

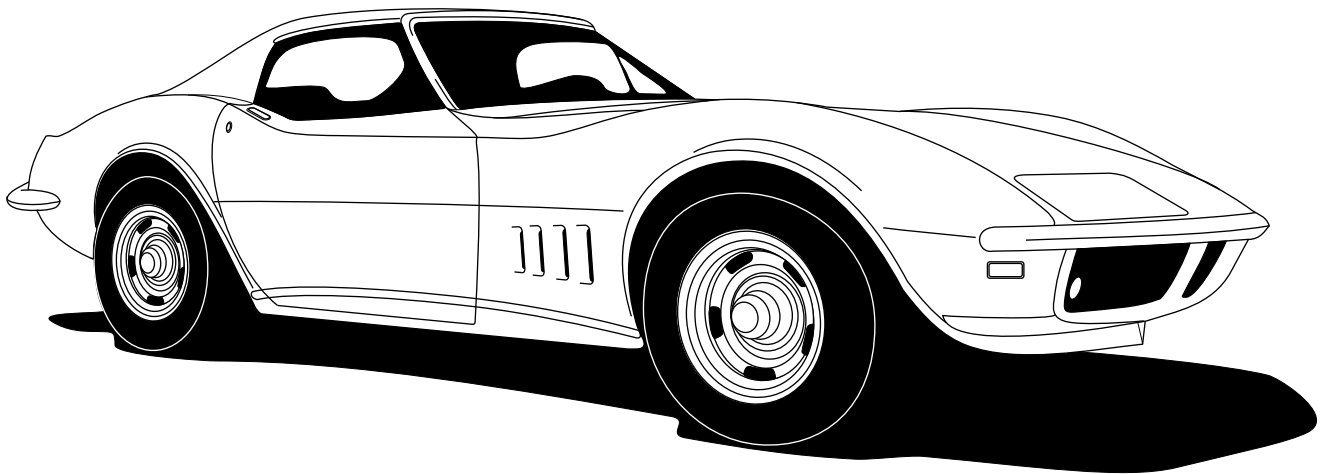


an ISO 9001:2008 Registered Company

1968 CORVETTE

w/ FACTORY AIR

564168



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EVAPORATOR KIT PACKING LIST

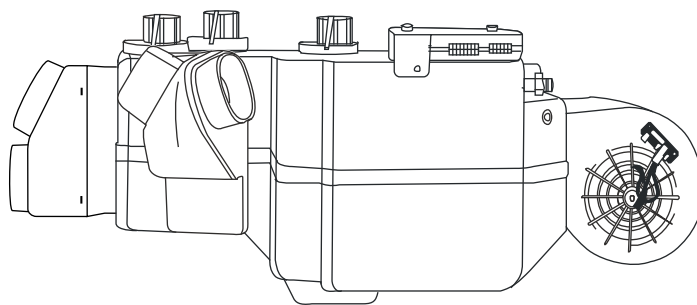
EVAPORATOR KIT
564168

No.	QTY.	PART No.	DESCRIPTION
1.	1	744007	GEN IV 4 VENT w/ 2" EVAP SUBCASE w/ 203 ECU
2.	1	784170	1968 CORVETTE w/ AC ACC. KIT

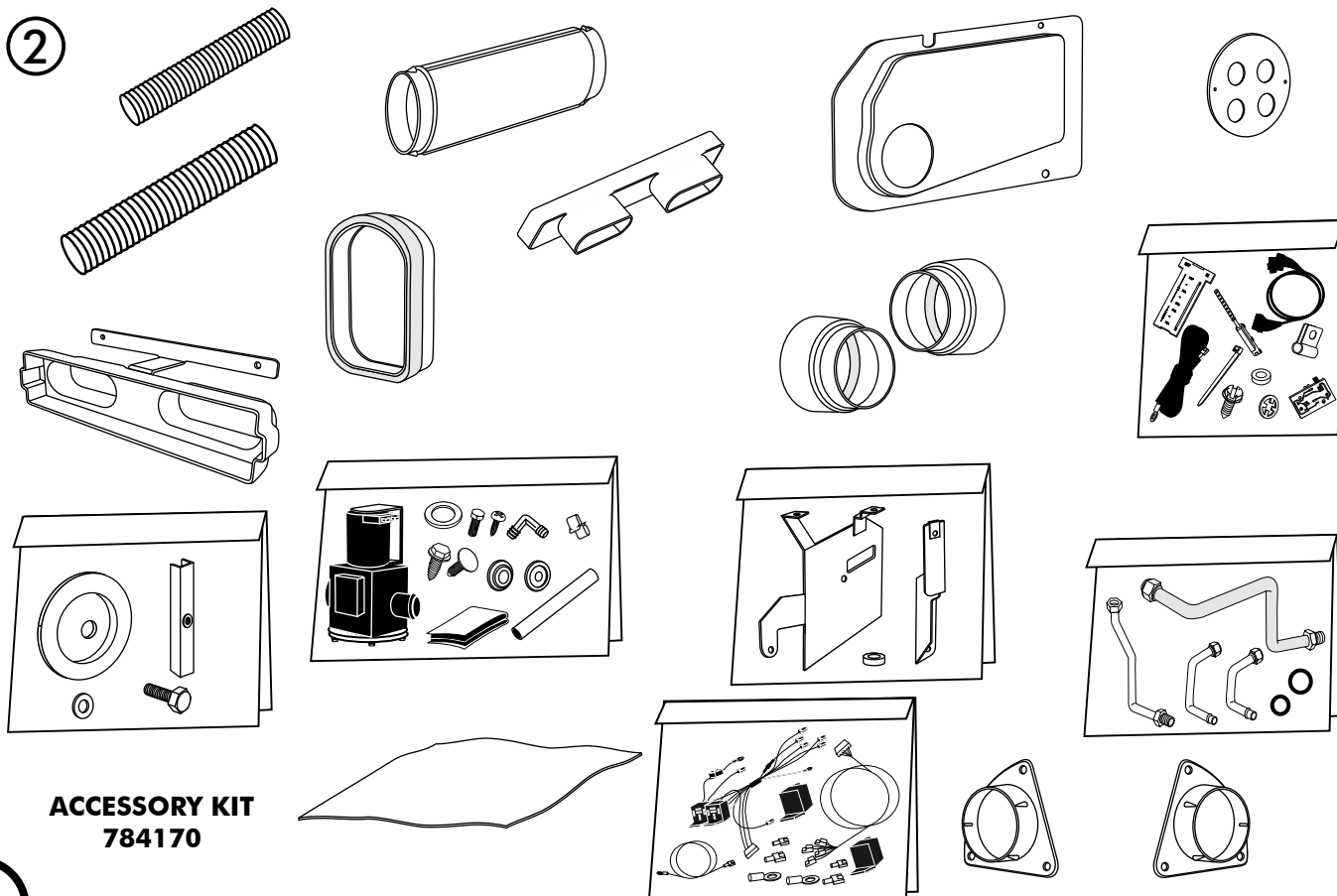
**** BEFORE BEGINNING INSTALLATION OPEN ALL PACKAGES AND CHECK CONTENTS OF SHIPMENT. PLEASE REPORT ANY SHORTAGES DIRECTLY TO VINTAGE AIR WITHIN 15 DAYS. AFTER 15 DAYS, VINTAGE AIR WILL NOT BE RESPONSIBLE FOR MISSING OR DAMAGED ITEMS.**

①

**GEN IV 4 VENT w/ 2"
EVAP. SUB CASE
w/ 203 ECU
744007**



②



**ACCESSORY KIT
784170**



IMPORTANT NOTICE-PLEASE READ

FOR MAXIMUM SYSTEM PERFORMANCE VINTAGE AIR RECOMMENDS THE FOLLOWING:

THIS KIT DOES NOT CONTAIN HEATER HOSE. YOU MUST PURCHASE 8 FEET OF 5/8" DIA. HEATER HOSE FROM VINTAGE AIR (31800-VUD) OR FROM YOUR LOCAL PARTS RETAILER

SAFETY SWITCHES:

YOUR VINTAGE AIR SYSTEM IS EQUIPPED WITH A BINARY PRESSURE SAFETY SWITCH. A BINARY SWITCH (11078-VUS) DISENGAGES THE COMPRESSOR CLUTCH IN CASE OF EXTREME LOW PRESSURE CONDITION (REFRIGERANT LOSS) OR EXCESSIVELY HIGH HEAD PRESSURE (406 PSI), TO PREVENT COMPRESSOR DAMAGE OR HOSE RUPTURE. A TRINARY SWITCH (11076-VUS) COMBINES HI/LO PRESSURE PROTECTION WITH AN ELECTRIC FAN OPERATION SIGNAL AT 254 PSI., AND MAY BE SUBSTITUTED FOR USE WITH ELECTRIC CONDENSER FANS. COMPRESSOR SAFETY SWITCHES ARE EXTREMELY IMPORTANT SINCE AN A/C SYSTEM RELIES ON REFRIGERANT TO CARRY LUBRICATION THROUGH THE SYSTEM.

SERVICE INFO:

ATTENTION: SYSTEM COMPONENTS: THE COMPRESSOR, EVAPORATOR, CONDENSER & DRIER ARE CAPPED. 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 RISKS A DANGER OF FIRE
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 GUIDELINES)

134a SYSTEM

CHARGE WITH 1.8 lbs.
(1lbs. 12ozs) OF REFRIGERANT

LUBRICANT CAPACITIES: NEW COMPRESSOR - NO ADDITIONAL OIL NEEDED



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 TO THE 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 TURNING SOME OF THE VEHICLE'S OTHER SYSTEMS ON AND OFF. MODERN COMPUTER OPERATED EQUIPMENT CAN BE SENSITIVE TO VOLTAGE SPIKES ON THEIR POWER LEADS, WHICH CAN CAUSE UNEXPECTED RESETS, STRANGE BEHAVIOR, AND MAY ALSO CAUSE PERMANENT DAMAGE.

VINTAGE AIR STRIVES TO HARDEN THEIR 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 & TRUCK PARTS SUPPLIERS. THEY TYPICALLY ARE CYLINDRICAL IN SHAPE, A LITTLE OVER AN INCH LONG, A LITTLE OVER A HALF INCH IN DIAMETER, THEY HAVE A SINGLE LEAD COMING FROM ONE END OF THE CYLINDER WITH A TERMINAL ON THE END OF THE WIRE, AND THEY WILL HAVE 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 ANY OTHER AUXILIARY DEVICE. SHORTING TO GROUND OR CONNECTING TO A CONDENSER FAN OR ANY OTHER AUXILIARY DEVICE WILL CAUSE SEVERE DAMAGE TO THE ECU.
- WHEN INSTALLING GROUND LEADS ON GEN IV SYSTEMS, THE BLOWER CONTROL GROUND AND ECU GROUND MUST BE CONNECTED DIRECTLY TO THE NEGATIVE BATTERY POST.
- THE HEATER CONTROL VALVE IS A NORMALLY OPEN VALVE. IT MUST BE CONNECTED TO THE ECU TO BLOCK WATER FLOW IN AC MODE.



INSTALLATION INSTRUCTIONS FOR 1968 CORVETTE

BEFORE STARTING THE AIR CONDITIONER INSTALLATION, CHECK FOR PROPER OPERATION OF ALL COMPONENTS (RADIO, LIGHTS, WIPERS, ETC.). STUDY THE INSTRUCTIONS, ILLUSTRATIONS AND DIAGRAMS. FOR EASE OF INSTALLATION CHECK OFF (✓) EACH PROCEDURE PRIOR TO MOVING ON TO THE NEXT STEP.

ENGINE COMPARTMENT

- ☐ DISCONNECT BATTERY
- ☐ REMOVE HOOD TO EASE INSTALLATION
- ☐ DRAIN RADIATOR
- ☐ EVACUATE THE A/C SYSTEM IF NECESSARY
- ☐ REMOVE OEM CONDENSER AND DRIER
- ☐ REMOVE OEM A/C LINES FROM COMPRESSOR TO EVAPORATOR
- ☐ REMOVE OEM COMPRESSOR AND COMPRESSOR BRACKET

CONDENSER ASSEMBLY & INSTALLATION

- ☐ REFER TO SEPERATE INSTRUCTIONS INCLUDED WITH THE CONDENSER KIT TO INSTALL THE CONDENSER.

COMPRESSOR & BRACKETS

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

PULLEYS

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

PASSENGER COMPARTMENT

- ☐ REMOVE OEM BLOWER ASSEMBLY AND COVER
- ☐ REMOVE OEM EVAPORATOR AND COVER
- ☐ REMOVE OEM A/C HARNESS AND VACUUM HARNESS. (DISCARD)
- ☐ INSTALL 1 3/4 & 1 5/8 PLASTIC PLUGS IN FIREWALL AS SHOWN IN FIGURE 1a

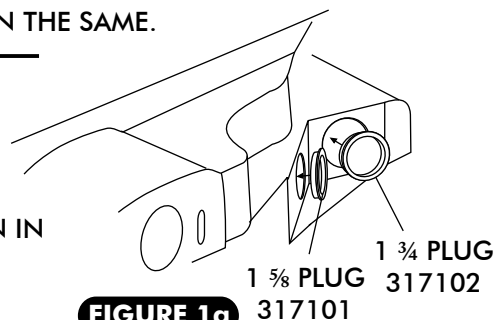


FIGURE 1a

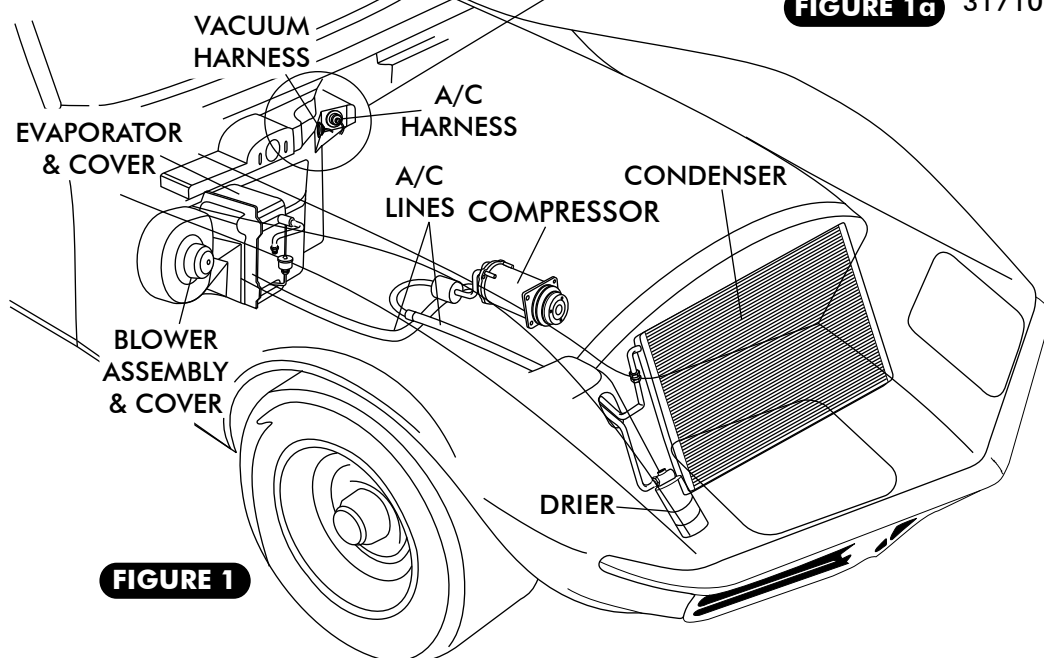


FIGURE 1



PASSENGER COMPARTMENT CONT.

