

Execute the safety line test

Does this solve the problem?

1] Yes

2] No

3] I don't know

- **Explanation**
IN THE TAC COMPUTER:

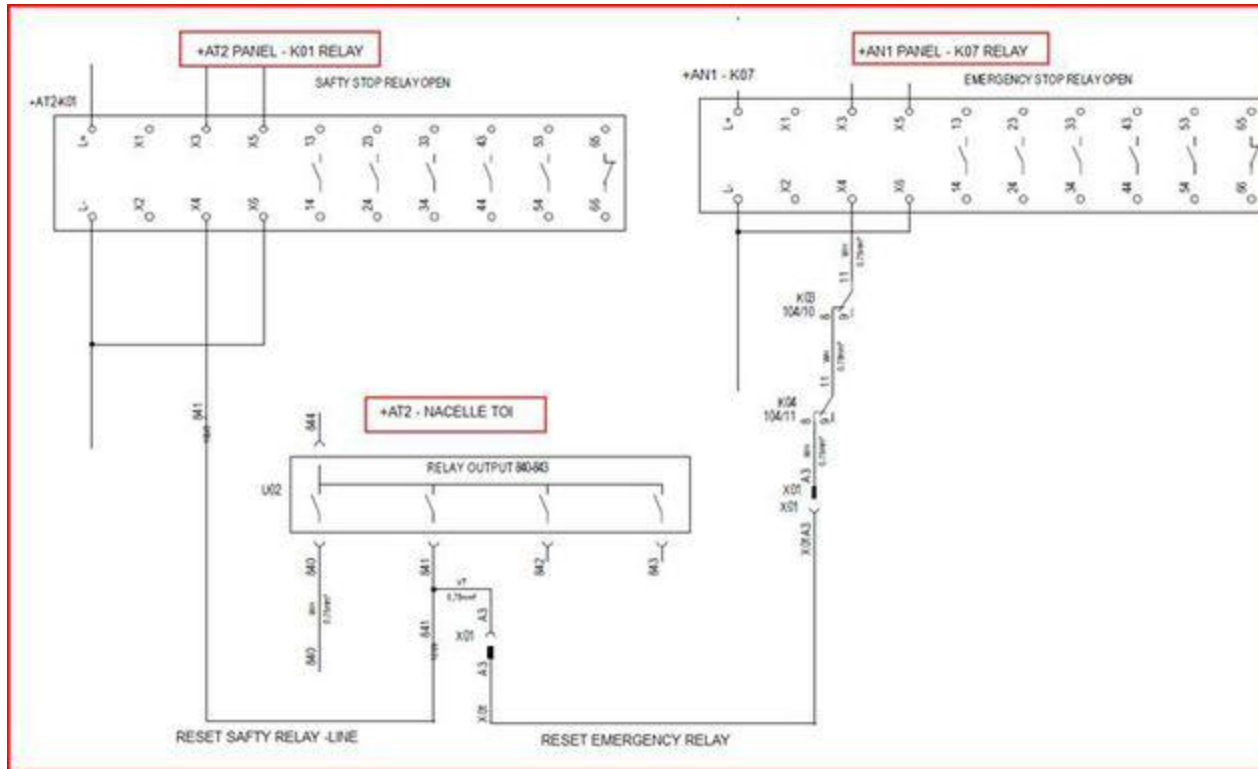
Execute the safety line test :

SERVICE MENU → MANUAL TEST → TEST SAFETY LINE

The test will be executed within 15 sec. If the safety line and emergency line is ok then the +AT2-K01 and _AN1-K07 relays closed through the reset line from the TOI unit. i.e. The safety line test is completed successfully.

If there is any problem with the emergency line or safety line then the “**750 -Safety line test fault**” alarm will rise.

24V DC -RESET LINE FROM TOI:



EMERGENCY CIRCUIT DIAGRAM:

Relevant documentation	
Description	DMS No.
MK1	6012952
MK2 50Hz	6014867
MK2 60Hz	6010124
MK3 & Above 50Hz	6016281
MK3 & Above 60Hz	6016283

IN THE +AT2 PANEL:

Check for loose connections in the safety line terminals.

Ensure the 24V DC supply from the Tower TOI relay output 840 and 841 **(Turbine reset)**.

NOTE: Reset safety line -24V DC voltage is present during the turbine reset time only.

Check switch and replace if defect

Does this solve the problem?

1] Yes

2] No

3] I don't know

- **Explanation**

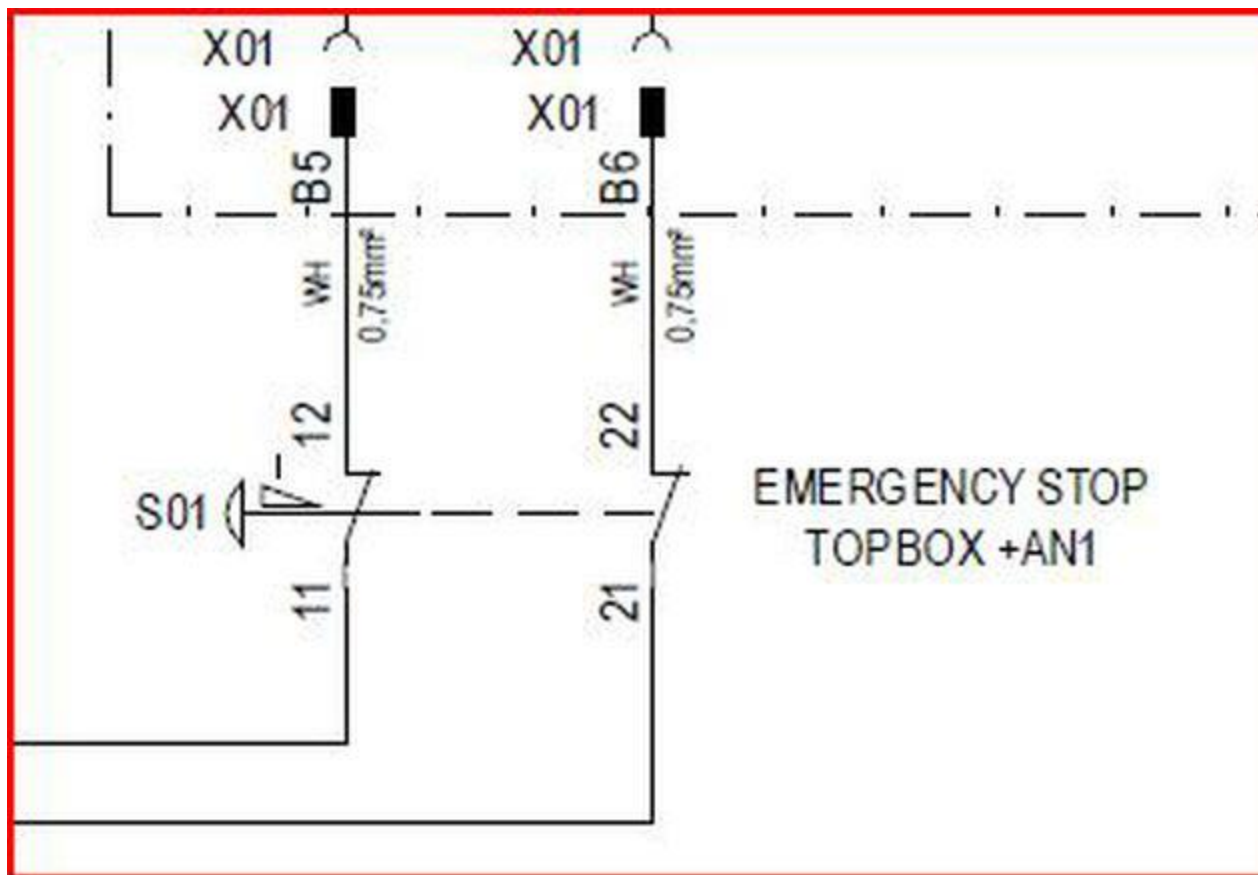
EMERGENCY SWITCH – IN THE NACELLE +AN1:

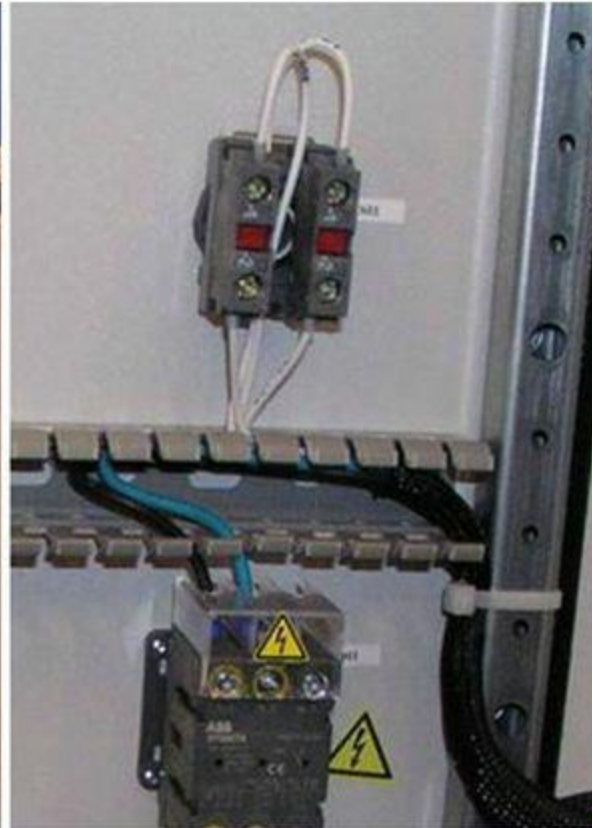
Check for any loose connections in in the emergency switch.

