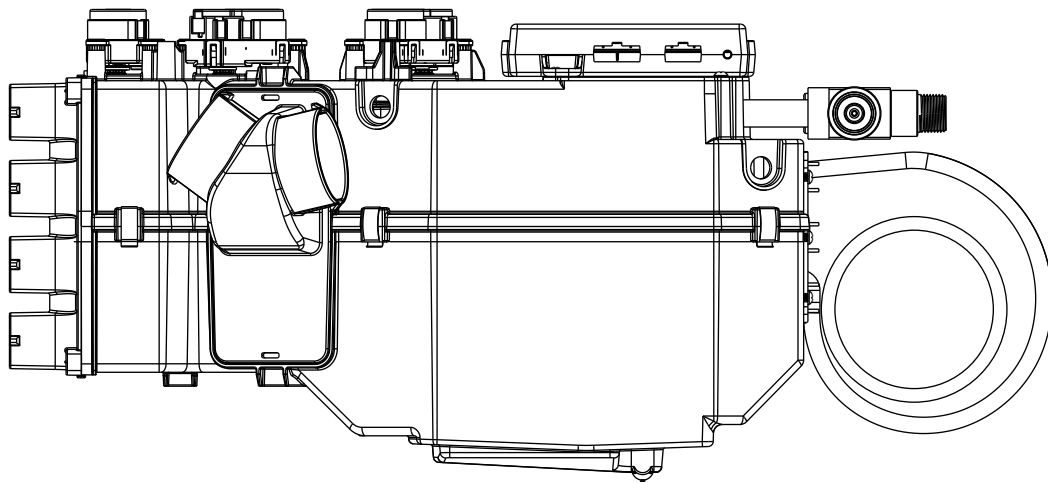




# Gen 5 Magnum

Heat/Cool/Defrost Evaporator Kit  
(675100)



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[www.vintageair.com](http://www.vintageair.com)

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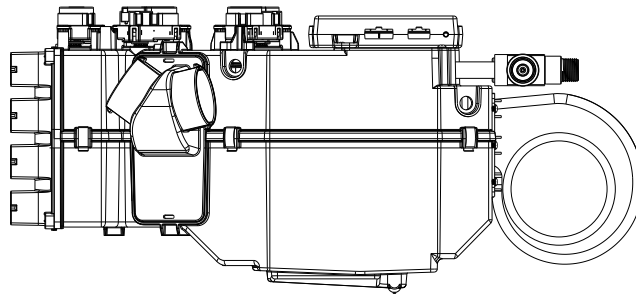
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## Packing List: Evaporator Kit (675100)

| No. | Qty. | Part No. | Description                    |
|-----|------|----------|--------------------------------|
| 1.  | 1    | 765100   | Gen 5 Magnum Evaporator Module |
| 2.  | 1    | 775100   | Accessory Kit                  |

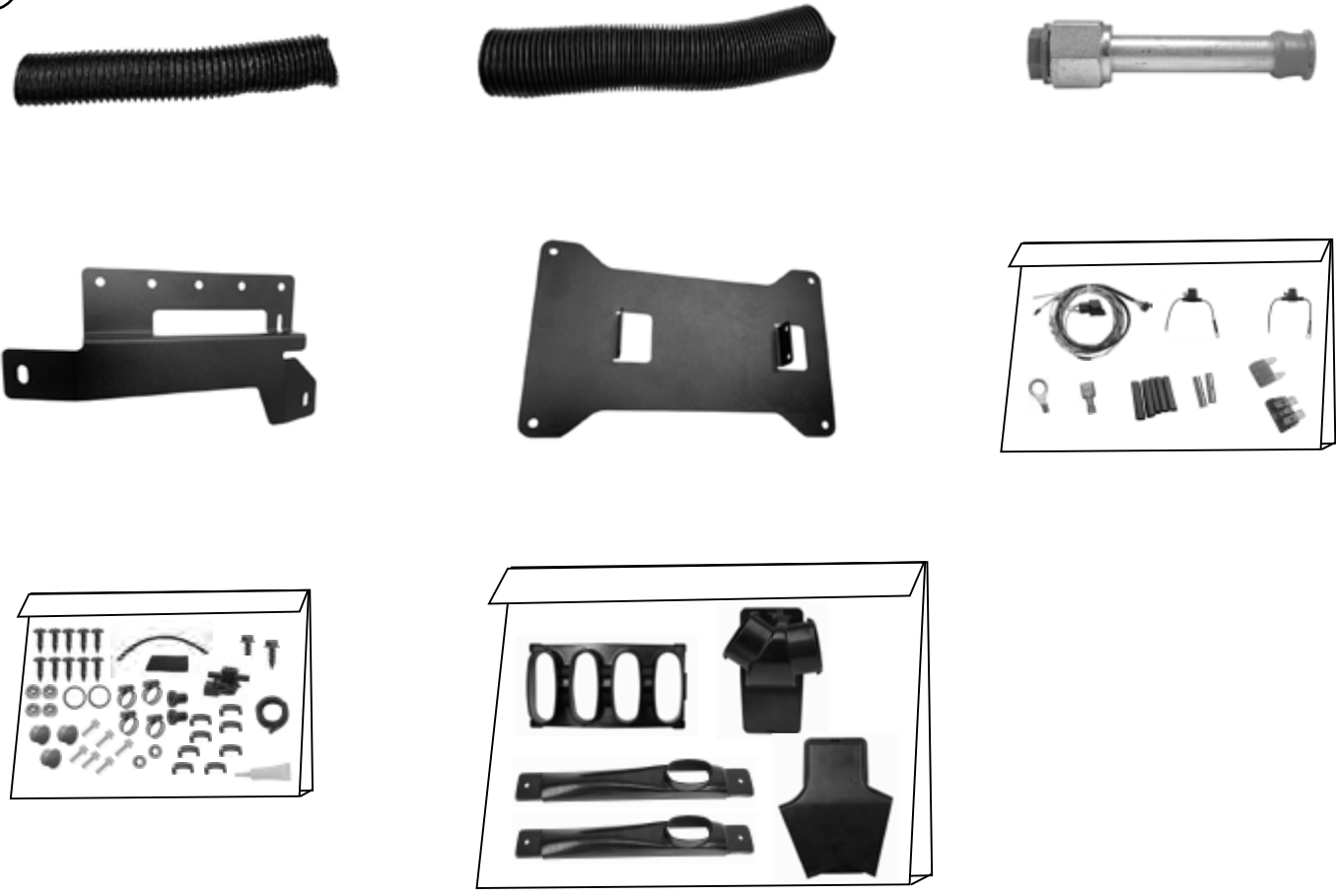
**\*\* Before beginning installation, open all packages and check contents of shipment. Please report any shortages directly to Vintage Air within 15 days. After 15 days, Vintage Air will not be responsible for missing or damaged items.**

1



Gen 5 Magnum  
Evaporator Module  
765100

2



Accessory Kit  
775100

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



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## Important Notice—Please Read

*For Maximum System Performance, Vintage Air Recommends the Following:*

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

### Refrigerant Capacities:

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

**Other Systems:** Consult manufacturer's guidelines.

### Lubricant Capacities:

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

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

### Safety Switches

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

### Service Info:

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

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

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

### Bolts Passing Through Cowl and/or Firewall:

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

### Heater Hose (not included with this kit):

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



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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 and charging systems, and from switching some of the vehicle’s other systems on and off. Modern computer-operated equipment can be sensitive to voltage spikes on the power leads, which can cause unexpected resets, strange behavior and/or permanent damage.

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

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

- Care must be taken, when installing the compressor lead, not to short it to ground. The compressor lead must not be connected to a condenser fan or to any other auxiliary device. Shorting to ground or connecting to a condenser fan or any other auxiliary device may damage wiring or the compressor relay, and/or cause a malfunction.
- When installing ground leads on Gen 5 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.

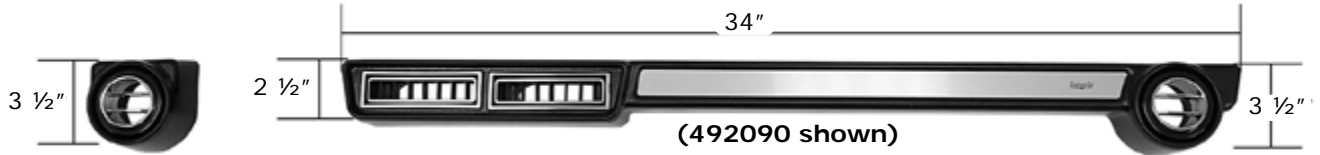


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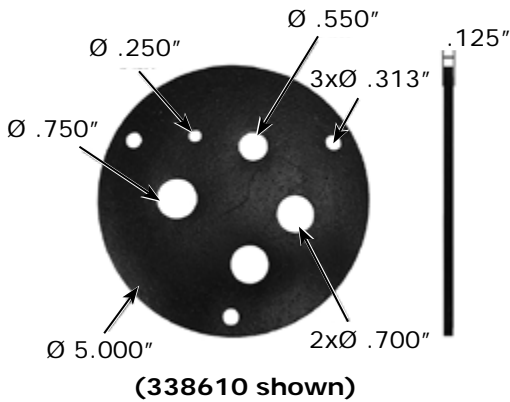
## Additional Parts and Components for Universal Installations

- Additional parts and components that were designed for specific kits may fit other applications and are shown on the website and in our catalog. Some of the parts and components include: insulation materials, under dash louvers, louver hose adapters, defrost ducts, electronic control panels, Magnum plenums, grommets, firewall and kick panel rubber boots, etc.

