

INCLUDED BELOW:

- ▶ **INSTALLATION TECH ARTICLE**
- ▶ **VINTAGE AIR INSTALLATION MANUAL**
- ▶ **TROUBLESHOOTING GUIDE**
- ▶ **CONTROL PANEL INSTRUCTIONS**

" THIS ARTICLE IS INTENDED FOR YOUR REFERENCE ONLY.

ACTUAL PARTS, YEARS AND BODY STYLES CONTAINED

IN THIS ARTICLE MAY DIFFER SLIGHTLY FROM YOUR APPLICATION. "

1955-57 VINTAGE AIR CONDITIONING GEN IV AND GRIFFIN CROSS-FLOW RADIATOR INSTALLATION

This article will cover the best of both worlds: keeping your engine cool and keeping yourself and your passengers cool! The improvements made in these two areas in the last year alone are astounding. The all new Gen IV air conditioning unit from Vintage Air includes a new design coil that cools even better than earlier designs. Blower speed and volume has been increased, and best of all, this unit uses no cables or vacuum for operation – it is fully electronic and computer controlled! In addition to the Vintage Air unit, we will update the installation of our cross-flow radiator kit from Griffin and show how easily it adapts to the air conditioner. This article will cover the installation in a 1955, but procedures for 1956 and 1957 are similar.

#51-104



Parts Needed:

- | | |
|--------|--|
| 51-98 | 1955 Gen IV Vintage Air System With Pro-Line [†] Upgrade* |
| 51-99 | 1956 Gen IV Vintage Air System With Pro-Line [†] Upgrade* |
| 51-100 | 1957 Gen IV Vintage Air System With Pro-Line [†] Upgrade* |
| 51-101 | 1955 Gen IV Servo Operated Vintage Air Conditioning Unit
Use With Griffin Cross-Flow Radiator Kit |
| 51-102 | 1956 Gen IV Servo Operated Vintage Air Conditioning Unit
Use With Griffin Cross-Flow Radiator Kit |
| 51-103 | 1957 Gen IV Servo Operated Vintage Air Conditioning Unit
Use With Griffin Cross-Flow Radiator Kit |
| 51-104 | 1955 Gen IV Servo Operated Pro-Line [†] Vintage Air
Conditioning Unit Use With Griffin Cross-Flow Radiator Kit |
| 51-105 | 1956 Gen IV Servo Operated Pro-Line [†] Vintage Air
Conditioning Unit Use With Griffin Cross-Flow Radiator Kit |
| 51-106 | 1957 Gen IV Servo Operated Pro-Line [†] Vintage Air
Conditioning Unit Use With Griffin Cross-Flow Radiator Kit |

[†]Pro-Line Includes Polished Compressor & Brackets *Condensor Included

Parts Needed: *Continued*

- 18-309 *Cross-Flow Radiator with Electric Fans, Wiring Harness, Aluminum Condenser, Over Flow Tank and Polished Radiator Cap*
- 18-310 *Cross-Flow Radiator*
- 18-314 *A/C Condenser for Cross-Flow Radiator*

- 18-311 *Dual Electric Fans for Cross-Flow Radiator*
- 18-312 *Wiring Harness and Relays for Electric Fan Kit*

- 18-313 *Overflow Tank*
- 18-315 *Polished Aluminum Radiator Cap*
- 18-316 *Aluminum Fan Shroud for Cross-Flow Radiator*

- 18-26 *Small Block Molded Lower Radiator Hose*

- 18-308 *Molded Upper Radiator Hose*
- 18-202 *Big Block Lower Radiator Hose*
- 19-69 *6-Cyl. Position 700R4 Cooler Lines*
- 19-41 *6-Cyl. Position TH350/TH400 Cooler Lines*

- 19-60 *Transmission Cooler Line Fittings*

To order parts call 1-800-456-1957 or visit ClassicChevy.com

Tools Needed:

- | | |
|--|--|
| <i>Assorted Wrenches from 1-1/8" to 1-1/4"</i> | <i>Box Knife</i> |
| <i>Phillips Screwdrivers</i> | <i>Wire Crimpers/Cutters</i> |
| <i>Straight Screwdriver</i> | <i>Butt Connectors</i> |
| | <i>Electric Drill and 1/8" Drill Bit</i> |

Time Frame:

16 Hours



Photo #1: Begin by removing the entire original heater system, glove box, radio and heater control panel inside. Also remove the original defroster duct. You may find it easier to complete this installation with

the front seat removed, but it is not necessary. Completely disassemble the original deluxe heater control panel except for the two original heater levers.



Photo #2: Install the two new horizontal blower and mode levers from the kit using the 5/16" bolt, washers, nylon spacers and nut provided.



Photo #3a & 3b: Using a 1/8" drill bit, remove the original rivets that secure the upper rear cable bracket to the panel cage and discard the bracket. Install the new slider switch bracket using the two #6-32 machine screws and nuts provided.



Photo #4a & 4b: There are four identical slider switch PC boards and cast metal holders. These assemblies attach to the control panel and will control the computer ECU on the air unit. Attach two of the assemblies to the new slider switch bracket. Make certain the loop ends of the new control levers engage the levers on the slider switches. If the levers drag on the sides of the metal holders, slightly bend the levers in or out until proper clearance is achieved. Secure the assemblies with the #8 x 1-1/4" self-tapping screws and nylon cupped washers. Tighten the screws until they are just barely snug. Do not over tighten or the PC boards may be damaged.

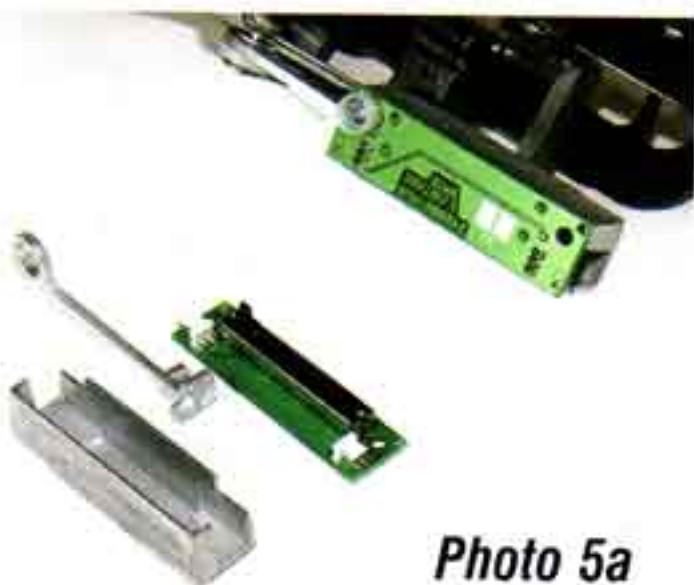


Photo 5a

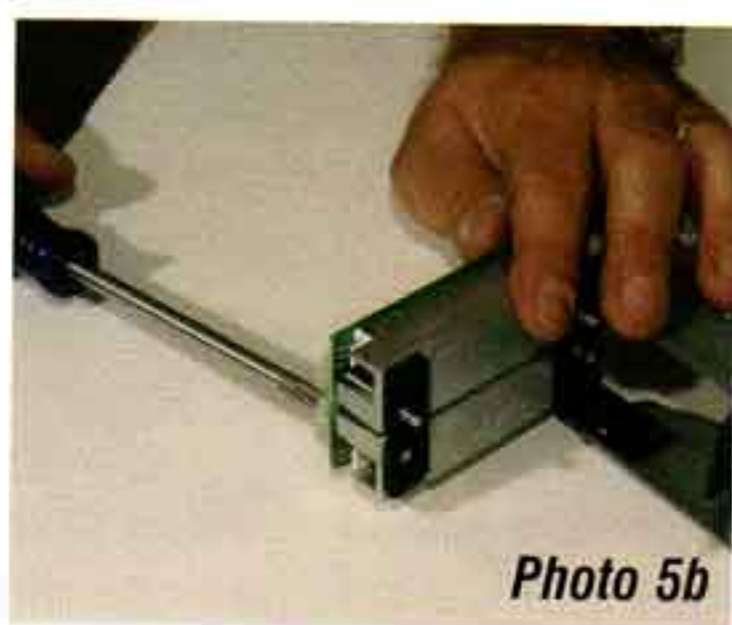


Photo 5b

Photo #5a & 5b: The two remaining switch assemblies attach to the bottom of the panel just like the two previous ones.

Additionally, there is a set of metal pushrods that engage the original vertical control levers and the new slider switches. Install the switch assemblies with the #8 x 1-1/4" self-tapping screws and nylon cupped washers provided. Do not overtighten. Make sure the loop ends of the metal pushrods engage the control levers on the panel. Secure these pushrods to the levers with the original screw, nylon spacer and small flat washer provided. Secure the rear of the switch assemblies with the small flat bracket and #8 x 1-1/4" self-tapping screws and cupped nylon washers provided.

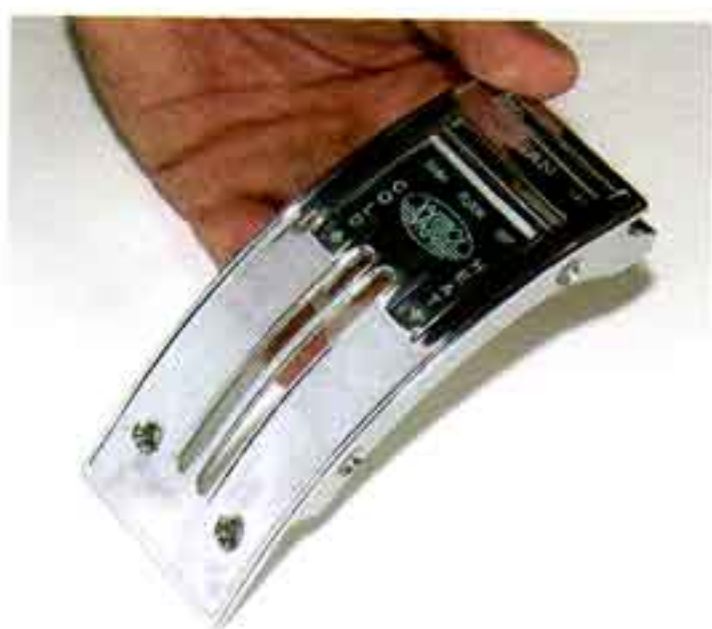


Photo #6a & 6b: Install the new air conditioning lens faceplate into the chrome heater face using the original steel backing plate. You will want to wait to secure the face to the panel assembly and reattach the original knobs until after it is installed in the dash. Check for proper, free operation of all levers. Also make certain the new slider switches are operating properly. Your newly refurbished panel is now complete!

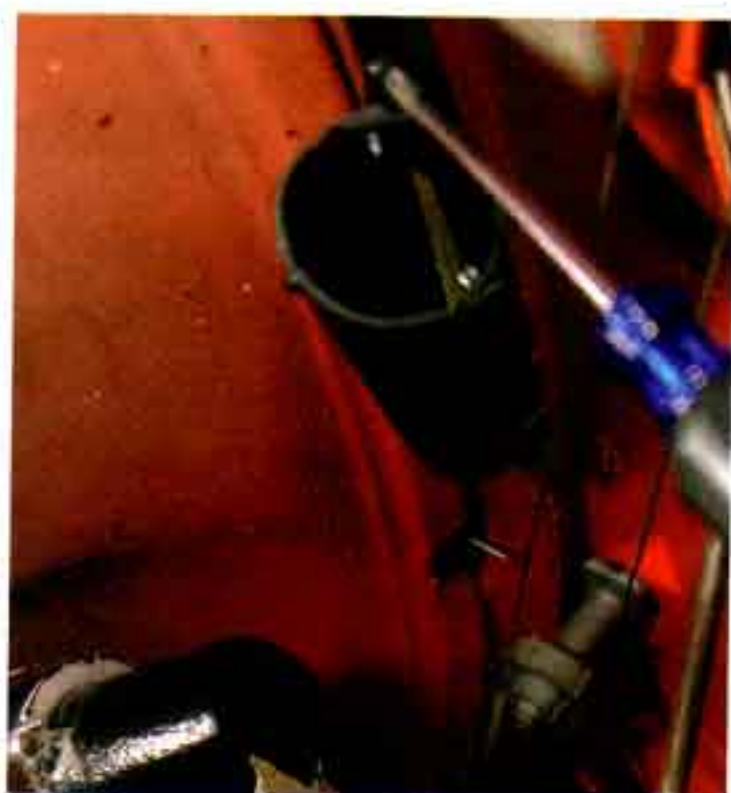


Photo #7a & 7b: Install the new ABS defroster ducts on each side by sliding the metal bracket on each into the original defroster slots in the dash top. The duct hose openings should be oriented toward the center of the car. Secure with the #8 x 1/2" sheetmetal screws provided.

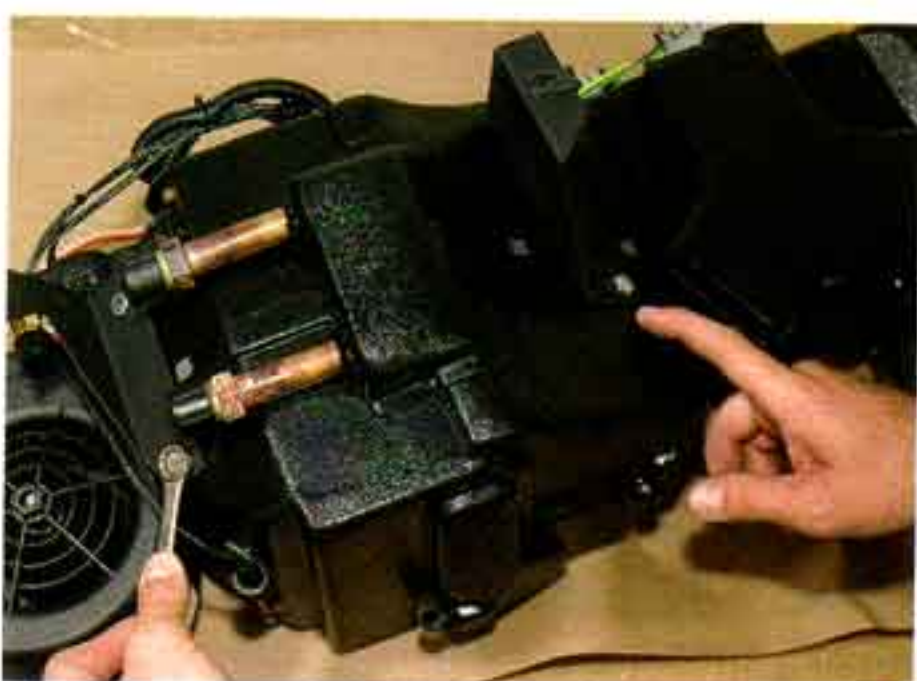


Photo #8: Attach the two evaporator rear support brackets to the evaporator with the 1/4 x 20 x 1/2" hex head bolts provided. These brackets will secure the evaporator to the firewall once the unit is in the car.



Photo #9a, 9b & 9c: Install the proper size O-rings provided on the ends of the suction line, liquid line and two heater lines. Lubricate the O-rings with a small amount of assembly lube provided with the kit. Install and tighten each line on the evaporator assembly. When tightening the lines, be sure they are properly oriented and use a wrench on each side of the fitting.



Photo #10: After the fittings are tight, wrap the exposed suction line fittings with the sticky press tape provided. This will improve the efficiency of the unit and help prevent water condensation or sweating on the tube.

Photo #11: The original fresh-air intake hole above the left hand kick panel vent on 1955-56 cars should be blocked off at this point. We used a flat piece of sheet metal trimmed to the right size and secured it with the original blower adapter screws. Install the evaporator assembly in the dash. You may wish to remove the center air vent and plenum from the unit to make installation easier. We found it best to install the unit by inserting the driver side of the unit under the dash first and then moving the entire unit up and to the center. Make certain the four heat and air conditioning tubes pass through the original heater motor hole in the firewall. This is where a second person really helps! Install the flat dash to evaporator bracket in the glove box area with the 1/4-20 x 1" bolt and washer provided. Also install the two 1/4-20 x 1" bolts and washers from the engine compartment side into the evaporator brackets installed earlier. It will require some shifting and repositioning and alignment in order to install and tighten these fasteners. Reattach the center plenum and air vent and tighten all hardware.



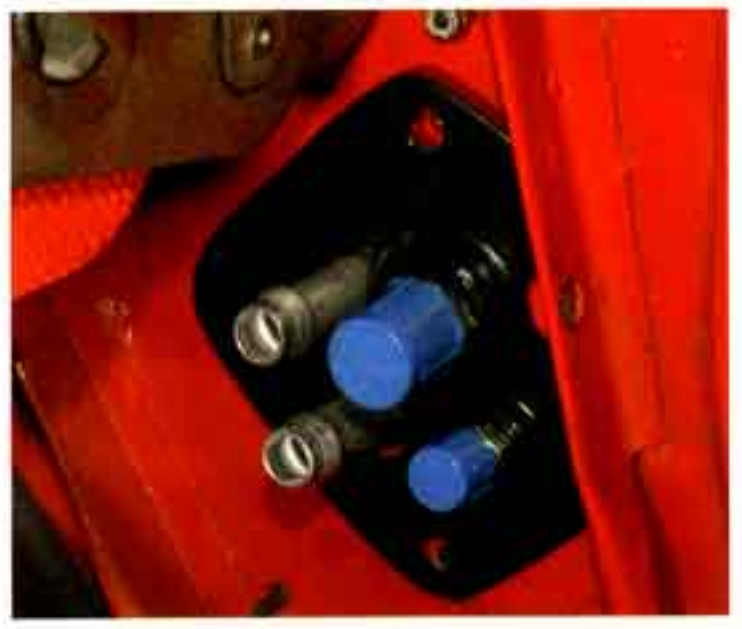


Photo #12a & 12b: Install the new firewall cover over the protruding evaporator tubes and secure with the push retainers provided. The kit also comes with some rubber plugs to block off the original heater core holes in the firewall.



Photo #13a & 13b: Locate the larger diameter duct hose provided with the kit. It will be necessary to cut this hose into two pieces. Route the uncut hose from the evaporator outlet to the driver side corner at the kick panel where the dash outlet will be located. After determining the length needed to reach this area, cut the hose with a sharp knife and your wire cutters. The remaining portion should be routed to the passenger side. Push the duct hoses firmly onto the evaporator and the corner outlets. Owners



of 1957 cars may decide to use the new reproduction dash outlets #51-10 in place of the supplied ones.



Photo #14a & 14b: Install the outlets by inserting the flanges of the housing between the kick panel and the kick panel retainer. Secure to the kick panel using a #8 x 1/2" sheetmetal screw. If the ducts do not fit the contour of the dash properly, you may wish to drill and add an additional screw to hold it in place. Drill a 5/8" hole through the toeboard on the passenger side 1" lower than the level of the drain nipple in the bottom of the evaporator. Install the flexible drain tube and pass it out through the toeboard.



Photo #15: Using the same procedure for the routing large diameter duct hose, run the smaller duct hose from the top of the evaporator to each of the dash defroster outlets.

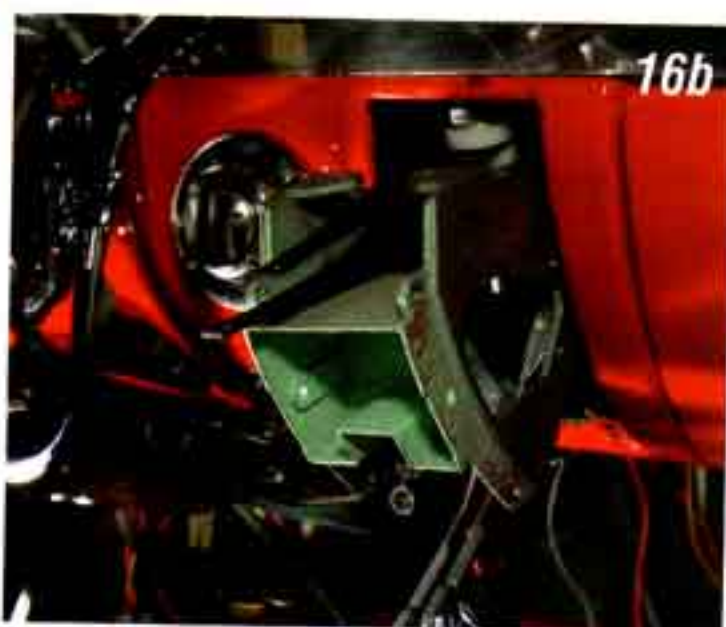


Photo #16a, 16b & 16c: Plug the wiring harness into the control panel and pass the unit through the glove box opening and back through the dash heater control opening. Install the face plate and knobs, secure the control panel to the dash. Attach the other end of the control panel wiring harness to the plug on the ECU module on the passenger side top of the evaporator. Also plug in the lead from the blower motor to the ECU.



Photo #17: Our Pro-Line Upgrade kit includes a polished aluminum compressor and alternator bracket as well as a polished compressor. The main bracket bolts to the two upper water pump mounting holes with 3/8" x 2-1/4" bolts and flat washers with a 3/8" spacer between the bracket and water pump on the driver's side and a 1/8" spacer on the passenger side.



Photo #18a & 18b: The left and right elbow brackets mount to the back of the main bracket and attach to the front intake bolt on each side. The elbow brackets are bolted to the main bracket with two counter sunk 5/16" Allen head bolts. Spacers are provided for installation between the intake manifold and the main portion of the bracket for proper alignment.

