

- I. The liquid purged from the purifier is a hazardous waste and must be disposed of in accordance with all state & local ordinances.
- II. Although there may be operational instances where it is desirable, from a safety stand point, we recommend the engine be stopped and the ignition or pump be turned off before purging the purifier.
- III. It is NOT necessary to drain the entire unit, except under "V" below.
 - A. Only contamination should be removed.
 - B. Purging is complete when clean fuel is observed draining from the purifier.
- IV. The purging procedures explained in "VI" below, are recommended to be performed every 100 to 150 operating hours. Purifiers operating in harsh environmental conditions, i.e., high humidity, dust, etc., or those cleaning seriously contaminated fuel, or operating in fuel cleaning or polishing operations will require more frequent purging.
- V. We recommend draining the purifier and removal of the top fill plug and drain valve after every 2000 hours of operation. When the top and bottom plugs are removed, the purifier can be blown out with high-pressure air from the top down. This will remove any solids that may be retained in the baffles or lower portions of the purifier.
- VI. Purging
 - A. **Purifier operating on the pressure side of the fuel system:**
 1. Open drain valve located at the bottom of the purifier. Purge or drain contaminants until clean fuel is observed.
 2. Close drain valve. Pressurize fuel system.
 3. Press air purge valve located on the top of the unit. Hold valve down until all air has been evacuated and fuel squirts from the valve.
 4. Purifier is ready to resume operation.
 - B. **Purifier operating on the suction side of the fuel system:**
 1. If unit is equipped with a check valve located at the intake coupling:
 - a. Open drain valve located at the bottom of the purifier. Purge or drain contaminants until clean fuel is observed.
 - b. Close drain valve.

- d. Remove fill plug at the top of purifier and top off fuel level in unit.
 - d. Purifier is ready to resume operation.
2. If unit is equipped with a fuel shut off valve:
 - a. Shut off fuel flow to purifier.
 - b. Using a bottle, a jar, or a similar container, open the drain valve (*located at the bottom of the purifier*). Purge or drain contaminants until clean fuel is observed. We suggest you open and close the drain valve several times in a rapid succession to assure all contaminants have been removed and the drain is sealed.
 - c. Remove fill plug at top of purifier and top off fuel level in unit.
 - d. Purifier is ready to resume operation.
3. If no shut off or check valve is provided:
 - a. Using a bottle, a jar, or a similar container, open the drain valve (*located at the bottom of the purifier*). Purge or drain contaminants until clean fuel is observed. We suggest you open and close the drain valve several times in a rapid succession to assure all contaminants have been removed and the drain is sealed.
 - b. Remove fill plug at top of purifier and top off fuel level in unit.
 - c. Purifier is ready to resume operation.
 - d. Restart system, run for a minute or so, shut down and repeat Step "B" above to ensure the purifier has remained full.

NOTE: In some installations, especially if the purifier is located on the suction or vacuum side of the fuel system, fuel may drain back into the tank whenever the top fill plug is opened. If a check valve or shut off valve cannot be installed at the "IN" port of the purifier, it may be helpful to install the incoming line so that a loop extends above the level of the top of the purifier (so that the fuel line creates a reverse "P" trap). Where possible, pinching off the fuel line prior to opening the top fill plug will also help to assure the fuel does not drain back into the tank.



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INSTALLATION PROCEDURE

Make sure the engine is stopped and the ignition or starting circuit has been turned off.

Using the universal mounting straps provided, surely mount the purifier approximately level with or lower than the intake of the primary filter. Install the purifier in a vertical position. Make sure to provide sufficient clearance for the fuel line connections and verify there is adequate room below the purifier to allow for draining (*see maintenance instructions*).

Disconnect the fuel line between the fuel tank and the primary fuel filter. Bend, modify or replace fuel lines so that the fuel line runs from the tank to the IN coupling on the purifier. Modify the existing or prepare a new fuel line from the OUT coupling on the purifier to the input fitting on the primary filter.

All plumbing and pipe fittings must be of compatible materials and size to insure a smooth even flow to the purifier. **(WARNING: USE OF INCORRECT FITTING MAY ALTER MANUFACTURES SPECIFICATIONS AND ADVERSELY EFFECT WARRANTY)**. Wrap at least four (4) layers of Teflon tape (*or other acceptable sealant*), around the threads. Including the spring sealed bottom drain, top fill plug and the inlet and outlet fuel line fittings.

