

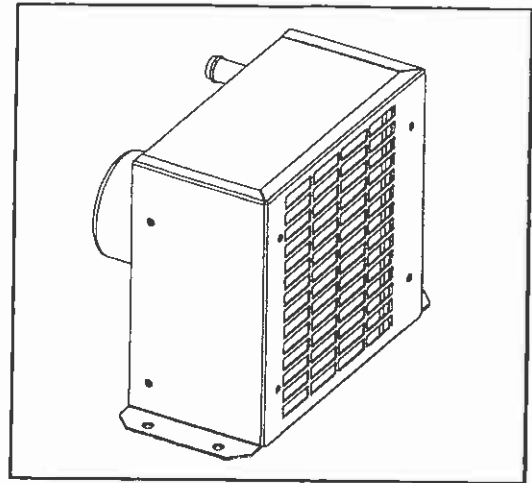
Model 500 Cab & Cargo Heater

Installation Instructions for:

700-0501 700-0502 700-0503 700-0504
700-0505 700-0506 700-0507 700-0508

Package Contents:

- (1) Cab & Cargo Heater
- (1) Electrical Control Switch
- (1) Electrical Control Switch Knob
- (3) Crimp-on Electrical Connectors
- (1) Model 500 Mounting Template



1.0 HEATER MOUNTING

- 1.1) Please read instructions thoroughly before starting installation and retain the instructions for future reference.
- 1.2) Remove heater from shipping container.
- 1.3) Position heater in area intended for mounting. When selecting area for mounting, consider the following:
 - Heater performance is not affected by orientation
 - Unit must be mounted at or below engine level to provide proper coolant flow
 - Unit should be placed out of the way so it is not an obstruction
 - Clearance must be left around unit to provide proper air flow
 - Routing of coolant hoses
 - Routing of electrical wiring
 - Integrity of mounting surface
- 1.4) Position *Model 500 Mounting Template* in area selected and secure in place.

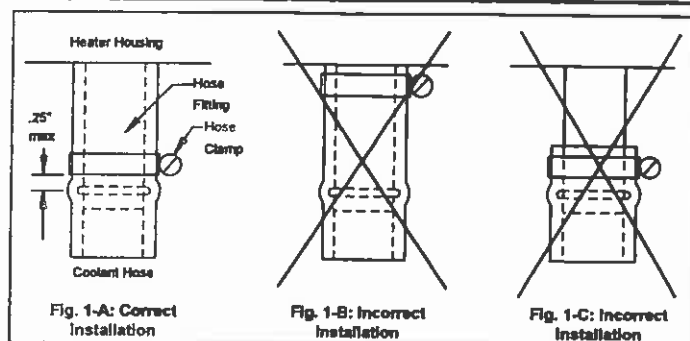
▲ WARNING: Steps 1.5 - 1.7 require drilling into vehicle. Wear eye protection, have battery ground wires disconnected, and check rear of surface being drilled for obstructions and for components that could be damaged. Failure to do so can result in eye injury from flying debris, electrical shock from drilling into live wires, or damage to the vehicle.

- 1.5) Drill (4) 3/8" (10mm) diameter holes as indicated on supplied template for mounting holes.
- 1.6) **Only for Models 700-0501, 700-0503, 700-0505, & 700-0507 (models with coolant fittings out the bottom):**
Drill (2) 1 1/4" (32mm) diameter holes as indicated on template for coolant connection.
- 1.7) As necessary, drill appropriately sized and located holes for routing of coolant hoses and electrical wiring.
- 1.8) Re-position Cab & Cargo Heater and fasten in place using appropriate bolts, nuts, and lock washers (not provided).

2.0 COOLANT LINE CONNECTIONS

▲ WARNING: Hot coolant and surfaces. Allow engine and coolant to cool before working on coolant connections and route coolant hoses where possibility of contact is minimal. Contact with hot coolant or surfaces can cause burns.

- 2.1) Use Cab & Cargo Heater only with proper mixtures of propylene or ethylene glycol.
- 2.2) Compare size of hose connections on vehicle to size of hose connections on Cab & Cargo Heater. If different sizes, step-up or step-down fittings should be used to insure proper fitment of coolant hoses to coolant fittings.
- 2.3) Properly drain engine coolant from system, or close coolant valves to circuit.
- 2.4) Coolant hoses should meet or exceed specifications in SAE J20. Coolant hose clamps should meet or exceed specifications in SAE J1508.
- 2.5) Connect coolant pressure hose to one of the Cab & Cargo Heater hose bead fittings. Refer to Figure 1 for proper installation. The coolant hose clamps should be placed slightly behind, but not on, the fitting bead. This ensures a proper seal between the fitting bead and the coolant hose. The coolant hose should be pushed up against the Cab & Cargo Heater housing. This provides an insulation around the hose fittings which can become very hot.