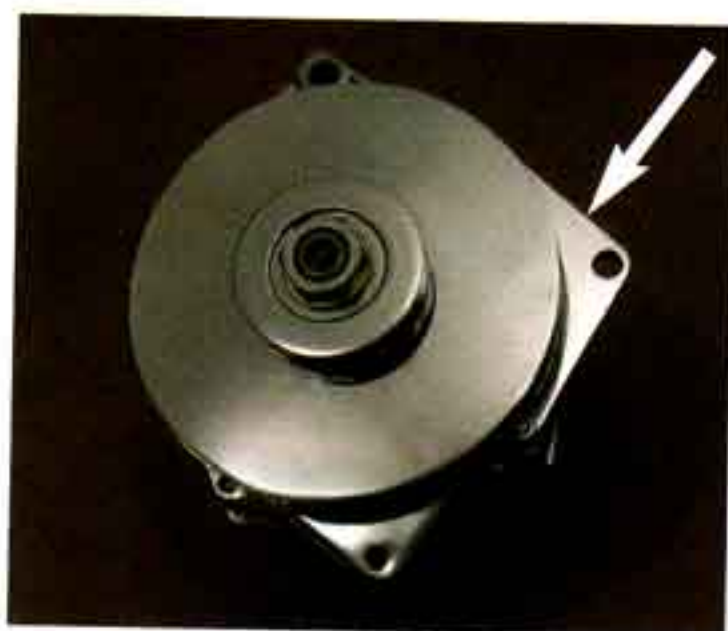
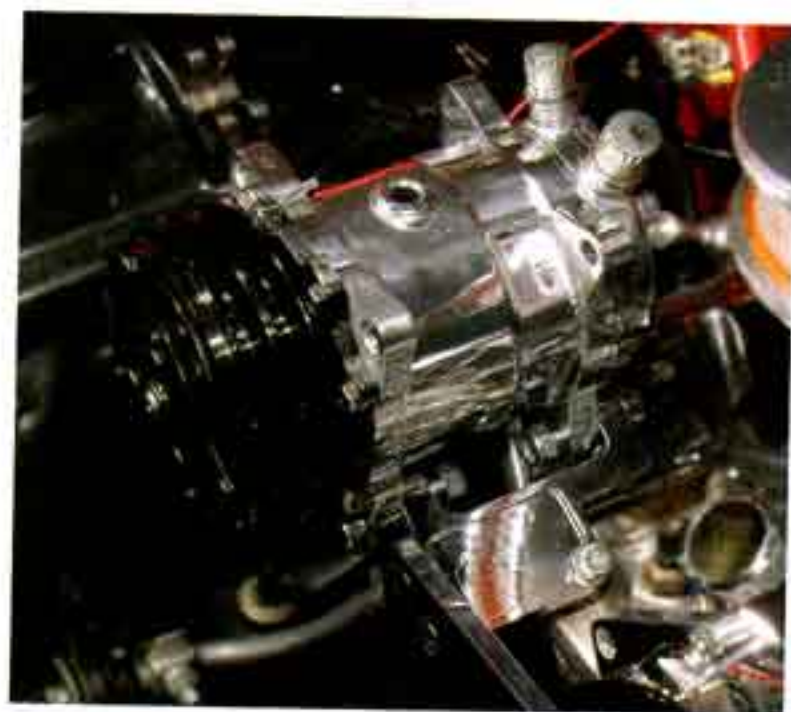


Photo #19a & 19b: Attach the mounting tab to the alternator and attach to the main bracket.



Photo #20a & 20b: Install the compressor with the two 3/8" Allen head bolts and lock nuts. Install the alternator adjusting link on the front side of the main bracket and the compressor link on the back side of the main bracket.



The rod ends are held to the alternator and compressor with 3/8" Allen bolts and lock nuts. They are attached to the main bracket with 3/8" Allen shoulder bolts and lock nuts.



Photo #21a & 21b: Install the two compressor hard lines after lubricating and installing the proper size O-rings.



Photo #22: Once the air conditioner has been charged and tested (after the underhood plumbing in the next few steps is done), install the 2-piece ABS glove box through the glove box opening in the dash and install the glove box door. Also install any other dash items that were removed earlier.



Photo #23a & 23b: Now we will begin the installation of the cross-flow radiator and finish the underhood plumbing on the air unit. If your car is equipped with an automatic transmission, 6-cylinder transmission cooler lines must be used with the cross-flow radiator. Use #19-41 for a TH350/TH400 and #19-69 for a 700R4 transmission. The original V8 radiator core support has a baffle on the bottom that can be removed by bending it back and forth a few times. This is required to clear the new radiator.



Photo #24a & 24b: The stock horns, voltage regulator and horn relay will need to be relocated closer to the inner fenders to allow for the wider radiator core.



Photo #25a & 25b: Using the template supplied with the cross-flow radiator, mark the driver's side filler panel and drill a 2-1/8" hole using a hole saw. Once the hole is drilled, clean up any sharp edges with a file and touch up the paint.



Photo #26: This next step is far easier if the grille is removed from the car. A template is supplied with the radiator to drill a hole in the passenger side radiator lower filler panel to allow the condenser lines to pass through and connect to the receiver dryer and compressor lines. Using a hole saw, drill a 2-1/8" hole in the panel.

Photo #27: The cross-flow radiator #18-309 comes with a 1/2" pipe bung on the driver's side. Install the sender for the electric fans in this opening. Install the fittings #19-60 for the automatic cooler lines into the lower radiator tank.



Photo #28a & 28b: On 1955-56 cars, there is not enough room between the front of the condenser and the back of the hood latch striker plate and support. We trimmed the front opening of the radiator core support slightly so the electric fan shroud would fit under the top of the core support giving us 7/16" more clearance.



Photo #29a, 29b & 29c: The radiator and electric fans can be installed as one unit, the condenser will need to be installed after the radiator is bolted into place. Bolt the cross-flow to the stock V8 core support using the original bolts. If a tubular core support #54-73, 54-74 or 54-75 is used, the V8 position flanges need to be used. Connect the transmission cooler lines to the new fittings #19-60 in the lower radiator tank.



Photo #30a & 30b: The outlet on the radiator for the lower radiator hose is in the stock location so a stock #18-26 lower hose can be used on a small block. If a big block engine has been installed, the lower outlet on the radiator will need to be trimmed to match up with the lower radiator hose #18-202. Install the upper and lower molded radiator hoses.



Photo #31a & 31b: With the radiator in place, the condenser may be installed. The hard lines from the condenser pass through the new hole in the passenger side filler panel. Secure the condenser to the front of the radiator with six #8 machine screws provided with the radiator kit.

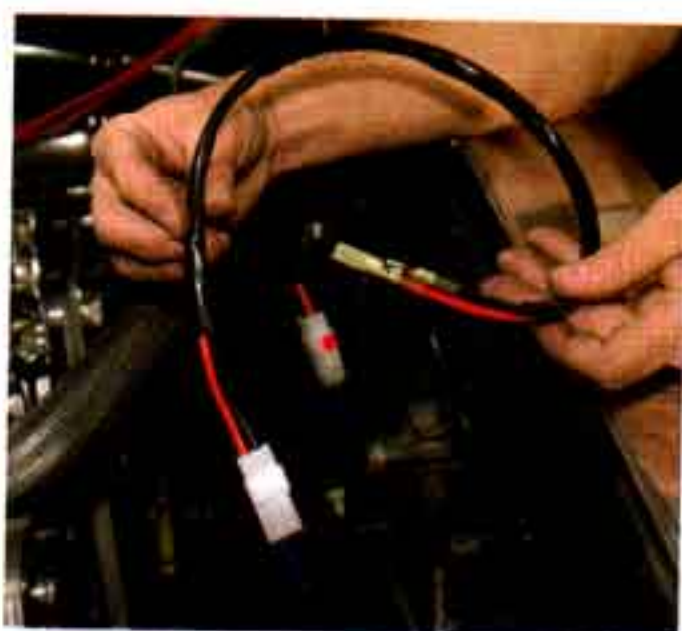


Photo #32a & 32b: The fan wiring harness kit includes two short leads with a red and black wire that plug into the electric fans. This will allow you to unplug the fans and remove them if you ever need to.

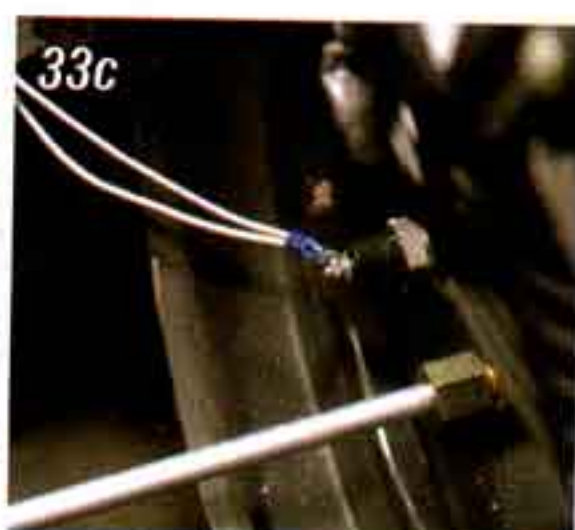


Photo #33a, 33b & 33c: The relays for the electric fans can be mounted anywhere on the car. We mounted ours up under the dash to keep the engine compartment nice and clean. The two red wires and two gray wires from the relays need to be routed out to the electric fans. The yellow wire on the relay needs to be connected to full-time 12-volts. The orange wire should be connected to ignition on 12-volts. The two gray wires should be butt connected together and connected to the temperature sender on the radiator.



Photo #34: The red wires in the harness connect to the red lead wires on the fans. The black wires from the fans should be connected to a good ground.

Photo #35: Mount the overflow tank included with the kit to the front of the filler panel on the passenger side.



Photo #36: Once the radiator and condenser are in place, the grille can be reinstalled. This is where it gets tight on 1955-56 cars. The hood latch striker plate and support need to be trimmed to give enough clearance with the condenser.



Photo #37a & 37b: The small fitting on the underdash evaporator unit is the liquid line



that attaches to the receiver dryer. The air conditioning kit includes an aluminum hard line that connects the evaporator and the inlet side of the receiver dryer. The receiver dryer mounts to the back of the passenger side radiator filler panel. The outlet side of the receiver attaches to the small fitting on the condenser using the #6 hose with the 90 degree fittings on each end.



Photo #38a & 38b: The blue wire from the evaporator under the dash needs to be connected to one of the terminals on the binary switch on the liquid line. The other terminal on the binary switch connects to the compressor with the supplied wire.



Photo #39a & 39b: The larger fitting from the evaporator attaches to the larger fitting on the compressor using the #10 hose with the straight fitting on one end and the 90-degree fitting on the other. The small fitting on the compressor connects to the large fitting on the condenser using the #8 hose with the 45 degree fitting on each end.



Photo #40: The electric heater control valve supplied with the air conditioning kit should be installed inline in the upper heater hose. The upper heater hose connects to the top barbed fitting on the heater core and to the

intake manifold nipple. The other heater hose connects to the lower barb on the heater core and to the water pump. The heater control valve has two male spade connectors. One terminal connects to the green wire from the new air conditioning harness, the other terminal should be connected to a good ground using the supplied white wire.

Photo #41: With all the hoses connected, fill the cooling system with antifreeze suitable for use with an aluminum radiator and distilled water. Start the engine and check for any leaks. Watching the temper-



ature, allow the engine to warm up. The electric cooling fans should turn on at 185° and than turn off once the engine cools down to 165°.

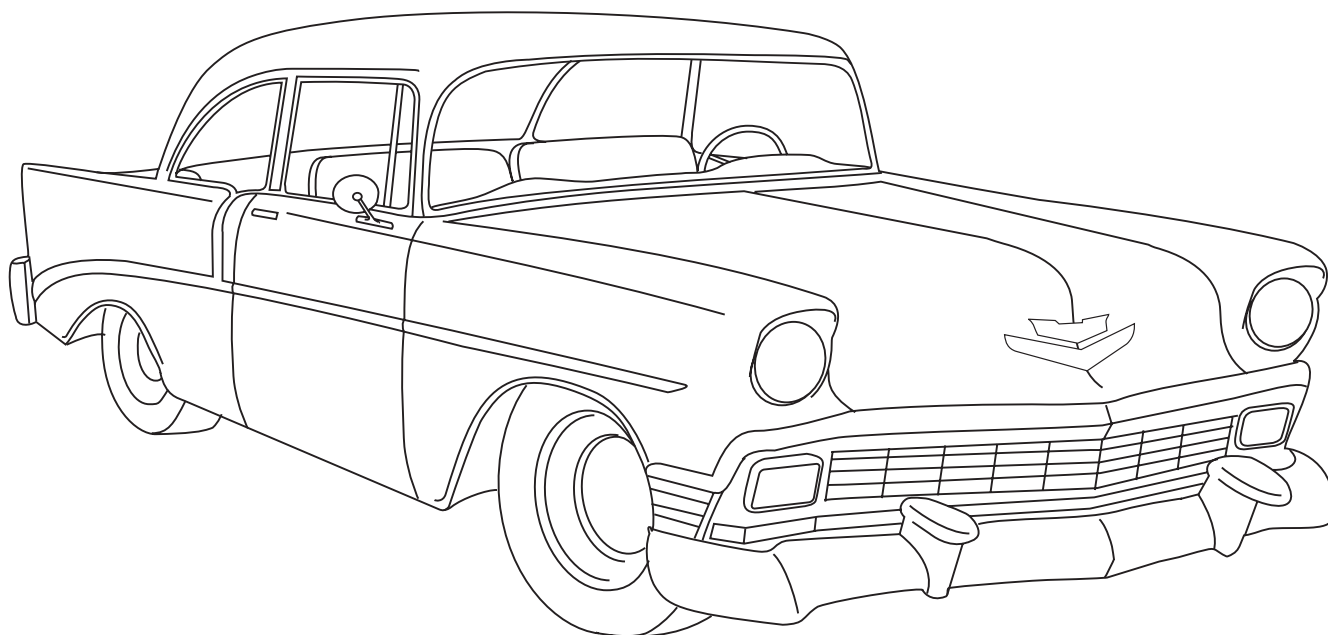
Take your car to a certified air conditioning garage and have the system charged. Enjoy your nice cold air!

Good Luck! 



1955-56 CHEVY

GEN IV
56155-PCZ



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



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GEN IV 1955-56 CHEVY

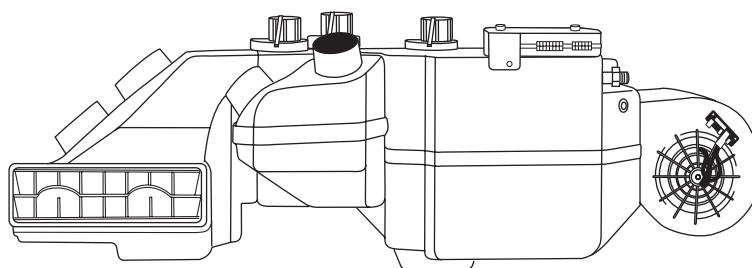
EVAPORATOR KIT PACKING LIST

EVAPORATOR KIT 56155-PCZ

No.	QTY.	PART No.	DESCRIPTION
1.	1	760155-VCE	1955-56 CHEV. EVAP. SUBCASE
2.	1	78255-PCN	1955-56 CHEV. CAR WO AC ACC. KIT

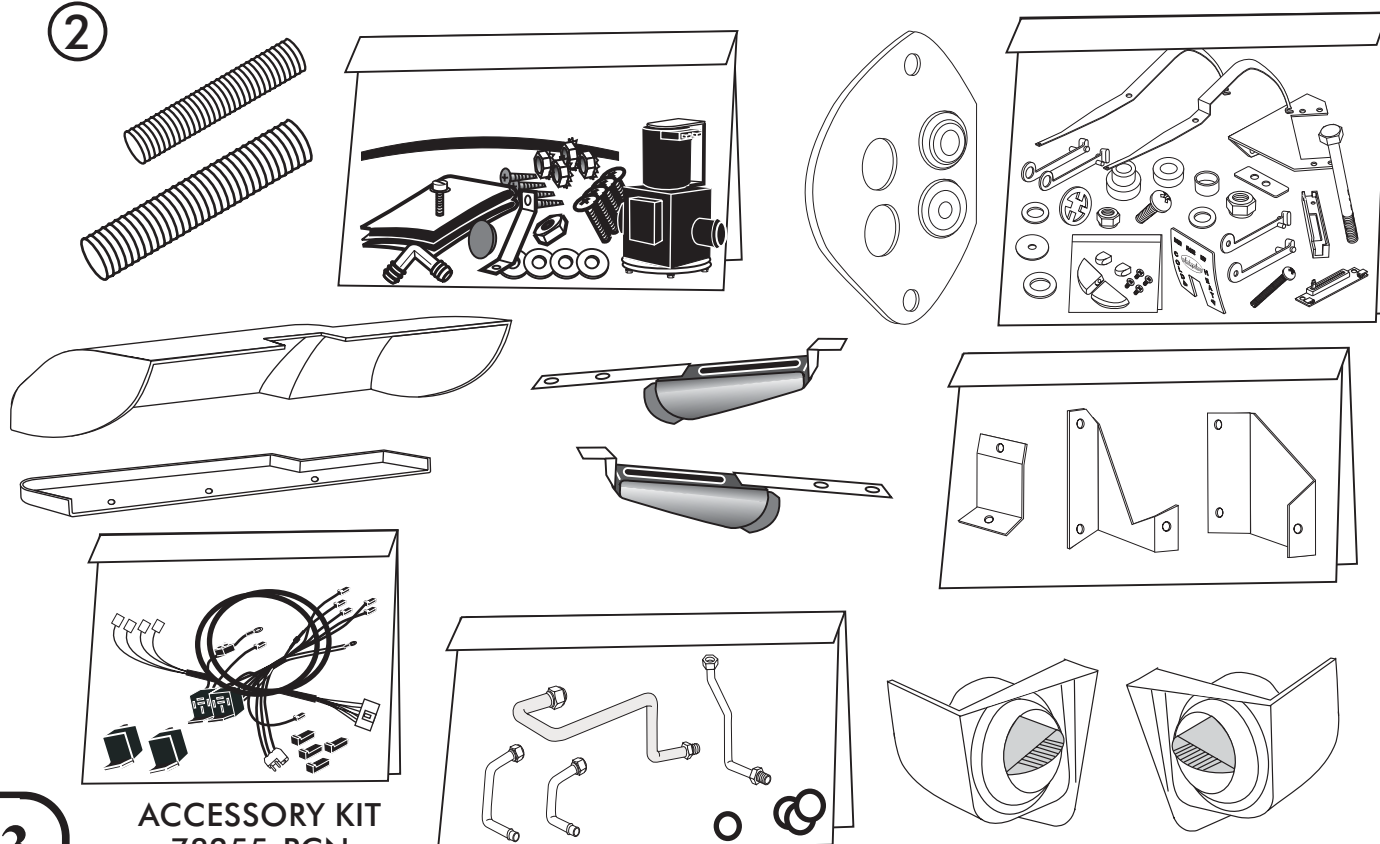
**** BEFORE BEGINNING INSTALLATION OPEN ALL PACKAGES AND CHECK CONTENTS OF SHIPMENT. PLEASE REPORT ANY SHORTAGES DIRECTLY TO VINTAGE AIR WITHIN 15 DAYS. AFTER 15 DAYS, VINTAGE AIR WILL NOT BE RESPONSIBLE FOR MISSING OR DAMAGED ITEMS.**

①



1955-56 CHEVY EVAP.
SUB CASE 760155-VCE

②



ACCESSORY KIT
78255-PCN



1955-56 CHEVROLET GEN IV

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 (406 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 254 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 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.



GEN IV 1955-56 CHEVY

INSTALLATION INSTRUCTIONS FOR 1955-1956 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

PASSENGER COMPARTMENT

1. ☐ REMOVE OEM HEATER ASSEMBLY, INCLUDES: CONTROL CABLES, TWO (2) 7/16" NUTS ON FIREWALL AND ONE (1) UNDER DASH (DISCARD).
2. ☐ REMOVE HEATER BLOWER (DISCARD). SEE FIGURE 1 BELOW.
3. ☐ REMOVE DUCT ABOVE KICK PANEL VENT WITH BUTTERFLY AND PANEL FLANGE (DISCARD). INSTALL NEW VENT COVER AS FIGURE 2 SHOWS.
4. ☐ REMOVE GLOVE BOX DOOR (RETAIN).
5. ☐ REMOVE GLOVE BOX (DISCARD).
6. ☐ REMOVE THE ORIGINAL DEFROSTER DUCT FROM HEATER TO WINDSHIELD (DISCARD).
7. ☐ REMOVE ASH TRAY (RETAIN).
8. ☐ REMOVE ASH TRAY SLIDER ASSEMBLY (RETAIN).
9. ☐ REMOVE VENT & CABLE FROM DASH (RETAIN. SEE FIGURE 1 BELOW).
10. ☐ REMOVE CONTROL PANEL (RETAIN), REFER TO CONTROL PANEL CONVERSION KIT TO ASSEMBLE CONTROL PANEL.
11. ☐ REMOVE PASSENGER SIDE SPEAKER GRILLE (RETAIN). SEE FIGURE 1 BELOW.

