specializing in “AIR CONDITIONING, PARTS AND SYSTEMS” for your classic

PERFECT FIT”

IN-DASH

HEAT/ COOL/ DEFROST

1965- 66 CHEVROLET IMPALA

CONTROL & OPERATING INSTRUCTIONS

The controls on your new “Perfect Fit” system. Offers complete comfort capabilities in virtually every driving condition. This includes Temperature control in all of the modes. This system also provides DEHUMIDIFICATION in the defrost mode and the ability to blend the air between Face and Heat / Defrost modes.

THE PICTURE YOU SEE ABOVE SHOWS THE CONTROLS IN THE DEFROST MODE. THIS MEANS THAT THE AIR WILL BE DISTRIBUTED THROUGH THE DEFROST OUTLETS. THIS ALSO HAS THE TEMPERATURE LEVER IN THE HOT POSITION. WITH THE CONTROLS IN THIS POSITION YOU WILL GET THE AIR THROUGH THE DEFROST OUTLETS WITH THE COMPRESSOR ON.

CAUTION: ALL OF THE OUTSIDE VENTS MUST BE CLOSED WHEN THE SYSTEM IS IN THE A/C MODE. THIS WILL ALLOW THE A/C SYSTEM TO FUCTION AT ITS MAXIMUM PERFORMANCE LEVEL.

THE FOLLOWING SUMMARY WILL DESCRIBE EACH OF THE CONTROL LEVERS FUNCTION.

FAN SPEED SWITCH: There are 3 speeds plus Off. When the switch is in the off position it will disconnect the 12V power to the Blower Motor and the A/C Clutch. This will shut down the entire system. When the switch is moved to any of the blower speeds 1, 2 or 3 there is 12V supplied to the Micro-Switch that is mounted on the Face Duct.

FACE / DEFROST / HEAT DOOR CONTROL: When the Control Knob is pushed all the way to the RIGHT the air is distributed to the FACE outlets. In this position the compressor clutch is engaged. When the knob is pushed to the MIDDLE of the controls the air will go to the DEFROST outlets. In the Defrost position the compressor clutch is engaged for dehumidification. When the knob is pushed all the way to the LEFT the air will go to the FLOOR outlets. In the FLOOR position the compressor is not disengaged.

TEMPERATURE CONTROL: The Temperature Knob as shown is at the HOTTEST temperature position. As the lever is pushed to the LEFT temperature of the discharged air will FALL to the COLDEST point.

Note: The temperature lever will function in any of the modes.

specializing in “AIR CONDITIONING, PARTS AND SYSTEMS” for your classic

INSTALLATION INSTRUCTIONS
1965 CHEVROLET IMPALA

Congratulations!! You have just purchased the highest quality, best performing A/C system ever designed for you Classic Car. To obtain the high level of performance and dependability our systems are known for, pay close attention to the following instructions.
Before beginning the installation check the box for the correct components.

Evaporator
Face Duct Assembly
Inlet Air Block off Assembly
Firewall Block off Assembly
Flex hose 2” dia. 3ft. – 1ea.
Flex hose 2” dia. 4ft. – 1ea.
Flex hose 2 ½” dia 1ft. – 2ea.
Sack Kit Hardware
Sack Kit Control
Glove box

IMPORTANT INFORMATION

1. Before starting, read the instructions carefully and follow proper sequence.
2. Check condition of engine mounts. Excessive engine movement can damage Hoses to A/C, heater, radiator, transcooler, and power steering systems.
3. Before starting, check vehicle interior electrical functions. i.e. interior lights, radio, horn, etc. When ready to start installation, disconnect battery.
4. Fittings. Use one or two drops of lubricant on O’rings, threads and rear of bump for O’ring where female nut rides. Do not use thread tape or sealants.
5. Always use two wrenches to tighten fittings. Try holding in one hand while squeezing together while other hand holds fitting in position.
6. Shaft seals in a small percentage of compressors will require as much as 3-4 hours run time to become leak free.
7. Compressors supplied in our complete systems are filled with proper amount of oil.
8. Compressor requires technician to hand turn 15-20 revolutions before and after charging with liquid from a charging station before running system. Compressors with damaged reed valves cannot be warranted.
9. Should you have any technical questions, or are suspect of missing, or defective parts, call us immediately. Our knowledgeable staff will be glad to assist you.

YOU CAN NOW BEGIN THE INSTALLATION

Remove Glove box door and the glove box. Discard glove box.

Retain original hardware.

DRAIN RADIATOR AND DISCONNECT AND REMOVE THE BATTERY AND THE BATTERY BOX. RETAIN ORIGINAL HARDWARE.

In order to remove the heater assembly. It is necessary to remove the Blower Housing Assembly first.

Carefully lift vehicle and place support stands under center of the vehicle as shown.

It is necessary to lower the inner fender well on the passenger side. Remove the passenger front tire. Remove and retain (9) bolts from around the inner fender. Lower the inner fender well to gain access to the (2) screws above and below the blower motor assembly.

Remove (7) screws around the perimeter of the Blower Housing. The (2) screws around blower motor can be accessed from below and between the fender well and fender. Remove blower assembly.

Retain (2) screws around blower motor.

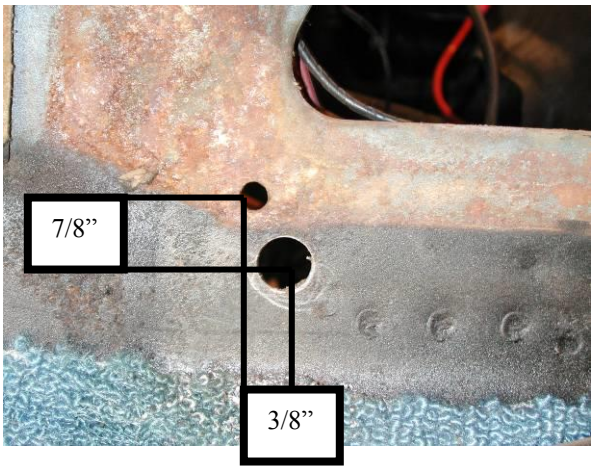
Attach block off behind the Hood Hinge assembly. Use the original hardware.

Reinstall Inner Fender Well using the original hardware. Reinstall front tire and remove the jack and stands.

Locate behind original control head the resistor connector, on heater box.

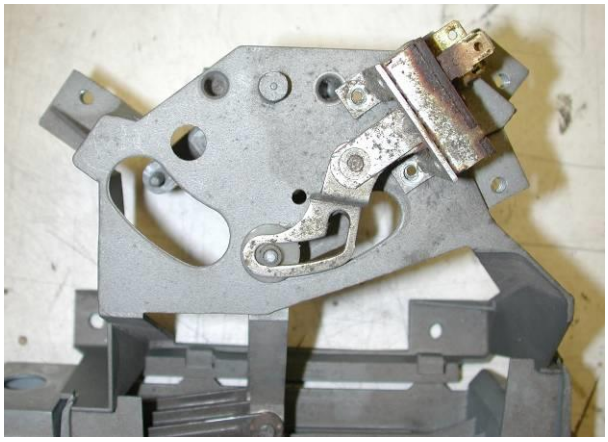
Disconnect the electrical connector. Remove heater assembly.

