“PERFECT FIT SERIES”
IN-DASH

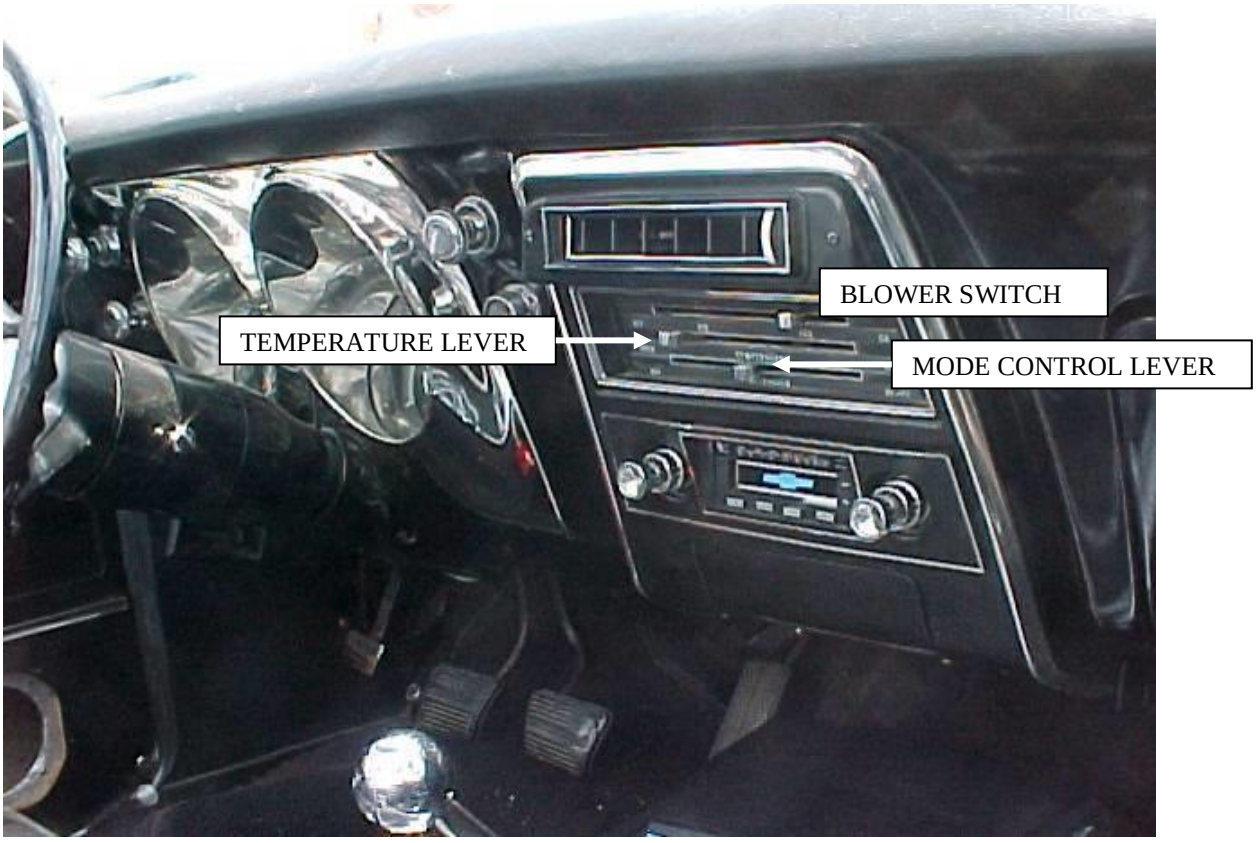
HEAT/ COOL/ DEFROST

1967 CHEVROLET CAMARO/ FIREBIRD

NOTE: INSTRUCTIONS DEPICT CAMARO

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 the ability to blend the air between Heat, and Defrost modes.



THE PICTURE YOU SEE ON PAGE ONE SHOWS THE CONTROLS IN THE A/C MODE. THIS MEANS THAT THE AIR WILL BE DISTRIBUTED THROUGH THE DASH LOUVERS. THIS ALSO HAS THE TEMPERATURE LEVER IN THE COLD POSITION. WITH THE CONTROLS IN THIS POSITION YOU WILL GET THE AIR THROUGH THE LOUVERS AT THE COLDEST TEMPERATURE AVALIABLE.

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 which is mounted on the defrost air housing.

FLOOR / FACE / DEFROST MODE: When the BOTTOM lever is pulled all the way to the LEFT, it will direct the air to the floor ducts. When the lever is moved into the CENTER position the air is directed to the Dash Louvers. When the lever is pushed to the far RIGHT, the air will be directed onto the defrost outlets. When the lever is in the Defrost position the A/C Compressor is activated and provides Dehumidification.

TEMPERATURE CONTROL: The temperature lever as shown is in 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.

AIR CONDITIONING MODE: The picture shows the controls in the A/C Mode (air-flow out the louvers).
When Air Conditioning is required the compressor clutch must be activated. This is accomplished when the bottom lever is in the Center position. When the compressor is activated the Temperature Lever will control the air from maximum cold through maximum heat.

INSTALLATION INSTRUCTIONS
1967 CHEVROLET CAMARO/ FIREBIRD

NOTE: INSTRUCTIONS DEPICT CAMARO

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
Defrost / Heat Duct Assembly
Inlet Air Block off Assembly
Firewall Block off Assembly
Flex hose 2" dia. (4) 2', (1) 4', (1) 52"
Sack Kit Hardware (2)
Sack Kit Control
Glove box

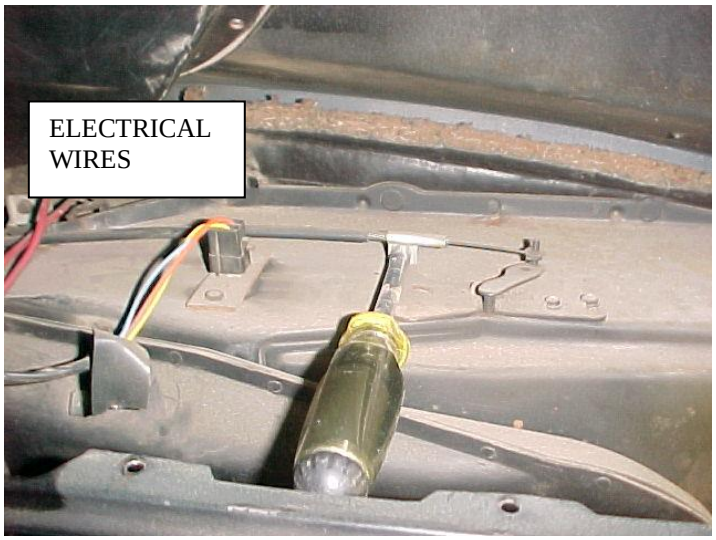
IMPORTANT INFORMATION

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, glove box, discard glove box retain original hardware. Remove Ash tray assembly, and radio, set aside for reinstall. Retain original hardware.

Remove center trim bezel from the instrument panel. Retain original hardware.

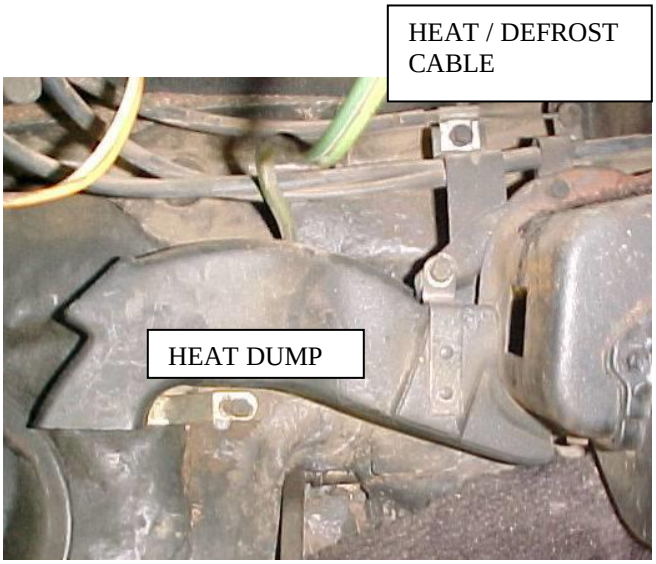


Removal of the Original Heater Assembly can be accomplished by disconnecting the three control cables.
One attached to the Temperature door.

Disconnect the electrical wires at the resistor.

