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> Rheem AP14270G Natural Gas Control Thermostat Instruction Manual

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Model: AP14270G

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation, installation, and maintenance of your Rheem AP14270G Natural Gas Control Thermostat. This component is designed to regulate the flow of natural gas to the burner and manage the water temperature in your water heater.

Key Features:

- **Gas Flow Control:** Precisely controls the flow of natural gas from the main supply line to the water heater burner.
- **Water Temperature Regulation:** Maintains desired water temperature for consistent hot water supply.
- **Genuine OEM Part:** Ensures compatibility and reliability as an original equipment manufacturer part.
- **ProTech Gas Valve Technology:** Engineered for efficient and safe operation, optimizing water heating conditions.
- **Compatibility Verification:** Designed for specific Rheem natural gas water heaters. Always verify compatibility using your water heater's serial number.

2. IMPORTANT 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.

- **Professional Installation Required:** All gas valves and related components should be installed by a qualified, licensed professional. Attempting installation without proper training and tools can lead to gas leaks, fire, explosion, or carbon monoxide poisoning.
- **Gas Leaks:** If you smell gas, immediately follow emergency procedures:
 - a. Do not light any appliance.
 - b. Do not touch any electrical switch.
 - c. Do not use any phone in your building.
 - d. Immediately call your gas supplier from a neighbor's phone.

- e. Follow the gas supplier's instructions.
- f. If you cannot reach your gas supplier, call the fire department.

- **Scalding Hazard:** Hot water can cause severe burns. Exercise caution when setting water temperature. Higher temperatures increase the risk of scalding.
- **Proposition 65 Warning:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.
- **Compatibility:** Always verify that this gas control thermostat is the correct replacement part for your specific water heater model using its serial number.

3. PRODUCT COMPONENTS

The Rheem AP14270G Gas Control Thermostat integrates several key components to manage your water heater's operation.



Figure 1: Front view of the Rheem AP14270G Gas Control Thermostat. This image shows the main body of the thermostat, including the temperature control knob and the pilot light ignition button.

- **Gas Control Valve Body:** The main housing that contains the gas flow mechanisms.
- **Temperature Control Knob:** Used to set the desired water temperature. Features markings for various temperature settings, including a "Very Hot" warning.
- **Pilot Light Button/Ignitor:** Used to ignite the pilot light during startup.
- **Thermocouple/Thermopile Connections:** Ports for connecting the safety devices that sense the pilot flame.
- **Gas Inlet/Outlet:** Connections for the main gas supply line and the gas line to the burner.
- **Temperature Sensor Probe:** A long, copper-colored probe that extends into the water heater tank to measure water temperature.



Figure 2: Side view of the Rheem AP14270G Gas Control Thermostat, highlighting the temperature sensor probe extending from the unit. This probe is crucial for accurate water temperature measurement.

4. SETUP AND INSTALLATION

Installation of the Rheem AP14270G Gas Control Thermostat requires specialized knowledge and tools. **It is strongly recommended that installation be performed by a licensed professional.** Incorrect installation can lead to serious hazards.

Pre-Installation Steps:

1. **Verify Compatibility:** Before beginning, ensure this thermostat (Model AP14270G) is compatible with your specific Rheem natural gas water heater. Refer to your water heater's serial number and manufacturer specifications.
2. **Turn Off Gas and Water Supply:** Locate and turn off the main gas supply valve to the water heater. Also, turn off the cold water inlet valve to the water heater and drain the tank completely.
3. **Gather Tools:** Ensure you have the necessary tools, including wrenches, pipe sealant (suitable for gas lines), and leak detection solution (soapy water).

Installation Procedure (Professional Recommended):

1. **Disconnect Old Unit:** Carefully disconnect the gas supply line, pilot tubing, and thermocouple/thermopile connections from the existing gas control unit. Remove the old unit from the water heater tank.
2. **Prepare New Unit:** Apply appropriate pipe sealant to the threads of the new AP14270G thermostat's temperature sensor probe and gas connections as required.

3. **Install New Unit:** Thread the new gas control thermostat into the water heater tank opening. Ensure it is securely tightened to prevent leaks.
4. **Reconnect Lines:** Reconnect the main gas supply line, pilot tubing, and thermocouple/thermopile connections to the new thermostat. Ensure all connections are tight and properly sealed.
5. **Check for Leaks:** After reconnecting all lines and before turning on the main gas supply, apply a leak detection solution (soapy water) to all gas connections. Slowly turn on the main gas supply valve. If bubbles appear, there is a leak. Immediately turn off the gas supply and tighten connections until no bubbles are present.
6. **Refill Water Heater:** Once gas connections are secure and leak-free, open the cold water inlet valve to refill the water heater tank. Ensure all air is purged from the system before proceeding.

