
“Hydronic 5 Coolant Heaters: Purpose & Function” Video Transcript

VIDEO DESCRIPTION:

Length 03:57 min

Watch this video to learn both the purpose of a Hydronic 5 coolant heater, and how it works.

VIDEO TRANSCRIPT:

(Speaker)

Welcome to Espar Heater Systems - a member of the Eberspaecher group of companies. This video will outline the purpose, function and installation procedure of the Hydronic 5 coolant heater. So it's important to take the time to review it.

Part One: Purpose and Function

Espar's Hydronic 5 coolant heaters are for affordable pre heating solutions for trucks.

There are several benefits to having a Hydronic heater:

- It makes it easier to start the engine in cold weather;
- It will supply heat to the cabin shortly after starting the engine;
- Reduce engine wear;
- And provide fuel saving due to less idle time;
- Also the heater does not have any off board power requirements.
- So it can be used in remote locations.

The Hydronic 5 is an engine coolant heater that produces up to 17,000 BTUs per hour, since the heater operates on fuel and 12 Volt or 24 Volt power. It is capable of running completely independent of the vehicle engine.

The following animation shows how the Hydronic 5 heater functions:

The heater is started by means of the control switch. In this example it is the 7-day timer. Activate the timer and start the heater by pressing the heat button. It will then run for the pre-selected time, in this case 120 minutes. First of all, the heater does a safety check, control unit, flame sensor, water temperature sensor, overheat sensor, glow pin, coolant pump, fuel pump and blower motor. The coolant pump starts, the glow pin warms up, the combustion air fan begins to run, and the fuel pump starts up; a mixture of fuel and air is created in the combustion chamber; the glow pin ignites the fuel air mixture; the flame sensor measures the rise in temperature of the exhaust gas; if a programmed temperature is reached within a certain time the glow pin is switched off a short while later, the flame continues to burn by itself; the heater is now working at high output, the coolant is warmed up and the temperature sensor monitors its temperature. At 80°C or 176°F the heater switches to low output; If the coolant temperature should continue to rise above 85°C or 185°F the control unit switches to the offsetting and the fuel supply is cut off. The flame goes out and the heater goes to standby. The water pump continues to run. If the temperature of the water should drop below 75°C or 167°F the heater will start up in high.