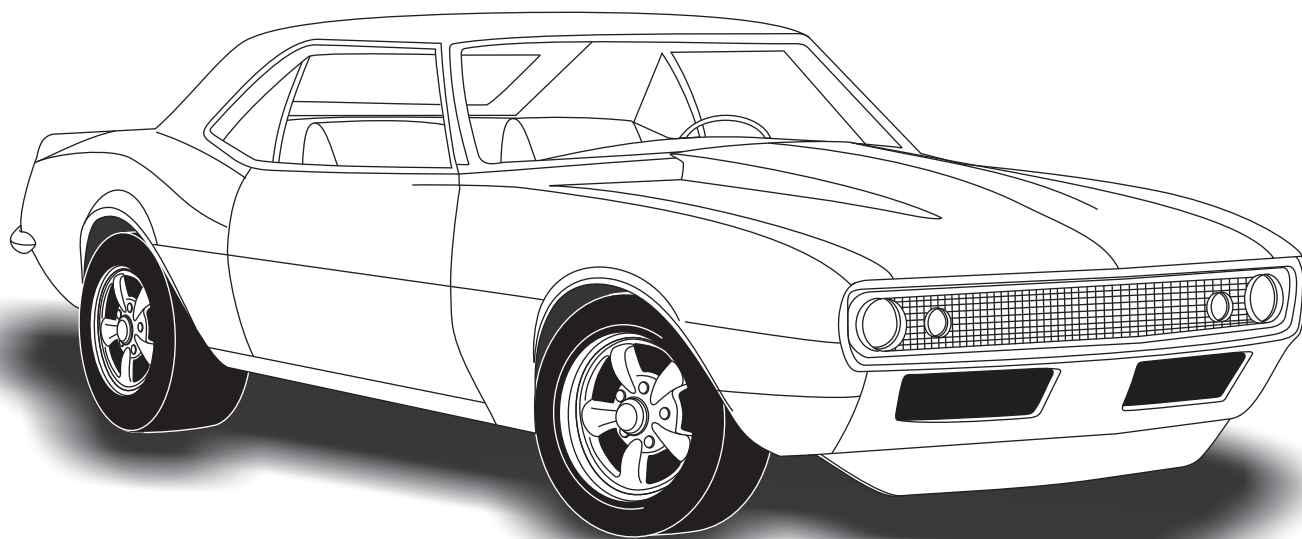




an ISO 9001:2008 Registered Company

# 1967-68 Chevrolet Camaro

*without* **Factory Air  
Evaporator Kit  
(561167)**



**18865 Goll St. San Antonio, TX 78266**  
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**Thank you for purchasing this evaporator kit from Vintage Air. When installing these components as part of a complete SureFit™ system, Vintage Air recommends working from front to back on the vehicle, installing the condenser kit, hose kit, and compressor first, followed by the wiring, evaporator, and finally the control panel.**

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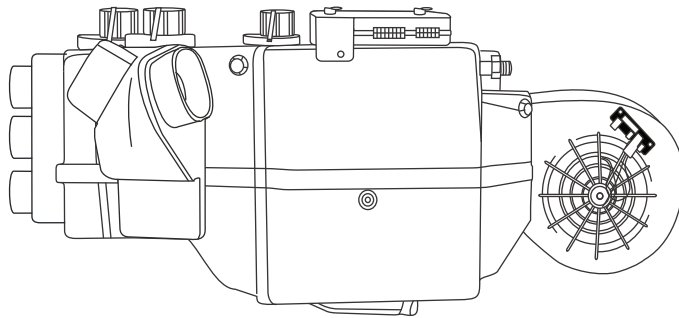
## Packing List: Evaporator Kit (561167)

No.	Qty.	Part No.	Description
1.	1	744005	Gen IV 3-Vent Evaporator Sub Case with 204 ECU
2.	1	781168	Accessory Kit

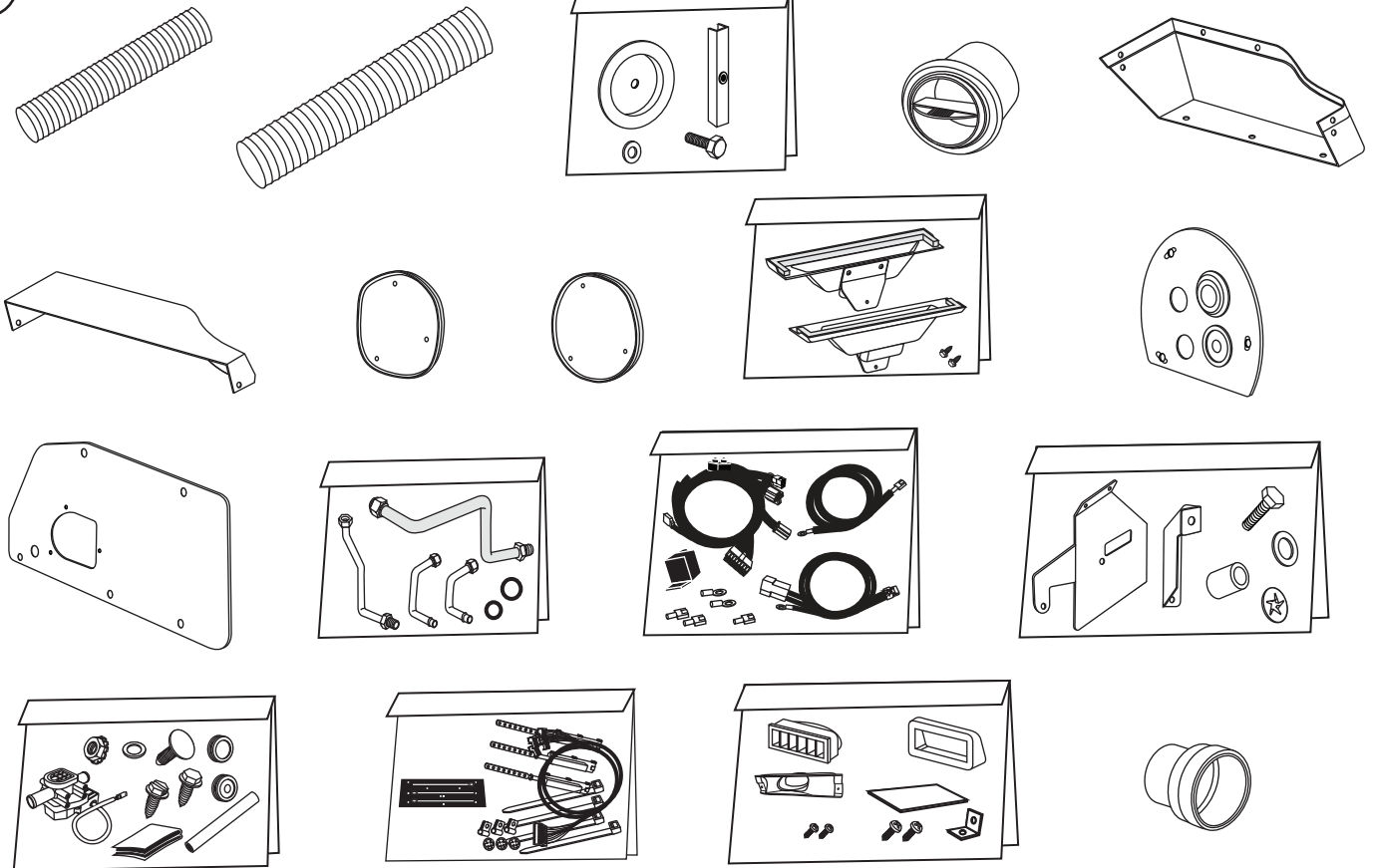
**\*\* Before beginning installation, open all packages and check contents of shipment.  
Please report any shortages directly to Vintage Air within 15 days. After 15 days,  
Vintage Air will not be responsible for missing or damaged items.**

1

**Gen IV 3-Vent  
Evaporator Sub Case  
with 204 ECU  
744005**



2



**Accessory Kit  
781168**

**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. (1 lb., 12 oz.) 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.

## 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.



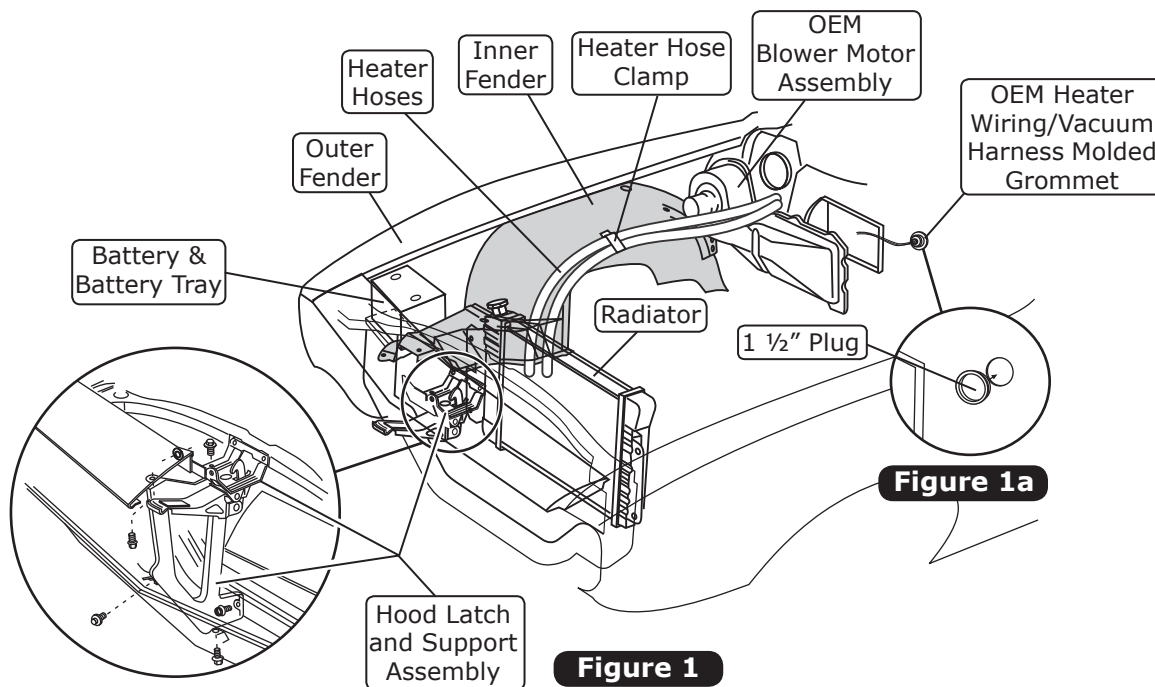
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## Engine Compartment Disassembly

**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 battery and battery tray (retain) (See Figure 1, below).
3. Drain radiator.
4. Remove hood latch and hood latch support assembly (retain) (See Figure 1, below).
5. Remove OEM heater hoses (discard) (See Figure 1, below).
6. Remove OEM blower assembly (discard) (See Figure 1, below). **NOTE:** To remove the heater blower assembly (under hood) and the air distribution system (under dash), the factory manual recommends doing the following: Remove right lower rocker molding. Remove fender attaching bolts. Remove skirt to fender and skirt to reinforcement screws. Pull out on lower portion of fender, moving the skirt away from the fender flange and firewall. Block the skirt with a 2" x 4" block of wood. To avoid damage to paint and sheet metal, and for ease of removal and replacement of components, Vintage Air recommends that the right fender be removed, and the inner panel lowered (See Figure 1, below).
7. Remove OEM heater wiring/vacuum harness molded grommet (discard) (See Figure 1, below).
8. Install a 1 1/2" plug into the firewall (See Figure 1a, below).



## 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.

## Pulleys

1. In most instances, the belt lengths will remain the same.



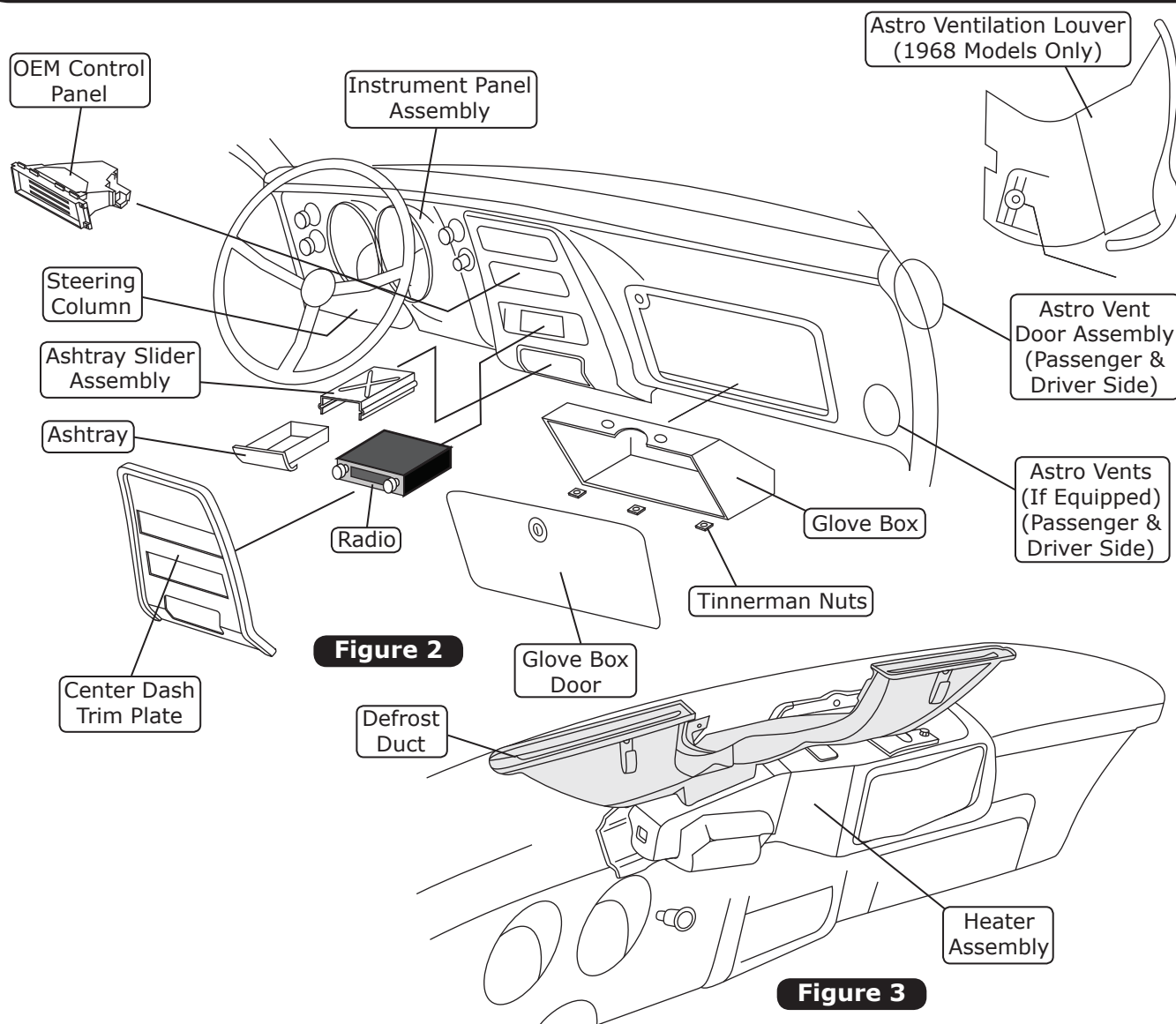


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## Passenger Compartment Disassembly

### Perform the Following:

1. On 1968 models equipped with astro ventilation, remove the astro vents and door assemblies (Retain dash vents, but discard door assemblies).
2. Remove the front seats (optional, for ease of A/C installation only).
3. Remove the ashtray (retain) (See Figure 2, below).
4. Remove the ashtray slider assembly (retain) (See Figure 2, below).
5. Remove the glove box door (retain) (See Figure 2, below).
6. Remove the glove box (discard, but retain the (3) Tinnerman nuts) (See Figure 2, below).
7. Remove the center dash trim plate (retain) (See Figure 2, below).
8. Remove the radio (retain) (See Figure 2, below).
9. Remove the OEM control panel (retain) (See Figure 2, below).
10. Loosen and lower steering column.
11. Remove the instrument panel assembly (retain).
12. Remove the OEM defrost duct (discard) (See Figure 3, below).
13. Remove the OEM heater assembly (discard) (See Figure 3, below).

