

# KIT COOLING EXIT TEMPERATURE SENSOR

100283.



**Installation and servicing of Danfoss Turbocor® compressors by qualified and product trained personnel only. Follow these instructions and sound refrigeration/electrical/servicing practices relating to installation, commissioning, maintenance, and service.**

<p>Consult the appropriate Danfoss LLC Service Manual on <a href="http://turbocoroem.com">turbocoroem.com</a> for detailed service instructions.</p>	<p><b>Never power compressor without covers in place and secured.</b></p> <p><b>Opening the drive panel will expose you to a voltage hazard of up to 575V AC and 900V DC. Ensure the mains input power is off and locked out before opening panel.</b></p> <p><b>Before opening the drive panel, wait at least 20 minutes after isolating AC power to allow the high voltage capacitors to discharge.</b></p>	<p>Always wear appropriately rated safety equipment when working around equipment and/or components energized with high voltage.</p> <p><b>This equipment contains hazardous voltages that can cause serious injury or death.</b></p>	<p><b>Recover all refrigerant from compressor in accordance with local codes and ensure pressure is fully vented before the removal of refrigerant containing components.</b></p>
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## 1 - Introduction

VTT/VTX COOLING EXIT TEMPERATURE SENSOR installation.

We have made the **VTT/VTX Service Manual** available to anyone. To access the manual, you may scan the applicable QR code below or you may go to our DTC website at [www.turbocoroem.com](http://www.turbocoroem.com). At the top of the page there is a pull-down menu called "Quick Links." Click this menu and select the appropriate service manual.

**Note\* This sensor can only be used in combination with Firmware 1.8 and newer.**

Refer to the applicable QR code below to download the VTT/VTX Service Manual.

**English**



**Chinese**



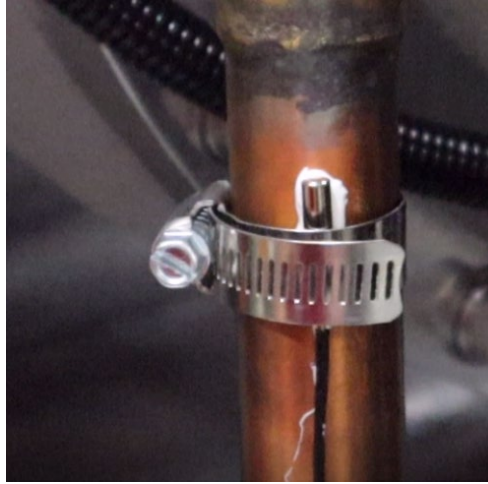
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## 2 - COOLANT INLET TEMPERATURE SENSOR Installation Instructions

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1. Measure approximately 2" from the Motor Cooling Exit Flange and clean the 1 1/8" copper tube.
2. Apply a small amount of thermal paste to where the sensor will be located and then set the sensor in place. Refer to Figure 1 – Sensor Location.

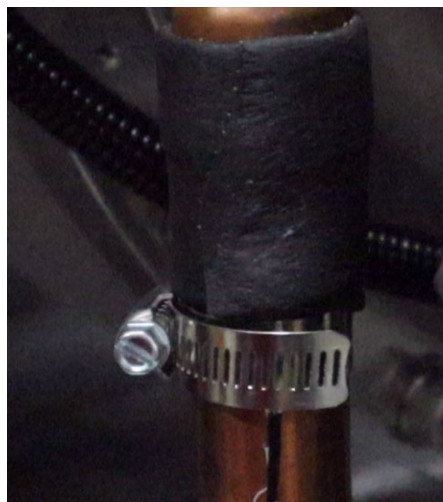


**Figure 1 – Sensor Location**

3. While holding the sensor in place, install the included hose clamp over the sensor location. Tighten the clamp to secure the sensor, do not overtighten. Refer to Figure 2

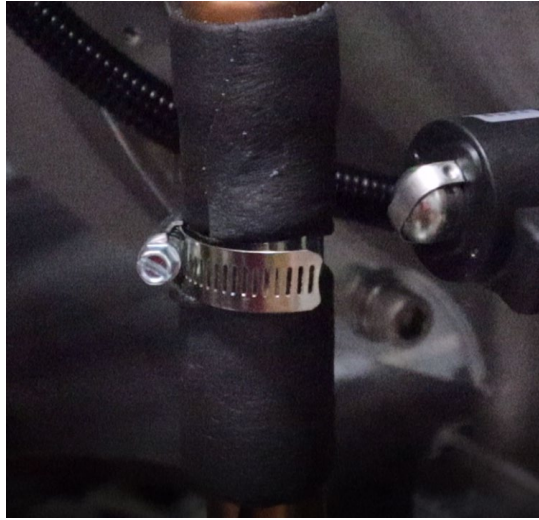
**NOTE:** Do not use a power tool to tighten the clamp. It must only be secured with a hand tool. Damage to the sensor could occur if the clamp is over tightened.

