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

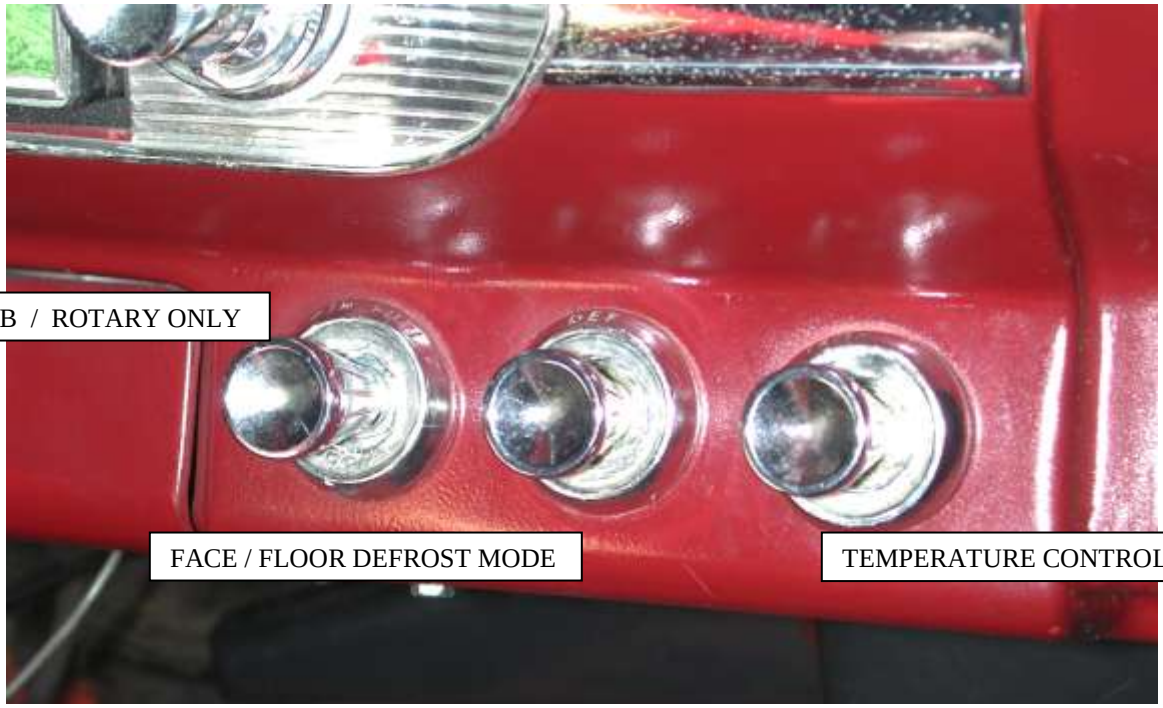
“PERFECT FIT”
IN-DASH

HEAT/ COOL/ DEFROST

1962-1965 CHEVROLET NOVA

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.



THE PICTURE YOU SEE ON THE FIRST PAGE SHOWS THE CONTROLS IN THE FACE MODE. THIS MEANS THAT THE AIR WILL BE DISTRIBUTED THROUGH THE FACE OUTLETS. THIS ALSO HAS THE TEMPERATURE KNOB 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 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 main housing.

FACE AND FLOOR / DEFROST MODE: When the push pull cable is pulled all the way OUT, it will direct the air to the floor / and defrost ducts. The cable can be moved any position from full in to full out. This will give blend between all distribution outlets.

TEMPERATURE CONTROL: The temperature Knob as shown is in the COLDEST temperature position. As the lever is pulled out 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 Knob in the Face Mode (air-flow out the face outlets).
When the Mode control knob is pushed all the way IN 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

INSTRUCTIONS
1963-65 CHEVROLET NOVA

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
Inlet Air Block Off Assembly
Firewall Block Off Assembly
Flex hose 2" dia. x 2 ft.- 4ea.
Flex hose 2" dia. x 3 ft - 2ea.
Sack Kit Hardware
Sack Kit Control
Glove box