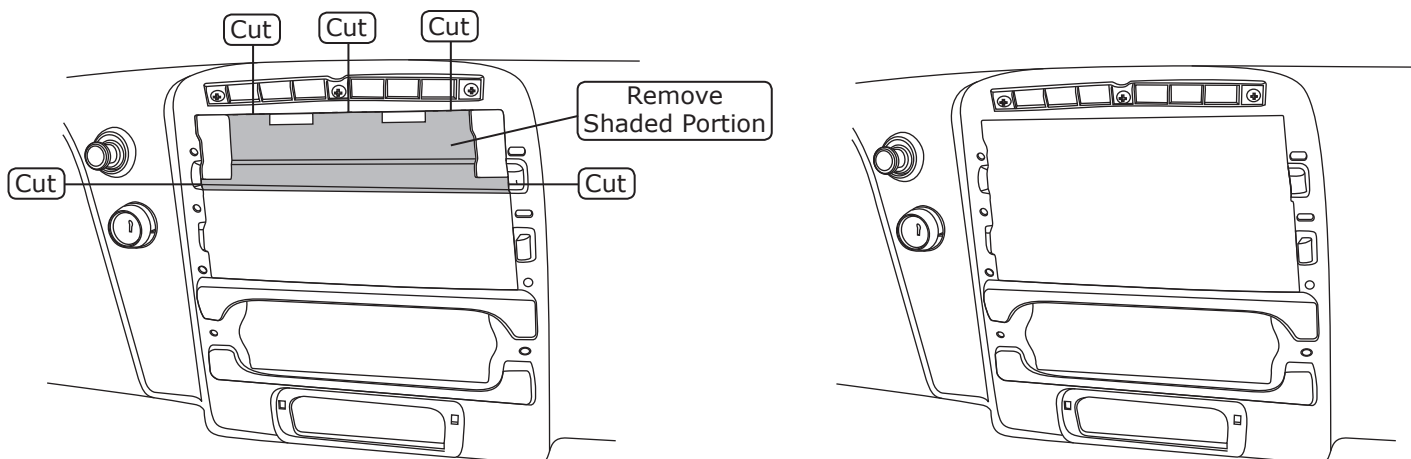




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## Dash Frame Modification

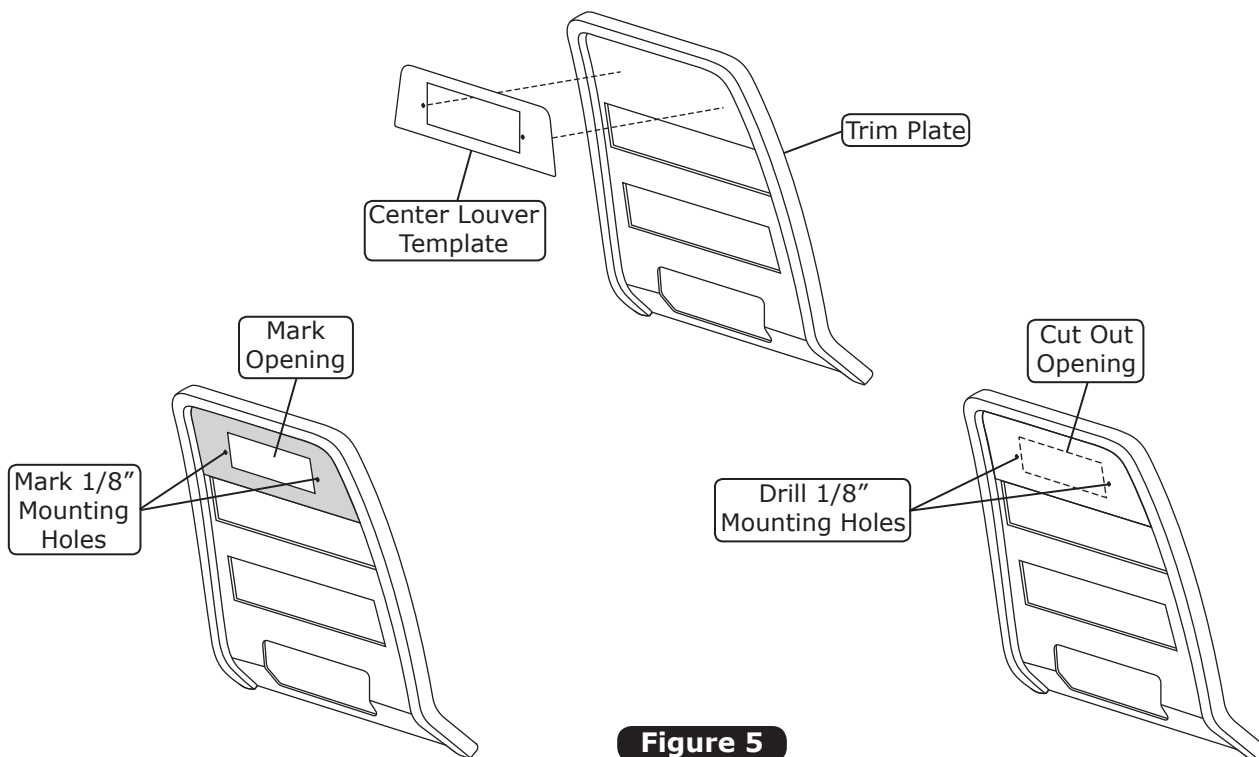
1. Modify the dash as shown in Figure 4, below.



**Figure 4**

## Trim Plate Modification

1. Using the center louver template on Page 29, align the template onto the trim plate as shown in Figure 5, below.
2. Mark the center louver opening and mounting holes on the trim plate. Once the center louver opening and mounting holes are marked, remove the template and carefully cut out the opening in the trim plate (See Figure 5, below).
3. Using a 1/8" drill bit, drill the marked mounting holes on the center trim plate (See Figure 5, below).



**Figure 5**





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## Center Louver Installation

1. Install the center louver into the trim plate as shown in Figure 6, below.
2. Secure the center louver to the trim plate using (2) #6 x 3/8" pan head screws as shown in Figure 6, below.
3. Using the center louver foam template on Page 29, place the template onto the provide foam strip. Trace the template onto the foam. Cut the foam as shown in Figure 7, below.
4. Peel the paper backing from the foam, and install the foam onto the back side of the trim plate as shown in Figure 7, below.

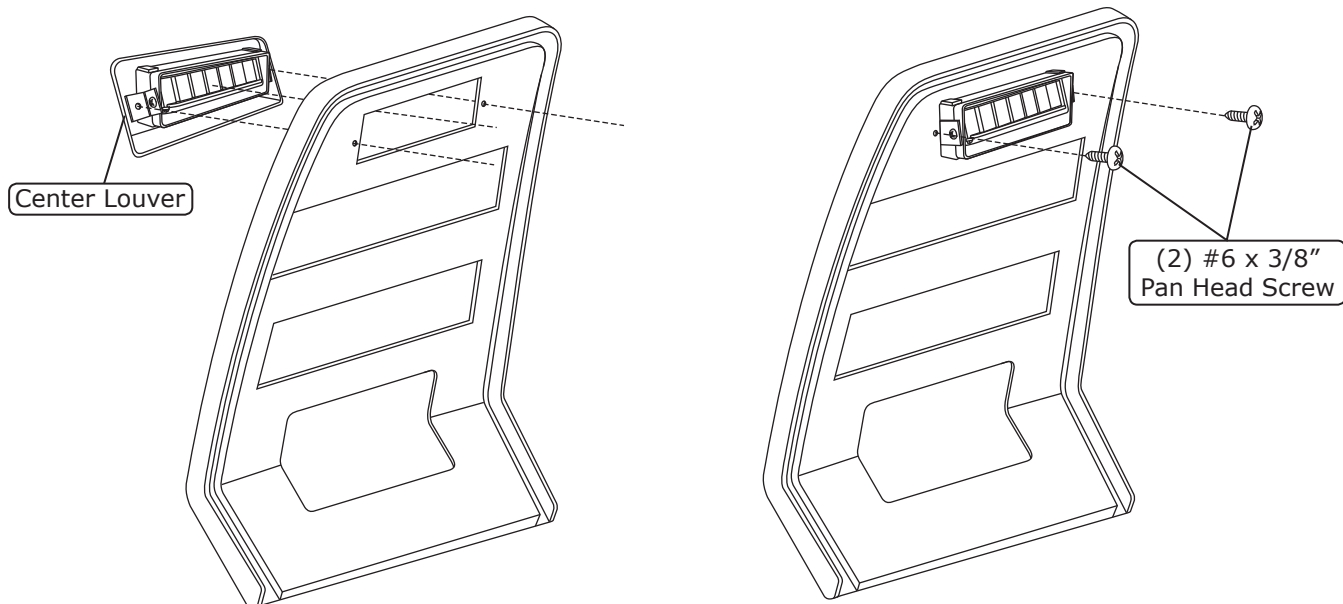


Figure 6

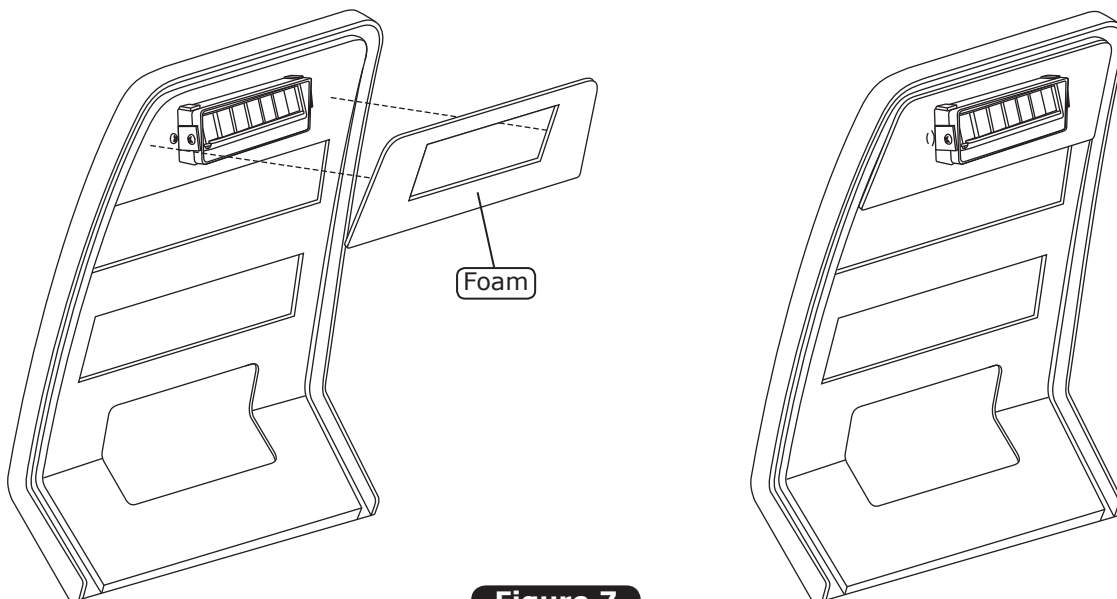


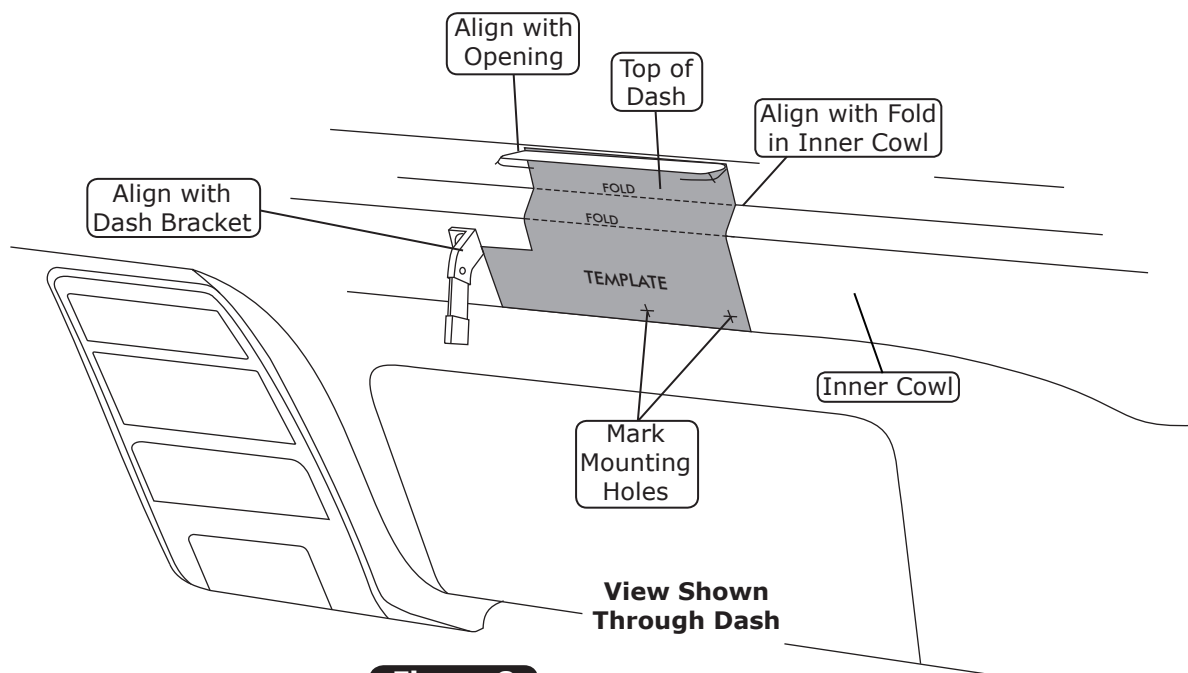
Figure 7



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## Evaporator Mounting Holes