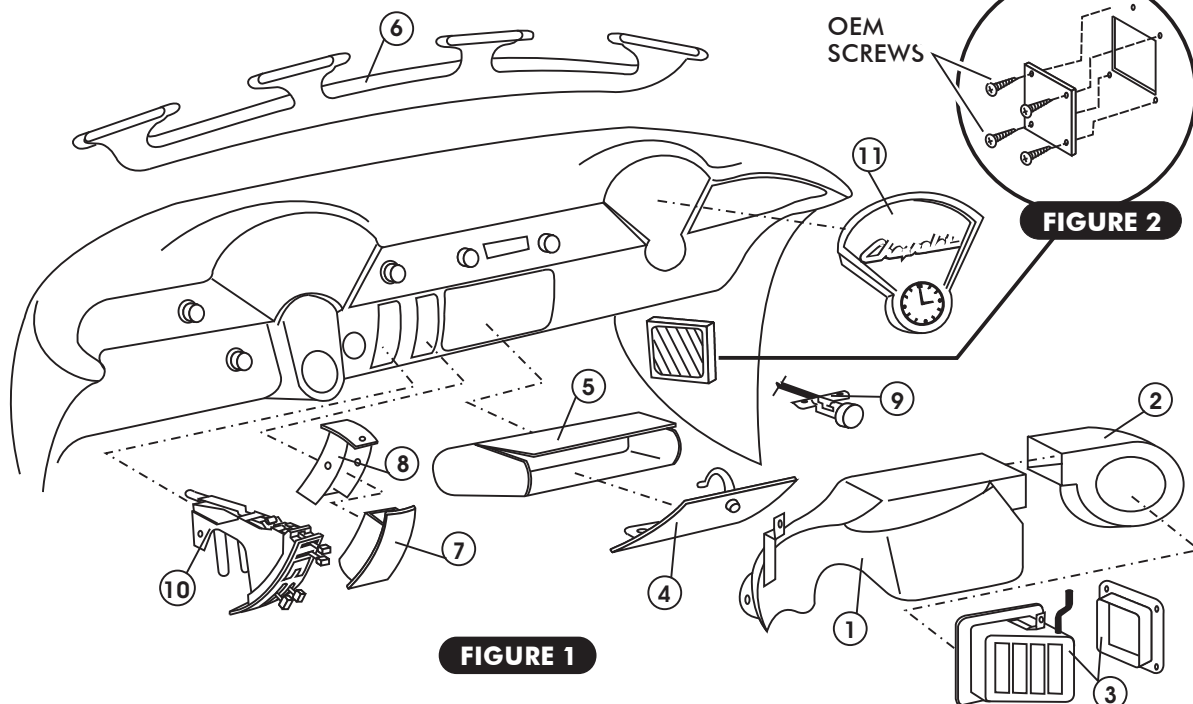


FIGURE 1

FIGURE 2



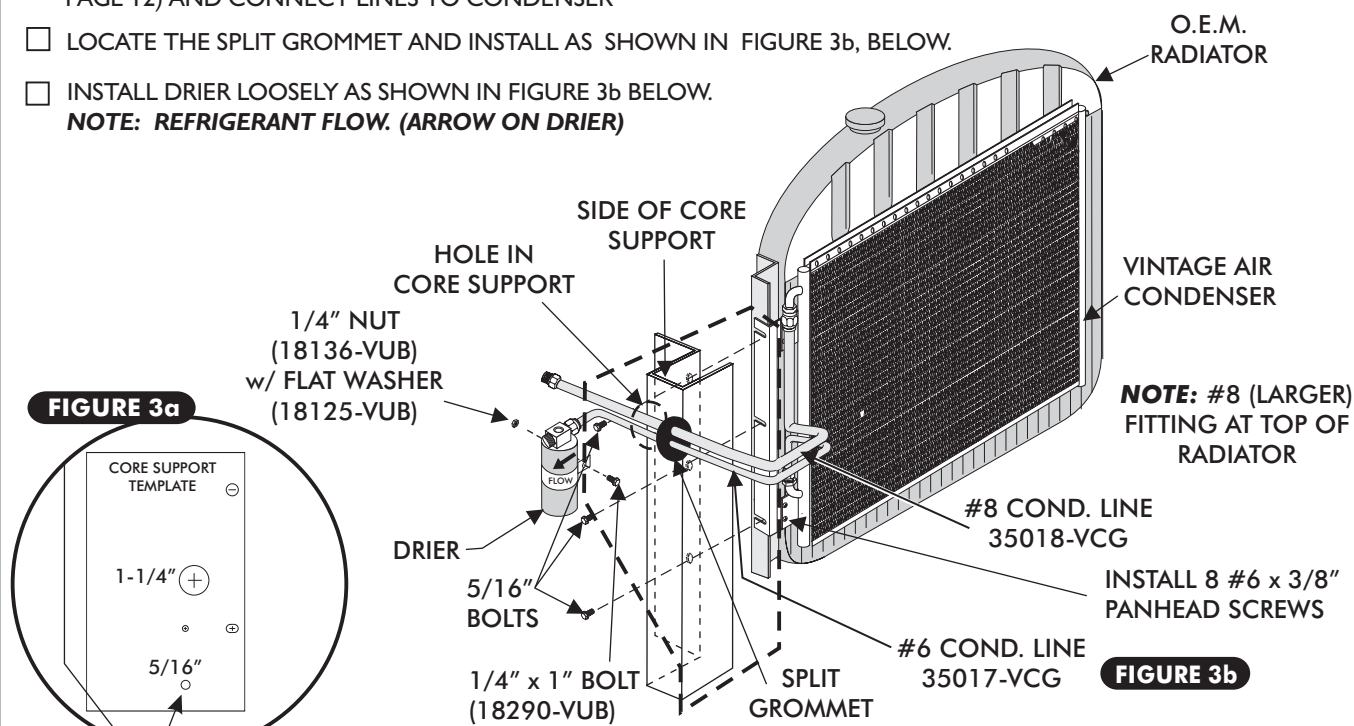
GEN IV 1955-56 CHEVY

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 23, 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 (SEE FIGURES 10 & 11, PAGE 12) 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)



MOUNT DRIER
TO INSIDE OF
CORE SUPPORT
THRU 5/16" HOLE

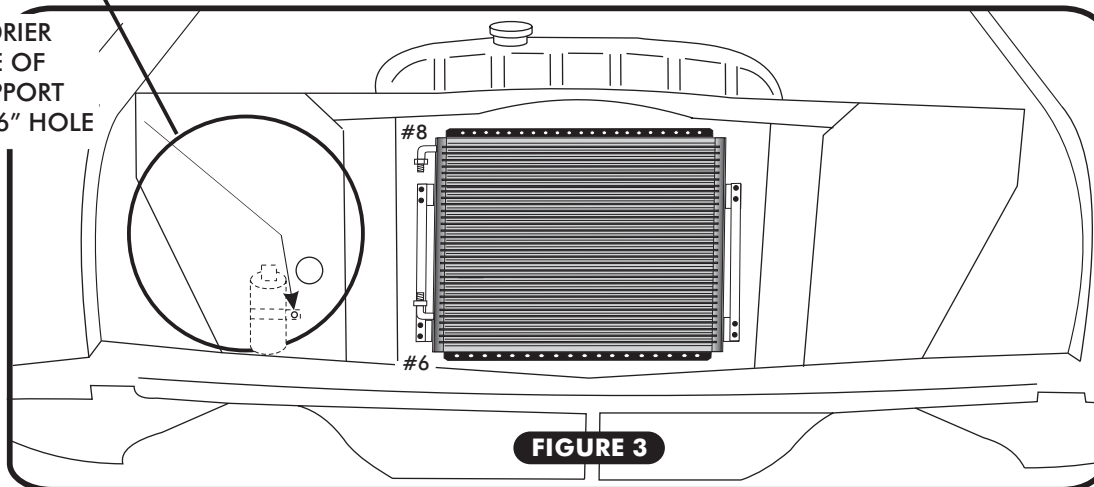


FIGURE 3



GEN IV 1955-56 CHEVY

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)

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

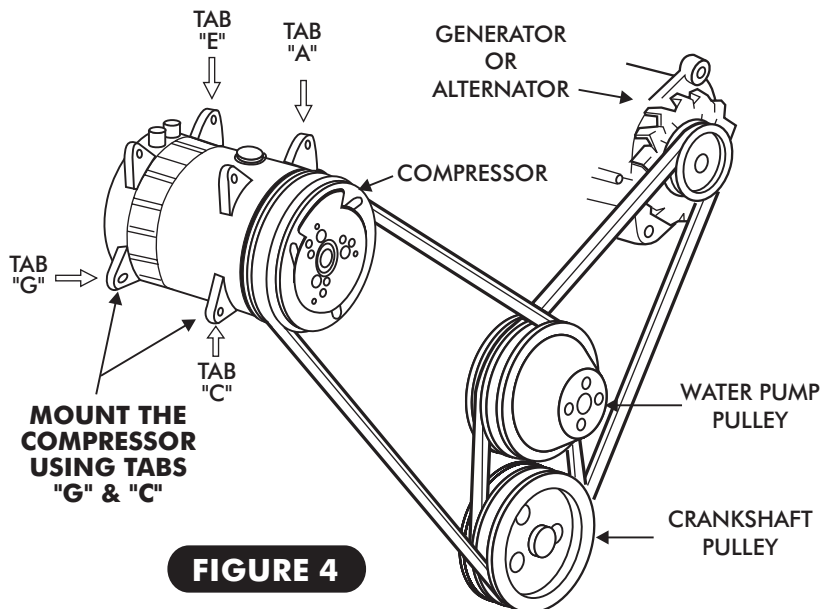


FIGURE 4

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 15, PAGE 16

INSTALL THE DEFROSTER DUCTS AT THIS TIME. SEE FIGURE 5 & 5a.
NOTE: ROUNDED SIDE OF DUCTS FACE PASSENGER AREA.

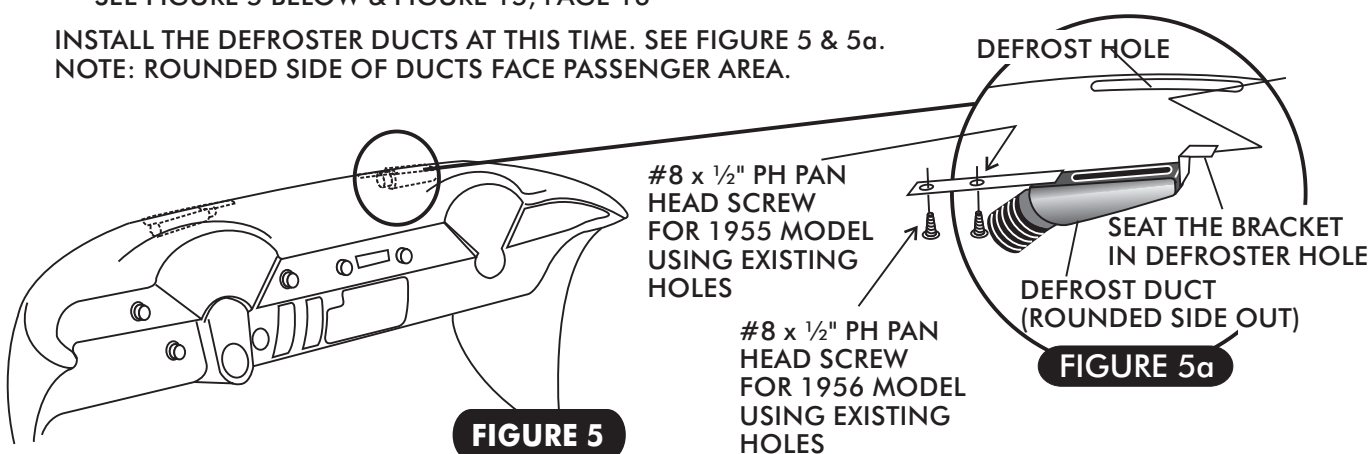


FIGURE 5

FIGURE 5a

CONTROL PANEL CONVERSION

- LOCATE THE CONTROL PANEL CONVERSION KIT (473055-PCA), REFER TO INSTRUCTIONS SUPPLIED WITH CONVERSION KIT TO ASSEMBLE CONTROL PANEL.



GEN IV 1955-56 CHEVY

EVAPORATOR INSTALLATION

- ☐ ON A WORK BENCH, INSTALL EVAPORATOR REAR BRACKETS, AND INSTALL EVAPORATOR HARDLINES WITH PROPERLY LUBRICATED O-RINGS. (SEE FIGURE 17, PAGE 18, AND FIGURES 10, 11 & 12, PAGE 12.)
- ☐ LIFT EVAPORATOR UNIT UP & UNDER THE DASHBOARD (SEE FIGURES 6-6a BELOW & FIGURE 6b, PAGE 10). SECURE LOOSELY TO THE FIREWALL FROM THE ENGINE COMPARTMENT SIDE WITH (2) 1/4-20 x 1" BOLTS AND WASHERS. SEE FIGURE 7, PAGE 10 & FIGURE 17, PAGE 18.
- ☐ INSTALL FRONT MOUNTING BRACKET TO EVAPORATOR UNIT WITH 1/4-20 x 1/2" BUTTON HEAD BOLT AND TIGHTEN AS SHOWN IN FIGURE 7, PAGE 10. LOOSELY ATTACH FRONT MOUNTING BRACKET TO DASH WITH 1/4-20 x 1" BOLT, WASHER AND NUT. SEE FIGURE 7, PAGE 10
- ☐ INSTALL CENTER A/C PLENUM TO EVAPORATOR WITH (2) 10/32 x 1/2" SCREWS. SEE FIGURE 7, PAGE 10.
- ☐ 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 7, PAGE 10
- ☐ VERIFY THAT EVAPORATOR UNIT IS LEVEL AND SQUARE TO THE DASH, THEN TIGHTEN ALL MOUNTING BOLTS. **(NOTE: TIGHTEN THE TWO BOLTS ON FIREWALL FIRST, THEN THE FRONT MOUNTING BRACKET BOLT AND NUT. TIGHTEN THE CENTER PLENUM MOUNTING BOLT LAST).**

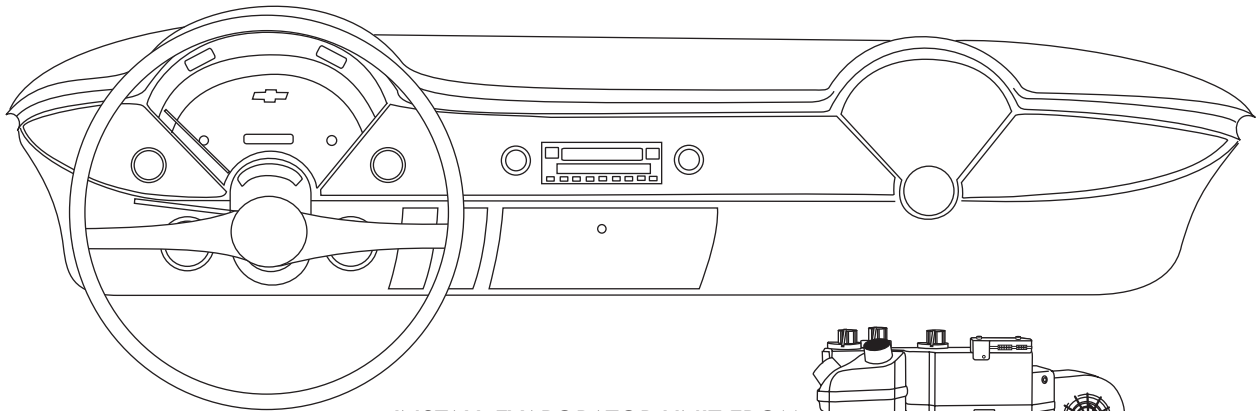


FIGURE 6

INSTALL EVAPORATOR UNIT FROM PASSENGER SIDE FLOOR BOARD.

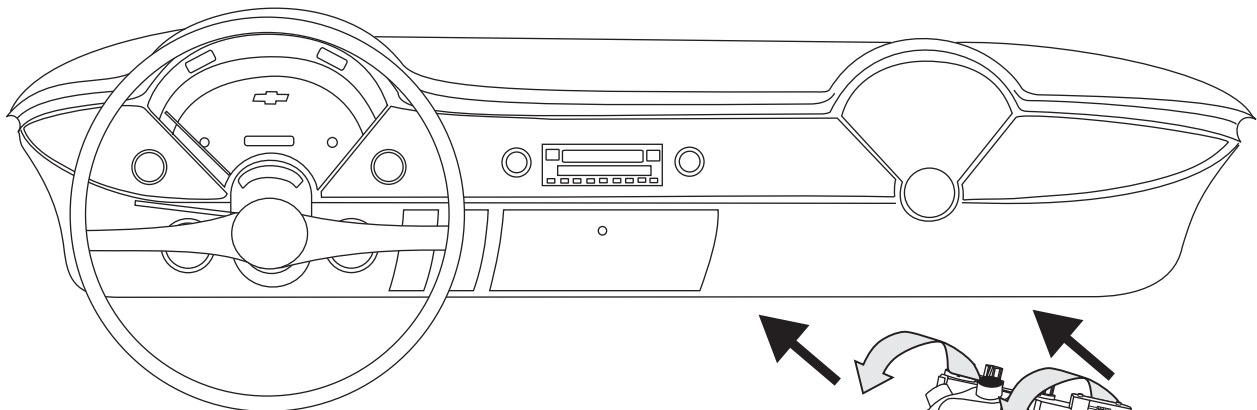


FIGURE 6a

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



GEN IV 1955-56 CHEVY

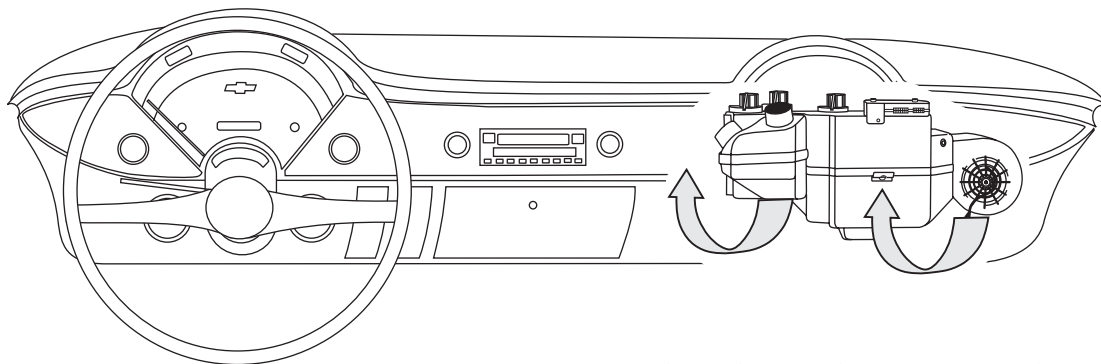


FIGURE 6b

ONCE INTO PLACE SECURE EVAPORATOR UNIT TO FIREWALL.