IMPORTANT INFORMATION

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

YOU CAN NOW BEGIN THE INSTALLATION

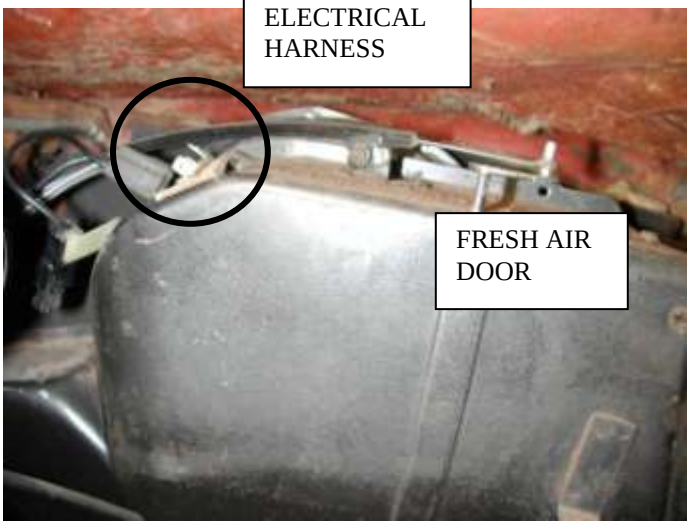
DISCONNECT BATTERY GROUD CABLE.

Remove Glove box door, glove box, discard glove box retain original hardware.

Removal of Original Heater Assembly can be accomplished by disconnecting the (3) control cables.

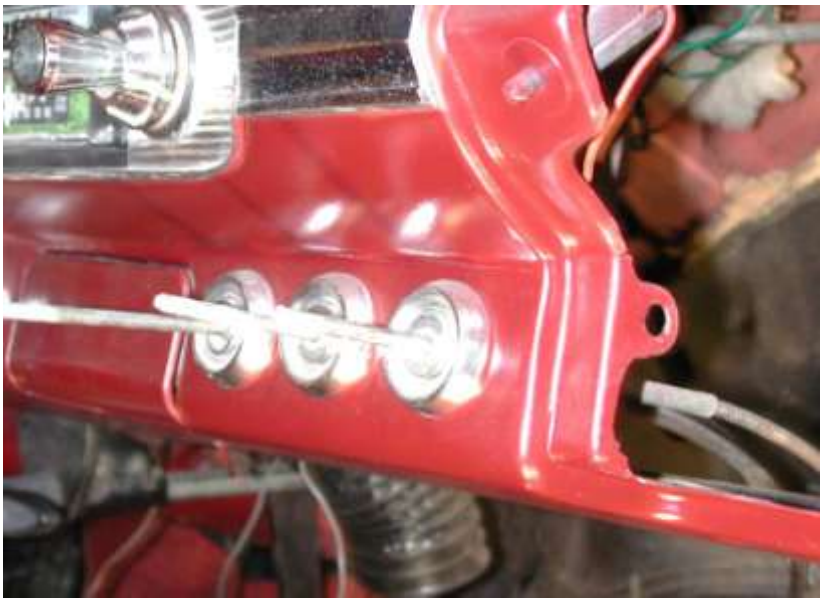
One attached to the Fresh Air Door.

Disconnect electrical harness at the resistor block.



One attached to the Heat / defrost door cable.

The 3rd cable is attached on front of the unit and is attached to the Blend Air Door.

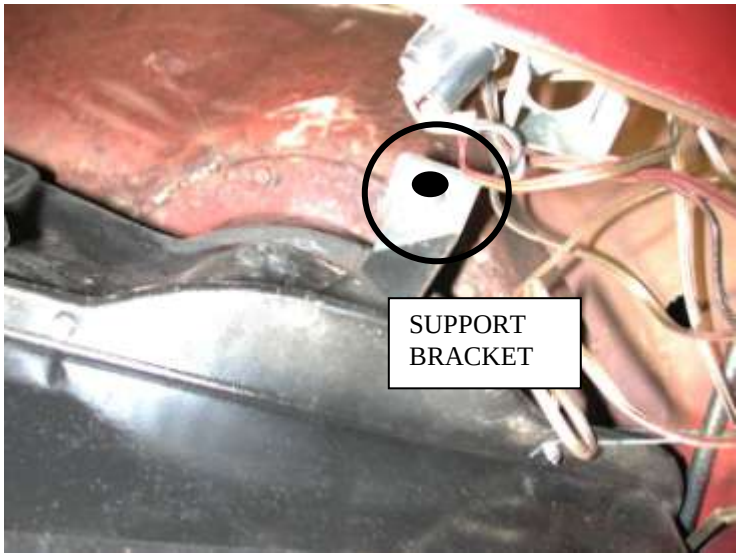


Remove (3) control cables and knobs from instrument panel and discard the cable and switch.

