

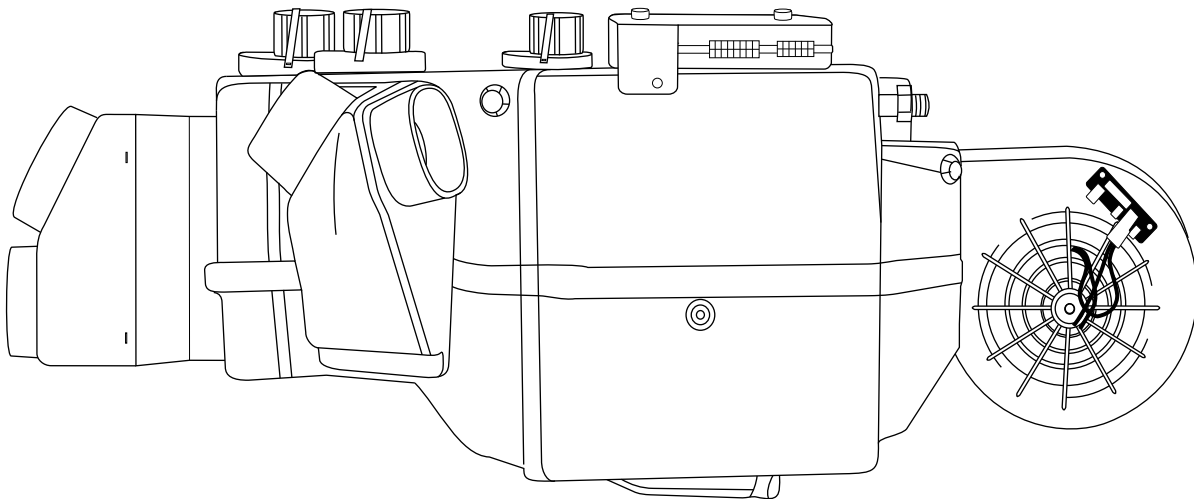


an ISO 9001:2008 Registered Company

# GEN IV MAGNUM

HEAT/COOL/DEFROST EVAPORATOR KIT

671400-VUZ





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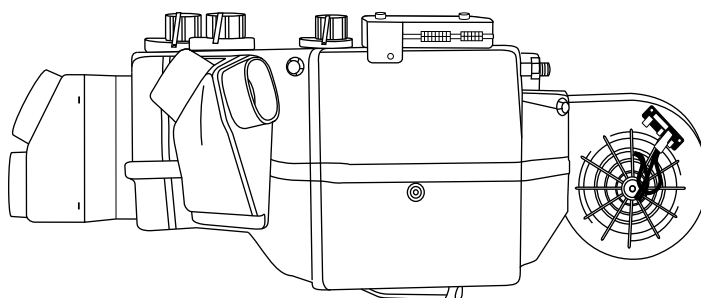
## EVAPORATOR KIT PACKING LIST

## EVAPORATOR KIT 671400-VUZ

No.	QTY.	PART No.	DESCRIPTION
1.	1	744004-VUE	GEN IV MAGNUM EVAP. SUB CASE
2.	1	784004-VUA	GEN IV MAGNUM ACC. KIT

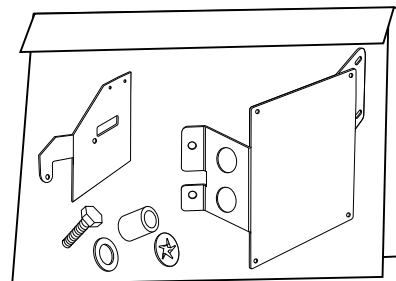
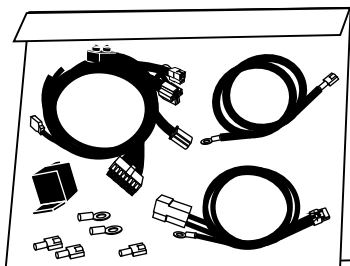
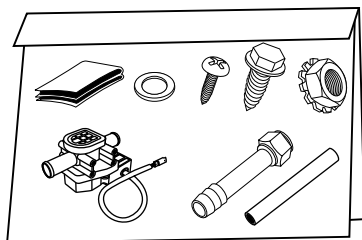
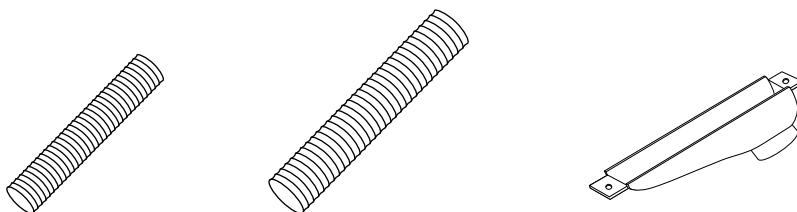
**\*\* BEFORE BEGINNING INSTALLATION, OPEN ALL PACKAGES AND CHECK CONTENTS OF SHIPMENT. PLEASE REPORT ANY SHORTAGES DIRECTLY TO VINTAGE AIR WITHIN 15 DAYS. AFTER 15 DAYS, VINTAGE AIR WILL NOT BE RESPONSIBLE FOR MISSING OR DAMAGED ITEMS.**

①



**GEN IV MAGNUM  
EVAP. SUB CASE  
744004-VUE**

②



**ACCESSORY KIT  
784004-VUA**

**NOTE: IMAGES MAY NOT DEPICT ACTUAL PARTS AND QUANTITIES.  
REFER TO PACKING LIST FOR ACTUAL PARTS AND QUANTITIES.**



## Important Notice—Please Read

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

### **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.

### **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.

### **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:**

**Attention:** The following system components are capped: Compressor, evaporator, condenser & drier. Caps may be under pressure with dry nitrogen. Be careful removing caps. Do not remove caps prior to installation. Removing caps prior to installation will cause components to collect moisture and lead to premature failure and reduced performance.

Evacuate the system for 35-45 minutes with system components (Drier, compressor, evaporator and condenser) 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.