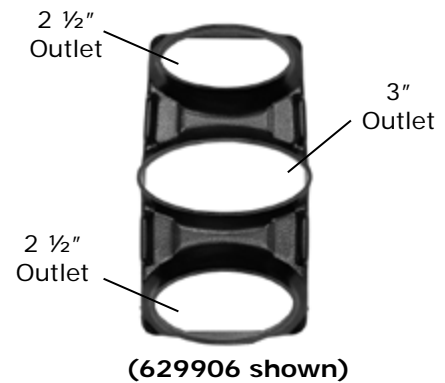
### Under Dash Louvers



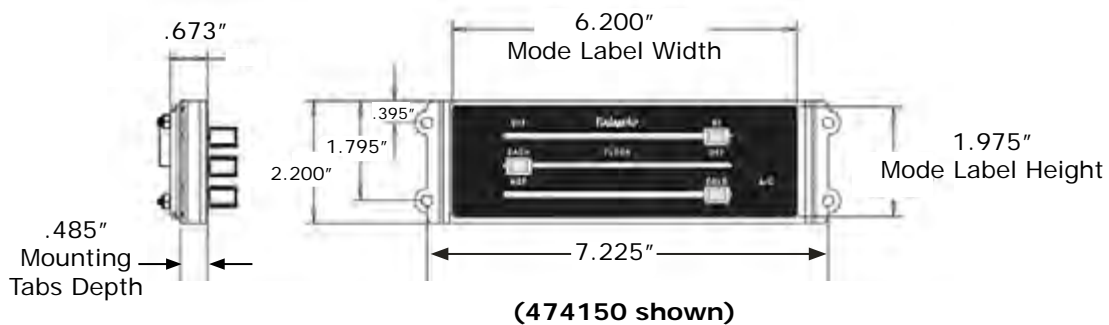
### Rubber Boots



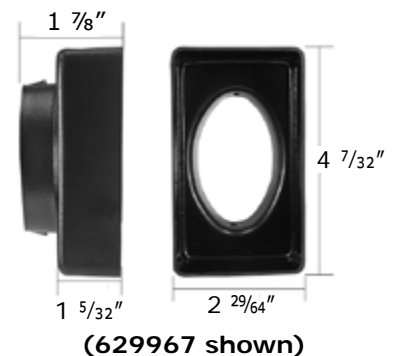
### Duct Hose Magnum Plenums



### Control Panels



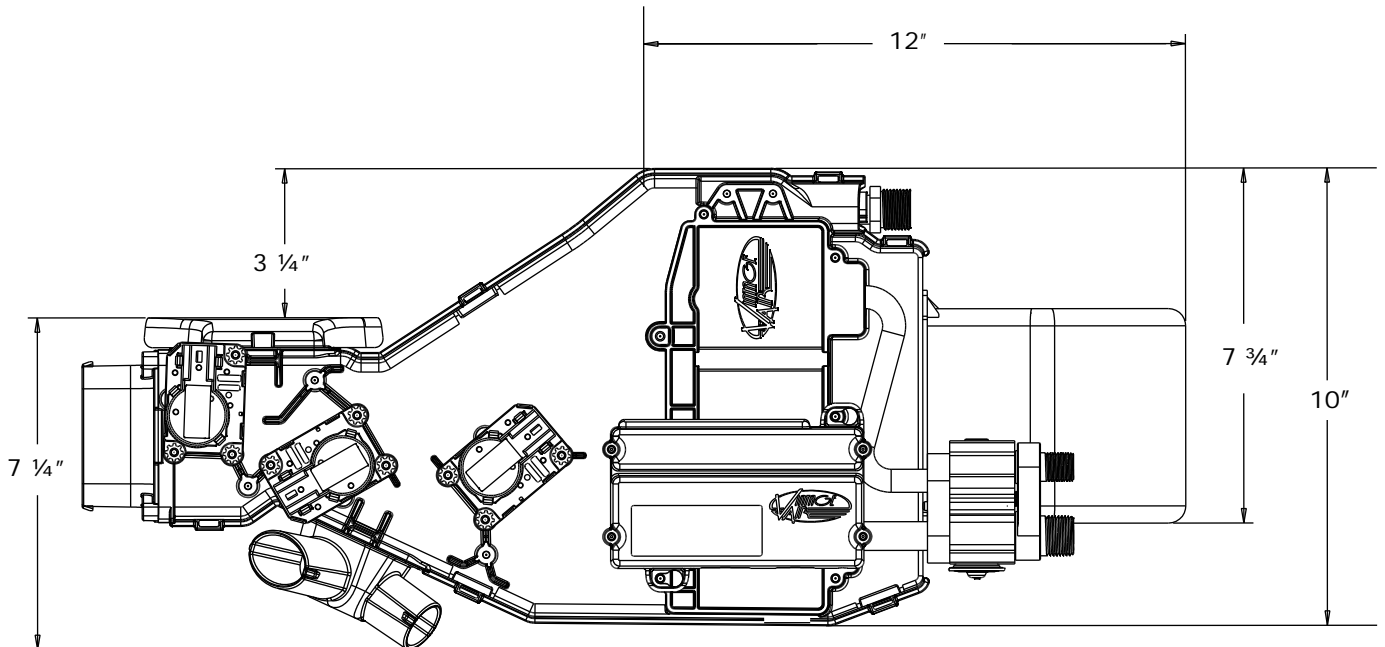
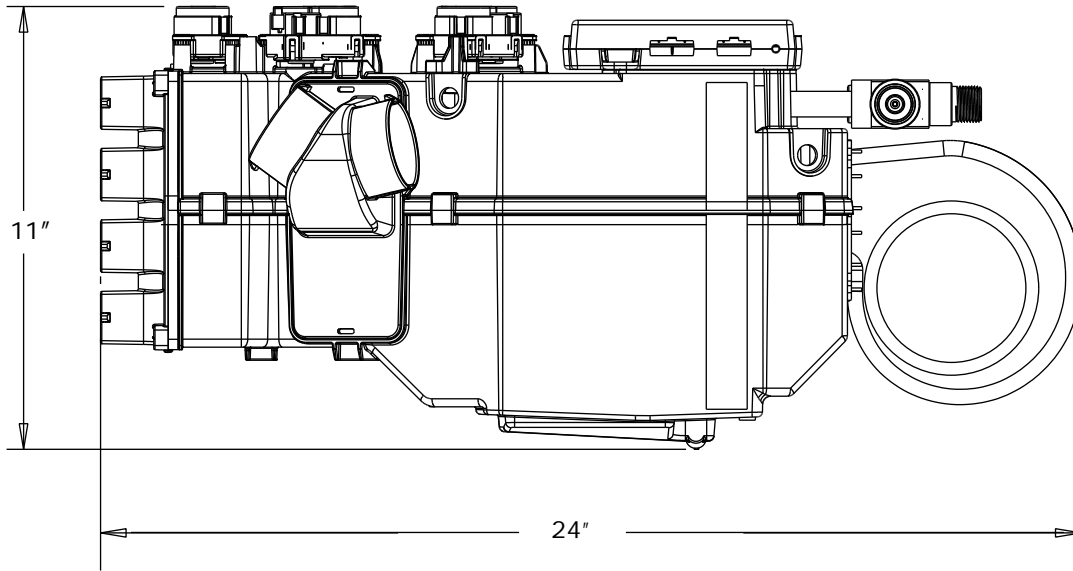
### Defrost Ducts and Hose Adapters





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# Evaporator Dimensions





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## Planning Overview

- Every vehicle is different depending on the:
  1. Type of vehicle/engine and location of engine.
  2. Type of air conditioning equipment used.
  3. Owner's preferences.
- There are many factors that go into making each air conditioning installation different. Usually, all of the above decisions are made before any consideration is given to the air conditioning installation. The A/C system is then tailored to fit your particular application.
- The mounting location of the evaporator module is determined in part by the space available for the hose routing. The components used in the hose routing process (i.e. bulkhead plates, fittings, grommets, etc.) will also influence the location of the evaporator module. When planning your hose routing, you must install the major component parts first. Mount the compressor, condenser and drier. The evaporator must be temporarily held in position under the dash. Final mounting of the evaporator to the firewall should not be done until you have verified that all hoses attaching to the evaporator will exit the firewall and/or kick panel as planned. The hoses must be run exactly the way they will be when finished, before cutting them to length.
- Duct hose routing and A/C vent locations should also be given careful consideration before final mounting position of the evaporator is selected.
- The Vintage Air Gen 5 Magnum Evaporator Module was designed for classic cars, custom cars, and trucks. The evaporator module is designed to mount behind the dash.
- Read the installation instructions completely, and familiarize yourself with all the parts, photos and illustrations.
- The installation of this module varies according to the body manufacturer or modifications to the original body. Take your time, and double check before drilling or cutting.
- For proper system operation, Vintage Air recommends using heat-blocking insulation in the area around the evaporator module (firewall, kick panel, inner cowl, firewall covers) (See Photos 1 and 2, below). 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.



