

USA Ground Operations CIL Sheet

DEC 15 1999

Critical Item: Line Regenerative Digital DC Control
 NASA Part No: None
 Mfg/Part No: Baldor Electric Company / BC0062A02
 System: FSS Electrical Passenger Elevators

Criticality Category: 1S

Total Quantity: 2

Find No.	Qty	Area	PMN	Baseline	Drawing / Sheet
SCR DC Drive	1	Pad-B	K60-0597-06	420.00	80K58931 / All
SCR DC Drive	1	Pad-B	K60-0597-07	420.00	80K58931 / All

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
09FY018-001.209 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. Could result in loss of life during a hazardous condition.	Loss of car mobility Immediate	1S
09FY018-001.210 Erroneous operation	Internal component failure. Possible loss of car mobility. Possible inadvertent operation. Possible erratic operation of elevator. 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. Could result in loss of life during a hazardous condition.	None Immediate	1S

ACCEPTANCE RATIONALE**Design:**

- This equipment is specifically designed for elevator control applications.
- 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

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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.

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.