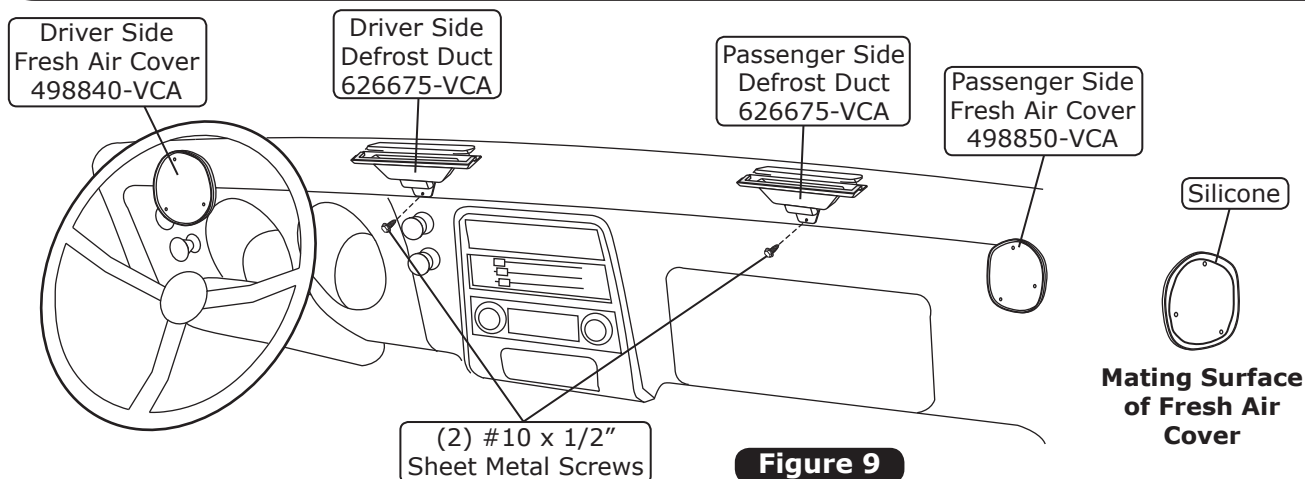
1. Cut out the evaporator bracket template on Page 28. Place the template onto the inner cowl under the dash by aligning the left side of the template against the dash bracket as shown in Figure 8, below. Fold the template to follow the contour of the inner cowl. Make sure the upper left hand corner of the template aligns with the left side of the defrost opening in the dash as shown in Figure 8, below.
2. Once the template is aligned correctly, mark the mounting holes on the inner cowl. Once holes are marked in the correct location, drill (2) 3/16" holes in the inner cowl for the evaporator front mounting bracket (See Figure 8, below).



**Figure 8**

## Defrost Duct & Fresh Air Cover Installation

1. Install the defrost ducts under the dash as shown in Figure 9, below. Align each defrost duct with the defrost opening in the dash, and hold in place. Using the bracket as a template, drill a 7/64" hole. Secure each defrost duct using a #10 x 1/2" sheet metal screw (See Figure 9, below).
2. If the vehicle is equipped with astro ventilation, apply a 1/4" bead of silicone to the mating surface, and install the driver and passenger side fresh air covers, securing them using OEM hardware (See Figure 9, below).



**Figure 9**



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## Passenger Side Dash Modification (1967 Models Only)

1. Cut out the passenger side louver template on Page 30. Place the template onto the dash, aligning the left side of the template against the glove box edge, and then folding the bottom under the dash, and aligning it with the existing OEM hole as shown in Figure 10, below.
2. Once the template is aligned correctly, use a center punch to mark the hole on the dash. Once the center of the hole is located on the dash, remove the template. Using a 2 1/2" hole saw, cut a hole in the dash for the passenger side louver (See Figure 10, below).

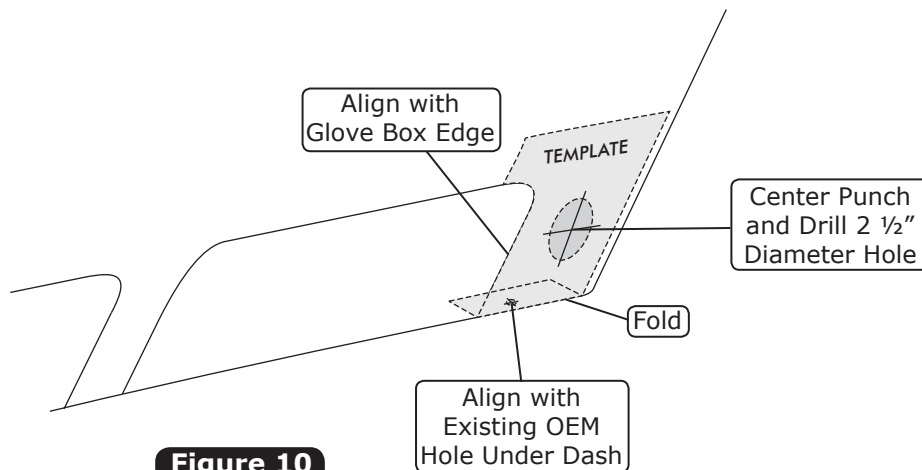


Figure 10

## Driver Side Dash Modification (1967 Models Only)

1. Cut out the driver side louver template provided on Page 31. Place the template onto the dash, aligning the right side of the template against the dash to instrument panel parting line, and then folding the bottom under the dash, and aligning it with the existing OEM hole as shown in Figure 11, below.
2. Once the template is aligned correctly, use a center punch to mark the hole on the dash. Once the center of the hole is located on the dash, remove the template. Using a 2 1/2" hole saw, cut a hole in the dash for the driver side louver (See Figure 11, below).

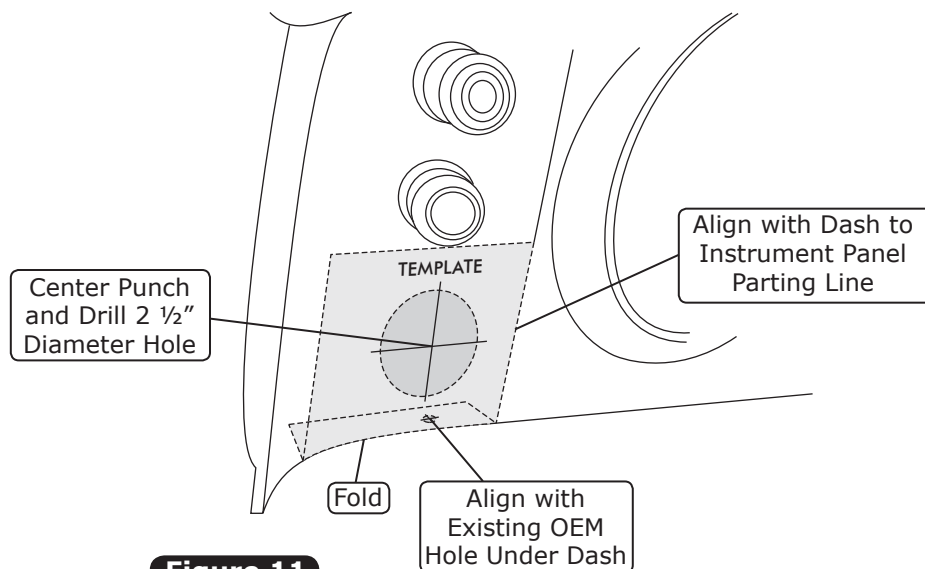


Figure 11



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## Driver & Passenger Side Louver Installation

1. Install the louver bezel through the dash opening. From behind the dash, install the hose adapter onto the louver bezel as shown in Figure 12, below.

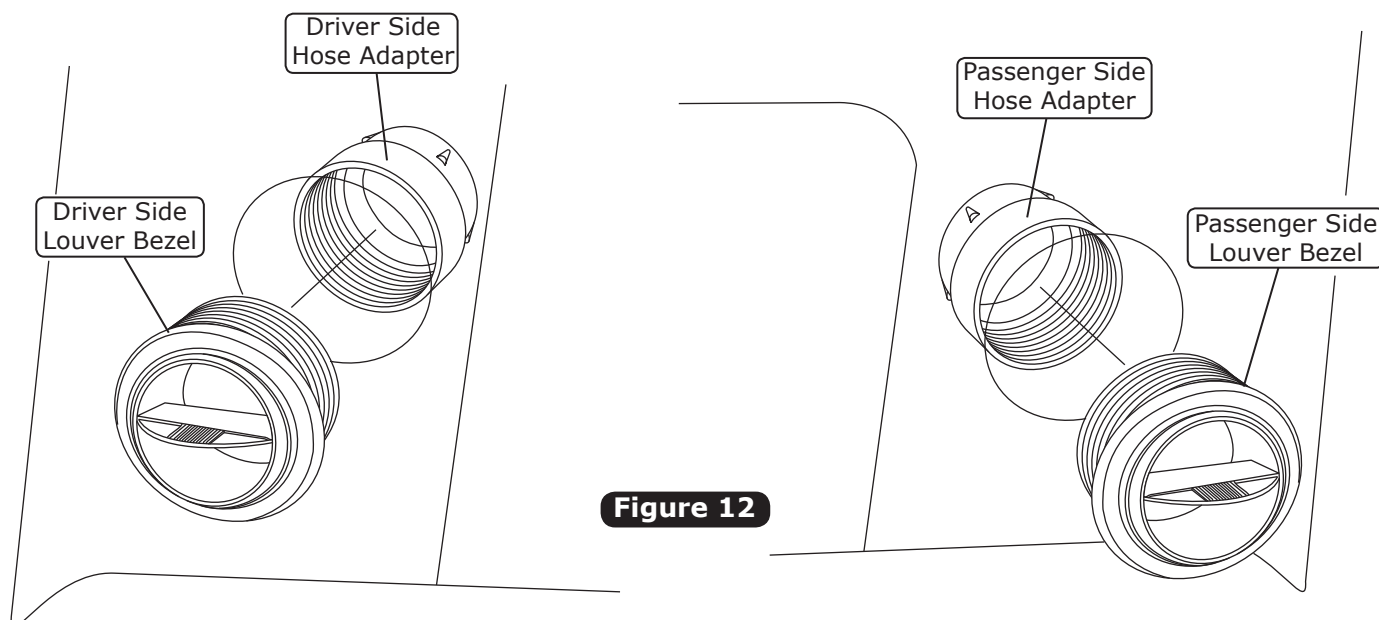


Figure 12

## Hose Adapter Installation (1968 Models with OEM Astro Vents Only)

1. Cut and modify the OEM astro louvers as shown in Figure 13, below.
2. Install S-clips onto the hose adapters as shown in Figure 13a, below.
3. Install the driver & passenger side hose adapters onto the OEM louvers (See Figure 13a, below).
4. Reinstall the modified astro vents into the dash.

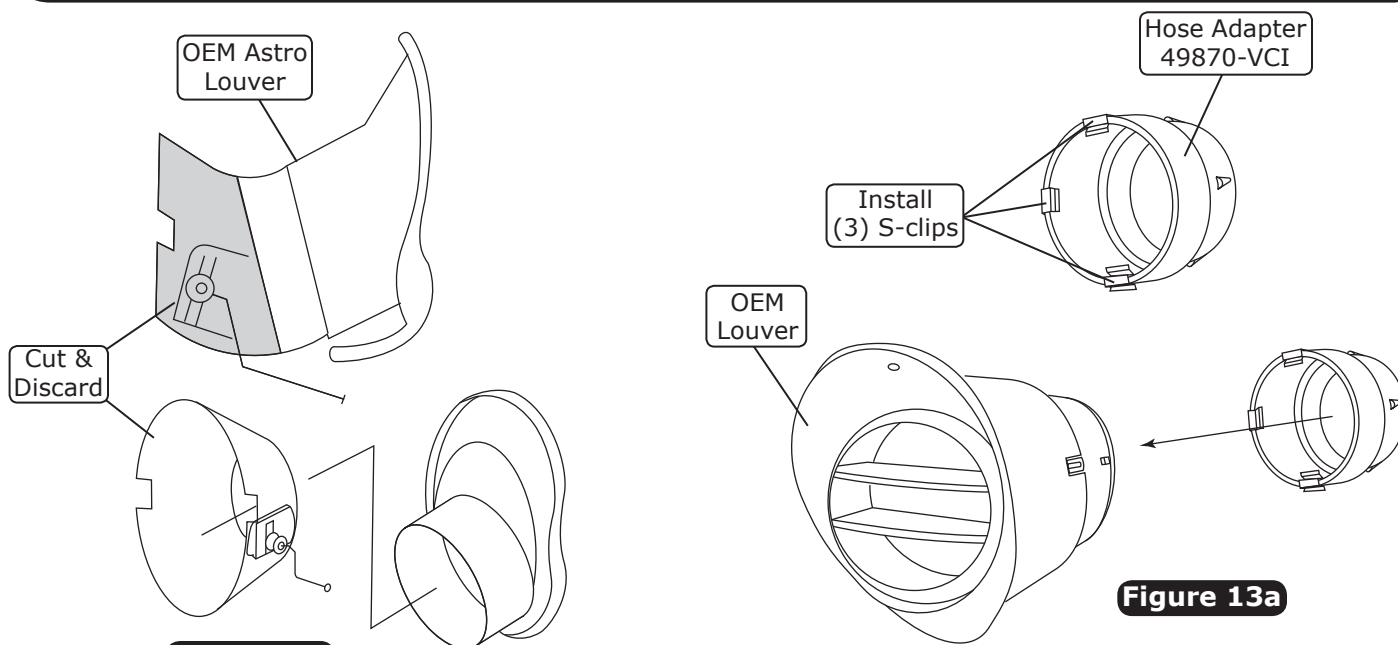


Figure 13

Figure 13a



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## Fresh Air Cap Installation