One attached to the Heat / defrost door. This can be found behind heater box next to the throttle cable.

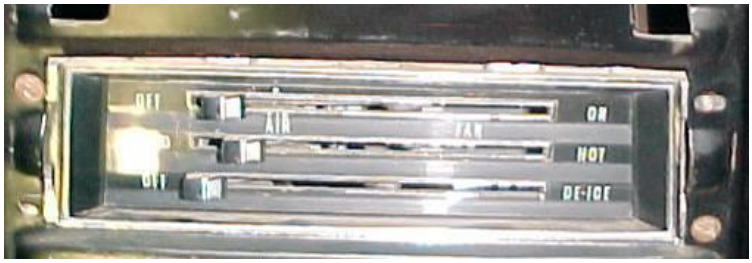
Also remove the heat dump and discard.

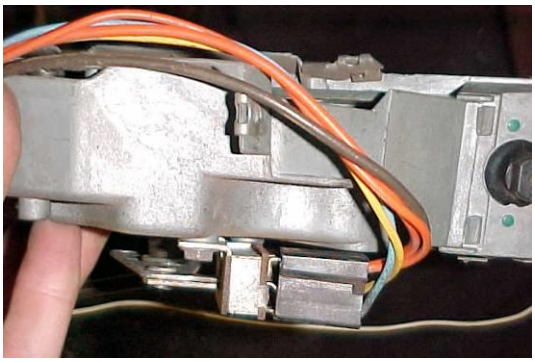


Third cable is located on top of heater next to the defrost ducts.

Locate (4) screws and remove original control head.

Retain original hardware.

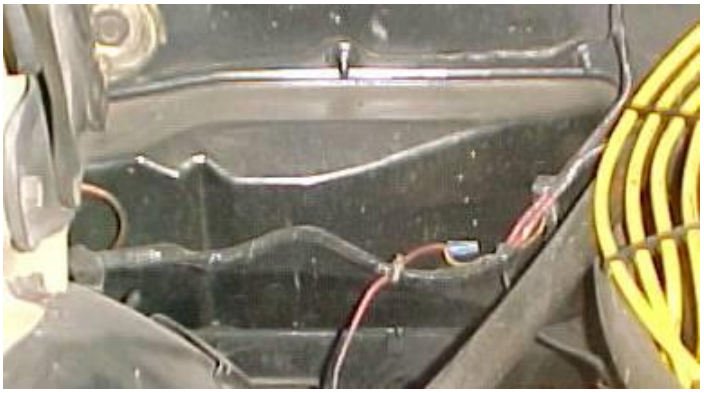




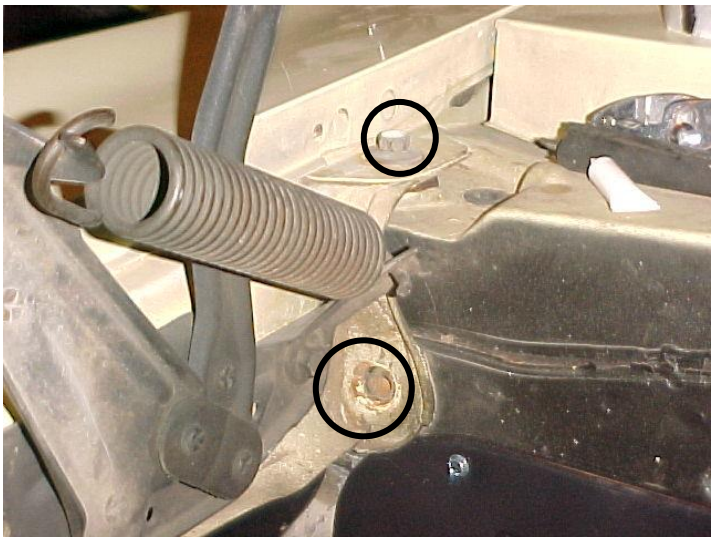
When removing control assembly disconnect the electrical plug on the switch. Also remove light socket.

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

It is also necessary to remove the passenger side fender.



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



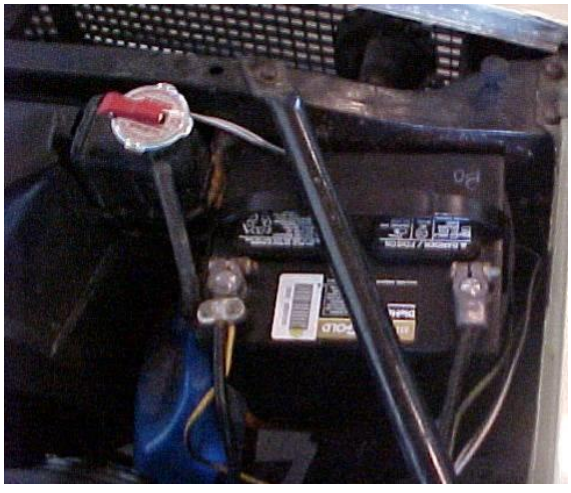
Remove hood and retain the original hardware.

Remove (2) bolts as shown.

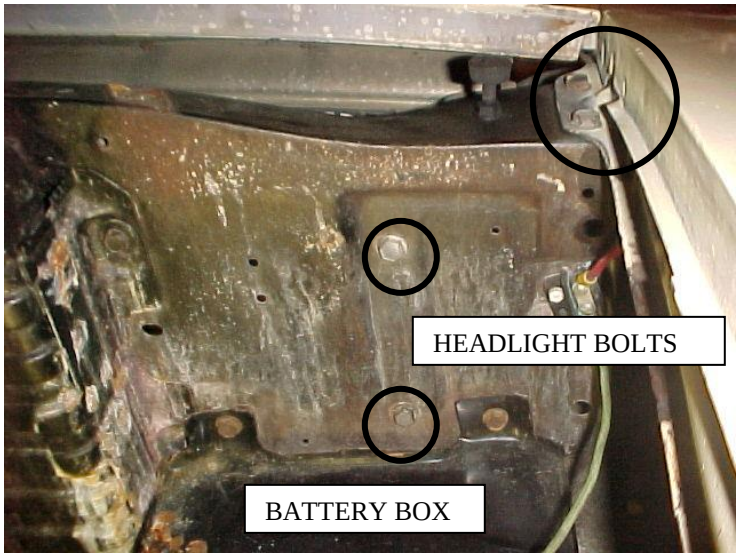
Located behind the passenger door remove fender bolt.

Located just behind and at the bottom of wheel opening is a fender bolt remove and retain.

CAUTION: FENDER IS INSTALLED WITH SPACERS FROM THE FACTORY. MAKE NOTE OF QUANTITY FOR REINSTALLATION.

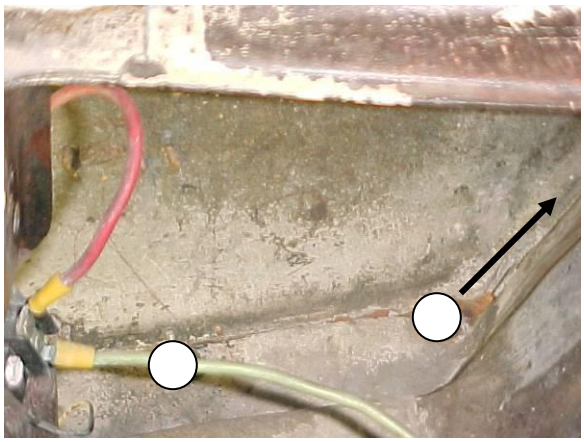


Remove fender brace, battery and battery tray, retain original hardware.



Remove (2) bolts at the radiator bulkhead.

Remove (2) bolts that support the head light bracket.



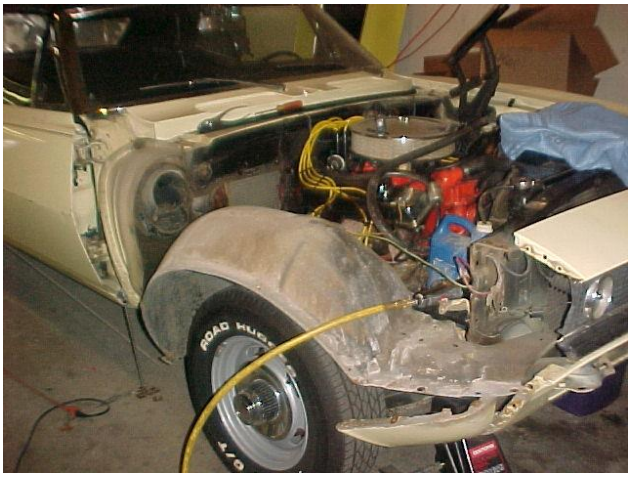
Located behind battery tray is a series of bolts. These bolts attach the fender from the front and along the wheel well.

