FUEL WARMER SELECTION INFORMATION

INFORMATION REQUIRED TO SPECIFY A FUEL WARMER

To select the proper fuel warmer for a vehicle, it is important to first determine what the fuel issues are:

1) Is the fuel waxing or gelling in the tank, making it difficult to draw the fuel out?
2) Is the fuel becoming too gelled in the fuel line between the tank and primary filter?
3) Is the fuel only waxing in the fuel filter causing it to plug?
4) Is there a combination of these conditions?
5) Is the condition immediate on start up, or no start?
6) Does the condition occur after a period of operation?

Once these conditions are determined, the next step is to understand the operational characteristics of the vehicle:

A) Do they operate for long periods of time under moderate to full engine load conditions?
B) Do they operate intermittently such as in a pick-up and delivery operation where the engine is stopped and started frequently?
C) Do they idle for long periods of time with only a small to moderate load on the engine?
D) Do they park for extended periods of time with the engine off?

Matching the proper Arctic Fox fuel warmer to overcome the combination of fuel issues and operational characteristics is then possible based upon the features, advantages, and benefits of each style of fuel warmer.

FUEL WARMER: FEATURES – ADVANTAGES - BENEFITS

HOT FOX MODELS

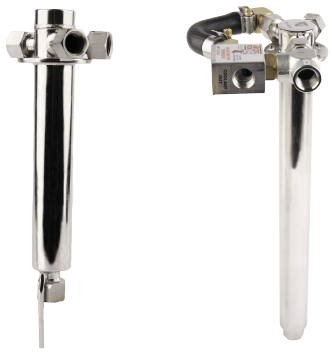
Feature - Combines the heating capability of both an in-tank and in-line fuel warmer.

Advantage – Provides heat into the volume of fuel in the tank as well as applying additional heat to the fuel as it is drawn out of the tank through the center tube of the heat exchanger.

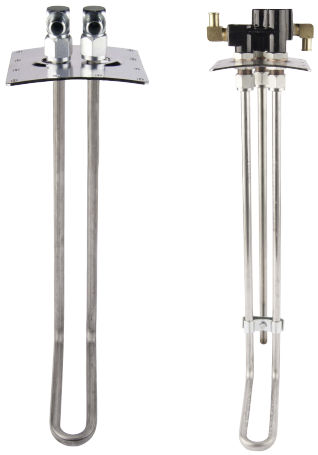
Benefits – Addresses in-tank fuel gelling as well as in-line and fuel filter gelling. Provides faster fuel warming as a smaller volume of fuel is being heated as it is drawn from the tank. This model applies the same heat value to the fuel being drawn from the tank, regardless of the volume of fuel in the tank resulting in a more stable fuel temperature.

Fuel conditions addressed: 1, 2, 3, 4, 6.

Operational characteristics addressed: A, B, C.



ARCTIC FOX MODELS



Feature - Prevents fuel gelling in the fuel tank when operating under condition "A" above. Variations of this model also provide for a fuel pick up tube that is mounted close to the heat exchanger. These models do NOT add heat to the fuel being drawn out of the tank and the fuel temperature is dependent upon the volume of fuel in contact with the heat exchanger.

Advantage – When located near an existing fuel stand pipe or utilizing a model with an integral stand pipe, the Arctic Fox model will maintain a liquid volume of fuel within the tank while the vehicle is operating at moderate to full engine load.

Benefits – Addresses in-tank fuel gelling, improves fuel flow through hose and filter.

Fuel conditions addressed: 1, 2, 3, 6.

Operational characteristics addressed: A

IN-LINE FUEL WARMERS

Feature - Connects to the fuel line instead of in the fuel tank and prevents fuel gelling in the fuel line and filter.

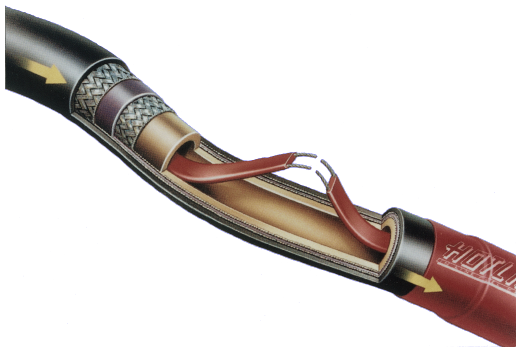
Advantage – Fuel heating is accomplished closer to the fuel filter.

Benefits – There is no need to modify the fuel tank, heating fuel close to the filter results in warmer fuel at that location due to reduced heat loss from the surface of the fuel hose.

Fuel conditions addressed: 2, 3, 4, 5, 6.

Operational characteristics addressed: A, B, C.

HOTLINE® ELECTRIC HEATER



Feature - Replaces existing fuel line, self-regulating, operates on truck battery power, and provides rapid heating to facilitate engine start and auxiliary heat for moderate filter gelling conditions when engine is at low to moderate load.

Advantage – Provides liquid fuel in the fuel line for engine start up with minimal battery power consumption. Self-regulates power consumption based upon fuel temperature in the fuel line to minimize power requirements and prevent overheating of the fuel. This fuel warmer can be operated as required while the vehicle is in operation to add heat to the fuel in the event of power loss due to filter plugging at moderate engine loads.

Benefits – There is no need to modify the fuel tank, or connect to the engine cooling system, heat is provided regardless of engine temperature and is operated from the vehicle cab.

Fuel conditions addressed: 2, 3, 5, 6.

Operational characteristics addressed: A (up to moderate load), B, C.

ELECTRIC FLUID RESERVOIR HEATERS

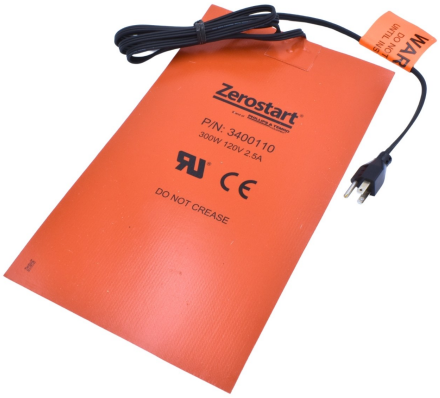
Feature - Externally mounted, operate on 120 or 240 volts AC power, permanent installation, no tank modification required.

Advantage – Reservoir heaters provide a liquid pool of fuel in the tank for engine operation until other fuel warmers become fully functional. The devices are self-adhesive and can applied to most metal tanks with smooth, flat or curved surfaces.

Benefits – Used in addition to other fuel warming devices, reservoir heaters will provide fuel for engine start up, and can be operated while the vehicle is stationary with the engine running.

Fuel conditions addressed: 5

Operational characteristics addressed: D



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