Before Insulation

Photo 1



After Insulation

Photo 2

## Condenser Assembly & Installation

1. Refer to separate instructions included with the condenser kit.

## Compressor and Brackets

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





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## Defrost Duct Installation

**NOTE:** For an alternate installation method, apply silicone, epoxy, etc., to the defrost ducts and align with the openings in the dash.

1. Align the defrost duct with the opening in the dash, if applicable. Use OEM mounting hole locations or mark and drill 1/8" mounting holes. Use (4) #8 x 1/2" pan head screws to secure the new defrost ducts as shown in Figure 1, below.

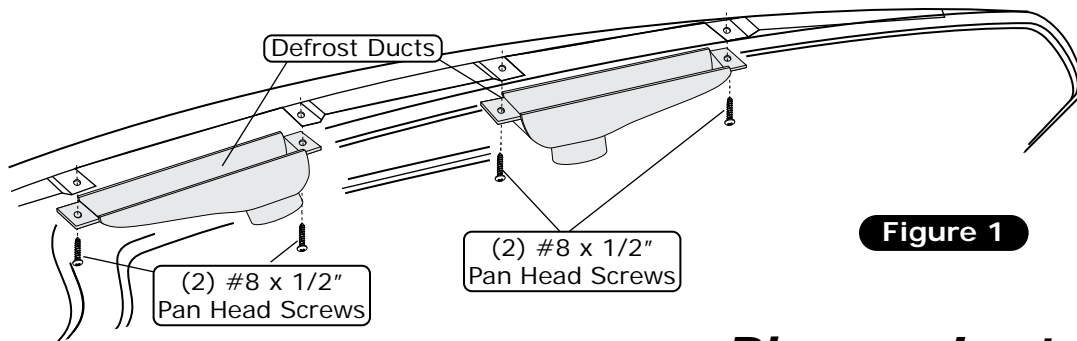


Figure 1

## Plenum Installation

**On a workbench, perform the following:**

1. Gather all the plenums and installation hardware as shown in Photo 1, below.
2. Install the defrost plenum onto the evaporator module using (2) spring clips (See Photo 2, below).
3. Install the dash plenum onto the evaporator module using (4) spring clips (See Photos 3 and 4, below).



Photo 1

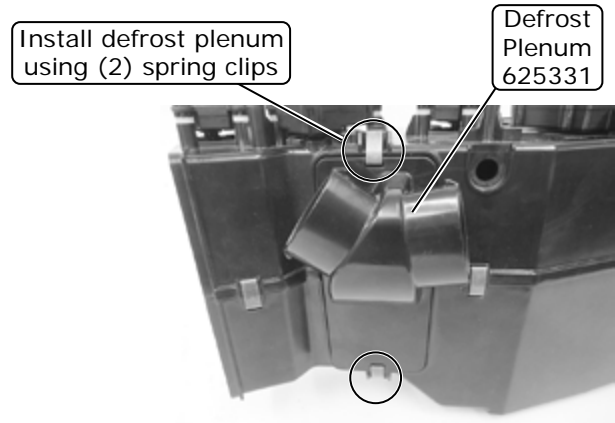


Photo 2

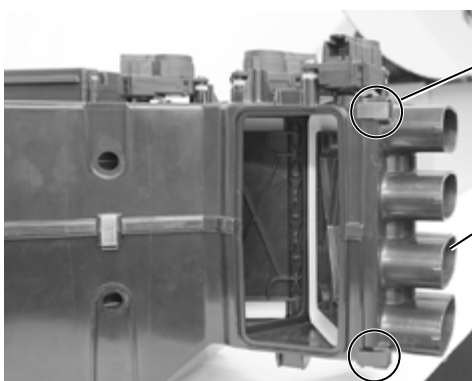


Photo 3

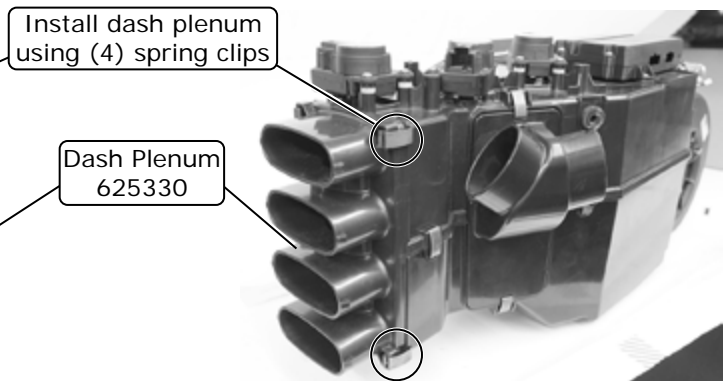


Photo 4



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## Plenum Installation (Cont.)

4. Install the floor plenum onto the evaporator module using (2) spring clips (See Photo 5, below).

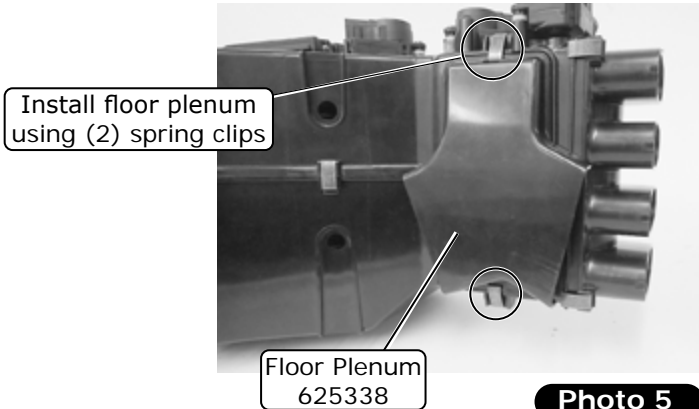


Photo 5

## Heater Fitting Installation

1. On a workbench, install (2) heater fittings with properly lubricated #10 O-rings onto the evaporator module (See Lubricating O-rings and Photos 1 and 2, below). **NOTE: 45° and 90° heater fittings are available for sale.**

Install heater fitting with properly lubricated #10 O-ring

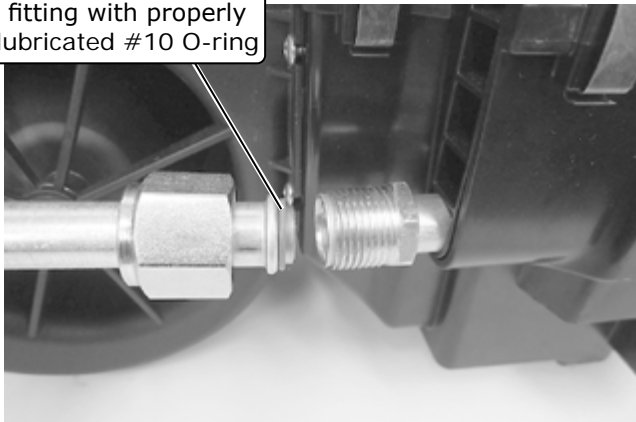


Photo 1

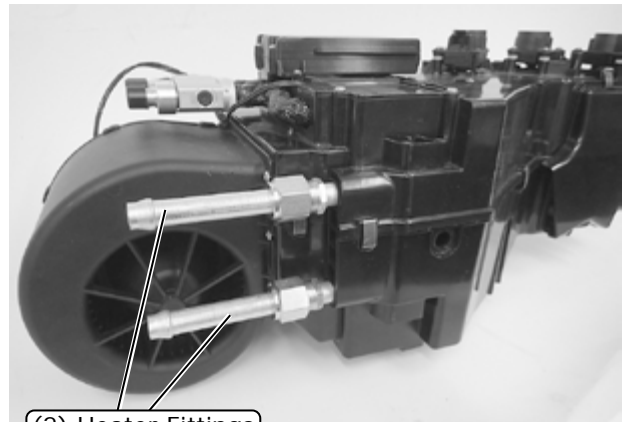
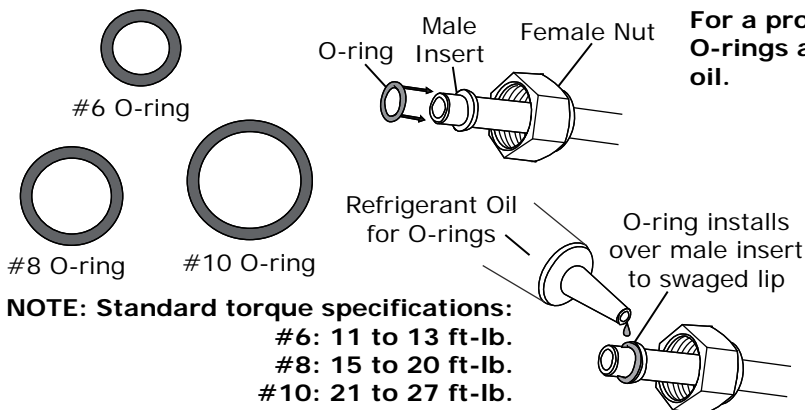


