



an ISO 9001:2008 Registered Company

1979-81 CAMARO

WITH FACTORY AIR

565080

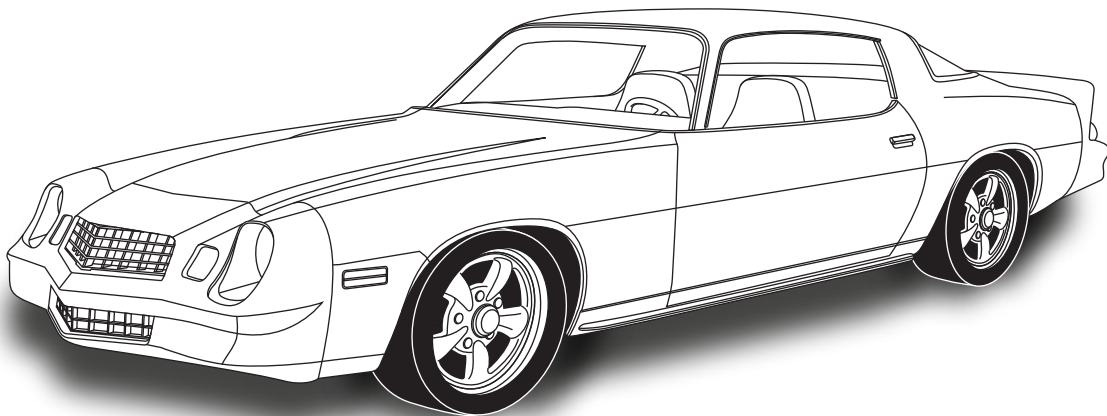




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EVAPORATOR KIT PACKING LIST

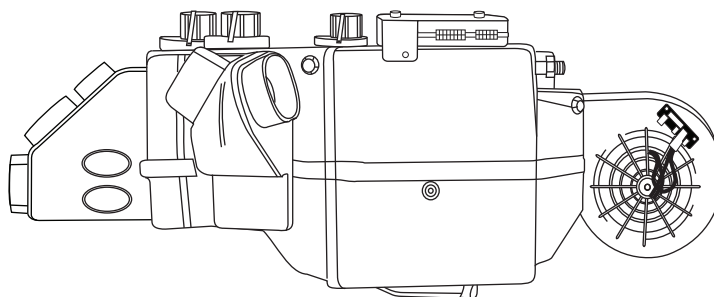
EVAPORATOR KIT
565080

NO.	QTY.	PART NO.	DESCRIPTION
1.	1	762171	6 VENT EVAP. SUB CASE w/ 204 ECU w/ (4) 2 1/2"
2.	1	781175	1979-81 CAMARO w/ A/C ACC. KIT

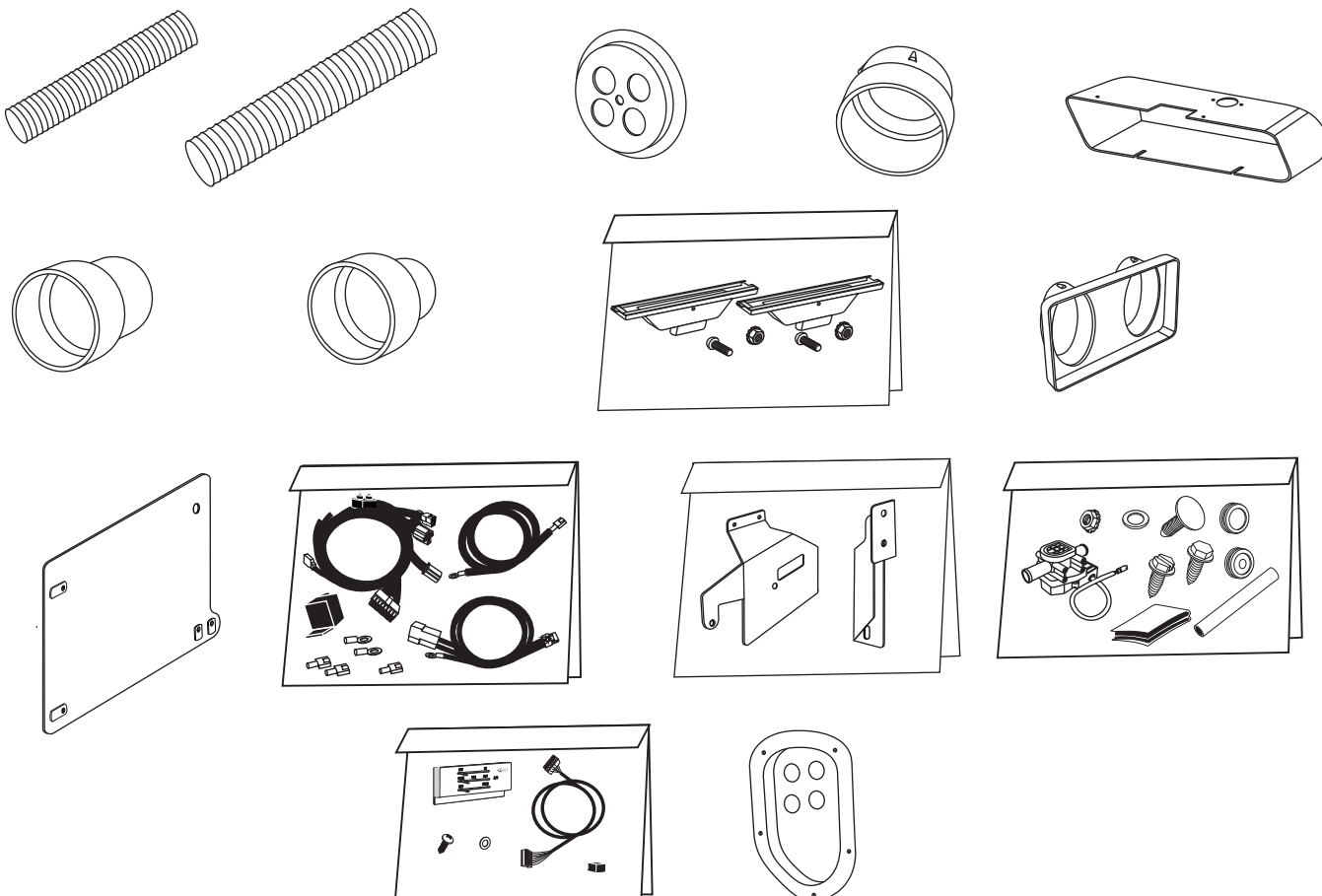
**** BEFORE BEGINNING INSTALLATION, OPEN ALL PACKAGES AND CHECK CONTENTS OF SHIPMENT. PLEASE REPORT ANY SHORTAGES DIRECTLY TO VINTAGE AIR WITHIN 15 DAYS. AFTER 15 DAYS, VINTAGE AIR WILL NOT BE RESPONSIBLE FOR MISSING OR DAMAGED ITEMS.**

①

**6 VENT
EVAP SUB CASE
w/ 204 ECU w/ (4) 2 1/2"
762171**



②



**ACCESSORY KIT
781175**

**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.



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

ENGINE COMPARTMENT

REMOVE THE FOLLOWING:

- ☐ BATTERY AND BATTERY TRAY (RETAIN), (SEE FIGURES 1 AND 3, BELOW).
- ☐ DRAIN RADIATOR.
- ☐ RADIATOR FAN SHROUD & RADIATOR (RETAIN).
- ☐ EVACUATE THE A/C SYSTEM IF NECESSARY.
- ☐ CONDENSER, LINES AND THE (4) OEM RUBBER WELL NUTS IN THE CORE SUPPORT (DISCARD), (SEE FIGURE 1, BELOW).
- ☐ OEM COMPRESSOR AND BRACKET (DISCARD), (SEE FIGURE 2, BELOW).
- ☐ EVAPORATOR AND BLOWER ASSEMBLY (DISCARD). TO REMOVE THE EVAPORATOR AND BLOWER ASSEMBLY (UNDER HOOD) AND THE AIR DISTRIBUTION SYSTEM (UNDER DASH), REMOVE THE INNER FENDER.
- ☐ OEM HEATER HOSES, A/C HOSES, HARDLINES AND DRIER (DISCARD), (SEE FIGURE 4, BELOW).

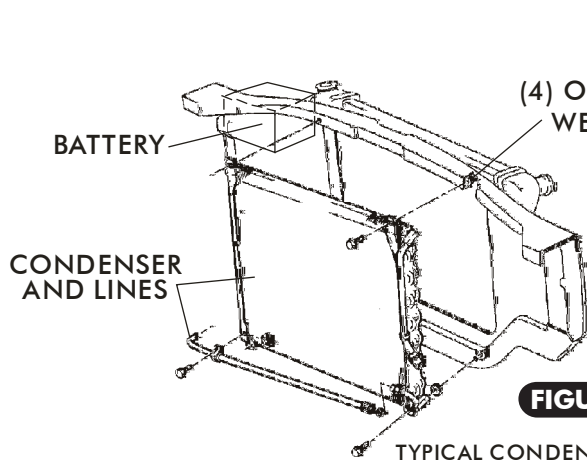


FIGURE 1

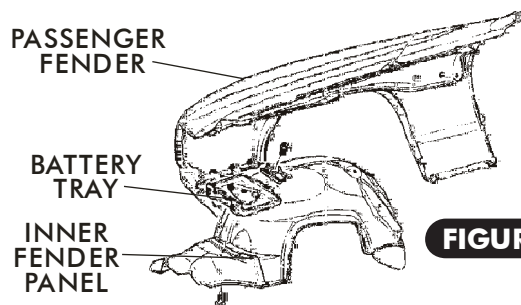


FIGURE 3

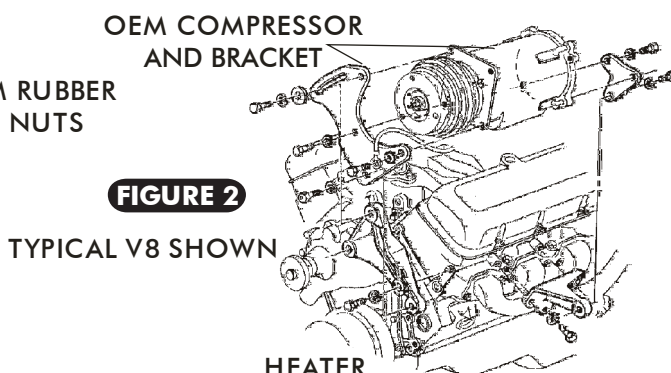


FIGURE 2

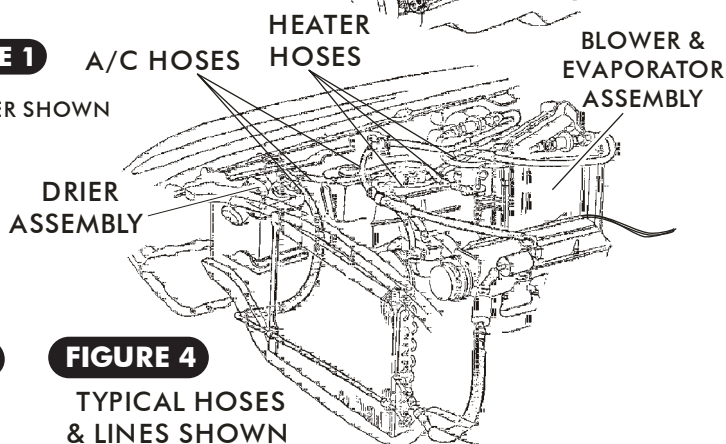


FIGURE 4

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.

PULLEYS

- ☐ IN MOST INSTANCES, THE BELT LENGTHS WILL REMAIN THE SAME.



PASSENGER COMPARTMENT

NOTE: DASHBOARD REMOVAL IS NOT REQUIRED TO INSTALL THE EVAPORATOR. VINTAGE AIR RECOMMENDS THAT YOU FOLLOW THE STEPS IN THE FACTORY SERVICE MANUAL WHEN YOU DISASSEMBLE AND REASSEMBLE THE DASHBOARD.

REMOVE THE FOLLOWING:

- ☐ GLOVE BOX DOOR (SEE FIGURE 6, BELOW).
- ☐ GLOVE BOX (DISCARD, RETAIN SCREWS), (SEE FIGURE 5, BELOW).
- ☐ A/C, HEATER, EVAPORATOR ASSEMBLY AND ALL RELATED DUCTING (DISCARD, RETAIN SCREWS), (SEE FIGURE 6, BELOW).
- ☐ A/C, HEAT OUTLETS (RETAIN). INSTRUMENT PANEL MUST BE REMOVED TO GET TO LEFT OUTLET AND CONTROL PANEL (SEE FIGURE 6, BELOW).
- ☐ CONTROL PANEL ASSEMBLY (DISCARD), (SEE FIGURE 6, BELOW).
REFER TO CONTROL PANEL CONVERSION KIT INSTRUCTIONS FOR INSTALLATION OF CONTROLS.
- ☐ REMOVE PASSENGER SIDE KICK PANEL FRESH AIR COVER (DISCARD) AND KICK PANEL (RETAIN). REMOVE CABLE FROM PANEL (DISCARD), (SEE FIGURE 6, BELOW).
- ☐ REMOVE OEM DEFROST DUCT ASM.

