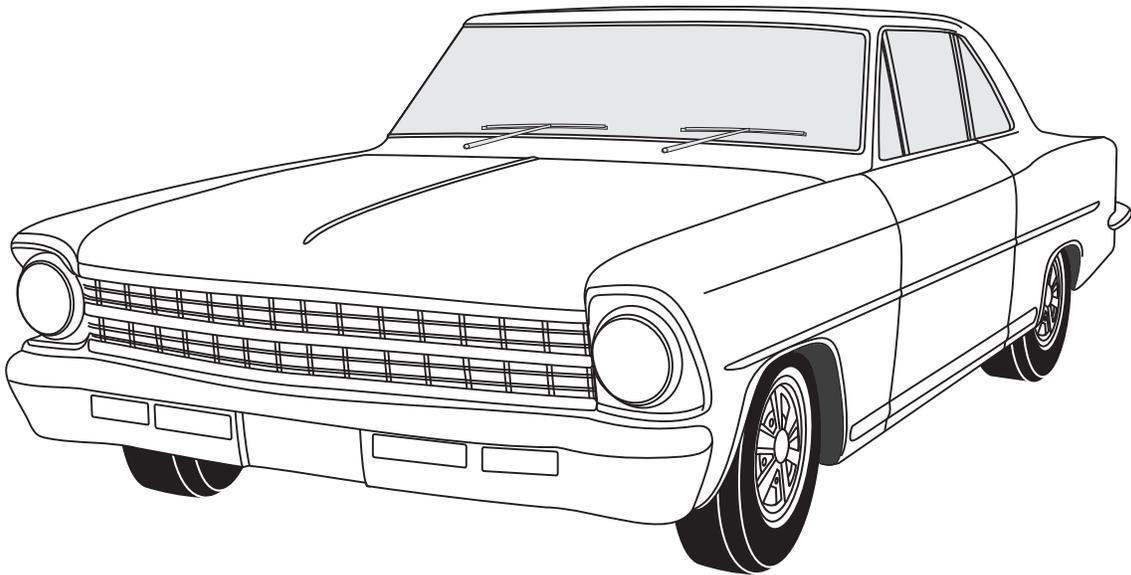




an ISO 9001: 2008 Registered Company

# 1966-67 NOVA

WITH & WITHOUT A/C  
561166





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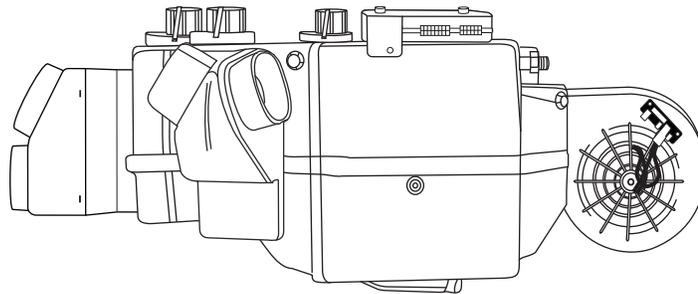
# EVAPORATOR KIT PACKING LIST

EVAPORATOR KIT  
561166

No.	QTY.	PART No.	DESCRIPTION
1.	1	744004-VUE	GEN IV 4-VENT EVAP. SUB CASE
2.	1	784066	1966-67 NOVA ACCESSORY KIT

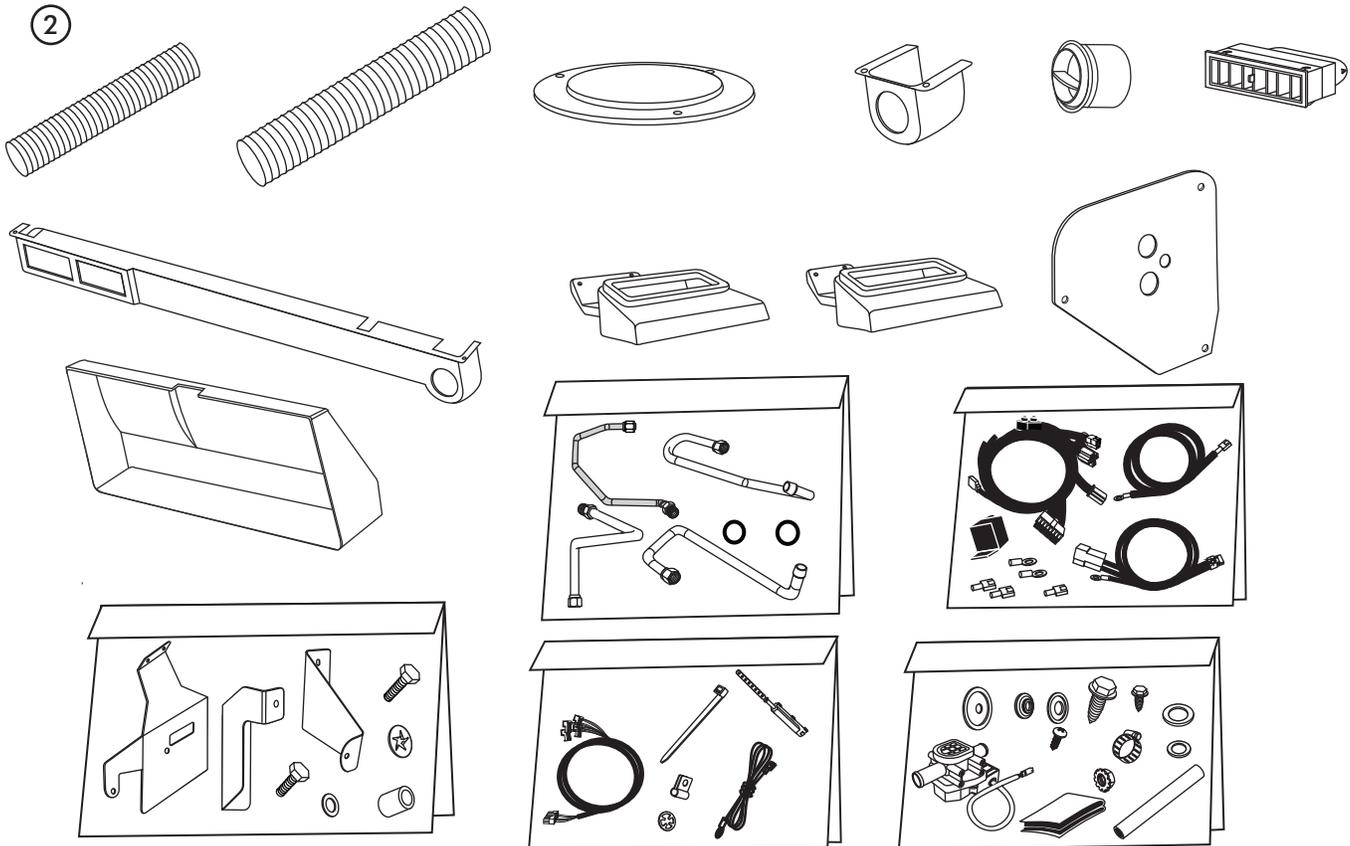
**\*\* BEFORE BEGINNING INSTALLATION, OPEN ALL PACKAGES AND CHECK CONTENTS OF SHIPMENT. PLEASE REPORT ANY SHORTAGES DIRECTLY TO VINTAGE AIR WITHIN 15 DAYS. AFTER 15 DAYS, VINTAGE AIR WILL NOT BE RESPONSIBLE FOR MISSING OR DAMAGED ITEMS.**

①



GEN IV 4-VENT  
EVAP. SUB CASE  
744004-VUE

②



ACCESSORY KIT  
784066

**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:*

**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.

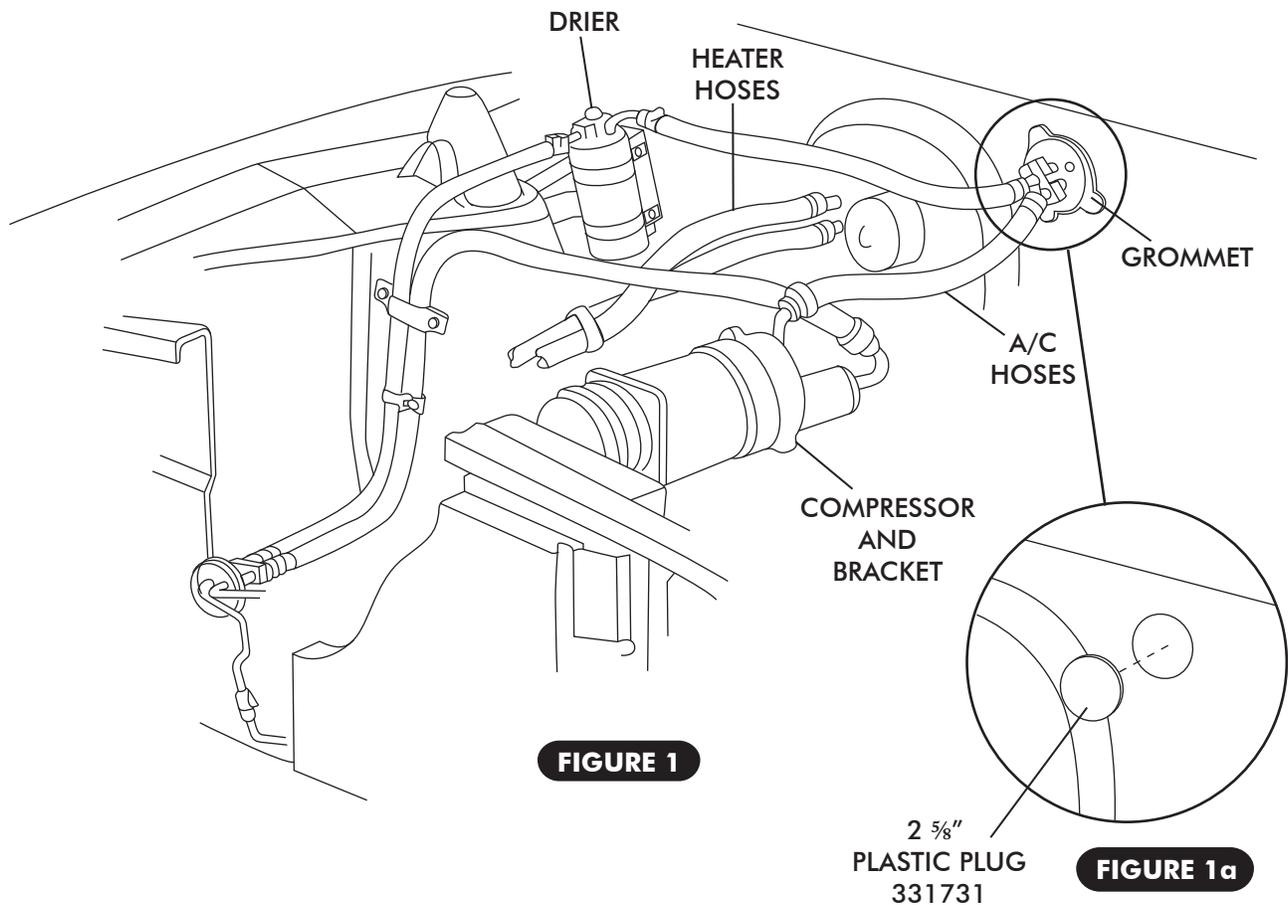


**BEFORE STARTING THE INSTALLATION, CHECK THE FUNCTION OF THE VEHICLE (HORN, LIGHTS, ETC.) FOR PROPER OPERATIONS. STUDY THE INSTRUCTIONS, ILLUSTRATIONS, & DIAGRAMS.**