4. This kit includes three (3) strips of insulation tape. Apply one of the strips of insulation tape on the left side of the hose clamp covering the exposed sensor and wire. Wrap the insulation tape around the pipe and continue until all the tape is used. This tape should overlap itself completely. Refer to Figure 2 – Insulation Tape (first strip).



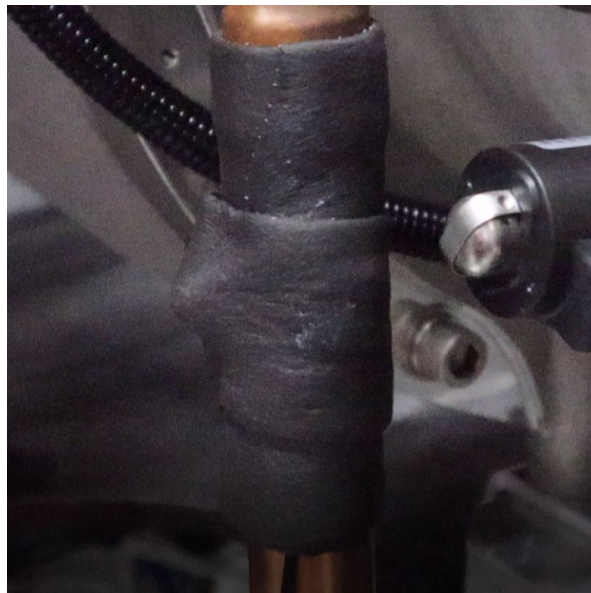
**Figure 2 – Insulation Tape (first strip)**

5. Apply the insulation tape to the right side of the hose clamp, covering the exposed section of the sensor. Wrap the insulation tape around the pipe in the same manner as in the previous step. Refer to Figure 3 – Insulation Tape (second strip).



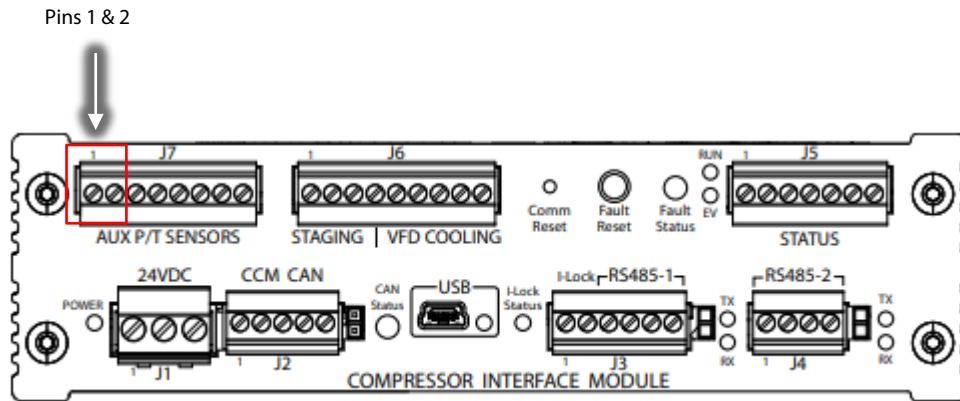
**Figure 3 – Insulation Tape (second strip)**

6. Apply the third strip of insulation tape and wrap it around the hose clamp so that the entire hose clamp is covered. The result will also overlap the other two pieces of tape. Refer to Figure 4 – Insulation Tape (third strip).



**Figure 4 – Insulation Tape (third strip)**

7. Install the temperature sensor wire leads into the CIM at terminals 1&2 of the J7 connector, ensuring the connector fasteners are tight. Refer to Figure 5 – CIM Interface for Temperature Sensor.



**Figure 5 – CIM Interface for Temperature Sensor**

8. If the leads from the temperature sensor are not long enough to reach the CIM, additional wire can be used to accommodate the distance required to make the connection. Refer to the specifications below for the type of wire to be used. It must meet or exceed the listed specifications.

**Wire specifications:** PVC Insulated Wire, E477101 AWM 2651 26 AWG 105°C 300v VW-1

- a. Connect the additional wire leads to the existing temperature sensor leads using a 26 AWG butt connector (heat shrink covered). Follow the manufacturer specifications regarding the amount of wire to strip and the proper crimp tool to use.
- b. On the other side of the wire lead, strip off 6mm of insulation and insert into the CIM as shown in Step 7.

### 3 - Kit Contents

Kit numbers	Compressor models	
100283	VT Series	
QTY	Part(s) Description	Picture(s)
1	TEMPERATURE SENSOR PROBE – NTC – 10K OHM	
3	TAPE – THERMAL INSULATION – THICKNESS 1/8" – WIDTH 2" - LENGTH 5"	
1	TUBE CLAMP – WORM DRIVE – CLAMP ID 13/16" TO 1 3/4" – BAND WIDTH 9/16" – STAINLESS STEEL	
1	THERMAL PASTE – SILICONE BASE	

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