



UNITED STATES ARMY AVIATION and MISSILE LCMC

CORROSION PROGRAM OVERVIEW

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Overview

- **Aviation and Missile Corrosion Program Focus**
- **Corrosion Impact**
- **Corrosion Program Initiatives**
- **Summary**



Aviation and Missile Corrosion Program Focus

*Getting Technology to
the War Fighter*



Aviation and Missile Corrosion Program Focus

- **Actions**
 - **Provide Immediate Near-Term Solutions & Implementation**
 - **Aviation Reset Support**
 - **Impact Corrosion Cost At High Corrosion Cost Locations**
 - **Provide Corrosion Assistance & Guidance**
 - **Acquisition**
 - **Sustainment**
 - **Provide Corrosion Prevention and Control Plan Guidance**
- **Army Aviation and Missile Lead for:**
 - **DOD Corrosion Policy and Oversight**
 - **Joint Council on Aging Aircraft Corrosion Steering Group**
 - **Army/Navy Corrosion Partnership**



Corrosion Impact

Center For Army Analysis Study on Army Aviation Corrosion 2001

- **\$1.28 Billion Estimated Annual Corrosion Maintenance Cost to Army Aviation**
- **Army Wide Safety Impact (Corrosion) 1989 – 2000**
 - **46 Aircraft Mishaps**
 - **9 Fatalities**
 - **13 Injuries**
 - **\$30 Million+ Additional Cost in Aircraft Equipment. Readiness Impact Unknown**



Corrosion Impact

Typical Cost Drivers

- **Phase Maintenance & Corrosion Inspections**
 - Drive Train Losses
 - UH-60 \$400,000+ Each
 - CH-47 \$350,000+ Each
 - Other Component Losses
 - Structural and Airframe Repairs
- **Shipping, Transportation, Storage, Handling, & Other Overhead**
- **Labor – Direct and Indirect**



Corrosion Impact





Corrosion Impact





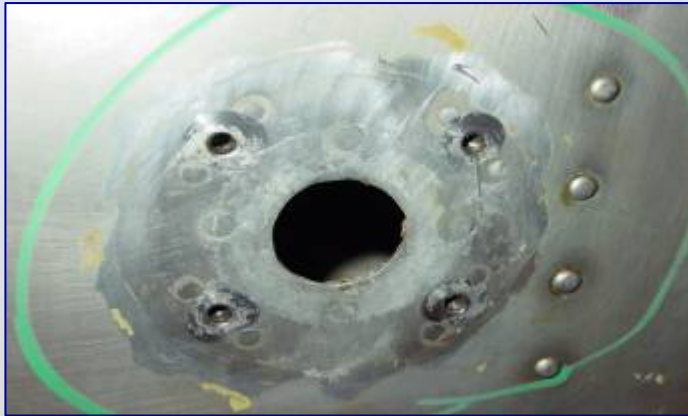
Corrosion Impact





Corrosion Impact

ANTENNA CORROSION



FLOOR BEAMS



DRAIN AREAS



ELECTRICAL CONNECTORS





Corrosion Impact

TRAPPED WATER



MILDEW



ROTOR TIP WEIGHT



MAGNESIUM TRANSMISSION





Corrosion Program Initiatives

Acquisition

- **DOD Policy - Address Corrosion Prevention in Design**
 - Corrosion Prevention and Control (CPC) Plans
 - Corrosion Prevention Advisory Teams (CPATs)
 - Corrosion Prevention and Control Planning Guidebook
 - www.dodcorrosionexchange.org

