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

“PERFECT FIT”

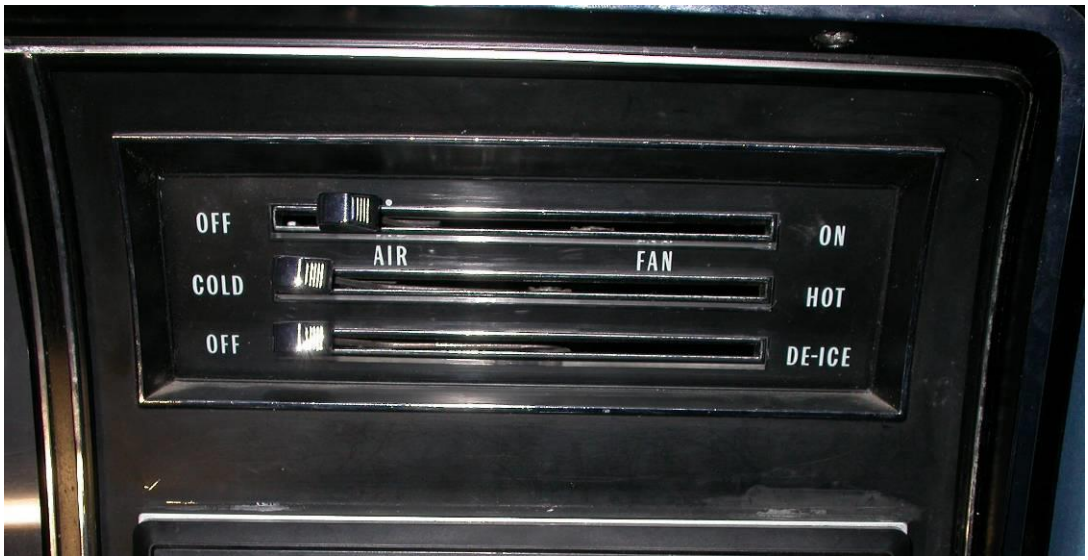
IN-DASH

HEAT/ COOL/ DEFROST

1968 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 HEAT MODE. THIS MEANS THAT THE AIR WILL BE DISTRIBUTED THROUGH THE FLOOR OUTLETS. THIS ALSO HAS THE TEMPERATURE LEVER IN THE COLD POSITION. WITH THE CONTROLS IN THIS POSITION YOU WILL GET THE AIR THROUGH THE FLOOR OUTLETS.

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 COLDEST temperature position. As the lever is pushed to the RIGHT the temperature of the discharged air will RISE to the HOTTEST point.

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

specializing in "AIR CONDITIONING, PARTS AND SYSTEMS" for your classic

INSTALLATION INSTRUCTIONS
1968 CHEVROLET BISCAYNE & 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. x 3ft.
Flex hose 2" dia. x 4ft.
Flex hose 2 ½" dia x 1ft. (2)
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 glove box. Discard glove box.

Retain original hardware.

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

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

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

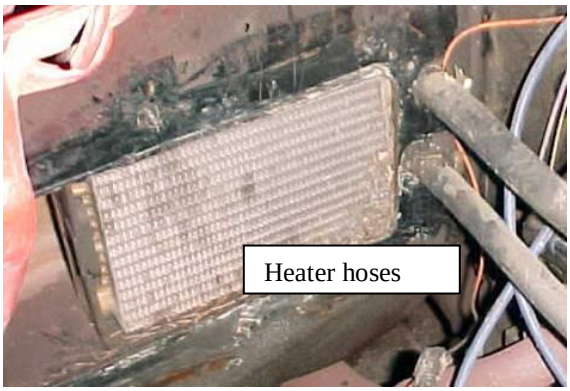
It is necessary to lower the inner fender well on passenger side. Remove passenger front tire. Remove and retain (9) bolts from around inner fender. Lower inner fender well to gain access to (2) screws above and below the blower motor assembly.

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

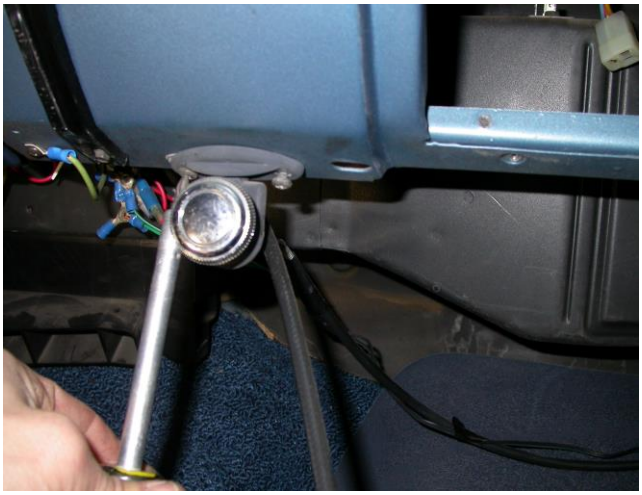
Retain (2) screws around blower motor.

Attach the 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.



DRAIN COOLANT FROM RADIATOR.
Remove Heater hoses from heater coil at firewall.

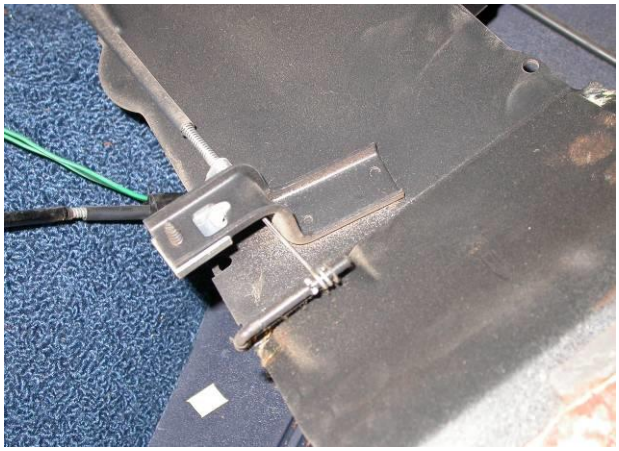


Located next to glove box opening is the fresh air control cable.

Remove and retain the mounting screws. Lay cable on the floor for later reinstallation.

Locate on top of heater assembly accessing through glove box opening the resistor connector.

Disconnect the electrical connector. Remove control cable and discard the original hardware.

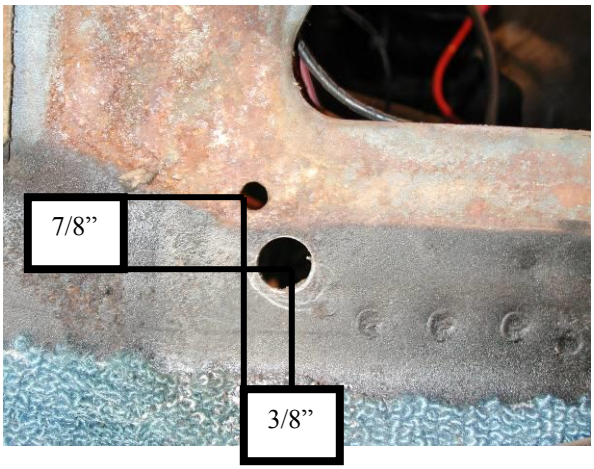


Pull heater box away from firewall and rotate to remove the control cable on back of the box. Discard the original hardware.