## ENGINE COMPARTMENT

### REMOVE THE FOLLOWING:

- BATTERY, BATTERY TRAY (RETAIN).
- DRAIN RADIATOR, REMOVE RADIATOR (RETAIN).
- EVACUATE THE A/C SYSTEM IF NECESSARY.
- OEM CONDENSER AND DRIER (DISCARD). SEE FIGURE 1, BELOW.
- OEM COMPRESSOR AND BRACKET (DISCARD). SEE FIGURE 1.
- OEM HEATER HOSES (DISCARD). SEE FIGURE 1.
- OEM A/C HOSES AND FIREWALL GROMMET (DISCARD). SEE FIGURE 1.
- INSTALL 2 5/8" PLASTIC PLUG IN FIREWALL (A/C CARS ONLY). SEE FIGURE 1a, BELOW.



## CONDENSER ASSEMBLY & INSTALLATION

- REFER TO SEPARATE INSTRUCTIONS INCLUDED WITH THE CONDENSER KIT TO INSTALL THE CONDENSER.
- BINARY SWITCH INSTALLATION (REFER TO CONDENSER INSTRUCTIONS).

## COMPRESSOR & BRACKETS

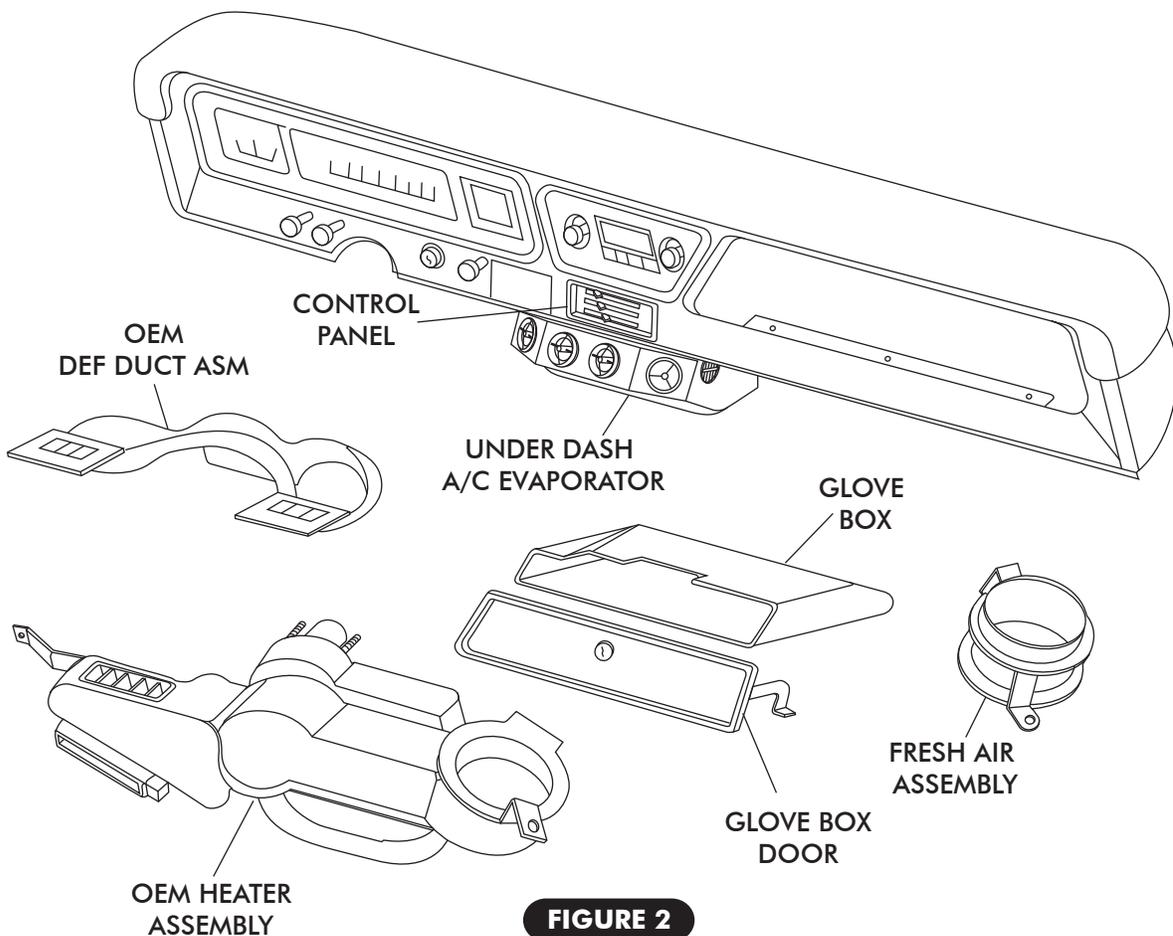
- REFER TO SEPARATE INSTRUCTIONS INCLUDED WITH THE BRACKET KIT TO INSTALL THE COMPRESSOR BRACKET.



## PASSENGER COMPARTMENT

### REMOVE THE FOLLOWING:

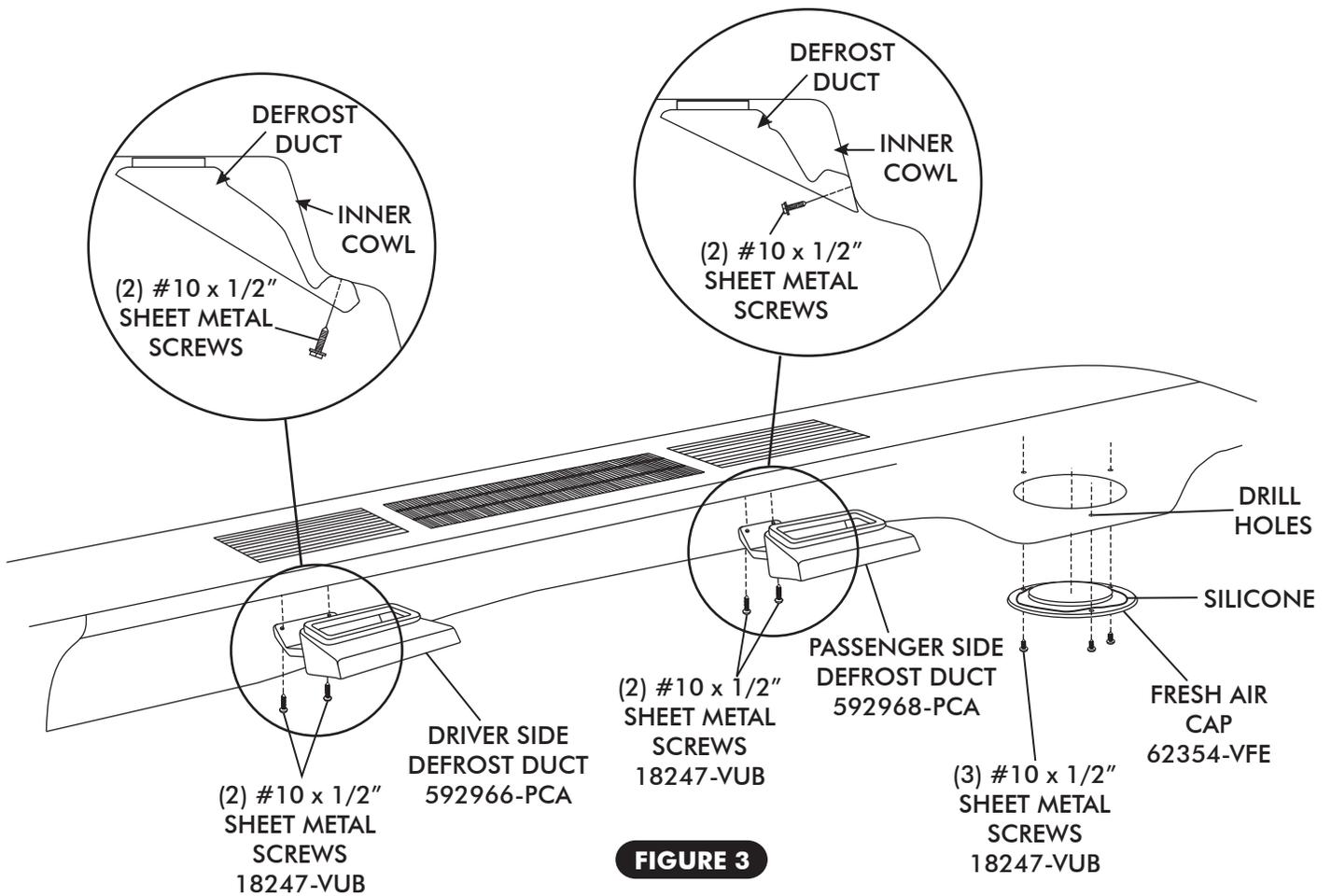
- GLOVE BOX DOOR (RETAIN). SEE FIGURE 2.
- GLOVE BOX (DISCARD).
- UNDER DASH A/C EVAPORATOR (IF EQUIPPED).
- HEATER ASSEMBLY (DISCARD, RETAIN SCREWS).
- CONTROL PANEL ASSEMBLY & RADIO (RETAIN).
- REFER TO CONTROL PANEL CONVERSION KIT INSTRUCTIONS FOR INSTALLATION OF CONTROLS.
- OEM DEFROST DUCT ASM (DISCARD).