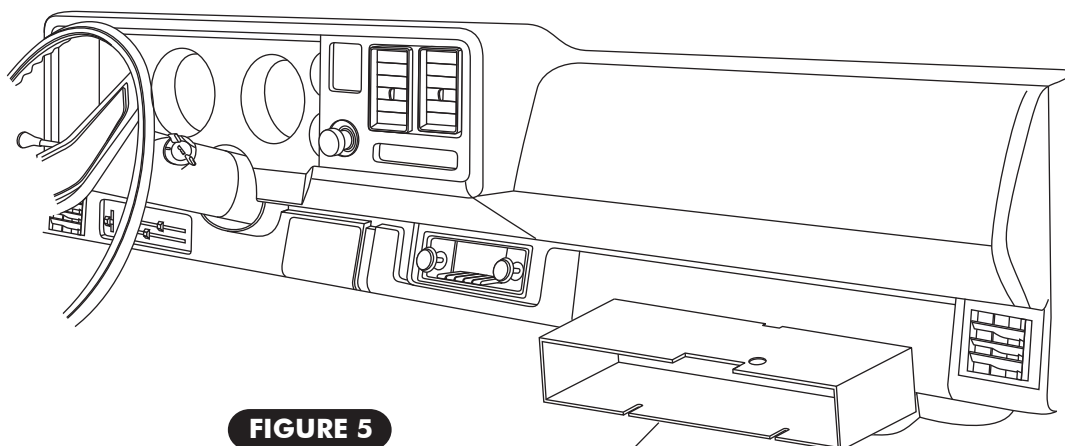


FIGURE 5

GLOVE BOX

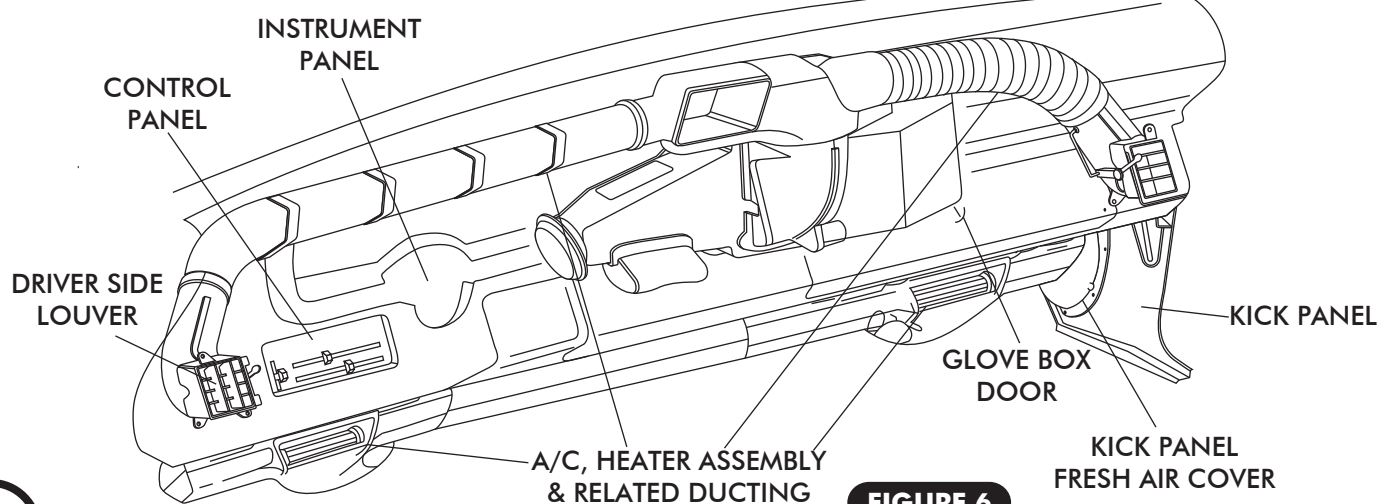


FIGURE 6



PASSENGER SIDE KICK PANEL AND FRESH AIR COVER MODIFICATION

- ☐ REMOVE KICK PANEL BY REMOVING THE (4) OEM SCREWS (SEE FIGURE 7, BELOW).
- ☐ PLACE TEMPLATE ON KICK PANEL AS SHOWN IN FIGURE 7, BELOW.
- ☐ CUT FRESH AIR DOOR ASM USING THE TEMPLATE PROVIDED ON PAGE 25 (SEE FIGURE 7a, BELOW).
- ☐ CUT AND TRIM PASSENGER SIDE KICK PANEL FRESH AIR COVER AS SHOWN IN FIGURE 7a, BELOW.

NOTE: FIT AND TRIM IF NEEDED.

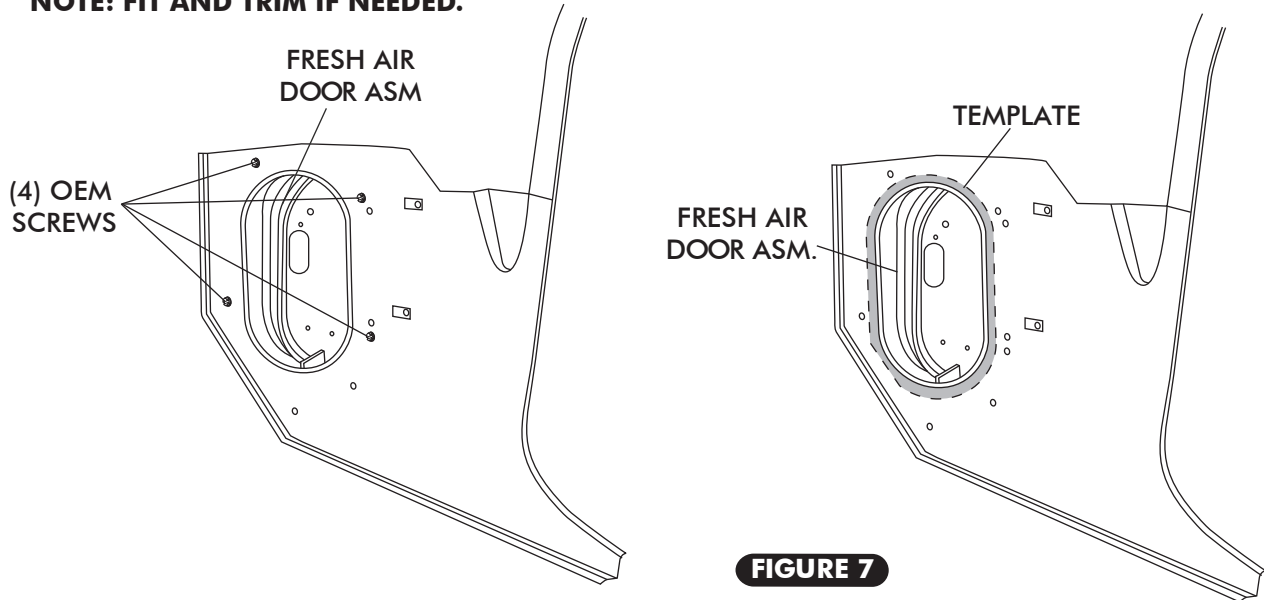


FIGURE 7

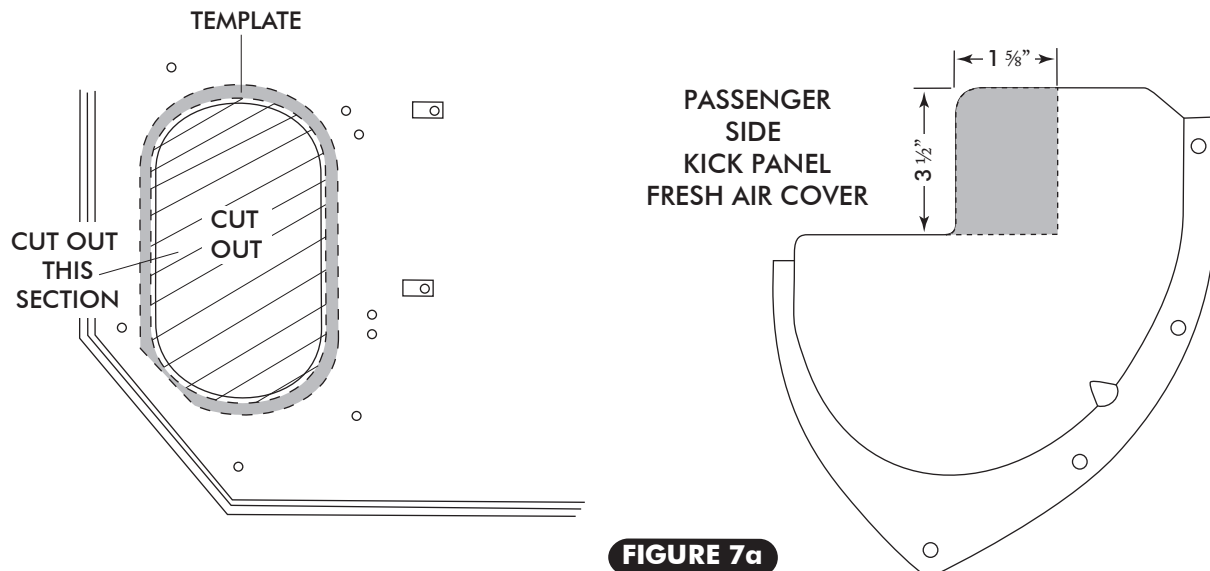


FIGURE 7a



DEFROST DUCT INSTALLATION

- INSTALL THE DEFROST DUCTS UNDER THE DASH ON THE OEM DEFROST DUCT MOUNTING FLANGE AND SECURE USING 10/24 x 3/8" PAN HEAD SCREW AND 10/24 NUT w/ STAR WASHER AS SHOWN IN FIGURE 8, BELOW.

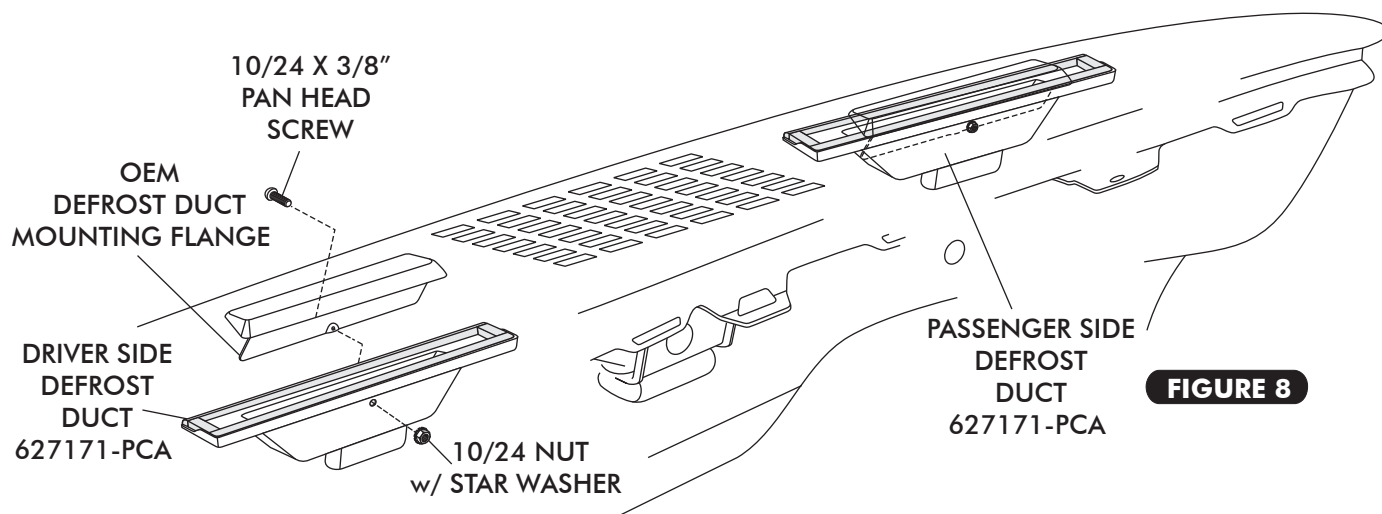


FIGURE 8

HOSE ADAPTER INSTALLATION

- INSTALL S-CLIPS ON THE HOSE ADAPTERS AS SHOWN IN FIGURE 9, BELOW.
- INSTALL THE DRIVER & PASSENGER SIDE HOSE ADAPTERS ON THE OEM LOUVERS (SEE FIGURE 9, BELOW).

