



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

“PERFECT FIT”

IN-DASH

HEAT/ COOL/ DEFROST

1968-76 CHEVROLET CORVETTE

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 Face and Heat / Defrost modes.



HEATER ONLY



FACTORY AIR

THE PICTURES YOU SEE ABOVE SHOWS THE CONTROLS IN THE FACE MODE. THIS MEANS THAT THE AIR WILL BE DISTRIBUTED THROUGH THE FACE OUTLETS. THIS ALSO HAS THE TEMPERATURE WHEEL IN THE COLD POSITION. WITH THE CONTROLS IN THIS POSITION YOU WILL GET THE AIR THROUGH THE FACE 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 FUNCTION 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 main housing.

FACE AND FLOOR / DEFROST MODE: When the CONTROL WHEEL is rotated to the FRONT of the vehicle, it will direct the air to the floor / and defrost ducts. The control wheel can be moved both directions. This will give blend between all distribution outlets.

TEMPERATURE CONTROL: The temperature WHEEL as shown is in the COLDEST temperature position. As the wheel is rotated to the rear of the vehicle 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 CONTROL WHEEL in the Face Mode (air-flow out the face outlets).
When the Mode control wheel is rotated to the REAR of the vehicle the Air Conditioning is activated the compressor clutch is on. When the compressor is activated the Temperature Lever will control the air from maximum cold through maximum heat.



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

***INSTALLATION INSTRUCTIONS
1968-76 CHEVROLET CORVETTE
WITH / WITHOUT FACTORY AIR***

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
Defrost Duct Assembly
Firewall Block Off
Inlet Block Off
Air Distribution Assembly
Flex Hose 2”dia. x 8 ft.
Sack Kit Hardware
Sack Kit Control
Control Cables (2)

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

CAREFULLY REMOVE THE HOOD FROM THE CAR AND SET ASIDE.

DISCONNECT BATTERY. (BATTERY IS LOCATED INSIDE THE CAR BEHIND THE DRIVERS SEAT).

THE PROCEDURE TO REMOVE THE FACTORY AIR DASH IS THE SAME AS THE NON AIR CARS.



On the passenger side of the instrument panel. Locate and remove the (5) screws that attach the cover to the car. Retain original hardware.

There are (2) screws located in the center of the dash to the right of the gauges. Remove and retain hardware.

Remove the dash cover and set aside for later reinstallation.



Remove the (3) screws that hold the center bezel in place.

Remove the screws that hold the heat duct to the center bezel. (NOT FACTORY AIR)



Remove bezel and retain original hardware.



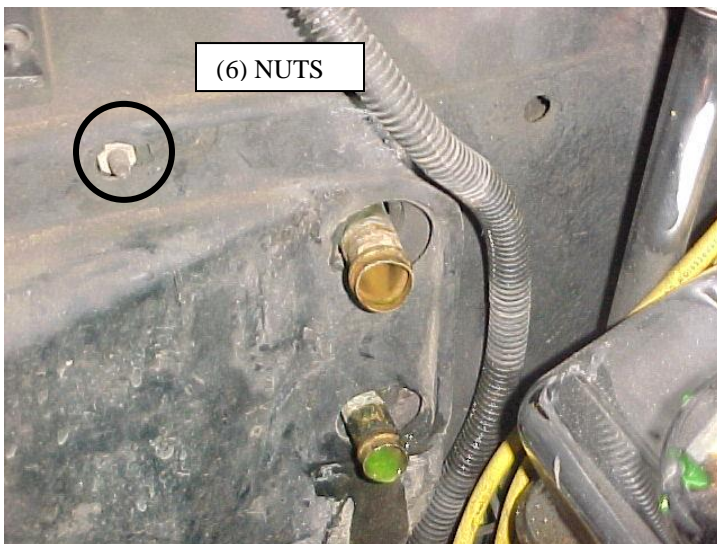
HEATER ONLY VEHICLES



Remove the auxiliary heat duct from the top of the heater assembly. Discard the duct and the mounting hardware.

Located on the passenger side kick panel is the air inlet duct for the passenger louver.

Remove the wing nut and remove the duct. Discard duct and hardware.



Located on the engine side of the firewall is the blower assembly. Remove the (6) nuts around the outside of the housing. Disconnect the electricals to the motor. Drain radiator and disconnect heater hoses

In order to remove the blower housing it is necessary to remove the blower motor first.

Discard housing, blower assembly and the original mounting hardware.





Locate top of the heater the temperature cable.

Discard the original hardware.

Carefully pull the heater assembly away from the firewall. Lay the heater on the floor of the car.

Remove the mode door cable and discard the original hardware.



Turn the heater so that you can disconnect the resistor connection of the back of the heater box.

Remove the heater box and discard.



Locate on the passenger kick panel the inlet collar.

Carefully cut the collar off flush with the firewall.

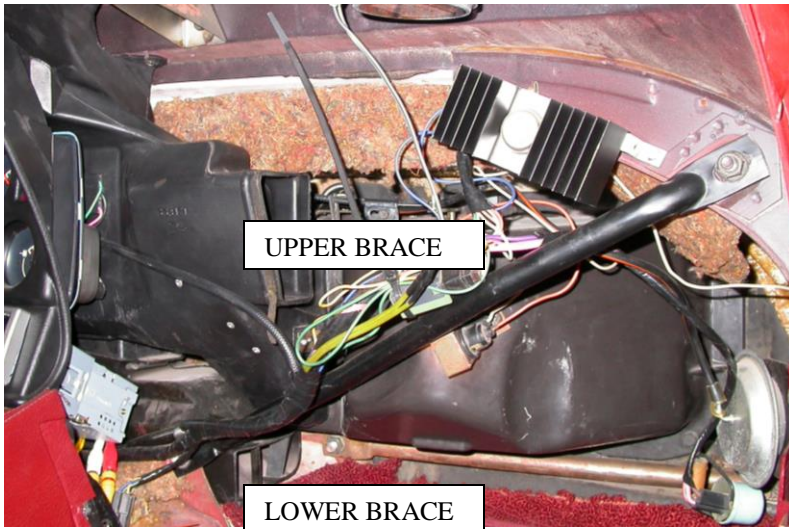


Locate in the hardware sack kit the inlet block off and (2) #10 teak screws.

Attach the block off over the hole using the #10 screws.



HEATER ONLY AND FACTORY A/C CARS WITH CONVERTIBLE TOPS

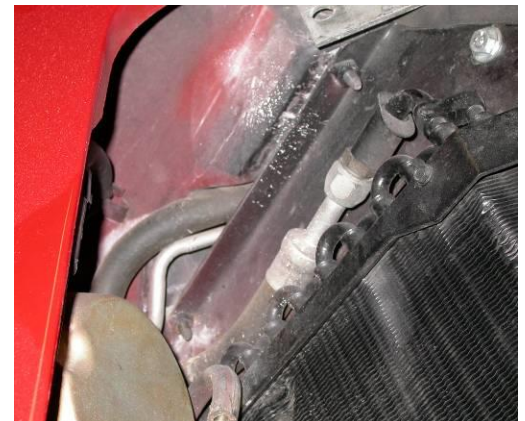


Remove and discard the upper brace.

Remove and retain the lower brace and hardware.

FACTORY A/C CARS

Remove and discard the original condenser assembly and the a/c hoses.

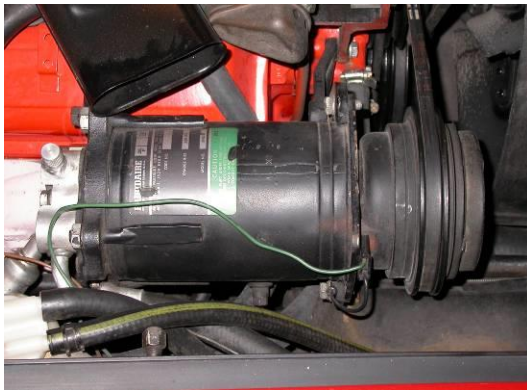


Remove and retain the overflow canister.



Removing the a/c assembly under the hood will require separating the housings.

Remove V.I.R. assembly.



Remove and discard compressor and all mounting brackets.

Remove the radio and the center gauge cluster. Remove and discard the factory distribution ducts all the way to the drivers louver.



ALL CARS 68-73

Remove the (4) screws that hold the console control assembly.



Remove the “VENT” knobs using an allen wrench. Retain knobs.

Remove the console cover. Retain all original hardware.



CAUTION: WHEN VEHICLE IS EQUIPTED WITH FIBRE OPTICS. CAREFULLY REMOVE THE CONSOLE COVER.