Check that voltage is present through the switch and switch operation.

If the switch is found to be defective, replace with new.

Relevant spare parts	
Description	Item No.
MUSHROOM BUTTON ISAF616510R1001 RED	60005824
CONTACT ELEMENT SK616 001-B 1NC	60005846
HOLDER for 3 ELEMENTS SK616 01	60005848





Check and replace the failed components if defective

Does this solve the problem?

- 1] Yes
- 2] No
- 3] I don't know

- **Explanation**
EMERGENCY SWITCH – IN THE TOWER +AT2:

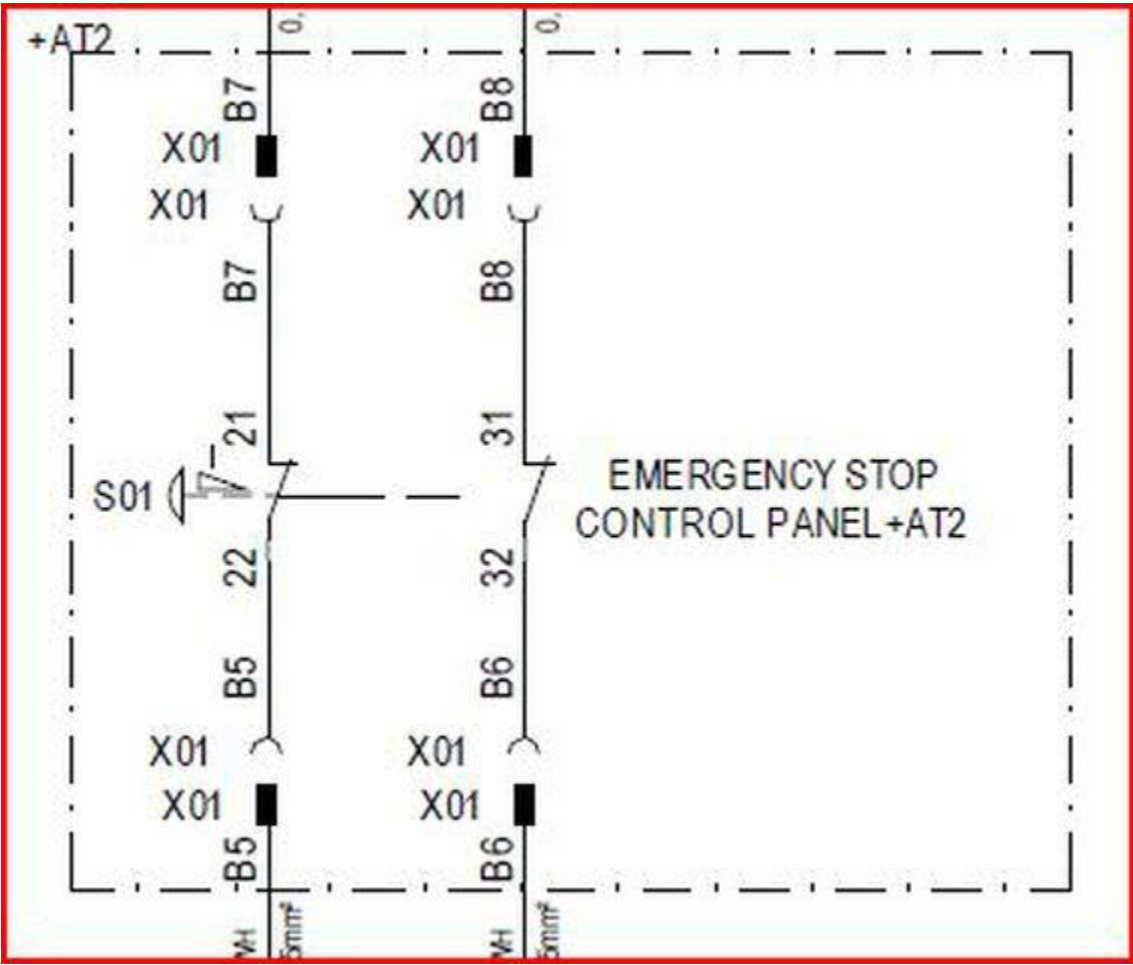
Check for loose connections at the emergency switch.

Check that voltage is present and switch operation.

If the switch is found to be defective, replace with new.

Relevant spare parts

Description	Item No.
MUSHROOM BUTTON ISAF616510R1001 RED	60005824
CONTACT ELEMENT SK616 001-B 1NC	60005846
HOLDER for 3 ELEMENTS SK616 01	60005848





Part number for emergency switch:



60005824 - MUSHROOM BUTTON ISAF6165



60005846 - CONTACT ELEMENT SK616 001



60005848 - HOLDER for 3 ELEMENTS SK616

Replace the defective varistors

Does this solve the problem?

1] Yes

2] No

3] I don't know

- **Explanation**
VARISTOR F45, F38, F33- IN THE AN1 PANEL:

The emergency line in the nacelle is connected through varistor boxes F33, F38, F45.

Defective varistors can also cause this alarm.

Varistors can be tested individually by placing a multimeter (set to measure Ω) lead on the common (earth) side of the varistors and the other on the individual varistor terminals. The resistance value over the varistor should be ∞ or in the high M Ω range. If the resistance is lower, the varistor has been damaged by an over voltage in the circuit and must be replaced.

Part number for varistor :

Relevant spare parts	
Description	Item No.
VARISTOR BOX X8	51706201



Press clip on top and bottom of varistor box and remove varistor assembly from housing:



The varistor box is made up of eight varistors and has provisions for 16 wire connections (protection for 8 signals).

Check and replace components if failed

Does this solve the problem?

- 1] Yes
- 2] No
- 3] I don't know

- **Explanation**
SHAFT BRAKE COVER – IN THE NACELLE:

Check for loosening of the shaft brake cover and ensure the cover is properly closed.

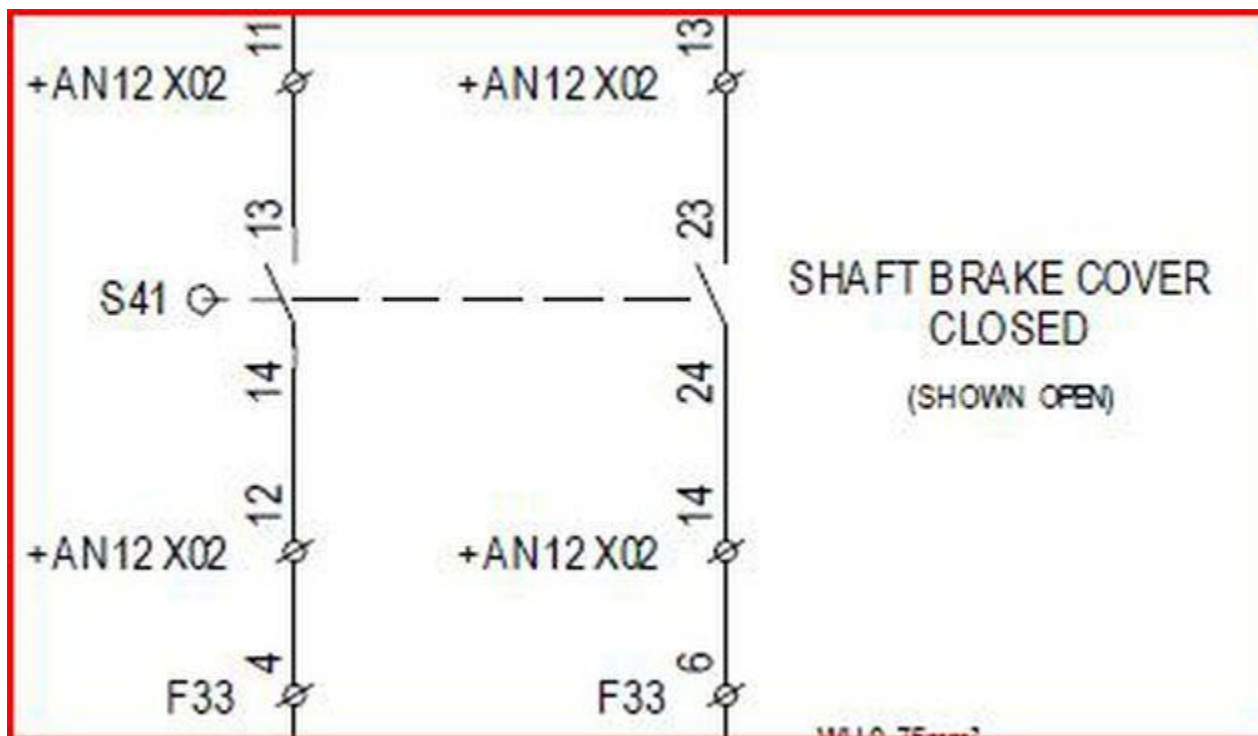
Check for any loose connections at the shaft brake switch and switch operation is ok.

