Calibrate Sensor

Does this solve the problem?

1] Yes

2] No

3] I don't know

- **Explanation**

Auto zero the Flexbar oil level pressure sensor to atmospheric pressure at the turbine.

Disconnect W527 connector on the gear oil level pressure sensor.

DO NOT disconnect the W522 connector to the PT100 sensor.

Place rags or other absorbent material below the pressure head to absorb gear oil run-off.

Use a 27 mm spanner to hold the stem portion of the sensor.

Use the 41 mm spanner to remove the pressure head from the stem portion.

Plug the hole with a standard ½” pipe plug.

Attach the W527 cable back to the sensor to power it up.

Verify connectivity by observing the gear oil level pressure value in the TAC

Controller Service Menu>Pressure>Gear Oil level pressure.

Push and hold the Auto Zero button in the center of the instrument. (The LED will blink slowly indicating that the sensor is calibrating to atmospheric pressure. The LED will blink quickly when calibration is complete).

Install silver cap on sensor and disconnect the W527 cable.

Install the pressure head back onto the stem portion. Do not over tighten.

Attach the W527 plug to the sensor.

Take care to seat the plug well and ensure it is tight.

Check the W522 plug for the PT100 sensor.

- A loose connection can generate alarms;

193 Gear Oil Temp. High Long Term and **192 Gear Oil Temp. High Short Term**

If these alarms occur in the Service Log as a result of zeroing the oil level pressure sensor, verify that the W527 plug is secure.

If alarm is still present, recall factory parameters in the TAC Controller and perform a Master Reset.

Remember to re-install all ‘Different from Factory’ parameters exclusive to the site.

Gear oil level sensors			
Gearbox brand	**Sensor description**	**Sensor item no.**	**SWI**
Hansen	PR TRANSMITTER/PT-100 L=100mm	60109922	0023-4419
Winergy	PR TRANSMITTER/PT-100 L=40mm	60109925	0023-4419

Verify and correct parameters in TAC II Controller

Does this solve the problem?

1] Yes

2] No

3] I don't know

- **Explanation**
  - Verify that the oil level pressure sensor is enabled; ‘

SERVICE MENU => ENABLE PRESSURE CHANNELS => ENABLE GEAR OIL LEVEL PRESSURE’ from 0 to 1

  - Verify that all Stop and Reset functions parameters for Alarm ‘365 Gear Oil Pressure Low’ are at factory settings, and not modified in any way.

  - Verify that the correct gearbox type is entered;

‘SERVICE MENU => WTG SETUP => SELECT GEARBOX TYPE (0 / 1 / 2)’.

0 = WINERGY

1 = HANSEN

2 = JAKE

Relevant documentation	
Description	**DMS No.**
Oil level sensor config Work Instruction	0023-4419
CIM 1855 ,Gearbox Breather replacement	0027-4983

Relevant CIM case		
CIM case	**Task list**	**SWI**
1855		

Add/remove oil to maintain the correct level in the gearbox

Does this solve the problem?

1] Yes

2] No

3] I don't know

- **Explanation**

Low oil level in the gearbox will trigger this alarm (as the alarm title suggests), however, too much oil in the gearbox can cause the air breather to clog which will lead to alarm 365 as well.

