Army Regulation 750–59

Maintenance of Supplies and Equipment

Corrosion Prevention and Control for Army Materiel

Headquarters
Department of the Army
Washington, DC
22 June 2020

UNCLASSIFIED

SUMMARY of CHANGE

AR 750–59
Corrosion Prevention and Control for Army Materiel

This major revision, dated 22 June 2020—

- Revises responsibilities to include U.S. Army Futures Command (paras 2–7*a*(2) and 2–8).
- Changes the method to appoint Unit Corrosion Monitors. Unit Corrosion Monitors will be identified on initial and quarterly counseling (para 2–11*a*).
- Adds "providing protection" as a preventative measure against corrosion 3-4*a*(1).
- Specifies training requirements for corrosion prevention and control training (paras 2–6*d* and 2–9*i*).
- Clarifies corrosion prevention, control survey responsibilities, and reporting requirements (paras 2–7*a*(1), 2–7*a*(2), and 3–6).
- Adds a requirement for a central repository of corrosion prevention and control survey reports (para 2–7*a*(2)).
- Incorporates Army Directive 2018–07–12, Prioritizing Efforts-Readiness and Lethality (Update 12), by removing the requirement for commanders to publish appointment orders for corrosion monitor(s) as an additional duty (formerly para 2–9*a*) and removing the requirement to maintain a physical reference library of corrosion prevention and control publications (formerly para 2–10*g*).
- Adds annual corrosion survey summary to the corrosion control and prevention executive (para 2–9*c*).
- Incorporates Army Directive 2018–07–16 Prioritizing Efforts-Readiness and Lethality (Update 16), by removing the requirement to continuously review the effectiveness of the unit's corrosion prevention and control program (formerly para 2–9*i*), removing the requirement for unit corrosion monitors to work with maintenance and supply personnel to ensure that equipment in contract storage is monitored for corrosion (formerly para 2–10*d*), and removing the requirement for annual corrosion prevention and control training (para 3–5*c*).
- Incorporates Army Directive 2018–07–11, Prioritizing Efforts-Readiness and Lethality (Update 11), by revising refresher training for corrosion prevention and control personnel to once every 2 years (para 3–5*c*).
- Adds definitions for "materiel" and "Department of Defense military munitions" (glossary).

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Effective 22 July 2020

Maintenance of Supplies and Equipment

Corrosion Prevention and Control for Army Materiel

By Order of the Secretary of the Army:

JAMES C. MCCONVILLE
General, United States Army
Chief of Staff

Official:

KATHLEEN S. MILLER
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 Regular 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 in accordance with AR 11–2 and identifies key internal controls that must be evaluated (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–MPF), 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–MPF), 500 Army Pentagon Washington, DC 20310–0500.

Distribution. This publication is available in electronic media only and is intended for Regular 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)

*This publication supersedes AR 750-59, dated 19 March 2014.

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Chapter 1
General

1–1. Purpose
This regulation establishes policies and responsibilities to implement corrosion prevention and control (CPC) of Army materiel. This includes material development, acquisition, fielding, sustainment, training, and survey requirements to support CPC at the field and sustainment levels.

1–2. References and forms
See appendix A.

1–3. Explanation of abbreviations and terms
See the glossary.

1–4. Responsibilities
Responsibilities are listed in chapter 2.

1–5. Records management (recordkeeping) requirements
The records management requirement for all record numbers, associated forms, and reports required by this regulation are addressed in the Army Records Retention Schedule-Army (RRS–A). Detailed information for all related record numbers, forms, and reports are located in ARIMS/RRS–A at https://www.arims.army.mil. If any record numbers, forms, and reports are not current, addressed, and/or published correctly in ARIMS/RRS–A, see DA Pam 25–403 for guidance.

1–6. Concept
CPC is a critical consideration to ensure the sustained performance, readiness, economical operation, and service life of Army systems and equipment throughout their life cycle. CPC is addressed in materiel development, acquisition, fielding, operation and sustainment, modification, upgrade, and storage processes of Army materiel. CPC requires life cycle management planning and execution in design, development, testing, fielding, training, and maintenance.

1–7. Exception
This regulation does not address the facilities engineering program, managed by the Deputy Chief of Staff (DCS), G–9, for real property, or 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 and DODI 5000.67.

b. Coordinate Department of the Army (DA)-level CPC program activities per Public Law 110–417 and DODI 5000.67.

c. Designate a principal point of contact to coordinate DA-level CPC program activities with the Army, DOD staff, and program executive offices (PEOs).

d. Ensure that CPC is incorporated into DA policy and guidance to effectively manage 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 product support (IPS) in the materiel acquisition process, per AR 700–127 and DA Pam 700–127.

e. Support the CPC survey team process.

f. Develop procedures for corrosion planning, process implementation, management, review, and documentation of results.

