an ISO 9001:2015 Registered Company

1957 Chevrolet Full-Size

with **4-Vent Plenum Evaporator Kit (565702)**

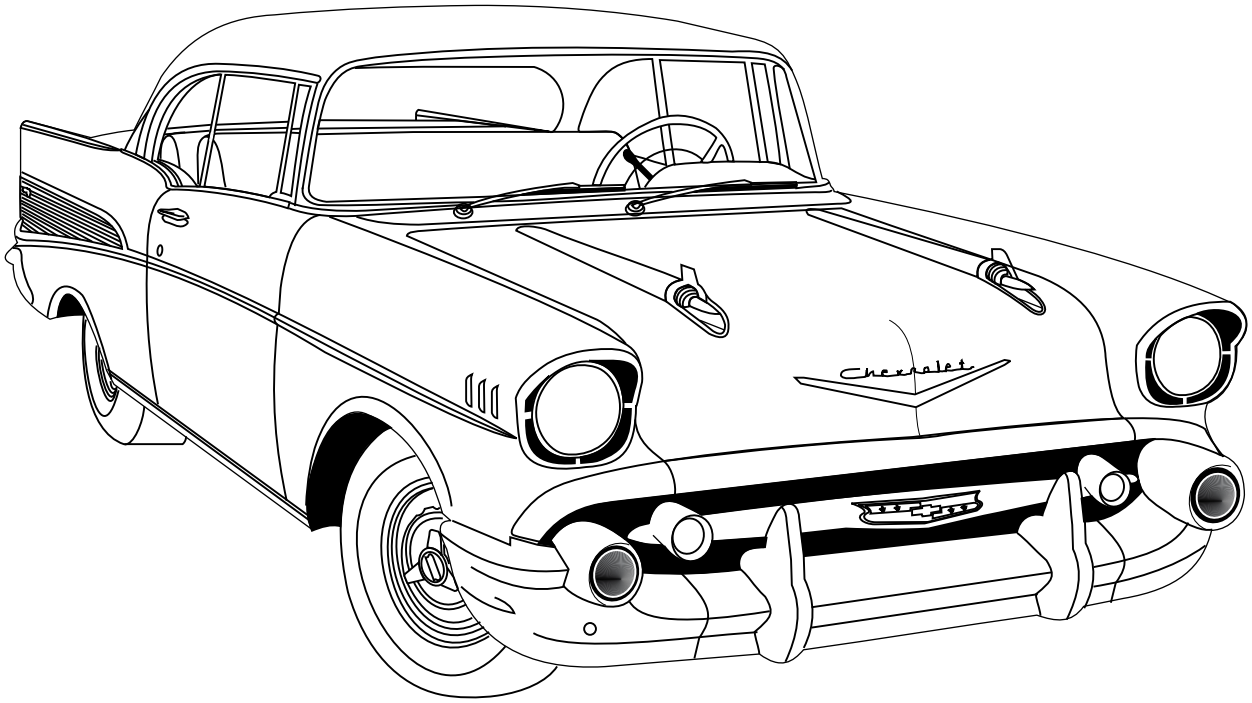

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Table of Contents

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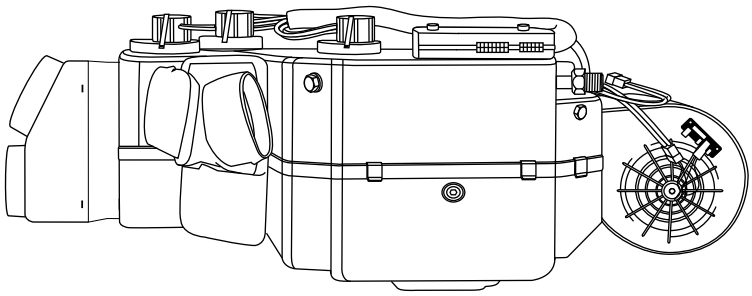
Packing List: Evaporator Kit (565702)

No.	Qty.	Part No.	Description
1.	1	761160	Gen IV Evaporator Sub Case
2.	1	781162	Accessory Kit

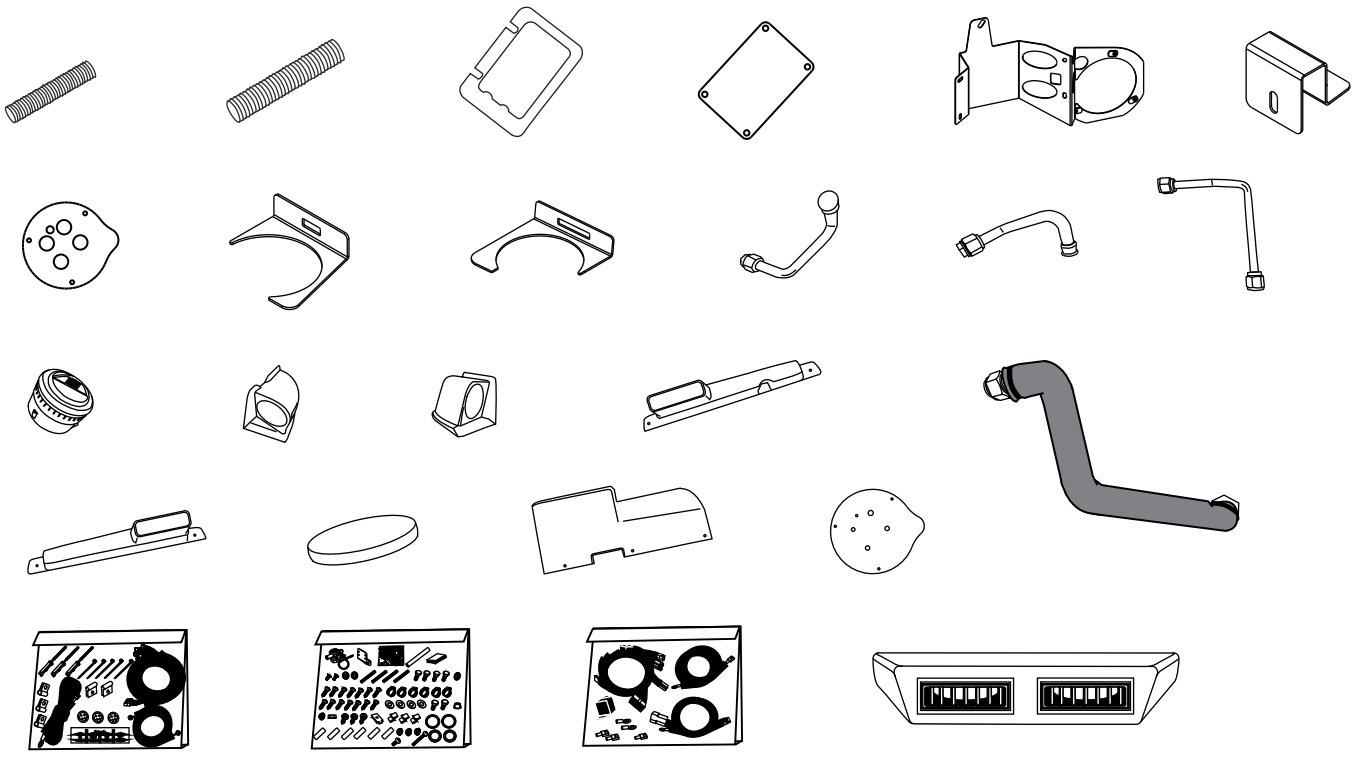
**** Before beginning installation, open all packages and check contents of shipment. Please report any shortages directly to Vintage Air within 15 days. After 15 days, Vintage Air will not be responsible for missing or damaged items.**

1



Gen IV Evaporator Sub Case 761160

2



Accessory Kit 781162

NOTE: Images may not depict actual parts and quantities. Refer to packing list for actual parts and quantities.

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Important Notice—Please Read

For Maximum System Performance, Vintage Air Recommends the Following:

NOTE: Vintage Air systems are designed to operate with R134a refrigerant only. Use of any other refrigerant could damage your A/C system and/or vehicle, and possibly cause a fire, in addition to potentially voiding the warranties of the A/C system and its components.

Refrigerant Capacities:

Vintage Air System: 1.8 lbs. (28.8 oz.) or 816 grams of **R134a**, charged by weight with a quality charging station or scale. **NOTE: Use of the proper type and amount of refrigerant is critical to system operation and performance.**

Other Systems: Consult manufacturer's guidelines.

Lubricant Capacities:

New Vintage Air-Supplied Sanden Compressor: No additional oil needed (Compressor is shipped with proper oil charge).

All Other Compressors: Consult manufacturer (Some compressors are shipped dry and will need oil added).

Safety Switches

Your Vintage Air system is equipped with a binary pressure safety switch. A binary switch disengages the compressor clutch in cases of extreme low pressure conditions (refrigerant loss) or excessively high head pressure (406 PSI) to prevent compressor damage or hose rupture. A trinary switch combines Hi/Lo pressure protection with an electric fan operation signal at 254 PSI, and should be substituted for use with electric fans. Compressor safety switches are extremely important since an A/C system relies on refrigerant to circulate lubricant.

Service Info:

Protect Your Investment: Prior to assembly, it is critical that the compressor, evaporator, A/C hoses and fittings, hardlines, condenser and receiver/drier remain capped. Removing caps prior to assembly will allow moisture, insects and debris into the components, possibly leading to reduced performance and/or premature failure of your A/C system. This is especially important with the receiver/drier.

Additionally, when caps are removed for assembly, **BE CAREFUL!** Some components are shipped under pressure with dry nitrogen.

Evacuate the System for 35-45 Minutes: Ensure that system components (Drier, compressor, evaporator and condenser) are at a temperature of at least 85°F. On a cool day, the components can be heated with a heat gun ***or*** by running the engine with the heater on before evacuating. Leak check and charge to specifications.

Bolts Passing Through Cowl and/or Firewall:

To ensure a watertight seal between the passenger compartment and the vehicle exterior, for all bolts passing through the cowl and/or firewall, Vintage Air recommends coating the threads with silicone prior to installation.

Heater Hose (not included with this kit):

Heater hose may be purchased from Vintage Air (Part#31800-VUD) or your local parts retailer. Routing and required length will vary based on installer preference.

Important Wiring Notice—Please Read

Some vehicles may have had some or all of their radio interference capacitors removed. There should be a capacitor found at each of the following locations:

1. On the positive terminal of the ignition coil.
2. If there is a generator, on the armature terminal of the generator.
3. If there is a generator, on the battery terminal of the voltage regulator.

Most alternators have a capacitor installed internally to eliminate what is called “whining” as the engine is revved. If whining is heard in the radio, or just to be extra cautious, a radio interference capacitor can be added to the battery terminal of the alternator.

It is also important that the battery lead is in good shape and that the ground leads are not compromised. There should be a heavy ground from the battery to the engine block, and additional grounds to the body and chassis.

If these precautions are not observed, it is possible for voltage spikes to be present on the battery leads. These spikes come from ignition systems and charging systems, and from switching some of the vehicle’s other systems on and off. Modern computer-operated equipment can be sensitive to voltage spikes on the power leads, which can cause unexpected resets, strange behavior and/or permanent damage.

Vintage Air strives to harden our products against these types of electrical noise, but there is a point where a vehicle’s electrical system can be degraded so much that nothing can help.

Radio interference capacitors should be available at most auto and truck parts suppliers. They typically are cylindrical in shape, a little over an inch long and a little over a half-inch in diameter, and they have a single lead coming from one end of the cylinder with a terminal on the end of the wire, as well as a mounting clip which is screwed into a good ground on the vehicle. The specific value of the capacitance is not too significant in comparison to ignition capacitors that are matched with the coil to reduce pitting of the points.

- Care must be taken, when installing the compressor lead, not to short it to ground. The compressor lead must not be connected to a condenser fan or to any other auxiliary device. Shorting to ground or connecting to a condenser fan or any other auxiliary device may damage wiring or the compressor relay, and/or cause a malfunction.
- When installing ground leads on Gen IV systems, the blower control ground and ECU ground must be connected directly to the negative battery post.
- For proper system operation, the heater control valve must be connected to the ECU.

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Engine Compartment Disassembly

NOTE: Before starting the installation, check the function of the vehicle (horn, lights, etc.) for proper operation, and study the instructions, illustrations, & diagrams. Retain OEM bolts, washers and nuts (unless otherwise indicated), as some hardware will be reused. When the installation is complete, make sure all holes through the firewall are sealed to prevent water intrusion, and be sure the windshield wiper escutcheon is sealed. Any water damage to the evaporator system may void the warranty.

Perform the Following:

NOTE: Vintage Air recommends the removal of the hood for easier installation. Before removing the hood, mark where the hood and hinge meet with a pencil (See Photo 1, below). This will help during reassembly.

1. Remove the hood by removing (4) hood hinge bolts (retain) (See Photo 2, below).
2. Remove the passenger side hood hinge by removing (4) bolts ((2) bolts from under the dash inside the passenger compartment and (2) in the engine compartment) (See Photos 3 & 4, below).
3. Disconnect and remove the battery.
4. Remove the battery tray by removing (4) bolts (See Photos 5 & 6, below).
5. Remove the air cleaner (See Photo 7, below).
6. Drain the radiator, and remove the upper and lower hoses.

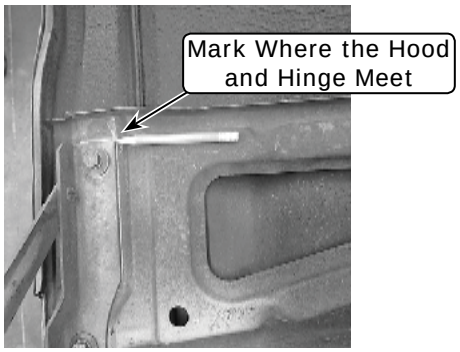
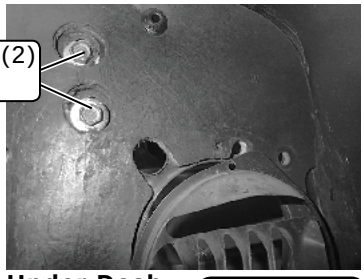


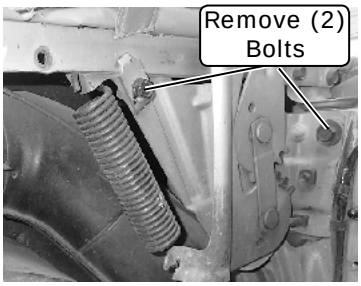
Photo 1

Photo 2



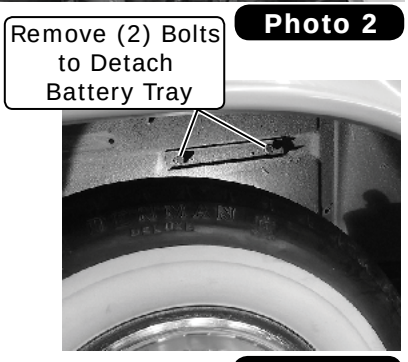
Under Dash, Passenger Compartment

Photo 3



Engine Compartment

Photo 4



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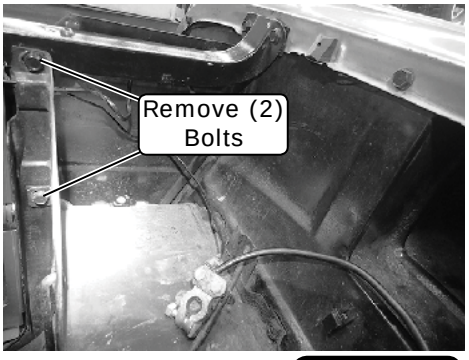


Photo 6

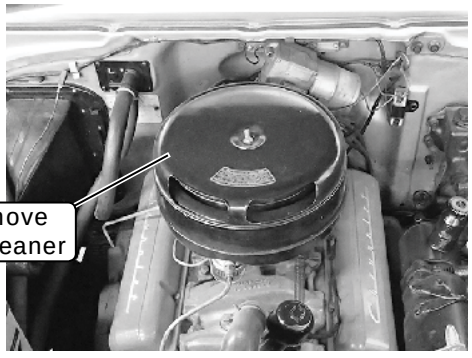
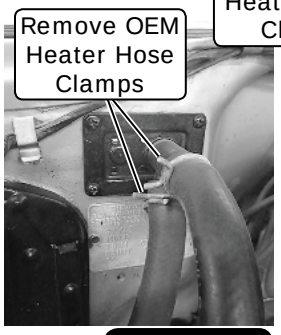


Photo 7

Engine Compartment Disassembly (Cont.)

7. Remove the OEM heater hoses (See Photos 8 & 9, below).
8. Disconnect the transmission cooling lines at the bottom of the radiator (See Photo 10, below).
9. Remove the (3) bolts on each side of the radiator, and lift the radiator out (See Photo 11, below).
10. Remove the OEM blower assembly by removing (2) bolts and the reinforcement bracket on the inner fender (See Photo 12, below), and (2) bolts in the engine compartment (See Photo 13, below).
11. Remove the (4) screws on the OEM heater control water valve, and remove the blower assembly by pulling up the retaining brackets (See Photo 14, below). **NOTE: Save the retaining brackets.**
12. Remove the OEM heater core (See Photo 15, below).
13. Remove the heater control water valve and cable by removing the screw (discard) (See Photo 16, below).
14. Locate the supplied OEM heater control water valve cover, and apply seam sealer or silicone to the mating surface. Install the cover and secure it using (4) #8 x 1/2" screws (See Photo 17, below).



