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› [Ruud](#) /

› [Instruction Manual for Ruud Furnace Flame Sensor 62-23543-03](#)

Ruud 62-23543-03

Instruction Manual

OEM UPGRADED REPLACEMENT RUUD FURNACE FLAME SENSOR 62-23543-03

Product Overview

This manual provides essential information for the installation, operation, and maintenance of the OEM Upgraded Replacement Ruud Furnace Flame Sensor, model 62-23543-03. This component is a critical safety device in your furnace system, designed to detect the presence of a flame in the combustion chamber. Proper installation and function are vital for the safe and efficient operation of your heating unit.



This image displays the Ruud furnace flame sensor, model 62-23543-03. It features a ceramic base with a metal rod extending upwards, bent at an angle, and a flat metal connector at the bottom. This design allows it to be positioned correctly within the furnace to sense the flame.

Safety Information

Always prioritize safety when working with heating appliances. Failure to follow these instructions could result in property damage, personal injury, or death.

- **Disconnect Power:** Before beginning any work, ensure the furnace's electrical power supply is completely disconnected at the circuit breaker or fuse box.
- **Shut Off Gas Supply:** Turn off the gas supply to the furnace at the main gas valve.
- **Allow Cooling:** Ensure the furnace has cooled down completely before handling any components.
- **Qualified Technician:** If you are unsure about any step, consult a qualified HVAC technician.

Setup and Installation

This flame sensor is designed as a direct replacement for Ruud Part # 62-23543-03.

1. **Access the Burner Compartment:** Locate and open the furnace's burner compartment access panel.
2. **Locate the Old Sensor:** Identify the existing flame sensor. It is typically a thin metal rod with a ceramic insulator, positioned in the path of the burner flame.
3. **Disconnect Wiring:** Carefully disconnect the electrical wire connected to the old flame sensor.
4. **Remove Old Sensor:** Unscrew the mounting screw(s) holding the old sensor in place and carefully remove it. Note its exact position and orientation.
5. **Install New Sensor:** Position the new Ruud flame sensor (model 62-23543-03) in the exact same orientation as the old one. Secure it with the mounting screw(s).
6. **Connect Wiring:** Reconnect the electrical wire to the new flame sensor's terminal. Ensure a secure connection.
7. **Close Compartment:** Close and secure the burner compartment access panel.
8. **Restore Power and Gas:** Restore the gas supply and electrical power to the furnace.
9. **Test Operation:** Initiate a heating cycle to verify proper furnace operation and flame sensor function.

Operating Principles

The flame sensor works by creating a small electrical current when exposed to the heat and ionization of a gas flame. This current is sent to the furnace's control board, signaling that a flame is present and it is safe to continue the heating cycle. If the control board does not detect this current within a specified time after ignition, it will shut down the gas supply to prevent uncombusted gas from accumulating, ensuring safety.

Maintenance

Regular maintenance can extend the life of your flame sensor and ensure reliable furnace operation. It is recommended to inspect and clean the flame sensor annually, preferably before the heating season.

- **Cleaning:** With power and gas disconnected, carefully remove the flame sensor. Use a fine abrasive pad (like fine-grit sandpaper or steel wool) to gently clean any carbon buildup or oxidation from the metal rod. Avoid bending the rod.
- **Inspection:** Check the ceramic insulator for cracks or damage. Inspect the wiring for fraying or loose connections. Replace the sensor if any damage is observed.
- **Replacement:** Flame sensors are wear-and-tear components. Depending on usage and environmental factors, they may need replacement every few years, even if cleaned regularly.

Troubleshooting

If your furnace is experiencing issues related to ignition or cycling, the flame sensor may be a contributing factor. Common symptoms include:

- Furnace ignites briefly and then shuts off (short cycling).
- Burners light, but the furnace does not stay on.
- Furnace attempts to ignite multiple times without success.

Troubleshooting Steps:

1. **Check Connections:** Ensure the flame sensor's wire connection is secure and free of corrosion.
2. **Clean Sensor:** Follow the cleaning instructions in the Maintenance section. Carbon buildup is a common cause of sensor malfunction.
3. **Inspect for Damage:** Look for any visible damage to the sensor rod or ceramic insulator.
4. **Replace Sensor:** If cleaning does not resolve the issue, or if the sensor is visibly damaged, replacement is often necessary.
5. **Consult Manual:** Refer to your specific furnace's user manual for diagnostic codes or further troubleshooting steps.

Specifications

Model Number	62-23543-03
Product Dimensions	6 x 6 x 6 inches; 0.49 ounces
Manufacturer	Replacement for Ruud
Date First Available	August 5, 2013

Warranty and Support

Specific warranty details for this replacement part are not provided in this manual. Please refer to the original purchase documentation or contact the seller/manufacturer for warranty information.

For technical support or further assistance, it is recommended to contact a certified HVAC professional or the manufacturer of your furnace system.