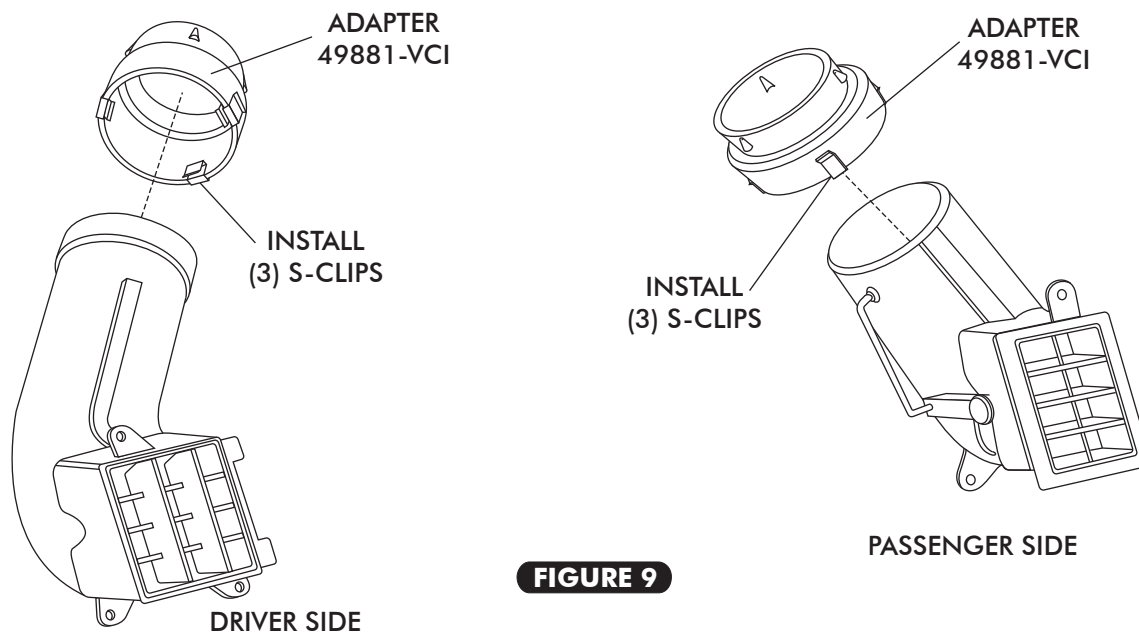


FIGURE 9



FRESH AIR COVER AND HEATER COVER ASM INSTALLATION

- ☐ USING HTR FIREWALL COVER ASM AS A TEMPLATE, MARK AND DRILL (2) 5/16" HOLES (SEE FIGURE 10, BELOW).
NOTE: MAKE SURE TO CENTER HEATER FIREWALL COVER ASM HOLE WITH OEM HOLE ON FIREWALL BEFORE DRILLING.
- ☐ ENLARGE (2) OEM HOLES IN FIREWALL TO 5/16" (SEE FIGURE 10, BELOW).
- ☐ INSTALL (4) GROMMETS IN FRESH AIR CAP (SEE FIGURE 10, BELOW).
- ☐ APPLY A 1/4" BEAD OF SILICONE AROUND THE BACK SIDE OF THE FRESH AIR CAP AS SHOWN IN FIGURE 10, BELOW. ATTACH FRESH AIR CAP TO FIREWALL USING A 1/4-20 x 1 1/2" BOLT AND WASHER (SEE FIGURE 10, BELOW). **NOTE: FRESH AIR CAP INSTALLS ON ENGINE SIDE OF FIREWALL.**
- ☐ INSTALL PLUGS IN FIREWALL (SEE FIGURE 10, BELOW).

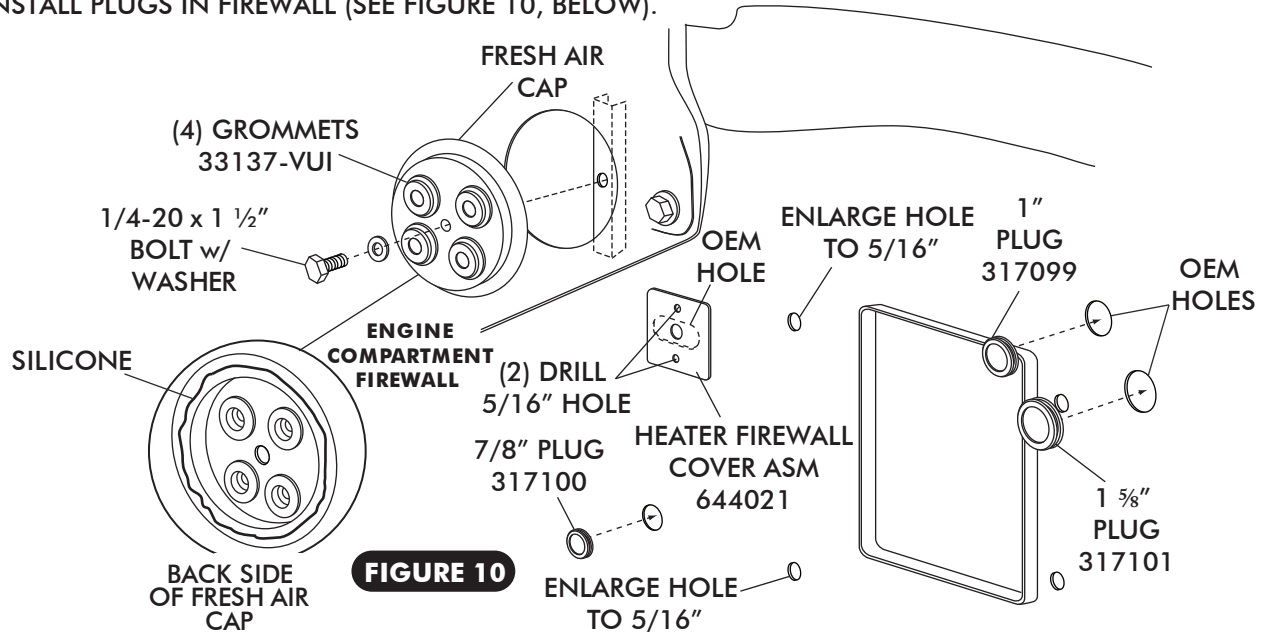


FIGURE 10

KICK PANEL FRESH AIR CAP INSTALLATION

- ☐ INSTALL (4) GROMMETS IN KICK PANEL FRESH AIR CAP (SEE FIGURE 11a, BELOW).
- ☐ ROUTE A/C AND HEATER HOSE THROUGH FRESH AIR CAP AND KICK PANEL FRESH AIR CAP AS SHOWN IN FIGURE 11 AND 11b, BELOW.
- ☐ APPLY A 1/4" BEAD OF SILICONE AROUND THE BACK SIDE OF THE KICK PANEL FRESH AIR CAP AS SHOWN IN FIGURE 11a, BELOW.
- ☐ SECURE KICK PANEL FRESH AIR CAP USING OEM SCREWS, AS SHOWN IN FIGURE 11b, BELOW.

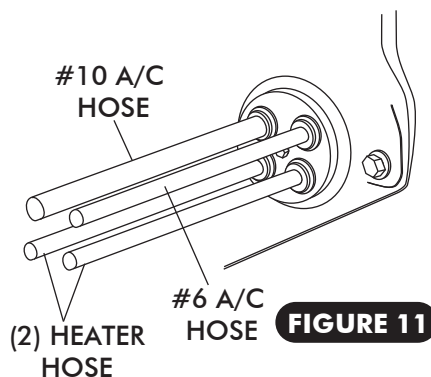


FIGURE 11

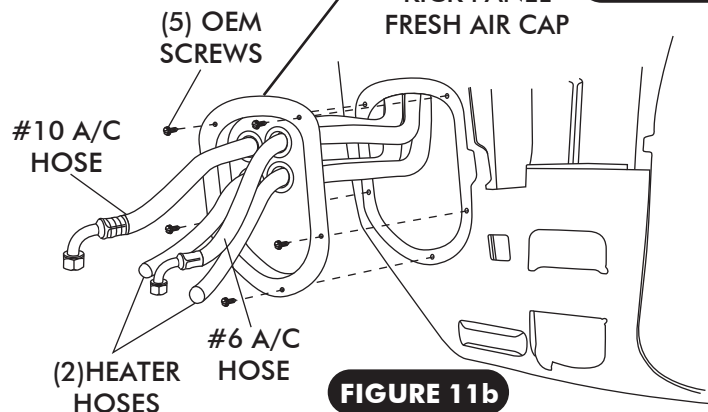


FIGURE 11b



FIREWALL COVER INSTALLATION

- ☐ ENLARGE (2) OEM FIREWALL HOLES TO 5/16" (SEE FIGURE 12, BELOW).
- ☐ APPLY A 1/4" BEAD OF SILICONE AROUND THE BACK SIDE OF THE FIREWALL COVER (SEE FIGURE 12, BELOW).
- ☐ FROM INSIDE THE CAR, INSTALL THE FIREWALL COVER ON THE FIREWALL (SEE FIGURE 12, BELOW). FROM THE ENGINE COMPARTMENT, SECURE THE FIREWALL COVER TO THE FIREWALL USING (3) 1/4-20 x 1" HEX BOLTS WITH WASHERS (SEE FIGURE 12, BELOW).
- ☐ APPLY A 1/4" BEAD OF SILICONE AROUND THE BACK SIDE OF THE HEATER FIREWALL COVER BRACKET AS SHOWN IN FIGURE 12, BELOW.
- ☐ FROM INSIDE THE CAR, INSTALL HEATER FIREWALL COVER ASM ON FIREWALL (SEE FIGURE 12, BELOW). FROM THE ENGINE COMPARTMENT, SECURE HEATER FIREWALL COVER ASM TO FIREWALL USING (2) 1/4-20 x 1/2" HEX BOLTS WITH WASHERS (SEE FIGURE 12, BELOW).

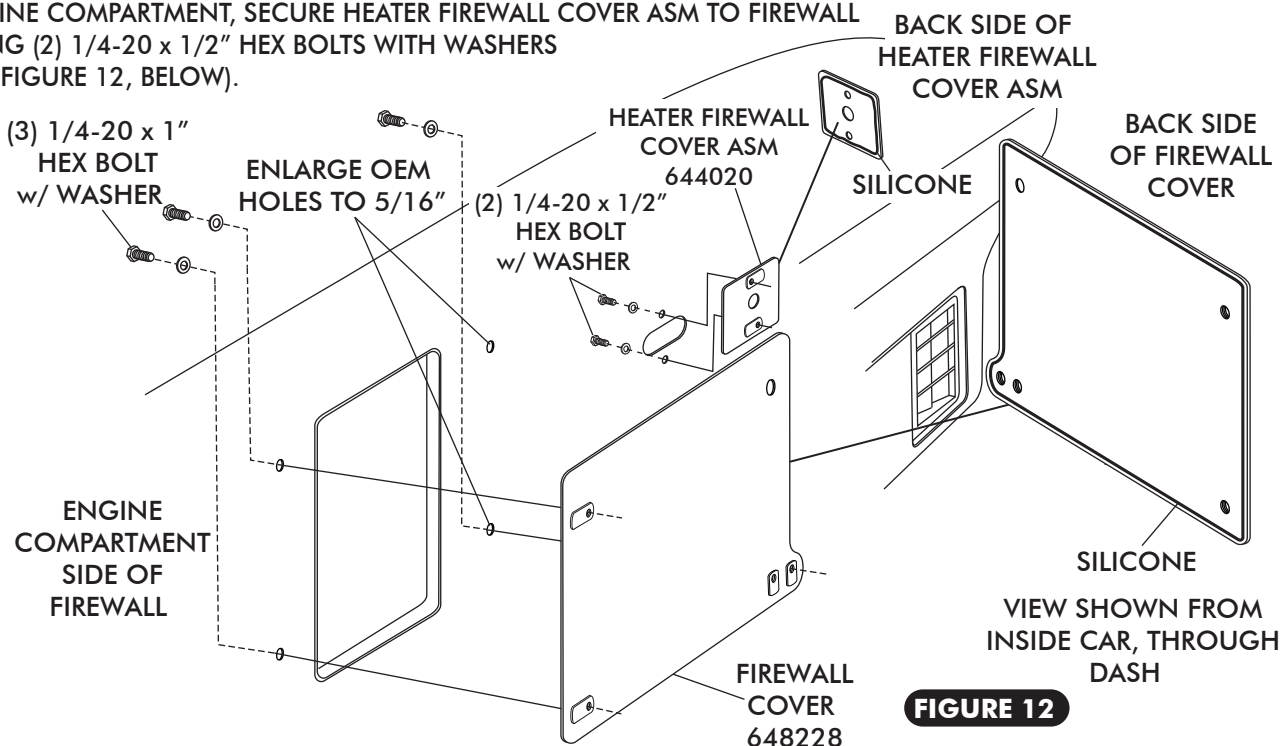


FIGURE 12

EVAPORATOR BRACKET AND A/C & HEATER HOSE INSTALLATION

- ☐ ON A WORKBENCH, INSTALL EVAPORATOR REAR BRACKET AND A/C & HEATER HOSE WITH PROPERLY LUBRICATED O-RINGS (SEE FIGURE 14, PAGE 12, AND FIGURE 15a, PAGE 13).
- ☐ INSTALL FRONT MOUNTING BRACKET ON EVAPORATOR USING (2) 1/4-20 x 1/2" HEX BOLTS, AND TIGHTEN AS SHOWN IN FIGURE 13, BELOW.