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 throughout the sustainment readiness model, in coordination with the 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 is the principle Army staff element responsible for providing Service-level oversight of the CPC program 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. Designate a single office of the DCS, G–4 and a point of contact to support the Army CCPE on CPC activities.

c. Support CPC efforts throughout the materiel life cycle phases, to include supporting the appropriate program evaluation group to plan, program, and budget resources that effectively sustain the CPC program for fielded systems.

d. Evaluate the CPC program's effectiveness by reviewing Army commands (ACOMs), Army service component commands (ASCCs), direct reporting units (DRUs), Army National Guard (ARNG), and U.S. Army Reserve (USAR) CPC survey reports.

e. Ensure that CPC requirements are reflected in DA policies for maintenance, supply, and transportation of materiel for all components of the Army.

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) Planning, programming, and budgeting resources for CPC environment, safety, and occupational health (ESOH) evaluations that support sustainment of fielded medical systems throughout the sustainment readiness model.

b. Provide guidance to ensure ESOH standards and regulations for human health and environmental protection are observed during CPC practices. This guidance is especially important since volatile organic compounds, heavy metals, and other toxic and pollutant materials are commonly used in CPC.

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 Forces Command

The CG, FORSCOM will—

a. Appoint a CPC functional manager to administer the command-level program and report the name and contact information to the CCPE and DCS, G–4 (Field Maintenance Division) within 60 days of assignment or reassignment.

b. Establish and oversee command-level CPC policy and procedures.

c. Conduct periodic assessments of the CPC program, no less than once every 3 years (see app B).

d. In coordination with U.S. Army Materiel Command (AMC), publish the CPC surveys schedule, as applicable to subordinate units and maintenance activities.

2–6. Commanding General, U.S. Army Training and Doctrine Command

The CG, TRADOC will—

a. Appoint a CPC functional manager to administer the command-level program and report the name and contact information to the CCPE and DCS, G–4 (Field Maintenance Division) within 60 days of assignment or reassignment.

b. Ensure the functional manager oversees the integration of CPC training and education into appropriate curriculum for equipment operators and for maintenance and supply personnel. Training and education should include identifying the causes of corrosion, detection, and corrective and preventive measures.

c. Integrate CPC training within the Basic Leader Course to enhance Army culture on sustaining Army materiel readiness.

d. Ensure course curricula and training materials reflect the current CPC information available from Combat Capabilities Development Command (CCDC). Corrosion training for sustainers should include:

(1) Maintenance actions for operators and crew when addressing corrosion.

(2) Environmental control for hazardous materials used in, and resulting from, CPC processes.

(3) Safety considerations in use of volatile chemicals.

(4) Occupational health and industrial hygiene considerations to protect workers required to use hazardous materials in CPC processes.

(5) Understanding safety data sheets and personal protective equipment requirements.

e. Provide curriculum support and disseminate training materials to all participating commands.

f. Work with life cycle management commands (LCMCs) and the CCDC to ensure current CPC information is incorporated into programs of instruction.

2–7. Commanding General, U.S. Army Materiel Command

The CG, AMC has overall responsibility to sustain 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 CCPE and DCS, G–4 (Field Maintenance Division) within 60 days of assignment or reassignment. The functional manager will—

(1) Coordinate and publish a list of commands, organizations, or maintenance activities pending a CPC survey in the coming fiscal year. The list will be distributed to ACOMs, ASCCs, DRUs, or operational force headquarters that are scheduled for a CPC survey in the coming fiscal year.

(2) Collect and post CPC survey data and reports from the survey teams to a central repository for Armywide access and provide the CCPE, the DCS G–4 (Field Maintenance Division), the U.S. Army Futures Command (AFC) functional manager, and the LCMC CPC managers access to the reports.

b. As sustaining program evaluation group co-chair, validate and prioritize CPC resource requirements in the program objective memorandum and budget.

c. Establish, manage, and execute a command-level CPC program. The program will include:

(1) Corrosion prevention, detection, and mitigation practices during sustainment of the five major commodity areas (aircraft and missile systems, to include support equipment; communications and electronics equipment; DOD military munitions and associated equipment; tactical and combat vehicles to include armament; and Soldier equipment and other ground equipment).

(2) CPC surveys.

