

CI09SV01-002
REV. A
July 24, 1990

Critical Item: Damper Control Panel

Find Number: 14

Criticality Category: 1S

<u>SAA No:</u>	09SV01-006	<u>System/Area:</u>	Halon 1301/PTCR Pad A
<u>NASA Part No:</u>	None	<u>P/N/Name:</u>	K61-0712-01
<u>Mfg/Part No:</u>	Roffman Enclosure with Off-the-shelf UL listed electrical components	<u>Drawing/Sheet No:</u>	81X01775 and EN 18-68DEFAC271

Function: Provides power to the damper actuators to open the NVAC dampers during normal operation. When the halon system is activated, a 120 VAC signal is received from the Halon Control Panel which energizes two power relays to remove power from the damper actuators allowing the dampers to close by a damper close spring.

Critical Failure Mode: The Damper Control Panel fails to remove power from the damper actuators when the halon system is activated. PN 09SV01-006.009.

Failure Cause(s): One of the power relays fails to energize or a contact shorts in the normally open position or one of the contacts in the maintenance by-pass switch fails in the closed (on) position.

Failure Effect: Two or three dampers would not close resulting in a significant reduction of halon concentration which could allow a fire to spread in 209/210. Possible loss of life and damage/loss of a space shuttle.

Acceptance Rationale

DESIGN: The panel conforms to the requirements of NEC (National Electric Code) and NFPA 70. The components are UL (Underwriters Laboratories) certified.

TEST: File VI OMSD requires an annual test.

INSPECTION: MHI/OMI shall require a complete inspection of the Damper Control Panel and components for damage, corrosion or other deterioration quarterly.

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Operational Use:

- o Nonn. response to Pad A PTCR by Fire Services Personnel:
 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 in the PTCR area 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 in the PTCR area is expected to typically be within 20 minutes.

Failure History:

- o No KSC PRACA history of failure in the critical failure mode for similar items.
- o No QIDEP ALERTs were reported for similar items.
- o No Trouble Tickets were reported for similar items.