- ☐ REMOVE PASSENGER SIDE DASH
- ☐ DISCONNECT CENTER DASH AND PULL FORWARD TO REMOVE OEM A/C DUCT
- ☐ REMOVE OEM RADIO
- ☐ REMOVE CONTROL PANEL (RETAIN), REFER TO CONTROL PANEL CONVERSION KIT TO ASSEMBLE CONTROL PANEL.
- ☐ DROP STEERING COLUMN
- ☐ DISCONNECT DRIVER SIDE DASH AND PULL FORWARD

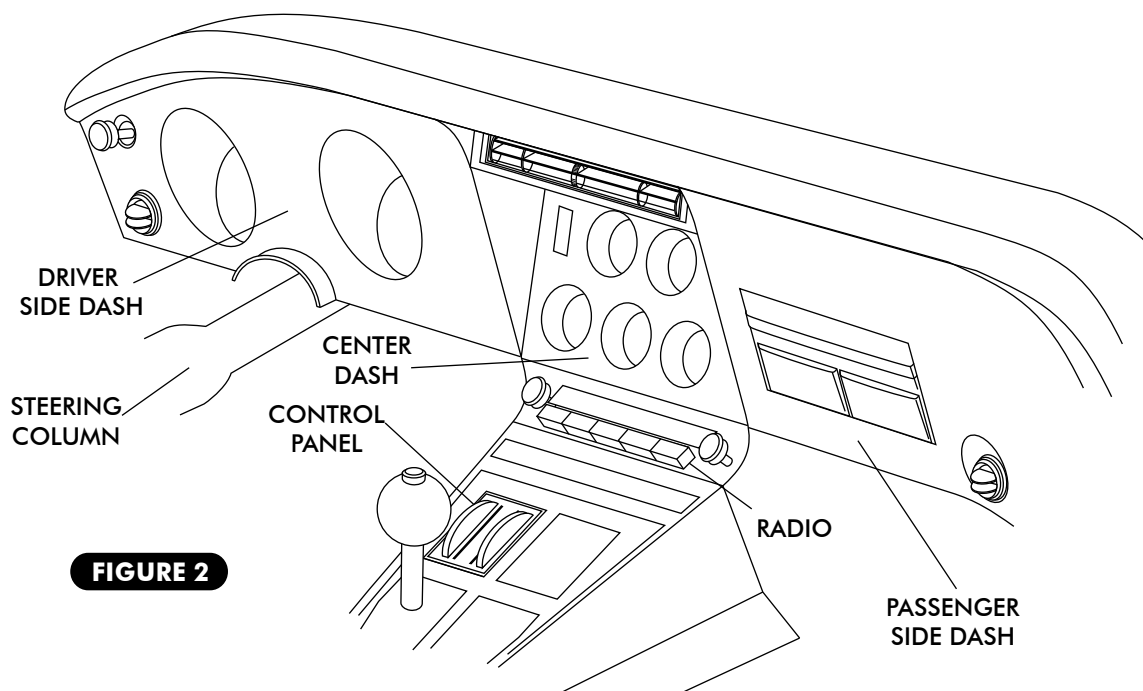


FIGURE 2

- ☐ REMOVE THE PASSENGER SIDE, CENTER, AND DRIVER SIDE A/C DUCTS AS SHOWN IN FIGURE 3 BELOW.

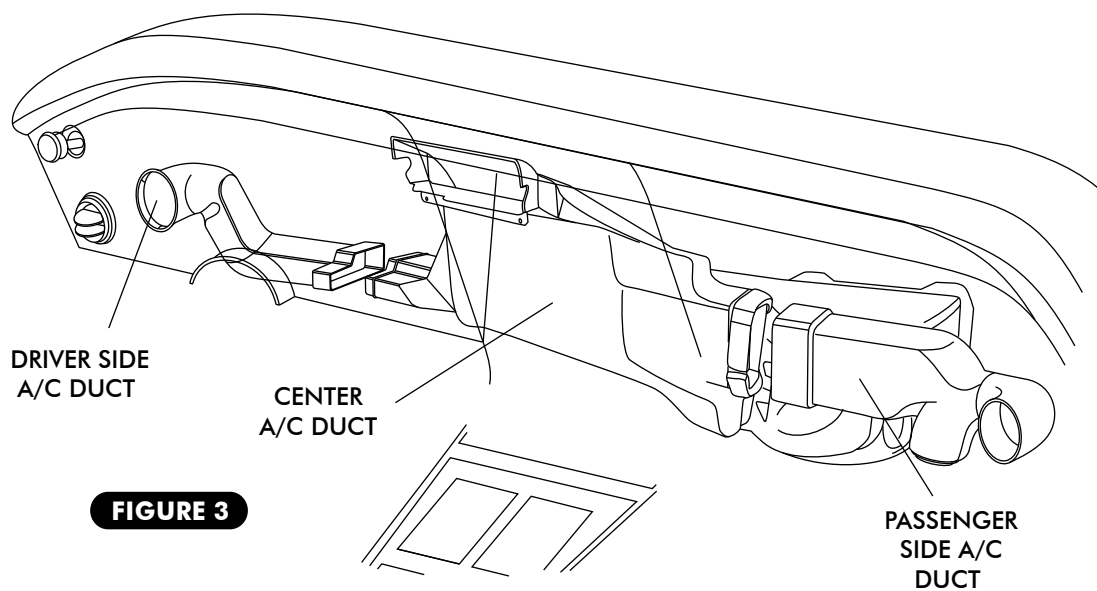
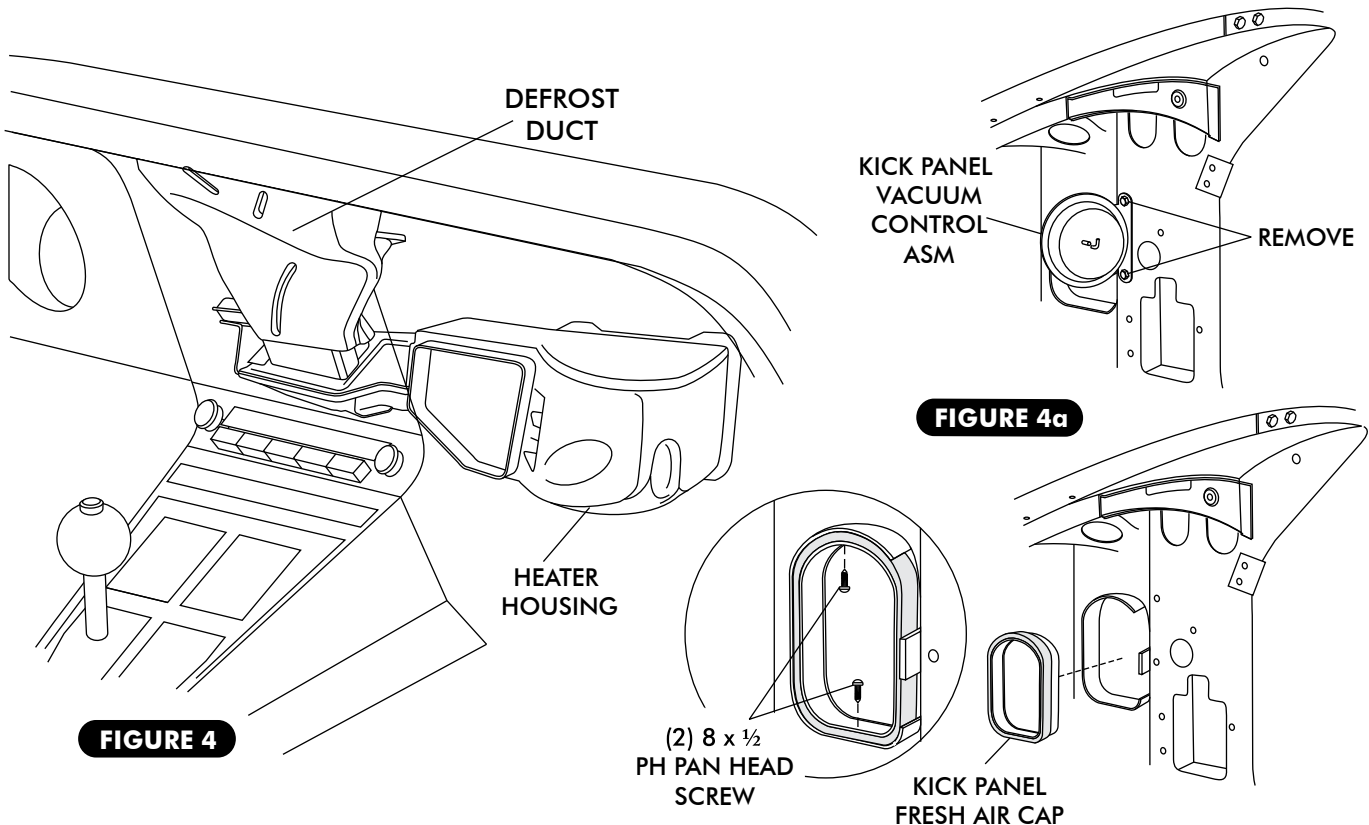


FIGURE 3



- ❑ REMOVE THE DEFROST DUCT. (RETAIN)
- ❑ REMOVE THE HEATER HOUSING FROM UNDER THE DASH.
- ❑ REMOVE KICK PANEL VACUUM CONTROL ASM AND DISCARD. SEE FIGURE 4a BELOW.
- ❑ USING (2) #8 x 1/2 PH PAN HEAD SCREWS INSTALL THE KICK PANEL FRESH AIR CAP AS SHOWN IN FIGURE 4a BELOW.



FRESH AIR COVER INSTALLATION

- ❑ APPLY A 1/4" BEAD OF SILICONE AROUND THE BACK SIDE OF THE FRESH AIR CAP AS SHOWN IN FIGURE 4b BELOW.
- ❑ ATTACH FRESH AIR CAP TO FIREWALL USING A 1/4-20 x 1" BOLT AND WASHER, SEE FIGURE 4b.

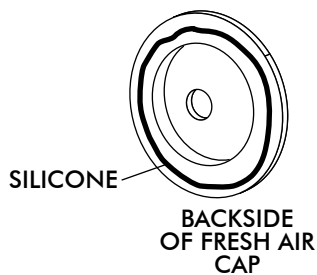
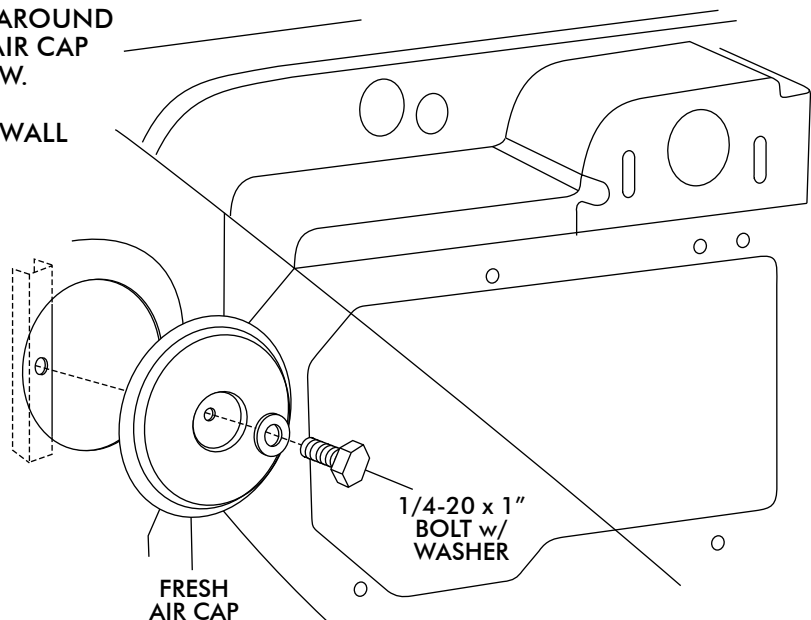


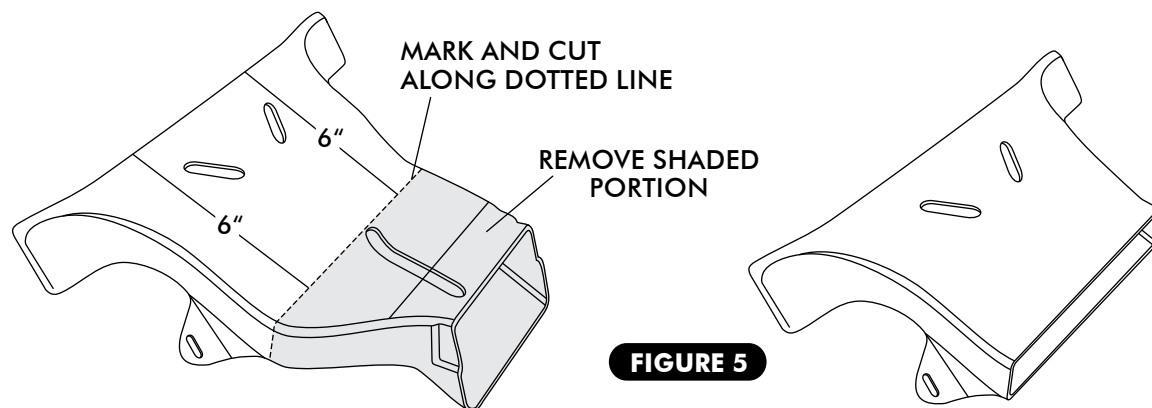
FIGURE 4b



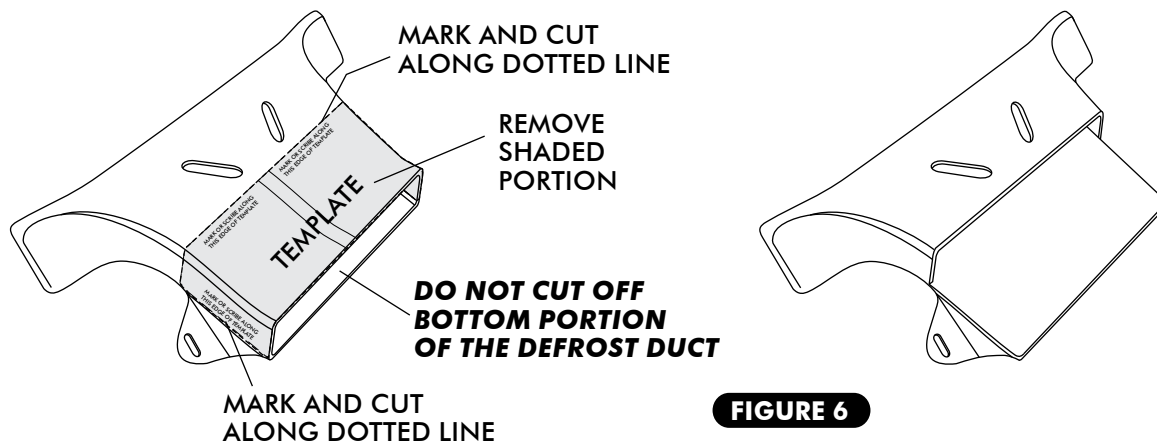


OEM DEFROST DUCT MODIFICATION

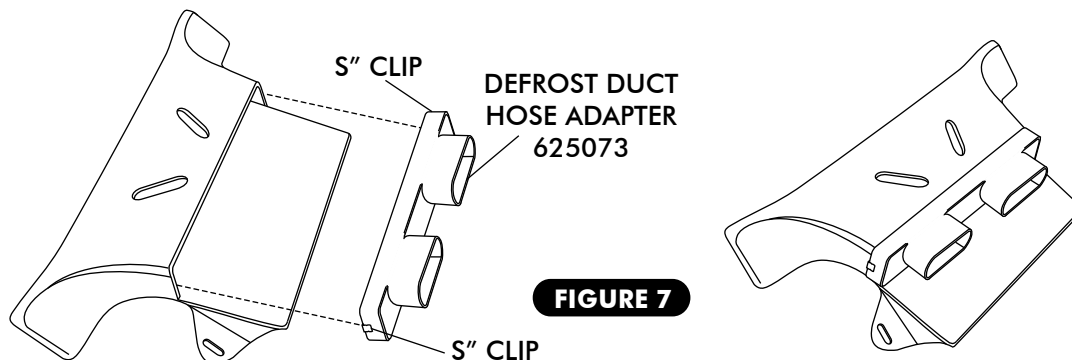
- ☐ MEASURE 6" FROM THE TOP OF THE DEFROST DUCT AND MARK AS SHOWN IN FIGURE 5 BELOW. CUT OFF THE BOTTOM PORTION OF THE DEFROST DUCT AS SHOWN.