***Vintage Air Systems Are Designed to Operate With R134a Refrigerant Only! Use of Any Other Refrigerants Is a Fire Hazard and Could Damage Either Your Air Conditioning System or Your Vehicle.***

***Use of Any Other Refrigerants Will Void All Warranties of the Air Conditioning System and Components. Use of the Proper Type and Amount of Refrigerant Is Critical to Proper System Operation. Vintage Air Recommends Our Systems Be Charged By Weight With a Quality Charging Station or Scale.***

### **Refrigerant Capacity for Vintage Air Systems:**

*(For other systems, consult manufacturer's guidelines)*

#### **R134a System**

Charge with 1.8 lbs. (1 lb., 12 oz.) of refrigerant.

### **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).



## 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.



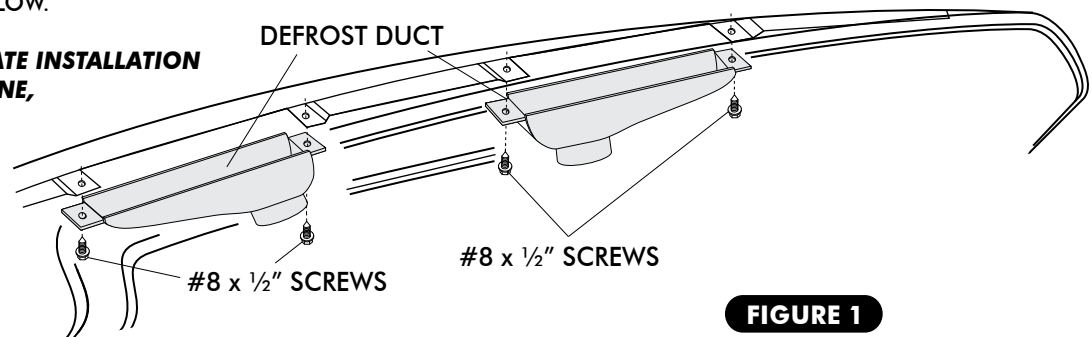
## PLANNING OVERVIEW

- ☐ EVERY VEHICLE IS A LITTLE 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 UNIT 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, AND GROMMETS, ETC.) WILL ALSO INFLUENCE THE LOCATION OF THE EVAPORATOR UNIT. WHEN PLANNING YOUR HOSE ROUTING, YOU MUST INSTALL THE MAJOR COMPONENT PARTS. 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 IV MAGNUM UNIT WAS DESIGNED FOR CLASSIC CARS, CUSTOM CARS, AND TRUCKS. THE EVAPORATOR UNIT IS DESIGNED TO MOUNT BEHIND THE DASH.
- ☐ READ THE INSTALLATION INSTRUCTIONS COMPLETELY, AND FAMILIARIZE YOURSELF WITH ALL THE PARTS AND ILLUSTRATIONS.
- ☐ THE INSTALLATION OF THIS UNIT VARIES ACCORDING TO THE BODY MANUFACTURER OR MODIFICATIONS TO THE ORIGINAL BODY. TAKE YOUR TIME, AND DOUBLE CHECK BEFORE DRILLING OR CUTTING.
- ☐ REMOVE OEM HEATER, DEFROST DUCTS, CONTROLS, BLOWER ASSEMBLY, A/C EVAPORATOR & CONDENSER IF EQUIPPED.
- ☐ BEFORE BEGINNING, REMOVE GLOVE BOX TO EASE INSTALLATION. IF THE DASH IS EASILY REMOVABLE, REMOVE IT NOW. CHECK FOR, AND FILL IN ANY HOLES IN THE FIREWALL AND FLOOR. INSULATE AND SEAL FIREWALL, FLOOR, DOOR PANELS, AND HEADLINER TO REDUCE THE AMOUNT OF HEAT ENTERING THE CAR.

### DEFROST DUCT INSTALLATION

- ☐ ALIGN DEFROST DUCT WITH OPENING IN DASH, IF APPLICABLE. USE OEM MOUNTING HOLE LOCATIONS OR MARK AND DRILL 1/8" MOUNTING HOLES. USE (4) #8 x 1/2" SCREWS TO SECURE THE NEW DEFROST DUCTS AS SHOWN IN FIGURE 1, BELOW.

**NOTE: FOR AN ALTERNATE INSTALLATION METHOD, APPLY SILICONE, EPOXY, ETC., TO DEFROST DUCTS AND ALIGN WITH OPENINGS IN DASH.**



**FIGURE 1**



## CONDENSER ASSEMBLY & INSTALLATION

- REFER TO SEPARATE INSTRUCTIONS INCLUDED WITH CONDENSER KIT.

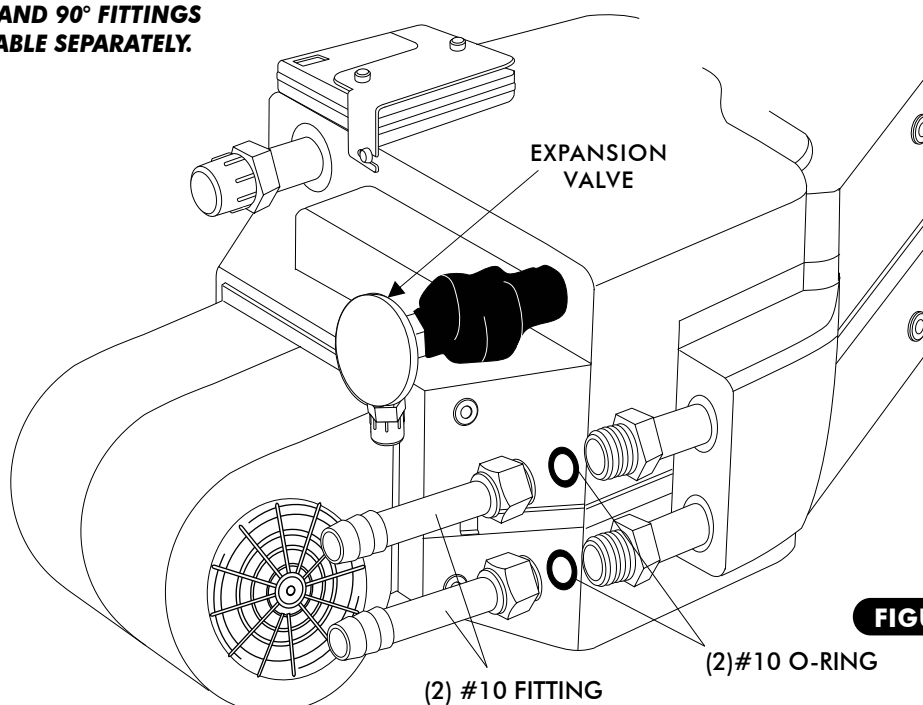
## COMPRESSOR & BRACKETS

- REFER TO SEPARATE INSTRUCTIONS INCLUDED WITH BRACKET KIT.