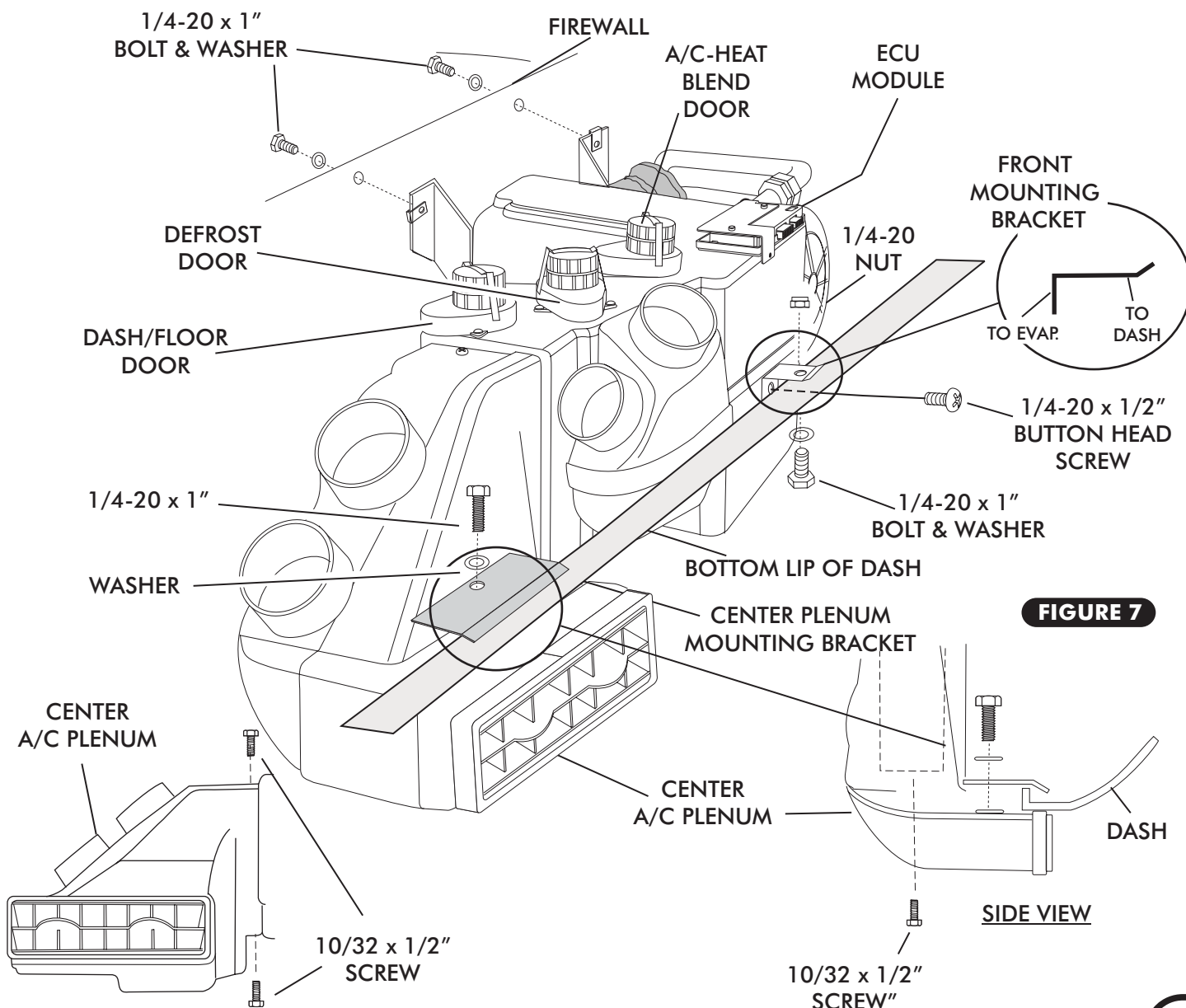


FIGURE 7



GEN IV 1955-56 CHEVY

PASSENGER AND DRIVER SIDE UNDER DASH LOUVER INSTALLATION

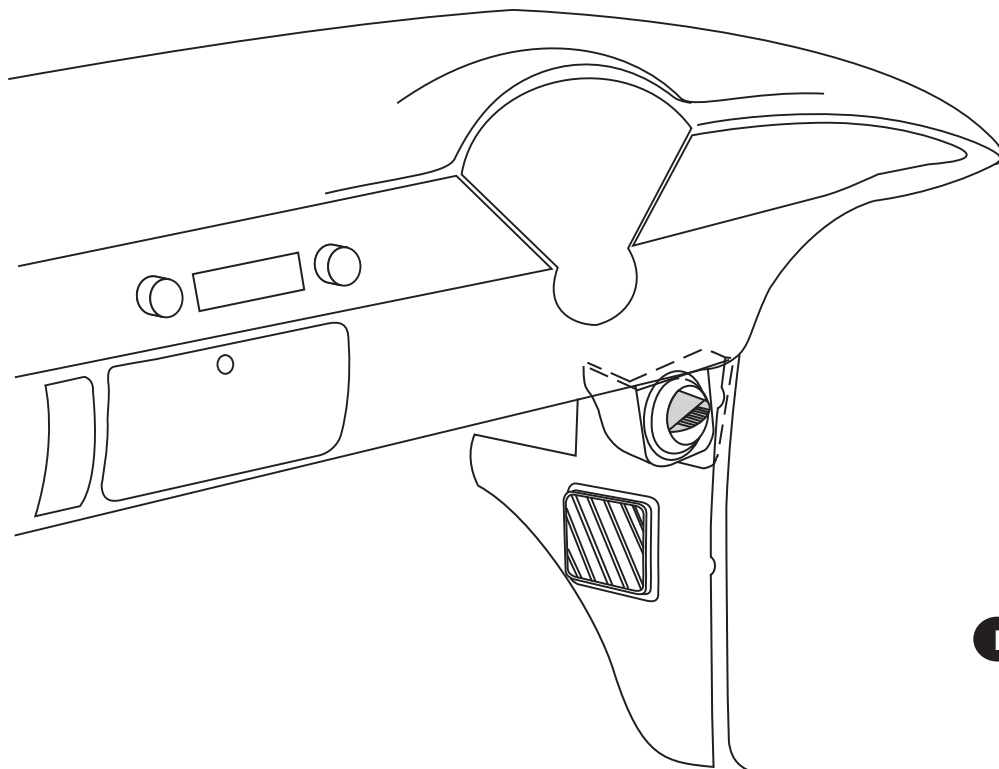


FIGURE 8

- ☐ 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 8 ABOVE.

DRAIN HOSE INSTALLATION

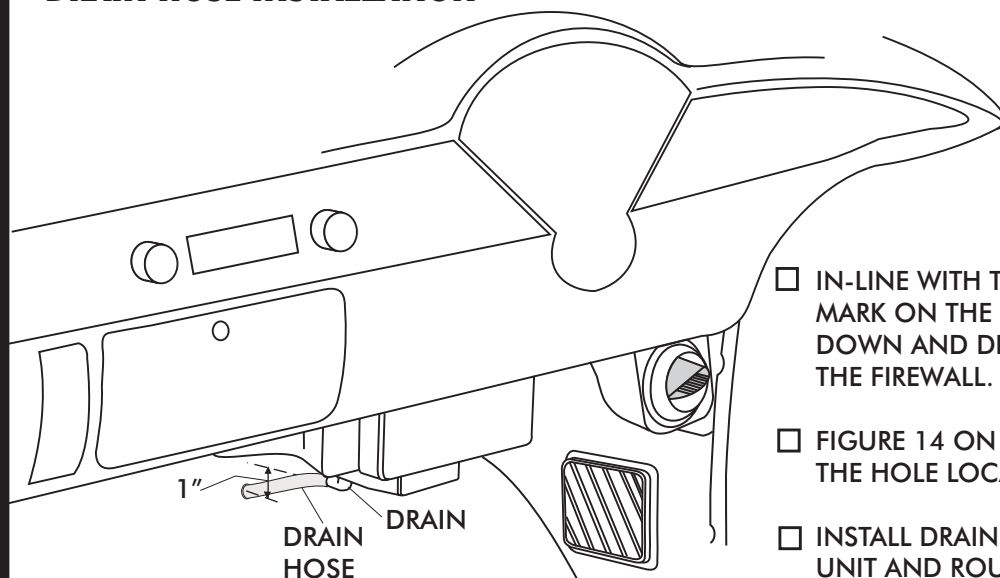


FIGURE 9

- ☐ 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 9.
- ☐ FIGURE 14 ON PAGE 15 WILL SHOW YOU ROUGHLY THE HOLE LOCATION.
- ☐ INSTALL DRAIN HOSE TO BOTTOM OF EVAPORATOR UNIT AND ROUTE THROUGH FIREWALL. SEE FIGURE 9 AND FIGURE 14, PAGE 15.



GEN IV 1955-56 CHEVY

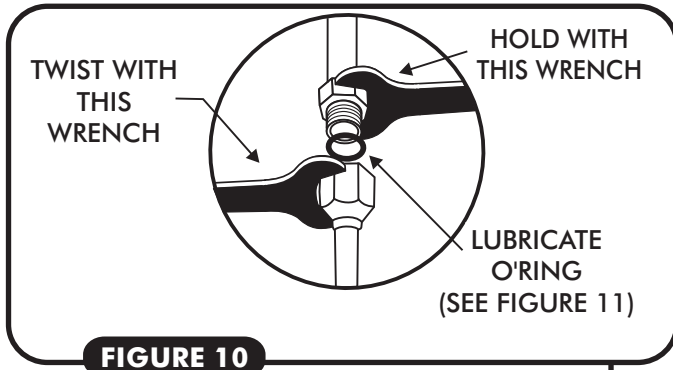


FIGURE 10

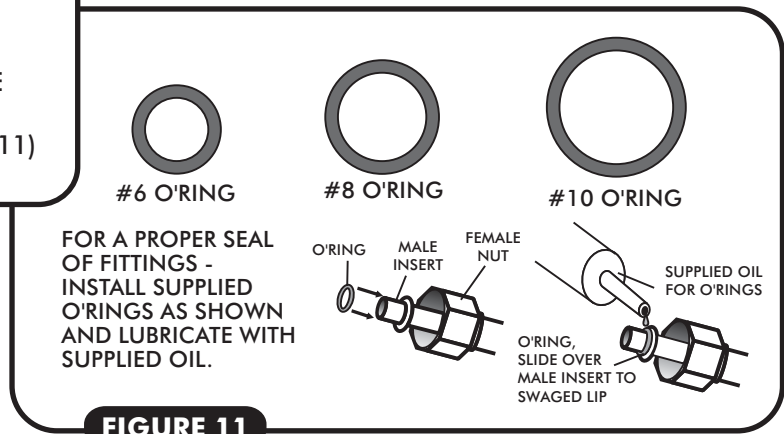


FIGURE 11

HEATER CONTROL VALVE INSTALLATION

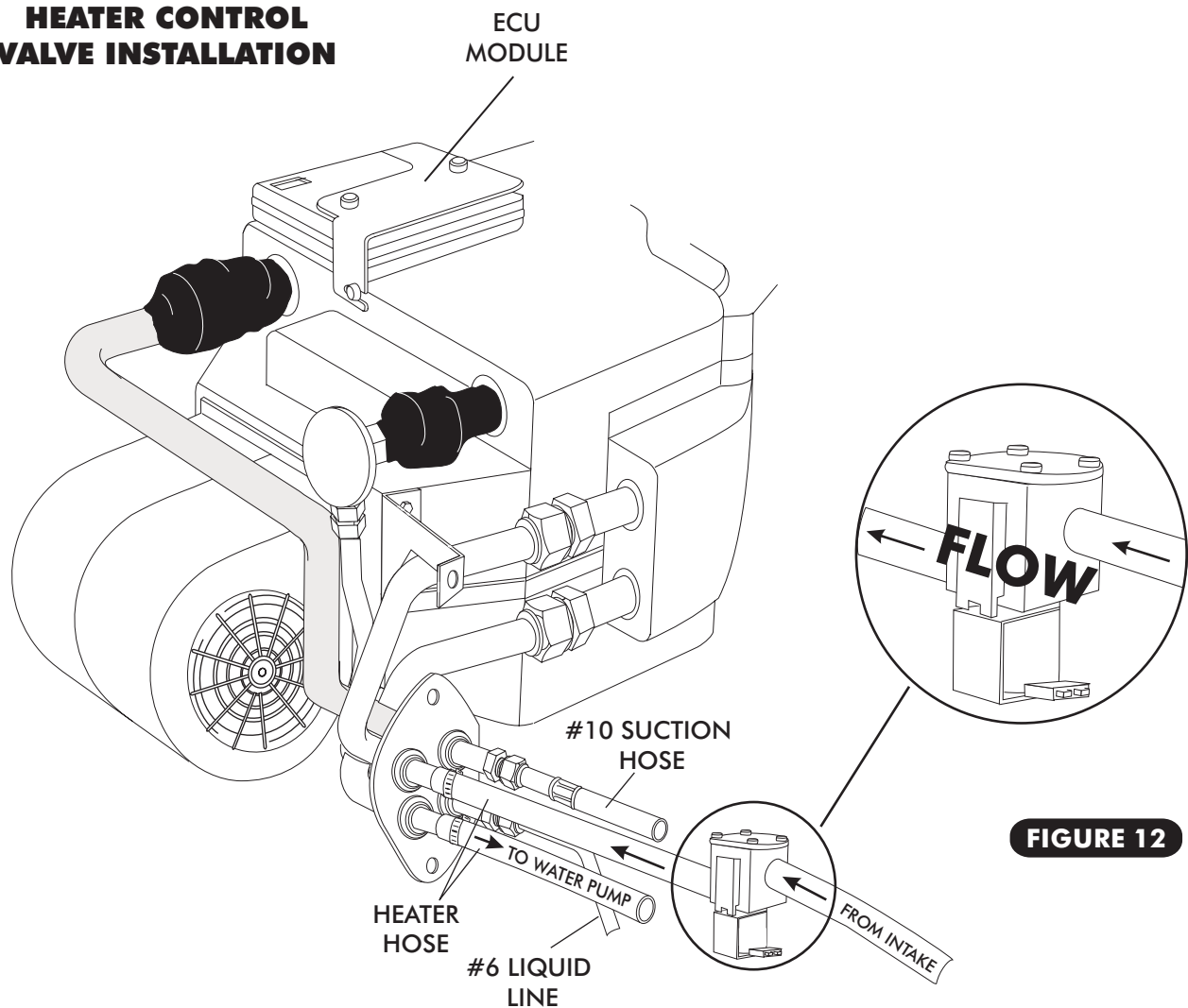


FIGURE 12



GEN IV 1955-56 CHEVY

HARDLINE & HOSE INSTALLATION

STANDARD HOSE KIT

- ☐ LOCATE THE TWO COMPRESSOR ALUMINUM HARDLINE EXTENSIONS. SEE FIGURE 13, PAGE 14.
- ☐ 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 FIGURES 10 & 11, PAGE 12.
- ☐ 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 13, PAGE 14.
- ☐ SECURE THE TWO COMPRESSOR HARDLINES TO THE COMPRESSOR, USING THE SUPPLIED CLAMP. SEE FIGURE 13a, PAGE 14.
- ☐ 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 13, PAGE 14 AND TIGHTEN. **NOTE: THE 90° DEGREE HOSE END CONNECTS TO THE CONDENSER HARDLINE.**
- ☐ INSTALL FIREWALL COVER. SEE FIGURE 14, PAGE 15.
- ☐ INSTALL THE #6 LIQUID LINE, LUBRICATE (1) #6 O-RING AND TIGHTEN. SEE FIGURE 13b, PAGE 14.
- ☐ 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 13, PAGE 14 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 13-13b, PAGE 14. 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.

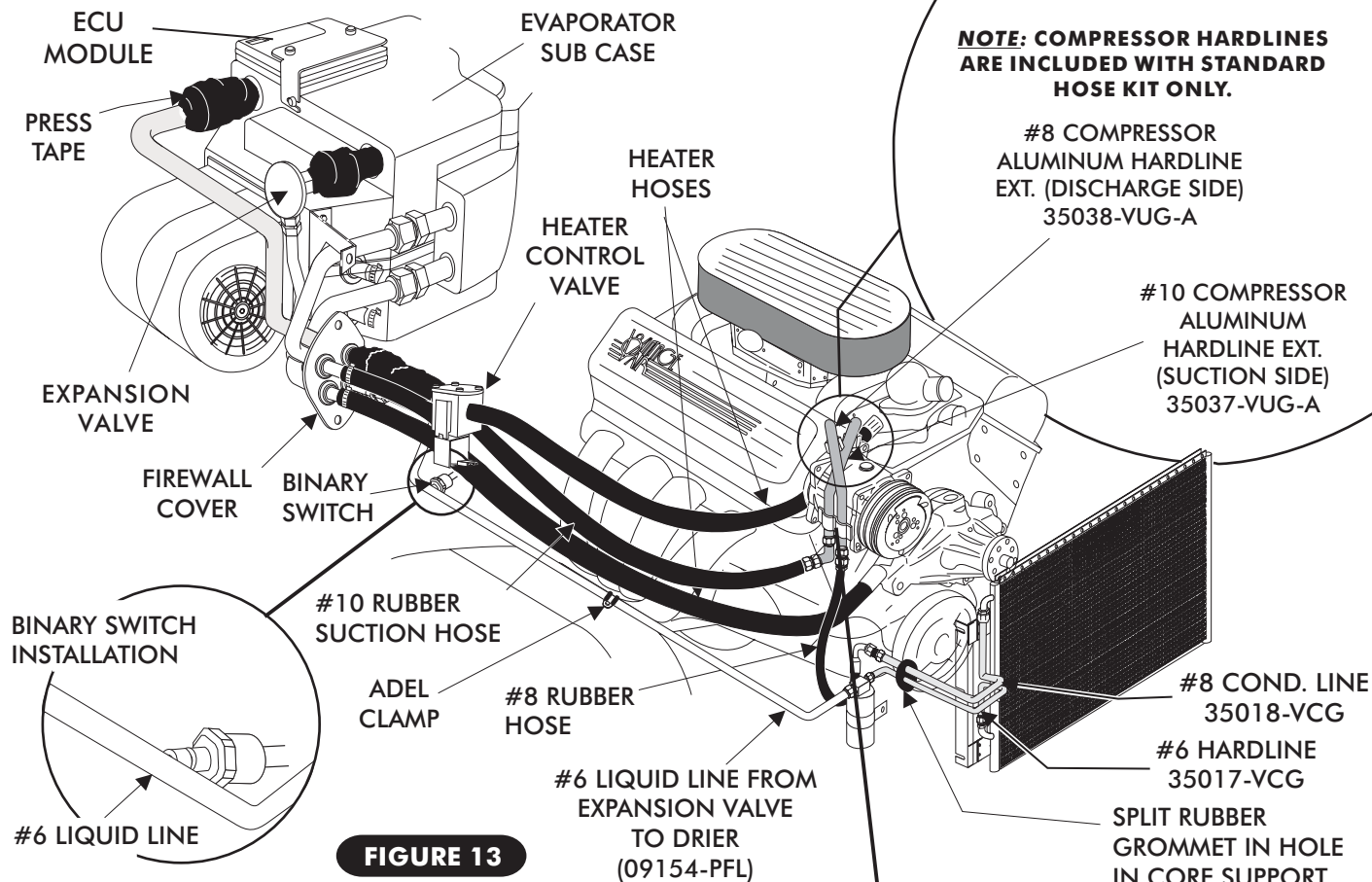
HEATER CONTROL VALVE & #6 LIQUID LINE

- ☐ INSTALL HEATER CONTROL VALVE IN-LINE WITH INTAKE MANIFOLD (PRESSURE SIDE) HEATER HOSE. SEE FIGURE 12, PAGE 12.
- ☐ INSTALL THE #6 LIQUID LINE TO DRIER WITH LUBRICATED O-RING AND TIGHTEN. FIGURE 13, PAGE 14
- ☐ INSTALL BINARY SWITCH ON #6 LIQUID LINE. SEE FIGURE 13, PAGE 14.
- ☐ SECURE THE #6 LIQUID LINE TO THE FENDER USING THE SUPPLIED ADEL CLAMP. SEE FIGURE 13, PAGE 14.

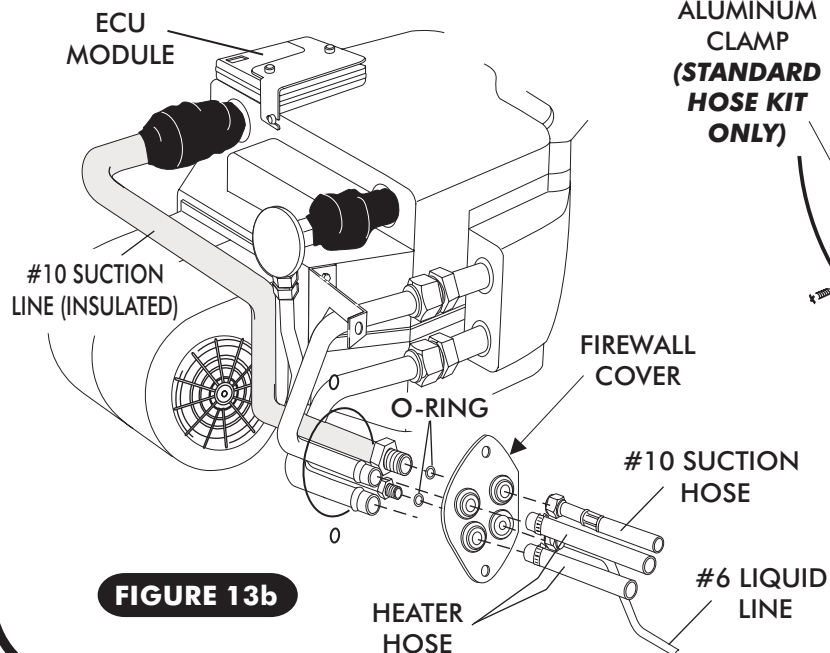


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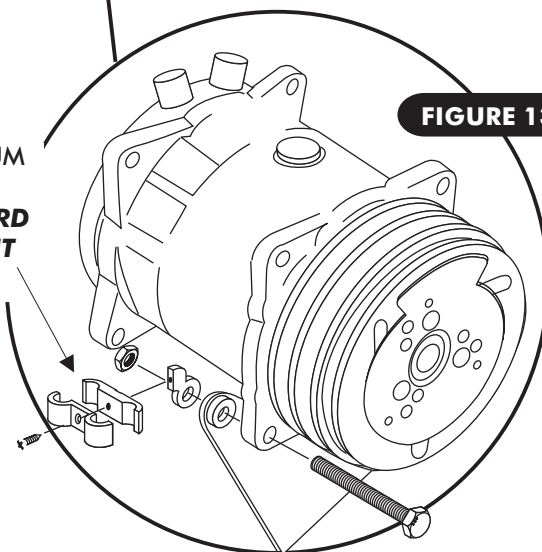
AC/HEAT HOSE & LINE ROUTING



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



ALUMINUM CLAMP (STANDARD HOSE KIT ONLY)





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FIREWALL COVER

- ☐ PASS LINES THROUGH FIREWALL COVER, AND SECURE WITH (2) 1/4-20 BOLTS. SEE FIGURE 14 BELOW.