(3) Periodic assessments of the CPC program not less than once every 3 years (see app B).

d. Ensure that CPC is addressed within the national maintenance management program, the depot maintenance programs and theater reserve, war reserve, and prepositioned stocks program, including developing annual program requirements for the program objective memorandum and budget.

e. Emphasize the importance of CPC planning to reduce life cycle costs, improve materiel availability and/or readiness, and system safety with all subordinate organizations.

2–8. Commanding General, U.S. Army Futures Command

The CG, AFC, has overall responsibility for sustainment planning for future Army materiel. The CG, AFC 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 (Field Maintenance Division) within 60 days of assignment.

b. Support the planning, programming, budgeting, and execution of RDT&E to investigate new technologies for the prevention and mitigation of corrosion.

c. Support AMC with the sustaining engineering functions to include:

(1) Maintenance concept engineering capabilities.

(2) Production and manufacturing engineering capabilities.

(3) Technical project leadership and acquisition engineering capabilities.

(4) Quality assurance, continuous improvement, test and evaluation capabilities, including CPC survey support.

(5) Unique sustaining engineering tasks from the CCDC.

d. Support and assist the PEOs and program managers (PMs) —through the LCMCs and the CCDC— to establish and implement their CPC programs using resources and technical expertise, including corrosion prevention in sustainment planning for Army materiel.

e. Ensure corrosion control requirements are included in design production and are part of test and acceptance programs.

f. Conduct CPC planning, corrosion control management, and design considerations for CPC stated in the system engineering plan (SEP) for incorporation in life cycle sustainment plans (LCSPs).

g. Ensure CPC is adequately addressed in the following areas:

(1) Manufacturing technology and related programs.

(2) 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.

(3) Evaluation of nondevelopmental items, equipment, and systems.

(4) RDT&E programs and activities.

(5) Equipment standardization programs, including international standardized agreements.

(6) Logistics research and development initiatives.

(7) Supportability analysis as it relates to IPS in the materiel acquisition process.

(8) Collection, distribution, and feedback of system-test and equipment-maintenance information relating to corrosion.

h. Emphasize the importance of CPC planning to reduce life cycle costs and to improve materiel availability, readiness, and system safety with all subordinate organizations.

i. Include CPC and deterioration control considerations in the supportability-analysis process early in the materiel acquisition and development phase.

2–9. Commanding generals, life cycle management commands

The CGs, LCMCs, will—

a. Appoint a corrosion PM for the CPC program based on guidance from the AMC CPC functional manager and implement Army program policy.

b. Establish a CPC program office to administer the Army CPC program. In coordination with the CCDC Soldier Center, support and assist the PEOs, PMs, and depots to establish and implement their individual CPC programs.

c. Compile and submit an annual corrosion survey summary through AMC to the CCPE, copying DCS, G–4 (Field Maintenance Division). Annual corrosion survey summaries, at a minimum, will include:

(1) Identification of corrosivity zones surveyed.

(2) Corrosivity issues associated with surveyed zones.

(3) Action conducted on site by survey teams.

(4) Long-term recommendations of corrosion preventions and mitigation.

d. Identify and evaluate corrosion considerations in sustainment phases to reduce, control, or mitigate corrosion during sustainment.

e. Review LCSPs for CPC planning and corrosion control management and provide feedback to PEOs on adequacy of CPC planning in LCSPs.

f. Ensure 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 product improvement, including evaluating each proposal for new systems, equipment, or components.

(3) Care of supplies in storage, including preservation, packaging, and exercising per AR 710–2, AR 740–3/DLAI 4145.4/AFMAN 23–125(IP)/NAVSUPINST 4400.100A/MCO 4450.15A, AR 750–1, and TM 38–400/NAVSUP PUB 572/AFJMAN 23–210/MCO 4450–14/DLAM 4145.12.

g. Ensure that CPC is included in all applicable materiel, logistics, and maintenance trade studies; tradeoff analysis; and risk-mitigation planning.

h. Inform and support the weapons systems managers to effectively address corrosion.

i. Develop and provide commodity-specific corrosion training to address the causes of corrosion, detection, consequences, and corrective and preventive measures for appropriate personnel involved in maintaining Army materiel. CPC training will include:

(1) Environmental control for hazardous materials used in, and resulting from, CPC processes.

(2) Safety considerations for use of volatile chemicals.

(3) Occupational health and industrial hygiene considerations to protect workers required to use hazardous materials in CPC processes.

(4) Understanding safety data sheets and personal protective equipment requirements.

j. Schedule and conduct CPC surveys per paragraph 3–6.

k. Ensure equipment and materiel technical publications, including DOD military munitions, contain current and appropriate CPC details to maintain systems in serviceable status.

l. As necessary, support TRADOC in developing and including corrosion control training.