1. Apply a 1/4" bead of silicone around the mating surface of the fresh air cap as shown in Figure 14, below.
2. Attach the fresh air cap to the firewall using a 1/4-20 x 1" bolt and a 1/4" washer as shown in Figure 14, below. **NOTE: The fresh air cap installs onto the engine side of the firewall.**

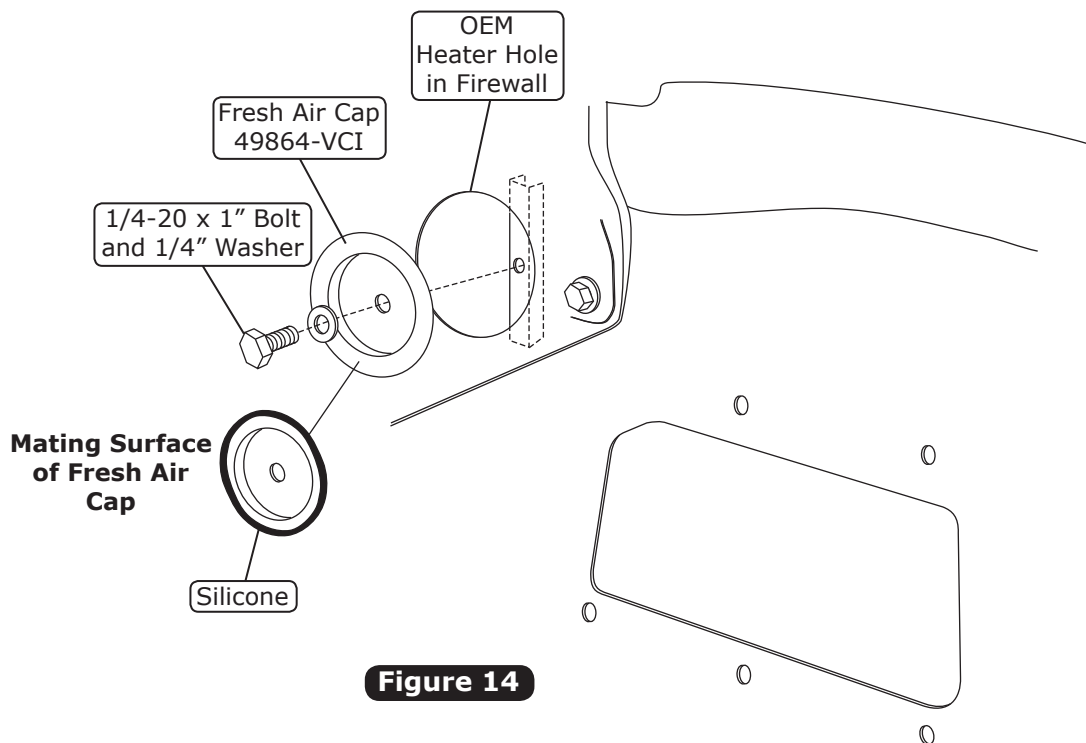


Figure 14

## Kick Panel Modification

1. Remove the kick panel by removing the (5) #10 x 1" pan head screws.
2. Disconnect the fresh air door from the lever housing. Close the fresh air door assembly in the kick panel and seal the door with a 1/4" bead of silicone around the door as shown in Figure 15, below.
3. Reinstall the kick panel using the (5) #10 x 1" pan head screws as shown in Figure 15a, below.

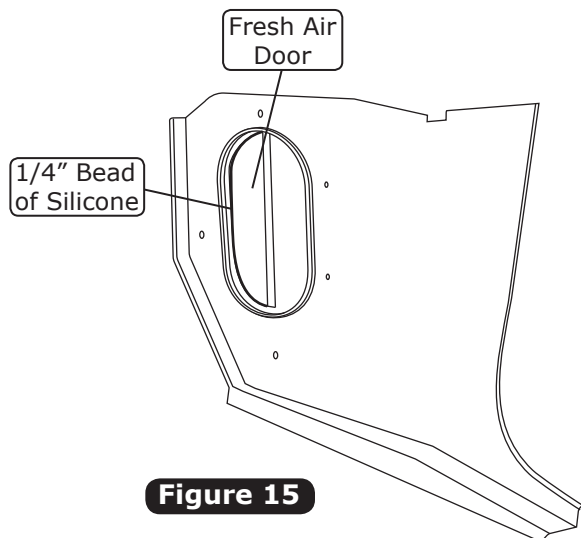


Figure 15

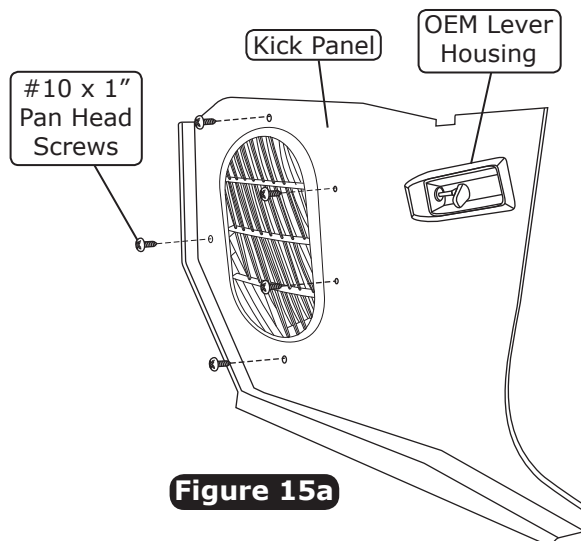


Figure 15a

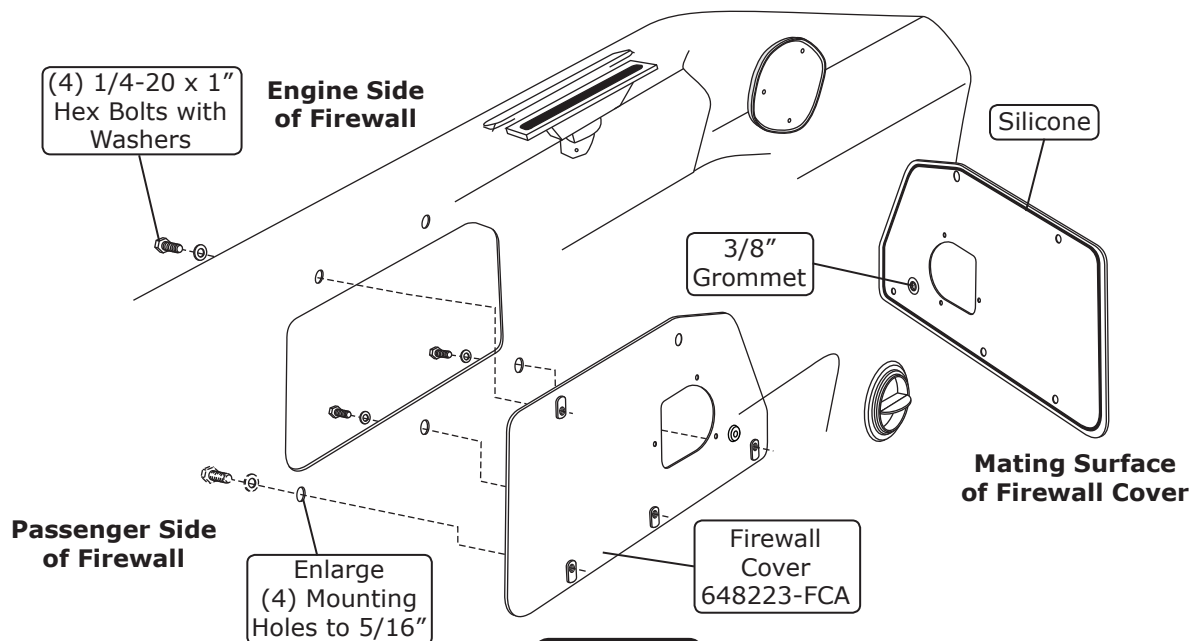


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## Firewall Cover Installation

**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.

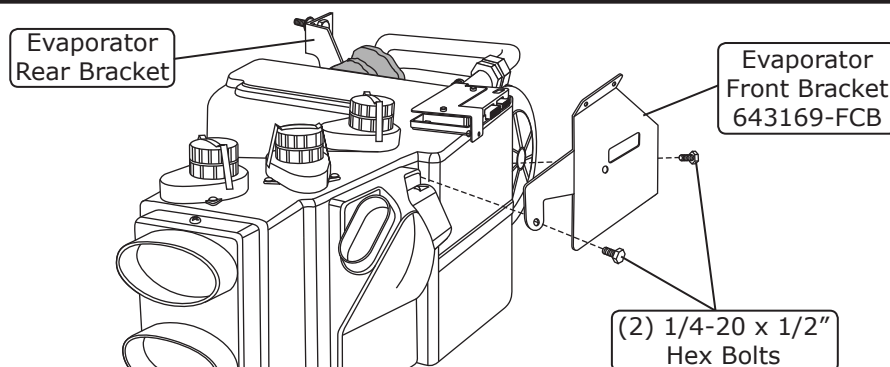
1. Enlarge the (4) mounting holes on the firewall to 5/16" (See Figure 16, below).
2. Install a 3/8" grommet onto the firewall cover (See Figure 16, below).
3. Apply a 1/4" bead of silicone around the mating surface of the firewall cover as shown in Figure 16, below.
4. From the passenger compartment, install the firewall cover onto the firewall. From the engine compartment, secure the firewall cover to the firewall using (4) 1/4-20 x 1" hex bolts and washers as shown in Figure 16, below.



**Figure 16**

## Evaporator Bracket & Evaporator Hardline Installation

1. On a workbench, install the evaporator rear bracket using (2) 1/4-20 x 1/2" hex bolts (See Figure 18, Page 15).
2. Install the A/C and heater hardlines with properly lubricated O-rings (See Figure 23, Page 18, & Figure 18, Page 15).
3. Install the front mounting bracket onto the evaporator using (2) 1/4-20 x 1/2" hex bolts (See Figure 17, below).



**Figure 17**

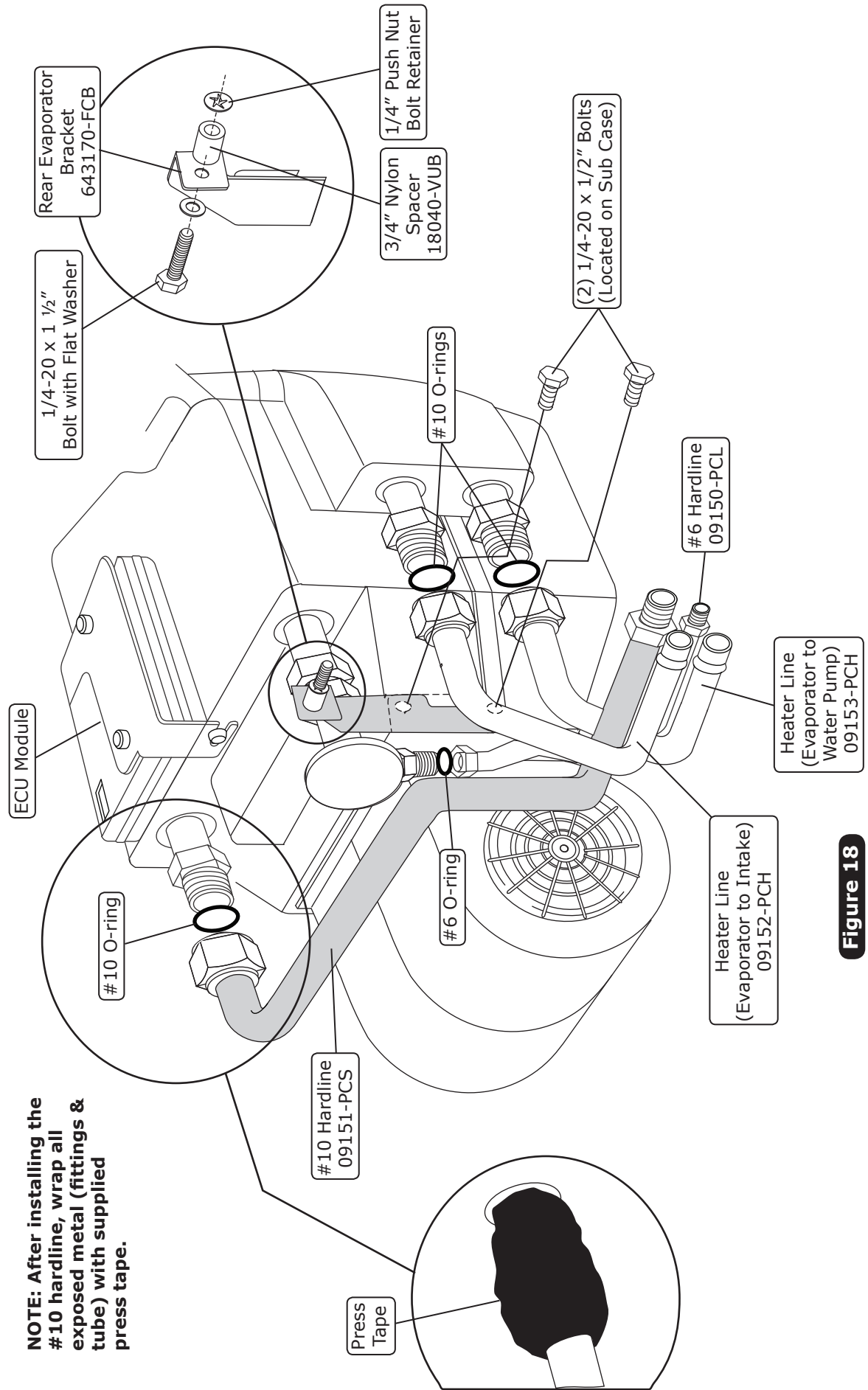




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## Evaporator Bracket & Evaporator Hardline Installation (Cont.)