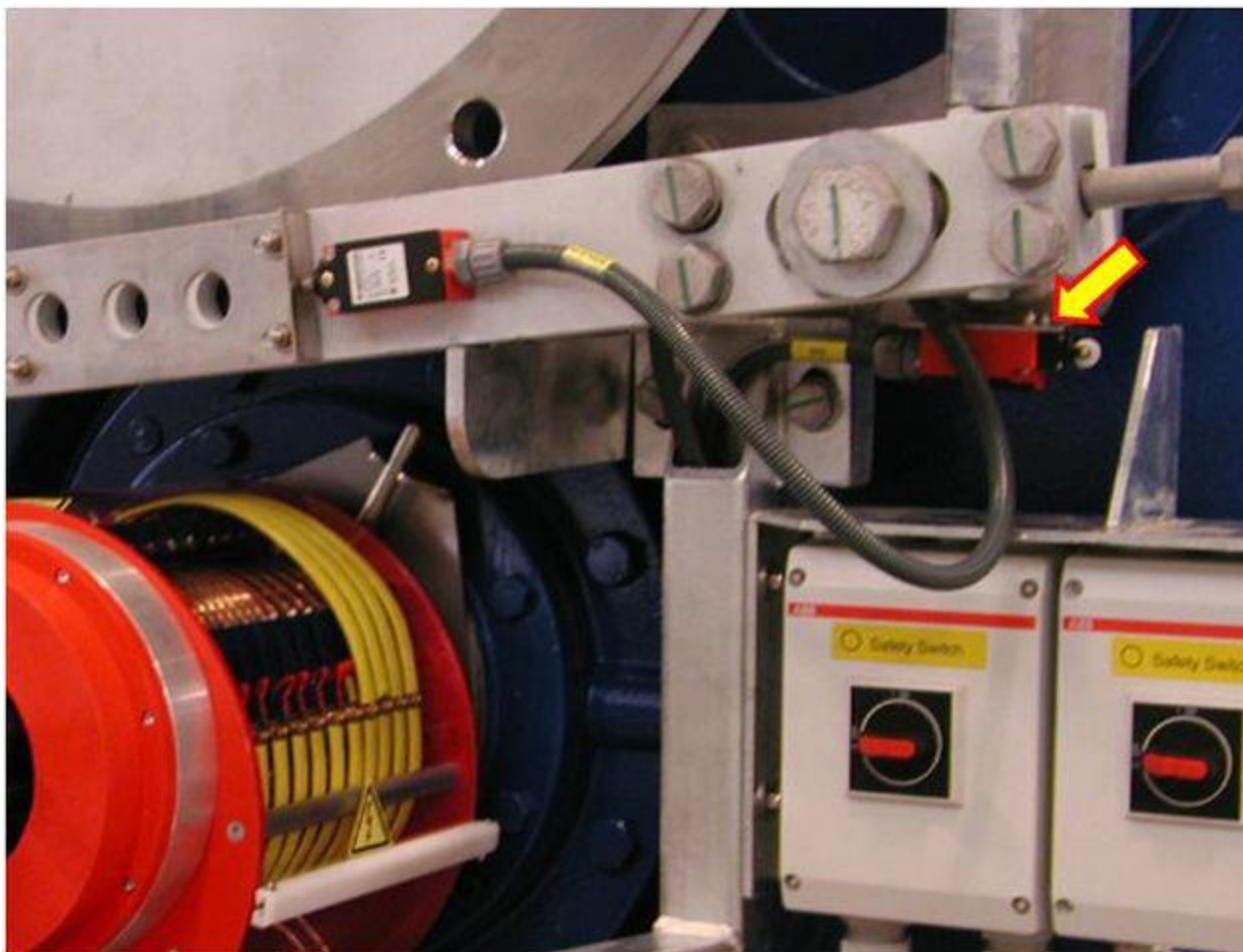
Check for the presence of voltage through the switch with a multimeter.

If the switch is found to be defective, replace with new

Part number for switch: (S41)

Relevant spare parts	
Description	Item No.
ENDSTOP S 6086803014 I88-E2W (NO+NO)	60009254





Check and restore the emergency line

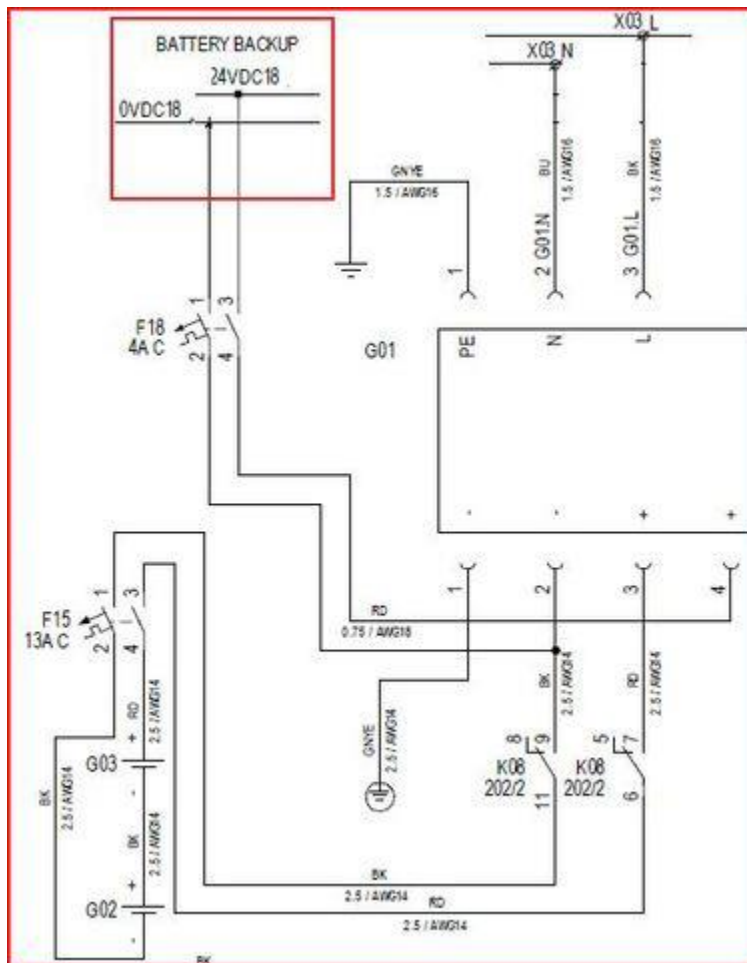
Does this solve the problem?

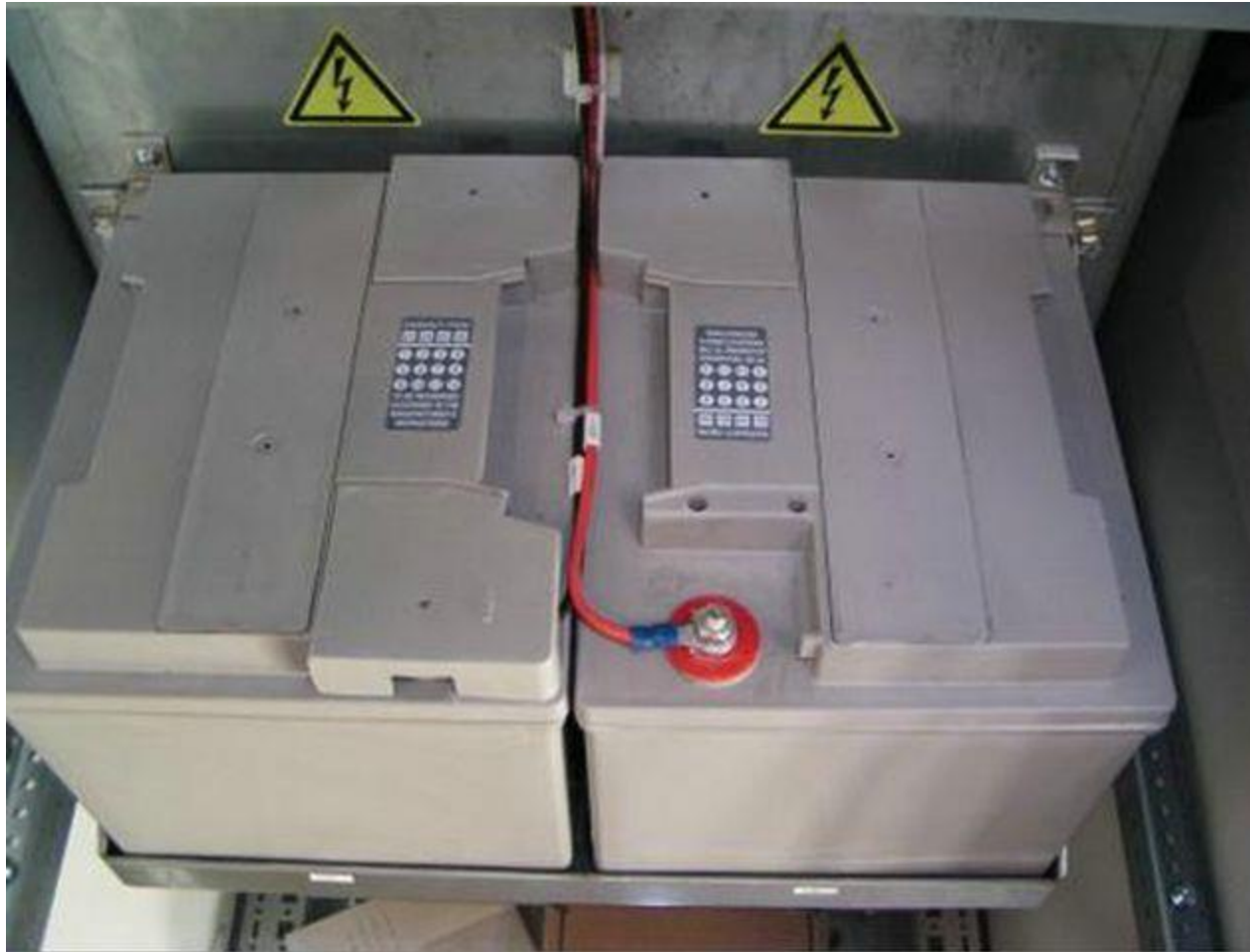
- 1] Yes
- 2] No
- 3] I don't know

- **Explanation**
IN THE NACELLE:

Check the battery line backup 24V DC supply presence, if not present – refer to “[686](#) - **Battery charger fault**” alarm guides to restore the backup supply.

