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Stant 45379

Stant 45379 SuperStat Thermostat - 195 Degrees Fahrenheit

User Instruction Manual

1. INTRODUCTION


This manual provides essential information for the proper installation, operation, and maintenance of your Stant 45379 SuperStat Thermostat. Please read this manual thoroughly before proceeding with any procedures to ensure safe and effective use of the product. This thermostat is designed to maintain an optimal engine operating temperature of 195 Degrees Fahrenheit.

2. PRODUCT OVERVIEW

The Stant SuperStat Thermostat is engineered to surpass the performance of original equipment (OE) thermostats. Unlike conventional thermostats that cycle open and closed, the SuperStat features a patented V-notch, non-linear design. This innovative design precisely meters the coolant flow, reducing temperature fluctuations and maintaining a more stable engine operating temperature. This leads to improved engine efficiency, extended engine life, reduced oil consumption, enhanced fuel economy, and lower emissions.



Image 1: The Stant 45379 SuperStat Thermostat. This image displays the metallic construction of the thermostat, including its spring, piston, and flange, designed for precise temperature regulation in automotive engines.



SUPERSTAT™ Thermostats

Unlike a conventional thermostat design that continually opens and closes to achieve the proper operating temperature and flood the engine with coolant, the SuperStat thermostat has a unique v-notch, non-linear design that reduces cycling by precisely metering the amount of coolant needed to maintain proper operating temperature.

The v-notch provides a small initial flow. As the engine heats up, the v-notch gradually opens wider, metering coolant into the system until the desired engine temperature is reached.

Image 2: Diagram illustrating the SuperStat Thermostat's V-notch design. This image highlights how the V-notch provides a small initial flow

of coolant and gradually opens wider as the engine heats up, precisely metering coolant to maintain optimal operating temperature.

3. KEY FEATURES

- **Superior Performance:** Outperforms standard OE thermostats by providing more consistent temperature control.
- **Patented V-Notch Design:** Reduces temperature cycling by precisely metering coolant flow, ensuring stable engine temperature.
- **Enhanced Durability:** Features an actuator piston that is 25% larger than standard Stant thermostats and 55% larger than competitive products, delivering increased power.
- **Robust Construction:** The flange is 33% thicker than standard Stant products and 43% thicker than competitors', providing added strength and longevity.
- **Stronger Operating Spring:** A 50% stronger spring ensures the thermostat returns to the closed position reliably, preventing cold running even in adverse conditions.
- **High Flow Venturi:** Maximizes cooling capacity during high-temperature, high-load operations.
- **Weir Valve:** Provides precision flow metering during cold weather and light load operations for stable temperature control.

4. INSTALLATION (SETUP)

Installation of an automotive thermostat requires mechanical aptitude and proper tools. If you are not confident in your ability to perform this procedure, it is highly recommended to seek assistance from a qualified automotive technician.

Safety Precautions:

- Always allow the engine to cool completely before beginning work. Hot coolant can cause severe burns.
- Wear appropriate personal protective equipment, including safety glasses and gloves.
- Ensure the vehicle is on a level surface and properly supported if lifting is required.
- Dispose of old coolant responsibly according to local regulations.

General Installation Steps (Consult Vehicle Service Manual for Specifics):

1. Locate the thermostat housing on your vehicle's engine. This is typically found where the upper radiator hose connects to the engine.
2. Drain a sufficient amount of coolant from the radiator to bring the coolant level below the thermostat housing.
3. Remove the bolts securing the thermostat housing and carefully detach the housing. Be prepared for some coolant spillage.
4. Remove the old thermostat and gasket. Clean the mating surfaces thoroughly to ensure a proper seal.
5. Install the new Stant 45379 SuperStat Thermostat, ensuring it is oriented correctly (refer to your vehicle's service manual for specific direction). Place a new gasket in position.
6. Reattach the thermostat housing and tighten the bolts to the manufacturer's specified torque.
7. Refill the cooling system with the appropriate type and amount of coolant.
8. Bleed any air from the cooling system as per your vehicle's service manual instructions.
9. Start the engine and check for leaks. Monitor the engine temperature gauge to ensure proper operation.

5. OPERATING PRINCIPLES

The Stant 45379 SuperStat Thermostat is designed to open at 195 Degrees Fahrenheit. Its unique V-notch design allows for a small initial flow of coolant when the engine is cold. As the engine warms up, the V-notch gradually opens wider, precisely metering the amount of coolant released into the system. This continuous, controlled flow prevents the rapid temperature fluctuations common with traditional thermostats, leading to a more stable and efficient engine operating temperature. The larger piston and stronger spring contribute to its precise and reliable operation under various driving conditions.

6. MAINTENANCE

While the Stant SuperStat Thermostat is built for durability, regular maintenance of your vehicle's cooling system is crucial for its longevity and optimal performance.

- **Coolant Level:** Regularly check your coolant level and top up as needed with the correct type of coolant for your vehicle.
- **Coolant Condition:** Follow your vehicle manufacturer's recommendations for coolant flush and replacement intervals. Old or contaminated coolant can reduce cooling efficiency and damage cooling system components.
- **Hose and Clamp Inspection:** Periodically inspect radiator hoses, heater hoses, and their clamps for signs of wear, cracks, or leaks.
- **System Leaks:** Address any cooling system leaks promptly. A low coolant level can lead to engine overheating and thermostat malfunction.
- **Thermostat Replacement:** While there is no fixed replacement interval for thermostats, consider replacement if you observe consistent engine overheating, underheating, or erratic temperature gauge readings.

7. TROUBLESHOOTING

If you experience issues with your vehicle's engine temperature after installing or while using the Stant 45379 SuperStat Thermostat, consider the following common problems and potential solutions:

Problem	Possible Cause	Solution
Engine Overheating	<ul style="list-style-type: none">• Low coolant level• Air in cooling system• Stuck closed thermostat• Faulty water pump• Clogged radiator	<ul style="list-style-type: none">• Check and refill coolant• Bleed cooling system• Inspect/replace thermostat• Inspect/replace water pump• Flush/replace radiator
Engine Underheating (Slow to warm up)	<ul style="list-style-type: none">• Stuck open thermostat• Faulty temperature sensor	<ul style="list-style-type: none">• Inspect/replace thermostat• Test/replace temperature sensor
Erratic Temperature Gauge Readings	<ul style="list-style-type: none">• Air in cooling system• Faulty temperature sensor• Intermittent thermostat operation	<ul style="list-style-type: none">• Bleed cooling system• Test/replace temperature sensor• Inspect/replace thermostat

If troubleshooting steps do not resolve the issue, it is advisable to consult a professional automotive technician.

8. SPECIFICATIONS

- **Model Number:** 45379
- **Brand:** Stant
- **Operating Temperature:** 195 Degrees Fahrenheit
- **Item Weight:** Approximately 3.2 ounces
- **Product Dimensions:** Approximately 2.9 x 2.7 x 2.8 inches
- **Manufacturer Part Number:** 45379

- **Position:** Center

9. WARRANTY AND SUPPORT

For specific warranty information regarding your Stant 45379 SuperStat Thermostat, please refer to the documentation provided at the time of purchase or contact Stant directly. Warranty terms typically cover manufacturing defects.

For technical support or further inquiries, please visit the official Stant website or contact their customer service department.

Contact information can usually be found on the product packaging or the manufacturer's website.

Note: Stant is not responsible for damage or injury resulting from improper installation or misuse of this product.