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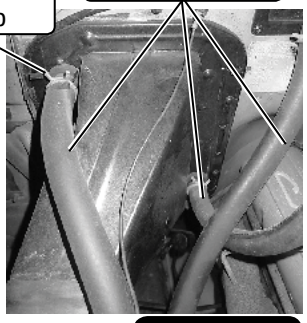

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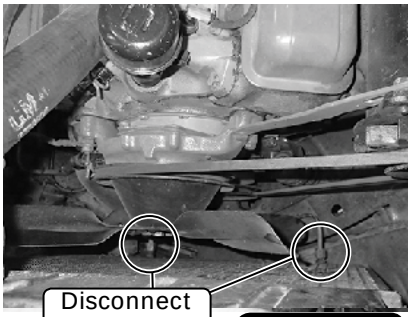

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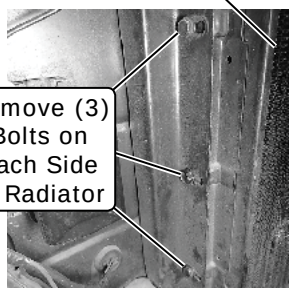

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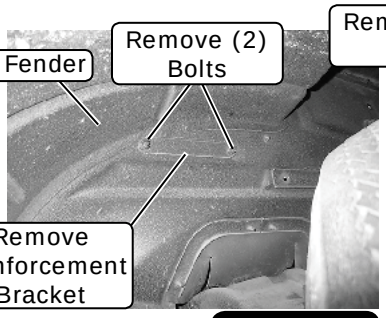

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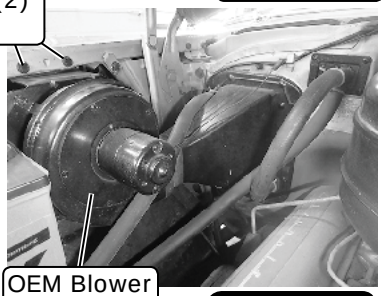

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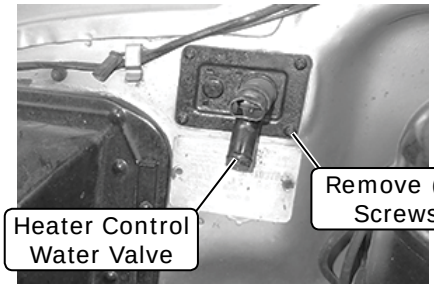


Photo 14

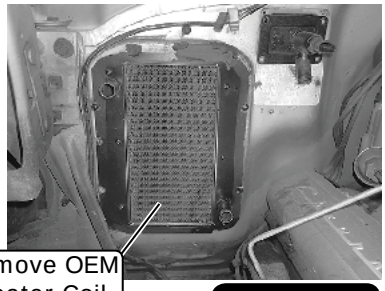


Photo 15

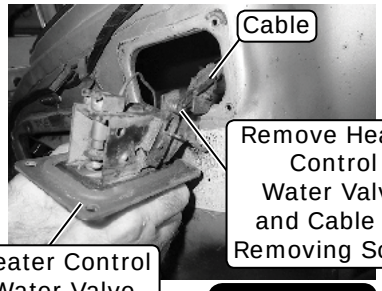


Photo 16

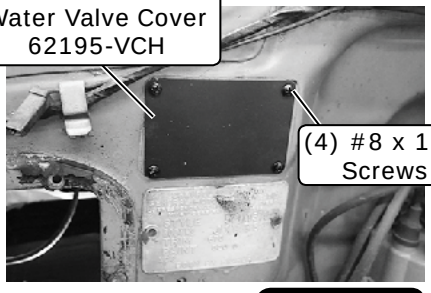


Photo 17

Passenger Compartment Disassembly

Perform the Following:

1. Remove the control panel bezel by removing (4) screws (See Photo 1, below).
2. Remove the OEM control panel assembly (retain), and disconnect the cables (discard) (See Photo 2, below). **NOTE: Refer to the control panel conversion kit instructions for installation of controls.**
3. Remove the glove box door by removing (3) screws as shown in Photo 3, below.
4. Remove the glove box by removing (5) screws as shown in Photo 4, below.
5. Remove the clock from the dash by detaching the light sockets and hardware from behind the dash (See Photo 5, below).

Photo 1

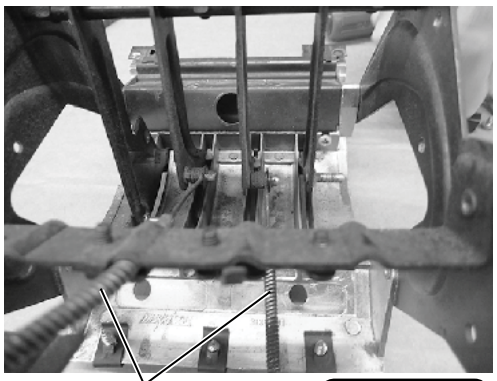
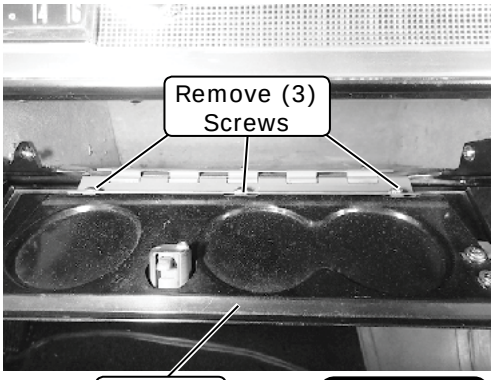


Photo 2



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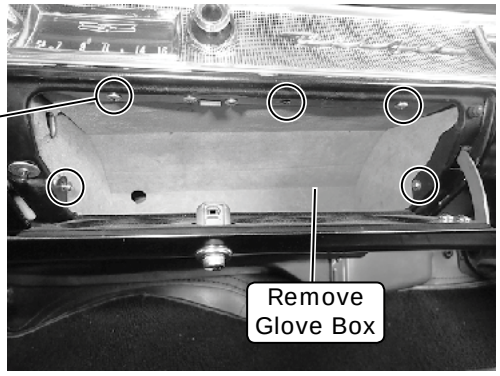

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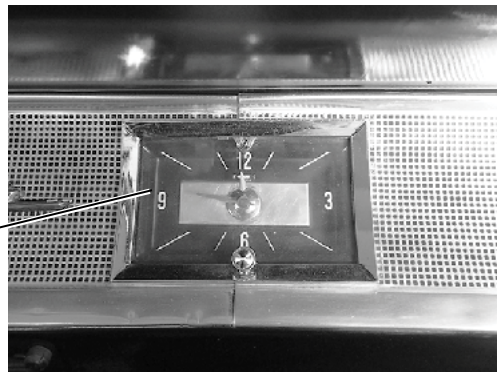
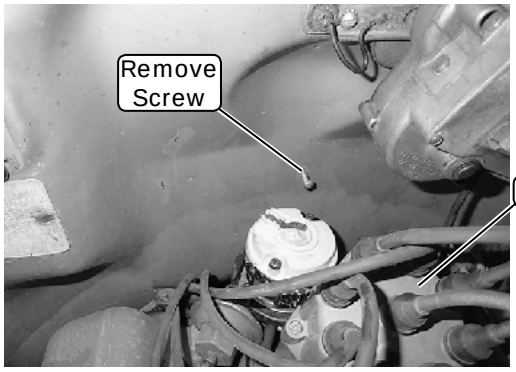


Photo 5

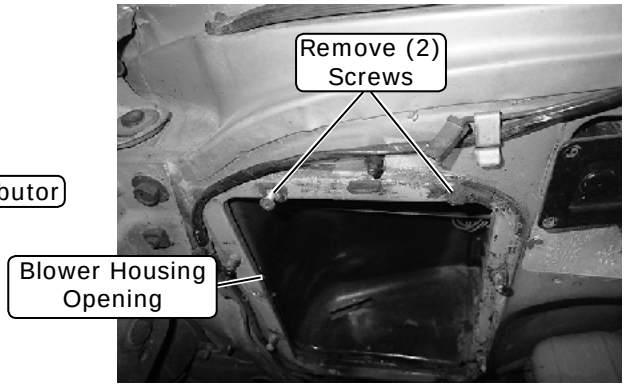
Passenger Compartment Disassembly (Cont.)

6. To remove the heater assembly and the OEM defrost duct, perform the following:

- **A.** Remove the screw behind the distributor in the engine compartment. **NOTE: To gain access to the screw, removal of the distributor cap may be required (See Photo 6, below).**
- **B.** Remove the (2) screws on the outside of the blower housing opening (See Photo 7, below).
- **C.** In the passenger compartment, under the dash, remove the (4) screws on the heater assembly cover (See Photo 8, below).
- **D.** Remove the (2) screws securing the OEM defrost duct to the dash (See Photo 9, below). Disconnect the wiring, and remove the screw securing the cable to the defrost duct (See Photo 10, below).
- **E.** Remove the (3) screws securing the fresh air vent cover to the firewall (See Photo 11, below).



Engine Compartment View **Photo 6**



Engine Compartment View **Photo 7**

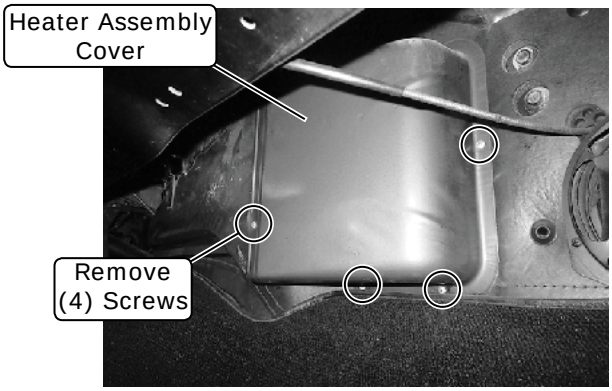


Photo 8

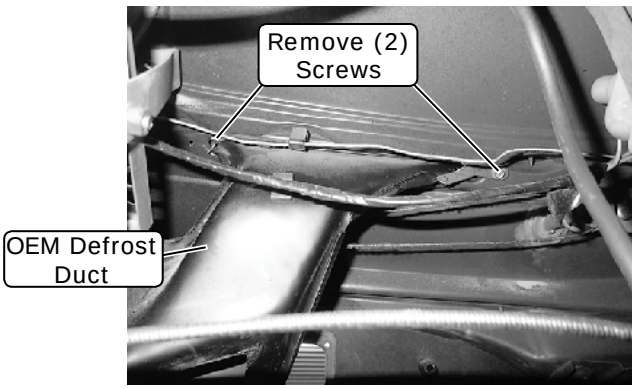


Photo 9

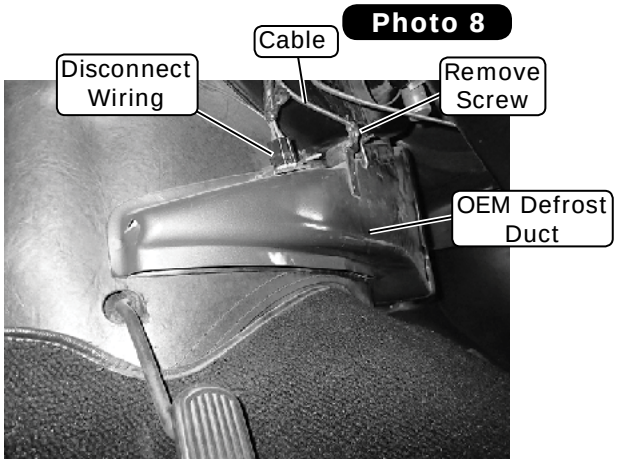


Photo 10

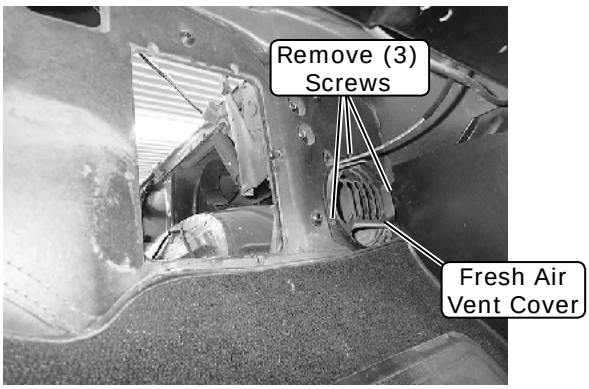


Photo 11

Passenger Compartment Disassembly (Final)

7. To remove the OEM fresh air vent tube, perform the following:

- **A.** Remove the fresh air vent tube in the passenger compartment by removing the (3) vent tube bolts (See Photo 12, below), the bolt under the passenger side fender directly above the wheel, and the cable grommet from the firewall (See Photos 12 & 13, below).
- **B.** Remove the fresh air vent tube from the passenger side fender, and remove the cable by removing the screw and clamp (See Photos 14 & 15, below).

8. Reinstall the passenger side hood hinge using the (4) OEM bolts.

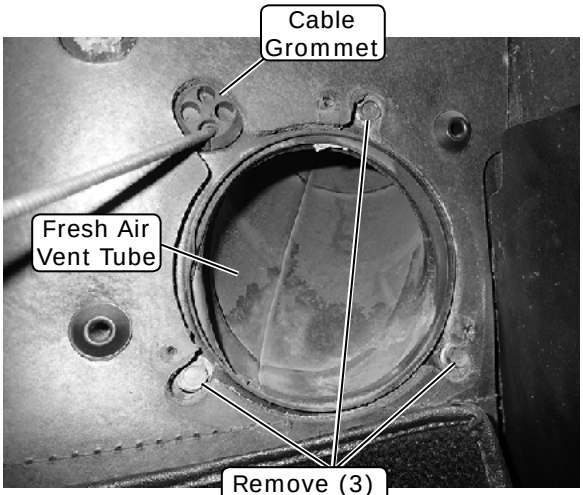


Photo 12

Passenger Side Fender View

Photo 13

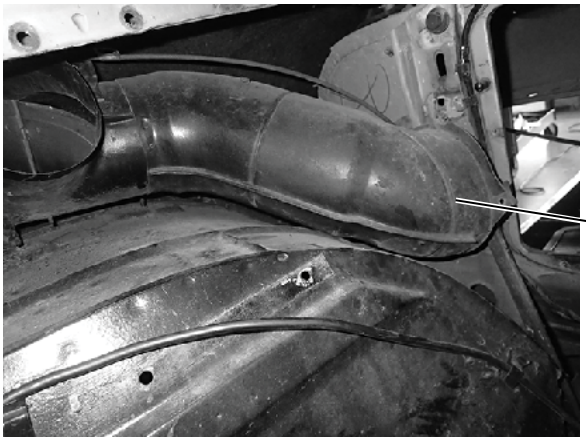


Photo 14

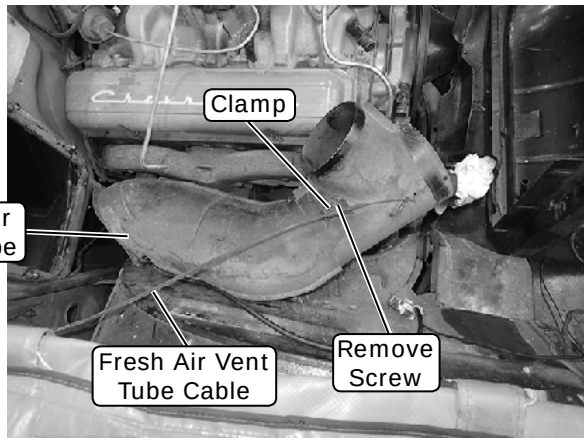


Photo 15

Evaporator Pre-Installation

1. On a workbench, remove the defrost plenum from the evaporator unit by removing (2) 10-32 x 1/2" screws (See Photo 1, below).
2. On the slotted top opening of the evaporator firewall bracket, install a 1/4-20 x 27/32" U-nut (See Photo 2, below).

