Troubleshoot/replace cable
Does this solve the problem?
1] Yes
2] No
3] I don't know

- **Explanation**

Remove the cover from the PT100 housing. Check for loose wire connections or corrosion in the PT100 and in the AN12 (X02 terminals 23 & 24), remove any corrosion and note any loose connections in the PT100 and/or AN12.

AN12:

Disconnect the wires from the PT100 and from the AN12 junction box on the side of the gear. Connect one end of the wires together and connect the other ends to a multimeter set to measure Ohms. The value should be very low in the milliohm range. If the value is in the ohm, meg ohm range or infinite, there is an open conductor in the cable. If the value is zero or very low in the milliohm range, flex the cable in several places to ensure that the value does not show an open conductor. Replace the cable if found to be defective. **Item no. 60103088- Cable -W521 NM30t. Module 2x1**

Repair spinning race IAW 1312 repair 1
Does this solve the problem?
1] Yes
2] No
3] I don't know

- **Explanation**
CIM 1312

If alarm 870 – Pt100 fault gear bear. Rear is active or recent in the alarm log, and the turbine has a Hansen gearbox- it is most likely a spinning bearing race causing the fault.

Inspect the tip of the PT100 temperature probe for signs of wear. If there is wear on the tip of the probe the outer race of the bearing has or is spinning in the bearing bore of the housing.

Wear on PT100:

Wear on the PT100 (2):

Undamaged PT100:

Determine via records if the CIM 1312 upgrade has been completed on this gear.

If so, determine if the PT100 was replaced at the time of the upgrade (PT100's have occasionally been reused after the repair if only slightly damaged and resurfaced using 400 grit emery paper, this allows us to reuse the part but may lead to random sensor failures in the future).

If the PT100 was resurfaced and reused at the time of the repair, it should be noted in the turbine log in accordance with the repair WKI.

If the PT100 was replaced at the time of the repair, and it is showing signs of wear, the race has begun spinning again and the repair must be completed a second time.

There is a possibility that solution #2 (mechanical lock) may be required to prevent the outer race from spinning.

Follow the detailed instructions in document - **DMS 0001-4318** **Securing Hansen 803-A and 803-C HSS Bearing Outer Races, NM72-1650, NM82-1500, NM82-1650, V82-1.65 MW** to proceed with repair solution 1. HTI trained Vestas Technicians will be required to complete the repair.

If during repair procedure it is determined that the gap between the outer race and housing are >.23mm, notify the site manager as it is likely solution #2 will be required.

Task list: 10914
Troubleshoot/repair/replace PT100
Does this solve the problem?

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

- **Explanation**

Item no. 60102405- PT100 SENSOR FOR HANSEN GEARBOX

Note the bearing temperature in the TAC user panel in the AN1 box. Remove the plug from the PT100. Using a multi-meter measure the resistance across the pins on the PT100. Compare the resistance measurement with the temperature/resistance conversion chart. The reading should be within a few degrees of the reading in the TAC user panel. If the reading is unreal, the sensor is defective and must be replaced.

Repair spinning race IAW 1312 repair 1 & 2

Does this solve the problem?

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

- **Explanation**

If after removing, cleaning and reinstalling the housing with the Plastigauge, it is determined that the gap between the housing and bearing outer race are >.23mm, follow the instructions in **SM 0013-8856** and **WKI 0011-0753 - Securing HSS Bearing Outer Race Mechanical Lock** toproceed with repair solution 2. HTI Technicians will be required onsite to complete the repair as well as services from a local machine facility.