



HEATER CRAFT®

Vehicle Installation

Approximate Installation Time: 3-5 Hours

Tools Required:

*#2 Phillips Screw Driver; Power Drill; 7/64" Drill Bit; 1"-4" Hole Saw; Jig Saw; Hose Cutter;
Wire Crimper; Teflon Plumbers Tape; Marine Sealant; Pencil.*

*HeaterCraft Products, LLC
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Guidelines And Definitions

These instructions contain information that is important for you to know and understand. The information provided relates to safety issues for the installation and use of our products. To help you identify important information, we use the following system.

Warning –

Important Safety information – A hazard that may cause an injury, serious injury, or loss of life.

Caution –

Information for preventing improper operation of, or damage to equipment.

Note –

Information pertaining to the installation, operation, and/or maintenance of this product that you should pay special attention to.

Heater Craft will not be held liable for any accidental damage to persons and/or property resulting from any installation not completed within the specified guidelines started herein.

Heater Engine Installation

Warning – Hot engine coolant can cause severe burns! Never open the cap on a hot radiator. Some vehicles are equipped with electric fans that may start without warning even with the engine shut off. Wait until the engine has cooled completely before installation.

Heater Hose Identification

Output and Return hose's will be the standard locations on the make/model of engine that you are plumping the heater to. Heater core is not directional.

Note – Our heater units are equipped with 5/8" heater core outlets. Please make sure that you have the proper size of heater hose and fittings for your installation. If the hoses and heater core outlets are not the same size, it is necessary to install a hose coupling with the proper hose sizes to prevent coolant leakage.

Engine Installation (replacing existing heater)

1. Loosen the radiator petcock or remove the lower radiator hose and drain the engine coolant into a clean suitable container.
2. Remove the existing heater.
3. Install the new heater (as outlined in the Heater Unit Installation section)
4. Connect existing hoses to the new unit. It makes no difference which side of core outlets to which the hoses are attached.

Heater Engine Installation *(Continued)*

Warning – Hot engine coolant can cause severe burns! Never open the cap on a hot radiator. Some vehicles are equipped with electric fans that may start without warning even with the engine shut off. Wait until the engine has cooled completely before installation.

1. Drain the engine coolant into a clean suitable container for reuses.
2. Remove the existing heater.
3. Route the hoses from the existing heater unit to the new heater unit if applicable (new hose maybe needed)
4. Attach the hoses to the new heater unit. It makes no difference which side of the heater core outlets to which hoses are attached.

Heater Unit Installation

1. Locate an area to mount the heater unit. Be sure the unit will be in an area with adequate air circulation.

Caution – The heater unit should be mounted below the level of the radiator cap. If it is mounted above this level, it is possible for air to be trapped in-line. If there is air trapped in-Line, it will not allow the water to circulate efficiently and may cause the engine to overheat. If the heater unit is mounted above the radiator cap it may be necessary to install an in-line are bleed valve at the highest point.

2. Attach the brackets and mount the heater unit.

Note – It may be easier to make the hose and wiring connections before mounting the heater unit. Some heater models are equipped with adjustable brackets for different mounting situations.

3. Cut the water/coolant hoses to length, attach them with hose clamps, and secure them in place If needed.

Note – The hose clamps should be fastened near the end of the hose to prevent the hose end from "mushrooming" and to prevent coolant leakage.

The hose can connect to either heater core outlet.

Be sure the hoses are not kinked or pinched in any way, and do not contact any moving parts, sharp objects, or edges.

Venting

1. Locate the area(s) for mounting the hot air vent(s).

Note – Vents should be located so the heat will blow out in a desirable direction and allow easy access for adjustments. They should be in area(s) that are protected from gear or persons damaging them.

2. Drill or cut the proper size hole to match the vents that you are using Heater Craft vents if applicable.

3. Install the vents in place and attach the vent hose to them. Secure the vent hose with a plastic tie or hose clamp.
4. Route the vent hose to the heater unit.

