

Experienced Dealer Technician - 1.5 Hours

Average Dealer Technician - 2 Hours

Do-It-Yourself - 4 Hours

(\*=Not including accessories)

#### **Approximate Product Specifications**

Weight: 15.33 lbs.

The contents of this envelope are the property of the owner. Leave with the owner when installation is complete.

Rev. D, 03/08/2019

# WARNINGS, TIPS, & REQUIRED TOOLS

For accurate installation, proper operation, and years of satisfaction, please read and understand the installation and owner's manual fully prior to installing the heater kit.

From all of us at Curtis, we thank you for choosing our product.



Curtis Cabs, blades and general accessories add additional weight to the base vehicle. All Curtis accessory weights are listed in product brochures. Deduct the accessory's total weight from the vehicle's rated capacity and never exceed the vehicle's rated capacity including driver and passenger.

Exposure to Carbon Monoxide can Cause illness, serious injury or death. Never operate vehicle if suspicious of Carbon Monoxide. Inspect exhaust system for leaks monthly. Leaks can result from loose connections, corrosion, cracks or other damage to the exhaust manifold. If leaks are found, repair or replace exhaust system. Do not use vehicle until repair or replacement is complete.

### **TOOLS REQUIRED:**

- #2 Phillips screwdriver
- #2 Flat screwdriver
- Standard and Metric wrenches
- Ratchet
- Standard and Metric sockets
- Wire cutters
- Pliers
- Snips or Scissors
- 2-1/16" Hole saw (2" hole saw and Dremel or file may be used as an alternative)
- Antifreeze
- Drain pan

### 1. Vehicle Preparation:

- 1.1 Disconnect the negative terminal of the battery.
- 1.2 Drain cooling system by opening the petcock located on lower rear driver's side of the radiator. See figure 1.2. Remove the radiator cap to aid in the draining process.

### 2. Vent Locations:

- 2.1 Drill two 2" holes through the driver's side dash, approximately centered to either side of the top of the instrument panel as shown. See figure 2.1. Measure to locate the hole to the right of the steering wheel. Use the template on the next page to locate the hole on the far left of the dash.
- CAUTION: before drilling, check underneath the dash to be sure there is clearance for the hole saw.
- NOTE: If drilling the vent holes with the cab installed, open the windshield to maximize clearance.
- 2.2 Drill one 2" hole in the lower center of the dash as outlined in step 2.1. See figure 2.2.
- 2.3 Pull the vent outlet from its mounting flange for all three vents. Install a vent flange in each of the holes drilled in steps 2.1 and 2.2 and secure with two #6 x 1/2" sheet metal screws per vent.

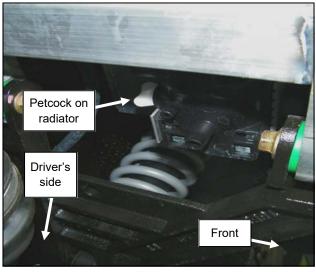
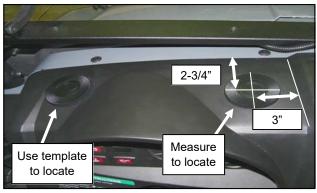