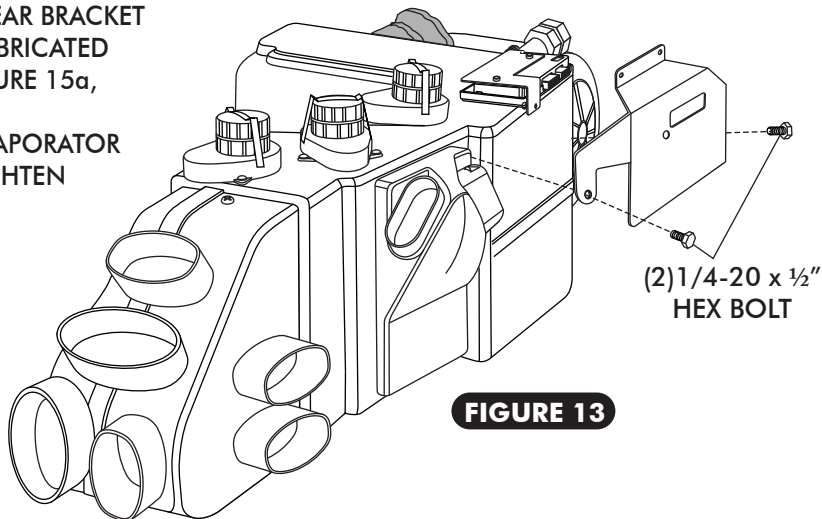


FIGURE 13



EVAPORATOR BRACKET AND HEATER FITTINGS INSTALLATION CONT. —

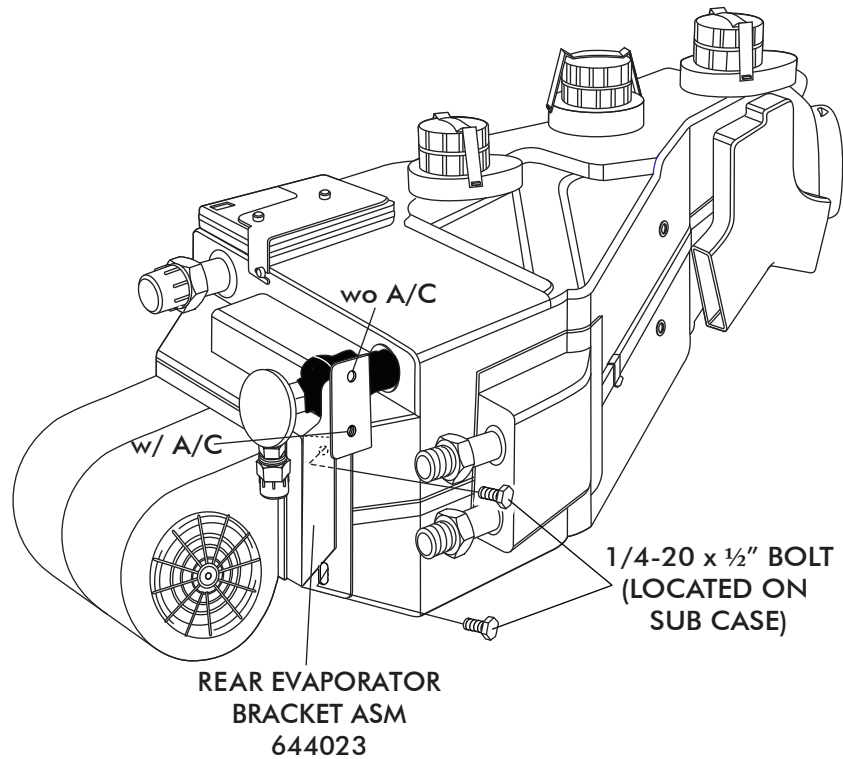
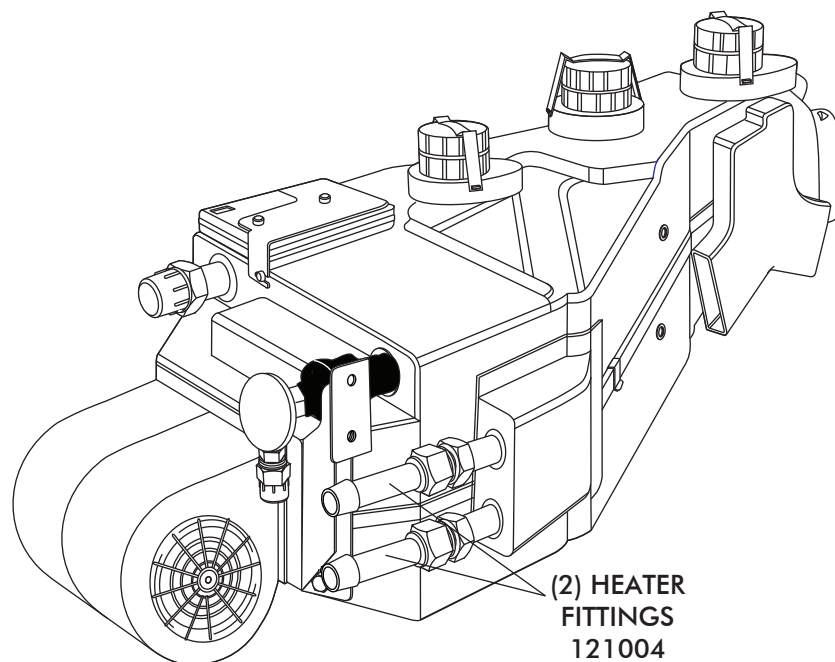


FIGURE 14





EVAPORATOR INSTALLATION

- LIFT EVAPORATOR UNIT UP UNDER THE DASHBOARD (SEE FIGURE 15, BELOW). SECURE LOOSELY TO THE FIREWALL FROM THE ENGINE COMPARTMENT SIDE USING A 1/4-20 x 1" BOLT AND WASHER (SEE FIGURE 15, BELOW).
- USING (2) #14 x 3/4" SHEET METAL SCREWS, SECURE THE FRONT EVAPORATOR MOUNTING BRACKET TO THE INNER COWL. (SEE FIGURE 15, BELOW).
- VERIFY THAT EVAPORATOR UNIT IS LEVEL AND SQUARE TO THE DASH, AND THEN TIGHTEN ALL MOUNTING BOLTS
(NOTE: TIGHTEN THE BOLT ON FIREWALL FIRST, AND THEN THE FRONT MOUNTING BRACKET SCREWS.)

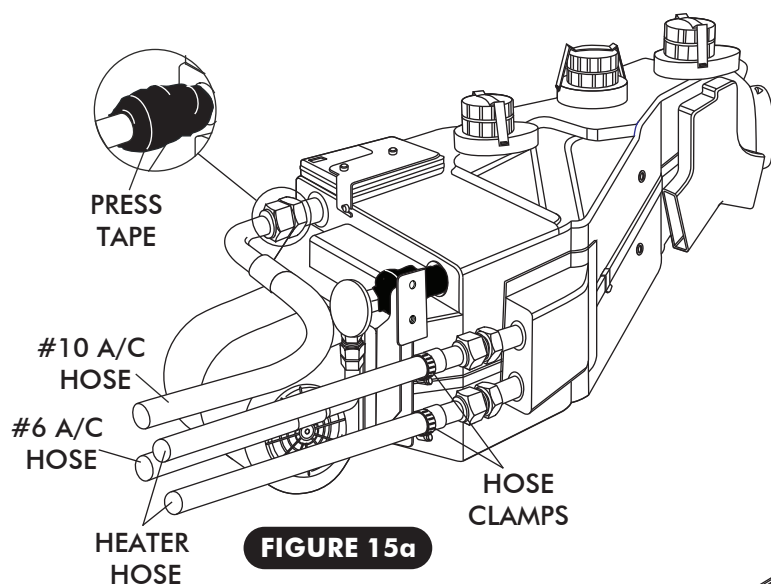


FIGURE 15a

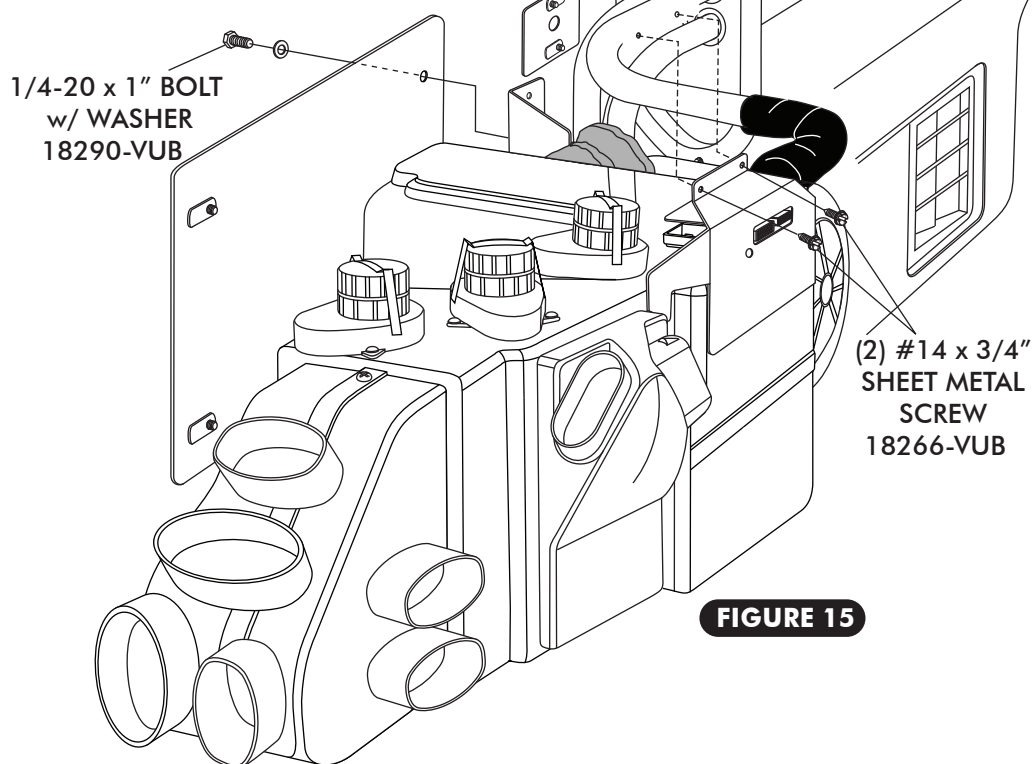


FIGURE 15



CENTER LOUVER INSTALLATION

- ☐ INSTALL (2) S-CLIPS ON CENTER LOUVER HOSE ADAPTER (SEE FIGURE 16, BELOW).
- ☐ INSTALL CENTER LOUVER HOSE ADAPTER ON CENTER LOUVER AS SHOWN BELOW.

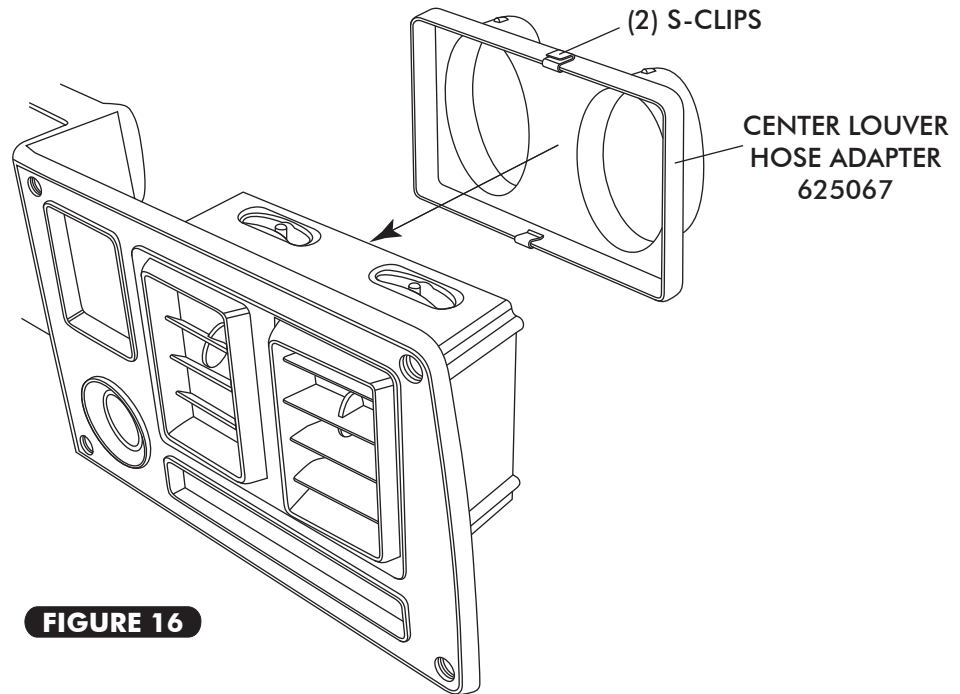


FIGURE 16

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 17, RIGHT).
- ☐ ATTACH THE DRAIN HOSE TO THE BOTTOM OF THE EVAPORATOR UNIT AND ROUTE THROUGH THE FIREWALL (SEE FIGURE 17, RIGHT).

