



# VpCI™ SOLUTIONS FOR MILITARY APPLICATIONS



## CASE HISTORY

### Halvorsen 25K Aircraft Cargo Loader Preservation

#### PROBLEM

The Air Force Halvorsen 25K Aircraft Cargo Loaders are outstanding pieces of equipment purchased to load and unload cargo from military and commercial airframes. This small next-generation loader is designed to be in the Air Force inventory for the next 30 years. Corrosion has a major impact on the life expectancy of all equipment, and an effective corrosion control plan is essential to ensure the best measures are taken to address the impact of corrosion. The Air Force performed long-term storage testing on three of the Halvorsens using Cortec's Vapor phase Corrosion Inhibitor (VpCI™) technology to determine the feasibility of storing vehicles to increase their life expectancy and reduce the cost of corrosion prevention.

#### APPLICATION

The tests were for periods of 6 months, 1, 2, and 3 years with visual inspections performed monthly. The loaders were washed with VpCI™-415. Once dried, the oil, hydraulic, fuel, and coolant systems were changed and lowered to the proper level to allow for the addition of VpCI™-322 Oil Concentrate, VpCI™-323, VpCI™-705 Fuel Additive, and M-640 L. Once the additives were added, the loaders were started and operated to circulate the additives throughout the systems. The loaders were then coated using VpCI™-368 for all stationary parts and surfaces, VpCI™-369 aerosol for all moving parts, and Re-Grip MIL for the tires and other rubber surfaces. VpCI™-105 Emitters were placed inside all electrical boxes, the battery box, and inside the cab. ElectriCorr® VpCI™-238 was then used on all electrical components and fogged inside the electrical boxes. Finally, VpCI™-132 Foam Pad's were placed throughout the loader and the loader was sealed with MilCorr® VpCI™ Shrink Film.

#### CONCLUSION

The loaders started with no identified problems. OEM reliability and maintainability exercise cycles were performed on the loaders at the start and finish of the tests. At the conclusion of the long term storage tests the loaders met all OEM test parameters and performed extremely well. By preserving the loaders, the Air Force reduced the hazardous waste stream. Cortec® products increased the life expectancy, vehicle reliability, and the mission readiness of the loaders.

**DATE**  
April 2007

**CUSTOMER**  
United States Air Force

**LOCATION**  
Orlando and Cape Canaveral, Florida

- PRODUCTS**
- MilCorr® VpCI™ Shrink Film
  - M-640 L
  - VpCI™-105 Emitters
  - VpCI™-132 Foam Pads
  - ElectriCorr® VpCI™-238
  - VpCI™-322 Oil Concentrate
  - VpCI™-323
  - VpCI™-368
  - VpCI™-369
  - VpCI™-415
  - VpCI™-705 Fuel Additive
  - Re-Grip MIL

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