



SUMMIT AUXILIARY HEATERS

SUM-991101 MOAB Xtreme

SUM-991102 Heavy Duty with Round Outlets

SUM-991105 Heavy Duty with Grill Front

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.

Operation Warning:

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

Questions? Call our Tech Line 1-330-630-0240

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 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

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.

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. The hoses can connect to either heater core outlet.

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 and connect with hose clamps. The hoses can connect to either heater core outlet.
4. 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

SUM-991101 / SUM-991102 / SUM-991105

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



Caution

Mount the heater unit 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, connect them with hose clamps, and secure them in place.



Note

- Fasten the hose clamps near the end of the hose to prevent the hose end from "mushrooming" and to prevent coolant leakage.
- The hoses can connect to either heater core outlet.
- Be sure the hoses are not kinked or pinched in any, and do not contact any moving parts, sharp objects or edges.

VENTING

SUM-991102

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.
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.
5. Route the vent hose to the heater unit.



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.

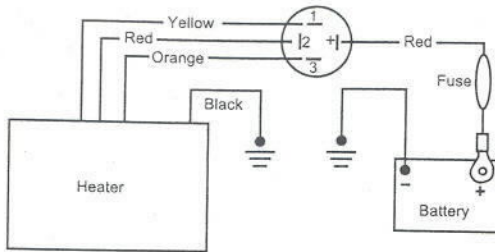
WIRING THE FAN MOTOR

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

3-speed fan motor

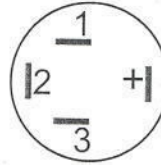
A 4-position switch is needed for full operation. The fan motor and switch should be protected with a 15-amp in-line fuse.

- Yellow lead -- Low speed.
- Orange lead -- High speed.
- Red lead -- Medium speed.
- Black lead -- ground.



SWITCH & SWITCHPLATE

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.



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



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.

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.
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.

LIMITED ONE-YEAR WARRANTY

This Limited One-Year Warranty is given to the original purchaser (the "Buyer") of this new Summit or Summit Performance Branded Product. Summit Racing Equipment warrants that the product will be free from defects in workmanship and materials under normal use and service for one year from the date of purchase.

Your responsibilities:

Keep a sales receipt, canceled check, or payment record to verify your purchase date. Operate and maintain the product in accordance with the specifications provided to you with the product. Arrange for or pay items and costs that are not covered by this Limited Warranty.

What is not covered:

Damages caused by shipping, product misuse, misapplication, improper installation or maintenance, or damages resulting from accidents, contact with on-road or off-road hazards, or racing engine use. Labor costs to remove and install the products or component parts. The costs of shipping the product to and from Summit Racing Equipment.

Claims Procedure:

The duration of this warranty is limited to claims made in writing to Summit Racing Equipment within one year after the Purchase Date.

The Buyer should call the telephone number below to report a possible warranty claim. The Buyer must also allow Summit Racing Equipment to inspect the product, and the Buyer must reasonably cooperate with Summit Racing Equipment with respect to verifying the warranty claim of the Buyer. In the event that a warranted defect is discovered, Summit Racing Equipment will repair or replace the product, or return the purchase price to the Buyer, at the option of Summit Racing Equipment.

All shipping costs are paid by the Buyer. Merchandise returned to Summit Racing Equipment without prior authorization will not be accepted.

This warranty extends only to the Buyer and is not transferable. Implied warranties applicable to this transaction extend only to one year. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

Summit Racing Equipment shall not be responsible for any incidental or consequential damages of the Buyer. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you.

This warranty gives you very specific legal rights, and you may also have other rights which vary from state to state.



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