INCLUDED BELOW:

- **VINTAGE AIR INSTALLATION MANUAL**
- **TROUBLESHOOTING GUIDE**

VINTAGE AIR
18865 GOLL ST. - SAN ANTONIO, TX. - 78266 - ph.210-654-7171 - fax 210-654-3113

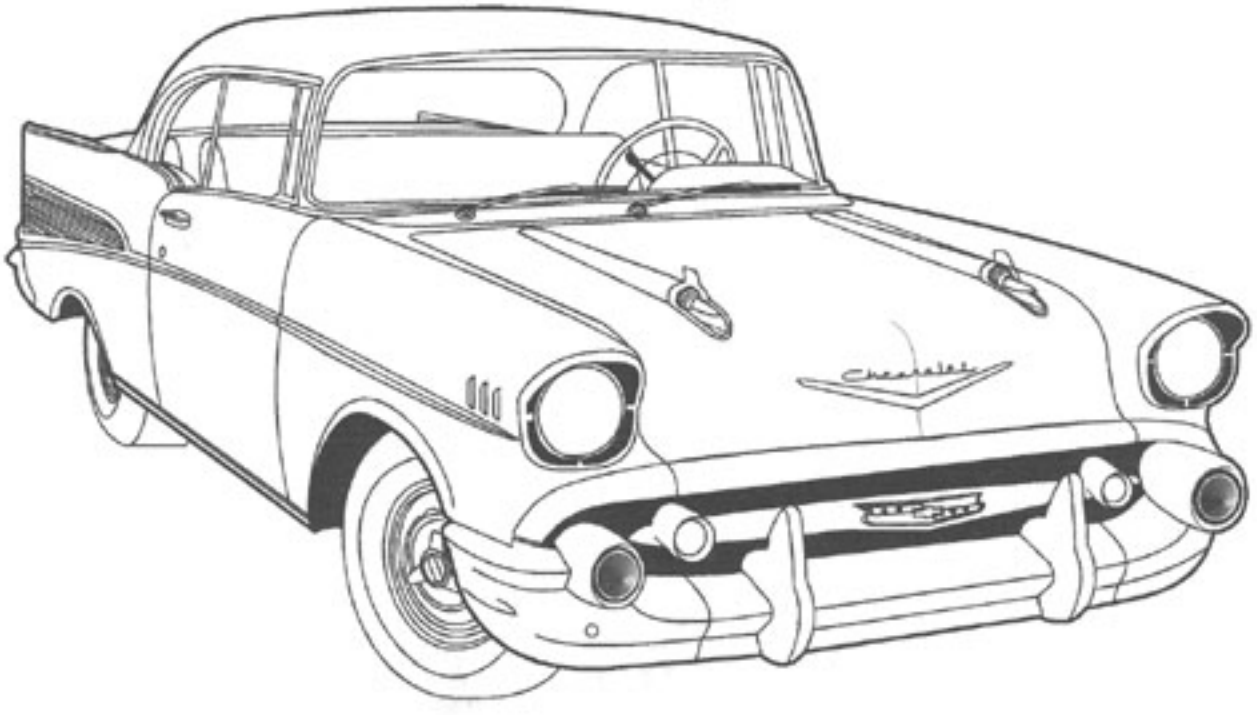
INSTALLATION INSTRUCTIONS FOR

1957 CHEVROLET

w/ FOUR LEVER CONTROLS

GEN IV

(56157-PCZ)



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PAGES

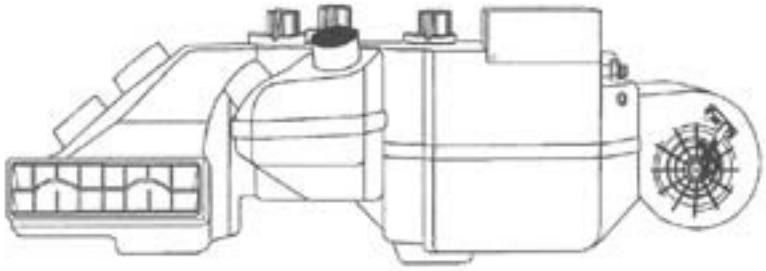
EVAPORATOR KIT PACKING LIST

EVAPORATOR KIT
56157-PCZ

No.	QTY.	PART No.	DESCRIPTION
1.	1	76157-VCE	'57 CHEV. EVAP. SUBCASE
2.	1	78158-PCN	'57 CHEV. CAR 4 LEVER WO AC ACC. KIT

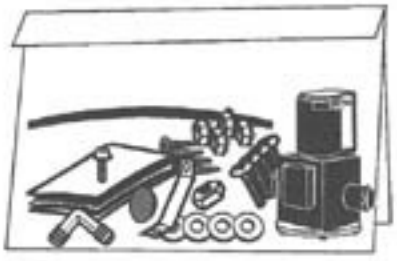
***** BEFORE BEGINNING INSTALLATION OPEN ALL PACKAGES AND CHECK CONTENTS OF SHIPMENT. PLEASE REPORT ANY SHORTAGES DIRECTLY TO VINTAGE AIR WITHIN 15 DAYS. AFTER 15 DAYS, VINTAGE AIR WILL NOT BE RESPONSIBLE FOR MISSING OR DAMAGED ITEMS.***

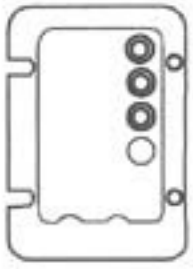
①

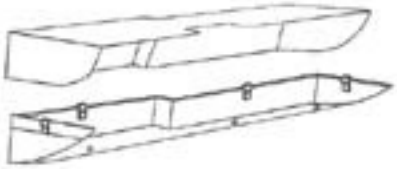


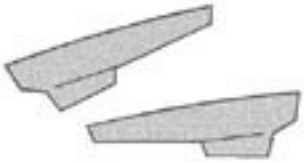
'57 CHEVY EVAP.
SUB CASE *76157-VCE*

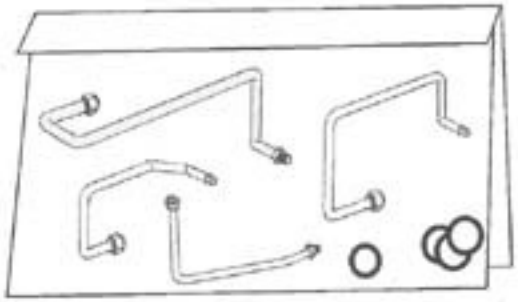
②

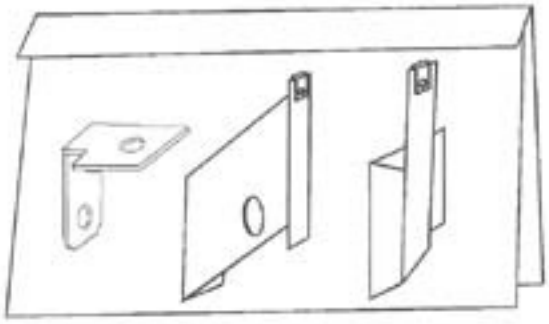


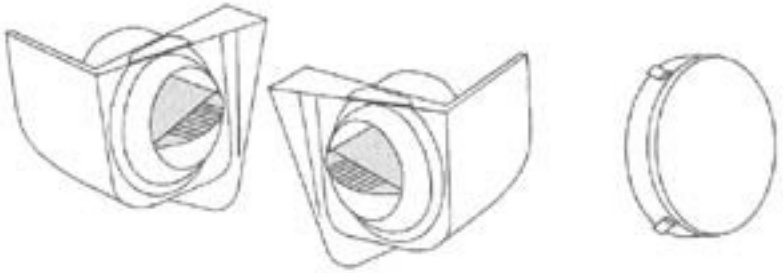












ACCESSORY KIT
78158-PCN

1957 CHEVROLET

GEN IV WITH 4-LEVER CONTROLS

IMPORTANT NOTICE-PLEASE READ

FOR MAXIMUM SYSTEM PERFORMANCE VINTAGE AIR RECOMMENDS THE FOLLOWING:

*18" HEAVY DUTY FAN - 32918-VUF
*1955-57 CHEVY FAN SHROUD (V/8 RADIATOR POSITION)- 37155-VCF, OR
1955-57 CHEVY FAN SHROUD (6 cyl. RADIATOR POSITION)-32057-VCF
*16" SPAL AUXILIARY CONDENSER FAN PACKAGE - 32007-VUF

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 YOU 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 (380 lb.), TO PREVENT COMPRESSOR DAMAGE OR HOSE RUPTURE. A TRINARY SWITCH (11076-VUS) COMBINES HI/LO PRESSURE PROTECTION WITH AN ELECTRIC FAN OPERATION SIGNAL AT 220 lbs., 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:

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.

THE PROPER 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 CAPACITIES

134a SYSTEM

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

R-12 SYSTEM

CHARGE WITH 2.0 lbs. OF REFRIGERANT

LUBRICANT CAPACITIES

NEW COMPRESSOR - NO ADDITIONAL OIL NEEDED
USED COMPRESSOR - CONSULT VINTAGE AIR

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.

- 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 IN SEPARATE LOCATIONS. IDEALLY, THE BLOWER CONTROL GROUND (HEAVY GAUGE WIRE) SHOULD BE CONNECTED TO THE ENGINE BLOCK OR TO THE NEGATIVE BATTERY POST WITH A 10-12 GAUGE WIRE. ECU CAN BE CONNECTED TO ANY CHASSIS GROUND.
- 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 1957-CHEVROLET

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 AND REMOVE
- ☐ REMOVE BATTERY TRAY
- ☐ REMOVE AIR CLEANER
- ☐ DRAIN RADIATOR
- ☐ DISCONNECT HEATER HOSES
- ☐ REMOVE O.E.M. BLOWER ASSEMBLY FROM FIREWALL AND FENDER. KEEP THE TWO O.E.M FIREWALL COVER RETAINING BRACKETS FOR USE WITH THE NEW FIREWALL COVER
- ☐ REMOVE O.E.M HEATER CONTROL VALVE AND DISCARD
- ☐ INSTALL HEATER CONTROL VALVE BLOCK OFF PLATE AS SHOWN IN FIGURE 1 BELOW.

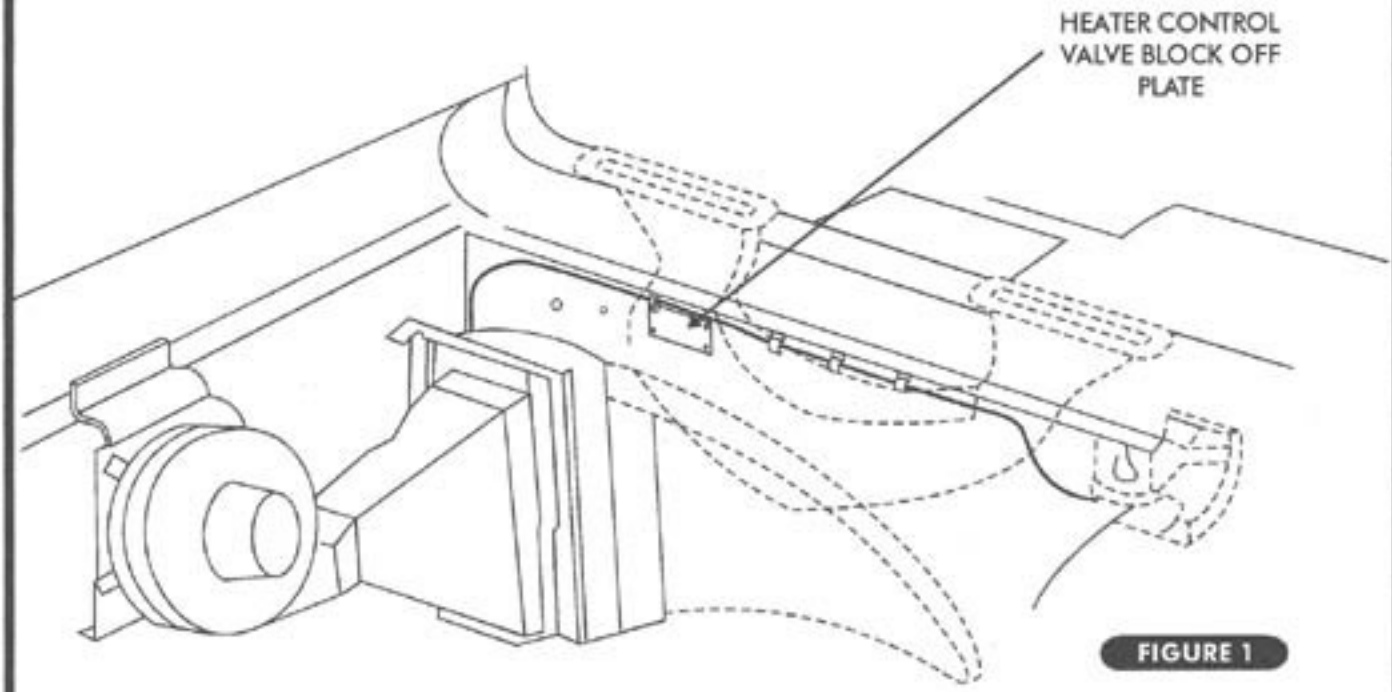


FIGURE 1

PASSENGER COMPARTMENT

1. ☐ REMOVE CONTROL PANEL BEZEL
2. ☐ REMOVE OEM CONTROL PANEL AND DISCONNECT CABLES (DISCARD CABLES)
3. ☐ REMOVE GLOVE BOX (DISCARD)
4. ☐ REMOVE GLOVE BOX DOOR
5. ☐ REMOVE RADIO (OPTIONAL)
6. ☐ REMOVE CLOCK
7. ☐ REMOVE AND DISCARD THE OEM HEATER ASSEMBLY AND HEATER DUCT
8. ☐ REMOVE AND DISCARD DEFROSTER DUCT