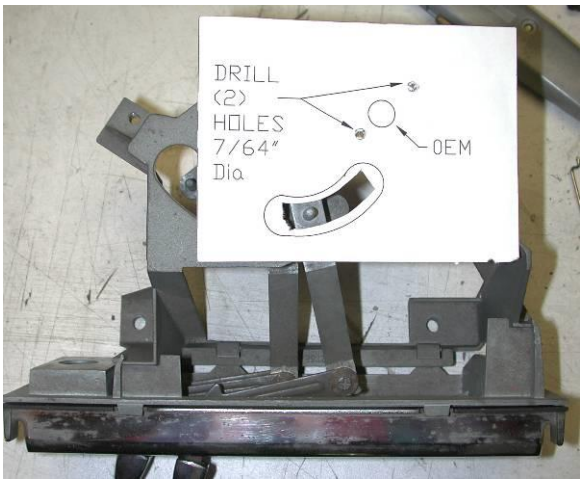
Locate behind dash and on firewall the hole that previously mounted the heater box. Drill (1) ¾” dia. hole for the drain tube as shown.
Remove (2) screws located under the control head.



Remove control head and disconnect the electrical connector. Also disconnect (3) original control cables retain the original hardware.

Locate the original control assembly. Remove and discard the original blower switch. Discard all original hardware.

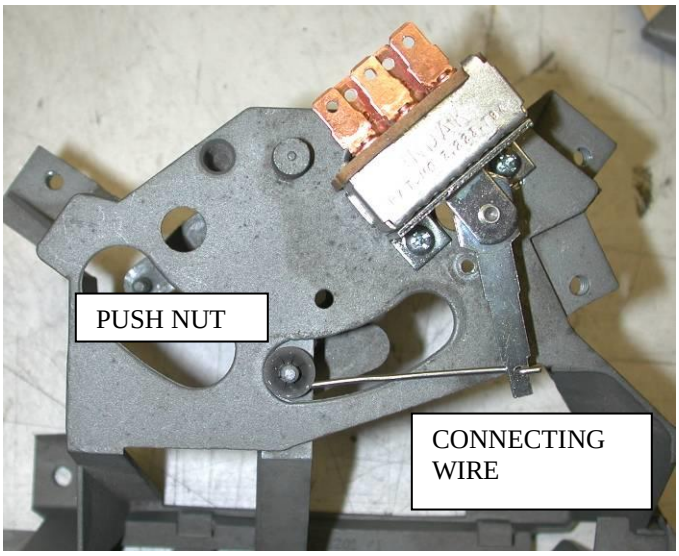




Locate Control Switch Drill Template from the installation instructions.

Locate to curved slot of the controls and align with the OEM hole as shown.

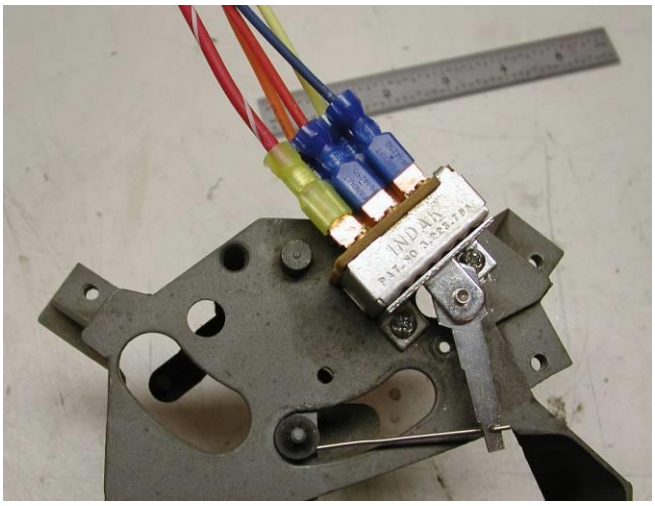
Mark and drill (2) holes 7/64” dia.



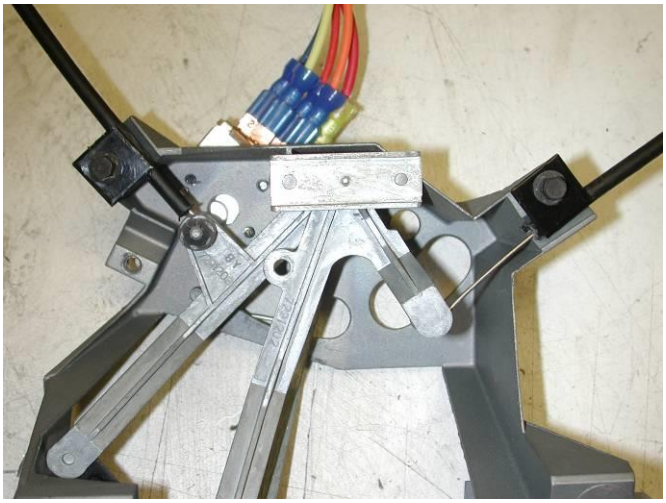
Locate the blower switch, (2) #6 x 3/8” pan head screws, (1) 3/16” push nut and connecting wire from the control sack kit.

Attach control switch assembly and connecting wire to the original control head using (2) #6 x 3/8” pan head screws and (1) 3/16” push nut.

Locate wire harness from the control sack kit. Attach harness to blower switch according to the wiring diagram on next page.