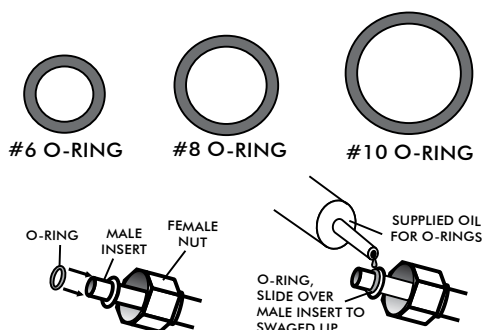
## HEATER FITTING INSTALLATION

- ON A WORKBENCH, INSTALL HEATER FITTINGS WITH PROPERLY LUBRICATED O-RINGS (SEE FIGURES 2 & 2a, BELOW).

**NOTE: 45° AND 90° FITTINGS ARE AVAILABLE SEPARATELY.**

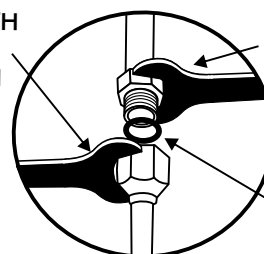


**FIGURE 2**



FOR A PROPER SEAL OF FITTINGS:  
INSTALL SUPPLIED O-RINGS AS SHOWN,  
AND LUBRICATE WITH SUPPLIED OIL.

TWIST WITH  
THIS  
WRENCH



HOLD WITH  
THIS WRENCH

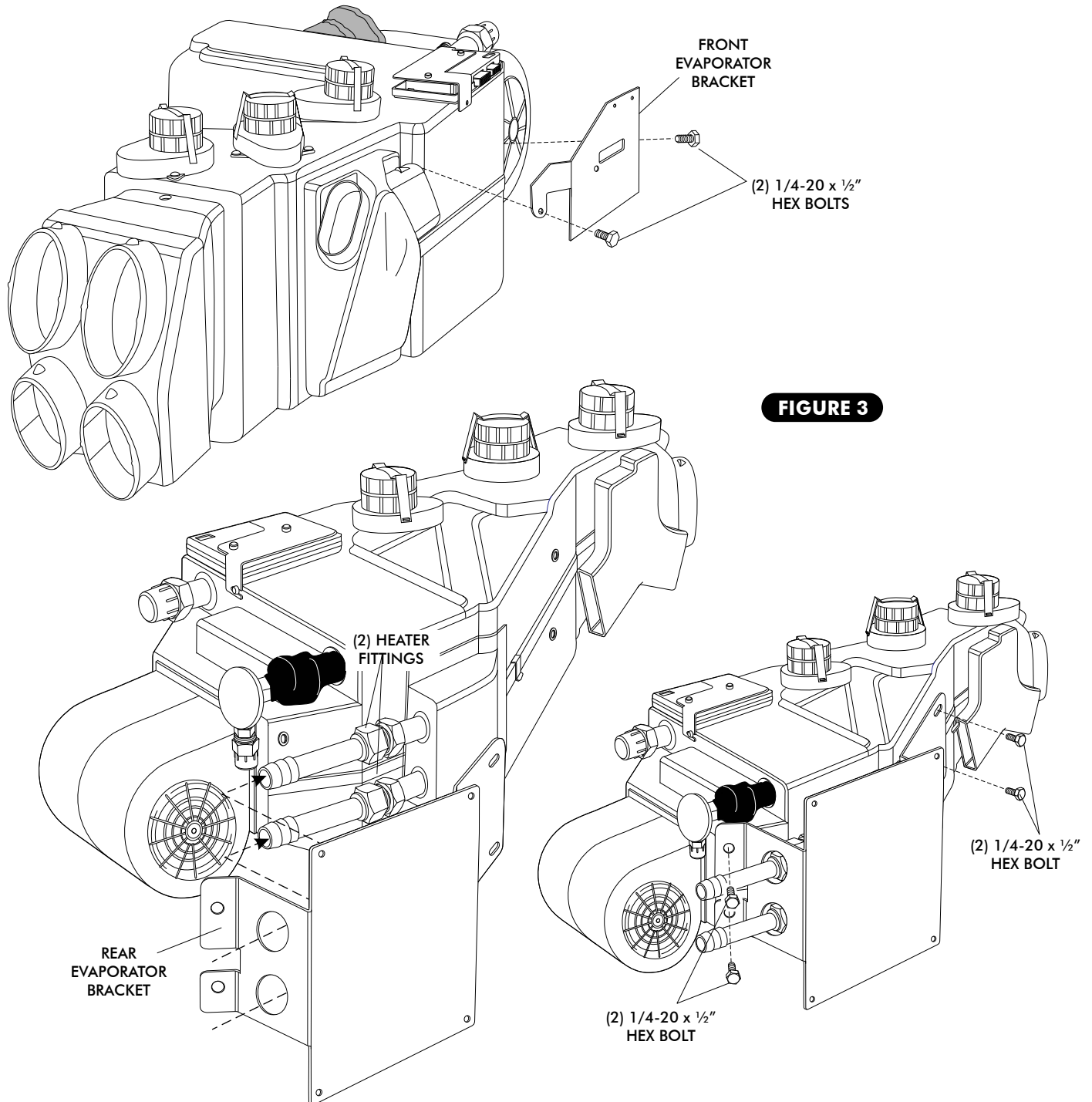
LUBRICATE  
O-RING

**FIGURE 2a**



## BRACKET INSTALLATION

- ON A WORKBENCH, INSTALL THE FRONT & REAR EVAPORATOR MOUNTING BRACKETS USING (6) 1/4-20 x 1/2" HEX BOLTS. SEE FIGURE 3, BELOW. **NOTE: PASS HEATER FITTINGS THROUGH THE (2) HOLE OPENINGS IN BRACKET AS SHOWN.**