After the removal of the console cover remove the (2) screws that hold the control head to the console.



1969-73 CONTROL W/WO FACTORY AIR

Disconnect the vacuum connectors from the controls.



On heater only cars leave harness in console.

On factory air cars remove the entire vacuum harness and the firewall grommet.

Locate the 1 ½” cap plug from the hardware sack kit and install over hole.



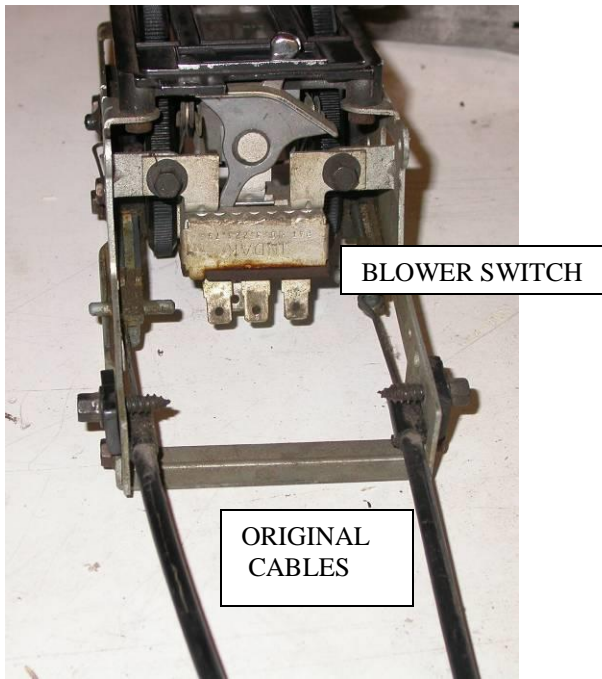
Locate the source for the a/c vacuum harness and remove the t-fitting and add a splice.

1968 – 73 CONTROLS W/WO FACTORY AIR

Disconnect the electrical plug from the switch. Unplug the light to the control. Carefully remove the controls and cables.

Tyrap the plug that was attached to the resistor to the original wire harness.

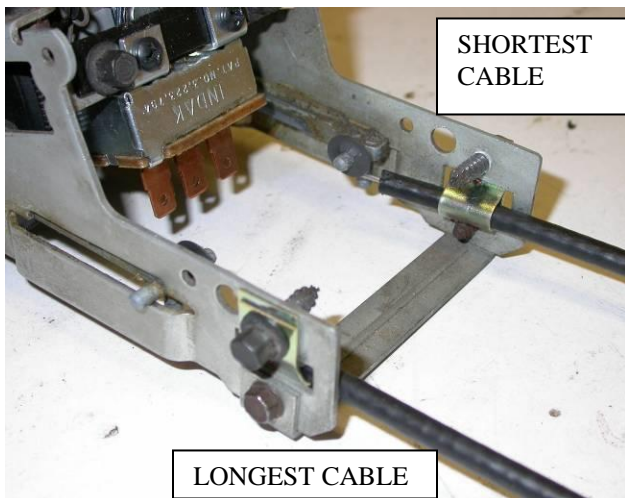




Place controls on bench and remove all of the original electrical switches, vacuum switch and the control cables. Retain original hardware.

Locate in the control bag kit the blower switch assembly, and black switch knob.

Attach the control switch to the control head using the original hardware. Attach the black switch knob to the switch as shown.



Locate the (2) new cable assemblies from the a/c box, (2) push nuts, and (2) cable clips from the control sack kit.

Attach the longest of the control cables to the control head using (1) cable clip and the original hardware.

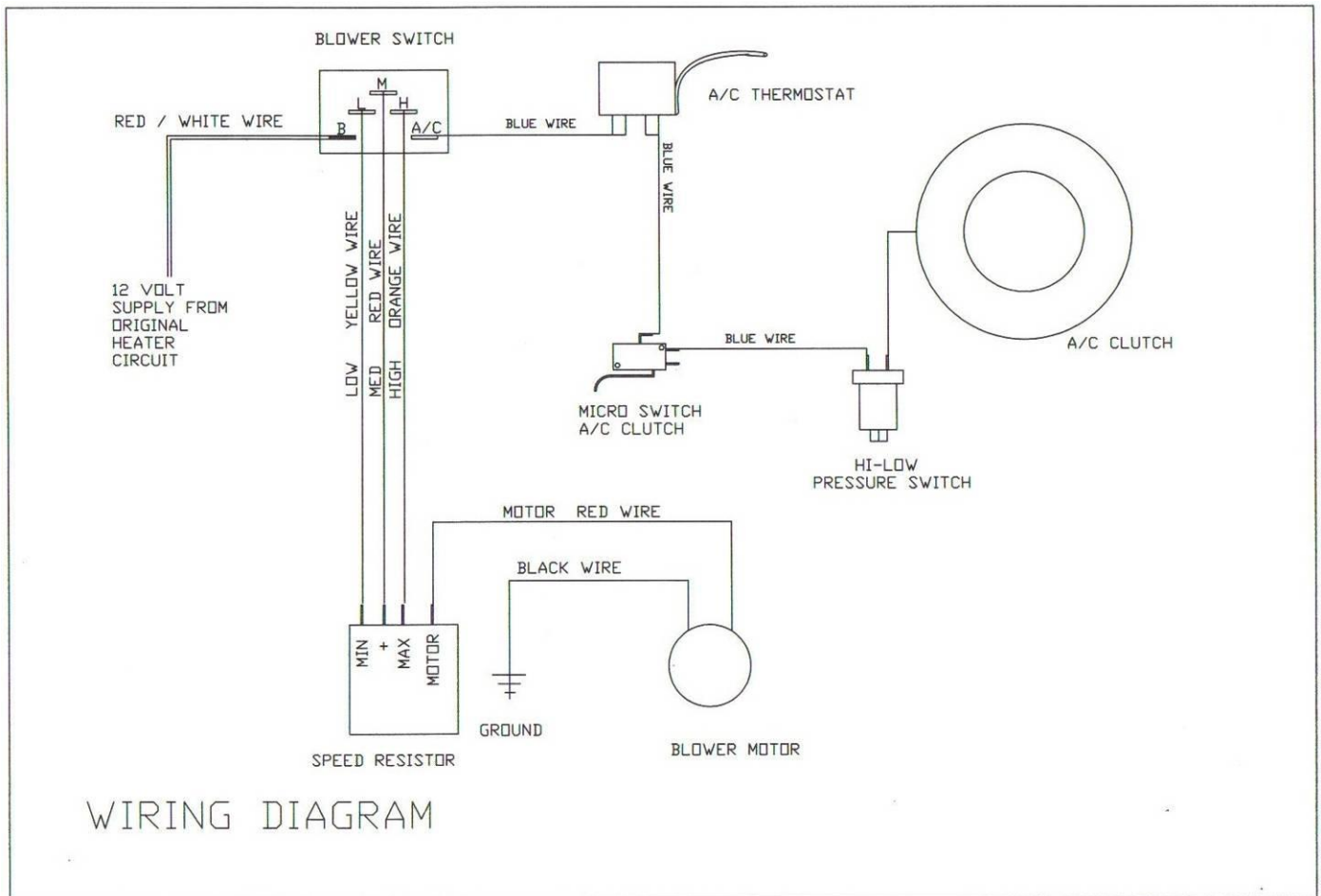
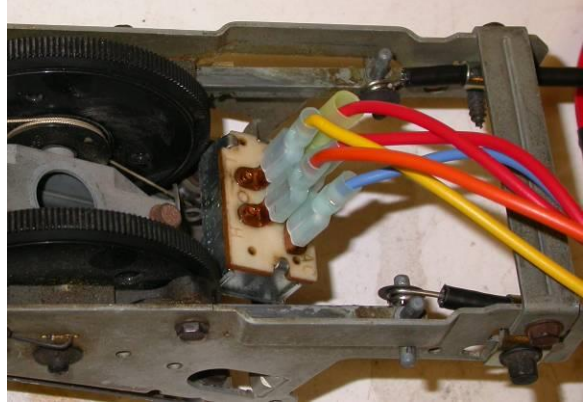
Locate the end of the cable housing 1/32" from the ring attachment and slide ring over the control rod. Secure using the push nut.

Attach the shortest of the control cables to the control head using (1) cable clip and the original hardware.

