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Trane Parts SEN03002

Trane Parts SEN03002 Suction Line Temperature Sensor

Instruction Manual

1. Introduction

This manual provides essential information for the proper installation, operation, maintenance, and troubleshooting of the Trane Parts SEN03002 Suction Line Temperature Sensor. This is a genuine Original Equipment Manufacturer (OEM) component designed for specific Trane and American Standard HVAC systems. Please read this manual thoroughly before proceeding with installation or service.

2. Safety Information

- **Disconnect Power:** Always ensure that the main power supply to the HVAC unit is disconnected before attempting any installation, maintenance, or repair. Failure to do so can result in electrical shock or serious injury.
- **Qualified Personnel:** Installation and service should only be performed by qualified HVAC technicians.
- **Personal Protective Equipment (PPE):** Wear appropriate PPE, including safety glasses and gloves, during installation and service.
- **Handle with Care:** The sensor and its components are delicate. Handle them carefully to prevent damage.

3. Product Overview

The Trane Parts SEN03002 is a suction line temperature sensor designed to monitor the temperature of the refrigerant suction line in HVAC systems. This data is crucial for the system's control board to optimize performance and diagnose issues. It is an OEM replacement part for various Trane and American Standard air handlers.



Image showing the Trane Parts SEN03002 Suction Line Temperature Sensor with its orange lead wires and tube clamp.

Key Features:

- Genuine OEM Trane Component.
- Replaces part numbers such as SEN02208, SEN2124, and SEN1808.
- Designed for suction line temperature sensing.
- Features a clamp for 3/8 inch (0.375 inch) tubing.
- Equipped with a 2-PIN connector and approximately 47 inches of orange lead wires.
- Commonly used in Trane GAF, GAM, and TAM series air handlers.

4. Setup and Installation

Follow these steps for proper installation of the SEN03002 sensor:

1. **Power Disconnection:** Ensure the main power to the HVAC unit is completely disconnected at the breaker. Verify with a multimeter.
2. **Locate Existing Sensor:** Identify the existing suction line temperature sensor on the refrigerant line. It will typically be clamped to a copper tube.
3. **Disconnect Old Sensor:** Carefully disconnect the 2-PIN connector from the old sensor. Unclip or unfasten the old sensor from the 3/8 inch suction line tubing.
4. **Install New Sensor:** Position the new SEN03002 sensor's clamp onto the 3/8 inch suction line tubing. Ensure a secure fit to allow for accurate temperature transfer.
5. **Connect Wiring:** Connect the 2-PIN connector of the new sensor's orange lead wires to the corresponding receptacle on the HVAC unit's control wiring harness. Ensure the connection is firm and secure.
6. **Secure Wiring:** Route and secure the 47-inch orange lead wires to prevent them from interfering with moving parts or being damaged by heat or sharp edges.
7. **Restore Power:** Once the sensor is securely installed and connected, restore power to the HVAC unit.

8. **System Check:** Monitor the HVAC system's operation to confirm the sensor is functioning correctly and no error codes related to the suction line temperature are present.

5. Operating Instructions

The Trane Parts SEN03002 is a passive temperature sensing device. Once installed, it continuously measures the temperature of the suction line and transmits this data to the HVAC system's control board. No direct user interaction is required for its operation. The system uses this temperature information for:

- Optimizing refrigerant flow and system efficiency.
- Detecting abnormal operating conditions.
- Triggering diagnostic codes or system shutdowns in case of critical temperature deviations.

6. Maintenance

Regular maintenance helps ensure the longevity and accuracy of your SEN03002 sensor:

- **Visual Inspection:** Periodically inspect the sensor and its wiring for any signs of physical damage, corrosion, or loose connections.
- **Connection Integrity:** Ensure the 2-PIN connector remains firmly seated and free from moisture or debris.
- **Clamp Security:** Verify that the sensor's clamp is securely fastened to the 3/8 inch tubing to maintain good thermal contact.
- **Cleaning:** If necessary, gently clean the exterior of the sensor with a soft, dry cloth. Avoid using harsh chemicals or abrasive materials.

7. Troubleshooting

If your HVAC system displays error codes related to suction line temperature or exhibits unusual behavior, consider the following troubleshooting steps:

- **Check Connections:** Ensure the sensor's 2-PIN connector is fully seated and that the wiring is intact and not damaged.
- **Verify Clamp:** Confirm the sensor is securely clamped to the suction line tubing, providing good thermal contact.
- **Common Error Code:** If your Trane XV20i or similar unit displays error code**067.06**, this often indicates a faulty suction line temperature sensor. Replacing the sensor with a new SEN03002 (or its superseding part) has been shown to resolve this specific error.
- **Sensor Testing:** A qualified technician can test the sensor's resistance values at various temperatures to determine if it is operating within specifications.
- **Replacement:** If the sensor is determined to be faulty, replace it with a genuine Trane Parts SEN03002 or an approved equivalent.

8. Specifications

Specification	Detail
Brand	Trane Parts
Model Number	SEN03002

Replaces Part Numbers	SEN2124, SEN1808, SEN02208
Mounting Type	Tube Clamp
Tubing Compatibility	3/8 inch (0.375 inch) diameter
Connector Type	2-PIN
Lead Wire Length	Approximately 47 inches
Output Type	NPN
Upper Temperature Rating	93 °C
Material (Lead Wires)	Lead

9. Warranty Information

As a genuine Trane Parts OEM component, the SEN03002 Suction Line Temperature Sensor comes with a manufacturer's warranty. For specific details regarding warranty coverage, duration, and claims procedures, please refer to the official Trane Parts warranty documentation or contact Trane Parts customer support directly. Keep your proof of purchase for warranty purposes.

10. Support

For technical assistance, installation questions, or warranty inquiries, please contact Trane Parts customer support. Ensure you have your product model number (SEN03002) and any relevant system information ready when contacting support.
Trane Parts Official Website: www.trane.com (or refer to your local Trane distributor for contact information)

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