an ISO 9001:2015 Registered Company

1969-74 Chevrolet Nova

without **Factory Air Evaporator Kit (561072)**

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Table of Contents

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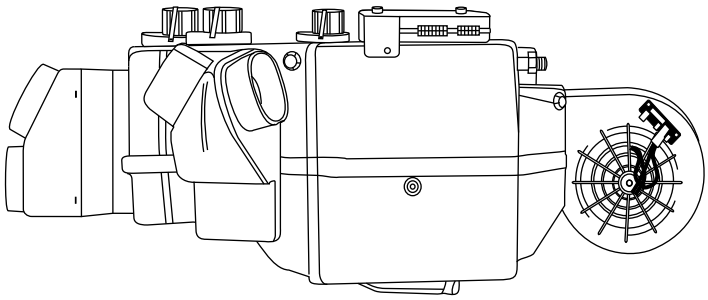
Packing List: Evaporator Kit (561072)

No.	Qty.	Part No.	Description
1.	1	744004-VUE	Gen IV 4-Vent Evaporator Sub Case
2.	1	784176	Accessory Kit

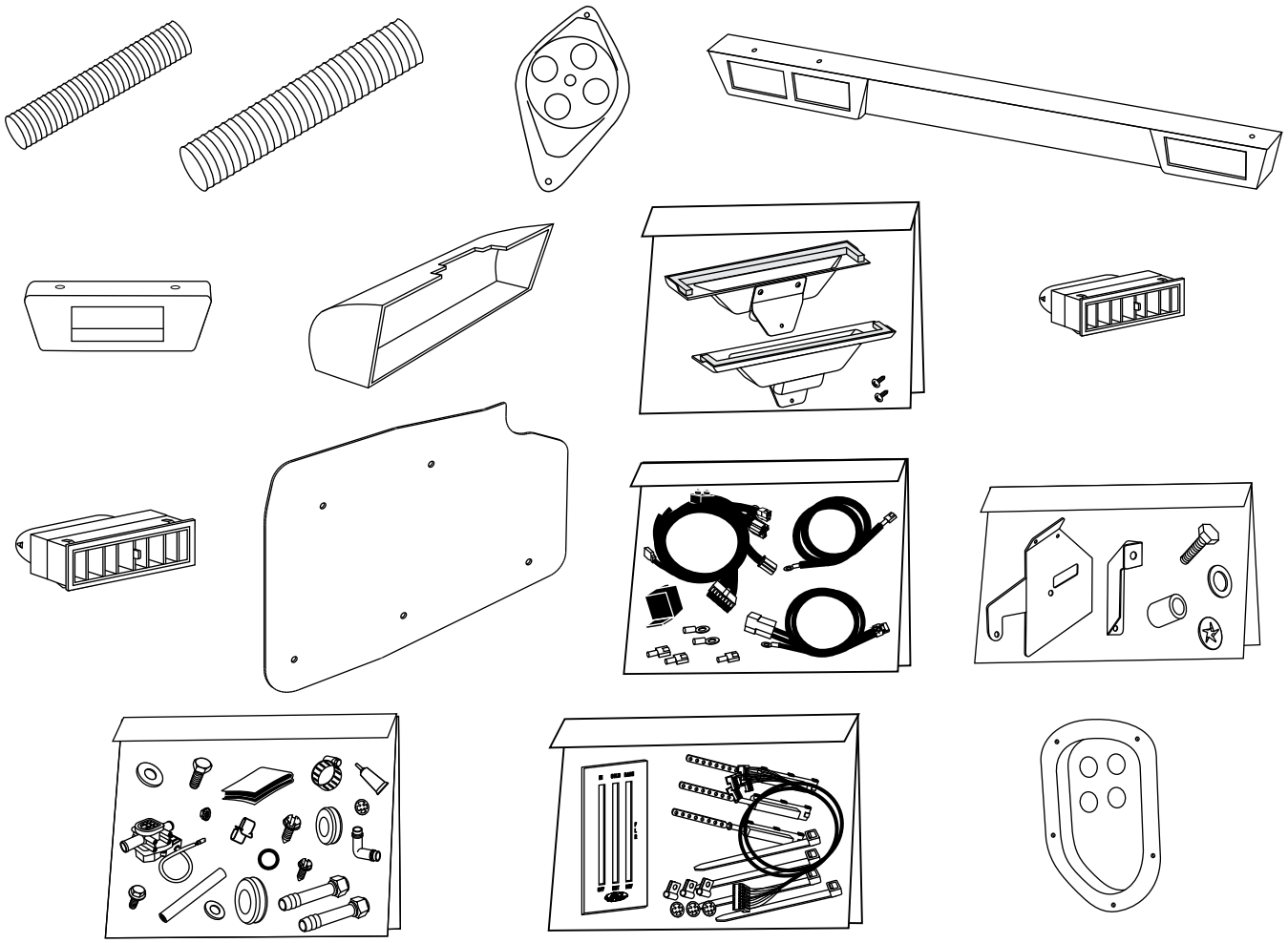
**** Before beginning installation, open all packages and check contents of shipment. Please report any shortages directly to Vintage Air within 15 days. After 15 days, Vintage Air will not be responsible for missing or damaged items.**

1



Gen IV Evaporator Sub Case 744004-VUE

2



Accessory Kit 784176

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 remained 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.

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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, 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, 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, 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.

Perform the Following:

1. Disconnect battery.
2. Remove the battery and battery tray (retain).
3. Drain the radiator.
4. Remove the radiator (retain).
5. Remove the blower assembly (under the hood) and the air distribution system (under the dash). **NOTE: The factory manual indicates to remove the right inner fender panel.**
6. Remove the OEM heater hoses (discard) (See Figure 1, below).
7. Remove the OEM heater wiring (discard) (See Figure 1, below).

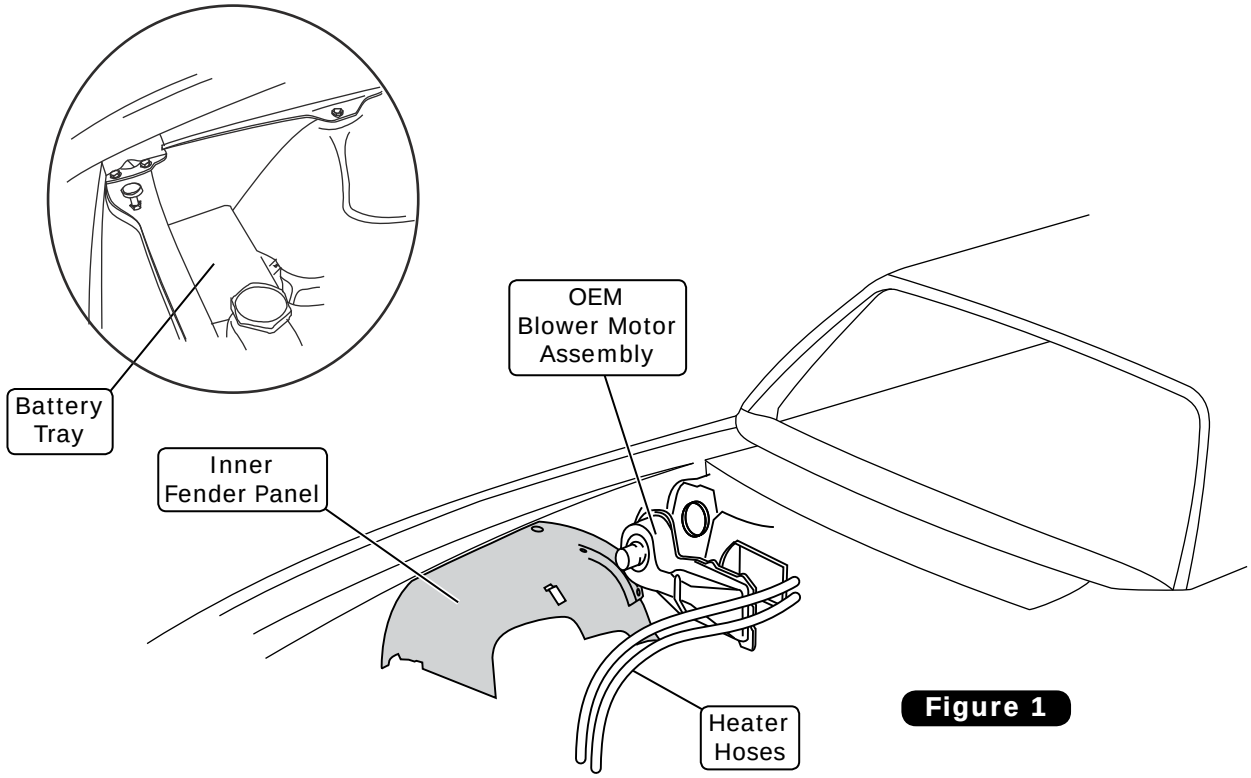


Figure 1

Condenser Assembly and Installation

1. Refer to separate instructions included with the condenser kit to install the condenser.
2. Binary switch installation (Refer to condenser instructions).

Compressor and Brackets

1. Refer to separate instructions included with the bracket kit to install the compressor bracket.

Passenger Compartment Disassembly

NOTE: The removal of the instrument panel is required for the installation of the evaporator unit. Vintage Air recommends utilizing the factory service manual when diassembling and reassembling the instrument panel. Retain all items removed from vehicle, as some parts and hardware will be reused.

Perform the Following:

1. Remove the glove box door (See Figure 1, below).
2. Remove the glove box.
3. Remove the OEM heater assembly (See Figure 1, below).
4. Remove the OEM defrost duct assembly.
5. Remove the lower steering column. **NOTE: Protect the steering column with a cloth.**
6. Disconnect all wires and cables from the instrument panel, speedometer, control panel and radio.
7. Remove the control panel assembly.
8. Refer to the control panel conversion kit instructions for the installation of the controls.
9. Remove passenger side kick panel.

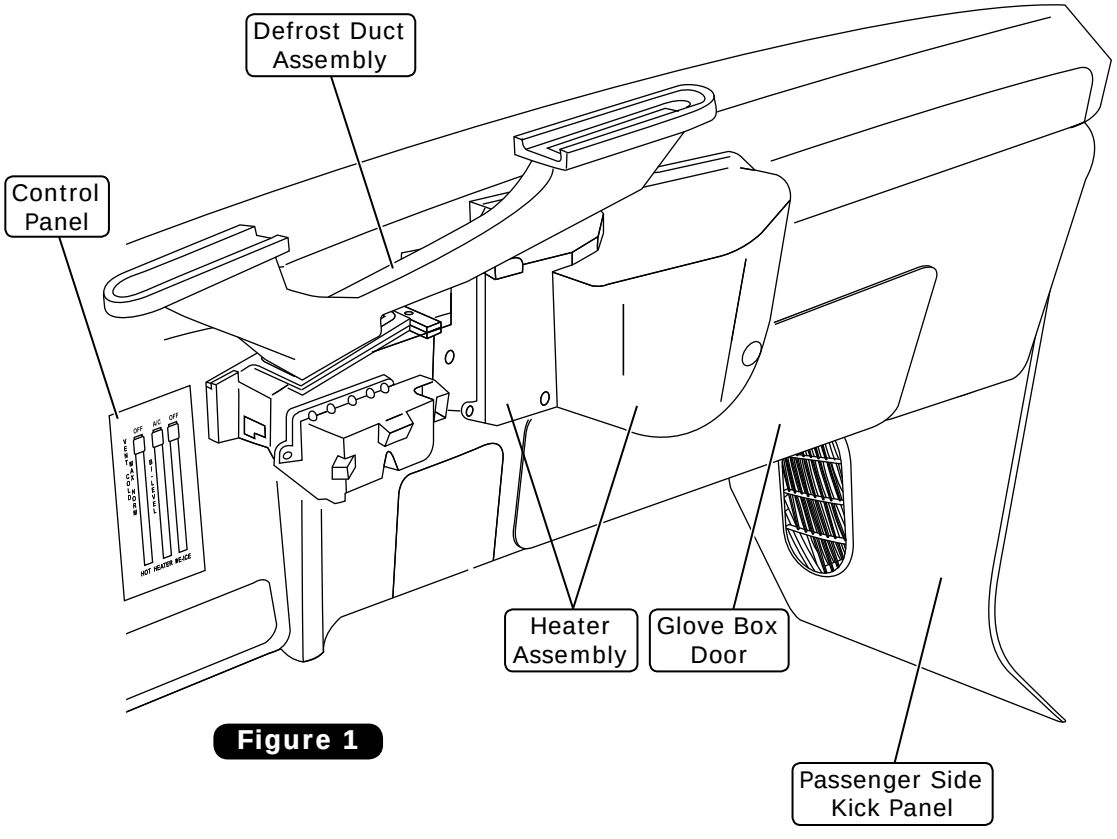


Figure 1

Kick Panel Modification

1. Remove the fresh air door assembly from the OEM kick panel by lifting up on the door toward the spring and sliding it out of the hinge housing (See Photo 1, below).
2. Disconnect and remove the fresh air door cable from the OEM lever housing (discard) (See Photo 2, below).
3. Trim the fresh air door housing flush with the back of the OEM kick panel, and discard the excess material (See Photo 3 and Figure 1, below). Install the 1/2" plug into the door cable opening as shown in Figure 1, below.
4. Remove the kick panel vent (See Photos 4 & 5, below).

