



**AF Corrosion
Conference
August 2011**

AMCOM Corrosion Program Overview



Report Documentation Page

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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

DATA

**Current Operational
Situational
Awareness**

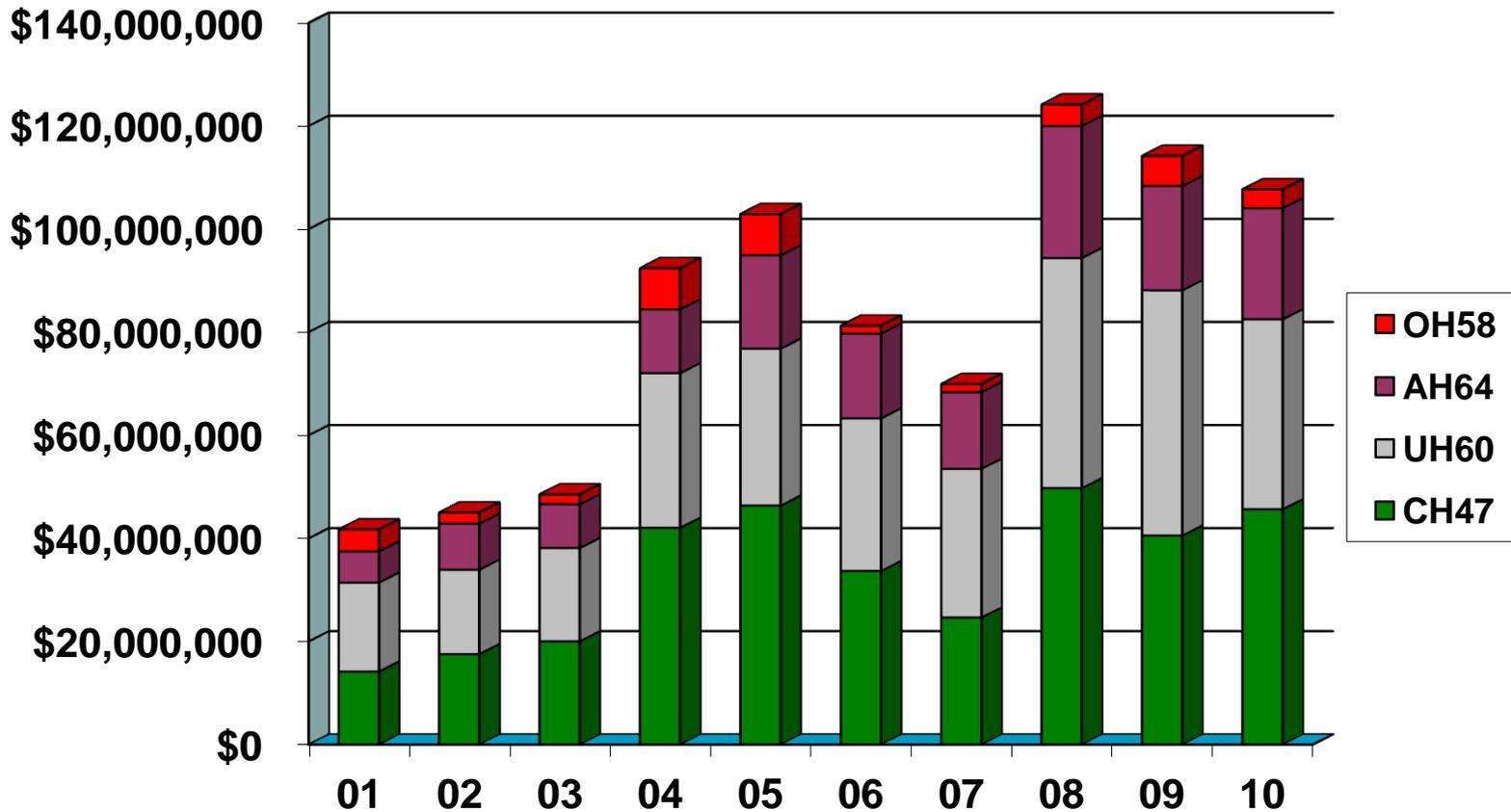
**Future Operational
Influence &
Planning**