- ☐ LOCATE THE DEFROST DUCT TEMPLATE ON PAGE 27, PLACE THE TEMPLATE OVER THE DEFROST DUCT AS SHOWN IN FIGURE 6 BELOW.
- ☐ USING A PENCIL OR SCRIBE MARK ALONG THE EDGE OF THE TEMPLATE AS SHOWN.
- ☐ REMOVE THE TEMPLATE AND CUT ALONG THE DOTTED LINE AND REMOVE THE TOP PORTION OF THE DEFROST DUCT AS SHOWN IN FIGURE 6. **NOTE: DO NOT CUT COMPLETELY THROUGH THE DEFROST DUCT, ONLY REMOVE THE SHADE PORTION AS SHOWN.**



- ☐ INSTALL THE DEFROST DUCT HOSE ADAPTER AS SHOWN IN FIGURE 7 BELOW.
- ☐ INSTALL (2) S" CLIPS ON DEFROST DUCT HOSE ADAPTERS AS SHOWN IN FIGURE 7 BELOW.





DEFROST DUCT & PS AND DS SIDE A/C DUCT HOSE ADAPTER INSTALLATION

- ☐ USING THE OEM DEFROST DUCT MOUNTING SCREWS INSTALL THE DEFROST DUCT WITH HOSE ADAPTER AS SHOWN IN FIGURE 8 BELOW.

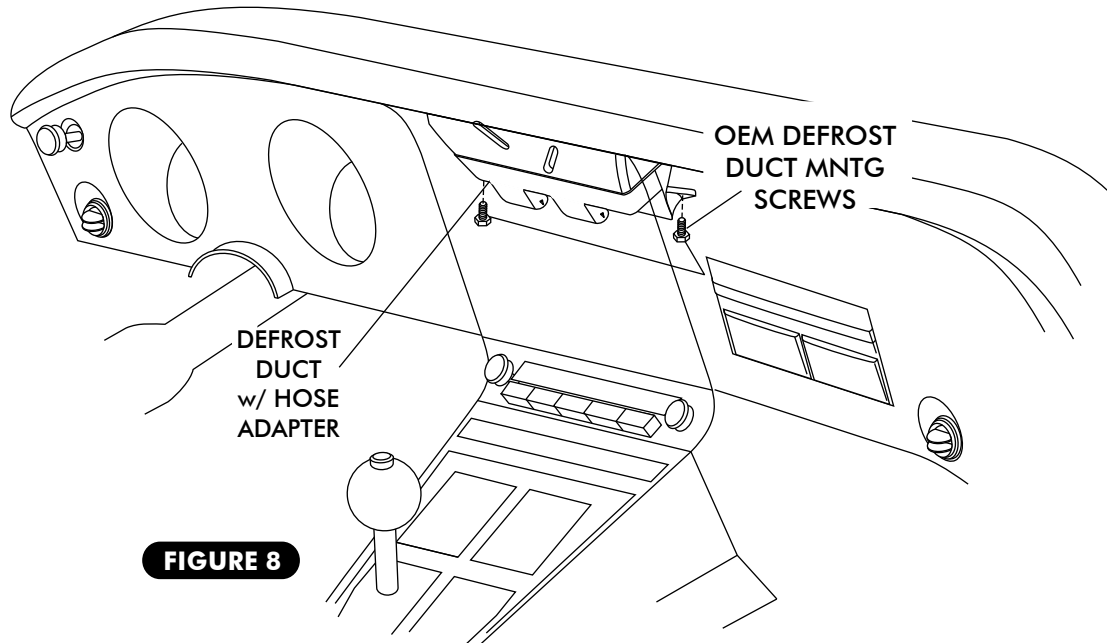


FIGURE 8

- ☐ REMOVE THE PASSENGER AND DRIVER SIDE VENT ADAPTERS (DISCARD) AS SHOWN IN FIGURE 9 BELOW.
NOTE: RETAIN MOUNTING HARDWARE
- ☐ INSTALL THE INNER AND OUTER A/C DUCT HOSE ADAPTERS AS SHOWN IN FIGURE 9 BELOW. USE OEM SCREWS TO SECURE ADAPTERS TO DASH.
NOTE: THE PASSENGER SIDE INSTALLATION IS SHOWN BELOW IN FIGURE 9, REPEAT THE SAME STEPS FOR THE DRIVER SIDE INSTALLATION
- ☐ SEE FIGURE 10, PAGE 12 FOR A COMPLETELY ASSEMBLED VIEW OF A/C DUCT HOSE ADAPTER.

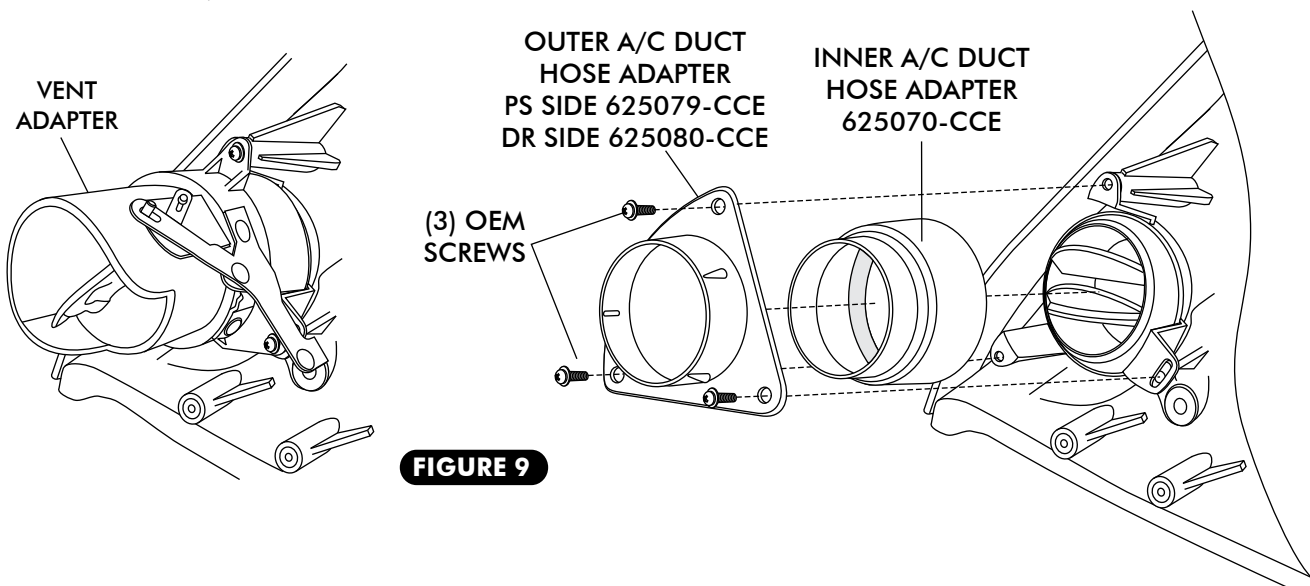


FIGURE 9



PS & DS AC DUCT HOSE ADAPTER INSTALLATION

- ☐ COMPLETELY ASSEMBLED VIEW OF AC DUCT HOSE ADAPTER.

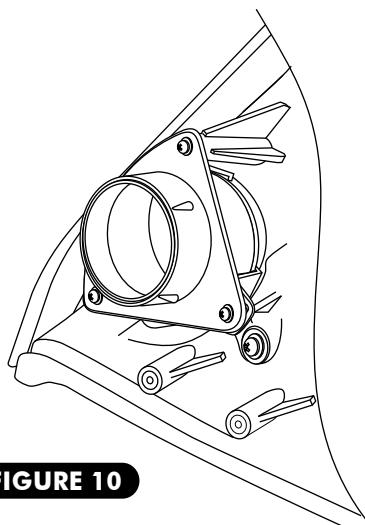


FIGURE 10

PASS SIDE DASH MODIFICATION

- ☐ ALIGN THE TEMPLATE (PROVIDED ON PAGE 31) ON BACK SIDE OF PASSENGER SIDE DASH AS SHOWN IN FIGURE 11 BELOW.
- ☐ USING A PENCIL OR SCRIBE MARK ALONG THE EDGE OF THE TEMPLATE AS SHOWN.
- ☐ REMOVE THE TEMPLATE AND CUT ALONG THE DOTTED LINE AND REMOVE PLASTIC PORTION OF DASH (NOTE: DO NOT CUT THROUGH FOAM DASH PAD ON BACK SIDE OF PLASTIC) AS SHOWN IN FIGURE 11a.

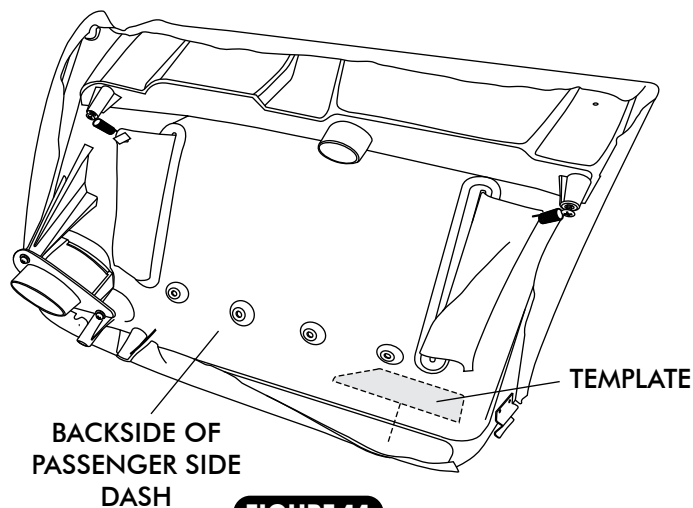
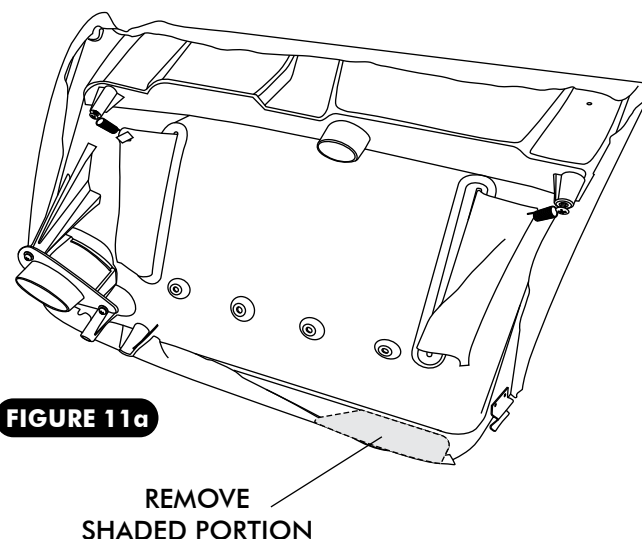


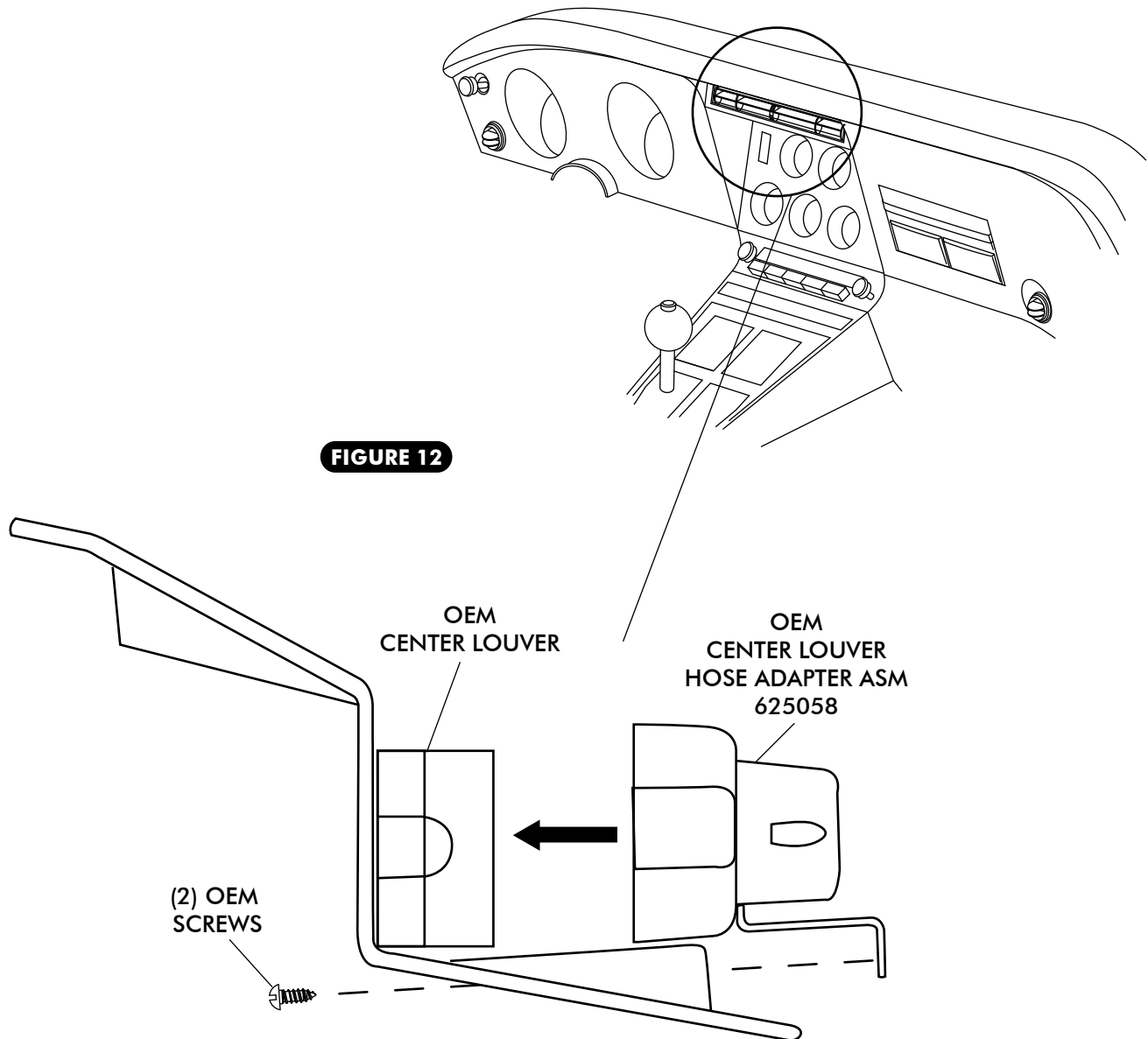
FIGURE 11





CENTER LOUVER ADAPTER INSTALLATION

- INSTALL CENTER LOUVER HOSE ADAPTER USING OEM SCREWS AS SHOWN IN FIGURE 12 BELOW.