## DEFROST DUCT/FRESH AIR CAP INSTALLATION

- MOUNT DEFROST DUCTS USING (4) #10 x 1/2" SHEET METAL SCREWS SEE FIGURE 3, BELOW.
- HOLD FRESH AIR CAP UNDER COWL AND MARK THE (3) MOUNTING HOLES.
- DRILL (3) 1/8" MOUNTING HOLES UNDER COWL.
- APPLY A 1/4" BEAD OF SILICONE AROUND THE BACK SIDE OF THE FRESH AIR CAP AS SHOWN.
- SECURE FRESH AIR CAP TO FRESH AIR HOLE USING (3) #10 x 1/2" SHEET METAL SCREWS AS SHOWN.

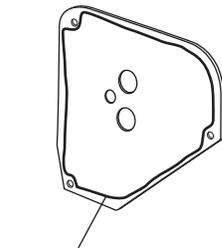


**FIGURE 3**

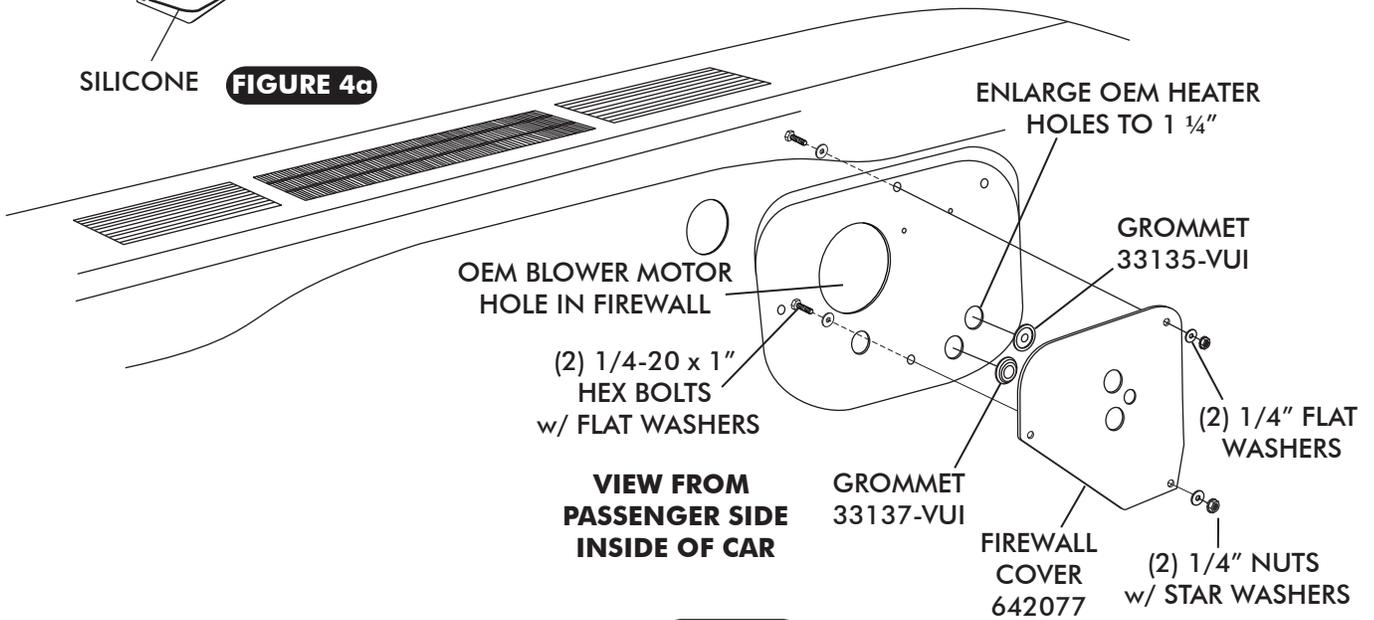


## FIREWALL COVER INSTALLATION

- ENLARGE OEM HEATER HOLES TO 1 1/4" AS SHOWN IN FIGURE 4, BELOW.
- INSTALL (2) GROMMETS IN FIREWALL AS SHOWN BELOW.
- APPLY A 1/4" BEAD OF SILICONE AROUND THE BACK SIDE OF THE FIREWALL COVER AS SHOWN IN FIGURE 4a.
- SECURE FIREWALL COVER TO FIREWALL USING (2) 1/4-20 x 1" HEX BOLTS w/ FLAT WASHERS AND NUTS.  
**NOTE: FIREWALL COVER INSTALLS ON INSIDE PASSENGER SIDE COMPARTMENT.**



SILICONE **FIGURE 4a**

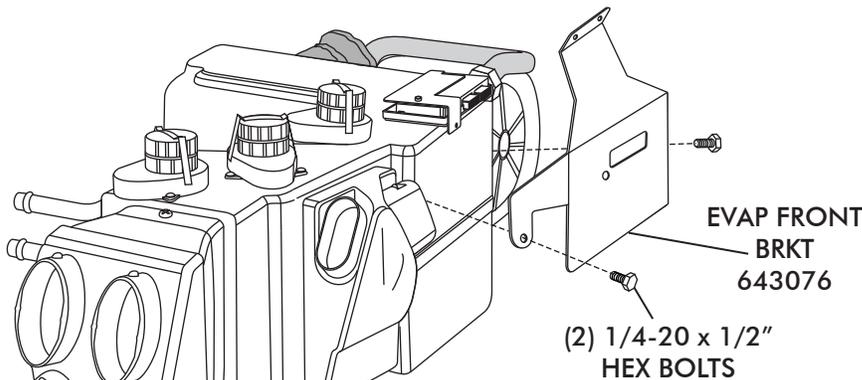


**FIGURE 4**

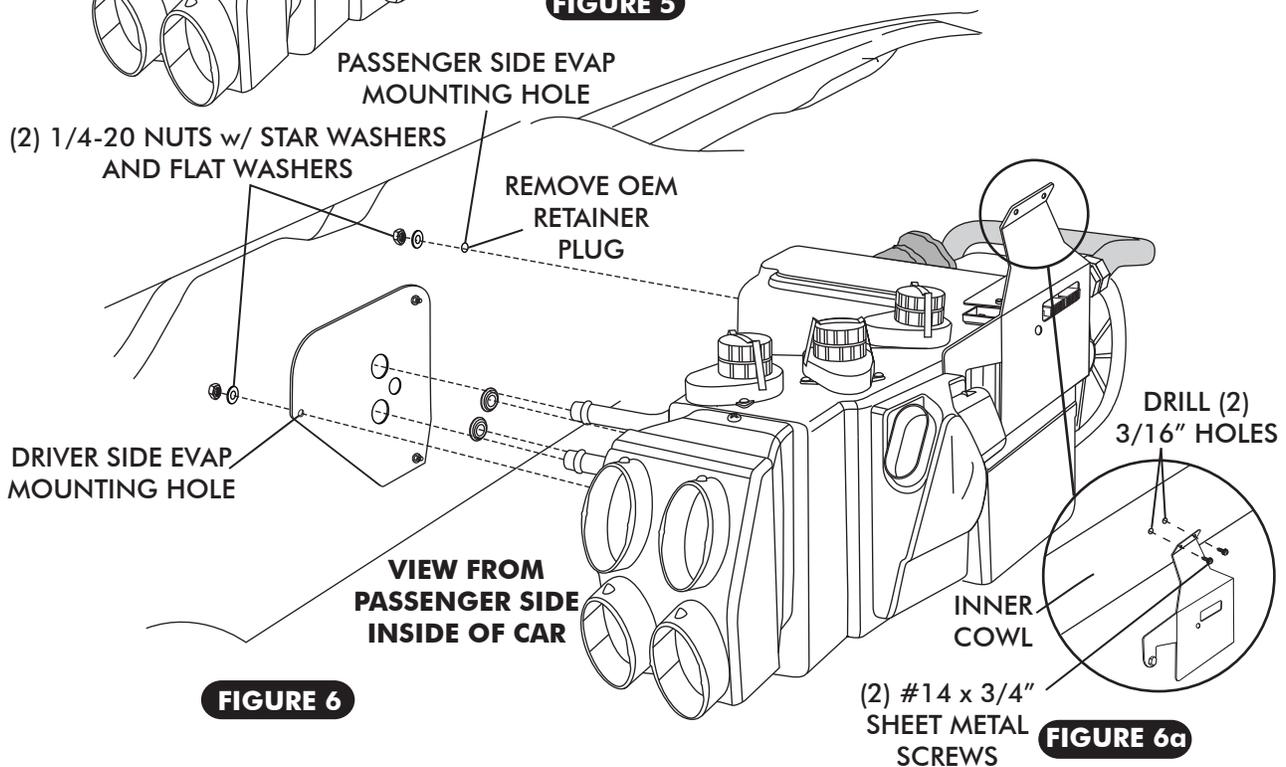


## EVAPORATOR INSTALLATION

- ❑ ON A WORKBENCH, INSTALL EVAPORATOR REAR BRACKETS AND HARDLINES WITH PROPERLY LUBRICATED O-RINGS (SEE FIGURE 8, PAGE 11, AND FIGURE 14, PAGE 17).
- ❑ INSTALL FRONT MOUNTING BRACKET ON EVAPORATOR USING (2) 1/4-20 x 1/2" HEX BOLTS, AND TIGHTEN AS SHOWN IN FIGURE 5, BELOW.
- ❑ REMOVE OEM FIREWALL PAD RETAINER PLUG.
- ❑ LIFT EVAPORATOR UNIT UP UNDER THE DASHBOARD. SECURE LOOSELY TO THE FIREWALL FROM THE ENGINE COMPARTMENT SIDE USING (2) 1/4-20 NUTS w/ STAR WASHERS AND FLAT WASHERS. SEE FIGURE 6, 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, BLOCK THE UNIT UP, THEN DRILL FOR FRONT BRACKET SCREWS.**
- ❑ USING (2) #14 x 3/4" SHEET METAL SCREWS, SECURE THE FRONT EVAPORATOR MOUNTING BRACKET TO THE INNER COWL. SEE FIGURE 6a, BELOW.
- ❑ VERIFY THAT EVAPORATOR UNIT IS LEVEL AND SQUARE TO THE DASH, THEN TIGHTEN ALL MOUNTING BOLTS. **NOTE: TIGHTEN THE BOLT ON FIREWALL FIRST, THEN THE FRONT MOUNTING BRACKET SCREWS.**