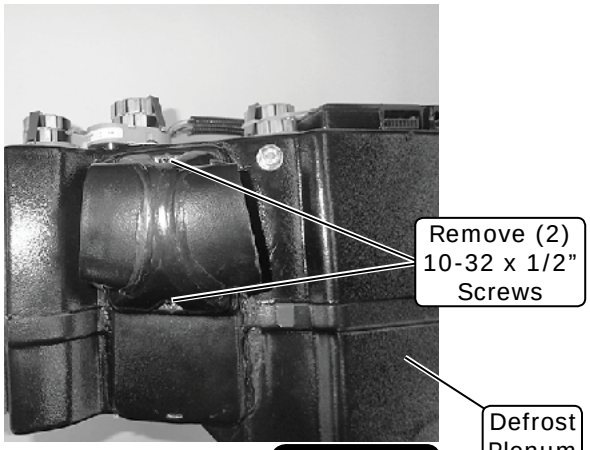


Photo 1

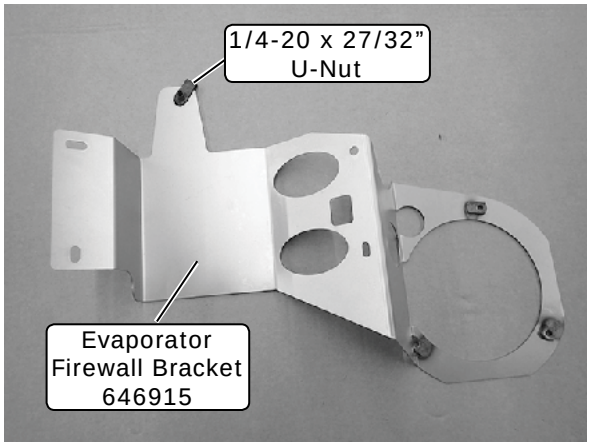


Photo 2

Evaporator Firewall Bracket Installation

1. Install the evaporator firewall bracket onto the evaporator unit using the (4) 1/4-20 x 1/2" bolts supplied on the evaporator unit as shown in Photo 1, below.
2. Install a 1/4-20 x 1 ½" stud into the previously installed U-nut on the evaporator firewall bracket, and thread it until approximately 1/4" of the stud is showing (See Photo 2, below). **NOTE: The 1/4-20 x 1 ½" studs are provided for easier installation of the evaporator unit. All studs will be replaced with bolts at the end of the installation.**

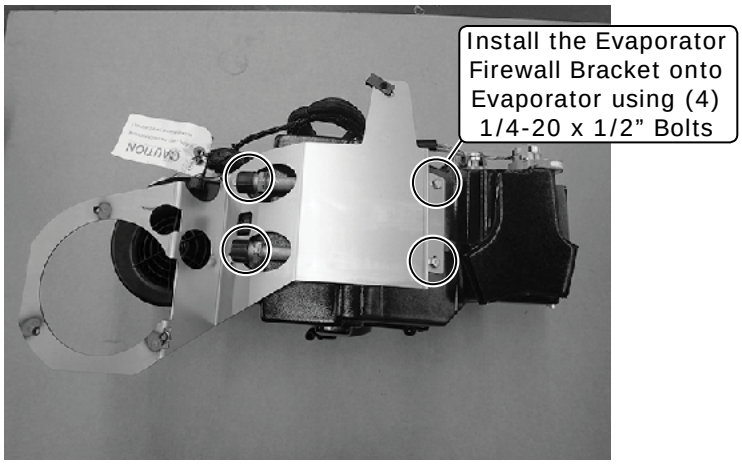


Photo 1

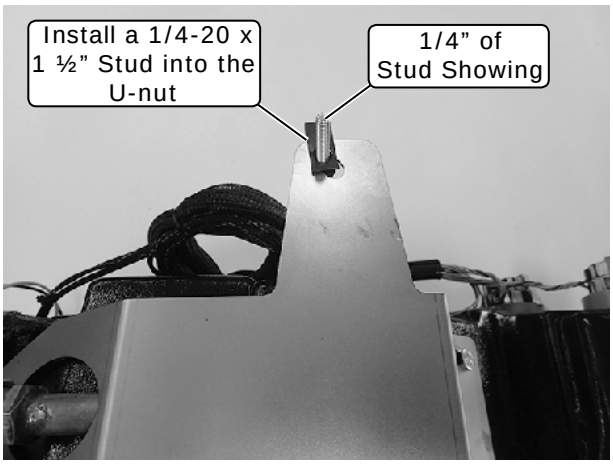


Photo 2

Evaporator and Heater Hardline Installation

NOTE: Do not fully tighten the hardlines at this time. The hardlines will be adjusted before tightening.

1. Install the #10 evaporator/compressor hardline onto the #10 evaporator fitting using a properly lubricated #10 O-ring (See Photo 1, below, and Figure 1, Page 20).
2. Install the #6 evaporator/drier hardline onto the expansion valve using a properly lubricated #6 O-ring (See Photos 1 & 2, below, and Figure 1, Page 20).
3. Install the lower heater hardline onto the evaporator unit using a properly lubricated O-ring (See Photo 3, below, and Figure 1, Page 20).
4. Install the upper heater hardline onto the evaporator unit using a properly lubricated O-ring (See Photo 4, below, and Figure 1, Page 20). **NOTE: The upper heater hardline is longer from the nut to the first bend.**
5. Temporarily install the fresh air plate onto the evaporator firewall bracket using (3) 1/4-20 x 1 ½" studs (See Photo 5, below).
6. Center the hardlines into the holes on the fresh air plate, and tighten the fittings (See Photo 5, below).
7. Remove the fresh air plate, and keep the studs on the evaporator firewall bracket with approximately 1/4" of the studs showing.
8. Apply press tape to the #10 evaporator/compressor hardline as shown in Photo 6, below.

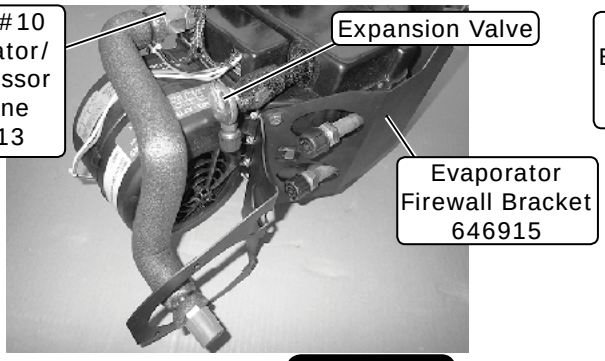


Photo 1

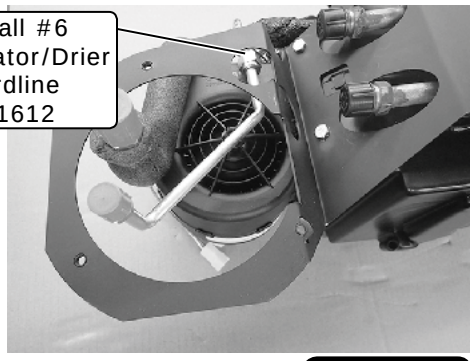
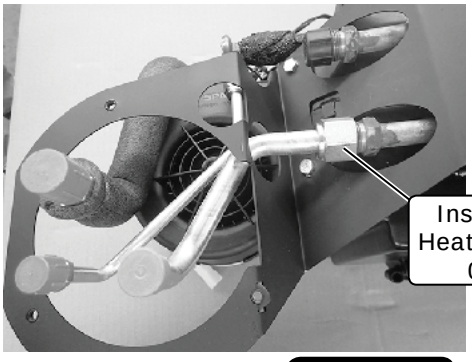


Photo 2



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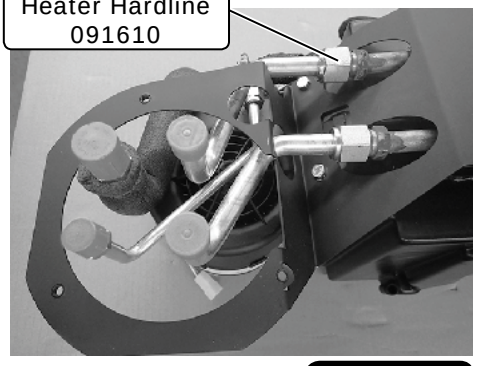


Photo 4

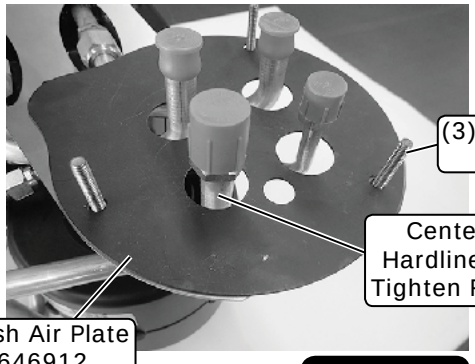


Photo 5

Photo 6

Firewall Insulation

NOTE: For proper system operation, Vintage Air recommends using heat-blocking insulation in the area around the evaporator unit (firewall, inner cowl and kick panel). Due to the tight clearance for the evaporator unit between the firewall and dash, Vintage Air recommends an insulation thickness of no more than 1/4".

1. Pull back the carpet and padding as shown in Photo 1, below.
2. Remove the OEM insulation (See Photo 1, below), and clean the surface where the new insulation will be installed (See Photo 2, below).
3. Install the insulation pieces using spray adhesive, and cover the seams using duct tape (See Photo 3, below). Apply insulation to the firewall cover (See Photo 4, below).

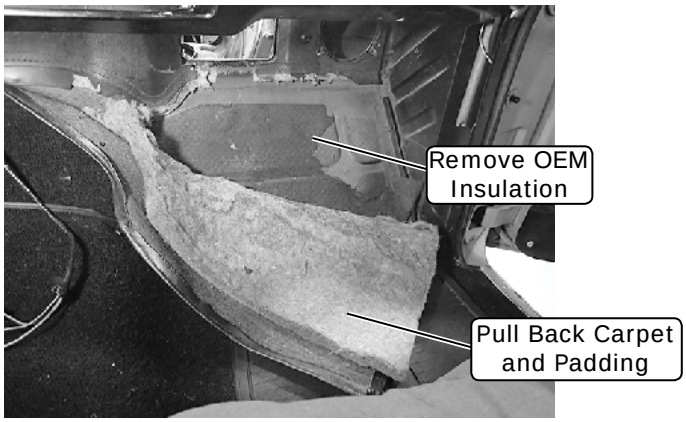
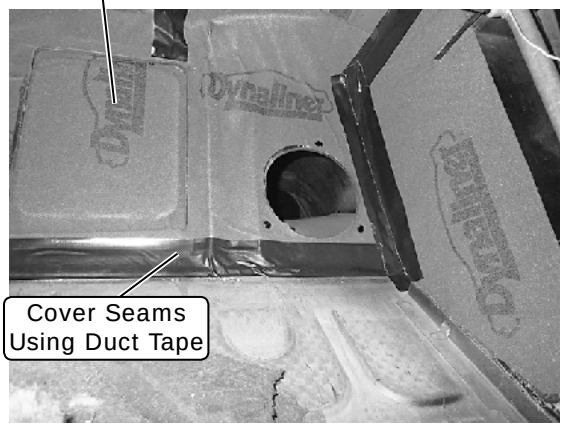


Photo 1

Photo 2



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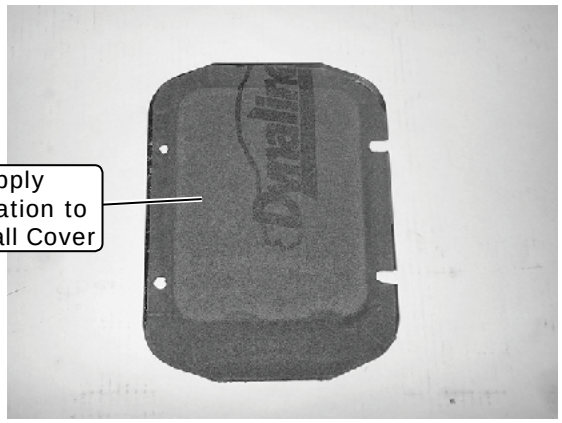


Photo 4

Defrost Duct Installation

NOTE: The passenger side defrost duct has a notch for the OEM wire clip (See Photo 1, below).

1. Locate the driver and passenger side defrost ducts. Attach a 12" length of 2" duct hose to the passenger side defrost duct, and a 24" length of 2" duct hose to the driver side defrost duct (See Photo 2, below).
2. Install the (2) defrost ducts onto the OEM defrost duct mounting flanges under the dash, and secure them using (2) #8 x 1/2" screws on each duct (See Photos 3, 4 & 5, below).

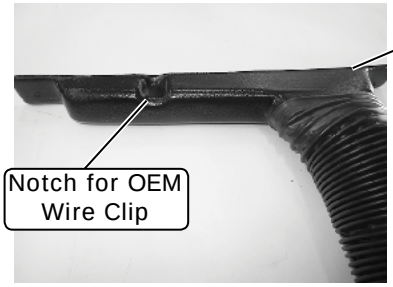


Photo 1

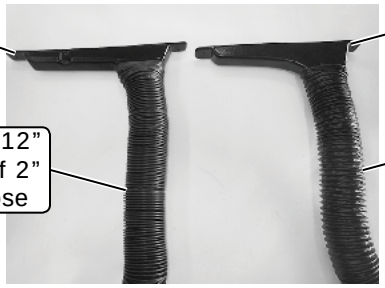


Photo 2

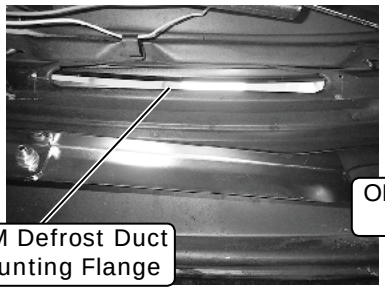


Photo 3

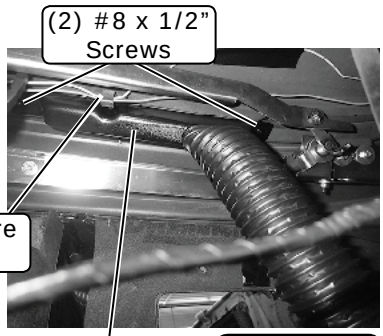


Photo 4

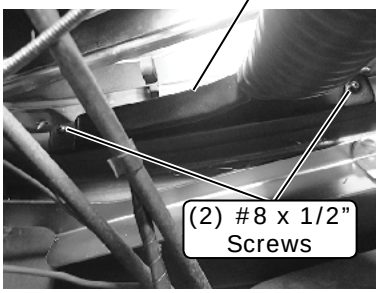
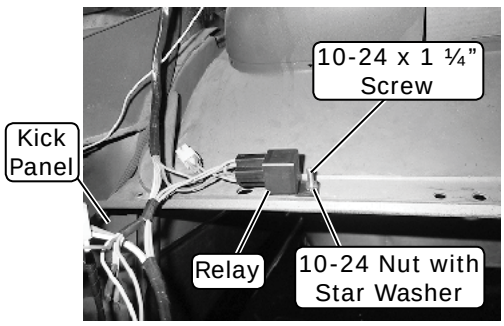


Photo 5

Wiring Installation

1. Using a 10-24 x 1 ¼" screw and a 10-24 nut with star washer, install the relay in the passenger compartment under the dash using the 4th OEM hole from the right as shown in Photo 1, below.
2. Route the purple power wire to the switched 12V power source on the fuse panel (See Photo 2, below).
3. Plug the white connector on the heater control valve adapter into the white connector on the main wiring harness (See Photo 3, below).



Passenger Compartment, Under Dash View

Photo 1

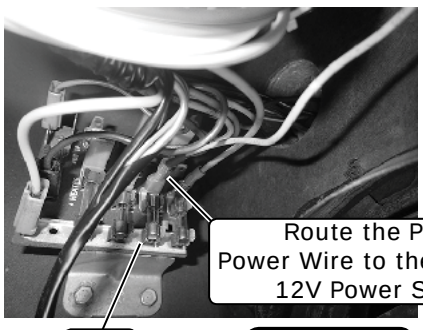


Photo 2

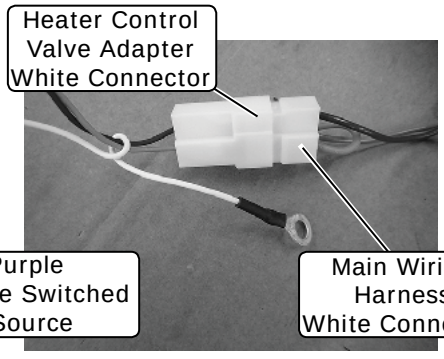


Photo 3

Evaporator Installation

NOTE: To ensure a watertight seal between the passenger compartment and the vehicle exterior, for all bolts passing through the firewall, Vintage Air recommends coating the threads with silicone prior to installation.

1. Place the evaporator unit onto the passenger side floorboard, and plug the white connector on the blower motor into the corresponding connector on the main wiring harness (See Photo 1, below).
2. Roll the evaporator unit under the dash, and bring the hardlines into the fresh air opening (See Photo 2, below). **NOTE: Make sure the hardlines do not bend.**
3. Insert the (3) 1/4-20 x 1 ½" studs through the fresh air vent opening mounting holes (See Photo 3, below). Once the unit is in place, from the passenger compartment, turn the studs approximately 1/4". From the engine compartment, temporarily secure the unit using (3) 1/4-20 nuts with star washers.