Remove and retain all of these bolts.

Remove head light assembly.

Located at top of the light opening are (2) bolts that connects the fender with the front panel.

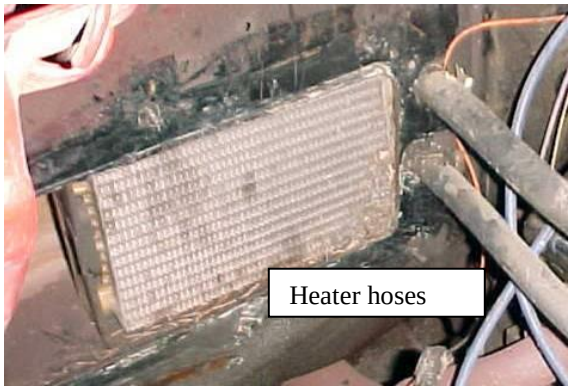
Remove and retain.



Carefully remove the front bumper.

Carefully remove fender and set aside.

Remove the blower and housing assembly. Discard and retain (2) screws that are above and below the blower motor.



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

Located behind the glove box.
Remove heater assembly and discard.

Locate the air inlet block off from the kit.

Using the original hardware attach over inlet hole.

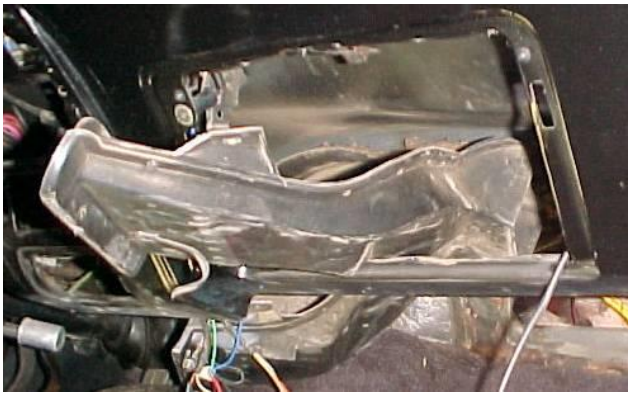
REASSEMBE FRONT FENDER AND

INSTALL THE LIGHT ASSEMBLY, FRONT BUMPER AND THE HOOD. BE SURE THAT THE BODY SPACERS ARE IN THE CORRECT LOCATION.

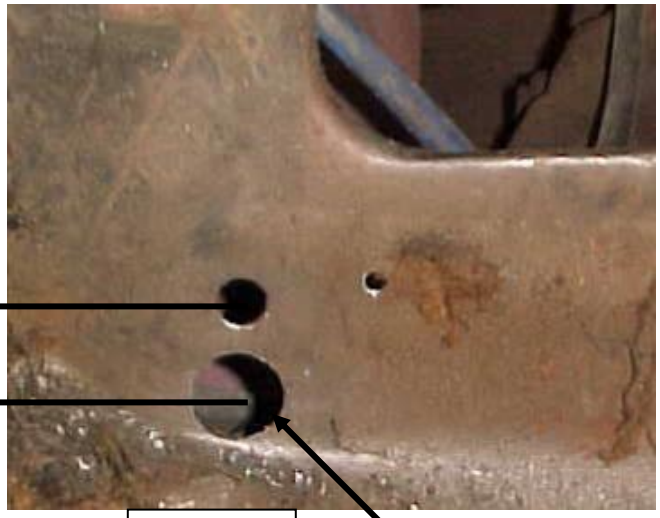
Locate Defrost Air Duct behind control opening in the instrument panel.

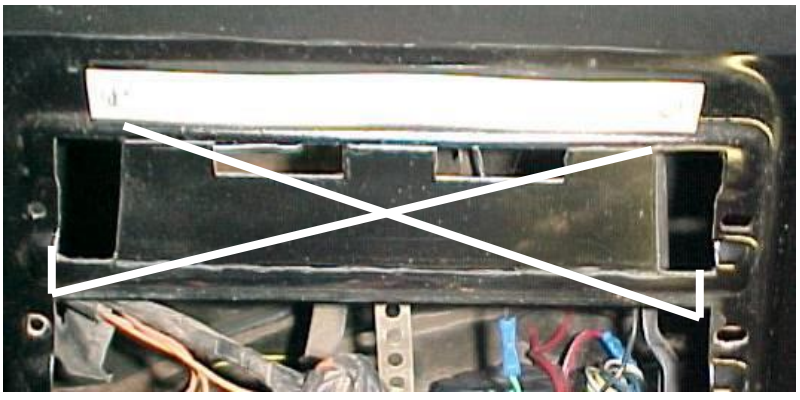
Remove (2) mounting screws and remove duct through the glove box opening.

Discard the duct retain original hardware.



Locate behind the glove box and on firewall the hole that previously mounted the heater box. Drill (1) ¾" dia. hole for the drain tube as shown.

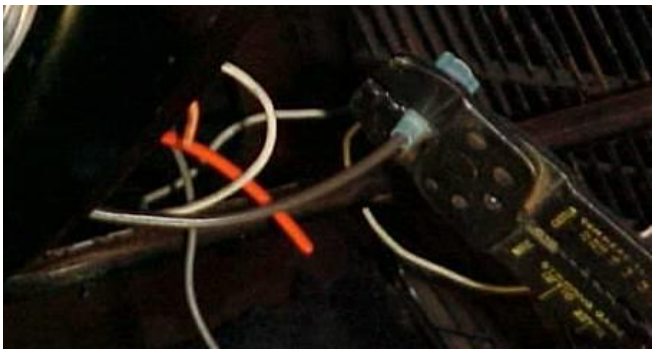




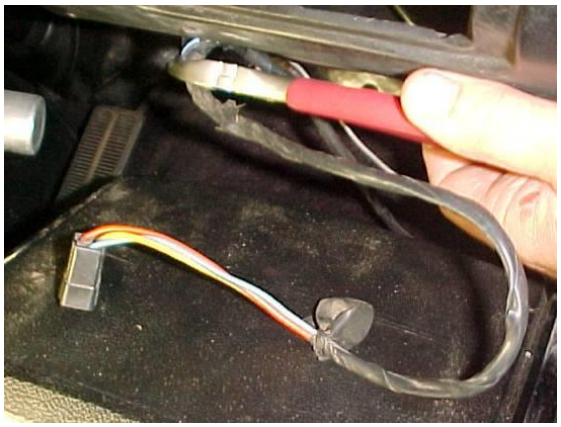
Above the control panel opening, cut out the center and down to the control opening of the block off, as shown for the center louver assembly

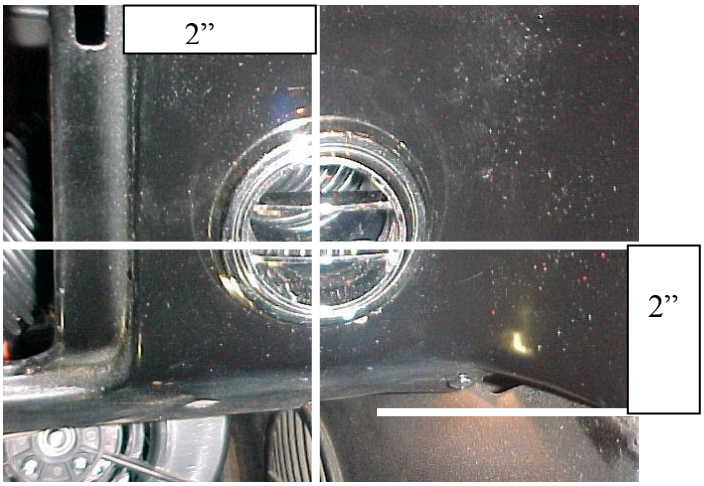
Locate wire assembly that plugged into the original blower switch. Cut all but the brown wire as far back as you can.

Cut the brown wire at the plug. And attach a male insulated spade connector.



Locate the wire assembly that attached to the resistor. Cut the wires back as far as possible.





Locate in the hardware sack kit (1) Ball Louver Assembly.