**FIGURE 5**



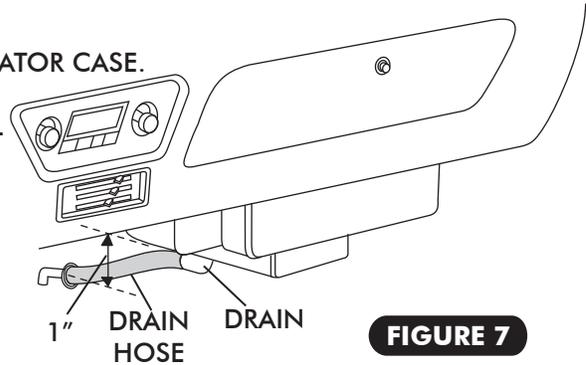
**FIGURE 6**

**FIGURE 6a**



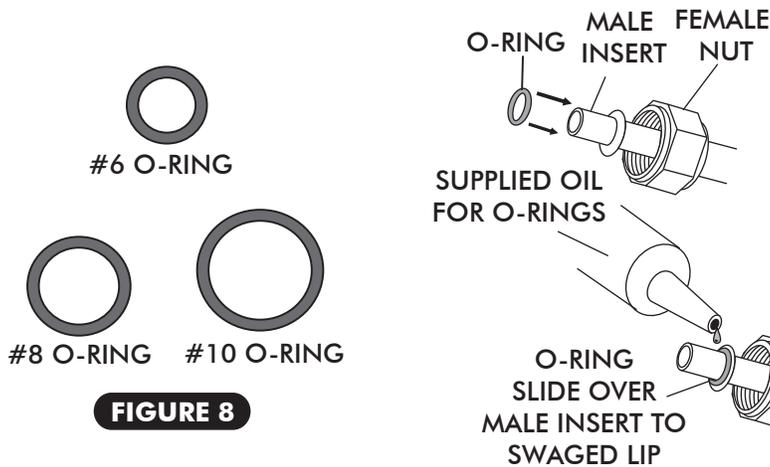
## DRAIN HOSE INSTALLATION

- LOCATE EVAPORATOR DRAIN ON BOTTOM OF EVAPORATOR CASE.
- IN LINE WITH THE DRAIN, LIGHTLY MAKE A MARK ON THE FIREWALL. MEASURE ONE INCH DOWN AND DRILL A 5/8" HOLE THROUGH THE FIREWALL. SEE FIGURE 7.
- INSTALL DRAIN HOSE TO BOTTOM OF EVAPORATOR UNIT, AND ROUTE THROUGH FIREWALL. INSTALL 1/2" 90° DRAIN ELBOW ON DRAIN HOSE AS SHOWN.



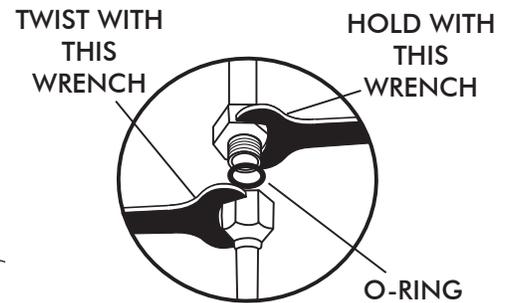
**FIGURE 7**

## LUBRICATING O-RINGS



**FIGURE 8**

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



## STANDARD HOSE KIT

- LOCATE THE #8 COMPRESSOR A/C HOSE. LUBRICATE (2) #8 O-RINGS (SEE FIGURE 8, ABOVE) AND CONNECT THE 45° FEMALE w/ 134a SERVICE PORT FITTING TO THE #8 DISCHARGE PORT ON THE COMPRESSOR. ROUTE THE STRAIGHT FEMALE FITTING TO THE #8 CONDENSER HARDLINE COMING THROUGH THE RADIATOR CORE SUPPORT. SEE FIGURE 10, PAGE 13. TIGHTEN EACH FITTING CONNECTION AS SHOWN IN FIGURE 8, ABOVE.
- LOCATE THE #10 COMPRESSOR A/C HOSE. LUBRICATE (2) #10 O-RINGS AND CONNECT THE 90° FEMALE FITTING TO THE #10 SUCTION PORT ON THE COMPRESSOR, ROUTE THE STRAIGHT FEMALE w/ 134a SERVICE PORT FITTING TO THE #10 EVAPORATOR HARDLINE COMING THROUGH THE FIREWALL. SEE FIGURE 9, PAGE 12, & FIGURE 10, PAGE 13. TIGHTEN EACH FITTING CONNECTION AS SHOWN IN FIGURE 8, ABOVE. WRAP THE #10 FITTING CONNECTION WITH PRESS TAPE. SEE FIGURE 14, PAGE 17.
- LOCATE THE #6 EVAP/DRIER HARDLINE. LUBRICATE (2) #6 O-RINGS AND CONNECT THE HARDLINE TO THE DRIER AND THE #6 EVAPORATOR HARDLINE COMING THROUGH THE FIREWALL. SEE FIGURE 9, PAGE 12, & FIGURE 10, PAGE 13. TIGHTEN EACH FITTING CONNECTION AS SHOWN IN FIGURE 8, ABOVE.

## MODIFIED A/C HOSE KIT

- REFER TO SEPARATE INSTRUCTIONS INCLUDED WITH MODIFIED HOSE KIT.



## HEATER HOSE & HEATER CONTROL VALVE INSTALLATION

- ROUTE A PIECE OF HEATER HOSE FROM WATER PUMP TO THE HEATER LINE COMING THROUGH THE FIREWALL AS SHOWN IN FIGURE 9, BELOW. SECURE USING HOSE CLAMPS.
- ROUTE A PIECE OF HEATER HOSE FROM THE INTAKE TO THE HEATER LINE COMING THROUGH THE FIREWALL AS SHOWN BELOW. **NOTE: INSTALL HEATER CONTROL VALVE IN LINE WITH INTAKE MANIFOLD (PRESSURE SIDE) HEATER HOSE, SECURE USING HOSE CLAMPS AS SHOWN. NOTE PROPER FLOW DIRECTION.**
- HOSE SHOULD PROTRUDE THROUGH THE FIREWALL COVER SLIGHTLY TO CLOSE THE GAP BETWEEN THE ALUMINUM LINE AND THE FIREWALL COVER. SEAL ANY REMAINING GAP WITH RTV SILICONE.

