Critical Item: Control Head (Pneumatic Actuator) (Slave and Pilot Cylinder) (22 each MLP-1 and MLP-2, 21 each MLP-3, 65 total)

Find Number: 5 and 6

Criticality Category: 1S

SAA No:	09ST01-002	System/Area:	Halon 1301 Fire Protection System/MLP
NASA Part No:	None	PMN/ Name:	X61-0739-01 X61-0740-01 X61-0741-01
MFG Part No:	Kidde 486363 (11 each MLP-2 & MLP-1, 10 each MLP-3) 896048 (11 each MLP)	Drawing/ Sheet No:	79K09475 5

Function: Provides the means to release halon from the pilot cylinder and slave cylinders using control pressure from the pilot cylinder.

Critical Failure Mode: Fails to actuate. FM09ST01-002.001

Failure Cause: Actuator pin binds

Failure Effect: Unable to release halon from affected cylinder. Reduction of halon which could allow a fire to spread. Possible loss of life and damage/loss of a Space Shuttle Vehicle.

Acceptance Rationale

Design:

- Component Specification: Rated Actual

  Operating Temperature -20°F to 130°F Ambient (60°F to 80°F)

- Materials:

	896048	486363
Valve Body:	Brass	Aluminum
Swivel Nut:	Steel	Steel
Piston :	Brass	Aluminum
Seat :	Rubber	Rubber

- Valves are listed by Underwriters Laboratories (UL).

Test:

- File VI OMRSD requires an annual test:
- Ensure Halon System is in the automatic mode. Activate two ionization detectors on separate circuits to perform end-to-end test and verify dampers close and halon actuator pins do extend approximately 1/4 inch.

Inspection:

- Verify functional operation annually and at component replacement.
- PMI requires: Visually inspect quarterly for physical damage and deterioration.

Operational Use:

- None. response by Fire Services Personnel when MLP at Launch Pad:
  1. During normal Pad operation (routine operation/maintenance personnel present), Fire Services Personnel will respond within 2-9 minutes after notification from LCC Room 1P10.
  2. During hazardous operations at the Pad (access limited to essential personnel only), response time after notification of a fire would be 2-9 minutes. Fire Services Personnel will be on-site or in near proximity during all hazardous operations.
  3. During post-launch operations (no operation/maintenance personnel present), response time after notification of a fire is expected to typically be within 20 minutes.

Failure History:

- No KSC PRACA history of failure in the critical failure mode.
- No GIDEP ALERTs were reported.
- No trouble tickets were reported.