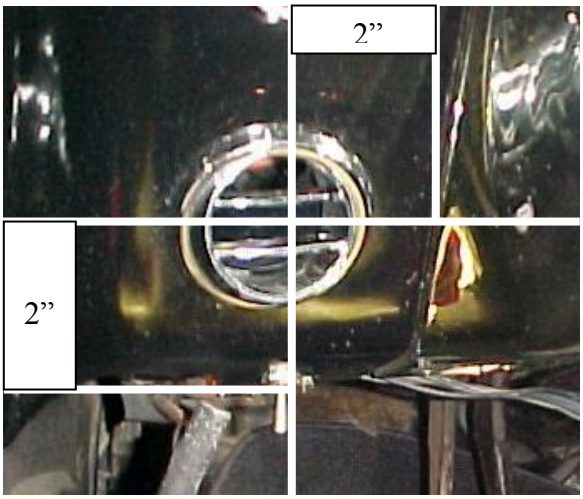
Carefully locate and cut a 2 ½” diameter hole on passenger panel beside the glove box opening.

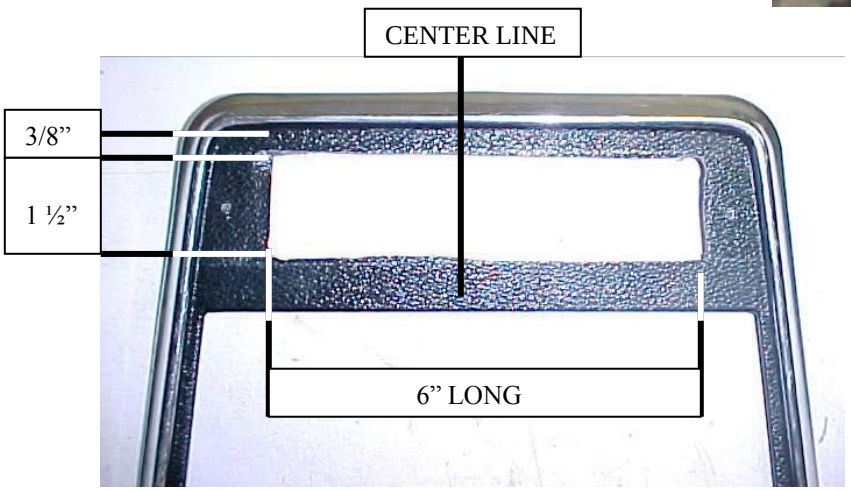
Attach ball louver through the hole.

Locate in the hardware sack kit (1) Ball Louver Assembly.

Carefully locate and cut a 2 ½” diameter hole on the drivers panel beside the instrument gauges.

Attach ball louver through the hole.





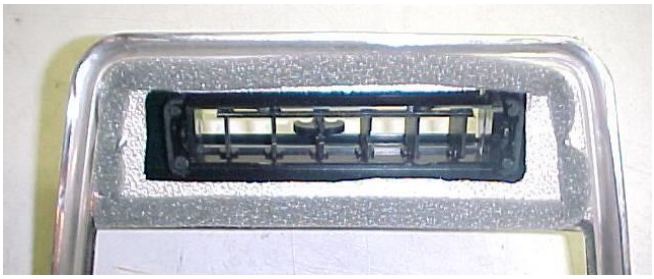
Locate the original center trim bezel.

Cut a hole in the bezel as shown in picture to the left.

Locate in the hardware sack kit the center louver assembly and (2) #6 x 1” pan head philips screws.

Place louver assembly over the trim bezel and drill (2) 1/8” dia holes using the trim bezel as guide.

Attach louver assembly using (2) #6 screws.

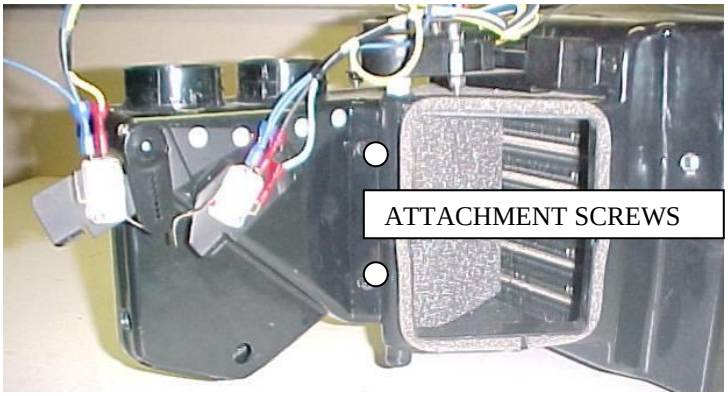


Locate in the hardware sack kit the ¼” x ½” open cell foam.

Turn bezel assembly over and attach to back of the assembly as shown.

All of the modifications to the vehicle are complete we will now begin the installation of the Unit.

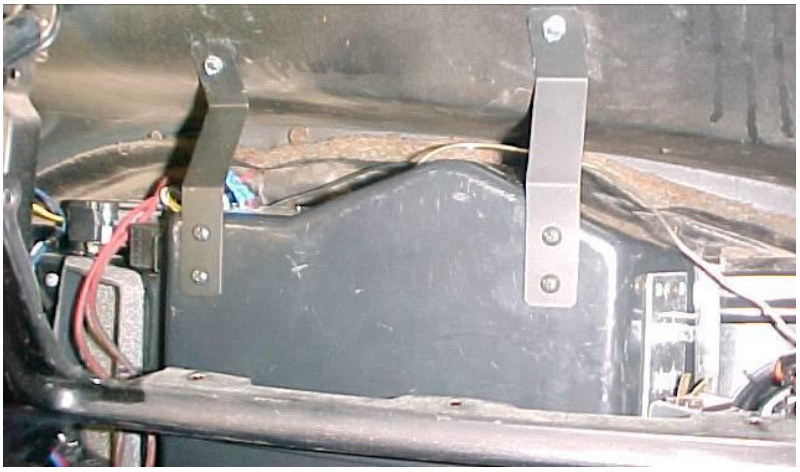
Locate Evaporator, Defrost Duct Assembly, and (2) #10 x 5/8" pan head screws. Attach defrost duct to the evaporator using (2) screws. Be sure that s-clips on back of the duct are attached to opening flange on the evaporator.



Locate electrical harness that is attached to the face door and connect to the micro switches. Refer to the wiring diagram on page 15 for correct connections.

Place Evaporator assembly on passenger floor. Lift into place.

Insert 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) mounting brackets, (2) #10 x ¾" tek screws, and (4) #10 x 5/8" pan head screws.

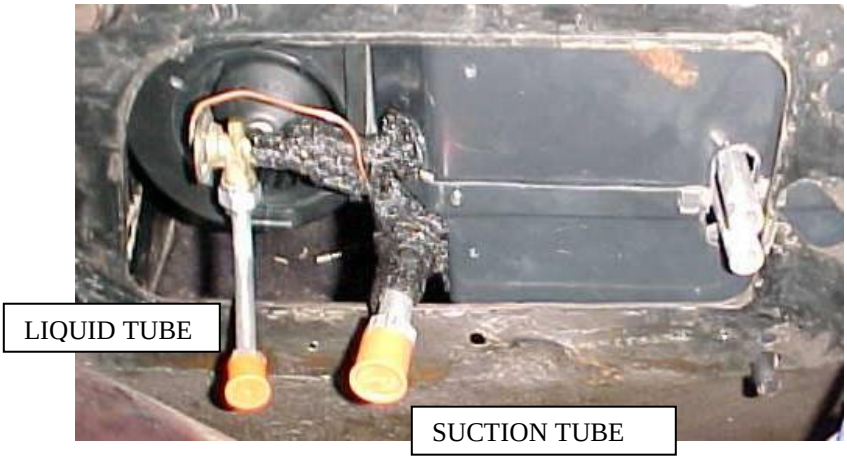
Attach brackets to the holes provided on front of the evaporator using the #10 pan head screws.

Holding evaporator level with bottom of the glove box opening attach to body of the car using (2) tek screws.

CAUTION: INSTALL SCREWS USING A NON-POWERED SCREW DRIVER.

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

Install Suction Tube to the outlet on 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 Expansion valve (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 the hookup tubes from the evaporator using (7) #10 x ¾" hex washer head Tek screws.