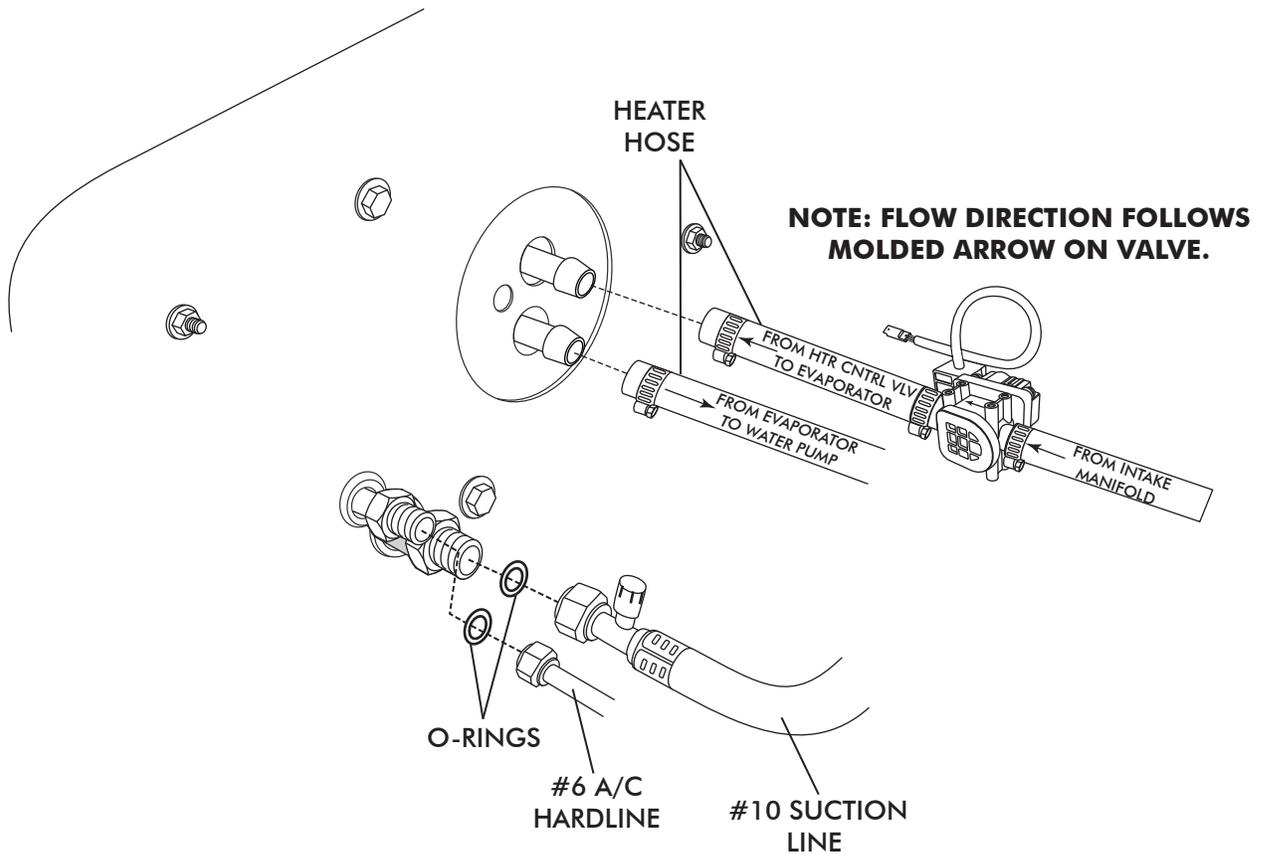
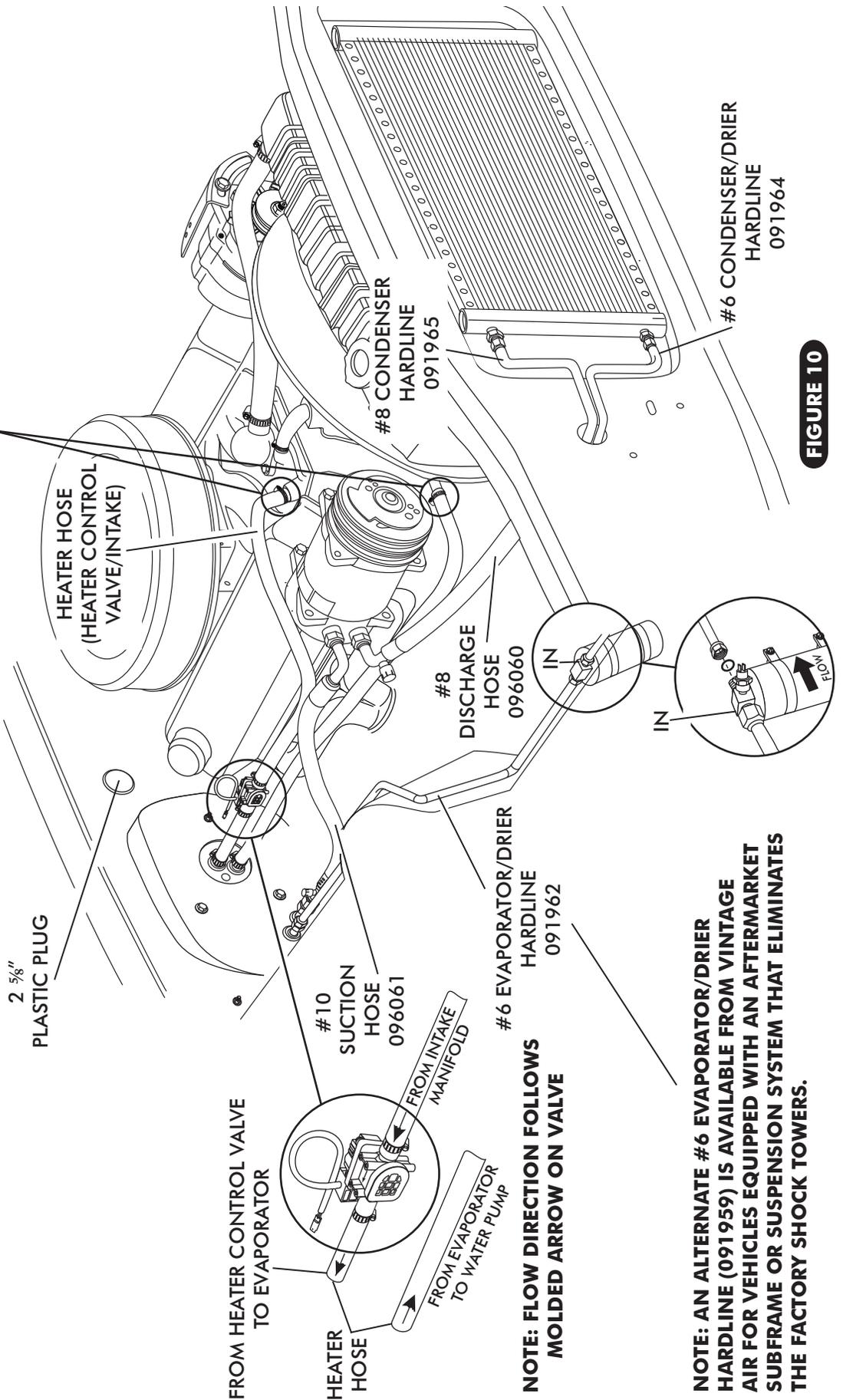


FIGURE 9

## A/C & HEATER HOSE ROUTING 1966-67 NOVA SHOWN

**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.**



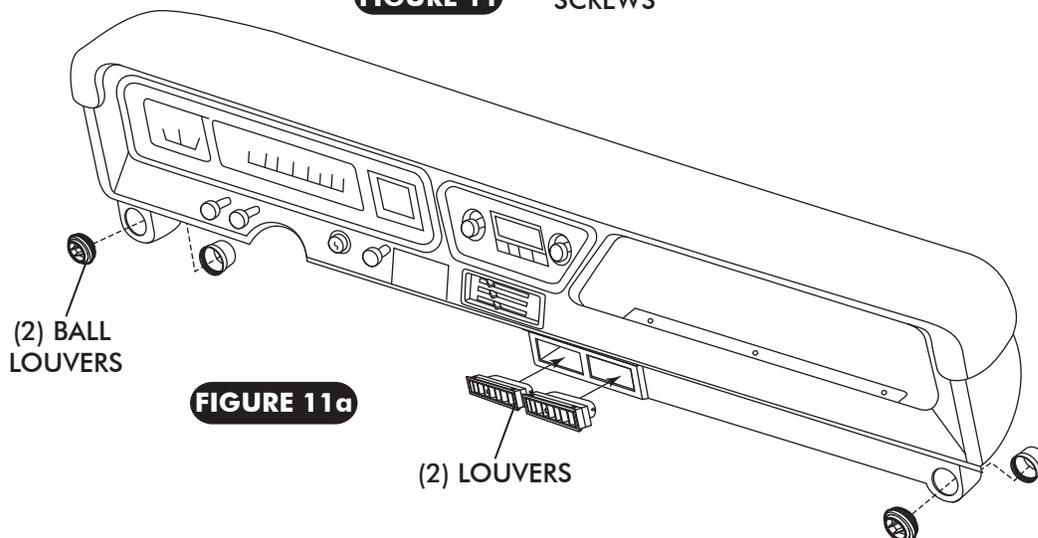
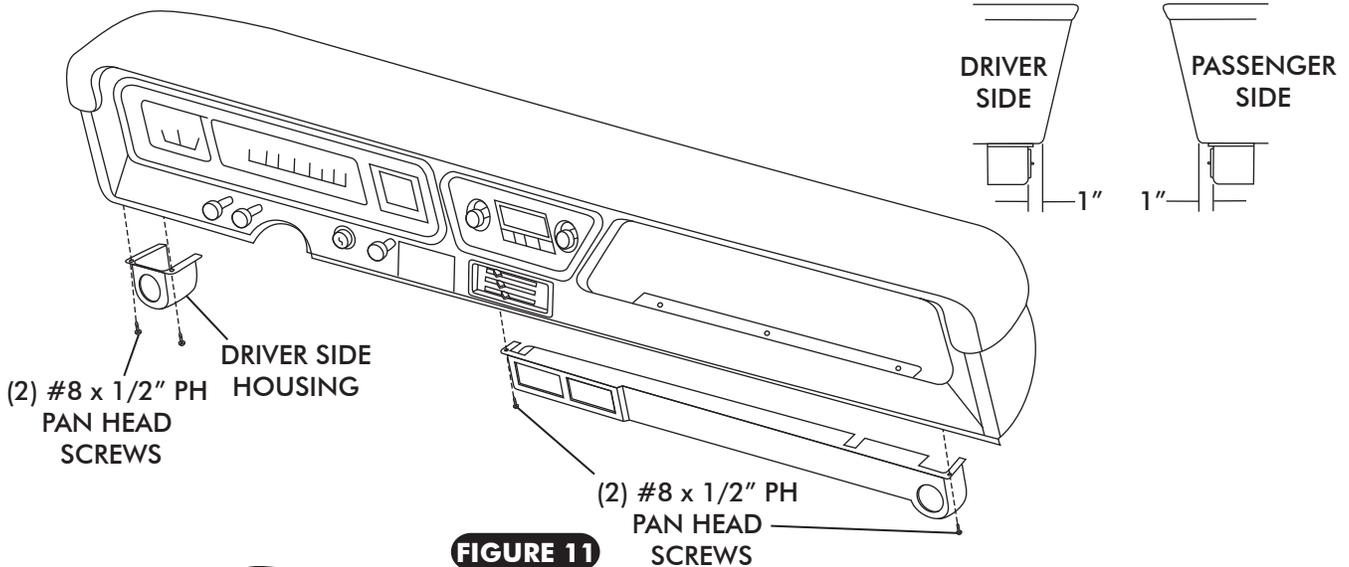
**FIGURE 10**

**NOTE: AN ALTERNATE #6 EVAPORATOR/DRIER HARDLINE (091959) IS AVAILABLE FROM VINTAGE AIR FOR VEHICLES EQUIPPED WITH AN AFTERMARKET SUBFRAME OR SUSPENSION SYSTEM THAT ELIMINATES THE FACTORY SHOCK TOWERS.**



