

Stant 14659

Stant Engine Coolant Thermostat/Water Outlet Assembly User Manual

Model: 14659

Brand: Stant

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your Stant Engine Coolant Thermostat/Water Outlet Assembly. This component is crucial for regulating your vehicle's engine temperature, ensuring optimal performance and longevity. Please read this manual thoroughly before proceeding with any installation or maintenance.

2. SAFETY INFORMATION

Always prioritize safety when working on your vehicle. Failure to follow these guidelines may result in injury or damage to the vehicle.

- Ensure the engine is completely cool before attempting any work on the cooling system. Hot coolant and engine components can cause severe burns.
- Wear appropriate personal protective equipment, including safety glasses and gloves.
- Use a suitable drain pan to collect old coolant. Dispose of used coolant responsibly according to local regulations.
- Do not open the radiator cap or coolant reservoir cap when the engine is hot.
- If you are unsure about any step of the installation process, consult a qualified professional mechanic.

3. PRODUCT OVERVIEW

The Stant Engine Coolant Thermostat/Water Outlet Assembly (Model 14659) is an integrated unit designed to precisely control the flow of coolant through your engine. It features durable stainless steel construction for reliable performance.

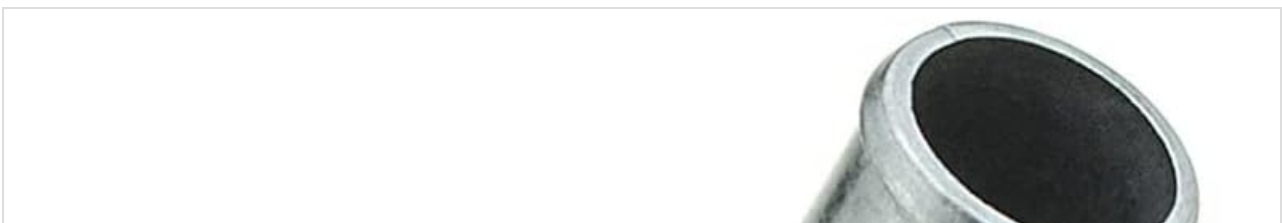




Figure 3.1: The complete Stant Engine Coolant Thermostat/Water Outlet Assembly, including the main housing, the integrated thermostat, and a separate O-ring gasket. The assembly is made of stainless steel.



Figure 3.2: A side view of the Stant Thermostat/Water Outlet Assembly, highlighting the curved outlet pipe and the base where the thermostat is housed.



Figure 3.3: A detailed top-down view showing the internal thermostat mechanism, including the spring and the temperature rating (192F) stamped on the component.

4. SETUP AND INSTALLATION

Proper installation is critical for the correct function of the thermostat assembly. Refer to your vehicle's service manual for specific torque specifications and additional details.

4.1 Tools Required

- Wrench set (metric/SAE as required by vehicle)
- Pliers
- Coolant drain pan
- New engine coolant (compatible with your vehicle)
- Clean rags
- Scraper or wire brush (for cleaning mating surfaces)

4.2 Pre-Installation Steps

1. Ensure the engine is completely cool.
2. Locate the thermostat/water outlet assembly on your vehicle's engine.
3. Place a drain pan beneath the radiator or engine block drain plug. Carefully drain the engine coolant.

4. Disconnect any hoses or electrical connectors attached to the old assembly.

4.3 Installation Procedure

1. Carefully remove the bolts securing the old thermostat/water outlet assembly. Remove the old assembly and gasket.
2. Thoroughly clean the mating surfaces on the engine block and the new assembly to ensure a proper seal. Remove any old gasket material or corrosion.
3. Install the new O-ring gasket onto the Stant assembly. Ensure it is seated correctly.
4. Position the new Stant Engine Coolant Thermostat/Water Outlet Assembly onto the engine block.
5. Insert and hand-tighten the mounting bolts. Then, tighten them to the vehicle manufacturer's specified torque settings, typically in a crisscross pattern to ensure even pressure.
6. Reconnect any hoses and electrical connectors that were removed.
7. Refill the cooling system with the appropriate type and amount of new coolant.
8. Bleed any air from the cooling system as per your vehicle's service manual instructions. This often involves running the engine with the heater on high and the radiator cap off until air bubbles cease.
9. Inspect for any leaks after the engine has reached operating temperature and cooled down.

Important: Always refer to your vehicle's specific service manual for detailed instructions and torque specifications.

5. OPERATING PRINCIPLES

The thermostat's primary function is to regulate engine temperature for optimal performance and fuel efficiency. When the engine is cold, the thermostat remains closed, preventing coolant from circulating to the radiator. This allows the engine to warm up quickly to its ideal operating temperature.

As the engine reaches its optimal operating temperature (e.g., 192°F as indicated on the thermostat), the wax pellet inside the thermostat expands, causing the valve to open. This allows coolant to flow to the radiator, where heat is dissipated. As the engine cools slightly, the wax contracts, and the thermostat closes partially or fully, restricting coolant flow. This continuous opening and closing action maintains the engine within its ideal temperature range, preventing both overheating and overcooling.

6. MAINTENANCE

The Stant thermostat assembly is designed for long-term reliability. Regular maintenance of your vehicle's cooling system will help ensure the longevity of all components, including the thermostat.

- Regularly check your coolant level and top it off as needed with the correct type of coolant.
- Inspect all cooling system hoses and connections for signs of leaks, cracks, or deterioration.
- Follow your vehicle manufacturer's recommendations for cooling system flushes and coolant replacement intervals.
- If your engine consistently runs too hot (overheating) or too cold (failing to reach operating temperature), the thermostat may need inspection or replacement.

7. TROUBLESHOOTING

This section addresses common issues related to engine thermostats and their potential solutions.

Issue	Possible Cause	Solution
Engine Overheating	Thermostat stuck closed; low coolant level; clogged radiator; faulty water pump.	Replace thermostat; check and refill coolant; inspect radiator and water pump.

Issue	Possible Cause	Solution
Engine Runs Cold / Slow to Warm Up	Thermostat stuck open.	Replace thermostat.
Coolant Leak at Assembly	Improper installation; damaged O-ring/gasket; loose mounting bolts.	Re-check installation steps; replace O-ring/gasket; tighten bolts to specification.
Check Engine Light (related to cooling)	Thermostat not operating correctly; coolant temperature sensor issue.	Scan for diagnostic trouble codes (DTCs); inspect/replace thermostat or sensor.

8. SPECIFICATIONS

- **Brand:** Stant
- **Model Name:** Engine Coolant Thermostat / Water Outlet Assembly
- **Product Dimensions:** 5.1"D x 11"W x 3.8"H
- **Material:** Stainless Steel
- **Item Weight:** 15.2 ounces
- **Included Components:** Integrated Thermostat Assembly, CN
- **Manufacturer Part Number:** 14659
- **UPC:** 033342042544
- **Temperature Control Type:** Automatic
- **Color:** Stainless Steel

9. WARRANTY AND SUPPORT

For detailed warranty information regarding your Stant Engine Coolant Thermostat/Water Outlet Assembly, please refer to the official Stant website or the warranty documentation included with your purchase. For technical support or further assistance, please contact Stant customer service directly. Keep your purchase receipt as proof of purchase for any warranty claims.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question