Execute the safety line test

Does this solve the problem?

1] Yes

2] No

3] I don't know

- **Explanation**

IN THE TAC COMPUTER:

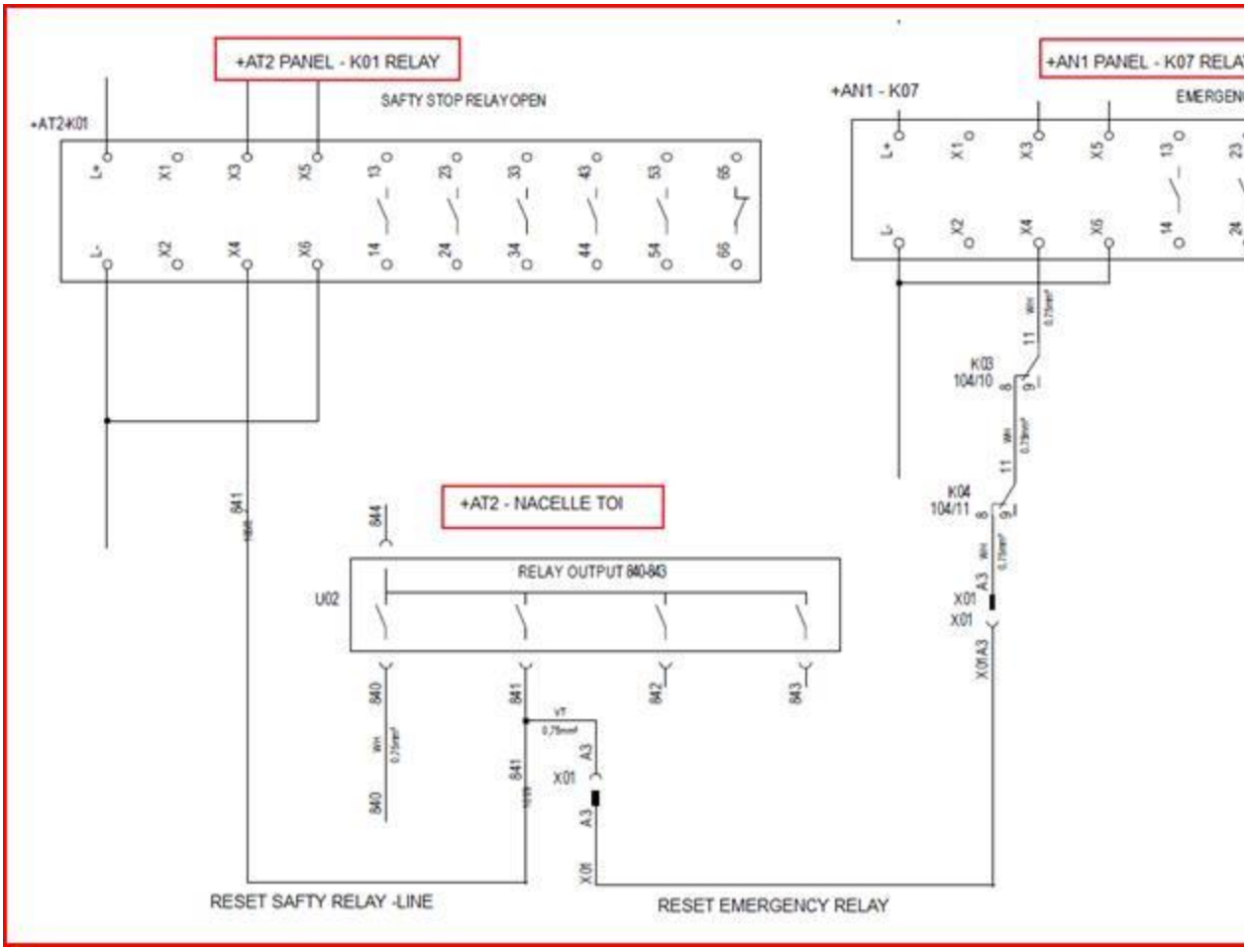
Execute the safety line test :

SERVICE MENU → MANUAL TEST → TEST SAFETY LINE

The test will be executed within 15 seconds. If all of the safety line and emergency line is ok then +AT2-K01 and _AN1-K07 relay is closed by reset line (841) from the TOI unit. i.e. Safety line test is completed successfully.

If there is any problem with safety line the "**750 -Safety line test fault"** alarm will rise.

24V DC -RESET LINE FROM TOI:



Check the safety line and restore the line

Does this solve the problem?