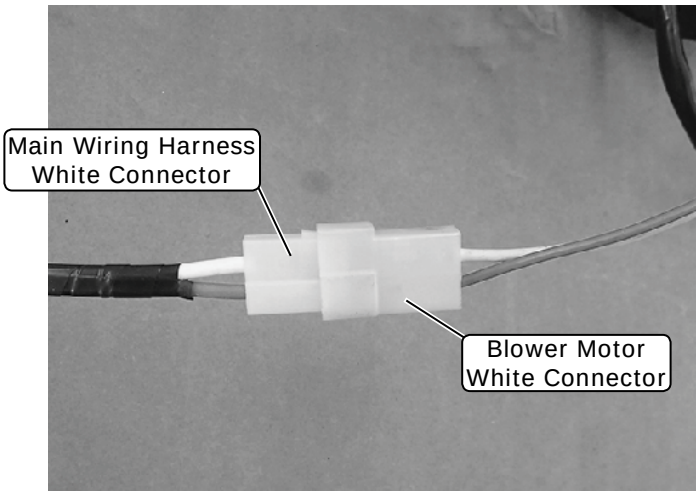


Photo 1

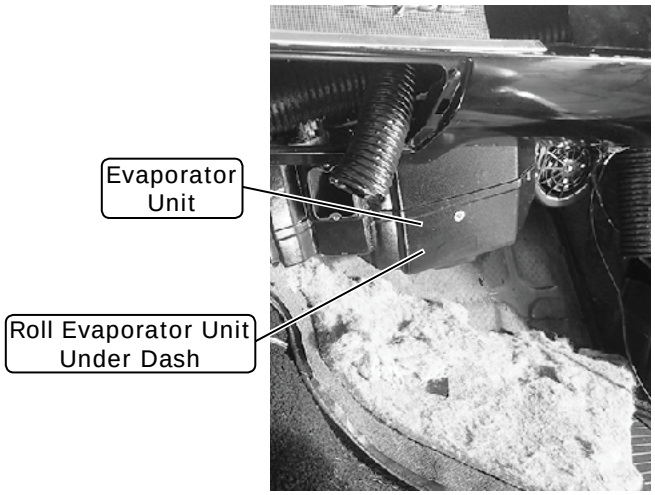


Photo 2

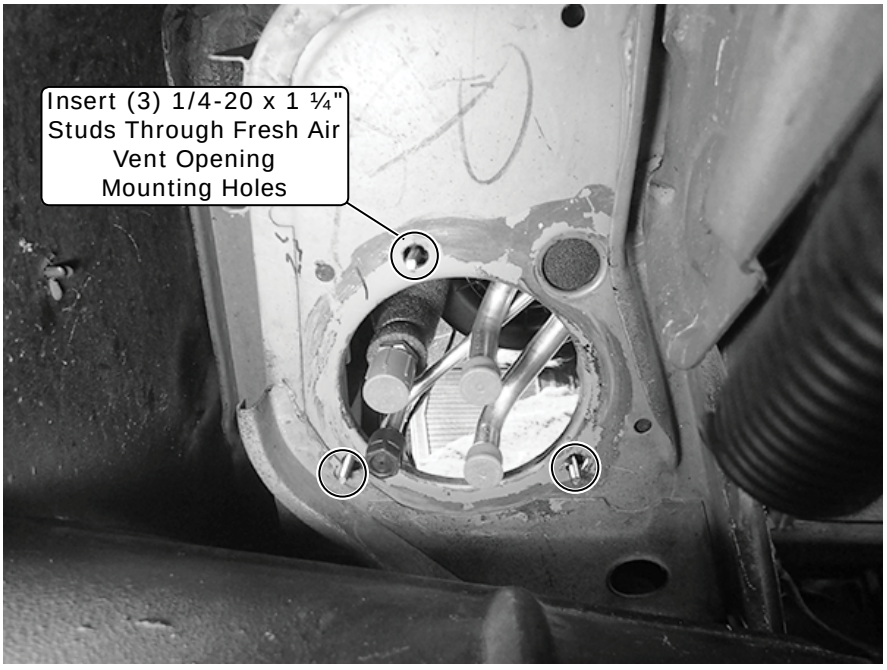


Photo 3

Evaporator Installation (Cont.)

4. Looking through the clock opening, make sure the remaining 1/4-20 x 1 ½" stud goes through the upper mounting bolt hole on the firewall. From the engine compartment, install a 1/4-20 nut with star washer onto the 1/4-20 x 1 ½" stud to temporarily secure the evaporator unit in place (See Photo 4, below). **NOTE: A 2"x 4" board can be used to keep the evaporator unit in place while the nut is being installed (See Photo 5, below).**
5. Attach the defrost hoses onto the previously removed defrost plenum, and install the plenum onto the evaporator unit using (2) 10-32 x 1/2" screws (See Photos 6 & 7, below).

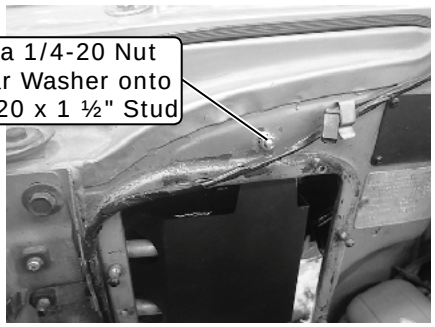


Photo 4

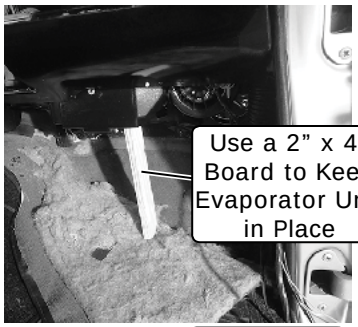


Photo 5

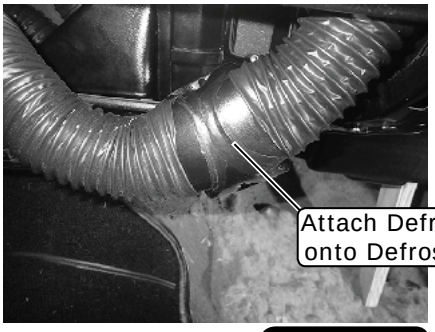


Photo 6

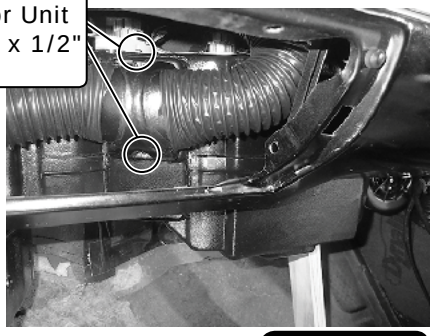


Photo 7

Evaporator Dash and Center Louver Bracket Installation

1. Install the evaporator dash bracket onto the evaporator unit using a 1/4-20 x 1/2" bolt (supplied on the evaporator unit). Secure the evaporator dash bracket to the under dash lip using a 1/4-20 x 1/2" hex bolt and a 1/4-20 nut with star washer (See Photos 1 & 2, below). **NOTE: Do not fully tighten the bolts at this time. Some adjustment may be needed when leveling the evaporator unit.**

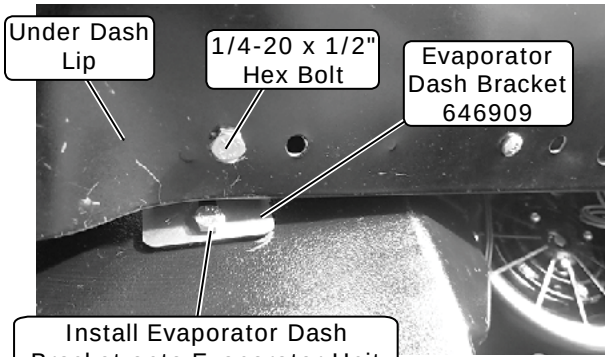


Photo 1

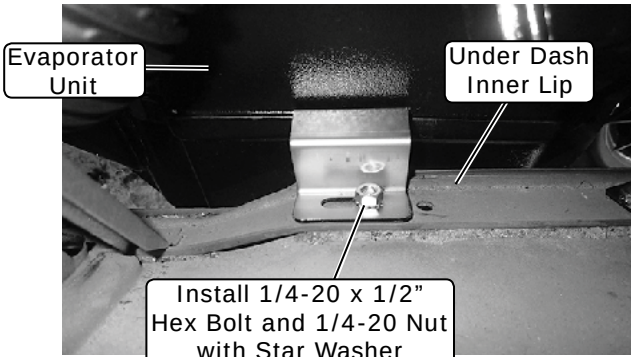


Photo 2

Fresh Air Cover Plate & Rubber Boot Installation

1. Remove the fitting caps, and install the rubber boot over the hardlines (See Photo 1, below). **NOTE: Insert one hardline at a time. When finished, cap all fittings to prevent debris from getting inside the lines.**
2. Install the fresh air plate over the lines (See Photo 2, below).
3. Remove the (3) 1/4-20 x 1 ½" studs, and replace them with (3) 1/4-20 x 3/4" hex bolts (See Photo 3, below). **NOTE: Do not fully tighten the bolts at this time. Cap all (4) hardlines to protect the lines from contamination.**

Photo 1

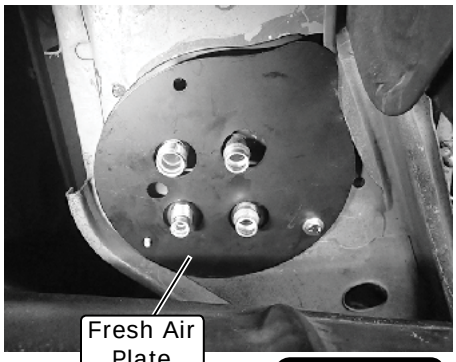


Photo 2

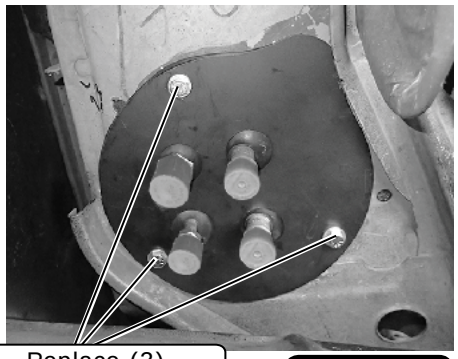


Photo 3

Evaporator Leveling & Fresh Air Vent Duct Cap Installation

1. Verify that the evaporator unit is level, and then tighten all of the mounting bolts.
2. Replace the upper 1/4-20 x 1 ½" stud on the firewall with a 1/4-20 x 3/4" hex bolt and a 1/4" sleeve washer (See Photo 1, below).
3. Install (3) S-clips onto the fresh air vent duct cap (See Photo 2, below).
4. Install the fresh air vent duct cap over the fresh air opening on the passenger side inner fender (See Photo 3, below). **NOTE: The cap will protect the electronic heater control valve from water damage.**

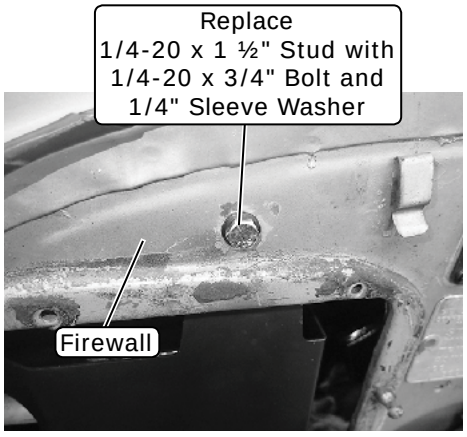


Photo 1

Photo 2

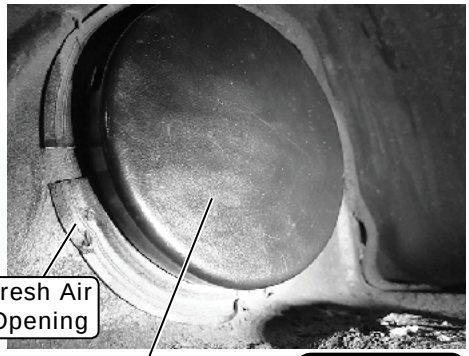


Photo 3

ECU Installation

1. Apply (2) strips of Velcro to the ECU, and cut the tie wraps holding the ECU wiring together (See Photos 1 & 2, below).
2. Plug the main wiring harness black connector into the ECU module (See Photo 3, below).
3. Reinstall the control panel into the dash using the (4) OEM screws (See Photo 4, below).
4. Plug the control panel connector into the ECU module (See Photo 5, below).
5. Apply (2) strips of Velcro, and mount the ECU to the right of the radio on the inner dash. **NOTE: Make sure the area is clean and free of debris before applying the Velcro (See Photo 6, below).**

Photo 1

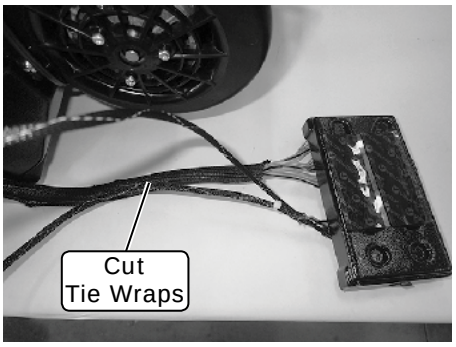


Photo 2

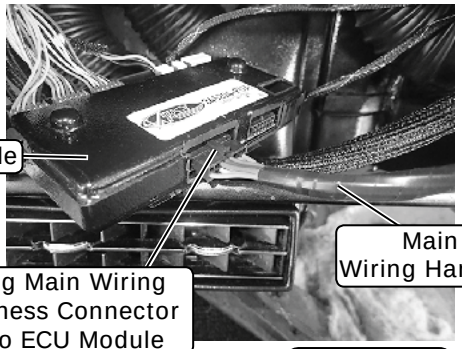


Photo 3

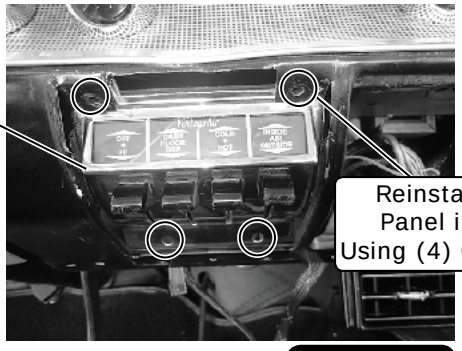
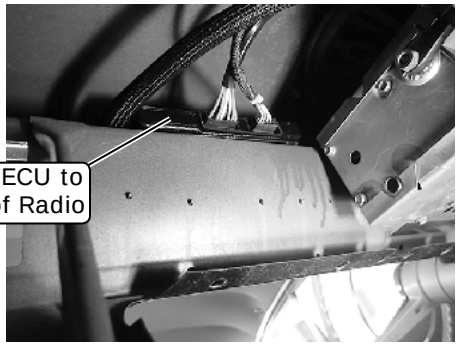


Photo 4

Photo 5

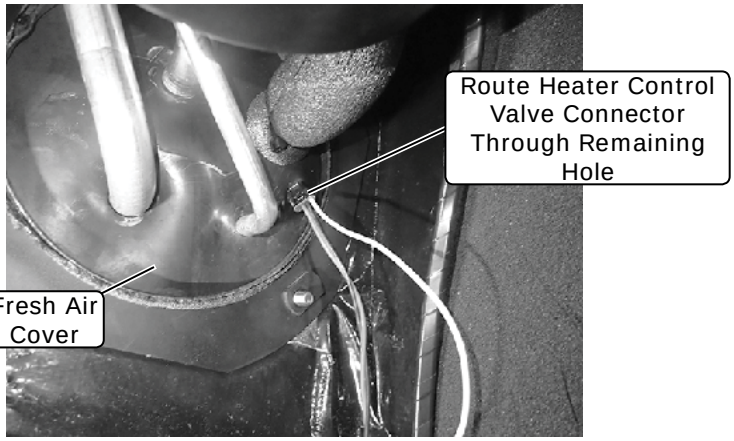


Inner Dash View

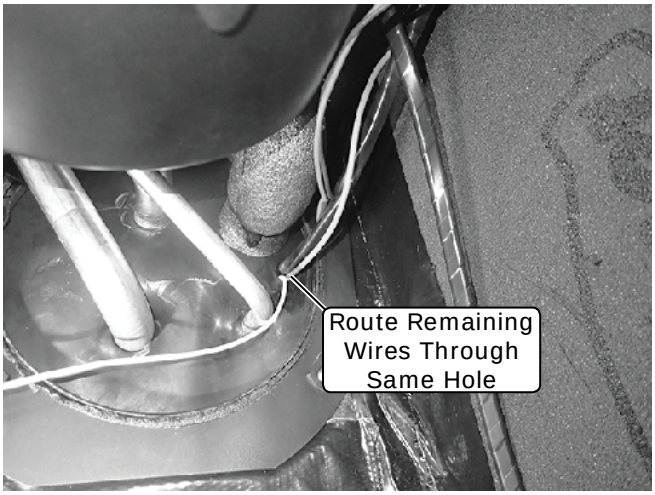
Photo 6

ECU Installation (Cont.)