Photo 2

## Lubricating O-rings

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

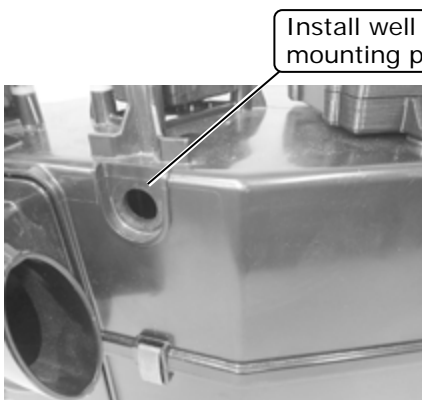




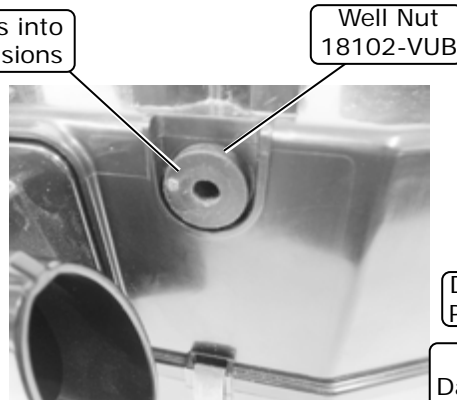
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## Bracket Installation

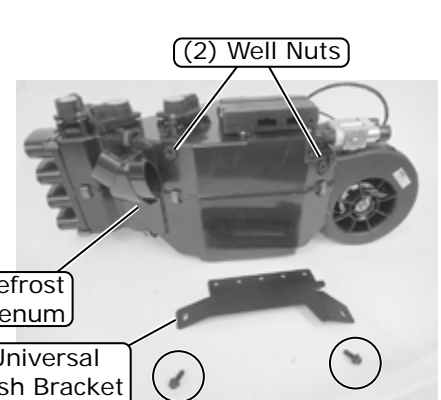
1. Install (2) well nuts into the mounting provisions on the evaporator module next to the defrost plenum (See Photos 1, 2 and 3, below).
2. Secure the dash bracket onto the evaporator module using (2) 1/4-20 x 3/4" serrated flange bolts (See Photos 3 and 4, below).
3. For all unused mounting provisions on the evaporator module, install a 1/2" plastic plug (See Photos 5 and 6, below).
4. Install and secure the firewall bracket onto the evaporator module using (4) #10 x 5/8" philips screws ((2) on top, (2) at the bottom) (See Photos 7 and 8, below).



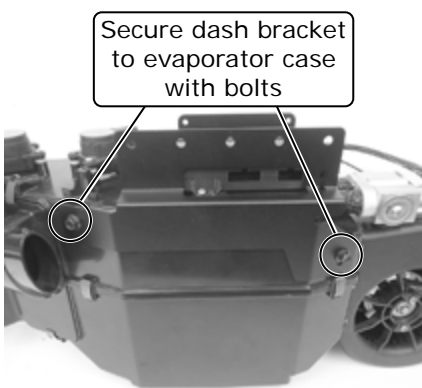
**Photo 1**



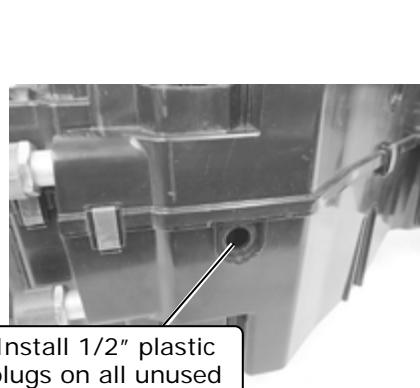
**Photo 2**



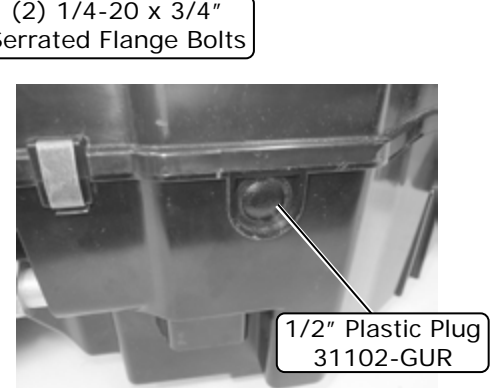
**Photo 3**



**Photo 4**



**Photo 5**

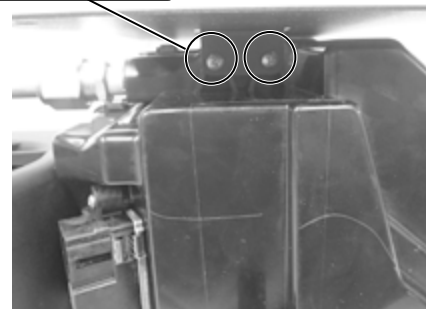


**Photo 6**



**Photo 7**

Install universal firewall bracket using (4) #10 x 5/8" philips screws



**Bottom View of Evaporator Module Photo 8**

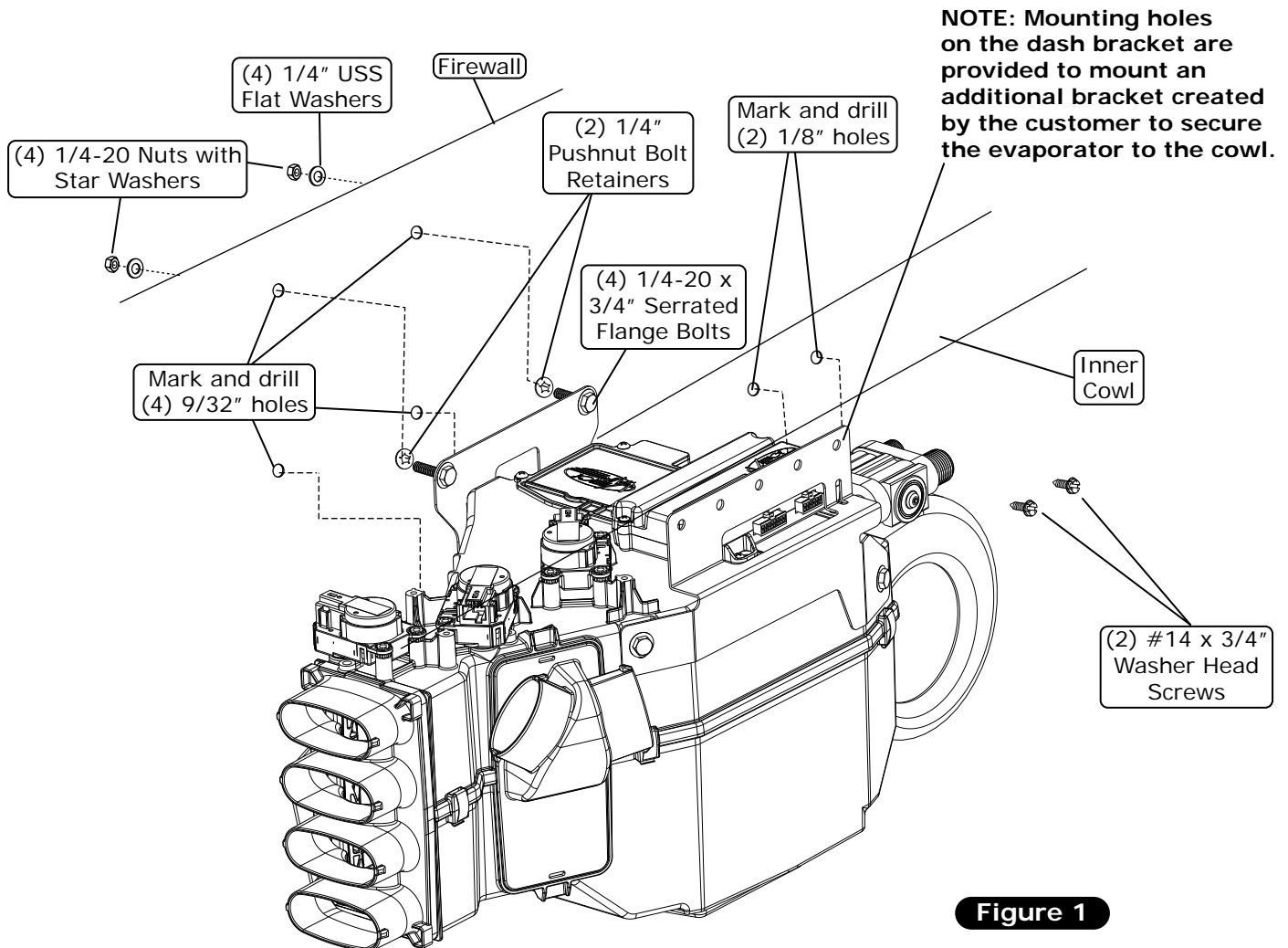


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## Evaporator Installation

**NOTE: A typical installation is shown below. It may be necessary to modify brackets and/or add additional brackets for your specific installation.**