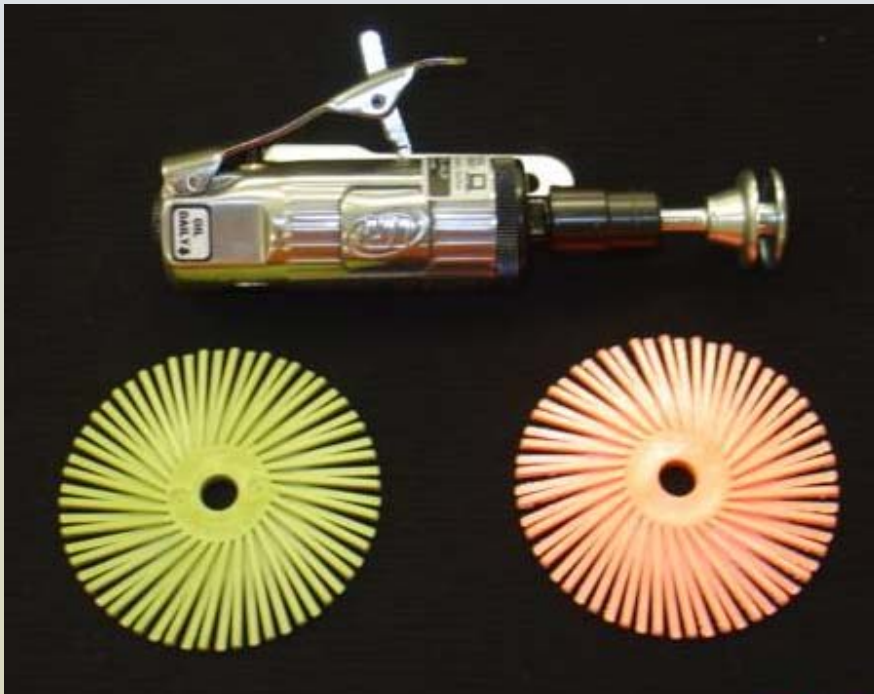
Sustainment

- **Corrosion Prevention Technologies Development/Training**
- **TM Changes (Joint Service Cleaning and Corrosion Control TM 1-1500-344-23-2)**



Corrosion Program Initiatives

- ***High-Speed Bristle Discs***
- **Less aggressive than abrasive wheels and flap brushes for small corrosion repairs and spot paint removals**





Corrosion Program Initiatives

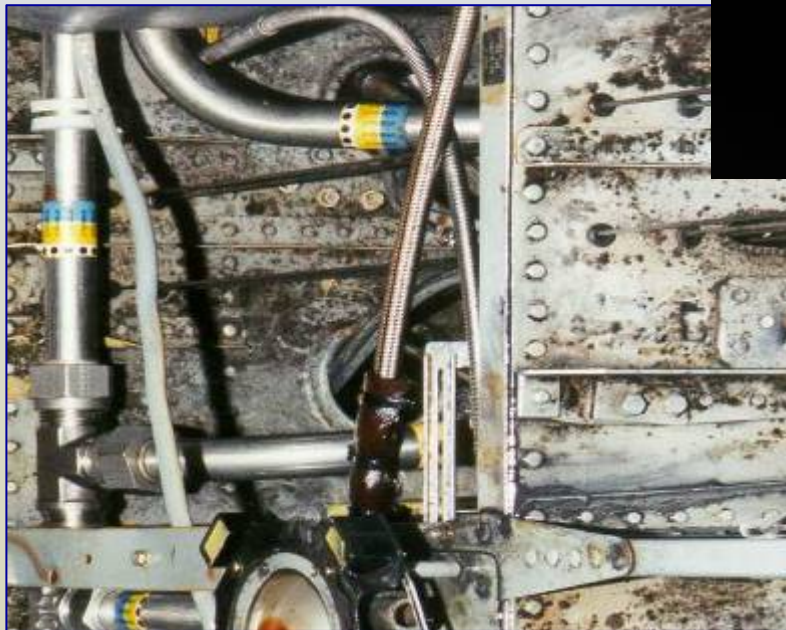
Improved Wash Pads for Army Aviation Aircraft





Corrosion Program Initiatives

Non-Corrosive Mildew Removal Kit





Corrosion Program Initiatives

Missile System Connector Covers





Corrosion Program Initiatives

Transportable Clear Water Rinse System (CWRS)

- Designed for Helicopter Rinse
- Closed-Loop With Filtration
- Rinses all Helicopter Types and Small Fixed Wing Aircraft
- Removes Salt, Sand, and Other Contaminants Between Wash Cycles
- Designed as a Post Mission Rinse
- New Filtration Technology Meets Routine and Surge Requirements



Corrosion Program Initiatives

Transportable Clear Water Rinse System





Summary

- **Corrosion Prevention and Control Must Be an Integral Part of the Life Cycle Management Plan for All Military Systems**
- **The U.S. Army Aviation and Missile Corrosion Program is Actively Addressing Corrosion Prevention for New and Legacy Systems**