## UNDER DASH LOUVER INSTALLATION

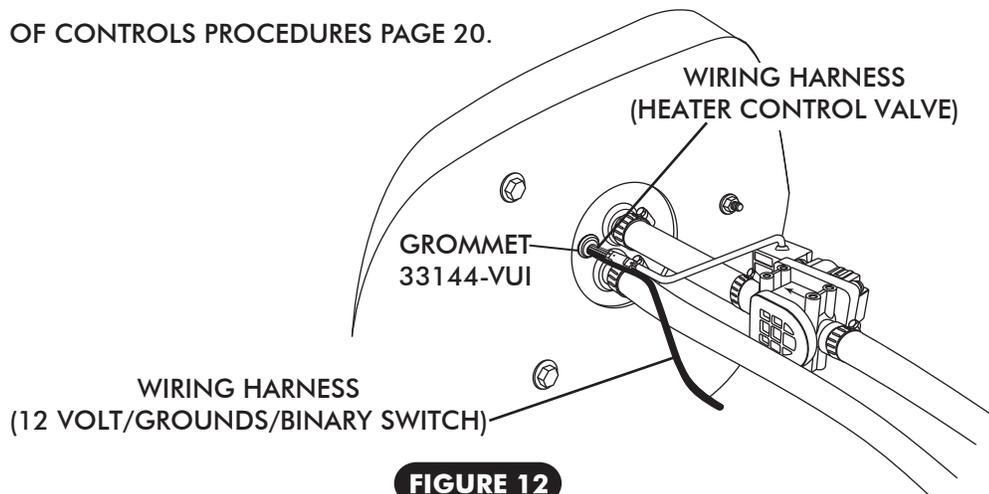
- ❑ PLACE THE DRIVER SIDE LOUVER HOUSING UNDER THE DASH, ALIGN 1" FROM THE FRONT EDGE OF THE DASH AND MARK MOUNTING HOLES. DRILL 7/64" MOUNTING HOLES IN BOTTOM OF THE DASH. SEE FIGURE 11, BELOW.
- ❑ PLACE THE CENTER/PASSENGER SIDE LOUVER BEZEL UNDER THE DASH, AND ALIGN 1" FROM THE FRONT EDGE OF THE DASH AND MARK MOUNTING HOLES. DRILL 7/64" MOUNTING HOLES IN BOTTOM OF THE DASH AS SHOWN BELOW.
- ❑ USING (2) #8 x 1/2" PH PAN HEAD SCREWS, INSTALL THE DRIVER SIDE LOUVER HOUSING UNDER DASH AS SHOWN BELOW.
- ❑ USING (2) #8 x 1/2" PH PAN HEAD SCREWS, INSTALL THE CENTER/PASSENGER SIDE LOUVER BEZEL UNDER DASH, AS SHOWN BELOW.
- ❑ INSTALL LOUVERS IN DRIVER SIDE HOUSING AND CENTER/PASSENGER SIDE LOUVER BEZEL AS SHOWN IN FIGURE 11a, BELOW.
- ❑ ONCE THE LOUVER ASSEMBLY IS IN PLACE, ROUTE THE DUCT HOSES AND ATTACH THEM TO THE CORRECT LOCATION ON EVAPORATOR AS SHOWN IN FIGURE 13, PAGE 16.





## FINAL STEPS

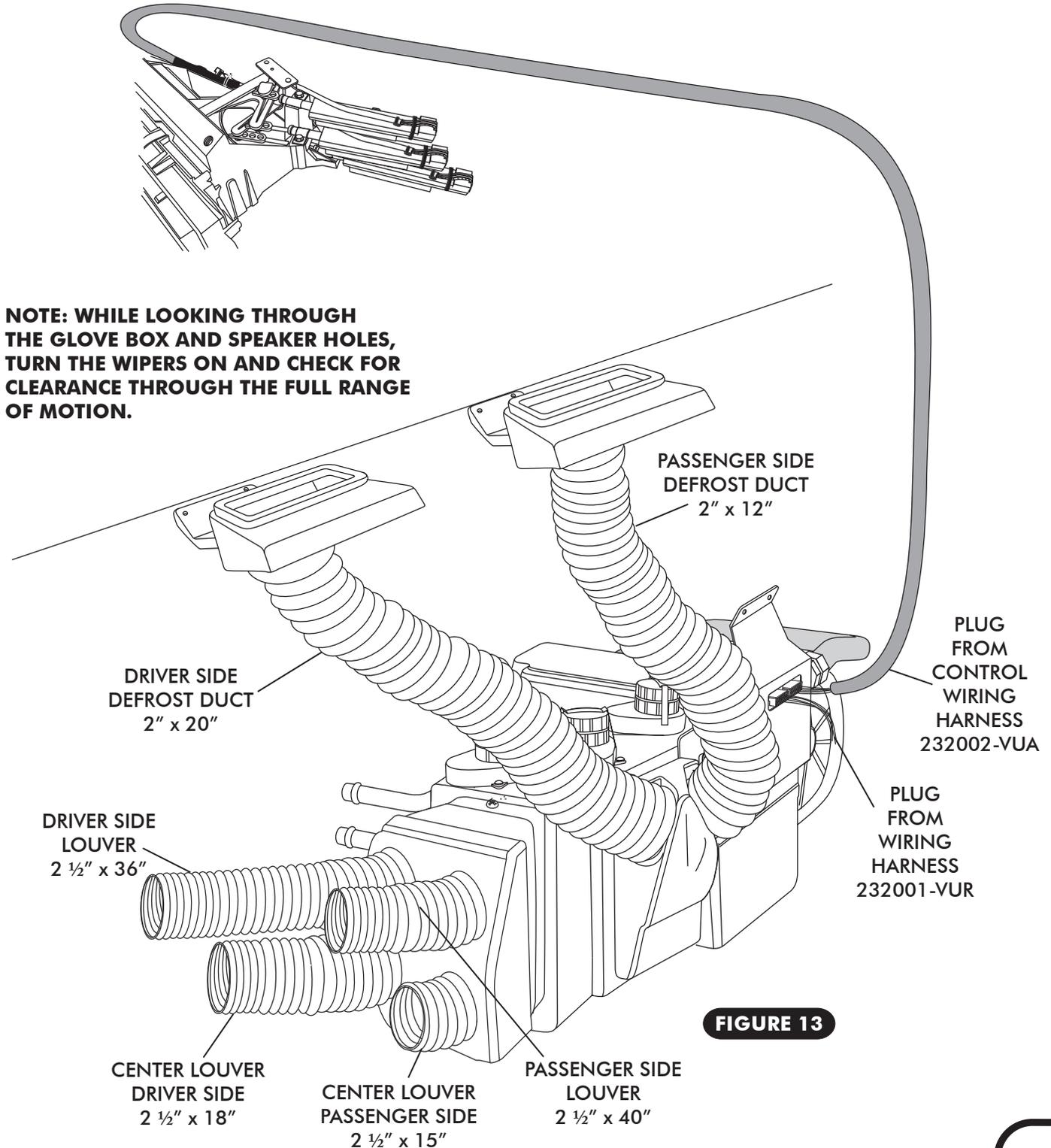
- INSTALL DUCT HOSES AS SHOWN IN FIGURE 13, PAGE 16. EXTEND DUCT HOSE TO A TAUT CONDITION, THEN CUT TO LENGTH AS NOTED. THERE SHOULD BE LITTLE OR NO SLACK IN HOSE ONCE INSTALLED.
- ROUTE A/C WIRES THROUGH 3/8" GROMMET AS SHOWN IN FIGURE 12 (12 VOLT/GROUND/BINARY SWITCH/HEATER VALVE).
- REINSTALL CONTROL PANEL ASSEMBLY. **NOTE: CONTROLS MUST BE CALIBRATED FOR PROPER OPERATION. REFER TO CONTROL PANEL INSTRUCTIONS.**
- PLUG THE WIRING HARNESS INTO THE ECU MODULE ON SUB CASE AS SHOWN IN FIGURE 13, PAGE 16 (WIRE ACCORDING TO WIRING DIAGRAM ON PAGE 18 AND 19).
- INSTALL NEW GLOVE BOX AND GLOVE BOX DOOR USING OEM SCREWS.
- REINSTALL ALL PREVIOUSLY REMOVED ITEMS (BATTERY, RADIATOR, RADIO).
- FILL RADIATOR WITH AT LEAST A 50/50 MIXTURE OF APPROVED ANTIFREEZE AND DISTILLED WATER OR PRE MIX ANTIFREEZE. 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.
- 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 CAPACITY STATED ON PAGE 4 OF THIS INSTRUCTION MANUAL.
- SEE OPERATION OF CONTROLS PROCEDURES PAGE 20.