The purifier must be grounded to insure proper operation of the optional heating element or optional sensor, (*if purchased follow these instructions provided*). A ground strap or ring should be threaded on the heating element then at least four (4) layers of Teflon tape should be wrapped around the threads and the heating element tightened into the purifier body. Connect a ground wire (not provided) to ground (*engine block, frame rail or similar reliable location*). *Because of the powder coated finish on the purifier, mounting straps, an acceptable ground cannot be assured simply by mounting the purifier to the engine or frame.*

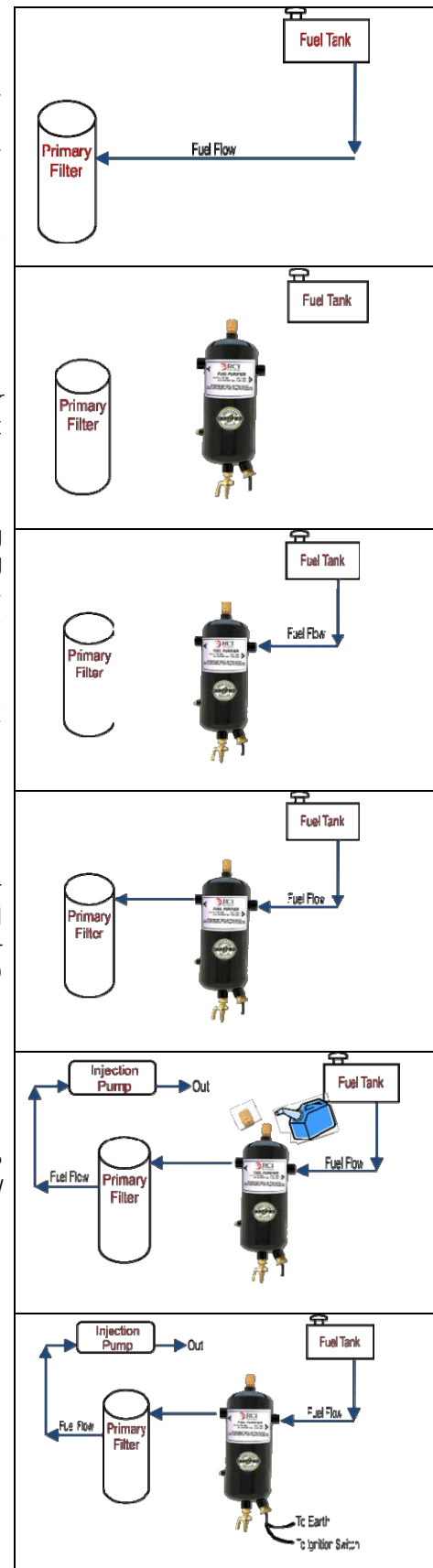
Connect a switch controlled fused lead (*works only when ignition is on*) to the terminal of the heater. This provides for operation of the heater only when the ignition is on. The heater remains in operation whenever the equipment is operating. It is not necessary to disconnect or shut off the heater in warm or hot weather.

Note: Operation of the purifier, especially in warmer climates, does not require the use of the heater. However, if the heater is not to be used, the heater coupling on the purifier must be plugged.

Connect the prepared fuel lines. Make sure the lines run from the fuel tank to the IN coupling on the purifier and from the OUT coupling to the primary fuel filter. Install the drain plug and check that the factory installed sensor port cap is secure. Replace the sensor port cap with the optional sensor. (*If sensor purchased – follow the instructions provided with the sensor kit*). Inspect to insure the compatibility of all line, assure no kinks or crimps, which may impede fuel flow. Check all connections to insure they are correct and tight.

Completely fill the purifier with clean fuel. Install the top plug, make sure plug has been properly wrapped with Teflon tape (*or other acceptable sealant*) to insure a tight seal. To insure proper operation of the purifier all air must be purged from the fuel system.

Note: Make sure all air has been evacuated from the purifier. If a priming pump is not provided on the engine, it may be necessary to remove the top plug and refill the purifier once or twice during the initial installation or subsequent engine or filter service.



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