Remove heater box from the vehicle.

Locate behind dash and on firewall the hole that previously mounted heater box.

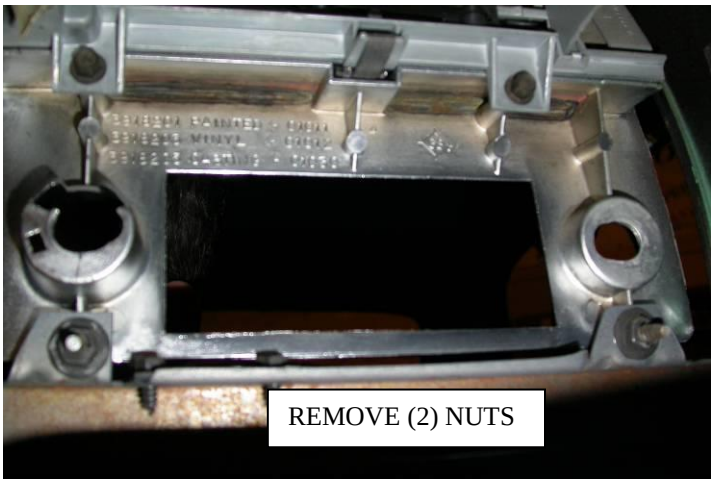
Drill (1) ¾" dia. hole for drain tube as shown.



Remove (5) attachment screws across top edge of the instrument trim bezel.

Remove and retain the hardware for later reinstallation.

In order to remove control head remove and retain the (2) screws as shown.

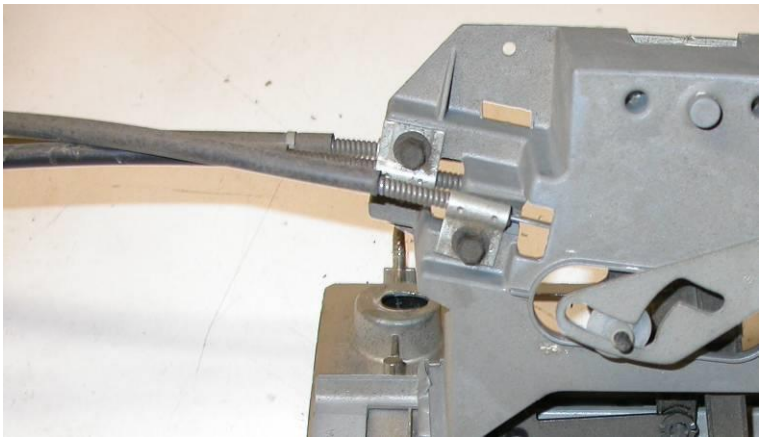


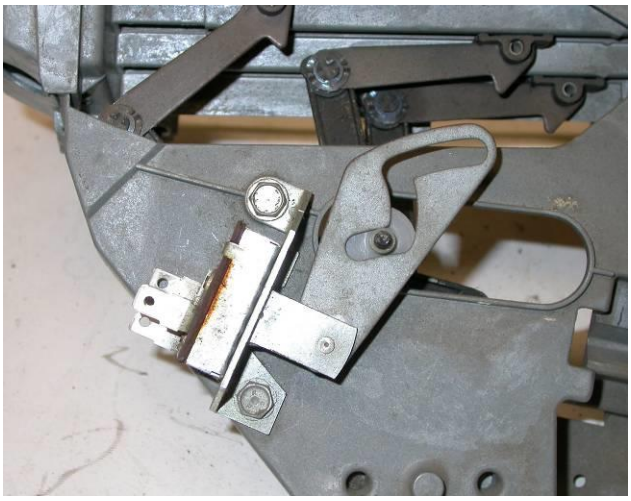
Remove the radio, remove and retain the lower (2) nuts that hold the lower bezel.

Remove controls from front of the instrument panel. Disconnect the electrical connection from blower switch.

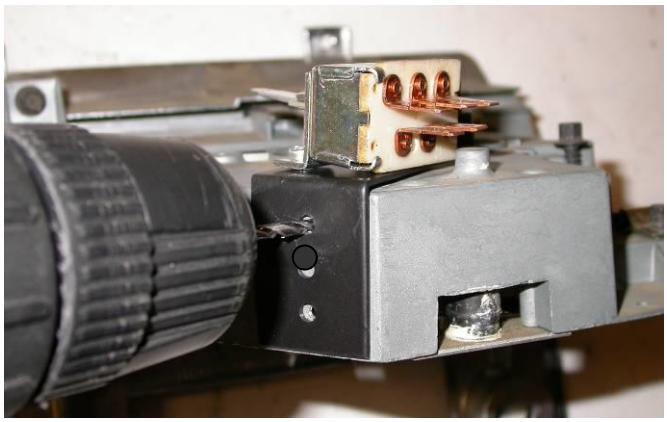
Place controls on the bench and remove the (2) control cables.

Discard cables and retain mounting hardware.



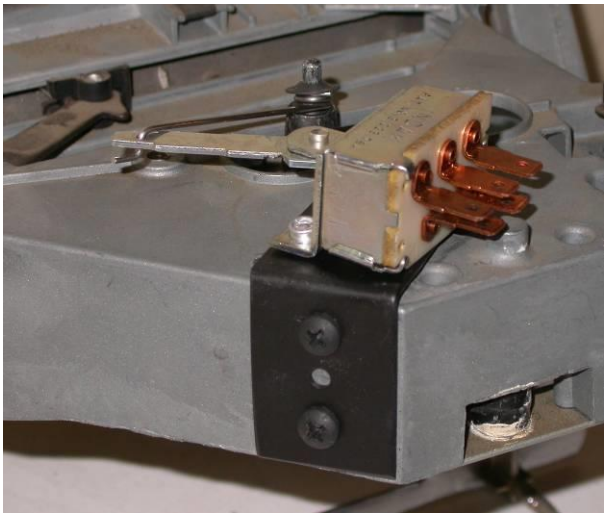


Remove and discard original blower switch. Discard all of the original hardware.