▲ WARNING: Use of wrong coolant hoses or coolant hose clamps may cause leaks. Use proper coolant hoses and coolant hose clamps. Contact with hot coolant can cause burns and low coolant level can cause engine damage.

- 2.6) Connect coolant return hose to remaining Cab & Cargo Heater hose bead fitting. Refer to Figure 1 for proper installation.
- 2.7) Attach each hose to engine to provide coolant flow through heater.
- 2.8) Coolant hoses connected to the Cab & Cargo Heater should be supported to minimize stresses on the heater fittings.
- 2.9) Open any coolant valves which may have been closed in step 2.3.
- 2.10) Fill engine to correct level with proper coolant mixture.
- 2.11) Run engine to normal operating temperature to purge air from new heater circuit.
- 2.12) When engine is cool, check coolant level and fill as required.

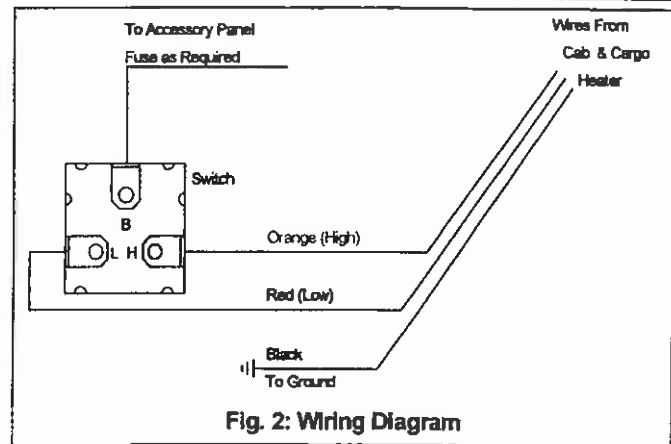
▲ CAUTION: Low coolant level can cause engine damage. Properly refill coolant tank after installation. Protect coolant hoses from hot surfaces and abrasions and tighten all coolant hose clamps to prevent coolant leaks.

3.0 ELECTRICAL CONNECTIONS

- 3.1) Disconnect vehicle battery ground wires at battery.

▲ WARNING: Live electrical wires in vehicle. Disconnect vehicle battery ground before working on electrical connections. Failure to do so may result in electrical shock.

- 3.2) Check the Cab & Cargo Heater label to determine the heater's voltage requirements. Determine the vehicle's system voltage. Install the heater only into a vehicle with DC connections of the correct voltage.



▲ WARNING: AC voltage or incorrect DC voltages can cause heater motor to overheat. Connect heater only to proper DC voltage source. Failure to do so may result in heater damage or an electrical fire.

- 3.2) Make electrical connections as shown in Figure 2. Use wire terminals which are appropriate to the environment in which they are located and install as per the manufacturers recommendations. Use a minimum of 16 gauge insulated and stranded wire that meets or exceeds the specifications in SAE J1128.

▲ WARNING: Undersized electrical wires and poor electrical connections can overheat. Use proper wire sizes and electrical connections. Failure to do so may result in an electrical fire.

- 3.3) Install standard automotive 10 amp fuse at voltage source.

▲ WARNING: Improperly fused wires may overheat. Install proper fuse at voltage source. Failure to do so may result in an electrical fire.

- 3.4) Restore power to vehicle by connecting battery ground wires.
- 3.5) Turn on Cab & Cargo Heater and verify proper operation. Cab & Cargo Heater should operate at two speeds based on switch position and fan blade should spin freely.

4.0 CAB & CARGO HEATER MAINTENANCE

- 4.1) Inspect coolant hoses for abrasion and wear and hose clamps for tightness and corrosion every 6 months. Replace or repair as necessary.
- 4.2) Inspect mounting bolts for corrosion and proper tightness annually. Replace or repair as necessary.
- 4.3) Keep unit clean and remove any obstructions from air inlet or outlet.

▲ WARNING: Moving fan blade inside unit. Disconnect power to unit before disassembling. Failure to do so may result in personal injury.