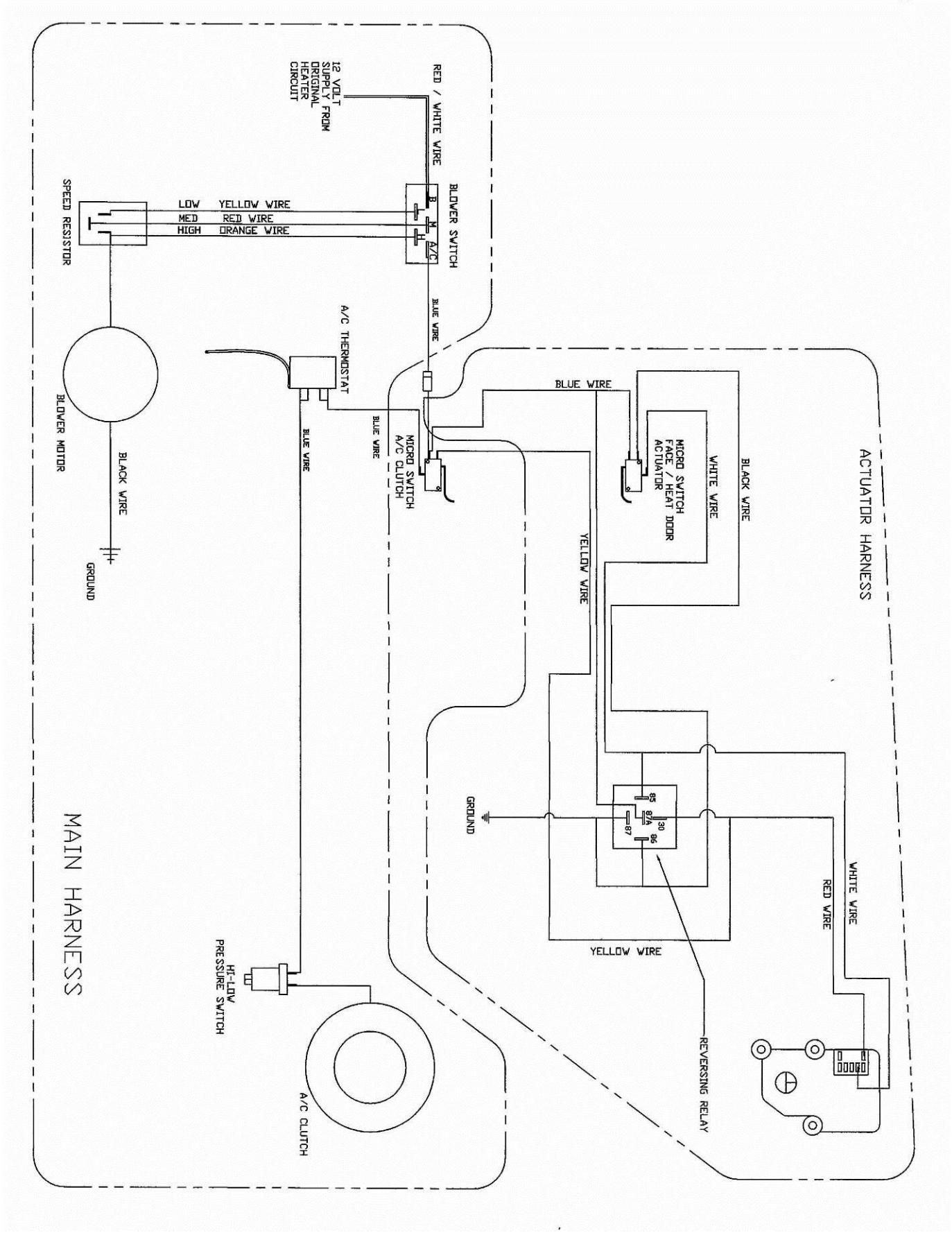


Locate in the control sack kit (1) SHORT control cable, (1) LONG Temperature control cable, (2) cable clips and (2) 3/16” push nuts.



Attach (longest) temperature control cable using original hardware to the CENTER control arm and (1) 3/16” push nut. NOTE: Cable sleeve is 1/16” from the lever arm.

Attach (shortest) Face / Heat cable to the BOTTOM control arm. Using (1) push nut, original screw and cable clip.
NOTE: Cable sleeve is lined up with the cable clip.


MAIN HARNESS
ACTUATOR HARNESS
12 VOLT SUPPLY FROM ORIGINAL HEATER CIRCUIT
RED / WHITE WIRE
BLOWER SWITCH
SPEED RESISTOR
LOW YELLOW WIRE
MED RED WIRE
HIGH ORANGE WIRE
A/C
BLUE WIRE
A/C THERMOSTAT
BLOWER MOTOR
BLACK WIRE
GROUND
MICRO SWITCH A/C CLUTCH
HI-LOW PRESSURE SWITCH
A/C CLUTCH
MICRO SWITCH FACE / HEAT DOOR ACTUATOR
WHITE WIRE
YELLOW WIRE
85
87
30
86
REVERSING RELAY
RED WIRE

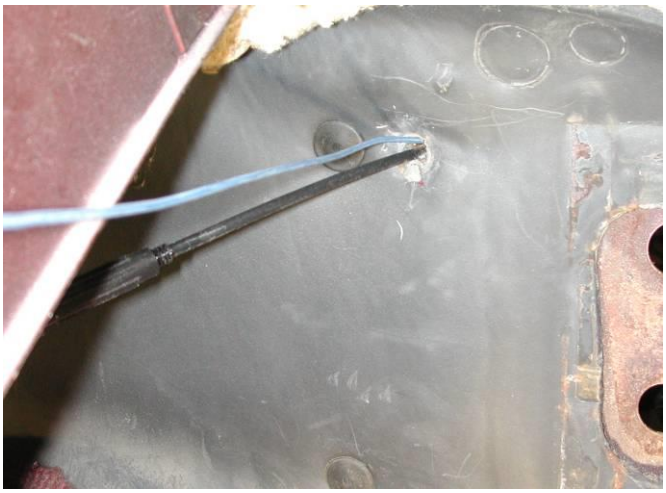
Locate original wire harness that was attached to the blower switch. Cut the connector off. Attach (1) ¼" male spade connector to the brown wire.

Place control assembly on floor of the car.

Attach red / white striped wire from the blower switch to brown wire from the original harness.

Insert light socket back into the control head.

Reinstall control head using original hardware.



Drill hole for the temperature cable and clutch wire just to right of the firewall pad attachment plug.

Route the Temperature cable out through this hole.

All modifications to the vehicle are complete. We will now begin the installation of the system.

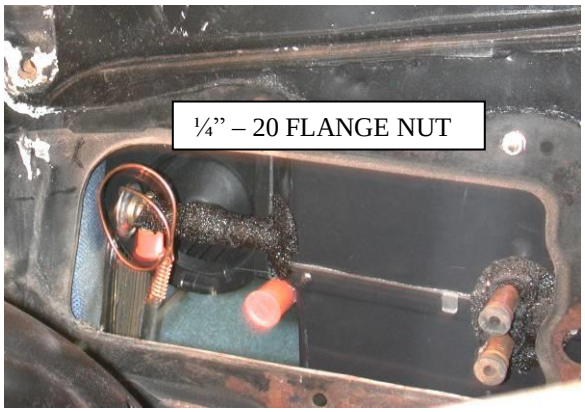
Locate the evaporator, Air Distribution Duct assembly and (4) #10 x 5/8" pan head screws..

Place evaporator on the bench and attach Distribution assembly onto the evaporator using (4) #10 x 5/8" pan head screws.

Lift unit up and behind the glove box opening.

Be sure that defrost outlet from the new unit inserts into the original defrost diffuser.

Insert (1) upper rear Evaporator mounting stud through the original hole as shown. Attach using (1) ¼" – 20 flange nut provided.



Locate in the hardware sack kit (2) #14 x ¾" tek screws.

Attach blower support brace to the body using (2) #14 tek screws.

CAUTION: BE SURE THAT THE EVAPORATOR IS LEVEL WITH THE BOTTOM OF THE DASH.

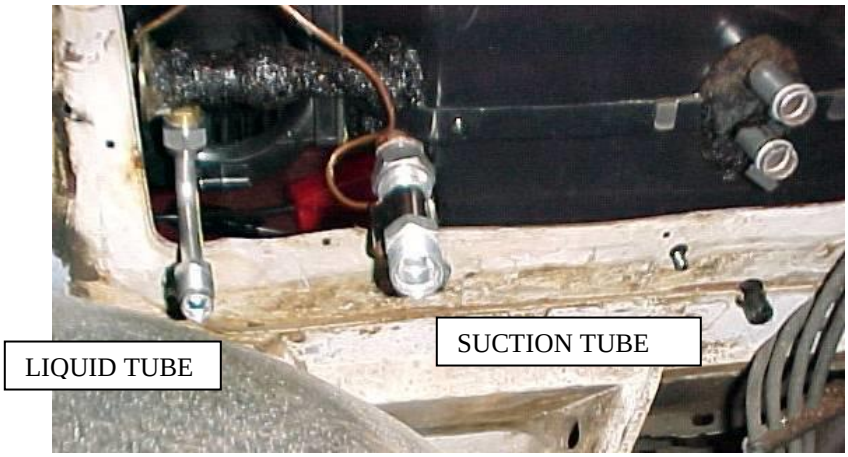
Locate in the hardware sack kit the upper evaporator support bracket, (1) #10 x 5/8" pan head screw and (1) #14 x ¾ tek screw.