Fig. 1.2





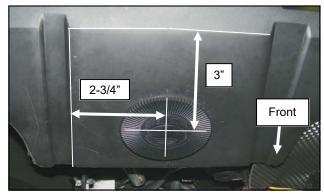
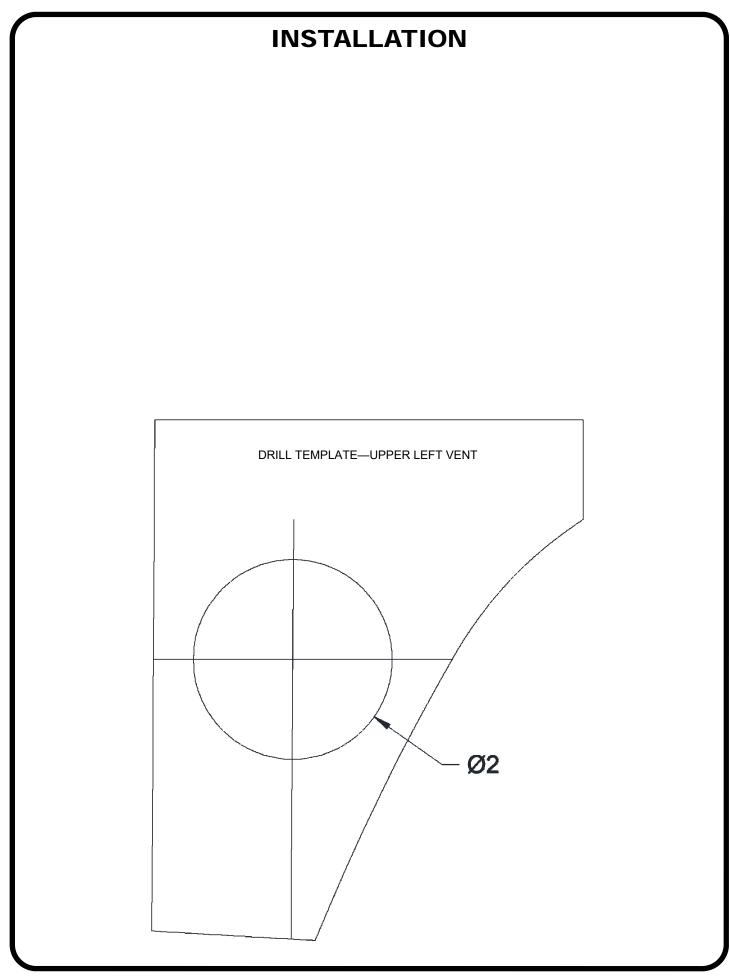


Fig. 2.2



#### 3. Wiring:

NOTE: If the Console is already installed, remove the internal mirror (if applicable) from its bracket, remove the four 1/4-20 screws from the corners of the console, and allow the console to hang from the windshield support via the tethers attached to the console.

If the console is not installed, steps 3.1 through 3.5 can be performed on a work bench.

- NOTE: The following steps require that the cab is already installed onto the vehicle.
- NOTE: Refer to the Console instructions if additional accessories will be installed.
- 3.1 Remove one of the switch plugs from the console and install the heater switch as shown. See Figure 3.1.
- 3.2 Install the Heater harness onto the switch and route the harness to the right of the console. Remove the plug from the side of the console, feed the loom-covered leg of the harness through the hole and install the grommet in the side of the console. See figure 3.2.
- 3.3 Remove and retain the three #10-32 screws and nuts holding the fuse block bracket to the console panel. Connect the push-on terminals of the Heater harness to the fuse block terminals as shown. Connect the black wire to any terminal of the ground block, and the red wire to the fuse terminal indicated. See Figure 3.3.
- 3.4 Install the included 15 amp fuse into the fuse block, at the slot connected to the Heater harness.
- 3.5 Re-install the fuse block panel to the console with the three #10-32 screws outside the console, and nuts inside. Make sure no wires are pinched under the fuse block bracket. Secure the heater harness to the console wiring with 8" cable ties. See figure 3.5
- 3.6 Install the Console panel to the Windshield Support with the four 1/4-20 bolts.
- 3.7 Route the Heater harness along the inside flange of the passenger's side A-pillar and secure with cable ties through the slots in the A-pillar. Route the heater harness underneath the dashboard toward the front compartment of the Carryall. See Figure 3.7.