1] Yes

2] No

3] I don't know

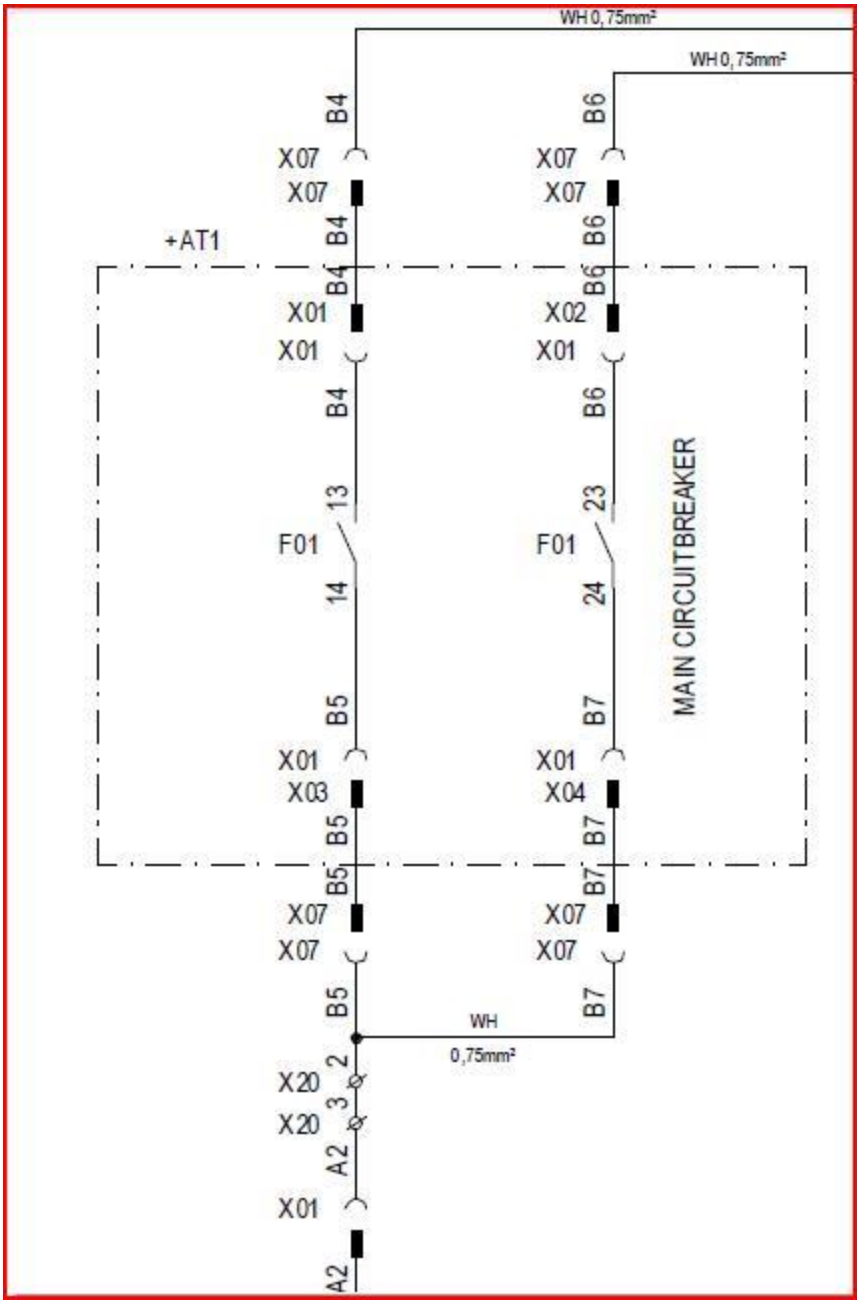
- **Explanation**

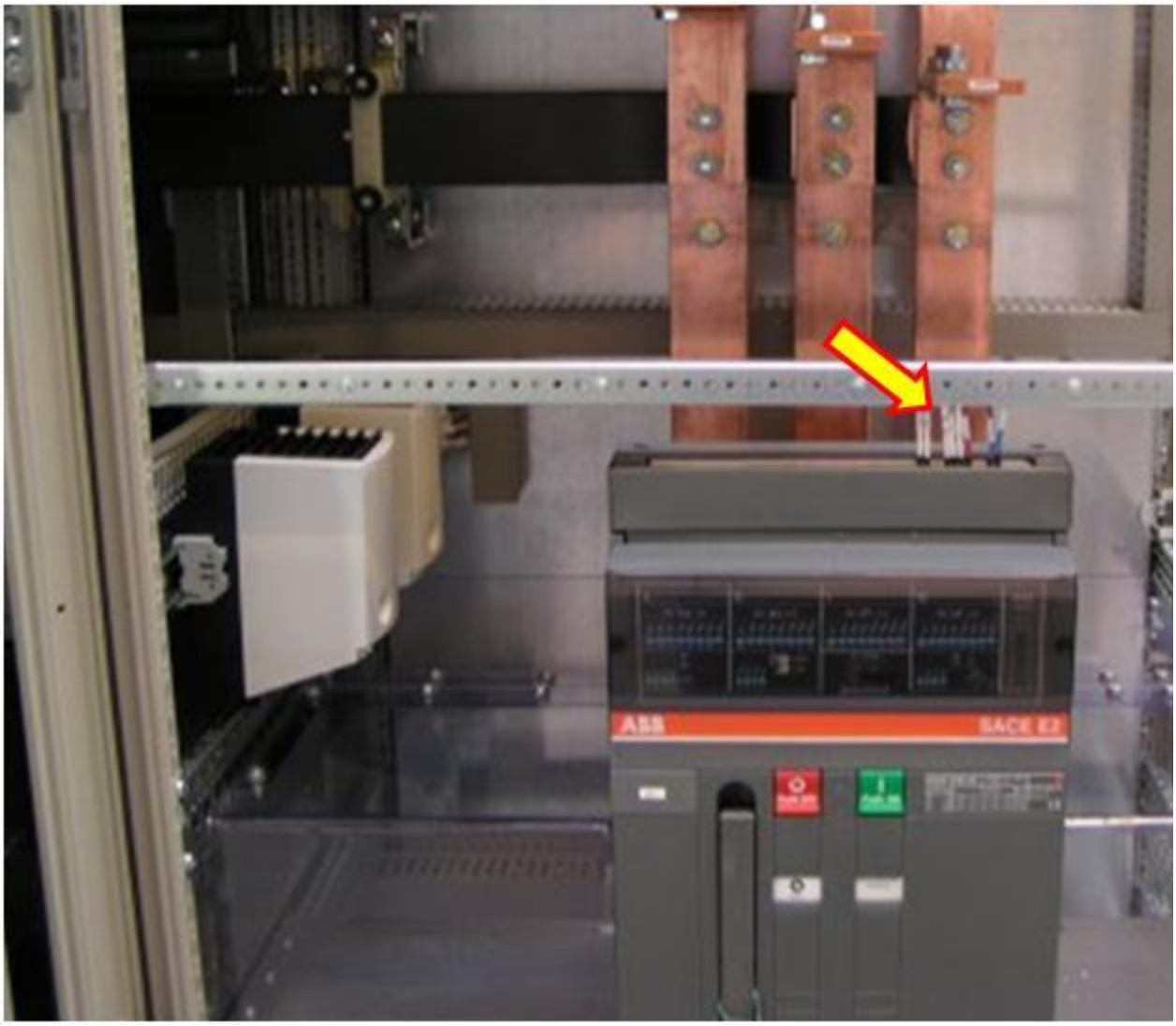
MAIN CIRCUIT BREAKER – IN THE +AT1 PANEL:

Check for a loose connection at the F01 Circuit breaker switch.

Check the INPUT/ OUTPUT voltage with a multimeter.

If voltage is not in the output – check the safety circuit in the AT1 panel and restore the safety line.


WH 0,75mm²
WH 0,75mm²
B4
B6
X07
X07
X07
X07
+AT1
B4
B6
B4
B6
X01
X02
X01
X01
B4
B6
13
23
F01
F01
14
24
MAIN CIRCUITBREAKER
B5
B7
X01
X01
X03
X04
B5
B7
B5
B7
X07
X07
X07
X07
B5
B7
WH
0,75mm²
2
X20
3
X20
A2
X01
A2



Check the panel X07 connector for any damaged or broken pins.

Check the emergency line and restore the connection

Does this solve the problem?

1] Yes

2] No

3] I don't know

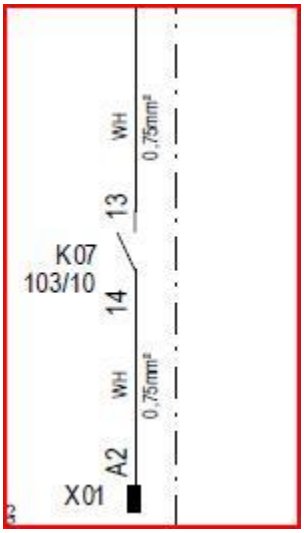
- **Explanation**
  IN THE +AN1 PANEL:

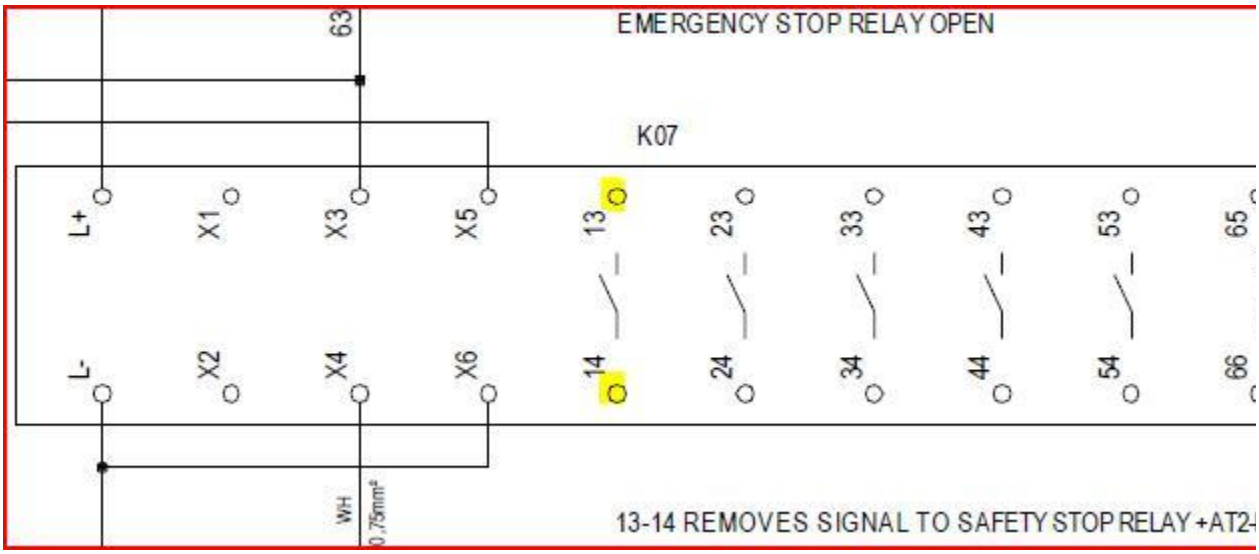
  Check that the K07 emergency relay is closed.

  If it is not closed, check the emergency line as per the diagram and refer to **"515 –Emergency relay open"** guidelines to restore the line.

Relevant VGA Guide
515 - Emergency relay open - V82

If closed check the continuity at terminals 13 to 14, and ensure the 24V DC supply going in to the tower panel.





Replace the defective safety relay

Does this solve the problem?