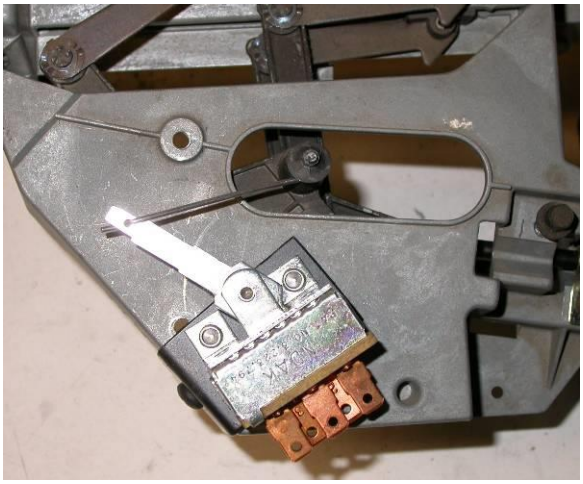


Locate blower switch assembly, and (2) #8 x 3/8” pan head screws.

Using the switch assembly as a template. Locate the bracket at edge of control housing, drill (2) holes 7/64” dia.



Attach control switch assembly to original control head using (2) #8 x 3/8” pan head screws.



Locate connecting wire and (1) 3/16” push nut.

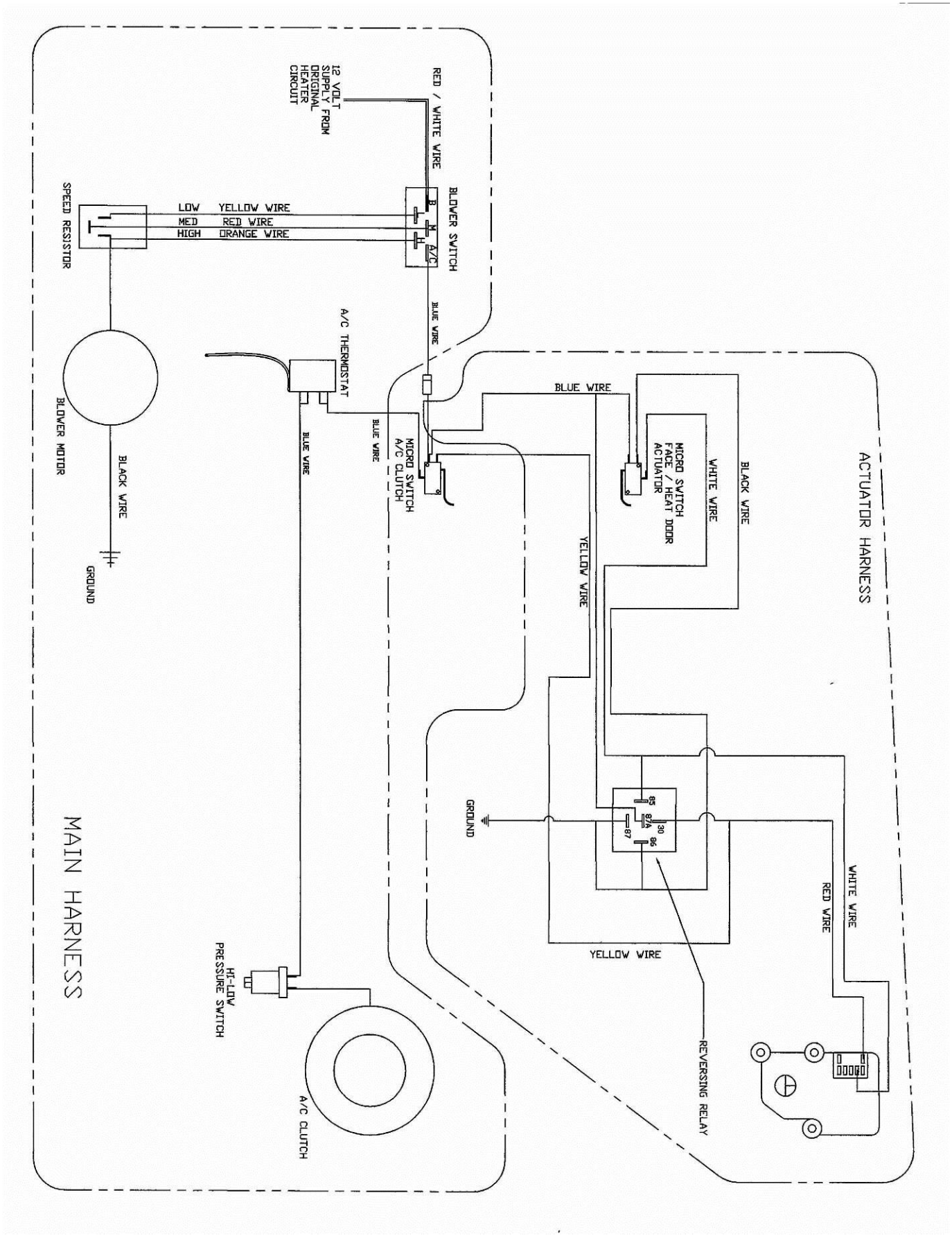
Attach the end of wire with ring to control arm and other end with hook to the blower switch.

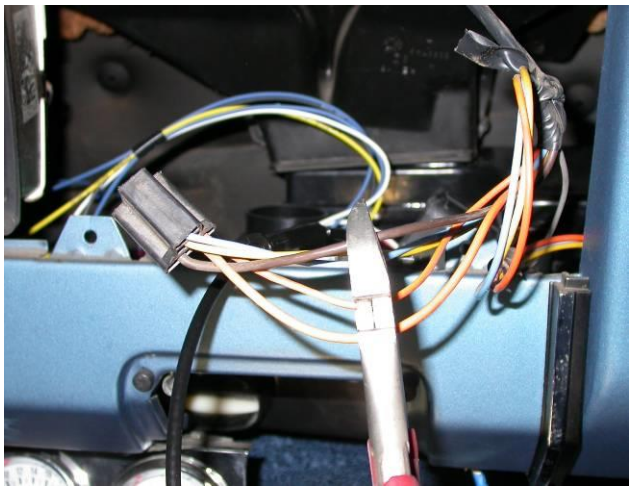
Secure with 3/16” push nut.

Locate in 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 CENTER control arm and (1) 3/16” push nut. NOTE: Cable sleeve is 1 ½” from the clip.

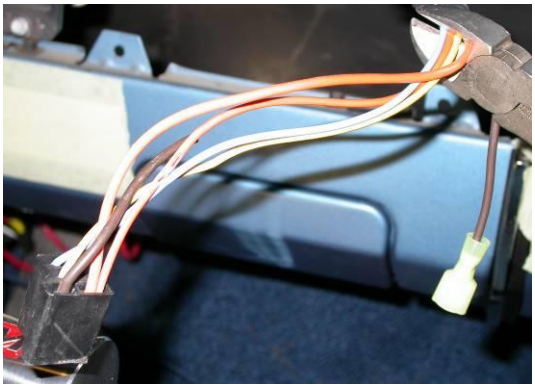
Attach the (shortest) Face / Heat cable to BOTTOM control arm. Using (1) push nut and original screw and cable clip. NOTE: Cable sleeve is 1 ½” from the clip.