FIREWALL MODIFICATION

- ☐ CUT OUT TEMPLATES PROVIDED ON PAGE 32. PLACE THE TEMPLATES UNDER THE DASH ON THE FIREWALL AS SHOWN IN FIGURE 13.
- ☐ ONCE TEMPLATES ARE ALIGNED CORRECTLY AND TAPED INTO PLACE, MARK MOUNTING HOLES ON FIREWALL. ONCE HOLES ARE MARKED IN THE CORRECT LOCATION, DRILL (2) $\frac{3}{8}$ " HOLES IN FIREWALL FOR FIREWALL COVER. SEE FIGURE 13.

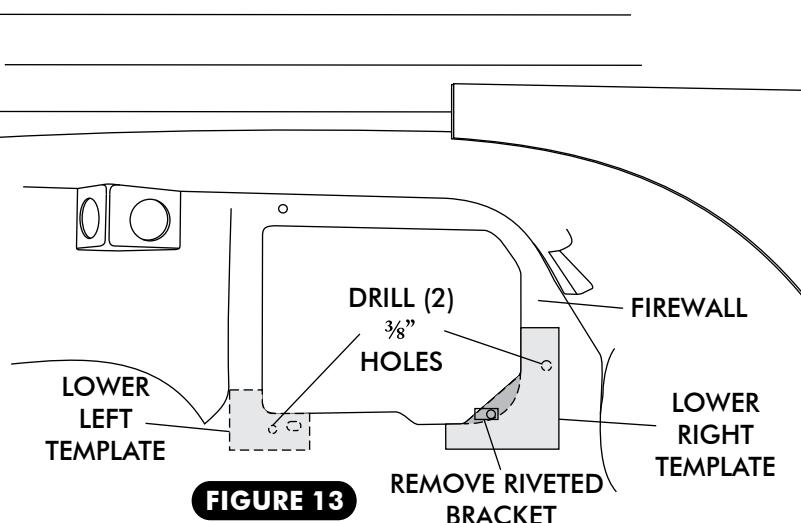


FIGURE 13

EVAPORATOR INSTALLATION

- ☐ ON A WORK BENCH. INSTALL EVAPORATOR REAR BRACKET, AND INSTALL EVAPORATOR HARDLINES WITH PROPERLY LUBRICATED O-RINGS. (SEE FIGURE 18, PAGE 19, AND FIGURES 24, PAGE 23.)
- ☐ INSTALL FRONT MOUNTING BRACKET ON EVAPORATOR USING (2) $\frac{1}{4}$ -20 x $\frac{1}{2}$ " HEX BOLTS AND TIGHTEN AS SHOWN IN FIGURE 14, BELOW.
- ☐ PLACE 4 MIL POLYETHYLENE SHEET OVER THE STEPPER MOTORS. SEE FIGURE 15, PAGE 15.
- ☐ LIFT EVAPORATOR UNIT UP UNDER THE DASHBOARD. SEE FIGURE 15, PAGE 15. SECURE LOOSELY TO THE FIREWALL FROM THE ENGINE COMPARTMENT SIDE USING A $\frac{1}{4}$ -20 x 1" BOLT AND WASHER, SEE FIGURE 15, PAGE 15.
- ☐ USING A #14 x $\frac{3}{4}$ " SHEET METAL SCREW SECURE THE FRONT EVAPORATOR MOUNTING BRACKET TO INNER COWL BY ALIGNING THE LEFT HOLE IN FRONT EVAPORATOR MOUNTING BRACKET WITH OEM HOLE IN INNER COWL. SEE FIGURE 15, PAGE 15. IF RETAINING ORIGINAL TRANSISTOR USE ORIGINAL BOLT.
- ☐ TO SECURE THE RIGHT SIDE OF THE FRONT MOUNTING BRACKET WITH EVAPORATOR MOUNTING IN PLACE DRILL A $\frac{3}{16}$ " HOLE IN INNER COWL USING THE RIGHT MOUNTING BRACKET HOLE AS A GUIDE. SECURE THE BRACKET TO THE INNER COWL USING A #14 x $\frac{3}{4}$ " SHEET METAL SCREW. SEE FIGURE 15, PAGE 15.
- ☐ 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 BRACKETS SCREWS.)

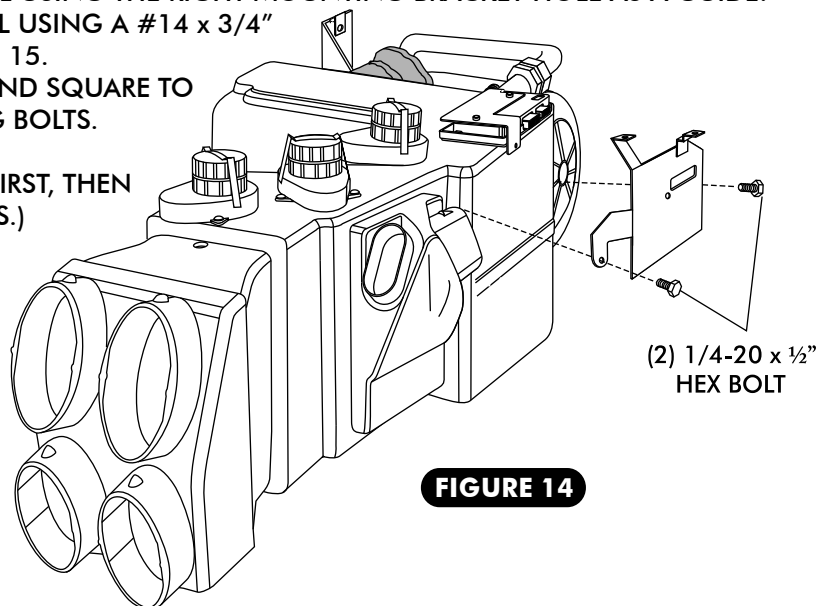
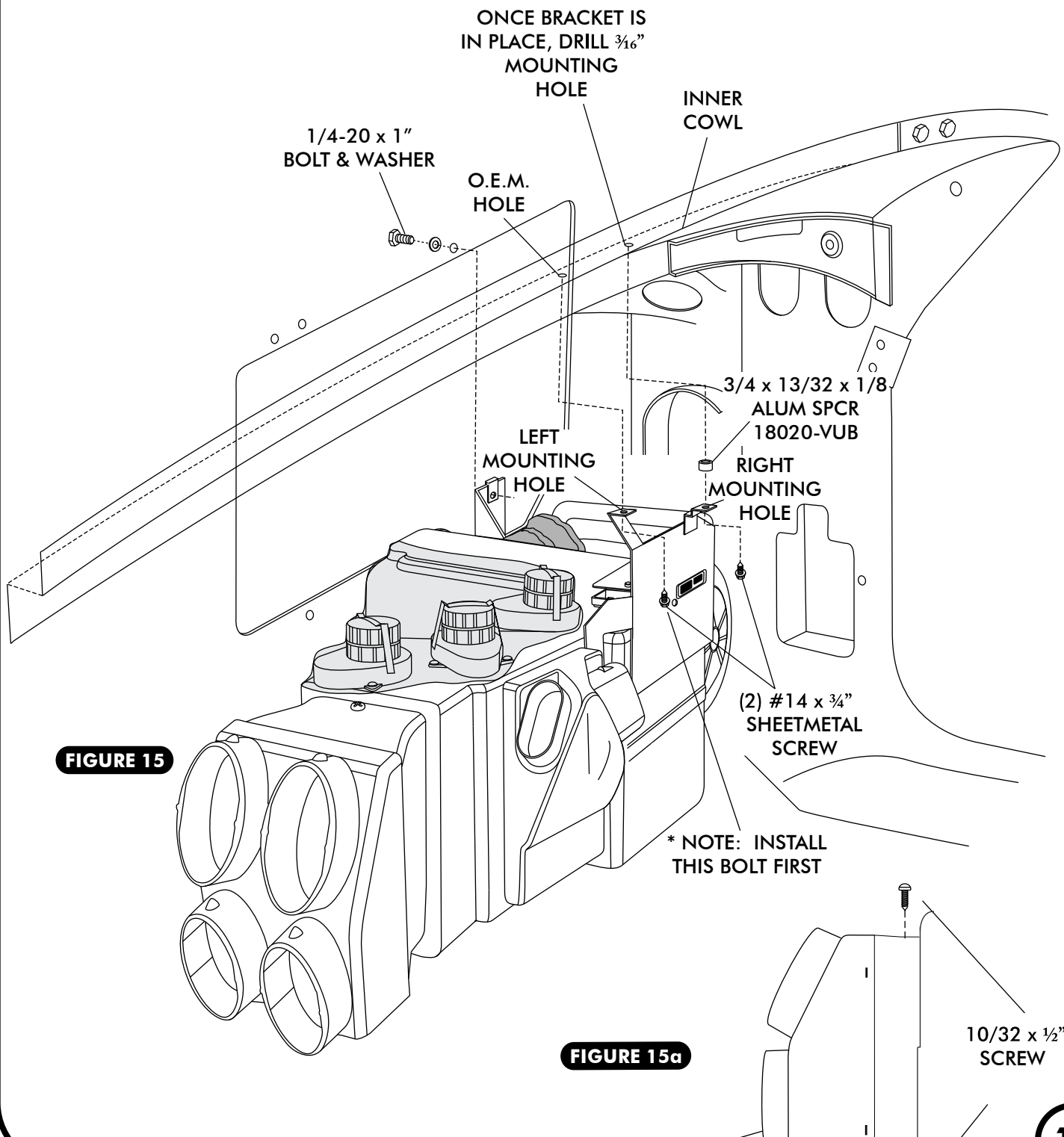


FIGURE 14



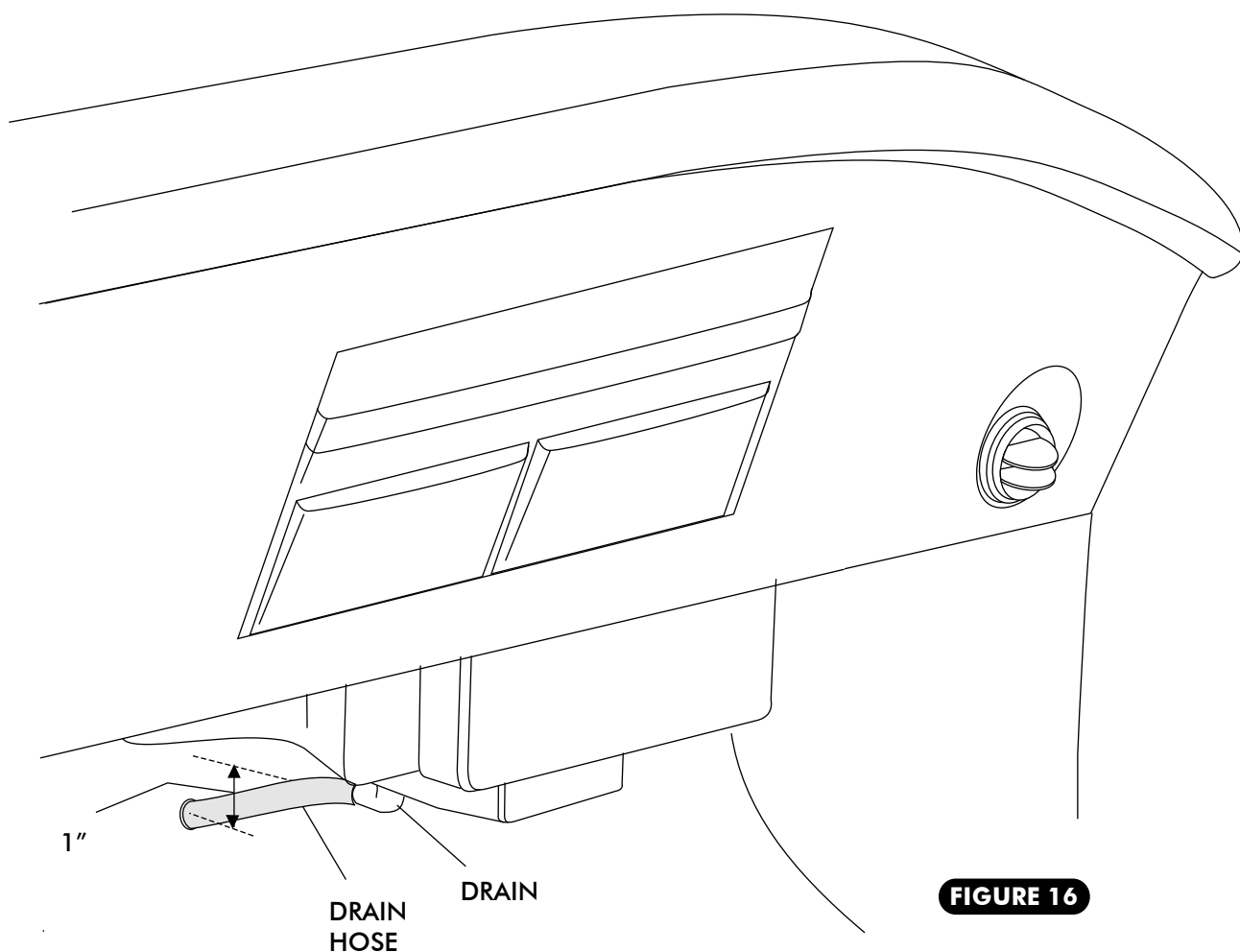
EVAPORATOR INSTALLATION CONT.





DRAIN HOSE INSTALLATION

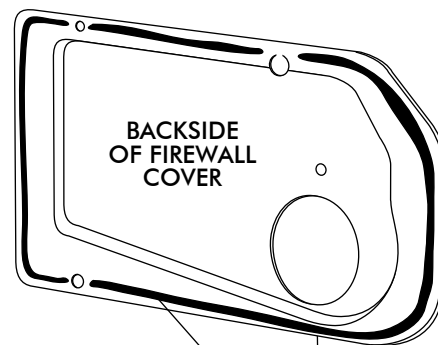
- ☐ IN-LINE WITH THE DRAIN, LIGHTLY MAKE A MARK ON THE FIREWALL. MEASURE ONE INCH DOWN AND DRILL A $\frac{5}{8}$ " HOLE THROUGH THE FIREWALL. SEE FIGURE 16 BELOW.
- ☐ INSTALL DRAIN HOSE TO BOTTOM OF EVAPORATOR UNIT AND ROUTE THROUGH FIREWALL. SEE FIGURE 16, BELOW.