1] Yes

2] No

3] I don't know

- **Explanation**

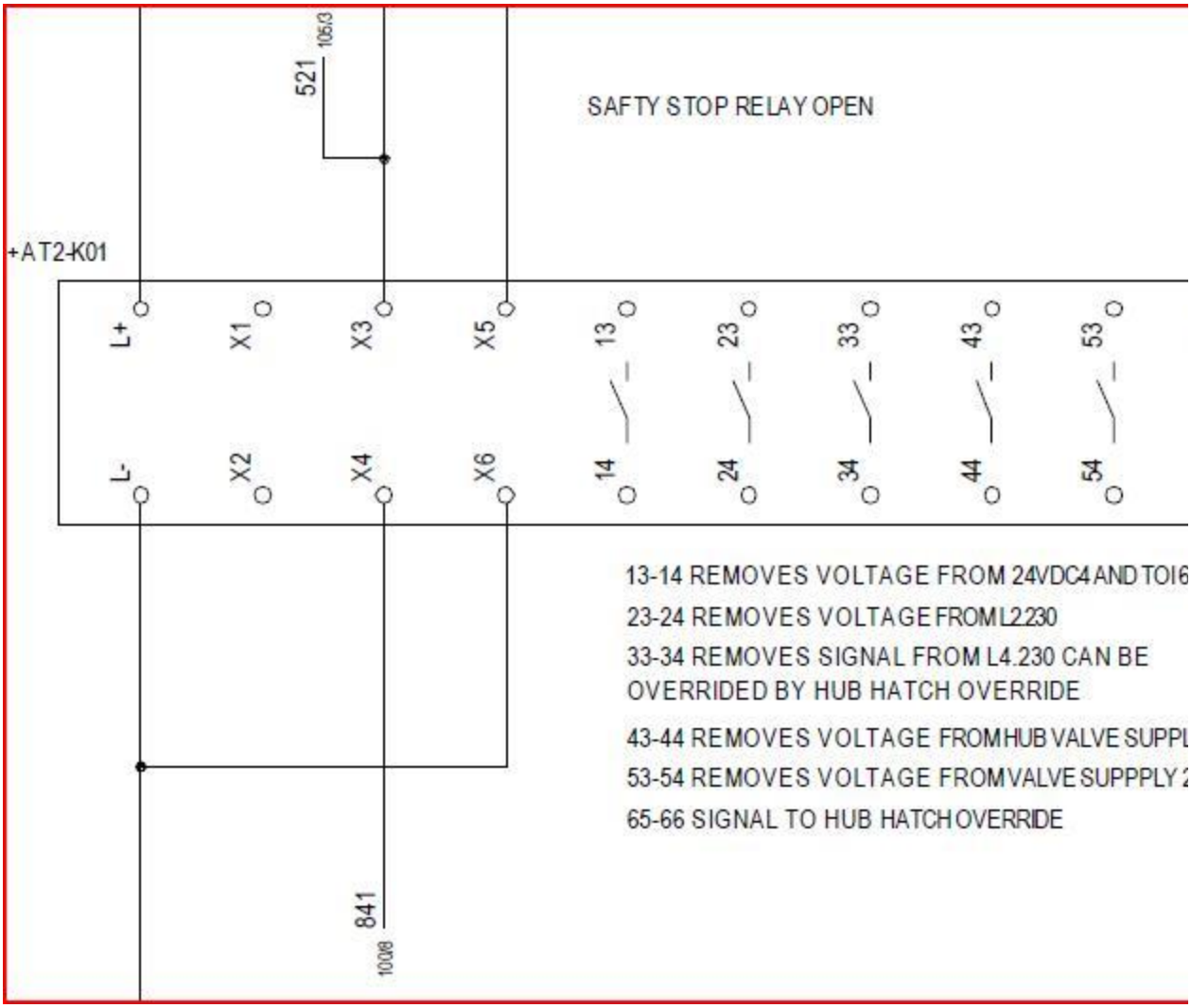
SAFETY RELAY (K01) – IN THE +AT1 PANEL:

Check that the K01 relay input supply indicates 1st Green LED.

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

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

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


SAFTY STOP RELAY OPEN
+AT2-K01
521
105/3
L+
X1
X3
X5
13
23
33
43
53
L-
X2
X4
X6
14
24
34
44
54
841
1008
13-14 REMOVES VOLTAGE FROM 24VDC4 AND TOI6
23-24 REMOVES VOLTAGE FROM L2.230
33-34 REMOVES SIGNAL FROM L4.230 CAN BE OVERRIDED BY HUB HATCH OVERRIDE
43-44 REMOVES VOLTAGE FROM HUB VALVE SUPPL
53-54 REMOVES VOLTAGE FROM VALVE SUPPPLY 2
65-66 SIGNAL TO HUB HATCH OVERRIDE


SIEMENS
Netz
Power
Kanal 1
Channel 1
Kanal 2
Channel 2
Freigabe
ENABLE
3TK2806

Relevant spare parts	
Description	**Item No.**
RELAY SAFETY 3TK2806-OBB4 24VDC 5NO+1NC	60004996

Replace the defective vibration switch

Does this solve the problem?

1] Yes

2] No

3] I don't know

- **Explanation**

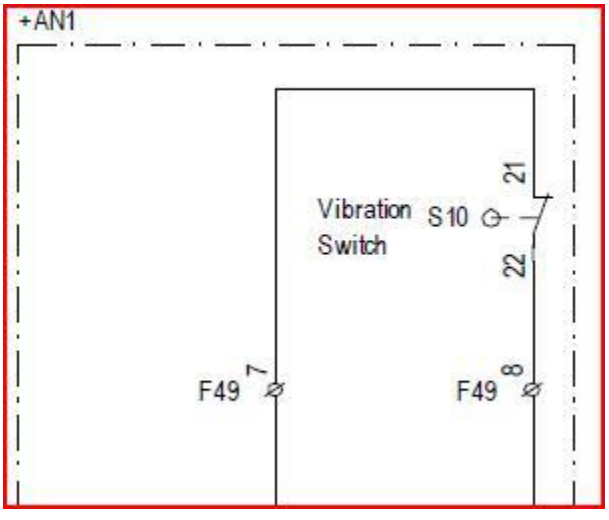
VIBERATION SWITCH IN THE NACELLE :