NOTE: Retain the knobs, and the trim bezels.
.

Locate behind glove box opening the heater support tab.

Remove and discard the screw.



Locate on drivers side of the heater (1) bolt that attaches ducts to the firewall.

Remove and discard this bolt.

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

Remove (3) nuts from around the blower motor.

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

Locate behind glove box opening the air inlet flange.

Remove and discard flange and original hardware.

Locate the Air Inlet Block Off and (3) #10 x ¾ tek screws.

Attach Block Off to the air inlet as shown.

Locate behind glove box and on firewall the hole that previously mounted the heater box. Locate and drill (1) 9/16” dia. hole for the drain tube 7” directly below the original hole as shown.

Locate in the Hardware Sack kit (2) defrost hose adapters. Attach these to the original Defrost Diffusers located under the instrument panel.

Locate (3) original Control Trim Bezel.

Carefully hold bezel and drill out center hole to 7/16” diameter.

Drill all (3) bezels.

Locate (1) of the original Knobs.

Carefully hold knob and drill end of the knob out to ¼” diameter.

Locate (3) original control knobs along with the first knob modified.

Locate and drill (1) hole 9/64” diameter 1/8” from the end and perpendicular to the center hole. This operation is done on all (3) knobs.

Carefully Tap the hole for a #8 – 32 set screw.

Install set screw provided in the control sack kit into the taped hole.

Locate the (3) holes next to the glove box opening. Drill these holes to 7/16” dia.

Locate original wire harness that provided power for the original heater assembly.

Cut off the plug and attach a Male Spade connector. This is the power wire for the a/c unit.

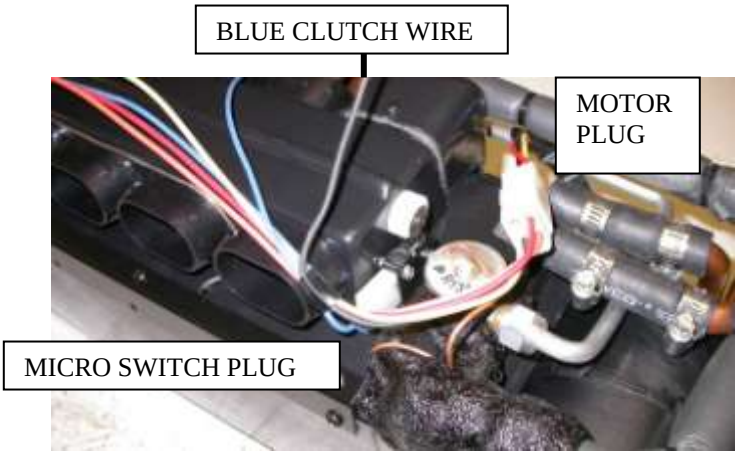
NOTE: check original heater fuse. Update to 25 amp minimum.