6. Route the heater control valve connector through the remaining hole in the fresh air cover (See Photo 7, below).
7. Attach the white ground wire from the heater control valve wiring harness to a suitable ground.
8. Route the remaining main wiring harness wires (white ground, red power and blue safety switch wires) through the same hole as the heater control valve wiring (See Photo 8, below). **NOTE: Disconnect the red wire from the circuit breaker in order to route the wire through the rubber boot.**



Passenger Compartment View **Photo 7**



Passenger Compartment View **Photo 8**

Drain Hose Installation

1. From the passenger compartment, using the firewall opening as a reference, measure down 2 ¾" from the bottom right corner. Mark and drill a 5/8" hole through the firewall for the drain hose (See Photo 1, below).
2. Insert the drain hose through the previously drilled 5/8" hole, and attach it to the evaporator drain (See Photo 2, below). **NOTE: If the hole is covered by carpet, a 5/8" hole will need to be cut into the carpet as well.**

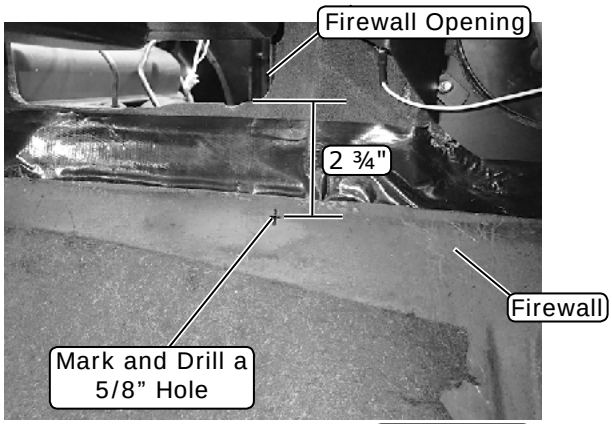


Photo 1

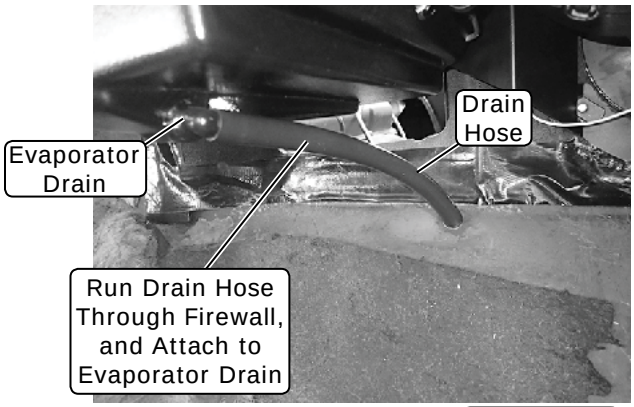
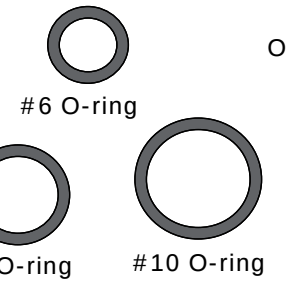
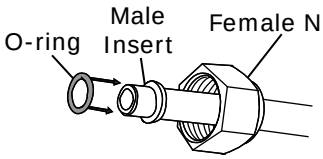


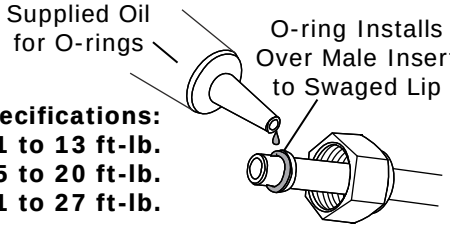
Photo 2

Lubricating O-rings



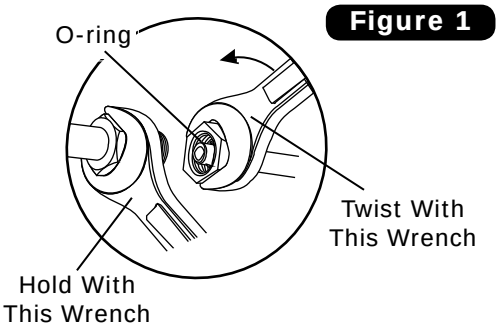


For a proper seal of fittings: Install supplied O-rings as shown and lubricate with supplied oil.



NOTE: Standard torque specifications:
#6: 11 to 13 ft-lb.
#8: 15 to 20 ft-lb.
#10: 21 to 27 ft-lb.

Figure 1



A/C Hose Installation

Standard Hose Kit:

1. Locate the #6 drier/evaporator A/C hose. Lubricate (2) #6 O-rings (See Figure 1, above), and connect the 45° fitting to the #6 evaporator/drier hardline (See Photo 4,below). Route and connect the 90° fitting to the drier (See Photo 2, below). Tighten each fitting connection as shown in Figure 1, above.
2. Locate the #8 condenser/compressor A/C hose. Lubricate (2) #8 O-rings (See Figure 1, above), and connect the straight fitting with service port to the #8 discharge port on the compressor (See Photo 1,below). Route and connect the other straight fitting to the #8 condenser/compressor hardline (See Photo 2, below). Tighten each fitting connection as shown in Figure 1, above.
3. Locate the #10 compressor/evaporator A/C hose. Lubricate (2) #10 O-rings (See Figure 1, above), and connect the straight fitting to the #10 evaporator/compressor hardline (See Photo 4, below). Route and connect the 45° fitting with service port to the compressor (See Photo 1, below). Tighten each fitting connection as shown in Figure 1, above.

Modified Hose Kit:

1. Refer to separate instructions included with modified hose kit.

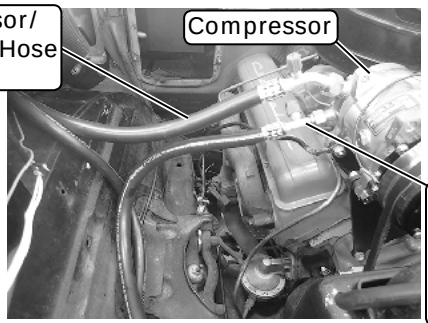


Photo 1

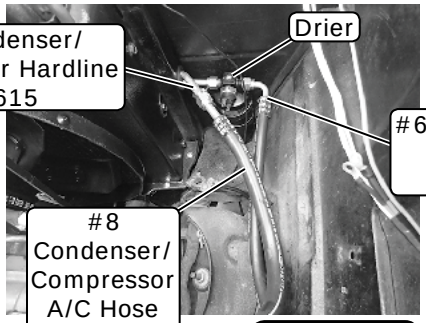


Photo 2

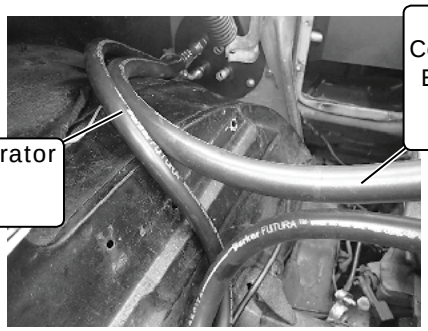


Photo 3

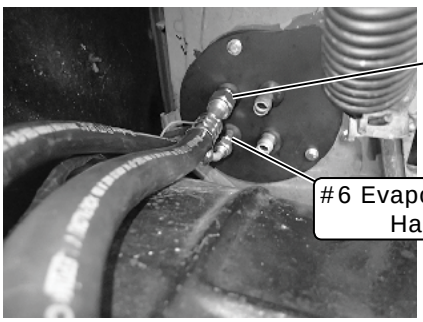


Photo 4

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Heater Hose & Heater Control Valve Installation

NOTE: When installing the heater control valve, make sure the flow arrow is facing toward the evaporator unit.

1. Install the heater control valve support bracket onto the heater control valve using (4) #8 x 1/2" screws (See Photos 1 & 2, below)
2. Plug the heater control valve connector into the main wiring harness (See Photo 3, below).
3. Attach a 14" length of 5/8" heater hose to the heater control valve (See Photo 4, below), and attach the other end to the upper heater hardline on the evaporator unit. Secure both ends with hose clamps.
4. Secure the heater control valve assembly onto the first OEM hole closest to the hood hinge using a 1/4-20 x 1/2" hex bolt and a 9/32" washer (See Photo 5, below).
5. Route the other end of the heater control valve heater hose to the intake coolant port (See Figure 2, below). Secure it with a hose clamp.
6. Route a length of heater hose to the lower heater hardline on the evaporator unit. Route the other end to the water pump coolant port (See Figure 2, below). Secure both ends with hose clamps (not supplied).

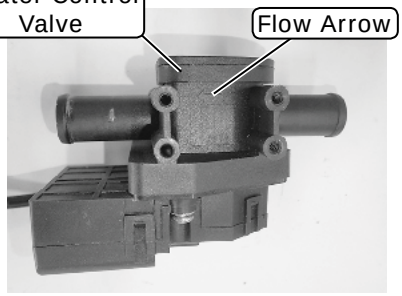


Photo 1

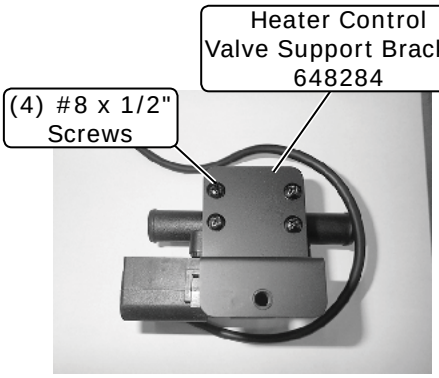


Photo 2

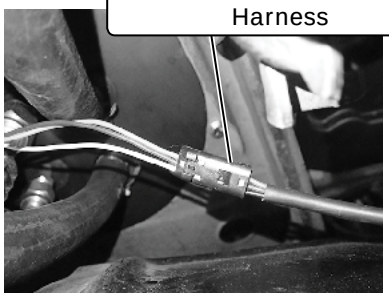
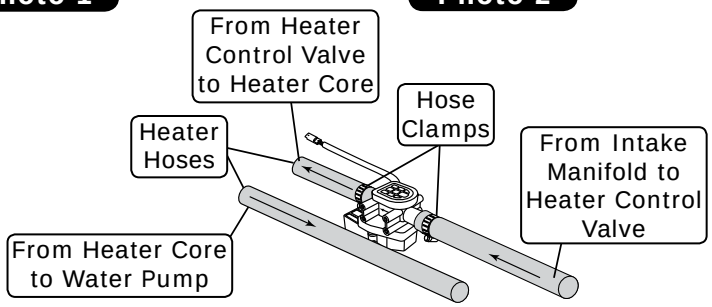


Photo 3



NOTE: Flow Direction Follows Molded Arrow on Valve.

Figure 2

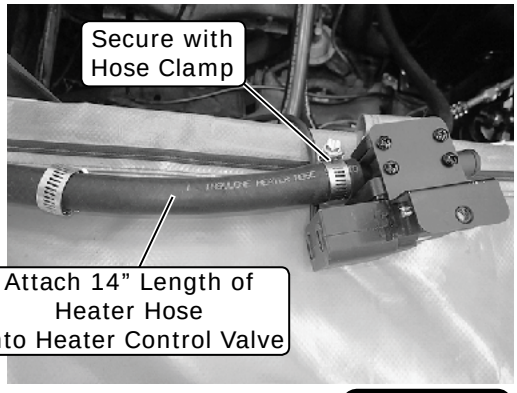


Photo 4

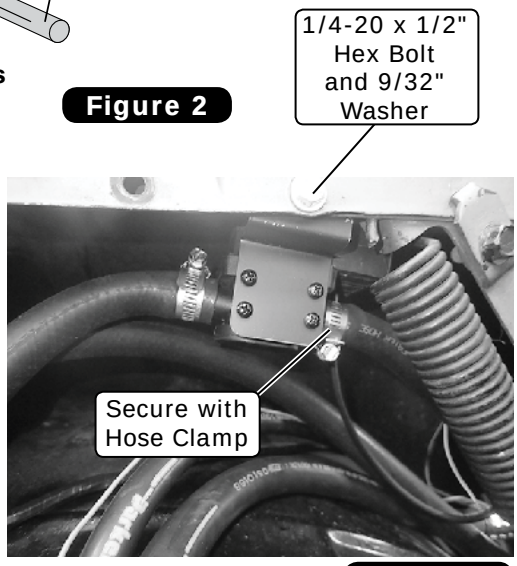


Photo 5

A/C and Heater Hose Routing

NOTE: Vintage Air Systems use 5/8" heater connections. On engines equipped with 3/4" hose nipples, these will need to be removed and replaced with 5/8" nipples (not supplied). For water pumps with a cast-in 3/4" heater outlet, a 3/4" x 5/8" reducer fitting (not supplied) or molded hose (Vintage Air Part # 099010) will need to be installed in the heater hose.

NOTE: Flow Direction Follows Molded Arrow on Valve.

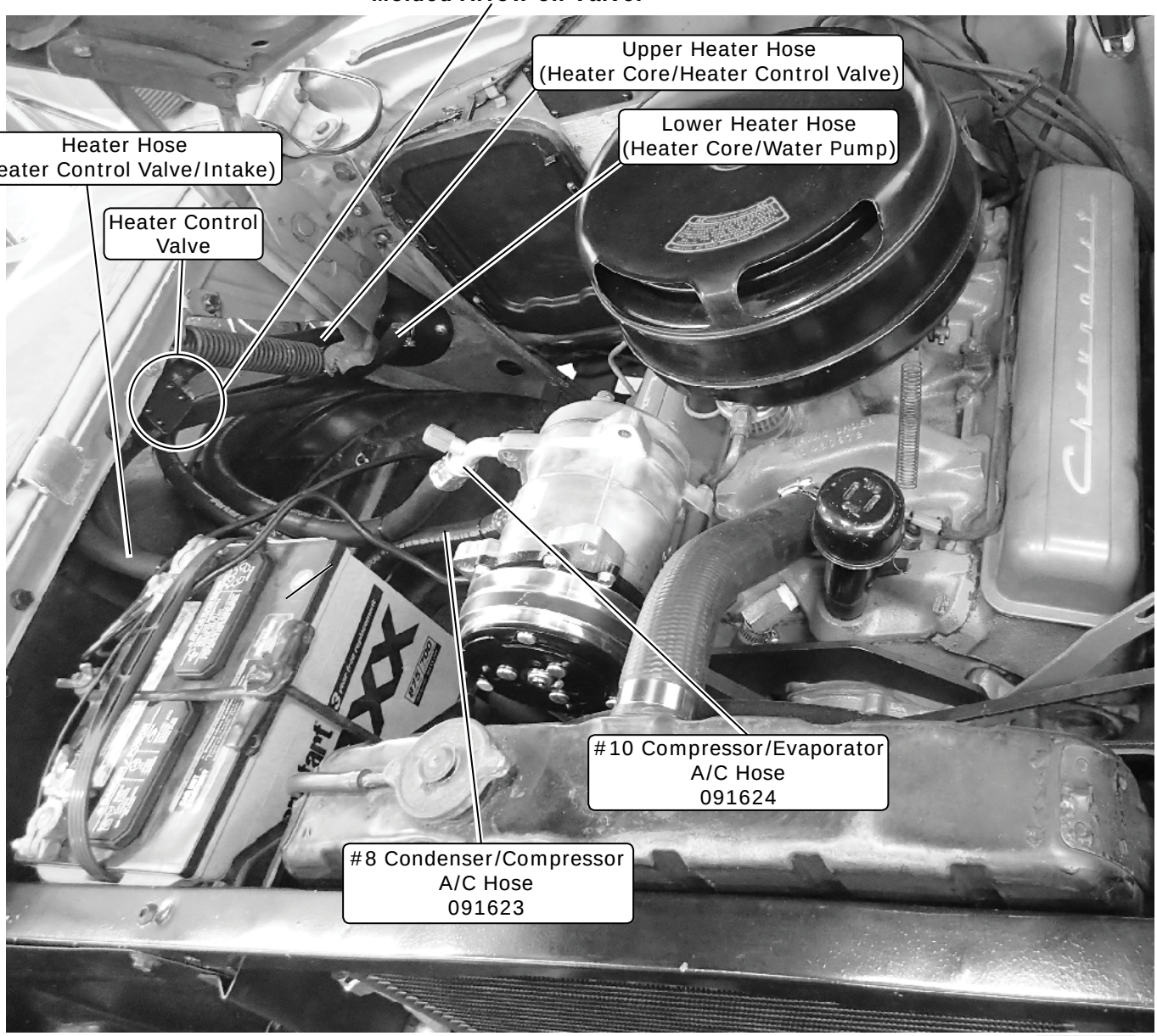


Photo 1

Final Wiring Installation

1. Connect the blue wire from the main wiring harness to the safety switch on the drier (See Photo 1, below).
2. Connect the compressor lead to the compressor, and route the other end to the safety switch on the drier (See Photo 2, below).
3. Reinstall the battery tray using the OEM bolts (See Photo 3, below).
4. Install the circuit breaker near the battery (See Photo 4, below).
5. Reconnect the red wire eyelet from the main wiring harness to the circuit breaker (See Photo 5, below).