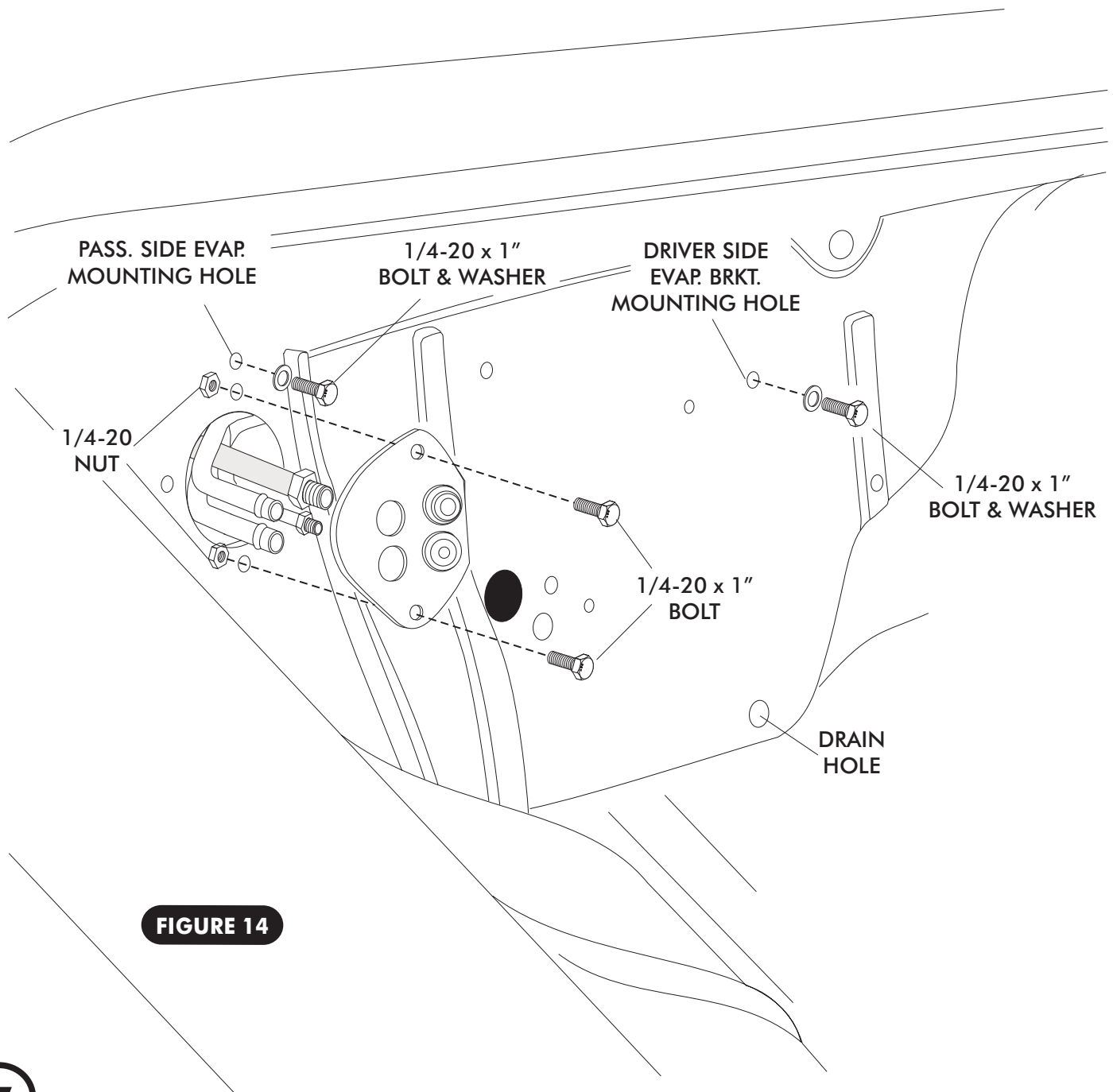


FIGURE 14

FINAL STEPS - DUCT HOSE ROUTING & CONTROL PANEL HARNESS

- ☐ INSTALL DUCT HOSES AS SHOWN IN FIGURE 15 BELOW.
- ☐ REMOVE THE CONTROL PANEL KNOBS AND BEZEL.
- ☐ FROM THE BACK SIDE OF THE DASH, INSTALL THE CONTROL PANEL ASSEMBLY THROUGH THE CONTROL PANEL OPENING IN DASH AS SHOWN IN FIGURE 15 BELOW.
- ☐ REINSTALL BEZEL AND CONTROL KNOBS.
- ☐ PLUG THE CONTROL PANEL HARNESS INTO THE ECU MODULE ON SUB CASE AS SHOWN. SEE FIGURE 15 BELOW.
- ☐ CONNECT THE CONTROL HARNESS TO THE CONTROL POTS AS SHOWN BELOW.
- ☐ PLUG THE WIRING HARNESS INTO THE ECU MODULE ON SUB CASE AS SHOWN. (WIRE ACCORDING TO WIRING DIAGRAM ON PAGE 19.)

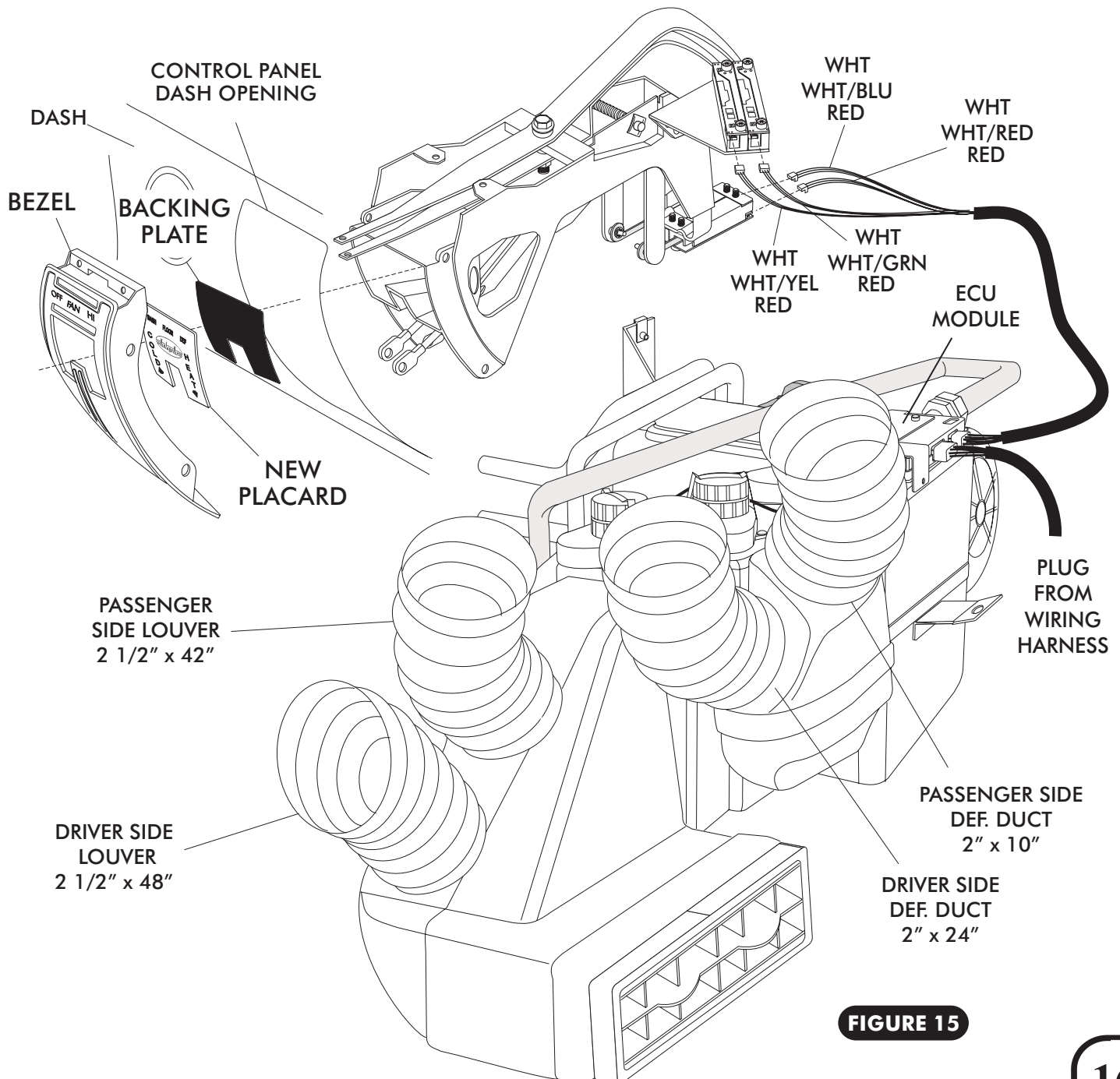


FIGURE 15

- ☐ INSTALL GLOVE BOX BOTTOM AND GLOVE BOX DOOR, SECURE TO DASH WITH (3) O.E.M. SCREWS. SEE FIGURE 16, BELOW.
- ☐ WITH GLOVE BOX BOTTOM AND DOOR IN PLACE, INSTALL GLOVE BOX TOP AS SHOWN, SECURE THE GLOVE BOX TOP AND BOTTOM TOGETHER USING (3) 6 x 3/8" PAN HEAD SCREWS AS SHOWN.
- ☐ SECURE THE GLOVE BOX TOP TO DASH USING (2) OEM SCREWS, SEE FIGURE 16 BELOW.

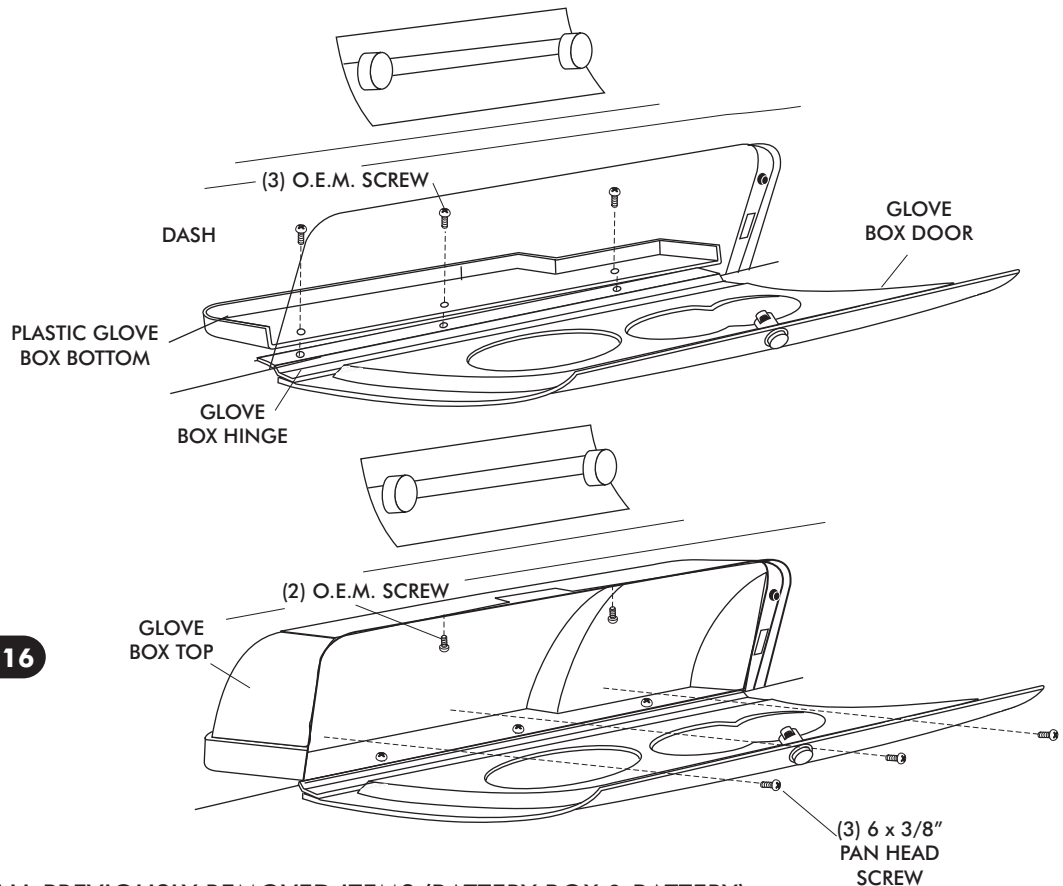


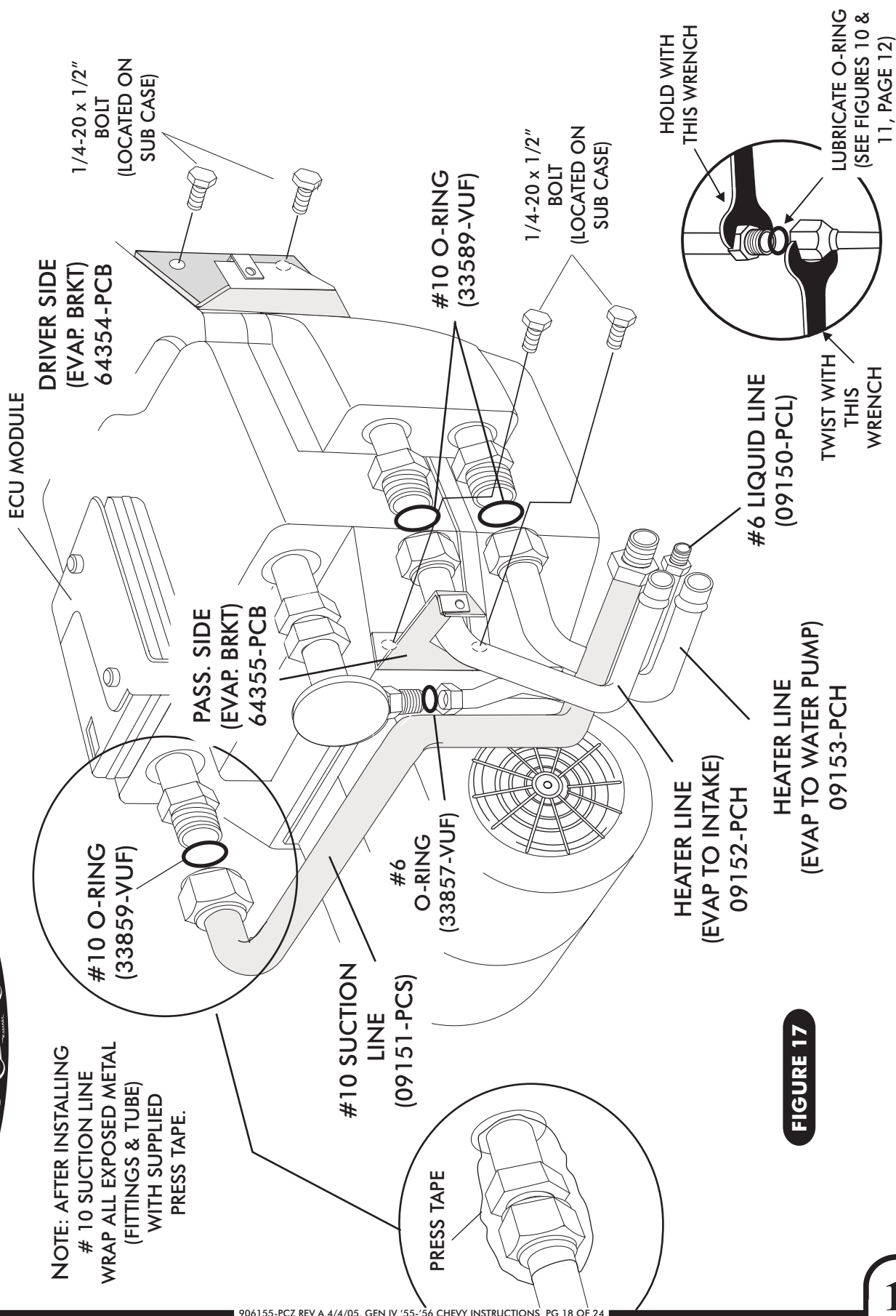
FIGURE 16

- ☐ 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.



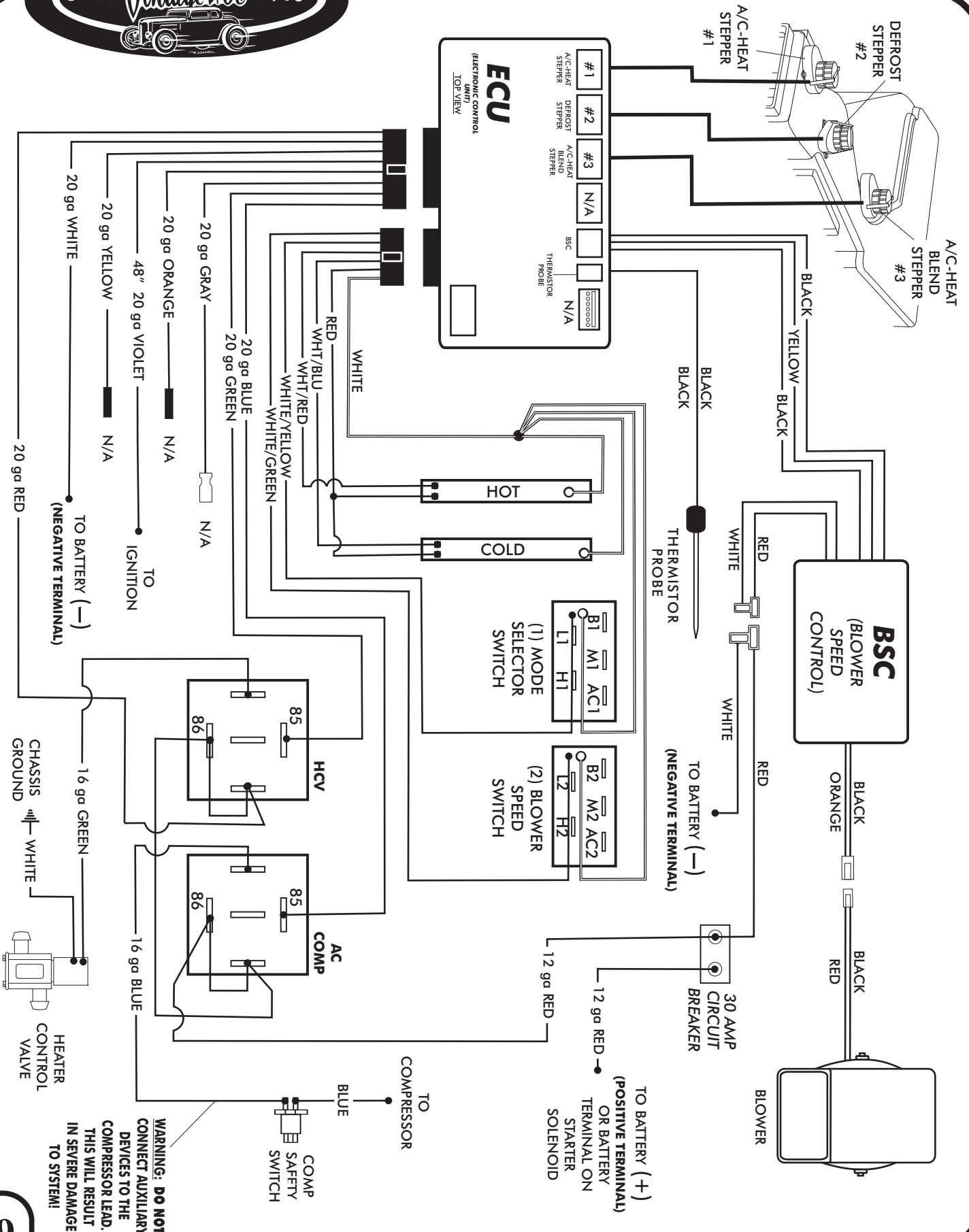
GEN IV 1955-56 CHEVY

EVAPORATOR HARD LINE INSTALLATION





GEN IV 1955-56 CHEVY



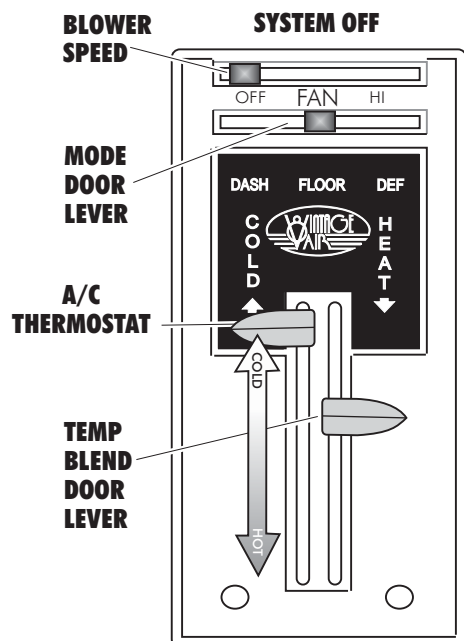


GEN IV 1955-56 CHEVY

OPERATION OF CONTROLS

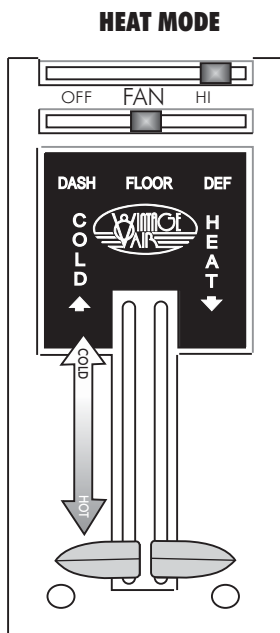
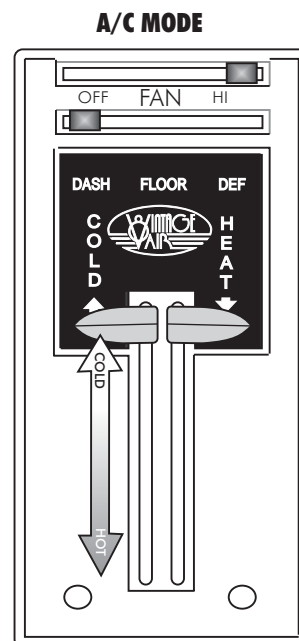
FOR MAXIMUM COOLING AND HEATING, THE AIR LEVER MUST BE IN "INSIDE MODE" POSITION

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.



