

USA Ground Operations CIL Sheet DEC 15 1999

Critical Item: Line Regenerative Digital DC Control
NASA Part No: None
Mfg/Part No: Magnetek / DSD 412
System: FSS Electrical Passenger Elevators

Criticality Category: 1S**Total Quantity:** 2

Find No.	Qty	Area	PMN	Baseline	Drawing / Sheet
DSD 412	1	Pad-A	K60-0597-01	420.00	E835012E /
DSD 412	1	Pad-A	K60-0597-02	420.00	E835012E /

Function:

Provides drive current to car hoist motor. Accepts commands from control PLC.

Failure Mode No. Failure Mode	Failure Cause Failure Effect	Detection Method Time to Effect	Crit Cat
09FY018-001.211 Fails to operate	Internal component failure. Loss of car mobility. Loss of elevator function would prevent / delay ingress of rescue personnel during Flight Crew /Red Crew/Close-Out Crew rescue operations. Possible entrapment of personnel during hazardous fuel spill or fire.	Loss of car mobility. Immediate	1S
09FY018-001.212 Erroneous operation	Internal component failure. Possible loss of car mobility. Loss of elevator function would prevent / delay ingress of rescue personnel during Flight Crew /Red Crew/Close-Out Crew rescue operations. Possible entrapment of personnel during hazardous fuel spill or fire.	Loss of car mobility. Immediate	1S

ACCEPTANCE RATIONALE**Design:**

- This SCR DC Drive is typical equipment used in industry for the intended application.
- The design of the FSS elevator systems are consistent with ASME A17.1 (1994) Safety Code For Elevators And Escalators.

Test:

- The State of Florida requires bi-annual elevator inspection and certification.
- Annual testing and certification of elevators is performed per ANSI/ASME A17.1.
- OMRSD File VI requires that the FSS elevators are functionally tested (Ref. OMI S0007VL2) at T-8 hours.
- The Pad Close-out Crew performs additional functional check-out at T-25 Minutes.

Inspection:

- OMI Q3018 requires inspection and functional test after each launch.
- OMI Q6009 requires monthly inspection of Pad Electrical Passenger Elevators.

Failure History:

- Failures have been experienced with the elevator systems, however they have been attributed to burn-in type causes which do not represent current elevator operation. Critical failure modes identified are not represented in the burn-in type failures experienced.
- Current data on test failures, unexplained anomalies, and other failures experienced during ground processing activities can be found in the PRACA database. The PRACA database was researched and no data was found on this component in the critical failure mode.

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Operational Use:

Correcting Action	Timeframe
There is no action which can be taken to mitigate the failure effect.	Since no correcting action is available, timeframe does not apply.