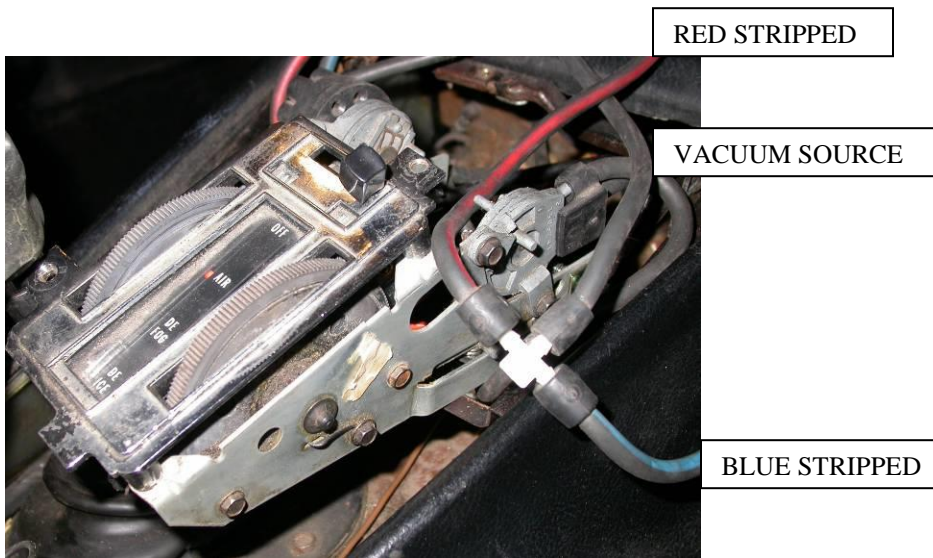
Locate the end of the cable housing 1/32" from the ring attachment and slide ring over the control rod. Secure using the push nut.

Locate the wire extension harness in the control sack kit.

Attach to the control switch. Follow the wiring diagram below.



1969-73 MODEL CONTROLS WO FACTORY AIR



Locate the vacuum Tee from the control sack kit.

Attach the red stripped, the blue stripped and the black vacuum source to the Tee.

1969-73 MODEL CONTROLS W/WO FACTORY AIR

Reinstall controls into the console. Route the new control cables and harness extension under the radio and to the passenger side to be attached to unit later.

Attach the short red wire to the brown wire on the original blower harness plug.

Be sure that there is no exposed metal on the connector.



1968-73 MODELS W FACTORY AIR

Remove passenger kick panel retain hardware.

Remove and discard vacuum motor and mounting hardware.



Using the existing spring. Attach the end over the hole as shown. This will keep the fresh air door closed.

Reinstall the kick panel using the original hardware.

Locate the 2" diameter flex hose. The hose should be 8 feet long. Be sure that the hose is stretched firmly when cutting to length.



Locate the 2" dia flex duct and cut 21" from the 8 ft duct.

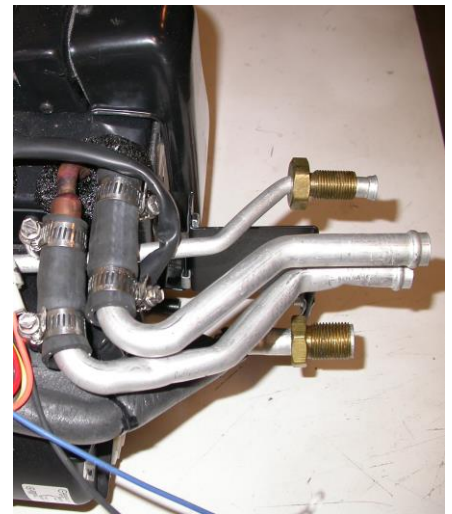
Attach to the outlet on the evaporator using (1) #8 x 3/8" pan head screw.

Place the Evaporator on the bench.

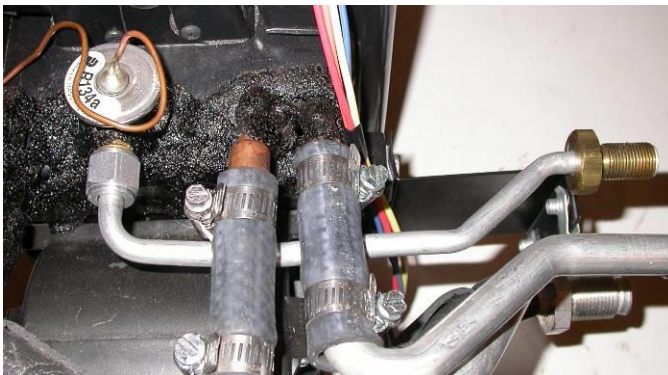
Locate in hardware sack kit (2) heater hookup tubes, (2) pieces of 3" long heater hose, and (4) worm gear clamps.

Attach the shortest of the tubes to the rear heater connection using (1) piece of hose and (2) worm gear clamps.

Attach the longest of the tubes to the front heater connection using (1) piece of hose and (2) worm gear clamps.



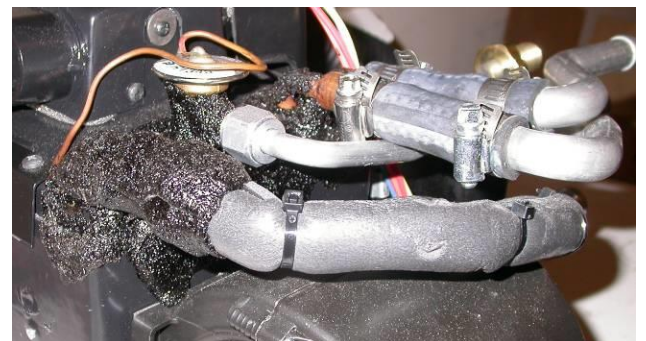
CAUTION: MAKE SURE THAT YOU HAVE THE CLAMPS TIGHT.



Locate in the hardware sack kit the #6 liquid tube and (1) #6 o-ring. Attach the tube to the expansion valve using (1) #6 o-ring and a few drops of mineral oil. Tighten securely.

Locate the Suction Tube Assembly, and (1) #10 o-ring.

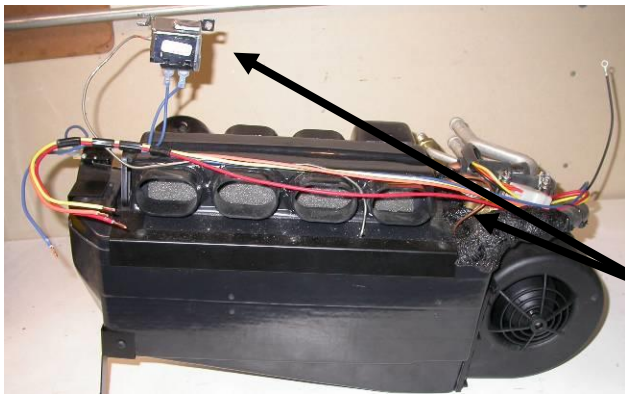
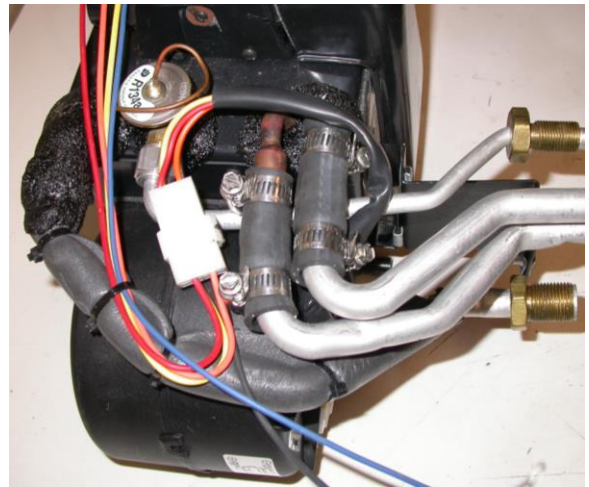
Attach the tube to the evaporator fitting using (1) #10 o-ring and a few drops of mineral oil. Tighten securely.



NOTE: LOCATE THE REFRIGERANT TAPE FROM THE HARDWARE SACK KIT.
WRAP ALL EXPOSED METAL SURFACES ON THE SUCTION TUBE.

Refer to diagram. Attach the wire harness to the blower motor.

Tyrap the wire harness to the suction tube as shown.