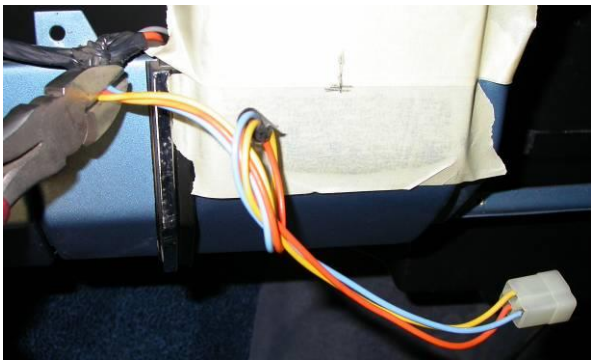

MAIN HARNESS
ACTUATOR HARNESS
12 VOLT SUPPLY FROM ORIGINAL HEATER CIRCUIT
RED / WHITE WIRE
BLOWER SWITCH
SPEED RESISTOR
LOW YELLOW WIRE
MED RED WIRE
HIGH ORANGE WIRE
A/C
BLUE WIRE
A/C THERMOSTAT
BLOWER MOTOR
BLACK WIRE
GROUND
MICRO SWITCH A/C CLUTCH
HI-LOW PRESSURE SWITCH
A/C CLUTCH
MICRO SWITCH FACE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



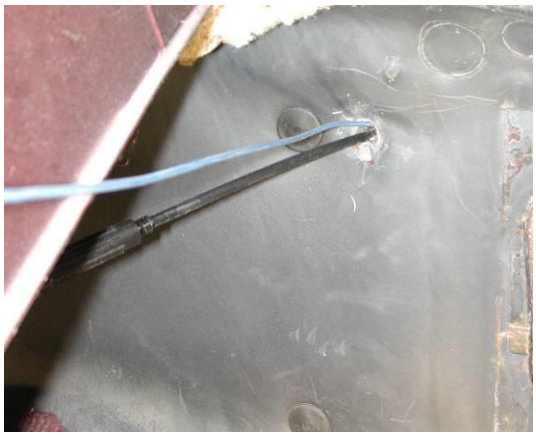
Locate original wire harness that was attached to blower switch. Cut the connector off. Attach (1) ¼" male spade connector to brown wire.

Cut the connector and wires back to main harness.





Cut connectors and wires from the original resistor back to main harness.



Drill hole for temperature cable and clutch wire just to the right of firewall pad attachment plug. Located on firewall between the defrost duct and holes for original heater tubes.

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

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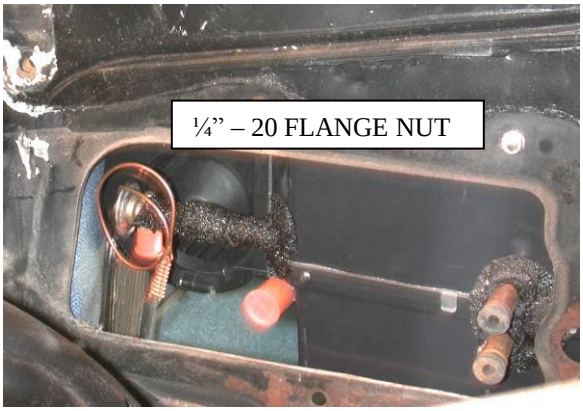


Insert the (1) upper rear Evaporator mounting stud through the original hole as shown. Attach using (1) ¼" – 20 flange nut provided.

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

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

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

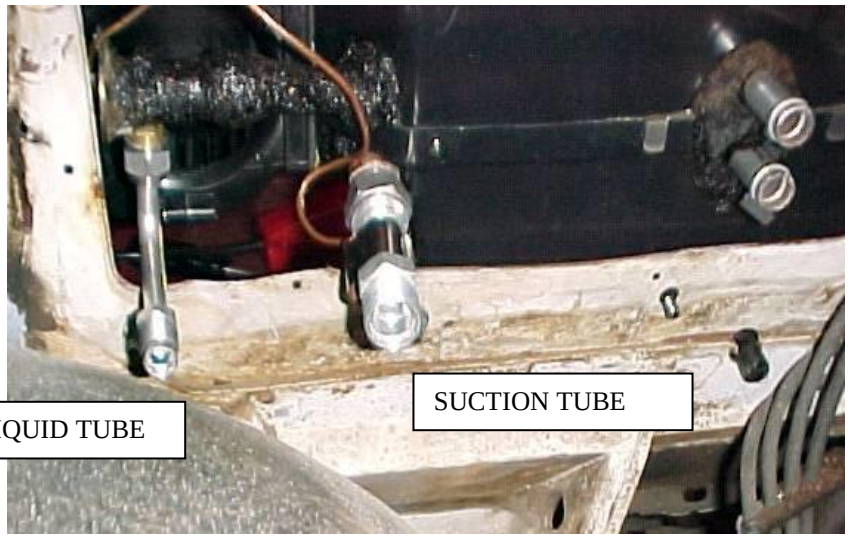
Locate in hardware sack kit the upper evaporator support bracket, (1) ¼ - 20 X 5/8" screw and flange nut.

Remove pan head screw from the evaporator. Loosely attach support bracket to the unit using same screw.

Attach top of bracket to the dash brace through existing hole as shown using ¼ - 20 screw and flange nut.

Locate in hardware sack kit the following components.

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



Install liquid line onto Expansion valve (TXV) as shown. Use #6 o-ring and (2) drops of mineral oil on o-ring and tighten securely.

Install Suction Tube on outlet to the unit as shown. Use #10 o-ring and (2) drops of mineral oil on o-ring and tighten securely.

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

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

Wrap Suction Tube and Sensing Coil with 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.

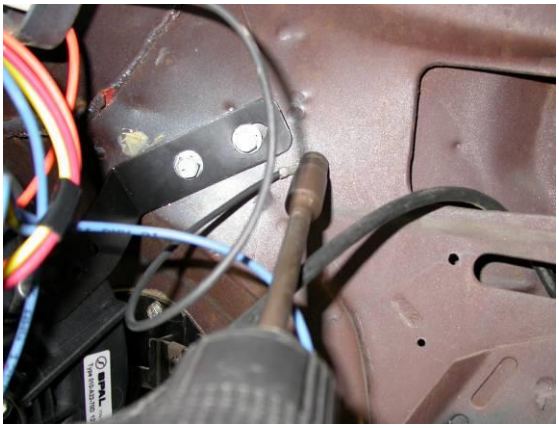
On engine side of the firewall attach over hookup tubes from evaporator using (6) #10 Tek screws.

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

Locate and install air distribution assembly using (4) #10 x 5/8" pan head screws. (2) on top and (2) on bottom.