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

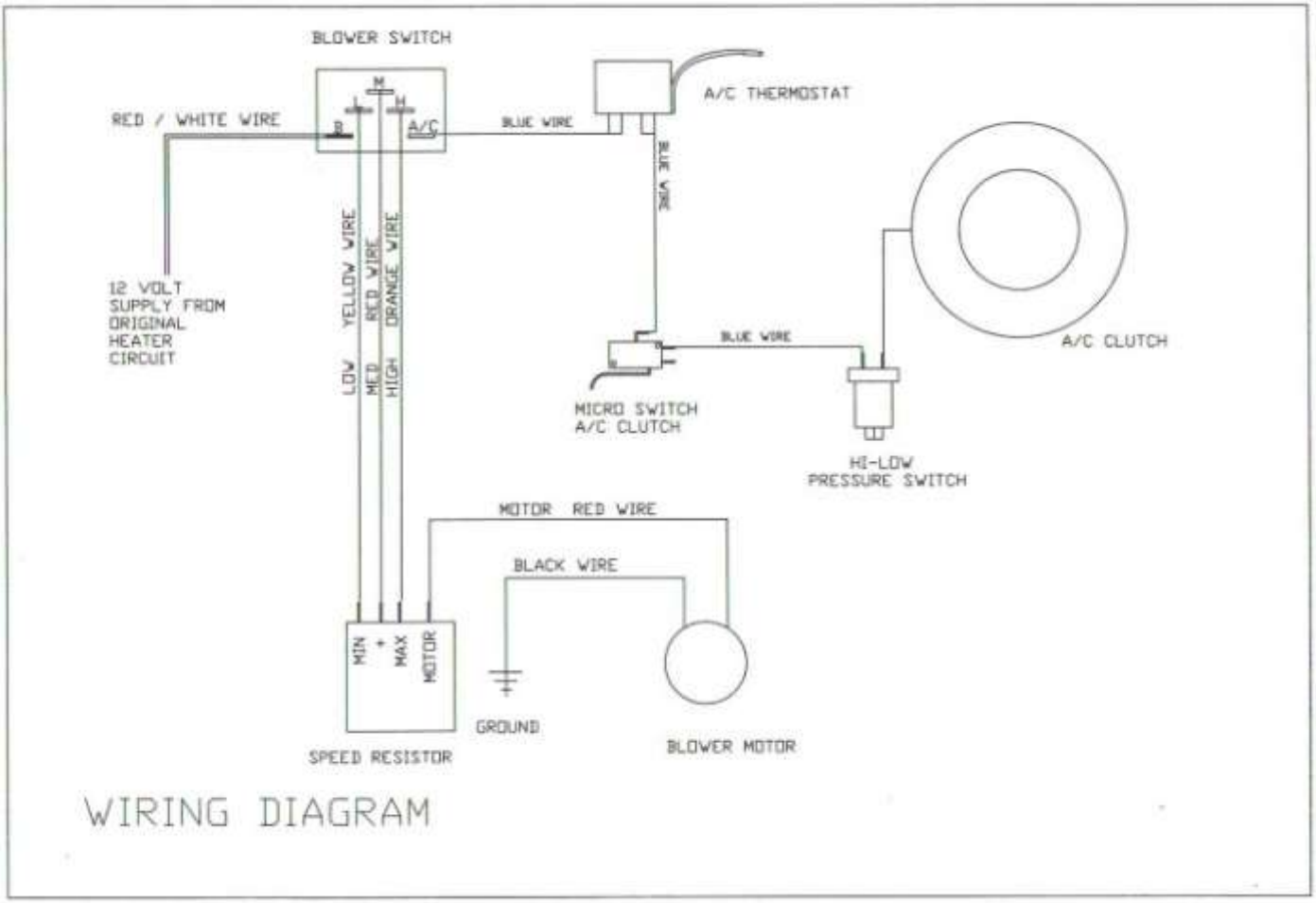
Locate the Evaporator, (1) piece of 2” dia. Flex hose 20” long, and (1) piece of 2” die flex hose 36” long.

Locate the Evaporator, and Wire Harness.

Attach wire harness to the BLOWER connector, and micro switch plug to the micro switch. Route the blue clutch wire over the top and along the suction tube. Refer to diagram on next page.



Route wire harness across top of the evaporator and attach harness to the thermostat.



Carefully place evaporator upside down on the bench. Locate the heater duct from the main box.

Slide the heater duct over the heater outlet on the evaporator.

Push firmly so that the clips are fully engaged.

Locate Heat / Defrost cable assembly, and (1) #8 x 3/8" pan head screw. Cable is the one that has wire off set and cable attachment lug.

Insert off set end into 3rd hole from the pivot of the crank arm. Attach housing to the evaporator using (1) # 8 screw.

Lift evaporator up and behind instrument panel. Insert tubes and clutch wire through opening in the firewall.