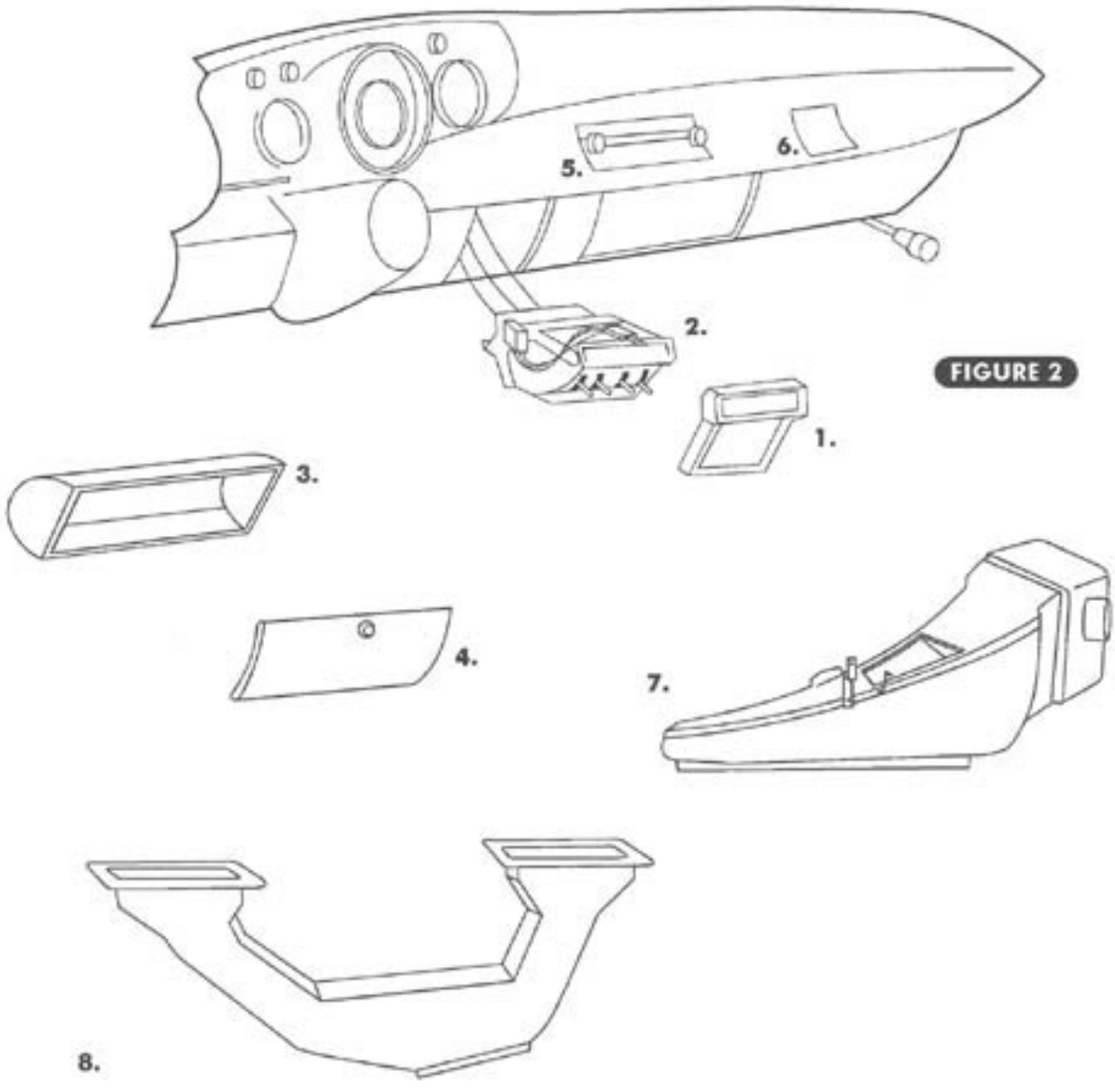


FIGURE 2

CONDENSER ASSEMBLY

- ☐ LOOSEN THE SIX BOLTS THAT SECURE THE RADIATOR TO THE CORE SUPPORT.
- ☐ SLIDE THE CONDENSER ASSEMBLY INTO POSITION. THE CONDENSER BRACKETS WILL BE HELD BETWEEN THE RADIATOR AND CORE SUPPORT, SECURED WITH THE SIX RADIATOR BOLTS. SEE FIGURE 3 & 3b BELOW. HOLDING THE CONDENSER IN POSITION, TIGHTEN THE SIX RADIATOR BOLTS.

CORE SUPPORT

- ☐ LOCATE THE TEMPLATE ON PAGE 25, AND ALIGN THIS TEMPLATE ON THE PASSENGER SIDE CORE SUPPORT PANEL. USING THE TEMPLATE, MARK HOLES AND CUT THE 1 1/4" HOLE, USING A HOLE SAW. DRILL THE 5/16" HOLE IN NOTED LOCATION. SEE FIGURE 3a BELOW.
- ☐ INSTALL THE #6 AND #8 CONDENSER LINES THROUGH 1 1/4" HOLE. LUBRICATE O-RINGS AND CONNECT LINES TO CONDENSER
- ☐ LOCATE THE SPLIT GROMMET AND INSTALL AS SHOWN IN FIGURE 3b, BELOW.
- ☐ INSTALL DRIER LOOSELY AS SHOWN IN FIGURE 3b BELOW.
  NOTE: REFRIGERANT FLOW. (ARROW ON DRIER)

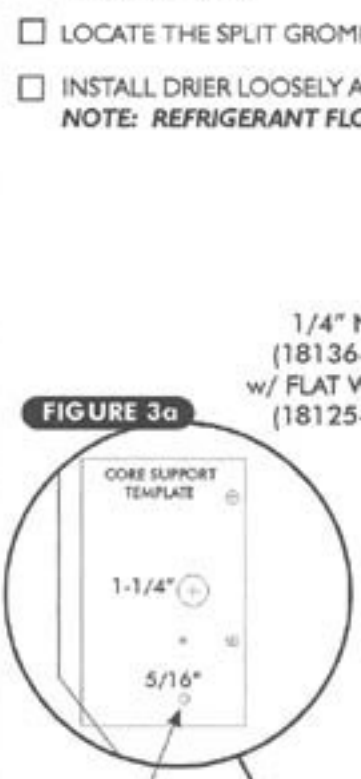


FIGURE 3a

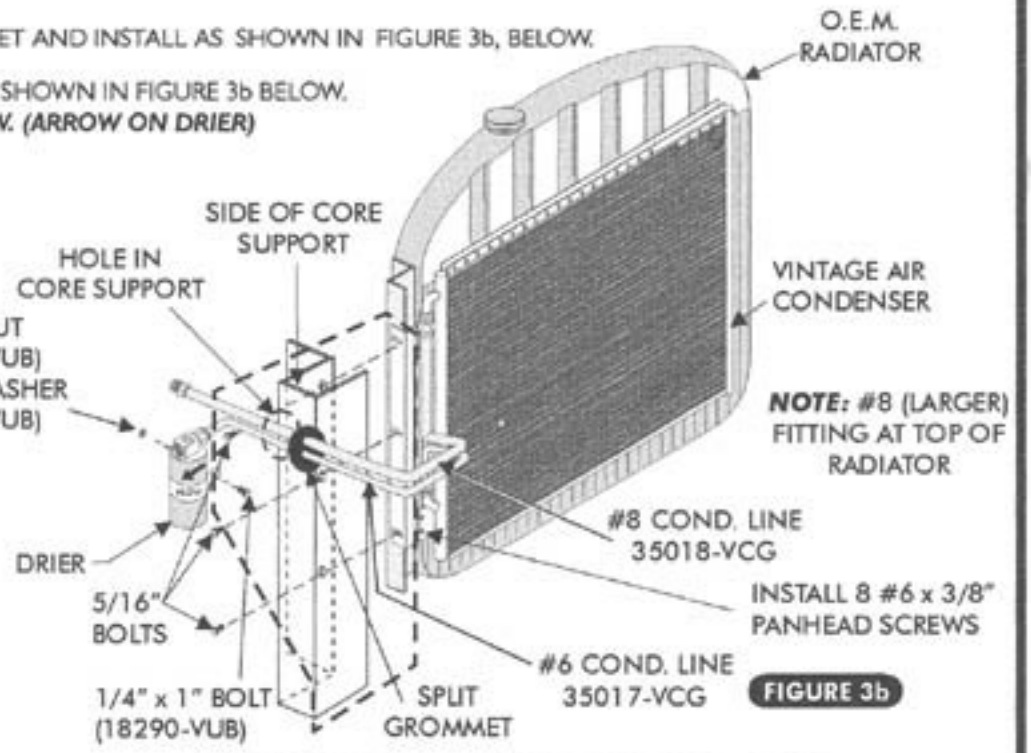


FIGURE 3b

INSTALLATION OF CONDENSER HARDLINES

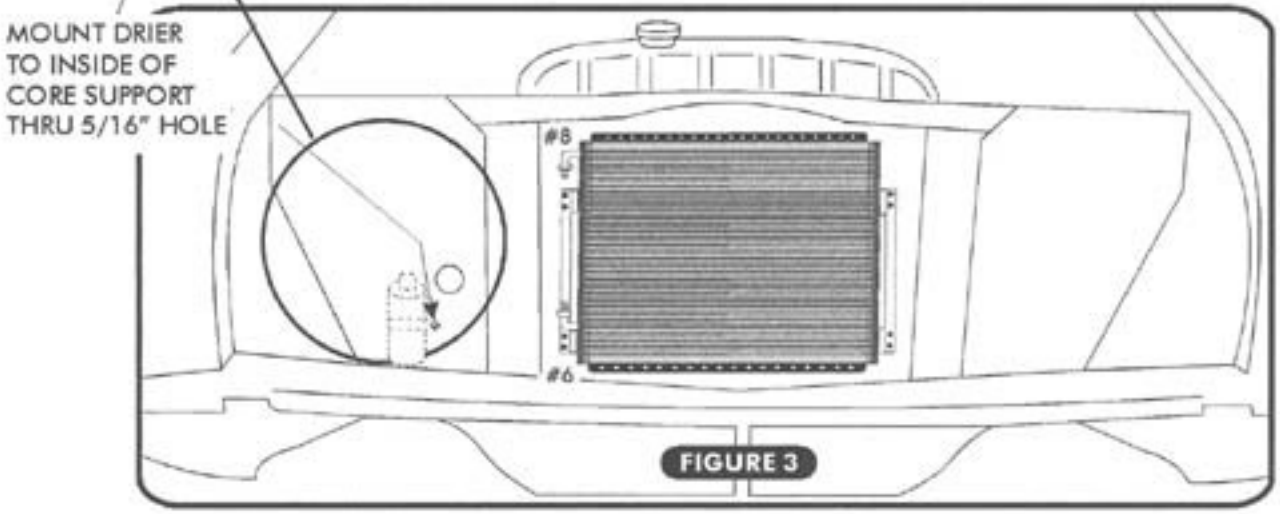


FIGURE 3

COMPRESSOR & BRACKETS

☐ REFER TO SEPARATE INSTRUCTIONS INCLUDED WITH THE BRACKET KIT TO INSTALL THE COMPRESSOR BRACKET. REFER TO FIGURE 4 BELOW FOR COMPRESSOR MOUNTING POSITION.

PULLEYS

☐ IN MOST INSTANCES EXISTING BELT LENGTHS WILL REMAIN THE SAME. SEE FIGURE 4 BELOW.

PULLEYS (VINTAGE AIR) SHORT PUMP SMALL BLOCK CHEVY (STEEL PULLEY)

22503-VCA - WATER PUMP PULLEY *(DOUBLE GROOVE)*

22506-VCA - CRANKSHAFT PULLEY *(DOUBLE GROOVE) (WITH POWER STEERING A 3 GROOVE CRANK PULLEY IS REQUIRED)*

22507-VCA - CRANKSHAFT PULLEY *(TRIPLE GROOVE)*

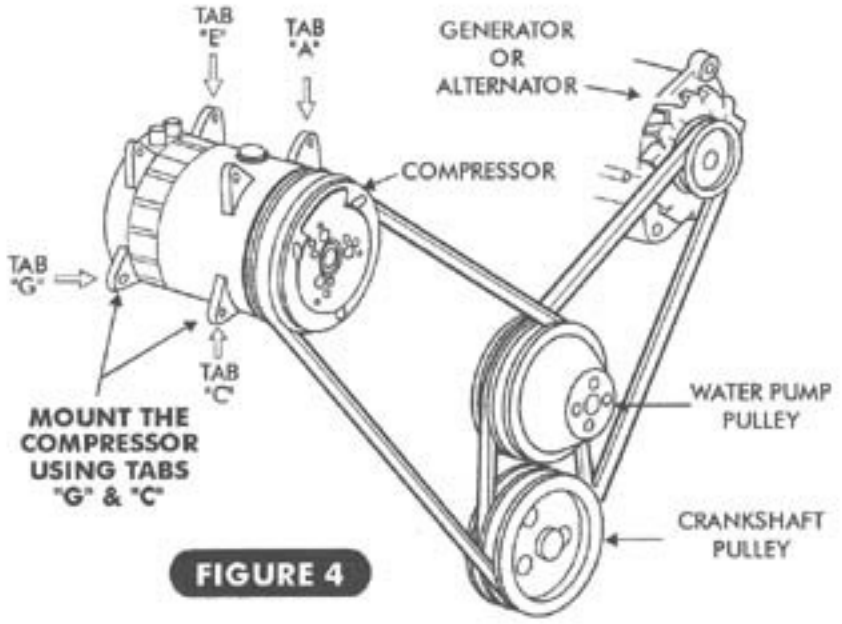


FIGURE 4

NOTE: BELT ROUTING MAY VARY WITH DIFFERENT BRACKET SETS. ALWAYS REFER TO INSTRUCTIONS INCLUDED WITH BRACKETS.

DEFROST DUCT INSTALLATION

☐ INSTALL DEFROST DUCTS WITH 2" DUCT HOSE
(PASSENGER SIDE) 2" x 10"
(DRIVER SIDE) 2" x 24"
SEE FIGURE 5 BELOW &
FIGURE 10, PAGE 15