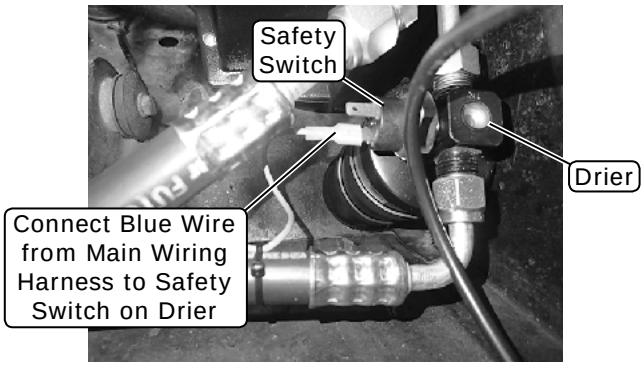


Photo 1

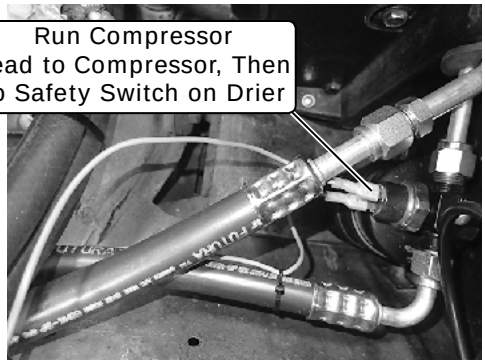


Photo 2

Photo 3

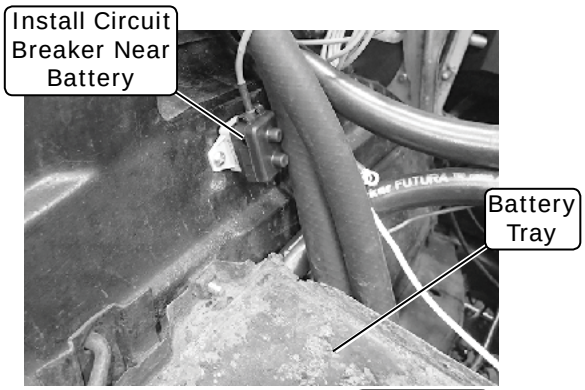


Photo 4

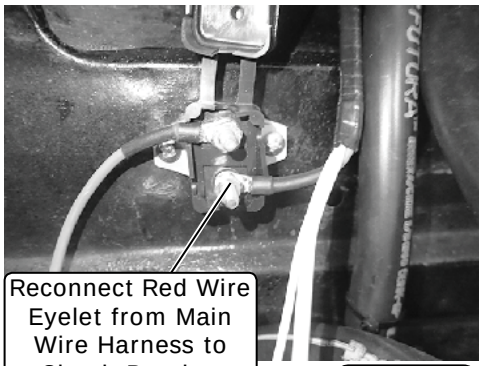


Photo 5

Final Wiring Installation (Cont.)

6. Reinstall the battery, and connect the positive and negative terminals (See Photo 6, below).

7. Install the firewall cover using the OEM retaining brackets (See Photo 7, below).

8. Route the supplied fresh air vent cable through the OEM grommet on the firewall, and reattach the cable to the vent under the driver side fender (See Photos 8 & 9, below).

9. Install the #6 Adel clamp onto the #6 drier/evaporator A/C hose, and secure it to the inner fender OEM hole next to the battery using a 10-24 x 1/2" screw and 10-24 nut with star washer. Use the supplied tie wraps to secure the hoses (See Photo 10, below).

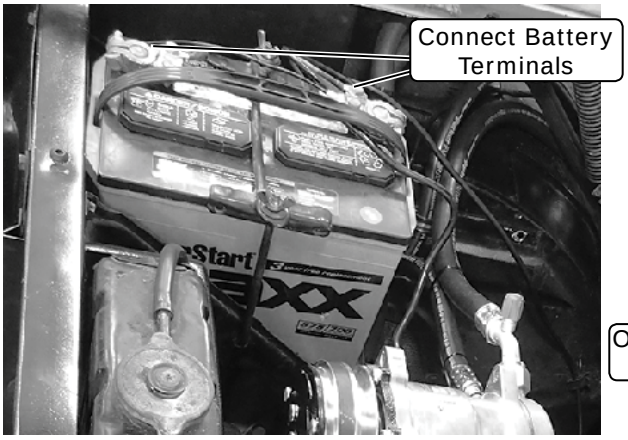


Photo 6

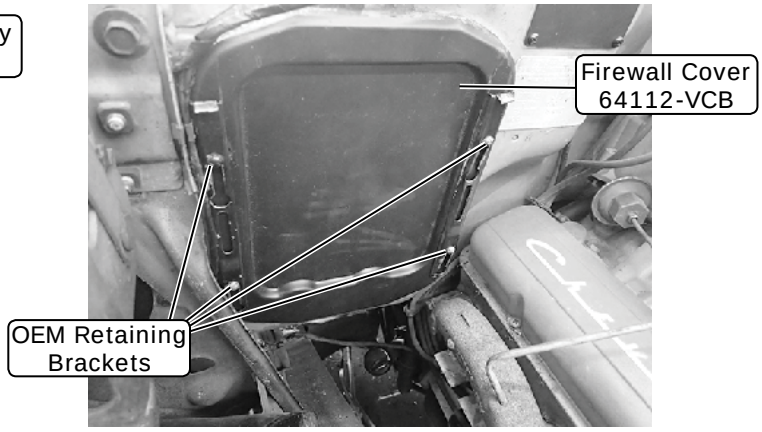


Photo 7

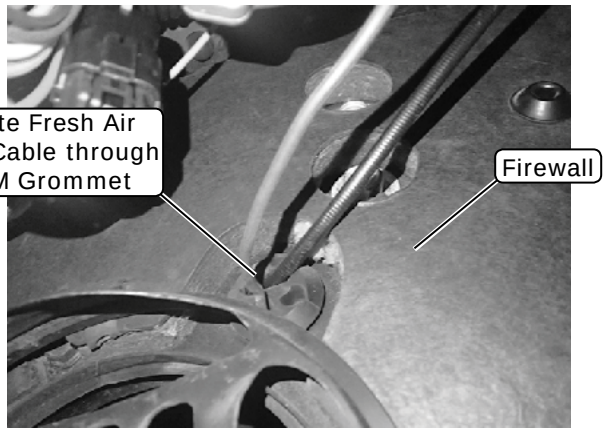
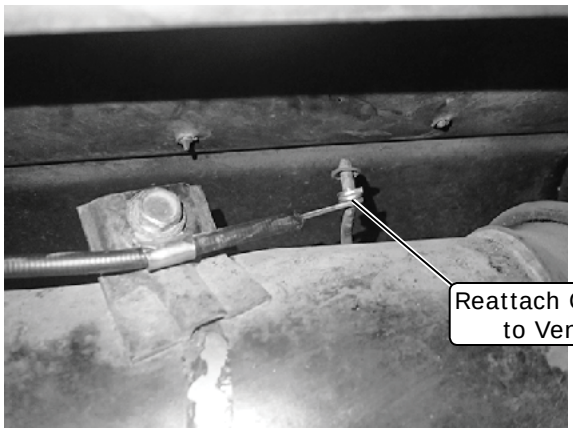


Photo 8



Driver Side Fender View

Photo 9

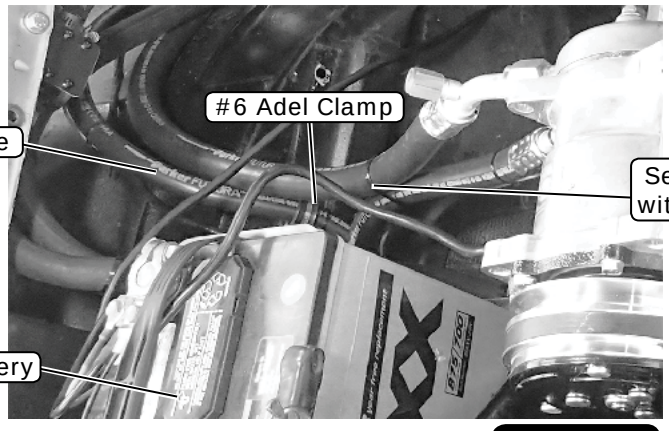


Photo 10

Driver and Passenger Side Louver Installation

1. In the passenger compartment, on the passenger side at the bottom right corner of the dash, measure 3/8" to the right from the center of the OEM hole. Mark and drill a 7/32" hole as shown in Photo 1, below.
2. On the driver side, at the bottom left corner of the dash, measure 3/8" to the left from the center of the OEM hole. Mark and drill a 7/32" hole as shown in Photo 2, below.
3. Install a 10-24 x 1/2" square neck carriage bolt into the slot on each louver bracket, and secure using a 1/8" push-on ring (See Photos 3 & 4, below).
4. Separate the hose adapters from the louvers (See Photo 5, below).
5. Attach the driver and passenger side duct hoses to the hose adapters (See Photo 6, below). **NOTE: See Figure 4, Page 28, for duct hose lengths.**

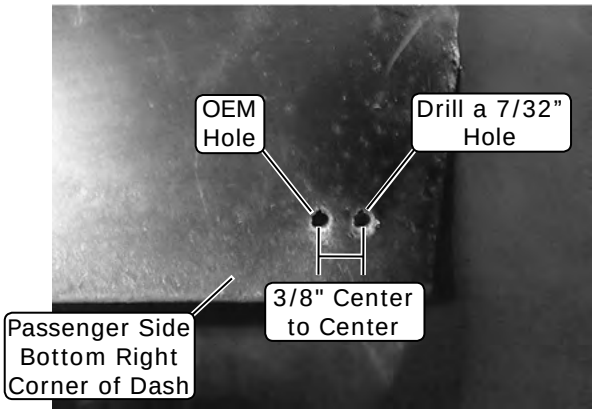


Photo 1

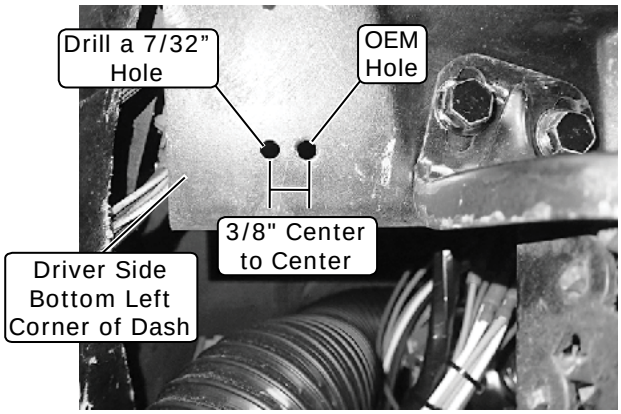


Photo 2

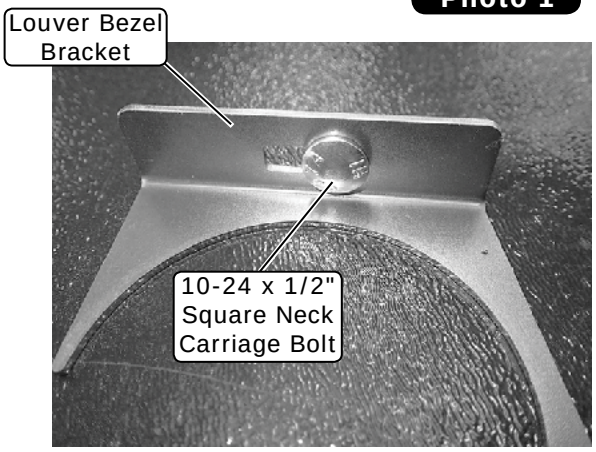


Photo 3

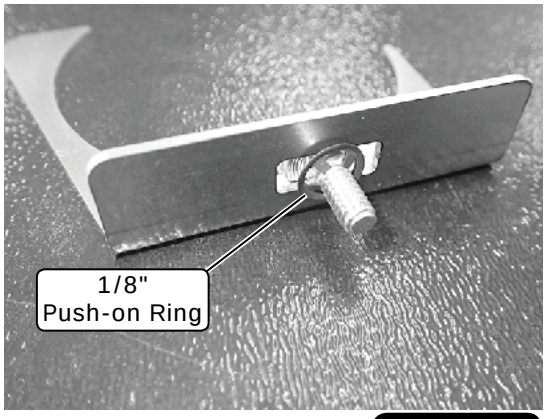


Photo 4

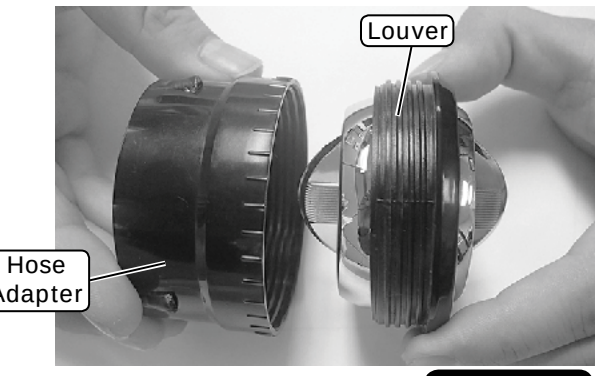


Photo 5

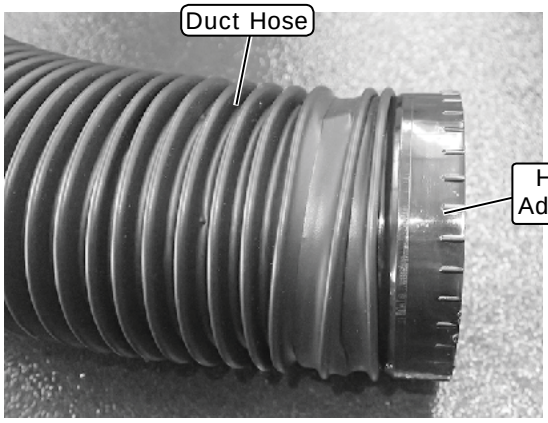


Photo 6

Driver and Passenger Side Louver Installation (Cont.)

5. Install the louver bezel brackets between the louver housings and the hose adapters (See Photo 7, below). Install the louver through the louver housing and into the hose adapter, and then tighten to secure the assembly together (See Photos 8, 9 & 10, below).
6. Install the driver side louver assembly onto the previously drilled hole on the bottom of the dash, and secure it using a 10-24 nut with star washer (See Photo 11, below). **NOTE: The driver side louver housing has a notch for easy installation next to the parking brake. This louver will use the louver mounting bracket with a smaller slot.**
7. Install the passenger side louver assembly onto the previously drilled hole on the bottom of the dash, and secure it using a 10-24 nut with star washer (See Photo 12, below).

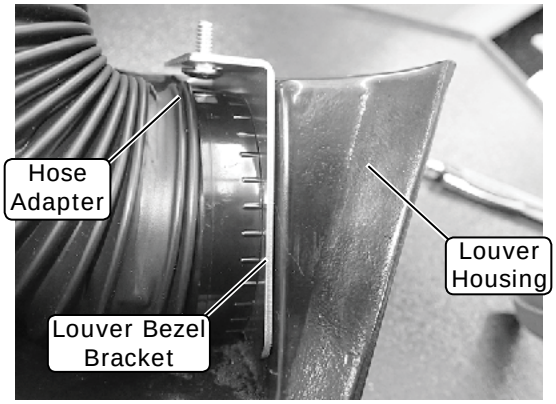


Photo 7

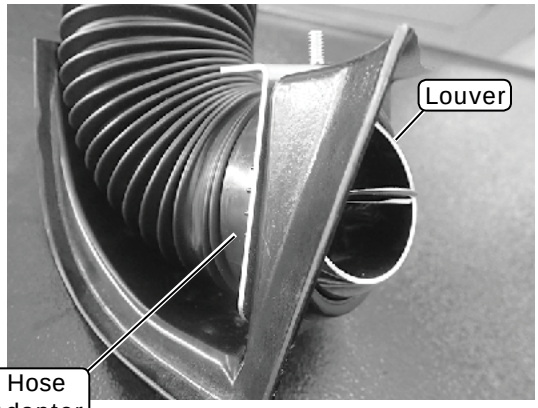


Photo 8

Photo 9

Photo 10

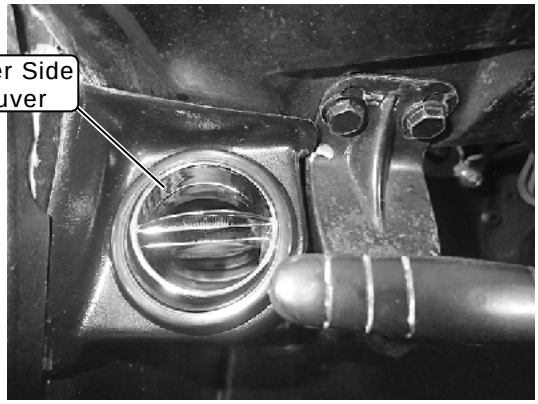


Photo 11

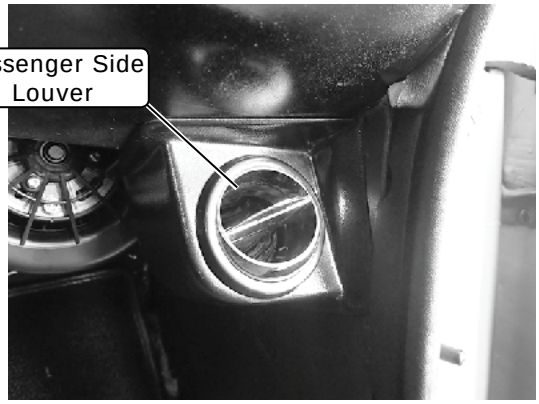


Photo 12

Center Louver Installation

1. Place the under dash center louver bezel under the dash in the desired location. Using the louver bezel as a template, mark and drill (2) 1/8" mounting holes into the bottom lip of the dash (See Figure 3, below).
2. Secure the louver bezel under the dash using (2) #8 x 1/2" pan head screws (See Figure 3, below).
3. Insert (2) lengths of 2 ½" duct hose (See Figure 4, Page 28, for duct hose lengths) through the back of the louver bezel (See Photo 2, below).
4. Attach the (2) duct hoses to the hose adapters on the (2) louvers (See Photos 3 & 4, below).
5. Insert the (2) louvers into the under dash center louver bezel, and insert the (2) 1/2" plastic caps into the (2) holes on the bottom of the bezel (See Photo 5, below).