2–10. Commanding generals of Army commands, Army service component commands, and direct reporting units; Chief, U.S. Army Reserve; and Chief, National Guard Bureau

CGs of ACOMs, ASCCs, and DRUs; Chief, USAR; and Chief, NGB, will establish and maintain an effective command-level program. Each CG 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 ASA (ALT) CCPE and DCS, G–4 (Field Maintenance Division) 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 CPC survey teams as established in paragraphs 2–7*a*(2) and 3–6.

f. Conduct a statistical sampling of subordinate units and review of subordinate commands' CPC policies and programs once every 3 years.

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 to support and train 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. Provide corrosion training for unit Soldiers and maintainers addressing the causes of corrosion, detection, consequences, and corrective and preventive measures involved in maintaining Army materiel. This training shall include personal protective equipment identification and use, hazardous material handling and storage, mitigation measures, equipment, processes, and materials.

k. Ensure that inspection, maintenance requests, and deficiency reports involving corrosion are submitted using the Corrosion/Rotted cause code (170). This includes failures where corrosion contributed to system or equipment failure or for maintenance being done as either a preventative measure or as a result of corrosion. Reports include:

(1) DA Form 2404 (Equipment Inspection and Maintenance Worksheet).

(2) DA Form 5988–E (Equipment Maintenance and Inspection Worksheet).

(3) DA Form 2407 (Maintenance Request).

(4) DD Form 1225 (Storage Quality Control Report).

(5) SF 364 (Report of Discrepancy (ROD)).

(6) SF 368 (Product Quality Deficiency Report).

l. Participate in coordinating and executing CPC surveys. Assist in determining areas that require improved corrosion control and recommend evaluating specific systems, equipment, or components susceptible to corrosion damage.

2–11. Unit commanders

Unit commanders will—

a. Annotate appointment of unit corrosion monitors during initial and quarterly counseling.

b. Ensure unit corrosion monitors receive CPC unit corrosion monitor training from an LCMC-, TRADOC-, AFC-, or AMC-endorsed course. It is recommended that at least two personnel are identified to execute unit corrosion program responsibilities.

c. Ensure that CPC procedures are incorporated into the unit maintenance standard operating procedure.

d. Ensure all unit personnel receive CPC training appropriate for their skill level and duties.

e. Ensure unit training personnel integrate corrosion training for maintenance and supply personnel.

f. Integrate CPC awareness into all levels of maintenance, including depot, inter-Service contracts, and life cycle contractor support.

g. Review the effectiveness of unit CPC program no less than once every 2 years (see app B).

h. Support CPC survey teams, including participation in CPC survey entrance and exit briefs.

2–12. Unit corrosion monitors

Unit corrosion monitors will—

a. Implement and coordinate the commander's CPC program.

b. Participate in CPC surveys as established in paragraph 3–6.

c. Ensure unit training personnel integrate corrosion training for vehicle operators, crews, and maintenance and supply personnel.

d. Ensure unit training personnel maintain training and performance records for the unit's CPC program.

e. 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 inhibiting compounds and water displacing compounds.

f. Work with maintenance supervisors and with quality assurance, supply, and maintenance technicians to determine the effectiveness of the unit's CPC program.

g. Ensure corrosion-related problems are properly reported in Global Combat Support System—Army (GCSS–Army) using cause code 170 for Corroded/Rusted.

h. Monitor equipment corrosion inspections to ensure technical manual (TM) procedures are followed.

i. As needed (brigade and above unit corrosion monitors), contact the affiliated LCMC corrosion office for support in implementing and maintaining a CPC program.

Chapter 3
Policy Implementation

Corrosion prevention is a key aspect of the design influence and interface element of IPS. One of 12 IPS elements from AR 700–127—design interface—addresses CPC throughout the system life cycle to preserve acquired capabilities. In concert with other design influences and interface elements. CPC facilitates supportability to maximize the availability, effectiveness, and capability of the system. Properly implemented, CPC can inform early phases of development to incorporate better materials, processes, and systems which can reduce long-term sustainment costs. This includes input from field activities using established feedback mechanisms, such as DA Form 2028, SF 368, the Army suggestion programs, and CPC surveys, which consist of the supply and maintenance assessment and review team and the tool improvements program.

3–1. Design

a. SEPs, LCSPs, and test and evaluation master plans will address corrosion prevention in equipment or system designs. In all ways possible, SEP LCSP, and test and evaluation master plans will include:

(1) CPC as a continuous process whereby the equipment design provides for corrosion resistance.