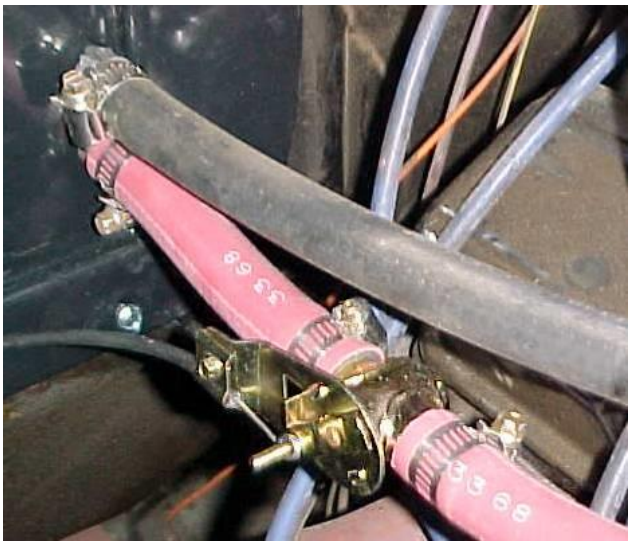
Locate refrigeration tape provided and seal around the hookup tubes.

Locate above the evaporator and drill a 3/8" diameter hole.

Locate the Water Valve and (3) worm gear clamps.

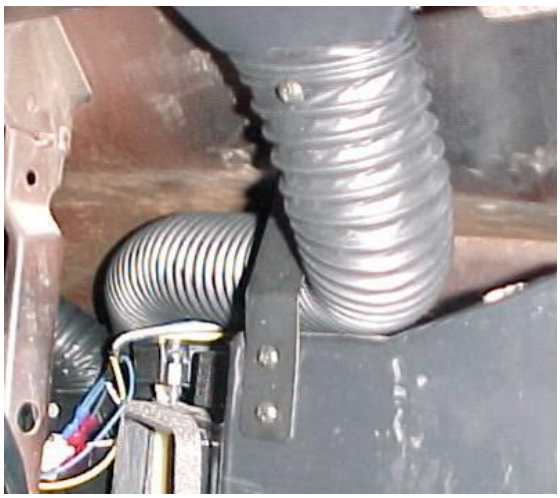
Supply line from the engine is attached to the upper heater hookup tube. Cut 6” off end of the return line and install the water valve using (3) worn gear clamps as shown above.

Note: It is recommended that you replace heater hoses from the engine to the hookup tubes.



Locate in the hardware sack kit (2) Defrost diffusers, 2” dia. flex hose.

Cut the 2” flex hose 19”and 24”. Attach these to the defrost diffusers using the #8 pan head screws.

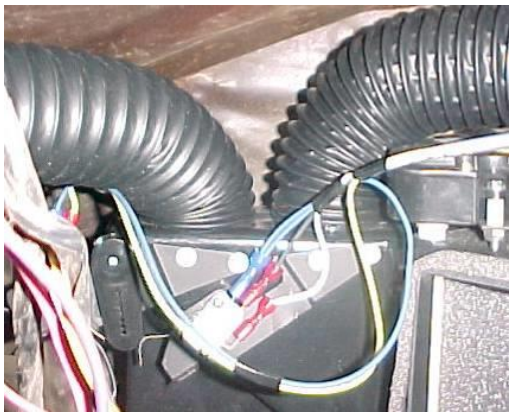


Locate defrost diffuser with the 24” flex hose and attach it behind the glove box opening so it lines up in middle of the defrost outlet.
Attach using (2) s-clips on the lip of defrost opening.

Locate defrost diffuser with the 19” flex hose and attach behind the instruments and in middle of the defrost outlet.

Route flex hose over top and behind the unit bracket and over to right outlet on the defrost duct.

Route flex hose from the drivers diffuser over to left outlet on the defrost duct.

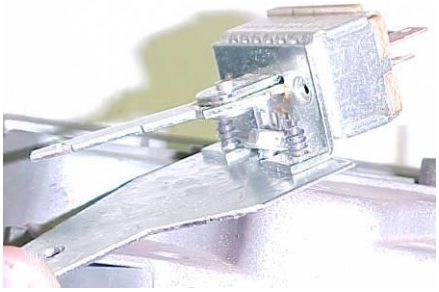


Locate the original control assembly. Remove and discard following components. Retain all original hardware.

(1) Original Blower Switch
(2) Heat Cable
(3) Temp Cable
(4) Air Shutoff Cable

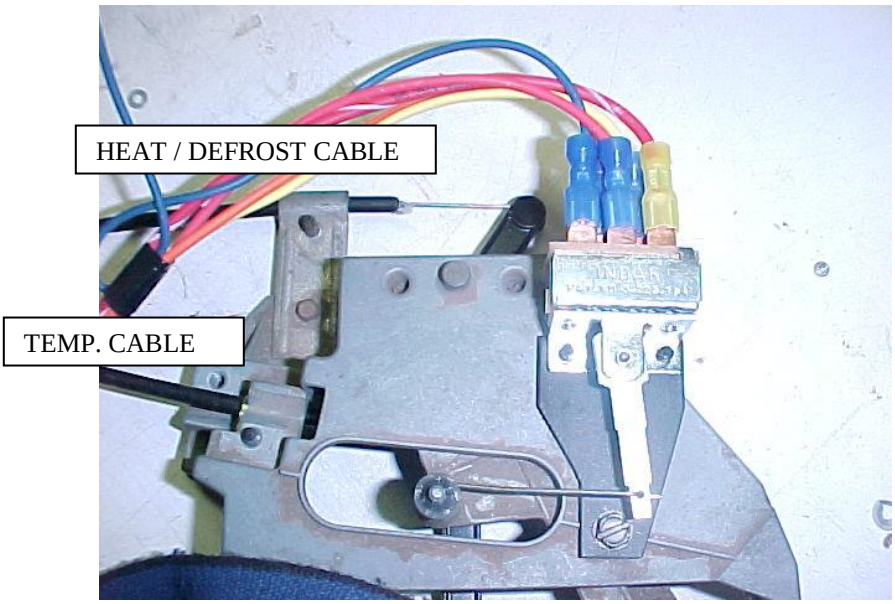
Attach Blower Switch assembly on to control head using the original hardware.

As shown in picture below it is necessary to rotate the assembly and slide over the screw that will be under the switch. This screw will need to be tightened with a wrench.



Locate in the control sack kit the Connecting Wire and (1) 3/16” push nut.

Hook the wire through blower switch hole in the lever and then over the Control Lever. Use push nut to hold the connecting wire.



Locate in the control sack kit the (SHORT) Heat / Defrost control cable, (LONG) Temperature control cable, (2) 3/16” push nuts, and (2) Cable Clips.

Rotate the control head upside down. Attach temperature control cable and clip to the center lever arm using original screw and 3/16” push nut.

NOTE: The cable sleeve is located against the control lever when it is in the far right position.

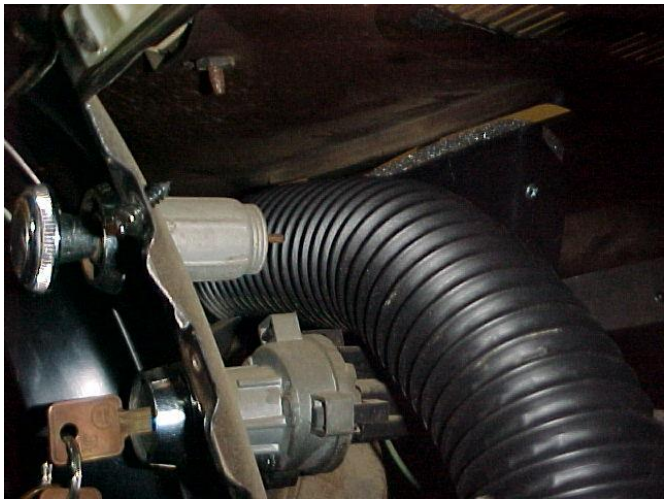
Attach Heat / Defrost cable to control lever on the bottom. Using (1) cable clip, (1) push nut, and the original screw.

NOTE: The cable sleeve will touch the control lever when it is in the far right position.

Attach Wire Harness supplied in unit to the blower switch.