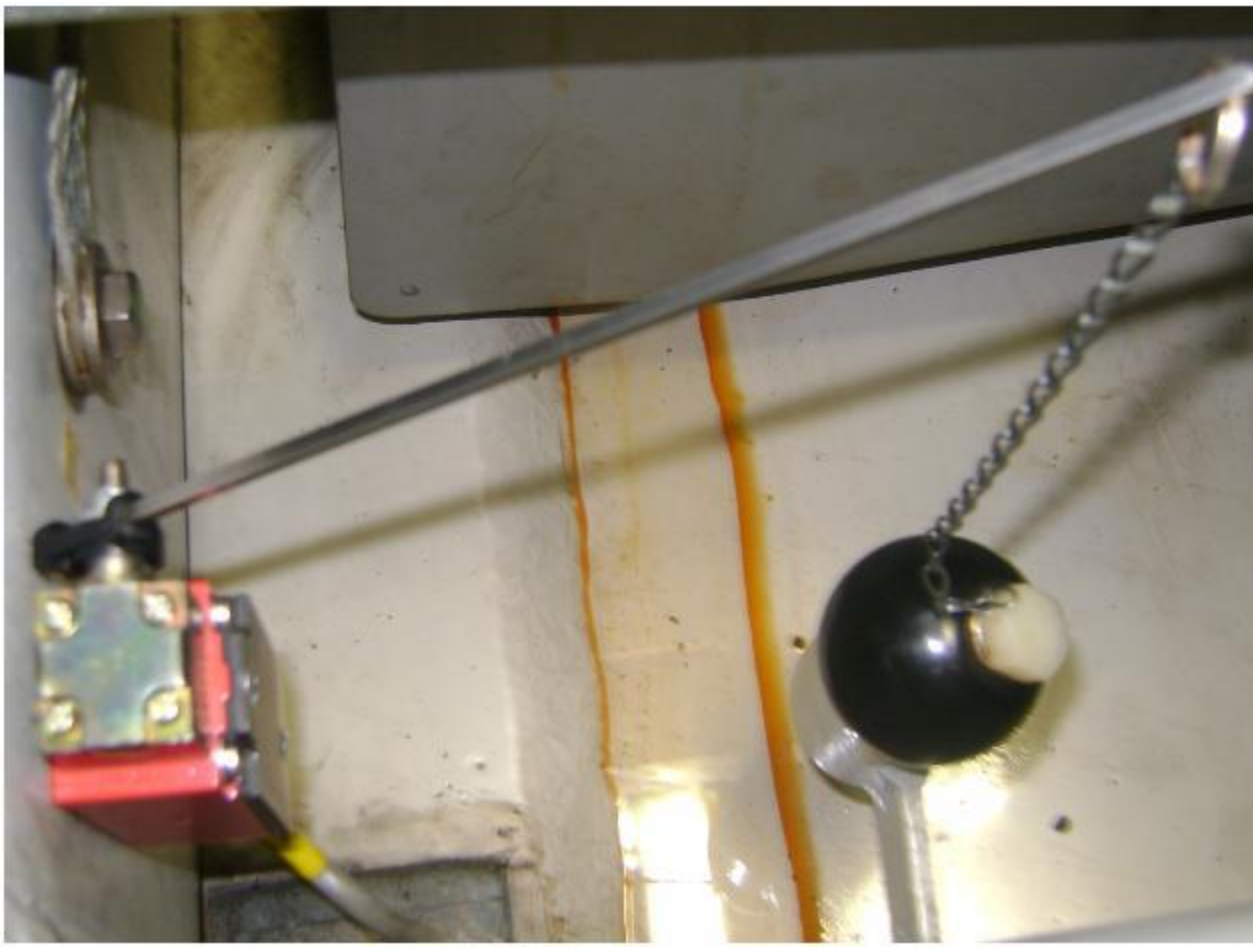
Check for a loose connection at the vibration switch.

Check that the vibration switch operates smoothly.

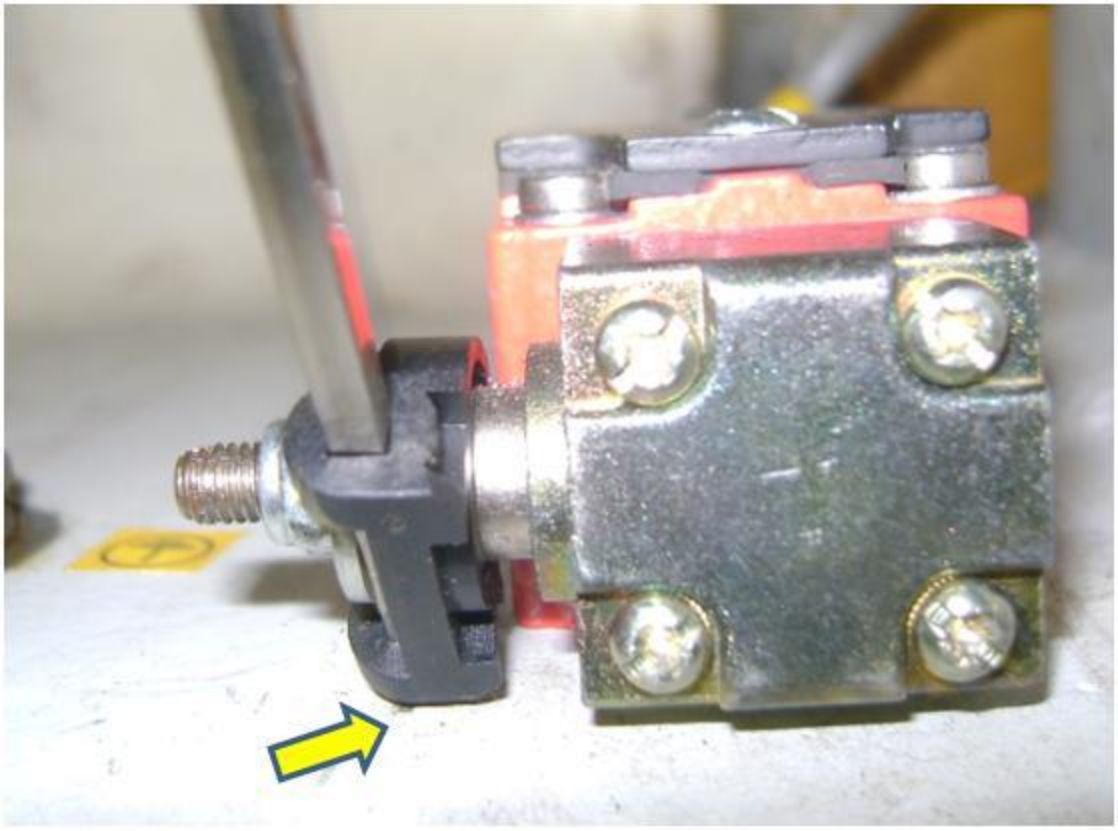
Replace the switch if it is damaged or defective.