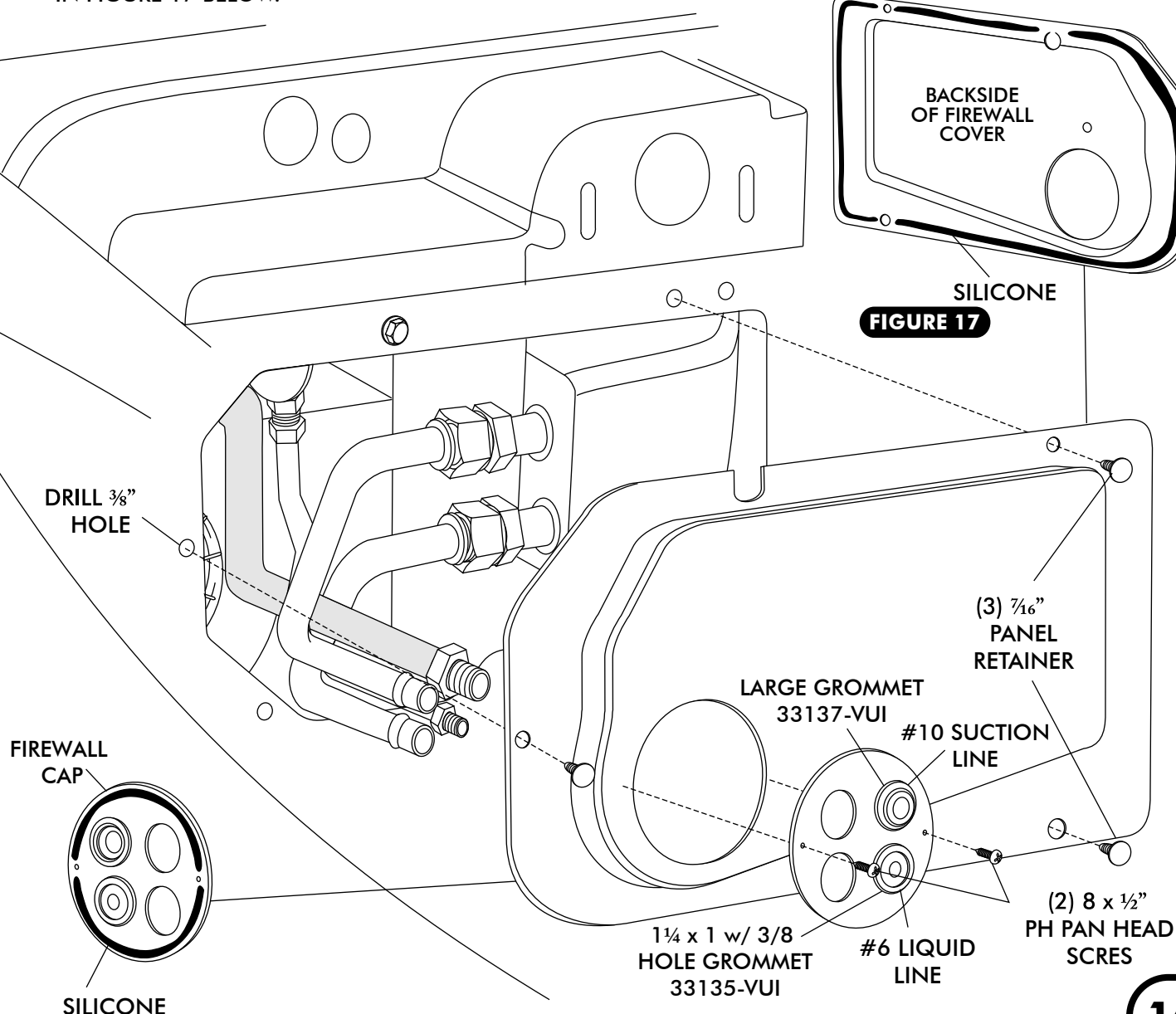
FIREWALL COVER

- ☐ APPLY A 1/4" BEAD OF SILICONE AROUND THE BACK SIDE OF THE FIREWALL COVER AS SHOWN IN FIGURE 17 BELOW.
- ☐ PASS LINES THROUGH FIREWALL COVER, AND SECURE WITH (2) 7/16" PANEL RETAINERS. SEE FIGURE 17 BELOW.
- ☐ ONCE THE FIREWALL COVER IS IN PLACE LOCATE THE WHOLE ON THE LEFT SIDE OF THE FIREWALL COVER AND DRILL A 3/8" HOLE THROUGH THE FIREWALL AND INSTALL A 7/16" PANEL RETAINER TO SECURE THE LEFT SIDE OF THE FIREWALL COVER TO FIREWALL. SEE FIGURE 17 BELOW.
- ☐ USING COVER CAP AS GUIDE. MARK THE (2) HOLES IN FIREWALL COVER THAT NEEDED TO BE DRILLED. NOW DRILL (2) 1/8 HOLES.
- ☐ INSTALL (2) GROMMET IN FIREWALL COVER CAP AS SHOWN IN FIGURE 17 BELOW.
- ☐ APPLY A 1/4" BEAD OF SILICONE AROUND THE BACK SIDE OF THE FIREWALL COVER CAP AS SHOWN IN FIGURE 17 BELOW. USING (2) #8 x 1/2" PAN HEAD SCREWS INSTALL FIREWALL COVER CAP AS SHOWN IN FIGURE 17 BELOW.



SILICONE

FIGURE 17





A/C HOSE INSTALLATION

STANDARD HOSE KIT

- ☐ LOCATE THE #8 COMPRESSOR A/C HOSE. LUBRICATE (2) #8 O-RINGS (SEE FIGURE 18, PAGE 19) AND CONNECT THE 90° FITTING TO THE #8 DISCHARGE PORT ON THE COMPRESSOR AND ROUTE THE STRAIGHT FITTING TO THE #8 CONDENSER HARDLINE COMING THROUGH THE CORE SUPPORT SEE FIGURE 20, PAGE 19. TIGHTEN EACH FITTING CONNECTION AS SHOWN IN FIGURE 19, PAGE 19.
- ☐ LOCATE THE #10 COMPRESSOR A/C HOSE. LUBRICATE (2) #10 O-RINGS (SEE FIGURE 18, PAGE 19) AND CONNECT THE 135° FITTING TO THE #10 SUCTION PORT ON THE COMPRESSOR AND ROUTE THE STRAIGHT FITTING TO THE #10 EVAPORATOR HARDLINE COMING THROUGH THE FIREWALL SEE FIGURE 20, PAGE 19. TIGHTEN EACH FITTING CONNECTION AS SHOWN IN FIGURE 19, PAGE 19. **(NOTE: WRAP THE #10 FITTING CONNECTIONS AT FIREWALL WITH PRESS TAPE. SEE FIGURE 20, PAGE 19.)**
- ☐ LOCATE THE #6 EVAP/ CORE HARDLINE AND LUBRICATE (2) #6 O-RINGS (SEE FIGURE 18, PAGE 19) AND CONNECT THE HARDLINE TO THE #6 HARDLINE COMING THROUGH THE CORE SUPPORT FROM DRIER. ATTACH THE OTHER END OF THE HARDLINE WITH LUBRICATED O-RING TO THE #6 EVAPORATOR HARDLINE COMING THROUGH THE FIREWALL. SEE FIGURE 20, PAGE 19. TIGHTEN EACH FITTING CONNECTION AS SHOWN IN FIGURE 19, PAGE 19. USE A #2 ADEL CLAMP TO SECURE THE #6 EVAP/ CORE HARDLINE TO THE INNER FENDERWELL AS SHOWN IN FIGURE 20, PAGE 20. SECURE THE ADEL CLAMP TO THE INNER FENDER USING A 10-32 x 1/2" MACHINE SCREW AND NUT.

MODIFIED A/C HOSE KIT

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

BIG BLOCK MODIFIED HOSE KIT

- ☐ LOCATE THE #8 COMPRESSOR A/C HOSE. LUBRICATE (2) #8 O-RINGS (SEE FIGURE 18, PAGE 19) AND CONNECT THE 90° FITTING TO THE #8 DISCHARGE PORT ON THE COMPRESSOR AND ROUTE THE STRAIGHT FITTING TO THE #8 CONDENSER HARDLINE COMING THROUGH THE CORE SUPPORT SEE FIGURE 21, PAGE 20. TIGHTEN EACH FITTING CONNECTION AS SHOWN IN FIGURE 19, PAGE 19.
- ☐ LOCATE THE #10 COMPRESSOR A/C HOSE. LUBRICATE (2) #10 O-RINGS (SEE FIGURE 18, PAGE 19) AND CONNECT THE 90° FITTING TO THE #10 SUCTION PORT ON THE COMPRESSOR AND ROUTE THE STRAIGHT FITTING TO THE #10 EVAPORATOR HARDLINE COMING THROUGH THE FIREWALL SEE FIGURE 21, PAGE 20. TIGHTEN EACH FITTING CONNECTION AS SHOWN IN FIGURE 19, PAGE 19. **(NOTE: WRAP THE #10 FITTING CONNECTIONS AT FIREWALL WITH PRESS TAPE. SEE FIGURE 21, PAGE 20.)**
- ☐ LOCATE THE #6 EVAP/ CORE HARDLINE AND LUBRICATE (2) #6 O-RINGS (SEE FIGURE 18, PAGE 19) AND CONNECT THE HARDLINE TO THE #6 HARDLINE COMING THROUGH THE CORE SUPPORT FROM DRIER. ATTACH THE OTHER END OF THE HARDLINE WITH LUBRICATED O-RING TO THE #6 EVAPORATOR HARDLINE COMING THROUGH THE FIREWALL. SEE FIGURE 21, PAGE 20. TIGHTEN EACH FITTING CONNECTION AS SHOWN IN FIGURE 19, PAGE 19. USE A #2 ADEL CLAMP TO SECURE THE #6 EVAP/ CORE HARDLINE TO THE INNER FENDERWELL AS SHOWN IN FIGURE 21, PAGE 20. SECURE THE ADEL CLAMP TO THE INNER FENDER USING A 10-32 x 1/2" MACHINE SCREW AND NUT.

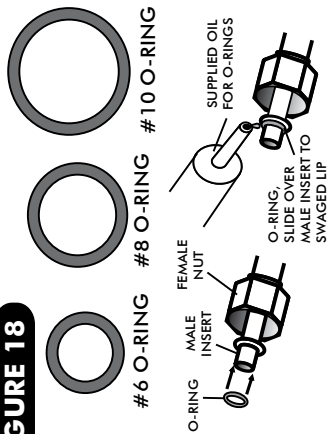
HEATER HOSE & HEATER CONTROL VALVE INSTALLATION

- ☐ ROUTE A PIECE OF HEATER HOSE FROM THE WATER PUMP TO THE HEATER LINE COMING THROUGH THE FIREWALL AS SHOWN IN FIGURES 22, PAGE 21. SECURE USING HOSE CLAMPS.
- ☐ ROUTE A PIECE OF HEATER HOSE FROM THE INTAKE TO THE HEATER LINE COMING THROUGH THE FIREWALL AS SHOWN IN FIGURE 22, PAGE 21. NOTE: INSTALL HEATER CONTROL VALVE IN-LINE WITH INTAKE MANIFOLD (PRESSURE SIDE) HEATER HOSE, SECURE USING HOSE CLAMPS AS SHOWN IN FIGURE 22 ON PAGE 21.
NOTE PROPER FLOW DIRECTION.