CPC

Plan → *Equip* → *Train* → *Deploy* → *Sustain* → *Reconstitute/Recoup*



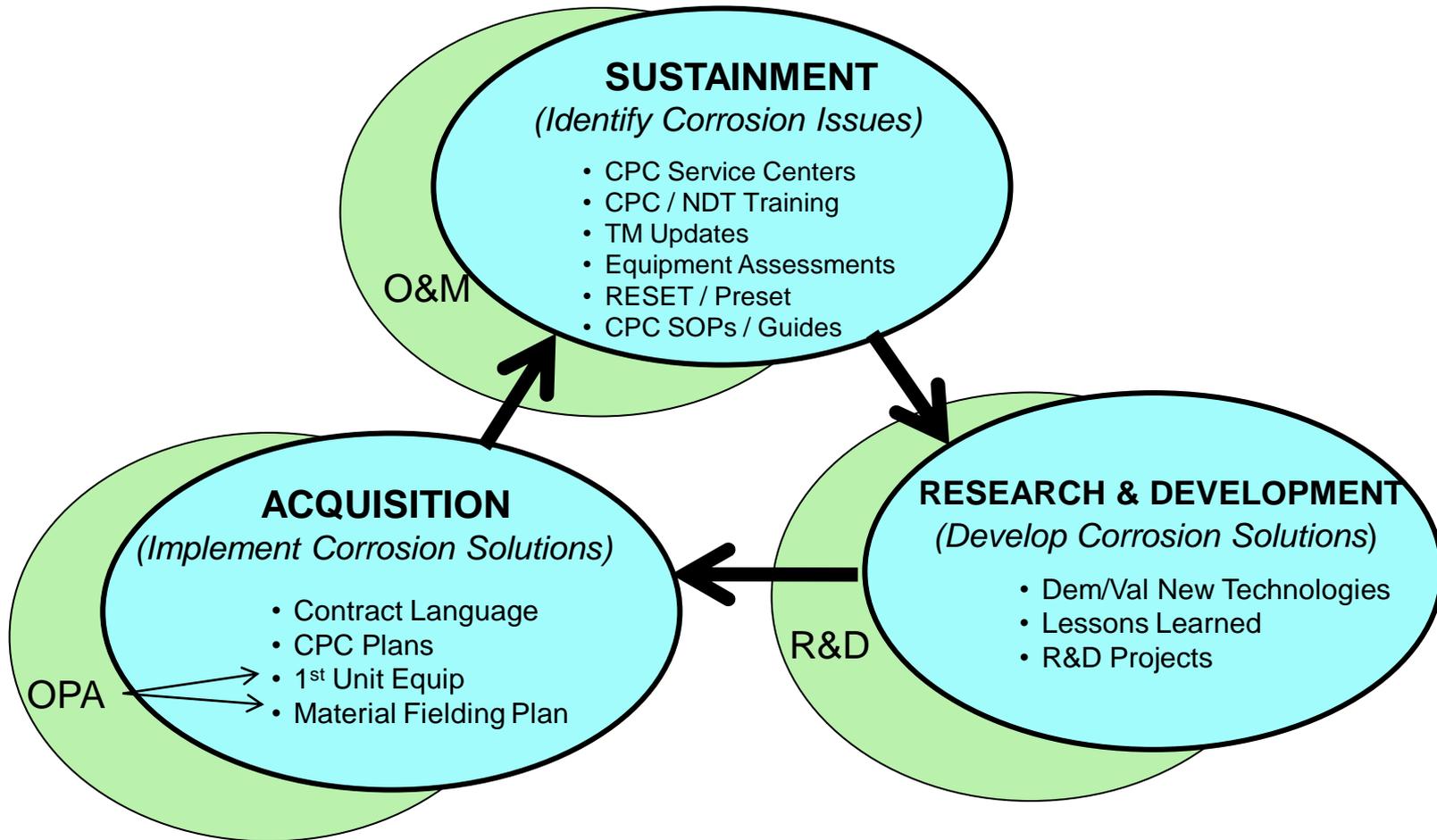
AMCOM Corrosion Program



DA Form 2410 Corrosion Cost



AMCOM Corrosion Prevention Strategy



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