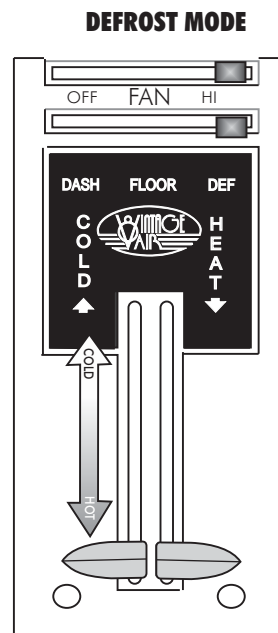
A/C THERMOSTAT
IN A/C AND DE-FOG MODE THIS LEVER SHOULD BE UP. FOR HEAT THIS LEVER SHOULD BE DOWN

MODE LEVER
INFINITELY VARIABLE FROM DASH TO FLOOR TO DEFROST



BLOWER SPEED
THIS LEVER CONTROLS THE BLOWER SPEED, WHICH IS INFINITELY VARIABLE FROM OFF TO HI

TEMP BLEND LEVER
1. THIS LEVER SHOULD BE FULLY UP WHEN IN AIR CONDITIONING POSITION.
2. IN ANY MODE THE TEMPERATURE CAN BE VARIED BY PUSHING THE TEMPERATURE LEVER DOWN. ALL THE WAY DOWN IS FULL HOT.





—TROUBLE SHOOTING— INFORMATION

SYMPTOM

- BLOWER STAYS ON HIGH, NO MODE FUNCTIONS
- PARTIAL FUNCTION OF CONTROL HEAD. (SOME FUNCTIONS WORK)
- COMPRESSOR DOES NOT TURN ON. (ALL OTHER FUNCTIONS WORK)
- NO FUNCTION AT ALL

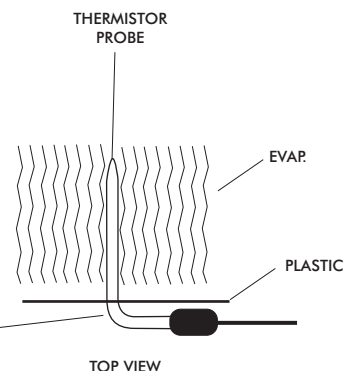
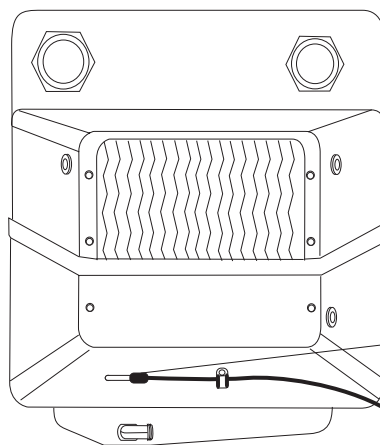
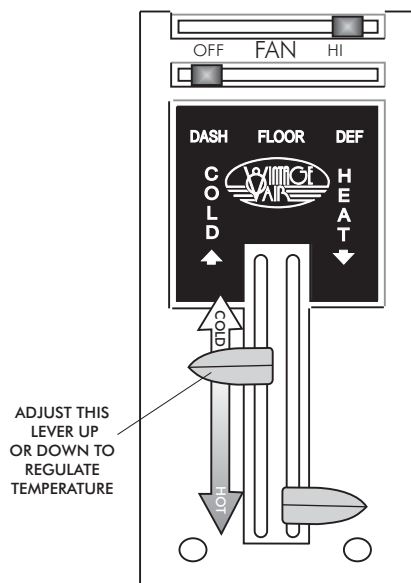
SOLUTION

- BE SURE CONTROL HEAD CONNECTOR IS PROPERLY INSTALLED
- CHECK FOR DAMAGE TO CONTROL HARNESS
- CHECK FOR PROPER CHARGE
- BE SURE AC LEVER (SECOND FROM LEFT) IS UP.
- CHECK MAIN POWER LEAD AFTER CIRCUIT BREAKER
- CHECK FOR POWER WITH IGNITION ON AT PURPLE WIRE
- CHECK ALL GROUNDS



GEN IV 1955-56 CHEVY

THERMOSTAT ADJUSTMENT



NOTE: GEN IV UNITS DO NOT HAVE A REMOTE THERMOSTAT. THE THERMISTOR PROBE INSTALLED IN THE EVAPORATOR SERVES AS THE THERMOSTAT WHICH IS CONTROLLED BY THE COLD/OFF LEVER ON THE CONTROL PANEL

AIR CONDITIONING ADJUSTMENTS:

- THE AIR CONDITIONER THERMOSTAT LEVER(COLD LEVER) CONTROLS COIL TEMPERATURE.
- ADJUSTING THE LEVER UP MAKES THE SYSTEM OPERATE COLDER. IF THE THERMOSTAT LEVER IS SET TOO COLD THE EVAPORATOR MAY "ICE UP" UNDER HIGH HUMIDITY CONDITIONS- THE EVAPORATOR COIL IS RESTRICTED WITH ICE AND COLD AIR FLOW WILL BE REDUCED.
- ADJUSTING THE LEVER DOWN MAKES THE SYSTEM OPERATE WARMER. THE COMPRESSOR CLUTCH WILL CYCLE MORE FREQUENTLY AND THE A/C SYSTEM WILL NOT GET AS COOL AS IT COULD.
- OPTIMUM PERFORMANCE WILL BE ATTAINED WITH THE THERMOSTAT ADJUSTED AS COLD AS POSSIBLE WITHOUT "ICING UP" THE COIL AND THEN USING THE TEMP/BLEND LEVER (OFF/HEAT) TO ADJUST VENT TEMPERATURE.

ADJUSTING A/C THERMOSTAT

- 1.) SYMPTOM: THE A/C WORKS WELL AT FIRST THEN QUILTS COOLING. THE AIR FLOW FROM THE VENTS IS LOW AND THE COMPRESSOR CYCLES INFREQUENTLY.
SOLUTION: THE THERMOSTAT LEVER IS SET TOO COLD , THE EVAPORATOR IS "ICING UP" AND RESTRICTING AIR FLOW. ALLOW THE ICE TO MELT BY MOVING THE THERMOSTAT LEVER DOWNWARD (WARMER) IN INCREMENTS OF 10% UNTIL SYMPTOMS DIMINISH.
- 2.) SYMPTOM: A/C NEVER GETS COLD AND THE COMPRESSOR CLUTCH CYCLES FREQUENTLY.
SOLUTION: THE THERMOSTAT LEVER IS SET TOO WARM. ADJUST THE THERMOSTAT LEVER UPWARD (COLDER) IN INCREMENTS OF 10% UNTIL THE COMPRESSOR CLUTCH CYCLES INFREQUENTLY. AVOID SETTING THE THERMOSTAT LEVER TOO COLD.

(TOP)



1-1/4" DIAMETER

EXISTING HOLES

5/16" DIAMETER

FOLD PAGE AT THIS LINE AND POSITION AT EDGE OF CORE SUPPORT (REMOVABLE PANEL)



GEN IV 1955-56 CHEVY

EVAPORATOR KIT PACKING LIST

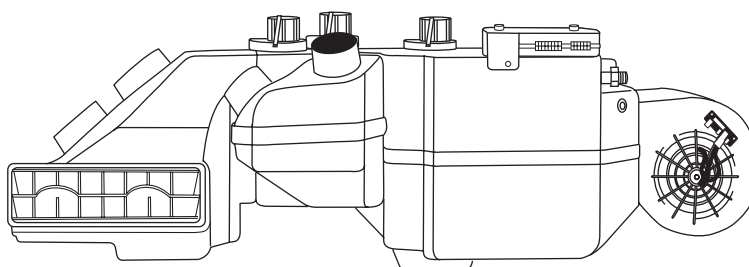
**EVAPORATOR KIT
56155-PCZ**

No.	QTY.	PART No.	DESCRIPTION
1.	1	760155-VCE	1955-56 CHEV. EVAP. SUB CASE
2.	1	78255-PCN	1955-56 CHEV. CAR WO AC ACC. KIT

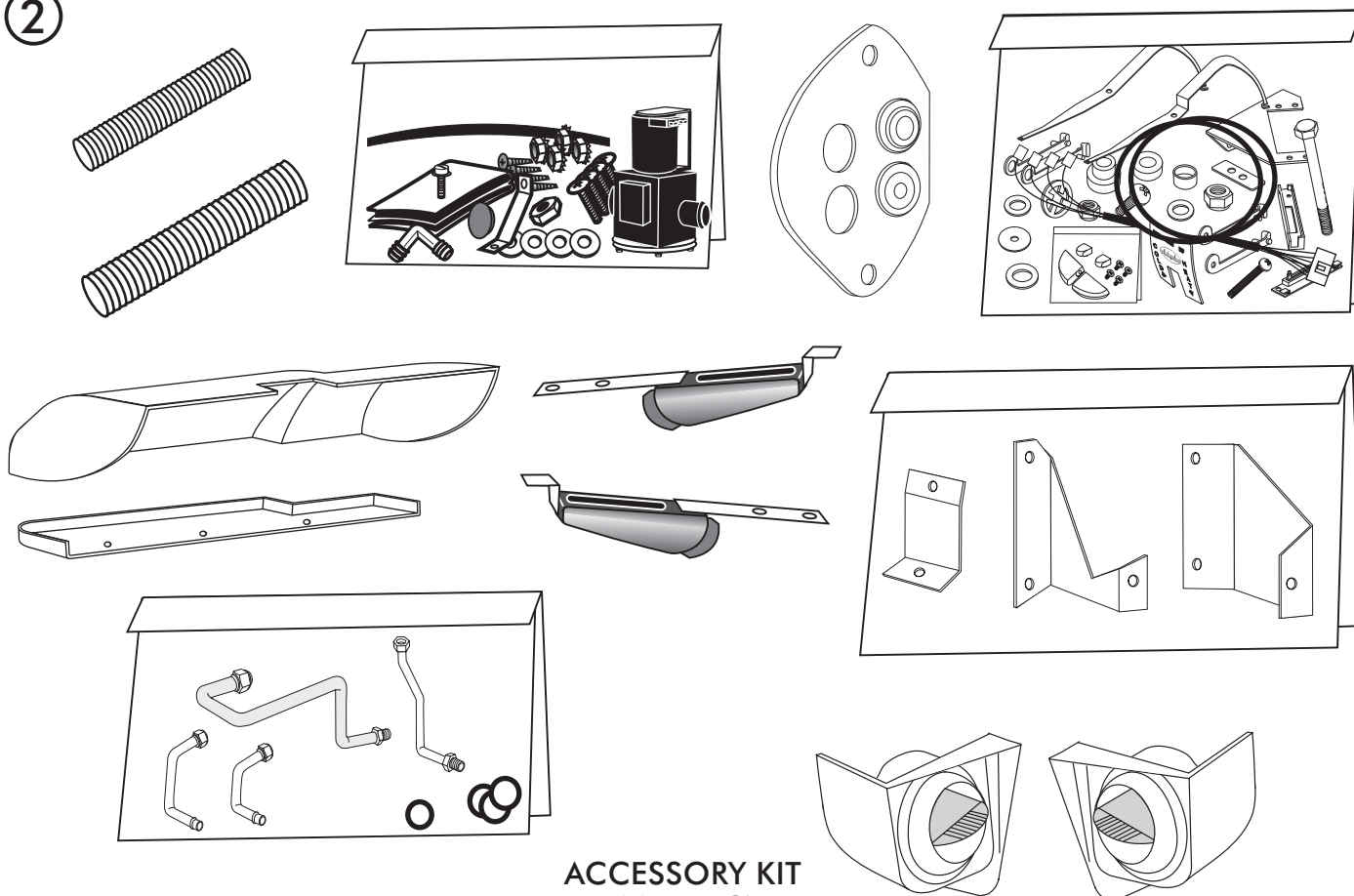
CHECKED BY: _____
 PACKED BY: _____
 DATE: _____

①

1955-57 CHEVY EVAP.
SUB CASE 760155-VCE



②



**ACCESSORY KIT
78255-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.)

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

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.

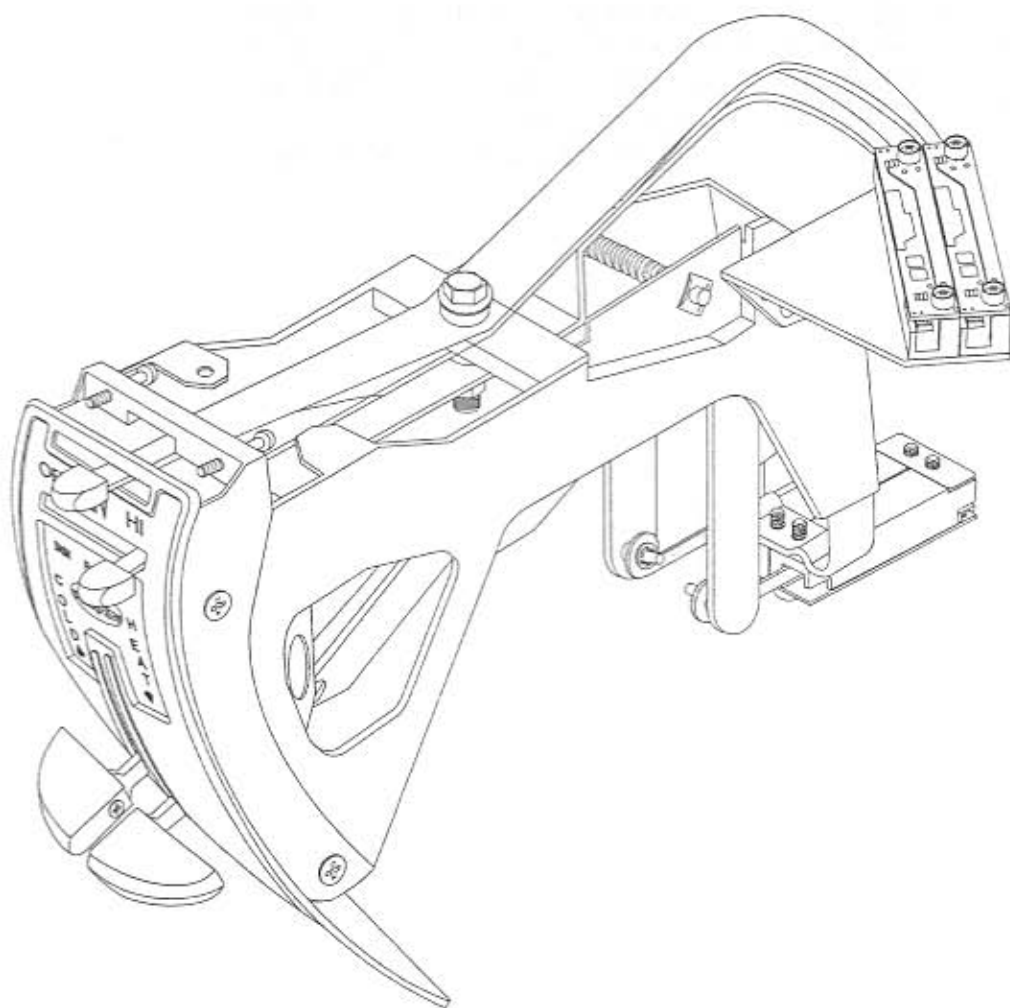
These simple tests can be performed by a local shop and can help determine the extent of the systems problem. **If further assistance is needed, our tech line is (210) 654-7171.**

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.



1955 & 56 CHEVY

CONTROL PANEL CONVERSION KIT
473055-PCA



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



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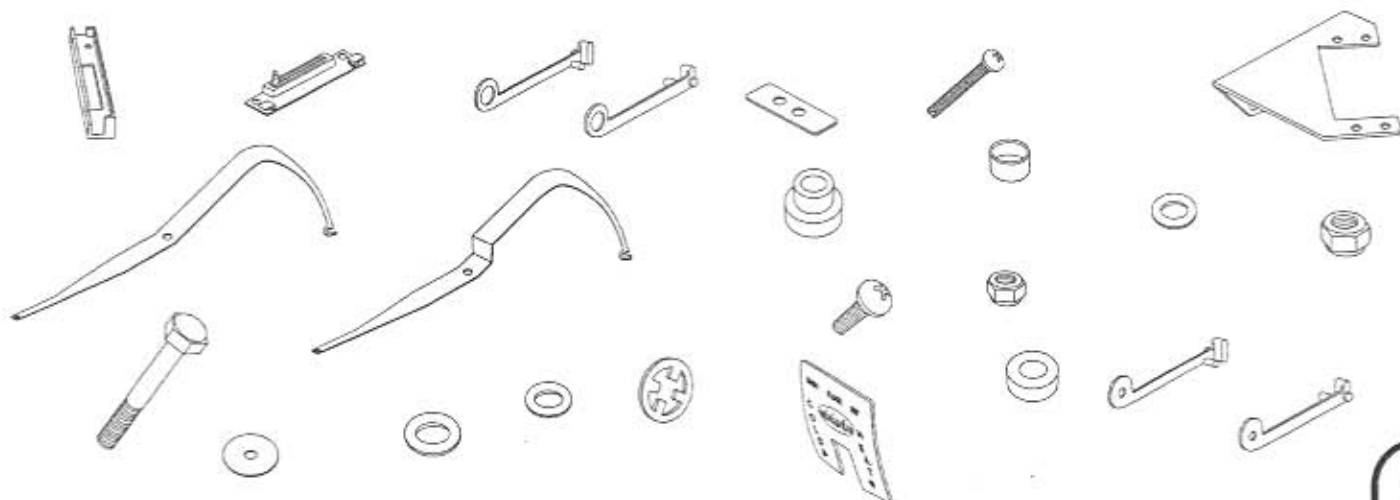
1955 & 56 CHEVY CONTROL PANEL CONVERSION

1955 & 56 CHEVY CONTROL PANEL CONVERSION PACKING LIST

CONVERSION KIT
473055-PCA

No.	QTY.	PART No.	DESCRIPTION
1.	4	496000-PFR	CAST POT HOLDER
2.	4	246001-PUA	SLIDE POT PC BOARD ASM
3.	1	491000-SLR	55 CHEVY LL/AC CAST PUSH ROD
4.	1	491001-SLR	55 CHEVY LR/HEAT CAST PUSH ROD
5.	1	649002-PCB	55-56 CHEVY LOWER POT BRKT
6.	8	181125-PSR	#8 x 1.25" SELF TAPPING SCREW
7.	8	186005-JSR	#8 NYLON CUP WASHER
8.	1	649003-PCB	55-56 CHEVY UPPER POT BRKT
9.	1	491004-SLR	55-56 CHEVY BLOWER LEVER
10.	1	491005-SLR	55-56 CHEVY MODE LEVER
11.	2	180007-SSR	NYLON SHOULDER SPACER
12.	2	180006-SSR	NYLON SPACER
13.	2	18028-VUB	5/16 FENDER WASHER
14.	1	18151-VUB	5/16-18 NYLON LKNUT
15.	1	18312-VUB	5/16-18 X 1 3/4 HEX BOLT
16.	2	49705-VUI	NYLON FLAT WASHER 1/8
17.	2	65975-VUE	1/8" PUSH ON RING
18.	2	18237-VUB	6-32x3/8" PAN MS
19.	2	18107-VUB	6-32 NYLON LOCKNUT
20.	1	491002-SLR	56 CHEVY LL/AC CAST PUSHROD
21.	1	491003-SLR	56 CHEVY LR/HEAT CAST PUSHROD
22.	2	186003-JSR	.141 ID x .625 OD x .031 WASHER
23.	2	186004-JSR	.44 ID x .65 OD x .125 NYLON WASHER
24.	1	48401-PCR	55-56 CHEVY PLACARD

**** 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.**





1955 & 56 CONTROL PANEL CONVERSION

REMOVE CONTROL KNOBS. (RETAIN)
REMOVE BLOWER SWITCH AND DISCARD.
REMOVE CONTROL PANEL BEZEL. (RETAIN)
REMOVE PLACARD AND DISCARD.
REMOVE INSIDE/OUTSIDE AIR LEVER BY REMOVING RETAINING CLIP AND STUD. (DISCARD)
USE A DRILL OR A DREMEL TOOL TO REMOVE THE TWO CABLE BRACKET RETAINING RIVETS,
REMOVE BRACKET AND DISCARD. (AS SHOWN BELOW, SEE FIGURE 1)

