

Heater Engine Installation

(Part#: HEATER, HEATER-24)

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 hose:

This hose would typically originate from the intake manifold or thermostat housing.

Return hose:

This hose would typically route to the water pump on the front of the engine.

Note

Our heater units are equipped with 5/8" or 3/4" 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 the heater core outlets to which the hoses are attached.

Engine Installation

(in series with existing heater)

1. Loosen the radiator petcock or remove the lower radiator hose and drain the engine coolant into a clean suitable container.
2. Identify the return hose from the existing heater unit and remove.
3. Route a hose from the existing heater unit to the new heater unit.
4. Attach the return hose from the existing heater unit to the new heater unit. It makes no difference which side of the heater core outlets to which the hoses are attached.
5. Route a return hose from the new heater unit to the port where the return hose was removed from in step 2.

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 air 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.

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 collect 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 areas 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:

- H-504 Directional Euro Vent -- use a 3” hole saw.
 - H-506 Directional Rotaire Vent -- use a 4-1/4” hole saw.
3. Mark the location of the mounting holes and pre-drill them.
4. Install the vents in place and attach the vent hose to them. Secure the vent hose with a plastic tie or hose clamp.

Note

Vent hoses should be routed to prevent any loose gear from damaging them.

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

Note

Vent hoses should be as short as possible for efficiency.

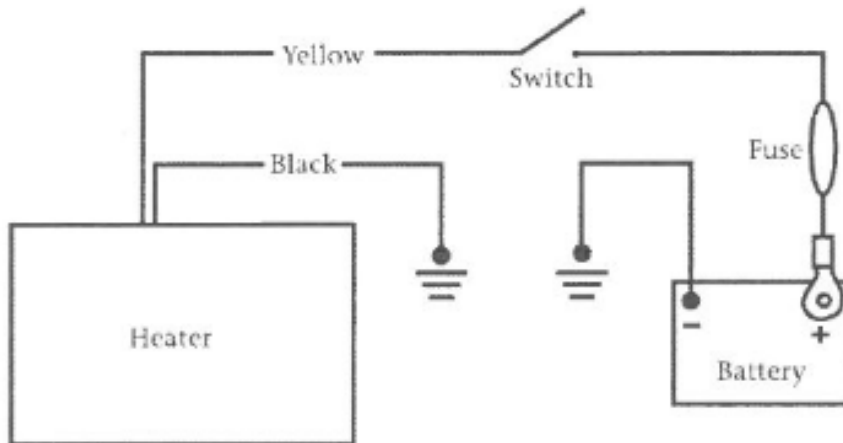
Wiring the Fan Motor

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.

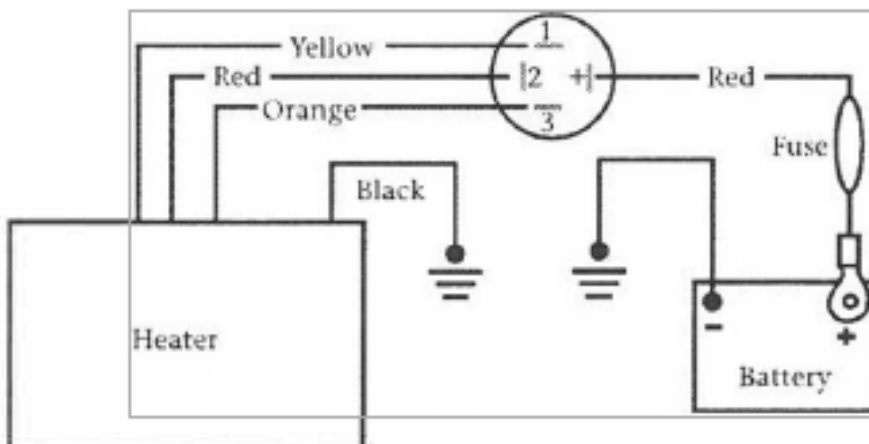
- Red or Yellow lead -- on/off switch (power source)
- Black lead -- ground.



3-speed fan motor

A 4-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.



Questions?

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1-888-648-4923

(Mon-Fri, 9AM-5PM, EST)

or email Mike Meditz at:

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Switch & Switchplate

Note

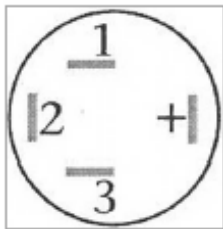
Route the wires away from moving parts and secure them from sharp objects or edges.

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

E-112 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

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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.

Note

If the air flow does not correspond to the switch setting, the wires are not on the proper terminals. Refer to the wiring diagram and recheck the switch wiring.

2. Check all hot-air outlets to make sure there are no air flow restrictions on.
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, re-check the coolant level.