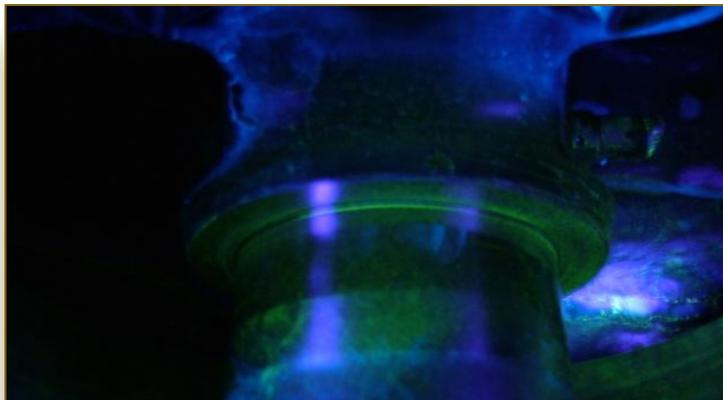
NON-DESTRUCTIVE TESTING PLATFORM SUPPORT:

CH-47 AFT Landing Gear

MH-47 AFT Slider Shaft

AH-64 Curvic Coupling

UH-60 Tail Rotor Gearbox

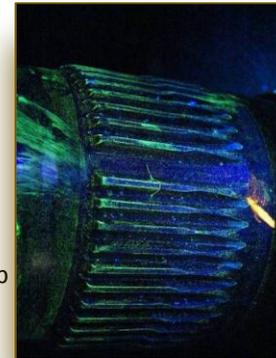
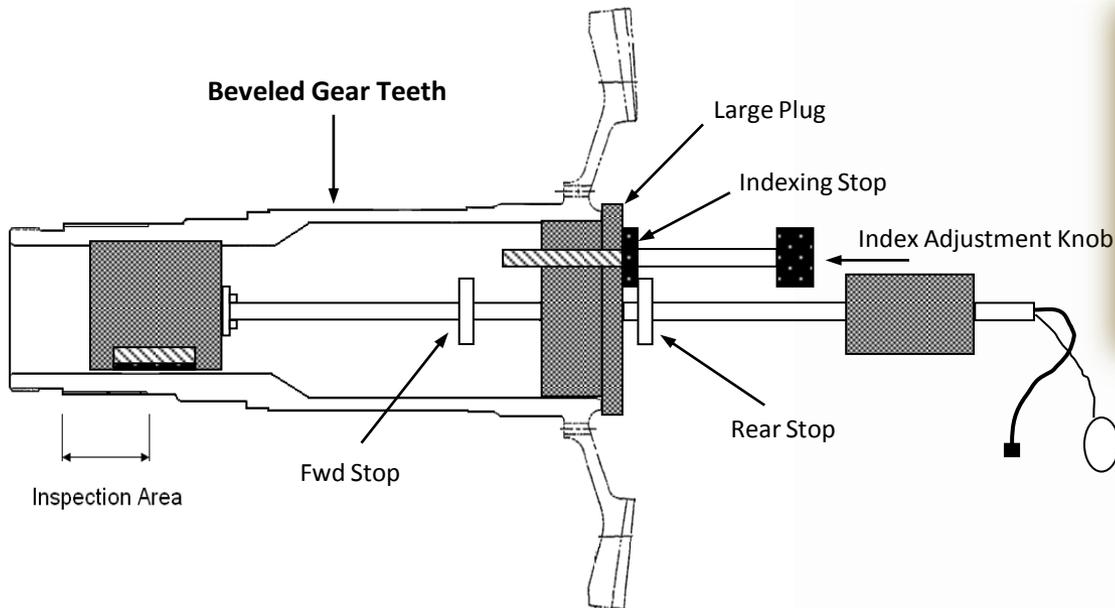