Pre drill 1/8" dia hole in the evaporator and attach bracket using (1) #10 pan head screw.

Attach the top of bracket using (1) #14 x ¾" Tek screw.

Locate in the hardware sack kit the following components.

Suction Tube
Liquid Tube
TXV Bulb Clamp
Refrigerant Tape
(1)#6 o-ring
(1) #10 o-ring

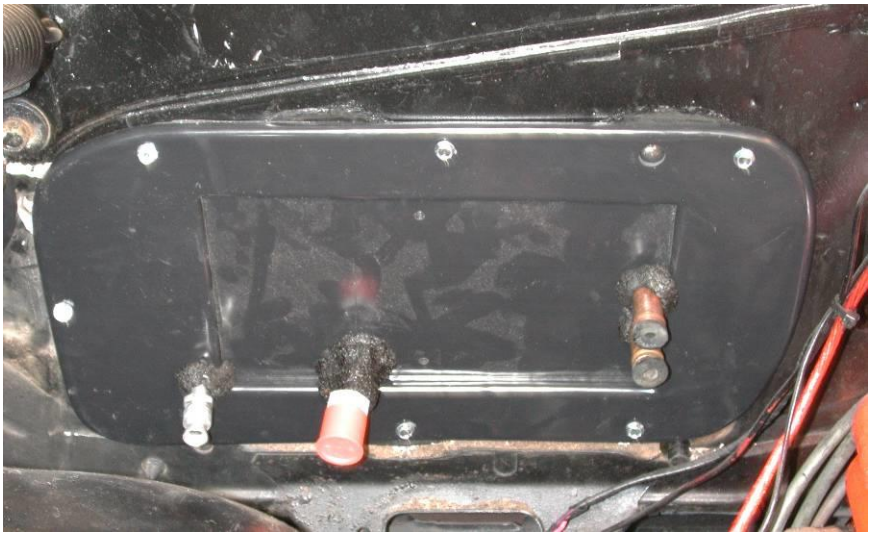


Install the liquid line onto Expansion (TXV) valve as shown. Use #6 o-ring and (2) drops of mineral oil on the o-ring and tighten securely.
Install the Suction Tube on outlet to the unit as shown. Use #10 o-ring and (2) drops of mineral oil on the o-ring and tighten securely.

Locate Sensing Coil attached to the TXV and utilizing Bulb Clamp, attach to the Suction Tube.

CAUTION: THE SYSTEM WILL NOT FUNCTION PROPERLY IF THE SENSING COIL IS NOT CLAMPED IN THE CORRECT POSITION. SEE PICTURE.

Wrap Suction Tube and Sensing Coil with the refrigerant tape provided. Be sure that all of the exposed metal is covered.

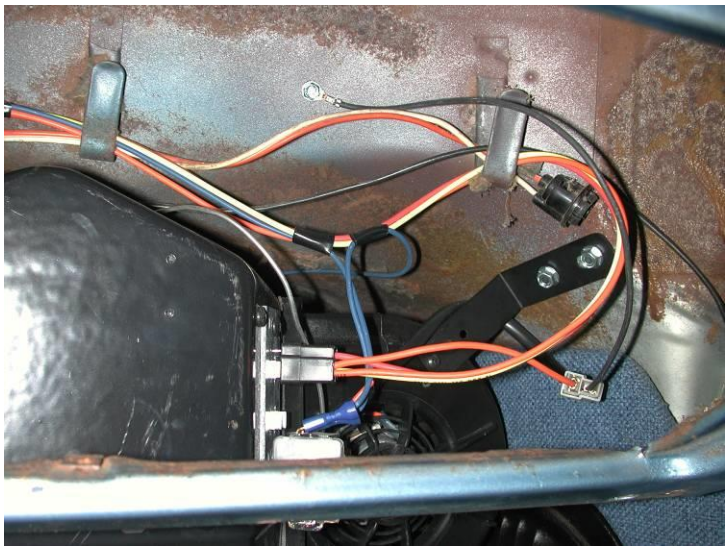


Locate the Firewall Block Off plate, and (6) #10 x ¾" hex head tek screws.

On engine side of firewall attach over hookup tubes from the evaporator using (6)
#10 Tek screws.

Using refrigerant tape seal around tubes at the firewall block off plate.

Route main harness across front of unit to the resistor and blower motor. Route blue clutch wire over evaporator and out through hole along with the temp cable. Secure ground from the blower motor using (1) #10 x ¾ " hex head Tek screw. Also secure ground wire from servo motor to the center brace using (1) #10 tek screw.



REFER TO THE WIRING DRAWING FOR PROPER CONNECTIONS.

Hang wire harness on the clips

Attach (2) blue wires to the micro-switch and blue pig tail located next to the face / heat door crank arm. Refer to wiring diagram for correct connections.

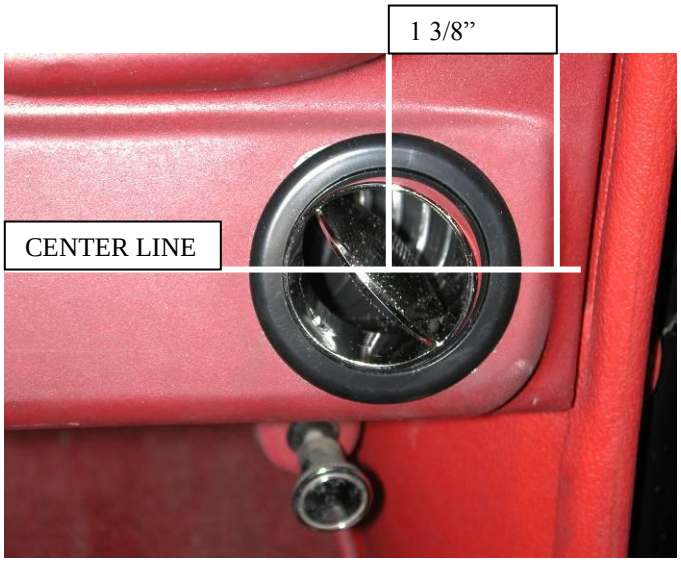
Attach Face / Heat cable to door on side of the center duct assembly using (1) #8 screw.

Locate cable wire in the 3rd hole from the pivot of the crank arm.

Locate in the hardware sack kit (2) Round Ball louver and (2) tywraps

Locate 2" dia flex hose from the unit box.
(1) piece of hose 48", and (1) piece of hose 36".

Attach each of the flex hose to the ball louver using tywrap as shown.



Locate and Drill (1) 2 ¼” dia. hole on passenger lower part of the instrument panel.

Center of the hole will be located vertically on center line of raised portion of the panel. The horizontal location is 1 3/8” from the side.