If a battery is found defective, replace it.





Relevant spare parts	
Description	Item No.
BAT H4 12V 32Ah	60000711

Replace the defective emergency relay

Does this solve the problem?

1] Yes

2] No

3] I don't know

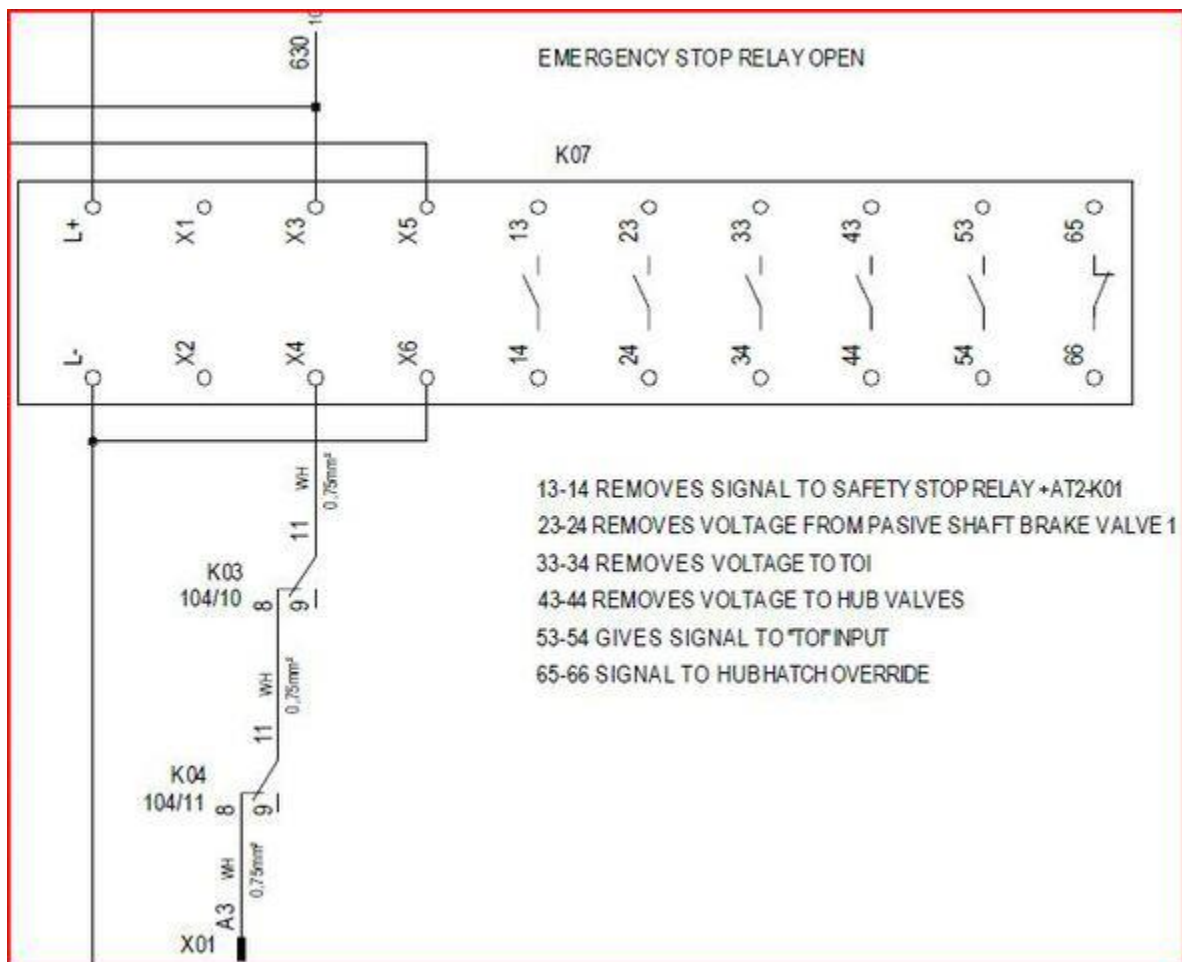
- **Explanation**
EMERGENCY RELAY (K07) – IN THE +AN1 PANEL:

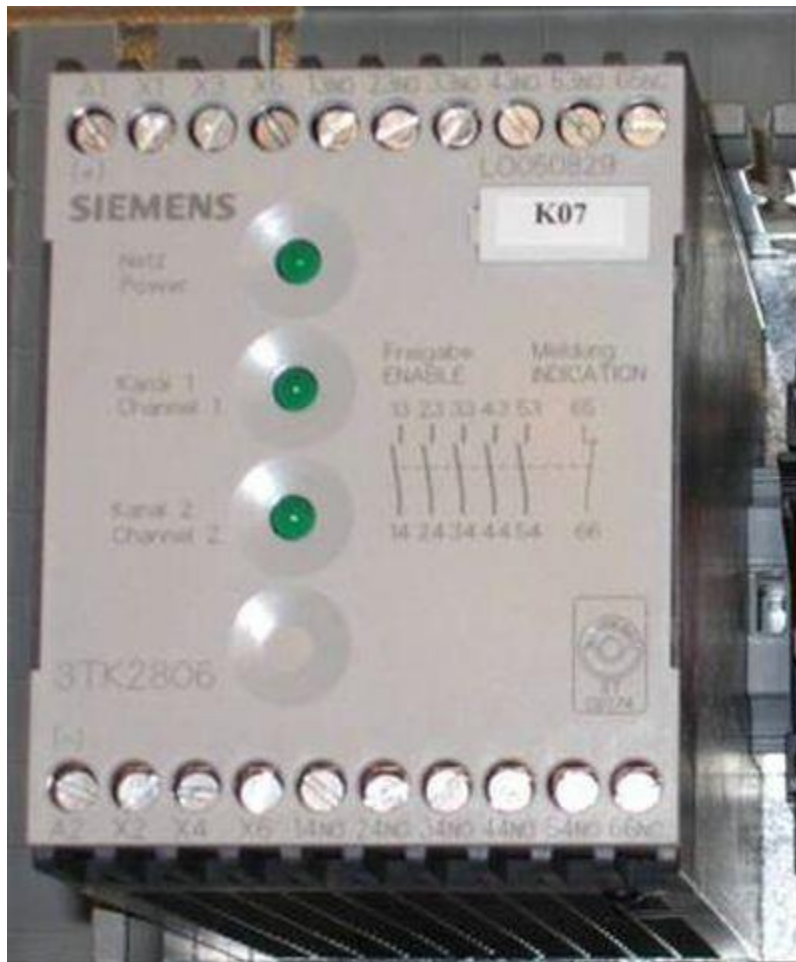
Check that the K07 relay input supply indicates 1st Green LED,

Check that the 24VDC voltage of +X3, +X5 terminals indicates 2nd and 3rd Green LED's.

After checking of 24V DC L+, X3, X5 terminals, then 24VDC pulse given to X4 terminal means the relay should be closed.

If not closed, it is likely that the relay will be defective.





Part number for safety relay:

Relevant spare parts	
Description	Item No.
RELAY SAFETY 3TK2806-OB4 24VDC 5NO+1NC	60004996

Check and replace the failed relay

Does this solve the problem?