**FIGURE 3**





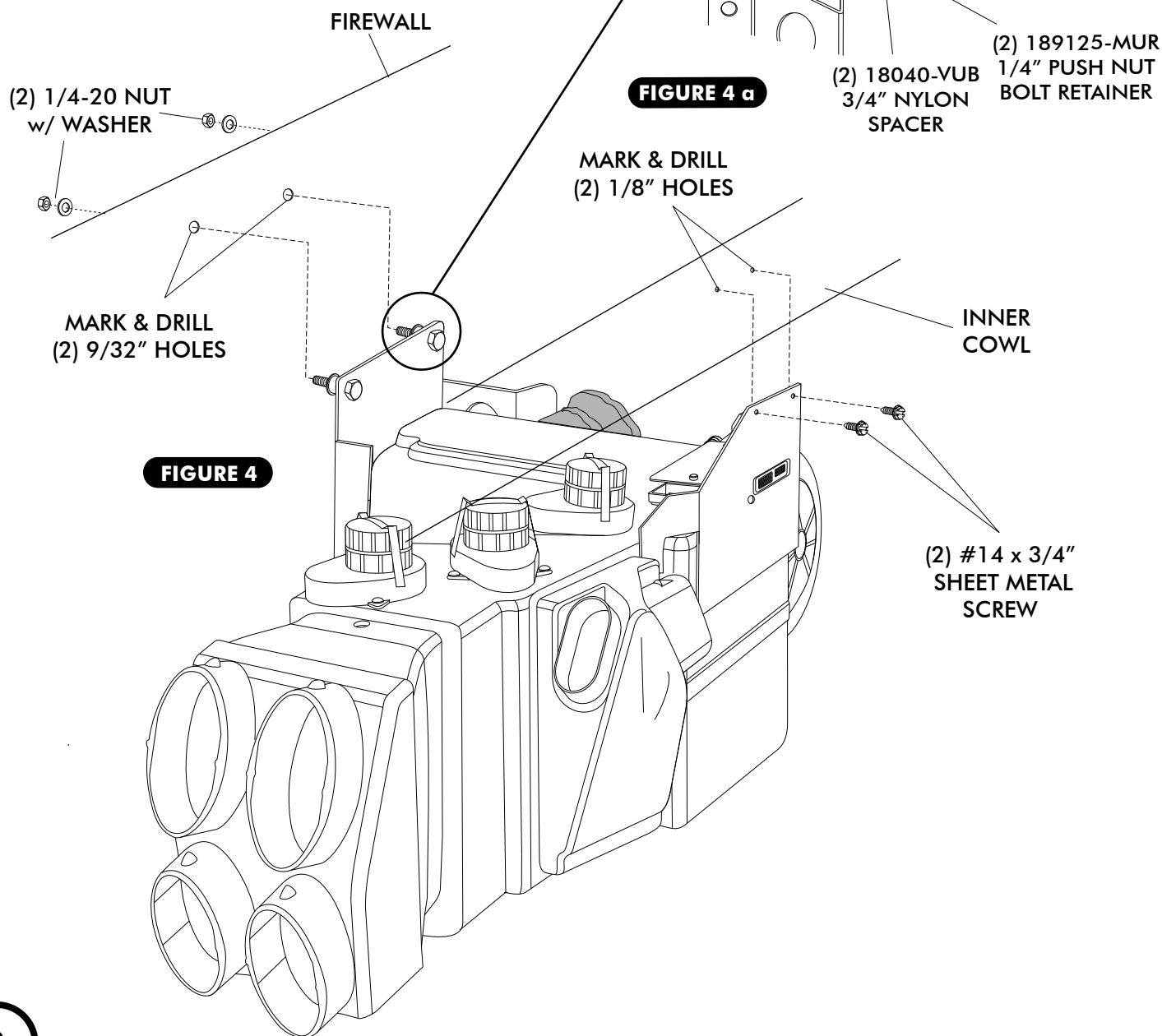
**NOTE: TYPICAL INSTALLATION SHOWN BELOW. IT MAY BE NECESSARY TO MODIFY BRACKETS OR ADD ADDITIONAL BRACKETS FOR YOUR SPECIFIC INSTALLATION.**

## EVAPORATOR INSTALLATION

- LIFT EVAPORATOR UNIT UP UNDER THE DASHBOARD INTO DESIRED POSITION, AND VERIFY THAT EVAPORATOR UNIT IS LEVEL AND SQUARE TO THE DASH. ONCE IN PLACE, USING THE HOLES IN MOUNTING BRACKETS AS TEMPLATES, MARK MOUNTING HOLE LOCATIONS ON INNER COWL AND FIREWALL.

**NOTE: DEPENDING ON YOUR INSTALLATION, USE ANY COMBINATION OF HOLES IN THE REAR MOUNTING BRACKET TO SECURE EVAPORATOR TO FIREWALL (THE TOP TWO HOLES ARE USED IN FIGURE 4, BELOW)**

- INSTALL MOUNTING HARDWARE IN REAR BRACKET AS SHOWN IN FIGURE 4a.