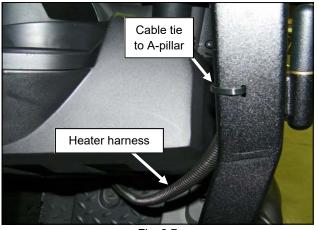


Fig. 3.7

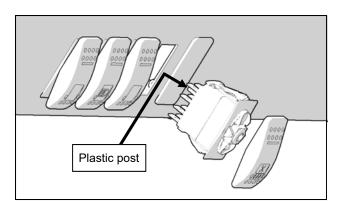


Fig. 3.1

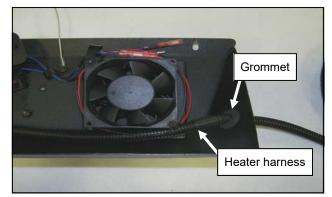


Fig. 3.2

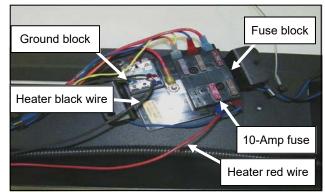
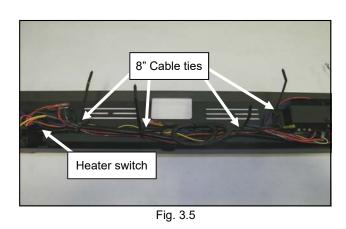


Fig. 3.3



### 4. Heater Installation:

- 4.1 Cut the supplied 2" ID duct into three equal segments approximately 24 inches long and attach the segments to the Heater with large hose clamps.
- 4.2 <u>Carryall 1500:</u> Cut one of the supplied 5/8" ID hoses in half and mark both ends of one hose.

**<u>Carryall 1700:</u>** Leave the 5/8" ID hoses at supplied length; mark both ends of one hose.

The marked hose will be the supply line. Route the heater hoses from inside the front compartment, below the plastic panel and above the frame. See figure 4.2.

- 4.3 Inside the front compartment, connect the heater harness to the wires from the heater box assembly, matching black, yellow and orange wires. Connect the heater hoses to the heater, with the marked line on the lower port. Place the heater box assembly into the front compartment, with the front bracket under the side frame and radiator bracket, and the rear bracket on top of the cross frame under the dashboard, with the wires underneath the heater box.
- NOTE: The coolant hoses to the overflow bottle may be temporarily disconnected to ease the install of the heater. Take care to replace hoses to the same port and avoid spilling any coolant that may be in the hoses.
- 4.4 Remove and discard the rear M8 bolt from the radiator bracket, on the passenger's side of the Carryall. Secure the front bracket with a 1/4-20 x 1" bolt with a 1" fender washer, through the radiator bracket and into the threaded insert of the heater bracket. Leave loose. See figure 4.4.
- 4.5 Secure the rear heater bracket to the Carryall cross frame with a 1/4-20 x 2-1/4" bolt and nut, through the hole in the frame. Leave loose. See figure 4.5.
- 4.6 Connect the ends of the heater ducts to the vents in the dash, matching order from passenger's to driver's side. Install the vent outlets into the three vent flanges.
- 4.7 Pull down on the heater hoses to remove slack, make sure the hoses are not kinked, and tighten the two 1/4-20 bolts for the heater. Torque to 120±5 inch-lbs.

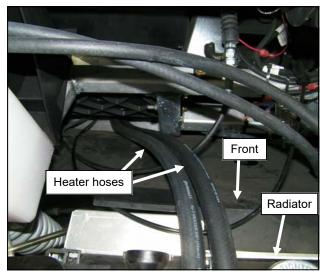


Fig. 4.2

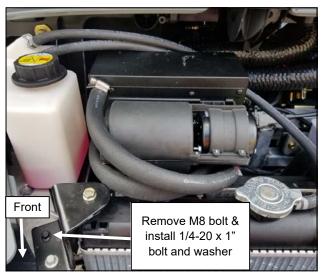
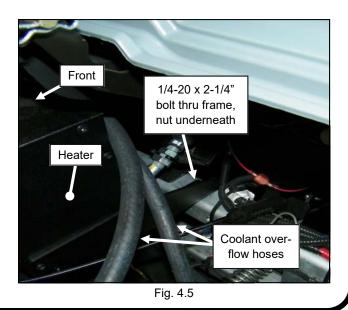


