“PERFECT FIT”
IN-DASH

HEAT/ COOL/ DEFROST

1966-67 PLYMOUTH BELVEDERE

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 HEAT OUTLETS. THIS ALSO HAS THE TEMPERATURE LEVER IN THE COLD POSITION. WITH THE CONTROLS IN THIS POSITION YOU WILL GET THE AIR THROUGH THE HEAT OUTLETS WITH THE COMPRESSOR OFF.

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 LEFT the air is distributed to the HEAT outlets. 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 RIGHT the air will go to the FACE outlets. In the FACE position the compressor is engaged.

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.

INSTALLATION INSTRUCTIONS
1966-67 PLYMOUTH BELVEDERE

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
Flex hose 2" dia. x 1ft (1)
Flex hose 2" dia. x 2ft (1)
Flex hose 2" dia. x 3ft (1)
Flex hose 2" dia. x 4ft (1)
Flex hose 2 ½" dia. x 1ft. (2)
Sack Kit Hardware
Sack Kit Control

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

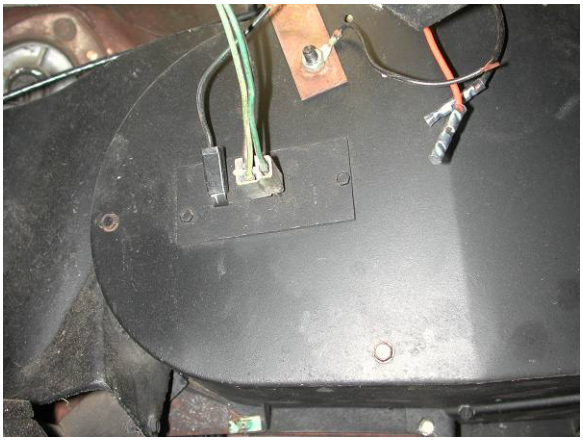
DRAIN RADIATOR, DISCONNECT HEATER HOSES AND REMOVE BATTERY.

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

Disconnect cable to the fresh air door.

Remove push / pull assembly that was attached to the fresh air door.

Disconnect control cable from the blend air door.



Disconnect electrical harness from the resistor block. Also disconnect blower motor power wires.

Disconnect Heat / Defrost cable from top of the heater box.

Also remove the defrost flex hose from drivers and passengers defrost outlet.

Discard duct hoses.

Disconnect heater hoses to the heater core.

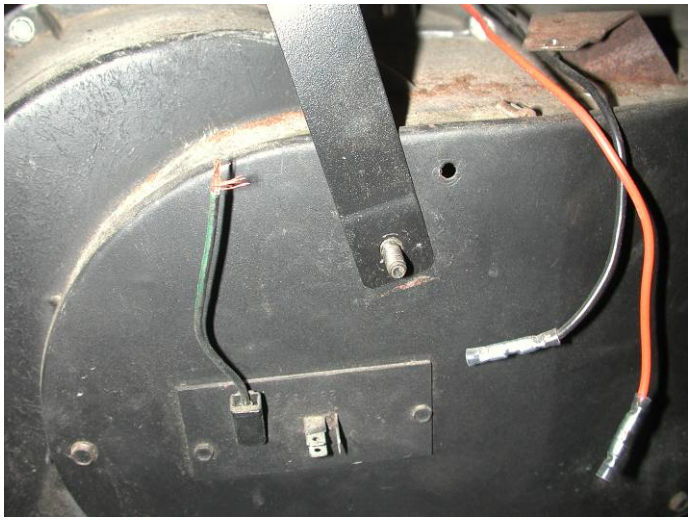
Locate and remove (2) nuts from the heater box. Discard hardware.

Locate on drivers side of firewall (1) nut that attaches the heater box.

Remove and discard nut.

Remove front support brace from the unit and air box above the heater.

Retain hardware and the support brace.