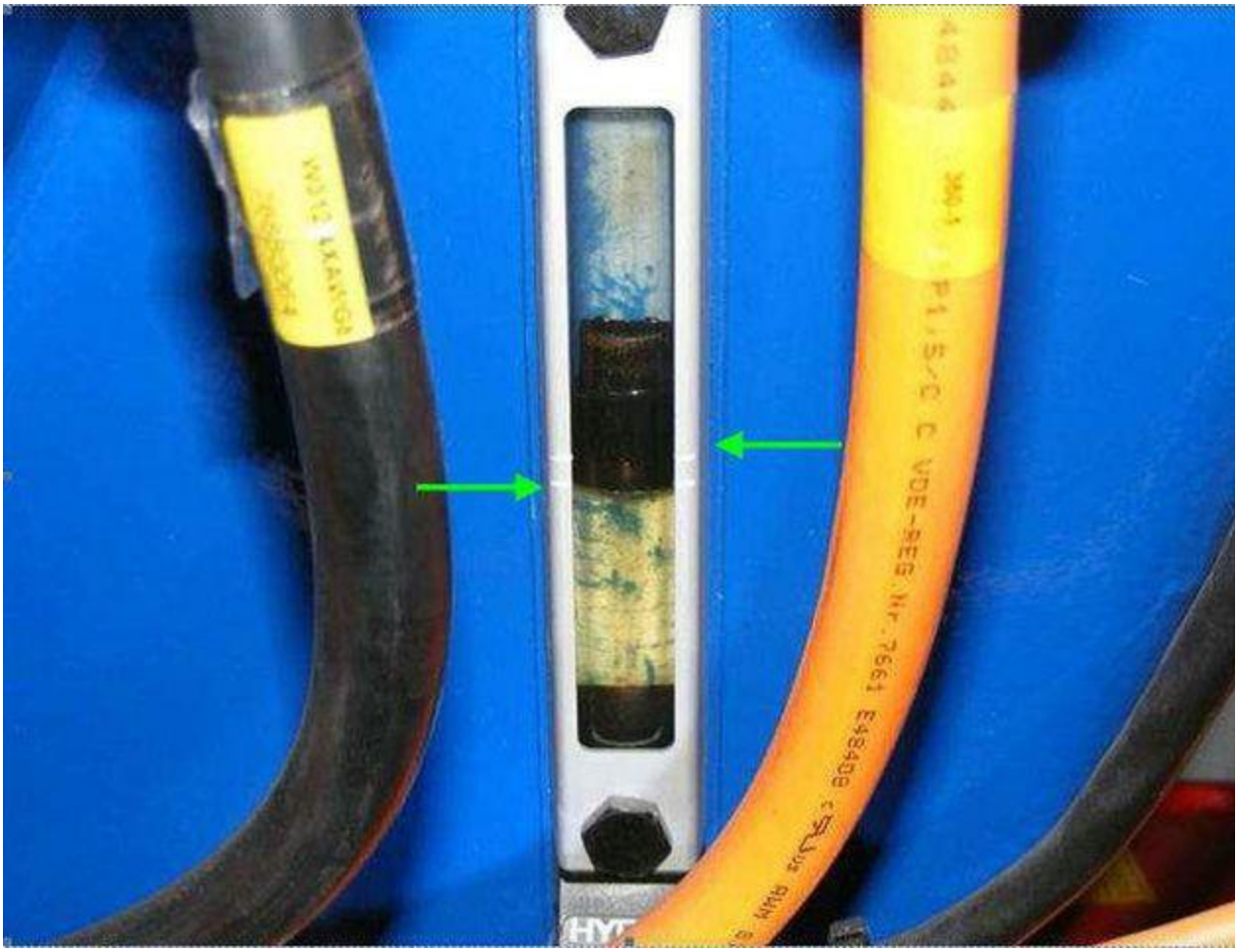
Check that the gear oil is at the correct level as described in document as follows

Relevant documentation

Description	DMS No.
Oil level sensor config Work Instruction	0023-4419

Hansen (Ja/Ke) Gearbox Oil Level

Winergy Gearbox Oil Level



Upgrade to new type of gearbox air breather (CIM 1855)

Does this solve the problem?

1] Yes

2] No

3] I don't know

- **Explanation**

  Remove the original Hydac breather from the top of the gearbox.

Install the Mahle breather.


ACCO

Relevant documentation	
Description	**DMS No.**
Oil level sensor config Work Instruction	0023-4419
CIM 1855 ,Gearbox Breather replacement	0027-4983

Relevant CIM case		
CIM case	**Task list**	**SWI**

1855		

Check the electrical connection

Does this solve the problem?