**FIGURE 12**



## CONTROL PANEL CABLE & DUCT HOSE ROUTING

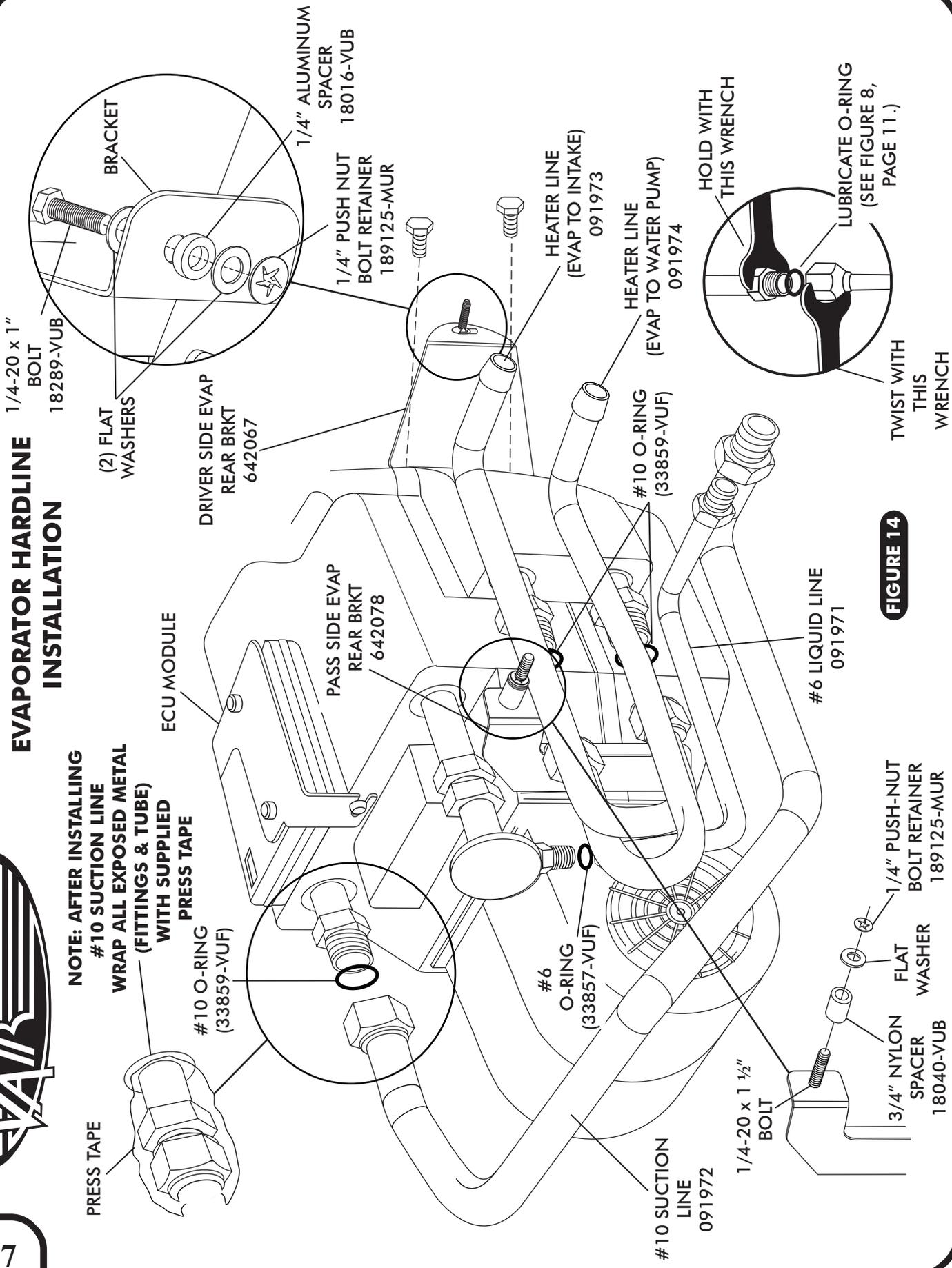


**FIGURE 13**



# EVAPORATOR HARDLINE INSTALLATION

**NOTE: AFTER INSTALLING #10 SUCTION LINE WRAP ALL EXPOSED METAL (FITTINGS & TUBE) WITH SUPPLIED PRESS TAPE**

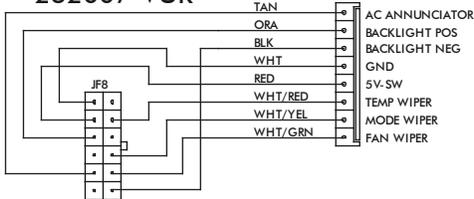


**FIGURE 14**



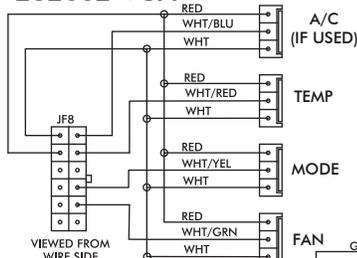
# Wiring Diagram

## 232007-VUR



VIEWED FROM WIRE SIDE

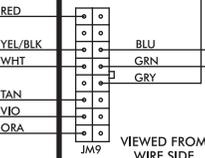
## 232002-VUA



VIEWED FROM WIRE SIDE

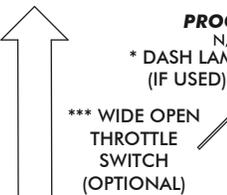
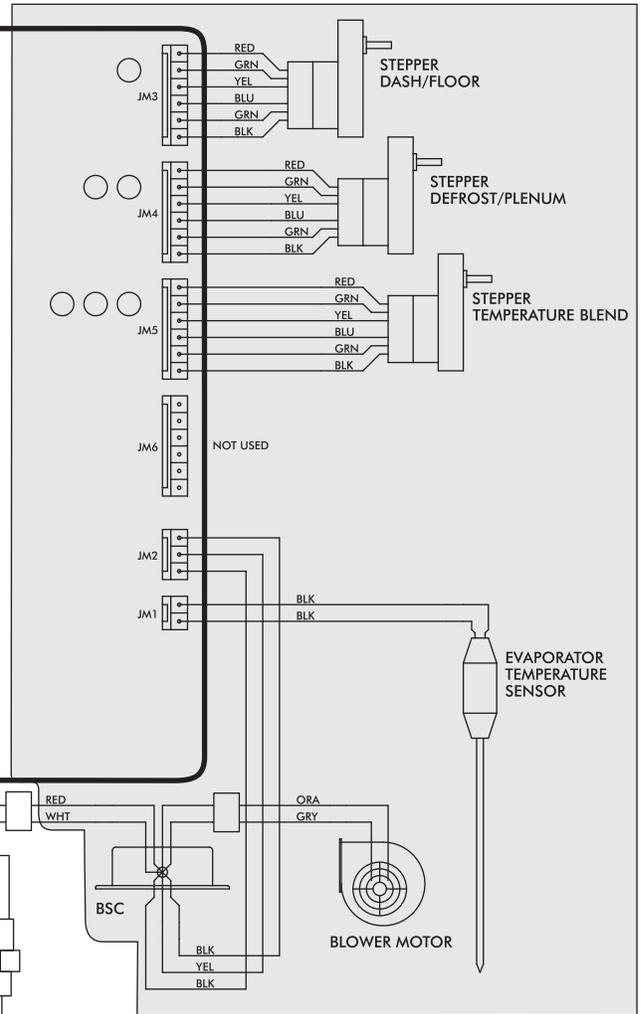
## GEN IV ECU

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



VIEWED FROM WIRE SIDE

## PRE-WIRED



### PROGRAM

N/A

\* DASH LAMP (IF USED)

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

\*\* CIRCUIT BREAKER 30 AMP

COMPRESSOR RELAY

BINARY OR TRINARY SAFETY SWITCH

CMPR

HEATER CONTROL VALVE

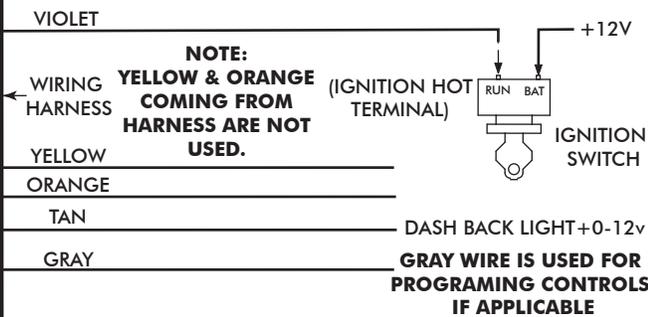
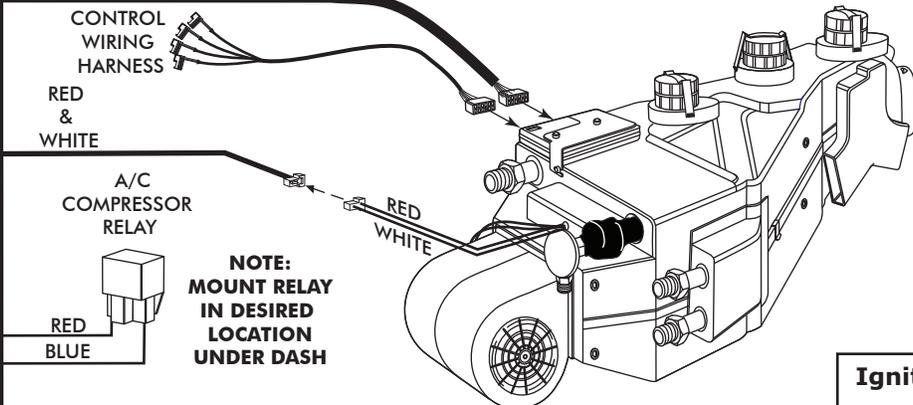
NOTE: = CHASSIS GROUND

- 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 Routed to Avoid a Short Circuit).
- Wide Open Throttle Switch Contacts Close Only at Full Throttle, Which Disables A/C Compressor.



# Gen IV Wiring Connection Instruction

WIRING HARNESS

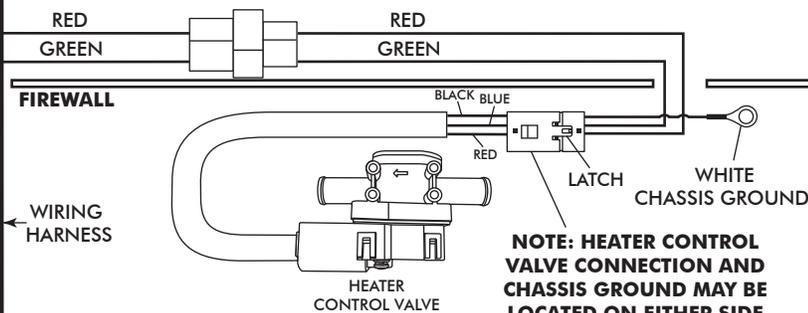


### Ignition Switch:

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

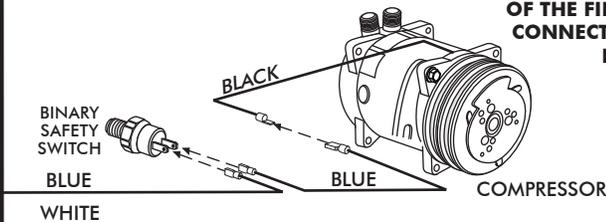
### Dash Light:

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



### Heater Control Valve:

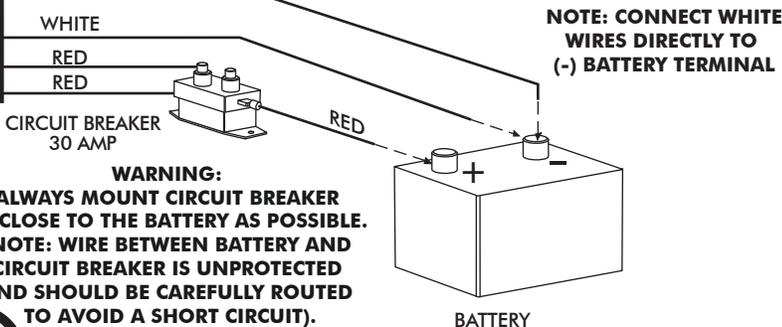
Install With Servo Motor Facing Down, As Shown. Note Flow Direction Arrow Molded Into Valve Body, And Install Accordingly.