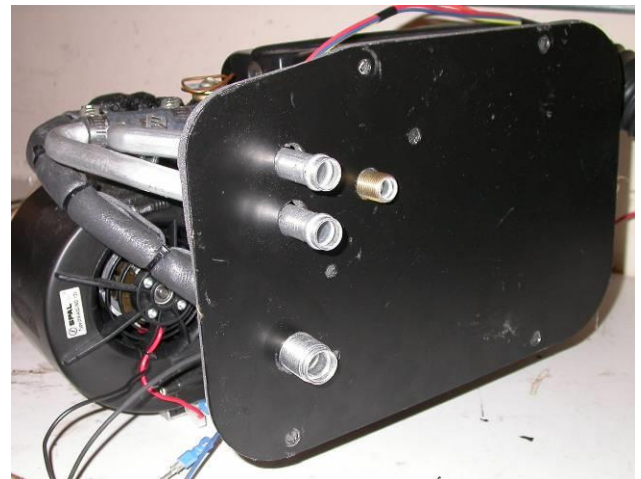
Route the harness over the top to the left to be later connected to the harness already installed on the control switch. (page 12)

Attach the harness to the micro-switch and the thermostat.

Locate the firewall block off from the kit.

Check for the alignment of the tubes.

Place the block off aside.



Locate the defrost hose adaptor assembly.

Insert the adaptor into the inlet of the defrost diffuser.
Make sure that the s-clips are all the way into the plastic.

Place the evaporator on the floor on the passenger side.

Locate the long defrost flex hose and attach to the left outlet on the back of the evaporator.



Route the shortest cable around the backside of the radio and over to the evaporator.

Insert the end of the cable into the 2nd hole from the center of the crack arm.



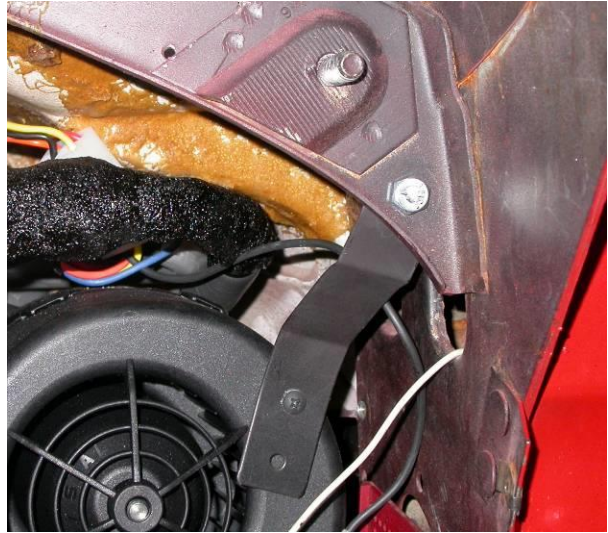
Attach the cable to the evaporator using (1) #8 pan head screw.



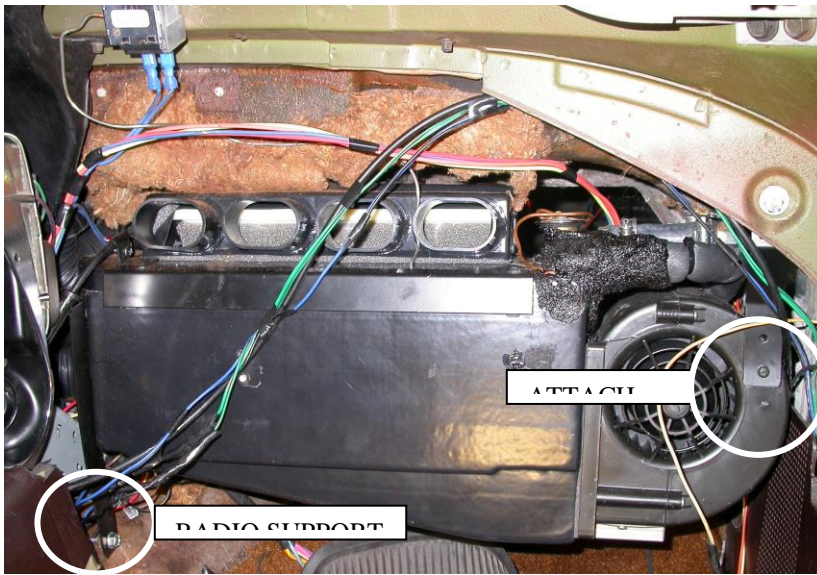
Locate blower support brace, (1) 1/4"-20 x 5/8" hex head screw, (1) 1/4" flat washer and (1) 1/4"-20 flange nut from the hardware sack kit.

Loosely attach the brace to the hole located above the passenger kick panel trim panel.

Corvette's with convertible tops locate and drill (1) 1/4" hole as shown.



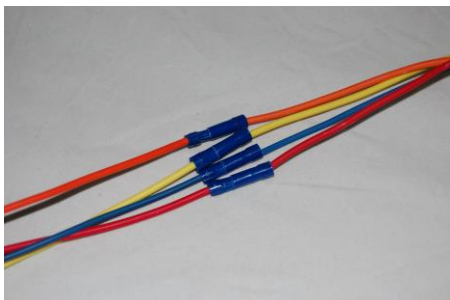
The picture below shows the evaporator installed in the vehicle.

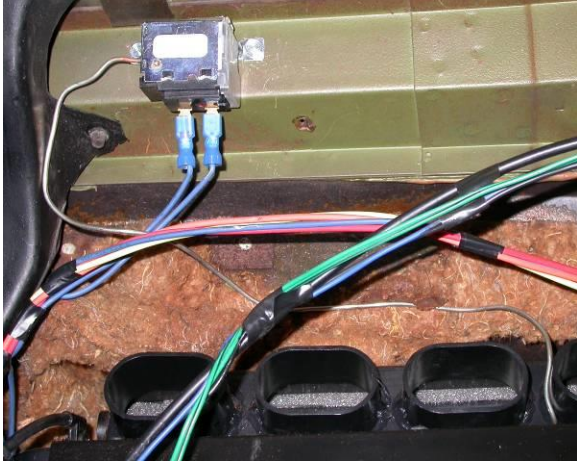


Locate the radio support bracket. Remove the screw and attach the left evaporator support bracket to this bracket location using the original screw or locate (1) 1/4-20 x 5/8" hex head screw and nut from sack kit.

Locate (1) #8 x 3/8 pan head screw. Holding the evaporator level attach the blower support brace to the blower using the #8 screw and a power screw driver as shown above.

Now attached wiring harness from unit with harness from controls and splice together as shown.



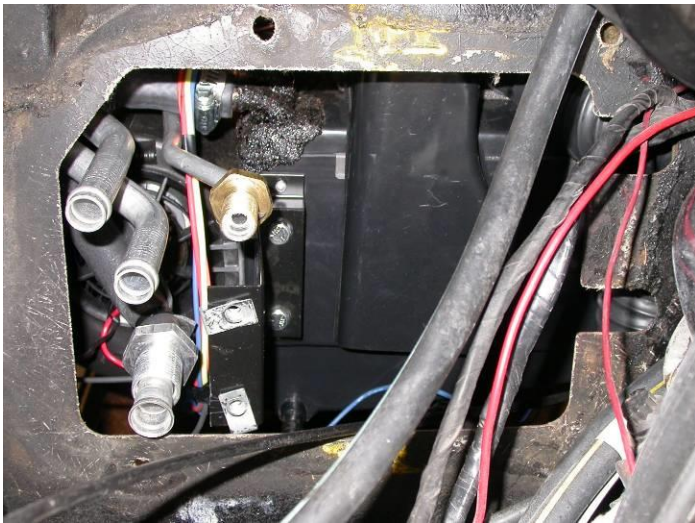
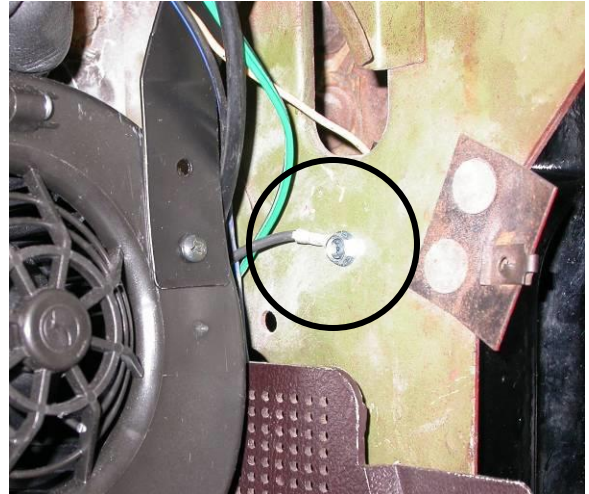


Attach thermostat to the body just to the right of the defrost duct.

Use (2) #10 tek screws supplied.

Locate the ground wire from the unit and (1) #10 tek screw.

Attach to the kick panel as shown.



View showing the engine side of the firewall.

THE NEXT FEW STEPS ARE LOCATED IN THE ENGINE COMPARTMENT.



Locate in the unit box the inlet air block off.

Using the original nuts attach over the inlet hole as shown. tighten securely.