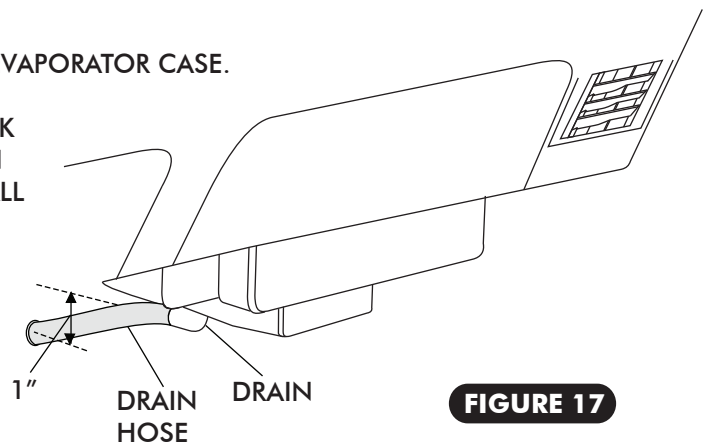


FIGURE 17



UNDER DASH LOUVER DUCT HOSE ADAPTER INSTALLATION

- ☐ INSTALL HOSE ADAPTERS AS SHOWN IN FIGURE 18, BELOW.
- ☐ AFTER THE HOSE ADAPTERS ARE INSTALLED, DRILL (2) 7/64" HOLES IN THE OEM UNDER DASH LOUVER ASSEMBLIES AS SHOWN IN FIGURE 18a, BELOW.

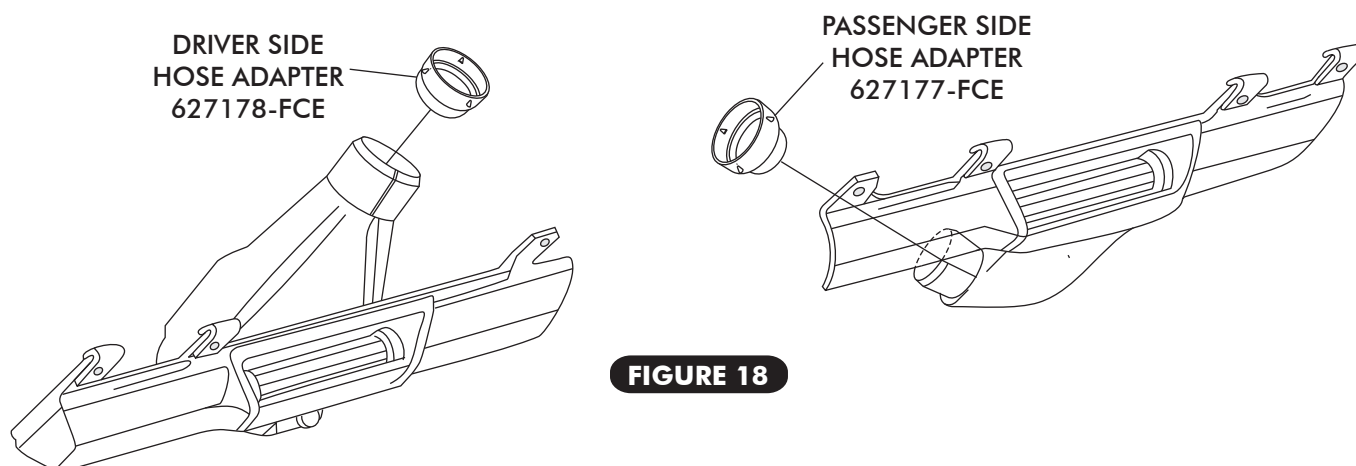


FIGURE 18

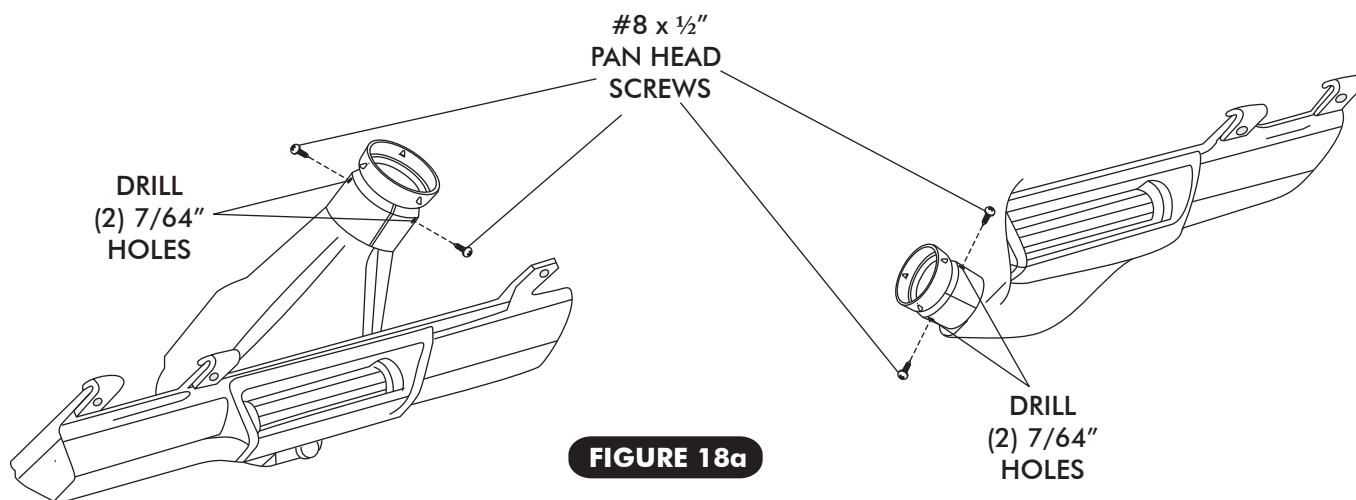


FIGURE 18a



LUBRICATING O-RINGS

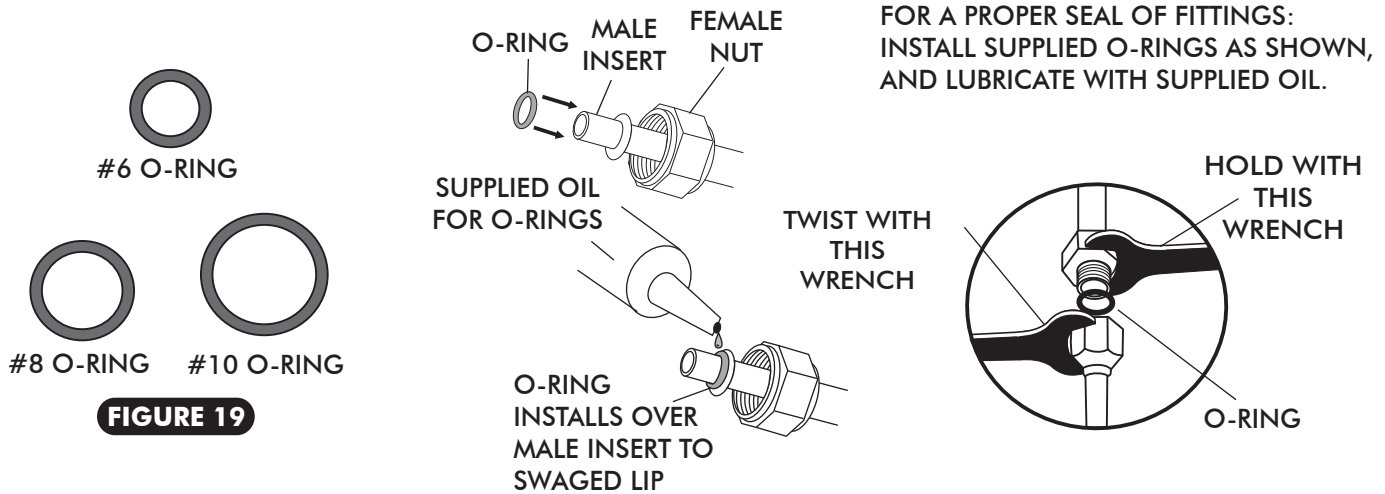


FIGURE 19

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

A/C HOSE INSTALLATION

STANDARD HOSE KIT

- ☐ LOCATE THE #8 COMPRESSOR A/C HOSE. LUBRICATE (2) #8 O-RINGS (SEE FIGURE 19, ABOVE) AND CONNECT THE 90° FEMALE FITTING w/ R134a SERVICE PORT TO THE #8 DISCHARGE PORT ON THE COMPRESSOR. ROUTE THE 45° FEMALE FITTING TO THE #8 CONDENSER HARDLINE COMING THROUGH THE CORE SUPPORT (SEE FIGURE 20, PAGE 17). TIGHTEN EACH FITTING CONNECTION AS SHOWN IN FIGURE 19, ABOVE.
- ☐ LOCATE THE #10 COMPRESSOR A/C HOSE. LUBRICATE (2) #10 O-RINGS (SEE FIGURE 19, ABOVE) AND CONNECT THE #10 135° FEMALE FITTING w/ R134a SERVICE PORT TO THE #10 SUCTION PORT ON THE COMPRESSOR. ROUTE THE 90° FEMALE FITTING TO THE #10 EVAPORATOR (SEE FIGURE 15a, PAGE 13, AND FIGURE 20 PAGE 17). TIGHTEN EACH FITTING CONNECTION AS SHOWN IN FIGURE 19, ABOVE.
- ☐ LOCATE THE #6 EVAPORATOR A/C HOSE. LUBRICATE (2) #6 O-RINGS (SEE FIGURE 19, ABOVE) AND CONNECT THE 90° FEMALE FITTING TO THE #6 HARDLINE COMING THROUGH THE CORE SUPPORT FROM THE DRIER. ROUTE THE 90° FEMALE FITTING TO THE #6 EVAPORATOR (SEE FIGURE 15a, PAGE 13, AND FIGURE 20, PAGE 17). TIGHTEN EACH FITTING CONNECTION AS SHOWN IN FIGURE 19, ABOVE.

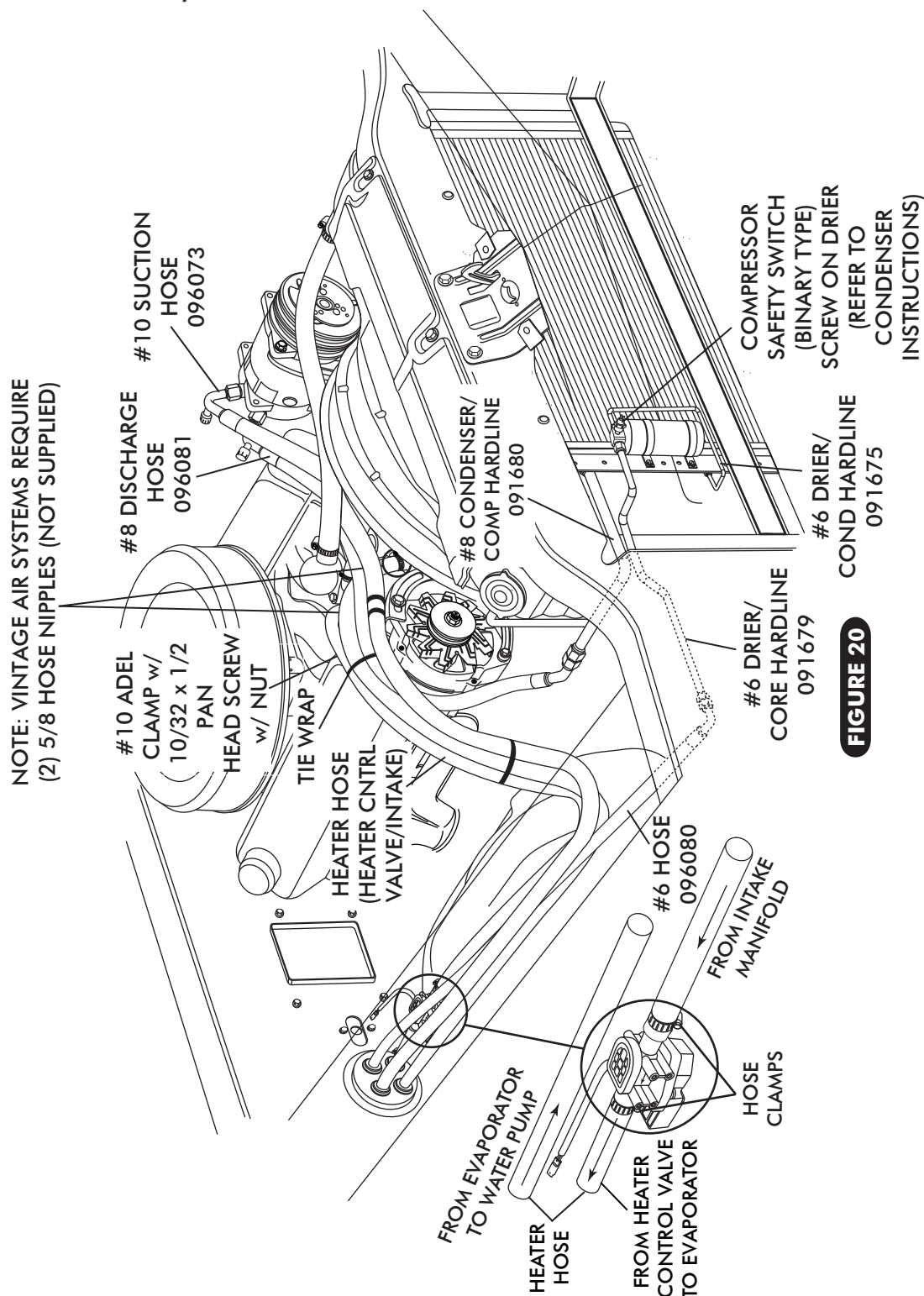
MODIFIED A/C HOSE KIT

- ☐ REFER TO SEPARATE INSTRUCTIONS INCLUDED WITH THE MODIFIED HOSE KIT.