Attach unit to the firewall using (2) ¼”-20 x 1” hex head screws and # ¼” SAE washers.

Attach through the original heater mounting holes.

Located on side of the blower is a support brace, attach the bottom of the instrument panel using (1) #10 x ¾” tek screw.

The 20” flex hose that was attached to the defrost outlet on top of the evaporator attaches to the passenger defrost diffuser.

Attach to the hose adaptor using (1) #8 x 3/8 pan head screw.

The 36” flex hose route across top of the evaporator and over to the drivers side defrost diffuser. Attach to the hose adaptor using (1) #8 x 3/8” pan head screw.

CAUTION: BE SURE THAT THE WINDSHIELD WIPER CONTROL ARM

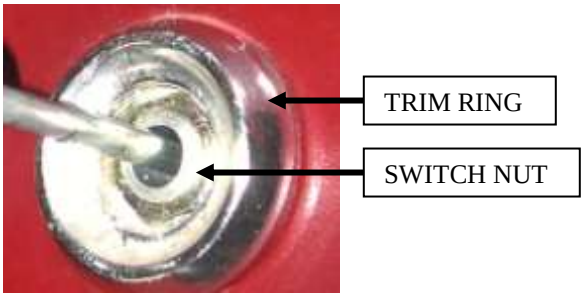
DOESN'T INTERFERE WITH FLEX HOSE.

Locate in the Control Sak Kit (1) cable assembly and (1) blower switch assembly.

Cable assembly that was attached to the Defrost / Heat door cable loops around and is inserted through the center hole.

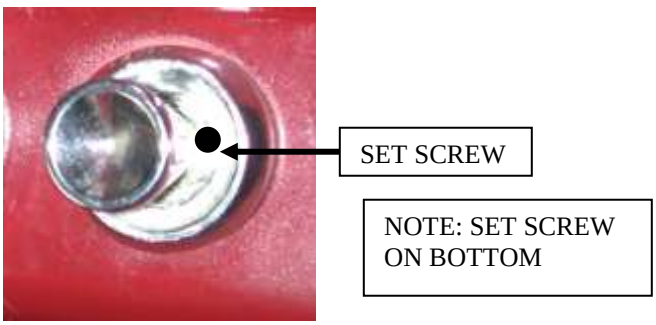
Cable assembly that has the ring on the end and no attachment lug is the Temperature Cable.

Install blower switch in the left hole. Insert through IP and then through the bezel. Attach using (1) of the switch nuts.

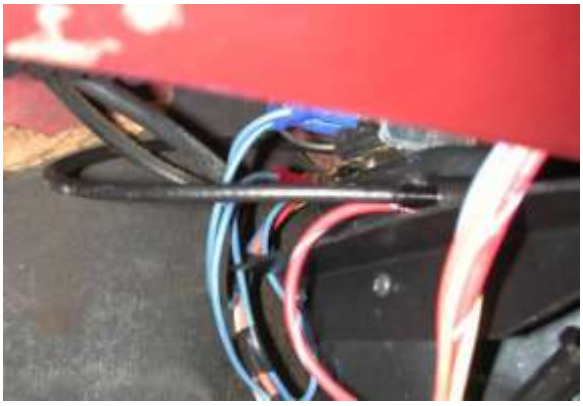


Control cable assemblies are attached the same method.

Attach all 3 Switch Knobs to the control cables and blower switch.



Route temperature cable around back of the evaporator and out through the firewall block off hole.



Locate the Firewall Block Off plate, and (3) #10 x ¾" hex head tek screws.

On engine side of firewall attach over hookup tubes from the evaporator using
(3) #10 x ¾" hex washer head Tek screws.

Locate refrigeration tape provided and seal around the hookup tubes.

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

Supply line from engine is attached to the upper heater hookup tube. Cut 6" off end of the **RETURN LINE** and install the water valve using (3) worm gear clamps as shown above.

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

Locate temperature cable and attach to the water valve.
NOTE: WATER VALVE MUST BE CLOSED WHEN CONTROLS ARE PUSHED ALL THE WAY IN.

Next few steps are in the interior of the car.

Locate in the hardware sack kit the drain hose.

