

USA Ground Operations CIL Sheet

AUG 23 1999

Critical Item: Switch

NASA Part No: None

Mfg/Part No: C&K Components, Inc / 7205K12CWZBE

System: Facility Water System

Criticality Category: 1S

Total Quantity: 1

| Find No. | Qty | Area | PMN | Baseline | Drawing / Sheet |
|-------------------------------|-----|-------|----------|----------|-----------------|
| 0325B3A3, module 6, switch S1 | 1 | Pad-A | U72-1193 | 007.00 | 79K09211 / 95L |

Function:

Provides capability to energize parallel relays 5340A20K5 and 5340A20K6 to activate 5340 bus-3 power and close all RSS water valves.

| Failure Mode No. Failure Mode | Failure Cause Failure Effect | Detection Method Time to Effect | Crit Cat |
|------------------------------------|---|--|-------------|
| 09SY03A-001.026 Fail closed | Corrosion, contamination, or failure of internal piece part Parallel relays 5340A20K5 and 5340A20K6 would remain energized as long as Hardwire Backup Panel command power was available. 5340 bus-3 power would continuously energize close solenoid of all RSS water valves resulting in loss of capability to open any RSS water valve. Possible loss of life and/or vehicle during a hazardous condition. | Backup panel all valves closed indication Immediate | 1S |

ACCEPTANCE RATIONALE

Design:

- Double pole double throw.
- Locking lever.
- Solder lug with gold contacts.
- Epoxy seal and splashproof bushing.
- Electrical life of 40,000 make-and-break cycles at full load.
- Contact rating 5 amps @ 28 VDC.

Test:

- OMI M2067 requires cycling of FSS/RSS water valves to verify proper operation.
- OMRSD, File VI requires verification of the operational function of water valves in all modes of operation semiannually and at replacement. (Verifies switch has not failed.)

Inspection:

NA

Failure History:

- 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 failure data was found on this component in the critical failure mode.
- The GIDEP failure data interchange was researched and no failure 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. |