

CarbPart#25417097

Replacement Shutoff Solenoid User Manual

Model: CarbPart#25417097

1. INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of the replacement shutoff solenoid, model CarbPart#25417097. This component is designed as a direct replacement part for BlackMax PM0496500, PM0496500.02, 6500, and 10000 series generators, and may also be compatible with certain motorcycle, ATV, and UTV carburetor throttle cable systems. Please review this manual thoroughly before attempting any installation or operation.



Figure 1: The replacement shutoff solenoid. This image displays the solenoid unit with its metallic body, green base, and attached electrical wiring with two distinct connectors. The wiring is protected by a black braided sleeve.

The package includes one (1) set of the shutoff solenoid. Ensure to verify compatibility with your original part by carefully comparing photos and model numbers before proceeding with installation.

2. SAFETY INFORMATION

Always prioritize safety when working with electrical and mechanical components. Failure to follow these safety guidelines may result in injury or damage to equipment.

- **Disconnect Power:** Before beginning any installation or maintenance, ensure the generator or vehicle's power source is completely disconnected and secured to prevent accidental startup.
- **Personal Protective Equipment (PPE):** Wear appropriate PPE, including safety glasses and gloves, to protect against potential hazards.
- **Ventilation:** Work in a well-ventilated area, especially when dealing with fuel systems.
- **Professional Assistance:** If you are unsure about any step or lack the necessary tools or expertise, consult a qualified technician.
- **Fuel Handling:** Exercise extreme caution when handling fuel. Avoid spills and ensure no open flames or ignition sources are nearby.

3. SETUP AND INSTALLATION

This section outlines the general steps for installing the shutoff solenoid. Specific procedures may vary slightly depending on your generator or vehicle model. Refer to your equipment's service manual for detailed instructions.

Pre-Installation Checks:

- Verify that the replacement solenoid matches the original part in terms of physical dimensions and electrical connectors.
- Ensure all necessary tools are available (e.g., wrenches, screwdrivers, electrical tape).
- Clean the area around the installation point to prevent contamination.

Installation Steps:

1. **Locate the Original Solenoid:** Identify the existing shutoff solenoid on your generator's carburetor or fuel system. It is typically mounted near the carburetor bowl.
2. **Disconnect Wiring:** Carefully disconnect the electrical wires connected to the original solenoid. Note the orientation and connection points if necessary.
3. **Remove Original Solenoid:** Unscrew or unbolt the original solenoid from its mounting location. Be prepared for a small amount of fuel to drain if it's connected to the carburetor bowl.
4. **Install New Solenoid:** Thread or bolt the new replacement solenoid into the mounting location. Ensure it is securely fastened but do not overtighten.
5. **Connect Wiring:** Reconnect the electrical wires to the new solenoid. Ensure a secure and correct electrical connection.
6. **Test Functionality:** After installation, perform a functional test. With the power reconnected (and fuel supply open if applicable), activate the system to ensure the solenoid operates correctly (e.g., clicks when power is applied/removed, allows fuel flow).
7. **Check for Leaks:** If installed on a fuel system, check for any fuel leaks around the solenoid's mounting point.

4. OPERATION

The shutoff solenoid is an integral part of the fuel system, primarily found in carburetors of generators and small engines. Its main function is to control the flow of fuel to the carburetor's main jet, preventing fuel from entering the engine when the ignition is turned off.

- **Engine On:** When the generator or vehicle's ignition is turned on, the solenoid receives electrical power, which energizes an electromagnet. This pulls a plunger or needle away from the fuel passage, allowing fuel to flow freely into the carburetor for engine operation.
- **Engine Off:** When the ignition is turned off, power to the solenoid is cut. A spring then pushes the plunger or needle back into the fuel passage, effectively shutting off the fuel supply. This prevents "dieseling" or "run-on" (where the engine continues to run briefly after being shut off) and helps prevent fuel from leaking into the engine's cylinders when not in use.

Proper operation of the solenoid ensures efficient fuel management and prevents common engine issues related to fuel flow control.

5. MAINTENANCE

The shutoff solenoid is generally a low-maintenance component. However, periodic checks can help ensure its longevity and proper function.

- **Visual Inspection:** Periodically inspect the solenoid and its wiring for any signs of damage, corrosion, or loose connections.
- **Cleanliness:** Keep the area around the solenoid clean and free from dirt, debris, or fuel residue.
- **Electrical Connections:** Ensure electrical connectors are clean and securely attached. Corroded connections can impede proper operation.
- **Fuel Quality:** Using clean, fresh fuel can prevent deposits from forming within the carburetor and affecting solenoid operation.

6. TROUBLESHOOTING

If you experience issues with your generator or vehicle's fuel system, the shutoff solenoid might be a contributing factor. Here are some common symptoms and potential solutions:

Symptom	Possible Cause	Solution
Engine will not start (no fuel flow)	Faulty solenoid (stuck closed), no power to solenoid, clogged fuel passage.	Check electrical connections to solenoid. Test solenoid for continuity/power. Replace solenoid if faulty. Clean carburetor fuel passages.
Engine dies immediately after starting	Solenoid not staying open, intermittent power supply.	Verify consistent power to solenoid when ignition is on. Check for loose wiring. Replace solenoid if it fails to stay open.
Engine "diesels" or "runs on" after shutoff	Solenoid not closing completely (stuck open), allowing fuel flow.	Inspect solenoid for debris preventing closure. Replace solenoid if it cannot seal the fuel passage.
Fuel leak around solenoid	Improper installation, damaged O-ring/gasket, cracked solenoid body.	Ensure solenoid is tightened correctly. Replace O-ring/gasket if present. Replace solenoid if body is cracked.

If troubleshooting steps do not resolve the issue, professional assistance may be required.

7. SPECIFICATIONS

The following are general specifications for the replacement shutoff solenoid:

Attribute	Detail
Part Type	Replacement Shutoff Solenoid
Model Number	CarbPart#25417097
Compatibility	BlackMax PM0496500, PM0496500.02, 6500, 10000 Generators; various Motorcycle, ATV, UTV carburetor systems.
Manufacturer	Generic
Exterior Finish	Other (as per manufacturer)
Package Contents	1 Set of Shutoff Solenoid

8. WARRANTY AND SUPPORT

As a replacement part, specific warranty terms may vary. Please refer to the seller or manufacturer's stated warranty policy at the time of purchase for details regarding coverage, duration, and claims procedures.

For technical support or further assistance with installation and troubleshooting, it is recommended to contact the seller directly or consult a certified small engine mechanic.

Always ensure you have your purchase details and the product model number (CarbPart#25417097) available when seeking support.