**S1-02530788700**

# Generic S1-02530788700 Flame Sensor Rod: Installation and Maintenance Guide

For York and Coleman Gas Furnaces (Model 025-30788-700 and others)

## 1. INTRODUCTION

This instruction manual provides essential information for the safe and effective installation, operation, maintenance, and troubleshooting of the Generic S1-02530788700 Flame Sensor Rod. This component is designed as a replacement part for various York and Coleman gas furnace models, including the 025-30788-700 series.

Please read this manual thoroughly before attempting any installation or maintenance procedures. Proper understanding and adherence to these instructions are crucial for ensuring the safety of personnel and the optimal performance of your furnace system.

## 2. SAFETY INFORMATION

**WARNING: Working with gas furnaces involves risks of electric shock, gas leaks, fire, and explosion. Improper installation, adjustment, alteration, service, or maintenance can cause property damage, personal injury, or loss of life. Always consult with a qualified HVAC technician if you are unsure about any procedure.**

- **Disconnect Power:** Always turn off the electrical power to the furnace at the main service panel before performing any service or maintenance.
- **Shut Off Gas Supply:** Ensure the gas supply to the furnace is turned off before beginning work.
- **Personal Protective Equipment:** Wear appropriate safety gear, including gloves and eye protection.
- **Qualified Personnel:** Installation and service should ideally be performed by a qualified HVAC professional.
- **Gas Leaks:** After any gas line work, check for gas leaks using a soap solution.

## 3. PRODUCT OVERVIEW

The S1-02530788700 Flame Sensor Rod is a critical safety component in gas furnaces. Its primary function is to detect the presence of a flame in the combustion chamber. When the furnace ignites, the flame sensor sends a signal to the control board, confirming that the burner is lit. If no flame is detected, the control board will shut off the gas supply to prevent uncombusted gas from accumulating, ensuring safe operation.

Figure 3.1: The S1-02530788700 Flame Sensor Rod, featuring a ceramic insulator and metal rod.

Figure 3.2: Another view of the flame sensor rod, showing the terminal end for electrical connection.

## 4. COMPATIBILITY

This flame sensor rod is compatible with a wide range of York and Coleman gas furnace models. Please verify your furnace model number against the list below to ensure proper fit and function. This part is a direct replacement for York Coleman part number 025-30788-700.

**Compatible Models Include:**

- 6MG10
- 6MG11
- 6MG12

- 6MG13
- 6MG14
- 6MG15
- 6MG16
- 6MG17
- 6MG18
- 6MG19
- 6MG20
- 6MG21
- 6MG22
- 6MG23
- DGAD060CDC
- DGAD060CDD
- DGAE080CDC
- DGAE080CDD
- DGAF100CDC
- DGAF100CDD
- DGU04008U
- DGU04008UA
- DGU04008UB
- DGU06010U
- DGU06010UA
- DGU06010UB
- DGU08012U
- DGU08012UA
- DGU08012UB
- DGU08016U
- DGU08016UA
- DGU08016UB
- DGU10014U
- DGU10014UA
- DGU10014UB
- DGU10020U
- DGU10020UA
- DGU10020UB
- DGU12020U
- DGU12020UA
- DGU12020UB
- FG9A04008DH11B
- FG9A04008UP11A
- FG9A04010DH11C
- FG9A04010DH11G
- FG9A04010UP11C

- FG9A04010UP11G
- FG9B06010UP11A
- FG9B06010UP11C
- FG9B06012DH11B
- FG9B06012DH11C
- FG9B06012DH11G
- FG9B08012DH11B
- FG9B08012DH11C
- FG9B08012DH11G
- FG9B08012UP11A
- FG9B08012UP11C
- FG9C08016DH11B
- FG9C08016DH11C
- FG9C08016DH11G
- FG9C08016UP11A
- FG9C08016UP11C
- FG9C08016UP11G
- FG9C10014UP11C
- FG9C10020DH11B
- FG9C10020DH11C
- FG9C10020DH11G
- FG9C10020UP11A
- FG9C10020UP11C
- FG9C10020UP11G
- FG9D12020DH11B
- FG9D12020DH11C
- FG9D12020DH11G
- FG9D12020UP11A
- FG9D12020UP11C
- FG9D12020UP11G
- FG9D14020UP11A
- FG9D14020UP11C
- FG9D14020UP11G
- G9D06012UPB11A
- G9D06012UPB11B
- G9D08012UPB11A
- G9D08012UPB11B
- G9D08016UPC11A
- G9D08016UPC11B
- G9D10014UPC11A
- G9D10014UPC11B
- G9D10020UPC11A
- G9D10020UPC11B