1] Yes

2] No

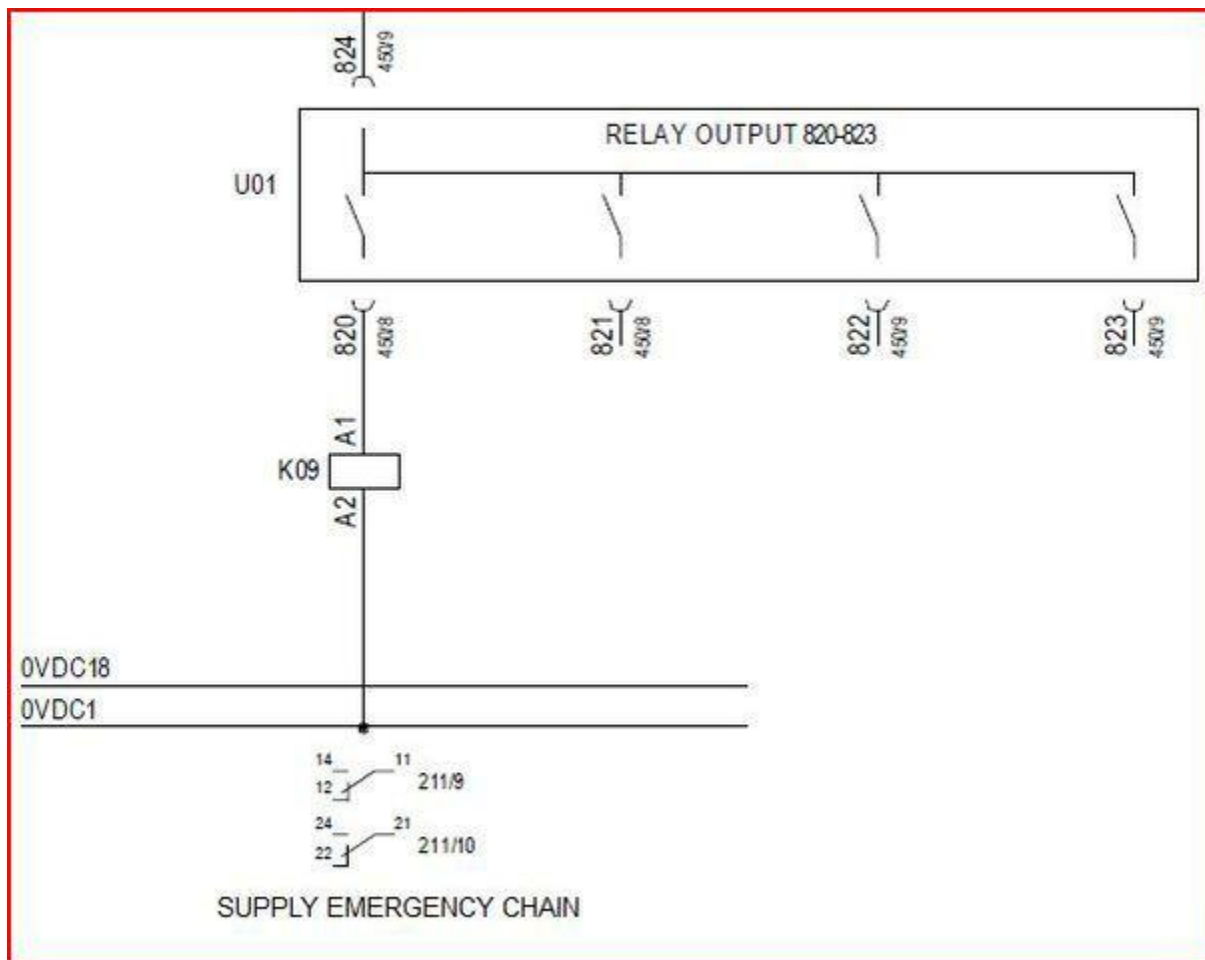
3] I don't know

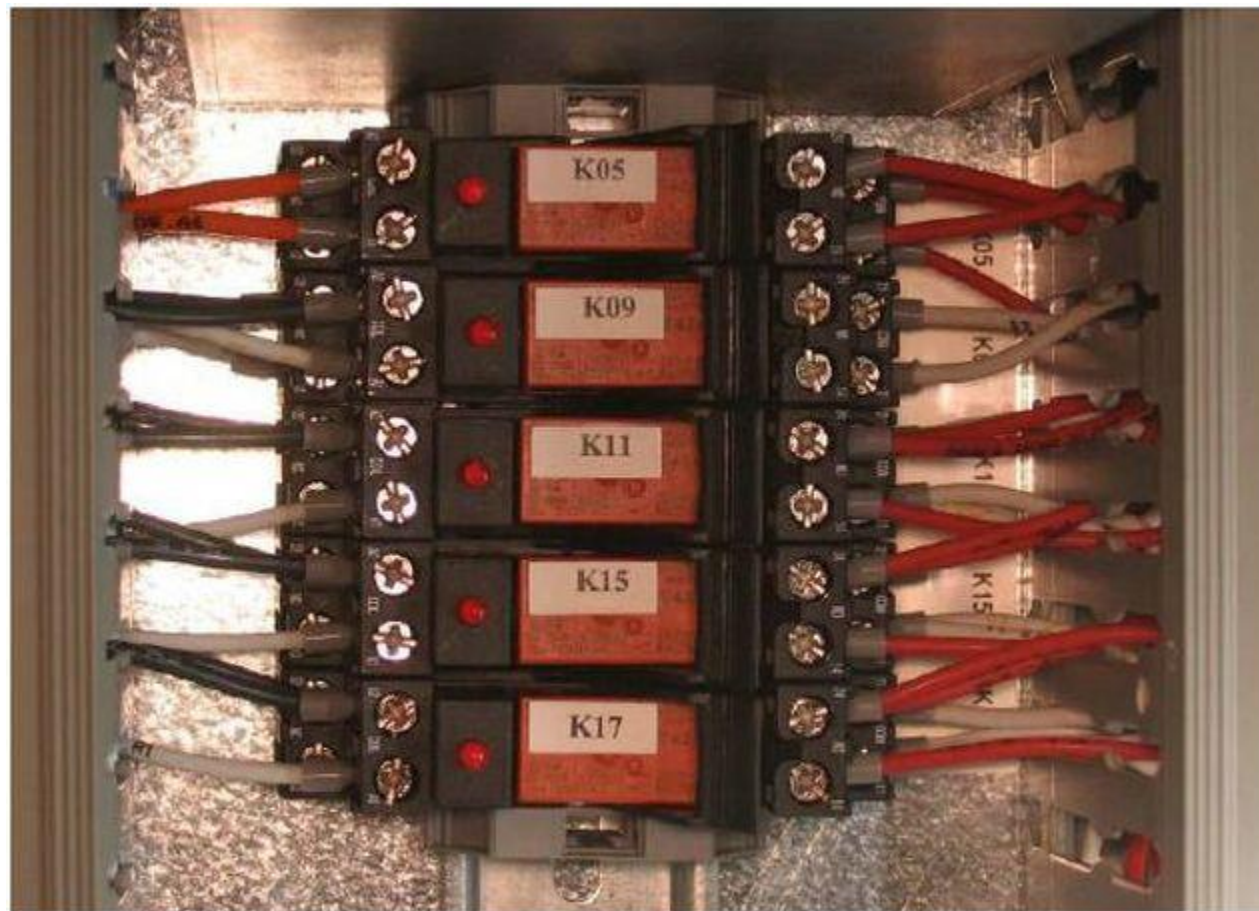
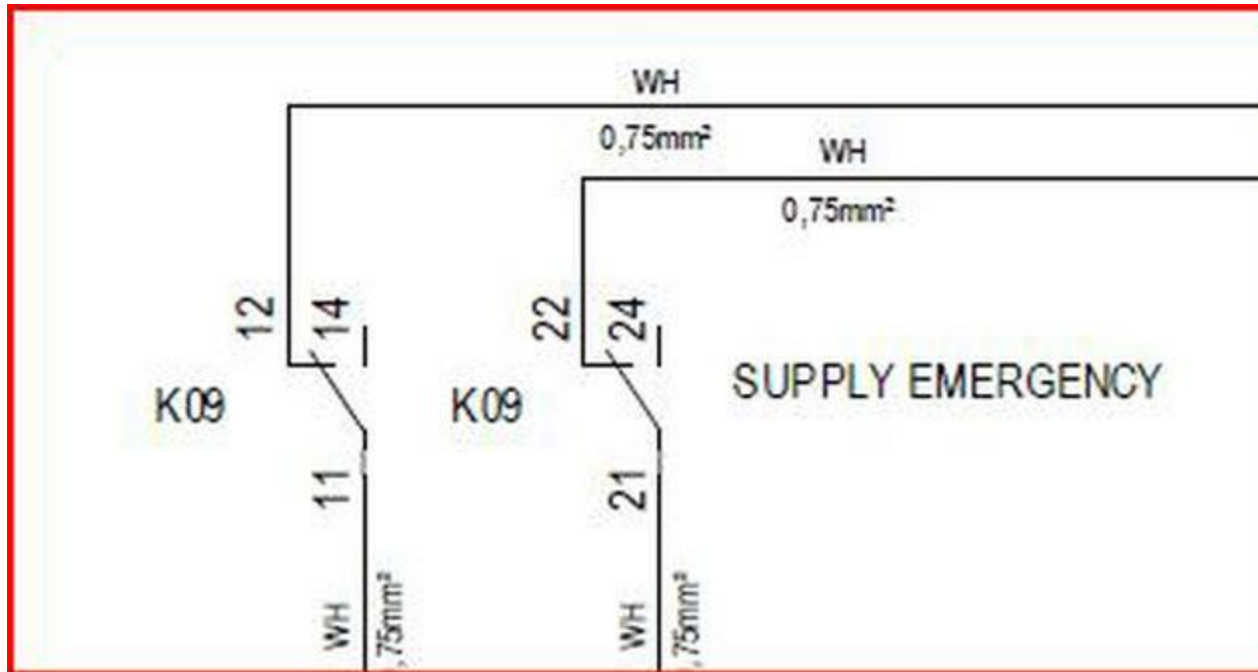
- **Explanation**

SUPPLY EMERGENCY RELAY – IN THE +AN1 PANEL:

Check for loose or damaged connections in the relay, tighten any loose connections.