**NOTE:** After installing the #10 hardline, wrap all exposed metal (fittings & tube) with supplied press tape.



**Figure 18**



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## 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. Lift the evaporator unit up under the dashboard, and secure it loosely to the firewall from the engine compartment using a 1/4-20 nut and a 1/4" washer (See Figure 19, below) .
2. Using (2) #14 x 3/4" sheet metal screws, secure the front evaporator mounting bracket to the inner cowl (See Figure 19, below). **NOTE:** To ensure proper drainage, it is very important that the evaporator is level, both left-right and fore-aft. Check for level on the flat portions of the case around the drain.
3. Verify that the evaporator unit is level and square to the dash; then tighten all mounting bolts. **NOTE:** Tighten the bolt on the firewall first. Then tighten the front mounting bracket.

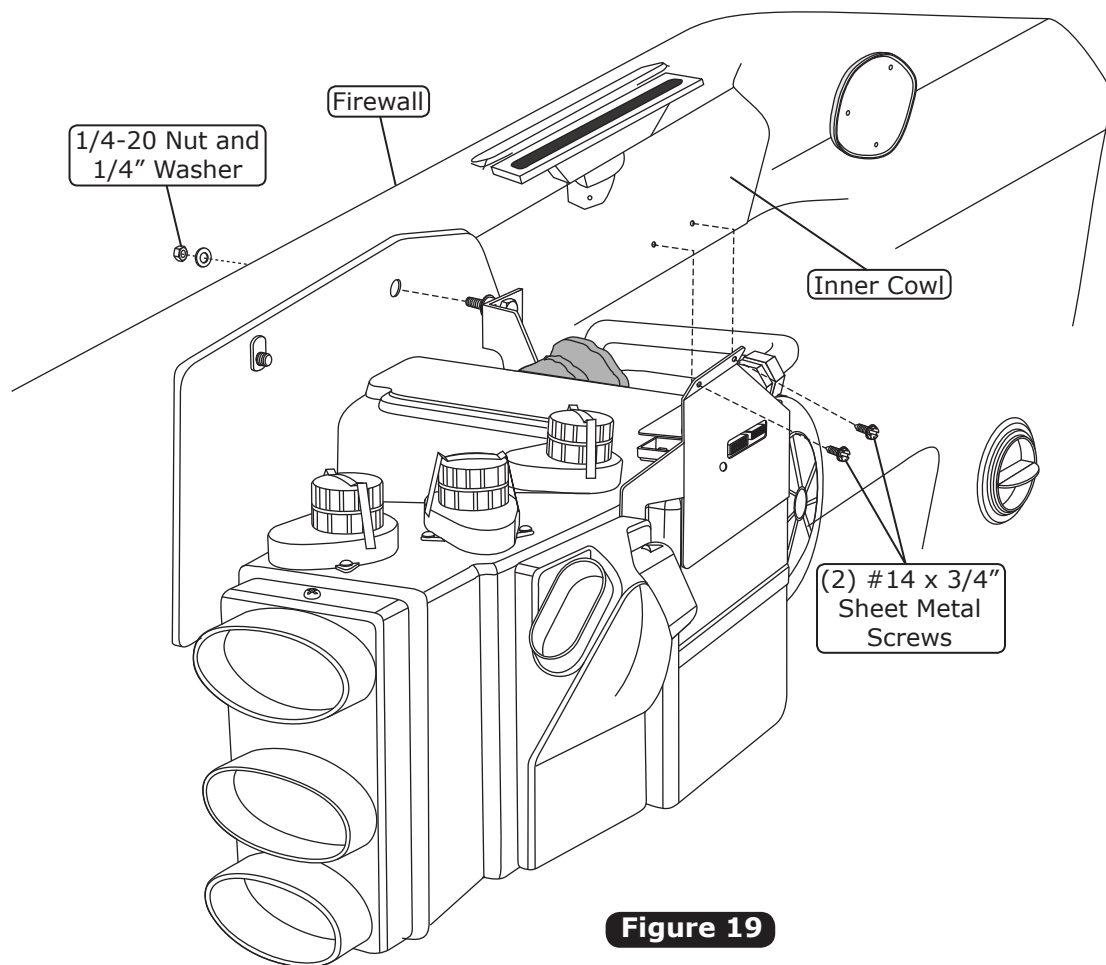


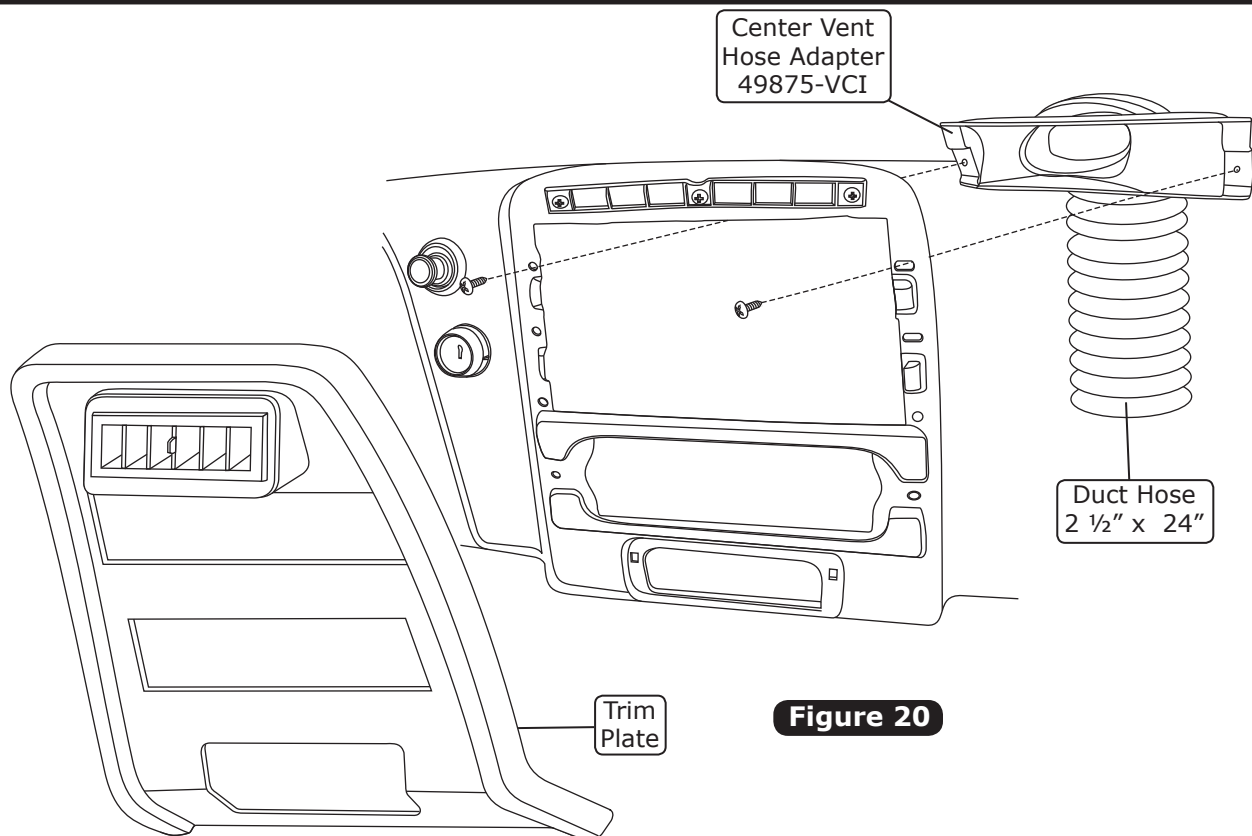
Figure 19



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## Center Louver and Hose Adapter Installation

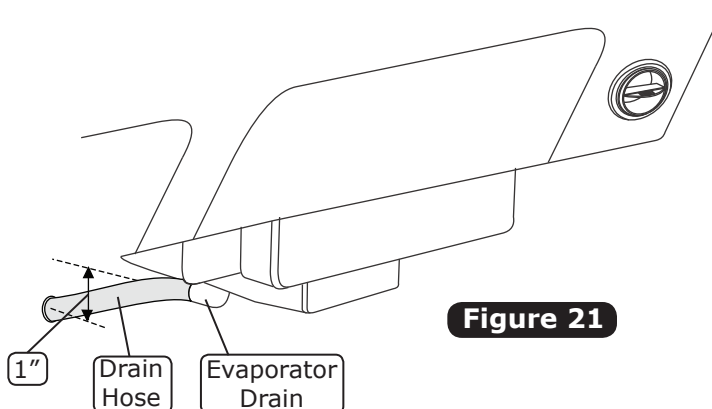
1. Attach a 24" length of 2 1/2" duct hose to the center vent hose adapter as shown in Figure 20, below.
2. Secure the center vent hose adapter to the dash using (2) #8 x 1/2" sheet metal screws as shown in Figure 20, below.
3. Install the trim plate onto the dash (See Figure 20, below).



**Figure 20**

## Drain Hose Installation

1. Locate the evaporator drain on the bottom of the evaporator case.
2. In line with the drain, lightly make a mark on the firewall. Measure 1" down, and drill a 5/8" hole through the firewall (See Figure 21, below).
3. Install the drain hose onto the outlet on the bottom of the evaporator unit, and route it through the firewall (See Figure 21, below).



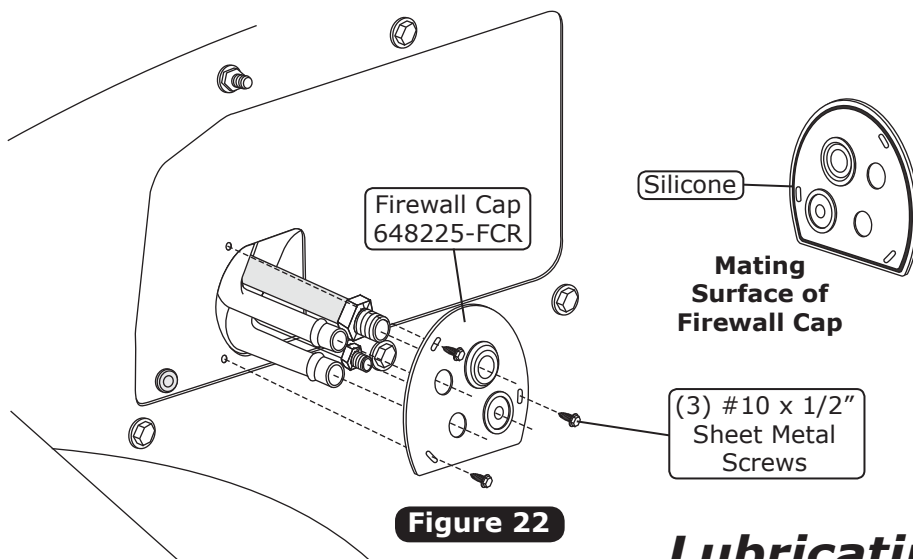
**Figure 21**



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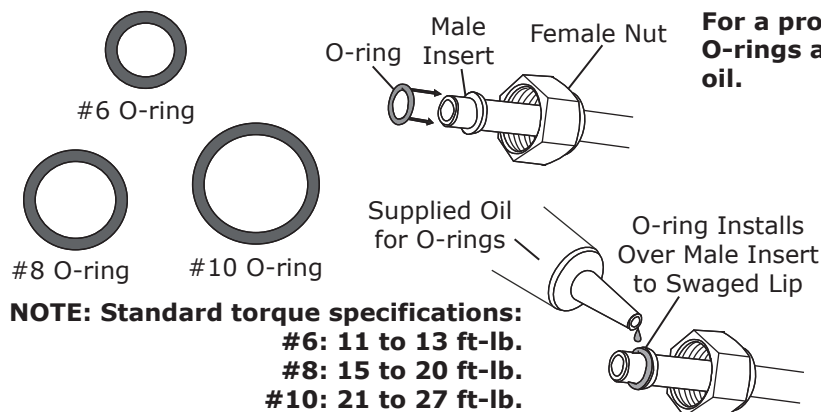
## Firewall Cap Installation

1. Apply a 1/4" bead of silicone around the mating surface of the firewall cap as shown in Figure 22, below.
2. Pass the lines through the firewall cap, and secure the cap using (3) #10 x 1/2" sheet metal screws (See Figure 22, below).

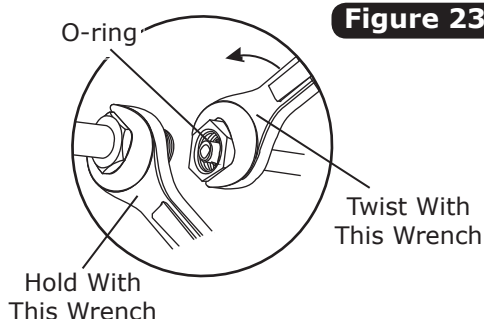


**Figure 22**

## Lubricating O-rings



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



**Figure 23**

## A/C Hose Installation

### Standard Hose Kit:

1. Locate the #8 compressor A/C hose. Lubricate (2) #8 O-rings (See Figure 23, above) and connect the #8 135° fitting with service port to the #8 discharge port on the compressor (See Figure 25, Page 20). Then route the 45° fitting to the #8 condenser hardline coming from under the radiator core support (See Figure 25, Page 20). Tighten each fitting connection as shown in Figure 23, above.
2. Locate the #10 compressor A/C hose. Lubricate (2) #10 O-rings (See Figure 23, above) and connect the #10 135° fitting with service port to the #10 suction port on the compressor (See Figure 25, Page 20). Then route the straight fitting to the #10 evaporator hardline coming through the firewall (See Figure 24, Page 19). Tighten each fitting connection as shown in Figure 23, above.
3. Locate the #6 evaporator hardline. Lubricate (2) #6 O-rings (See Figure 23, above) and connect the hardline to the #6 hardline coming under the radiator core support from the drier (See Figure 25, Page 20). Then route the other end of the hardline with lubricated O-ring to the #6 evaporator hardline coming through the firewall (See Figure 24, Page 19). Tighten each fitting connection as shown in Figure 23, above.

