

Mopar 05066779AA

Mopar 05066779AA Coolant Temperature Sensor User Manual

Official Instruction Guide

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of the Mopar 05066779AA Coolant Temperature Sensor. This sensor is a critical component in your vehicle's engine management system, responsible for monitoring engine coolant temperature and relaying this data to the engine control unit (ECU). Accurate temperature readings are vital for optimal engine performance, fuel efficiency, and emissions control. The Mopar 05066779AA is an OEM (Original Equipment Manufacturer) part, designed to meet the exact specifications for fit, form, and function of your specific vehicle, ensuring reliable performance and compatibility.

2. SAFETY INFORMATION

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

- **Professional Installation Recommended:** If you are not experienced with automotive repairs, it is highly recommended to have this part installed by a qualified mechanic.
- **Engine Off and Cool:** Ensure the vehicle's engine is turned off and has completely cooled down before attempting any work. Hot engine components and fluids can cause severe burns.
- **Disconnect Battery:** For electrical safety, disconnect the negative terminal of the vehicle's battery before beginning installation.
- **Eye Protection:** Always wear appropriate eye protection to guard against splashes of coolant or other fluids.
- **Gloves:** Wear protective gloves to prevent skin contact with engine fluids, which can be harmful.
- **Coolant Handling:** Engine coolant is toxic. Handle it with care and dispose of it properly according to local regulations. Do not pour coolant down drains.
- **Proper Tools:** Use the correct tools for the job to avoid damaging the sensor or surrounding components.
- **Secure Vehicle:** If lifting the vehicle, ensure it is securely supported on jack stands. Never rely solely on a jack.

3. PACKAGE CONTENTS

The package for the Mopar 05066779AA Coolant Temperature Sensor typically includes:

- One (1) Mopar 05066779AA Coolant Temperature Sensor

Note: Additional components such as O-rings or seals may be pre-installed on the sensor or sold separately depending on the specific vehicle application.

4. INSTALLATION GUIDE

This section provides general steps for installing the coolant temperature sensor. Specific procedures may vary by vehicle model. Always consult your vehicle's service manual for detailed instructions.

4.1. Pre-Installation Steps

1. **Park Vehicle Safely:** Park the vehicle on a level surface and engage the parking brake.
2. **Cool Down Engine:** Allow the engine to cool completely. This can take several hours.
3. **Disconnect Battery:** Disconnect the negative battery cable to prevent accidental electrical shorts.
4. **Locate Sensor:** Identify the location of the coolant temperature sensor. It is typically found on the engine block, cylinder head, or thermostat housing.
5. **Drain Coolant:** Place a drain pan under the radiator drain plug or lower radiator hose. Carefully drain a sufficient amount of coolant to bring the level below the sensor's location. This prevents significant coolant loss when the sensor is removed.

4.2. Sensor Removal

6. **Disconnect Electrical Connector:** Carefully disconnect the electrical connector from the old sensor. This may involve pressing a tab or sliding a lock.
7. **Remove Old Sensor:** Using an appropriately sized wrench or sensor socket, carefully unscrew the old coolant temperature sensor. Be prepared for a small amount of coolant to leak out even after draining.
8. **Inspect Mounting Area:** Clean any debris or old sealant from the sensor's mounting hole. Ensure the threads are clean and undamaged.

4.3. New Sensor Installation

9. **Prepare New Sensor:** Ensure the new Mopar sensor has its O-ring or sealing washer properly seated. If not included, transfer the old one if it's in good condition, or obtain a new one.
10. **Install Sensor:** Carefully thread the new sensor into its mounting hole by hand to avoid cross-threading.
11. **Tighten Sensor:** Using the correct wrench or socket, tighten the sensor to the manufacturer's specified torque. Do not overtighten, as this can damage the sensor or the engine component.
12. **Reconnect Electrical Connector:** Reconnect the electrical connector to the new sensor, ensuring it clicks securely into place.
13. **Refill Coolant:** Close the radiator drain plug or reattach the lower radiator hose. Refill the cooling system with the correct type and amount of coolant as specified by your vehicle manufacturer.
14. **Bleed Air:** Follow your vehicle's specific procedure for bleeding air from the cooling system. This often involves running the engine with the heater on high and the radiator cap off (or reservoir cap off) until the thermostat opens and all air bubbles escape. Monitor the coolant level and top up as needed.
15. **Reconnect Battery:** Reconnect the negative battery cable.
16. **Check for Leaks:** Start the engine and allow it to reach operating temperature. Carefully inspect the sensor area for any coolant leaks.