- G9D12020UPD11A
- G9D12020UPD11B
- G9T04008DHA13A
- G9T04008DHA13B
- G9T04008UPA13A
- G9T04008UPA13B
- G9T04010DHA13C
- G9T04010DHA13G
- G9T04010UPA13C
- G9T04010UPA13G
- G9T06010UPB13A
- G9T06010UPB13B
- G9T06010UPB13C
- G9T06012DHB13A
- G9T06012DHB13B
- G9T06012DHB13C
- G9T06012DHB13G
- G9T08012DHB13A
- G9T08012DHB13B
- G9T08012DHB13C
- G9T08012DHB13G
- G9T08012UPB13A
- G9T08012UPB13B
- G9T08012UPB13C
- G9T08016DHC13A
- G9T08016DHC13B
- G9T08016DHC13C
- G9T08016DHC13G
- G9T08016UPC13A
- G9T08016UPC13B
- G9T08016UPC13C
- G9T10014UPC13A
- G9T10014UPC13B
- G9T10014UPC13C
- G9T10020DHC13A
- G9T10020DHC13B
- G9T10020DHC13C
- G9T10020DHC13G
- G9T10020UPC13A
- G9T10020UPC13B
- G9T10020UPC13C
- G9T12020DHD13A
- G9T12020DHD13B

- G9T12020DHD13C
- G9T12020DHD13G
- G9T12020UPD13A
- G9T12020UPD13B
- G9T12020UPD13C
- G9T14020UPD13A
- G9T14020UPD13B
- G9T14020UPD13C
- G9T14020UPD13G
- G9V06012UPB11A
- G9V06012UPB11G
- G9V08016UPC11A
- G9V08016UPC11G
- G9V10020UPC11A
- G9V10020UPC11G
- G9V12020UPD11A
- G9V12020UPD11G
- GUD04008UB
- GUD06010UB
- GUD08012UB
- GUD08016UB
- GUD10014UB
- GUD10020UB
- GUD12020UB
- P1XUB12N05501A
- P1XUB12N05501B
- P1XUB12N07501A
- P1XUB12N07501B
- P1XUB12V05501A
- P1XUB12V05501B
- P1XUB12V05501G
- P1XUC14N09501A
- P1XUC14N09501B
- P1XUC16N07501A
- P1XUC16N07501B
- P1XUC16V07501A
- P1XUC16V07501B
- P1XUC16V07501G
- P1XUC20N09501A
- P1XUC20N09501B
- P1XUC20V09501A
- P1XUC20V09501B
- P1XUC20V09501G

- P1XUD20N11201A
- P1XUD20N11201B
- P1XUD20V11201A
- P1XUD20V11201B
- P1XUD20V11201G
- P2DRA08N03701A
- P2DRB12N05501A
- P2DRB12N07501A

## 5. INSTALLATION (SETUP)

Replacing a flame sensor rod is a common maintenance task. Follow these general steps. If you are uncomfortable with any step, please contact a qualified technician.

1. **Prepare for Safety:**
   - Turn off the electrical power to the furnace at the main service panel before performing any service or maintenance.
   - Turn off the gas supply to the furnace at the main gas valve.
   - Allow the furnace to cool down completely if it has been recently operating.

2. **Locate the Flame Sensor:**

   The flame sensor is typically a single metal rod with a ceramic insulator, located in the path of the burner flames, usually opposite the igniter. It will have a single wire connected to it.

3. **Remove the Old Sensor:**
   - Carefully disconnect the wire from the terminal of the old flame sensor.
   - Using a nut driver or wrench, unfasten the screw or nut that secures the flame sensor to the burner assembly.
   - Gently pull the old flame sensor rod out of its mounting hole.