(2) New technologies, policies, procedures, tools, and test equipment (incorporated over time) into the original equipment design.

b. SEPs LCSPs, and test and evaluation master plans are part of the program acquisition strategy and will be discussed during technical reviews. Identify risks to meeting key performance parameters and key system attributes impacted by corrosion issues.

c. The materiel developers, PMs, and project managers, to minimize the negative effects of corrosion and to sustain equipment and systems, will consider:

(1) System safety.
(2) Equipment design.
(3) Manufacturing processes that address selecting 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.
(14) Integration of commercial off-the-shelf government-furnished equipment.

3–2. Corrosion test and evaluation

a. Planning for test and evaluation begins with developing user needs and continues throughout the acquisition processes. Specific test and evaluation responsibilities, organizations, policies, and procedures are identified in AR 73–1, DA Pam 73–1, and AR 70–1.

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

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

d. In every respect possible, testing for specific weapons systems and/or ground support equipment will comply with prescribed standards in MIL–STD 810H, ASTM G85–11, ASTM B117–16, GMW14872, or other test methods as appropriate. Include exposure and performance tests in natural and accelerated environments. Correlate tests with the mission profile and planned service life of the system, and focus on equipment components and areas where corrosion is most likely to occur.

3–3. Integrated product support

a. In coordination with LCMCs and AFC, the PEO and the PM will carry out aggressive and effective programs to control material deterioration and corrosion. This requires implementing the supportability-analysis process and establishing dedicated integrated product support teams early in the acquisition life cycle per the Army CPC strategic plan, the Army's CPC program policy.

b. Consider the LCMC's CPC as a significant factor in design and in such IPS elements as:

(1) Maintenance.
(2) TMs.
(3) Training.
(4) Planning.
(5) Programming.
(6) Budgeting for CPC.
(7) Developing oversight.
(8) Acquiring prototypes.
(9) Producing and deploying hardware.

c. Address CPC design practices at design and program reviews. Incorporate CPC into the following and track throughout the system's life cycle:

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

d. LCMCs' corrosion program offices will integrate approved products for CPC into TMs, technical bulletins (TBs), and lubrication orders for personnel performing preventive maintenance checks and services (PMCS).

e. LCMCs will verify inclusion of corrosion inspection in operator or crew level TMs for personnel performing PMCS.

3–4. Maintenance and storage

a. Corrosion control efforts will continue after a system is fielded. Field maintenance is the first function of the Army Maintenance System. Maintenance operations assigned to the operators and/or crew to address corrosion include identification, annotation, and those corrective and preventive actions that are within the operator's capability to include the following:

(1) *Provide protection.* Providing protection is a simple and effective means of corrosion prevention. Per TMs, units should consider using housing, covers, and other configurations to protect from environmental conditions that cause corrosion. This applies to all materiel, equipment, and supplies.

(2) *Cleaning.* Cleaning is a necessary first step to prevent corrosion and wear. Clean Army materiel on a routine basis as part of the Army maintenance program to prevent equipment degradation and deterioration. Cleaning frequency will vary depending on the operating environment, surface contamination, and equipment usage. Appropriate TMs contain cleaning instructions and frequency. Perform aircraft washes at a minimum of every 30 days per TM 1–1500–328–23.

(3) *Inspections.* A thorough CPC program includes inspections. Perform corrosion inspections on equipment on a recurring basis per instructions included in the equipment-specific TM. When no TM has been developed for the item or if a CPC inspection interval is not included, the CPC coordinator will recommend inspection intervals to the unit commander based on severity zone considerations for the location the equipment is being operated. At a minimum, conduct CPC inspections during regularly scheduled services.

(a) Visually inspect equipment per equipment TMs.

(b) Perform nondestructive test inspections per the equipment-specific TMs, ASTMs, or applicable industrial specifications.

(c) Document inspection findings and report them per DA Pam 750–1.

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

(a) The Chemical agent resistant coating (CARC) system per MIL–DTL 53072F 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 DOD military munitions, containers, including appropriate kits.

(b) Repair scratches, chips, or marring of the paint surface observed during PMCS at field level to prevent corrosion damage (see TB 43–0242 for CARC paint schemes and TM 1–1500–345–23 to paint and mark Army 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 1–1500–345–23).

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

(a) Only use approved CPC products.

(b) Authorized products are listed in equipment TMs or are approved by the appropriate engineering authority.

b. Equipment technical publications maintained by PMs will appropriately address CPC, to include a brief description of the forms of corrosion.

c. Corrosion control efforts will include those proven technologies and procedures that units can employ to reduce the effects of corrosion on equipment, including, but not limited to:

(1) A controlled humidity preservation program.