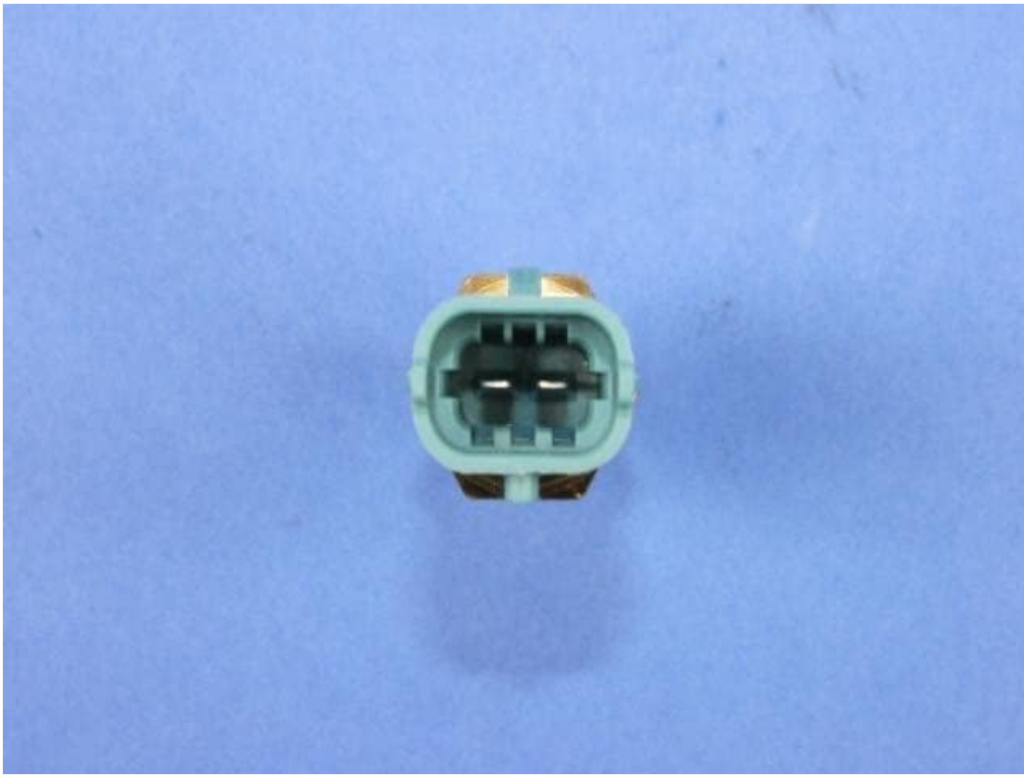


Figure 1: Front view of the Mopar 05066779AA Coolant Temperature Sensor, showing the electrical connector end.



Figure 2: Side view of the Mopar 05066779AA Coolant Temperature Sensor, highlighting the threaded brass body and electrical connector.



Figure 3: Angled view of the Mopar 05066779AA Coolant Temperature Sensor, showing the sensor tip and mounting threads.

5. OPERATION

The Mopar 05066779AA Coolant Temperature Sensor operates automatically once installed and connected to the vehicle's electrical system. It continuously measures the temperature of the engine coolant and sends this information as an electrical signal to the vehicle's Engine Control Unit (ECU).

The ECU uses this temperature data for various functions, including:

- Adjusting fuel injection and ignition timing for optimal cold start and warm-up performance.
- Controlling the cooling fan operation to maintain ideal engine temperature.
- Providing temperature readings to the dashboard gauge.
- Activating warning lights if the engine overheats.

No user intervention is required for the sensor's operation after proper installation.

6. MAINTENANCE

The Mopar 05066779AA Coolant Temperature Sensor is designed for long-term reliability and typically requires minimal direct maintenance. However, regular maintenance of your vehicle's cooling system is crucial for the sensor's longevity and accurate operation.