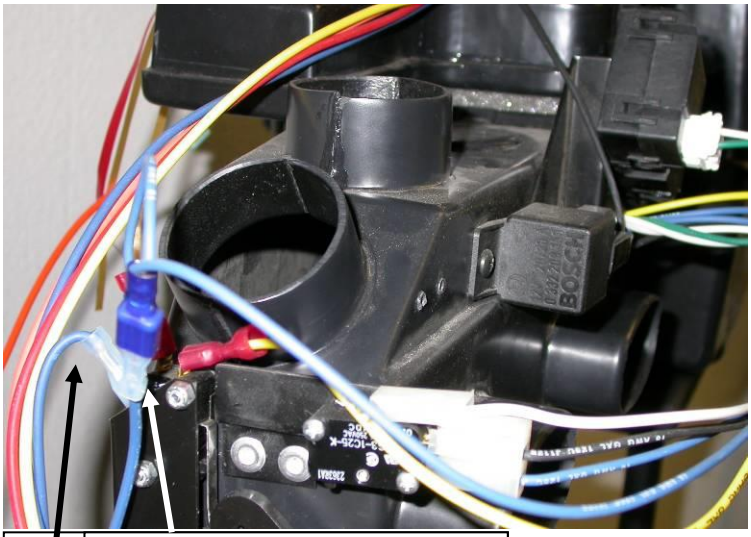
Insert defrost plenum into original defrost diffuser.

Reinstall passenger fresh air cable to bottom of dash using original hardware.
Locate in control sack kit the main wire harness.



Attach white (4) spade connector to blower motor and (2) blue spade connectors to thermostat.

Locate (1) #10 x ¾ tek screw and ground the blower ring terminal to body next to the blower support.



BLUE WIRE FROM SWITCH

BLUE WIRE FROM THERMOSTAT

Route wire harness across top of the unit and over to micro switch on the side of distribution duct.

Attach (1) blue wire from thermostat to side of micro-switch and (1) blue wire from blower switch to blue pig tail located next to face / heat door crank arm.

Refer to wiring diagram for correct connections.

Locate in hardware sack kit (2) Round Ball louver assemblies with 2” hose adaptors, and (2) tywraps

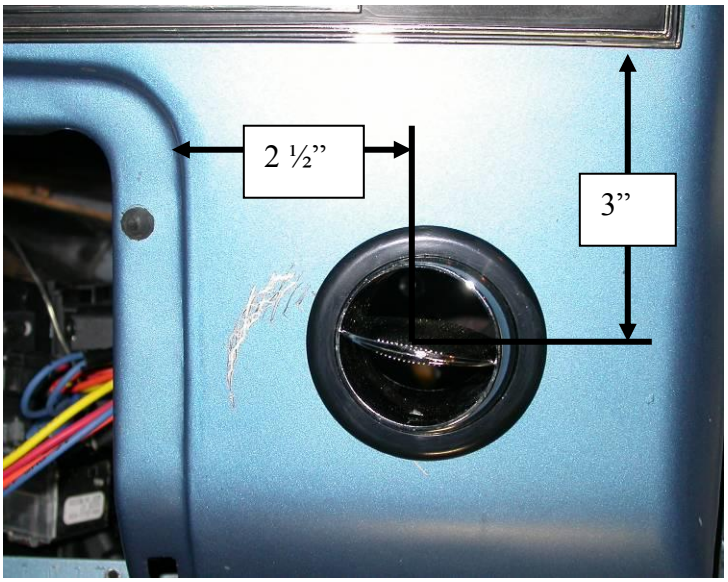
Locate 2” dia flex hose that is 4 ft long from the unit box. Cut (1) piece of hose 40”, and (1) piece of hose 36”.

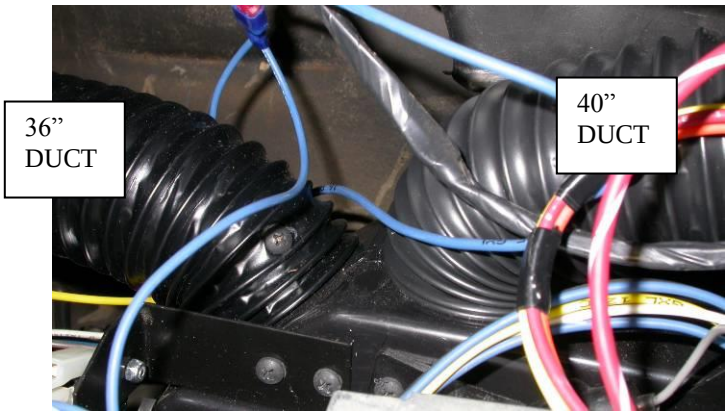
Attach each of the flex hoses to ball louver using a tywrap as shown.

Locate and Drill (1) 2 ¼” dia. hole on right side of glove box.

The center of hole will be located vertically 3” from bottom edge of trim as shown. Horizontal location is 2 ½” from glove box opening.

Attach ball louver assembly with 40” piece of duct hose through hole as shown.





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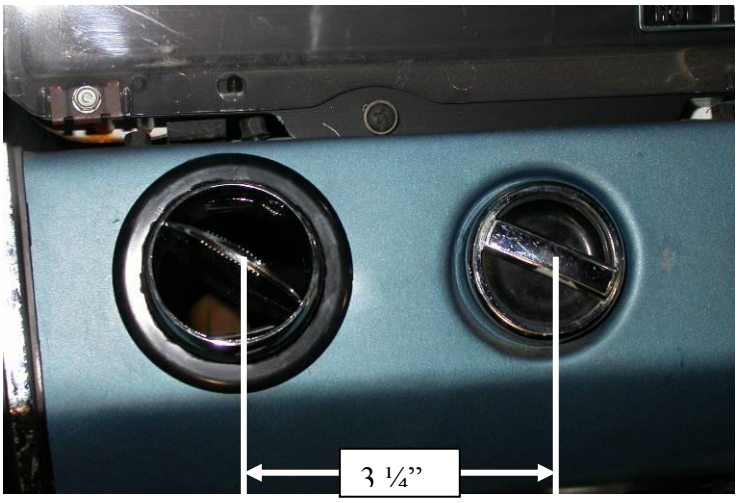
Route flex hose from right louver to top of distribution assembly.

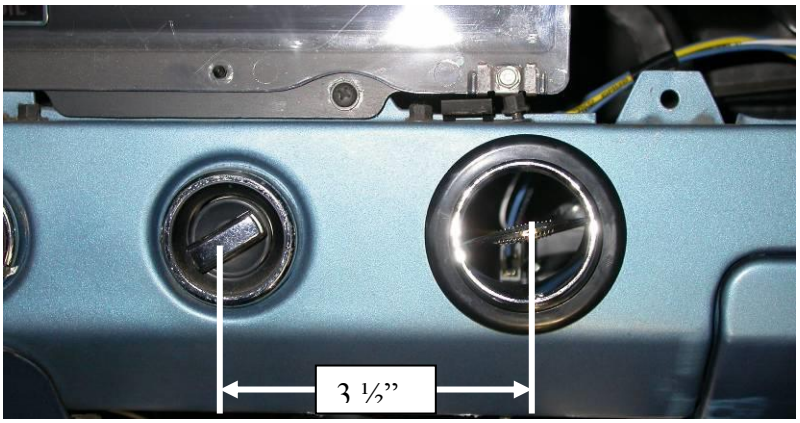
Locate and Drill (1) 2 ¼” dia. hole on drivers lower part of instrument panel.