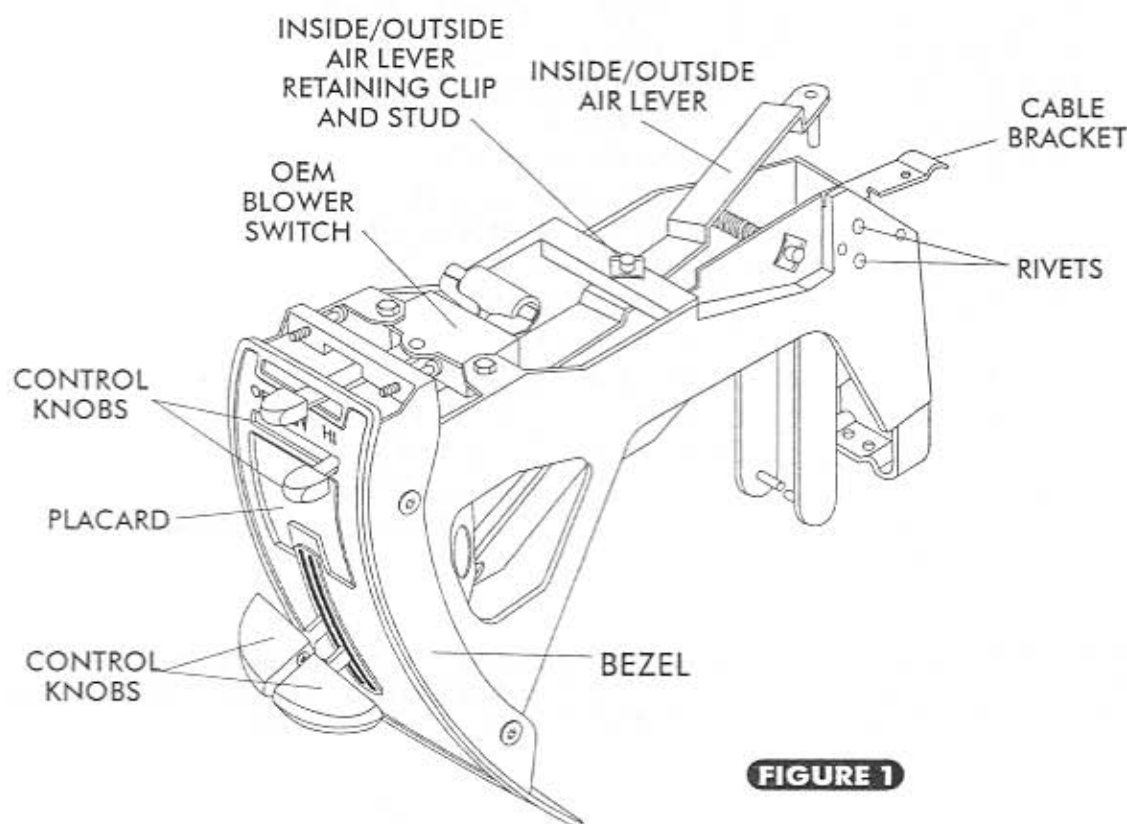


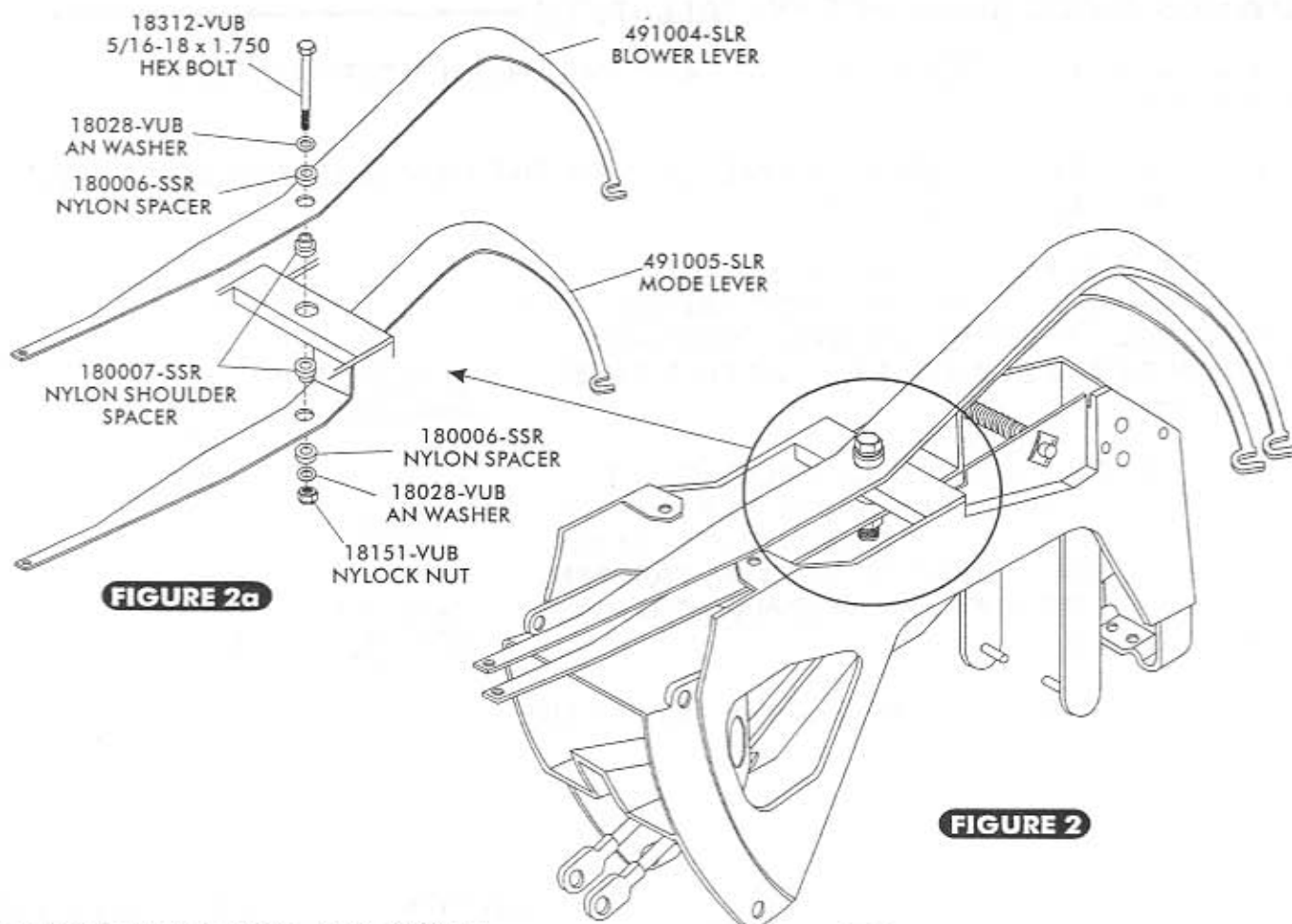
FIGURE 1

BLOWER & MODE LEVER INSTALLATION

USING A 5/16-18 x 1.750 HEX BOLT, (2) AN WASHERS, (2) NYLON SPACERS, (2) NYLON SHOULDER SPACERS, AND NYLOCK NUT; INSTALL THE BLOWER & MODE LEVERS AS SHOWN IN FIGURE 2 & 2a, PAGE 5.

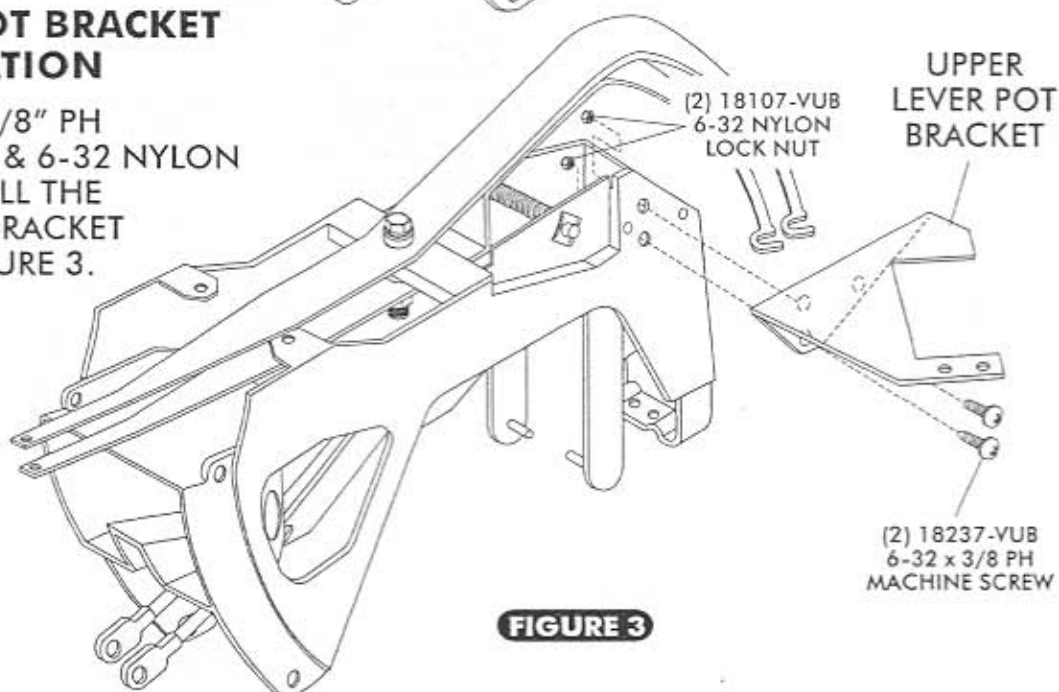


1955 & 56 CHEVY CONTROL PANEL CONVERSION



UPPER LEVER POT BRACKET INSTALLATION

USING (2) 6-32 x 3/8" PH
MACHINE SCREWS & 6-32 NYLON
LOCK NUTS, INSTALL THE
UPPER LEVER POT BRACKET
AS SHOWN IN FIGURE 3.





BLOWER & MODE SLIDE POT INSTALLATION

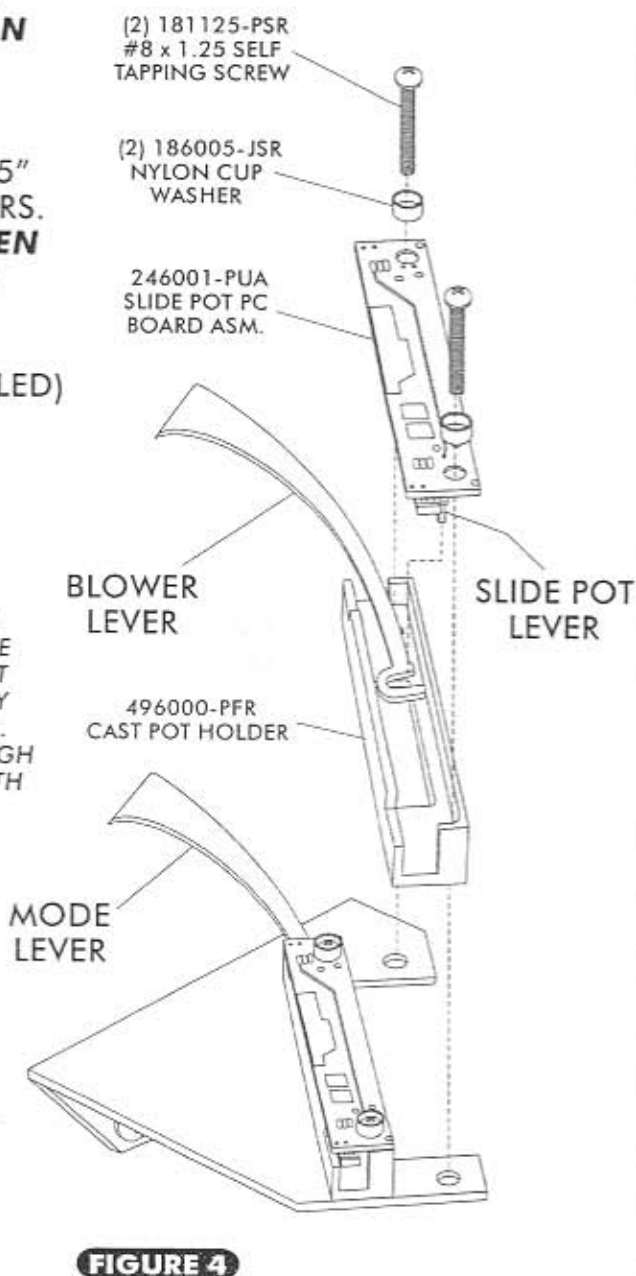
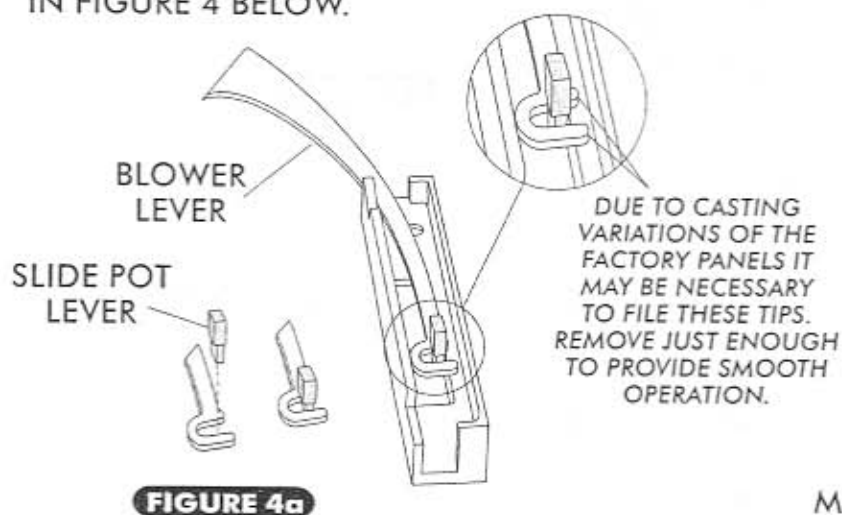
INSTALL SLIDE POT PC BOARD ASSEMBLY AND CAST POT HOLDERS AS SHOWN IN FIGURE 4.

PLACE THE CAST POT HOLDER ON BRACKET, WITH THE BLOWER LEVER PLACED INSIDE THE CAST POT HOLDER AS SHOWN.

PLACE THE SLIDE POT PC BOARD ASSEMBLY ON CAST POT HOLDER AS SHOWN. **NOTE: ALIGN THE SLIDE POT LEVER INSIDE THE HORSESHOE PORTION OF THE BLOWER LEVER AS SHOWN IN FIGURE 4a.**

SECURE THE PC BOARD AND CAST POT HOLDER TO THE BRACKET AS SHOWN USING (2) #8 x 1.25" SELF TAPPING SCREWS AND NYLON CUP WASHERS. SEE FIGURE 4. **(DO NOT OVER TIGHTEN, TIGHTEN JUST ENOUGH TO KEEP THE NYLON WASHERS FROM TURNING.)**

REPEAT STEPS OF MODE LEVER (SHOWN ASSEMBLED) IN FIGURE 4 BELOW.

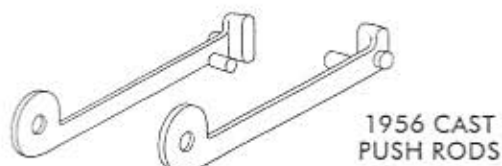
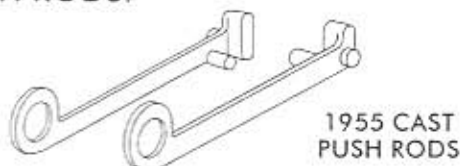




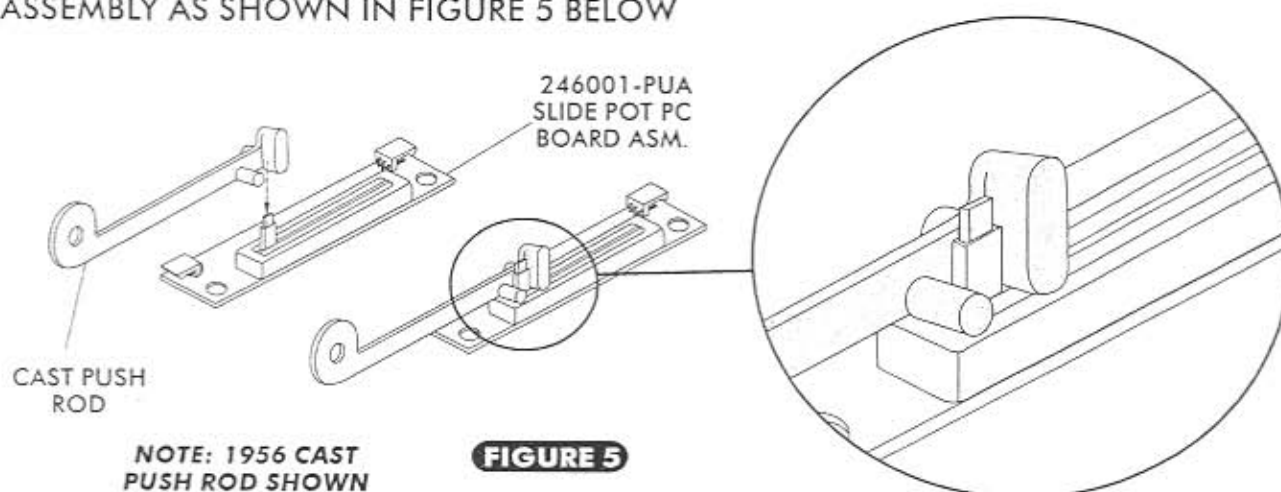
1955 & 56 CHEVY CONTROL PANEL CONVERSION

COLD & HEAT SLIDE POT ASSEMBLY

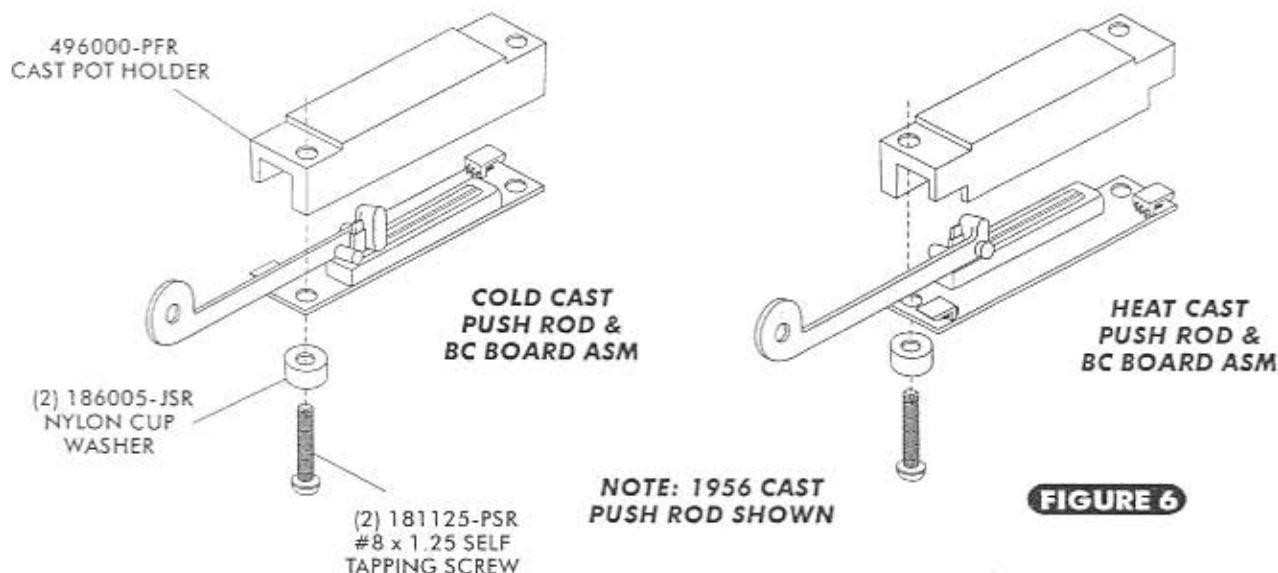
NOTE: DEPENDING ON YOUR APPLICATION, INSTALL THE 1955 OR 1956 CAST PUSH RODS.



INSTALL CAST PUSH ROD ON TO THE PC BOARD ASSEMBLY AS SHOWN IN FIGURE 5 BELOW



INSTALL THE PC BOARD AND CAST POT HOLDER AS SHOWN USING A #8 x 1.25" SELF TAPPING SCREWS AND NYLON CUP WASHER. SEE FIGURE 6. (**DO NOT OVER TIGHTEN, TIGHTEN JUST ENOUGH TO KEEP THE NYLON WASHERS FROM TURNING.**)





1955 & 56 CHEVY CONTROL PANEL CONVERSION

1955 SLIDE POT INSTALLATION

HOLDING THE COLD CAST PUSH ROD & PC BOARD ASSEMBLY TOGETHER; THREAD THE #8 x 1.25" SELF TAPPING SCREW WITH NYLON CUP WASHER INTO THE CONTROL PANEL AS SHOWN. SEE FIGURE 7.

REPEAT STEPS FOR THE HEAT PUSH ROD & PC BOARD ASSEMBLY.

INSTALL (2) 1/8" SPACERS (186004-JSR) ON LEVERS AS SHOWN IN FIGURES 7 & 8 BELOW.