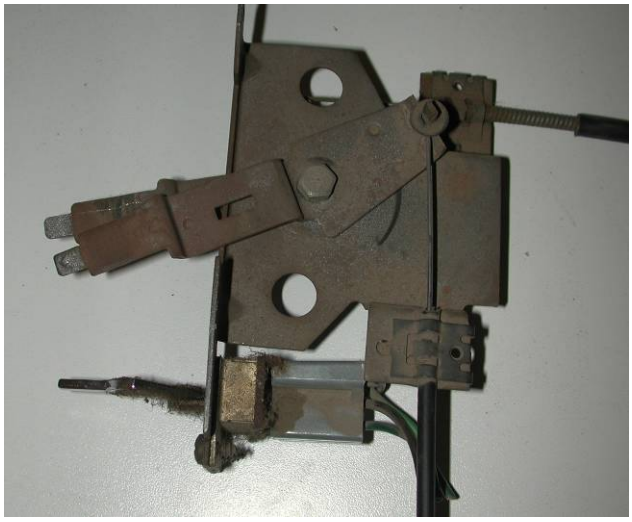


Remove Heater Box from behind instrument panel. Set aside.

Locate Heater Controls below the gauges. Remove control knobs on the levers. Remove (2) screws on the control head face.
Remove and retain the face and hardware.

Remove screws attaching the control bracket. Retain the screws.

Remove controls out back of the instrument panel.



Disconnect electrical harness from the controls.

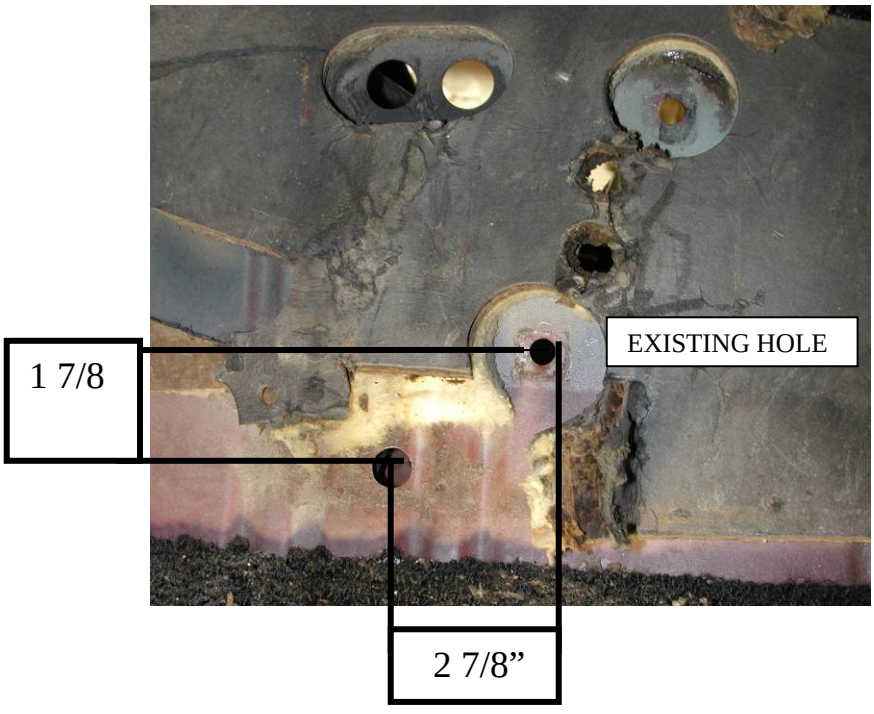
Remove (2) cables and the blower switch.

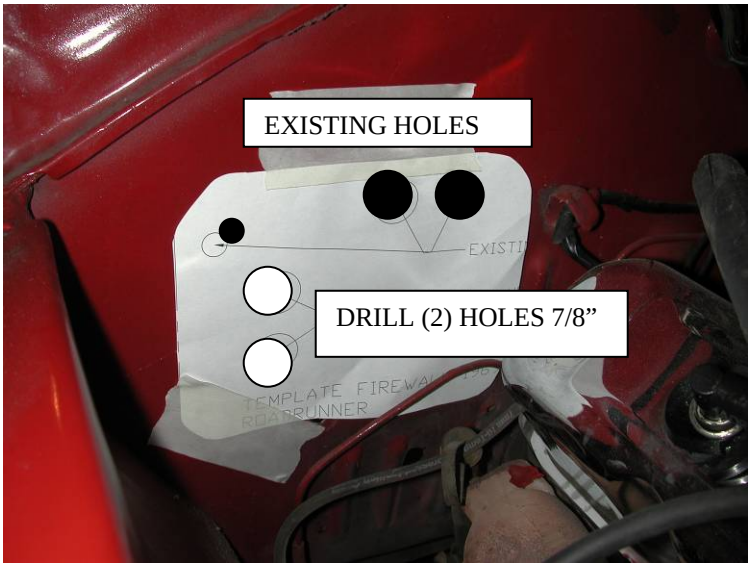
Do not discard cable clips or the switch mounting screws.