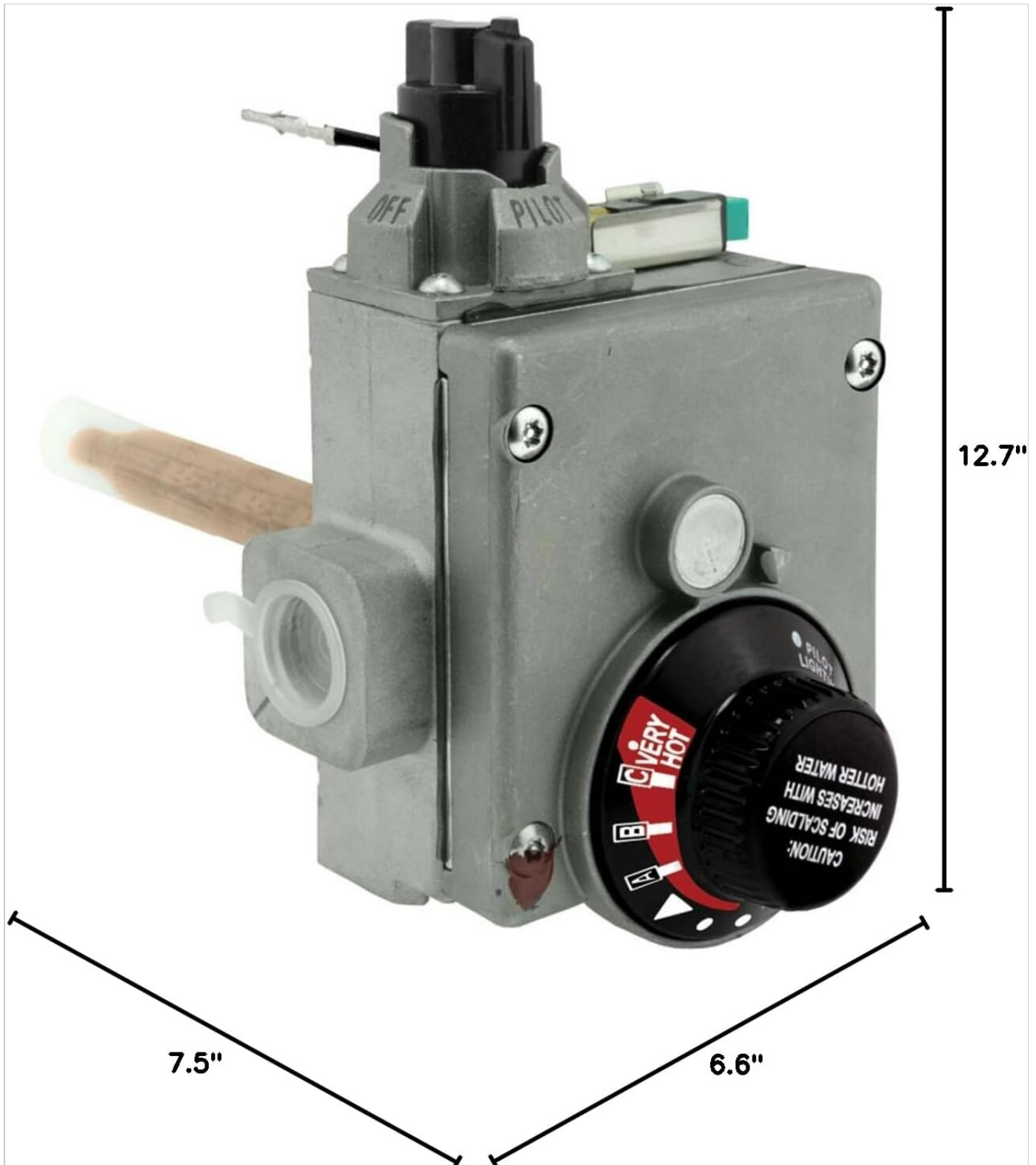


Figure 3: Dimensional view of the Rheem AP14270G Gas Control Thermostat, showing its approximate measurements (12.7"D x 7.5"W x 6.6"H). These dimensions are important for ensuring proper fit and clearance during installation.

