

Critical Item: Pneumatic Actuator

Find Number: None

Criticality Category: 1S

SAA No: 09FT08-022 Rev. A

System/Area: Dry Chemical Fire
Protection/SRM Trans-
porter

NASA
Part No: None

PMN/
Name: P77-0828-01

Mfg/
Part No: Walter Kidde 877806

Drawing/ Walter Kidde Catalog
Sheet No: 2.3

Function: Actuates release of dry chemicals.

Critical Failure Mode: Piston fails to release. FM No. 09FT08-022.002

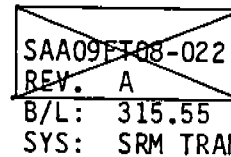
Failure Cause: Frozen by contamination.

Failure Effect: Unable to release dry chemical fire extinguishing agent in response to fire alarm in the engine compartment of the SRM Transporter. An uncontrolled engine fire could result in loss of life and the SRM segment.

Acceptance Rationale

Design:

- o Component Specification:
 - Operating Temperature -65°F to 200°F
- o Materials:
 - Valve Body: Aluminum
 - Retaining Ring: Stainless Steel
 - Piston: Aluminum
 - Seat: Synthetic Rubber
- o Valves are listed by Underwriters Laboratories.



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Pneumatic Actuator (Continued)

Design: (Continued)

- o Meets requirements of NFPA-17 "Standard for Dry Chemical Extinguishing Systems".

Test:

- o Validated by Acceptance Test

Inspection: OMI M3164 will specify the following inspection requirements per NFPA-17 "Standard for Dry Chemical Extinguishing Systems".

- o Monthly: Check all parts of system for physical damage, rust, corrosion, etc. Make certain that the system has not been tampered with, and that nothing has been placed where it would interfere with the operation of the system.
- o Semi-annual: Examine the nitrogen cylinder, Part No. 878508, for knicks and corrosion. Replace if cylinder is knicked or corroded. Unscrew the nitrogen cylinder from actuator assembly. Install the anti-recoil cap with gasket onto the cylinder and weigh. Replace if the weight is not within 1/2 ounce of the weight stamped on the cartridge.

Failure History:

- o No KSC PRACA history of failure in the critical failure mode.
- o No GIDEP alerts were reported.

Operational Use:

- o Observers are assigned on both sides of the transporter to monitor safety requirements.
- o Fire department is notified to standby when moving SRM segments.
- o Portable extinguishers are available in each cab and in convoy vehicles.
- o A power kill switch is activated to turn off all power to the transporter systems.

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B/L: 315.55

SYS: SRM TRANSPORTER

Pneumatic Actuator (Continued)

Operational Use: (Continued)

- o The engine compartment and the SRM segment are approximately 12 feet apart along the surface of the structural steel deck of the transporter.