Attach to evaporator and route over to the 9/16" hole drilled in the firewall.

Seal the tube using refrigerant tape provided.

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

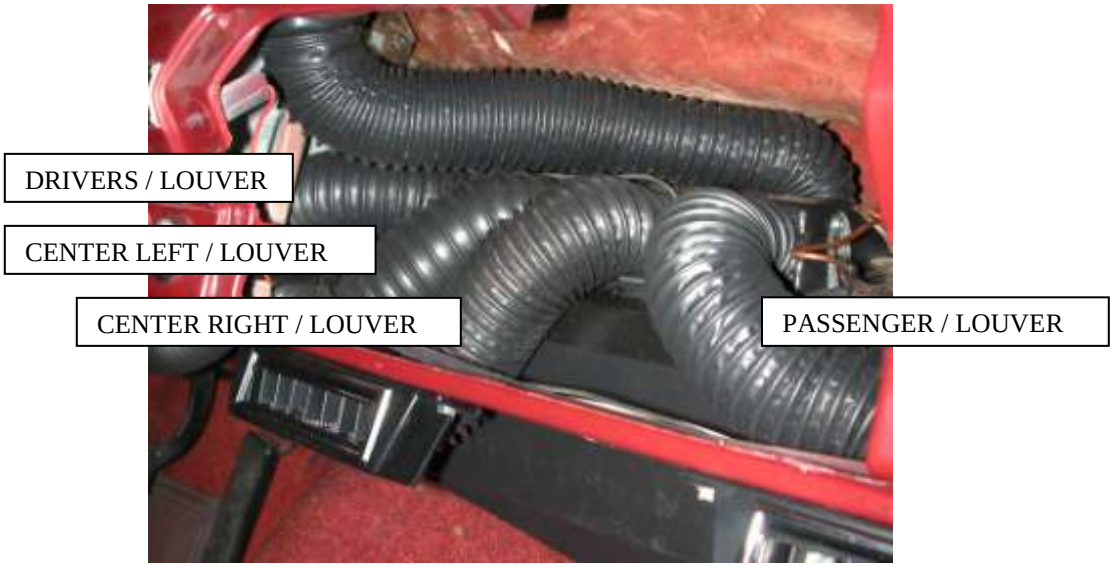
DRIVERS SIDE / LOUVER

Locate (4) remote louvers, and (8) #10 x ¾" tek screws.

Attach louvers along the bottom of the instrument panel equally spaced using #10 tek screws as shown.

CENTRE LOUVERS ASSEMBLY

PASSENGER SIDE / LOUVER



Locate 2“ Dia. flex hose Cut (1) piece 36” long. Attach to face duct over the left outlet. Route behind instrument panel over the unit brace and steering column and attach to the drivers louver.

Locate 2“ Dia. flex hose Cut (1) piece 20” long. Attach to face duct over 2nd outlet from the left. Route across and over the unit brace and attach to the left center louver.

Locate 2” Dia. Flex hose Cut (2) pieces 16” long. Attach to the face duct over 2 outlets remaining. Route and attach (1) to right center and (1) to the passenger louver.

Install new glove box and glove box door using original hardware.

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

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

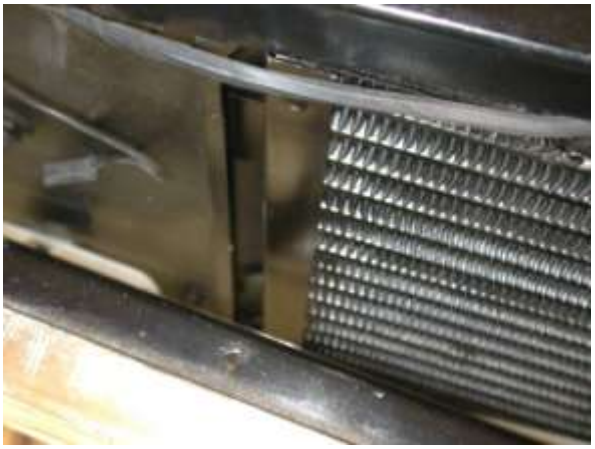
INSTALL THE COMPRESSOR ADAPTER KIT AND COMPRESSOR AT THIS TIME PER THE MANUFACTURERS DIRECTIONS.