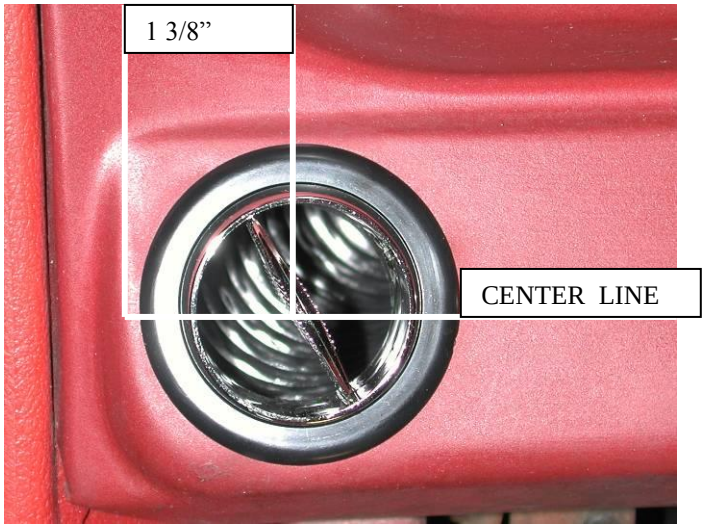
Attach ball louver through the hole as shown.

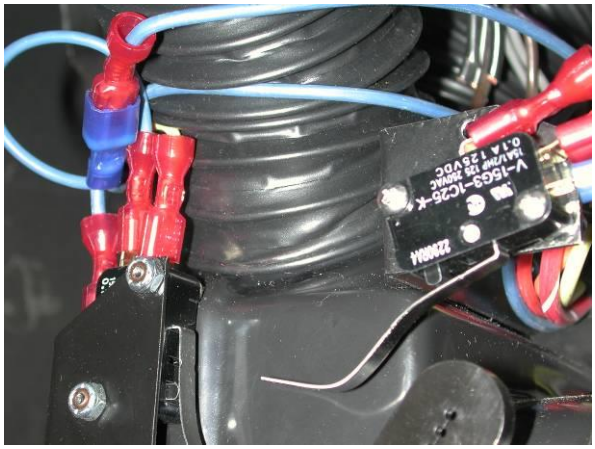
Route the 2” dia x 48” flex hose from right outlet on top of the distribution over to the passenger louver assembly.

Locate and Drill (1) 2 ¼” dia. hole on drivers lower part of the instrument panel.

Center of hole will be located vertically on center line of raised portion of the panel. The horizontal location is 1 3/8” from the side.

Attach ball louver through the hole as shown.

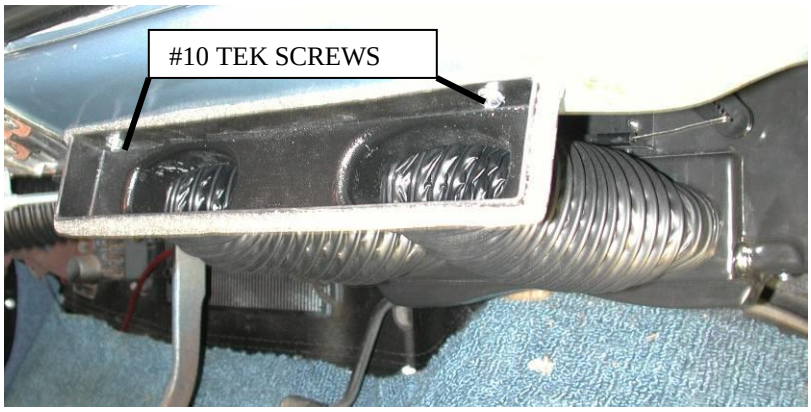




Route flex hose over to the center distribution duct and attach to left outlet on side of the duct.

Locate the center face distribution hose adaptor, (2) pieces of 2 ½”dia flex hose 1ft long. Cut to 7 ½” long, and (2) #10 x ¾” tek screws.

Attach adapter under center of instrument panel using (2) #10 tek screws.



Attach 7 ½” flex hose between center hose adapter and the distribution duct adaptors.

Locate Center Louver Bezel Assembly and (2) #8 x 3/8” pan head screws.

Attach bezel assembly over hose adaptor and fasten with (4) #8 screws. (2) on bottom and (1) on each side.

Locate Glove Box provided in the kit and install using original hardware.
Install (3) screws through the door. Install (2) screws in the 2 sides. Top of the glove box requires only (1) screw.

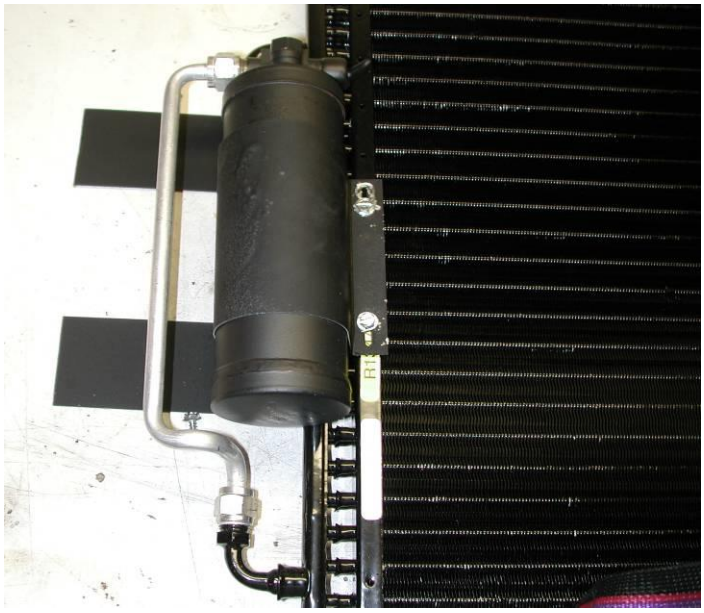
Reinstall glove box door. Attach using original hardware.

Caution: Carefully check under the Instrument Panel for all cables, electrical harness, or Flex Hoses that might interfere with the safe operation of the vehicle.

Installation of the interior components is complete. We will now install the under hood portion of the system.

INSTALL THE COMPRESSOR ADAPTER KIT AND COMPRESSOR AT THIS TIME PER THE MANUFACTURERS DIRECTIONS.

Remove fan shroud.



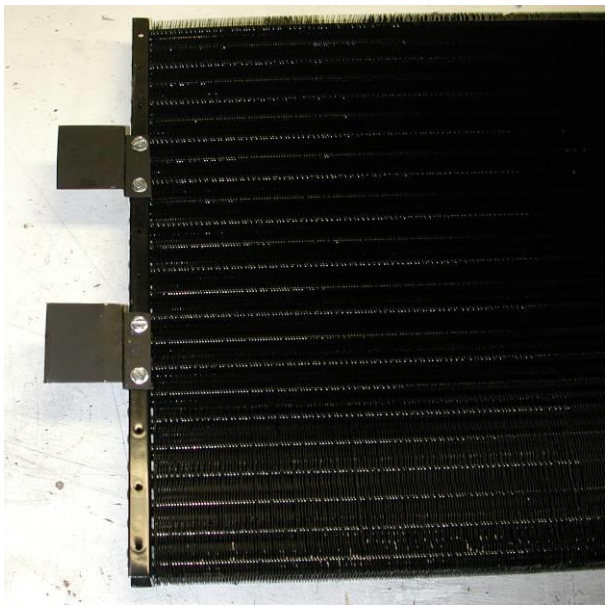
Locate Filter / Drier, Drier Mounting Bracket, Aluminum Liquid tube, (2) #6 o-rings, and (2) #10 x 3/8" hex head screws.

Install filter drier to the condenser in fifth hole from bottom as to allow the Liquid Tube to attach as shown.

