

**INSTALLATION
INSTRUCTIONS**

**In-Line Fuel & Fluid Warmers
(Without Thermostat)**



CAUTION

Failure to follow these important safety messages can cause serious injury and property damage.

- Not for use with gasoline, ethanol, natural gas, propane, etc
- Designed to work at <50 psi in a diesel type fuel system



INSTALLATION LOCATION

Mount lower than the coolant expansion tank (lower than the highest point in the coolant system) to avoid air entrapment resulting in poor coolant circulation.

MOUNTING

Using appropriate mounting hardware, the in-line fuel warmer can be frame or engine/transmission mounted in either the horizontal or vertical position. For vertical installations, the cold fuel plumbed into the bottom fitting and warmed fuel exiting the top fitting. To provide maximum cold weather protection, the in-line warmer must be located as close as possible to the primary fuel filter or water separator. Some engine applications may not be equipped with a primary fuel filter between the tank and transfer pump. In this situation, locate warmer as close as possible to the transfer pump.

COOLANT SUPPLY

Obtain hot coolant from a pipe plug opening on the engine pressure side (outlet side of the water pump) of the cooling system. Route coolant to either “COOLANT CONNECTION” on warmer.

COOLANT RETURN

Route coolant from unused “COOLANT CONNECTION” on warmer back to engine pipe plug on suction side of engine water pump.

FUEL

Route fuel line from tank to either “FUEL CONNECTION” on fuel warmer. Install fuel suction line from other fuel connection on warmer to primary fuel filter inlet or to transfer pump if engine is not equipped with a primary filter. If more than 24 inches (610 mm) of fuel line is installed between the warmer and filter/pump, it is recommended that the line be insulated with ARCTIC FOX TUBE INSULATION of the proper inside dimension to fit the line. Always use equipment manufacturer fuel line.

NOTICE

- Failure to follow installation instructions will result in poor performance.
- While it is physically possible to interchange fuel and coolant connections in pairs, heat transfer efficiency will be reduced by up to 43% on fuel systems which flow over .5 GPM (1.9 LPM).
- For the most efficient operation of fuel warmers, it is **recommended** that a separate coolant loop be provided. As necessary, use Tee's or Wye's in coolant supply and return lines thereby paralleling with another accessory. However, if all access ports on the engine are being used for other accessories, such as cab or sleeper heaters or coolant sensors, the Tee or Wye may have to be considered as an option. In this circumstance, the Tee/Wye must be appropriately sized for the fuel warmer and should be installed at the engine or as close to the engine as possible. It should also be noted that plumbing a fuel warming device in series with a cab heater may drastically reduce the amount of heat transferred to the fuel. Hot coolant should be shutoff to the fuel warmer when ambient temperatures reach 40° Fahrenheit (4° Celsius). Manual shut off valves such as Arctic Fox part numbers A-275, A-461, and A-526 or remote automatic shut-off thermostats are available from your dealer. Contact an Arctic Fox application engineer if you have questions installing a remote shut-off thermostat.

HELPFUL HINTS

If an in-line fuel warmer is used with an optional in-tank warmer, both can be plumbed in series in the same coolant loop. However, the hot coolant from the engine coolant supply should first pass through the in-line warmer, then on to the in-tank warmer. This will allow maximum anti-waxing protection to the primary fuel filter upon initial startup after an extended "cold soak" period. For additional cold weather protection, especially below 0° F (-18°C), Arctic Fox tube insulation can be added to all fuel and coolant lines to reduce external heat loss.

WARRANTY

The Phillips & Temro Industries warranty statement is located on the website at phillipsandtemro.com/terms