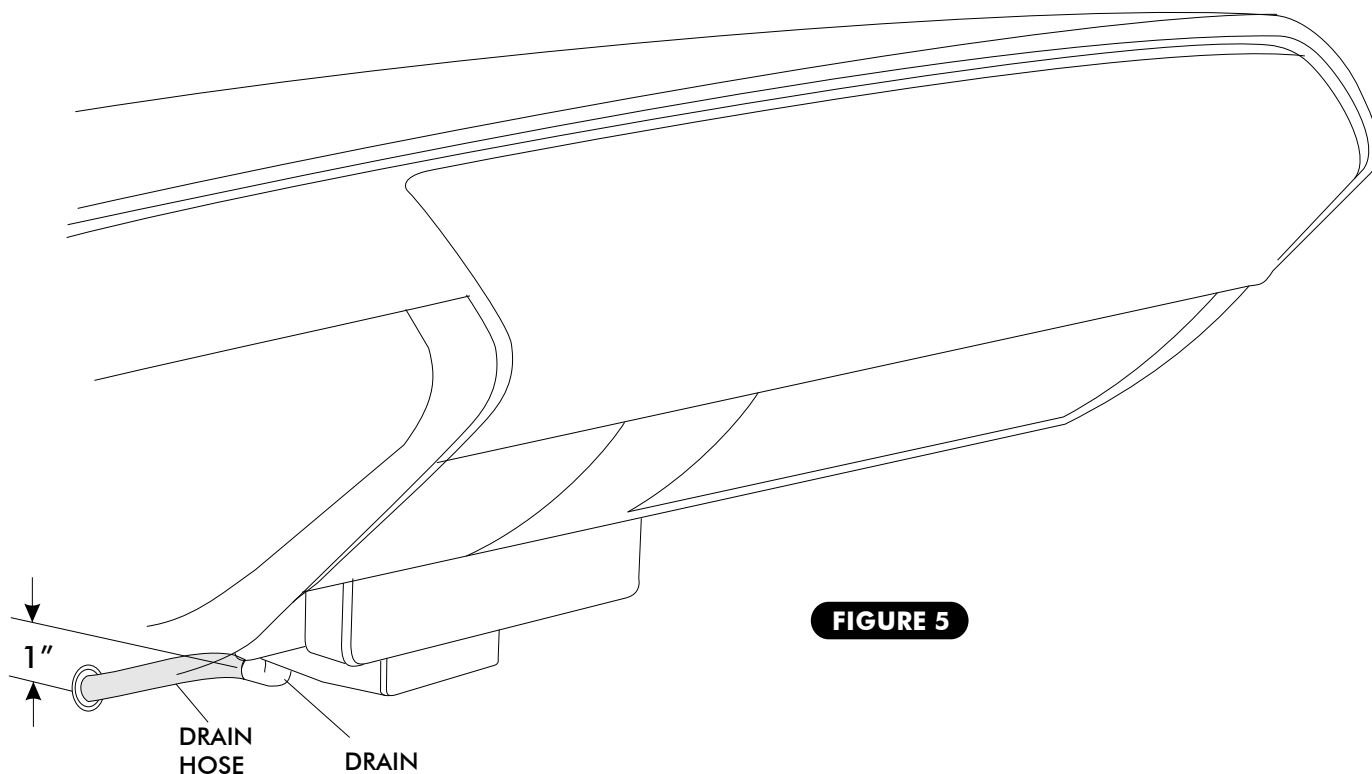


## EVAPORATOR INSTALLATION

- ☐ ONCE BRACKETS ARE INSTALLED, LIFT EVAPORATOR UNIT UP UNDER THE DASHBOARD INTO DESIRED POSITION AND LOOSELY SECURE TO FIREWALL FROM THE ENGINE COMPARTMENT SIDE USING (2) 1/4-20 NUTS WITH WASHERS. SEE FIGURE 4, PAGE 8.
- ☐ USING (2) #14 x 3/4" SHEET METAL SCREWS, SECURE THE FRONT EVAPORATOR MOUNTING BRACKET TO INNER COWL. SEE FIGURE 4, PAGE 8. **NOTE: DO NOT COMPLETELY TIGHTEN SCREWS.**
- ☐ VERIFY THAT THE EVAPORATOR UNIT IS LEVEL AND SQUARE TO THE DASH. THEN TIGHTEN ALL MOUNTING LOCATIONS. **NOTE: TIGHTEN THE BOLTS ON THE FIREWALL FIRST. THEN TIGHTEN THE FRONT MOUNTING BRACKET SCREWS.**

## DRAIN HOSE INSTALLATION

- ☐ IN LINE WITH THE DRAIN, LIGHTLY MAKE A MARK ON THE FIREWALL. MEASURE ONE INCH DOWN, AND MARK AND DRILL A 5/8" HOLE THOUGH FIREWALL. SEE FIGURE 5, BELOW.
- ☐ INSTALL DRAIN HOSE ON DRAIN AND ROUTE THROUGH THE FIREWALL. **NOTE: FROM THE ENGINE COMPARTMENT SIDE OF THE FIREWALL, CUT DRAIN HOSE TO DESIRED LENGTH.**



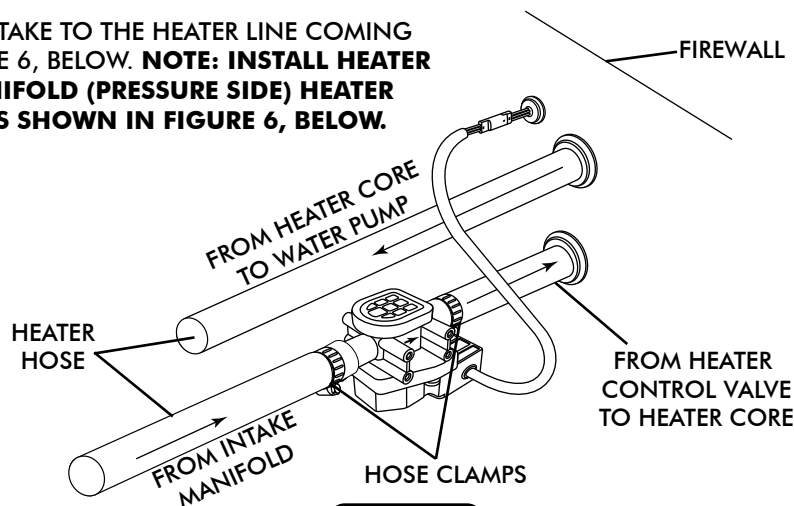
## A/C HOSE INSTALLATION

- ☐ REFER TO SEPARATE INSTRUCTIONS INCLUDED WITH HOSE KIT.