Note – Vent hoses should be routed to keep from being damaged.

5. Cut the vent hose to length, attach with a plastic tie or hose clamp, and secure in place.

Note – Vent hoses should be kept short as possible for greater heating efficiency.

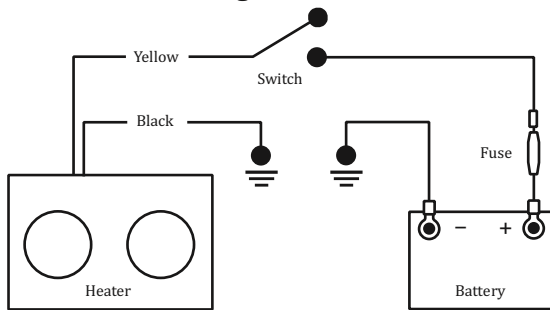
Wiring The Fan Motor

1. The wires from the heater unit are color-coded and correspond as follows.

Single-speed fan motor:

The fan motor and switch should be protected with an in-line fuse. The fuse rating should be greater than the amperage draw of the fan motor.

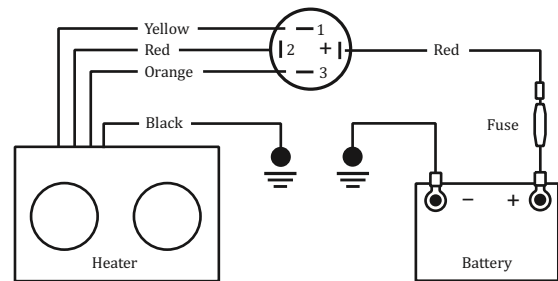
- Yellow, Red or Orange lead – on/off switch (Power source)
- Black lead – ground



Single-speed fan motor

A four-position switch is needed for full operation. The fan motor and switch should be protected with a 15-amp in-line fuse.

- Yellow lead – Low speed
- Red lead – Medium speed
- Orange lead – High speed
- • Black lead – ground



3-speed fan motor

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3-speed fan motor:

Wiring The Switch and Switch Plate

1. The wires from the heater unit are color coded and correspond as follows:

Note – Route the wires away from moving parts and secure them from sharp objects or edges.

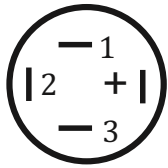
2. Route the BLACK wire to a ground source and attach.
3. Route the fan wires to the fan switch and attach.

Part numbers: E-112 Switch and E-113 Mounting plate.

1. Locate a place to install the heater fan switch.
2. Drill the proper size hole for your installation:
 - Without the switch mounting plate, drill a 7/16" hole.
 - With the switch mounting plate, drill a 1 1/8" hole.

- To mount the switch plate, pre-drill a 5/64" hole for the mounting screws provided and mount the switch plate.

E-112 Switch Wiring Diagram



- Terminal 1 – Yellow wire, low-speed
- Terminal 2 – Red wire, medium speed
- Terminal 3 – Orange wire, high speed
- Terminal + – Red wire, power source

Testing The Installation

Warning: Carbon Monoxide (CO) is emitted from the engines' exhaust. Do not run the engine without proper ventilation.

1. Test the fan motor on all settings.
2. Check all hot-air outlets to make sure there are no air restrictions.
3. Refill engine-cooling system to the required level. Operate engine until normal operating temperature is reached.

Warning: Rotating fan blades can cause serious injury. Some vehicles are equipped with electric fans that may start without warning, even with the engine shut off. Keep hands, hair loose clothing, and tools away from all moving parts.

4. Shut off the engine and check the heater core, hose connections, and all hoses for coolant leaks.
5. After the engine has cooled, recheck the coolant level.

Questions, please call us For Technical Support (208) 687-4400, www.heatercraft.com

Operation Warning:

Carbon Monoxide (CO) is emitted from the engines' exhaust. Do not run the engine without proper ventilation. Don not run the engine in a confined space or where back drafting may occur.

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