### Modified Hose Kit:

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



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## Heater Hose & Heater Control Valve Installation

1. Route a piece of heater hose from the lower heater core fitting to the water pump (See Figure 24, below, & Figure 25, Page 20). Secure using hose clamps.
2. Route a piece of heater hose from the intake to the heater control valve, and from the heater control valve to the upper heater core fitting (See Figure 24, below, & Figure 25, Page 20). **NOTE: Install the heater control valve in line with the intake manifold (pressure side) heater hose, and secure using hose clamps. Also note proper flow direction.**
3. Use #2 and #10 Adel clamps to secure the #6 evaporator/core support hardline and the #10 suction hose to the inner fender as shown in Figure 25, Page 20. Secure the Adel clamps to the inner fender using a 10-32 x 1/2" pan head screw and a 10-32 nut (See Figure 25a, Page 20).

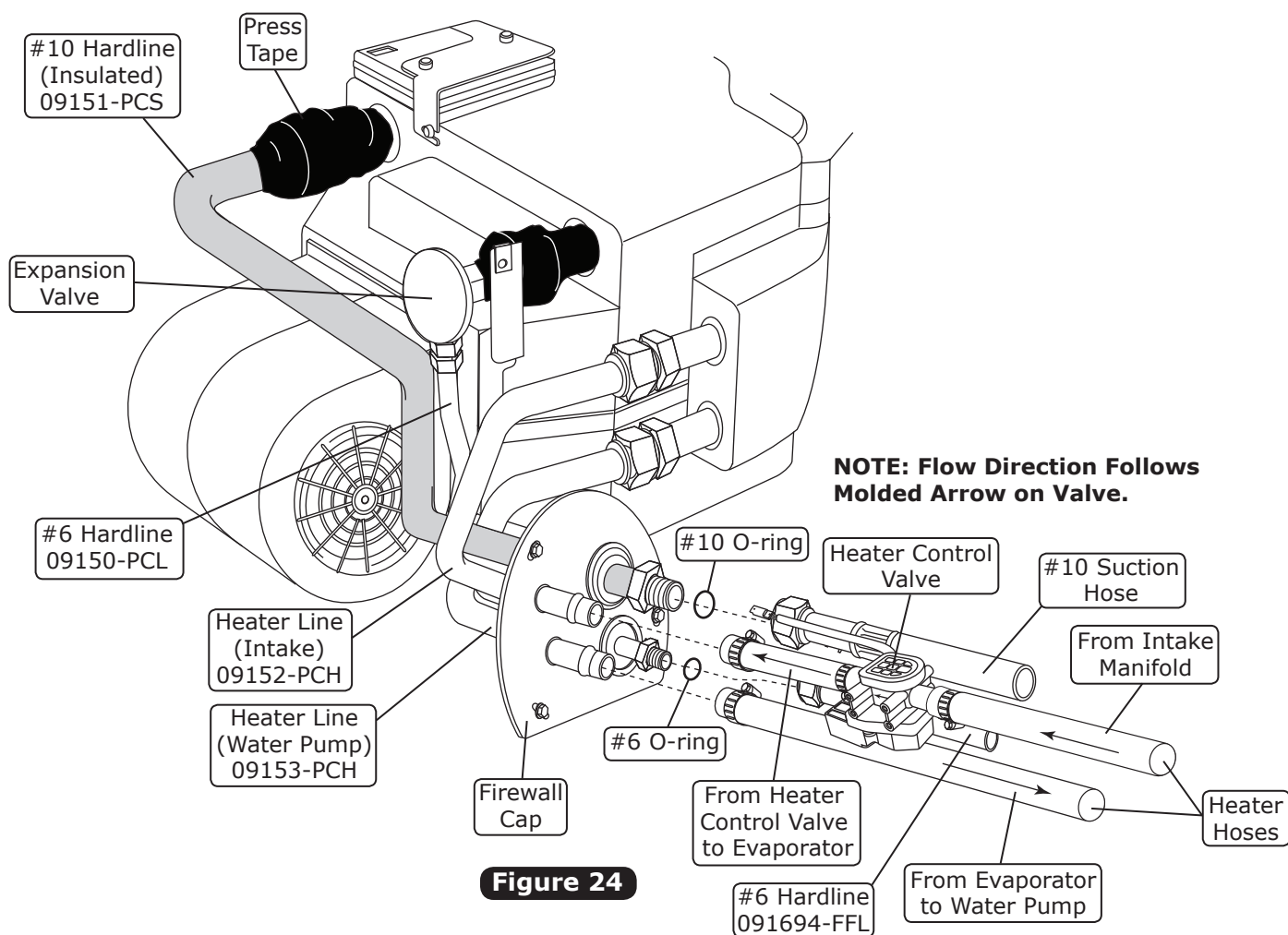


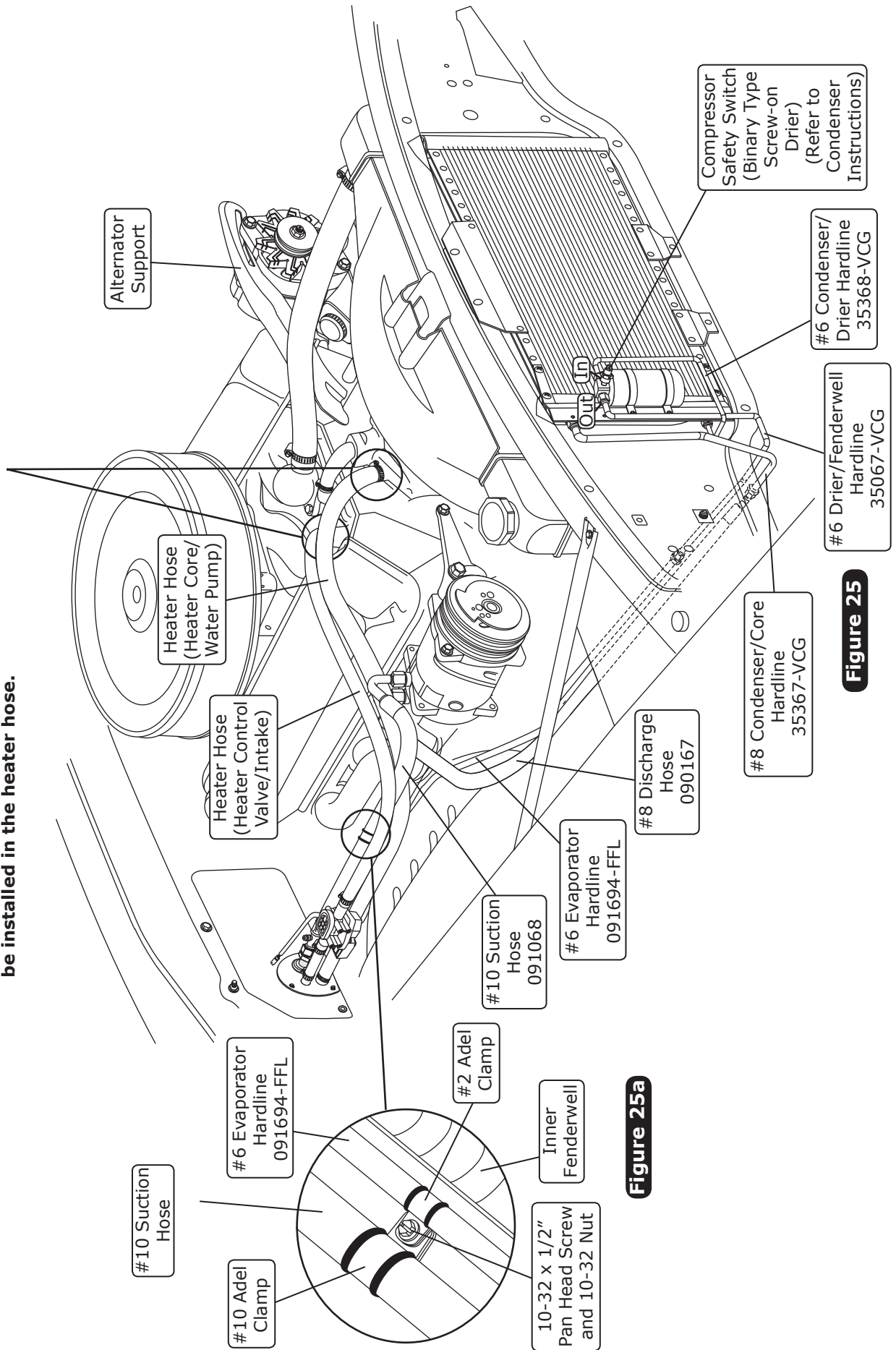
Figure 24



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# 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) will need to be installed in the heater hose.



**Figure 25**

**Figure 25a**

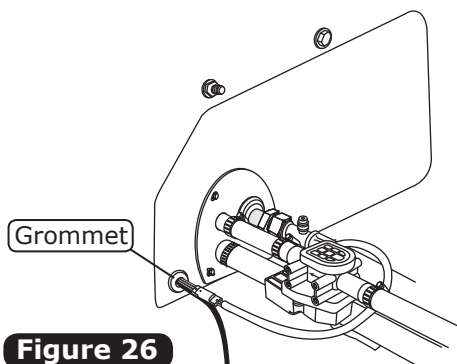




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## Final Steps

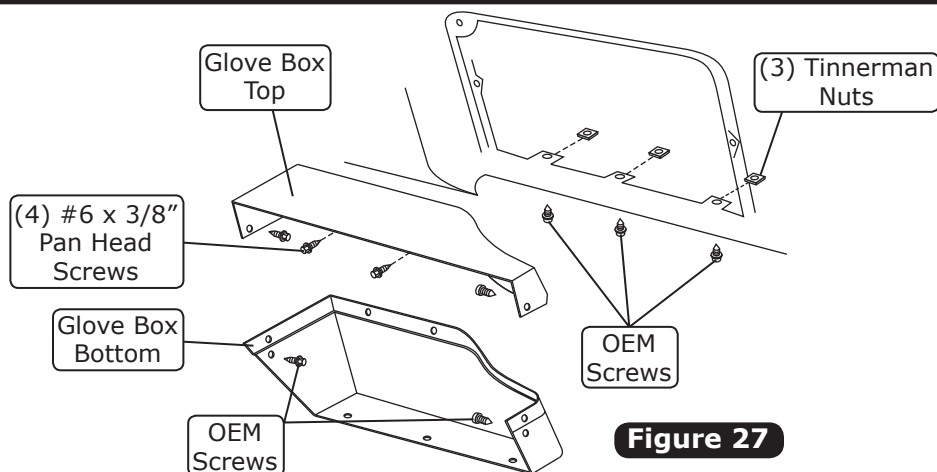
1. Install the duct hoses as shown in Figure 28, Page 22.
2. Route the A/C wires (12 volt/ground/binary switch/heater control valve) through the 3/8" grommet (See Figure 26, below).
3. Install the control panel assembly. Refer to the control panel instructions.
4. Plug the wiring harnesses into the ECU module on the sub case as shown in Figure 28, Page 22. Wire according to the wiring diagrams on Pages 23 & 24.
5. Refer to the instructions below to install the glove box.
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 25.



**Figure 26**

## Glove Box Installation

1. Locate the (3) Tinnerman nuts previously removed from the original glove box shell, and slide them onto the door hinge holes on the dash (See Figure 27, below).
2. Insert the bottom half of the new glove box into the glove box opening, and secure it to the dash with (1) OEM screw on each side of the glove box (See Figure 27, below).
3. Attach the top half of the glove box to the bottom half using (4) #6 x 3/8" pan head screws (See Figure 27, below).
4. Reinstall the glove box door using (3) OEM screws through the Tinnerman nuts (See Figure 27, below).

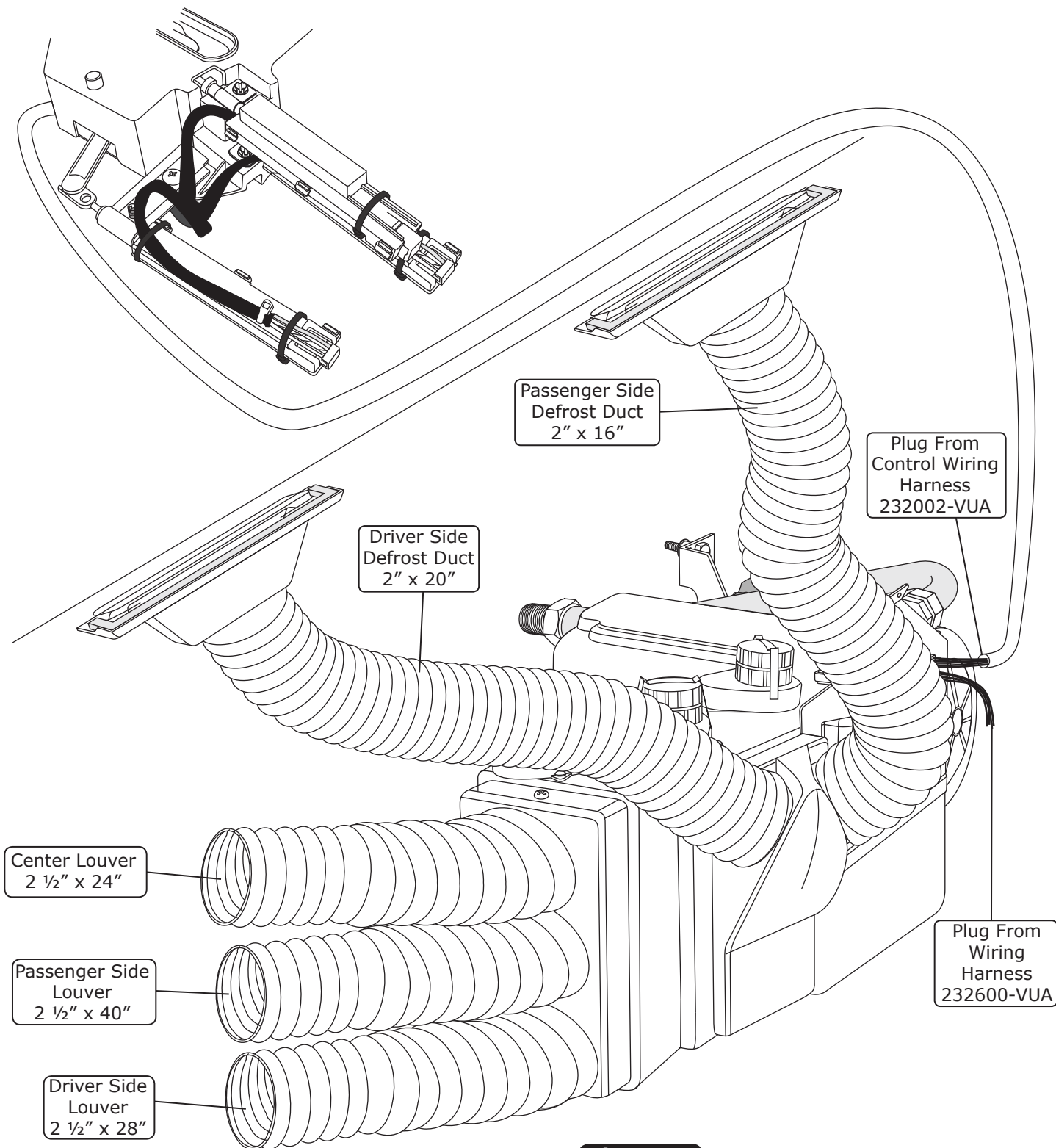


**Figure 27**



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## Control Panel & Duct Hose Routing