1. Lift the evaporator module up under the dashboard into the desired position. Verify that the evaporator module is level and square to the dash. Once in place, using the holes on the firewall and dash brackets as templates, mark the hole locations on the inner cowl and firewall, then drill holes as shown in Figure 1, below. **NOTE: Depending on your installation, use any combination of holes on the dash bracket with the addition of a second bracket created by the customer to secure the evaporator to the inner cowl.**
2. Install (2) 1/4-20 x 3/4" serrated flange bolts into the top mounting holes on the firewall bracket, and secure them with (2) 1/4" pushnut bolt retainers.
3. Lift the evaporator module up under the dashboard into the desired position, then loosely secure it to the firewall from the engine compartment side using (2) 1/4-20 nuts with star washers and (2) 1/4" USS flat washers (See Figure 1, below).
4. Install (2) 1/4-20 x 3/4" serrated flange bolts into the bottom (2) holes on the firewall bracket and through the firewall. Secure them with (2) 1/4-20 nuts with star washers and (2) 1/4" USS flat washers.
5. Using (2) #14 x 3/4" washer head screws and an additional bracket created by the customer, secure the dash bracket to the inner cowl (See Figure 1, below).
6. Verify that the evaporator module is level and square to the dash, then tighten all mounting locations.  
**NOTE: Tighten the bolts on the firewall first, then tighten the dash bracket screws.**

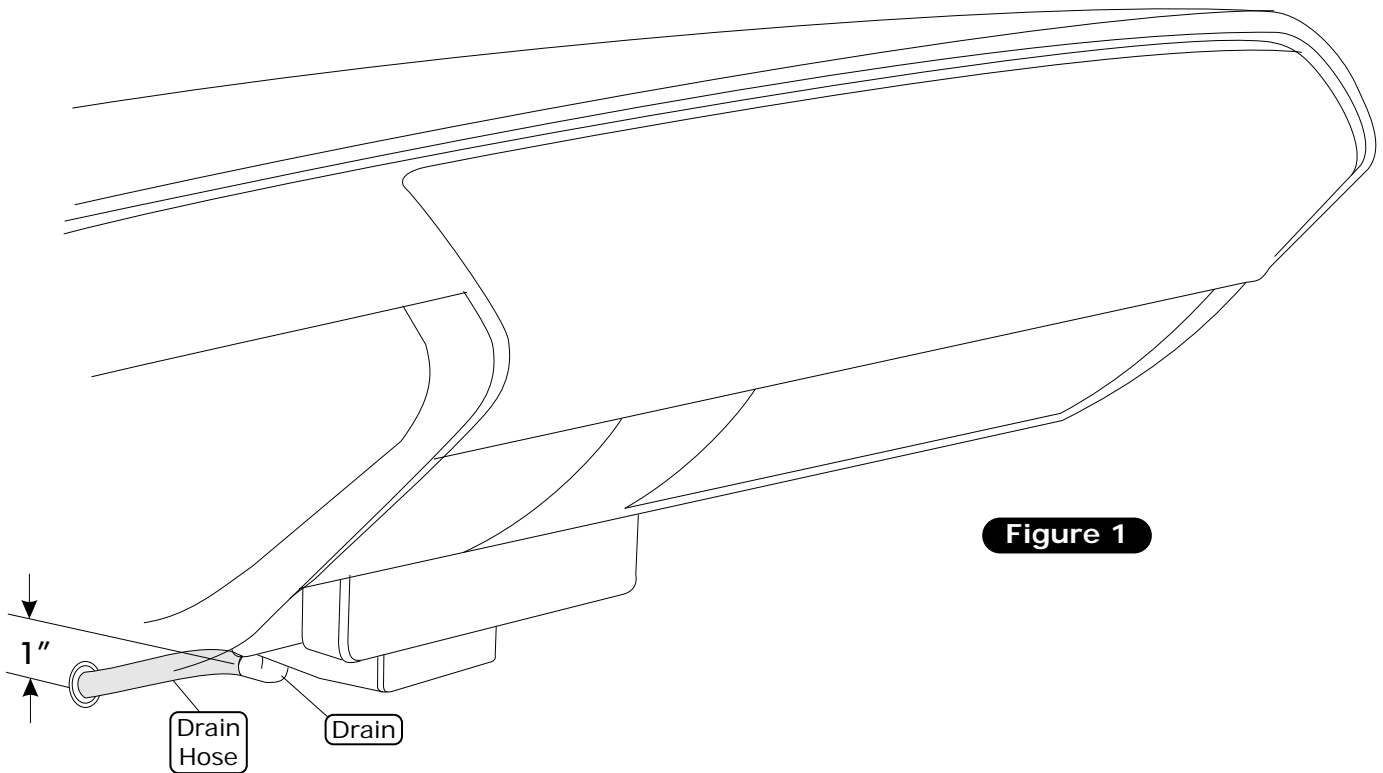




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## Drain Hose Installation

1. In line with the drain, lightly make a mark on the firewall. Measure 1" down, then mark and drill a 5/8" hole through the firewall (See Figure 1, below). **NOTE: To ensure a tight fit for the drain hose, do not enlarge the drain hole more than 5/8".**
2. Install the drain hose on the drain, then route through the firewall. **NOTE: From the engine compartment side of the firewall, cut the drain hose to the desired length.**



## A/C Hose Installation

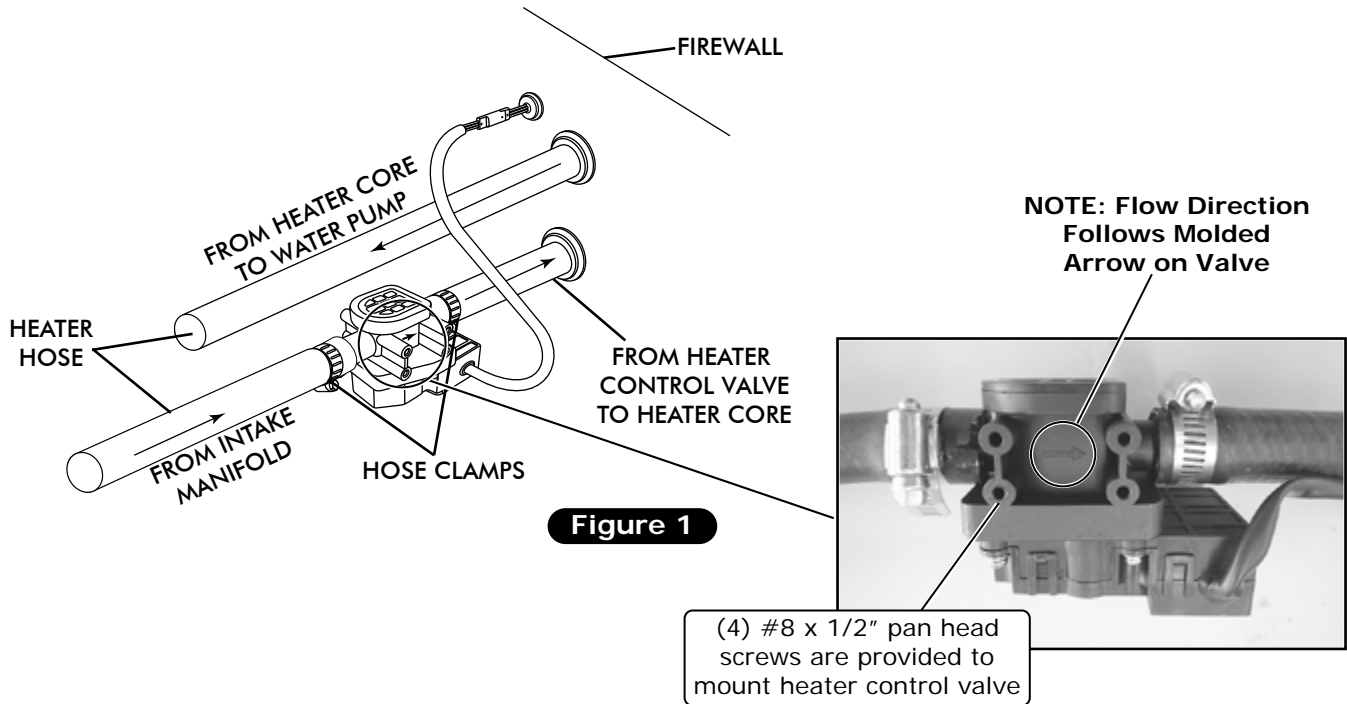
1. Refer to separate instructions included with hose kit.