If the relay is found to be defective, replace with new.





Part number for the relay: (K09)

Relevant spare parts	
Description	Item No.
RELAY RT424024 8A 24V 2P	60004513

Replace the defective hub hatch switch

Does this solve the problem?

1] Yes

2] No

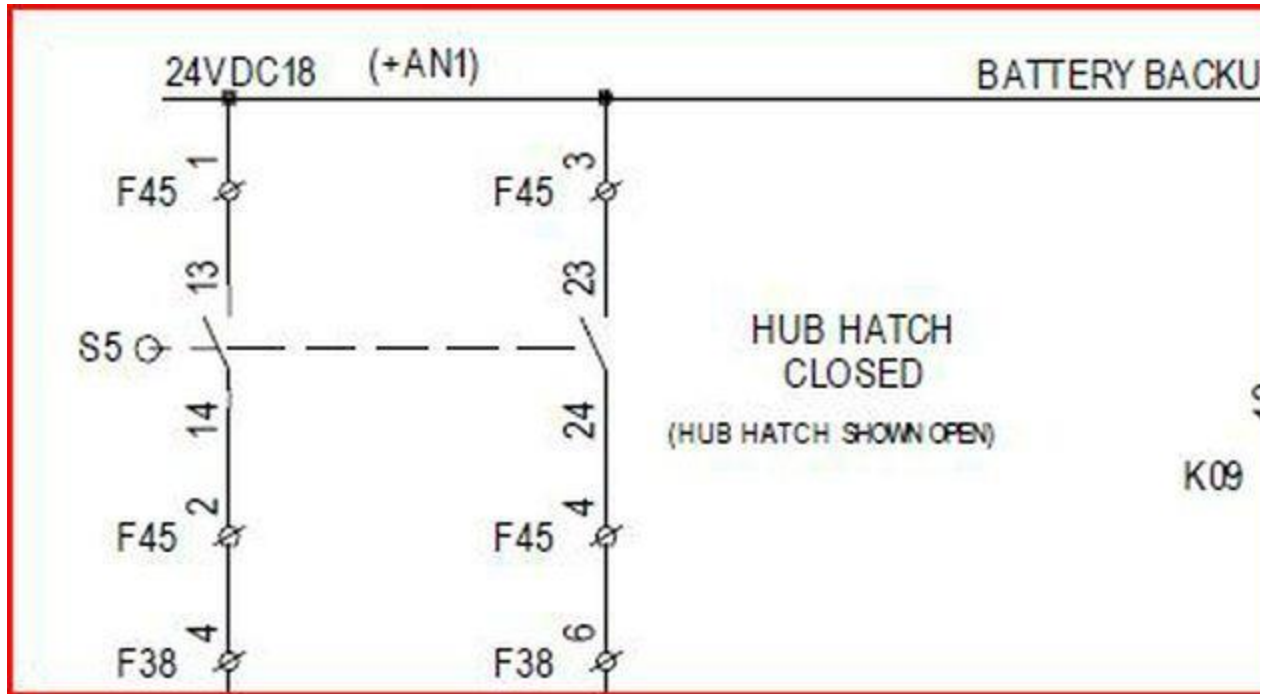
3] I don't know

- **Explanation**
HUB HATCH SWITCH- IN THE NACELLE:

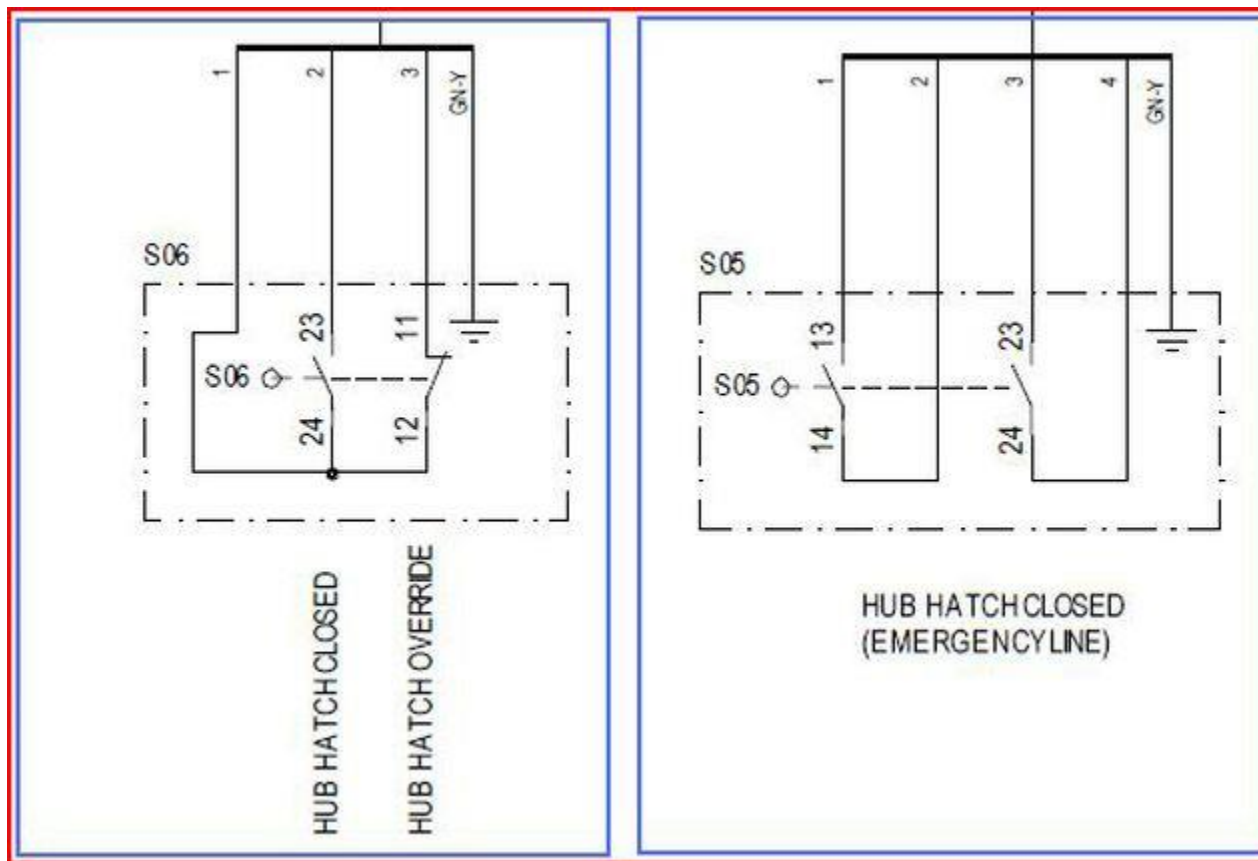
Check the hub hatch switch for misalignment, damage or loose wire connections.

Check the voltage presence through the switch with a multimeter.

If the switch is found to be defective, replace with a new one.



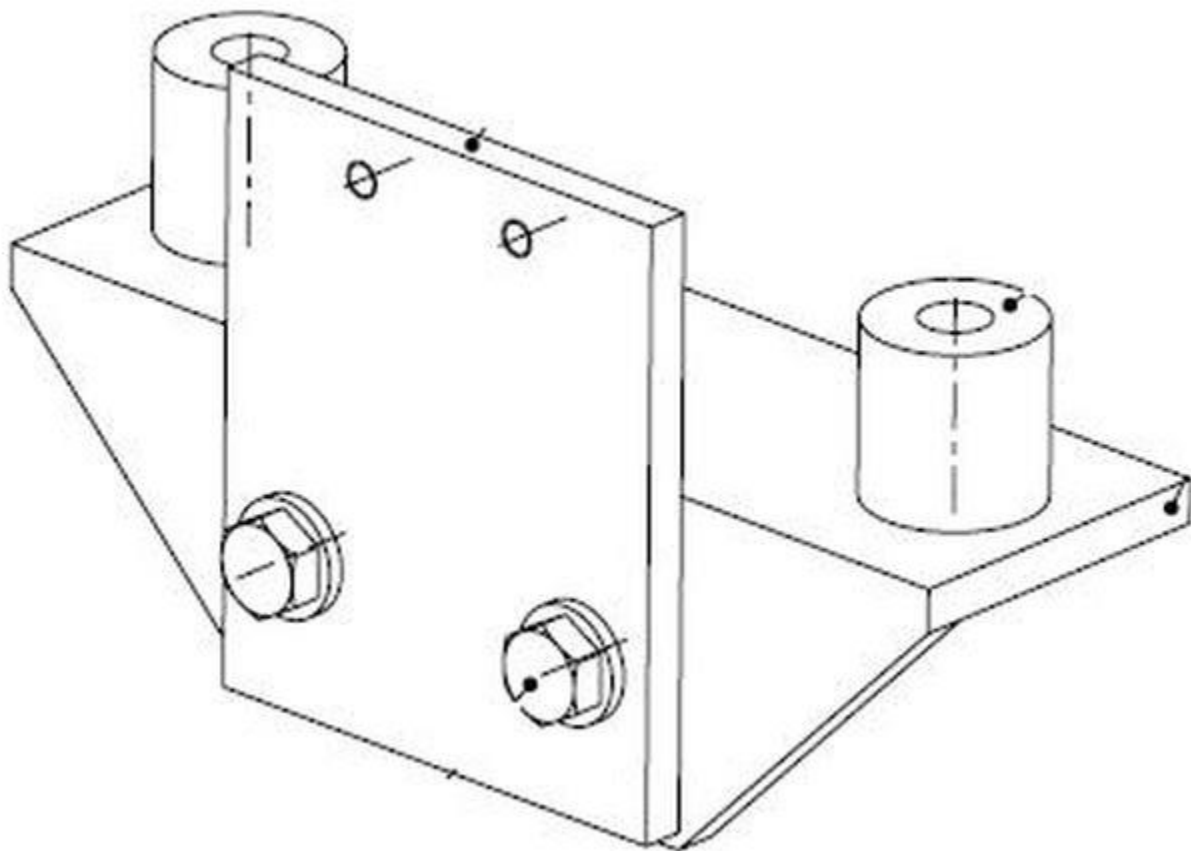
Hub hatch having two different switches, one is the emergency line and the other one is the hub hatch line.