Install a few drops of mineral oil to the o-ring fittings, and secure.

Locate the Condenser, (2) left condenser mounting brackets and (4) #10 x 3/8” hex head screws.

Attach brackets to the condenser. The top bracket in 4 hole from the top as shown. Attach lower left condenser bracket to condenser on fifth hole from the bottom.



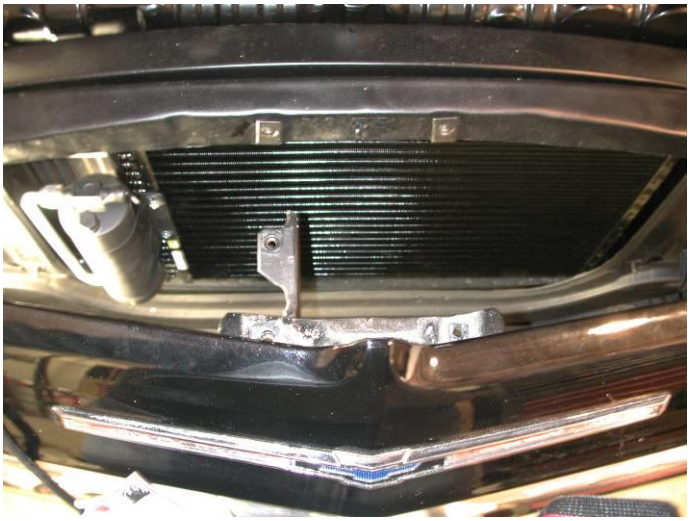
Locate the Condenser, (2) right condenser mounting brackets, and (4) #10 x 3/8” hex head screws.

Attach bracket to condenser in 4th hole from the top as shown.

Lower bracket attach to 5th hole from the bottom.

Remove the hood latch assembly retain original hardware. Also loosen (6) radiator mounting bolts.

Carefully insert Condenser Assembly through the Radiator Mounting Bulkhead as shown.

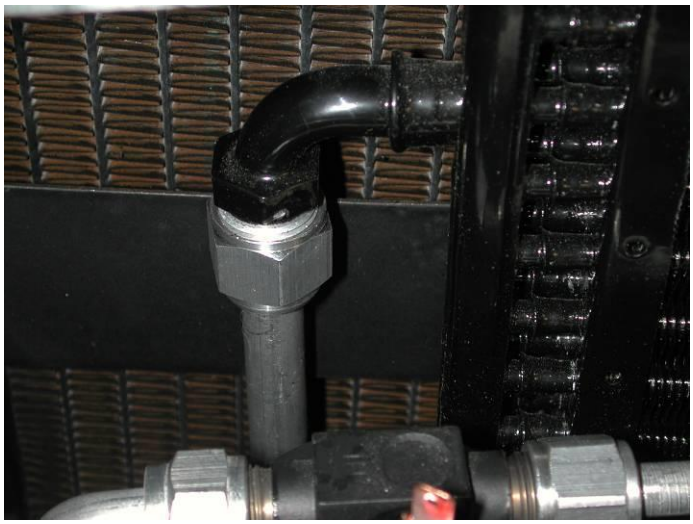


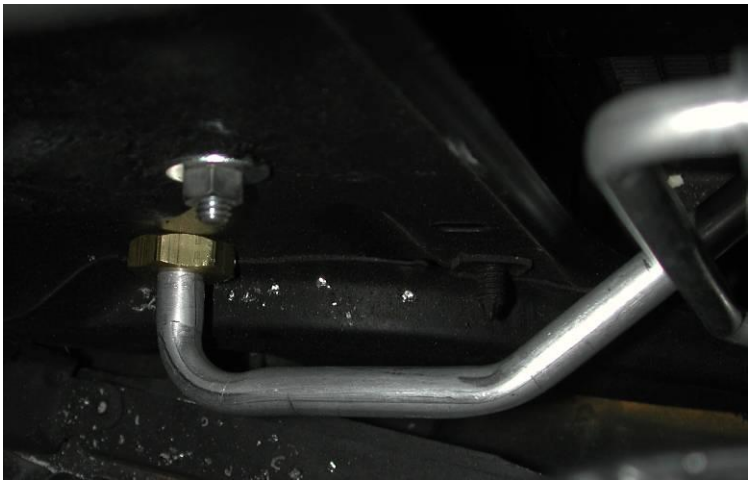
The (4) condenser mounting brackets are clamped between the radiator and its mating bulkhead.

Tighten the radiator mounting bolts.

Locate the Discharge Tube and (1) #8 o-ring

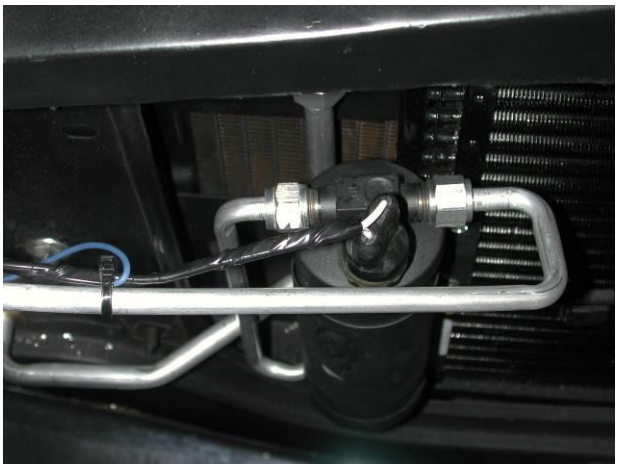
Attach tube to fitting on the condenser. Do not tighten.





Rotate lower fitting up to the radiator bulkhead. Locate and drill (1) hole 13/16” diameter.

Insert bulkhead fitting through the hole and tighten both fittings securely.



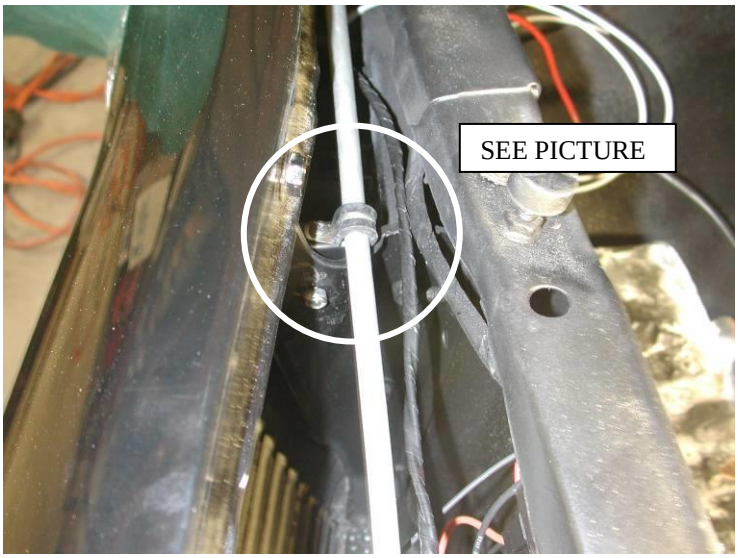
Locate liquid tube, Hi / Low pressure switch assembly, wire harness, (1) #6 o-ring, tube support bracket, # 6 tube clamp, (1) #8 x 3/8” screw and (1) #8-32 x 3/8 screw and nut.