A/C & HEATER HOSE ROUTING

HEATER HOSE & HEATER CONTROL VALVE INSTALLATION

- ☐
ROUTE A PIECE OF HEATER HOSE FROM THE WATER PUMP TO THE TOP HEATER FITTING OF THE HEATER CORE AS SHOWN IN FIGURE 15a, PAGE 13, AND FIGURE 20, BELOW. SECURE USING HOSE CLAMPS.
- ☐
ROUTE A PIECE OF HEATER HOSE FROM THE INTAKE TO THE BOTTOM HEATER FITTING OF THE HEATER CORE AS SHOWN IN FIGURE 15a, PAGE 13, AND FIGURE 20, BELOW. **NOTE: INSTALL HEATER CONTROL VALVE IN LINE WITH INTAKE MANIFOLD (PRESSURE SIDE) HEATER HOSE, AND SECURE USING HOSE CLAMPS AS SHOWN IN FIGURE 20, BELOW. ALSO NOTE PROPER FLOW DIRECTION.**





FINAL STEPS

- ☐ INSTALL DUCT HOSES AS SHOWN IN FIGURE 23, PAGE 19.
- ☐ INSTALL 3/8" ID GROMMET (SEE FIGURE 21a, BELOW).
- ☐ ROUTE A/C WIRES THROUGH 3/8" ID GROMMET AS SHOWN IN FIGURE 21a, BELOW (12 VOLT/GROUND/BINARY SWITCH/HEATER VALVE).
- ☐ INSTALL CONTROL PANEL ASM.
- ☐ PLUG THE WIRING HARNESSES INTO THE ECU MODULE ON THE SUB CASE AS SHOWN IN FIGURE 23, PAGE 19 (WIRE ACCORDING TO WIRING DIAGRAM ON PAGE 20 AND 21).
- ☐ GLOVE BOX INSTALLATION (SEE FIGURE 21, BELOW).
- ☐ REINSTALL KICK PANEL FRESH AIR COVER ON KICK PANEL.
- ☐ INSTALL UNDER DASH LOUVER ASM (SEE FIGURE 22, BELOW).
- ☐ REINSTALL ALL PREVIOUSLY REMOVED ITEMS (BATTERY BOX & BATTERY).
- ☐ 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 THE 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 PERFORM A LEAK CHECK PRIOR TO SERVICING.
- ☐ CHARGE THE SYSTEM TO THE CAPACITIES STATED ON PAGE 4 OF THIS INSTRUCTION MANUAL.
- ☐ SEE OPERATION OF CONTROLS PROCEDURES ON PAGE 22.

GLOVE BOX INSTALLATION

- ☐ INSTALL GLOVE BOX PROVIDED, AND SECURE WITH OEM SCREWS THROUGH OEM HOLES (SEE FIGURE 21).
- ☐ INSTALL GLOVE BOX DOOR.

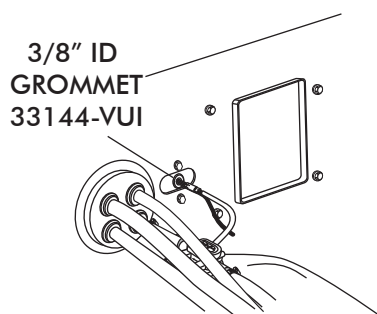


FIGURE 21a

NOTE: IF EQUIPPED WITH THE GLOVE BOX LIGHT AS SHOWN BELOW IN FIGURE 21b, THEN MODIFY THE PLASTIC GLOVE BOX USING THE TEMPLATE PROVIDED ON PAGE 26.

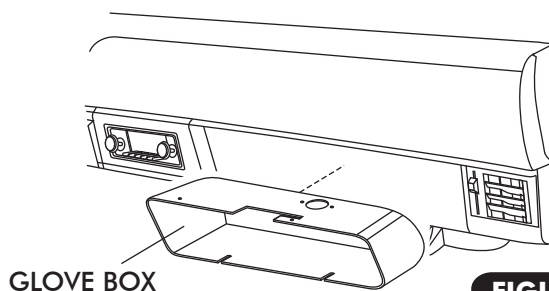


FIGURE 21

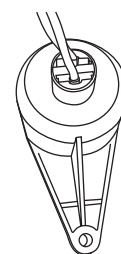


FIGURE 21b

UNDER DASH LOUVER INSTALLATION

- ☐ REINSTALL UNDER DASH LOUVERS USING OEM SCREWS AS SHOWN IN FIGURE 22, BELOW.
- ☐ CONNECT DUCT HOSE TO LOUVERS AS SHOWN IN FIGURE 23, PAGE 19.

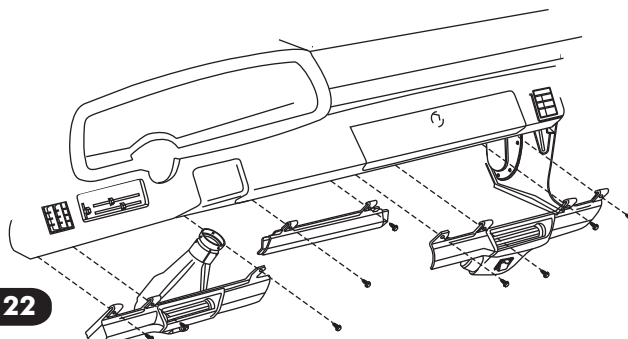


FIGURE 22



CONTROL PANEL & DUCT HOSE ROUTING

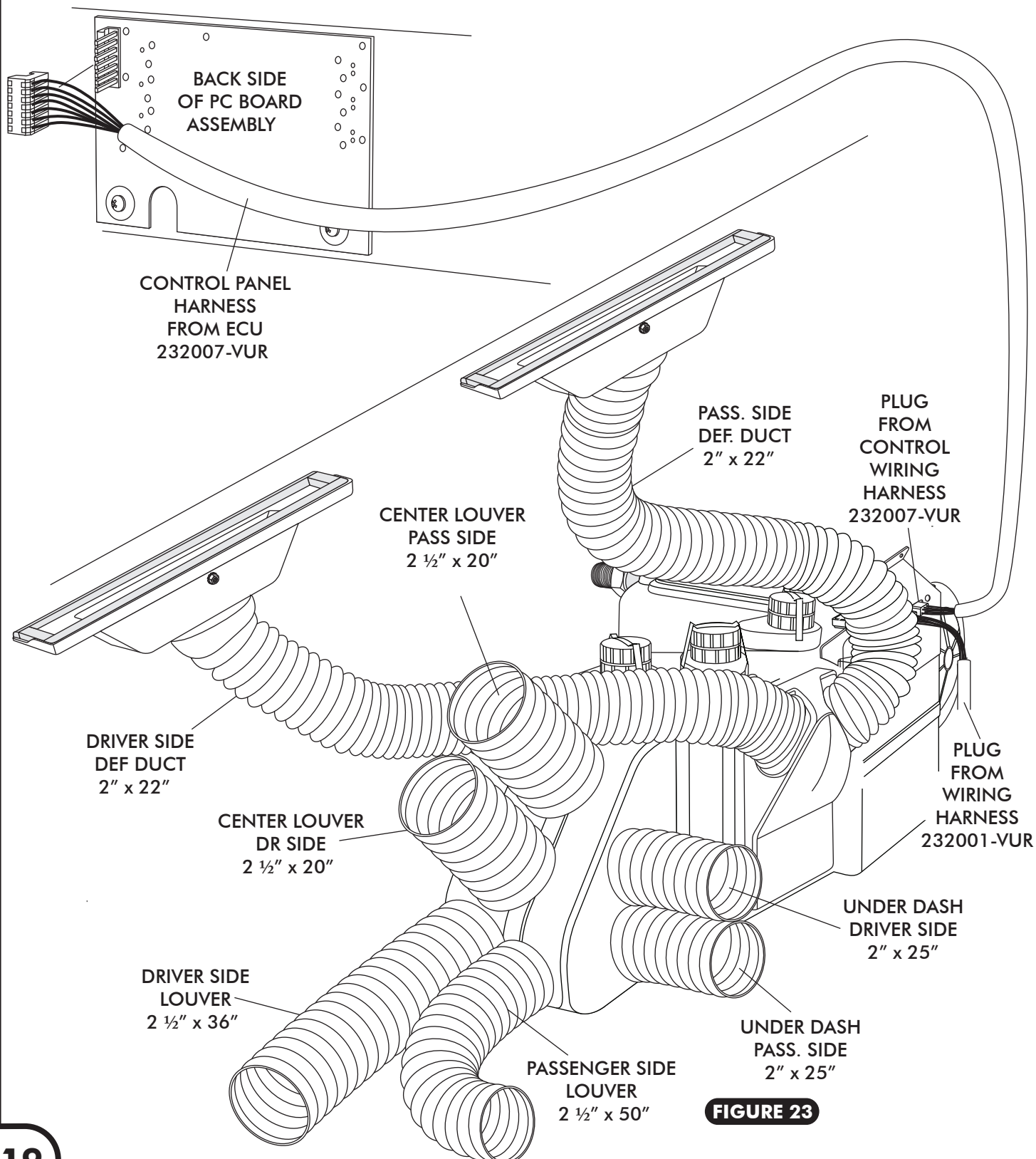
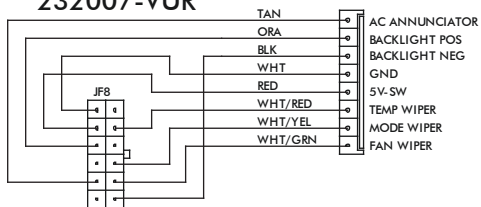


FIGURE 23



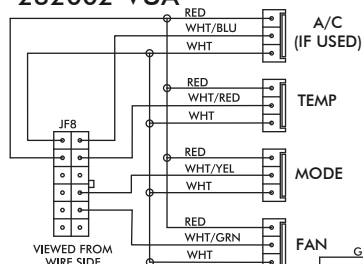
Wiring Diagram

232007-VUR



VIEWED FROM WIRE SIDE

232002-VUA



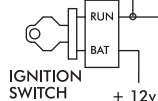
VIEWED FROM WIRE SIDE

PROGRAM

* DASH LAMP (IF USED)