While checking the emergency line ensure the switch is 2 NO.

Description	Item No.
SCREW ISO 1207 M4x25 A2	60038738

Interconnected fixing unit, check the condition and replace if necessary.



Relevant spare parts	
Description	Item No.
BRACKET FOR SKY LIGHT	60072428

Improper alignment of the moon light door can also lead to this alarm.

Check the alignment and fixing – replace the moon light door if it is defective or damaged.

Relevant spare parts	
Description	Item No.
MOONLIGHT AND INNER FRAME	60044606

Part number for Hub hatch closed : (S06)

Relevant spare parts	
Description	Item No.
ENDSTOP S 6086117050 I88U1Z (NC+ NO)	60009256

Check and replace the failed components

Does this solve the problem?

1] Yes

2] No

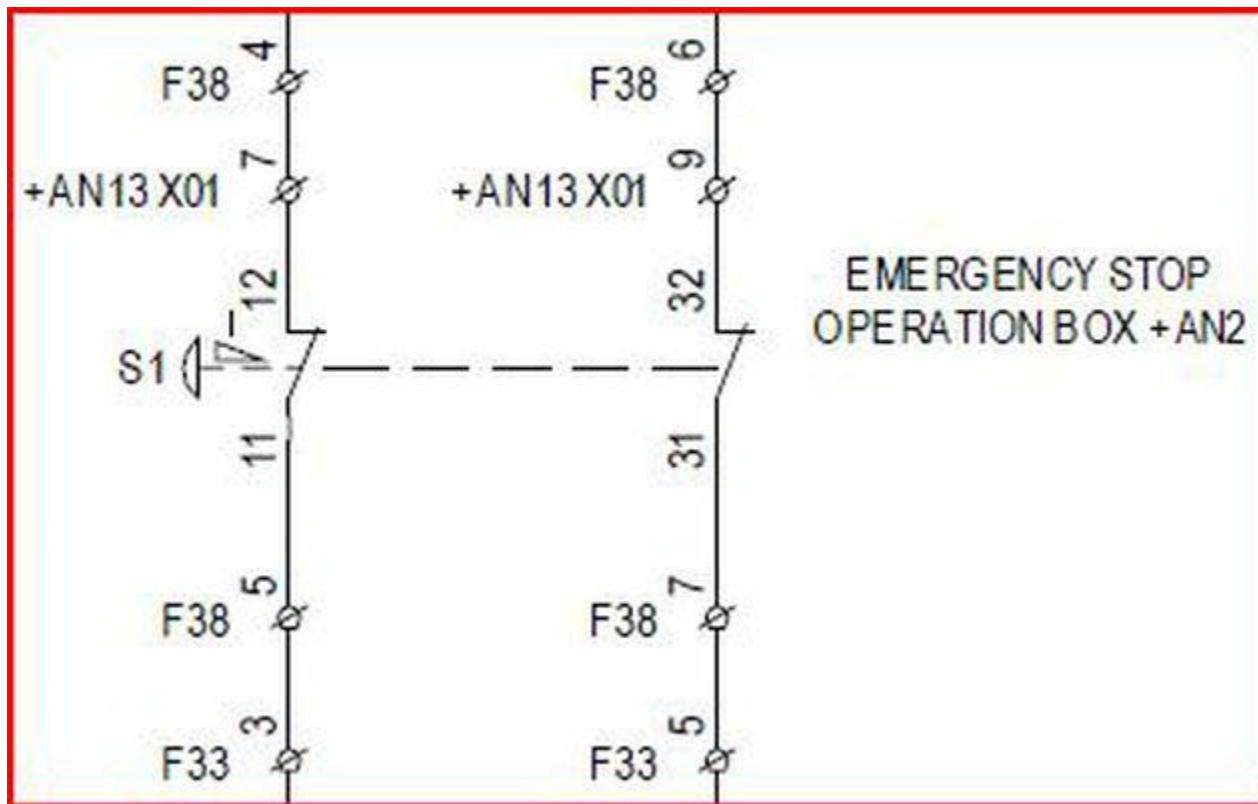
3] I don't know

- **Explanation**
OPERATION BOX EMERGENCY STOP AN2+AN13 – IN THE NACELLE:

Check for loose connections within the operation box.

Check for the presence of voltage through the switch with a multimeter.

If the switch is found to be defective, replace with new.





Relevant spare parts	
Description (Main Item In Bold)	Item No.
OPERATION BOX +AN2 NM1500C 4 BUTTONS	60019465
OPERATION BOX +AN2 NM1500C	60015962
PUSH BUTTON BOX 4 HOLES 192x74.4x64.5mm	60010964
LASER LABEL AN2 4-HOLE	60002309
MUSHROOM BUTTON ISAF616510R1001 RED	60005824
INSERT for PUSH BUTTON 36122100	60005881

CONTACT ELEMENT SK616 001-B 1NC	60005846
SAFETY HOLDER f.3 ELEMEN.1SFA616605R1100	60005849
SELECT SWITCH ISFA616210R1006 3POS.BLACK	60005832
SELECT SWITCH ISFA616212R1006 3POS.RETUR	60005834
CONTACT ELEMENT SK616 002-A 1NO DIN-RAIL	60005845
CONTACT ELEMENT SK616 002-B 1NC DIN-RAIL	60005847
SELECT SWITCH ISFA616202R1006 B-C RETURN	60005828
CABLE GLAND BS16 PG21 NYLON	60007545
LOCKNUT BLN-16 PG21 PA 6	60007557
CABLE FOR OPERATIONS BOX +AN2	60110664
CABLE 12G0.75mm² Y-JZ IEC	60008684
Terminal pin insulated 0.75mm² 8.0mm	60006337
CABLE LABEL NM1500C -W503	60003407
MAGNET A43A-KSM4 43mm	60009987
Bracket for control box AN2	60073080
SCREW ISO 7046 M 4 x 10 - 4.8 - FZB - Z	60009587
SCREW ISO 7045 M 4 x 14 - 4.8 - FZB - Z	60009599
LOCK WASHER DIN 6798 A 4 - FZB	60009838

Replace power supply if defect.

Does this solve the problem?