1] Yes

2] No

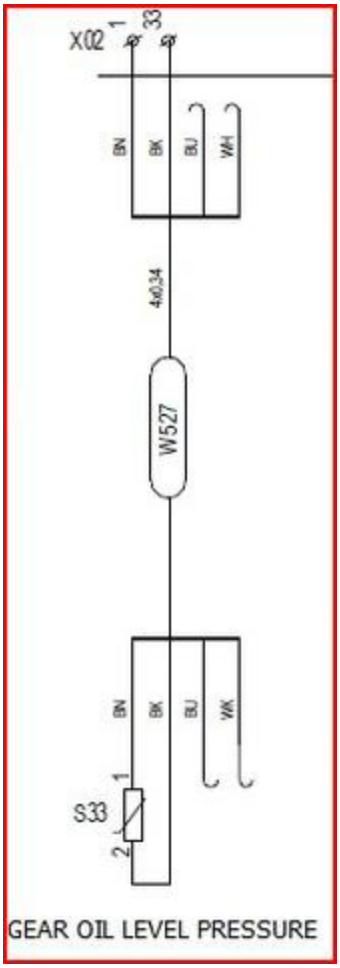
3] I don't know

- **Explanation**

IN THE NACELLE:

Check the connections at the gear oil level sensor, the plugs on the sensor are particularly sensitive and can be easily damaged.

Check the connections the W527 cable connected in to +AN12.



Replace the cable if it shows any signs of wear or damage.

Ensure the plug is fastened correctly and the cable is properly connected.

Also Check the W522 PT100 sensor cable plug tightness and cable connection.

A loose connection of the PT100 sensor cable can lead to these alarms;

193 -Gear Oil Temp. High Long Term and

192 -Gear Oil Temp. High Short Term

Relevant spare parts	
Description	**Item No.**
CABLE -W527 NM30t. MRK III 4x0 (Level sensor)	60110454
CABLE -W522 NM30t. MRK III 4x0 (PT100 sensor)	60110452

Check and replace the faulty Varistor F36/TOI II Top controller U01 at +AN1

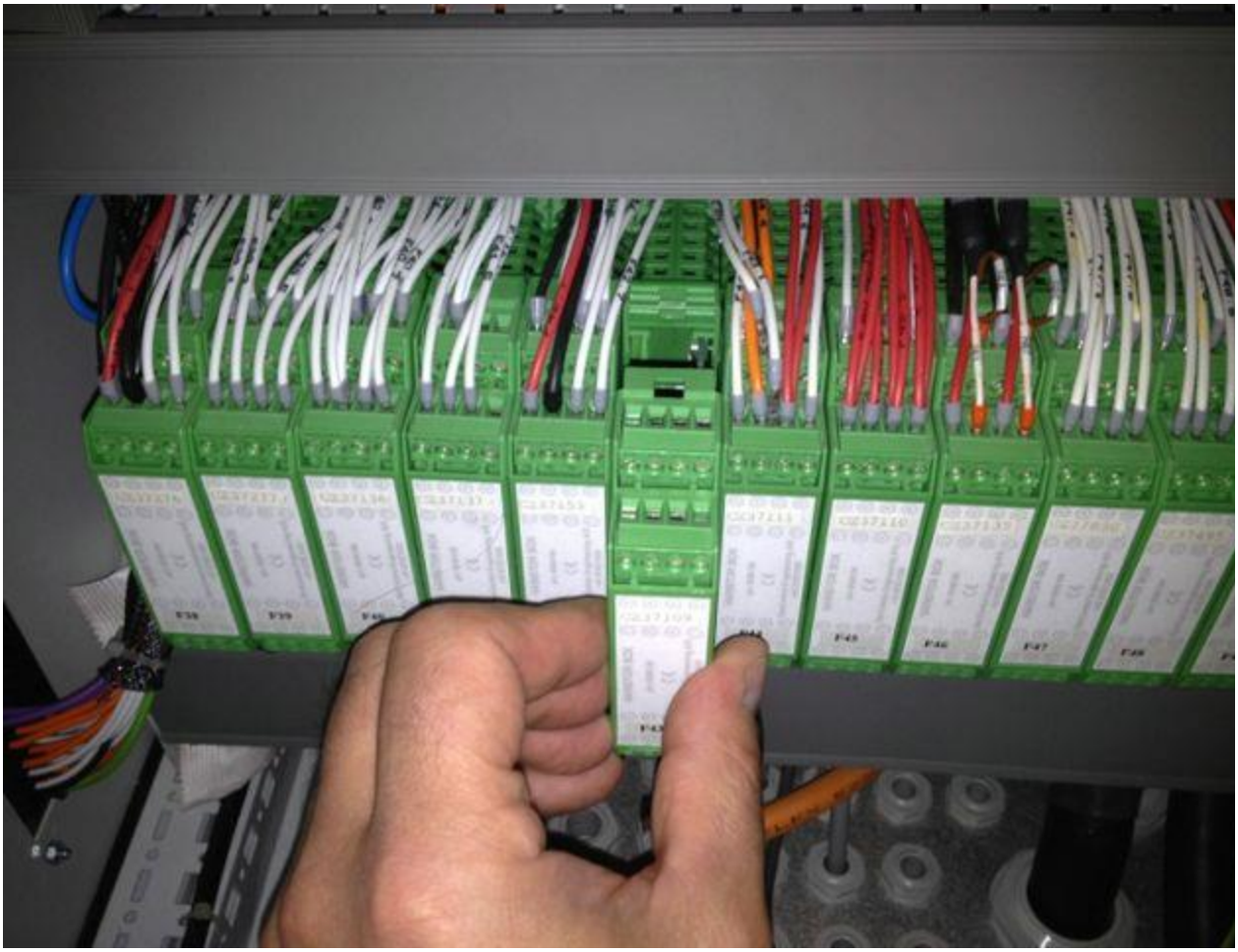
Does this solve the problem?