SMALL BLOCK HOSE ROUTING

FIGURE 18



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

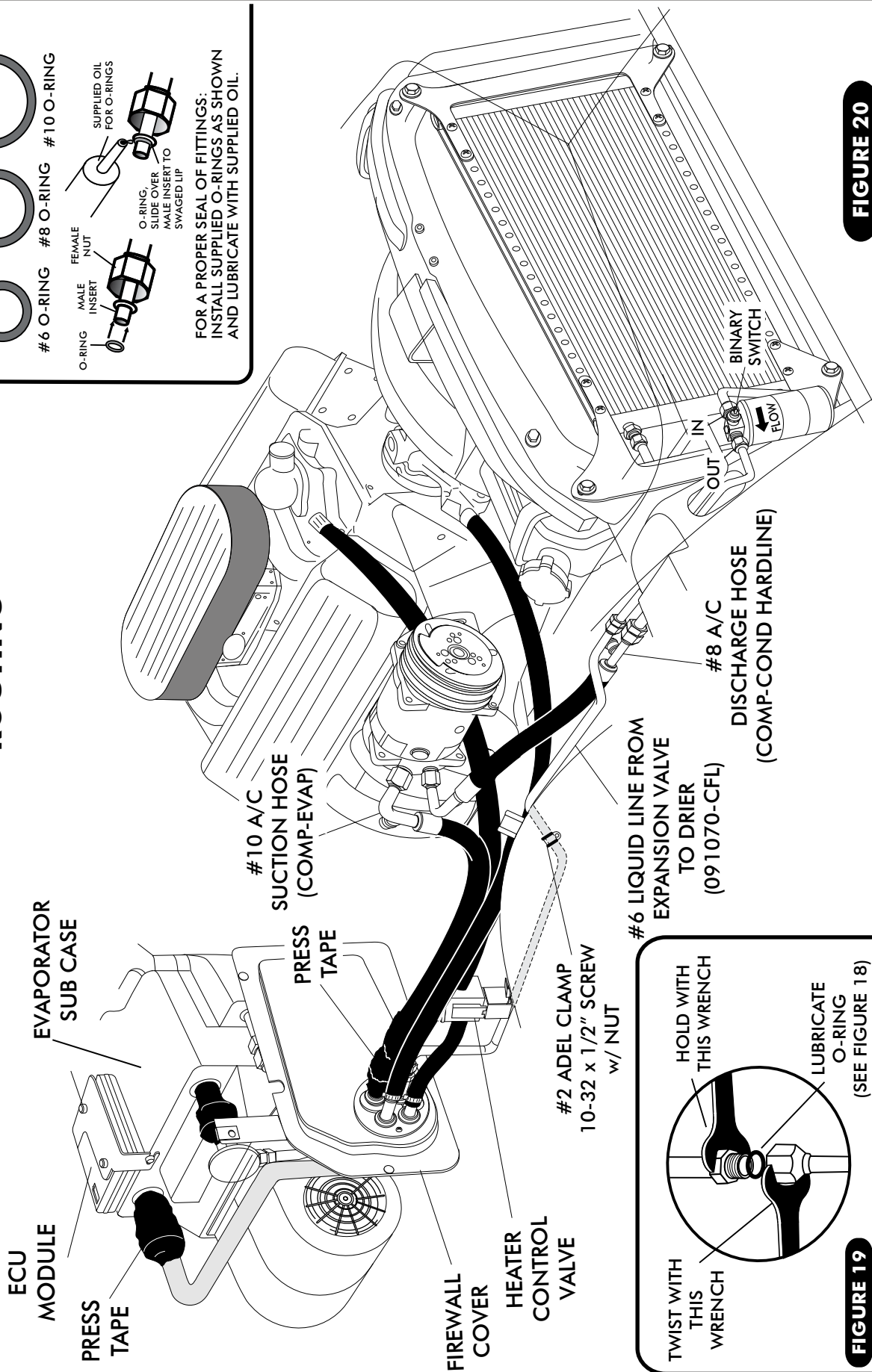


FIGURE 20

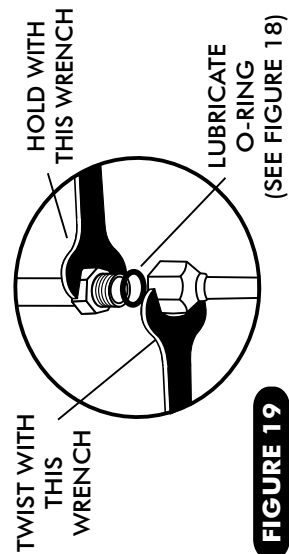


FIGURE 19



BIG BLOCK MODIFIED HOSE ROUTING

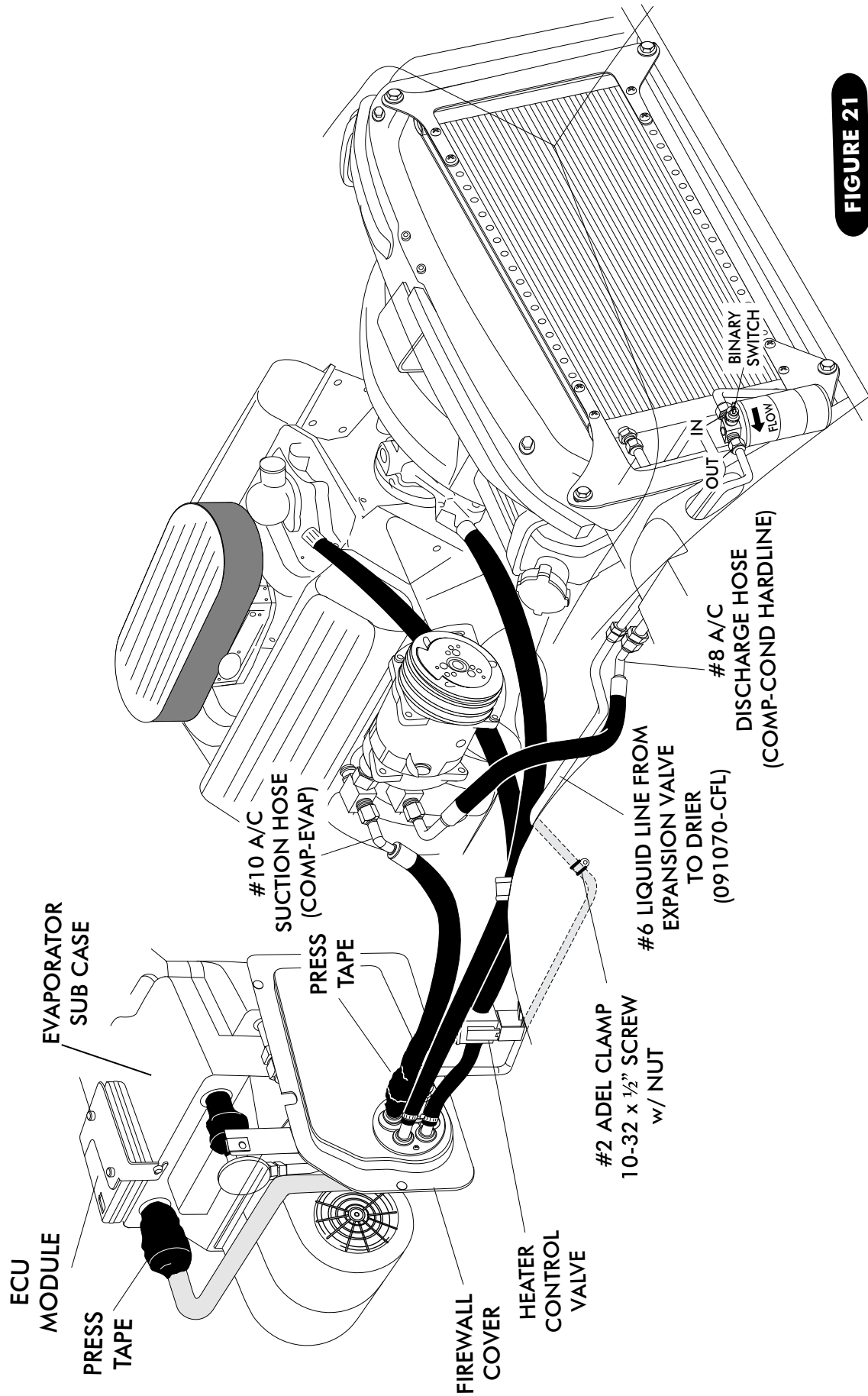
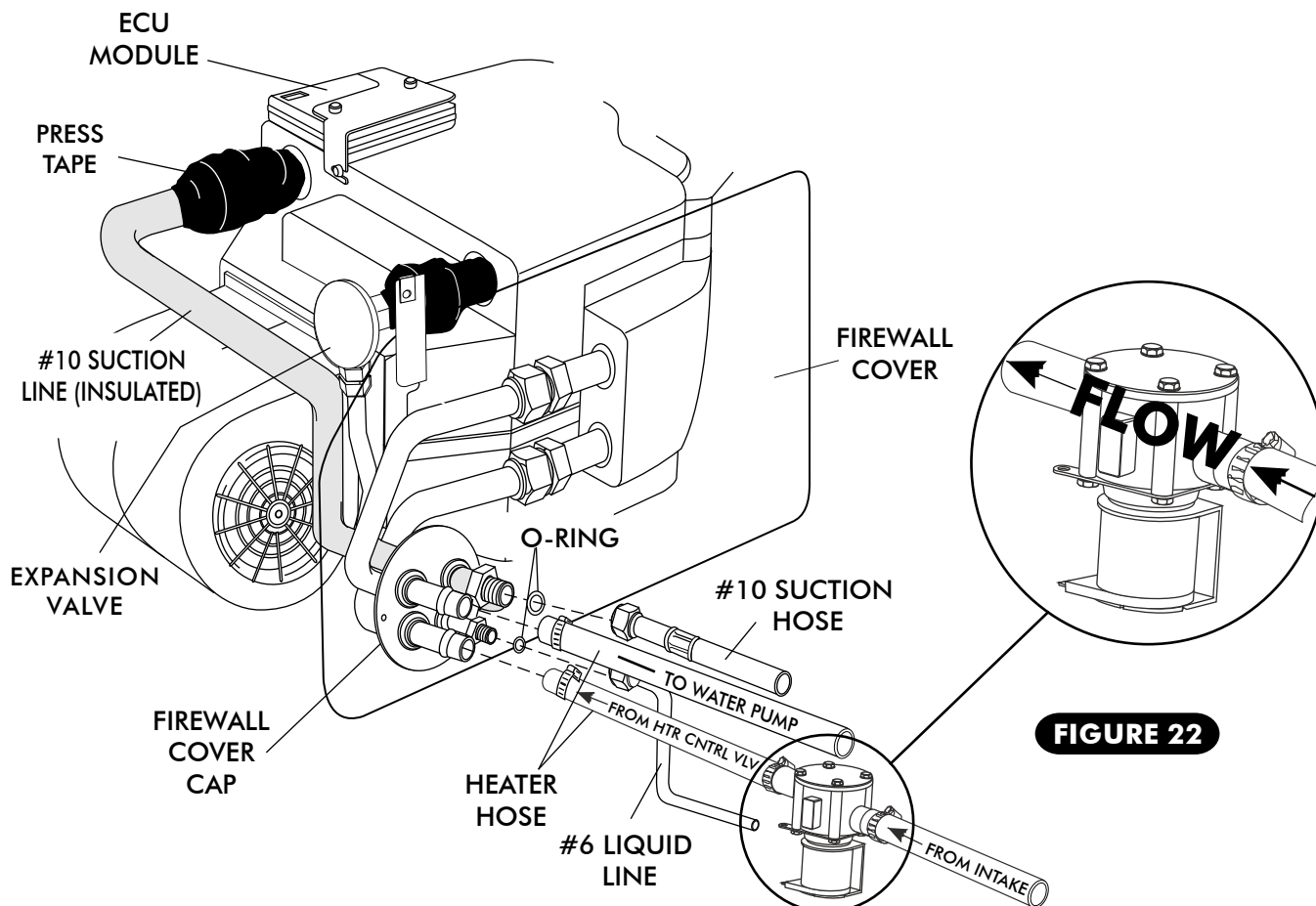


FIGURE 21



HEATER CONTROL VALVE INSTALLATION



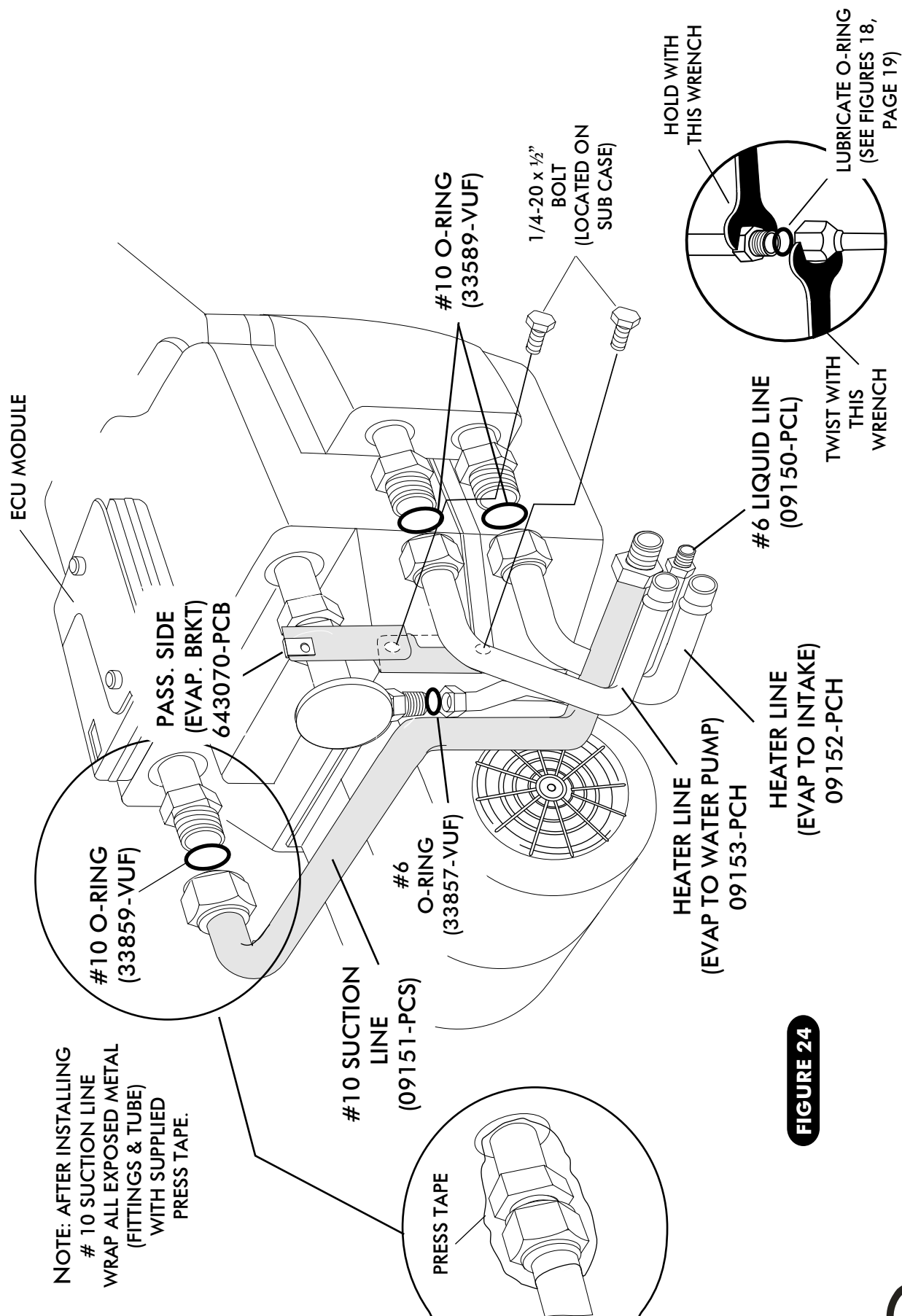
FINAL STEPS - DUCT HOSE ROUTING & CONTROL PANEL HARNESS

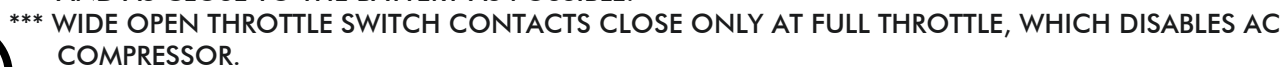
- ☐ INSTALL DUCT HOSES AS SHOWN IN FIGURE 23, PAGE 22.
- ☐ REINSTALL THE CENTER DASH ASSEMBLY.
- ☐ REINSTALL CONTROL PANEL.
- ☐ PLUG THE CONTROL PANEL HARNESS INTO THE ECU MODULE ON SUB CASE AS SHOWN. SEE FIGURE 23, PAGE 22.
- ☐ PLUG THE WIRING HARNESS INTO THE ECU MODULE ON SUB CASE AS SHOWN. (WIRE ACCORDING TO WIRING DIAGRAM ON PAGES 24 & 25.)
- ☐ **NOTE: CONTROLS MUST BE CALIBRATED FOR PROPER OPERATION. REFER TO CONTROL PANEL INSTRUCTIONS.**
- ☐ 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 HEATER CORE TO CORRODE PREMATURELY AND POSSIBLY BURST IN AC MODE AND/OR FREEZING WEATHER, VOIDING YOUR WARRANTY.
- ☐ DOUBLE CHECK ALL FITTINGS, BRACKETS AND BELTS FOR TIGHTNESS.
- ☐ VINTAGE AIR RECOMMENDS THAT ALL AC 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.