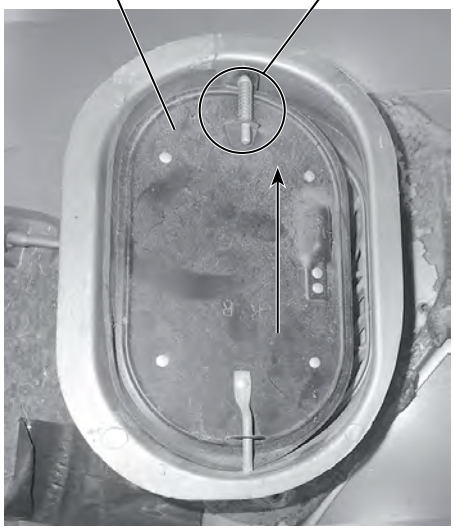
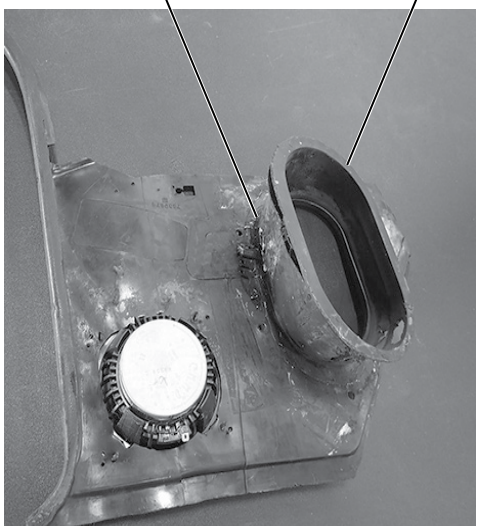


Photo 1

Photo 2



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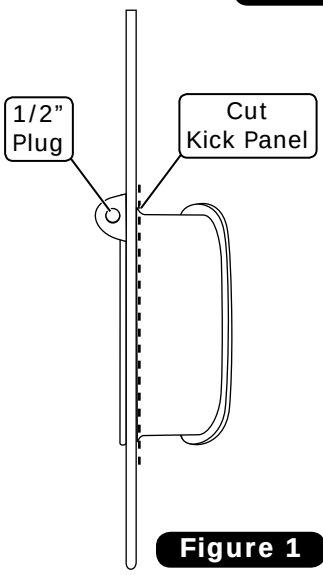
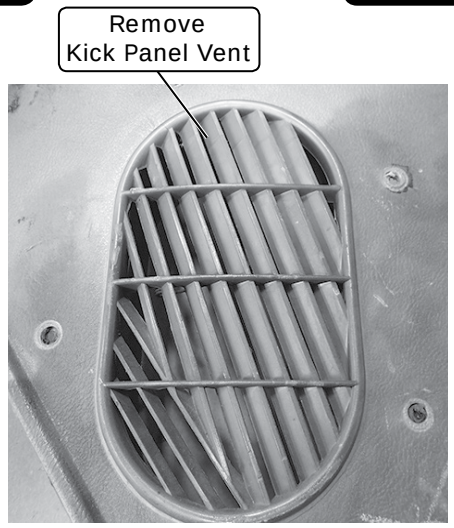
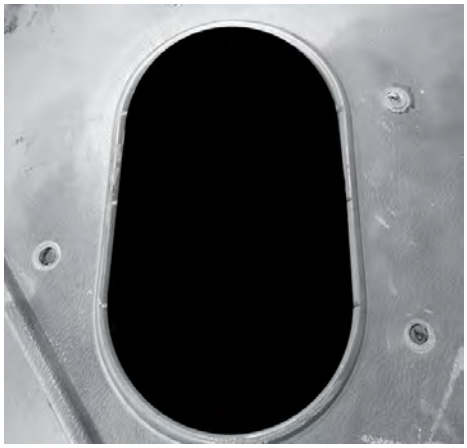


Figure 1



Before Modification

Photo 4



After Modification

Photo 5

Defrost Duct Installation

1. Place the defrost ducts under the dash, aligning them with the defrost opening as shown in Figure 1, below.
2. Using the brackets on the defrost ducts as a template, drill a 7/64" hole.
3. Secure the defrost ducts using (2) #10 x 1/2" sheet metal screws.

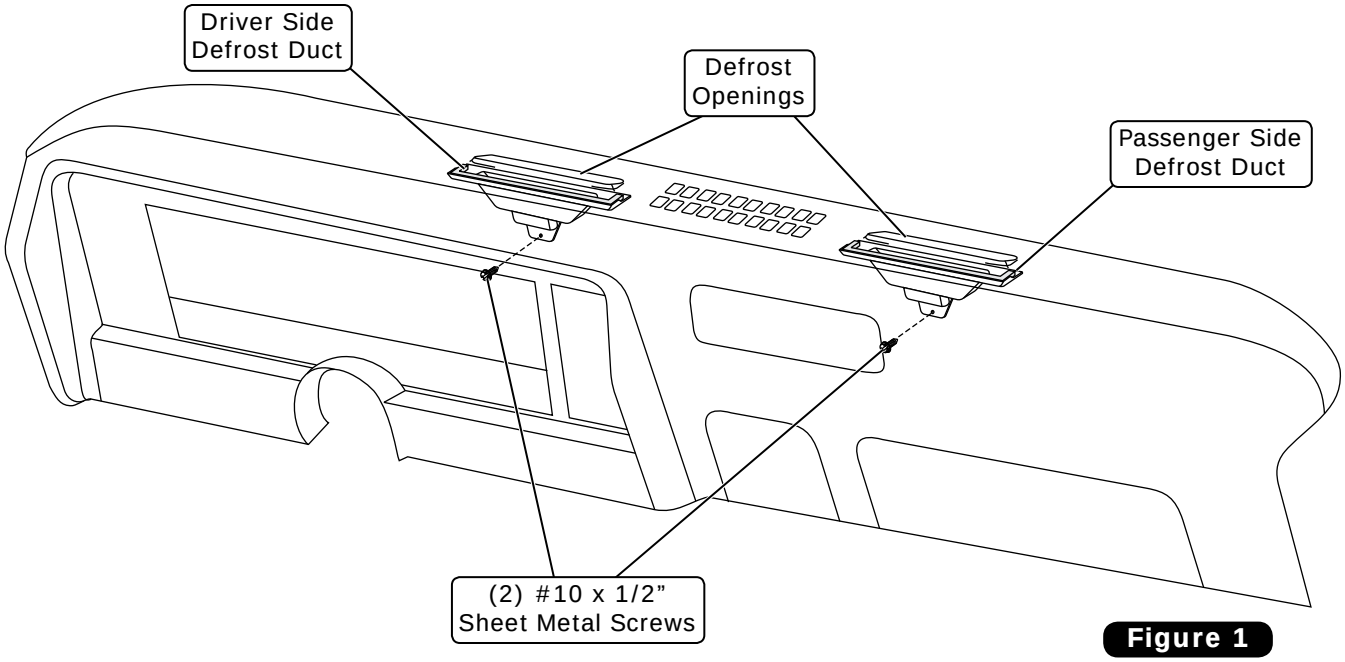
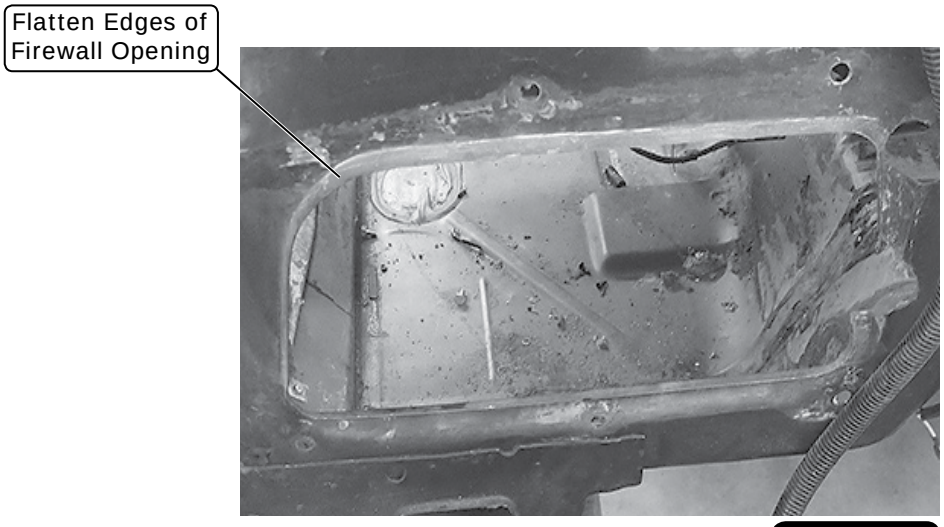


Figure 1

Firewall Modification

NOTE: A firewall modification is required for the firewall cover.
1. Flatten the edges of the firewall opening (See Photo 1, below).



Engine Compartment Side **Photo 1**

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Fresh Air Cap & Kick Panel Cover Preparation

1. Install (4) large grommets and a 7/8" grommet into the fresh air cap (See Photos 1 & 2, below).
2. On the inside of the fresh air cap, the letter "T" indicates the top mounting hole for the firewall (See Photo 3, below).
3. From the center of the bottom left hole in the kick panel cover, measure 1 ½" down. Mark and drill a 5/8" hole for the 7/8" grommet (See Photos 4 & 5, below).

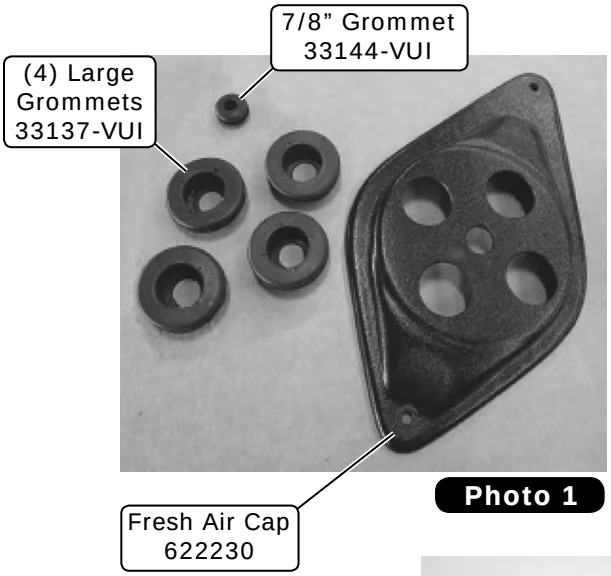


Photo 1

Photo 2

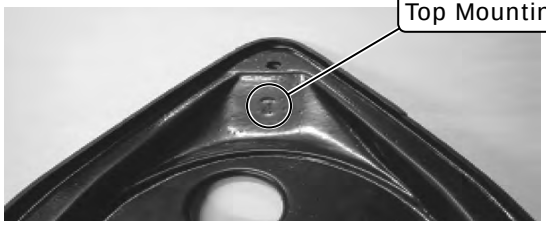


Photo 3

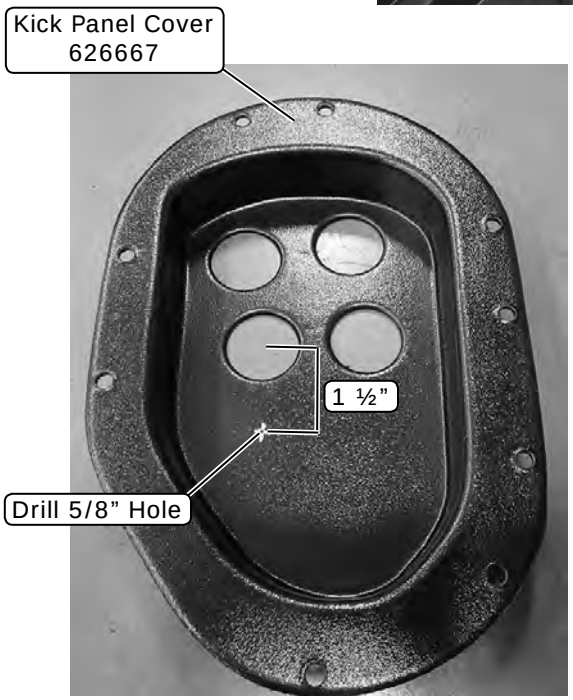


Photo 4

Photo 5

Fresh Air Cap & Kick Panel Cover Preparation (Cont.)

