



General Service Bulletin

Temperature Sensor Removal and Installation Practices

Product Code: 0047 (CVHS), 0153 (RTHD), 0154 (RTAC),
0347 (CDHF, CDHG, CVHE, CVHF, CVHG, CVHL),
0664 (CGAM), 0703 (RTWD, RTUD), 0895 (RTAE),
0947 (CVHH), 0948 (CDHH)

ATTENTION: Warnings, Cautions, and Notices appear at appropriate sections throughout this literature. Read these carefully:

⚠ WARNING Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe practices.

NOTICE: Indicates a situation that could result in equipment or property-damage only accidents.

⚠ SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

⚠ WARNING**Proper Field Wiring and Grounding Required!**

Failure to follow code could result in death or serious injury. All field wiring **MUST** be performed by qualified personnel. Improperly installed and grounded field wiring poses **FIRE** and **ELECTROCUTION** hazards. To avoid these hazards, you **MUST** follow requirements for field wiring installation and grounding as described in NEC and your local/state electrical codes.

⚠ WARNING**Personal Protective Equipment (PPE) Required!**

Installing/servicing this unit could result in exposure to electrical, mechanical and chemical hazards.

- Before installing/servicing this unit, technicians **MUST** put on all PPE required for the work being undertaken (Examples; cut resistant gloves/sleeves, butyl gloves, safety glasses, hard hat/bump cap, fall protection, electrical PPE and arc flash clothing). **ALWAYS** refer to appropriate Material Safety Data Sheets (MSDS)/Safety Data Sheets (SDS) and OSHA guidelines for proper PPE.
- When working with or around hazardous chemicals, **ALWAYS** refer to the appropriate MSDS/SDS and OSHA/GHS (Global Harmonized System of Classification and Labelling of Chemicals) guidelines for information on allowable personal exposure levels, proper respiratory protection and handling instructions.
- If there is a risk of energized electrical contact, arc, or flash, technicians **MUST** put on all PPE in accordance with OSHA, NFPA 70E, or other country-specific requirements for arc flash protection, **PRIOR** to servicing the unit. **NEVER PERFORM ANY SWITCHING, DISCONNECTING, OR VOLTAGE TESTING WITHOUT PROPER ELECTRICAL PPE AND ARC FLASH CLOTHING. ENSURE ELECTRICAL METERS AND EQUIPMENT ARE PROPERLY RATED FOR INTENDED VOLTAGE.**

Failure to follow instructions could result in death or serious injury.

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Revision History

RF-SVB012A-EN (26 Mar 2015)

- First version of this literature

General Information

The purpose of this general service bulletin is to advise the field of proper installation, removal and handling practices of the temperature sensors on La Crosse-built centrifugal chillers and Pueblo-built screw and scroll chillers (refer to “Units Affected,” p. 2 for a list of affected models).

The action described in this alert is NOT being taken to address a safety concern.

This is an INFORMATIONAL BULLETIN.

Units Affected

Products affected by this general service bulletin include temperature sensors on chillers with CH530 or Tracer AdaptiView™ controls including the following:

- La Crosse-built centrifugal chiller models: CDHF, CDHG, CDHH, CVHE, CVHF, CVHG, CVHH, CVHL, and CVHS
- Pueblo-built screw chiller models: RTAC, RTAE, RTHD, RTWD, and RTUD
- Pueblo-built scroll chiller model: CGAM

The temperature sensors (X13650726) include the following service part numbers: SEN00981, SEN01197, SEN01211, SEN01314, SEN01959, and SEN02133.

Discussion

Evaluation of many of the temperature sensor returned for failure analysis has revealed that many have broken probe wires, that is, the wires between the encapsulated printed circuit board and the thermistor (probe). The temp sensor probe consists of only two 22 AWG wires and are not as robust as the four 18 AWG machine buss wires. Therefore, it is believed that many of these failures are the result of improper removal or installation practices. This service bulletin provides proper installation, removal, and handling practices.

Corrective Action

Refer to the following points best practices for removing the temperature probe from the bulb well and for installing the temperature probe into the bulb well.

When removing the temperature probe from the bulb well:

- Dry off the connector and cables if wet before disconnecting the sensor to prevent water from getting into the connector. Moisture in the connector can lead to corrosion of the leads.
- Unthread the spiral strain relief from the crimping nut; see [Figure 1](#).

Figure 1.



- Unthread the crimping nut completely from the bulb well; see [Figure 2](#).

Figure 2.



- Unless the sensor is being replaced, do NOT pull the thermistor through the strain relief; see [Figure 3](#).

Figure 3.



- Use care when removing the sensor probe from the bulb well. Yanking on the sensor probe could break or damage the wires, or could cause the thermistor to come off the cable; refer to [Figure 4](#).

Figure 4.



When installing the temperature probe into the bulb well:

- Apply the proper amount of thermal grease to the probe. Ensure that the thermal grease does NOT get into the connector.
- Insert the probe and ensure that it is fully seated into the bottom of the well.
- Thread the crimp nut into the bulb well and secure.
- Thread the spiral strain relief onto the crimp nut to finger-tight. Using a wrench, apply 1/4 turn to the strain relief. Do NOT overtighten the strain relief as this can damage or break the wires; refer to [Figure 5](#). The spiral strain relief should NOT bottom out against the crimping nut.

Figure 5.



- Ensure that the probe wire is going directly into the strain relief. Do NOT attempt to “stretch” the probe into the bulb well; refer to [Figure 6](#). The strain relief should NOT be bent.

Figure 6.



- *If securing the machine bus cabling, do NOT overtighten wire ties; this can damage the wires.*

Parts Ordering Information

There are no required parts for this service bulletin.

Material Disposition

Dispose of all parts including any unused parts and materials in accordance with federal, state, and local laws and ordinances.

Questions

If you have questions about this general service bulletin and are a Trane Distributor or a Commercial Sales Office, contact the Technical Support team in La Crosse, WI (for centrifugal chillers) or in Pueblo, CO (for screw and scroll chillers). If you are not a Trane Distributor or a Commercial Sales Office, contact the local Trane Distributor or a Commercial Sales Office.



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