In order to remove radiator and install the condenser it is necessary to remove the front bumper. Retain the original hardware.

.Remove radiator fan, and the radiator. Retain all of original hardware.

Locate the condenser, (4) condenser mounting brackets and (8) #10 x 3/8" hex head screws. Attach (4) brackets to the condenser as shown above, using (2) #10 screw for each bracket. The small liquid fitting is on the bottom left.

Condenser is inserted from the engine side of the bulkhead. Reinstall radiator using the original hardware.



Condenser brackets are clamped between the radiator mounting flange and radiator bulkhead.

Locate Discharge Tube and the Liquid Tube Assembly.

Loosely attach tubes to the condenser and locate center of the holes for the bulkhead fittings.

Drill (1) ¾" diameter hole at top location and (1) 5/8" diameter hole at the bottom location.

Reinstall tubes to the condenser using a few drops of mineral oil at each of the connections.

Insert bulkhead fittings through the holes you just drilled. Tighten securely.

Reinstall radiator fan and the front bumper using original hardware.

Locate #6 liquid tube, long #6 hose, #10 hose, filter drier, drier mounting bracket, Hi-Low pressure switch & electrical boot, (4) #6 o-rings, (2) #10 o-rings and (2) #10 tek screws.

Attach liquid tube to fitting from the evaporator. Locate filter drier and the drier mounting bracket, and (2) #10 tek screws.

Attach drier assembly to inner fender using liquid tube as a guide. Attach using (2) #10 tek screws.

Attach tube using (2) #6 o-rings and a few drops of mineral oil on each fitting.

Attach #10 suction hose to #10 fitting on firewall using (1) #10 o-ring and a few drops of mineral oil. Route other end along firewall and then to the compressor. Attach end with service port to the compressor using (1) #10 o-ring and a few drops of mineral oil.

Attach long liquid tube to outlet of the drier using (1) #6 o-ring and a few drops of mineral oil and route over the suction hose and forward to lower fitting on the radiator bulkhead using (1) #6 o-ring and a few drops of mineral oil

Attach hi-low pressure switch & boot to port on the liquid tube using a few drops of mineral oil.

Locate the Discharge Hose from the condenser kit. Attach to #8 fitting on the radiator bulkhead and route over to the compressor.

Attach with service port at the compressor and (2) #8 o-rings and a few drops of mineral oil.

Locate Clutch wire (blue) from thermostat and attach it to one of the white wires from the Pressure switch. Other white wire from the pressure switch attaches to the compressor clutch.

Locate the double hose clamp and (1) #10 tek screw from the condenser kit. Attach suction and liquid hose to the firewall as shown.

Locate the #6 hose clamp and (1) #10 tek screw.

Attach liquid hose to the drivers side shock tower as shown.

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 PERFICT FIT SERIES" climate control system.

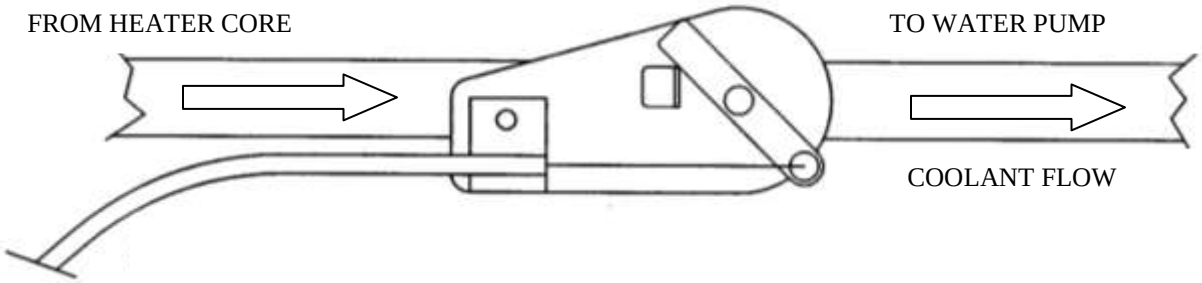
IMPORTANT

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