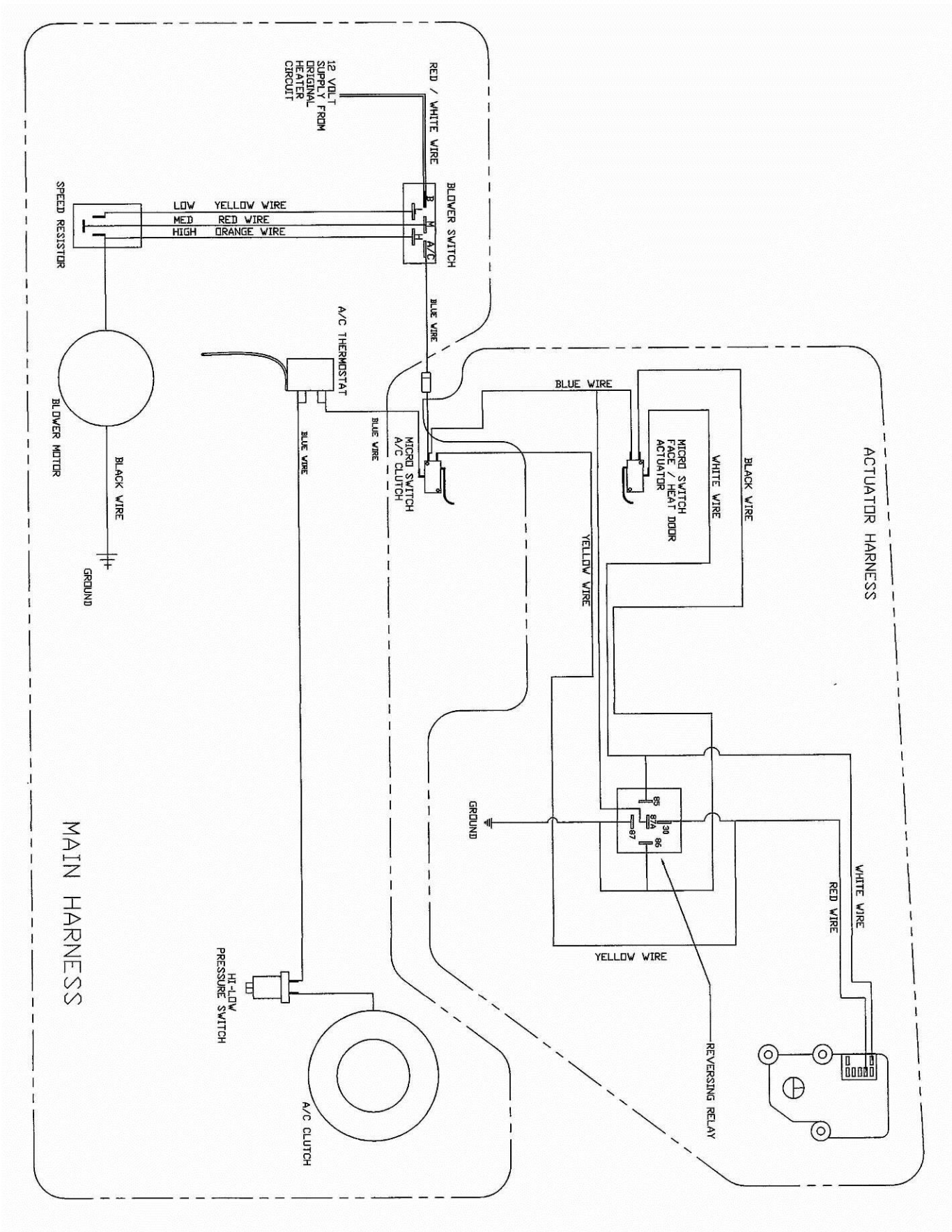
REFER TO THE WIRING DRAWING ON NEXT PAGE FOR PROPER CONNECTIONS.

NOTE: NEXT FEW STEPS ARE LOCATED BEHIND THE INSTRUMENT PANEL.



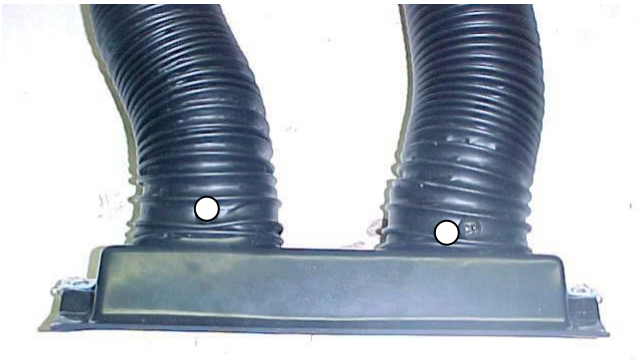
Locate 2” flex hose and cut off 52”.

Route flex hose from control opening over the ignition switch and across top of the instruments and down to the drivers ball louver. Attach to the louver.


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
BLUE WIRE
MICRO SWITCH FACE / HEAT DOOR ACTUATOR
WHITE WIRE
BLACK WIRE
YELLOW WIRE
GROUND
85
87A
30
87
86
WHITE WIRE
RED WIRE
YELLOW WIRE
REVERSING RELAY
HI-LOW PRESSURE SWITCH
A/C CLUTCH

Locate in the hardware sack kit the center hose adapter, and
2” dia. flex hose from the kit.

Cut (1) piece of flex hose 24” long, and one piece 19” long. Attach longest piece to the right hose adapter using (1) #10 x 5/8” pan head screw. Other piece attaches to the left adaptor using (1) #10 x 5/8” pan head screw.



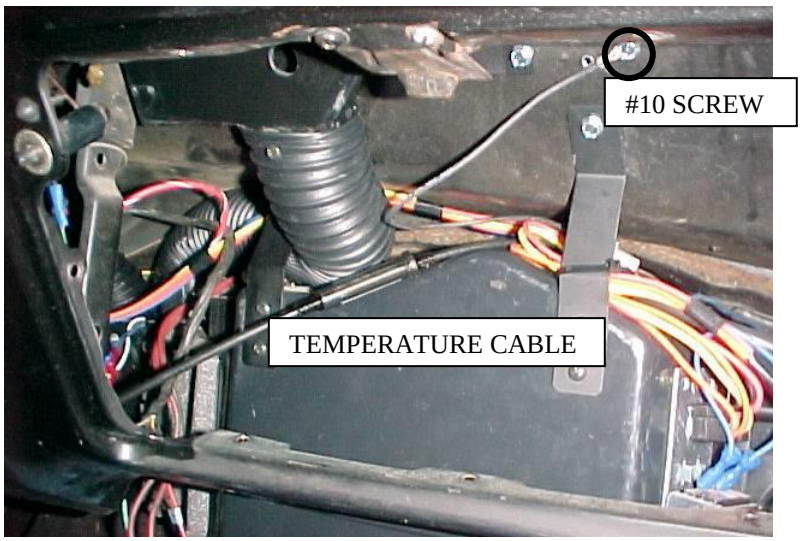
Install center hose adaptor behind the opening as shown. Secure using (2) #10 x 5/8” pan head screws.

Also install control head using the original hardware.

Connect power wire (brown / from the original harness) to Red / White stripe from the new harness supplied.

Route harness across top of the evaporator and connect to resistor, motor and thermostat. Refer to the wiring diagram.

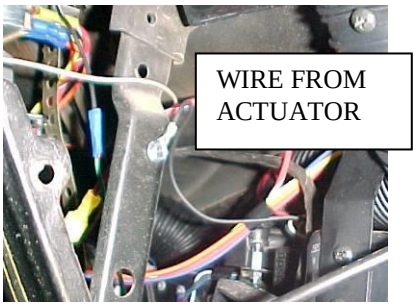
Locate black wire with ring terminal from the blower motor and (1) #10 tek screw.
Attach this terminal to the body as shown.

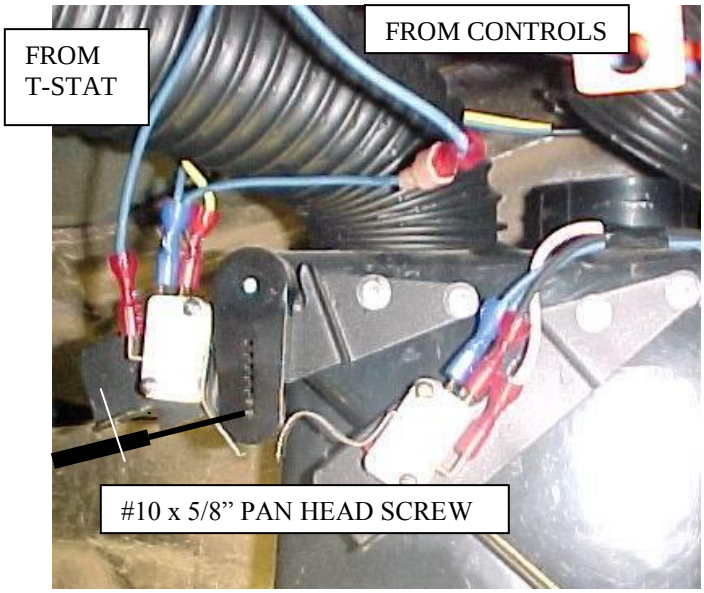


Route longest of the cables across

and over evaporator and out hole above the evaporator that was previously drilled. Also route blue clutch wire from the thermostat out the same hole.