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## Heater Hose & Heater Control Valve Installation

1. Route a piece of heater hose from the water pump to the heater line coming through the firewall as shown in Figure 1, below. Secure using hose clamps. **NOTE: Water pump side of system is low pressure (suction) side.**
2. Route a piece of heater hose from the intake to the heater line coming through the firewall as shown in Figure 1, below. **NOTE: Install heater control valve in line with intake manifold (pressure side) heater hose, and secure using hose clamps as shown in Figure 1, below. Also note proper flow direction.**





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# Final Steps: Installation Check

| Installation Check                                    |   |
|---|---|
| ITEM TO CHECK   | Procedure   |
| <input type="checkbox"/> ECU                          | <p>If no blinking is observed after 1 minute of turning the ignition on, go to the next check.</p> <p>If repetitive blinking is observed, go to the <b>Advanced Diagnostics</b> Section to diagnose.</p>  |
| <input type="checkbox"/> Blower speed control         | <p>Set the blower speed control to <b>OFF</b>, <u>confirm that the blower is off</u>.</p> <p>Position the blower speed control to <b>LOW</b> then <b>MEDIUM</b> and then <b>HIGH</b>. <u>At each setting confirm that the blower speed increases</u>, do this by feeling for the amount of air coming from the unit and hearing the blower speed increase.</p>  |
| <input type="checkbox"/> Mode control                 | <p>Set the <b>MODE</b> control to the <b>DASH</b> position. <u>Confirm that air is being blown at the dash vents</u>.</p> <p>Set the <b>MODE</b> control to the <b>FLOOR</b> position. <u>Confirm that air is being blown at the floor vents</u>.</p> <p>Set the <b>MODE</b> control to the <b>DEFROST</b> position. <u>Confirm that all air is being blown from the defrost vents</u></p> <p><b>If heater lines are installed:</b></p> <p>Set the <b>MODE</b> control to the <b>DASH</b> position. Set the <b>TEMP</b> control to the <b>MAX HEAT</b> position. <u>Confirm that HOT air is coming from the dash vents</u>.</p> |
| <input type="checkbox"/> Temperature control          | <p><b>If system is charged:</b></p> <p>Set the <b>TEMP</b> control to the <b>MAX COOL</b> position. <u>Confirm that COLD air is coming from the dash vents</u>.</p> <p>Also <u>confirm that the compressor "clicks" on</u> when adjusting the <b>TEMP</b> control from the <b>MAX HEAT</b> position to the <b>MAX COOL</b> position.</p>  |
| <input type="checkbox"/> AC Indicator (if applicable) | <p>While the <b>MODE</b> control is set to the <b>DASH</b> position, and the <b>TEMP</b> control is set to the <b>MAX COOL/MIN HEAT</b> position, <u>confirm that the blue AC Indicator light is on</u>.</p>  |
| <input type="checkbox"/> Backlight (if applicable)    | <p>If your control panel has backlight capabilities and has been wired, turn the dash lamp on and <u>confirm that the AC panel's legend is lit</u>.</p>   |
| <input type="checkbox"/> Fittings                     | <p>Verify AC and Heater fittings are all tight.</p>   |



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## *Final Steps: Completing the Install*

1. Install the duct hoses as shown in Figure 1, Page 17. Stretch the duct hose tightly to the dash vents. Trim to ensure that the duct hose is tight, with as few kinks or sharp bends in the hose as possible. This will ensure maximum airflow.
2. Install the control panel. Refer to the control panel kit instructions.
3. Route the control panel harness assembly and connect it to the PC board assembly on the back side of the control panel.
4. Plug the wiring harness into the ECU module on the sub case as shown in Figure 1, Page 17. Wire according to the wiring diagram on Page 19.
5. Reinstall all previously removed items.
6. Fill the 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 the antifreeze recommendations will cause the heater core to corrode prematurely and possibly burst in A/C mode and/or freezing weather, voiding your warranty. **NOTE: Prior to charging the A/C system, run the engine and cycle the heater control valve to circulate the antifreeze through the heater core.**
7. Double check all fittings, brackets and belts for tightness.
8. Vintage Air recommends that all A/C systems be serviced by a certified automotive air conditioning technician.
9. Evacuate the system for a minimum of 45 minutes prior to charging, and leak check prior to servicing. Charge the system to the capacities stated on the information page, Page 4, of this instruction manual.





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# ECU, Control Panel & Duct Hose Routing

**NOTE:** For the system to function optimally, the duct hoses must be routed as directly as possible, taking care to avoid kinks, sharp bends and unnecessary length. Vintage Air supplies duct hoses in continuous lengths that will need to be cut to size depending on application. Before cutting, familiarize yourself with the installation instructions and verify the routing will work with your application. For custom hose routing, additional hose may be needed and can be purchased from Vintage Air.

1. Stretch the duct hose until there is no slack, measure, mark and cut hose to size (See Photo 1, below).

Stretch, measure, mark and cut hose to size



Photo 1

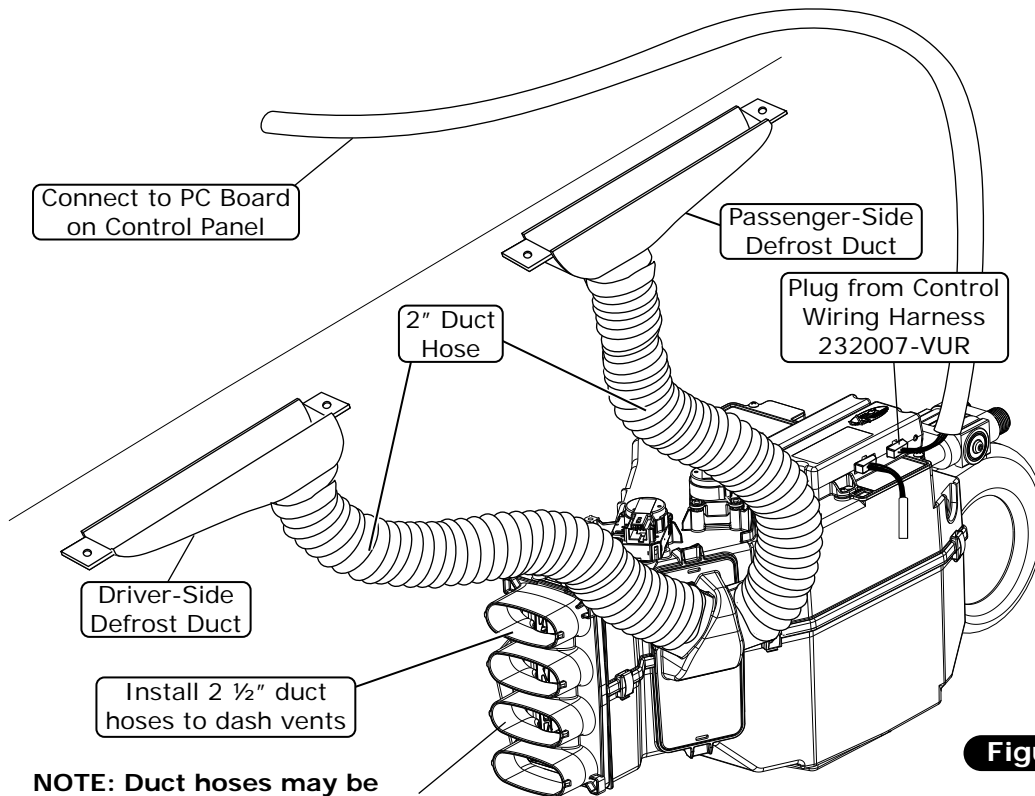


Figure 1

**NOTE:** Duct hoses may be installed in any sequence for the center, driver-side and passenger-side louvers.

(2) #8 x 1/2" pan head screws to relocate ECU if needed



**NOTE:** ECU must be placed away from water and humidity, and also be accessible for servicing. If relocating, connectors must be positioned towards the bottom.

Position connectors towards bottom



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# Quality Crimp Guideline

Refer to wiring diagram on Page 19, and instructions on Page 20.

