

Frequently Asked Questions About Hilton Cordless Engine Heaters

SUBJECT: CATALYTIC COMBUSTION

Q: What is catalytic combustion and why is it so safe?

A: Combustion is a chemical process in which oxygen combines with other elements to produce light and heat. When this chemical process takes place in the presence of a catalyst, it is called "catalytic combustion". The catalyst allows the chemical process to take place at a temperature below the flame point of the material. It is virtually impossible to have a flame or fire in catalytic combustion. You can leave your Hilton Cordless Engine Heater while ignited with no concern for flame or fire. This is about as safe as you can get.

Q: How long will the catalyst last?

A: Catalytic metals are known as noble metals in that they do not combine, oxidize or deteriorate.

SUBJECT: HEATER FUEL

Q: What fuel does the Hilton Cordless Engine Heater burner use?

A: The heater burns vapor fuels. It can be calibrated to burn either liquid propane vapor or natural gas.

Q: Are there any limiting factors in using liquid propane as fuel?

A: At - 44 degrees F, liquid propane ceases to vaporize. As liquid propane approaches this temperature, the heater will lose its fuel source and the heater will cease to function. This situation can be avoided by using the exhaust heat from the heater to heat the propane cylinder.

Q: How much fuel does the Hilton Cordless Engine Heater Use?

A: The heater uses approximately 5.4 oz. of liquid propane per hour. Most people use a 20 lb. propane cylinder - which will last about 60 hours. It is common for customers using several engine heaters to use a single large propane tank and park their vehicles around the tank.

Q: What type of hose do people use to connect the propane regulation to the heater?

A: The pressure in the line is only about 4/10ths psi and most people use 1/4" flexible fuel line which is available at most auto part stores.

SUBJECT: INSTALLATION

Q: Where should the Hilton Cordless Engine Heater be mounted?

A: We recommend that the heater be mounted in the engine compartment - vertically, using the bar furnished with the heater.

Q: Can the Hilton Cordless Engine Heater be mounted outside the engine compartment?

A: Yes, but there are several advantages to having the heater in the engine compartment.

1. You want the coolant hoses as short as possible to minimize heat loss through the hoses. If the hoses are over 20" long, it is a good idea to wrap the hoses with hose insulation because you could lose as much as 20% of the heat in the hoses.
2. The shorter the hoses, the more efficiently the hot coolant will circulate through the engine.
3. The heater gives off a lot of heat. When it gets very cold outside, throw an old tarp on the engine compartment.
4. If you must mount your heater in the open where it is exposed to strong winds, put a shield around the air intake at the base of the heater. A strong wind will not extinguish the heater, but it will alter the fuel/air mixture and the heater will not burn as hot as under normal conditions.

Q: What type of coolant hose should be connected to the heater?

A: Standard 3/4" heater hose works very well.

Q: How does the Hilton Cordless Engine Heater circulate the hot coolant?

A: The hot coolant is circulated by gravity (heat siphon - where the hot rises and the cold settles). The lower port of the heater is where the cold coolant enters the heater and the hot coolant exits from the upper port. It is important that the heater is located so that the hot coolant rises from the heater to the engine. The cold return hose should always be below the hot hose. For maximum efficiency, neither hose should have a dip or a kink.

Q: Can "quick connects" be used in the coolant hoses so that the heater can be used on multiple pieces of equipment?

A: Yes, this is common practice and it works well. Also, there are propane "quick connects" for 1/4" fuel lines. This makes it easier if you do not want to carry the propane tank on the vehicle or equipment.

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SUBJECT: BATTERY USAGE

Q: What voltage does the Hilton Cordless Engine Heater use?

A: The heaters are available in either 12 volt or 24 volt configuration.

Q: How much amperage does the Hilton Cordless Engine Heater draw?

A: There are two modes in the operation of the Hilton catalytic burner. During the "Starting Mode", the 12 volt heater draws approximately 25 amps and the 24 volt draws approximately 12 amps. The "Starting Mode" ends when catalytic combustion is established. This takes approximately 5 minutes. During the "Operating Mode", neither heater draws from the battery except for a few milli-amps to activate the solenoid valve.

Q: What happens when the Hilton Cordless Engine Heater runs out of fuel?

A: In this situation, the heater behaves much like your automobile or truck. If this condition continues for a period of time with the heater switch "on" it can result in draining the battery. This is because the heater will continually try to restart.

Q: Can the 12 volt Hilton Cordless Engine Heater be used on a 24 volt system?

A: Yes. Connect the positive and negative posts of one of the batteries directly to the heater.