Fig. 4.4



### 5. Plumbing:

- 5.1 Underneath the vehicle, route the heater hoses along the passenger's side center frame, remove excess slack from front to rear and secure with large cable ties. See figures 5.1.1 and 5.1.2. Inside the engine compartment under the seat (Carryall 1500) or rear seat (Carryall 1700), route the heater hoses up beside the fuel tank.
- 5.2 Remove the Water pump bypass hose from the engine using pliers on the spring clamps. See figure 5.2.
- 5.3 Cut the supplied 3/8" hose in half, for two pieces about 3" long. Attach a 3/8" to 5/8" hose adapter onto each piece, and secure to both ports of the water pump with 5/8" hose clamps. See figure 5.3.
- 5.4 Route the marked heater hose (supply line) toward the rear port on the water pump, cut to length, connect to the hose adapter and secure with a 1" hose clamp. Route the other heater hose to the front port on the water pump. Cut to length, connect to the hose adapter and secure with a 1" hose clamp.

### 6. Finishing touches:

- 6.1 Confirm that all heater hose connections are tight and close the petcock on the radiator.
- 6.2 Reconnect the battery and refill the Carryall with antifreeze per the vehicle's user manual.
- 6.3 Turn the Carryall ignition on and start the engine. Verify the Heater switch lights up. Press the top of the heater switch all the way against the console and verify the heater fan is off. Press the bottom of the Heater switch for one click and listen for the heater fan. Check for airflow through all three vents. Press the heater switch a second time and verify the heater fan becomes louder and airflow increases.
- 6.4 As the vehicle warms up, inspect for coolant leaks and hot air flowing through the heater vents.

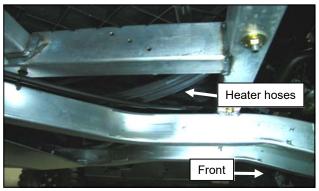


Fig. 5.1.1 (1500 shown)

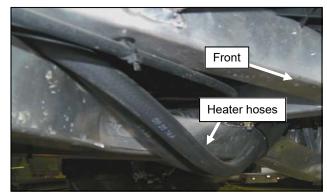


Fig. 5.1.2 (1700 rear shown)

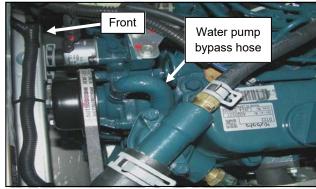


Fig. 5.2

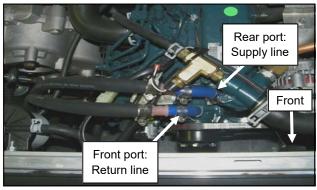


Fig. 5.3

# SERVICE PARTS

#	PART NUMBER	DESCRIPTION	QTY.
1	8SV-9PH20U9B	HEATER BOX AND CORE ASSEMBLY	1
2	8SV-SM-00610	BRKT, DRIVER SIDE	1
3	8SV-110-00035	BRKT, PASSENGER SIDE	1
4	9PH20S78BMA-A	BLOWER MOTOR	1
5	9SV-WH-00063	WIRE HARNESS, HEATER	1
6	9SV-9PCD1B	HEATER SWITCH COVER	1
7	9SV-OHC6	HEATER SWITCH	1
8	1HAP1D	2" LOUVER VENT	1
9	9SV-HRH13-15	HEATER DUCT, 2" ID	15 FT
10	9SV-HRH61-20	HEATER HOSE, 5/8" ID	20 FT
11	9PIBP-C	HEATER HOSE, 3/8" ID	1 FT
12	9PIBP-B	5/8" TO 3/8" REDUCER	1
13	9SV-9HR0060.75	HOSE CLAMPS - 7/16" - 25/32"	1
14	9SV-9HR00601.0	HOSE CLAMPS #10 (1")	6
15	9SV-9HR00602.25	HOSE CLAMPS #28 (2-1/4")	3

