AF Corrosion Conference
August 2011

AMCOM Corrosion Program Overview
**AMCOM Corrosion Program Overview**

Presented at the 2011 Air Force Corrosion Conference held 16-18 Aug 2011 at Robins AFB, GA.
Corrosion Prevention and Control (CPC)

Annual Corrosion Cost for Aviation and Missile Weapon Systems Is $1.4B

- The Army Corrosion Prevention and Control Program Addresses the Congressional Directives, DoD Policies, GAO Recommendations, and Army Regulations

- CPC Provides Solutions to the Army’s Current Corrosion Related Problems, Reduces Future Burdens by Enhancing Maintenance Procedures, Improves System Designs, and Promotes Corrosion Control Awareness Throughout the Maintenance Community

- Corrosion Control Is Addressed on Every Level From Initial System Design to Equipment Operation and Maintenance

- The CPC Program Will Increase Readiness & Safety, Decrease Maintenance Burden, and Reduce Maintenance Costs

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**Current Operational Situational Awareness**

**Future Operational Influence & Planning**

*Plan → Equip → Train → Deploy → Sustain → Reconstitute/Recoup*
AMCOM Corrosion Program

DA Form 2410 Corrosion Cost

OH58
AH64
UH60
CH47
AMCOM Corrosion Prevention Strategy

**SUSTAINMENT**
*(Identify Corrosion Issues)*
- CPC Service Centers
- CPC / NDT Training
- TM Updates
- Equipment Assessments
- RESET / Preset
- CPC SOPs / Guides

**ACQUISITION**
*(Implement Corrosion Solutions)*
- Contract Language
- CPC Plans
- 1st Unit Equip
- Material Fielding Plan

**RESEARCH & DEVELOPMENT**
*(Develop Corrosion Solutions)*
- Dem/Val New Technologies
- Lessons Learned
- R&D Projects

Focused Funding Strategy Is Key
AMCOM Corrosion Program

SUSTAINMENT

– Provide Immediate Near-Term Solutions & Implementation
  • Depots / AVCRADS
  • RESET
  • Field Maintenance
– Corrosion Maintenance / Procedures (TM, SOP, etc.)
– Corrosion Prevention and Control (CPC)/NDT Training
– CPC Sustainment Technology
  • Corrosion Repair Kits; Dehumidification; Corrosion Preventive Compounds; Protective Covers, etc.)
AMCOM Corrosion Program

“Identifying Corrosion Issues”
AMCOM Corrosion Program

Corrosion Prevention and Control Center of Excellence (CPC CoE)

- **Standard Maintainers’ Class**
  - Technician’s Class
  - On Site - Worldwide

- **Maintenance Managers’ Class**
  - All 151A “Walking Warrant” Classes at Ft Eustis
  - All AMMC/ANCOC Classes at Ft Rucker

- **Advanced Non-commissioned Officers’ Course (ANOC) at Ft Rucker**
  - AMCOM Logistics Assistance Representatives (LAR-U)
  - All ANCOC Classes (Ft Rucker)

- **Corrosion Monitor Class**
  - Army Requirements
  - Vendor and PM Presentations

100+ Sites/Over 3928 Students Trained in FY10
AMCOM Corrosion Program

Non-Destructive Test Center of Excellence (NDT CoE)

8  FORMAL TRAINING CLASSES (NGB)
Per NGR 750-410, 32-80 hour blocks

16  TECHNICAL ASSIST VISITS (NG & AC)
Pre-Deployment/Task Qualification/NDT Assessments

6  SUPPLEMENTAL – USAALS/Ft. Rucker
Managerial Briefings for Warrant Officer 151A & 15K briefings
AMCOM Corrosion Program

NON-DESTRUCTIVETESTING PLATFORM SUPPORT:

CH-47 AFT Landing Gear
MH-47 AFT Slider Shaft
AH-64  Curvic Coupling
UH-60 Tail Rotor Gearbox
AMCOM Corrosion Program

**Tail Rotor Gearbox Output Bevel Gear**

- Evaluator and Inspection Kits Procured/Distributed
- Personnel Are Being Trained and Individually Task Qualified
- ASAM to Be Released Within 30 - 60 Days
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AILING AGPUs
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Packaging & Storage Issues

Water in Containers
AMCOM Corrosion Program

SENSORs/MONITORING

- Corrosion, Corrosivity, Wetness, Humidity, Temperature, Coating Degradation, Environment

- Inside and Outside Locations

- Data Analysis/Remote Monitoring

- Storage, Transportation, and Deployment
AMCOM Corrosion Program

TECHNOLOGIES DEM/VAL

- Identification of New Technologies
- Dem / Val of New Technologies
- Data Collection / Analyses to Implement Proven Technologies

Examples: Corrosion Sensors for CBM+, Detergents, Soil/Water Analyses, Environmental Effects

Technology Integration With CBM Concept
AMCOM Corrosion Program

“Getting Technology to the War Fighter”
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CORROSION PREVENTIVE COMPOUNDS (CPC)

– New Improved CPCs
– SOP/TM Implementation
– Included in Corrosion Repair Kits/Unit Training
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AIRCRAFT PAINT INSPECTION

Color Chips/Coupons for Each Color
Handheld Coating Thickness Inspection Instruments
Digital Camera
IPT Determined Inspection Locator
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PROTECTIVE AIRCRAFT COVERS PROJECT

Vapor Transfer Properties
(Eliminates Condensation)

Custom Fitted

Patented Material
AMCOM Corrosion Program

Dehumidification (DH) Project
Aviation Technical Supply

Humid & Corrosive Environment
Stores $17M Unique High Value Parts

The SOLUTION....

$92K Commercial Off The Shelf DH Unit
AMCOM Corrosion Program

DETECTING HIDDEN CORROSION
ACQUISITION SUPPORT

– Provide Corrosion Prevention Assistance & Guidance
– Corrosion Prevention and Control (CPC) Plan Reviews
– Corrosion Prevention Action Teams (CPAT)
– Design for CPC Based Upon Lessons Learned
AMCOM Corrosion Program

Coatings for Magnesium Beach Exposure

Anodize/HT Resin Coating/23377C/53039

Conversion Coating A/HT Resin Coating/23377C/53039

Conversion Coating B/HT Resin Coating/23377C/53039
AMCOM Corrosion Program

MAGNESIUM GEARBOX

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