## HEATER HOSE & HEATER CONTROL VALVE INSTALLATION

- ☐ ROUTE A PIECE OF HEATER HOSE FROM THE WATER PUMP TO THE HEATER LINE COMING THROUGH THE FIREWALL AS SHOWN IN FIGURE 6, BELOW. SECURE USING HOSE CLAMPS. **NOTE: WATER PUMP SIDE OF SYSTEM IS LOW PRESSURE (SUCTION) SIDE.**
- ☐ ROUTE A PIECE OF HEATER HOSE FROM THE INTAKE TO THE HEATER LINE COMING THROUGH THE FIREWALL AS SHOWN IN FIGURE 6, BELOW. **NOTE: INSTALL HEATER CONTROL VALVE IN LINE WITH INTAKE MANIFOLD (PRESSURE SIDE) HEATER HOSE, AND SECURE USING HOSE CLAMPS AS SHOWN IN FIGURE 6, BELOW. ALSO NOTE PROPER FLOW DIRECTION.**



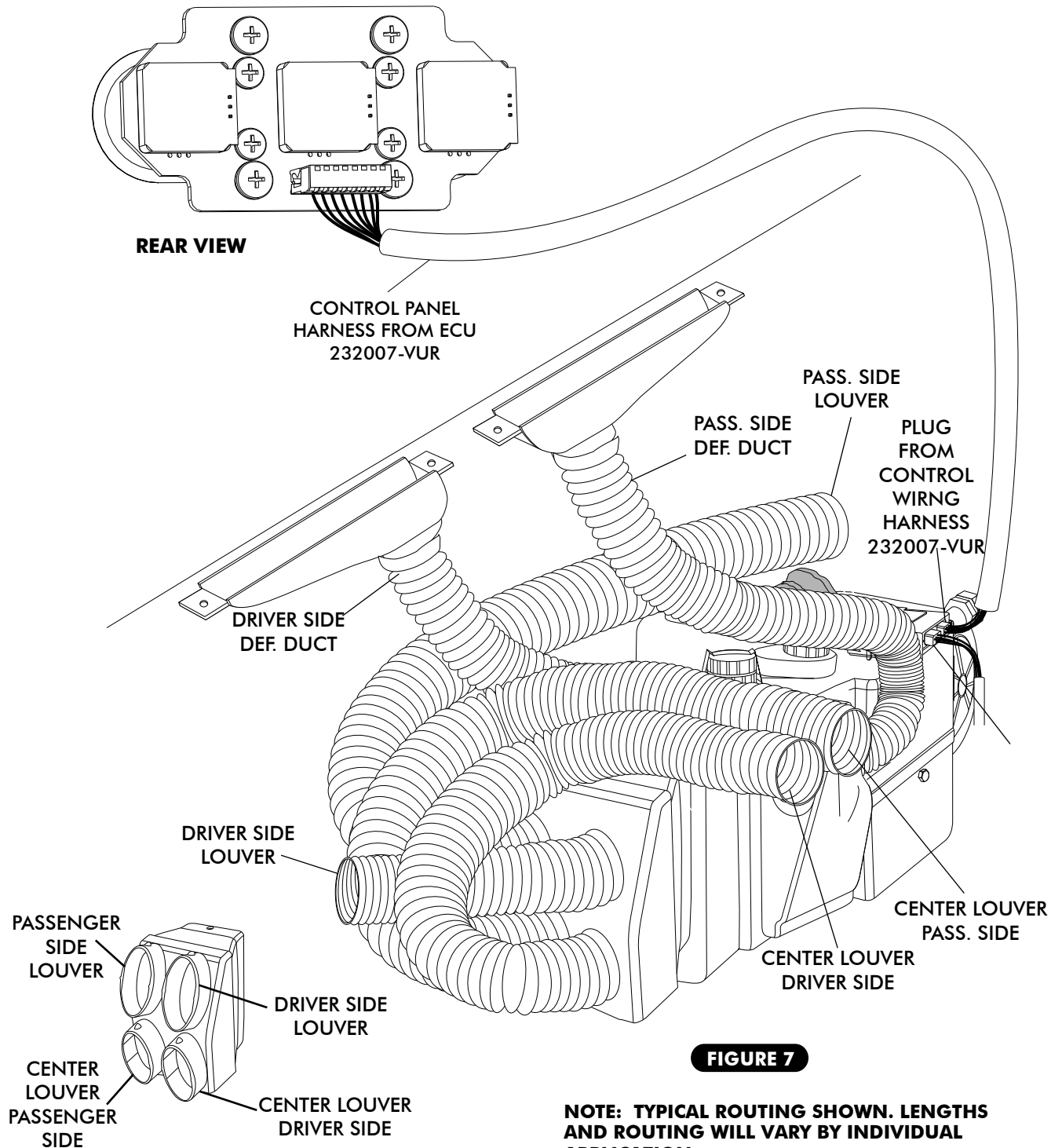
**FIGURE 6**

## FINAL STEPS - DUCT HOSE ROUTING & CONTROL PANEL HARNESS

- ☐ INSTALL DUCT HOSES AS SHOWN IN FIGURE 7, PAGE 11. 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 HOSE AS POSSIBLE. THIS WILL ENSURE MAXIMUM AIRFLOW.
- ☐ INSTALL CONTROL PANEL. REFER TO CONTROL PANEL KIT INSTRUCTIONS.
- ☐ ROUTE THE CONTROL PANEL HARNESS ASSEMBLY AND CONNECT TO THE PC BOARD ASSEMBLY ON THE BACK SIDE OF THE CONTROL PANEL AS SHOWN IN FIGURE 7, PAGE 11.
- ☐ PLUG THE WIRING HARNESS INTO THE ECU MODULE ON SUB CASE AS SHOWN. (WIRE ACCORDING TO WIRING DIAGRAM ON PAGE 12.)
- ☐ REINSTALL ALL PREVIOUSLY REMOVED ITEMS
- ☐ 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 AC MODE AND/OR FREEZING WEATHER, VOIDING YOUR WARRANTY. **NOTE: PRIOR TO CHARGING A/C SYSTEM, RUN ENGINE AND CYCLE HEATER CONTROL VALVE TO CIRCULATE ANTIFREEZE THROUGH HEATER CORE.**
- ☐ DOUBLE CHECK ALL FITTINGS, BRACKETS AND BELTS FOR TIGHTNESS.
- ☐ VINTAGE AIR RECOMMENDS THAT ALL A/C SYSTEMS BE SERVICED BY A CERTIFIED AUTOMOTIVE AIR CONDITIONING TECHNICIAN.
- ☐ 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.