*** WIDE OPEN THROTTLE SWITCH (OPTIONAL)

WHT



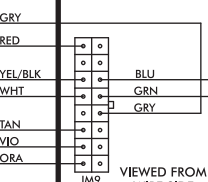
IGNITION SWITCH

** CIRCUIT BREAKER 30 AMP

COMPRESSOR RELAY

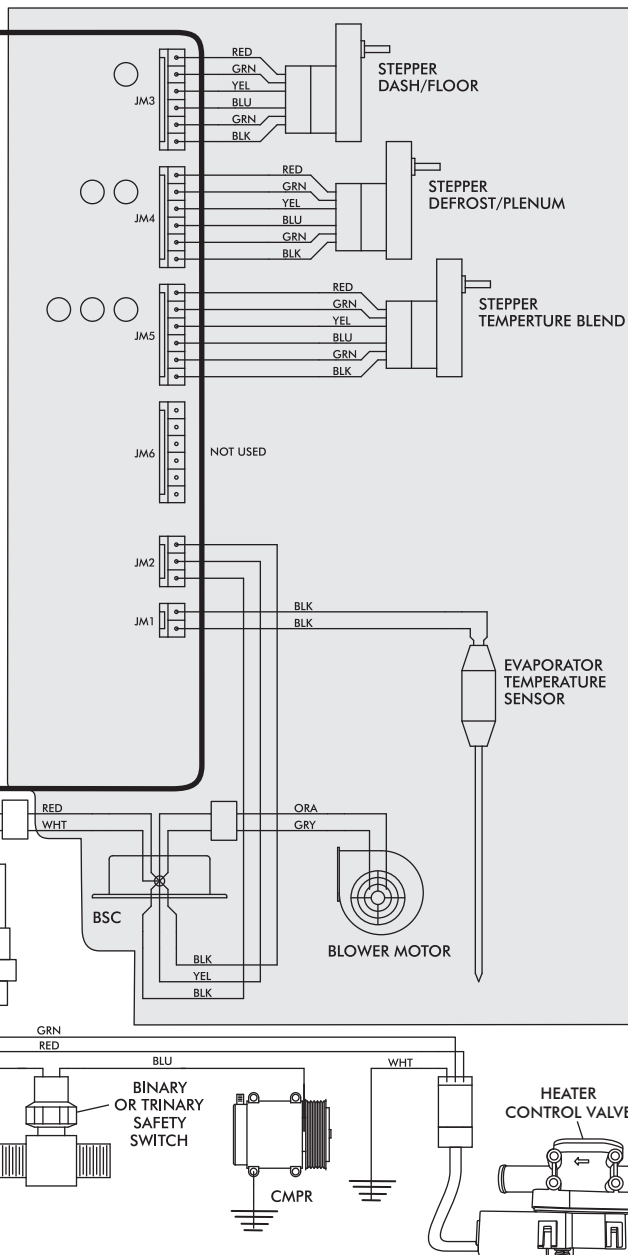
GEN IV ECU

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



VIEWED FROM WIRE SIDE

PRE-WIRED



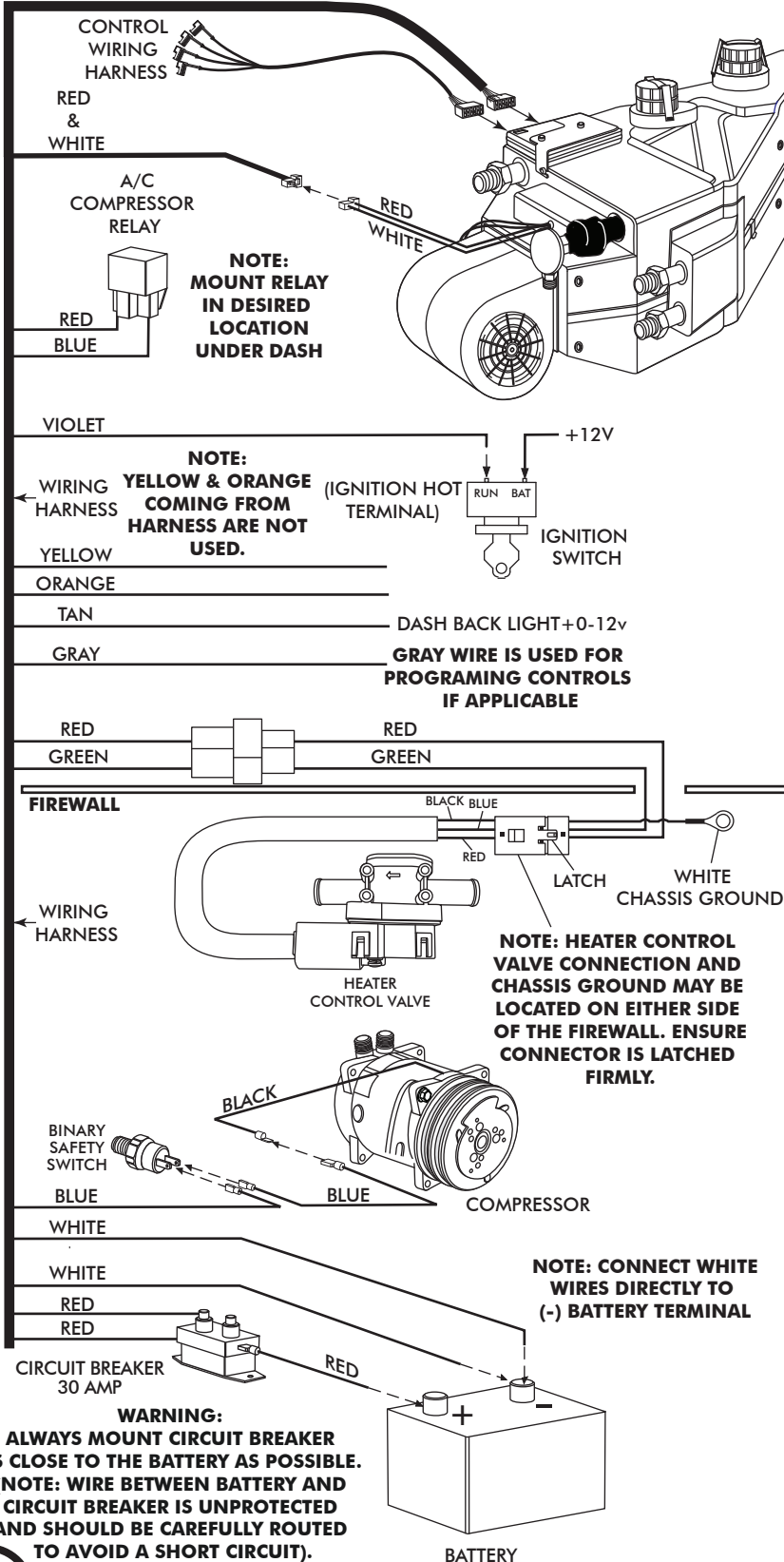
NOTE: = CHASSIS GROUND

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



WIRING
HARNESS

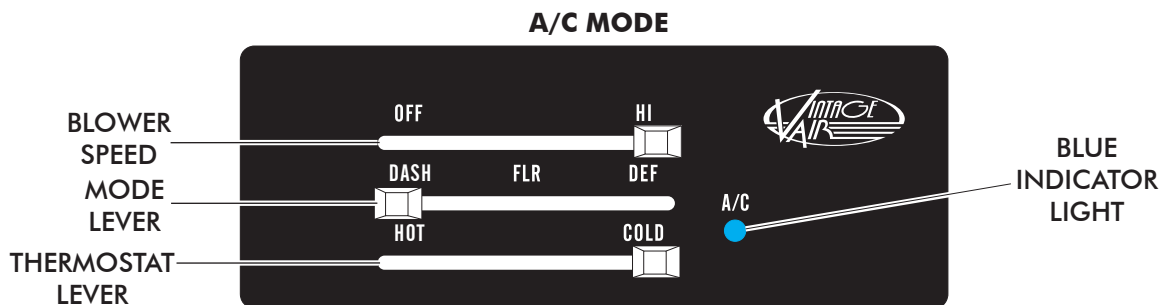
Gen IV Wiring Connection Instruction





OPERATION OF CONTROLS

NOTE: WHEN BATTERY POWER IS FIRST CONNECTED TO THE ECU, THE COMPUTER GOES THROUGH AN INITIALIZATION SEQUENCE. THIS INITIALIZATION MAY TAKE UP TO 30 SECONDS. DURING INITIALIZATION THE BLOWER WILL NOT OPERATE, BUT THE DOORS INSIDE THE UNIT WILL BE OPERATING. A LOW BATTERY OR DISCONNECTING THE BATTERY MAY ALSO TRIGGER A RE-INITIALIZATION. DURING START UP, A LOW BATTERY MAY DROP BELOW 7 VOLTS, TRIGGERING RE-INITIALIZATION.



BLOWER SPEED

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

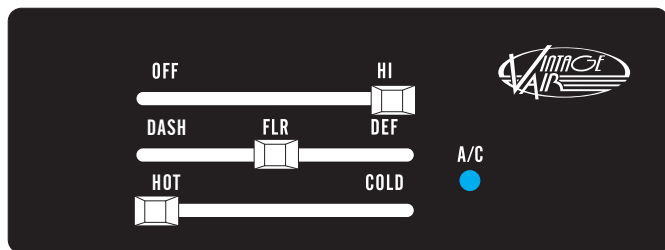
THERMOSTAT LEVER

IN A/C MODE, SLIDE THE THERMOSTAT LEVER ALL THE WAY RIGHT TO THE COLD POSITION, FOR MAXIMUM COOLING. BLUE A/C INDICATOR LIGHT COMES ON ONLY WHEN A/C COMPRESSOR IS ENGAGED (SLIDE LEVER LEFT OR RIGHT TO ADJUST TO DESIRED TEMPERATURE).

MODE LEVER

SLIDE THE LEVER TO THE DASH POSITION.

HEAT MODE



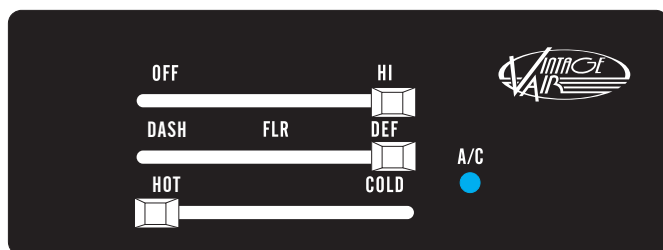
THERMOSTAT LEVER

IN HEAT MODE, SLIDE THE THERMOSTAT LEVER ALL THE WAY TO THE LEFT TO THE HOT POSITION, FOR MAXIMUM HEATING (SLIDE LEVER LEFT OR RIGHT TO ADJUST TO DESIRED TEMPERATURE).

MODE LEVER

SLIDE THE LEVER TO THE FLR POSITION (SLIDE THE LEVER TO THE LEFT OR RIGHT, TO ADJUST TO DESIRED DASH/FLR/DEF LOCATION).

DEFROST MODE



THERMOSTAT LEVER

IN DEF MODE, SLIDE THE THERMOSTAT LEVER ALL THE WAY TO THE LEFT TO THE HOT POSITION, FOR MAXIMUM HEATING (SLIDE LEVER LEFT OR RIGHT TO ADJUST TO DESIRED TEMPERATURE).

MODE LEVER

SLIDE THE LEVER TO THE DEF POSITION.



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.
		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.
			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.	
		Unplug 3-wire BSC control connector from ECU. If blower stays running, BSC is either improperly wired or damaged.	Replace BSC (This will require removal of evaporator from vehicle).	
2.	Compressor will not turn on (All other functions work).	System is not charged.	System must be charged for compressor to engage.	Danger: Never bypass safety switch with engine running. Serious injury can result. 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. Disconnected or faulty thermistor will cause compressor to be disabled.
		System is charged.	Check for faulty A/C potentiometer or associated wiring (Not applicable to 3-pot controls).	
			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.
			Replace relay.	
		Check for faulty A/C relay.		

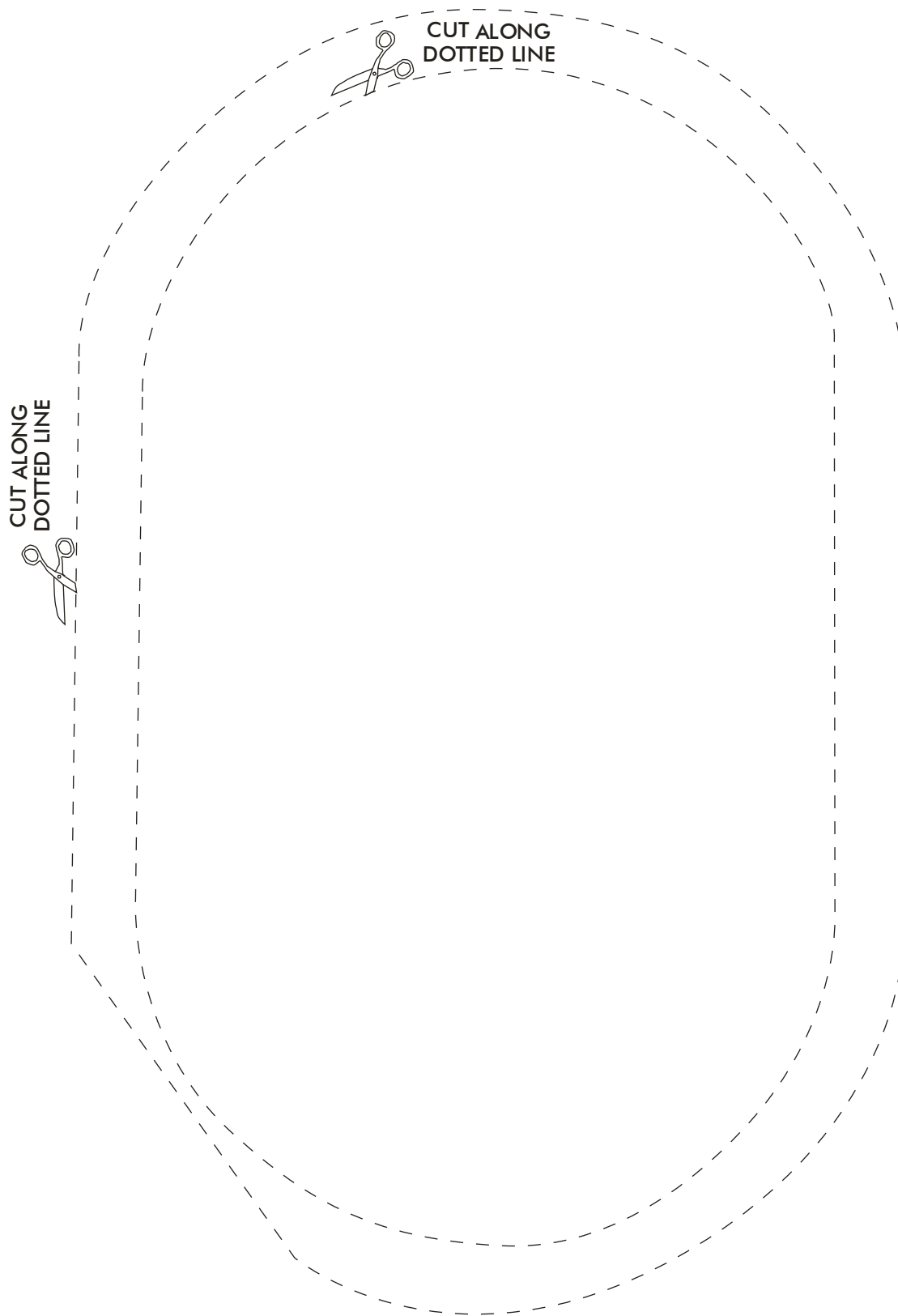


Troubleshooting Guide (Cont.)