Also check varistor box F49 (MkIII+) and replace it if damaged or defective





Check the switch operation, check for any obstruction to the switch lever.



Relevant spare parts	
Description	**Item No.**
VIBRATION BALL NM600/750/900	60039198

Replace the defect platform switch

Does this solve the problem?

1] Yes

2] No

3] I don't know

- **Explanation**
  PLATFORM SWITCH:

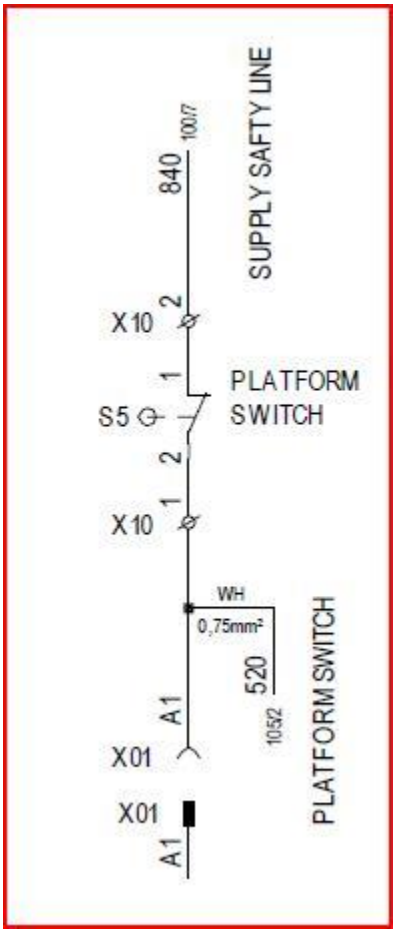
Check the platform switch for damage or loose connections.

Verify the 24V DC supply INPUT / OUTPUT.

Check the cable for wear or damage. If defective replace the cable.

If the platform switch is defective, replace with new.

Ensure feedback terminal 520 is properly connected at the tower TOI.



Relevant spare parts	
Description	**Item No.**
PLATFORM SWITCH COMPLETE w. FI (With fitting and cable 30 m).	60018326
ENDSTOP S 6021190100 GC-SU1-FF (Switch alone)	60009255

Check and replace the defective TAC84 or TAC85 Module

Does this solve the problem?

1] Yes

2] No

3] I don't know

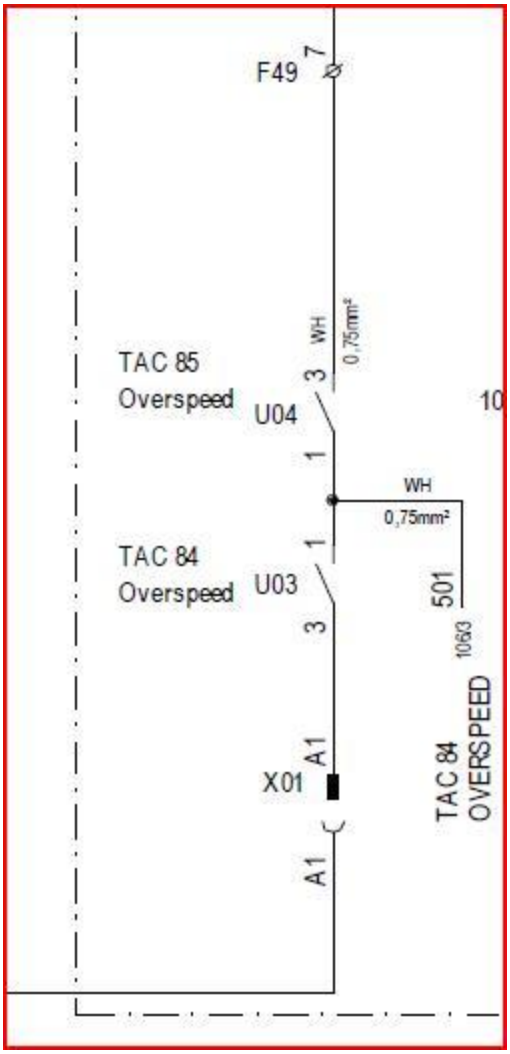
- **Explanation**
  TAC84 & TAC85 - IN THE +AN1 PANEL:

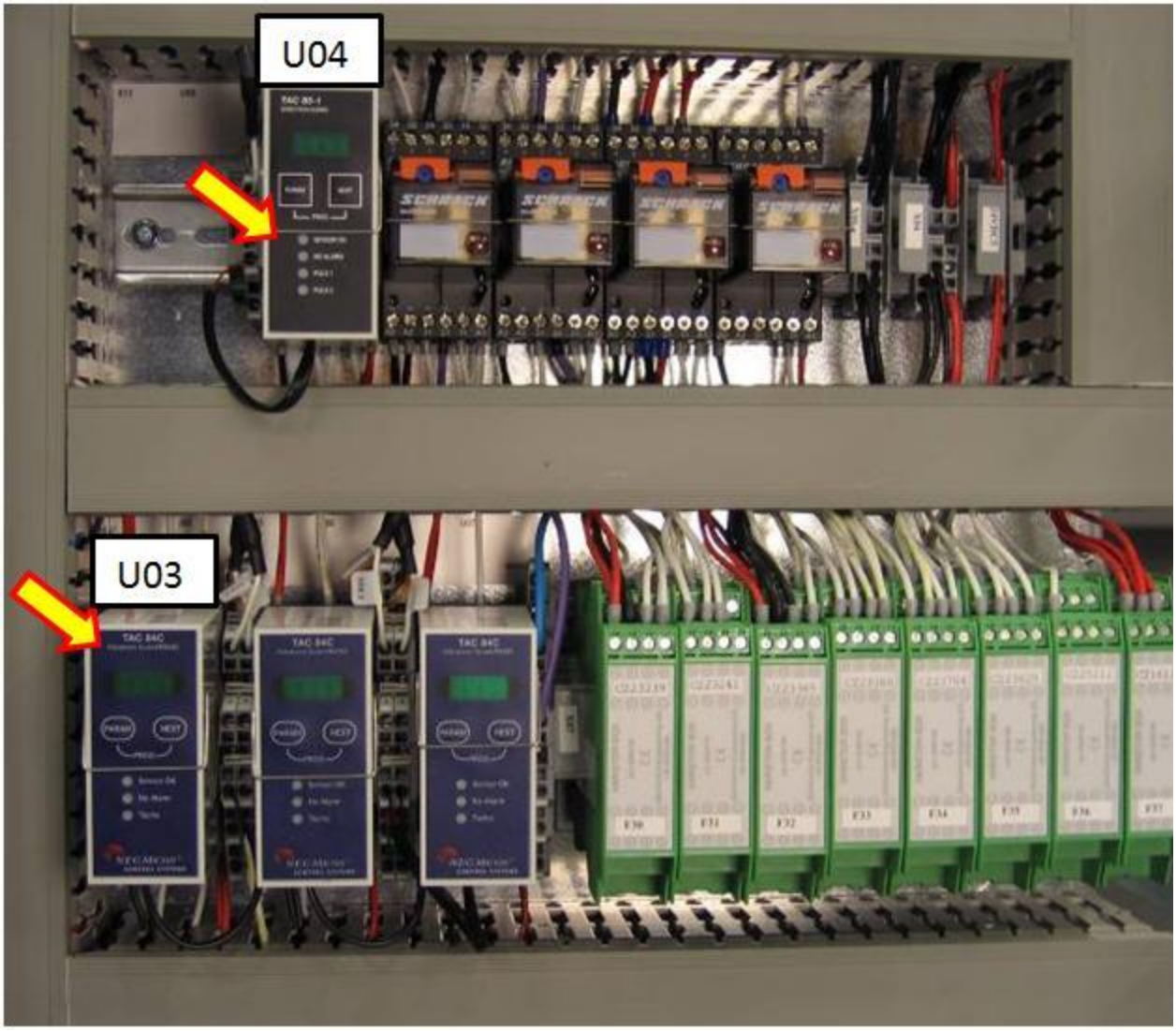
Check the TAC84 and TAC85 Modules and cables for loose or damaged connections.

If the TAC84 or TAC85 modules are found to be defective, replace with new.

Check the TAC84 and TAC85 module parameters as per instructions:

Relevant documentation	
Description	**DMS No.**
Settings for TAC 84 Edgewise blade vibrations	D17000068
Also refer TAC84 User manual	D5002041
Settings for TAC 85 Over speed guard	D17000069


F49
7
WH
0,75mm²
3
TAC 85
Overspeed
U04
10
1
WH
0,75mm²
1
TAC 84
Overspeed
U03
501
10/63
3
A1
X01
TAC 84
OVERSPEED
A1



Relevant spare parts	
Description	**Item No.**
TAC 84C VIB GUARD 2 FILTERS	51701001
TAC 85-1 DIRECTION GUARD VWS	51700402

Replace the defective tower TOI

Does this solve the problem?