(2) Corrosion inhibiting compounds applied by personnel; these compounds are encouraged as a practical method to deter corrosion.

d. For each system and equipment item, TMs and TBs will contain corrosion inspection procedures and techniques to prevent and control corrosion. The TM will include a section for operator, crew, field, and sustainment-level maintenance, as appropriate.

e. Applicable TMs will reference existing TBs for CPC that have specific details and procedures, including pertinent specification information. Information should include the national stock numbers, part numbers, nomenclature of coatings, preservatives, abrasive materials, papers, tools, brushes, and applicators that can be used by equipment operators and maintainers.

3–5. Training and awareness

a. Organizations will integrate CPC procedures into personnel training to increase safety and awareness and to 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 identifying and mitigating the effects of corrosion on equipment, including nondestructive inspection and testing.

c. As a minimum, unit personnel engaged in CPC procedures will receive initial corrosion training and refresher training once every 2 years. 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.

d. Aviation, missile, and aerospace systems training for corrosion monitors and nondestructive test inspectors is available through the Aviation and Missile Command LCMC per TM 1–1500–328–23.

3–6. Corrosion prevention and control surveys

a. The primary purposes of CPC surveys are to identify corrosion trends on Army materiel and to provide additional training opportunities for unit leadership and maintainers on corrosion issues.

b. CPC surveys are collective efforts between AMC, AFC, LCMCs, and host commands. The LCMCs recommend commands, organizations, or maintenance activities for survey to AMC each fiscal year. While higher corrosive zones are generally given additional scheduling consideration, LCMCs have the prerogative to exercise professional judgement in recommending which units or installations and equipment to survey. Major installations should be scheduled for a CPC survey at least once every 4 years, subject to available funding.

c. AMC will notify the ACOM, ASCC, DRU, or operational force headquarters that is subject to a CPC survey in the coming fiscal year.

d. LCMCs schedule and conduct CPC surveys with AMC oversight.

e. The survey team will consist of qualified personnel from the respective LCMCs, CCDC, and the host command. The survey team will—

(1) Visit installations, depots, equipment concentration sites, and other maintenance activities to survey the condition of aircraft, communications and electronic equipment, missiles, DOD military munitions, nontactical vehicles, combat vehicles, tactical vehicles, mobility equipment, support equipment, watercraft, floating equipment, and, if necessary, prepositioned war reserve materiel.

(2) Coordinate visits with installations, depots, and other maintenance activities to ensure that host commands are afforded sufficient time to identify and arrange support as required.

(3) Provide an entrance briefing to the host command, installation, or maintenance activity being surveyed. The briefing should provide an overview of the CPC program and indicate how the results of the survey will be used.

(4) Identify equipment, facilities, and maintenance personnel that will be part of the survey.

(5) Augment reports with photographs and video to accurately document findings where allowed.

(6) Where possible, collect samples of recurring problems for better evaluation. Identify and note points of contact or persons with knowledge on the corrosion problems in the survey report. Appropriate survey team members will coordinate with the item manager for proper release of samples desired.

(7) Evaluate CPC programs, including CPC procedures (plating, painting, cleaning, stripping, and preservation), training, and equipment-maintenance facilities.

(8) Anticipate and conduct CPC training in support of host command needs.

(9) Compile the results of the survey, with each member preparing general comments and specific recommendations in their assigned area of survey responsibility.

(10) Note CPC awareness, training, wash facilities, cleaning, and stripping compounds in use, paint facilities, repair procedures, products in use, and any deficiencies identified in the surveyed organization's CPC capabilities.

(11) Provide an exit briefing to the host command, installation, or maintenance activity visited.

(12) Provide a survey report to the surveyed command and the AMC CPC functional manager, to be posted in a central Army repository for Armywide access within 45 days of survey completion.

f. Survey findings (reports) will include, but are not limited to, corrosion-prone areas and corrosion trends on Army materiel to inform maintenance actions, training needs, and design solutions. Survey teams will discuss corrosion problems with operators, crews, and maintainers, providing guidance and assistance to minimize corrosion problems.

g. The CCPE, DCS G-4's point of contact, and the LCMC CPC managers will review the reports and assign courses of action for any identified design or engineer weaknesses. PMs or surveyed organizations will report the status of corrective action to the CCPE and DCS, G–4 (Field Maintenance Division) on a quarterly basis until the problem has been resolved.

Appendix A

References

Section I

Required Publications

AR 420–1
Army Facilities Management (Cited in para 1–7.)