Locate the firewall block off supplied in kit also in the hardware sack kit, (6) 1/4"-20 x 1" hex head screws, and (4) 1/4"-20 flange nuts.

Place block off over the hole on the firewall.

Insert the Temperature cable and the blue clutch wire through the 5/8" hole.



The following sequence is recommended for the attachment of the unit to the block off.

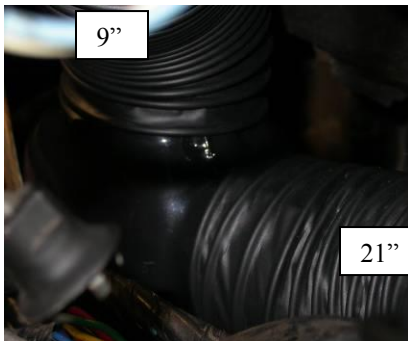
Insert the large bulkhead through the plate. Loosely attach the nut on to the bulkhead.

Insert the heater tubes through the block off.

Insert the small bulkhead through the block off. Loosely attach the nut on to the bulkhead.

Using an alignment tool attach to the rear heater mounting bracket using (2) 1/4" - 20 x 1" hex head screw. Do not Tighten at this point.

Attach block off to the firewall using (4) 1/4"-20 x 1" hex head screws and flange nuts. Tighten all screws and bulkhead nuts securely.



Locate the defrost heater Y connector and attach the 9" hose to the left defrost hose adaptor.

Route the 2" flex hose from the back of the evaporator across and behind the radio and attach to the defrost heater Y connector.



Locate (1) #10 x 1" pan head screw.
Attach to the drivers side of the dog house.



HEATER ONLY 68-73



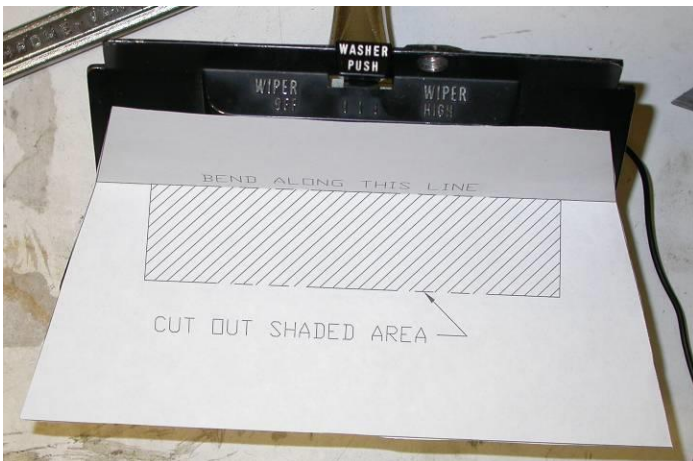
Locate the center air distribution assembly and the 2" dia flex duct and cut (1) piece 36" long. Attach to the left outlet using (1) #8 x 3/8" pan head screw.



Locate the original center bezel, and the trim template from the last page of the instructions.

Cut out the template and tape to the center Bezel as shown.

Cut out the shaded area.



CAUTION: CUT CAREFULLY. CHECK THE LOUVER ASSEMBLY FOR FIT. IT MAY BE NECESSARY TO FILE THE OPENING TO SIZE.

Install new louver into the center dash bezel.



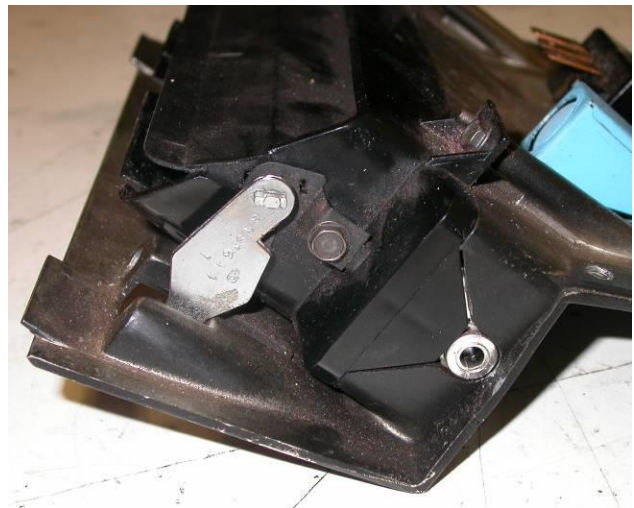
FACTORY A/C CARS



Locate the factory center louver assembly.

It is necessary to remove the shut off door.

Remove the retaining screw and the door and the lever will come out together.

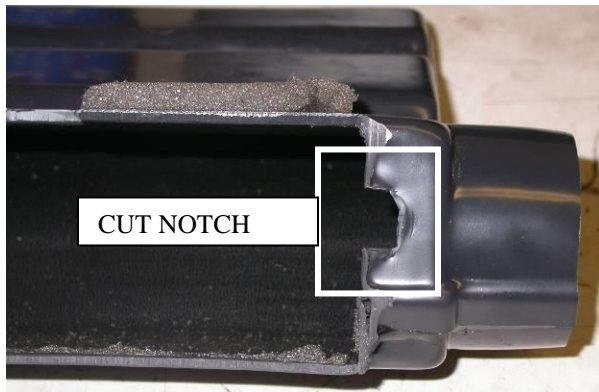
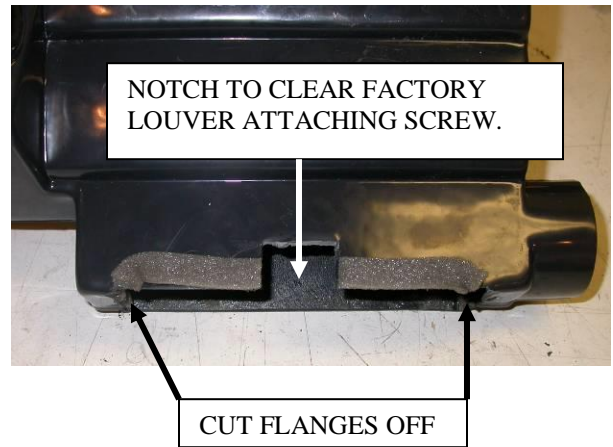


Locate center air distribution assembly



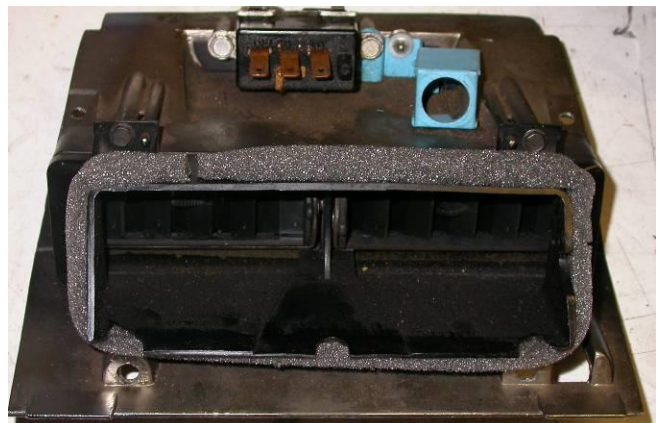
Remove the foam seal.

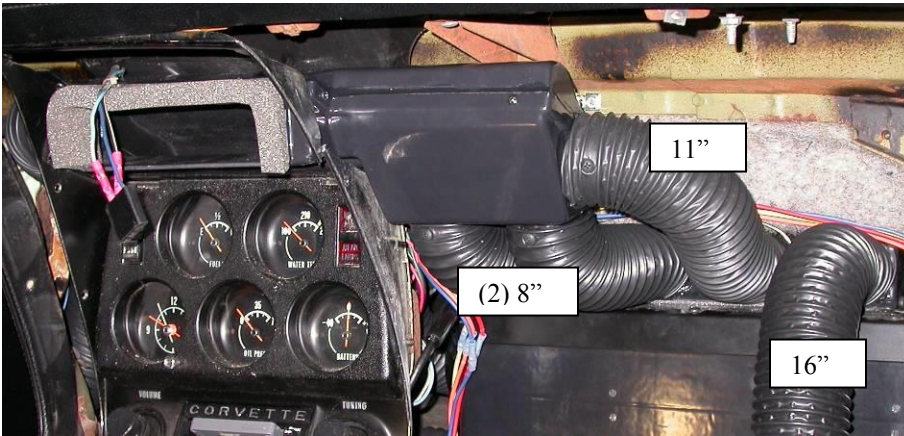
Modify the duct as shown. Cut off flanges and cut notch in the bottom of the duct to clear factory louver.



Cut the notch in the duct as shown to clear the factory louver assembly.