4. **Install the New Sensor:**
   - Insert the new S1-02530788700 Flame Sensor Rod into the mounting hole, ensuring it is positioned correctly to be in the flame path.
   - Secure the sensor with the screw or nut, tightening it firmly but without over-tightening.
   - Reconnect the wire to the terminal on the new flame sensor. Ensure the connection is secure.

5. **Restore Power and Test:**
   - Turn the gas supply back on.
   - Restore electrical power to the furnace.
   - Set your thermostat to call for heat to initiate a furnace cycle and observe the operation. The furnace should ignite and run normally.

*Tools You Might Need:* *Screwdriver, nut driver or wrench, multimeter (for testing purposes).*

## 6. OPERATION

Once installed, the flame sensor operates automatically as part of your furnace's ignition sequence. When the thermostat calls for heat:

1. The inducer motor starts, clearing any residual gases.
2. The igniter (hot surface igniter or pilot light) activates.
3. Gas flows to the burners and is ignited.
4. The flame sensor detects the presence of the flame through a process called flame rectification, sending a small electrical current signal to the furnace control board.
5. If the control board receives the flame signal, it allows the furnace to continue its heating cycle. If no signal is received within a few seconds, the control board will shut off the gas valve and attempt to re-ignite (usually 2-3 attempts) before entering a lockout mode for safety.

The flame sensor is a safety device and does not require user interaction during normal operation.

## 7. MAINTENANCE

Regular cleaning of the flame sensor is crucial for reliable furnace operation. Over time, carbon buildup on the sensor rod can impede its ability to detect the flame, leading to intermittent furnace operation or complete shutdown.

**Recommended Cleaning Frequency:** Annually, as part of your furnace's regular maintenance schedule.

**Cleaning Steps:**

1. **Safety First:** Always turn off the electrical power and gas supply to the furnace before beginning.
2. **Remove the Sensor:** Follow steps 5.3 from the Installation section to carefully remove the flame sensor rod.
3. **Clean the Rod:**
   - Use a fine-grit emery cloth, fine sandpaper, or steel wool to gently polish the metal rod of the flame sensor.
   - Do not use harsh chemicals or abrasive cleaners that could damage the ceramic insulator or the metal.
   - Wipe off any residue with a clean, dry cloth.
4. **Reinstall and Test:** Follow steps 5.4 and 5.5 from the Installation section to reinstall the cleaned sensor and test furnace operation.

## 8. TROUBLESHOOTING

If your furnace is experiencing issues related to flame sensing, consider the following troubleshooting steps:

| Symptom | Possible Cause | Solution |
| --- | --- | --- |
| Furnace attempts to ignite but burners don't light, or light briefly then shut off (short cycling). | Dirty or faulty flame sensor. | Clean the flame sensor (refer to Section 7). If cleaning does not resolve the issue, the sensor may need replacement. |
| Furnace ignites, runs for a short period, then shuts down with a lockout code (e.g., 3 flashes on LED). | Weak flame signal due to dirty sensor, poor ground, or incorrect flame position. | Clean the flame sensor. Check the furnace's ground wire connection. Ensure the flame is consistently hitting the sensor rod. |

| Symptom | Possible Cause | Solution |
|---------|----------------|----------|
| No ignition, but igniter glows/clicks. | No gas supply, faulty gas valve, or igniter not hot enough. | Check gas supply. This is likely not a flame sensor issue. Consult a qualified technician. |

If troubleshooting steps do not resolve the issue, it is recommended to contact a qualified HVAC technician for further diagnosis and repair.

## 9. SPECIFICATIONS

| Feature | Detail |
|---------|--------|
| Part Number | S1-02530788700 |
| Replacement For | York Coleman 025-30788-700 |
| Included Components | S1-02530788700 Gas Furnace Sensor Rod |
| Manufacturer | Generic (Manufactured in China) |

## 10. WARRANTY INFORMATION

This S1-02530788700 Flame Sensor Rod comes with a**30-day warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use. It does not cover damage resulting from improper installation, misuse, accident, or unauthorized repairs.
For warranty claims, please retain your proof of purchase and contact the seller or manufacturer directly.

## 11. SUPPORT

For technical assistance, installation questions, or troubleshooting beyond the scope of this manual, please contact your original point of purchase or a certified HVAC professional.
Always provide your product model number (S1-02530788700) and a detailed description of the issue when seeking support.