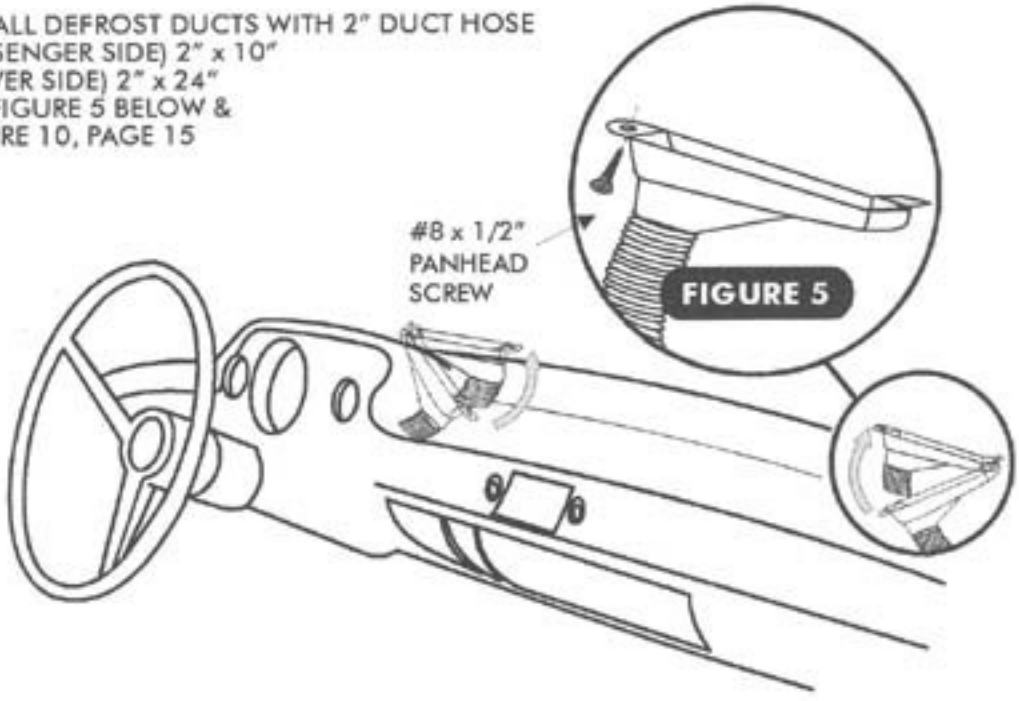


FIGURE 5

CONTROL PANEL CONVERSION

- ☐ LOCATE CONTROL PANEL KIT.
- ☐ REMOVE O.E.M. BLOWER SWITCH. DISCARD SWITCH, BUT RETAIN THE TWO O.E.M. SCREWS. SEE FIGURE 7, PAGE 12.
- ☐ REMOVE O.E.M. PLACARD AND DISCARD.
- ☐ INSTALL NEW PLACARD. SEE FIGURE 6, PAGE 11.
- ☐ INSTALL NEW 5-PRONG BLOWER SWITCH, USING THE TWO O.E.M. SCREWS. SEE FIGURE 7, PAGE 12.
- ☐ REMOVE FRESH AIR LEVER FROM O.E.M. CONTROL PANEL, DRILL 3/16" DIA. HOLE AS SHOWN IN FIGURE 7a, PAGE 12.
- ☐ REMOVE O.E.M. CABLE CLAMPS, AND DISCARD.
- ☐ DRILL 3/16" HOLE IN CONTROL PANEL MOUNTING BRACKET. SEE FIGURE 7, PAGE 12
- ☐ LOCATE TEMP BLEND POTENTIOMETER ASSEMBLY, SEE FIGURE 7, PAGE 12.
- ☐ ATTACH CONNECTING PUSH RODS OF TEMP. POTENTIOMETER ASSEMBLY TO O.E.M. CONTROL PANEL LEVERS. ***NOTE: THE CENTER TWO LEVERS MUST BE IN THE, "OFF" & "HEAT" POSITION (ALL THE WAY DOWN) WITH THE CONNECTING PUSH RODS PULLED ALL THE WAY OUT FOR PROPER INSTALLATION.*** SEE FIGURE 7, PAGE 12.
- ☐ AFTER CONNECTING PUSH RODS TO CONTROL LEVERS, SECURE WITH PUSH-RINGS, AND SLIDE THE TEMP. POTENTIOMETER ASSEMBLY UNDER MOUNTING BRACKET. SECURE ASSEMBLY TO MOUNTING BRACKET WITH 8-32 x 3/4" PAN HEAD SCREW FROM BOTTOM SIDE OF THE ASSEMBLY INTO MOUNTING BRACKET. AS SHOWN IN FIGURE 7b PAGE 12.
- ☐ ATTACH THE FRESH AIR CABLE BRACKET TO CONTROL PANEL AND TEMP. POTENTIOMETER ASSEMBLY WITH 8-32 x 3/4" PAN-HEAD SCREW. ONCE THE SCREW PASSES THRU ASSEMBLY THREAD 8-32 NYLOCK NUT TO THE SCREW FROM BOTTOM SIDE OF ASSEMBLY AND TIGHTEN AS SHOWN IN FIGURE 7b, PAGE 12.
- ☐ INSTALL FRESH AIR CABLES TO FRESH AIR LEVER, SECURE WITH CLEVIS PIN, NYLON WASHERS, 3/16" FLAT WASHER AND 3/32" COTTER PIN. SEE FIGURE 7b PAGE 12.
- ☐ ATTACH FRESH AIR CABLES WITH CABLE CLAMPS TO FRESH AIR CABLE MOUNTING BRACKET, SECURE WITH 8-32 x 3/4" SCREW AND 8/32 NYLOCK NUT.

MODE SELECTOR SWITCH ASSEMBLY

- ☐ LOCATE MODE SELECTOR SWITCH ASSEMBLY
- ☐ ATTACH SELECTOR PUSH-ROD TO LEVER AND SECURE WITH PUSH-RING. SEE FIGURE 6, PAGE 11.
- ☐ ATTACH MODE SELECTOR SWITCH ASSEMBLY USING O.E.M HOLES IN CONTROL PANEL WITH TWO 8-32 SELF TAPPING SCREWS. SEE FIGURE 6, PAGE 11.

MODE SELECTOR SWITCH ASSEMBLY ILLUSTRATION

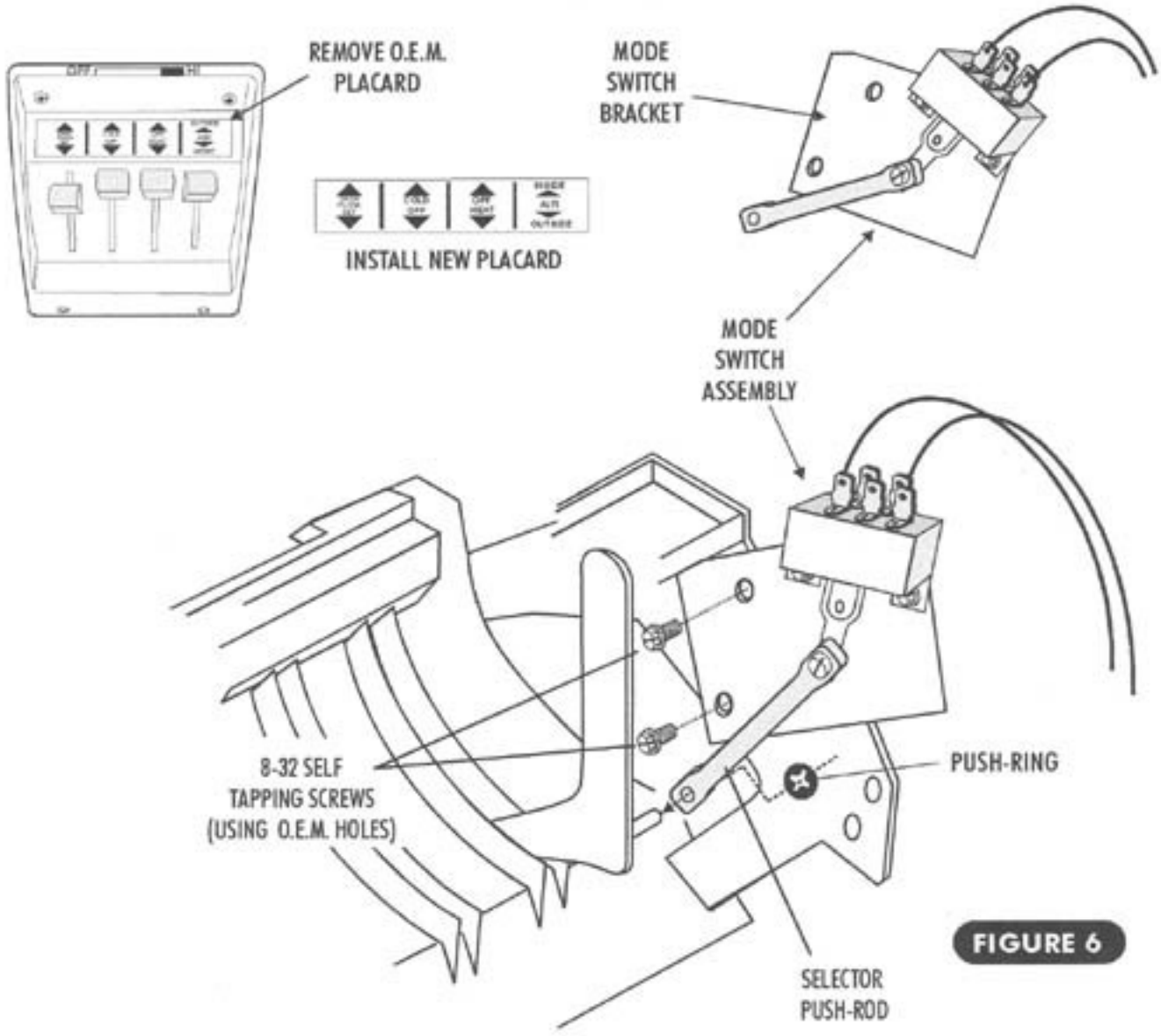


FIGURE 6

CONTROL CABLES AND WIRING

☐ ROUTE THE FRESH AIR CABLES THROUGH THE ORIGINAL CABLE HOLES IN THE FIREWALL. USING CABLE CLAMPS, CONNECT CABLE TO THE BUTTERFLY DOOR IN THE LEFT AND RIGHT FRONT FENDER. ADJUST CABLES, AND VERIFY THAT BOTH BUTTERFLY DOORS CLOSE COMPLETELY.