Symptom	Condition	Checks	Actions	Notes
4. System will not turn on, or runs intermittently.	Works when engine is not running; shuts off when engine is started (Typically early Gen IV, but possible on all versions).	Noise interference from either ignition or alternator.	Install capacitors on ignition coil and alternator. Ensure good ground at all points. Relocate coil and associated wiring away from ECU and ECU wiring. Check for burned or loose plug wires.	Ignition noise (radiated or conducted) will cause the system to shut down due to high voltage spikes. If this is suspected, check with a quality oscilloscope. Spikes greater than 16V will shut down the ECU. Install a radio capacitor at the positive post of the ignition coil (See radio capacitor installation bulletin). A faulty alternator or worn out battery can also result in this condition.
	Will not turn on under any conditions.	Verify connections on power lead, ignition lead, and both white ground wires.	Check for positive power at heater valve green wire and blower red wire. Check for ground on control head white wire.	
		Verify battery voltage is greater than 10 volts and less than 16.	Verify proper meter function by checking the condition of a known good battery.	
5. Loss of mode door function.	No mode change at all.	Check for damaged mode switch or potentiometer and associated wiring.		Typically caused by evaporator housing installed in a bind in the vehicle. Be sure all mounting locations line up and don't have to be forced into position.
	Partial function of mode doors.	Check for obstructed or binding mode doors. Check for damaged stepper motor or wiring.		
6. Blower turns on and off rapidly.	Battery voltage is at least 12V.	Check for at least 12V at circuit breaker.	Ensure all system grounds and power connections are clean and tight.	System shuts off blower at 10V. Poor connections or weak battery can cause shutdown at up to 11V.
	Battery voltage is less than 12V.	Check for faulty battery or alternator.	Charge battery.	
7. Erratic functions of blower, mode, temp, etc.		Check for damaged switch or pot and associated wiring.	Repair or replace.	
8. When ignition is turned on, blower momentarily comes on, then shuts off. This occurs with the blower switch in the OFF position.		This is an indicator that the system has been reset. Be sure the red power wire is on the battery post, and not on a switched source. Also, if the system is pulled below 7V for even a split second, the system will reset.	Run red power wire directly to battery.	



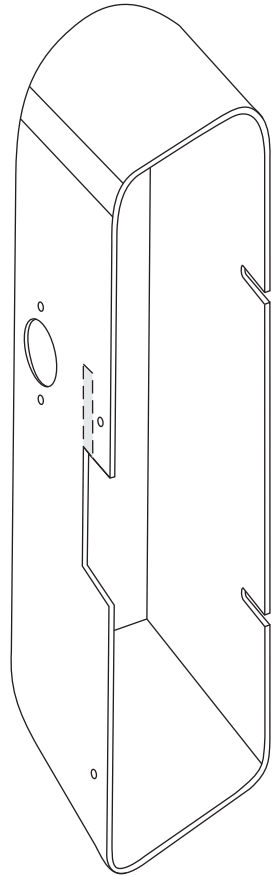
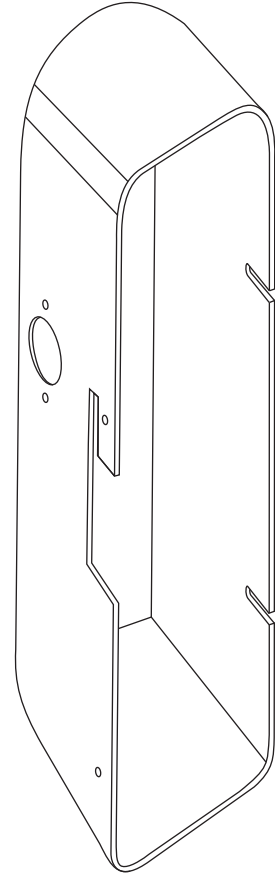
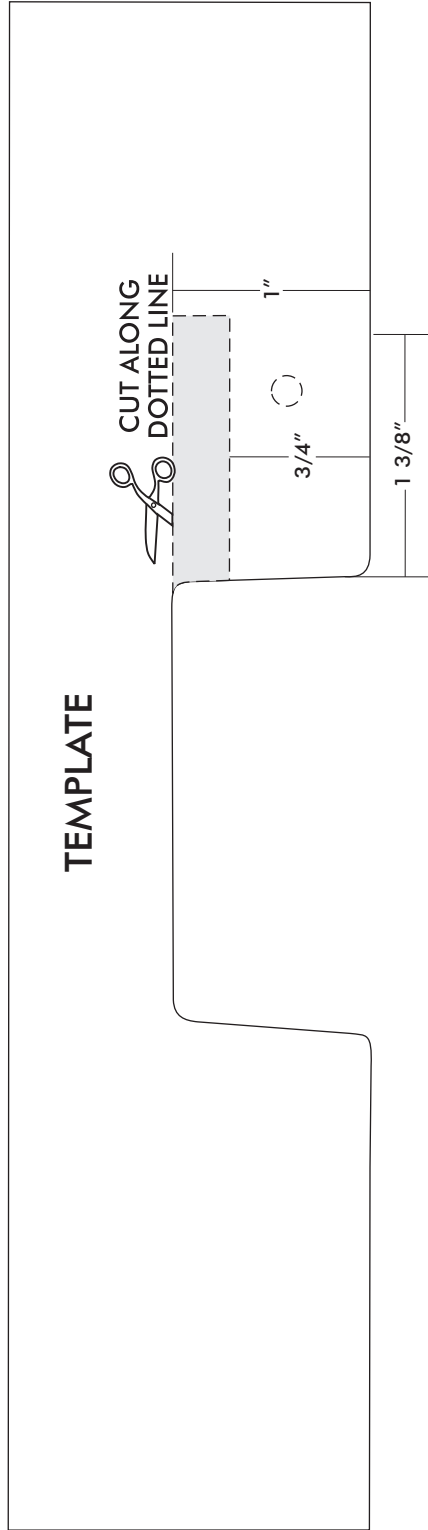
KICK PANEL MODIFICATION TEMPLATE





GLOVE BOX LIGHT TEMPLATE

TEMPLATE





EVAPORATOR KIT PACKING LIST

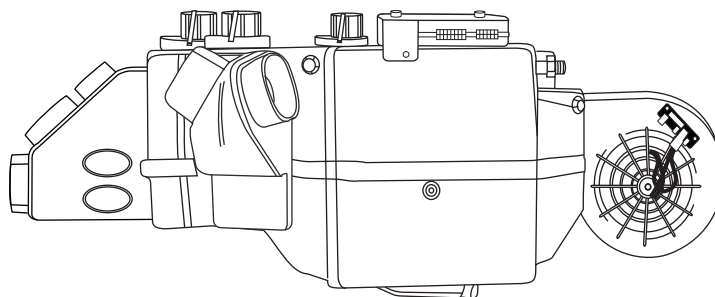
EVAPORATOR KIT
565080

NO.	QTY.	PART NO.	DESCRIPTION
1.	1	762171	6 VENT EVAP. SUB CASE w/ 204 ECU w/ (4) 2 ½"
2.	1	781175	1979-81 CAMARO w/ A/C ACC. KIT

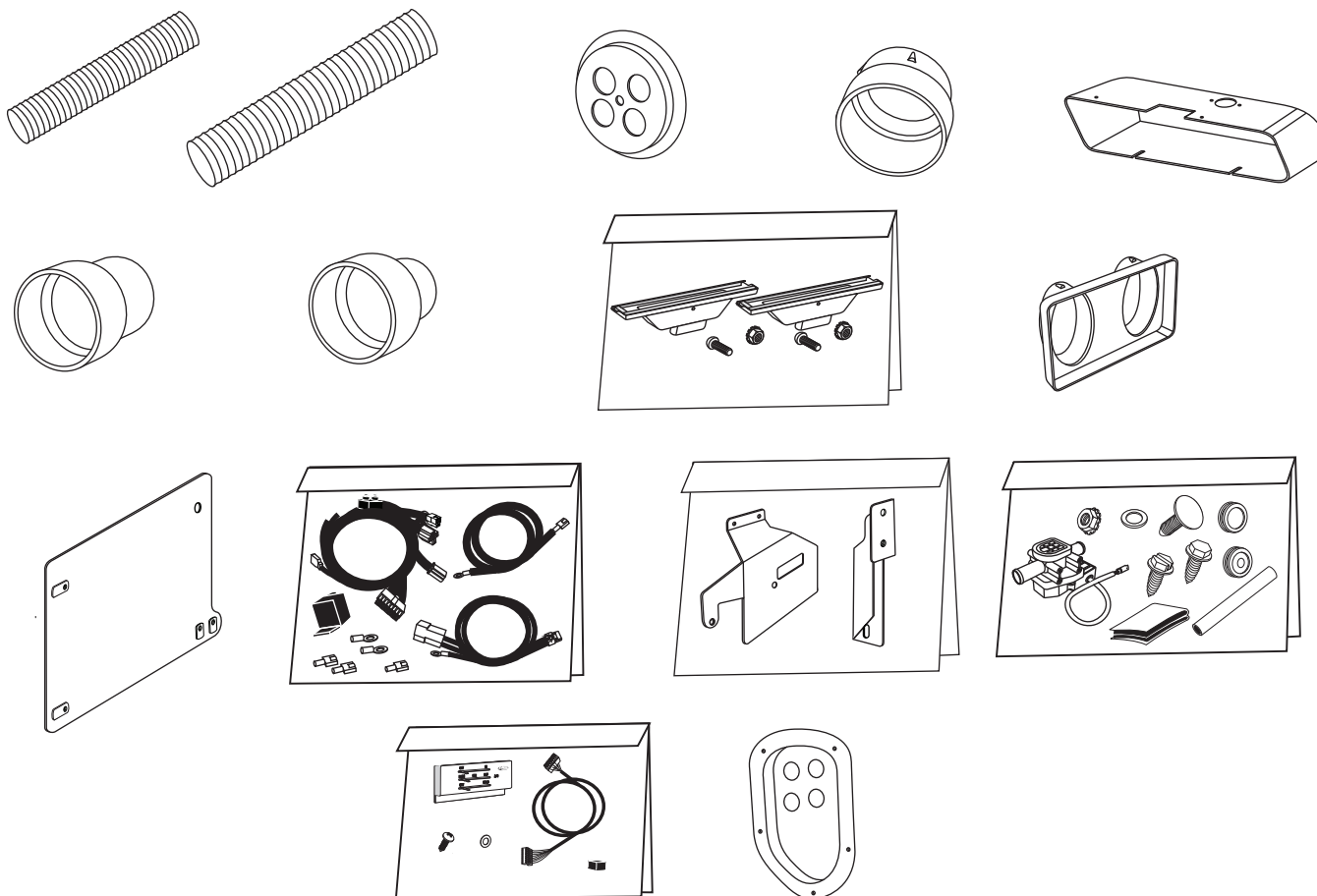
CHECKED BY: _____
PACKED BY: _____
DATE: _____

①

**6 VENT
EVAP SUB CASE
w/ 204 ECU w/ (4) 2 ½"
762171**



②



**ACCESSORY KIT
781175**

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