

Tivora MKD099

Tivora Ambient Temperature Sensor Instruction Manual

Model: MKD099

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of the Tivora Ambient Temperature Sensor, Model MKD099. This sensor is designed to accurately measure the external air temperature for compatible vehicles. Please read this manual thoroughly before installation and use to ensure proper function and safety.

2. SAFETY INFORMATION

- Always disconnect the vehicle's battery before performing any electrical work to prevent electrical shock or damage to components.
- Wear appropriate personal protective equipment, such as safety glasses and gloves, during installation.
- Ensure the vehicle is parked on a level surface with the parking brake engaged.
- If you are unsure about any step of the installation process, consult a qualified automotive technician.
- Keep small parts away from children.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- 1 x Tivora Ambient Temperature Sensor (Model MKD099)

4. PRODUCT OVERVIEW

The Tivora Ambient Temperature Sensor is a critical component for your vehicle's climate control and information systems. It provides accurate external temperature readings to the vehicle's computer. This sensor features a durable plastic housing and a precise thermistor element.

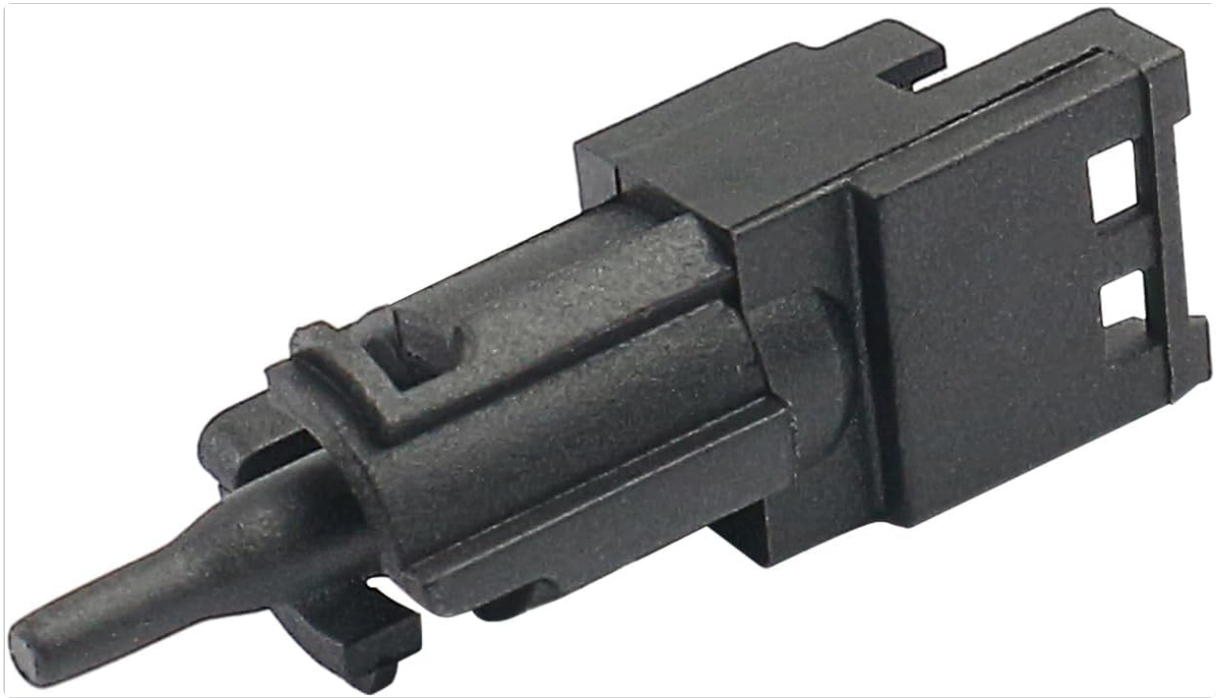


Figure 1: Tivora Ambient Temperature Sensor. This image shows the sensor from a top-front perspective, highlighting its compact design and connector.