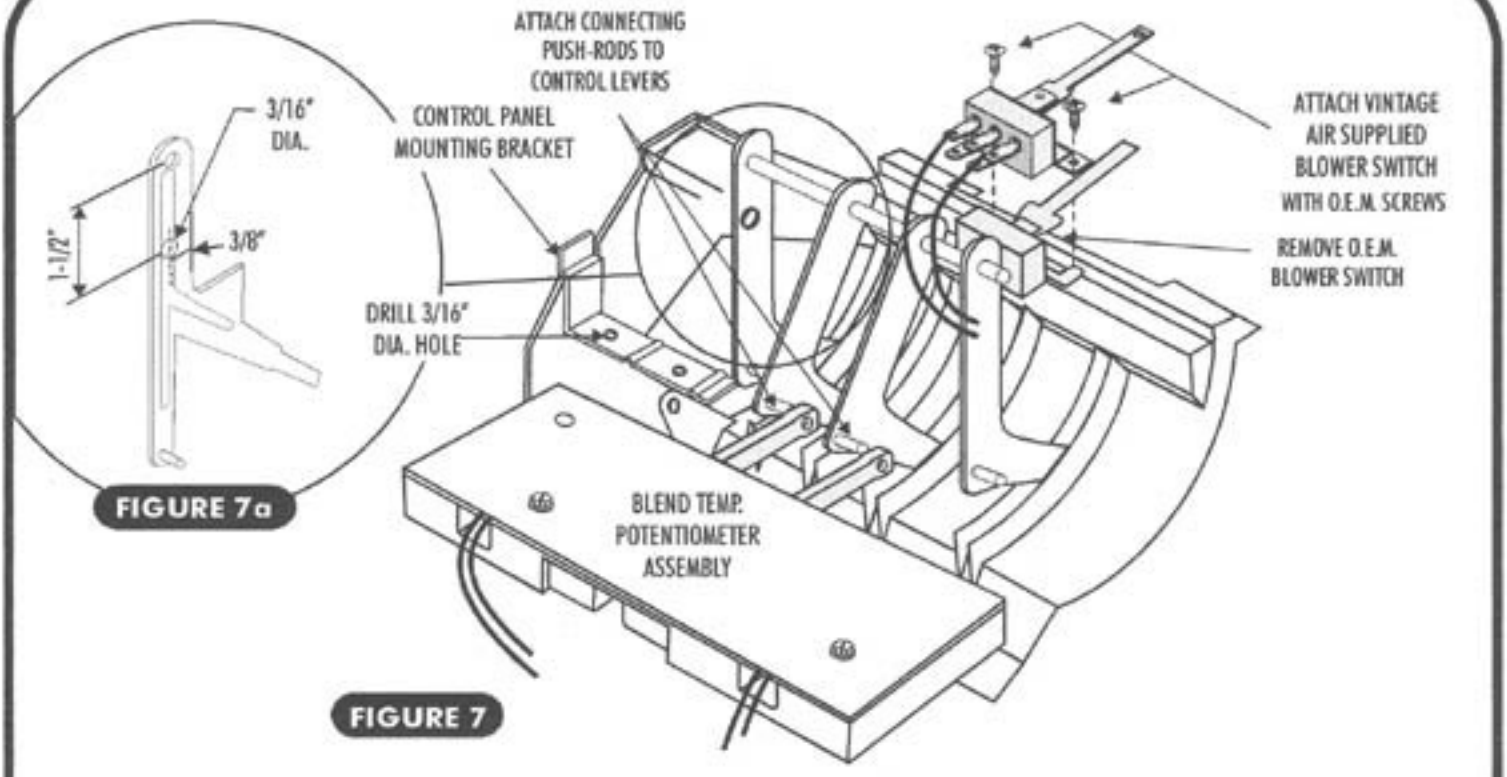


FIGURE 7a

FIGURE 7

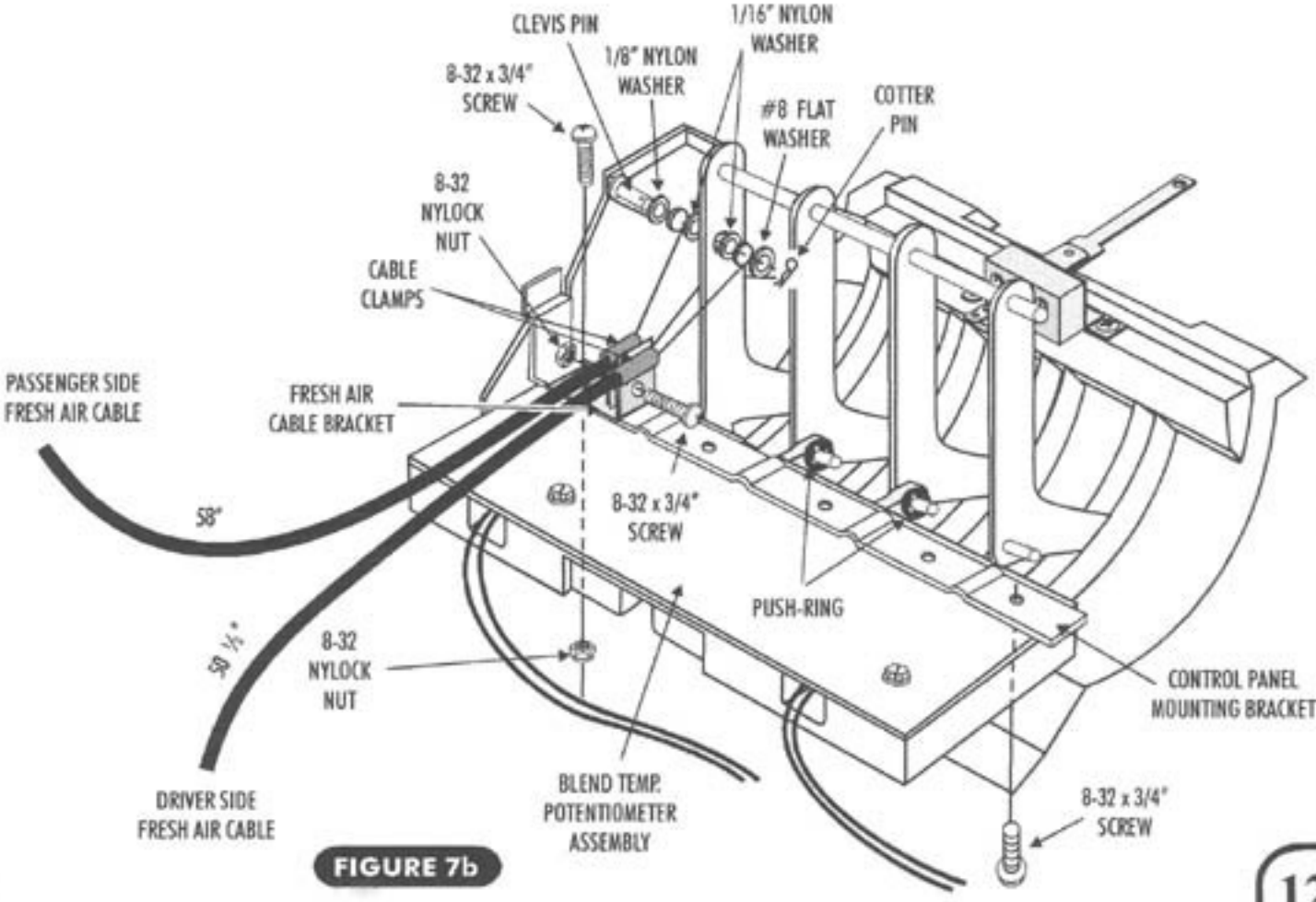


FIGURE 7b

EVAPORATOR INSTALLATION

- ☐ ON A WORK BENCH, INSTALL EVAPORATOR REAR BRACKETS, AND INSTALL EVAPORATOR HARDLINES WITH PROPERLY LUBRICATED O-RINGS. (SEE FIGURE 18, PAGE 22, AND FIGURE 15b, PAGE 19.)
- ☐ INSTALL FRONT MOUNTING BRACKET TO EVAPORATOR UNIT WITH 1/4-20 x 1/2" BUTTON HEAD SCREW & WASHER TIGHTEN AS SHOWN IN FIGURE 9, PAGE 14. LOOSELY ATTACH FRONT MOUNTING BRACKET TO DASH WITH 1/4-20 x 1" BOLT, WASHER AND NUT. SEE FIGURE 8 BELOW.
- ☐ LIFT EVAPORATOR UNIT UP & UNDER THE DASHBOARD (SEE FIGURES 8-8a BELOW & FIGURE 8b, PAGE 14). SECURE LOOSELY TO THE FIREWALL FROM THE ENGINE COMPARTMENT SIDE WITH (2) 1/4-20 x 1" BOLTS AND WASHERS. SEE FIGURE 9, PAGE 14 & FIGURE 16, PAGE 20.
- ☐ INSTALL CENTER A/C PLENUM TO EVAPORATOR WITH (2) 10/32 x 1/2" SCREWS. SEE FIGURE 9, PAGE 14.
- ☐ LOOSELY SECURE THE CENTER PLENUM TO DASH WITH THE CENTER PLENUM MOUNTING BRACKET, USING A 1/4-20 x 1" BOLT AND WASHER. SEE FIGURE 9, PAGE 14.
- ☐ VERIFY THAT EVAPORATOR UNIT IS LEVEL AND SQUARE TO THE DASH, THEN TIGHTEN ALL SECURING BOLTS. (***NOTE**: TIGHTEN THE TWO BOLTS ON FIREWALL FIRST, THEN THE FRONT MOUNTING BRACKET BOLT AND NUT. TIGHTEN THE CENTER PLENUM MOUNTING BOLT LAST*).

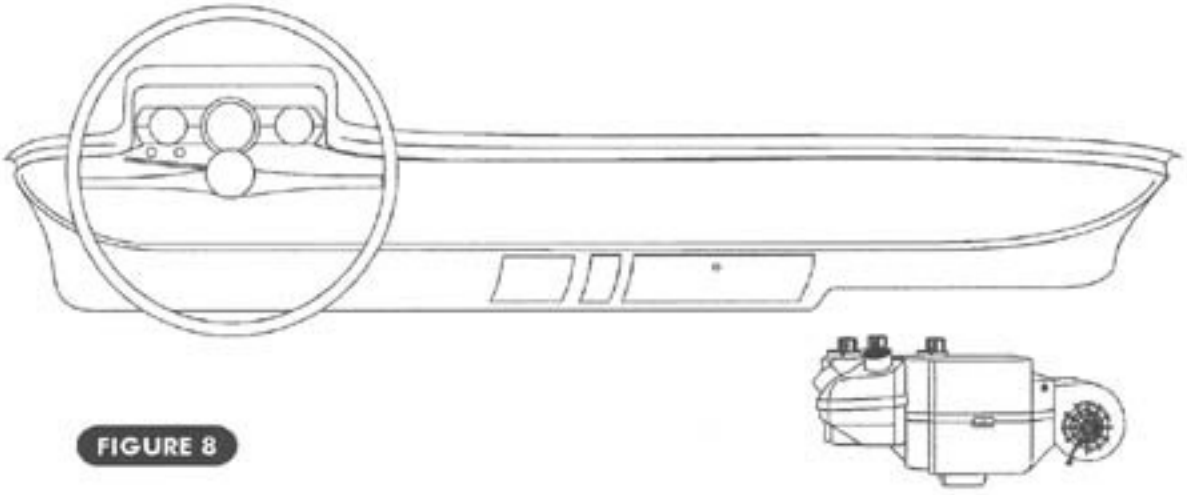


FIGURE 8

INSTALL EVAPORATOR UNIT FROM PASSENGER SIDE FLOOR BOARD.

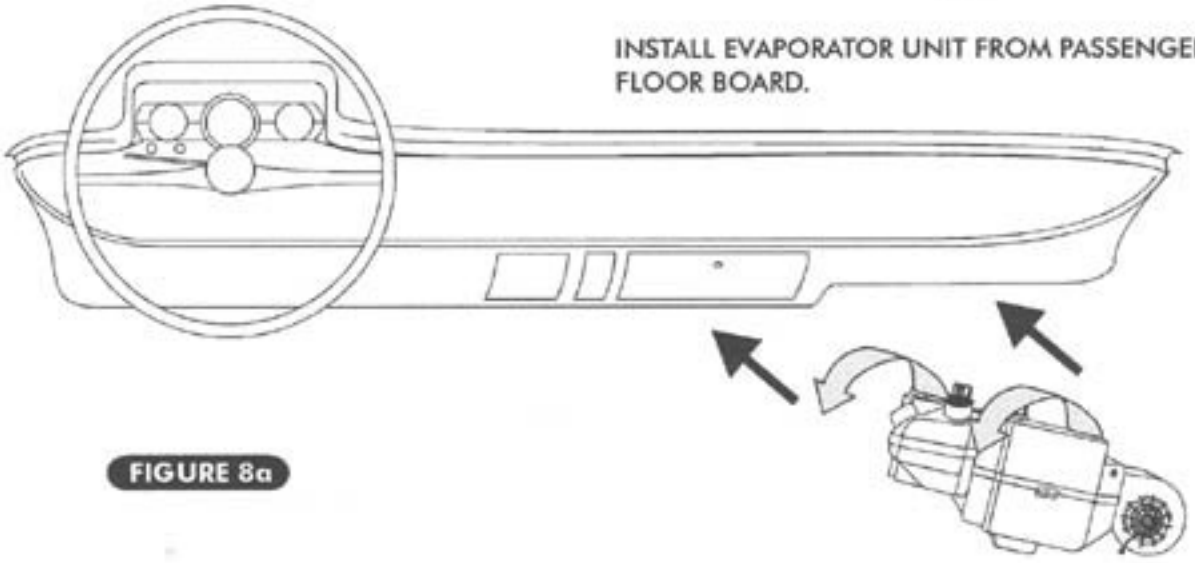


FIGURE 8a

ROTATE EVAPORATOR UNIT SO LINES PASS THROUGH OPENING IN FIREWALL AND LIFT INTO PLACE.

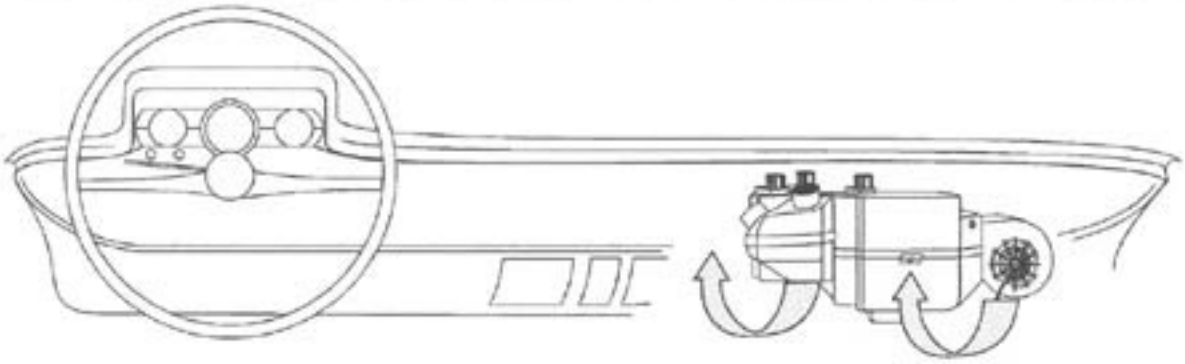


FIGURE 8b

ONCE INTO PLACE SECURE EVAPORATOR UNIT TO FIREWALL.

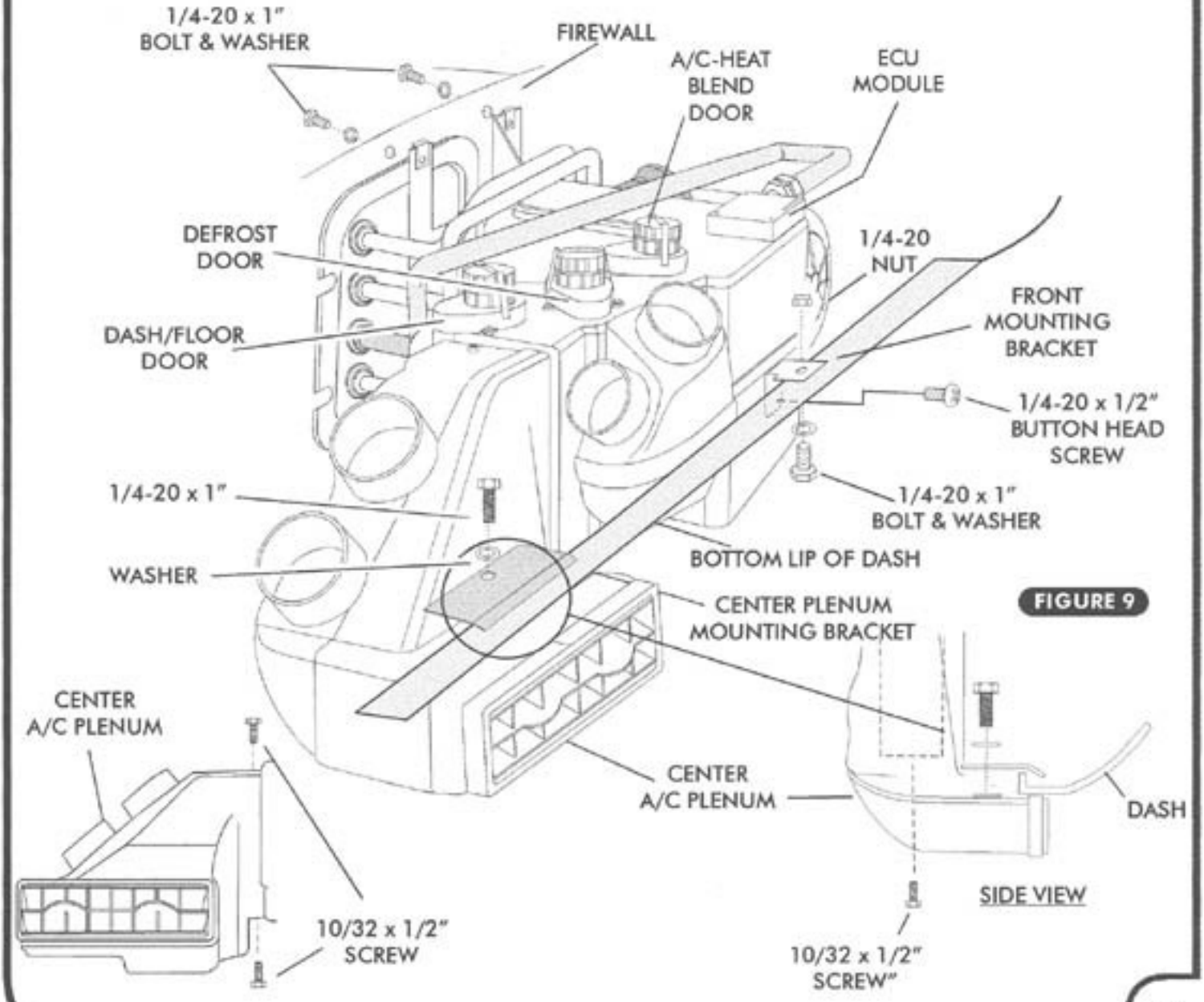


FIGURE 9

DUCT & DRAIN HOSE ROUTING

- ☐ DRILL 5/8" HOLE IN FIREWALL FOR DRAIN HOSE, USE FIREWALL HOLE TEMPLATE ON PAGE 25. SEE FIGURE 16, PAGE 20.
- ☐ CONNECT DRAIN HOSE TO BOTTOM OF EVAPORATOR UNIT AND ROUTE TO FIREWALL.(SEE FIGURE 16, PAGE 20).
- ☐ INSTALL DUCT HOSES AS SHOWN IN FIGURE 10 BELOW.
- ☐ INSTALL DRIVER & PASSENGER UNDER-DASH LOUVERS. SEE FIGURE 11, PAGE 16.

