

SAA09FY121-001  
B/L: 389.00  
SYS: 15-TON  
BRIDGE CRANE  
VAB

Critical Item: Relay Contactor (4 Items)

JAN 23 1995

Find Number: TR, TL, BF, BR

Criticality Category: 2

SAA No: 09FY121-001

System/Area: 15-Ton Bridge Crane/  
VAB - Low Bay Cell 7

NASA  
Part No: None

PMN/  
Name: K50-0532/15-Ton Bridge  
Crane

Mfg/  
Part No: Telemecanique (ITE)/  
2200R-EBR230AA

Drawing/  
Sheet No: 79K16769/1-9

Function: Provides 480V AC power to trolley or bridge motors in right/left or Forward/reverse modes respectively.

Critical Failure Mode/FM No: Fails activated/09FY121-001.010  
09FY121-001.011  
09FY121-001.012  
09FY121-001.013

Failure Causes: Relay sticks/welded contacts (2 or 3)

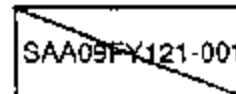
Failure Effect: Trolley or Bridge will operate in the effected direction when the start button is pressed or continue to operate at minimum speed in the last commanded direction when the button is released. Possible loss (damage) to Flight hardware if close proximity to an obstruction does not allow sufficient time for the operator to take correcting action. Failure is detectable when motion fails to stop when commanded. Time to effect: seconds.

#### Acceptance Rationale

##### Design:

Three pole reversing contactor specifications:

	Rated	Actual
Coil:		
Voltage:	120V AC	120V AC



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**Relay Contactor (Continued)**

	Rated	Actual
<b>Contacts:</b>		
Voltage:	480V AC	480V AC
Current:	25 amps	2.3 amps
Material:	Weld Resistant	Silver Cadmium Oxide

**Test:**

- Pre-operational set up (attaching and positioning sling over the load) to support lifting operations in OMI B5303 Task 04 verifies proper operation of crane components and all functions.
- A full operational test of the crane is performed monthly (no load) in accordance with OMI Q6166.
- An operational check of the crane is performed under full rated load as part of the annual load test in accordance with OMI Q6166.
- OMRSD File VI requires annual performance of an operational test at rated load.

**Inspection:**

- Relay contactors are inspected for wear and pitting monthly in accordance with OMI Q6166.

**Failure History:**

- The PRACA database was queried and no failure data was retrieved against this component.
- The GIDEP failure data interchange system has been researched and no failures of this component were found.

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Operational Use:

o Correcting Action:

Use of stop button or E-stop is effective in mitigating these failures if there is sufficient time/distance for the operator to react.

o Timeframe: Seconds