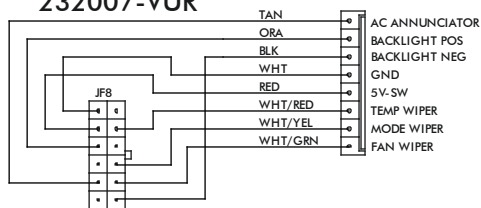
## CONTROL PANEL & DUCT HOSE ROUTING





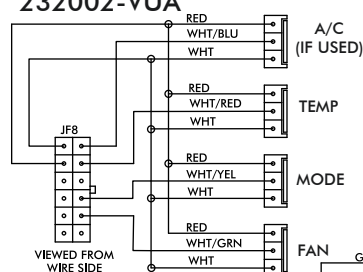
## Wiring Diagram

### 232007-VUR



VIEWED FROM WIRE SIDE

### 232002-VUA

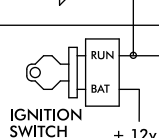


VIEWED FROM WIRE SIDE

### PROGRAM

N/A  
\* DASH LAMP  
(IF USED)

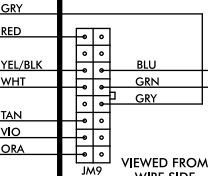
\*\*\* WIDE OPEN  
THROTTLE  
SWITCH  
(OPTIONAL)



IGNITION SWITCH

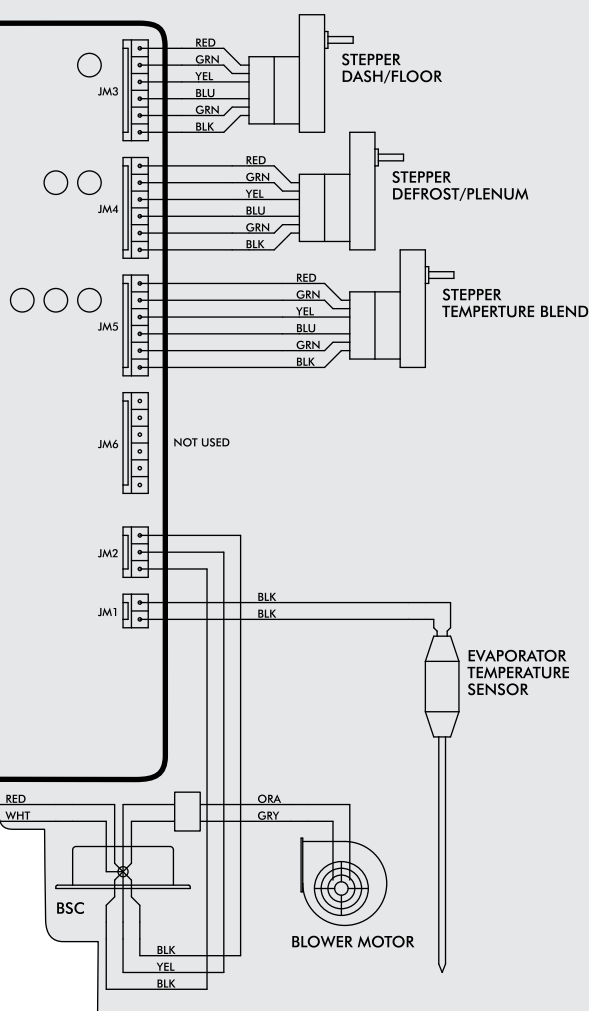
### GEN IV ECU

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



VIEWED FROM WIRE SIDE

### PRE-WIRED



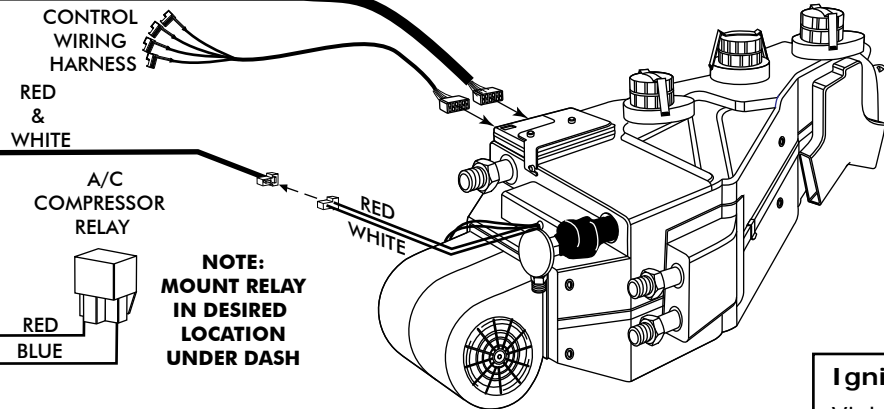
NOTE: = CHASSIS GROUND

- 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.



