
- c. Is the command's CPC published program disseminated to subordinate organizations?
- d. Has the command made a routine assessment of the organization's CPC Program?
- e. Does the command have a systematic method (schedule) to conduct a statistical sampling of subordinate units and review of the command CPC policies and program?
- f. Has the command conducted training for organizational personnel to identify, correct, and report corrosion and employ prescribed corrosion control practices? (Training should be equivalent to Defense Acquisition University-CPC overview continuous learning module 038 available at http://icatalog.dau.mil/onlinecatalog/courses.aspx?crs_id=404).
- g. Has the command taken proactive measures to resolve any identified CPC issues?

B-5. Supersession

Not applicable.

B-6. Comments

Help make this a better tool for evaluating internal controls. Submit comments to the Headquarters, Department of the Army, DCS, G-4 (DALO-MNF), 500 Army Pentagon, Washington, DC 20310-0500.

Glossary

Section I Abbreviations

ACOM

Army command

AMC

U.S. Army Materiel Command

ARFORGEN

Army Force Generation

ARNG

Army National Guard

ASA (ALT)

Assistant Secretary of the Army (Acquisition, Logistics and Technology)

ASCC

Army service component command

CNGB

Chief, National Guard Bureau

CPC

corrosion prevention and control

CG

Commanding General

DA

Department of the Army

DCS, G-3/5/7

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

DCS, G-4

Deputy Chief of Staff, G-4

DRU

direct reporting unit

ESOH

environmental, safety, and occupational health

ILS

integrated logistics support

LCMC

Life Cycle Management Command

PEO

program executive office

PM

program manager

PMCS

preventive maintenance checks and services

RDECOM

Research, Development, and Engineering Command

RDT&E

research, development, test, and evaluation

SF

standard form

TB

technical bulletin

TM

technical manual

TRADOC

U.S. Army Training and Doctrine Command

TSG

The Surgeon General

USAR

U.S. Army Reserve

Section II**Terms****Army Corrosion Prevention and Control Program**

A planned and organized effort to limit the damage to any system or equipment, owing to exposure to corrosive conditions, during its operational life cycle including transportation and storage, both short and long term.

Corrosion and/or deterioration

The impairment, degradation, or damage of materials (metallic and nonmetallic) as a result of exposure to a natural or induced environment owing to the individual or combined effects of chemical, electrochemical, biological, or physical attacks on the material.

Corrosion and/or deterioration control

The effort to reduce or prevent the damage of materials from corrosion by proper and timely identification, isolation, documentation, and implementation of appropriate corrective action.

Corrosion susceptibility

The tendency for a given material, after it has been exposed over a period of time to an operating environment, to corrode, and adversely affect a system or equipment.

Section III**Special Abbreviations and Terms****CCI**

corrosion control inspection

CCPE

Corrosion Control and Prevention Executive

CPAT

Corrosion Prevention Action Team

UNCLASSIFIED

PIN 064534-000