AMCOM Corrosion Program

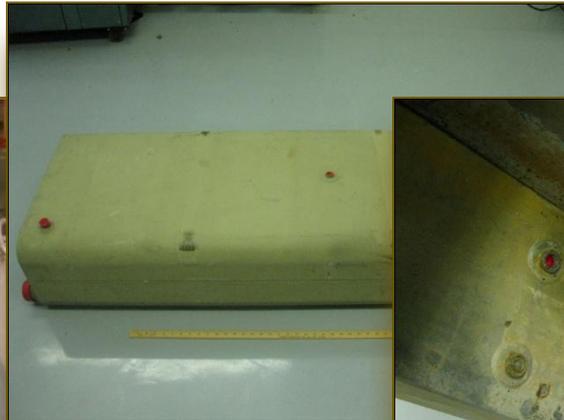
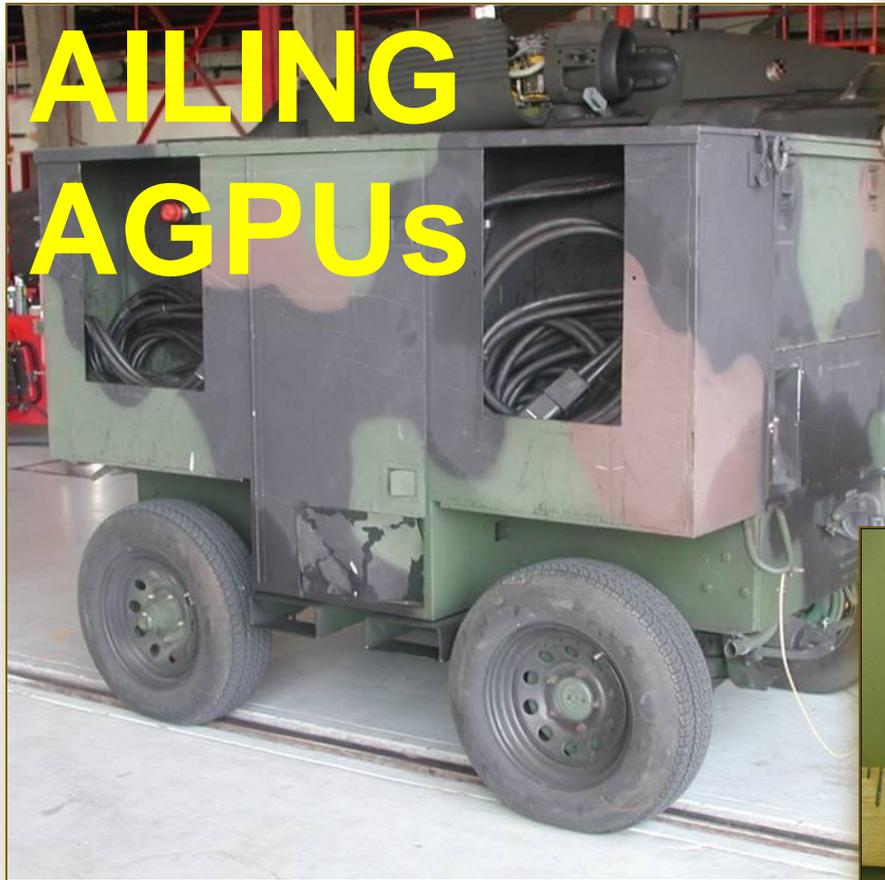
Tail Rotor Gearbox Output Bevel Gear

- Evaluator and Inspection Kits Procured/Distributed
- Personnel Are Being Trained and Individually Task Qualified
- ASAM to Be Released Within 30 - 60 Days