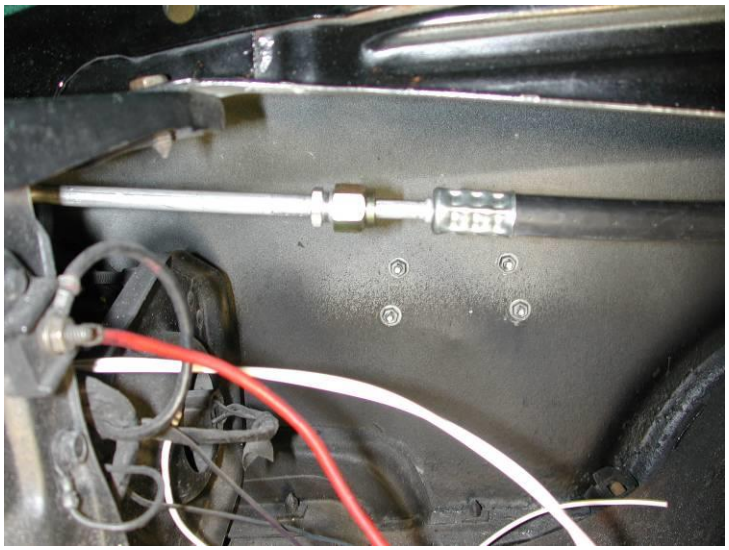
Attach Hi / Low switch assembly to drier outlet from the filter / drier using (1) #6 o-ring and a few drops of mineral oil.

Attach wire harness to the pressure switch and route wires along the liquid tube.

Route Liquid Tube Assembly across and behind head light assembly and back facing rear of the car.

Locate the support bracket and screws. Attach to the bulkhead brace as shown.





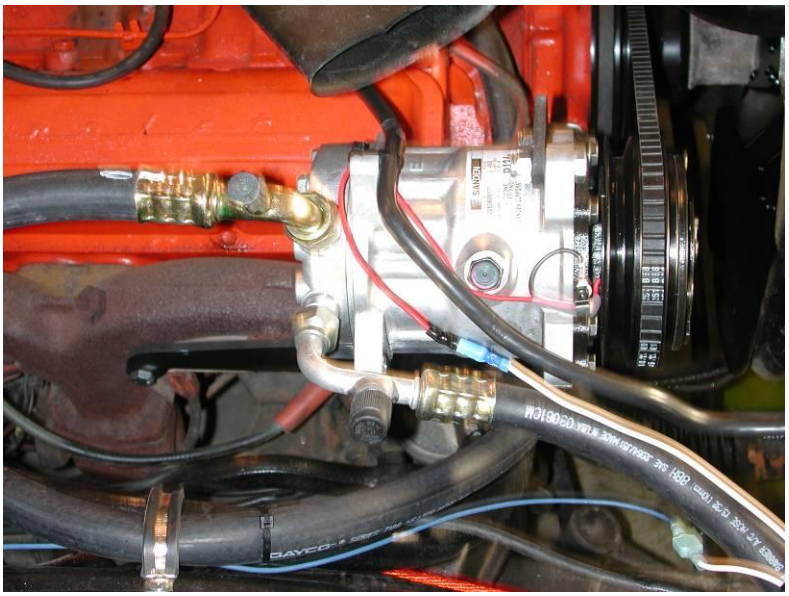
Locate the liquid hose and (2) o-rings.

Attach straight fitting to tube from the drier. Route between inner fender well and fender up to fitting at the firewall.

Attach both fittings using (1) #6 o-ring and a few drops of mineral oil.

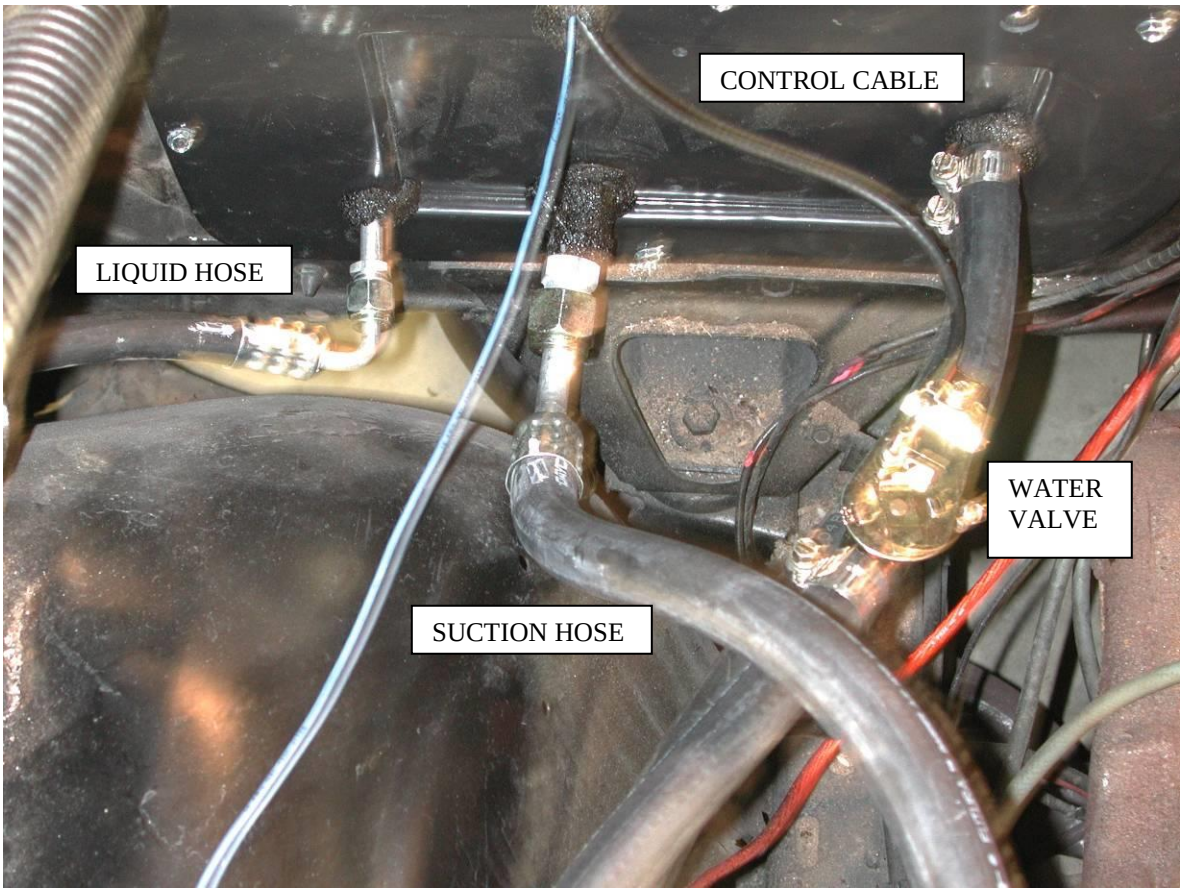
Locate the Discharge Hose and (2) #8 o-rings.

Attach discharge hose to lower fitting below battery and 90deg end with service port to the compressor using (2) #8 o-rings and a few drops of mineral oil.



Locate the Suction Hose and (2) #10 o-rings.

Attach suction hose end with the service port to the compressor. The other end to fitting at the firewall. Use (2) #10 o-rings and a few drops of mineral oil for each fitting.



