



[Manuals.plus](#) /

- › [Carter Fuel Systems](#) /
- › Carter Fuel Systems Universal Electric Fuel Pump (P90091) Instruction Manual

## Carter Fuel Systems P90091

# Carter Fuel Systems Universal Electric Fuel Pump (P90091) Instruction Manual

Model: P90091

## 1. INTRODUCTION

---

This manual provides essential information for the safe and effective installation, operation, and maintenance of your Carter Fuel Systems Universal Electric Fuel Pump, Model P90091. Please read all instructions carefully before use to ensure proper function and prevent damage or injury.



*Image 1: Carter Fuel Systems Universal Electric Fuel Pump (P90091). This image shows the compact, cylindrical design of the electric fuel pump with its inlet and outlet ports, and electrical connections.*

## 2. SAFETY INFORMATION

**WARNING:** Fuel is highly flammable. Always work in a well-ventilated area away from open flames, sparks, or other ignition sources. Disconnect the vehicle's battery before beginning any work on the fuel system.

- Wear appropriate personal protective equipment (PPE), including safety glasses and gloves.
- Ensure all fuel lines are securely connected and free from leaks.
- Do not operate the pump dry; ensure it is primed with fuel before initial operation.
- Verify correct electrical polarity (positive and negative) to prevent damage to the pump and electrical system.
- Consult a qualified mechanic if you are unsure about any installation or maintenance procedures.

## 3. WHAT'S INCLUDED

The Carter Electric in-tank fuel pump comes with the following components for proper installation:

- Electric Fuel Pump

- Strainer
- Wire Harnesses
- Tank Seal
- Grommets
- Mounting Bracket
- Mounting Hardware

## 4. SPECIFICATIONS

Feature	Specification
Brand	Carter Fuel Systems
Model	P90091 (Electric Fuel Pump)
Voltage	12V
Minimum Free Flow Rate	15.0 gph
Minimum Pressure	1.0 psi
Terminal Quantity	2
Terminal Gender	Male
Terminal Type	Blade
Inlet Outside Diameter	9.7mm
Outlet Quantity	1
Outlet Type	Hose Connection / Hose Barb
Outlet Outside Diameter	7.8mm
Length	249.3mm
Connector Gender	Male
Connector Shape	Spade
Fuel Pump Inlet Type	Hose Barb
Internal Or External	External
Negative Ground	Yes
Pump Type	Electric
Material	Metal
Item Weight	1.3 Pounds
Product Dimensions (L x W x H)	10.2 x 4.6 x 4.4 inches

## 5. INSTALLATION

The Carter Universal Electric Fuel Pump is designed for simple and quick installation. Follow these general guidelines:

1. **Preparation:** Ensure the vehicle's battery is disconnected. Work in a well-ventilated area.
2. **Mounting:** Use the provided mounting bracket and hardware to secure the fuel pump. The pump is designed for tank mount, but can be installed externally. Ensure the pump is installed below the fuel tank to allow for gravity feed, which is recommended for optimal performance and longevity.
3. **Fuel Line Connections:** Connect the fuel lines to the "IN" (inlet) and "OUT" (outlet) ports of the pump. The inlet outside diameter is 9.7mm and the outlet outside diameter is 7.8mm. Use appropriate hose clamps to secure connections and prevent leaks.
4. **Electrical Connections:** Connect the wire harnesses to the pump's terminals. Ensure correct polarity: red wire to positive (+), black wire to negative (-). Incorrect wiring can damage the pump.
5. **Priming:** Before starting the engine, prime the fuel pump by briefly turning the ignition key to the "ON" position (without starting the engine) to allow fuel to flow through the pump and lines. This prevents dry running.
6. **Leak Check:** After installation, reconnect the battery and check all fuel line connections for leaks. Start the engine and re-check for any leaks or unusual noises.



