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› [Rheem](#) /

› [Rheem SP20138 Pilot Assembly for 22V30FN Instruction Manual](#)

Rheem SP20138

Rheem SP20138 Pilot Assembly Instruction Manual

Model: SP20138 | For use with 22V30FN Water Heaters

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of the Rheem SP20138 Pilot Assembly. This component is specifically designed as a replacement part for Rheem 22V30FN gas water heaters. The SP20138 is an ultra-low NOx replacement part, ensuring compliance with environmental standards.

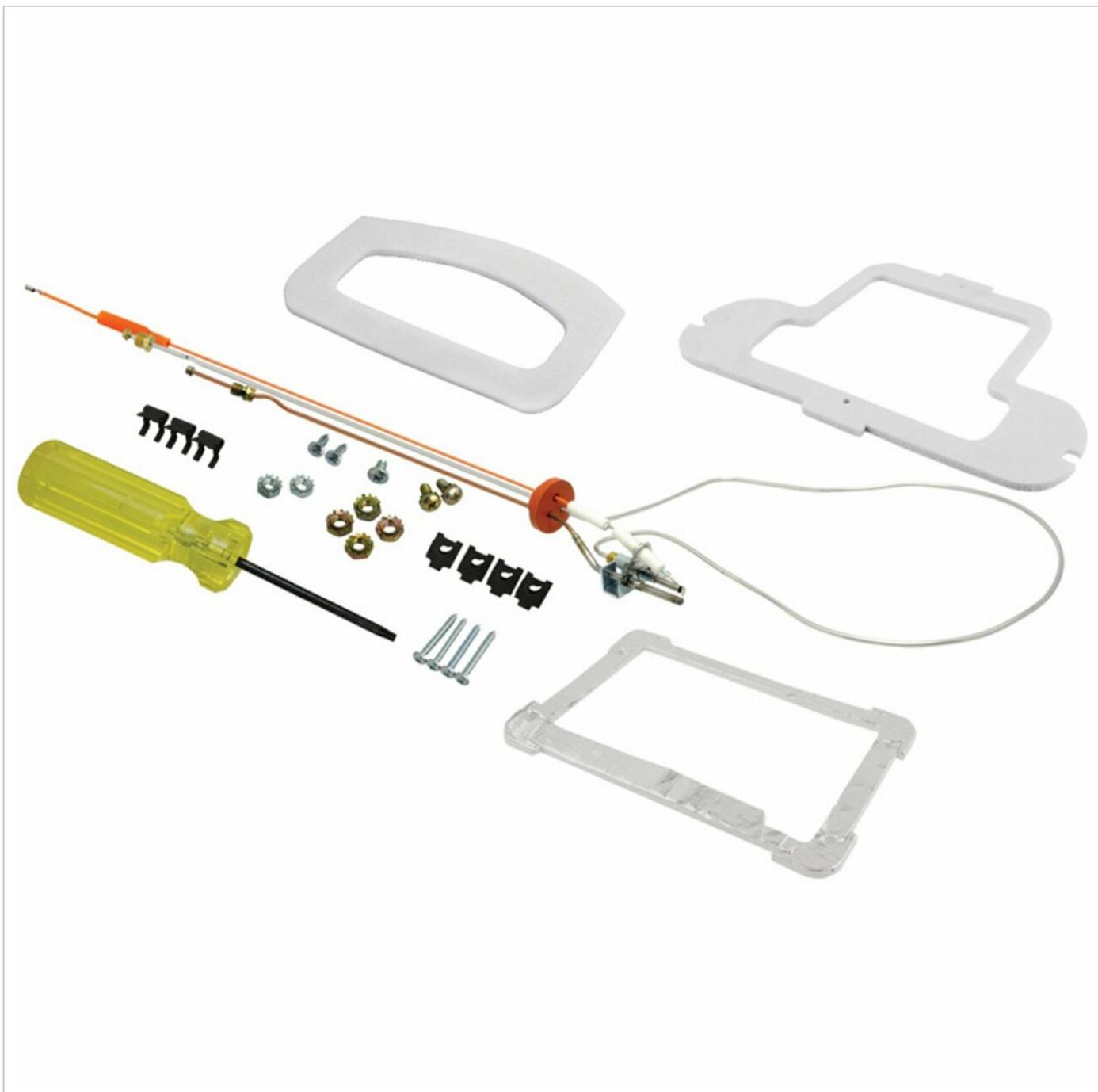
2. SAFETY INFORMATION

WARNING: Improper installation, adjustment, alteration, service, or maintenance can cause property damage, injury, or death. Read the installation, operating, and maintenance instructions thoroughly before installing or servicing this equipment.

- Always turn off the gas supply to the water heater before beginning any work.
- Disconnect electrical power to the water heater if applicable.
- Allow the water heater to cool down before handling components.
- Installation and service must be performed by a qualified installer, service agency, or the gas supplier.
- Ensure proper ventilation when working with gas appliances.
- Check for gas leaks after installation using a non-corrosive leak detection solution.