Locate the water valve and (3) worm gear clamps from the hardware sack kit.
Cut 6” of heater hose from the **RETURN HOSE**. Attach this piece to top fitting

at the firewall. The water valve is installed on the other end of the 6" piece.

Attach supply line from the engine to the bottom hose connection.
Set control lever in the Cold position and be sure that the water valve is closed.
Locate insulation tape and seal around cable at firewall.

Reinstall battery, battery box, and fan shroud using original hardware.

THE ENGINE COMPARTMENT OF YOUR SYSTEM IS COMPLETE. THE UNIT IS READY FOR EVACUATION AND CHARGING.

THIS SHOULD BE DONE BY A QUALIFIED AND CERTIFIED AIR CONDITIONING TECHNICIAN.

NOTE: ***COMPRESSOR IS SUPPLIED WITH THE CORRECT OIL CHARGE. DO NOT ADD OIL TO SYSTEM.***

134A SYSTEMS 24 oz OF REFRIGERANT
Recommend that power fuse is 25amp minimum

Congratulations you have completed the install of your CLASSIC AUTO AIR "Perfect Fit Series" climate control system.

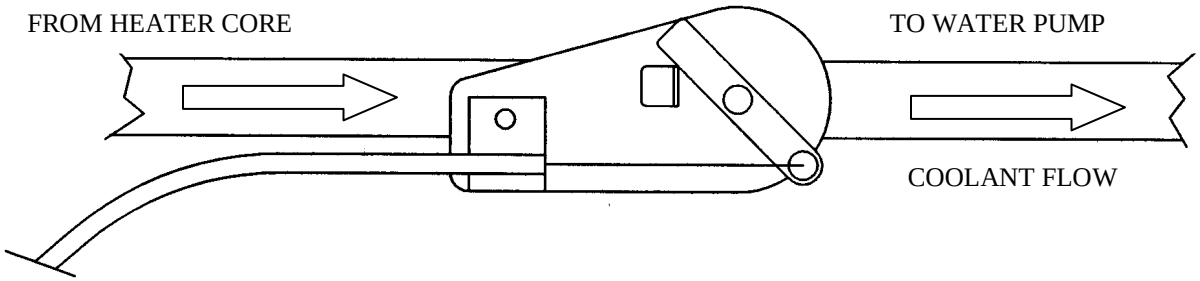
IMPORTANT

CAUTION: WATER VALVE MUST BE INSTALLED PER THE INSTRUCTIONS.

Classic Auto Air has done extensive testing on the correct method to install the water valve in order to get a repeatable and progressive temperature control.

Locate the **bottom** connection from the evaporator/heater unit off of the firewall and attach a 6" piece of 5/8" dia. heater hose with the supplied hose clamp. Next attach the inlet side of the water valve using another supplied hose clamp, (make sure the arrow on the water valve points toward the engine) Attach a heater hose from the outlet side of the water valve and route to the connection on the water pump.

NOTE: WATER VALVE = WATER PUMP

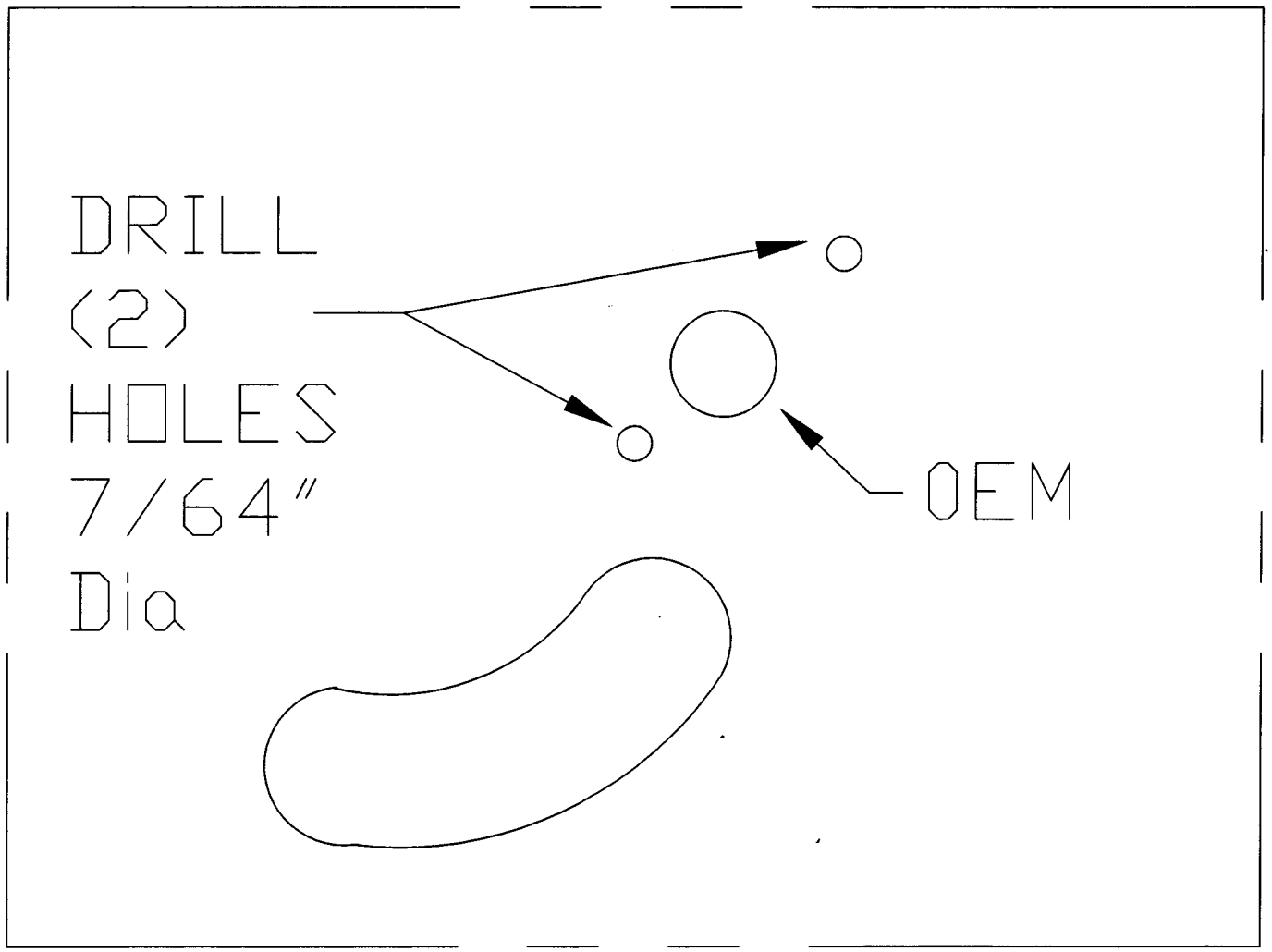


CAUTION: WATER VALVE MUST BE INSTALLED ON HEATER LINE ROUTED TO WATER PUMP.

NOTE: ***COMPRESSOR PURCHASED WITH KIT IS SUPPLIED WITH THE CORRECT OIL CHARGE. DO NOT ADD OIL TO SYSTEM.***

134A SYSTEMS 24 oz OF REFRIGERANT

Recommend that power fuse is 25amp minimum



SWITCH LOCATION TEMPLATE
1965 CHEVROLET IMPALA