CONTROL WIRING

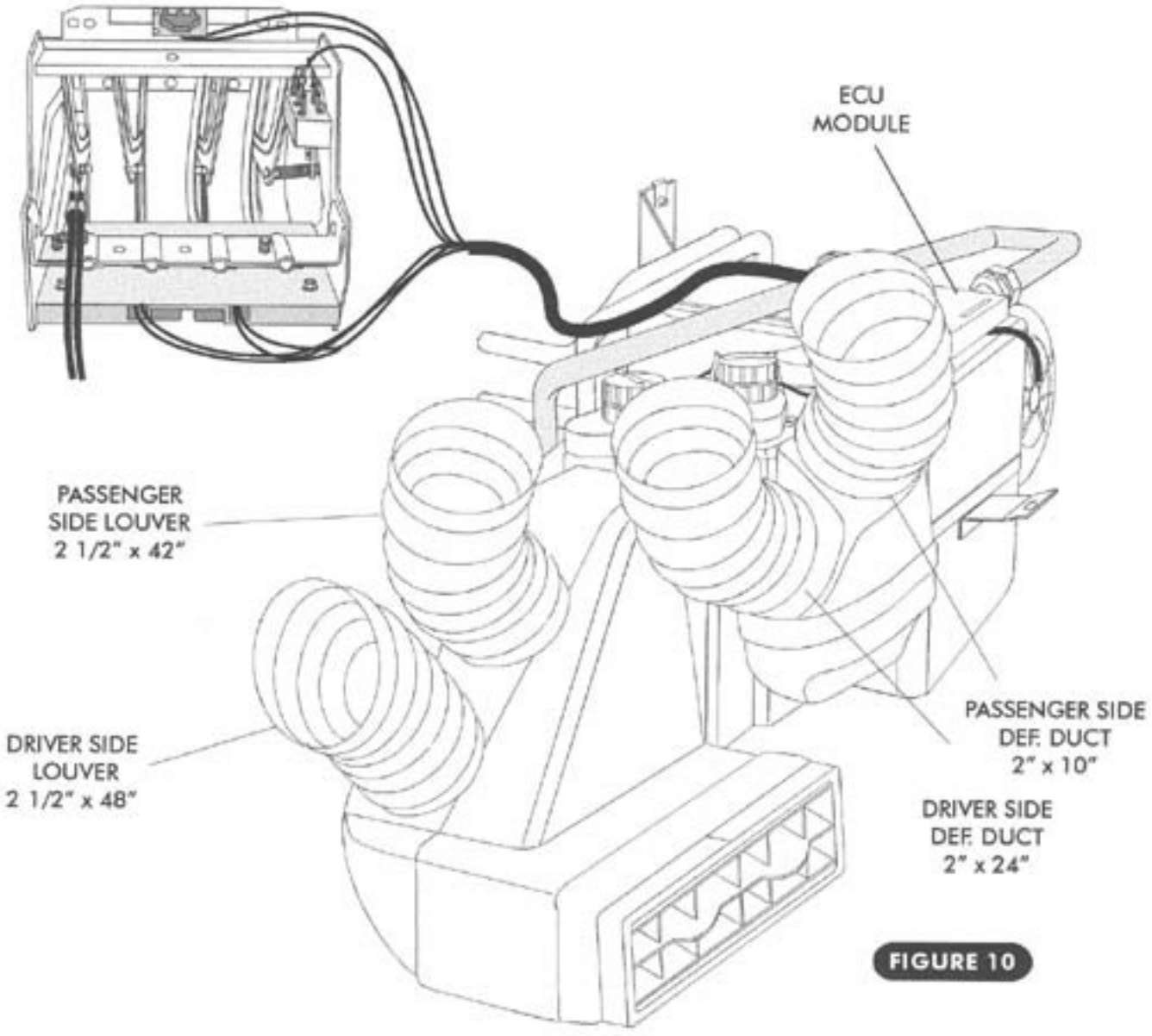


FIGURE 10

PASSENGER AND DRIVER SIDE UNDER DASH LOUVER INSTALLATION

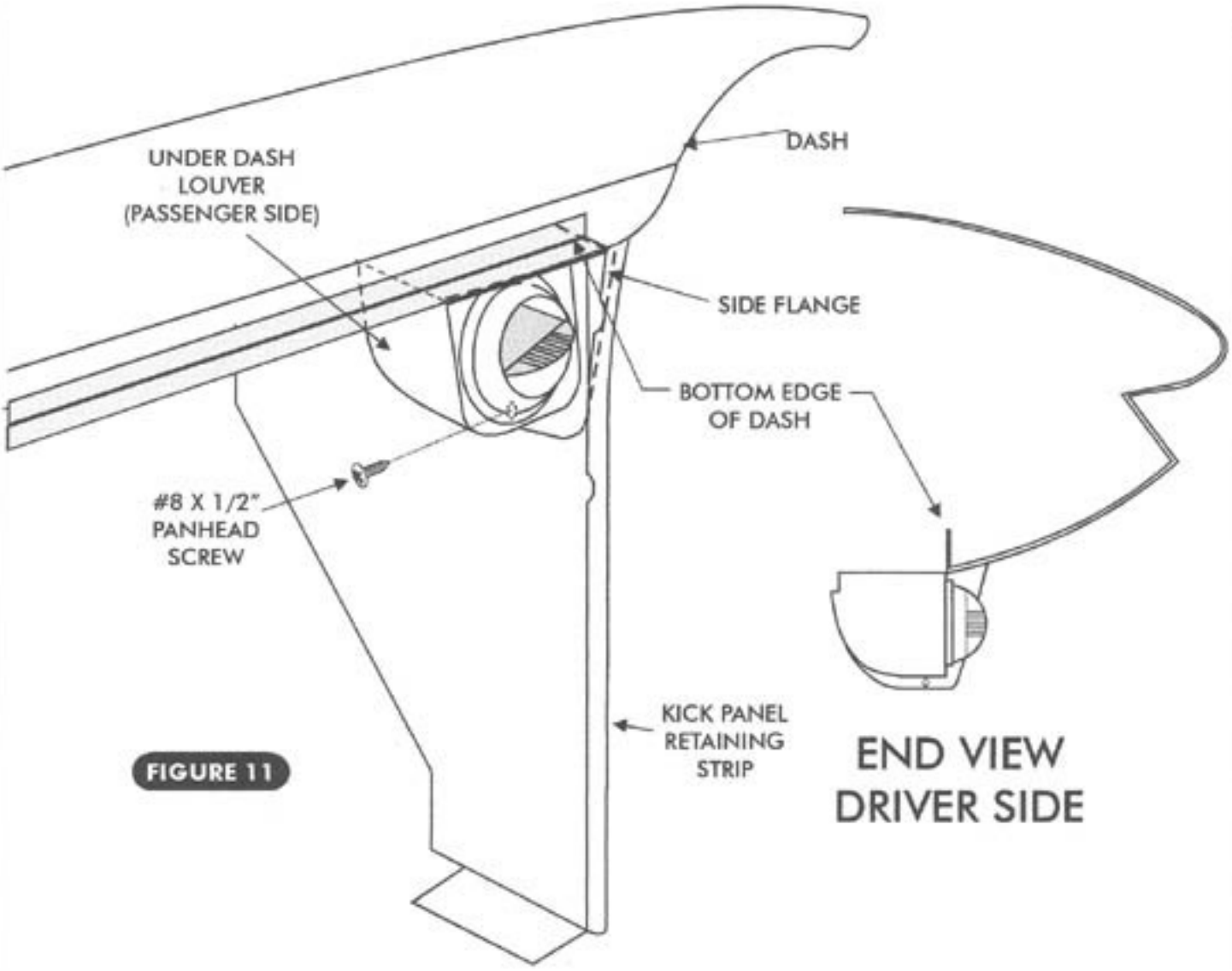


FIGURE 11

- ☐ INSTALL PASSENGER AND DRIVER SIDE BALL LOUVERS BY SLIDING THE SIDE FLANGE OF BALL LOUVER BETWEEN THE KICK PANEL AND KICK PANEL RETAINING STRIP.
- ☐ SLIDE LOUVER UP TOWARDS BOTTOM OF DASH UNTIL THE LOUVER IS SEATED AGAINST DASH, AND SECURE TO KICK PANEL WITH SUPPLIED #8 x 1/2" PANHEAD SCREW. SEE FIGURE 11 ABOVE.

HARDLINE & HOSE INSTALLATION

STANDARD HOSE KIT

- ☐ LOCATE THE TWO COMPRESSOR ALUMINUM HARDLINE EXTENSIONS. SEE FIGURE 15, PAGE 19.
- ☐ LOCATE THE #8 COMPRESSOR ALUMINUM HARDLINE. LUBRICATE (1) #8 O-RING AND INSTALL ON THE FEMALE O-RING END. CONNECT THIS LINE TO THE #8 DISCHARGE PORT ON THE COMPRESSOR, AND TIGHTEN. SEE FIGURE 15, PAGE 19.
- ☐ LOCATE THE #10 COMPRESSOR ALUMINUM HARDLINE. LUBRICATE (1) #10 O-RING AND INSTALL ON THE FEMALE O-RING END. CONNECT THIS LINE TO THE #10 SUCTION PORT ON THE COMPRESSOR, AND TIGHTEN. SEE FIGURE 15, PAGE 19.
- ☐ SECURE THE TWO COMPRESSOR HARDLINES TO THE COMPRESSOR, USING THE SUPPLIED CLAMP. SEE FIGURE 15a, PAGE 19.
- ☐ LOCATE THE #8 RUBBER HOSE. THIS HOSE WILL CONNECT TO THE #8 ALUMINUM COMPRESSOR HARDLINE AND #8 ALUMINUM HARDLINE FROM CONDENSER. LUBRICATE (2) #8 O-RINGS, AND INSTALL ONE ON EACH END OF THE #8 RUBBER HOSE. ROUTE HOSE AS SHOWN IN FIGURE 15, PAGE 19 AND TIGHTEN. ***NOTE:*** *THE 90° DEGREE HOSE END CONNECTS TO THE CONDENSER HARDLINE.*
- ☐ PASS THE #6 LIQUID LINE THRU THE BOTTOM HOLE IN FIREWALL COVER. SEE FIGURE 15b, PAGE 19.
- ☐ PULL FIREWALL COVER BACK AND INSTALL THE #6 LIQUID LINE, LUBRICATE (1) #6 O-RING AND TIGHTEN. SEE FIGURE 15b, PAGE 19.
- ☐ SECURE THE FIREWALL COVER USING TWO O.E.M RETAINING BRACKETS. SEE FIGURE 16, PAGE 20.
- ☐ LOCATE THE #10 RUBBER HOSE. THIS HOSE WILL CONNECT TO THE #10 ALUMINUM COMPRESSOR HARDLINE AND #10 ALUMINUM HARDLINE FROM EVAPORATOR. LUBRICATE (2) #10 O-RINGS, AND INSTALL ONE ON EACH END OF THE #10 RUBBER HOSE. ROUTE HOSE AS SHOWN IN FIGURE 15, PAGE 19 AND TIGHTEN. ***NOTE:*** *THE 90° DEGREE HOSE END CONNECTS TO THE COMPRESSOR HARDLINE.*
- ☐ INSTALL HEATER HOSES TO HEATER LINES AND ROUTE AS SHOWN IN FIGURE 15-15b, PAGE 19. SECURE WITH HOSE CLAMPS. ***NOTE: THIS KIT DOES NOT CONTAIN HEATER HOSE. YOU MUST PURCHASE 5/8" DIA. HEATER HOSE FROM YOUR LOCAL PARTS RETAILER.***

MODIFIED HOSE KIT

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

HEATER CONTROL VALVE & #6 LIQUID LINE

- ☐ INSTALL HEATER CONTROL VALVE IN-LINE WITH INTAKE MANIFOLD (PRESSURE SIDE) HEATER HOSE. SEE FIGURE 14, PAGE 18.
- ☐ INSTALL THE #6 LIQUID LINE TO DRIER WITH LUBRICATED O-RING AND TIGHTEN. FIGURE 15, PAGE 19
- ☐ INSTALL BINARY SWITCH ON #6 LIQUID LINE. SEE FIGURE 15, PAGE 19.
- ☐ SECURE THE #6 LIQUID LINE TO THE FENDER USING THE SUPPLIED ADEL CLAMP. SEE FIGURE 15, PAGE 19.