AR 750–1
Army Materiel Maintenance Policy (Cited in para 2–9*f*(3).)

DA Pam 73–1
Test and Evaluation in Support of Systems Acquisition (Cited in para 3–2*a*.)

DA Pam 750–1
Commanders' Maintenance Handbook (cited in 3-4a(3)(c).)

DODI 5000.67
Prevention and Mitigation of Corrosion on DOD Military Equipment and Infrastructure (Cited in para 2–1*a*.)

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. Unless otherwise noted, publications can be found at https://armypubs.army.mil/.

ADP 1–02
Terms and Military Symbols

AR 11–2
Managers' Internal Control Program

AR 25–30
Army Publishing Program

AR 70–1
Army Acquisition Policy

AR 70–75
Survivability of Army Personnel and Materiel

AR 73–1
Test and Evaluation Policy

AR 700–15/NAVSUPINST 4030.28E/AFJMAN 24–206/MCO 4030.33E/DLAR 4145.7
Packaging of Materiel

AR 700–127
Integrated Product Support

AR 700–141
Hazardous Materials Information Resource System

AR 700–142
Type Classification, Materiel Release, Fielding, and Transfer

AR 700–143/DLAR 4145.41/NAVSUPINST 4030.55D/AFI 24–210_IP/MCO 4030.40C
Packaging of Hazardous Material

AR 702–7/DLAR 4155.24/SECNAVINST 4855.5B/AFTO 00–35D–54/DCMA INST 305
Product Quality Deficiency Report Program

AR 702–7–1
Reporting of Product Quality Deficiencies within the U.S. Army

AR 710–2
Supply Policy Below the National Level

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

ASTM B117–16
Standard Practice for Operating Salt Spray (Fog) Apparatus (Available at https://www.astm.org/standards.)

ASTM G85–11
Standard Practice for Modified Salt Spray (Fog) Testing (Available at https://www.astm.org/standards.)

ATP 3–04.7
Army Aviation Maintenance

DA Pam 25–403
Guide to Recordkeeping in the Army

DA Pam 700–127
Integrated Product Support Procedures

GMW14872
Cyclic Corrosion Laboratory Test (Available at https://global.ihs.com/.)

MIL–DTL 53072F
Chemical Agent Resistant Coating (CARC) System Application Procedures and Quality Control Inspection (Available at https://quicksearch.dla.mil/qssearch.aspx.)

MIL–HDBK–502A
Product Support Analysis (Available at https://quicksearch.dla.mil/qssearch.aspx.)

MIL–HDBK–729
Corrosion and Corrosion Prevention Metals (Available at https://quicksearch.dla.mil/qssearch.aspx.)

MIL–STD–171F
Finishing of Metal and Wood Surfaces (Available at https://quicksearch.dla.mil/qssearch.aspx.)

MIL–STD–186
Manufacturing Process Protective Finishing for Army Missile Weapon Systems (Available at https://quicksearch.dla.mil/qssearch.aspx.)

MIL–STD–810H
Environmental Engineering Considerations and Laboratory Tests (Available at https://quicksearch.dla.mil/qssearch.aspx.)

MIL–STD–3056
Chemical, Biological, and Radiological System Contamination Survivability Design Criteria for (Available at https://quicksearch.dla.mil/qssearch.aspx)

National Aerospace Standard–410
NAS Certification and Qualification on Nondestructive Test Personnel (Available at Aerospace Industries Association of America Inc., 1000 Wilson Blvd, Arlington, VA, 22209.)

NGR 750–410
Army National Guard Aviation Nondestructive Testing Program (Available at https://www.ngbpdc.ngb.army.mil/.)

Public Law 110–417
Duncan Hunter National Defense Authorization Act for Fiscal Year 2009 (Available at https://www.gpo.gov/fdsys/pkg/plaw-110publ417/html/plaw-110publ417.htm.)

TB 43–0213
Corrosion Prevent and Control (CPC) for Army Ground Equipment

TB 43–0242
WD CARC SOPT Painting

TM 1–1500–328–23
Technical Manual Aeronautical Equipment Maintenance Management Procedures

TM 1–1500–344–23–1
Cleaning and Corrosion Control, Volume I: Corrosion Program and Corrosion Theory

TM 1–1500–344–23–2
Cleaning and Corrosion Control, Volume II: Aircraft

TM 1–1500–344–23–3
Cleaning and Corrosion Control, Volume III, Avionics and Electronics

TM 1–1500–344–23–4
Cleaning and Corrosion Control, Volume IV: Consumable Materials and Equipment for Aircraft and Avionics

TM 1–1500–345–23
Painting and Marking of Army Aircraft

TM 38–400/NAVSUP PUB 572/AFJMAN 23–210/MCO 4450–14/DLAM 4145.12
Joint Service Manual (JSM) for Storage and Materials Handling (Available at http://www.dla.mil/portals/104/documents/j5strategicplanspolicy/publicissuances/m4145.12.pdf.)