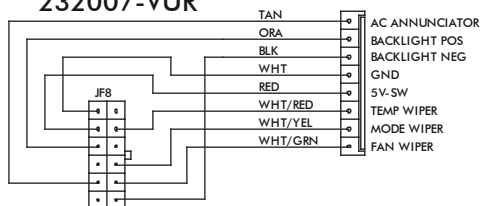
**Figure 28**



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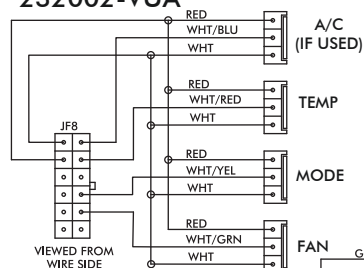
# Wiring Diagram

232007-VUR



VIEWED FROM WIRE SIDE

232002-VUA



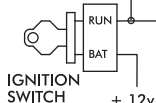
VIEWED FROM WIRE SIDE

PROGRAM

\* DASH LAMP (IF USED)

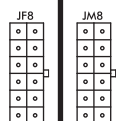
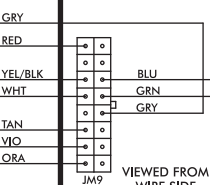
\*\*\* WIDE OPEN THROTTLE SWITCH (OPTIONAL)

WHT

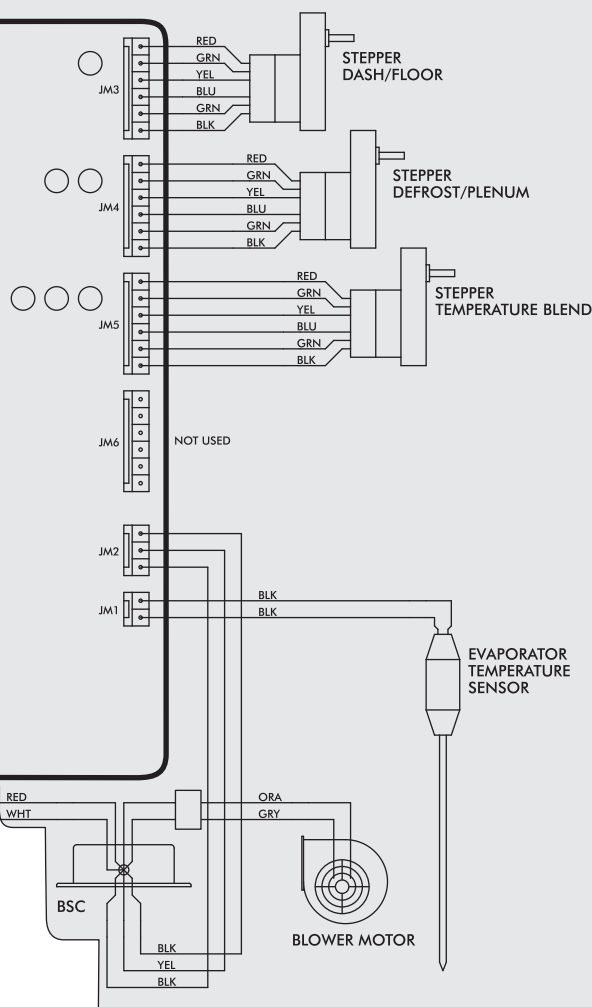


GEN IV ECU

GEN IV WIRING DIAGRAM  
REV D, 5/6/2014



PRE-WIRED



NOTE: = CHASSIS GROUND

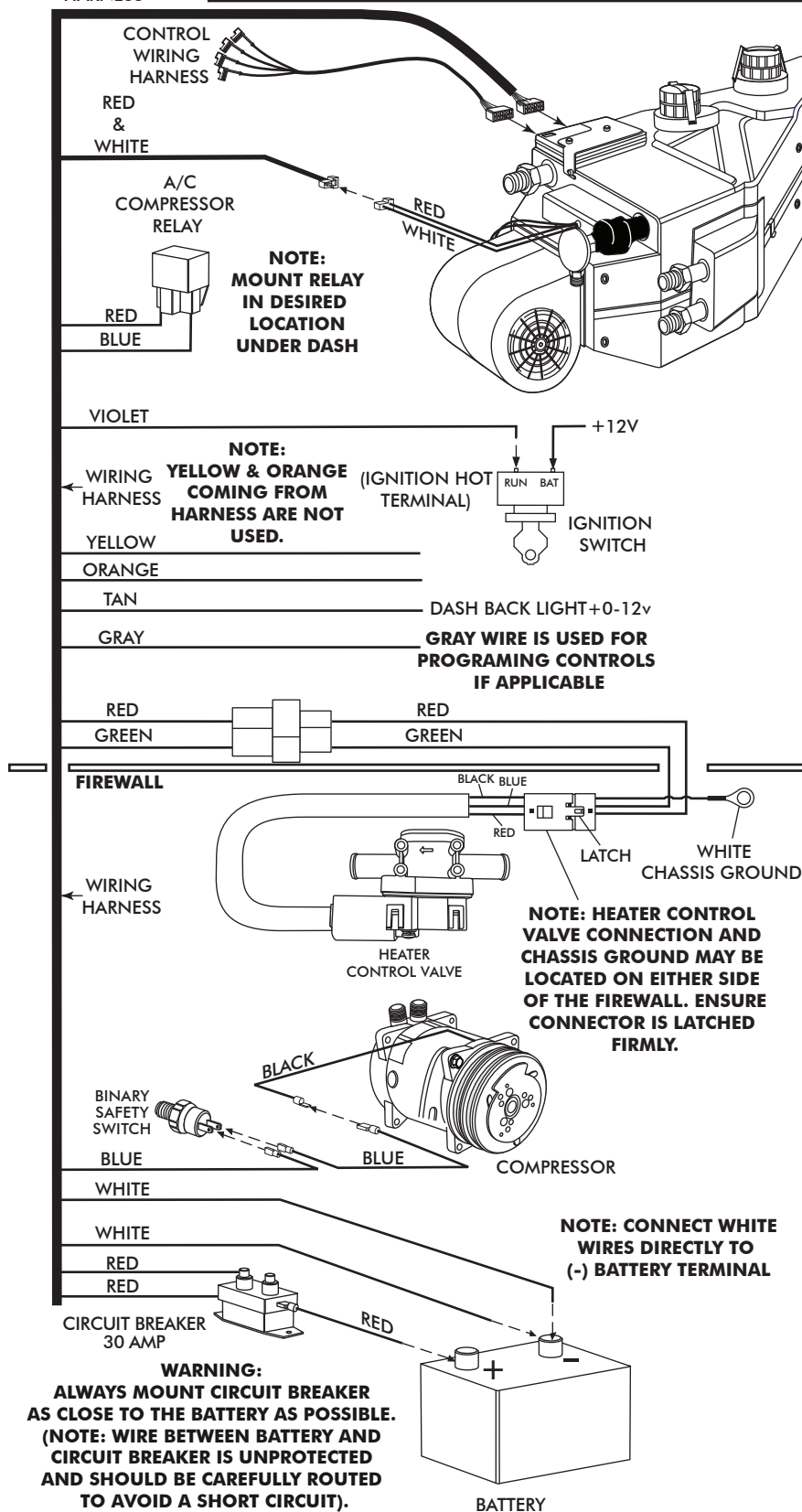
- Dash Lamp Is Used Only With Type 232007-VUR Harness.
- Warning: Always Mount Circuit Breaker As Close to the Battery As Possible. (NOTE: Wire Between Battery and Circuit Breaker Is Unprotected and Should Be Carefully Routd to Avoid a Short Circuit).
- Wide Open Throttle Switch Contacts Close Only at Full Throttle, Which Disables A/C Compressor.



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## Gen IV Wiring Connection Instruction

WIRING  
HARNESS



### 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 control panel instructions for calibration procedure.**

### Blower Speed

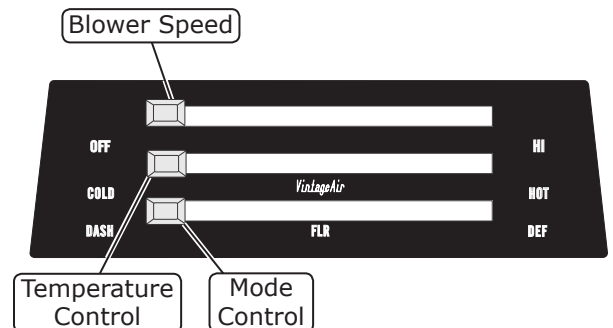
This lever/knob controls blower speed, from OFF to HI.

### 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

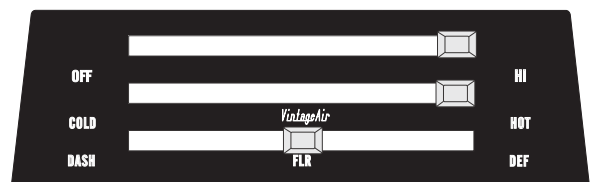
Adjust to desired speed.

### 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 must be charged for compressor to engage.	Charge system or bypass pressure switch.	<b>Danger: Never bypass safety switch with engine running. Serious injury can result.</b>
		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.
		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.	
3. Compressor will not turn off (All other functions work).				





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# Troubleshooting Guide (Cont.)

Symptom	Condition	Checks	Actions	Notes
4.	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.
	System will not turn on, or runs intermittently.	Will not turn on under any conditions.	Check for positive power at heater valve green wire and blower red wire. Check for ground on control head white wire.	
		Verify connections on power lead, ignition lead, and both white ground wires.		
		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.	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.	
			Ensure all system grounds and power connections are clean and tight.	
			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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## Evaporator Bracket Template

**NOTE:** Due to printing variances, measure the line below before using this template. If template is scaled properly, the line should measure 6 inches.

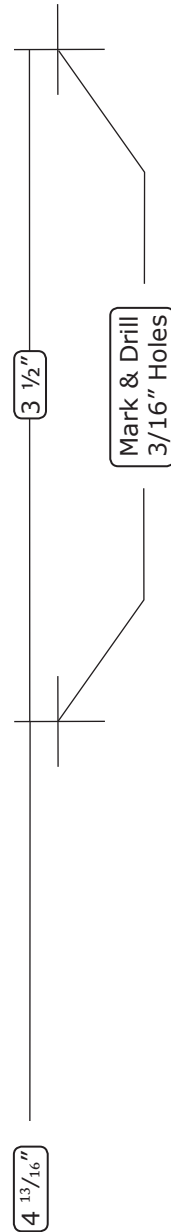


Cut Along  
Dotted Line



Fold Dotted Line

Fold Dotted Line



Cut Along  
Dotted Line



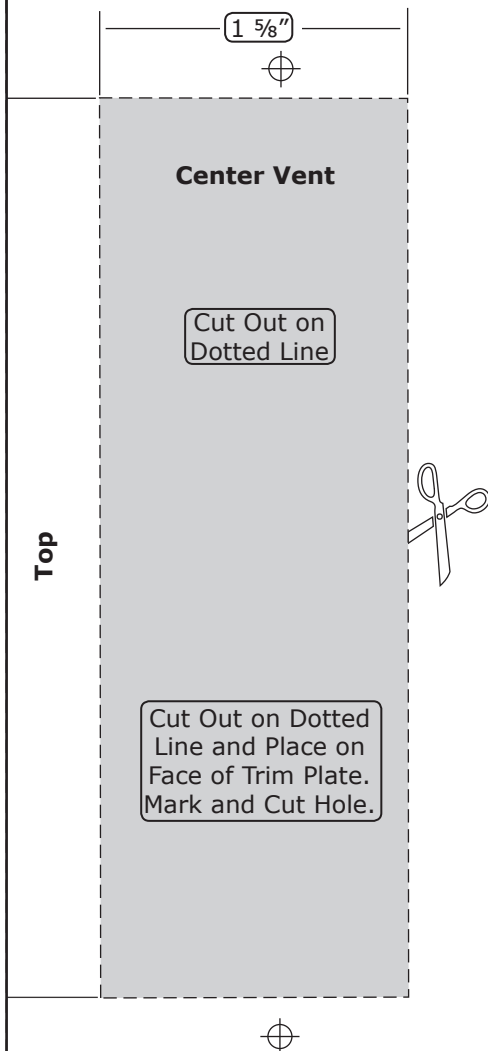




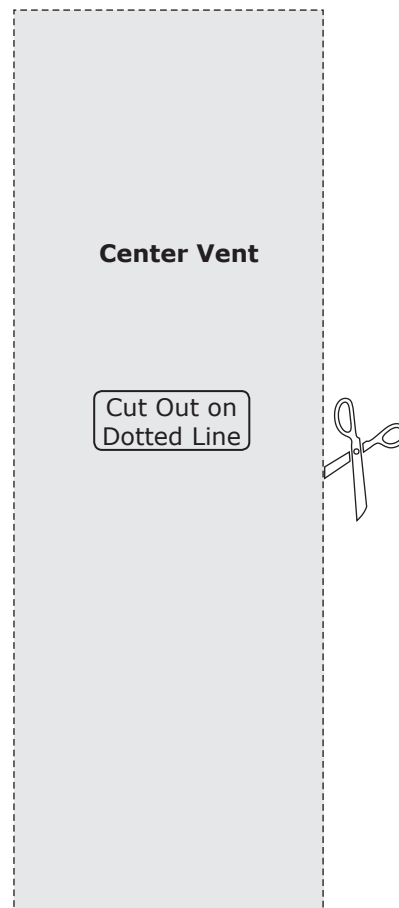
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## Center Vent Template (Vintage Air Louver Only)

**Template for Cutting Hole  
in Trim Plate for Vintage Air  
Center Louver Installation**



Cut Supplied Foam to Match Template. Peel the Protective Backing and stick onto the Back Side of the Trim Plate.