Locate (1) 16" piece of open cell foam and carefully wrap the factory louver assembly.





Insert the Center air distribution assembly across the top of the gauges. Route the 36" flex duct down the left side of the center gauges.

Locate the 2" flex duct, cut (2) pieces 8", (1) piece 11", and (1) 16" long.

Attach to the evaporator and air distribution as shown.

CAUTION: The control cables are equipped with inline adjusters. Adjust the Defrost, Heat / Face door, and Water valve cable so that the full travel of the Control cable operates the door to its full travel. Make sure that the water valve completely closes when the cable is in the cold position.

The Micro Switch that is mounted on the Face / heat door is used to turn on the compressor clutch. This will occur when the control lever is in the face position. It may be necessary to adjust the thin metal arm on the switch. Make sure that the Clutch Micro Switch is depressed when the lever is in the face position.

HEATER ONLY AND A/C CARS



Locate the passenger side dash cover, set the cover on the bench face side down.

Remove the (3) pan head screws that hold the original hose adaptor to the panel.

Remove the hose adaptor and discard the adaptor. Retain the original hardware.

Locate the 90 deg. Hose adaptor assembly, (2) hold down brackets.



Attach the hose adaptor over the ball louver and retain with the (2) hold down brackets and the original hardware.

Reinstall the 3rd original screw.



Attach the end of the 16" duct hose to the 90 deg hose adaptor on the dash cover. Reinstall the dash cover using the original hardware.

HEATER ONLY CARS

Located on the drivers side above the kick panel is the fresh air duct.

Remove the wing nut and retain. Remove and discard the duct.



Locate the fresh air cover and slide over the inlet flange. Attach using the original wing nut.



HEATER ONLY AND FACTORY A/C CARS

Reinstall the center bezel using original hardware.

Check for the seal around the center louver as to not block the air.



The drivers side ball louver is modified just like the passenger side ball louver.

Pull the drivers dash cover out enough to make the changes.

Route the 36" hose assembly across the bottom of the dash to the 90 deg hose adaptor before attaching to the ball. Reinstall the dash cover.

Locate and drill (1) 11/16 diameter hole through the hole in bottom of the firewall block off.



Locate the 6" piece of drain tube from the hardware sack kit.

Attach the drain tube through the hole.

Reinstall the lower brace to the dog house mounting stud.

Drop the right side of the brace so that the brace clears the drain tube.

Drill (1) 3/8" diameter hole through the end of the brace and attach using the original hardware.

Plug the original hole.



The engine compartment components should be installed at this time. Carefully follow the electrical diagram provided on page 10.

Locate the receiver drier, hi / low pressure switch, liquid tube (bulkhead / drier), drier mounting bracket, and (2) #10 x 3/4" tek screws.

Attach to the inlet block off as shown using the liquid tube for location. Attach tube using (2) #6 o-rings and a few drops of mineral oil.

Route blue wire from thermostat and connect it to one of the white wires on the pressure switch. Route the other white wire along the suction hose to the compressor.

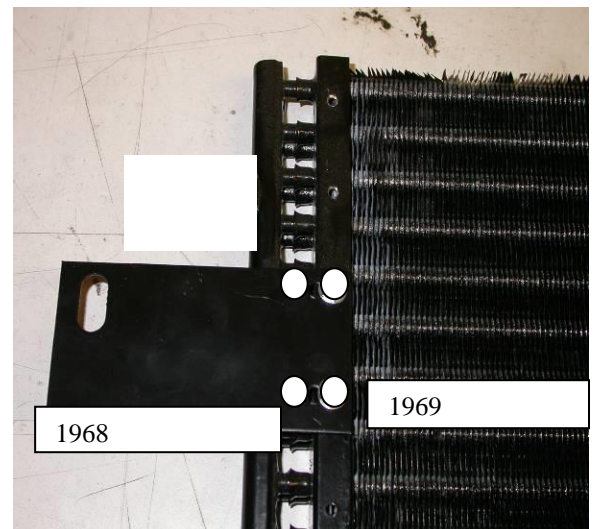


Locate the following components from the condenser kit. Condenser, (2) left side condenser mounting brackets, (2) right side condenser mounting brackets, condenser to bulkhead hose assembly, (1) #6 o-rings, and (8) # 10x 3/8" hex head screws.

1968 & 69-73 CONDENSER MOUNTING

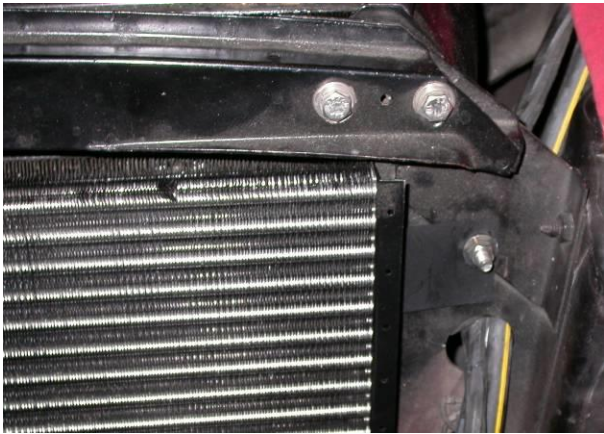
The condenser mounting brackets come with (2) sets of holes.

The picture to the right shows the set of holes on the right for the 68 big block and the set on the left for the 69 model.



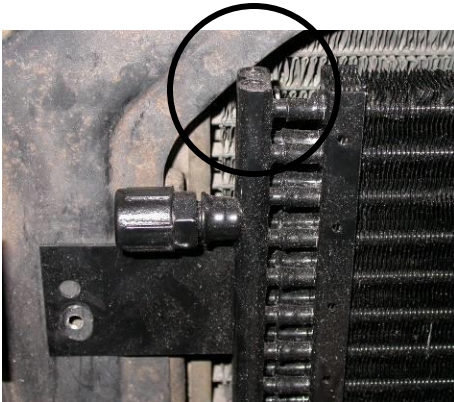
1968 CONDENSER MOUNTING

Attach the right condenser brackets using #10 screws to the 3rd hole from the top and the 2nd hole from the bottom.



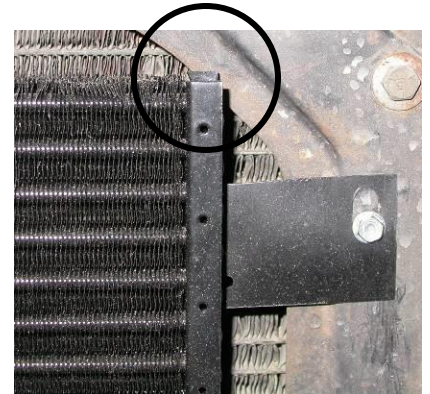
Mount condenser assembly through the fan shroud mounting bolts.

1968 -73 CONDENSER MOUNTING WO FACTORY A/C



Attach the brackets to the condenser. Place condenser in front of the radiator and using the #14 self drilling screws secure the bottom (2) mounting brackets.

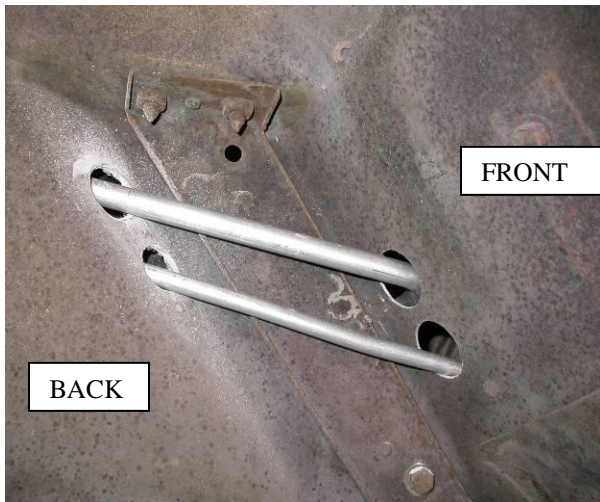
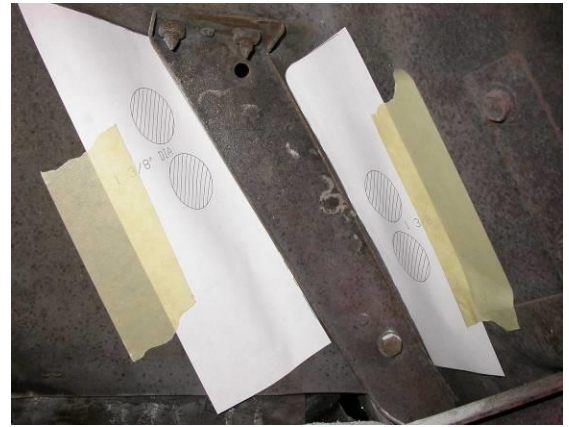
Locate the height of the condenser to the radiator support as shown.