Acceptable strip length  
(Some copper visible)

Crimped area is centered  
on each side of splice

Bad strip length  
(Too much copper visible)  
Visible copper should be  
just enough to ensure  
clearance between splice  
area and wire insulation

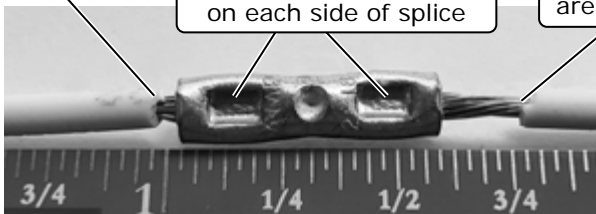


Photo 1

A good crimp requires  
seam of butt splice to be  
opposite of crimp die tooth

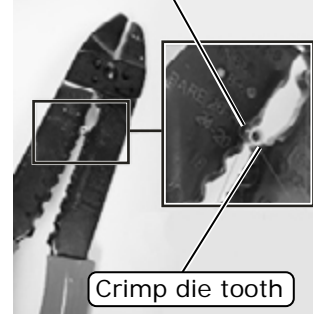
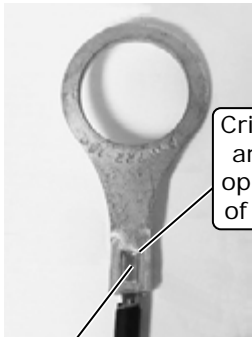


Photo 2

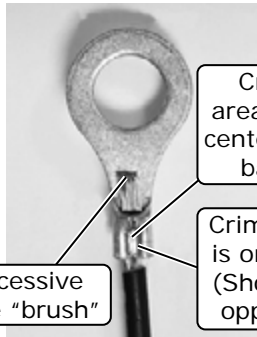
## Good Ring Terminal Crimp    Bad Ring Terminal Crimp



Crimped  
area is  
opposite  
of seam

Photo 3

Crimp  
area is  
centered  
on barrel



Crimp  
area is not  
centered on  
barrel

Excessive  
wire "brush"

Crimp  
area is on  
seam  
(Should be  
opposite)

Photo 4

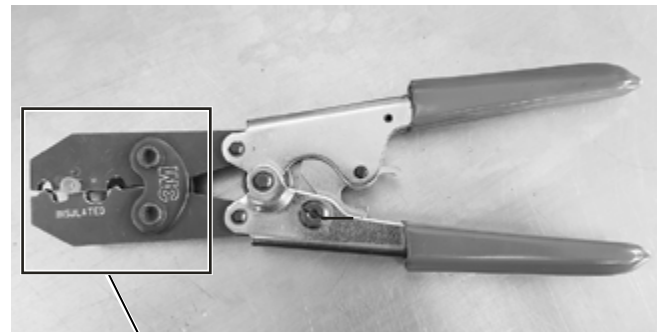


Photo 5



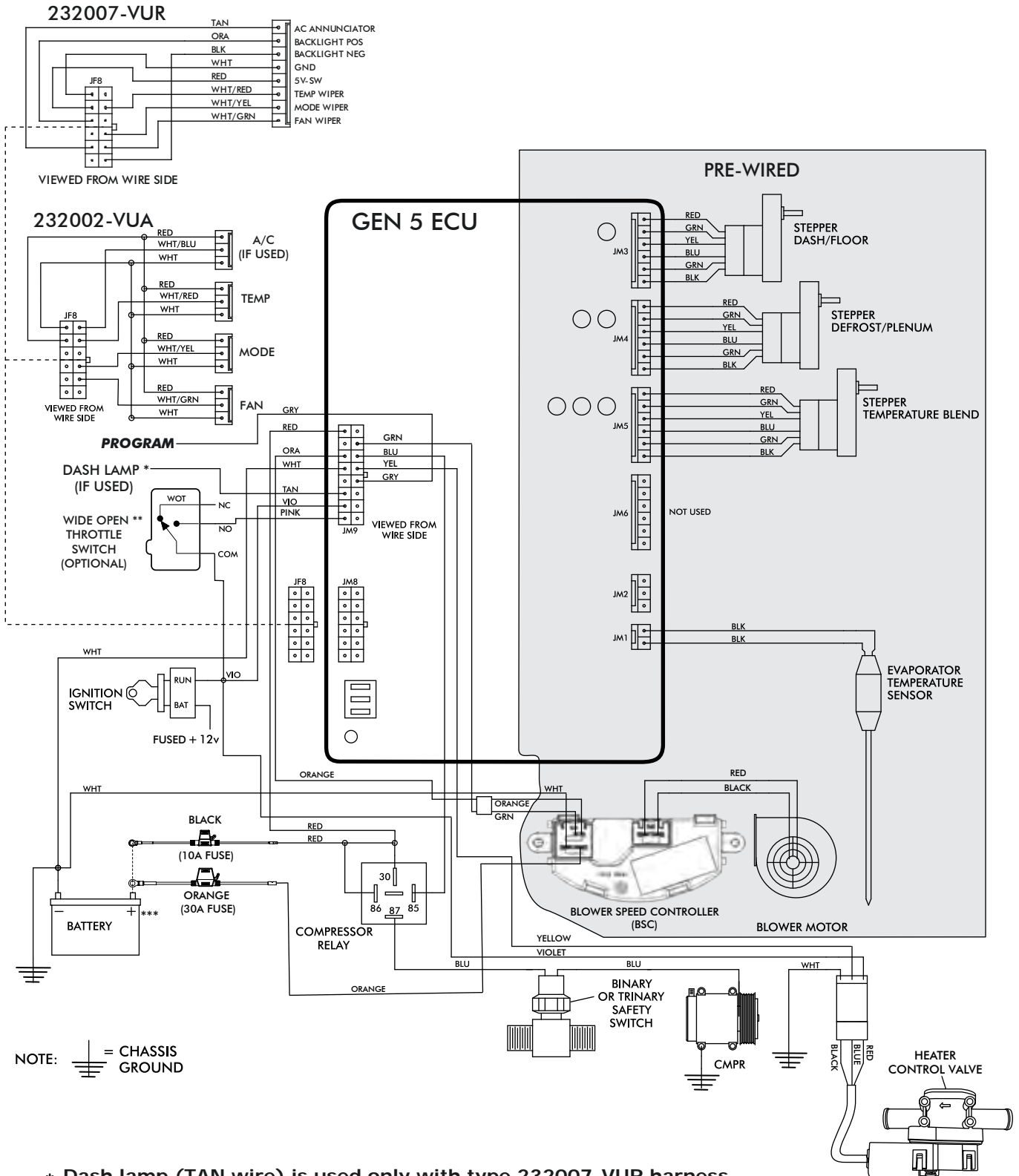
Photo 5a

Use a ratcheting crimp tool  
for insulated barrel terminals  
when crimping the provided  
female insulated terminal.  
Ensure terminal is inserted in  
appropriate position before  
crimping.



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# Gen 5 Wiring Diagram



NOTE: = CHASSIS GROUND

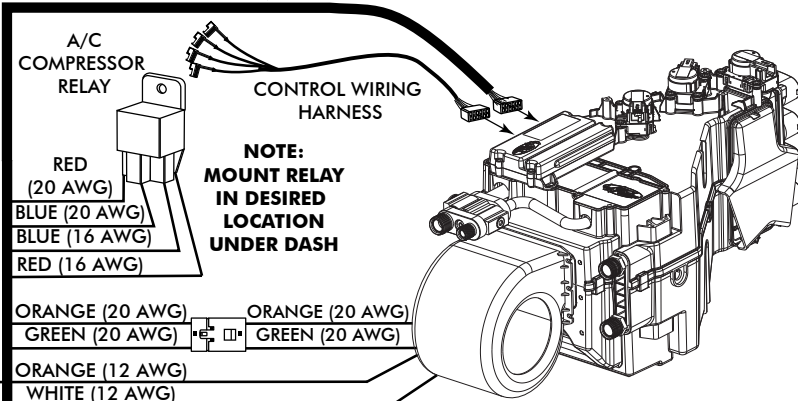
- \* Dash lamp (TAN wire) is used only with type 232007-VUR harness.
- \*\* Wide open throttle switch contacts close only at full throttle, which disables A/C compressor.
- \*\*\* Install fuse assemblies at or as near to the battery as possible.



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# Gen 5 Wiring Instructions

WIRING HARNESS (231505) ↓



**NOTE:**  
MOUNT RELAY  
IN DESIRED  
LOCATION  
UNDER DASH

### Ignition Switch:

Using provided butt splice (PN 226004), connect the 20 AWG violet wire to a 5A fused and switched 12V source such as Key On.

### Wide Open Throttle Switch (Optional):

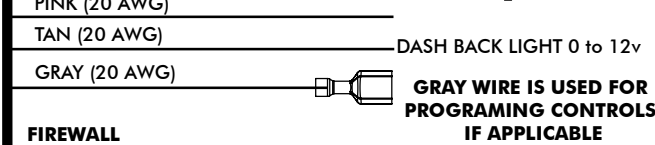
If a wide open throttle switch is required, connect the 20 AWG pink wire to a normally open switch that, when closed, connects a fused and switched 12V source to the pink wire. See Gen 5 wiring diagram for an example.