**Foam  
Template**

**NOTE:** Due to printing variances, measure the line below before using this template. If template is scaled properly, the line should measure 6 inches.



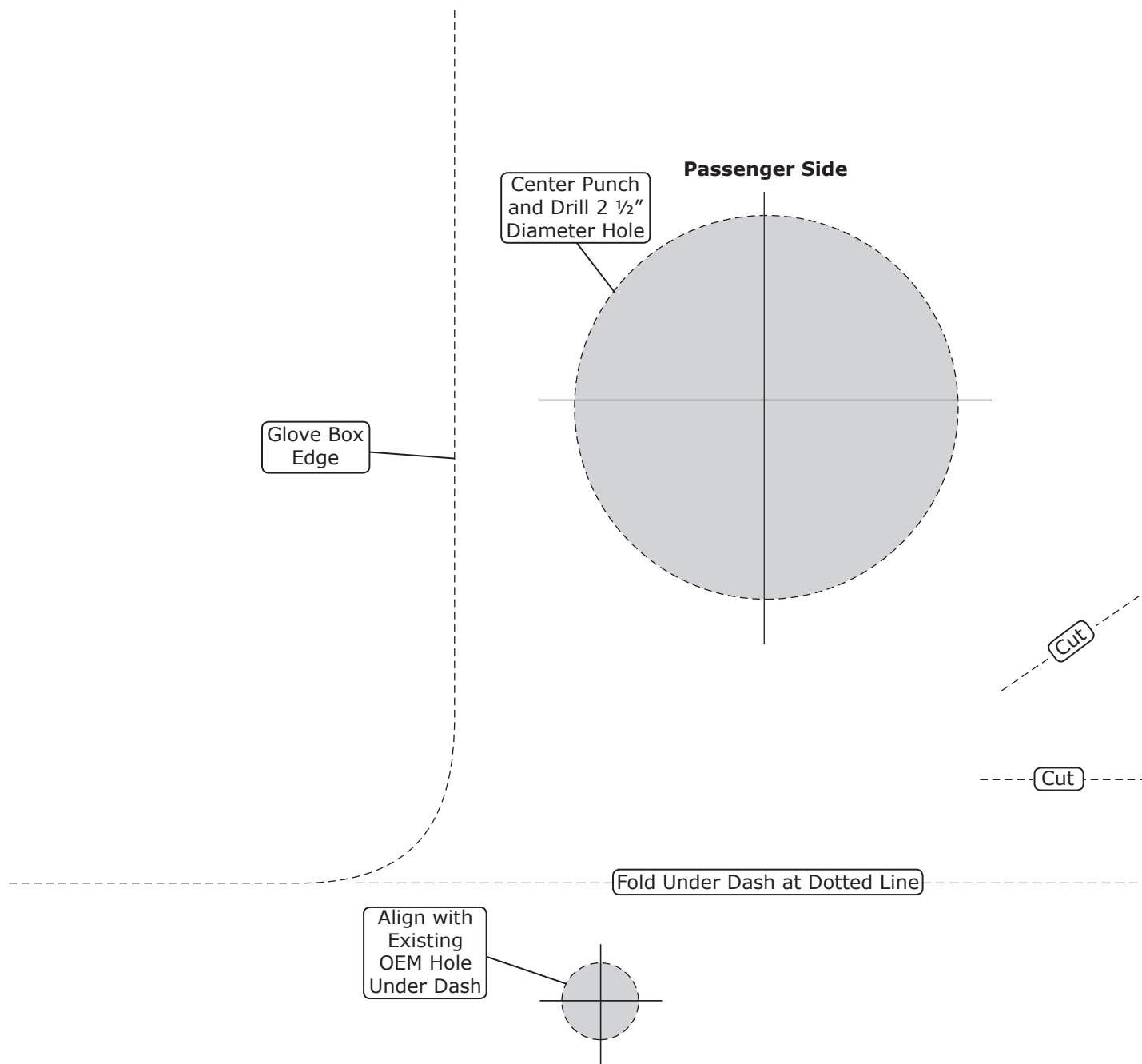




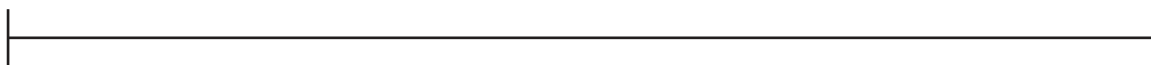


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## Passenger Side Louver Template (1967 Models Only)



**NOTE:** Due to printing variances, measure the line below before using this template. If template is scaled properly, the line should measure 6 inches.

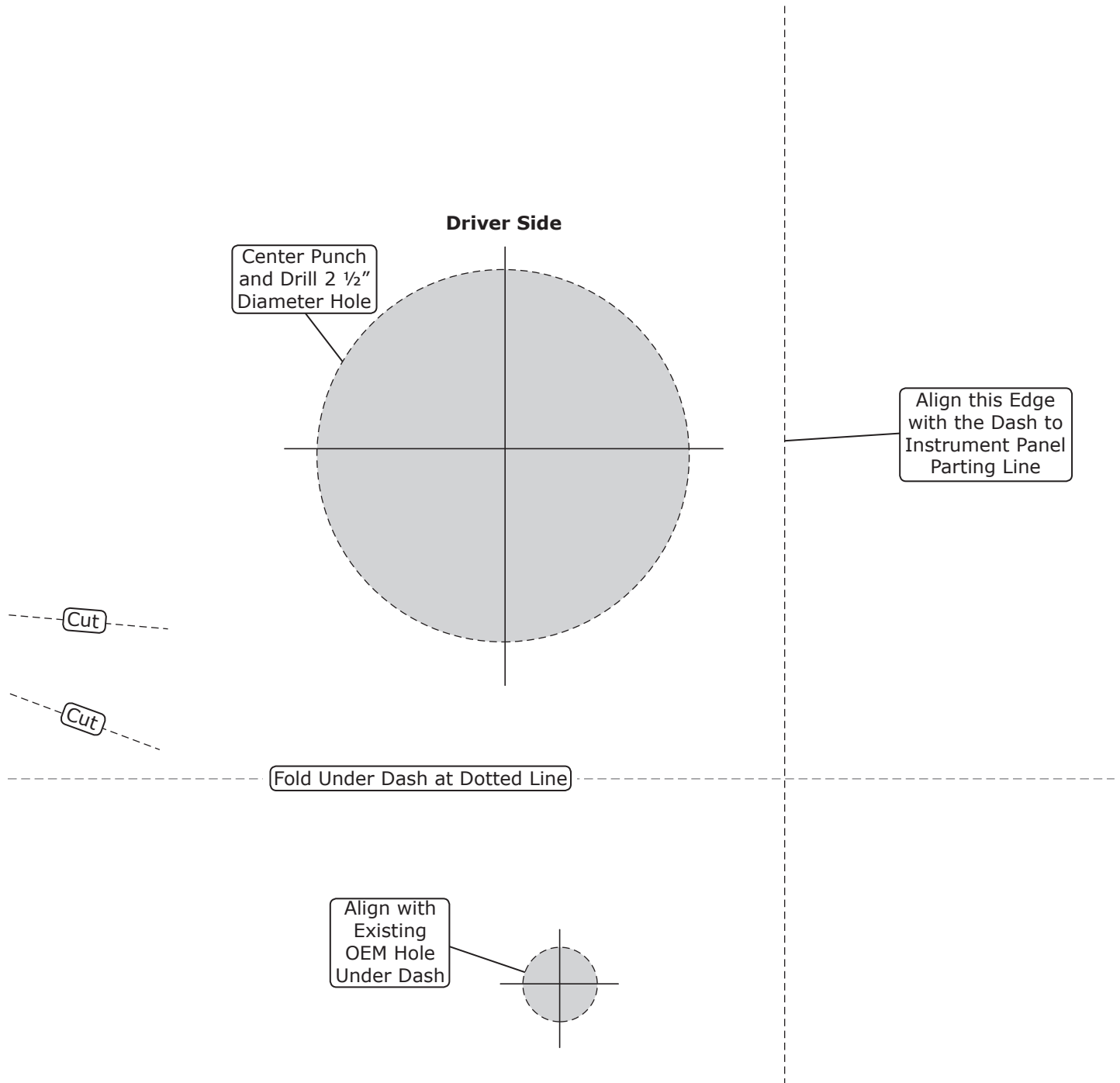




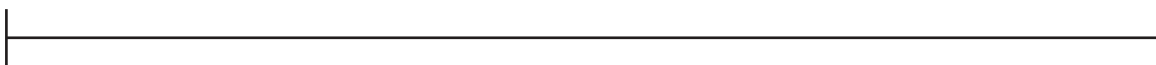


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## Driver Side Louver Template (1967 Models Only)



**NOTE:** Due to printing variances, measure the line below before using this template. If template is scaled properly, the line should measure 6 inches.









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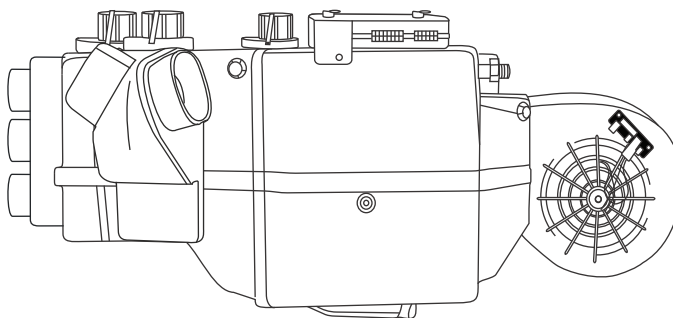
## Packing List: Evaporator Kit (561167)

No.	Qty.	Part No.	Description
1.	1	744005	Gen IV 3-Vent Evaporator Sub Case with 204 ECU
2.	1	781168	Accessory Kit

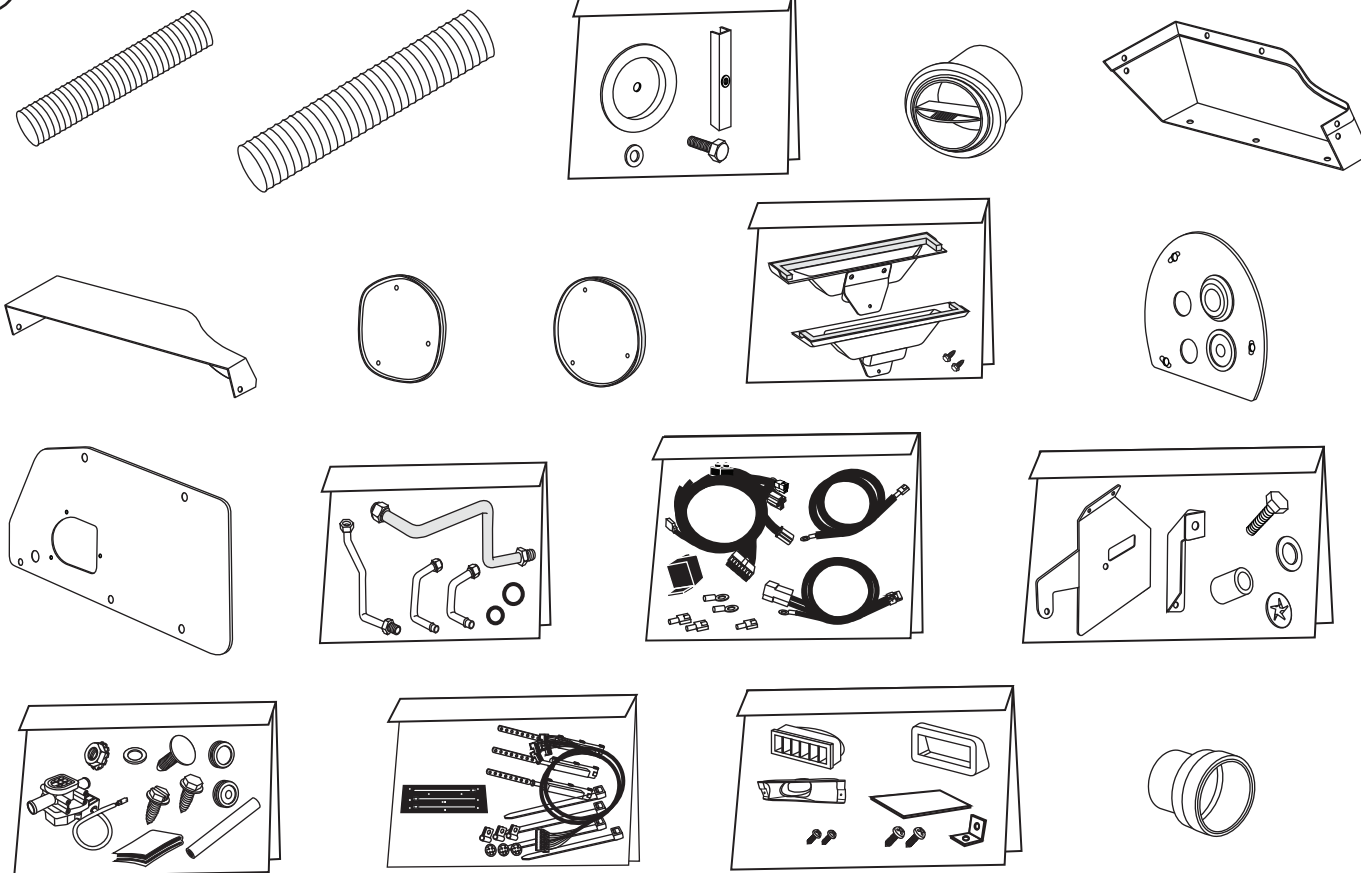
Checked By: \_\_\_\_\_  
Packed By: \_\_\_\_\_  
Date: \_\_\_\_\_

1

**Gen IV 3-Vent  
Evaporator Sub Case  
with 204 ECU  
744005**



2



**Accessory Kit  
781168**

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