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GNXFixt 010067, 12671336

GNXFixt Variable Valve Timing Solenoid Instruction Manual (Models: 010067, 12671336)

This manual provides essential information for the installation, operation, and maintenance of your GNXFixt Variable Valve Timing Solenoid.

1. Introduction

The GNXFixt Variable Valve Timing (VVT) Solenoid is designed to regulate camshaft timing, optimizing valve operation using engine oil pressure. This component is crucial for enhancing engine performance and efficiency across various driving conditions.
Note: Residual oil may be present in the valve due to factory testing. This is normal and necessary for proper function.

2. Compatibility

This VVT Solenoid is compatible with various vehicle models. Please verify your vehicle's make, model, and engine specifications against the list below before installation.

- 2018-21 Chevrolet Colorado V6 3.6L Intake
- 2017-20 GMC Acadia V6 3.6L Intake
- 2016-20 Chevrolet Camaro V6 3.6L Intake
- 2016-20 Chevrolet Camaro V6 3.6L Exhaust
- 2017-19 Cadillac XT5 Exhaust
- 2017-19 Cadillac XT5 Intake
- 2019-20 Chevrolet Blazer V6 3.6L Intake
- 2018-21 GMC Canyon V6 3.6L Intake
- 2020-21 Cadillac XT5 V6 3.6L Intake
- 2020-21 Cadillac XT5 V6 3.6L Exhaust
- 2016-19 Cadillac ATS V6 3.6L Naturally Aspirated Intake
- 2016-19 Cadillac ATS V6 3.6L Naturally Aspirated Exhaust
- 2016-19 Cadillac CTS V6 3.6L Naturally Aspirated Exhaust
- 2016-19 Cadillac CTS V6 3.6L Naturally Aspirated Intake
- 2016-19 Cadillac CT6 V6 3.6L Exhaust

- 2016-19 Cadillac CT6 V6 3.0L Intake
- 2016-19 Cadillac CT6 V6 3.0L Exhaust
- 2016-19 Cadillac CT6 V6 3.6L Intake
- 2020 Cadillac XT6 Intake
- 2020 Cadillac XT6 Exhaust
- 2017 Buick LaCrosse Intake
- 2017 Buick LaCrosse Exhaust
- 2020-21 Cadillac CT5 V6 3.0L Exhaust
- 2020-21 Cadillac CT5 V6 3.0L Intake
- 2021 Cadillac XT6 V6 3.6L Exhaust
- 2021 Cadillac XT6 V6 3.6L Intake
- 2018-19 Buick LaCrosse V6 3.6L Intake
- 2018-19 Buick LaCrosse V6 3.6L Exhaust
- 2018-20 Buick Regal Sportback V6 3.6L Exhaust
- 2018-20 Buick Regal Sportback V6 3.6L Intake
- 2019 Cadillac CT6 V8 4.2L Exhaust
- 2019 Cadillac CT6 V8 4.2L Intake
- 2020 Cadillac CT6 Intake
- 2020 Cadillac CT6 Exhaust

Reference Numbers: 010067, 12671336, 916519, P4003, VTS1186, VV1217, VVS1873, VVT317

Image: A visual representation of the VVT solenoid, accompanied by a list of OEM part numbers and compatible vehicle models. This graphic helps confirm the correct part for specific applications.

3. Setup and Installation

Installation of the Variable Valve Timing Solenoid requires mechanical knowledge and appropriate tools. If you are not confident in performing this installation, it is recommended to seek assistance from a qualified automotive technician.

3.1 Safety Precautions

- Ensure the vehicle's engine is off and cool before beginning any work.
- Disconnect the negative terminal of the vehicle's battery to prevent electrical hazards.
- Wear appropriate personal protective equipment, including safety glasses and gloves.
- Refer to your vehicle's specific service manual for detailed instructions and torque specifications.

3.2 Installation Steps (General Guide)

1. Locate the existing VVT solenoid on your engine. Its position varies by vehicle model and whether it's an intake or

exhaust solenoid.