4. Install (4) large grommets and a 7/8" grommet into the kick panel cover (See Photos 6 & 7, below).

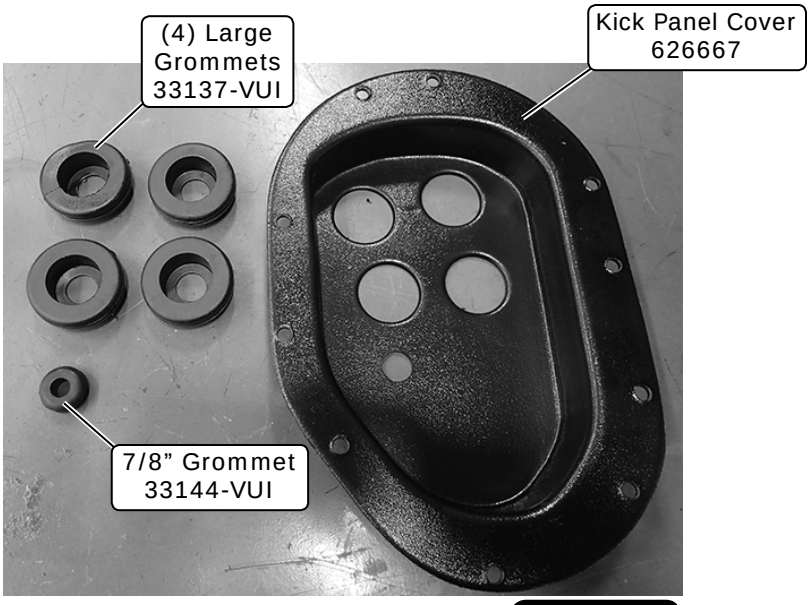


Photo 6

Photo 7

Wiring Installation

1. From the passenger compartment, route the heater control valve connector and wiring (red, white and green) through the 7/8" grommet in the kick panel cover (See Figure 1, below). **NOTE: Leave approximately 1" of wiring between the kick panel cover and the harness connector. This allows enough wiring to reach the harness.**

2. Disconnect the circuit breaker from the main wiring harness (See Photo 1, below).

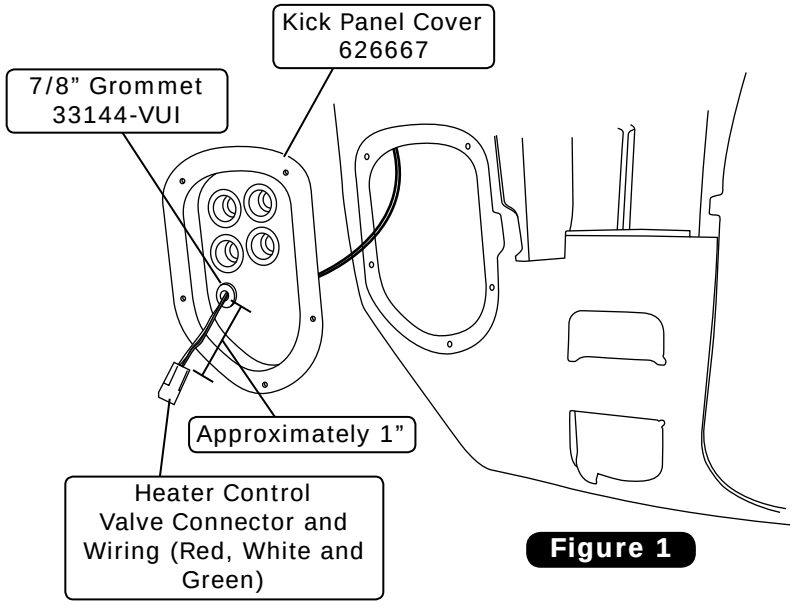


Figure 1

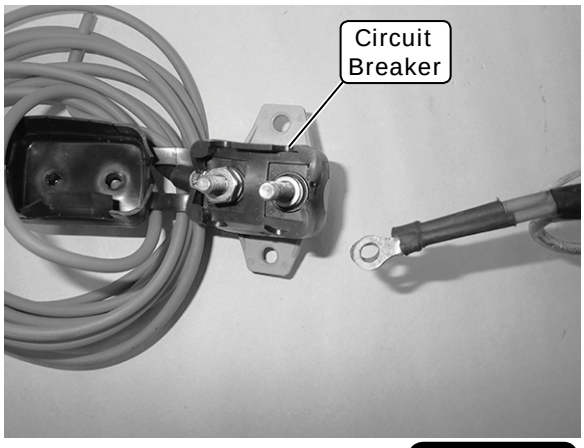
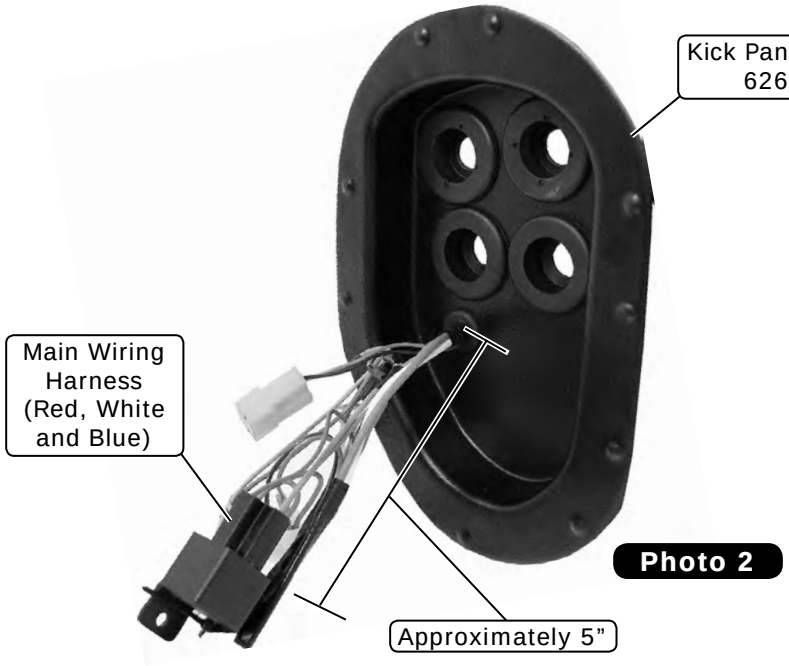


Photo 1

Wiring Installation (Cont.)

3. Route the red, white and blue wires from the main wiring harness through the 7/8" grommet in the kick panel cover (See Photo 2, below). **NOTE: Leave approximately 5" of wiring between the relay and the kick panel cover. This allows enough wiring to secure the relay to the mounting position.**
4. Route the heater control valve wiring (red, white and green) through the 7/8" grommet in the fresh air cap (See Photo 3, below).
5. Route the main harness wiring (red, white and blue) through the 7/8" grommet in the fresh air cap (See Photo 4, below).



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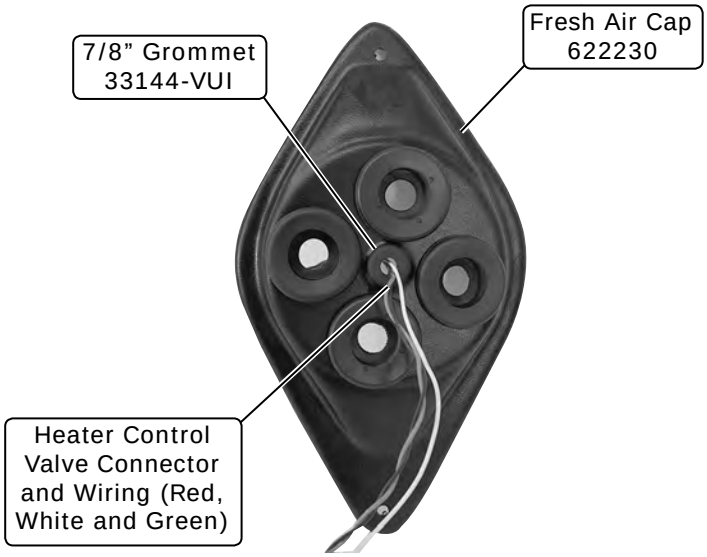


Photo 3

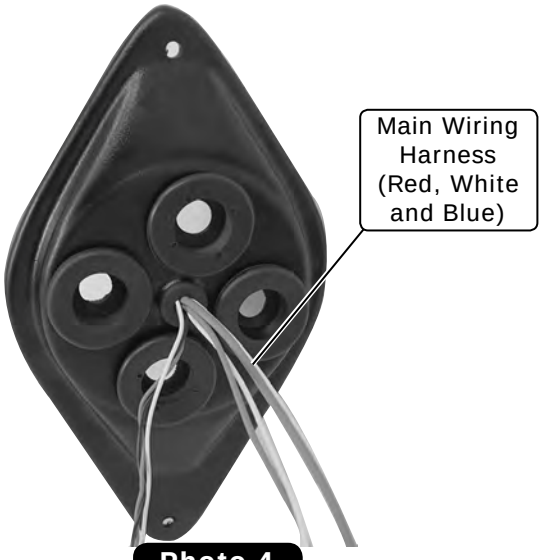


Photo 4

Kick Panel Cover Installation

1. Route the A/C and heater hoses through the kick panel cover as shown in Figure 1, below.

2. Apply 1/4" bead of silicone around the back side of the kick panel cover as shown in Figure 1, below.

3. Secure the kick panel cover and kick panel using OEM screws as shown in Figure 1, below.

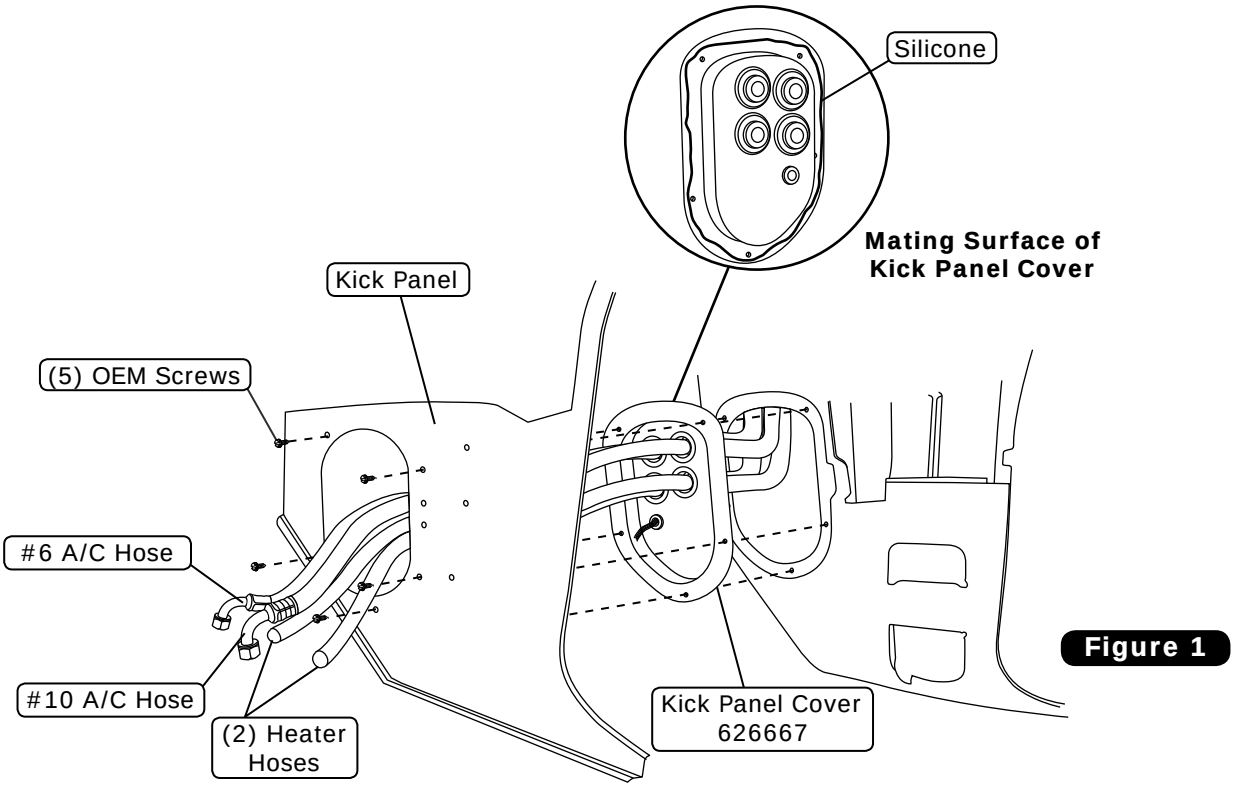


Figure 1

Fresh Air Cap Installation

NOTE: The fresh air cap installs on the engine side of the firewall.

1. Route the A/C and heater hoses through the fresh air cap as shown in Figure 1, below.

2. Gently pull the slack from the hoses in the passenger compartment, making sure the hoses are not kinked.

3. Slide the fresh air cap into position, and secure it to the firewall using (2) #14 x 3/4" sheet metal screws (See Photo 1, below).