EVAPORATOR HARD LINE INSTALLATION

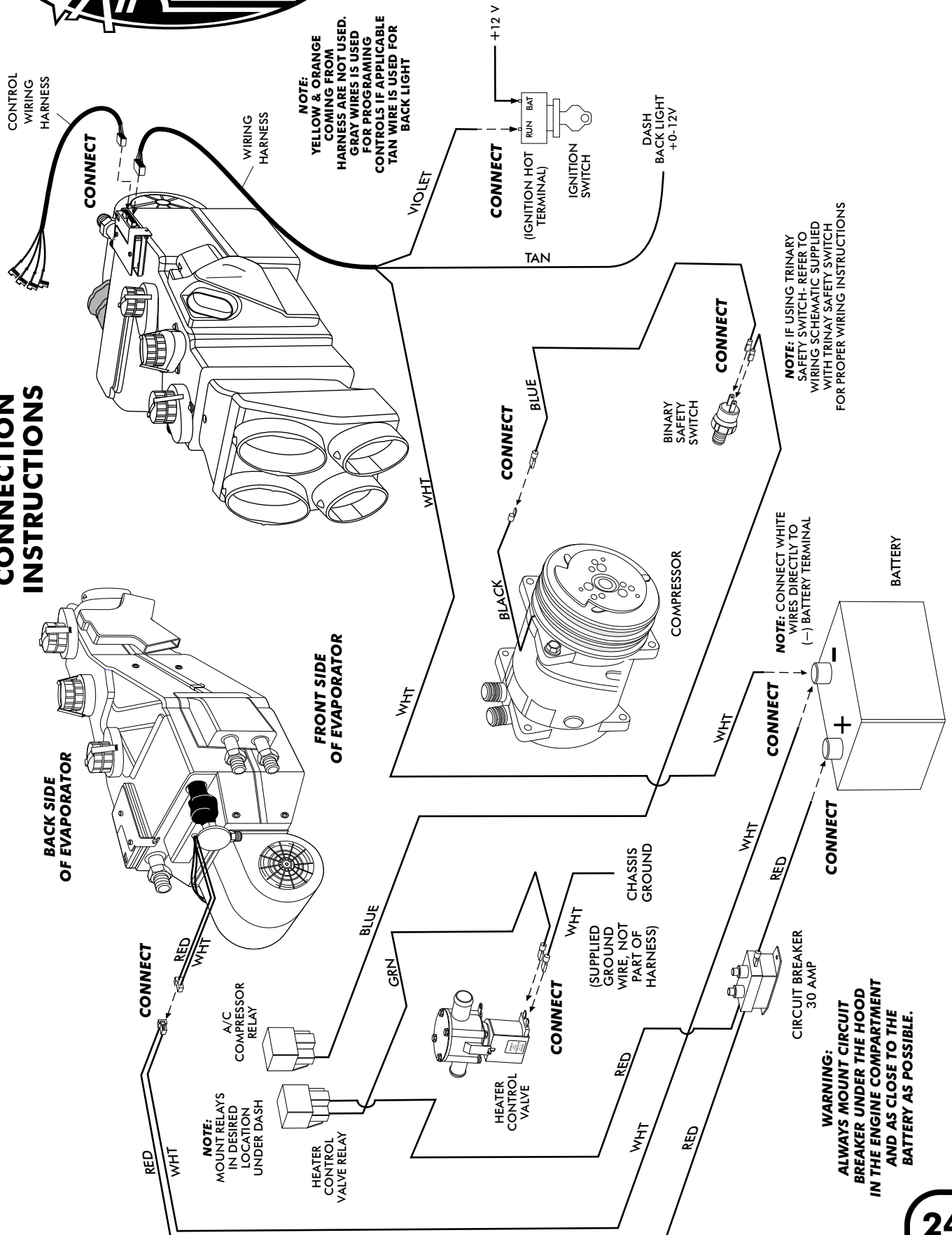






GEN IV WIRING CONNECTION INSTRUCTIONS

REFER TO CONTROL PANEL INSTRUCTIONS AND PLUG IN ACCORDINGLY





OPERATION OF CONTROLS

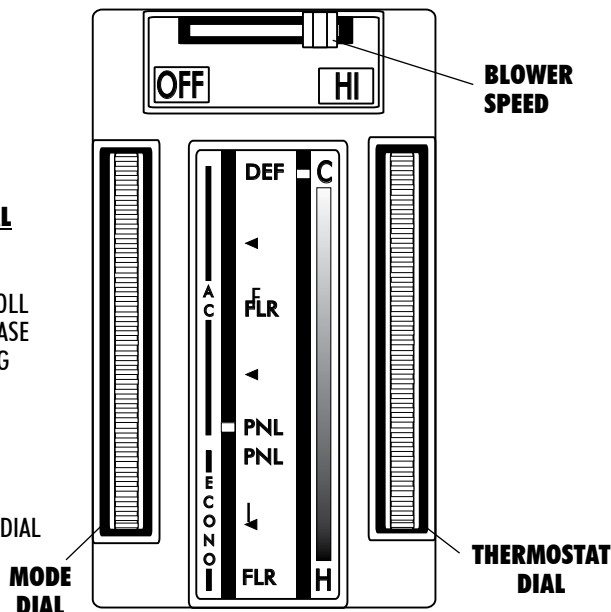
NOTE: CONTROLS MUST BE CALIBRATED FOR PROPER OPERATION. REFER TO CONTROL PANEL INSTRUCTIONS. WHEN EVER BATTERY POWER IS RE-CONNECTED TO THE ECU, THE COMPUTER GOES THROUGH AN INITIALIZATION SEQUENCE. THIS INITIALIZATION MAY TAKE UP TO 30 SECONDS. DURING THIS PROCESS THE DOORS INSIDE THE UNIT WILL BE OPERATING. A LOW BATTERY MAY ALSO TRIGGER RE-INITIALIZATION. WHEN THE ENGINE IS BEING CRANKED A WEAK BATTERY MAY DROP BELOW 7 VOLTS, TRIGGERING RE-INITIALIZATION.

A/C MODE

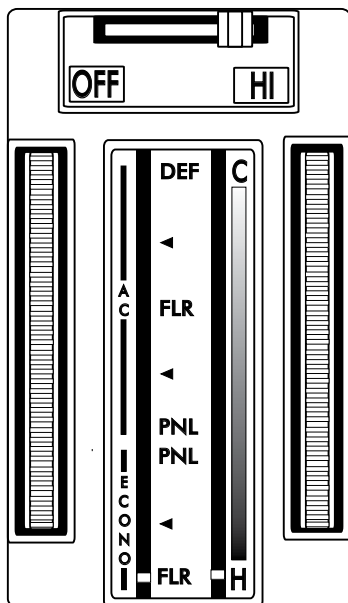
BLOWER SPEED
THIS LEVER CONTROLS
THE BLOWER SPEED,
FROM OFF TO HI

A/C THERMOSTAT DIAL
ROLL THE THERMOSTAT
DIAL ALL THE WAY UP
OR MAXIMUM COOLING, ROLL
THE DIAL DOWN TO DECREASE
THE AMOUNT OF COOLING

MODE DIAL
ROLL THE DIAL DOWN
TO THE "PNL" LEGEND
IN AC RANGE OF THE MODE DIAL



HEAT MODE

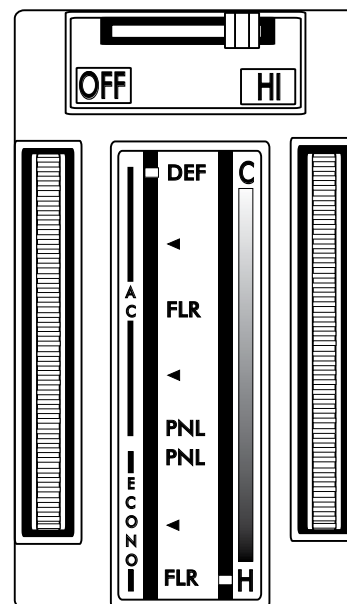


BLOWER SPEED
THIS LEVER CONTROLS
THE BLOWER SPEED,
FROM OFF TO HI

A/C THERMOSTAT DIAL
ROLL THE THERMOSTAT
DIAL ALL THE WAY DOWN
FOR MAXIMUM HEATING, ROLL
THE DIAL UP TO DECREASE
THE AMOUNT OF HEATING

MODE DIAL
ROLL THE DIAL DOWN
TO THE "FLR" LEGEND
IN THE ECONO RANGE
OF THE MODE DIAL

DEFROST MODE



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

A/C THERMOSTAT DIAL
ROLL THE THERMOSTAT
DIAL ALL THE WAY DOWN
FOR MAXIMUM HEATING, ROLL
THE DIAL UP TO DECREASE
THE AMOUNT OF HEATING

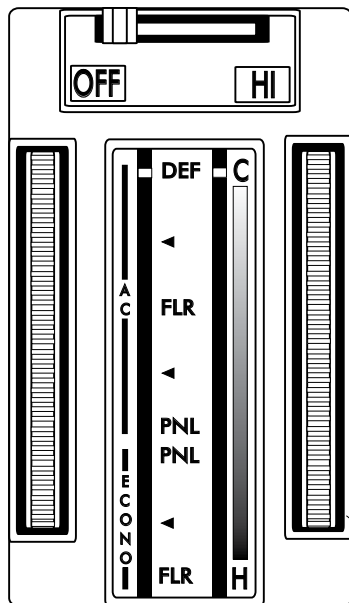
MODE DIAL
ROLL THE DIAL DOWN
TO THE "DEF" LEGEND
IN THE AC RANGE
OF THE MODE DIAL

MODE DIAL, AC & ECONO RANGES

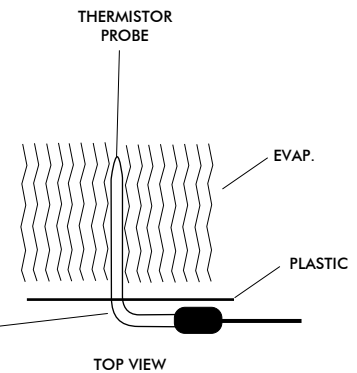
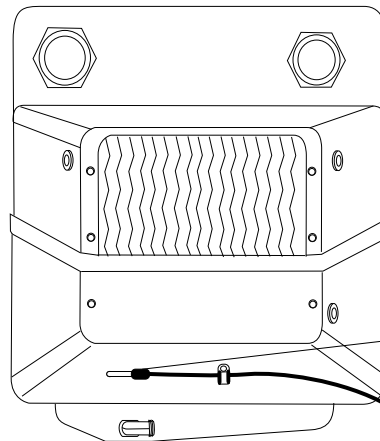
BOTH RANGES OF THE MODE DIAL OPERATE IDENTICALLY, WITH THE SINGULAR EXPECTATION THAT THE EXTRA COOLING AVAILABLE FROM THE AC COMPRESSOR IS NOT AVAILABLE WHILE THE MODE DIAL IS IN THE **ECONO** RANGE. WHEN THE MODE DIAL MOVES FROM ONE MODE RANGE TO THE OTHER, THE BLOWER SPEED CHANGES FOR AN INSTANT AND RETURNS TO NORMAL. THIS BEHAVIOR IS USED TO INDICATE THAT THE OPERATOR HAS MOVED INTO THE ALTERNATE MODE RANGE.



THERMOSTAT ADJUSTMENT



ADJUST THIS
DIAL UP
OR DOWN TO
REGULATE
TEMPERATURE



AIR CONDITIONING ADJUSTMENTS:

WHEN THE MODE DIAL IS IN THE AC RANGE, THE COMPRESSOR WILL AUTOMATICALLY CYCLE ON AND OFF SO AS TO MAKE THE AIR TEMPERATURE CORRESPOND WITH THE POSITION OF THE THERMOSTAT DIAL. AT THE UPPER-MOST END OF THE THERMOSTAT DIAL, THE COOLING EFFORT CAN BE SO INTENSE THAT UNDER HIGH HUMIDITY CONDITIONS, ICE MAY FORM ON THE EVAPORATOR COIL. THIS CONDITION KNOW AS, ICING UP OR ICE UP, CAN BE RECOGNIZED WHEN THE SYSTEM SEEMS TO BE OPERATING PROPERLY, BUT THE FLOW OF COLD AIR IS GREATLY DIMINISHED. TO COUNTER THIS EFFECT, SIMPLY BACK THE THERMOSTAT DIAL AWAY FROM ITS EXISTING POSITION SLIGHTLY, THEREBY PERMITTING THE ICE FROM THE HIGH HUMIDITY TO MELT AND NOT RE-OCCUR.



TROUBLE SHOOTING INFORMATION

SYMPTOM	CONDITION	CHECKS	ACTIONS	NOTES
1. BLOWER STAYS ON HIGH SPEED WHEN IGNITION IS ON	NO OTHER FUNCTIONS WORK	CHECK FOR DAMAGED PINS OR WIRES IN CONTROL HEAD PLUG.	VERIFY ALL PINS ARE INSERTED INTO PLUG. INSURE 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 WILL RENDER CONTROL HEAD INOPERABLE
	ALL OTHER FUNCTIONS WORK	CHECK FOR DAMAGED BLOWER SWITCH OR POT AND ASSOCIATED WIRING.		SEE BLOWER SWITCH CHECK PROCEDURE
BLOWER STAYS ON HIGH SPEED WHEN IGNITION IS ON OR OFF.		UN-PLUG 3 WIRE BSC CONTROL CONNECTOR FROM ECU. IF BLOWER SHUTS OFF ECU IS EITHER IMPROPERLY WIRED, OR DAMAGED.	BE SURE SMALL, 20GA, WHITE GROUND WIRE IS CONNECTED TO THE BATTERY GROUND POST. IF IT IS, REPLACE ECU.	
		UN-PLUG 3 WIRE BSC CONTROL CONNECTOR FROM ECU. IF BLOWER STAYS RUNNING, THE BSC IS EITHER IMPROPERLY WIRED, OR DAMAGED.	CHECK TO INSURE THAT NO BSC WIRING IS DAMAGED OR SHORTED TO VEHICLE GROUND. THE BSC OPERATES THE BLOWER BY GROUND SIDE PWM 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 EVAPORATOR TO BE REMOVED 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 COMP. TO ENGAGE.	CHARGE SYSTEM OR BYPASS PRESSURE SWITCH.	DANGER - NEVER BYPASS SAFETY SWITCH WITH ENGINE RUNNING, SERIOUS INJURY CAN RESULT
		CHECK FOR FAULTY AC POT OR ASSOC. 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 0 AND 5V, AND WILL VARY WITH POT LEVER POSITION.
		CHECK FOR DISCONNECTED OR FAULTY THERMISTOR.	CHECK TWO 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 AC POT OR ASSOC. WIRING	REPAIR/REPLACE POT/CONTROL WIRING	RED WIRE @ AC POT SHOULD HAVE APPROX. 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 AND DOWN.
		CHECK FOR FAULTY AC RELAY	REPLACE RELAY	



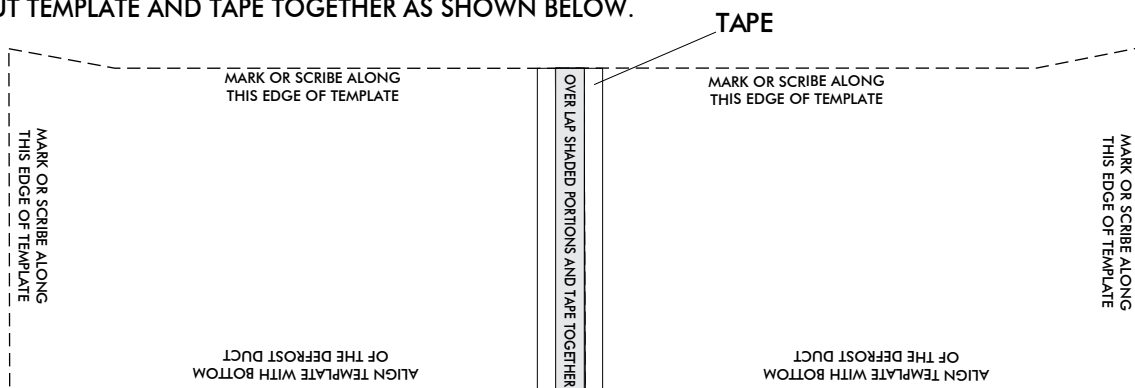
TROUBLE SHOOTING INFORMATION CONT.