### Dash Light (Optional):

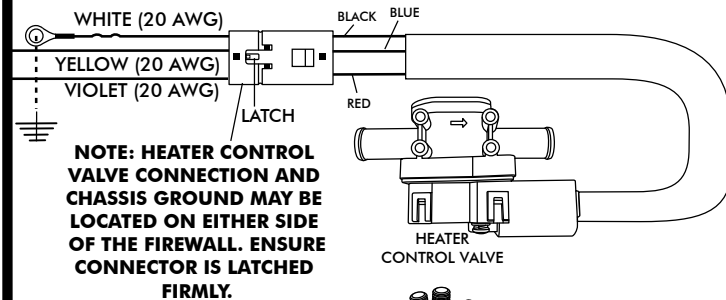
If using a Vintage Air control panel with back light, connect the 20 AWG tan wire to the vehicle's dash back light 0-12V using provided butt splice (PN 226004).

WIRING HARNESS (232020)



### Heater Control Valve:

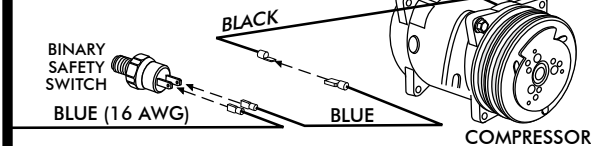
Connect the Violet/Yellow/White twisted branch with 3 position connector into the heater control valve connector. Ensure that the mating latch is fully seated.



**NOTE:** HEATER CONTROL VALVE CONNECTION AND CHASSIS GROUND MAY BE LOCATED ON EITHER SIDE OF THE FIREWALL. ENSURE CONNECTOR IS LATCHED FIRMLY.

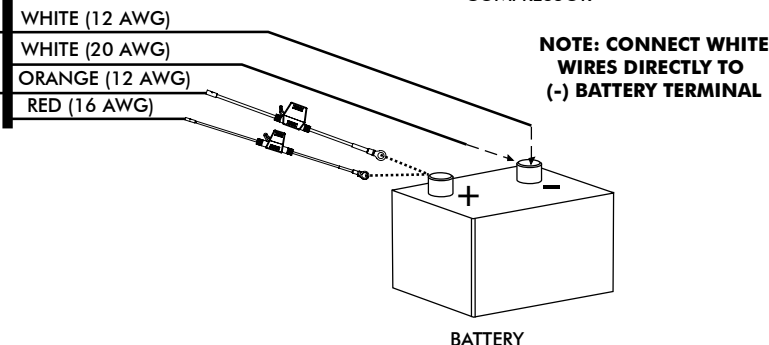
### Binary/Trinary & Compressor:

**Binary Switch:** Terminate provided insulated female terminal (PN 23172-VUW) to the blue 16 AWG wire. Connect as shown.  
**Trinary Switch:** Connect according to trinary switch wiring diagram.



### Battery Connections:

**ECU Ground:** Terminate provided ring terminal (PN 226110) to 20 AWG white wire from the 231505 wire assembly and install at battery.  
**ECU PWR:** Terminate provided fuse assembly with black leads (PN 233012) to the 20 AWG red wire from the 231505 wire assembly. Install provided 10A Red Mini Fuse (PN 226118). Install at battery.  
**Blower Speed Controller (BSC) Ground:** Terminate provided ring terminal (PN 226111) to 12 AWG white wire from the 232020 wire assembly and install at battery.  
**Blower Speed Controller (BSC) PWR:** Terminate provided fuse assembly with orange leads (PN 233008) to the 12 AWG orange wire from the 232020 wire assembly. Install provided 30A Green ATO/ATC Fuse (PN 226125). Install at battery.



WIRING HARNESS (232020)



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## Operation of Controls

On 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.

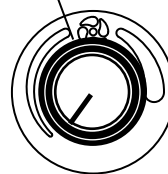
### Mode Control

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

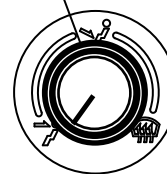
### Temperature Control

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

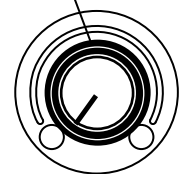
Blower Speed



Mode Control



Temperature Control



## 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

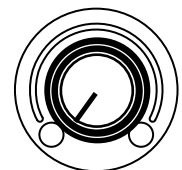
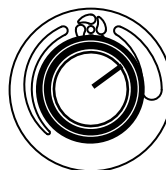
Adjust to desired speed.

### 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

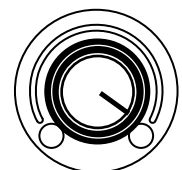
Adjust to desired speed.

### 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

This printed troubleshooting guide is our basic guide that covers common installation problems. To see our advanced diagnostics and troubleshooting guide, please see Page 23, for instructions on how to download the complete guide.

**WARNING: While troubleshooting the system, never probe connector terminals from the front mating side, only back probe.**  
**WARNING: While troubleshooting the system, never use automotive check lights.**

| Symptom   | Condition   | Checks   | Actions  | Notes  |
|---|---|--|--|--|
| 1. Blower stays on high speed with ignition on.             | No other functions work.  | Check for damaged pins or wires in the control panel wire assembly and mating header at ECU.<br>Check for a bad ECU GND. | If found damaged, replace wire assembly or ECU.  | If fuse continues to blow, there is a serious problem in the wiring. Check all wiring and ensure the wire is not damaged and shorting out along its route.   |
|   | All other functions work.   | Check for damaged pins or wires in the control panel wire assembly and mating header at ECU.                             | If found damaged, replace wire assembly or ECU.  |  |
|   |   | Check if Blower power fuse is blown.   | Replace fuse.  |  |
|   |   | Check for a bad ECU GND.   | Repair connection.   |  |
|   |   | 2. Compressor will not turn on (All other functions work).   | System is not charged.   |  |
| 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.<br>Check for 5V on red control head wire. | To check for proper pot function, check voltage at white/red 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). | System is charged.  | 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/Red wire should vary between 0V and 5V when lever is moved up or down. |
|   |   | Check for faulty A/C relay.  | Replace relay.   |  |





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# 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 | 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.<br>Verify battery voltage is greater than 10 volts and less than 16 while engine is running. | Check for power at ECU, and confirm ignition is being applied to ECU properly.<br>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.  |   |  |
|   | Blower turns on and off rapidly.                                   | Battery voltage is at least 12V.<br>Battery voltage is less than 12V.  | Ensure all system grounds and power connections are clean and tight.<br>Charge battery.   | System shuts off blower at 10V. Poor connections or weak battery can cause shutdown at up to 11V.  |
| 7. Erratic functions of blower, mode, temp, etc.    |  | Check for damaged switch or pot and associated wiring.   | Repair or replace.  |  |

## Advanced Diagnostics and Troubleshooting Guide

If after referencing the Troubleshooting Guide, the issue is not resolved, move to The Advanced Diagnostics and Troubleshooting Guide that covers the following:

- **ECU Diagnostics Codes**
  1. ECU Blink Sequence
  2. Firmware Version Number
  3. ECU Model Number
  4. ECU Start-Up Blink Sequence
  5. Diagnostic Codes
- **Complete Advanced Troubleshooting Guidelines**

Access the latest version of the Advanced Diagnostics and Troubleshooting Guide by scanning the following QR code on your mobile device:



You can also access the guide by typing the following address into your web browser:

[https://www.vintageair.com/instructions\\_pdf/905000.pdf](https://www.vintageair.com/instructions_pdf/905000.pdf)



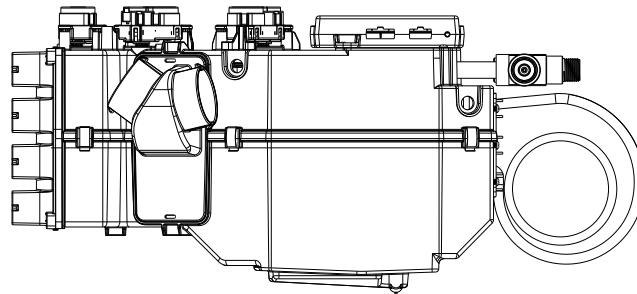
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## Packing List: Evaporator Kit (675100)

| No. | Qty. | Part No. | Description             |
|-----|------|----------|-------------------------|
| 1.  | 1    | 765100   | Gen 5 Evaporator Module |
| 2.  | 1    | 775100   | Accessory Kit           |

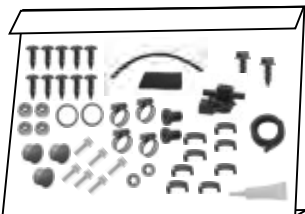
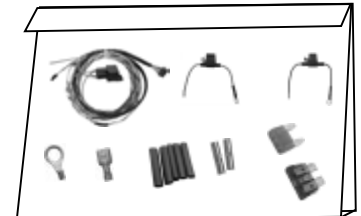
Checked By: \_\_\_\_\_  
Packed By: \_\_\_\_\_  
Date: \_\_\_\_\_

1



Gen 5 Evaporator  
Module  
765100

2



Accessory Kit  
775100

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