4. Apply silicone around the outer edge of the fresh air cap (See Photo 1, below).

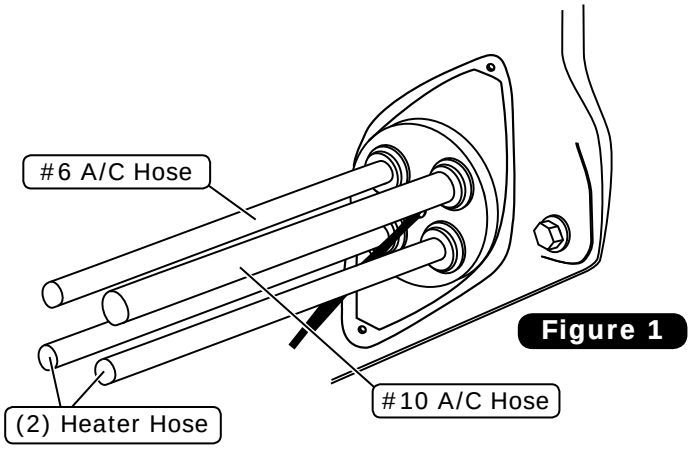


Figure 1

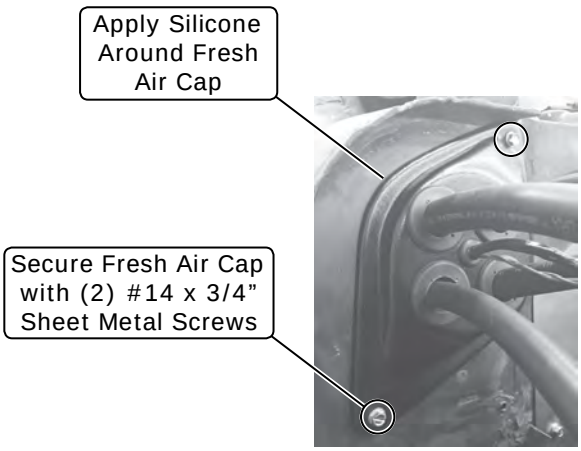


Photo 1

Firewall Cover Insulation

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

1. To apply insulation to the firewall cover, temporarily install the firewall cover onto the firewall using (2) 1/4-20 x 3/4" bolts and (2) 1/4-20 nuts with star washers (See Photo 1, below).
2. From the passenger compartment, trace the firewall opening onto the firewall cover (See Photo 2, below).
3. Remove the firewall cover, and apply insulation to the traced area (See Photo 3, below).

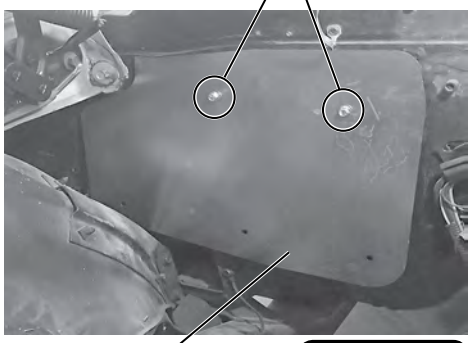
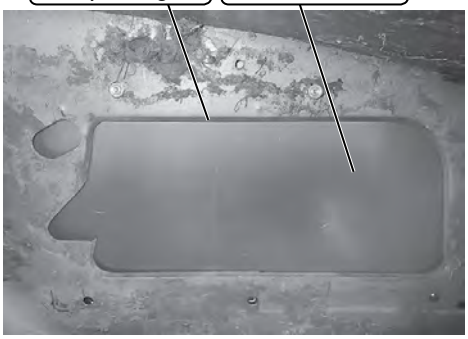


Photo 1



Passenger Compartment View

Photo 2

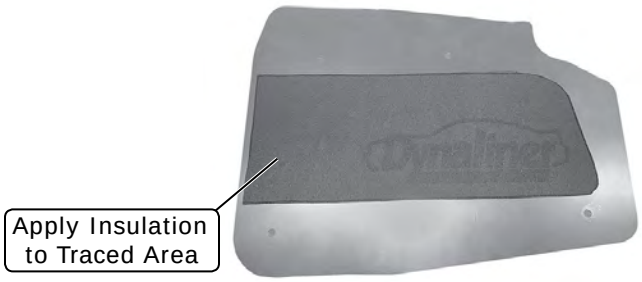
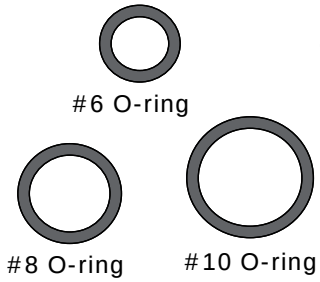
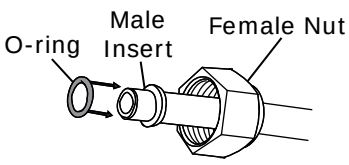


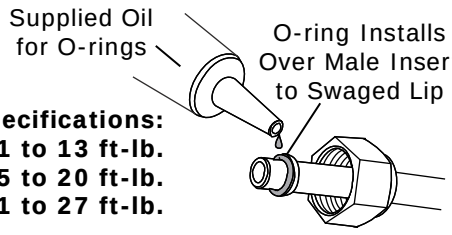
Photo 3

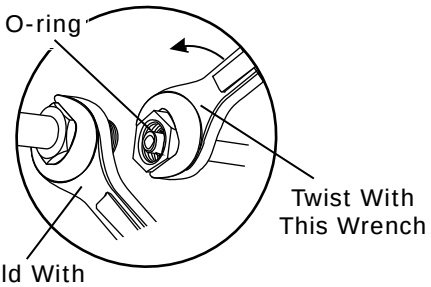
Lubricating O-rings





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



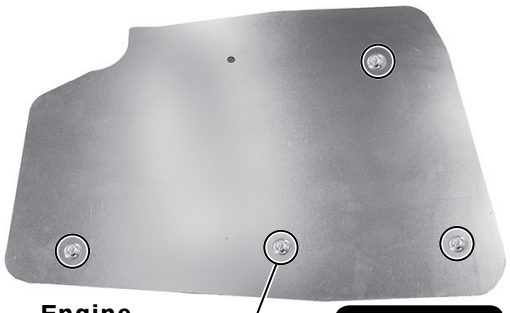


NOTE: Standard torque specifications:
#6: 11 to 13 ft-lb.
#8: 15 to 20 ft-lb.
#10: 21 to 27 ft-lb.

Firewall Cover Installation

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

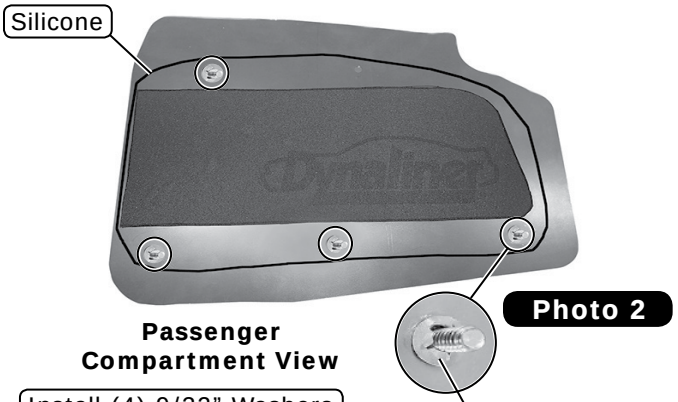
1. Install (4) 1/4-20 x 3/4" serrated flange hex bolts and (4) 1/4" pushnut bolt retainers into the firewall cover as shown in Photos 1 & 2, below.
2. Apply a bead of silicone around the mating surface of the firewall cover (See Photo 2, below).
3. Install the firewall cover onto the firewall. Secure it using (4) 9/32" washers and (4) 1/4-20 nuts with star washers (See Photo 3, below).



Engine Compartment View

Photo 1

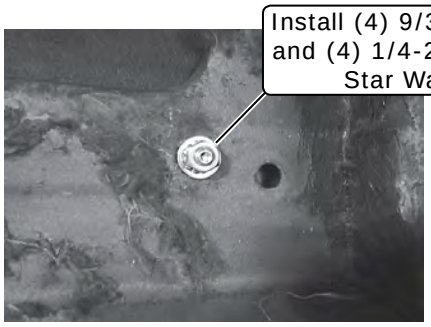
Install (4) 1/4-20 x 3/4" Serrated Flange Hex Bolts



Passenger Compartment View

Photo 2

Install (4) 1/4" Pushnut Bolt Retainers



Passenger Compartment View

Photo 3

Evaporator Bracket Installation

1. On a work bench, install the evaporator front and rear mounting brackets onto the evaporator using (4) 1/4-20 x 1/2" hex bolts and tighten as shown in Figure 1, below and Figure 2, Page 16.
2. Install the (2) heater fittings onto the evaporator with properly lubricated O-rings as shown in Lubricating O-rings, Page 14 and Figure 3, Page 16.

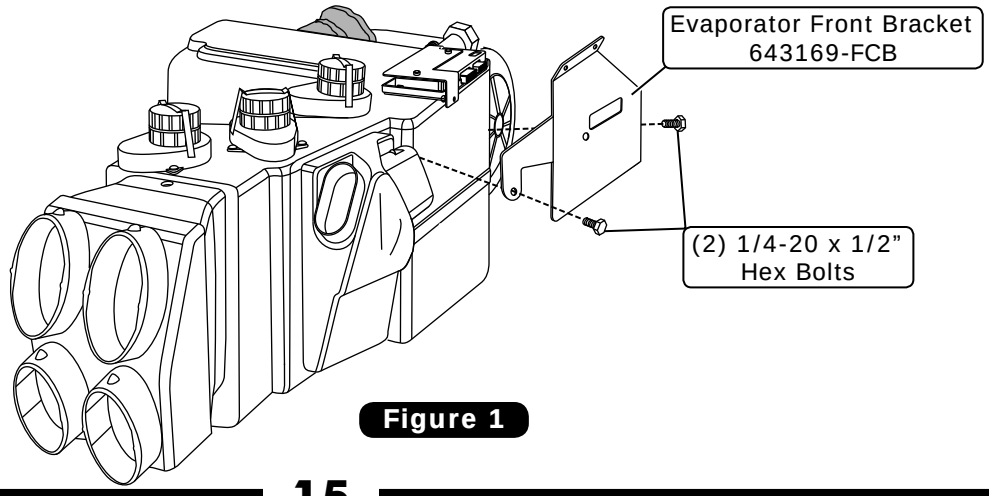


Figure 1

Evaporator Bracket Installation (Cont.)