Locate ground wire from the actuator harness and attach it to the brace as shown. use (1) #10 tek screw.





Locate (2) blue wires at the control end of the wire harness. The wire from the controls attaches to the jumper connector on the micro switch.

Wire from the thermostat connects directly to the micro switch.

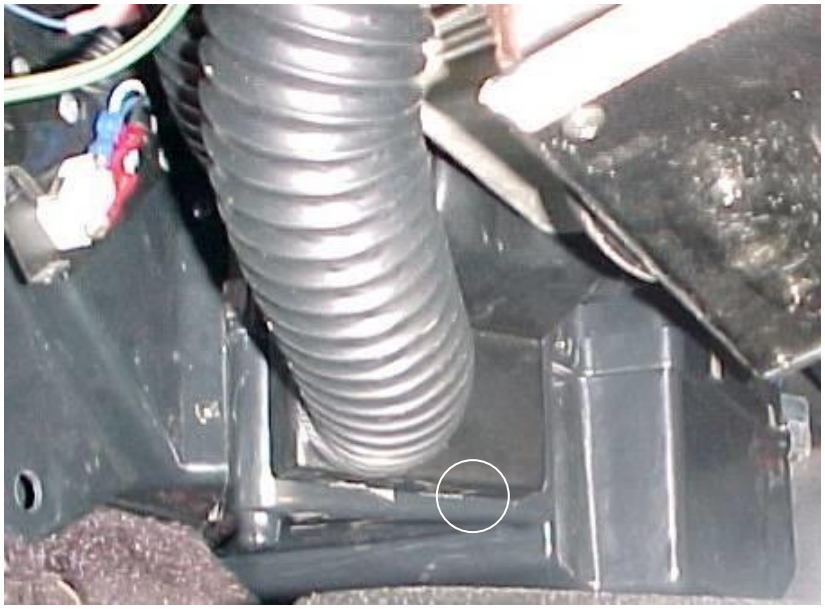
Route shortest of the (2) cables and attach to the defrost / heat duct. Insert cable into the first hole at the bottom.

Attach using (1) #10 x 5/8" pan head philips screw.

Locate the face duct assembly. Attach to the evaporator outlet using the s-clips at top and bottom of the duct.

Locate 2" Dia. flex hose from the left center louver adapter. Attach to the face duct over the left outlet.

Locate 2" Dia. flex hose from the right center louver adapter. Attach to the face duct over the top outlet.



Locate the 2" Dia. flex hose. Cut (1) piece 42" long. Attach to the face duct over the right outlet. Route up and over glove box and attach to the passenger louver.

Locate the 2” Dia. flex hose that was routed to the drivers louver and attach to the remaining outlet.

Locate the center trim bezel. Using original hardware reinstall over the outlet and the controls.

Reinstall the radio, and the ash tray using original hardware.

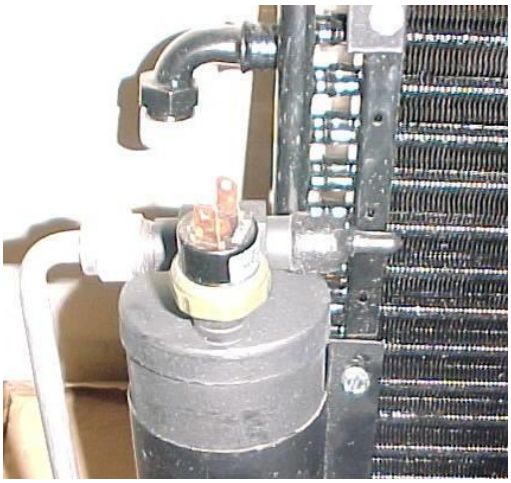
Locate New Glove Box supplied in kit. Slide through opening as shown. Reinstall the glove box door. Attach using original hardware.

Attach the glove box 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.

Locate the Condenser, (2) top condenser mounting brackets, (2) bottom condenser mounting brackets, and (8) #10 x 3/8” hex head screws. Attach brackets to the condenser as shown. do not tighten at this time.

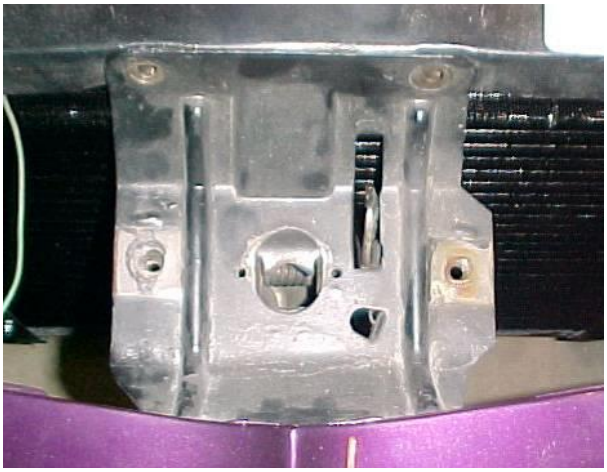


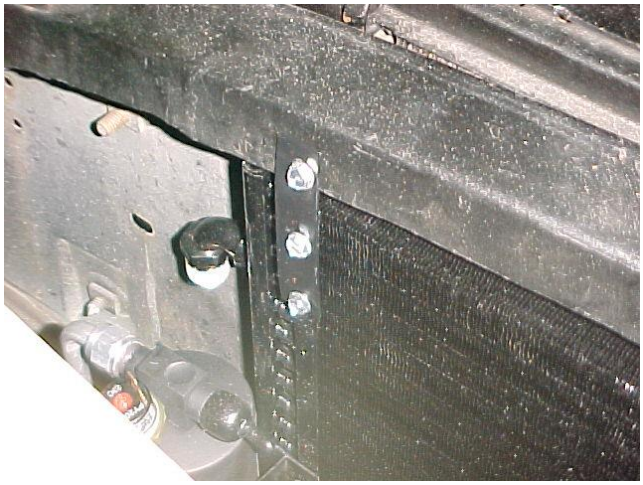
Locate the Receiver Drier, Drier Mounting Bracket, Aluminum Liquid tube, (2) #6 o-rings, and (2) #10 x 3/8" hex head screws.

Install the Receiver drier to the condenser 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 Hi-Low pressure switch and attach to top of the receiver drier using a few drops of mineral oil.

Remove the hood latch assembly. Retain original hardware.

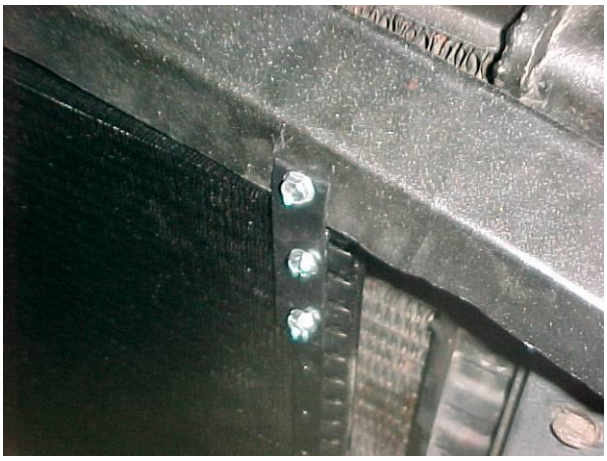


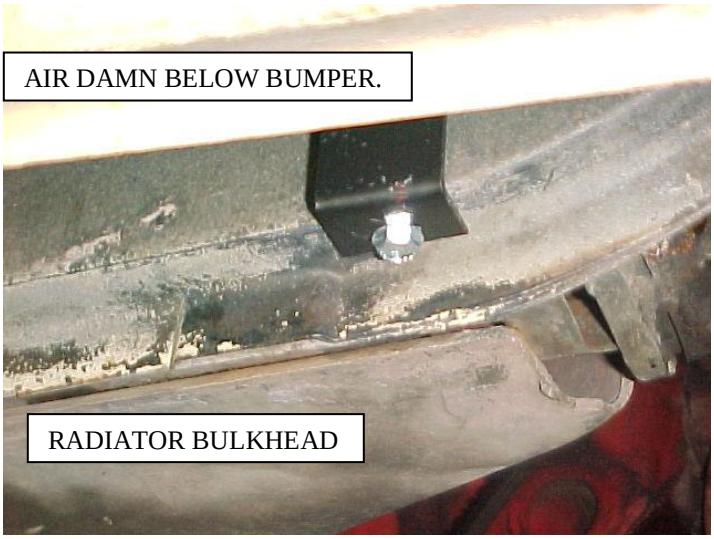


Slide condenser assembly down in front of the radiator.

