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Critical Item: Circuit Breaker

Find Number: CB-2, Panel 1 System/Area: EPSP, Payload Canister Transporter Set 2

Failure Category: 2 SAA No: 09FT06-029, Rev. A

NASA Part No: None Manufacture: Square "D"

PMN No: S70-1309 Drawing/Sheet No: VEN 829 Sheet 459

Name: Transporter EPS

Function: Provides overload protection for Environmental Control System.

Critical Failure Mode: Premature Trip (FMN 09FT06-029.001)

Cause: Internal Part Failure

Failure Effect: Loss of 60 Hz power to ECS system. Unable to maintain canister environment. Possible damage to payload due to contamination.

Acceptance Rationale

Design:

o	Component Specifications	Rated	Actual
	AC voltage	600	480

- o Breaker is extra heavy duty, molded case.
- o Breaker set to trip at 100 amps, loaded at 75 amps.
- o Breaker is a standard commercial item.
- o This component is qualified through regular usage in this application and by analysis of loads and voltages.
- o Breaker trip is detectable by I&CS.

Test:

- o Qualification and acceptance testing and manufacturing/assembly (source) inspection is in accordance with requirements of NASA 79K14547, section 16190.
- o File VI OMRSD requirements, implemented by TPS S70-1309-0016, include:
 - Annual CB operation, insulation test and performance test.
 - Time-Current test with first use/component replacement.
- o OMI E6412 is being prepared to incorporate the File VI OMRSD requirements.

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Inspection:

- o File VI OMRSD requires an annual inspection of terminals which is accomplished per TPS S70-1309-0016.

Failure History:

- o There has been no failure history in the critical mode since turnover in October 1983.

Operational Use:

- o Under hazardous conditions refer to OMI E6412, Appendix 2.