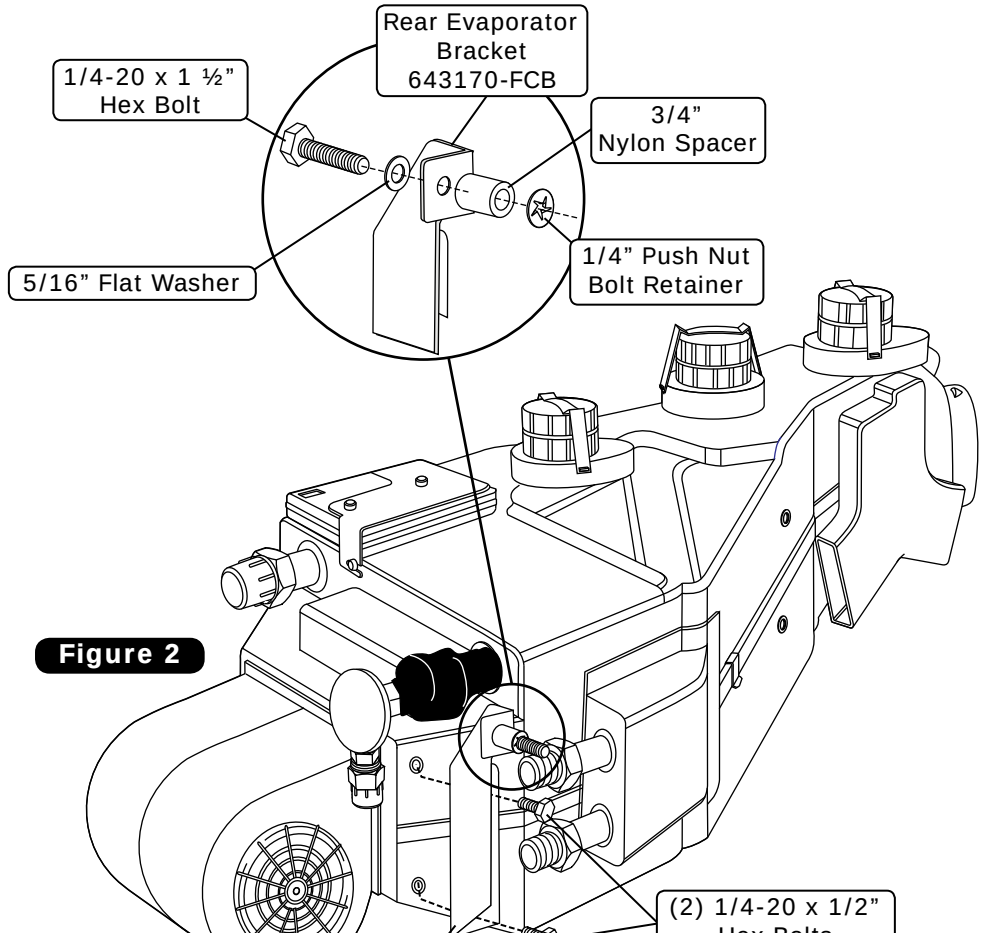


Figure 2

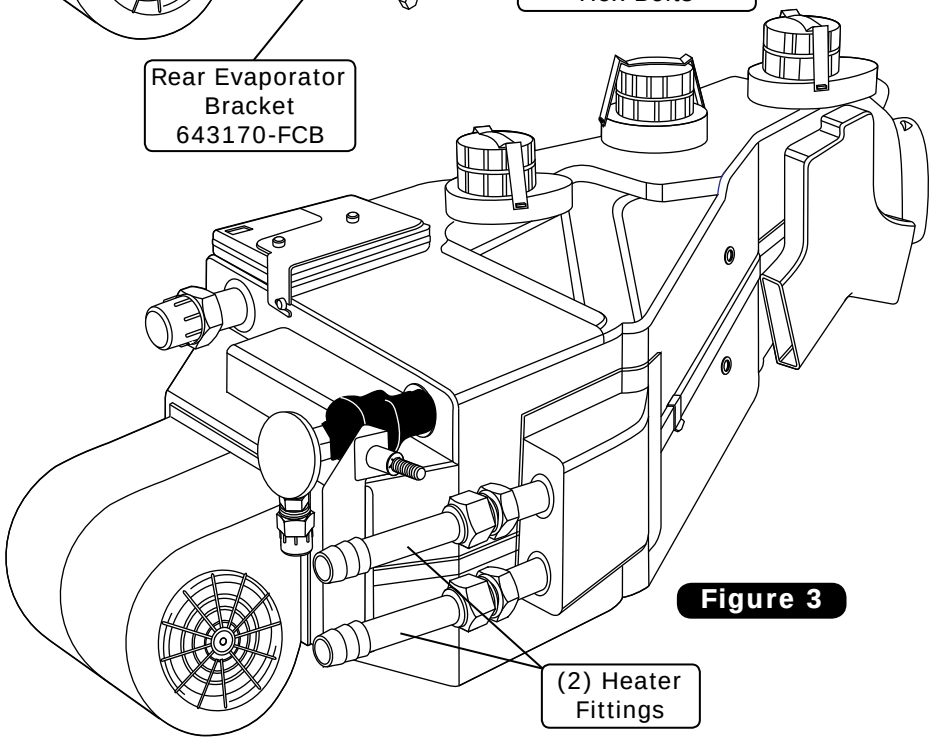


Figure 3

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 [call out in diagram].

1. Place the evaporator unit under the dash.
2. Install the 90° fitting from the #6 drier/evaporator A/C hose onto the expansion valve on the evaporator unit using a properly lubricated #6 O-ring (See Lubricating O-rings, Page 14 and Figure 1, below).
3. Install the heater hose and a hose clamp onto the upper heater hardline on the evaporator unit (See Figure 1, below).
4. Install the lower heater hose and a hose clamp onto the lower heater hardline on the evaporator unit (See Figure 1, below).
5. Lift the evaporator unit up under the dashboard, and secure it loosely to the firewall from the engine compartment side using a 1/4-20 nut with star washer (See Figure 2, below). **NOTE: To ensure proper drainage, it is very important that the evaporator level, both left-right and fore-aft. Check leveling on the flat portions of the sub case around the drain.**
6. Using (2) #14 x 3/4 sheet metal screws, secure the front evaporator mounting bracket to the inner cowl (See Figure 2a, below).
7. Verify that the evaporator unit is leveled and square to the dash, then tighten all mounting bolts. **NOTE: Tighten the bolt on the firewall first, then the front mounting bracket screws.**
8. Install the 90° female fitting from the #10 compressor/evaporator A/C hose onto the evaporator unit using a properly lubricated #10 O-ring (See Lubricating O-rings, Page 14 and Figure 1, below). **NOTE: After installing the #10 compressor/evaporator A/C hose, wrap all exposed metal with the supplied press tape (See Figure 1, below).**

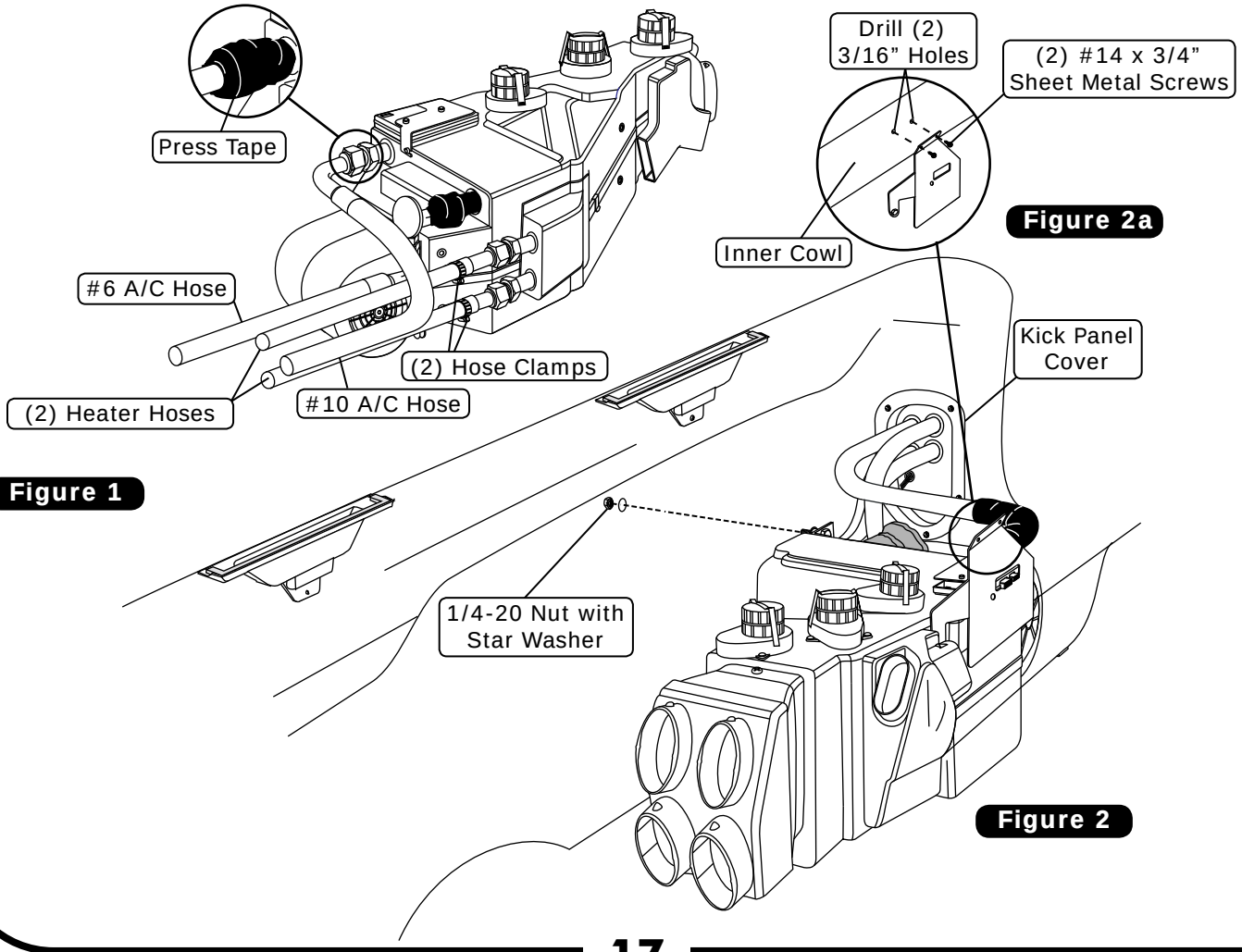


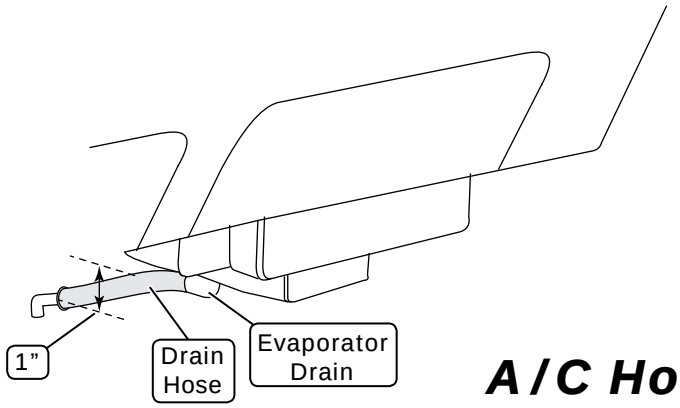
Figure 1

Figure 2a

Figure 2

Drain Hose Installation

1. Locate the evaporator drain on the bottom of the evaporator sub case.
2. Inline with the drain, lightly scribe a mark on the firewall. Measure down 1” and drill a 5/8” hole through the firewall (See Figure 1, below).
3. Install the drain hose onto the bottom of the evaporator sub case and route it through the firewall. Install the 1/2” 90° drain elbow onto the drain hose as shown in Figure 1, below.



A/C Hose Installation (1969-72 Vehicles Only)

Standard Hose Kit:

1. Locate the #8 condenser/compressor A/C hose and install (2) properly lubricated #8 O-rings (See Lubricating O-rings, Page 14). Connect the 90° fitting with service port to the #8 discharge port on the compressor (See Figure 1, Page 20). Install the 45° fitting onto the #8 condenser hardline coming through the core support (See Photo 1, below). Tighten each fitting connection as shown in Lubricating O-rings, Page 14.
2. Locate the #10 evaporator/compressor A/C hose and install a properly lubricated #10 O-ring (See Lubricating O-rings, Page 14). Connect the #10 135° fitting with service port to the #10 suction port on the compressor (See Figure 1, Page 20).
3. Locate the #6 evaporator/drier A/C hose and install a properly lubricated #6 O-ring (See Lubricating O-rings, Page 14). Connect the 90° fitting to the drier and tighten the fitting (See Figure 1, Page 20 and Lubricating O-rings, Page 14).
4. Install a #10 Adel clamp onto the #10 A/C hose. Secure the Adel clamp to the alternator bracket using a 10-32 x 1/2” pan head screw and 10-32 nut with star washer (See Figure 1, Page 20).

Modified Hose Kit:

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

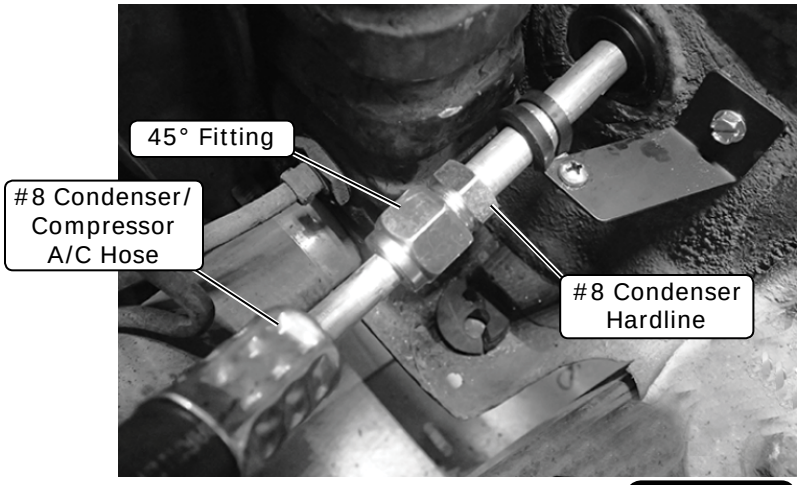


Photo 1

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A/C Hose Installation (1973-74 Vehicles Only)

Standard Hose Kit:

1. Locate the #6 evaporator/drier A/C hose and install a properly lubricated #6 O-ring (See Lubricating O-rings, Page 14). Connect the 90° fitting to the #6 condenser hardline coming through the core support and tighten the fitting (See Photo 1, below and Lubricating O-rings, Page 14).
2. Locate the #8 condenser/compressor A/C hose and install (2) properly lubricated #8 O-rings (See Lubricating O-rings, Page 14). Connect the 90° fitting with service port to the #8 discharge port on the compressor (See Photo 3, below). Install the 45° fitting to the #8 condenser hardline coming through the core support (See Photo 2, below). Tighten fitting connection as shown in Lubricating O-rings, Page 14.
3. Locate the #10 evaporator/compressor A/C hose and install a properly lubricated #10 O-ring (See Lubricating O-rings, Page 14). Connect the #10 135° fitting with service port to the #10 suction port on the compressor (See Photo 3, below).
4. Install a #10 Adel clamp onto the #10 A/C hose. Secure the Adel clamp to the alternator bracket using a 10-32 x 1/2" pan head screw and 10-32 nut with star washer (See Figure 1, Page 21).