1] Yes

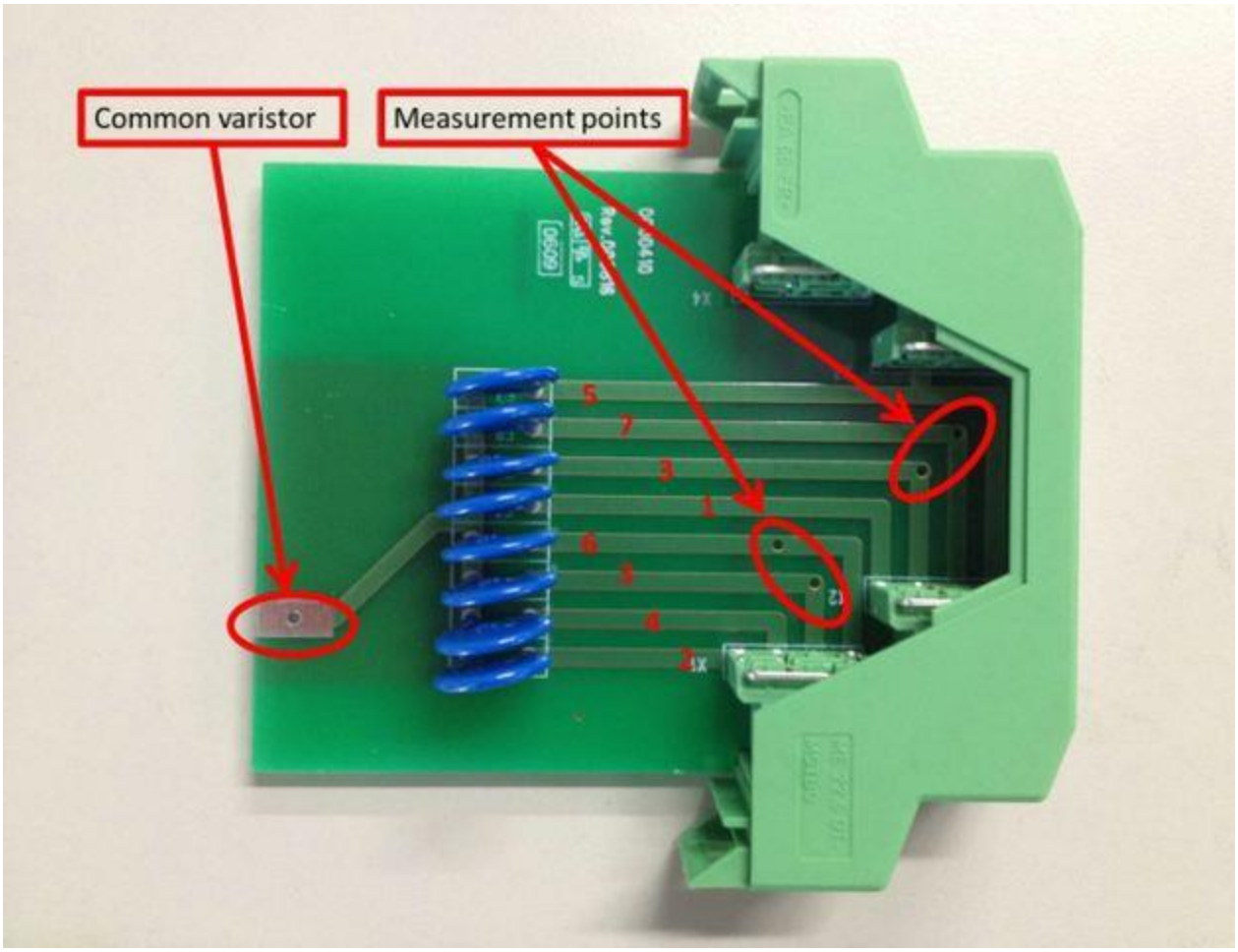
2] No

3] I don't know

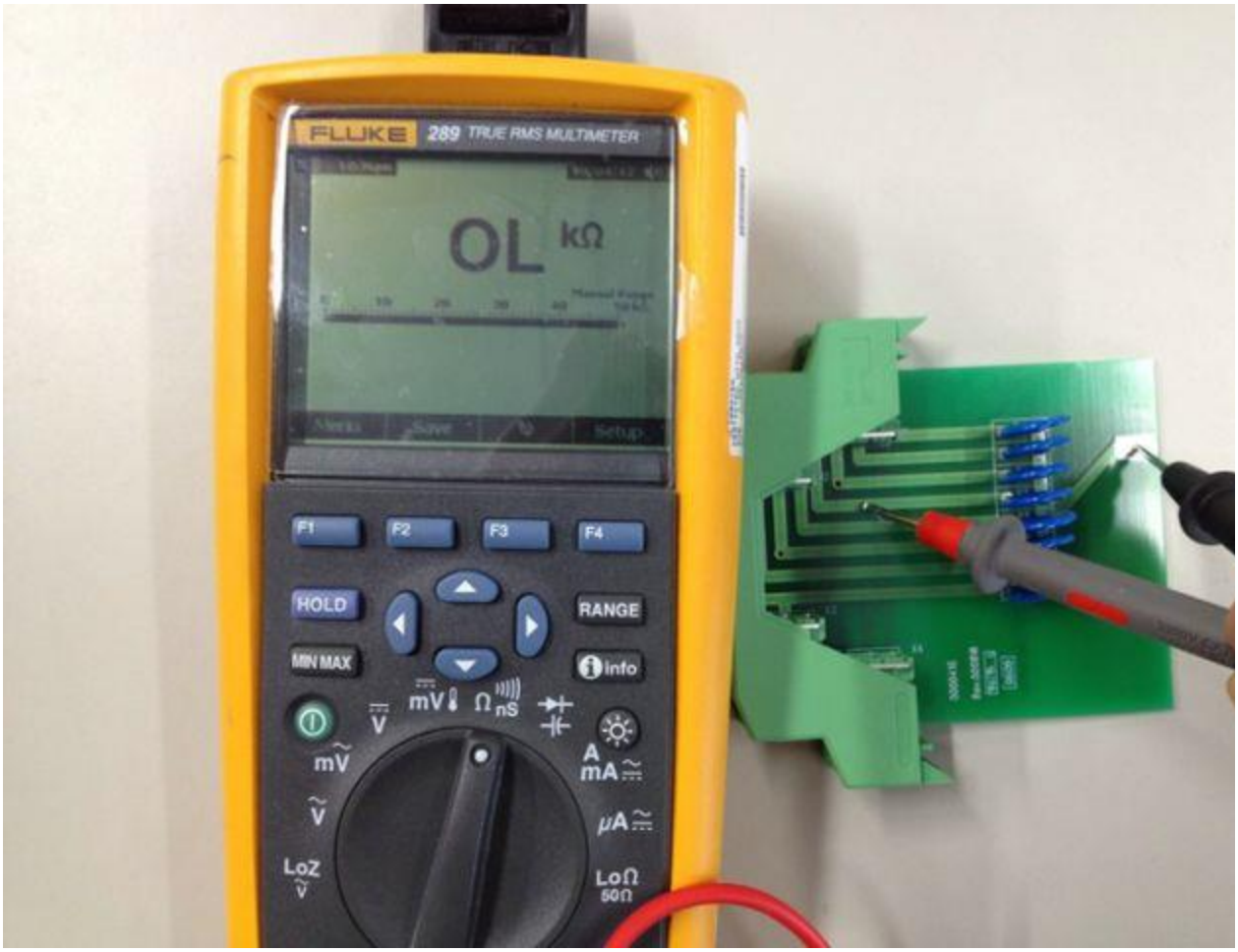
- **Explanation**
  - Check for loose/bad connection in Varistor F36.1 and TOI II connector U01.703
  - Faulty Varistors can be tested individually by placing a multimeter (set to measure Ω) lead on the common (earth) side of the varistors and the other on the individual varistor measurement points or at the terminals.