4. SYSTEM WILL NOT TURN ON OR RUNS INTERMITTENTLY	WORKS WHEN ENGINE IS NOT RUNNING, SHUTS OFF WHEN ENGINE IS STARTED. (TYPICALLY EARLY GEN 4, BUT POSSIBLE ON ALL VERSIONS)	NOISE INTERFERENCE FROM EITHER IGNITION OR ALTERNATOR.	INSTALL CAPACITORS ON IGN. COIL, AND ALTERNATOR. ENSURE GOOD GROUND AT ALL POINTS. RE-LOCATE 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 ECU.
	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.	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. BATTERY MUST BE IN GOOD CONDITION FOR ALTERNATOR REGULATOR TO FUNCTION PROPERLY.
		VERIFY BATTERY VOLTAGE IS GREATER THAN 10 VOLTS AND LESS THAN 16.	VERIFY PROPER METER FUNCTION BY CHECKING A KNOWN GOOD BATTERY'S VOLTAGE.	
5. LOSS OF MODE DOOR FUNCTION	NO MODE CHANGE AT ALL	CHECK FOR DAMAGED MODE SWITCH OR POT AND ASSOCIATED WIRING		
	PARTIAL FUNCTION OF MODE DOORS	CHECK FOR OBSTRUCTED OR BINDING MODE DOORS		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.
		CHECK FOR DAMAGED STEPPER MOTOR OR WIRING		
6. BLOWER TURNS ON AND OFF RAPIDLY	BATTERY VOLTAGE IS AT LEAST 12V BATTERY VOLTAGE IS LESS THAN 12V	CHECK FOR AT LEAST 12V BETWEEN GREEN HEATER VALVE WIRE AND CHASSIS GROUND. CHECK FOR FAULTY BATTERY OR ALTERNATOR	INSURE ALL SYSTEM GROUNDS AND POWER CONNECTIONS ARE CLEAN AND TIGHT. CHARGE BATTERY	SYSTEM SHUTS OFF BLOWER AT 10V. POOR CONNECTIONS OR WEAK BATTERY CAN CAUSE SHUT DOWN AT UP TO 11V
7. ERATIC FUNCTIONS OF BLOWER, MODE, TEMP, ETC.		CHECK FOR DAMAGED SWITCH OR POT AND ASSOCIATED WIRING	REPAIR OR REPLACE	
8. WHEN THE IGNITION IS TURNED ON, THE BLOWER MOMENTARILY COMES ON, THEN SHUTS OFF. THIS IS WITH THE BLOWER SWITCH IN THE OFF POSITION.		THIS IS AN INDICATOR THAT THE SYSTEM HAS BEEN RE-SET. 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 EVEN FOR A SPLIT SECOND, THE SYSTEM WILL RE-SET.	RUN RED POWER WIRE DIRECTLY TO BATTERY.	
9. BACKLIGHTING ON CONTROL PANEL ALWAYS ON.	VINTAGE AIR SUPPLIED PANELS ONLY.	TAN WIRE IN MAIN HARNESS IS NOT CONNECTED TO 0-12V GAUGE BACK LIGHT WIRE.	CONNECT TO GAUGE BACK LIGHT WIRE (0-12V) WHICH WHICH CONTROLS DIMMING OF PANEL BACK LIGHT	TAN WIRE IS ONLY USED ON SYSTEMS WITH ENTIRE CONTROL PANEL SUPPLIED BY VINTAGE AIR.
10. BACKLIGHTING ON CONTROL PANEL ALWAYS OFF.	VINTAGE AIR SUPPLIED PANELS ONLY.	TAN WIRE IN MAIN HARNESS NOT CONNECTED.	CONNECT TO GAUGE BACK LIGHT WIRE (0-12V) WHICH WHICH CONTROLS DIMMING OF PANEL BACK LIGHT	



DEFROST DUCT TEMPLATE

☐ CUT OUT TEMPLATE AND TAPE TOGETHER AS SHOWN BELOW.



OVER LAP SHADED PORTIONS AND TAPE TOGETHER

CUT ALONG DOTTED LINE

MARK OR SCRIBE ALONG
THIS EDGE OF TEMPLATE

ALIGN TEMPLATE WITH BOTTOM
OF THE DEFROST DUCT

MARK OR SCRIBE ALONG
THIS EDGE OF TEMPLATE

CUT ALONG DOTTED LINE

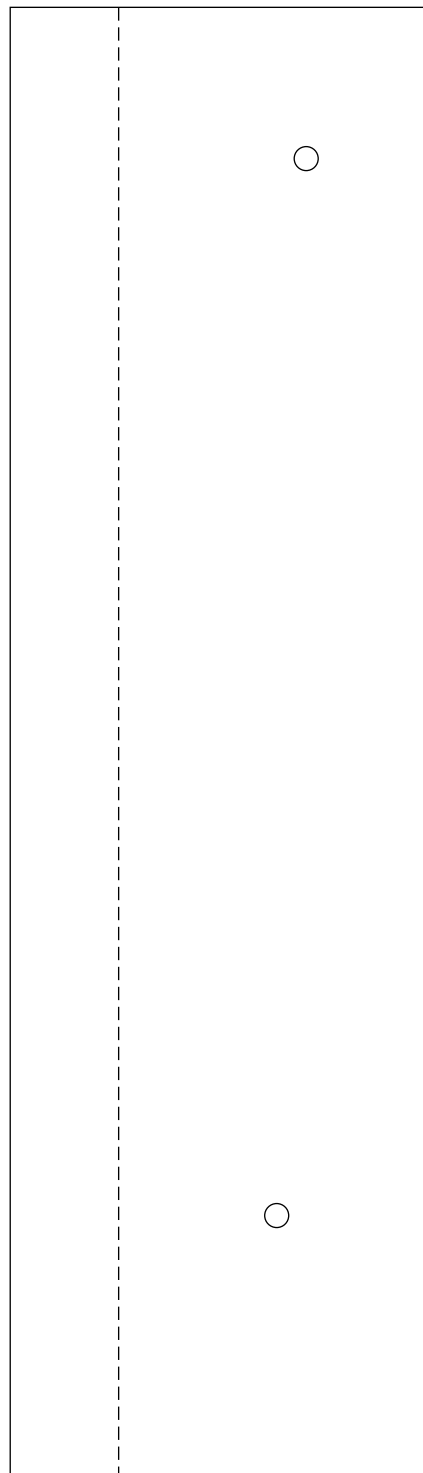
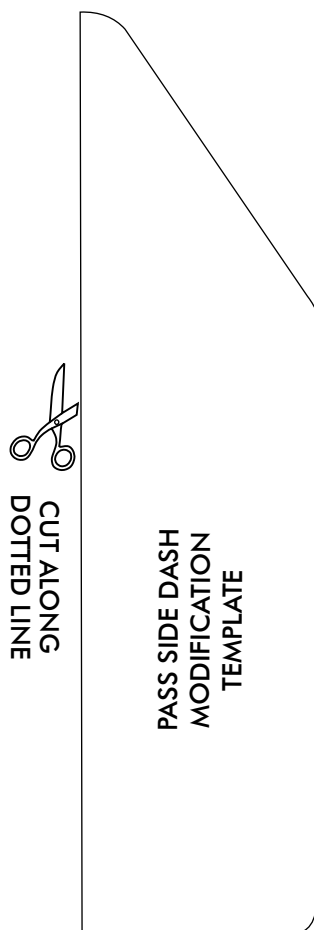
MARK OR SCRIBE ALONG
THIS EDGE OF TEMPLATE

MARK OR SCRIBE ALONG
THIS EDGE OF TEMPLATE

ALIGN TEMPLATE WITH BOTTOM
OF THE DEFROST DUCT

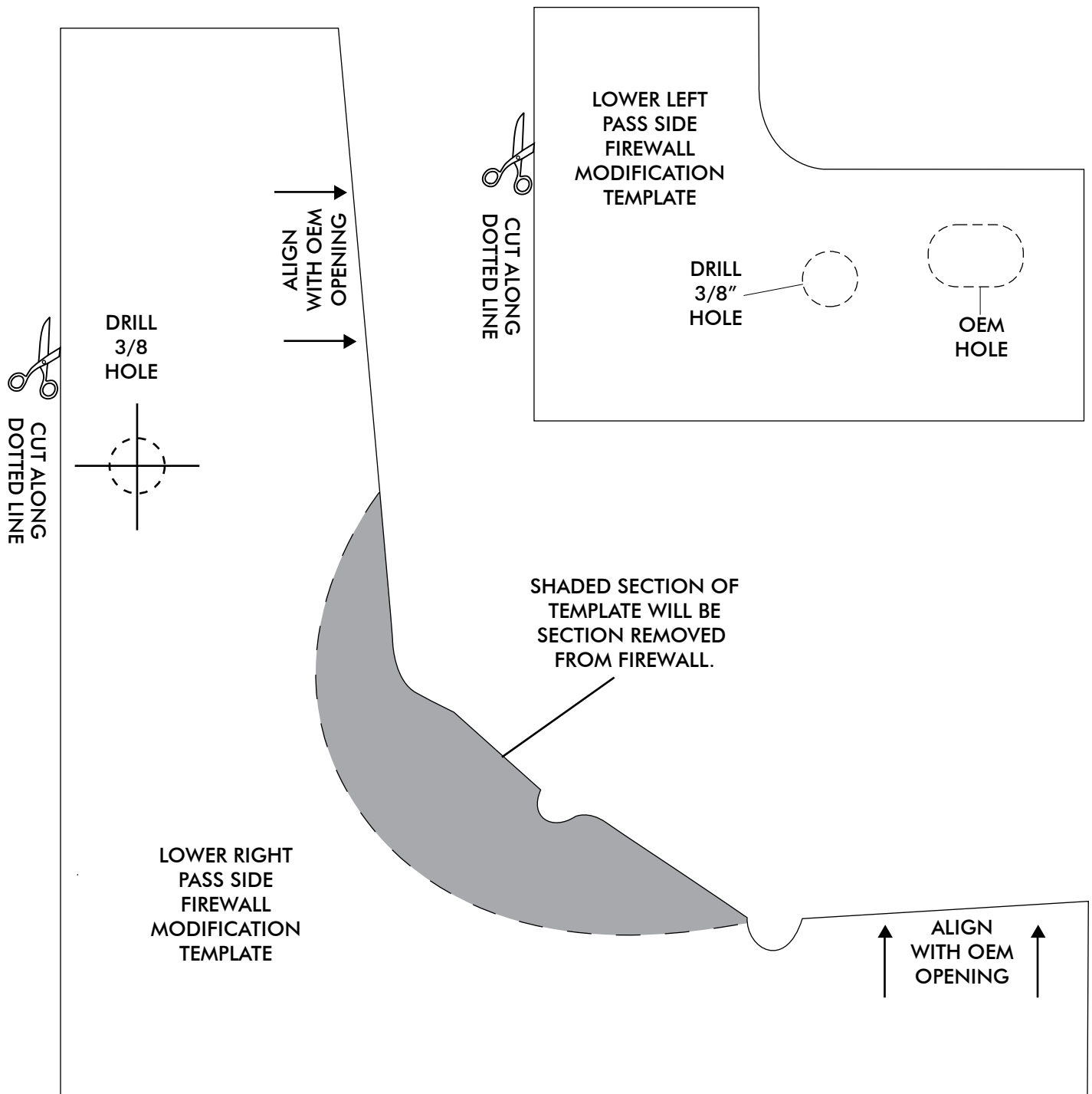


PASS SIDE DASH MODIFICATION TEMPLATE





FIREWALL MODIFICATION TEMPLATE





EVAPORATOR KIT PACKING LIST

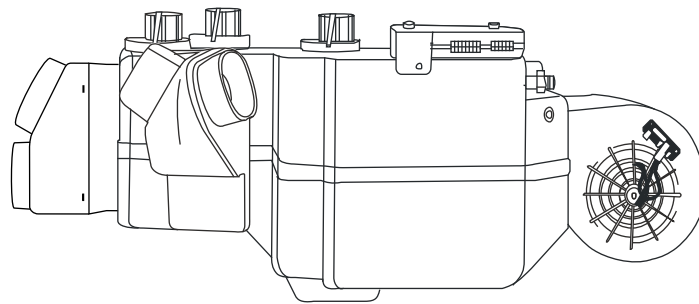
EVAPORATOR KIT
564168

No.	QTY.	PART No.	DESCRIPTION	
1.	1	744007	GEN IV 4 VENT w/ 2" EVAP SUBCASE w/ 203 ECU	_____
2.	1	784170	1968 CORVETTE w/ AC ACC. KIT	_____

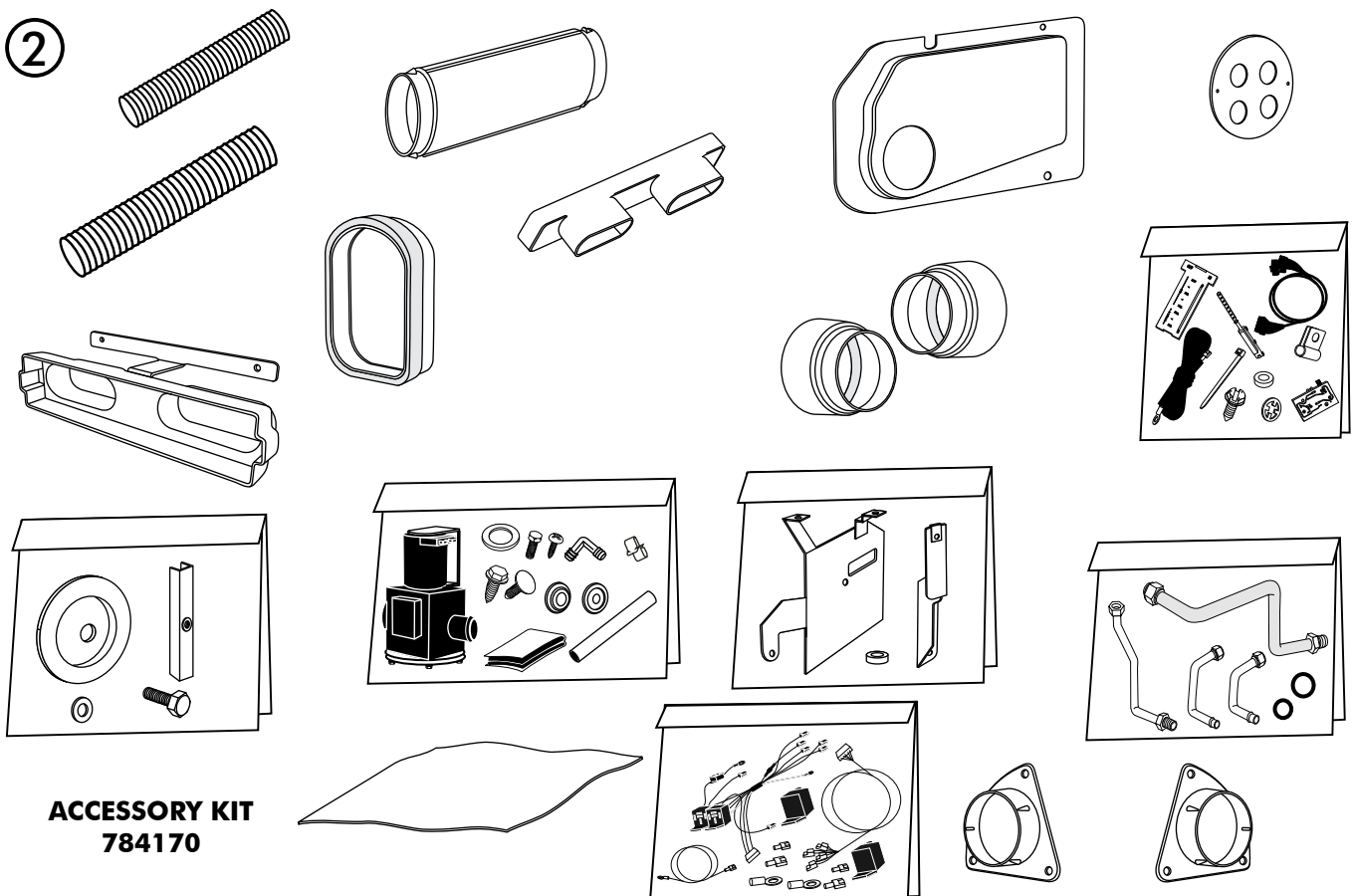
CHECKED BY: _____
PACKED BY: _____
DATE: _____

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**GEN IV 4 VENT w/ 2"
EVAP. SUB CASE
w/ 203 ECU
744007**



②



**ACCESSORY KIT
784170**