- **Coolant Level Check:** Regularly check your vehicle's coolant level and ensure it is within the recommended range. Low coolant levels can expose the sensor to air, leading to inaccurate readings or damage.
- **Coolant Quality:** Ensure the coolant is clean and free of contaminants. Old or contaminated coolant can cause corrosion and affect sensor performance. Follow your vehicle manufacturer's recommendations for coolant flush and replacement intervals.
- **Leak Inspection:** Periodically inspect the sensor's mounting area and surrounding hoses for any signs of coolant leaks. Address any leaks promptly.
- **Wiring Inspection:** Occasionally check the sensor's electrical connector and wiring for any signs of damage,

corrosion, or loose connections.

7. TROUBLESHOOTING

If you suspect an issue with your coolant temperature sensor, consider the following common symptoms and general troubleshooting steps. For accurate diagnosis and repair, it is always best to consult a qualified mechanic or use a diagnostic scan tool.

Common Symptoms of a Faulty Coolant Temperature Sensor:

- **Check Engine Light (CEL):** The most common indicator. A diagnostic trouble code (DTC) related to the coolant temperature sensor circuit will likely be stored.
- **Inaccurate Temperature Gauge Readings:** Gauge reads too high, too low, or fluctuates erratically.
- **Poor Fuel Economy:** If the sensor reports a constantly cold engine, the ECU may enrich the fuel mixture, leading to increased fuel consumption.
- **Rough Idling or Stalling:** Incorrect temperature data can disrupt the engine's air-fuel mixture, causing rough idle or stalling, especially when cold.
- **Cooling Fan Issues:** Cooling fans may run constantly or not at all if the sensor provides incorrect temperature signals.
- **Difficulty Starting:** Especially in cold weather, if the ECU thinks the engine is warm when it's cold, it may not provide enough fuel for a proper start.

General Troubleshooting Steps:

1. **Check for DTCs:** Use an OBD-II scanner to retrieve any stored diagnostic trouble codes. This will often pinpoint the issue directly.
2. **Inspect Wiring and Connector:** Visually inspect the sensor's electrical connector and wiring harness for any signs of damage, corrosion, or loose connections. Ensure the connector is fully seated.
3. **Check Coolant Level:** Verify that the coolant level is correct and that there are no air pockets in the system.
4. **Professional Diagnosis:** If symptoms persist after basic checks, it is advisable to seek professional diagnosis. A mechanic can perform advanced tests, such as checking sensor resistance values and live data from the ECU, to confirm sensor functionality.

8. SPECIFICATIONS

Attribute	Detail
Brand	Mopar
Model Number	05066779AA
Part Type	Coolant Temperature Sensor
Item Dimensions (L x W x H)	1 x 3 x 1 inches
Item Weight	1.38 pounds (0.63 Kilograms)
Output Type	Push Button (<i>Refers to the electrical signal type, not a physical button</i>)
Specific Uses For Product	Temperature Sensing

OEM Part Number	05066779AA
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9. WARRANTY INFORMATION

Mopar OEM parts typically come with a manufacturer's warranty against defects in materials and workmanship. The specific terms and duration of the warranty may vary depending on the region, purchase location, and Mopar's current warranty policy.

To obtain detailed warranty information for your Mopar 05066779AA Coolant Temperature Sensor, please:

- Refer to the warranty documentation included with your purchase.
- Contact the authorized Mopar dealer or the retailer from whom you purchased the part.
- Visit the official Mopar website for general warranty policies.

Keep your proof of purchase (receipt or invoice) as it will be required for any warranty claims.

10. CUSTOMER SUPPORT

For technical assistance, installation questions, or warranty inquiries regarding your Mopar 05066779AA Coolant Temperature Sensor, please utilize the following resources:

- **Authorized Mopar Dealers:** Your local authorized Mopar dealership can provide expert advice and service.
- **Mopar Official Website:** Visit the official Mopar website for product information, FAQs, and contact details. You can often find a "Contact Us" or "Support" section.
- **Retailer Support:** If purchased from an online retailer or auto parts store, their customer service may be able to assist with order-specific questions or direct you to the appropriate Mopar support.
- **Vehicle Service Manual:** For vehicle-specific installation and troubleshooting, always refer to your vehicle's official service manual.

When contacting support, please have your vehicle's make, model, year, and the Mopar part number (05066779AA) readily available.