Center of hole will be located vertically on center line of raised portion of the panel. Horizontal location is 3 ¼”” from light switch.

Attach ball louver assembly with 36” duct hose through hole as shown.

Route flex hose from driver’s louver over to left hose adaptor on the air distribution assembly.



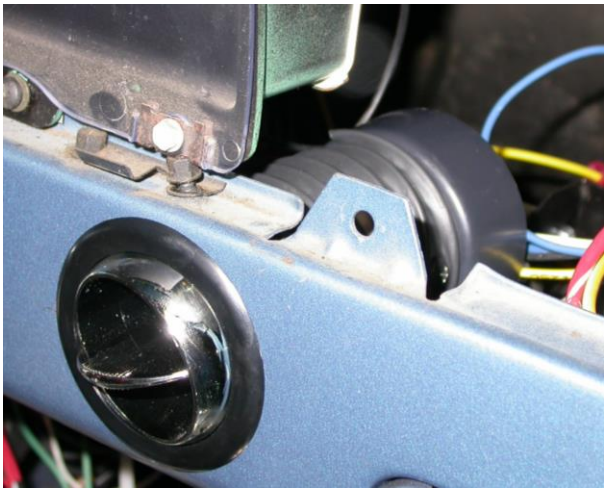


Locate and Drill (1) 2 ¼” dia. hole on drivers lower part of instrument panel to right of cigarette lighter.

Center of the hole will be located vertically on center line of raised portion of the panel. Horizontal location is 3 ½” from light switch.

Locate the Ball louver assembly that has 2 to 2 ½” hose adaptor on the end.

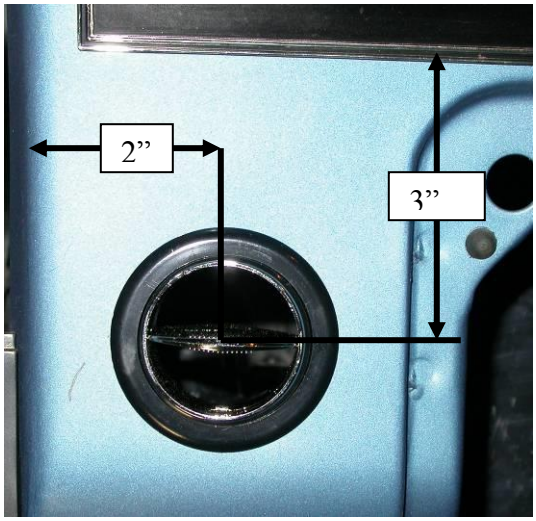
Attach this ball louver assembly through hole as shown.



Locate in hardware sack kit (1) Round Ball louver with 2 ½” hose adaptor, and (1) tywrap.

Locate 2 ½” dia flex hose that is 1ft long from unit box. Cut the hose 7”, and (1) piece of hose 1ft.

Attach the 12” flex hose to ball louver using tywrap as shown.



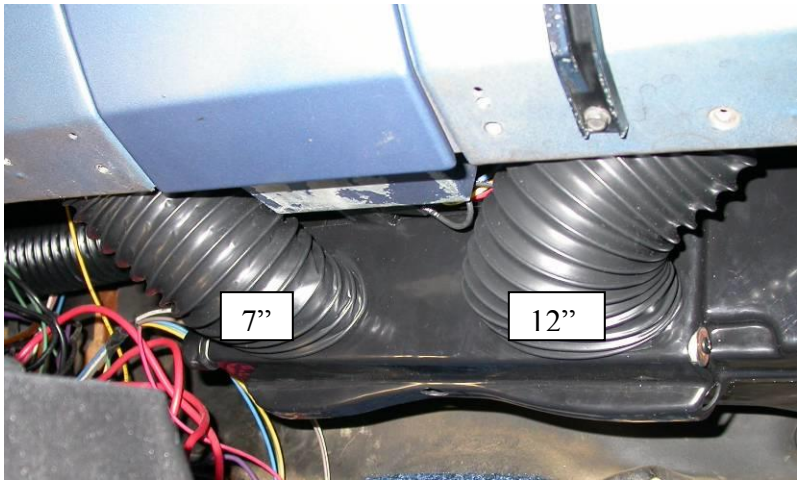
Locate and Drill (1) 2 ¼” dia. hole on left side of glove box.

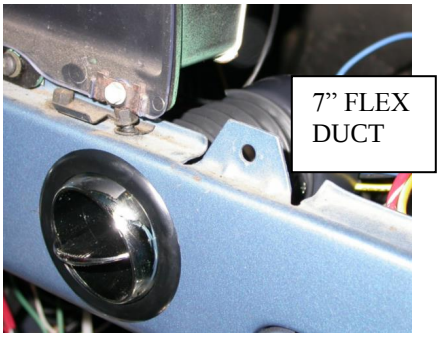
Center of hole will be located vertically 3” from the bottom edge of trim as shown. Horizontal location is 2” from left edge of the panel.

Attach ball louver assembly with 12” piece of duct hose through hole as shown.

Route the 12” flex hose down and attach to right hose adaptor on front of the distribution duct.

Attach 7” piece of flex hose to left center ball louver assembly and route down to left hose adaptor on front of the distribution duct.





Reinstall fresh air door cable using original hardware.

Locate the control head, insert cables through opening in the dash.

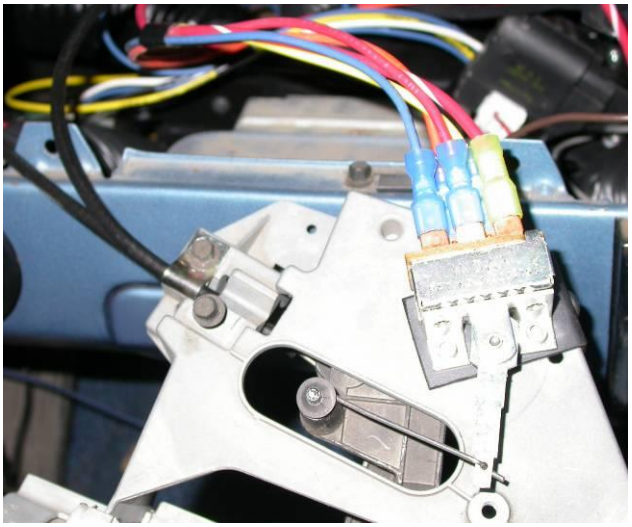
Route blue wire from thermostat over top of evaporator and out through hole that was previously drilled.

Route the longest cable across top of evaporator and out through hole that was previously drilled.

Route short cable back towards the driver.