*Video 1: CarBole 5-9 PSI 30 GPH Electric Fuel Pump. This video demonstrates the physical appearance and basic connections of a similar electric fuel pump, highlighting the inlet and outlet ports and electrical wiring.*



*Video 2: Universal 12V Heavy Duty Electric Fuel Pump HEP02A HEP-02A. This video provides a close-up view of a universal electric fuel pump, showing its components and demonstrating its operation.*

## 6. OPERATION

---

The Carter Universal Electric Fuel Pump operates automatically to deliver fuel at the precise pressure and flow rate required by the engine. It features a tough turbine technology for improved and quiet fuel flow.

- The pump is designed to provide consistent fuel pressure, typically around 1.0 psi minimum, suitable for various carbureted and EFI street applications.
- It incorporates multi-layer filtration technology, offering 40% more dirt holding capacity to protect the pump and engine from impurities.
- Ensure the fuel tank always has an adequate fuel level to prevent the pump from running dry, which can lead to premature wear.



*Video 3: Carbole Mini Electric Fuel Pump. This video illustrates the functionality of a mini electric fuel pump, showing how it draws and delivers fuel.*

## 7. MAINTENANCE

---

Regular maintenance helps ensure the longevity and optimal performance of your fuel pump:

- **Filter Replacement:** Periodically inspect and replace the fuel strainer and any inline fuel filters. The multi-layer filtration helps, but filters can still become clogged over time, reducing fuel flow and potentially damaging the pump.
- **Connection Check:** Regularly inspect all fuel line and electrical connections for tightness, corrosion, or damage. Address any issues promptly.
- **Corrosion Prevention:** If operating in corrosive environments (e.g., marine applications), apply appropriate corrosion protection to exposed metal parts and electrical connections.
- **Avoid Dry Running:** Always ensure there is fuel in the tank when the pump is operating. Running the pump dry can cause overheating and premature failure.



Video 4: 300LPH External Inline Fuel Pump Kit. This video demonstrates the installation and function of an external inline fuel pump, including connections and fuel flow.

## 8. TROUBLESHOOTING

Problem	Possible Cause	Solution
Pump not operating	No power, incorrect wiring, blown fuse, faulty relay, clogged filter.	Check electrical connections and battery voltage. Verify wiring polarity. Inspect and replace fuse/relay if necessary. Check and replace fuel filter/strainer.
Low fuel pressure/flow	Clogged fuel filter/strainer, restricted fuel line, low fuel level, air in system, worn pump.	Replace fuel filter/strainer. Inspect fuel lines for kinks or blockages. Ensure adequate fuel in tank. Bleed air from system. Replace pump if worn.
Fuel leaks	Loose connections, damaged fuel lines, faulty seals/grommets.	Tighten all fuel line connections. Inspect fuel lines for cracks or damage and replace if necessary. Replace tank seal and grommets if damaged.
Excessive noise	Dry running, air in system, loose mounting, internal pump issue.	Ensure pump is primed with fuel. Bleed air from system. Securely mount the pump. If noise persists, the pump may be failing.

Video 5: EVIL ENERGY 300LPH External Fuel Pump Kit. This video shows the installation process of an external fuel pump, which can be helpful for understanding general fuel pump setup.

## 9. VEHICLE FIT INFORMATION

This electric fuel pump is designed for a vehicle-specific fit and is compatible with a range of older models. Always verify compatibility with your specific vehicle before purchase and installation.

### Known Compatible Models:

- Audi 100 Series: 1974-1971
- Audi Fox: 1974-1973
- Audi Super 90: 1972-1971
- Austin America: 1972-1968
- Austin Marina: 1975-1973
- BMW 2.8 Bavaria: 1971
- BMW 3.0CS: 1974-1971
- BMW 3.0CSL: 1971
- BMW 3.0S: 1974-1971
- BMW 1600-2: 1967-1966

## 10. WARRANTY AND SUPPORT

For specific warranty details and customer support, please refer to the product packaging or contact Carter Fuel Systems directly. Keep your purchase receipt as proof of purchase for any warranty claims.