Modified Hose Kit:

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

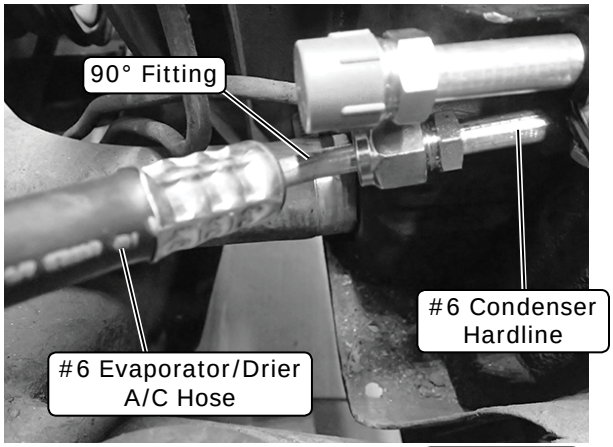


Photo 1

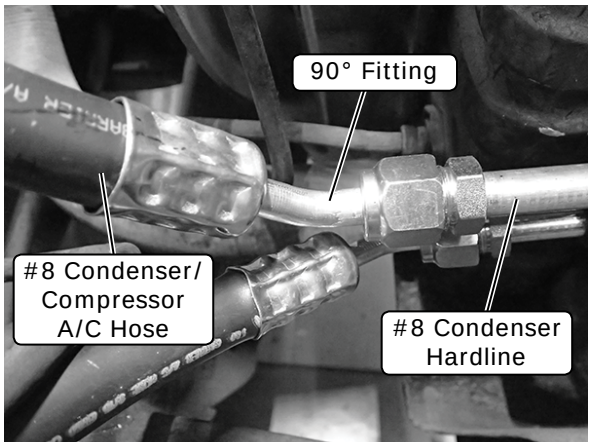


Photo 2

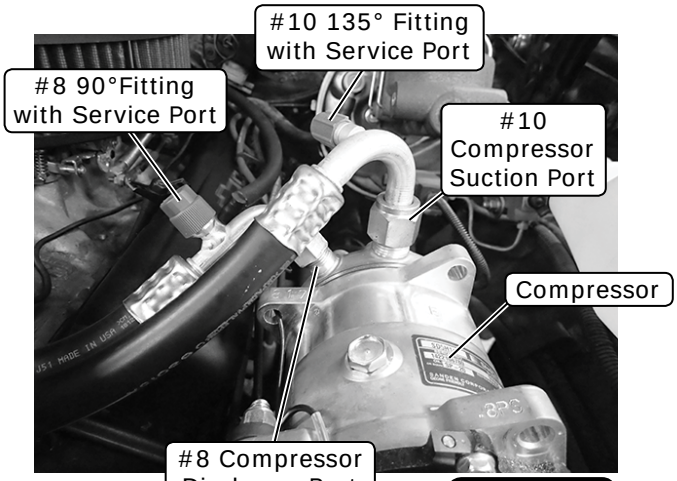
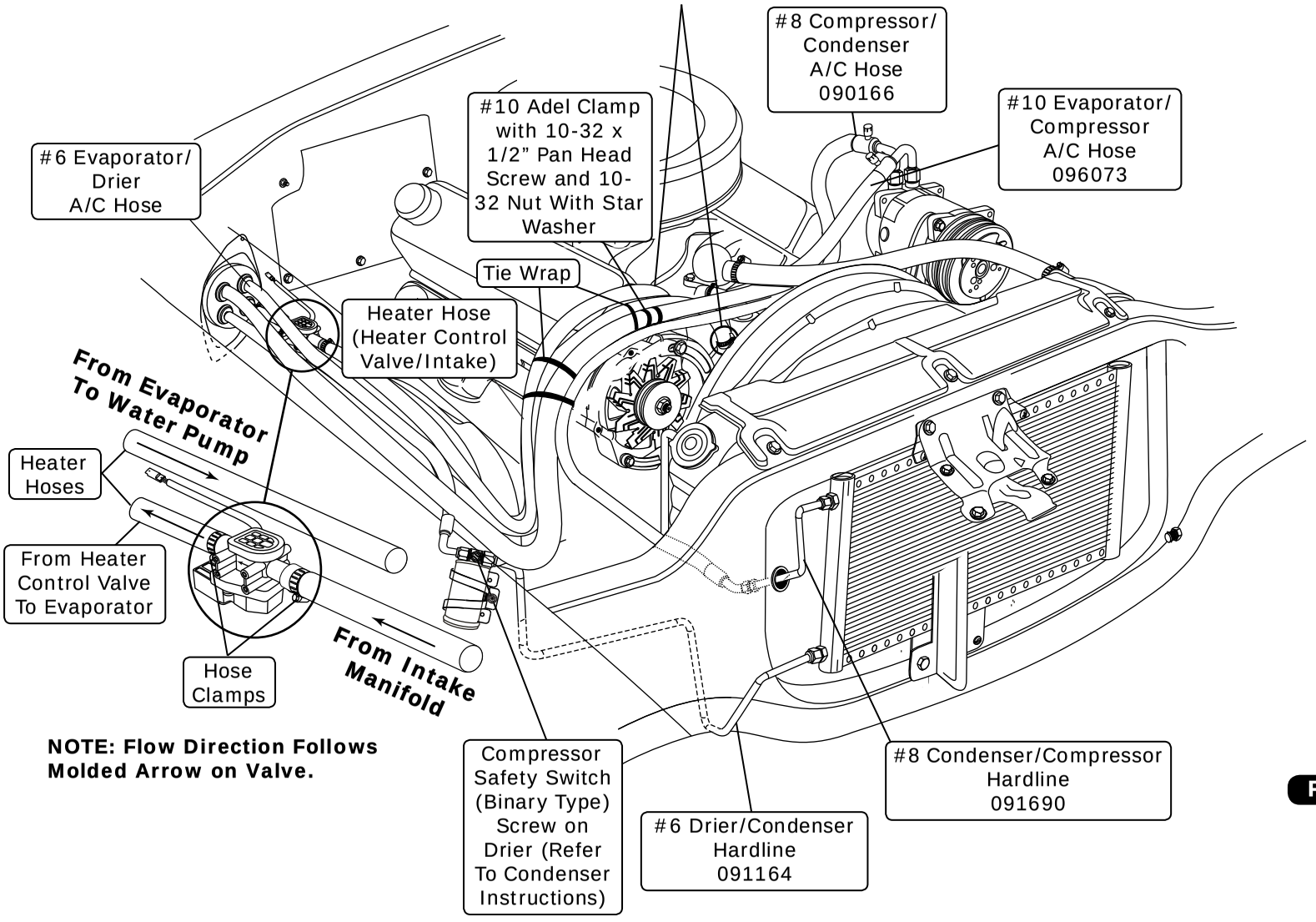


Photo 3

A/C and Heater Hose Routing (1969-72 Vehicles Only)

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 in the heater hose (not supplied) or molded hose (Vintage Air Part # 099010) will need to be installed.

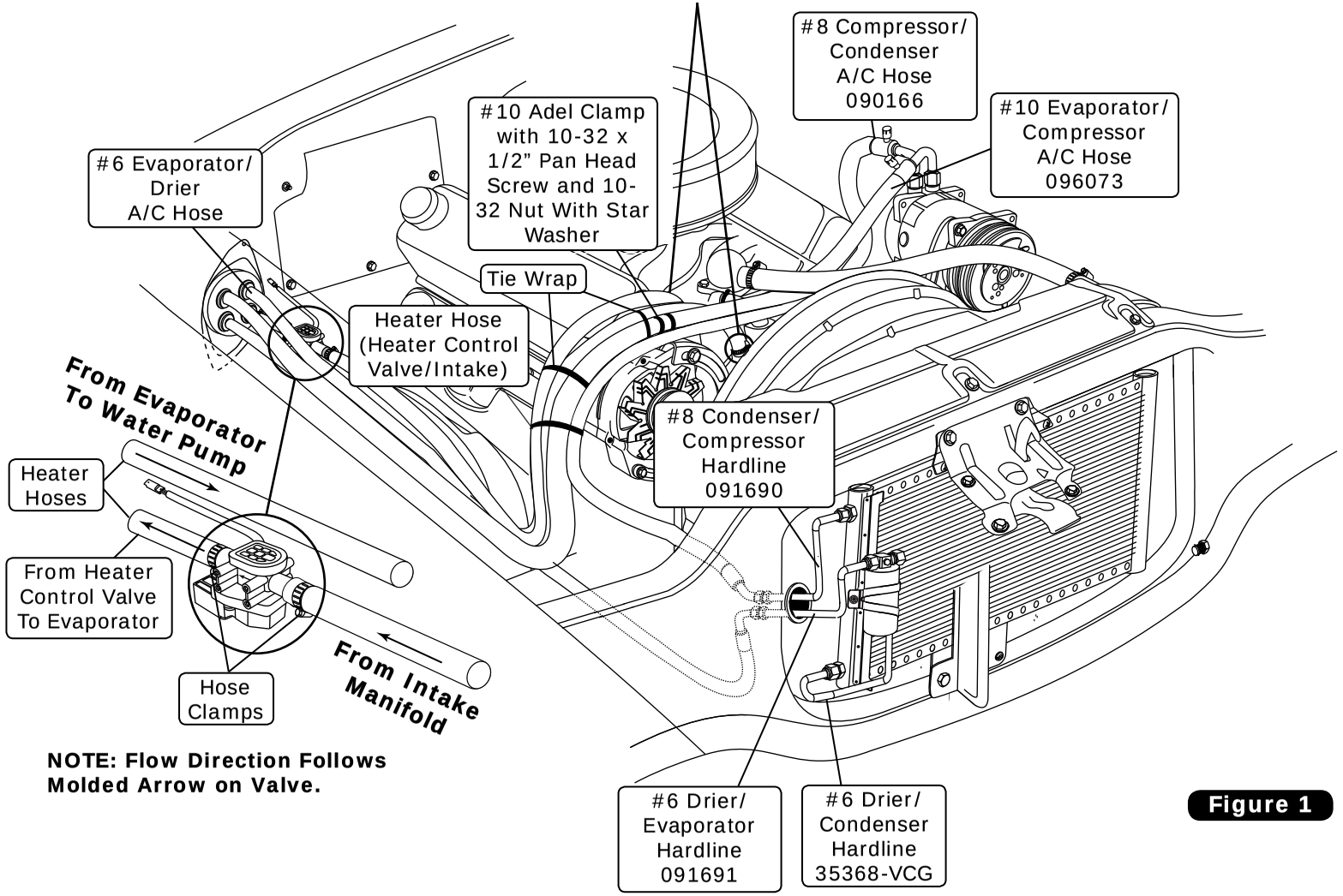


NOTE: Flow Direction Follows Molded Arrow on Valve.

Figure 1

A/C and Heater Hose Routing (1973-74 Vehicles Only)

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 in the heater hose (not supplied) or molded hose (Vintage Air Part # 099010) will need to be installed.



NOTE: Flow Direction Follows Molded Arrow on Valve.

Figure 1

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Heater Hose & Heater Control Valve Installation

1. Route a piece of heater hose (not provided) from the lower heater core fitting to the water pump. Secure using hose clamps (See Figure 1, below).
2. Route a piece of heater hose (not provided) from the intake manifold to the heater control valve. Connect the heater hose from the upper heater core fitting to the heater control valve. Secure using hose clamps (See Figure 1, below). **NOTE: Ensure proper flow direction through the heater control valve (the flow direction follows the molded arrow on the valve).**
3. Plug the heater control valve connector into the connector on the main wiring harness (See Photo 2, below). Secure the white wire from the heater control valve portion of the main harness to a suitable chassis ground.

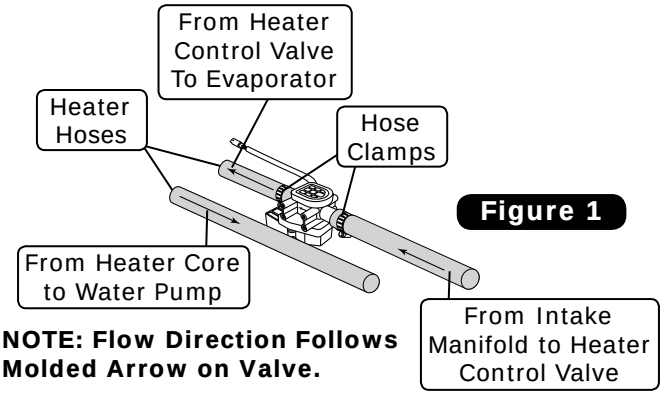


Figure 1

NOTE: Flow Direction Follows Molded Arrow on Valve.