2. Carefully disconnect the electrical connector from the old solenoid.
3. Remove any retaining bolts or clips securing the old solenoid.
4. Gently pull out the old solenoid. Be prepared for a small amount of oil to drain.
5. Inspect the new GNXFixt VVT Solenoid for any damage. Ensure the O-rings are properly seated.
6. Apply a small amount of clean engine oil to the new solenoid's O-rings to aid installation.
7. Insert the new solenoid into its port, ensuring it seats correctly.
8. Secure the solenoid with its retaining bolts or clips, tightening to the manufacturer's specified torque.
9. Reconnect the electrical connector, ensuring a secure connection.
10. Reconnect the vehicle's battery.
11. Start the engine and check for any leaks or error codes.

Image: The GNXFixt Variable Valve Timing Solenoid, showing its cylindrical body and electrical connector. This image illustrates the general appearance of the component to be installed.

4. Operating Principles

The Variable Valve Timing (VVT) Solenoid operates by controlling the flow of engine oil to the camshaft phasers. This oil pressure adjusts the camshaft's rotational position, thereby altering the timing of the engine's intake and exhaust valves. This dynamic adjustment allows the engine to optimize valve overlap and lift for different engine speeds and loads, leading to improved fuel efficiency, reduced emissions, and enhanced power output.

Image: A diagram illustrating the VVT solenoid's placement and function within an engine, highlighting its role in camshaft timing adjustment for optimal performance.

5. Maintenance

The VVT solenoid itself typically does not require routine maintenance. Its longevity is primarily dependent on the overall health of the engine and the quality of engine oil used.

- **Engine Oil Quality:** Use the manufacturer-recommended engine oil and adhere to the prescribed oil change intervals. Contaminated or incorrect oil can lead to VVT solenoid malfunction.
- **Oil Filter:** Regularly replace the engine oil filter to ensure clean oil circulation, which is vital for VVT system operation.
- **System Checks:** If your vehicle's check engine light illuminates, it may indicate an issue with the VVT system. Prompt diagnosis and repair are recommended.

6. Troubleshooting

Common symptoms of a malfunctioning VVT solenoid include:

- Check Engine Light illumination (often with codes like P0010, P0011, P0013, P0014, P0020, P0021, P0023, P0024).
- Rough idling or stalling.
- Reduced engine power or fuel economy.
- Engine knocking or ticking noises.

6.1 Diagnostic Steps

1. **Scan for Codes:** Use an OBD-II scanner to retrieve diagnostic trouble codes (DTCs). This will help pinpoint the specific VVT system issue.
2. **Inspect Wiring:** Check the electrical connector and wiring harness leading to the VVT solenoid for any signs of damage, corrosion, or loose connections.
3. **Oil Level and Quality:** Verify that the engine oil level is correct and that the oil is clean. Low oil pressure or contaminated oil can directly affect VVT solenoid function.
4. **Solenoid Testing:** Advanced diagnostics may involve testing the solenoid's electrical resistance or activating it with a scan tool to observe its operation.

If troubleshooting does not resolve the issue, professional diagnosis by a certified mechanic is advised.

7. Specifications

Feature	Specification
Brand	GNXFixt
Model Numbers	010067, 12671336
Material	Metal, Plastic
Dimensions (L x W x H)	5 x 2 x 2 inches (12.7 x 5.08 x 5.08 cm)
Item Weight	4.8 ounces (136 grams)
Inlet Connection Size	1 Inch
Inlet Connection Type	Threaded
Number of Ports	2
Color	Silver
UPC	768287625780