## Gen IV Wiring Connection Instruction

WIRING  
HARNESS



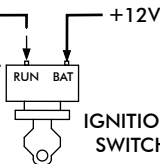
**NOTE:**  
MOUNT RELAY  
IN DESIRED  
LOCATION  
UNDER DASH

VIOLET

WIRING  
HARNESS  
YELLOW  
ORANGE  
TAN  
GRAY

**NOTE:**  
YELLOW & ORANGE  
COMING FROM  
HARNESS ARE NOT  
USED.

(IGNITION HOT  
TERMINAL)



IGNITION  
SWITCH

DASH BACK LIGHT+0-12v

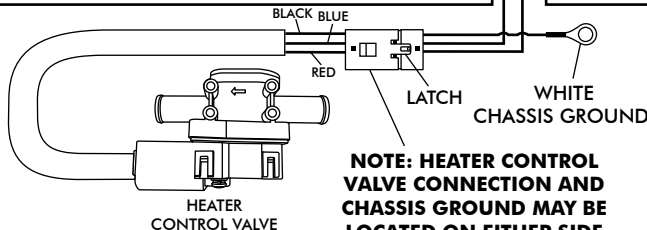
**GRAY WIRE IS USED FOR  
PROGRAMING CONTROLS  
IF APPLICABLE**

RED  
GREEN

RED  
GREEN

FIREWALL

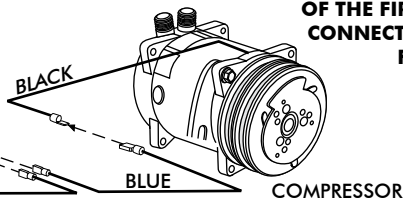
WIRING  
HARNESS



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

BINARY  
SAFETY  
SWITCH

BLUE  
WHITE

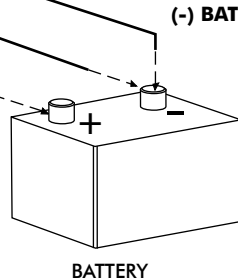


COMPRESSOR

**NOTE: CONNECT WHITE  
WIRES DIRECTLY TO  
(-) BATTERY TERMINAL**

CIRCUIT BREAKER  
30 AMP

**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).



BATTERY

### 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.



## 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.

### **Blower Speed**

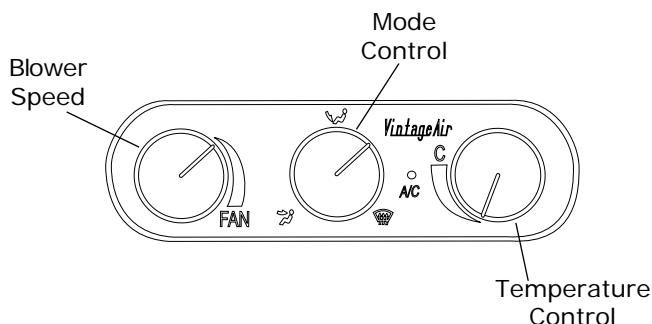
This lever/knob controls blower speed, from OFF to HI.

### **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**

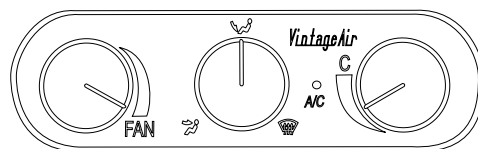
Adjust to desired speed.

### **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**

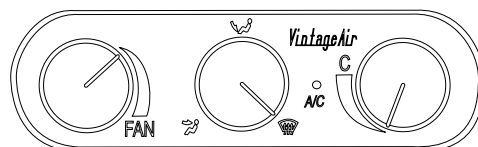
Adjust to desired speed.

### **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).





# 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.	<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.
	System is charged.	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.	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 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.	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.	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.
	Blower turns on and off rapidly.	Battery voltage is less than 12V.	Check for faulty battery or alternator.	
7.	Erratic functions of blower, mode, temp, etc.	Check for damaged switch or pot and associated wiring.	Charge battery.	
			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.	



## EVAPORATOR KIT PACKING LIST

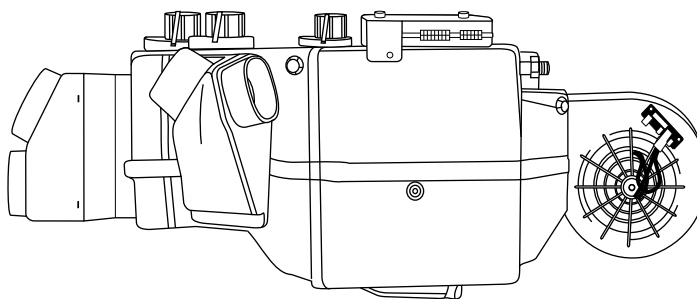
## EVAPORATOR KIT 671400-VUZ

No.	QTY.	PART No.	DESCRIPTION
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2.	1	784004-VUA	GEN IV MAGNUM ACC. KIT

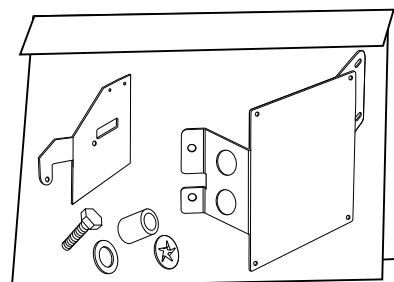
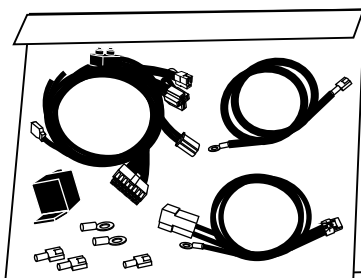
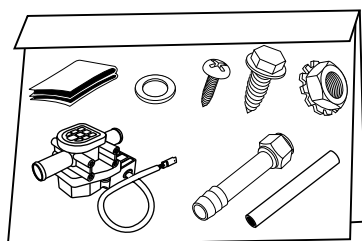
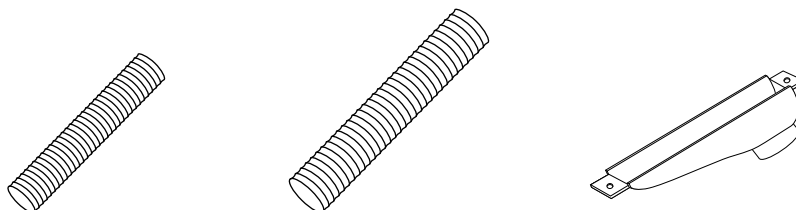
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PACKED BY: \_\_\_\_\_  
DATE: \_\_\_\_\_

①

**GEN IV MAGNUM  
EVAP. SUB CASE  
744004-VUE**



②



**ACCESSORY KIT  
784004-VUA**

**NOTE: IMAGES MAY NOT DEPICT ACTUAL PARTS AND QUANTITIES.  
REFER TO PACKING LIST FOR ACTUAL PARTS AND QUANTITIES.**