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

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



Attach wires to blower switch using the wiring diagram on page 7.

Reinstall radio and controls using original hardware.

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

Re-install the trim bezel using (5) attachment screws across top edge of instrument trim bezel.

Locate Glove Box provided in the kit and install using original hardware.
Install bottom trim using original hardware.

Reinstall glove box door, attach using original hardware.

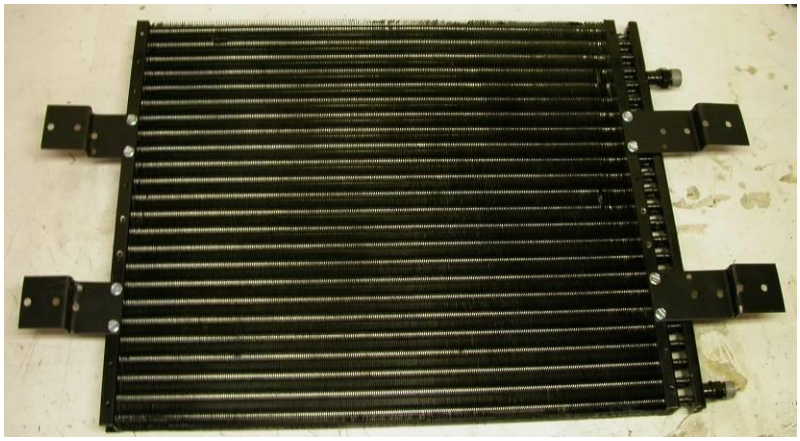
Installation of the interior components is complete. We will now install the under hood portion of the system.

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

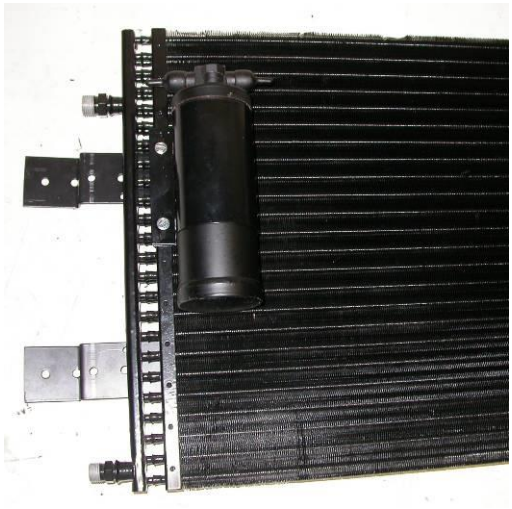
Remove fan shroud.

Locate Condenser, (2) left hand and (2) right hand condenser mounting brackets and (8) #10 x 3/8" hex head screws.

Attach brackets to condenser, top brackets in the 4th hole from top shown.



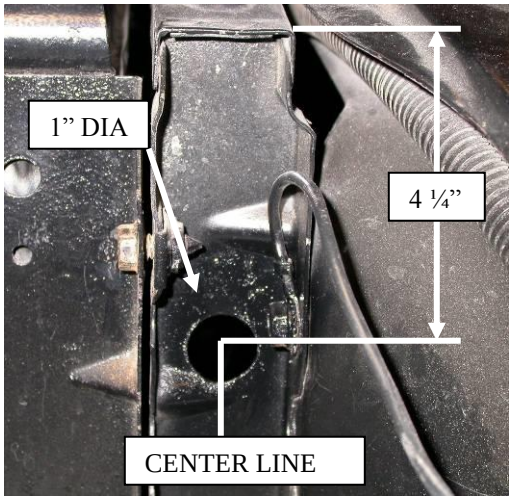
The lower condenser brackets attach to condenser on 3rd hole from the bottom.



Locate Filter / Drier, Drier Mounting Bracket and (2) #10 x 3/8" hex head screws.

Install filter drier to condenser on 4th hole from the top.

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

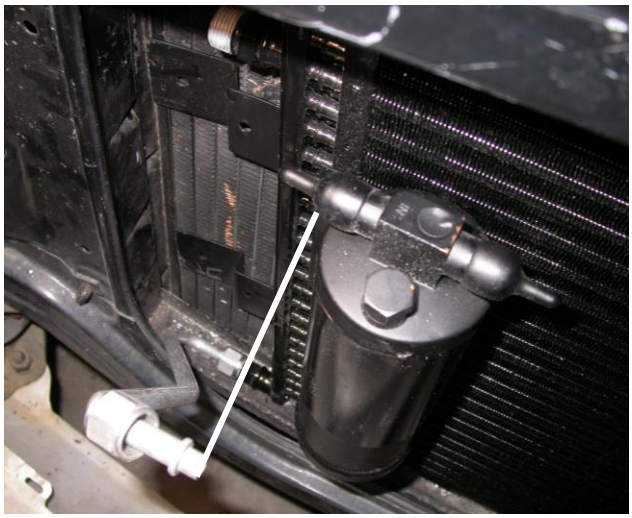


Locate on the center and 4 ¼" down on passenger side of the radiator spacer frame.

Drill (1) hole 1" diameter. Deburr hole and apply paint over the raw edges.

Loosen (4) radiator mounting bolts.

The (4) condenser mounting brackets will be clamped between the radiator and the radiator spacer frame.



Carefully insert Condenser Assembly through the Radiator Mounting Bulkhead slide assembly to drivers side see picture below.

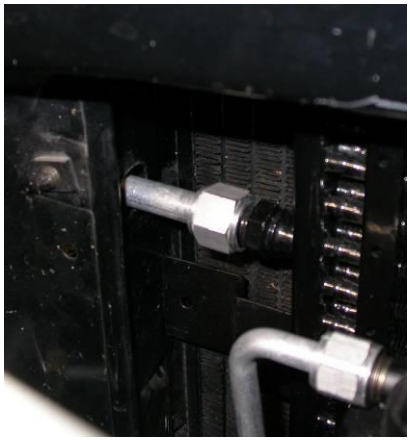
Locate Liquid Tube and (2) #6 o-rings.

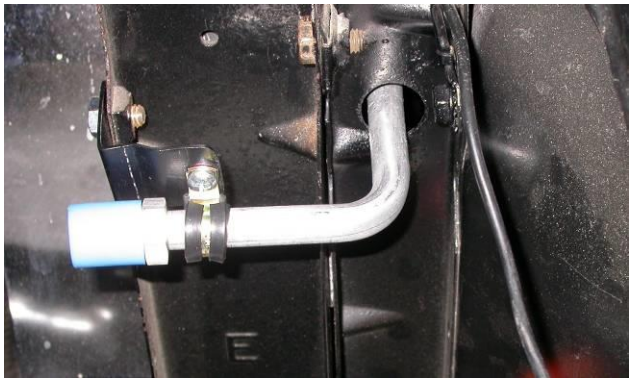
Attach the tube to fitting on condenser and fitting to the drier. Using the o-rings and a few drops of mineral oil.