5. OPERATING INSTRUCTIONS

Once the Rheem AP14270G Gas Control Thermostat is correctly installed and the water heater tank is full, you can proceed with lighting the pilot and setting the water temperature.

Lighting the Pilot:

1. **Turn Thermostat to "Pilot":** Rotate the temperature control knob to the "Pilot" setting.
2. **Press and Hold Pilot Button:** Press and hold the pilot light ignition button. While holding, repeatedly press the ignitor until the pilot flame lights. You may need to look into the pilot viewing window to confirm ignition.
3. **Continue Holding:** Once the pilot is lit, continue to hold the pilot button for approximately 30-60 seconds to allow the thermocouple/thermopile to heat up and hold the pilot flame.
4. **Release Button:** Slowly release the pilot button. If the pilot flame extinguishes, repeat the process. If it fails to stay lit after several attempts, refer to the Troubleshooting section or contact a professional.

Setting Water Temperature:

1. **Rotate Knob:** Once the pilot is stable, rotate the temperature control knob to your desired water temperature setting.
2. **Observe Burner:** The main burner should ignite shortly after setting the temperature, indicating the water heater is now operating.
3. **Adjust as Needed:** Allow time for the water to heat up. Adjust the temperature knob incrementally until the desired hot water temperature is achieved.

CAUTION: Setting the temperature too high increases the risk of scalding. Consult your water heater manual for recommended safe temperature settings.

6. MAINTENANCE

Regular maintenance helps ensure the longevity and efficient operation of your Rheem AP14270G Gas Control Thermostat and water heater system.

- **Annual Inspection:** It is recommended to have your water heater and gas control thermostat inspected annually by a licensed professional. They can check for proper operation, gas leaks, and wear.
- **Check for Mineral Buildup:** Over time, mineral deposits can accumulate on the temperature sensor probe. Excessive buildup can affect temperature accuracy and efficiency. While cleaning the probe typically requires removal of the unit (best done by a professional), being aware of this potential issue is important.
- **Keep Area Clear:** Ensure the area around the water heater and gas control is free from combustible materials, debris, and obstructions to airflow.
- **Do Not Tamper:** Do not attempt to repair or alter the gas control thermostat yourself. This can void warranties and create dangerous conditions.

7. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your Rheem AP14270G Gas Control Thermostat. For complex problems or if you are unsure, always contact a licensed professional.

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Pilot light won't stay lit.	<ul style="list-style-type: none"> Thermocouple/thermopile is faulty or dirty. Pilot flame is weak or improperly positioned. Gas supply issue. 	<ul style="list-style-type: none"> Ensure pilot button is held long enough during ignition. Inspect pilot flame for proper size and color (blue). Contact a licensed professional to inspect/replace thermocouple or check gas supply.
No hot water or insufficient hot water.	<ul style="list-style-type: none"> Pilot light is out. Thermostat setting is too low. Gas supply is off. Temperature sensor probe is fouled with mineral deposits. Thermostat malfunction. 	<ul style="list-style-type: none"> Relight pilot light (see above). Increase temperature setting on the control knob. Check if the main gas supply valve is open. Contact a licensed professional for inspection and potential replacement.
Water is too hot.	<ul style="list-style-type: none"> Thermostat setting is too high. Thermostat malfunction. 	<ul style="list-style-type: none"> Lower the temperature setting on the control knob. If problem persists, contact a licensed professional.

Important: Do not attempt repairs beyond basic troubleshooting. Gas appliances require expert handling.

8. SPECIFICATIONS

Feature	Detail
Brand	Rheem
Model Name	Rheem ProTech Gas Control (Thermostat) - Natural Gas - SP14270G
Model Number	AP14270G
Product Dimensions (D x W x H)	12.7" x 7.5" x 6.6"
Material Type	Metal
Controller Type	Manual Knob Control
Temperature Control Type	Manual
Connectivity Technology	Wired
Power Source	Hardwire
Mounting Type	Water Heater Mounted
Color	Gray
UPC	020352568713
GTIN	00020352568713

9. WARRANTY AND SUPPORT

Warranty Information:

Rheem products are manufactured to high-quality standards. Specific warranty details for the AP14270G Gas Control Thermostat

are typically provided with the product packaging or can be found on the official Rheem website. Please retain your proof of purchase for warranty claims.

Customer Support:

For technical assistance, warranty inquiries, or to locate a licensed service professional, please contact Rheem customer support.

- **Rheem Official Website:** www.rheem.com
- Refer to your water heater's documentation for specific contact numbers or service information.