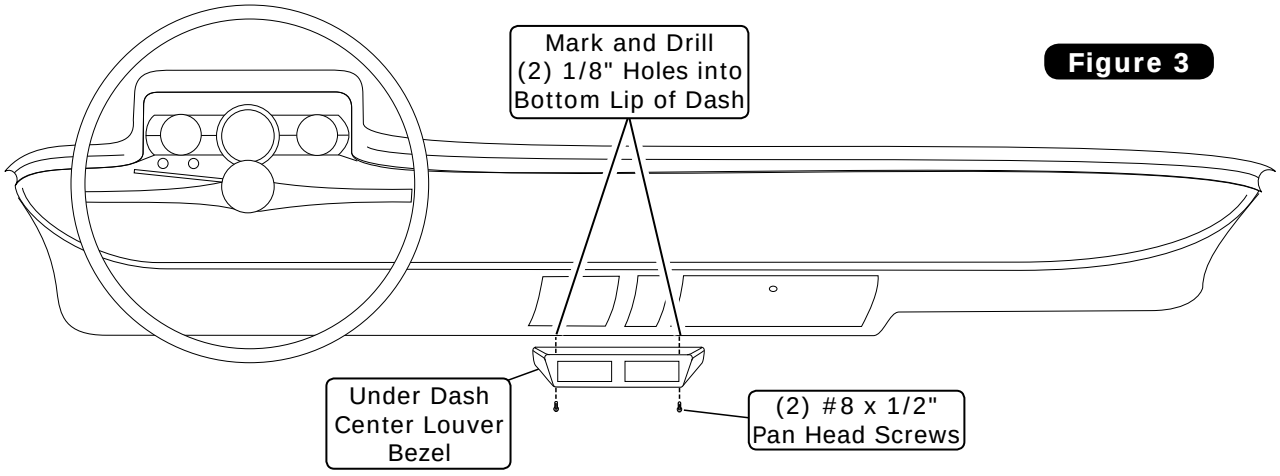


Figure 3

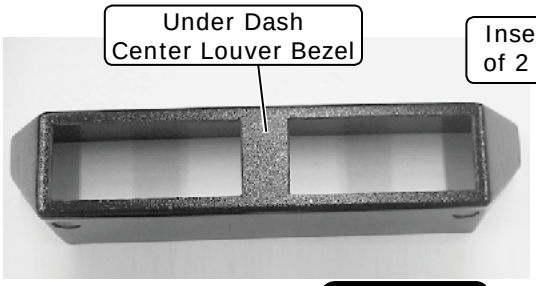


Photo 1

Top View **Photo 2**

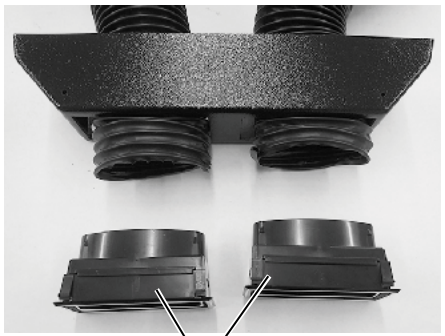
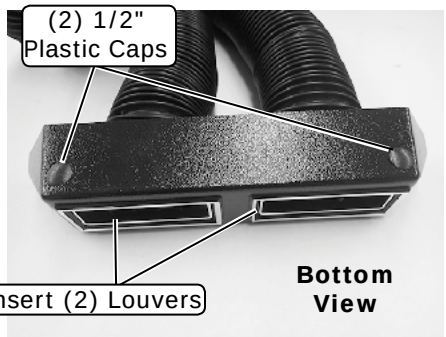


Photo 3

Photo 4



Bottom View

Photo 5

Duct Hose Routing

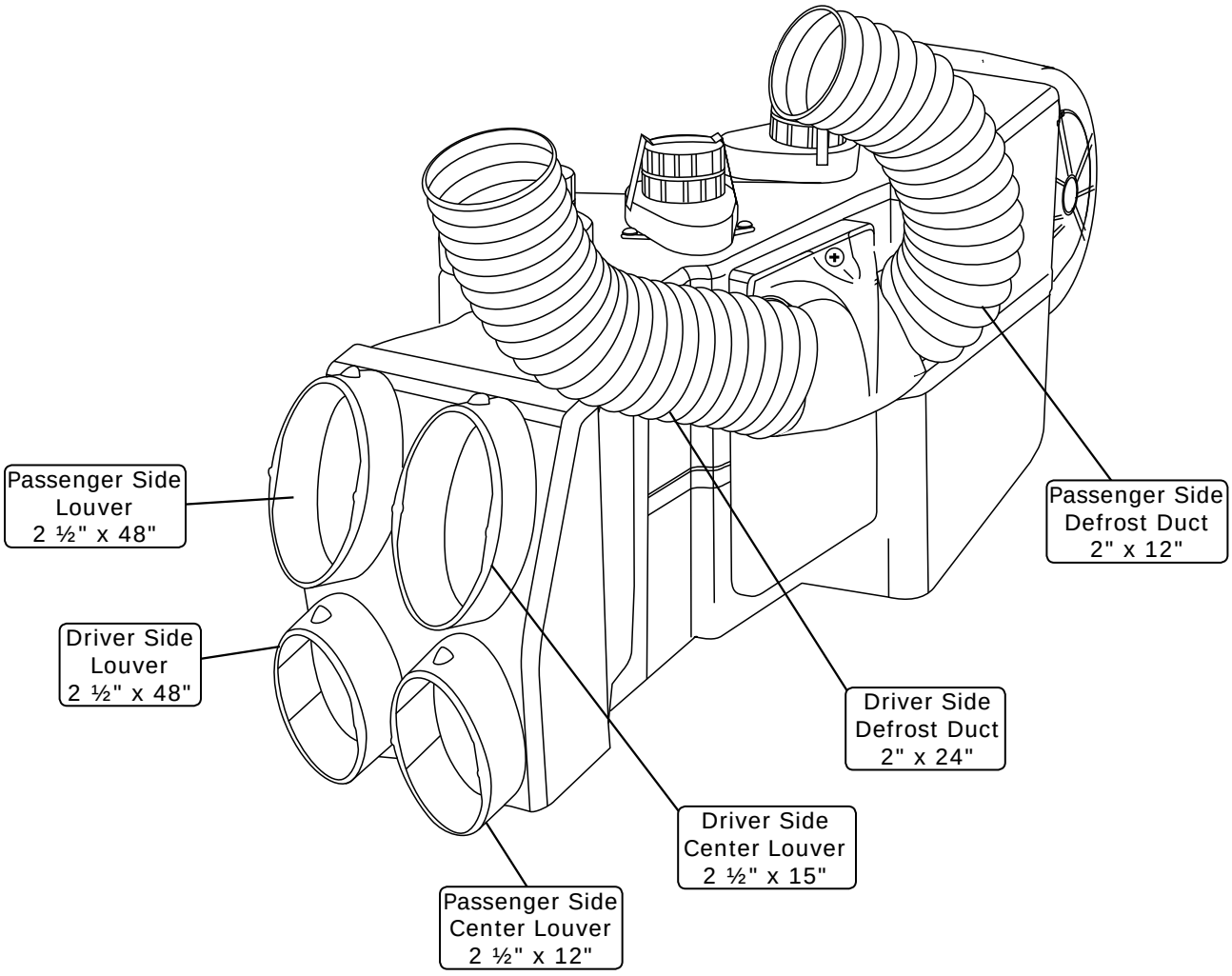


Figure 4

Glove Box Installation

1. Reinstall the clock, lights and bracket.
2. Install the supplied glove box through the front of the dash. Insert the left side first, and then slide the glove box to the right to the designated location. Secure using (5) OEM screws (See Photo 1, below).
3. Install the glove box door using (3) #10 x 3/4" sheet metal screws (See Photo 2, below).
4. Reinstall the glove box light (See Photo 3, below).
5. Reinstall the ashtray frame using the OEM screws (See Photo 4, below).
6. Reinstall the ashtray (See Photo 5, below).

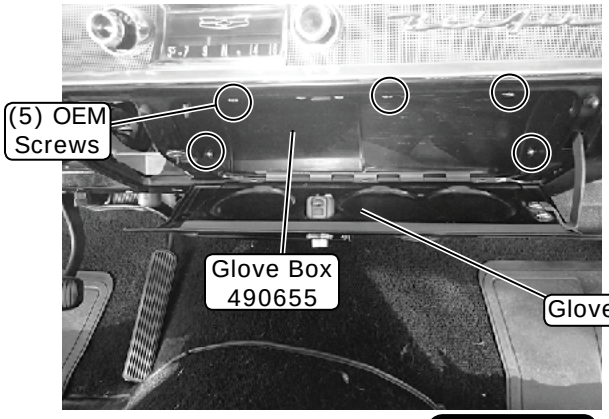


Photo 1

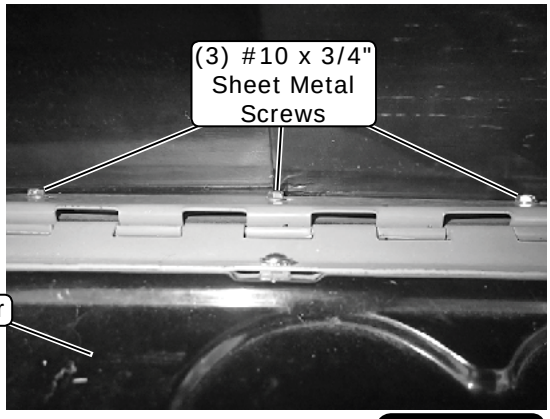


Photo 2

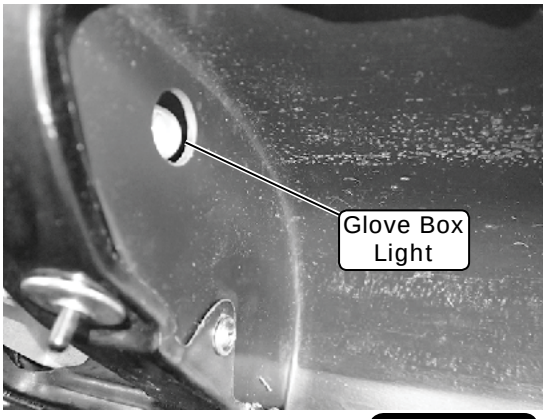


Photo 3

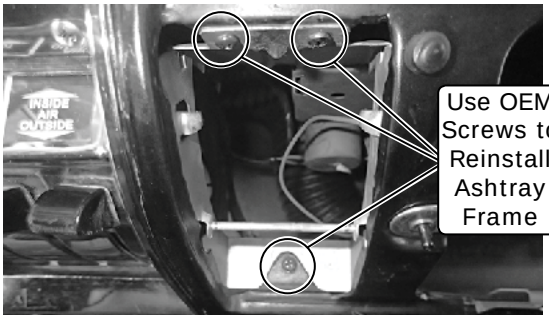


Photo 4

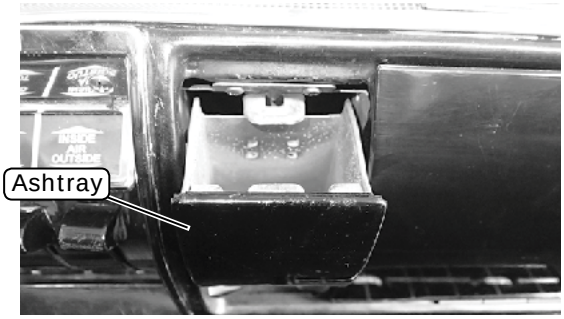
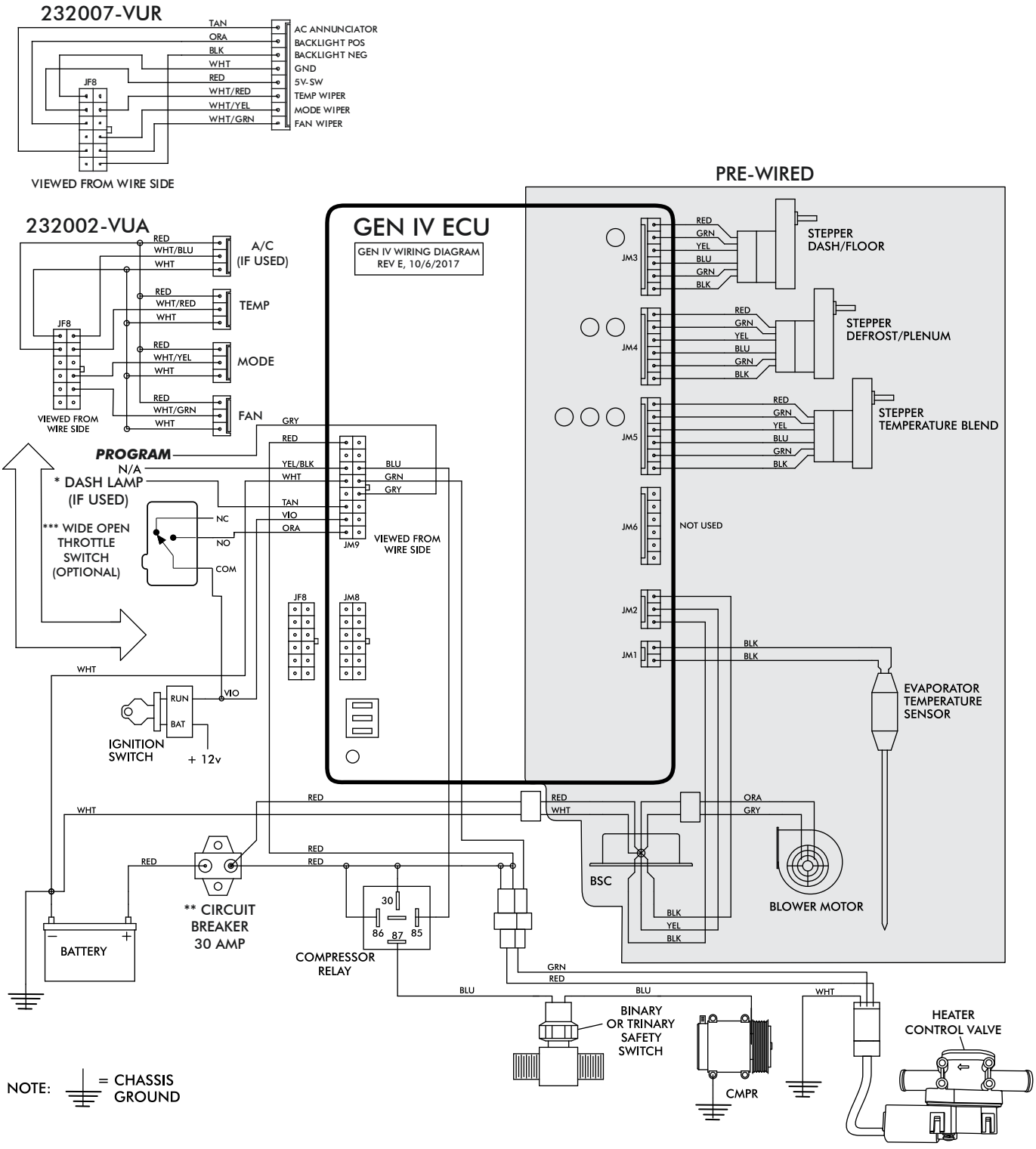


Photo 5

Final Steps

1. Reinstall all previously removed items.
2. Fill radiator with at least a 50/50 mixture of approved antifreeze and distilled water. It is the owner's responsibility to keep the freeze protection at the proper level for the climate in which the vehicle is operated. Failure to follow antifreeze recommendations will cause heater core to corrode prematurely and possibly burst in A/C mode and/or freezing weather, voiding your warranty.
3. Double check all fittings, brackets and belts for tightness.
4. Vintage Air recommends that all A/C systems be serviced by a licensed automotive A/C technician.
5. Evacuate the system for a minimum of 45 minutes prior to charging, and perform a leak check prior to servicing.
6. Charge the system to the capacities stated on Page 4 of this instruction manual.
7. See Operation of Controls procedures on Page 33.