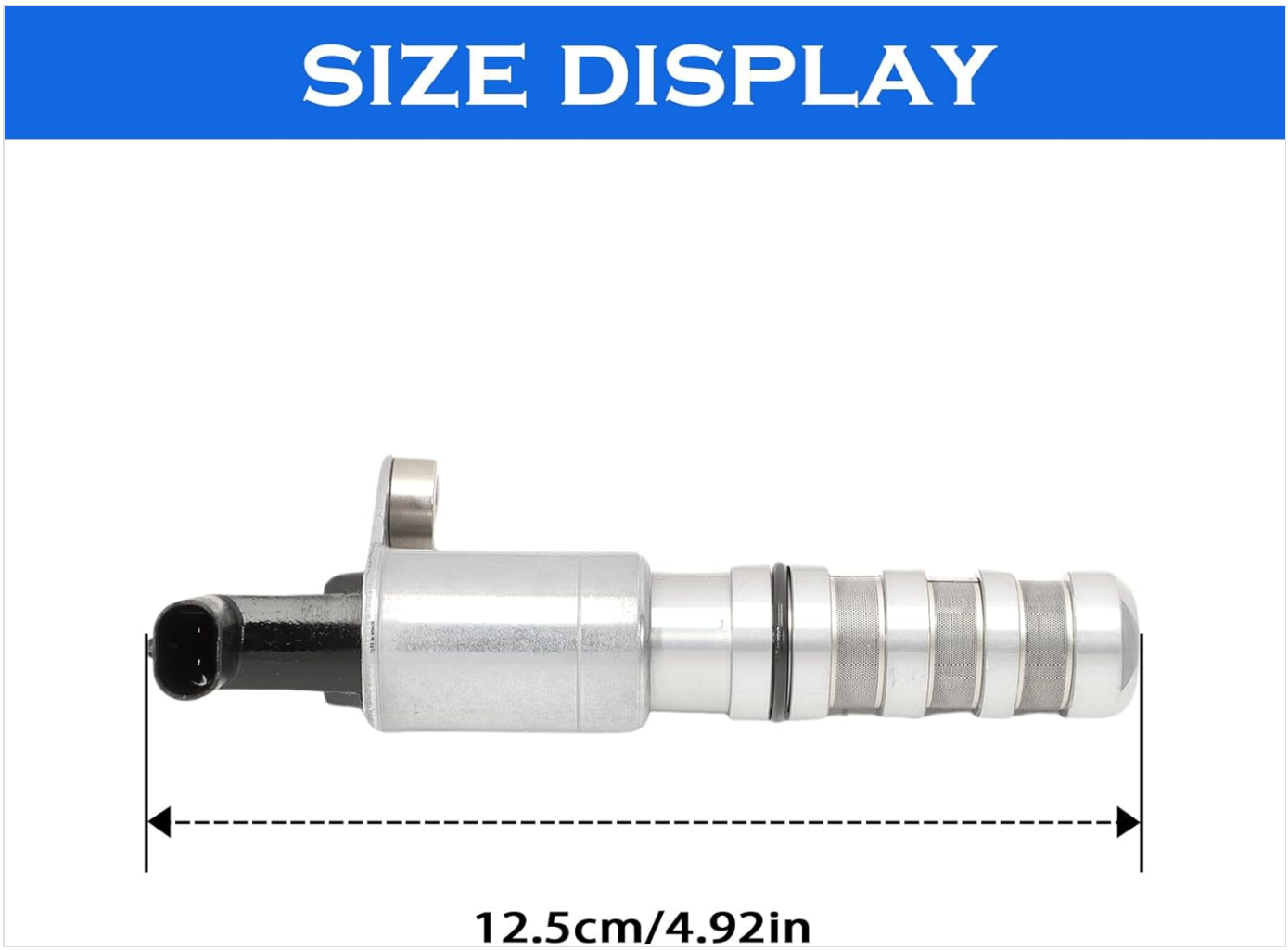

Image: A diagram showing the physical dimensions of the VVT solenoid, specifically its length of 12.5 cm (4.92 inches).

8. Warranty and Support

Information regarding product warranty and customer support is typically provided at the point of purchase or through the manufacturer's official channels. Please retain your purchase receipt for warranty claims.
For technical assistance or inquiries, please refer to the contact information provided by your retailer or the GNXFixt brand.

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