Locate (2) #10 x ¾" tek screws from hardware sack kit.

Locate condenser in the center of the radiator. Attach top condenser brackets to the bulkhead using (2) #10 screws.





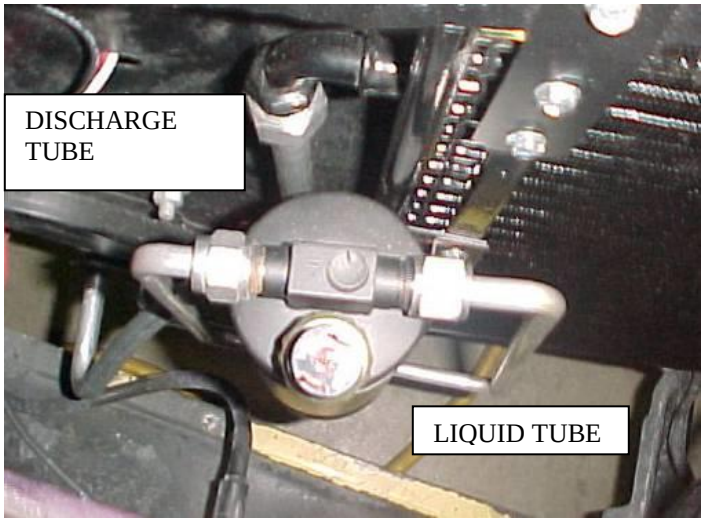
Located behind the air damn and at the lower radiator bulkhead, attach the lower condenser brackets using (2) # 10 screws.

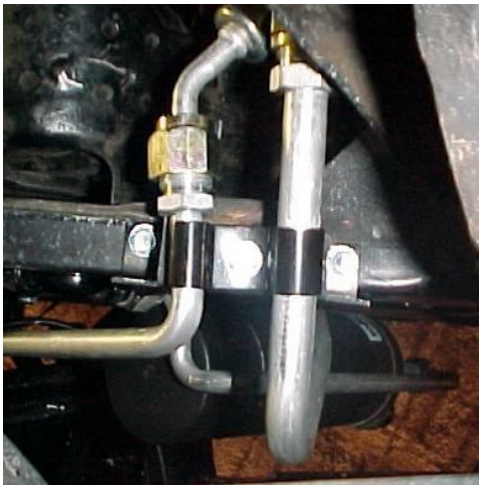
Reinstall hood latch assembly using original hardware.

Locate the Liquid tube, Discharge tube, (1) #6 o-ring, and (1) #8 o-ring.

Attach Liquid tube to the drier using the #6 o-ring and a few drops of mineral oil.

Attach Discharge tube to the condenser using #8 o-ring and a few drops of mineral oil.





Locate the tube support bracket, the tube clamp, and (2) #10 x ¾" tek screws, and (1) #10 x ½" hex head screw.

Attach the support bracket to the radiator bulkhead using (2) #10 x ¾" tek screws.

Attach liquid and discharge tubes using the tube clamp, using (1) #10 x ½" screw.

Reinstall the hood latch assembly. Using original hardware.

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

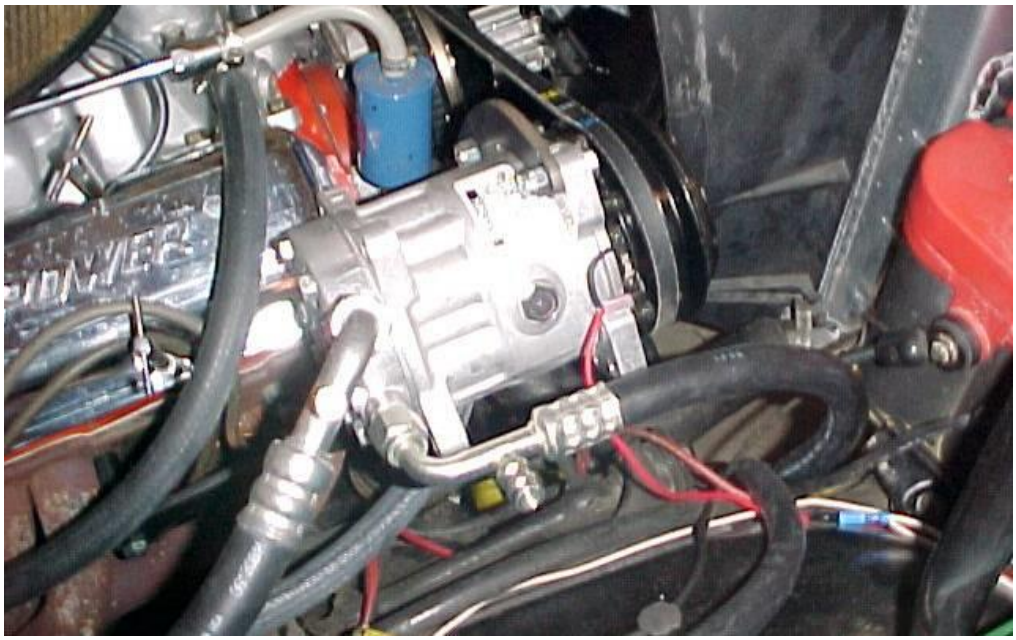
NOTE: THIS INSTALL IS CORRECT FOR A 350CID V8 ENGINE, WITH ALTERNATOR ON DRIVERS SIDE OF VEHICLE.
IF YOUR VEHICLE IS EQUIPTED WITH A DIFFERENT ENGINE PACKAGE IT WILL BE NECESSARY TO ROUTE THE HOSES DIFFERENT

Locate the #10 refrigerant hose.
Attach 45 deg. end to #10 fitting at the firewall. Attach using (1) #10 o-ring and a few drops of mineral oil. Attach the end with the service fitting to the compressor using (1) #10 o-ring and a few drops of mineral oil.
Tighten securely.

Locate the liquid hose, and (2) #6 o-ring.
Attach one of the ends to the liquid connection at the firewall. Route other end along inner fender and down to the condenser fitting. Attach using #6 o-ring and a few drops of mineral oil.

Attach #8 refrigerant hose with service port end to the compressor using (1) #8 o-ring and a few drops of mineral oil.

Attach other end to the fitting from the condenser.
Tighten securely.



Reinstall fender brace, battery and battery tray, using original hardware. Refill radiator.

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 25 amp minimum

Congratulations you have completed the install of your CLASSIC AUTO AIR "PERFECT FIT SERIES" system.

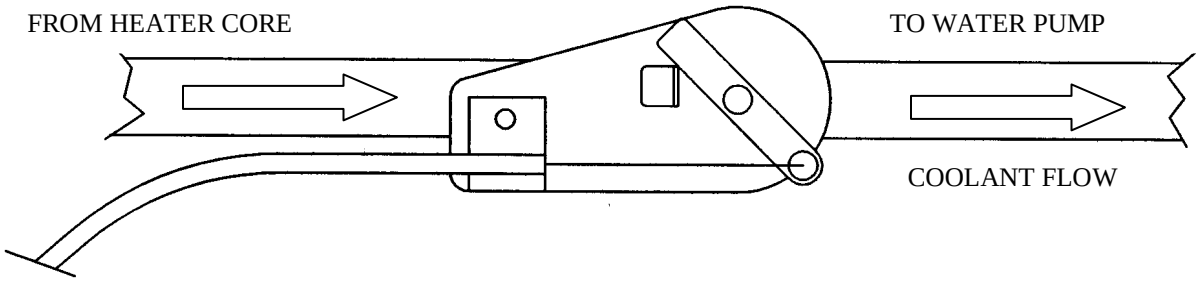
IMPORTANT

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