Remove the passenger front wheel assembly and retain hardware.

Locate the (2) templates from the installation instructions.

Tape them into position as shown. Drill (4) holes 1 3/8" dia.



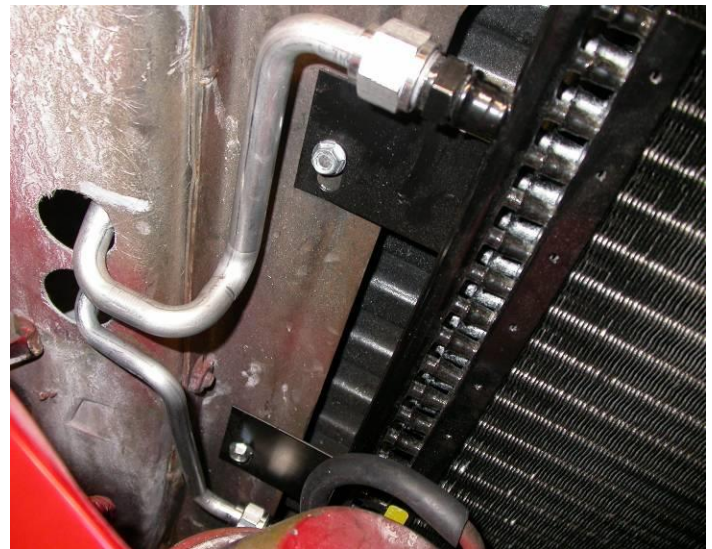
The condenser tube assemblies will pass through the core support in front of the radiator and the core support behind the radiator.

The picture to the left shows the tubes installed from behind the wheel.

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

Insert the #6 tube through the lower drilled holes and attach to the bottom fitting on the condenser using (1) # 6 o-ring and a few drops of mineral oil.

Insert the #8 tube through the upper drilled holes and attach to the top fitting on the condenser using (1) #8 o-ring and a few drops of mineral oil.



Locate the tube support bracket and attach using the hardware supplied.



1968-73 CONDENSER MOUNTING W A/C

Insert the condenser tubes through the channel that the original hoses passed through.



NOTE: A/C ONLY CARS USE DOUBLE HOSE CLAMP AND (1) #10 TEK SCREW TO SECURE THE HOSES TO THE BODY.

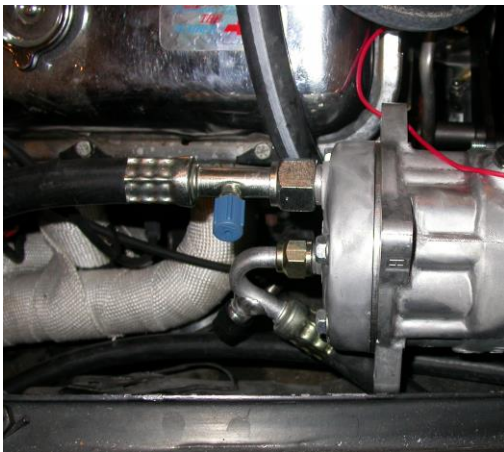
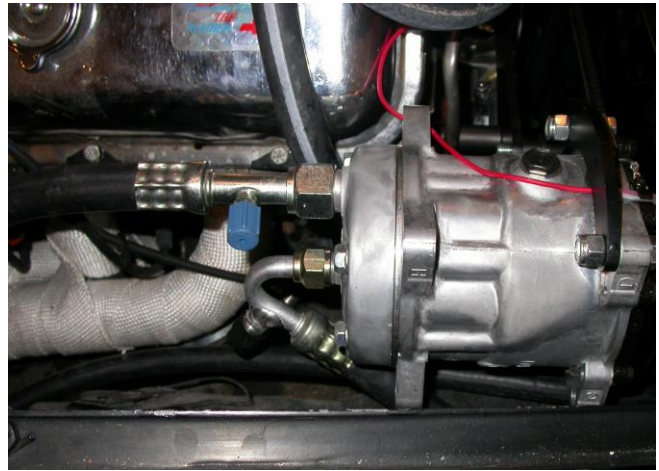


Locate the discharge hose assembly. Attach the straight end to the condenser tube using (1) #8 o-ring and a few drops of mineral oil.

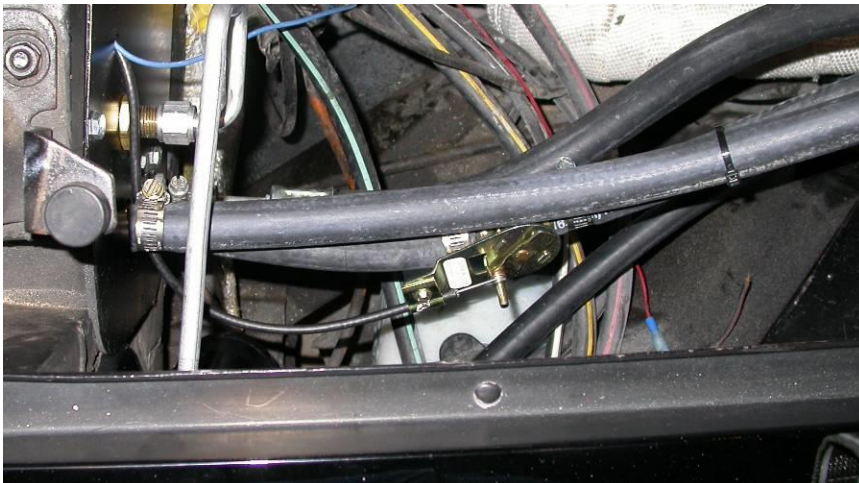
Route the discharge hose along the fender well and loop it around and attach to the rear of the compressor, using (1) #8 o-ring and a few drops of mineral oil.

Locate the Liquid Hose assembly.

Attach the Liquid hose to the bulkhead tube and route along the fender well to the fitting on the Receiver drier. As shown on page 24. Attach using (2) o-rings and a few drops of mineral oil.



Locate the suction hose and attach between the fitting on the firewall and the rear of the compressor using (2) #10 o-rings and a few drops of mineral oil.



Hookup the heater hoses to the connections coming through the firewall.

NOTE: THE SUPPLY LINE FROM THE ENGINE WILL BE HOOKED TO THE TOP FITTING USING A WORM GEAR CLAMP.

Locate in the Hardware Sack Kit the Water Valve and (3) worm gear clamps. Cut 6" off of the return heater hose and attach to the connector then to the water valve and then to the remaining hose that goes back to the engine. Use the worm gear clamps supplied.

It is recommended that the heater hoses be replaced at this time.

Locate the Temperature Control Cable and attach it to the water valve as shown. Set the cable so that the Temp Wheel is pushed all the way to the cold position and the water valve is in its fully closed position.

***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

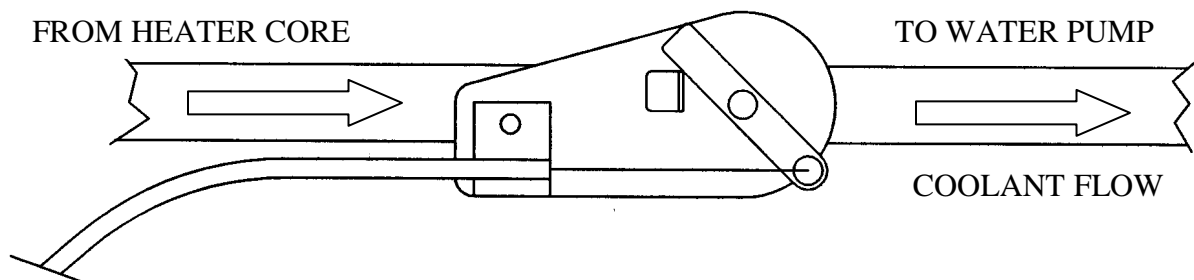
IMPORTANT

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.