3. PRODUCT OVERVIEW

The Rheem SP20138 Pilot Assembly is a crucial component responsible for igniting the main burner in your gas water heater. It typically consists of a pilot burner, a thermocouple (or thermopile), and an igniter electrode. This assembly ensures safe and reliable ignition of the main gas flow.



This image displays the Rheem SP20138 Pilot Assembly, a critical component for gas water heaters, specifically designed for the 22V30FN model. It includes the pilot burner, thermocouple, and igniter.

4. SETUP AND INSTALLATION

Note: Installation should only be performed by a qualified professional. These instructions are for informational purposes and to guide the professional installer.

1. **Preparation:** Ensure the gas supply to the water heater is turned off at the main shut-off valve. Disconnect electrical power if applicable. Allow the water heater to cool completely.
2. **Access:** Remove the outer and inner burner access doors to expose the burner assembly and pilot light.
3. **Disconnect Old Assembly:** Carefully disconnect the gas line to the pilot, the thermocouple/thermopile wiring, and the igniter wire from the existing pilot assembly. Note the routing of all wires and tubing.
4. **Remove Old Assembly:** Unfasten and remove the old pilot assembly from its mounting bracket.
5. **Install New Assembly:** Position the new Rheem SP20138 Pilot Assembly into the mounting bracket. Secure it

firmly.

6. **Connect Components:** Reconnect the gas line to the pilot, ensuring a tight, leak-free connection. Attach the thermocouple/thermopile wiring and the igniter wire to their respective terminals, following the original routing.
7. **Leak Test:** Turn on the main gas supply. Apply a non-corrosive leak detection solution to all gas connections. Bubbles indicate a leak, which must be corrected immediately.
8. **Pilot Ignition:** Follow the water heater's specific instructions for lighting the pilot. This typically involves turning the gas control knob to 'Pilot', pressing it down, and activating the igniter until the pilot flame is established and the thermocouple holds it.
9. **Verify Operation:** Once the pilot is lit, turn the gas control knob to the 'On' position and set the thermostat to call for heat. Observe the main burner ignition. It should ignite smoothly and consistently.
10. **Reassemble:** Replace the inner and outer burner access doors.

5. OPERATING INSTRUCTIONS

The Rheem SP20138 Pilot Assembly operates automatically once properly installed and lit. Its primary function is to provide a continuous small flame (the pilot light) that ignites the main burner when the water heater's thermostat calls for hot water. The thermocouple/thermopile within the assembly senses this pilot flame and generates a small electrical current to keep the gas valve open to the pilot, ensuring safety. If the pilot flame goes out, the thermocouple cools, stopping the current and closing the pilot gas valve, preventing unburned gas from accumulating.

6. MAINTENANCE

Regular inspection of the pilot assembly can help ensure reliable operation of your water heater. This should be performed by a qualified technician annually.

- **Pilot Flame Inspection:** The pilot flame should be steady, blue, and engulf the tip of the thermocouple/thermopile. A weak, yellow, or flickering flame may indicate a problem.
- **Cleanliness:** Ensure the pilot burner and surrounding area are free from dust, lint, or debris that could obstruct the flame or air supply.
- **Connections:** Verify that all gas and electrical connections to the pilot assembly are secure and free from corrosion.

7. TROUBLESHOOTING

If your water heater is not operating correctly, the pilot assembly may be a factor. Always consult a qualified technician for diagnosis and repair.

- **Pilot Will Not Light:**
 - Ensure gas supply is on.
 - Check for obstructions in the pilot tube.
 - Igniter may be faulty or misaligned.
 - Gas control valve may be faulty.
- **Pilot Lights But Will Not Stay Lit:**
 - Thermocouple/thermopile may be faulty, dirty, or improperly positioned. It must be fully engulfed by the pilot flame.
 - Pilot flame may be too weak or yellow, not adequately heating the thermocouple.
 - Gas control valve may be faulty.

- **Main Burner Does Not Ignite:**

- Pilot flame may not be strong enough to ignite the main burner.
- Thermostat setting may be too low or faulty.
- Main gas valve may be faulty.

8. SPECIFICATIONS

Specification	Detail
Manufacturer	Rheem
Part Number	SP20138
Item Model Number	SP20138
Compatibility	Rheem 22V30FN Water Heaters
Item Weight	1.5 pounds
Package Dimensions	16.9 x 12.4 x 2.3 inches
Item Package Quantity	1

9. WARRANTY AND SUPPORT

For specific warranty information regarding the Rheem SP20138 Pilot Assembly, please refer to the documentation provided with your original Rheem water heater or contact Rheem customer support directly. Rheem's official website provides comprehensive support resources, including contact information for technical assistance and authorized service providers.

Rheem Official Website: www.rheem.com