1] Yes

2] No

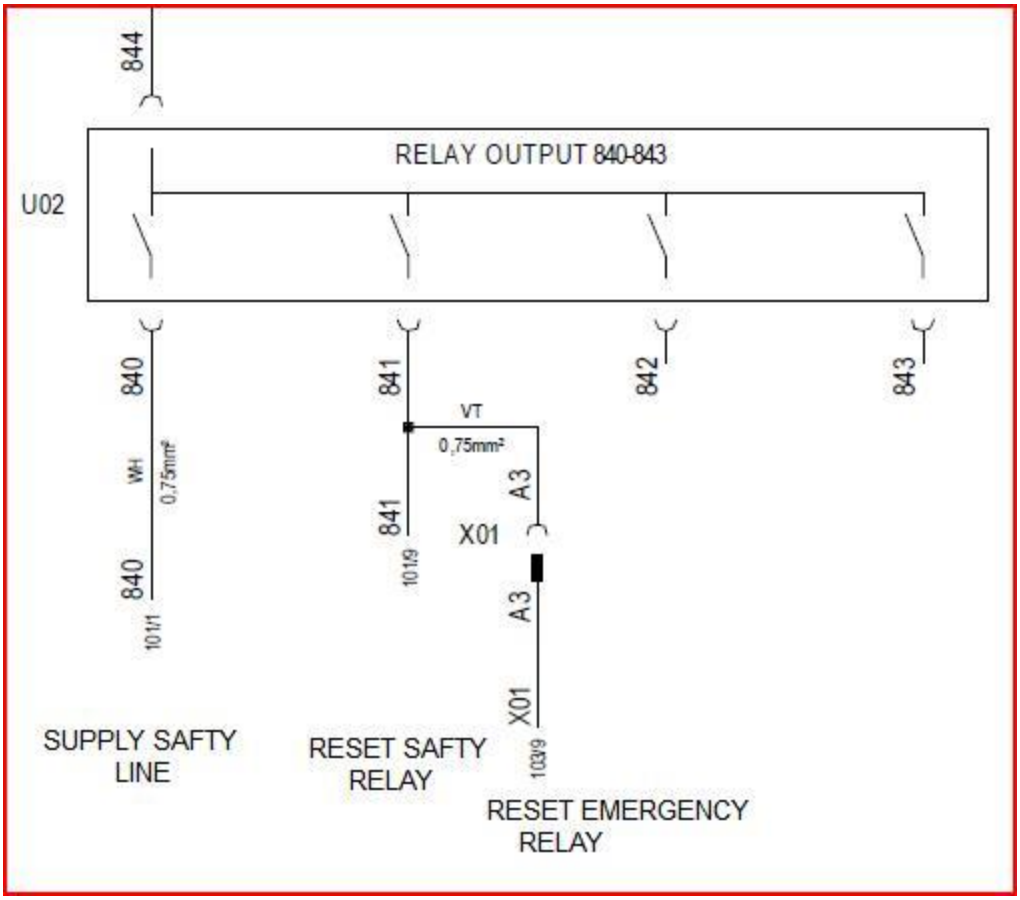
3] I don't know

- **Explanation**
  IN THE +AT2 PANEL:

  Check the loose connection in safety line terminals,

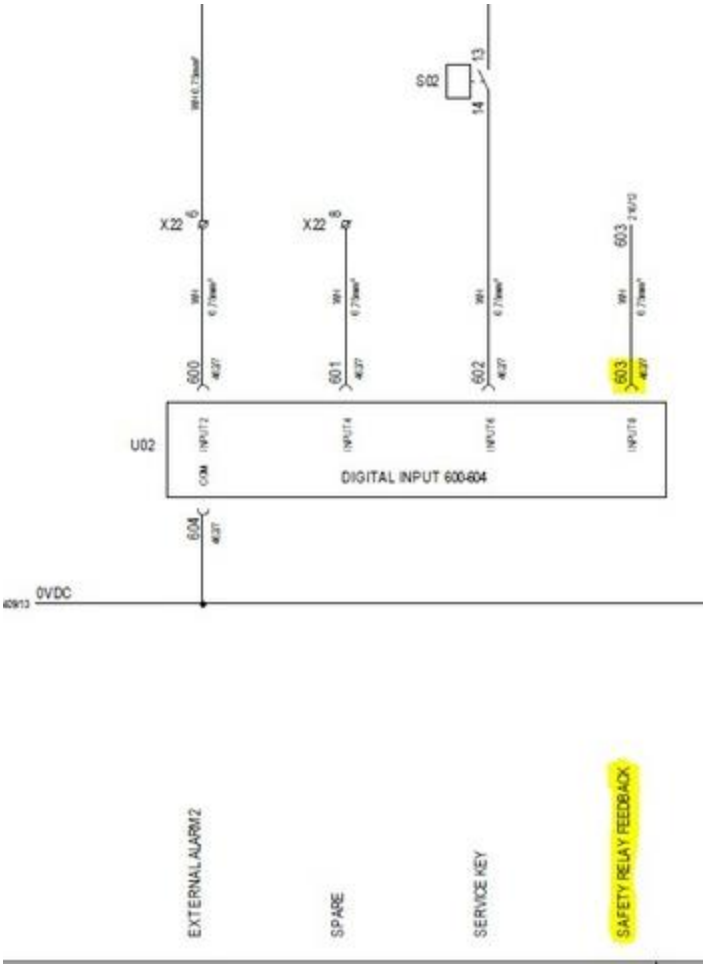
  Ensure the 24V DC supply from Tower TOI relay output 840 and 841**(Turbine reset)**

Relevant documentation	
Description	**DMS No.**
MK1 – Emergency Line Diagram	6012952
MK2 – Emergency Line Diagram (50 HZ)	6014867
MK2 – Emergency Line Diagram (60HZ)	6010124
MK3 & ABOVE – Emergency Line Diagram (50HZ)	6016281
MK3 & ABOVE – Emergency Line Diagram(60HZ)	6016283


844
RELAY OUTPUT 840-843
U02
840
841
842
843
VT
0,75mm²
WH
0,75mm²
841
A3
X01
10 1/9
840
A3
10 1/1
X01
103/9
SUPPLY SAFTY LINE
RESET SAFTY RELAY
RESET EMERGENCY RELAY

Replace the tower TOI if it is found to be defective.

Check the 24V supply at TOI terminal 603 and ensure LED has indication, replace the TOI, if LED is not ‘ON”



Relevant spare parts	
Description	**Item No.**
TOI-II INTERF NM1500 TOWER	51701501

NOTE: Reset safety line -24V DC voltage comes when the turbine reset time only