

Sierra 78482

Sierra Fuel Water Separator Filter Kit 47-78481 / Model 78482 Instruction Manual

For Marine Engine Fuel Systems

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your Sierra Fuel Water Separator Filter Kit, model 47-78481 (Part Number 78482). This kit is designed to protect sensitive inboard and outboard fuel injection systems by effectively removing water and particulate contaminants from gasoline.

The Sierra fuel water separator is engineered to remove over 98.8% of emulsified water from gasoline. Its 10-micron filter element is over 90% efficient at removing particles as small as 10 microns. The filter system maintains a flow rate of 90 GPH (Gallons Per Hour) to adequately supply even high-demand marine engines.

2. PRODUCT COMPONENTS

The Sierra Fuel Water Separator Filter Kit 47-78481 includes the following items:

- **Mounting Bracket:** Used to secure the filter assembly to a stable surface.
- **Fuel Water Separator Filter:** The primary filtration element.
- **Brass Pipe Plug (3/8 inch - Part 18-4264):** For sealing unused ports.
- **Brass Pipe Plug (1/4 inch - Part 18-4256):** For sealing unused ports.



Figure 1: Sierra Fuel Water Separator Filter Kit 47-78481. This image displays the complete filter kit, including the filter element, mounting bracket, and associated hardware.

3. INSTALLATION INSTRUCTIONS

Proper installation is crucial for the effective operation and longevity of your fuel system. If you are unsure about any step, consult a qualified marine technician.

1. **Select Mounting Location:** Choose a location that is easily accessible for maintenance, away from heat sources, and structurally sound to support the filter assembly. Ensure the filter is mounted vertically with the drain plug (if present) at the bottom.
2. **Mount the Bracket:** Securely attach the provided mounting bracket to the chosen location using appropriate marine-grade fasteners (not included).
3. **Install the Filter:** Apply a thin coat of clean engine oil or fuel to the filter gasket. Thread the filter onto the bracket until the gasket contacts the mounting base. Tighten an additional 3/4 to 1 full turn by hand. Do not overtighten.
4. **Connect Fuel Lines:** Connect the fuel supply line from the tank to the inlet port of the filter housing. Connect the fuel line leading to the engine to the outlet port. Ensure all connections are tight and leak-free. Use the provided brass pipe plugs (18-4264 and 18-4256) to seal any unused ports.
5. **Prime the System:** After installation, prime the fuel system according to your engine manufacturer's recommendations to remove any air. Check for leaks thoroughly before operating the engine.

Important: Always refer to your engine manufacturer's manual for specific fuel system requirements and safety precautions.

4. OPERATION

Once installed, the Sierra Fuel Water Separator Filter operates continuously to protect your engine. Fuel flows through the filter, where water and particulate contaminants are separated and retained by the filter media. The filtered fuel then proceeds to the engine.

The filter's design ensures a high flow rate (90 GPH) to meet the demands of various marine engines while maintaining superior filtration efficiency for both water and 10-micron particles.

5. MAINTENANCE

Regular maintenance of your fuel water separator is essential for optimal engine performance and longevity. The filter

element should be inspected and replaced periodically.

- **Filter Replacement:** Replace the fuel water separator filter at least once per boating season or every 50 hours of operation, whichever comes first. In harsh conditions or with contaminated fuel, more frequent replacement may be necessary.
- **Draining Water:** If your filter housing includes a drain valve, regularly check for and drain any accumulated water.
- **Inspection:** Periodically inspect all fuel lines and connections for signs of wear, cracks, or leaks.

To replace the filter:

1. Shut off the fuel supply to the filter.
2. Place a suitable container beneath the filter to catch any spilled fuel.
3. Unscrew the old filter counter-clockwise.
4. Clean the mounting base thoroughly.
5. Apply a thin coat of clean engine oil or fuel to the gasket of the new filter.
6. Thread the new filter onto the base until the gasket contacts, then tighten an additional 3/4 to 1 full turn by hand.
7. Restore fuel supply and prime the system, checking for leaks.

6. TROUBLESHOOTING

If you experience issues with your fuel system after installing the filter, consider the following:

- **Engine Stalling or Poor Performance:**
 - Check for air in the fuel lines. Re-prime the system.
 - Ensure all fuel line connections are secure and not leaking.
 - The filter may be clogged. Replace the filter element.
- **Fuel Leaks:**
 - Verify the filter is tightened correctly (hand-tight plus 3/4 to 1 turn).
 - Inspect the filter gasket for damage or improper seating.
 - Check all fuel line connections for tightness.

If problems persist, consult a qualified marine mechanic.

7. SPECIFICATIONS

Brand:	Sierra
Model Number (Part Number):	78482 (Kit 47-78481)
Filter Type:	Fuel Water Separator
Filtration Efficiency:	90% efficient at 10 micron particles
Water Separation:	Removes over 98.8% of emulsified water
Flow Rate:	90 GPH (Gallons Per Hour)
Outer Material:	Aluminum

Manufacturer:	Sierra Supply
UPC:	808282117931

8. WARRANTY AND SUPPORT

For information regarding product warranty, technical support, or to purchase replacement parts, please visit the official Sierra website or contact your authorized Sierra dealer.

You can find more information about Sierra products at the [Sierra Store on Amazon](#).

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