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POPSTORE 4L60E

POPSTORE 4L60E Transmission Solenoid Valve Kit

User Manual

1. Introduction

This user manual provides essential information for the installation, operation, and maintenance of the POPSTORE 4L60E Transmission Solenoid Valve Kit. This kit is designed to replace critical solenoid components within compatible GM 4L60E automatic transmissions.

Important Note: This product consists of refurbished parts. It is normal for these components to show minor signs of previous use or residual car oil. This does not affect their functionality or performance.

2. Product Overview and Components

The POPSTORE 4L60E Transmission Solenoid Valve Kit includes the following essential components:

- One A Shift Solenoid
- One B Shift Solenoid
- One 3-2 Downshift Solenoid
- One EPC (Electronic Pressure Control) Solenoid
- One TCC/PWM (Torque Converter Clutch / Pulse Width Modulation) Solenoid
- Associated wiring harness and manifold pressure switch (as part of the assembly)

Figure 2.1: Comprehensive view of the 4L60E Solenoid Valve Kit, illustrating the location of the Manifold Pressure Switch, EPC Solenoid, TCC Solenoid, PWM Solenoid, Shift Solenoids, and Downshift Solenoid within the assembly.

2.1. Individual Component Details

Shift Solenoids (A & B)

These solenoids control the hydraulic fluid flow to engage and disengage specific gears, facilitating smooth gear changes.

3-2 Downshift Solenoid

This solenoid manages the downshift from third to second gear, ensuring proper engagement and preventing harsh shifts.

EPC (Electronic Pressure Control) Solenoid

The EPC solenoid regulates the line pressure within the transmission, which is crucial for proper shift feel and clutch apply pressure.

TCC/PWM Solenoid

This solenoid controls the engagement and disengagement of the Torque Converter Clutch (TCC) and uses Pulse Width Modulation (PWM) for smooth lock-up.

Manifold Pressure Switch

The manifold pressure switch monitors transmission fluid pressure at various points, providing feedback to the transmission control module.

Main Electrical Connector

This connector provides the electrical interface for the entire solenoid and wiring harness assembly to the vehicle's transmission control unit.

3. Compatibility

This solenoid valve kit is compatible with all GM products equipped with the 4L60E automatic transmission, specifically models manufactured between 1993 and 2006. This includes, but is not limited to, various Chevrolet, GMC, Pontiac, and Oldsmobile vehicles.
Part Numbers: 4L60E, 4L65E, 4L70E.
Before installation, verify that your vehicle's transmission is a 4L60E series and falls within the specified model years.

4. Installation Guidelines (Setup)

Installation of transmission components requires specialized knowledge and tools. It is highly recommended that this kit be installed by a qualified automotive technician.

4.1. Safety Precautions

- Always wear appropriate personal protective equipment, including safety goggles and gloves, during installation.

- Ensure the vehicle is securely lifted and supported on jack stands or a lift.
- Disconnect the vehicle's battery before beginning any work on electrical components.
- Allow the transmission fluid to cool down before draining to prevent burns.

4.2. Installation Procedure Overview

While a detailed step-by-step guide is beyond the scope of this manual due to variations in vehicle models and specific transmission configurations, the general procedure involves:

1. Draining the transmission fluid and removing the transmission pan.
2. Disconnecting the existing solenoid wiring harness and removing the old solenoid assembly.
3. Carefully installing the new POPSTORE solenoid valve kit, ensuring all electrical connectors and mounting points are correctly aligned and secured.
4. Reinstalling the transmission pan with a new gasket and refilling with the appropriate type and amount of transmission fluid.
5. Reconnecting the battery and performing necessary diagnostic checks and fluid level verification.

For visual guidance and specific vehicle instructions, it is strongly recommended to search for relevant installation videos and repair manuals online or consult a professional mechanic.



Figure 4.1: The complete solenoid valve kit, ready for professional installation into a compatible 4L60E transmission.

5. Operation

Once installed, the solenoids within this kit operate electronically to control the hydraulic pressure and fluid flow within the 4L60E automatic transmission. This precise control enables the transmission to:

- **Shift Gears:** The A and B Shift Solenoids direct fluid to engage and disengage clutches and bands for smooth upshifts and downshifts.
- **Manage Downshifts:** The 3-2 Downshift Solenoid specifically controls the transition from third to second gear.
- **Regulate Pressure:** The EPC Solenoid adjusts line pressure based on engine load and speed, optimizing shift quality and preventing clutch slippage.
- **Control Torque Converter Lock-up:** The TCC/PWM Solenoid manages the engagement of the torque converter clutch, improving fuel efficiency and reducing heat.

Proper functioning of these solenoids is critical for the transmission's overall performance, efficiency, and longevity.

6. Maintenance

The solenoids themselves are sealed units and do not require direct maintenance. However, the longevity and performance of your transmission and its components, including this kit, depend heavily on proper transmission maintenance:

- **Regular Fluid Checks:** Periodically check your transmission fluid level and condition according to your vehicle manufacturer's recommendations.
- **Fluid Changes:** Adhere to the recommended transmission fluid change intervals. Use only the specified type of transmission fluid for your GM vehicle.
- **Filter Replacement:** Replace the transmission filter whenever the fluid is changed.

- **Address Leaks Promptly:** Any transmission fluid leaks should be addressed immediately to prevent low fluid levels, which can cause severe damage.

Maintaining clean, adequate transmission fluid is paramount for the proper function of all internal transmission components, including the solenoids.

7. Troubleshooting

If you experience transmission issues after installation, consider the following common troubleshooting points:

- **Diagnostic Trouble Codes (DTCs):** Use an OBD-II scanner to check for any stored transmission-related codes (e.g., P1810, P0753, P0758, P0740). These codes can point to specific solenoid or circuit issues.
- **Wiring Harness Connection:** Ensure the main electrical connector and all individual solenoid connections are fully seated and secure. A loose connection can cause intermittent or complete solenoid failure.
- **Fluid Level and Condition:** Verify that the transmission fluid level is correct and that the fluid is clean and free of debris. Low or contaminated fluid can mimic solenoid issues.
- **Missing Components:** In rare cases, a kit might be missing a specific solenoid (e.g., PWM Solenoid as noted in some user experiences). Verify all listed components are present and correctly installed. If a component is missing, contact customer support.
- **Refurbished Part Considerations:** While tested, refurbished parts can occasionally have unforeseen issues. If all other troubleshooting steps fail, professional diagnosis of the individual solenoids may be necessary.

If you are unable to resolve the issue, consult a certified automotive transmission specialist.

8. Specifications

Attribute	Detail
Brand	POPSTORE
Model Number	4L60E
Manufacturer Part Number	R028-FBA
Compatible Transmissions	GM 4L60E, 4L65E, 4L70E (1993-2006)
Item Weight	1.96 pounds
Package Dimensions	11.61 x 7.09 x 2.4 inches
Country of Origin	China



Figure 8.1: Approximate dimensions of the solenoid valve kit components for reference.

9. Warranty and Support

POPSTORE is committed to providing high-quality auto parts and the highest standard of after-sales service to every customer.

For any questions regarding product compatibility, installation, or performance, please contact POPSTORE customer support through the retailer's platform where the product was purchased. Please have your order details and product model number (4L60E) ready for faster assistance.

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