TM 43–0139
Painting Instructions for Army Materiel

Section III

Prescribed Forms

This section contains no entries.

Section IV

Referenced Forms

Except where otherwise indicated below, the following DA forms are available on the Army Publishing Directorate website (https://armypubs.army.mil/); DD forms are available on the Executive Services Directorate website (https://www.esd.whs.mil/directives/forms/); and standard forms are available at the General Services Administration website (https://www.gsa.gov/reference/forms)

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

DA Form 5988–E
Equipment Maintenance and Inspection Worksheet (This is generated electronically through the Global Combat Support System—Army)

DD Form 1225
Storage Quality Control Report

SF 364
Report of Discrepancy (ROD)

SF 368
Product Quality Deficiency Report

Appendix B

Internal Control Evaluation

B–1. Function
The function covered by this evaluation is CPC 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
Base answers upon the actual testing of controls (for example, document analysis, direct observation, interviewing, sampling, and simulation). Explain answers that indicate deficiencies and the corrective action in supporting documentation. Evaluate these internal controls at least once every 3 years. Certify that the evaluation has been conducted using DA Form 11–2 (Internal Control Evaluation Certification).

B–4. Test questions
a. Has the command identified a CPC functional manager (division and above) or unit corrosion monitor (brigade command and below)?

b. Has the command incorporated CPC procedures into the unit maintenance standard operating procedure?

c. Do unit personnel receive CPC training appropriate for their skill level and duties?

d. Have unit corrosion monitors been trained?

e. Is the command's CPC published program disseminated to subordinate organizations?

f. Has the command made a routine assessment of the organization's CPC program?

g. 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?

h. Has the command conducted training for organizational personnel to identify, correct, and report corrosion and to 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.

i. Has the command taken proactive measures to resolve any identified CPC issues?

B–5. Supersession
This evaluation replaces the evaluation previously published in AR 750–59, dated 19 March 2014.

B–6. Comments
Help make this a better tool for evaluating internal controls. Submit comments to the Headquarters, Department of the Army, Deputy Chief of Staff, G–4 (DALO–MPF), 500 Army Pentagon, Washington, DC 20310–0500.

Glossary

Section I

Abbreviations

ACOM
Army command

ADP
Army Doctrine Publications

AFC
U.S. Army Futures Command

AMC
U.S. Army Materiel Command

AR
Army regulation

ARNG
Army National Guard

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

ASCC
Army service component command

ASTM
American Society for Testing and Materials

CARC
chemical agent resistant coating

CCDC
Combat Capabilities Development Command

CCPE
corrosion control and prevention executive

CG
commanding general

CPC
corrosion prevention and control

DA
Department of the Army

DA Pam
Department of the Army pamphlet

DCS
Deputy Chief of Staff

DD Form
Department of Defense form

DOD
Department of Defense

DODI
Department of Defense instruction

DRU
direct reporting unit

ESOH
environment, safety, and occupational health

FORSCOM
U.S. Army Forces Command

IPS
integrated product support

LCMC
life cycle management command

LCSP
life cycle sustainment plan

MIL–DTL
military detail

MIL–STD
military standard

NGB
National Guard Bureau

PEO
program executive office

PM
program manager

PMCS
preventive maintenance checks and services

RDT&E
research, development, test, and evaluation

SEP
system engineering plan

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 to an operating environment, to corrode and adversely affect a system or equipment.

Department of Defense military munitions
All ammunition products and components produced for or used by the armed forces for national defense and security, including ammunition products or components under the control of the DOD, the Coast Guard, the Department of Energy, and the ARNG. The term includes confined gaseous, liquids, and solid propellants; explosives, pyrotechnics, chemical and riot-control agents, smokes, and incendiaries, including bulk explosives and chemical warfare agents; chemical munitions, rockets, guided and ballistic missiles, bombs, warheads, mortar rounds, artillery ammunition, small arms ammunition, grenades, mines, torpedoes, depth charges, cluster munitions and dispensers, and demolition charges; and devices and components of any item thereof.

Materiel
From the DOD perspective, materiel includes all items necessary to equip, operate, maintain, and support military activities without distinction as to its application for administrative or combat purposes (see ADP 1–02).