Varistor measurement points:



Measuring resistance across the varistors:

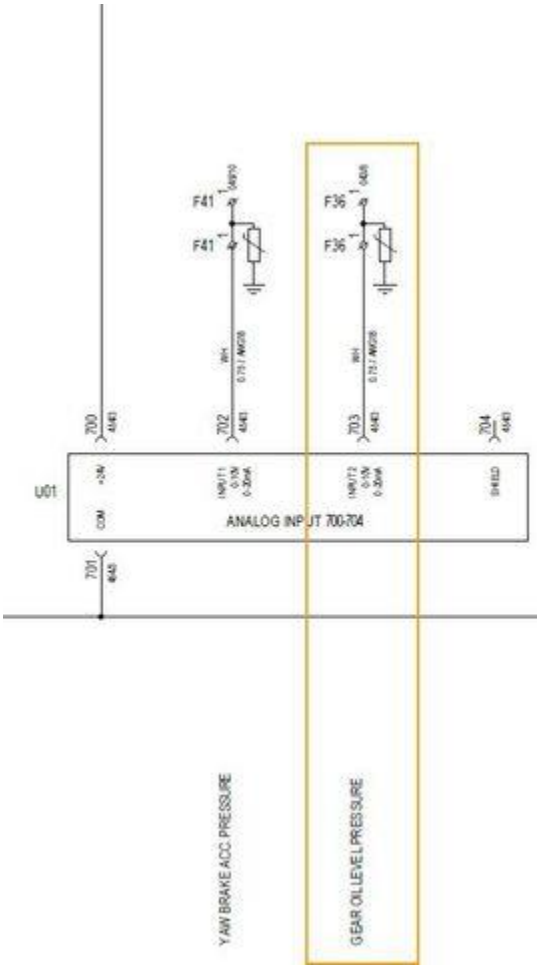


Measure resistance between the common varistor point and all other measurement points. Only four varistors can be measured by using the test points on the board, test the remaining four from the terminals. The resistance value over the varistor should be ∞ or in the high MΩ range. If the resistance is lower, the varistor has been damaged by an over voltage in the circuit and must be replaced.

Relevant spare parts	
Description	**Item No.**
VARISTOR BOX X8 (Discontinue)	60015847
VARISTOR BOX X8 (New)	51706201

Mounted PCB VARISTOR BOX X8	60015268

The varistor will be damaged by an event and therefore should not be the cause but a consequence of the event. The cause of the failure may be due to lightning, fault in the power supply or short in the circuit. Hence check the varistor before going for replacement of TOI-II top.



- If connections are ok, but the gear oil level pressure reads still low then the cause is likely a faulty nacelle TOI. Replace the same.

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