AMCOM Corrosion Program

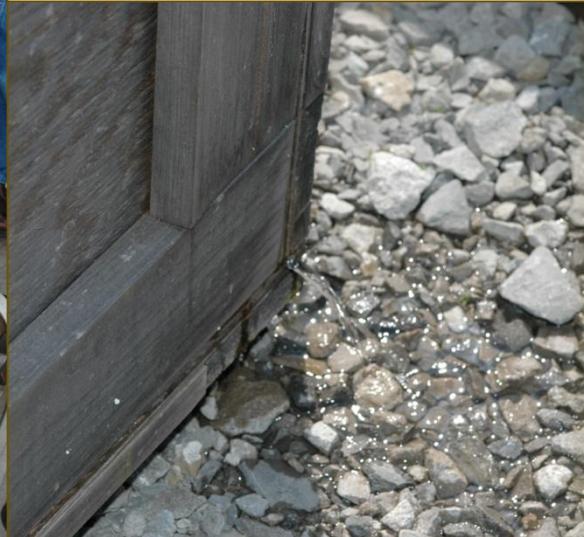




AMCOM Corrosion Program



Packaging & Storage Issues



Water in Containers



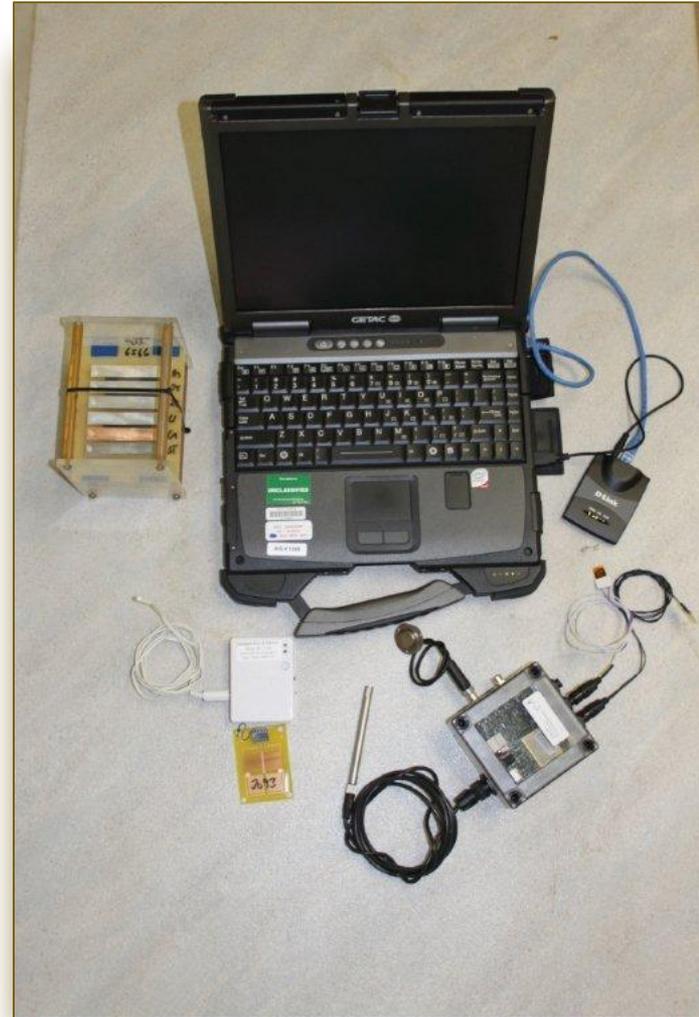


AMCOM Corrosion Program



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"*

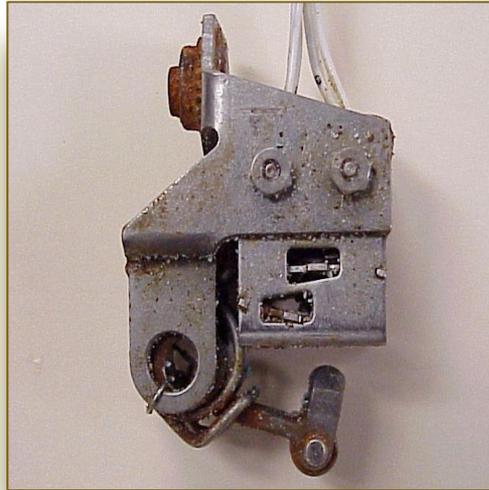


AMCOM Corrosion Program



CORROSION PREVENTIVE COMPOUNDS (CPC)

- New Improved CPCs
- SOP/TM Implementation
- Included in Corrosion Repair Kits/Unit Training