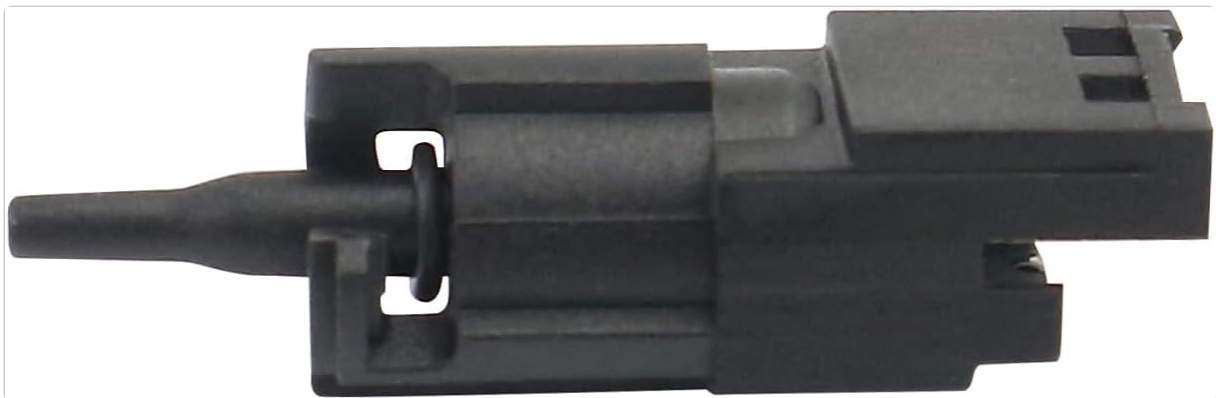


Figure 2: Side view of the Ambient Temperature Sensor. This view illustrates the overall length and profile of the sensor, including the temperature sensing probe and the electrical connector.

5. COMPATIBILITY

This Ambient Temperature Sensor is compatible with the following Dodge Ram models:

- Dodge Ram 1500 (2013-2022)
- Dodge Ram 2500 (2013-2022)
- Dodge Ram 3500 (2013-2022)

Replaces OEM Part Numbers: 68457701AA, 68138681AC, 68138681AE.

6. INSTALLATION

Follow these steps for proper installation of the ambient temperature sensor. Location of the sensor may vary slightly by vehicle model and year, but it is typically found behind the front bumper or grille.

1. **Prepare the Vehicle:** Park the vehicle on a level surface and engage the parking brake. Turn off the ignition and remove the key. Disconnect the negative terminal of the vehicle's battery to prevent electrical issues.

2. **Locate the Old Sensor:** The ambient temperature sensor is usually located in the front of the vehicle, often mounted to the radiator support, behind the grille, or near the front bumper. You may need to remove some grille components or splash shields to access it.
3. **Disconnect the Electrical Connector:** Carefully press the release tab on the electrical connector and pull it away from the old sensor. Inspect the connector for any signs of corrosion or damage.
4. **Remove the Old Sensor:** The sensor is typically held in place by a clip or a simple twist-lock mechanism. Gently unclip or twist the old sensor to remove it from its mounting bracket.
5. **Install the New Sensor:** Align the new Tivora Ambient Temperature Sensor with the mounting bracket. Push or twist it into place until it is securely seated.