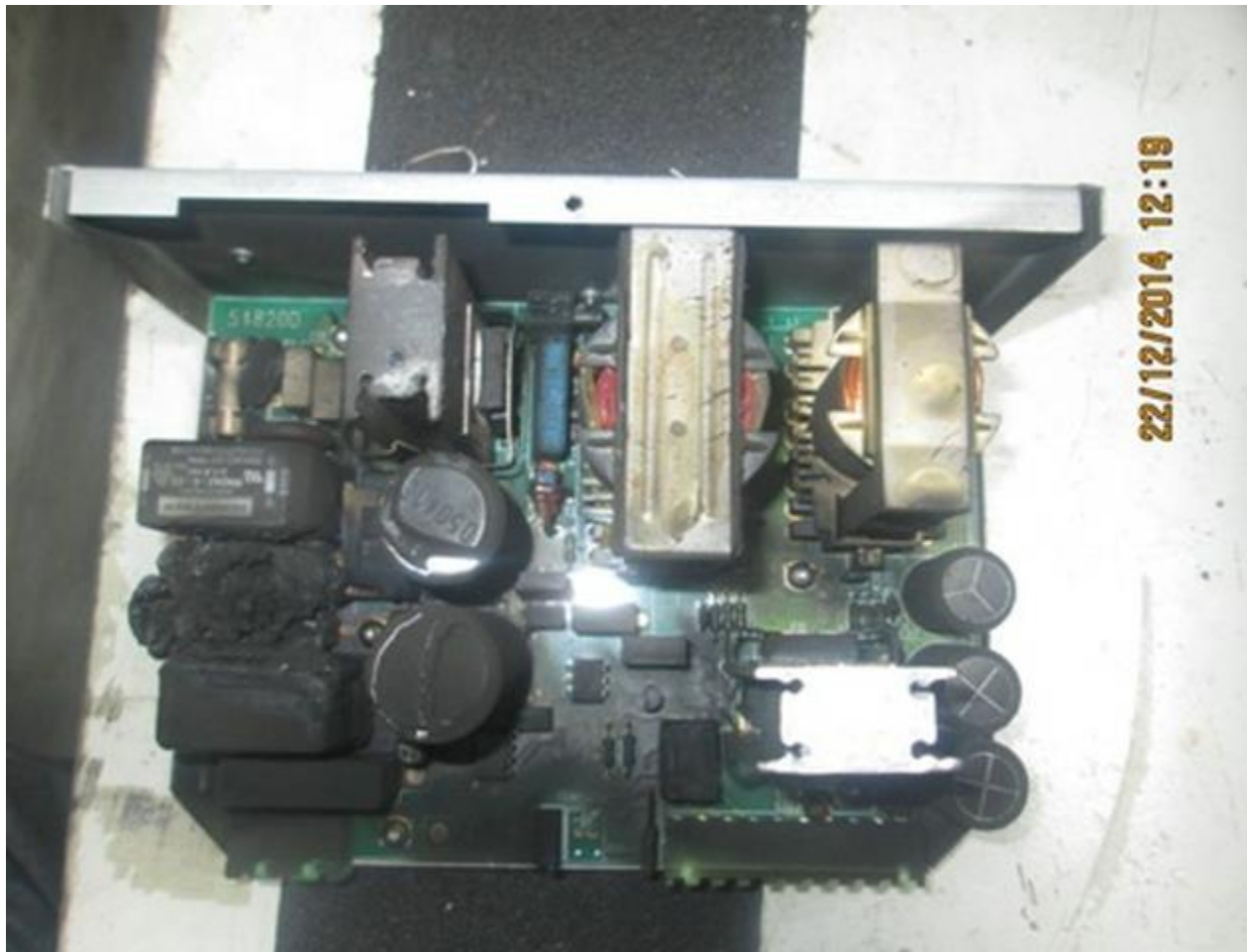
1] Yes

2] No

3] I don't know

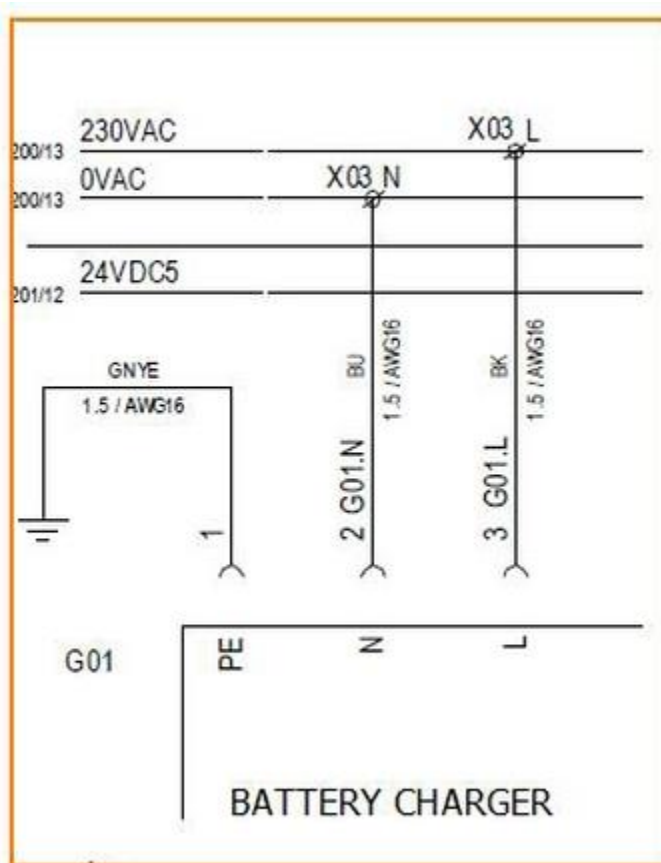
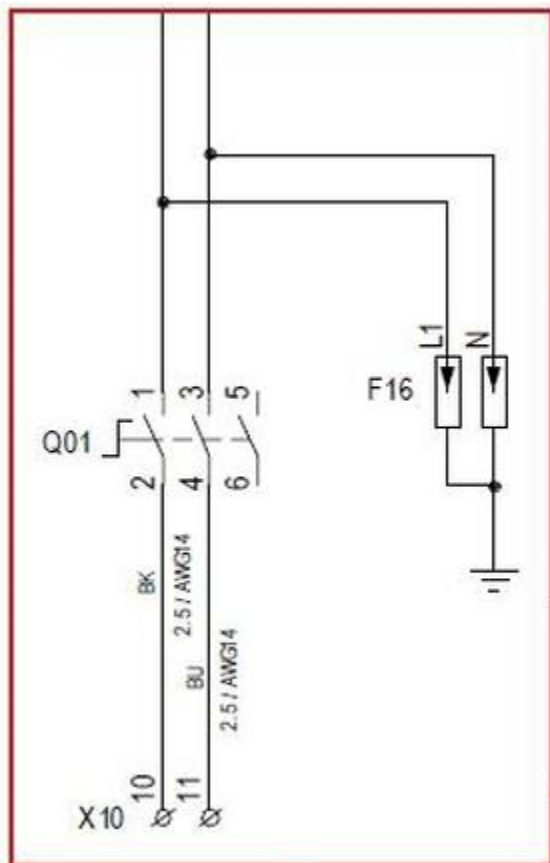
- **Explanation**
IN THE +AN1 PANEL:

Check the power net (G01) for any loose or damaged electrical connections.



Check the INPUT /OUTPUT voltage; if the 230/115V supply is present, but the DC output is low or not present, it is likely a defective power net. If the output voltage is low, adjust the rheostat on the power net accordingly to increase the output.

If defect power net replace with new.





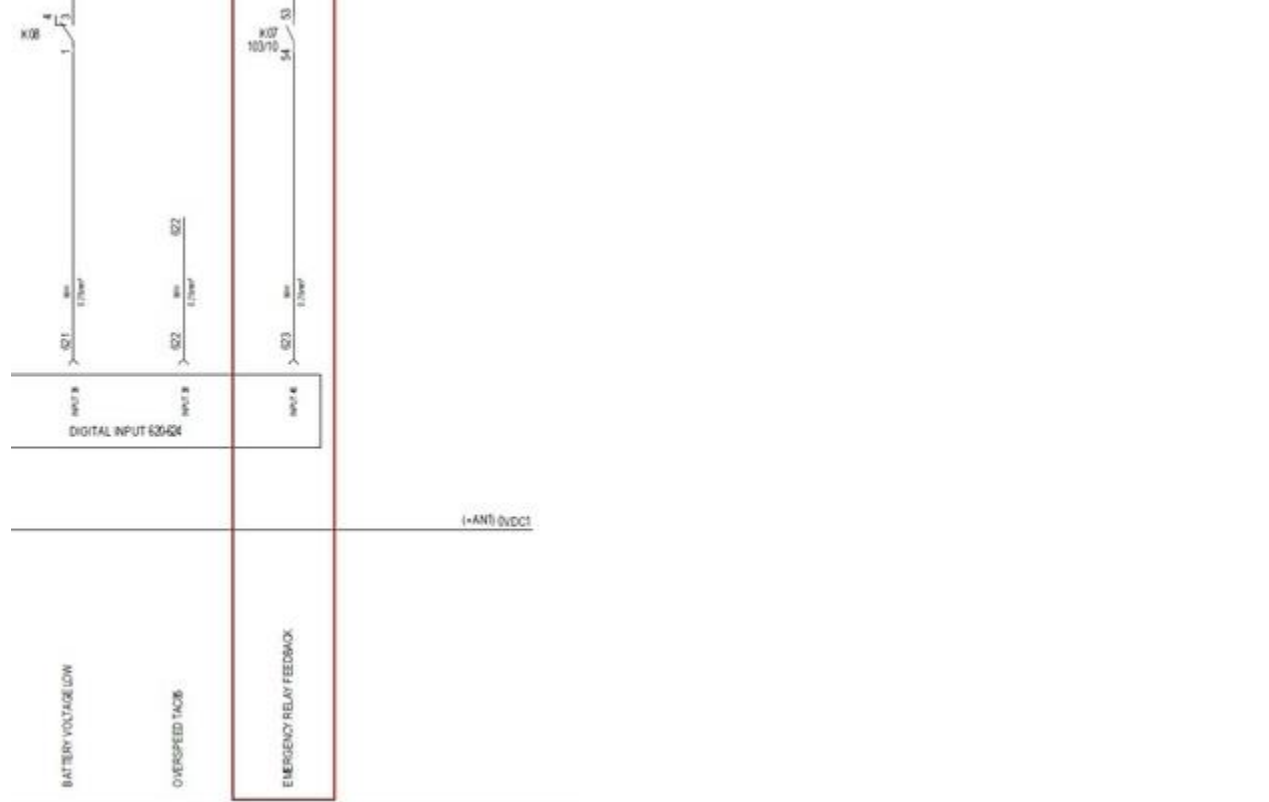
Relevant spare parts	
Description	Item No.
PS ADC 5483R-3 10A-27,4 NM PIN (Power Net)	188453

Test and replace TOI if defective

Does this solve the problem?

- 1] Yes
- 2] No
- 3] I don't know

- Explanation



Relevant spare parts	
Description	Item No.
TOI-II INTERF EXT POC	51701601