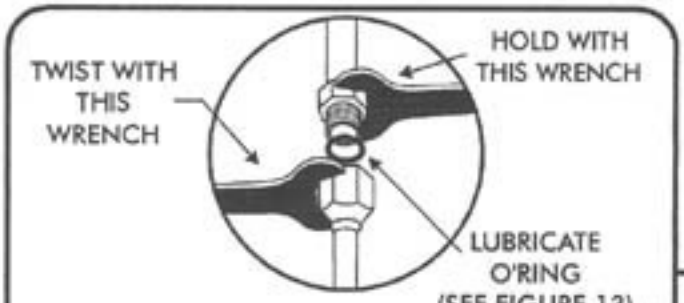


FIGURE 12

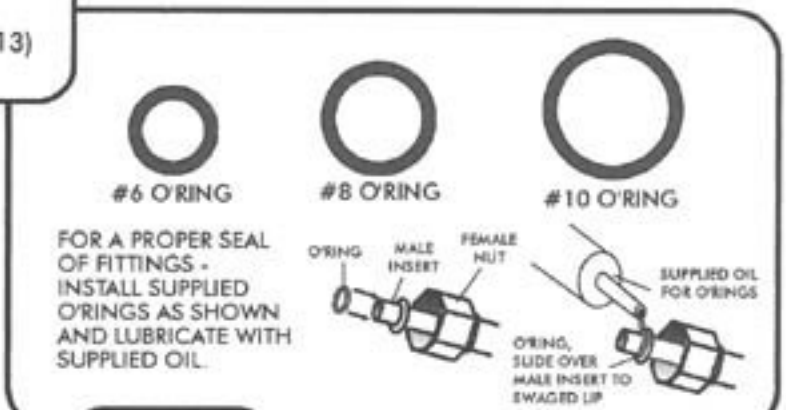


FIGURE 13

HEATER CONTROL VALVE INSTALLATION

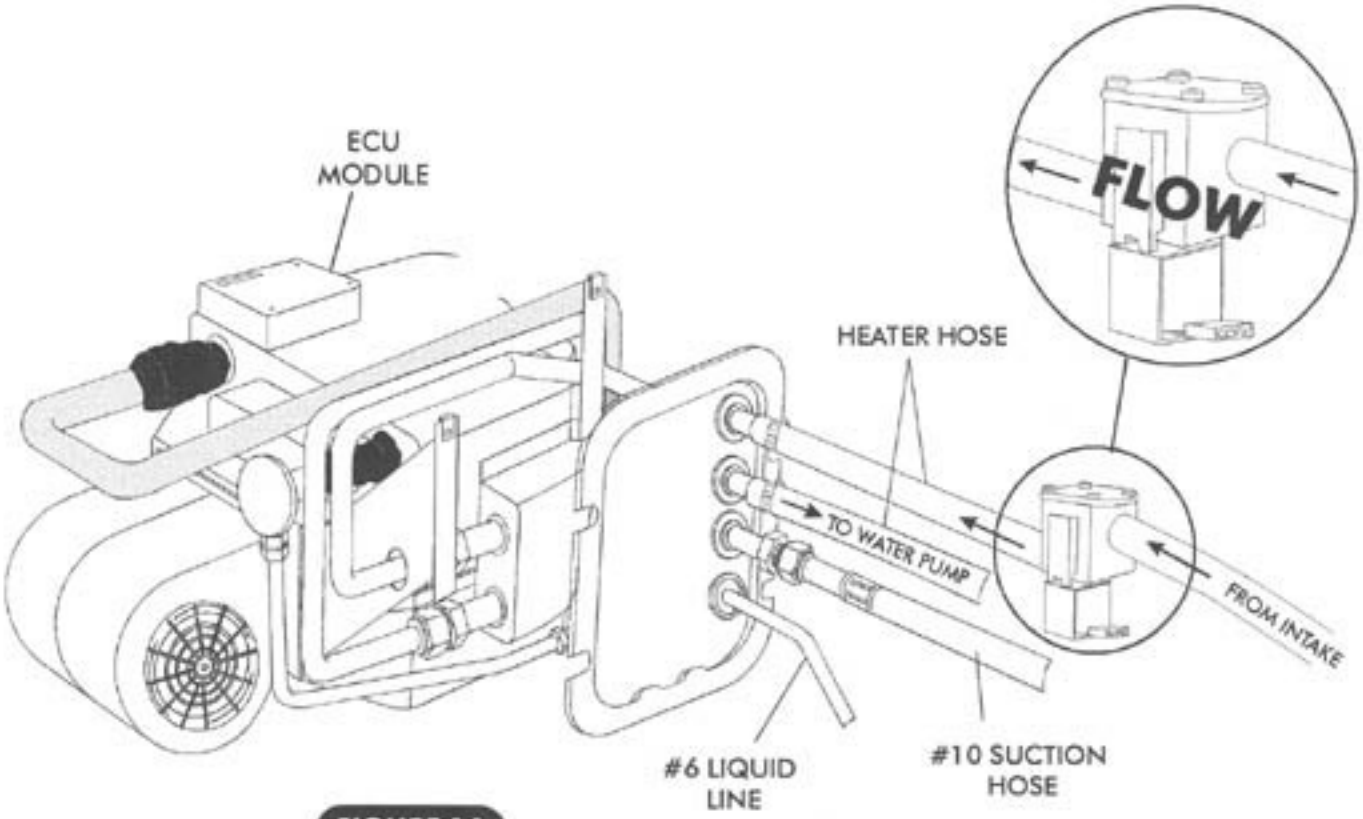


FIGURE 14

AC/HEAT HOSE & LINE ROUTING

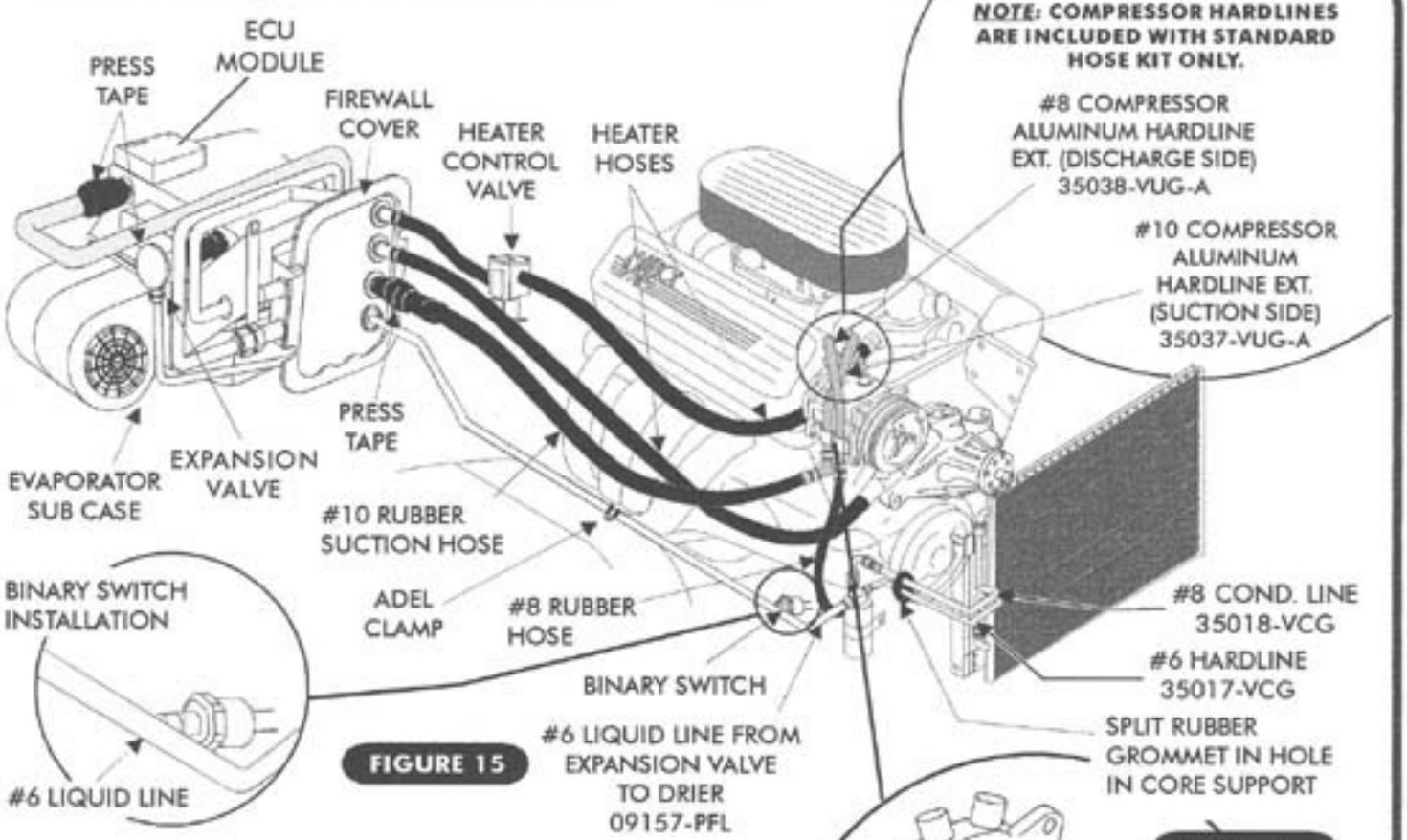


FIGURE 15

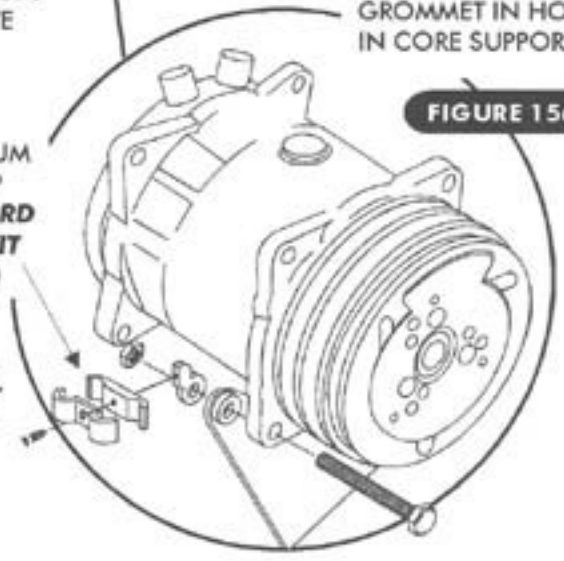


FIGURE 15a

NOTE: MODIFIED HOSE KITS INCLUDE 2 - 135° COMPRESSOR FITTINGS. (REFER TO MODIFIED HOSE KIT INSTRUCTIONS INCLUDED WITH HOSE KIT.)

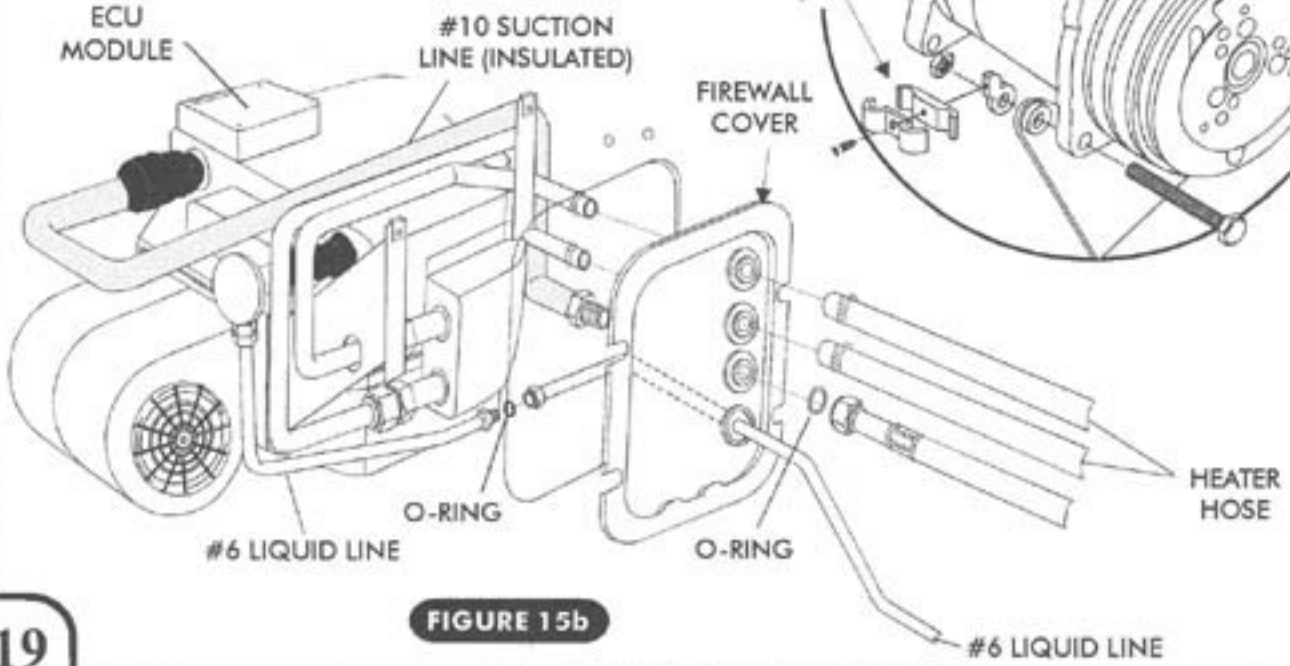


FIGURE 15b

FIREWALL COVER & FRESH AIR CAP

☐ INSTALL FRESH AIR CAP TO FRESH AIR DUCT UNDER PASSENGER SIDE FENDER AS SHOWN IN FIGURE 16 BELOW.

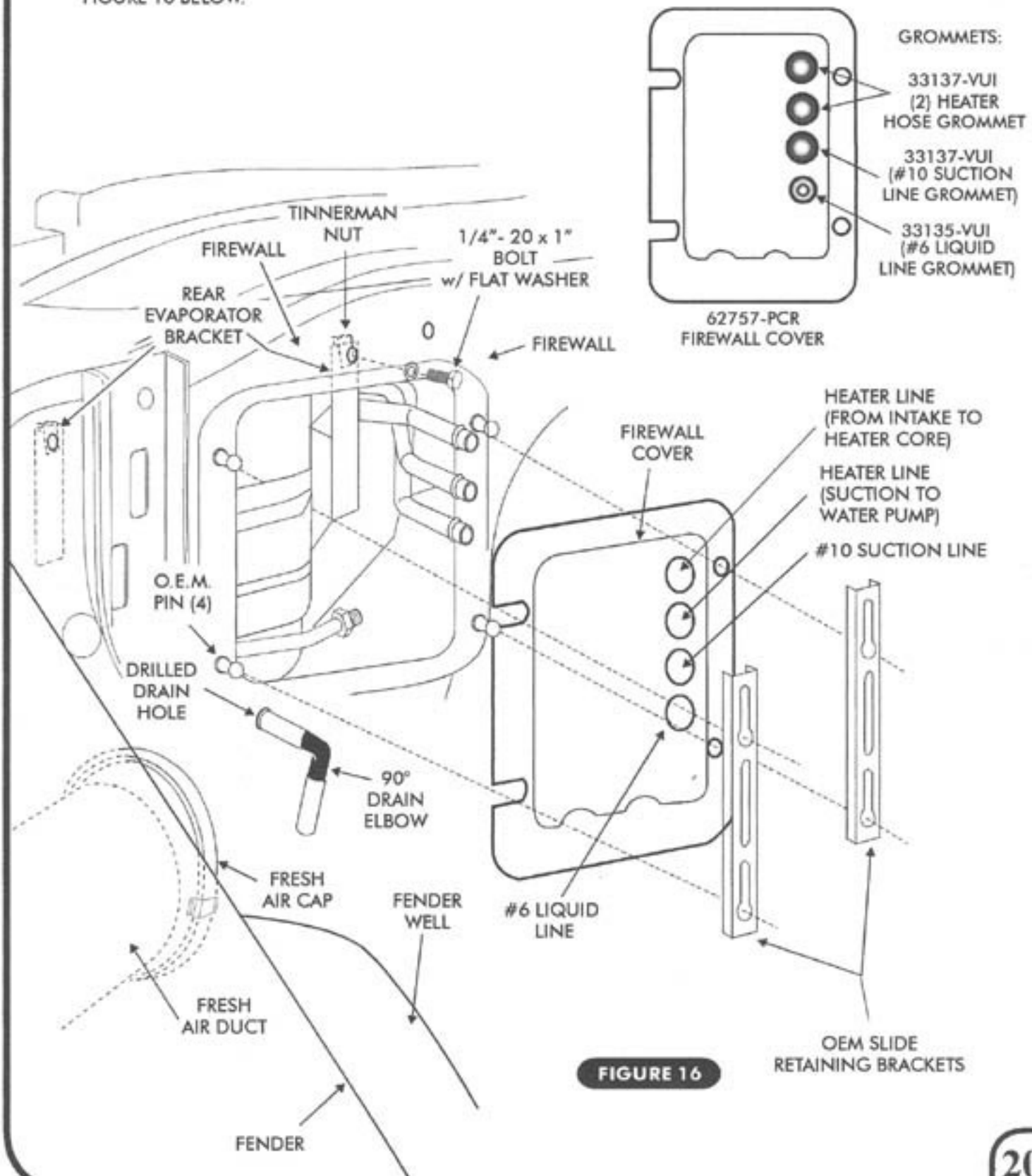


FIGURE 16

FINAL STEPS

- ☐ INSTALL CONTROL PANEL AND WIRE ACCORDING TO WIRING DIAGRAM ON PAGE 23.
- ☐ PLUG CONTROL SWITCH HARNESS INTO ECU MODULE. (NOTE: PLUG LOCATION BY ALIGNING YELLOW DOTS.) SEE WIRING DIAGRAM ON PAGE 23.

NOTE: CARE SHOULD BE TAKEN TO ENSURE THAT THE CONTROL HEAD CONNECTOR ON THE TOP OF THE ECU IS PROPERLY ALIGNED WITH THE CORRESPONDING PINS. IT IS POSSIBLE TO INSTALL THE CONNECTOR ONE PIN OFF TO THE LEFT OR RIGHT. IF THE CONNECTOR IS INSTALLED IMPROPERLY THE FAN WILL RUN ON HIGH.

- ☐ INSTALL GLOVE BOX BOTTOM AND GLOVE BOX DOOR, SECURE TO DASH WITH (3) O.E.M. SCREWS. SEE FIGURE 17, BELOW.
- ☐ WITH GLOVE BOX BOTTOM AND DOOR IN PLACE, INSTALL GLOVE BOX TOP TO THE S-CLIPS ON THE GLOVE BOX BOTTOM, AND SECURE TOP TO DASH WITH (5) O.E.M. SCREWS. SEE FIGURE 17 BELOW.