ALIGN THE CAST POT LEVERS WITH THE CONTROL PANEL LEVERS AND SLIDE CAST POT LEVER ON TO THE CONTROL PANEL LEVER. USE OEM MACHINE SCREW WITH WASHER TO SECURE THE CAST POT LEVERS AS SHOWN. **NOTE: IF USING AFTERMARKET CONTROL PANEL USE SCREWS SUPPLIED WITH AFTERMARKET CONTROL PANEL TO SECURE CAST PUSH ROD LEVER.**

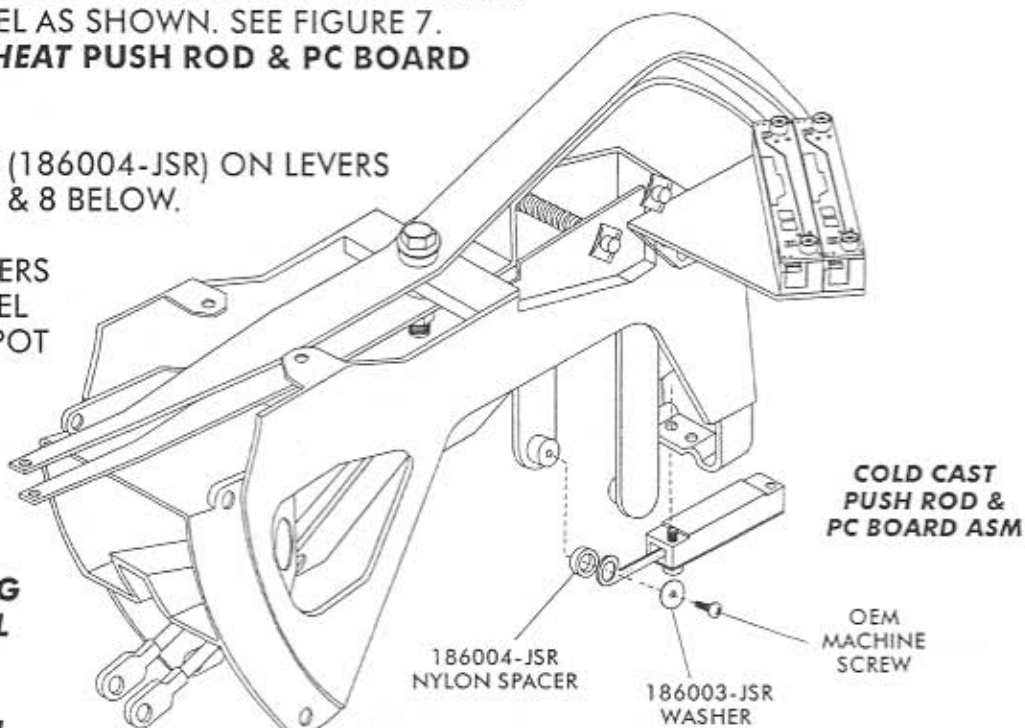
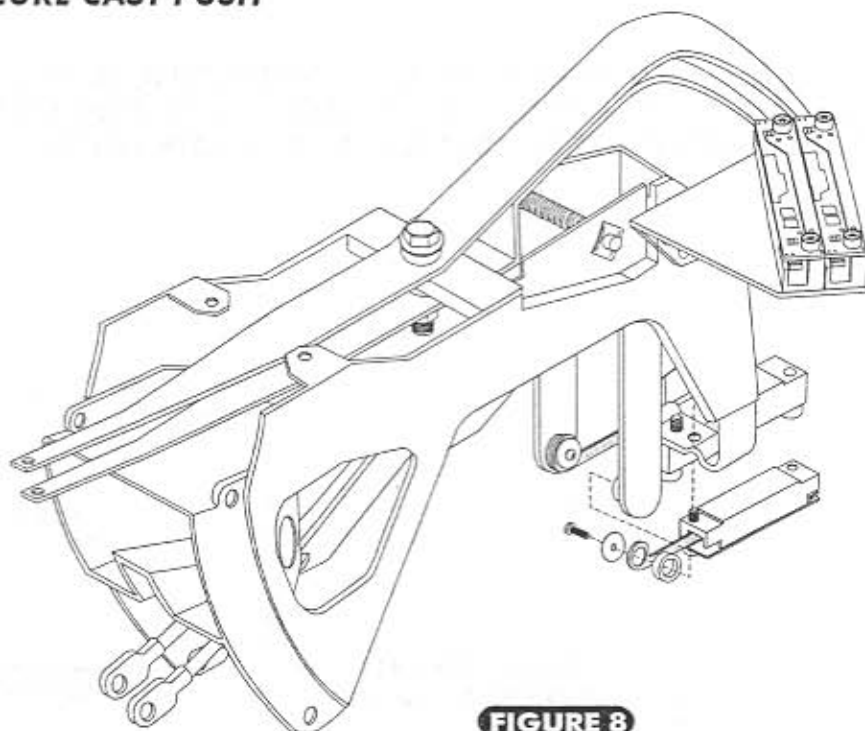


FIGURE 7



**HEAT CAST
PUSH ROD &
PC BOARD ASM**

FIGURE 8



1955 & 56 CHEVY CONTROL PANEL CONVERSION

1956 SLIDE POT INSTALLATION

HOLDING THE COLD CAST PUSH ROD & PC BOARD ASSEMBLY TOGETHER; THREAD THE #8 x 1.25" SELF TAPPING SCREW WITH NYLON CUP WASHER INTO THE CONTROL PANEL AS SHOWN. SEE FIGURE 9.

REPEAT STEPS FOR THE HEAT PUSH ROD & PC BOARD ASSEMBLY.

INSTALL 1/8" SPACERS ON LEVERS AS SHOWN IN FIGURES 9 & 10 BELOW.

ALIGN THE CAST POT LEVERS WITH THE CONTROL PANEL LEVERS AND SLIDE CAST POT LEVER ON TO THE CONTROL PANEL LEVER. USE PUSH-ON RINGS TO SECURE THE CAST POT LEVERS AS SHOWN.

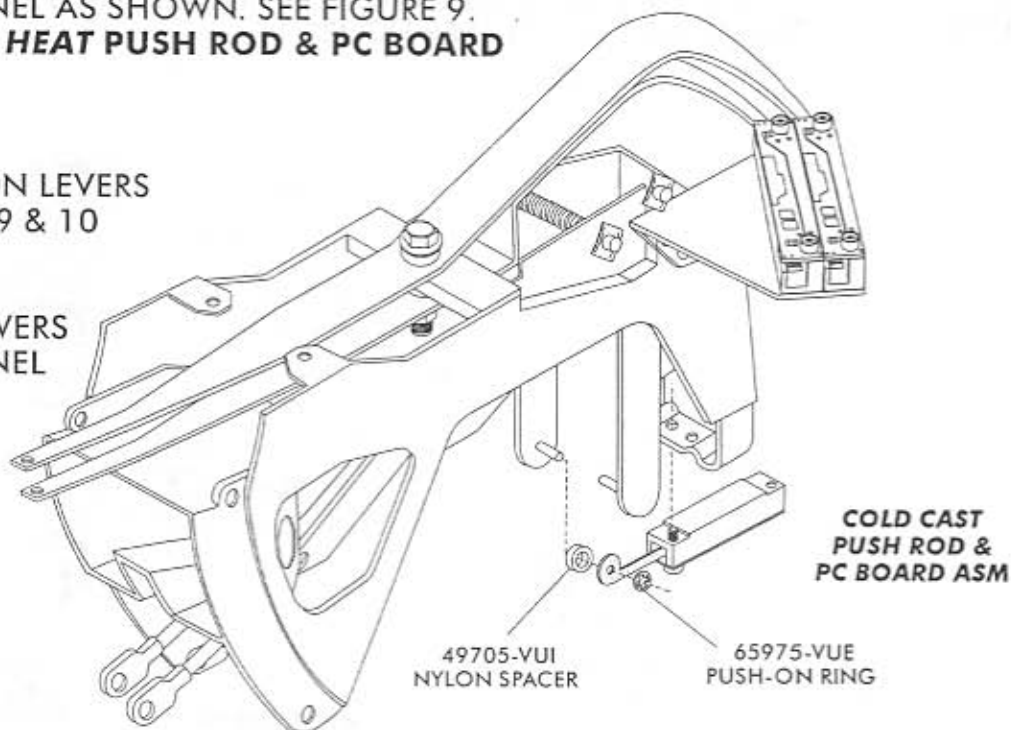


FIGURE 9

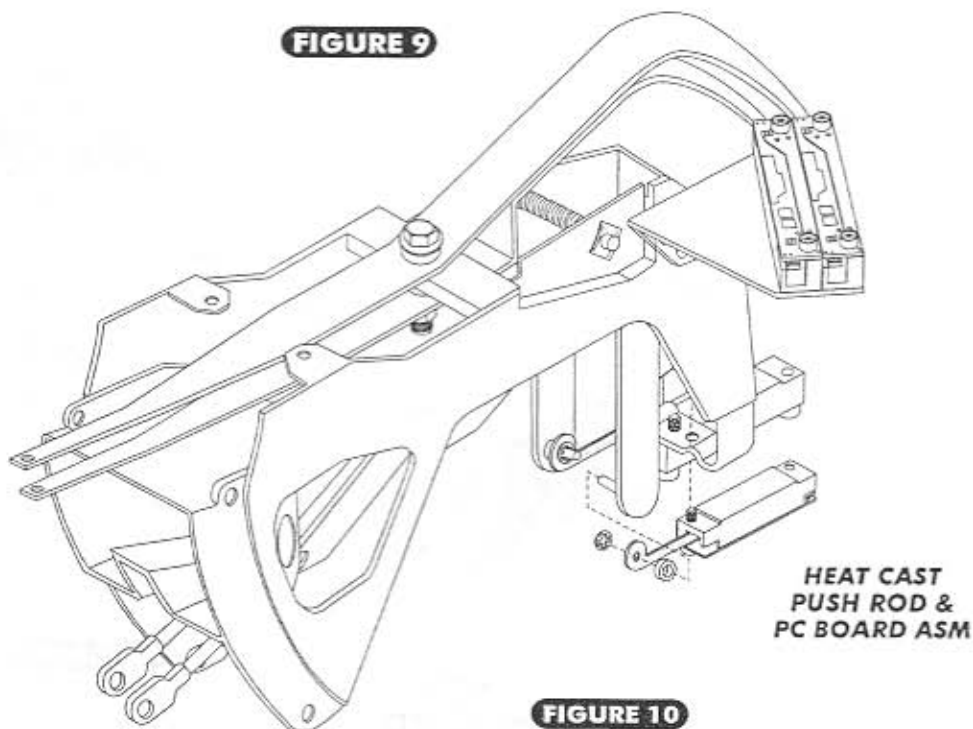
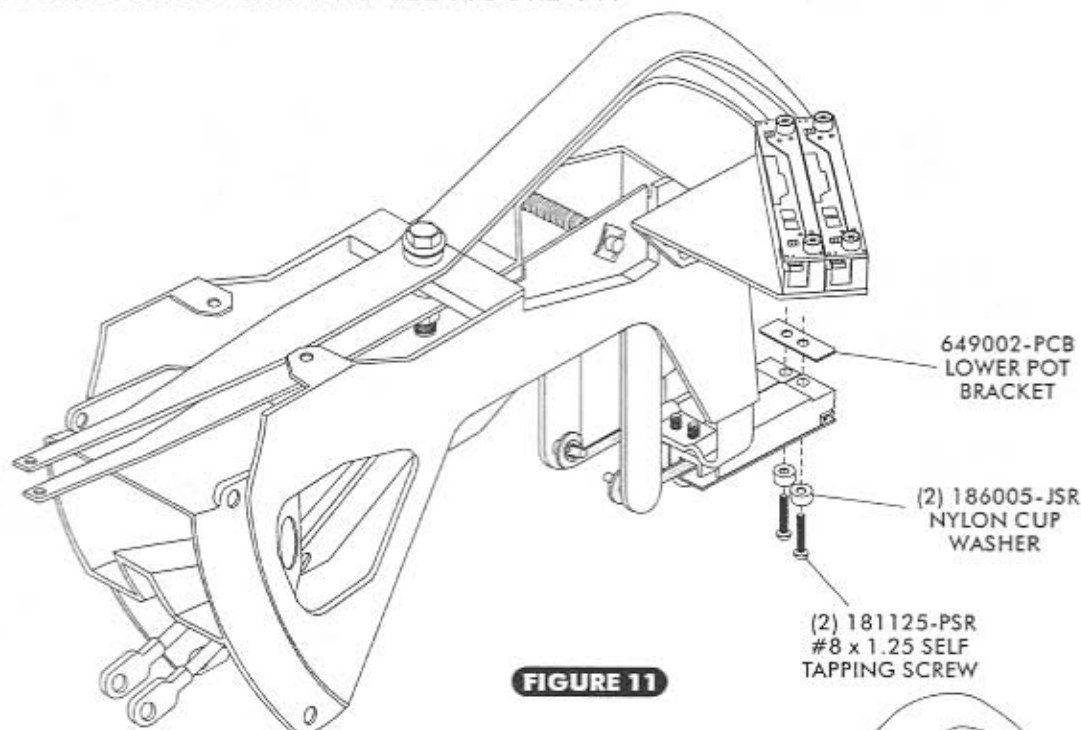


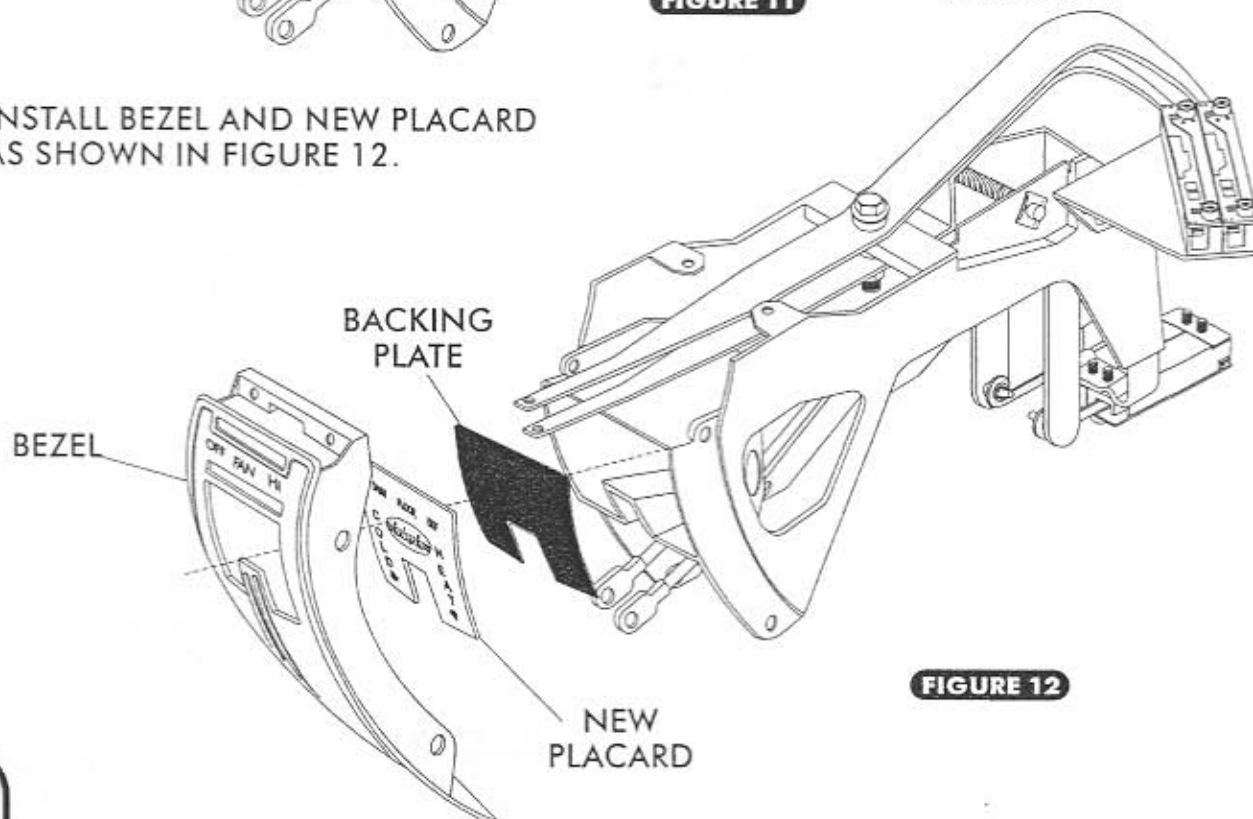
FIGURE 10

LOWER LEVER POT BRACKET INSTALLATION

SECURE THE COLD & HEAT PC BOARD, CAST POT HOLDERS TOGETHER USING (2) #8 x 1.25" SELF TAPPING SCREWS WITH NYLON CUP WASHERS. PASS THE SCREWS WITH CUP WASHERS THROUGH PC BOARDS AND POT HOLDERS AND THREAD INTO THE LOWER POT BRACKET AS SHOWN. SEE FIGURE 11.



INSTALL BEZEL AND NEW PLACARD AS SHOWN IN FIGURE 12.



RE-INSTALL OEM KNOBS AS SHOWN IN FIGURE 13 BELOW.

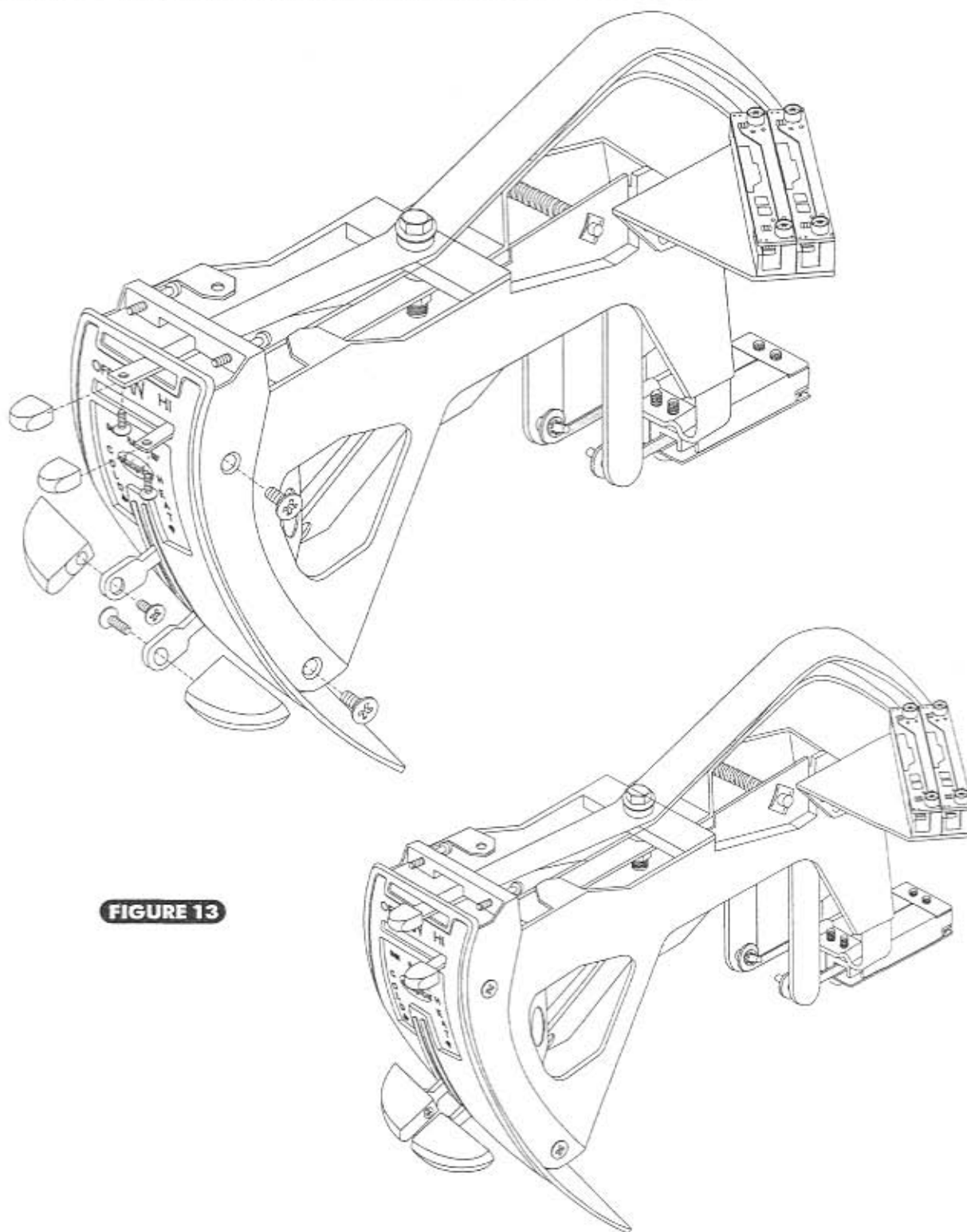


FIGURE 13



1955 & 56 CHEVY CONTROL PANEL CONVERSION

1955 & 56 CHEVY CONTROL PANEL CONVERSION PACKING LIST

CONVERSION KIT
473055-PCA

No.	QTY.	PART No.	DESCRIPTION	
1.	4	496000-PFR	CAST POT HOLDER	_____
2.	4	246001-PUA	SLIDE POT PC BOARD ASM	_____
3.	1	491000-SLR	55 CHEVY LL/AC CAST PUSH ROD	_____
4.	1	491001-SLR	55 CHEVY LR/HEAT CAST PUSH ROD	_____
5.	1	649002-PCB	55-56 CHEVY LOWER POT BRKT	_____
6.	8	181125-PSR	#8 x 1.25" SELF TAPPING SCREW	_____
7.	8	186005-JSR	#8 NYLON CUP WASHER	_____
8.	1	649003-PCB	55-56 CHEVY UPPER POT BRKT	_____
9.	1	491004-SLR	55-56 CHEVY BLOWER LEVER	_____
10.	1	491005-SLR	55-56 CHEVY MODE LEVER	_____
11.	2	180007-SSR	NYLON SHOULDER SPACER	_____
12.	2	180006-SSR	NYLON SPACER	_____
13.	2	18028-VUB	5/16 FENDER WASHER	_____
14.	1	18151-VUB	5/16-18 NYLON LKNUT	_____
15.	1	18312-VUB	5/16-18 X 1 3/4 HEX BOLT	_____
16.	2	49705-VUI	NYLON FLAT WASHER 1/8	_____
17.	2	65975-VUE	1/8" PUSH ON RING	_____
18.	2	18237-VUB	6-32x3/8" PAN MS	_____
19.	2	18107-VUB	6-32 NYLON LOCKNUT	_____
20.	1	491002-SLR	56 CHEVY LL/AC CAST PUSHROD	_____
21.	1	491003-SLR	56 CHEVY LR/HEAT CAST PUSHROD	_____
22.	2	186003-JSR	.141 ID x .625 OD x .031 WASHER	_____
23.	2	186004-JSR	.44 ID x .65 OD x .125 NYLON WASHER	_____
24.	1	48401-PCR	55-56 CHEVY PLACARD	_____

CHECKED BY: _____
PACKED BY: _____
DATE: _____

