Replace the defective PT100 Sensor

Does this solve the problem?

1] Yes

2] No

3] I don't know

- **Explanation**

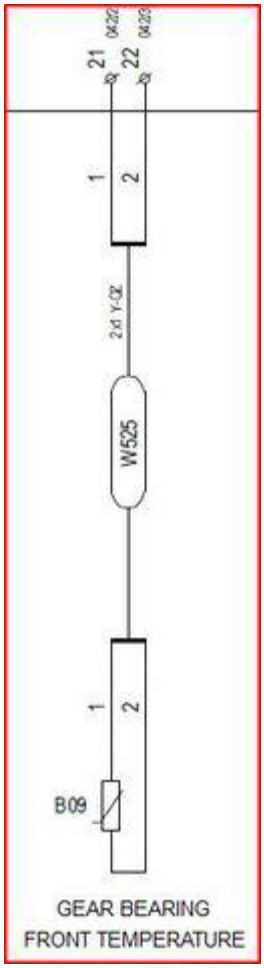
IN THE +AN12 CABINET:

Check PT100 connections and tightness in +AN12 panel X02 connection 21 and 22.

Check the sensor cable for any cracks or damage.

If defective, replace the cable.

60103090 - CABLE -W525 NM30T MODUL 2x1



Also check the input in TOI U01 terminals 314 and 315.

Use a multimeter set to read Ω and measure the resistance across the leads of the PT100.

Use the resistance/temperature conversion chart to determine the actual measured value.

0039-6203 - PT100 Resistance/Temperature chart

If the value matches that taken from the TAC Temperature menu, then the circuit is working as designed.

If the value is unreal (-40 to 200 °C), then the PT100 is faulty and must be replaced.

Part number for PT100 Sensor	
Description	**Item No**
PT100 SENSOR FOR HANSEN GEARBO (HANSEN)	60102405
PT100 SENSOR,TOP PSC 1030 JAKE (JAKE)	60066565

Replace the defective varistor

Does this solve the problem?

1] Yes

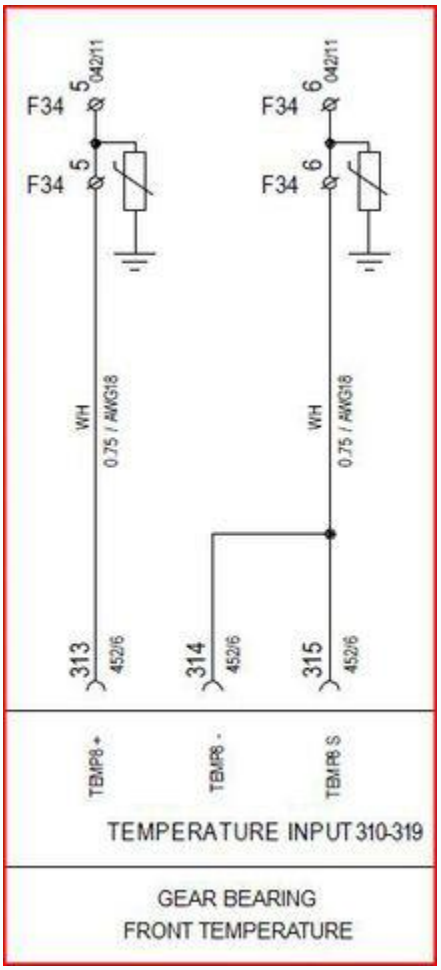
2] No

3] I don't know

- **Explanation**

IN THE AN1 CABINET:

