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Sawyer Auto PG-1861328

Sawyer Auto Intake Manifold Temperature Sensor (PG-1861328) User Manual

For 1985-1987 Dodge Caravan Models

1. INTRODUCTION

This manual provides essential information for the proper installation, functionality, and maintenance of your Sawyer Auto Intake Manifold Temperature Sensor, model PG-1861328. Please read this manual thoroughly before installation to ensure safe and correct usage.

2. PRODUCT OVERVIEW

The Sawyer Auto Intake Manifold Temperature Sensor is a direct-fit replacement component designed to accurately measure the temperature of the air entering your engine's intake manifold. This data is crucial for the Engine Control Unit (ECU) to optimize fuel delivery and ignition timing, ensuring efficient engine operation and performance.

Key features of this sensor include:

- Designed and manufactured to OE standards, ensuring optimal quality and reliability.
- Constructed with durable materials, exceeding OEM specifications for longevity.
- Direct replacement design for seamless installation, matching the factory unit.
- Undergoes rigorous inspection and road testing to ensure reliability and quality.



Figure 1: Sawyer Auto Intake Manifold Temperature Sensor. This image displays the sensor, a direct replacement part designed for precise fitment and accurate temperature readings.

3. SAFETY INFORMATION

Always observe the following safety precautions when working on your vehicle:

- Ensure the vehicle is parked on a level surface and the parking brake is engaged.
- Turn off the engine and allow it to cool down completely before beginning any work.
- Disconnect the negative terminal of the vehicle's battery to prevent electrical shorts or accidental engine starts.
- Wear appropriate personal protective equipment, including safety glasses and gloves.
- Refer to your vehicle's service manual for specific procedures and torque specifications.
- Keep children and pets away from the work area.

4. PACKAGE CONTENTS

Upon opening the package, verify that you have received the following item:

- 1 x Sawyer Auto Intake Manifold Temperature Sensor (PG-1861328)

If any items are missing or damaged, please contact Sawyer Auto customer support immediately.

5. INSTALLATION (SETUP)

This section outlines the general steps for replacing an intake manifold temperature sensor. Specific procedures may vary by vehicle model. Always consult your vehicle's service manual for detailed instructions.

1. **Prepare the Vehicle:** Ensure the engine is cool. Disconnect the negative battery terminal to prevent electrical hazards.

2. **Locate the Sensor:** Identify the existing intake manifold temperature sensor. For 1985-1987 Dodge Caravan models, this sensor is typically located on the cylinder head, near the intake manifold.
3. **Disconnect Electrical Connector:** Carefully disconnect the electrical wiring harness from the old sensor. This may involve pressing a tab or releasing a clip.
4. **Remove Old Sensor:** Using an appropriate wrench or socket, unscrew the old sensor from its mounting location. Be prepared for a small amount of coolant or oil to escape, depending on the sensor's design and location.
5. **Inspect Mounting Area:** Clean any debris or residue from the sensor's mounting hole. Ensure the threads are clean and undamaged.
6. **Install New Sensor:** Apply a small amount of thread sealant (if recommended by your vehicle's manual) to the threads of the new Sawyer Auto sensor. Carefully thread the new sensor into the mounting hole by hand to avoid cross-threading.
7. **Tighten Sensor:** Tighten the sensor to the manufacturer's specified torque. *Do not overtighten*, as this can damage the sensor or the manifold.
8. **Reconnect Electrical Connector:** Firmly connect the electrical wiring harness to the new sensor until it clicks into place.
9. **Reconnect Battery:** Reconnect the negative battery terminal.
10. **Test System:** Start the engine and check for any warning lights or abnormal readings. Monitor engine performance to ensure the sensor is functioning correctly.

6. FUNCTIONALITY

Once installed, the Intake Manifold Temperature Sensor continuously monitors the temperature of the air entering the engine. This temperature reading is sent to the vehicle's Engine Control Unit (ECU). The ECU uses this information, along with other sensor data, to calculate the optimal air-fuel mixture and ignition timing. A properly functioning sensor ensures:

- Improved fuel efficiency.
- Reduced emissions.
- Consistent engine performance across varying ambient temperatures.
- Prevention of engine damage due to incorrect air-fuel ratios.

7. MAINTENANCE

The Sawyer Auto Intake Manifold Temperature Sensor is designed to be a maintenance-free component. Regular inspection during routine vehicle service is recommended. Check the sensor's electrical connector for corrosion or damage and ensure it is securely attached. If the sensor shows signs of failure or provides inaccurate readings, replacement is necessary.

8. TROUBLESHOOTING

If you experience issues after installing the sensor or suspect a sensor malfunction, consider the following:

Symptom	Possible Cause	Solution
Check Engine Light (CEL) illuminated	Faulty sensor, incorrect wiring, or other engine issues.	Scan for diagnostic trouble codes (DTCs). If codes relate to intake air temperature, inspect wiring and sensor. Replace if faulty.
Poor fuel economy	Inaccurate temperature readings leading to incorrect fuel mixture.	Verify sensor readings with a diagnostic tool. Replace sensor if readings are inconsistent or incorrect.
Rough idle or poor engine performance	ECU receiving incorrect air temperature data.	Check sensor connection and integrity. Consider replacement if symptoms persist and other components are ruled out.
Difficulty starting the engine (especially in cold weather)	Sensor reporting incorrect cold air temperature, affecting cold start enrichment.	Diagnose sensor output. Replace if faulty.

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

9. SPECIFICATIONS

Attribute	Detail
Brand	Sawyer Auto
Model Number	PG-1861328
OEM Part Numbers	139-404, 31218, STACH006, TS10111, TS5020
Item Weight	1 ounces
Product Dimensions	2 x 4 x 4 inches
Fitment Details	Engine Intake Manifold Temperature Sensor -- On Cylinder Head (for 1985-1987 Dodge Caravan)

10. WARRANTY AND SUPPORT

Sawyer Auto is committed to providing high-quality replacement auto parts. For specific warranty information regarding your Intake Manifold Temperature Sensor (PG-1861328), please refer to the warranty documentation included with your purchase or visit the official Sawyer Auto website. For technical support or assistance with installation, please contact Sawyer Auto customer service.

Note: The product is from a small business brand. Support small businesses.