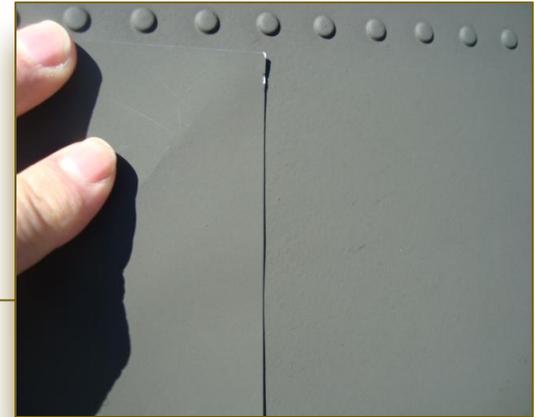




AMCOM Corrosion Program



AIRCRAFT PAINT INSPECTION



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



AMCOM Corrosion Program



PROTECTIVE AIRCRAFT COVERS PROJECT



Custom Fitted

**Vapor Transfer Properties
(Eliminates Condensation)**



Patented Material



AMCOM Corrosion Program



Dehumidification (DH) Project Aviation Technical Supply

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

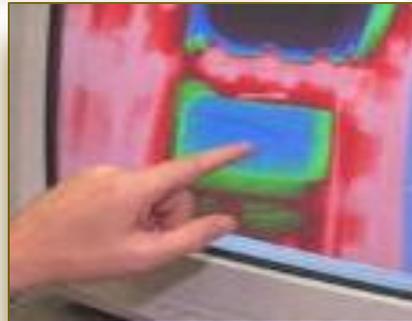
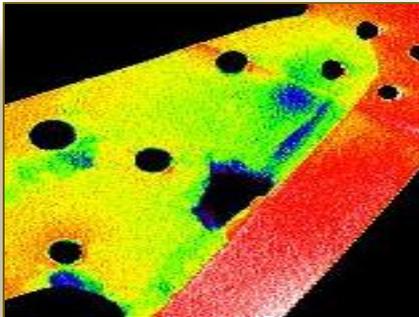
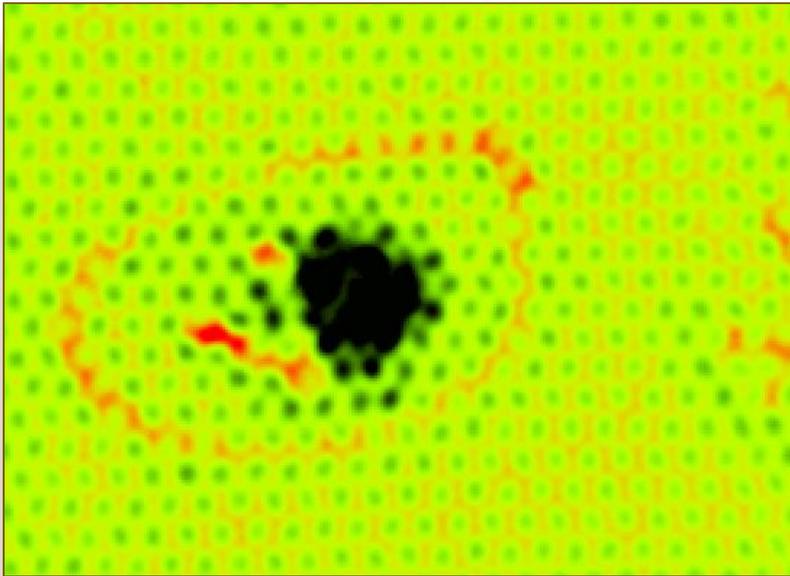
The SOLUTION....

\$92K Commercial Off The Shelf DH Unit



AMCOM Corrosion Program

DETECTING HIDDEN CORROSION





AMCOM Corrosion Program

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

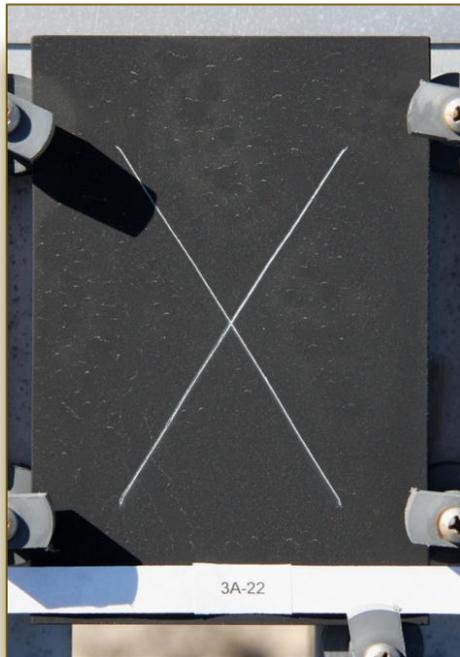
CPC:

Design the System, Design the Support, Support the Design



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



From This



To This



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Questions?