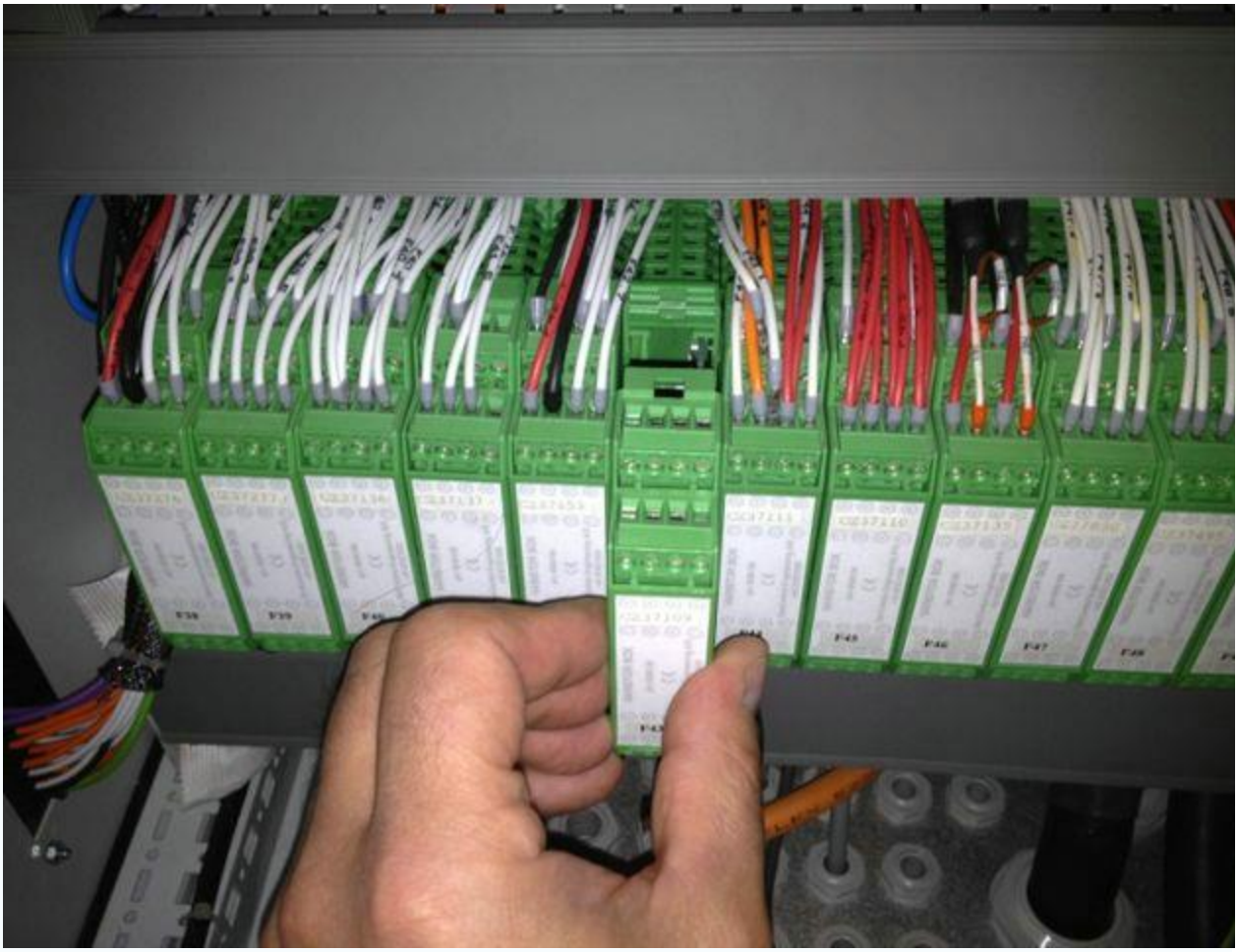
Varistors (F34) can be tested individually by placing a multimeter (set to measure Ω) lead on the common (earth) side of the varistors and the other on the individual varistor terminals. The resistance value over the varistor should be ∞ or in the high MΩ range. If the resistance is lower, the varistor has been damaged by an over voltage in the circuit and must be replaced.



VARISTOR BOX F34:

51706201 -VARISTOR BOX X8

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)

Replace the PT100 sensor and repair the bearing housing

Does this solve the problem?

1] Yes

2] No

3] I don't know

- **Explanation**
  IN THE NACELLE:

If the alarm “114 –Gear bear Front temp high”, is active or recent in the alarm log, and the turbine has equipped with HANSEN gearbox- it is most likely a spinning bearing race causing the fault.

Inspect gearbox rear PT100 sensor tip for signs of wear.

If there is wear on the tip, probably the outer race of the bearing has been spinning in the bearing. Then proceed with repair solution with refer to CIM 1312/2217.

HANSEN trained Vestas Technicians will be required to complete the repair

CIM -1312 :

Gearbox - Hansen - EH803- HSS-bearing NR - end OR rotating in housing

Securing Hansen HSS Bearing Outer Races **DMS:** 0001-4318

Gearbox - Hansen - EH803-xN21 - HS-bearing NR - end OR

rotating in housing service message DMS: **0013-8856**

CIM -2217 :

Gearbox - Hansen - EH803 - HS-bearing NR-end OR rotating in housing - factory loctite solution failing.

If during repairing the gap between the outer race and housing are >0.23mm, Mechanical lock solution will be required to prevent the outer race from spinning.

Securing HSS Bearing Outer Race Mechanical Lock **DMS: 0011-0753**

HANSEN Technicians will be required onsite to complete the repair.

Position of the Sensor:

Remove the PT100 sensor check the sensor tip surface

Wear PT100 Sensor 1:

Wear PT100 Sensor 2:

Wear PT100 Sensor 3:

Good PT100 sensor:

Replace the defective TOI

Does this solve the problem?

1] Yes

2] No

3] I don't know

- **Explanation**
  IN THE AN1 CABINET:

If the measured resistance value does not match that taken from the TAC temperature menu, then the cause is likely a faulty Nacelle TOI.

51701601- TOI-II INTERF EXT POC