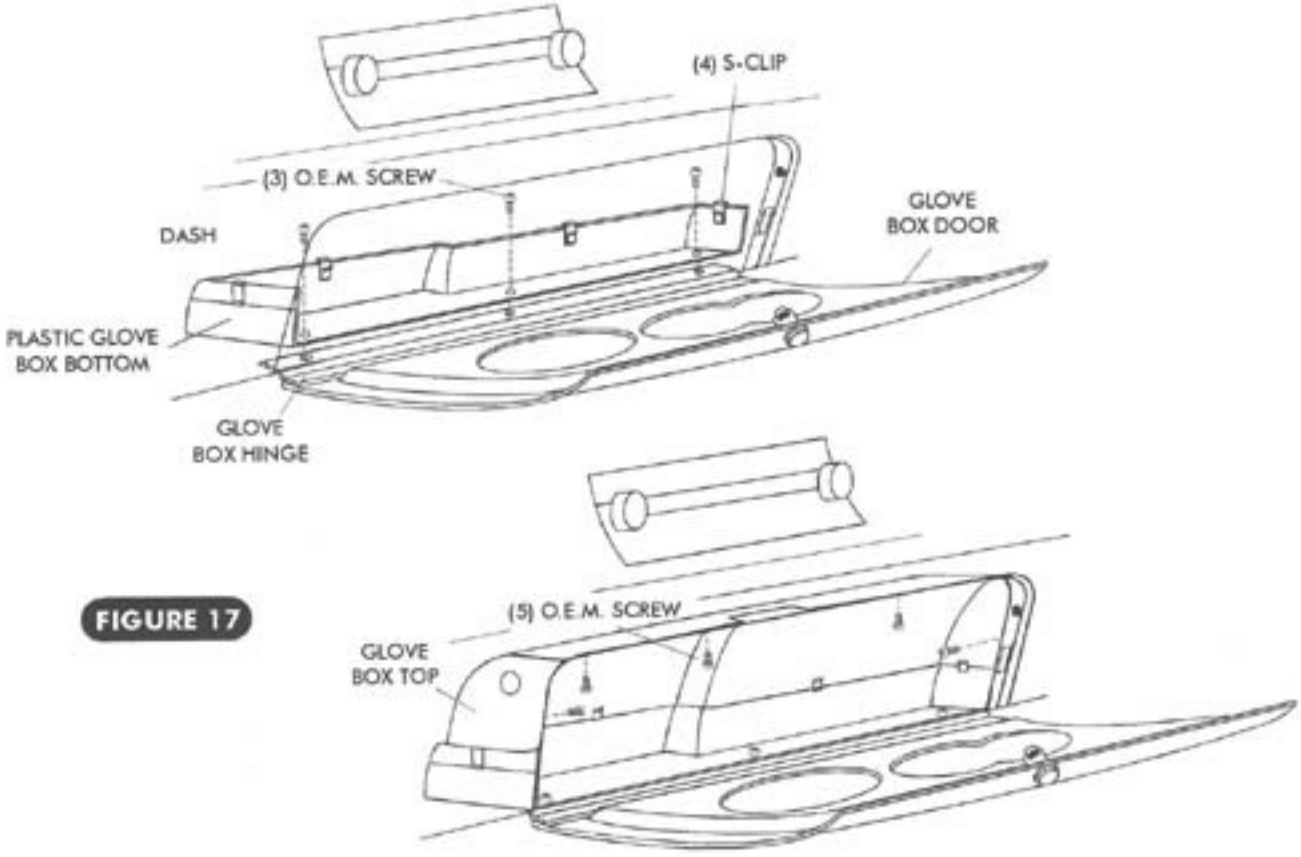


FIGURE 17

- ☐ REINSTALL ALL PREVIOUSLY REMOVED ITEMS (BATTERY BOX & BATTERY).
- ☐ FILL RADIATOR WITH AT LEAST A 50/50 MIXTURE OF APPROVED ANTIFREEZE AND 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

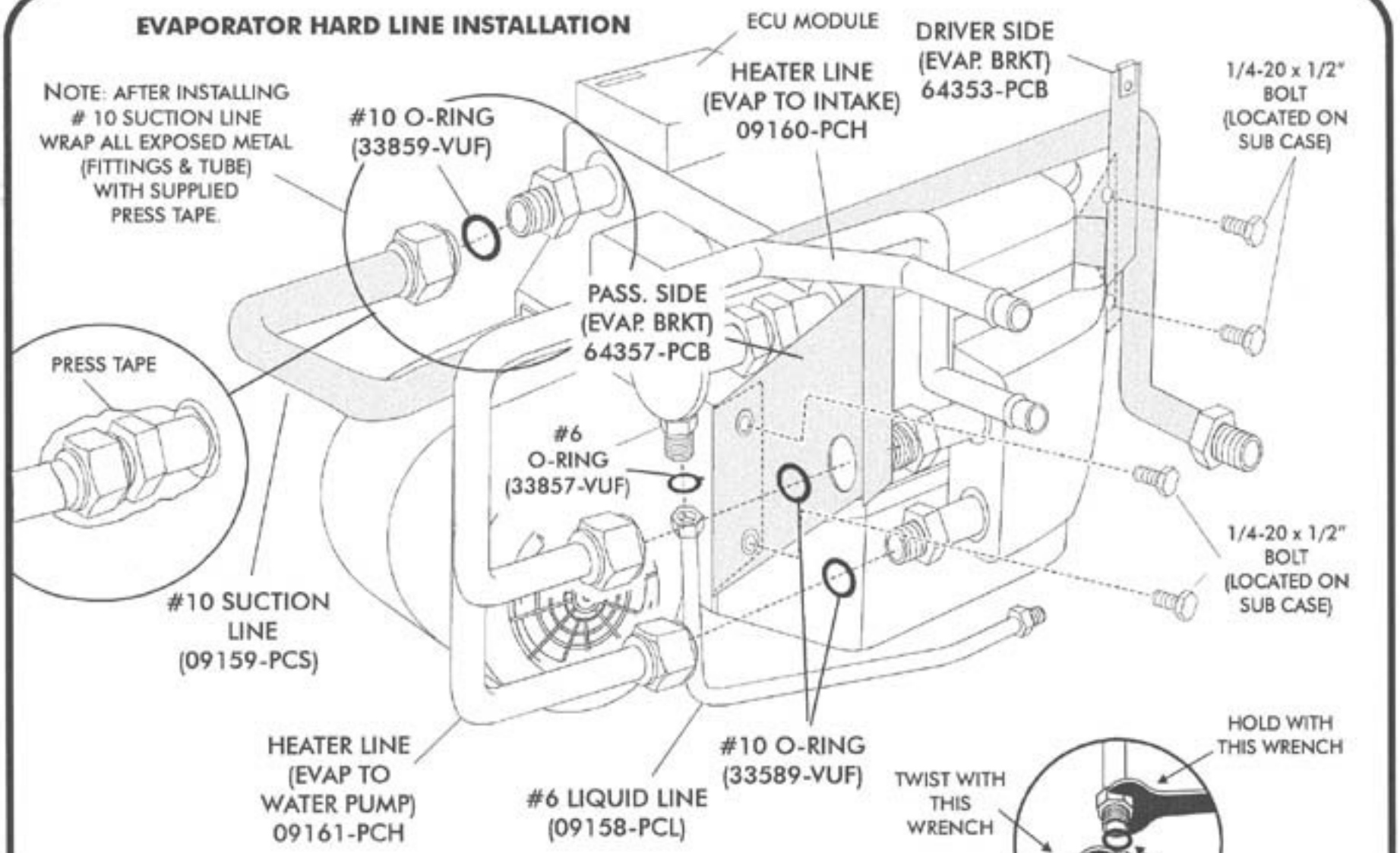
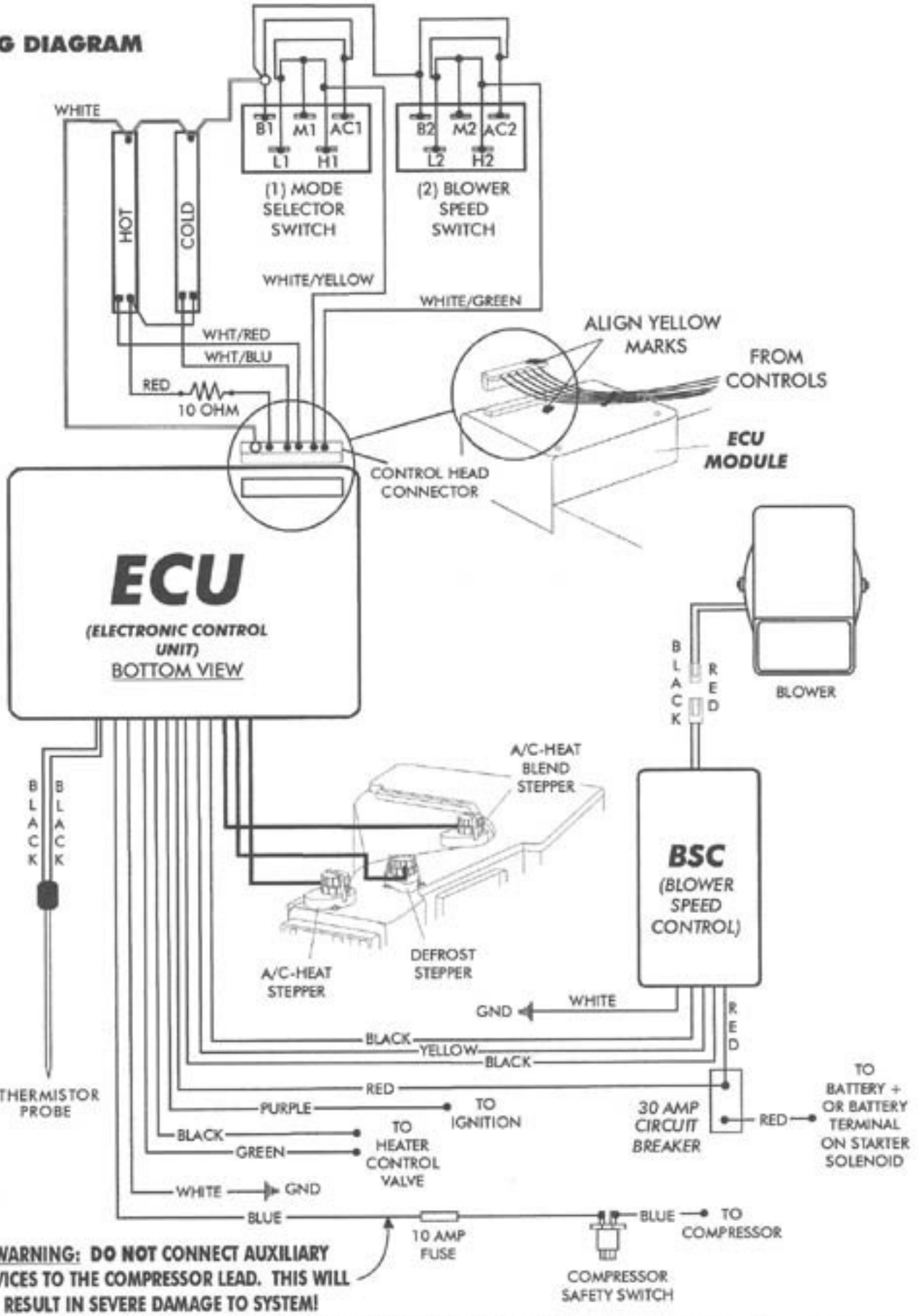


FIGURE 18

WIRING DIAGRAM



WARNING: DO NOT CONNECT AUXILIARY DEVICES TO THE COMPRESSOR LEAD. THIS WILL RESULT IN SEVERE DAMAGE TO SYSTEM!

OPERATION OF CONTROLS

FOR MAXIMUM COOLING AND HEATING, THE AIR LEVER MUST BE IN "INSIDE MODE" POSITION

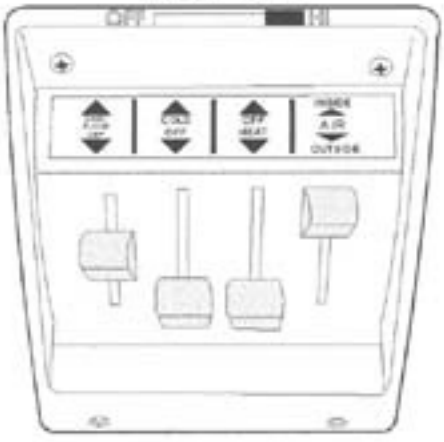
NOTE: WHEN BATTERY POWER IS FIRST CONNECTED TO THE ECU, THE COMPUTER GOES THROUGH AN INITIALIZATION SEQUENCE. THIS INITIALIZATION MAY TAKE UP TO 30 SECONDS. DURING INITIALIZATION THE BLOWER WILL NOT OPERATE, BUT THE DOORS INSIDE THE UNIT WILL BE OPERATING. A LOW BATTERY OR DISCONNECTING THE BATTERY MAY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

SYSTEM OFF

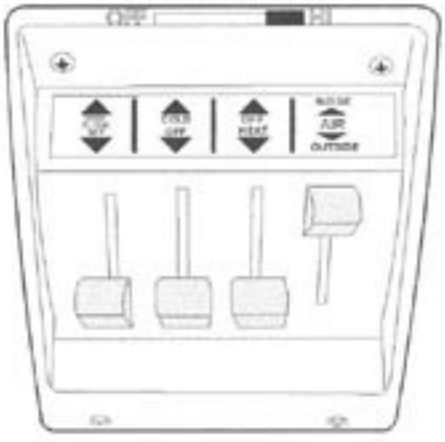
BLOWER SPEED CONTROL (LOW/MED/HI)