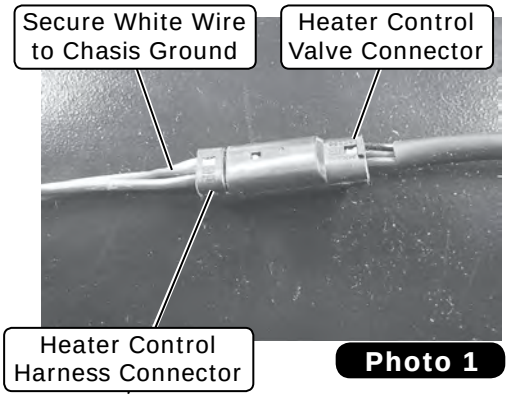
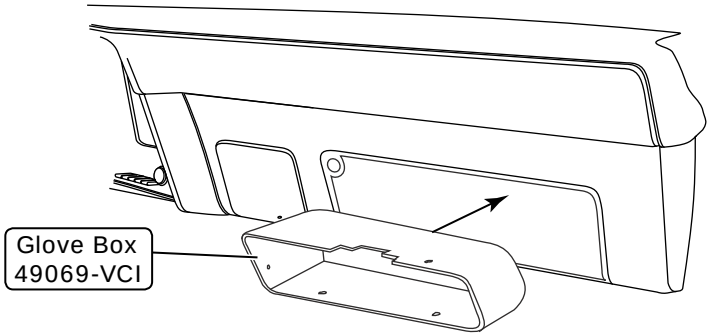


Photo 1

Final Steps

1. Install the duct hoses as shown in Figure 1, Page 24. Extend the duct hose to a taut condition, then cut it to length as noted. There should be little or no slack in the hose once installed.
2. Install control panel assembly. Refer to control panel instructions.
3. Plug the wiring harnesses into the ECU module on the sub case as shown in Figure 1, Page 24. Wire according to wiring diagrams on Pages 25 & 26.
4. Install the glove box behind the dash. Using the mounting holes on the glove box as a template, mark and drill 1/16" holes. Secure the glove box to the dash using the OEM screws.
5. Install the glove box door.
6. Reinstall all previously removed items.
7. 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.
8. Double check all fittings, brackets and belts for tightness.
9. Vintage Air recommends that all A/C systems be serviced by a licensed automotive A/C technician.
10. Evacuate the system for a minimum of 45 minutes prior to charging, and perform a leak check prior to servicing.
11. Charge the system to the capacities stated on Page 4 of this instruction manual.
12. See Operation of Controls procedures on Page 27.



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Under Dash Louver Installation

1. Remove the (2) screws from the bottom of the ash tray.
2. Place the center/passenger side louver bezel under the dash, aligning the (2) louver bezel mounting holes with the (2) ash tray mounting holes. Secure the louver bezel to the dash using (2) #10 x 1/2" sheet metal screws as shown in Figure 1, below.
3. Using the other end of the center/passenger side louver bezel as a template, drill a 1/8" hole under the dash. Secure the louver bezel with a #10 x 1/2" sheet metal screw as shown in Figure 1, below.
4. Using (2) #10 x 1/2" sheet metal screws, install and secure the driver side louver bezel under the dash as shown in Figure 2, below.
5. Install the louvers into the driver side and center/passenger side louver bezels as shown in Figures 1 & 2, below.
6. Once the louver assemblies are in place, route the duct hoses and attach them to the correct location on the evaporator sub case as shown in Figure 1, Page 24.

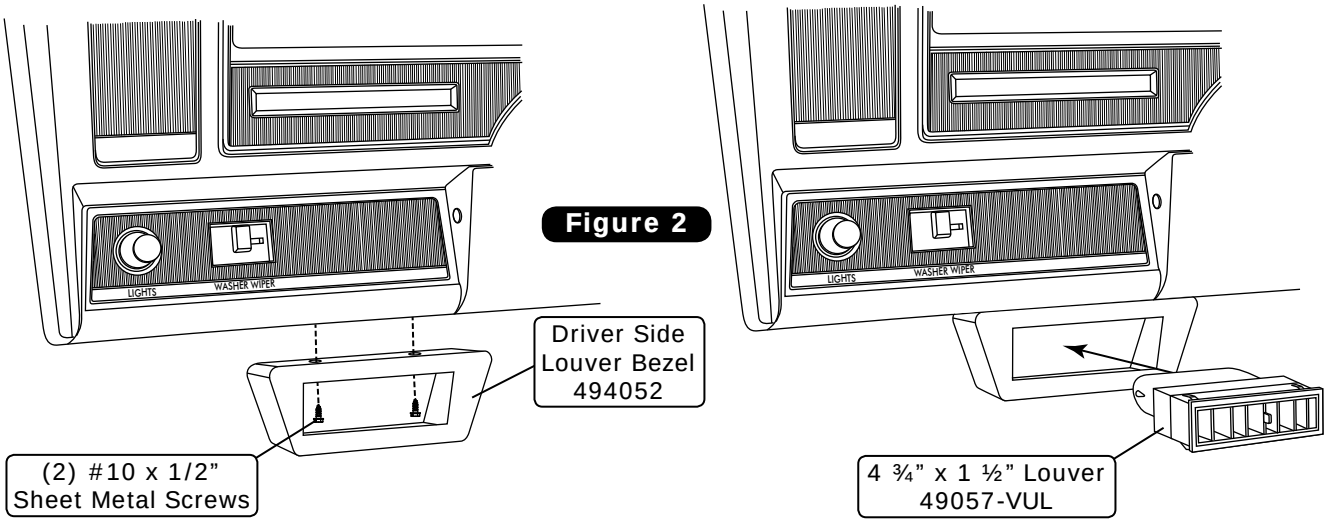


Figure 2

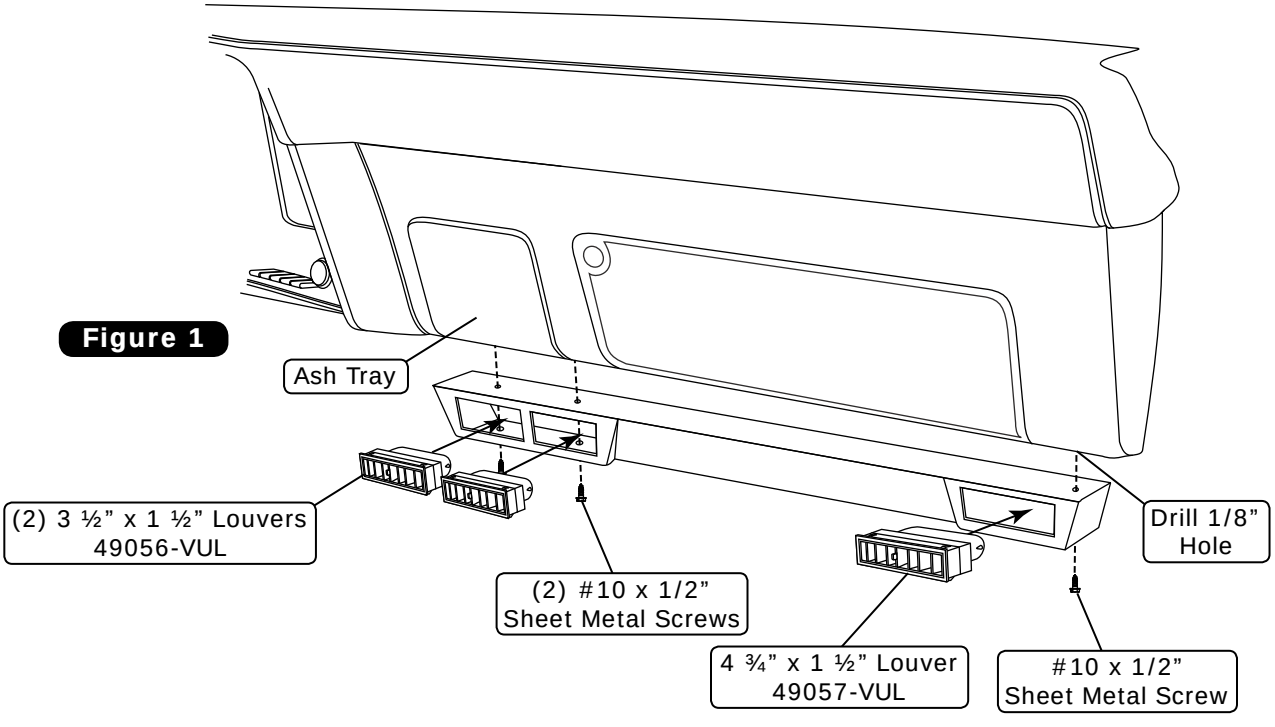


Figure 1

Control Panel & Duct Hose Routing

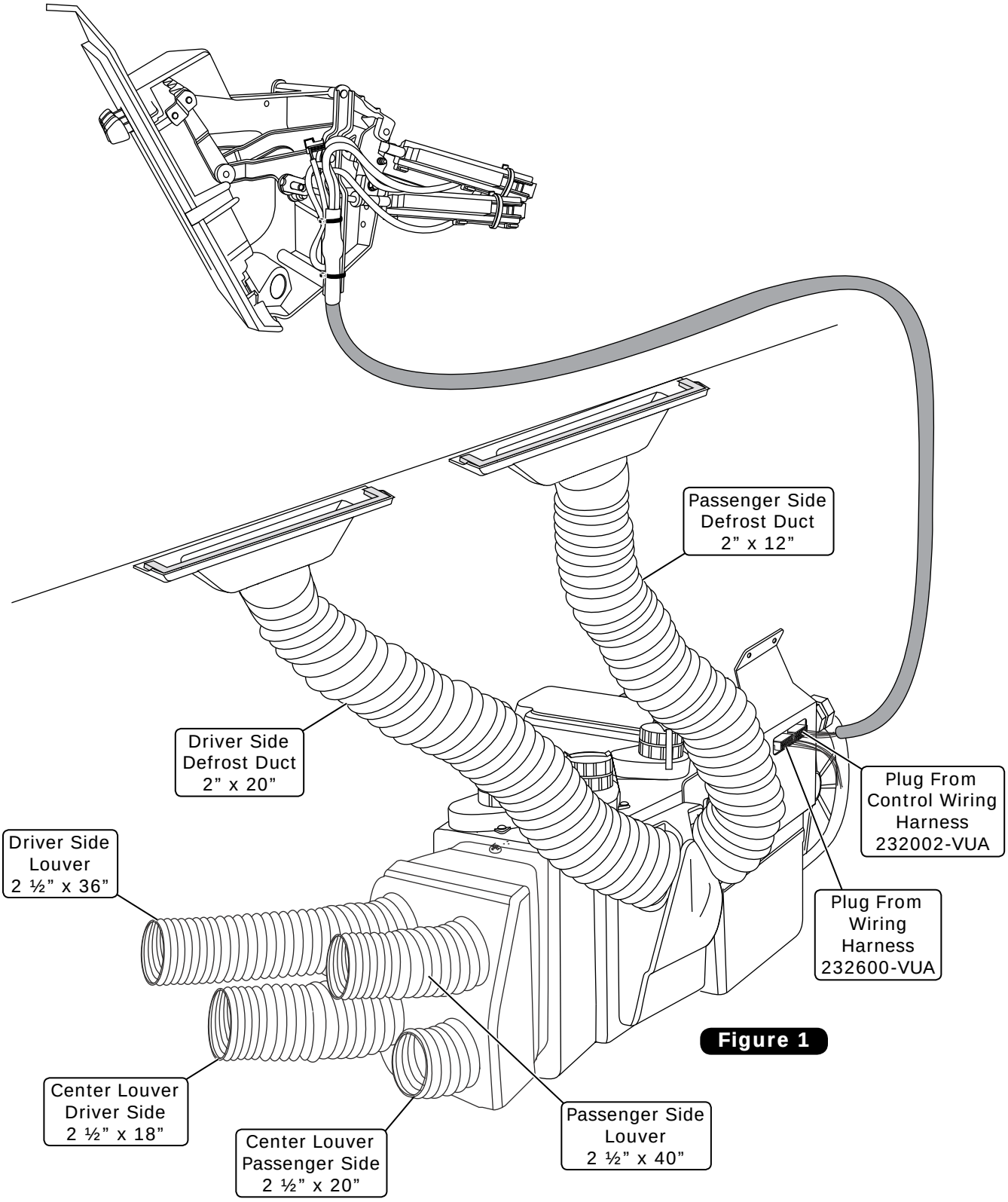
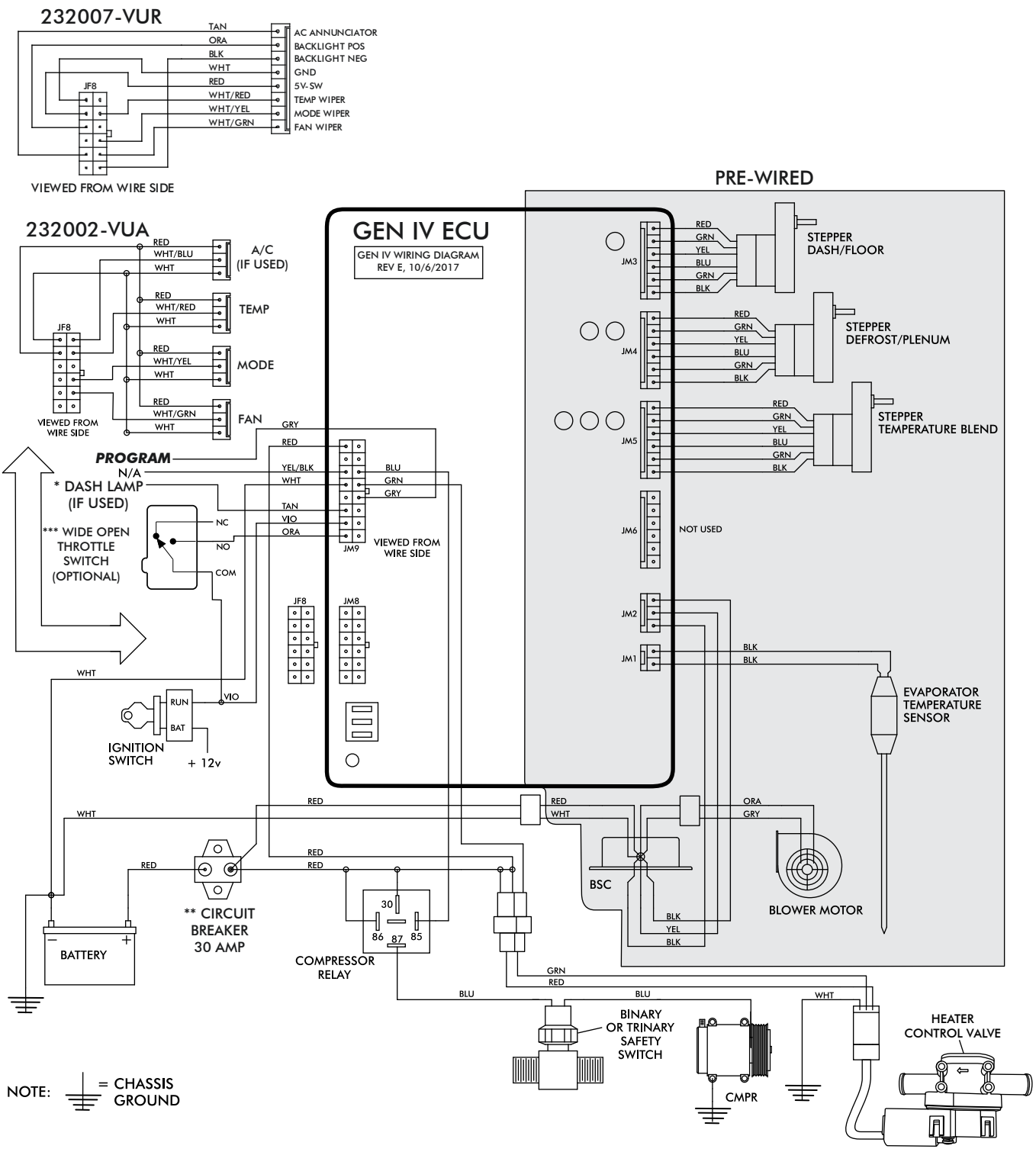