### 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.

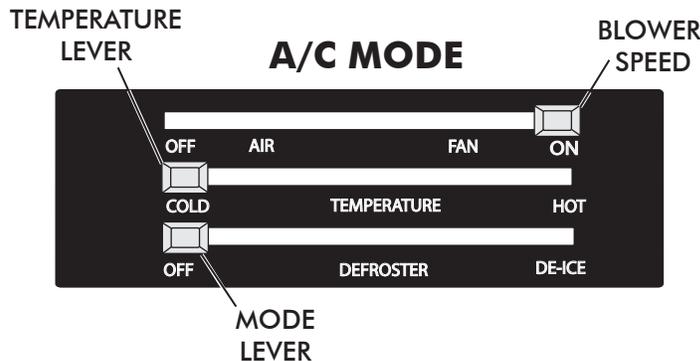


## OPERATION OF CONTROLS

THE TEMPERATURE LEVER TOGGLES BETWEEN A/C AND HEAT MODES. FOR A/C MODE SLIDE THE TEMPERATURE LEVER ALL THE WAY LEFT FOR HEAT MODE SLIDE THE LEVER ALL THE WAY TO THE RIGHT TO DISENGAGE THE COMPRESSOR, THEN MOVE THE LEVER TO SELECT DESIRED TEMPERATURE.

**NOTE: EACH TIME THE SYSTEM TOGGLES BETWEEN MODES, THE BLOWER WILL MOMENTARILY CHANGE SPEEDS.**

ALL SWITCHES ARE VARIABLE BETWEEN POSITIONS, SYSTEM WILL PERFORM A BLEND BETWEEN THE FUNCTIONS.

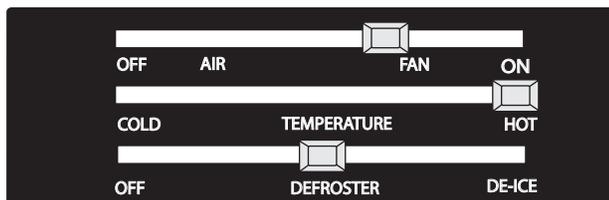


**BLOWER SPEED**  
THIS LEVER CONTROLS THE BLOWER SPEED, FROM OFF TO HI

**MODE LEVER**  
SLIDE THE LEVER TO THE LEFT TO DIRECT AIR FLOW TO THE DASH VENTS

**TEMPERATURE LEVER**  
IN A/C MODE SLIDE THE TEMPERATURE LEVER ALL THE WAY LEFT TO THE COLD POSITION TO ENGAGE COMPRESSOR. (SLIDE LEVER LEFT OR RIGHT TO ADJUST DESIRED TEMPERATURE)

### HEAT MODE

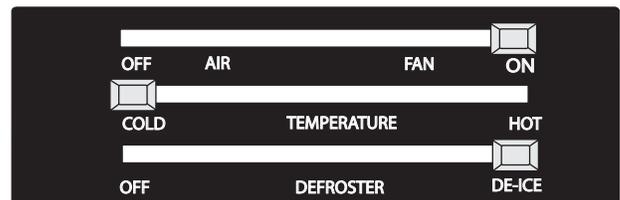


**BLOWER SPEED**  
SLIDE LEVER RIGHT TO DESIRED BLOWER SPEED FROM OFF TO HI

**MODE LEVER**  
SLIDE THE LEVER TO THE CENTER TO DIRECT AIR FLOW TO THE FLOOR.

**TEMPERATURE LEVER**  
IN HEAT MODE SLIDE THE TEMPERATURE LEVER ALL THE WAY RIGHT TO THE HOT POSITION. (SLIDE LEVER LEFT OR RIGHT TO ADJUST DESIRED TEMPERATURE)

### DEFROST/ DE-FOG MODE



**BLOWER SPEED**  
SLIDE LEVER RIGHT TO DESIRED BLOWER SPEED FROM OFF TO HI

**MODE LEVER**  
SLIDE THE LEVER TO THE RIGHT TO DIRECT AIR FLOW TO THE DEFROST VENTS

**TEMPERATURE LEVER**  
SLIDE LEVER LEFT OR RIGHT TO ADJUST DESIRED TEMPERATURE (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.	Loss of ground on this wire renders control head inoperable.	
	All other functions work.	Check for damaged ground wire (white) in control head harness.	Verify continuity to chassis ground with white control head wire at various points.		
		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.	No other part replacements should be necessary.
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.		
System must be charged for compressor to engage.			Replace BSC (This will require removal of evaporator from vehicle).		
Charge system or bypass pressure switch.					
2. Compressor will not turn on (All other functions work).		System is not charged.		<b>Danger: Never bypass safety switch with engine running. Serious injury can result.</b>	
		System is charged.	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 faulty A/C potentiometer or associated wiring (Not applicable to 3-pot controls).	Check 2-pin connector at ECU housing.		Disconnected or faulty thermistor will cause compressor to be disabled.
		Check for disconnected or faulty thermistor.			
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.		Check for positive power at heater valve green wire and blower red wire. Check for ground on control head white wire.
			Will not turn on under any conditions.		Verify proper meter function by checking the condition of a known good battery.
5.	Loss of mode door function.	Check for damaged mode switch or potentiometer and associated wiring. Check for obstructed or binding mode doors. Check for damaged stepper motor or wiring.	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.		
			No mode change at all.		
6.	Blower turns on and off rapidly.	Check for at least 12V at circuit breaker. Check for faulty battery or alternator.	Ensure all system grounds and power connections are clean and tight.	System shuts off blower at 10V. Poor connections or weak battery can cause shutdown at up to 11V.	
			Battery voltage is at least 12V.		Charge battery.
			Battery voltage is less than 12V.		
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.		





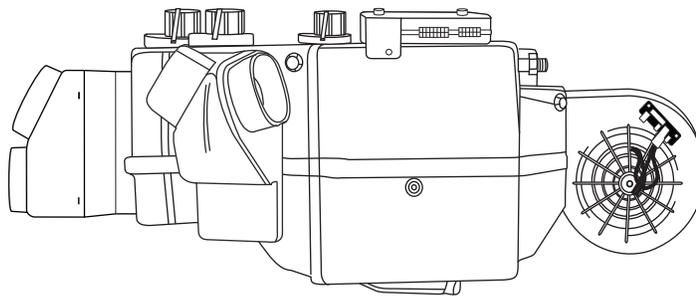
# EVAPORATOR KIT PACKING LIST

EVAPORATOR KIT  
561166

No.	QTY.	PART No.	DESCRIPTION
1.	1	744004-VUE	GEN IV 4-VENT EVAP. SUB CASE
2.	1	784066	1966-67 NOVA ACCESSORY KIT

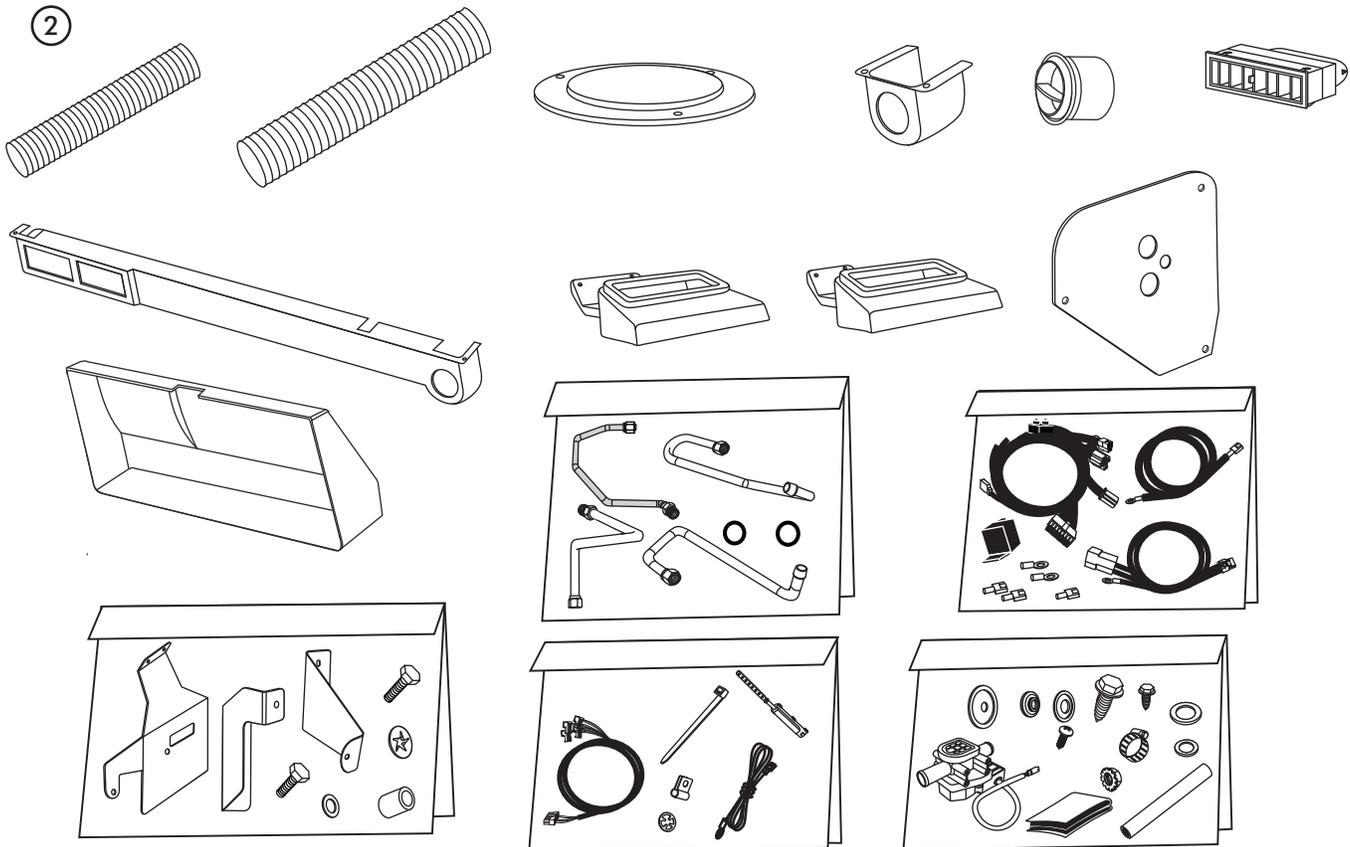
CHECK BY: \_\_\_\_\_  
 PACKED BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_

①



GEN IV 4-VENT  
EVAP. SUB CASE  
744004-VUE

②



ACCESSORY KIT  
784066

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