Slide condenser into place and tighten (4) radiator mounting bolts. The top discharge fitting will be inline with hole previously drilled.

Locate Discharge tube and (1) #8 o-ring.

Attach the tube to condenser. Feed end through 1" hole as shown. Connect using #8 o-ring and a few drops of mineral oil.





Locate tube support bracket, (1) 5/16-18 x ½" hex head bolt, (1) hose clamp, (1) #8 screw and nut.

Attach bracket to radiator front and clamp over the tube using hardware provided.

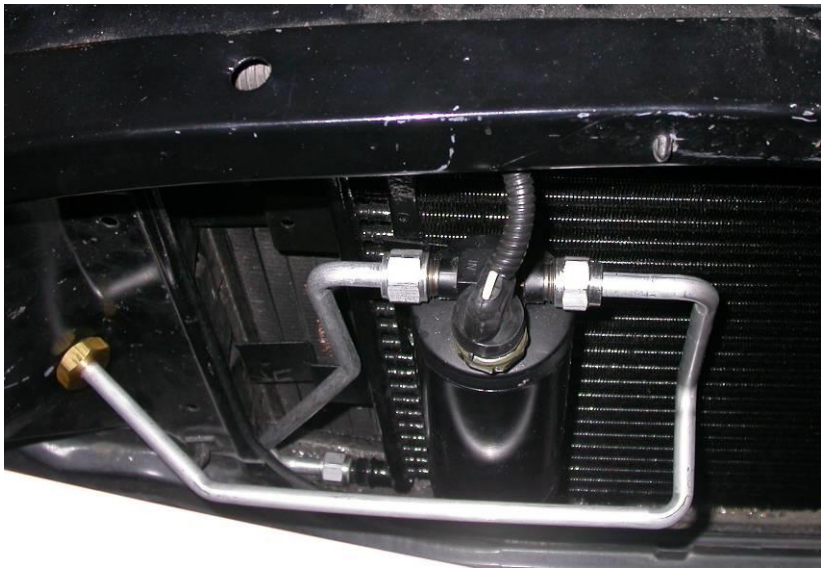
Locate liquid tube and (1) #6 o-ring.

Loosely attach the tube to drier.

Rotate tube and locate and drill (1) hole 13/16” diameter.

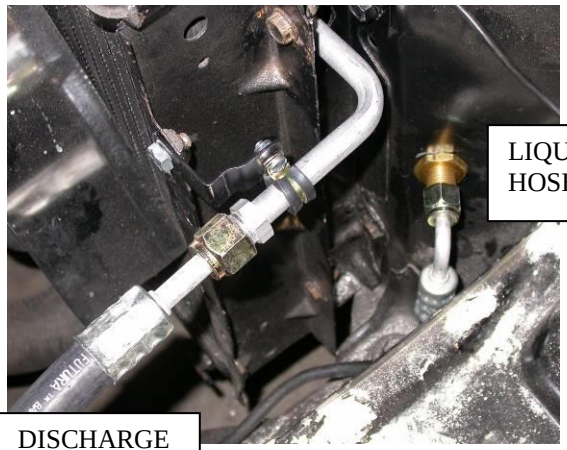
Insert bulkhead fitting through hole and tighten securely.

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



Locate Hi / Low pressure switch assembly, and wire harness.
Attach Hi / Low switch assembly using a few drops of mineral oil.

Attach wire harness to pressure switch and route wires along discharge hose to compressor. Attach (1) of the wires to clutch. Route other wire along suction hose and connect to blue clutch wire at firewall.

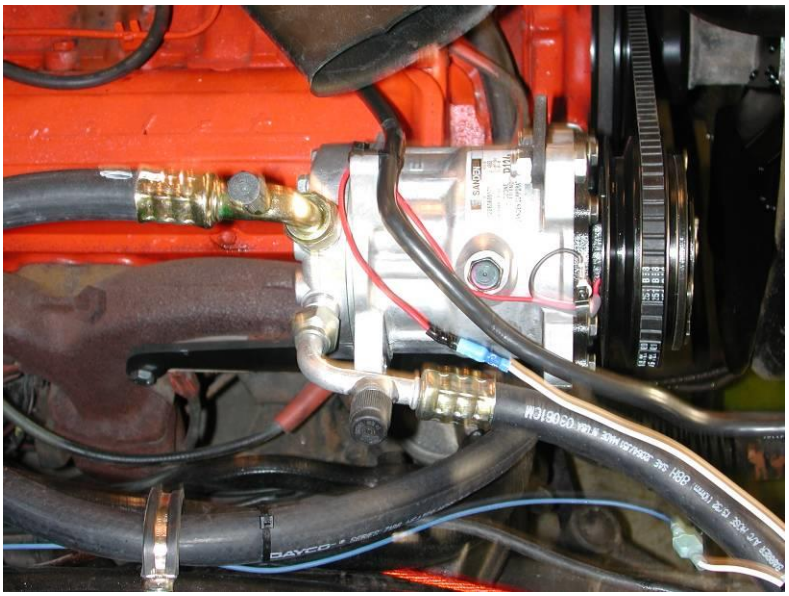


Route Liquid hose Assembly from bulkhead and under battery box. Route inside fender and back to firewall fitting. Attach using (2) o-rings and a few drops of mineral oil.

Attach discharge hose to condenser fitting and route to compressor. Attach using (2) #8 o-rings and a few drops of mineral oil.

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

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



Locate water valve and (3) worm gear clamps from hardware sack kit.
Cut 6” of heater hose from the **RETURN HOSE**.
Attach this piece to top fitting at firewall. The water valve is installed on other end of the 6” piece.

Attach supply line from engine to bottom hose connection.
Set control lever in Cold position and be sure that 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.

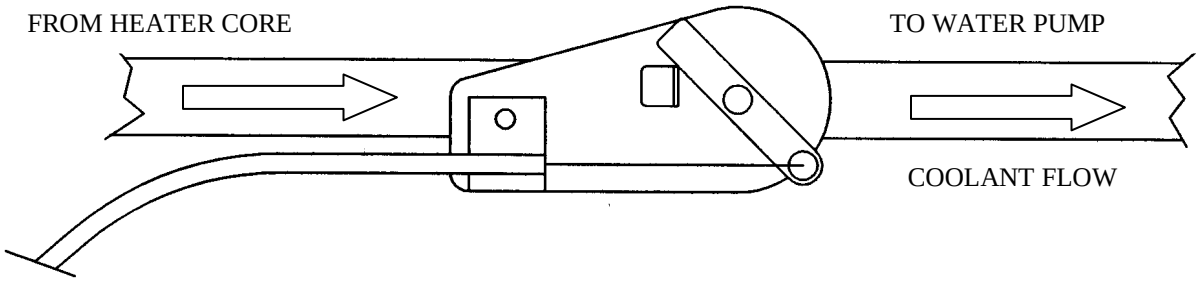
IMPORTANT

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