Figure 1

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.**

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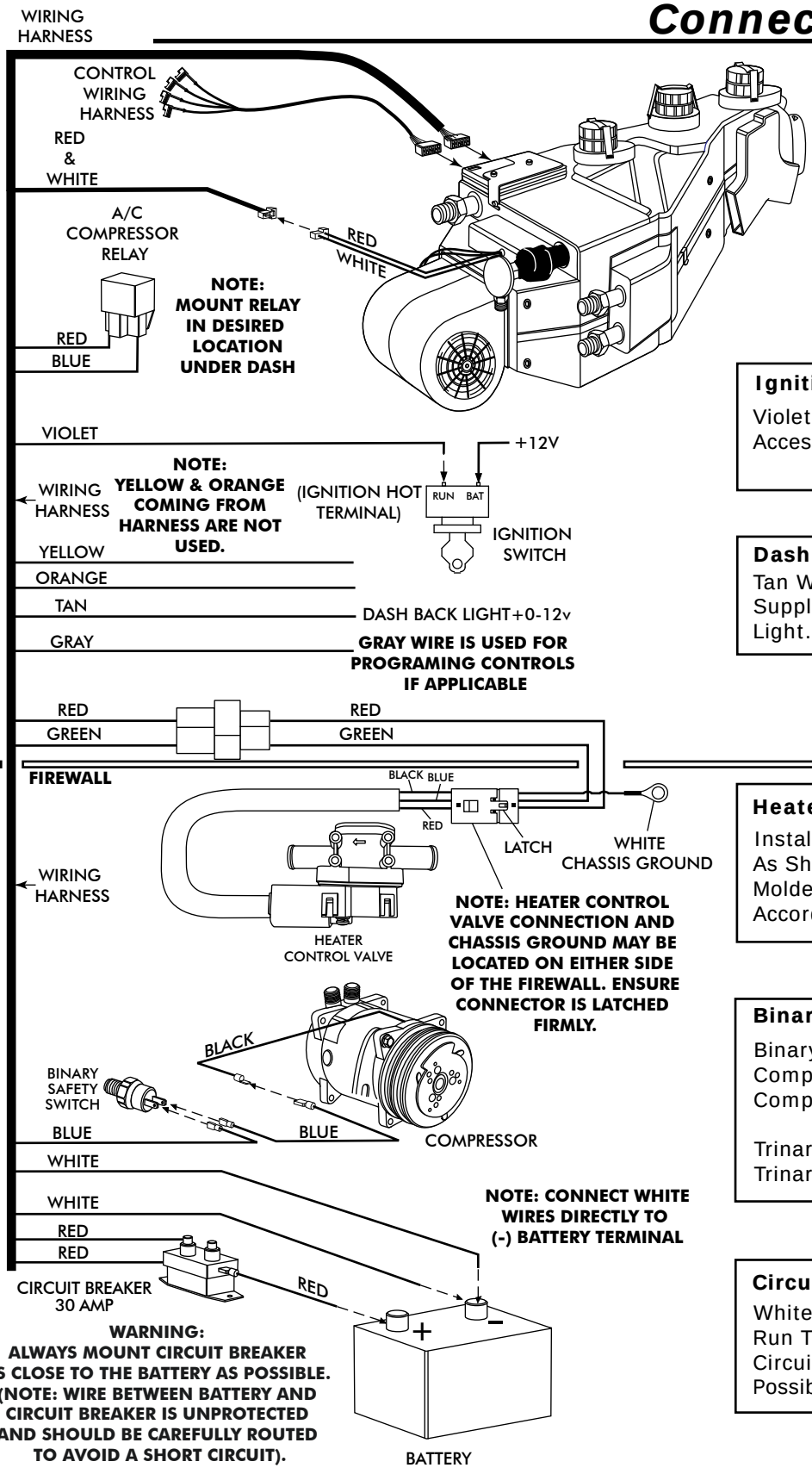
Gen IV Wiring Connection Instruction



Ignition Switch:

Violet 12V Ign Switch Source (Key On Accessory) Position Must Be Switched.

Dash Light:

Tan Wire Used Only With Vintage Air Supplied Control Panel With LED Back Light.

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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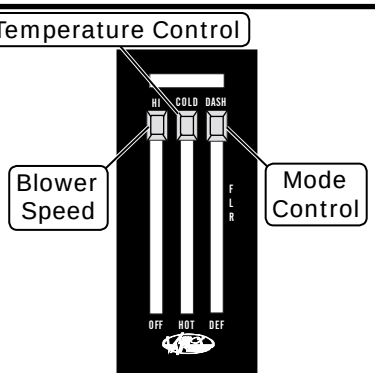
Operation of Controls

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.

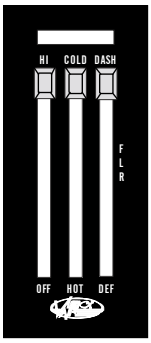


A/C Operation

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).

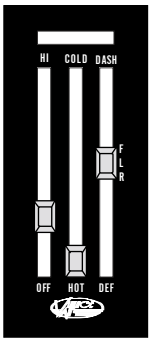


Heat Operation

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).

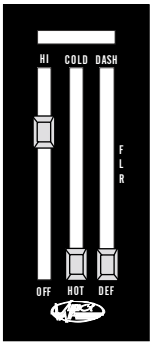


Defrost/De-fog Operation

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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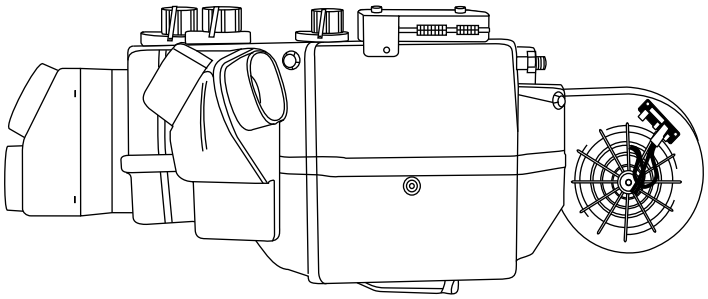
Packing List: Evaporator Kit (561072)

No.	Qty.	Part No.	Description	
1.	1	744004-VUE	Gen IV Evaporator Sub Case	_____
2.	1	784176	Accessory Kit	_____

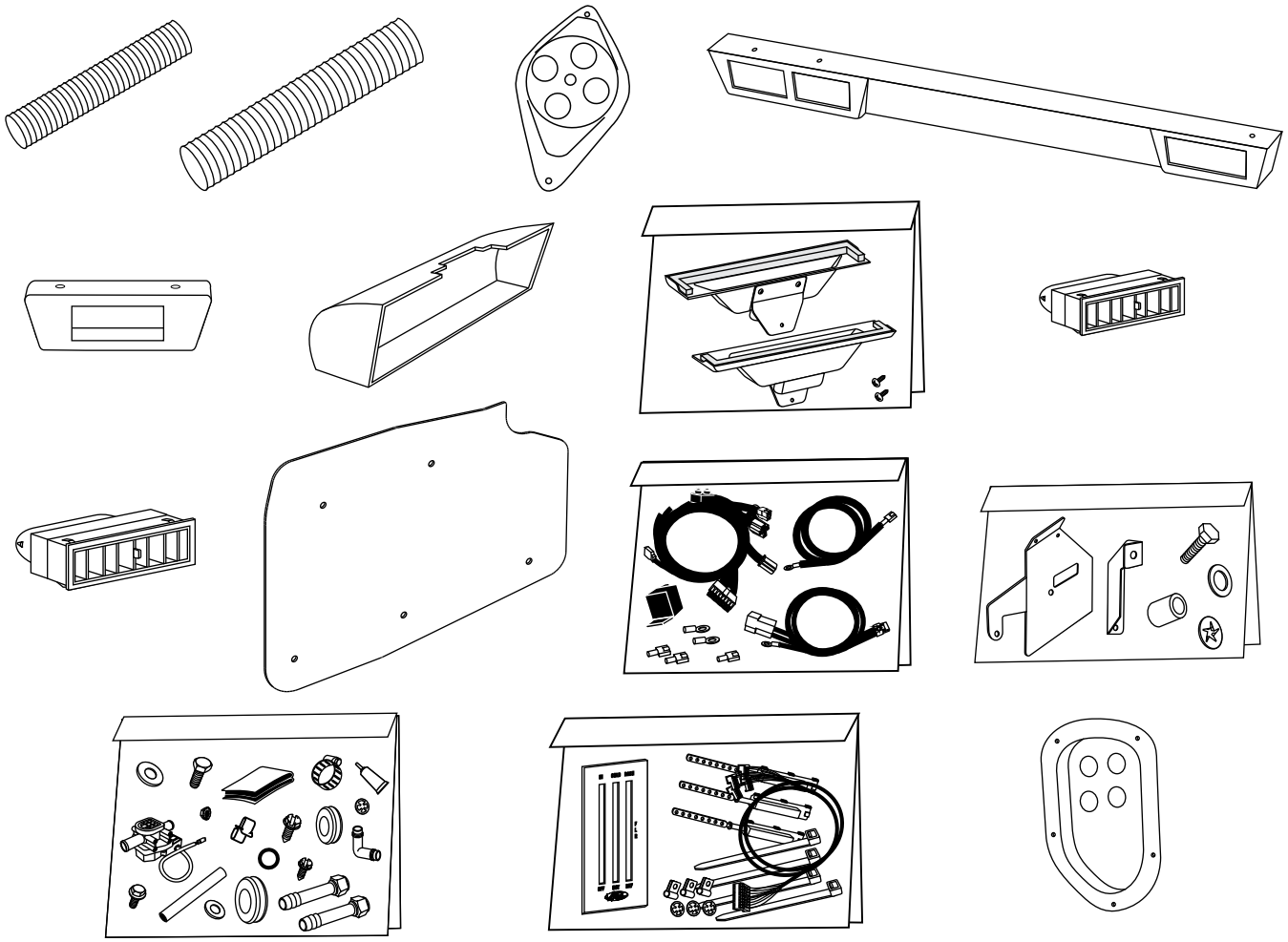
Checked By: _____
Packed By: _____
Date: _____

1



Gen IV Evaporator Sub Case 744004-VUE

2



Accessory Kit 784176

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