Wiring Diagram

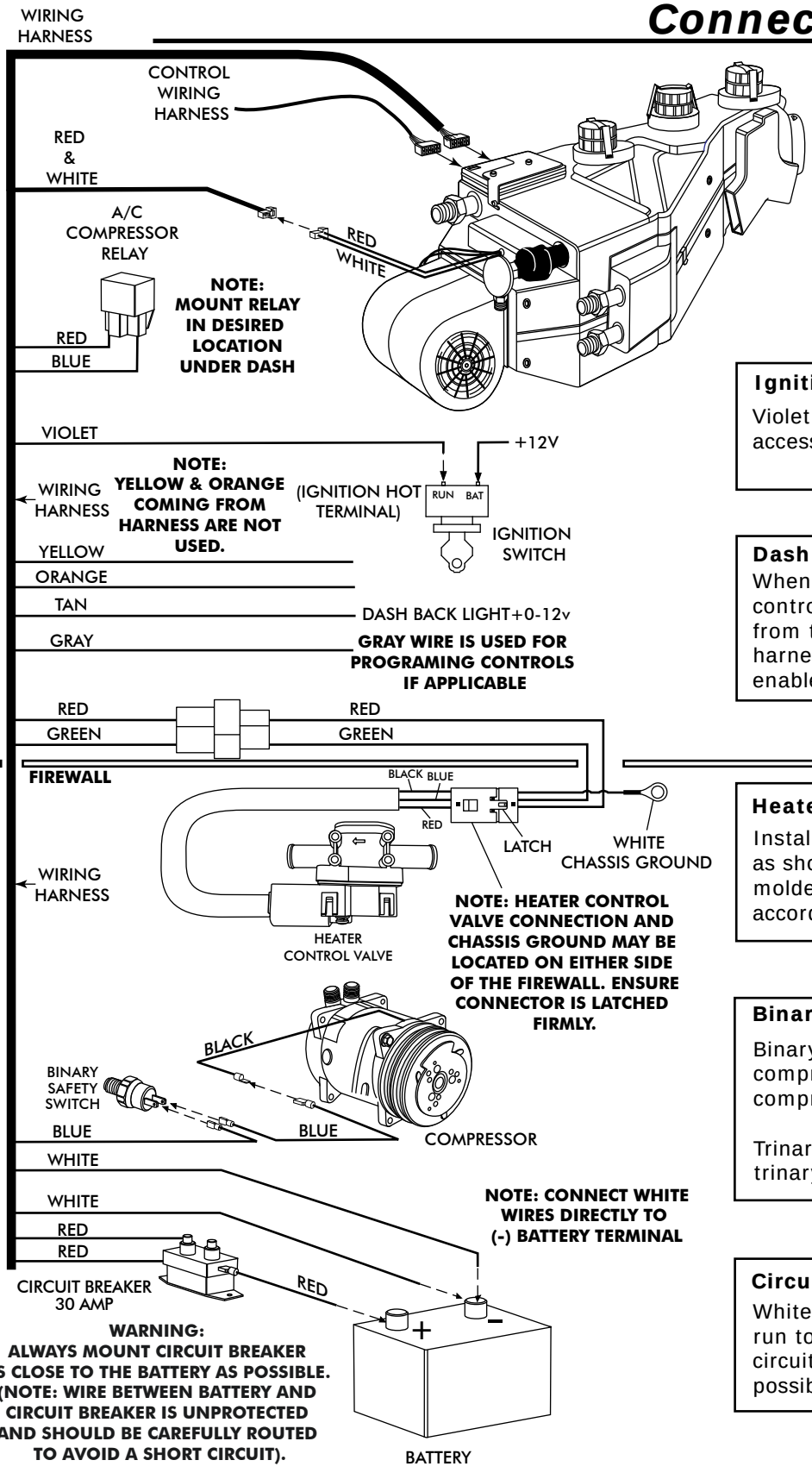


*** Dash lamp is used only with type 232007-VUR harness.**

**** Warning: Always mount circuit breaker as close to the battery as possible. (NOTE: Wire between battery and circuit breaker is unprotected and should be carefully routed to avoid a short circuit).**

***** Wide open throttle switch contacts close only at full throttle, which disables A/C compressor.**

Gen IV Wiring Connection Instruction



Ignition Switch:

Violet 12V ignition switch source (key on accessory) position must be switched.

Dash Light:

When using a Vintage Air-supplied control panel, connect the tan wire from the Gen IV evaporator wiring harness to the factory dash lights to enable panel backlighting.

Heater Control Valve:

Install with servo motor facing down, as shown. Note flow direction arrow molded into valve body and install accordingly.

Binary / Trinary & Compressor:

Binary: Connect as shown (typical compressor wiring). Be sure compressor body is grounded.

Trinary Switch: Connect according to trinary switch wiring diagram.

Circuit Breaker / Battery:

White **must** run to (-) battery. Red may run to (+) battery or starter. Mount circuit breaker as close to battery as possible.

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Operation of Controls

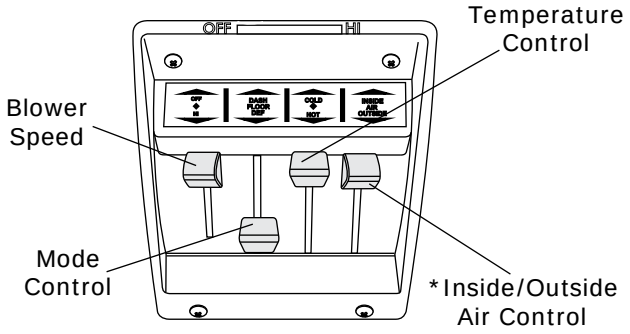
On Gen IV systems with three lever/knob controls, the temperature control toggles between heat and A/C operations. To activate A/C, move the temperature lever/knob all the way to cold and then back it off to the desired vent temperature. For heat operation, move the temperature lever/knob all the way to hot and then adjust to the desired vent temperature. The blower will momentarily change speed, each time you toggle between operations, to indicate the change. **NOTE: For proper control panel function, refer to the control panel instructions for calibration procedure.**

Blower Speed
This lever/knob controls blower speed, from OFF to HI.

Mode Control
This lever/knob controls the mode positions, from DASH to FLOOR to DEFROST, with a blend in between.

Temperature Control
This lever/knob controls the temperature, from HOT to COLD.

*** Inside/Outside Air Control**
The inside/outside air control operates the fresh air door. **NOTE: For optimal system performance, use inside air.**

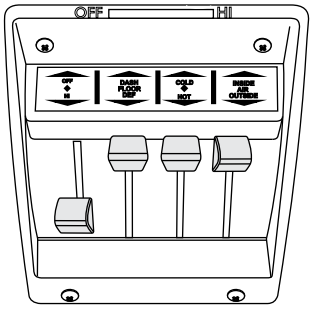


A/C Operation

Blower Speed
Adjust to desired speed.

Mode Control
Adjust to desired mode position (DASH position recommended).

Temperature Control
For A/C operation, adjust to coldest position to engage compressor (Adjust between HOT and COLD to reach desired temperature).

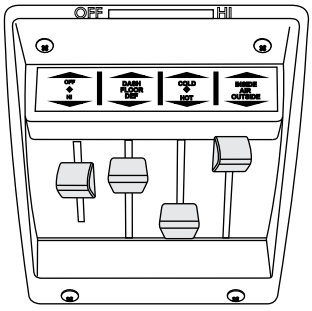


Heat Operation

Blower Speed
Adjust to desired speed.

Mode Control
Adjust to desired mode position (FLOOR position recommended).

Temperature Control
For maximum heating, adjust to hottest position (Adjust between HOT and COLD to reach desired temperature).

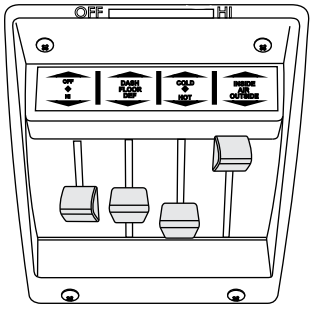


Defrost/De-fog Operation

Blower Speed
Adjust to desired speed.

Temperature Control
Adjust to desired temperature.

Mode Control
Adjust to DEFROST position for maximum defrost, or between FLOOR and DEFROST positions for a bi-level blend (Compressor is automatically engaged).



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Troubleshooting Guide

Symptom	Condition	Checks	Actions	Notes
1a. Blower stays on high speed when ignition is on.	No other functions work.	Check for damaged pins or wires in control head plug.	Verify that all pins are inserted into plug. Ensure that no pins are bent or damaged in ECU.	
		Check for damaged ground wire (white) in control head harness.	Verify continuity to chassis ground with white control head wire at various points.	Loss of ground on this wire renders control head inoperable.
	All other functions work.	Check for damaged blower switch or potentiometer and associated wiring.		See blower switch check procedure.
1b. Blower stays on high speed when ignition is on or off.		Unplug 3-wire BSC control connector from ECU. If blower shuts off, ECU is either improperly wired or damaged.	Be sure the small, 20 GA white ground wire is connected to the battery ground post. If it is, replace the ECU.	
		Unplug 3-wire BSC control connector from ECU. If blower stays running, BSC is either improperly wired or damaged.	Check to ensure that no BSC wiring is damaged or shorted to vehicle ground. The BSC operates the blower by ground side pulse width modulation switching. The positive wire to the blower will always be hot. If the "ground" side of the blower is shorted to chassis ground, the blower will run on HI.	
			Replace BSC (This will require removal of evaporator from vehicle).	No other part replacements should be necessary.
2. Compressor will not turn on (All other functions work).	System is not charged.	System must be charged for compressor to engage.	Charge system or bypass pressure switch.	**Danger: Never bypass safety switch with engine running. Serious injury can result.**
	System is charged.	Check for faulty A/C potentiometer or associated wiring (not applicable to 3-pot controls).	Check continuity to ground on white control head wire. Check for 5V on red control head wire.	To check for proper pot function, check voltage at white/blue wire. Voltage should be between 0V and 5V, and will vary with pot lever position.
		Check for disconnected or faulty thermistor.	Check 2-pin connector at ECU housing.	Disconnected or faulty thermistor will cause compressor to be disabled.
3. Compressor will not turn off (All other functions work).		Check for faulty A/C potentiometer or associated wiring.	Repair or replace pot/control wiring.	Red wire at A/C pot should have approximately 5V with ignition on. White wire will have continuity to chassis ground. White/ Blue wire should vary between 0V and 5V when lever is moved up or down.
		Check for faulty A/C relay.	Replace relay.	

Troubleshooting Guide (Cont.)

Symptom	Condition	Checks	Actions	Notes
4. System will not turn on, or runs intermittently.	Works when engine is not running; shuts off when engine is started (typically early Gen IV, but possible on all versions).	Noise interference from either ignition or alternator.	Install capacitors on ignition coil and alternator. Ensure good ground at all points. Relocate coil and associated wiring away from ECU and ECU wiring. Check for burned or loose plug wires.	Ignition noise (radiated or conducted) will cause the system to shut down due to high voltage spikes. If this is suspected, check with a quality oscilloscope. Spikes greater than 16V will shut down the ECU. Install a radio capacitor at the positive post of the ignition coil (see radio capacitor installation bulletin). A faulty alternator or worn out battery can also result in this condition.
	Will not turn on under any conditions.	Verify connections on power lead, ignition lead, and both white ground wires.	Check for positive power at heater valve green wire and blower red wire. Check for ground on control head white wire.	
		Verify battery voltage is greater than 10 volts and less than 16.	Verify proper meter function by checking the condition of a known good battery.	
5. Loss of mode door function.	No mode change at all.	Check for damaged mode switch or potentiometer and associated wiring.		Typically caused by evaporator housing installed in a bind in the vehicle. Be sure all mounting locations line up and don't have to be forced into position.
	Partial function of mode doors.	Check for obstructed or binding mode doors.		
		Check for damaged stepper motor or wiring.		
6. Blower turns on and off rapidly.	Battery voltage is at least 12V.	Check for at least 12V at circuit breaker.	Ensure all system grounds and power connections are clean and tight.	System shuts off blower at 10V. Poor connections or weak battery can cause shutdown at up to 11V.
	Battery voltage is less than 12V.	Check for faulty battery or alternator.	Charge battery.	
7. Erratic functions of blower, mode, temp, etc.		Check for damaged switch or pot and associated wiring.	Repair or replace.	
8. When ignition is turned on, blower momentarily comes on, then shuts off. This occurs with the blower switch in the OFF position.		This is an indicator that the system has been reset. Be sure the red power wire is on the battery post, and not on a switched source. Also, if the system is pulled below 7V for even a split second, the system will reset.	Run red power wire directly to battery.	

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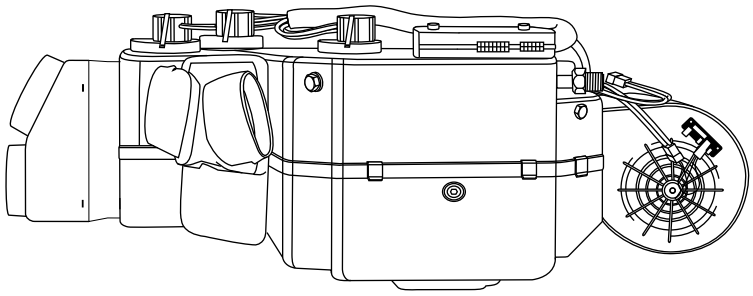
Packing List: Evaporator Kit (565702)

No.	Qty.	Part No.	Description	
1.	1	761160	Gen IV Evaporator Sub Case	_____
2.	1	781162	Accessory Kit	_____

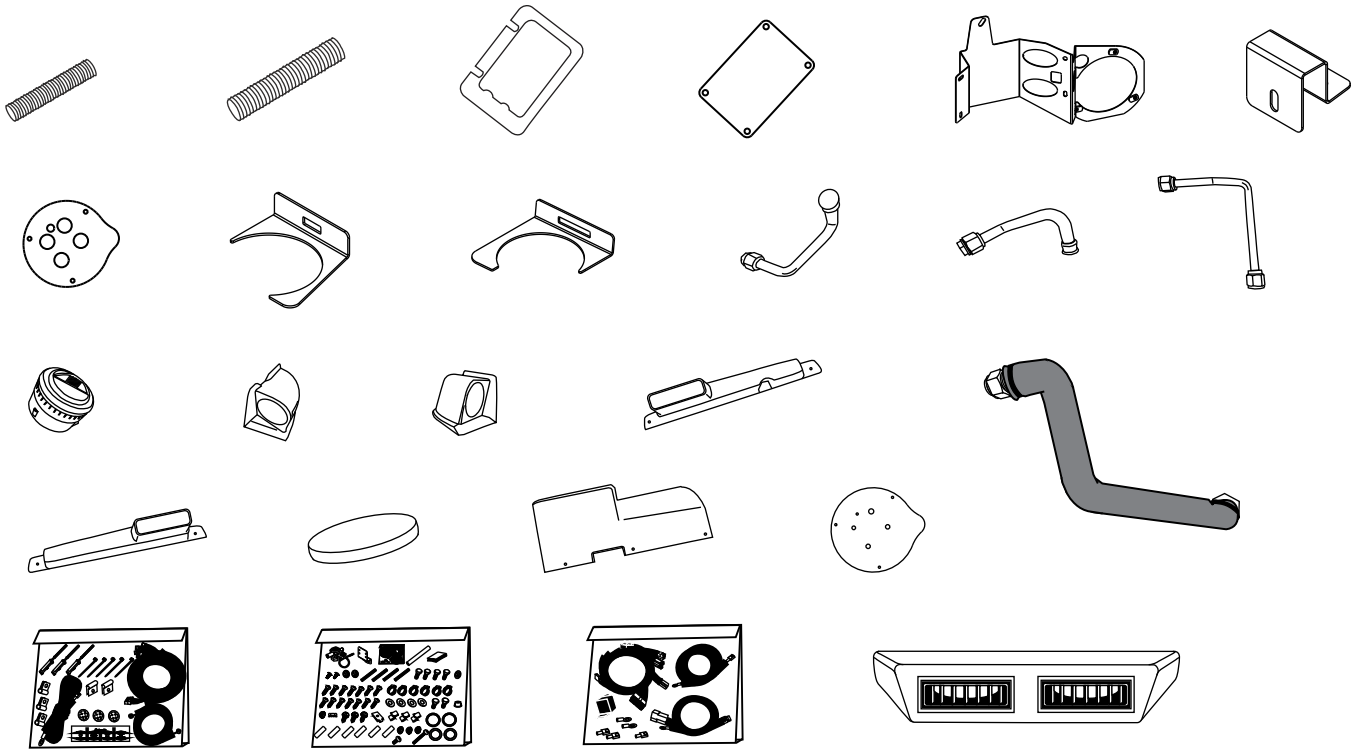
Checked By: _____
Packed By: _____
Date: _____

1

Gen IV Evaporator Sub Case 761160



2



Accessory Kit 781162

NOTE: Images may not depict actual parts and quantities. Refer to packing list for actual parts and quantities.