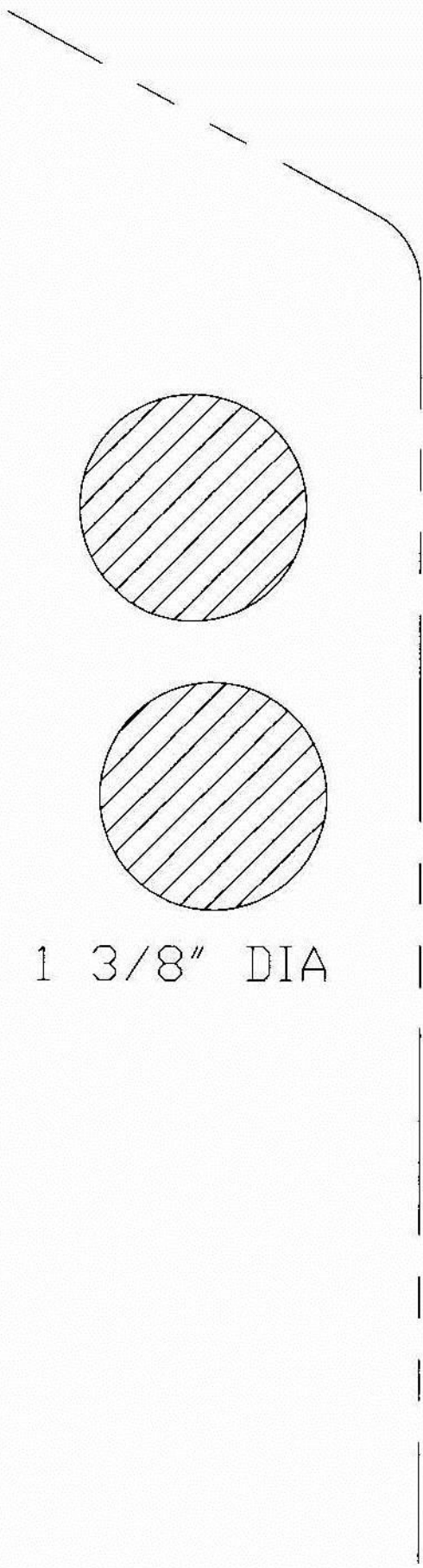
NOTE: WATER VALVE = WATER PUMP



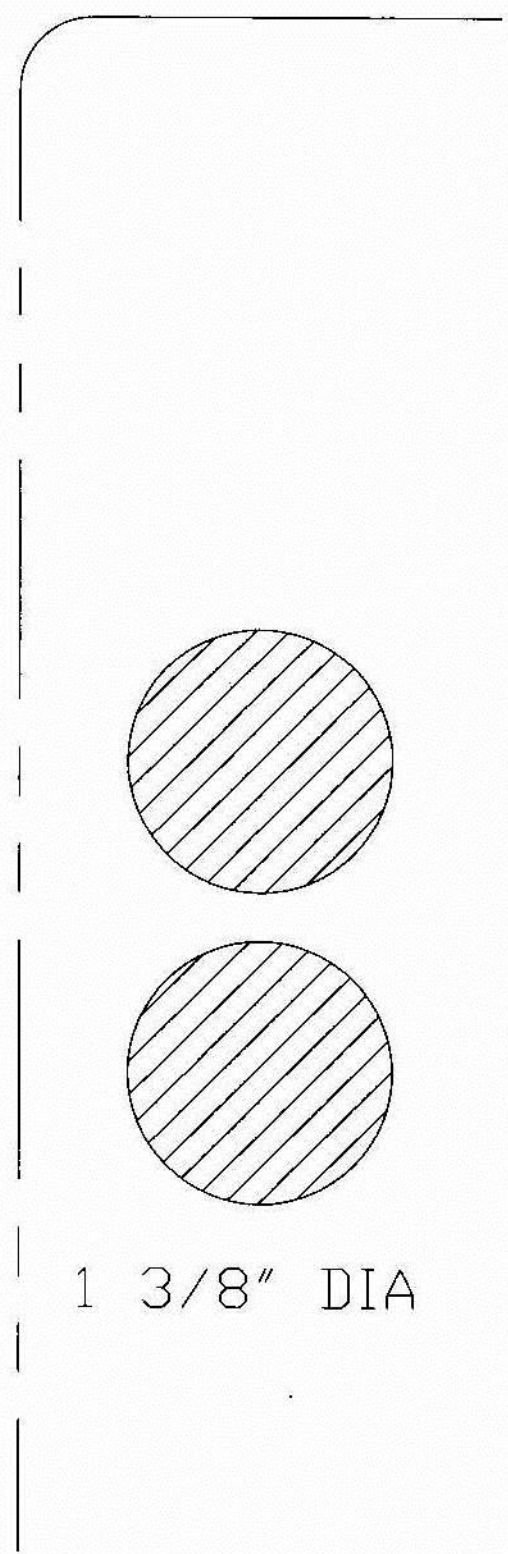
CAUTION: WATER VALVE MUST BE INSTALLED ON HEATER LINE ROUTED TO WATER PUMP.

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

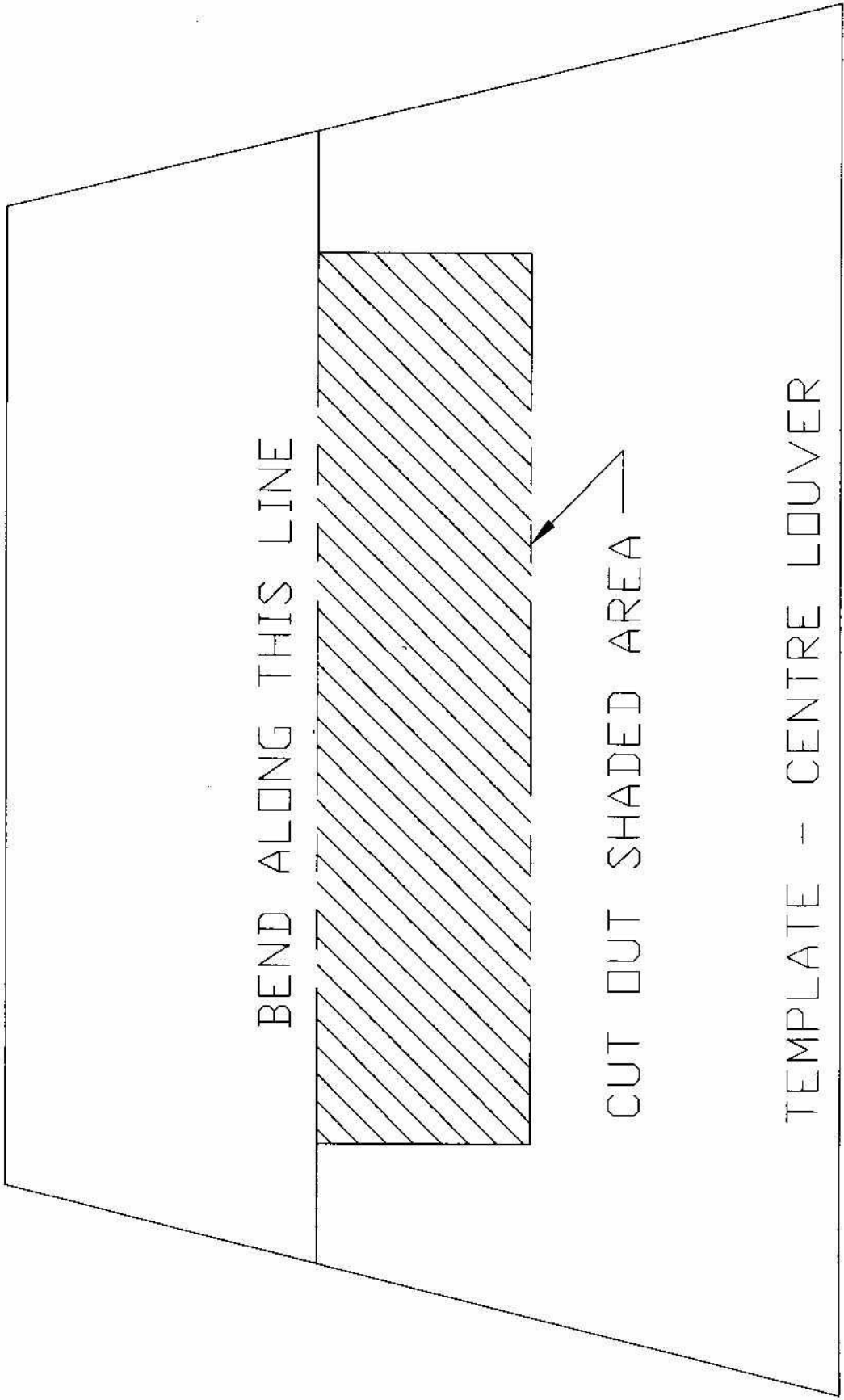
***134A SYSTEMS 24 oz OF REFRIGERANT
Recommend that power fuse is 25amp minimum***



TEMPLATE #2



TEMPLATE #1



BEND ALONG THIS LINE

CUT OUT SHADED AREA

TEMPLATE - CENTRE LOUVER