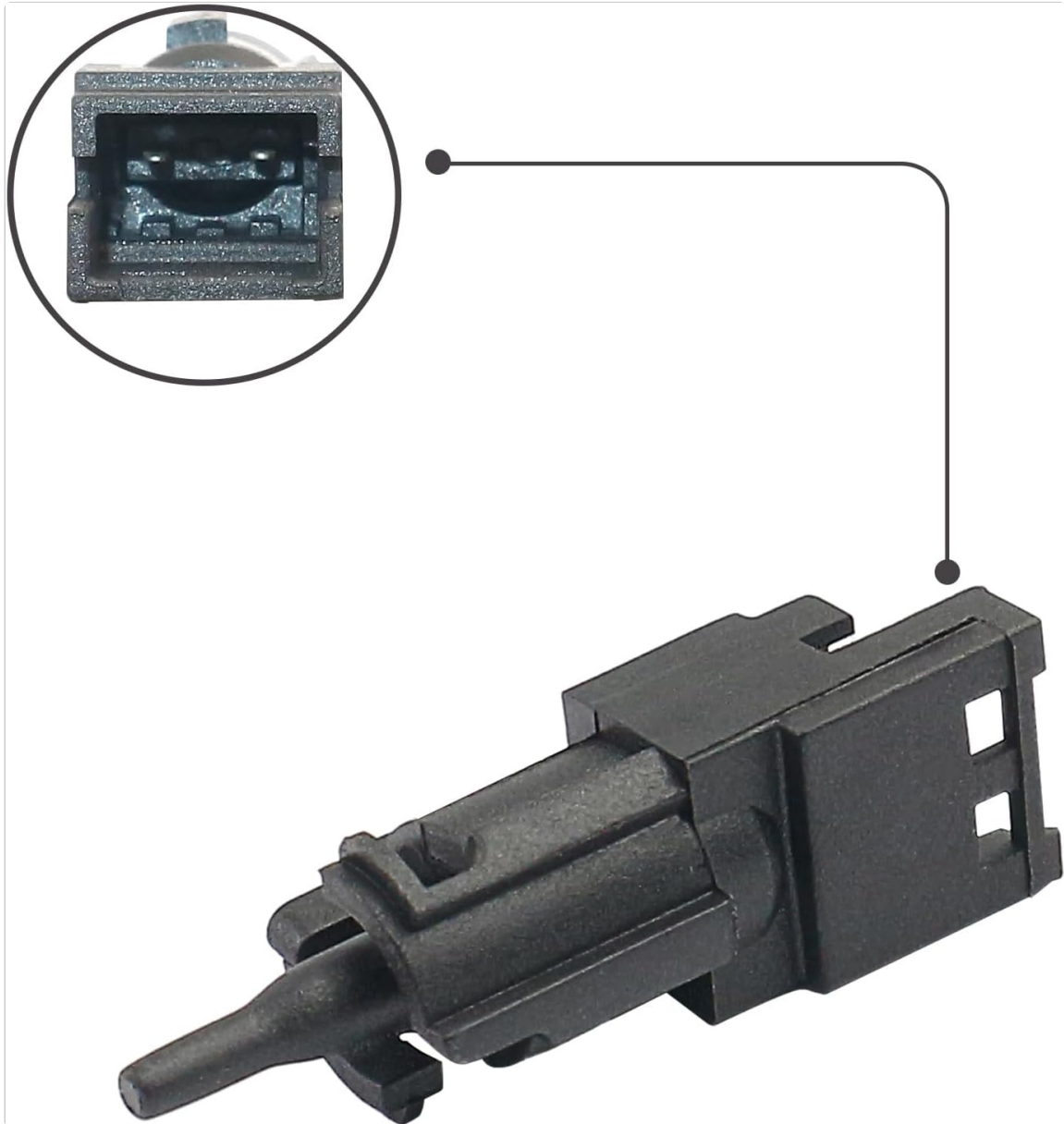


Figure 3: Close-up view of the sensor's electrical connector. This image highlights the precise fitment and connection points for secure installation.

6. **Connect the Electrical Connector:** Plug the vehicle's electrical connector firmly into the new sensor until you hear or feel a click, indicating it is securely latched.
7. **Reassemble and Reconnect Battery:** Reinstall any removed grille components or splash shields. Reconnect the negative terminal of the vehicle's battery.
8. **Test the Sensor:** Start the vehicle and check the external temperature display on your dashboard or infotainment system. Allow a few minutes for the reading to stabilize. If the reading is accurate, the installation is complete.

7. OPERATION

Once installed, the Tivora Ambient Temperature Sensor operates automatically. It continuously monitors the external air temperature and sends this data to the vehicle's onboard computer. This information is used for various functions, including:

- Displaying the outside temperature on the dashboard.
- Assisting the automatic climate control system in maintaining desired cabin temperatures.
- Providing data for engine management systems, particularly for cold start enrichment and air intake temperature calculations.

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

8. MAINTENANCE

The Tivora Ambient Temperature Sensor is designed to be maintenance-free. However, to ensure its longevity and accurate readings, consider the following:

- **Keep Clean:** Periodically inspect the sensor's location and gently clean any accumulated dirt, debris, or mud from around the sensor using a soft cloth. Avoid using harsh chemicals or abrasive materials.
- **Avoid Physical Damage:** Protect the sensor from physical impact, especially during vehicle maintenance or repairs in the front bumper area.
- **Check Wiring:** If you suspect an issue, visually inspect the wiring and connector for any signs of fraying, cuts, or corrosion.

9. TROUBLESHOOTING

If you experience issues with your ambient temperature sensor, refer to the following common problems and solutions:

| Problem | Possible Cause | Solution |
|--|---|--|
| Incorrect temperature reading (e.g., always too high/low, stuck) | <ul style="list-style-type: none">• Loose or corroded electrical connection• Sensor physically damaged or obstructed• Faulty sensor | <ul style="list-style-type: none">• Check and secure the electrical connector. Clean any corrosion.• Inspect the sensor for physical damage or obstructions (e.g., mud, ice).• If other solutions fail, the sensor may need replacement. |
| No temperature reading displayed | <ul style="list-style-type: none">• Sensor not connected• Blown fuse (less common for sensor itself)• Wiring issue | <ul style="list-style-type: none">• Ensure the sensor is securely plugged into its connector.• Check relevant fuses in the vehicle's fuse box (refer to vehicle manual).• Inspect wiring for breaks or shorts. |

| Problem | Possible Cause | Solution |
|---------------------------------------|---|---|
| Temperature reading fluctuates wildly | <ul style="list-style-type: none"> Intermittent electrical connection Sensor exposed to direct heat source (e.g., engine heat, exhaust) | <ul style="list-style-type: none"> Check and secure the electrical connector. Verify the sensor is mounted in its intended location, away from direct heat. |

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

10. SPECIFICATIONS

| Feature | Specification |
|---------------------------|------------------------------------|
| Brand | Tivora |
| Model Number | MKD099 |
| Replaces OEM Part Numbers | 68457701AA, 68138681AC, 68138681AE |
| Item Weight | 0.23 Ounces |
| Measurement Accuracy | ±2 degrees Fahrenheit |
| Mounting Type | Flange Mount |
| Output Type | Electrical Signal |
| Specific Uses For Product | Automotive |
| UPC | 717326919632 |

11. WARRANTY AND SUPPORT

For warranty information or technical support regarding your Tivora Ambient Temperature Sensor, please refer to the retailer's policy or contact Tivora customer service directly. Keep your purchase receipt as proof of purchase.