A/C MODE

HEAT MODE



DEFROST MODE



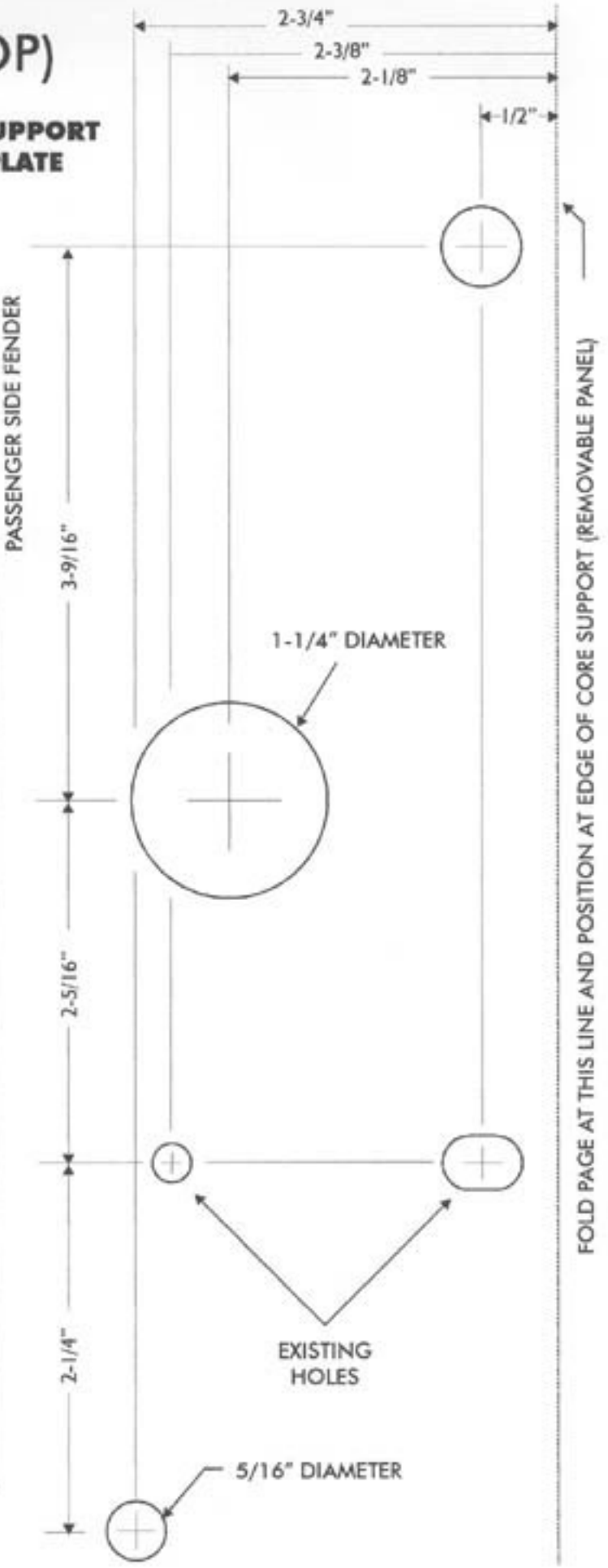
NOTE: THERE ARE TWO BI-LEVEL POSITIONS: BETWEEN DASH-FLOOR
BETWEEN FLOOR-DEF

BI-LEVEL A/C MODE

BI-LEVEL HEAT MODE

(TOP)

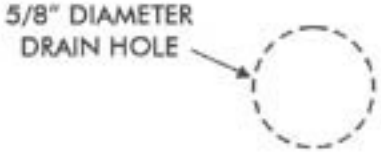
CORE SUPPORT TEMPLATE



FIREWALL DRAIN HOLE TEMPLATE

(FROM INSIDE CAR)

CUT ALONG DOTTED LINE (LINE UP OPENING IN FIREWALL & PLACE EDGE AGAINST FIREWALL SUPPORT



TROUBLE SHOOTING INFORMATION

SYMPTOM	SOLUTION
• BLOWER STAYS ON HIGH, NO MODE FUNCTIONS	• BE SURE CONTROL HEAD CONNECTOR IS PROPERLY INSTALLED
• PARTIAL FUNCTION OF CONTROL HEAD. (SOME FUNCTIONS WORK)	• CHECK FOR DAMAGE TO CONTROL HARNESS
• COMPRESSOR DOES NOT TURN ON. (ALL OTHER FUNCTIONS WORK)	• CHECK FOR PROPER CHARGE • CHECK COMPRESSOR FUSE (WARNING: USE ONLY 10 AMP FAST BLOW FUSE) • BE SURE AC LEVER (SECOND FROM LEFT) IS UP.
• NO FUNCTION AT ALL	• CHECK MAIN POWER LEAD AFTER CIRCUIT BREAKER • CHECK FOR POWER WITH IGNITION ON AT PURPLE WIRE • CHECK ALL GROUNDS

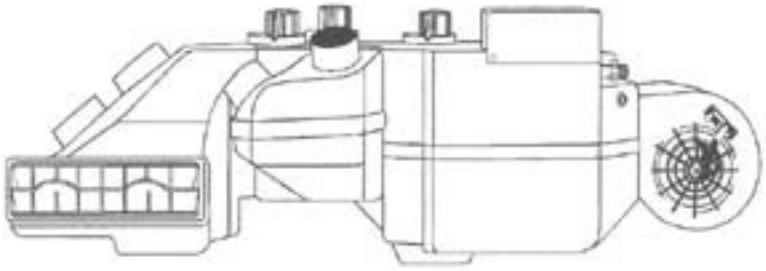
EVAPORATOR KIT PACKING LIST

EVAPORATOR KIT
56157-PCZ

No.	QTY.	PART No.	DESCRIPTION	
1.	1	76157-VCE	'57 CHEV. EVAP. SUB CASE	_____
2.	1	78158-PCN	'57 CHEV. CAR WO AC ACC. KIT	_____

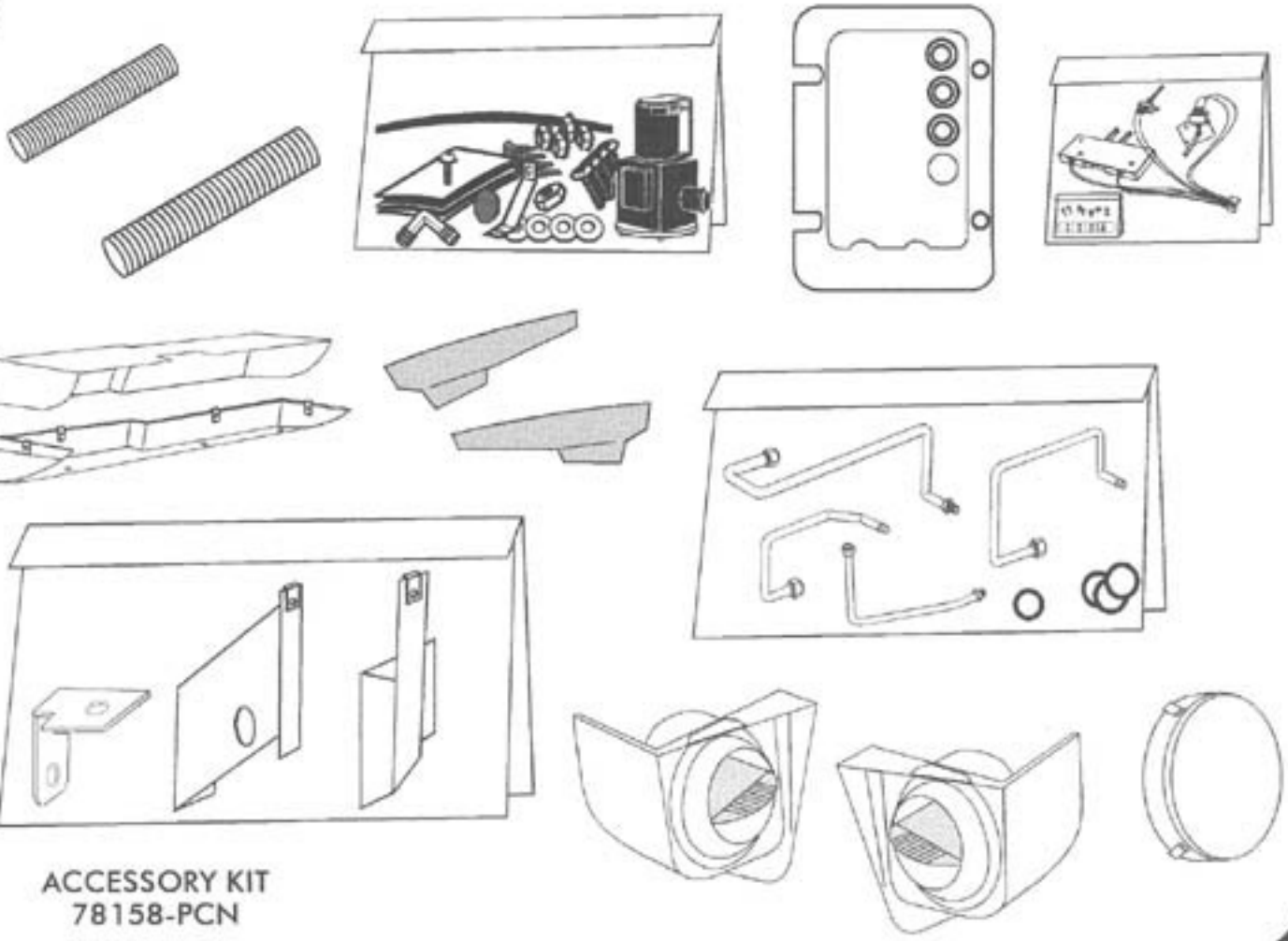
CHECKED BY: _____
PACKED BY: _____
DATE: _____

①



'57 CHEVY EVAP.
SUB CASE 76157-VCE

②



ACCESSORY KIT
78158-PCN

TROUBLESHOOTING GUIDE

The following guide will help the installer determine if a problem exists in the system that would cause a malfunction. **If you are experiencing problems in the physical operation of the unit (blower speeds, door operation, etc.), we encourage you to refer to the *wiring diagram* located in the instruction manual**. Using a continuity or light tester you can solve many of the simple problems by tracing all connections and testing them individually. However, if the unit is functioning correctly, but it is not cooling, you can refer to the following guide that will outline the most common problems encountered by installers.

I. TEST CONDITIONS USED TO DETERMINE SYSTEM OPERATION

A. PLACE TEMPERATURE PROBE (THERMOMETER) INTO CENTER OUTLET.
B. CONNECT GAUGES OR SERVICE EQUIPMENT TO HIGH/LOW CHARGING PORTS
C. PLACE BLOWER FAN SWITCH ON MEDIUM.
D. CLOSE ALL DOORS AND WINDOWS ON VEHICLE.
E. PLACE SHOP FAN OR HEAVY DUTY SQUIRREL-CAGE BLOWER DIRECTLY IN FRONT OF CONDENSER.
F. RUN ENGINE IDLE UP TO 1500 RPM.

(THESE TEST CONDITIONS WILL SIMULATE THE AFFECT OF DRIVING THE VEHICLE AND GIVE THE TECHNICIAN THE THREE CRITICAL READINGS THAT THEY WILL NEED TO DIAGNOSE ANY POTENTIAL PROBLEMS)

II. ACCEPTABLE OPERATING PRESSURE RANGES FOR VINTAGE AIR SYSTEMS

A. **R134A TYPE**

1. **HIGH-SIDE PRESSURES** (160-250 PSI) * Note- general rule of thumb is two times the ambient (daytime) temperature, plus 15-20%.
2. **LOW-SIDE PRESSURES** (06-18 PSI in a steady state)
3. **CENTER DUCT TEMPERATURE** (36-46 DEGREES F.)

B. **R12 TYPE**

1. **HIGH-SIDE PRESSURES** (140-230 PSI) * Note- general rule of thumb is two times the ambient (daytime) temperature, plus 15%.
2. **LOW-SIDE PRESSURES** (12-15 PSI in a steady state)
3. **CENTER DUCT TEMPERATURE** (36-46 DEGREES F.)

Charge as follows: R134A = 1.8 lbs R12= 2.0 lbs
No additional oil is necessary in new compressors

III. TYPICAL PROBLEMS ENCOUNTERED IN CHARGING SYSTEMS

A. NOISY COMPRESSOR

1. A noisy compressor is generally caused by overcharging the system or introducing outside air into the system.

a. If the system is overcharged both gauges will read abnormally high readings. This is causing a feedback pressure on the compressor causing it to rattle or shake from the increased cylinder head pressures. System must be evacuated and re-charged to exact weight specifications.

b. If air is introduced into the system during charging it will introduce moisture that will cause ice to form in the refrigerant flow and will cause the compressor to rattle or growl under acceleration. System must be evacuated and re-charged to exact weight specifications making sure to bleed any air from lines when introducing the refrigerant.

B. SYSTEM NOT COOLING

1. There are numerous factors that can cause the cooling to be less than optimal.

a. **Improper charge in system-** Improper charging is the number one cause of system failure. The pressure readings should be taken before any determination can be made. High or low readings in direct proportion to the normal pressures(see sect. II) will tell you if the charge is too high or low. Excessive system pressure can also cause vibrations and whistling noises from the expansion valve and refrigerant lines.

b. **Heater control valve installation**- Installing the heater control valve in the incorrect hose will allow water to collect in the unit. **The heater control is a directional valve; make sure the water flow is with the direction of the arrow**. As the engine heats up that water transfers the heat to the coil, thus overpowering the a/c coil. A leaking or faulty valve will have a more pronounced affect on the unit's cooling ability. Installing the valve improperly (such as having the flow reversed) will also allow water to flow through, thus inhibiting cooling. Check for heat transfer by disconnecting hoses from the system completely. By running down the road with the hoses looped backed through the motor, you eliminate the possibility of heat transfer to the unit. Move or replace the valve if necessary

c. **Evaporator freezing**- Freezing can occur both externally and internally on an evaporator core. ***External freeze up*** occurs when the coil cannot effectively displace the condensation on the outside fins and the water forms ice (the evaporator core resembles a block of solid ice), it restricts the flow of air that can pass through it, which gives the illusion of the air not functioning. The common cause of external freezing is the setting of the thermostat and the presence of high humidity in the passenger compartment. All door and window seals should be checked in the event of constant freeze-up. A thermostat is provided with all units to control the cycling of the compressor. The gas-filled probe will often come coiled up and must be installed into the coil through the access hole located in the top of each unit.

The rotary-type thermostat should be set all of the way clockwise and turned back counterclockwise an eighth of a turn. The lever-type thermostat should be backed away from the cold position slightly.

Internal freeze up occurs when there is too much moisture inside the system. The symptoms of internal freeze up often surface after extended highway driving. The volume of air stays constant, but the temperature of the air gradually rises. When this freezing occurs the low side pressure will drop, eventually going into a vacuum. At this point, the system should be checked by a professional who will evacuate the system and change the drier.

d. **Inadequate airflow to condenser**- The condenser works best in front of the radiator with a large supply of fresh air. Abnormally high pressures will result from improper airflow. Check the airflow requirements by placing a large capacity fan in front of the condenser and running cool water over the surface. If the pressures drop significantly, this will indicate the need for better airflow.

e. **Incorrect or inadequate condenser capacity**- Incorrect condenser capacity will cause abnormally high head pressures. Vintage Air recommends at least 300 cubic inches of fin area on a double-pass (two rows of tubes) condenser. (This can be measured by multiplying the height times the width times the thickness) This rule only applies to the tube and fin style, the efficiency of the superflow design allows the use of a smaller area. A quick test that can be performed is to run cool water over the condenser while the system is operating, if the pressures decrease significantly, it is likely a airflow or capacity problem.

f. **Expansion valve failure**- An expansion valve failure is generally caused by dirt or debris entering the system during assembly. If an expansion valve fails it will be indicated by abnormal gauge readings. A valve that is blocked will be indicated by high side that is unusually high, while the low side will be unusually low or may even go into a vacuum. A valve that is stuck open will be indicated by both the high and low pressures rising to unusually high readings, seeming to move toward equal readings on the gauges.

g. **Restrictions in system-** A restriction in the cooling system will cause abnormal readings on the gauges. A high-side restriction (between the compressor and the drier inlet) will be indicated by the discharge gauges reading excessively high.

These simple tests can be performed by a local shop and can help determine the extent of the systems problem. **If further assistance is needed, our tech line is (210) 654-7171**. If you have performed the initial tests, please document the results and readings before calling our technical line, it will help us solve the problem faster.