Discard the switch and cables.

Locate original wire harness that was attached to the blower switch. Cut the connector off. Attach (1) ¼” male spade connector to the BLACK / WHITE wire.

Locate behind dash and on firewall the hole that previously mounted the heater box. Drill (1) 11/16” dia. hole for the drain tube as shown





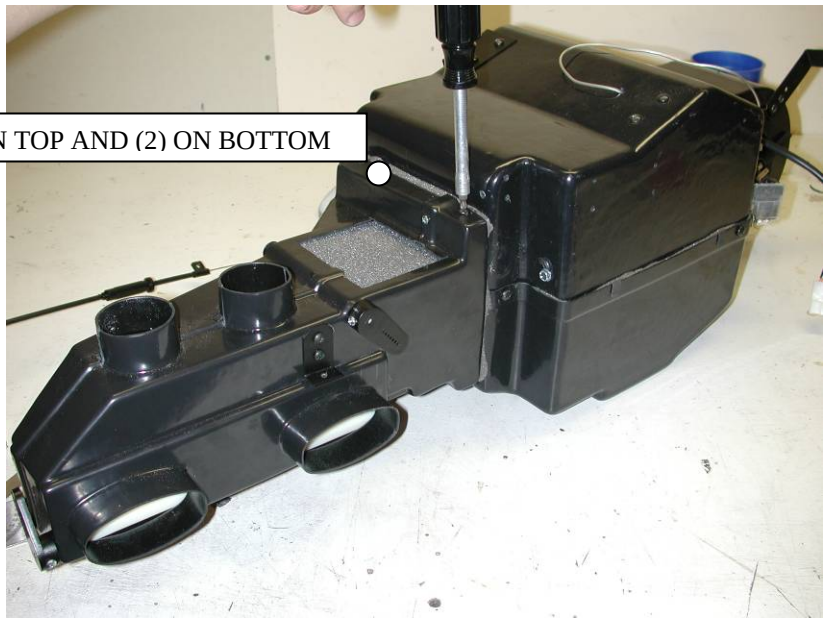
Locate the Firewall Hole Template from the install instructions.

Attach template on the firewall and align three holes to the existing hole.

Drill (2) holes 7/8” dia. as shown.

Locate the Inlet Block off plate and (3) #10 x ¾” tek screws.

Attach block off over the air inlet opening and attach using #10 screws.



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

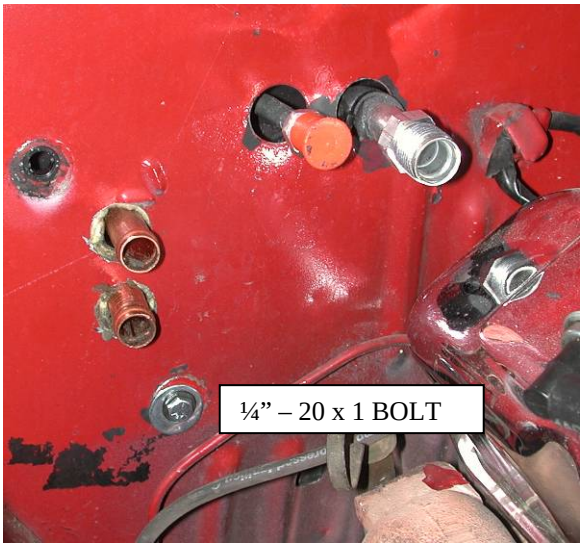
Place evaporator on the bench and attach the Distribution assembly onto the evaporator using (4) #10 x 5/8” pan head screws.

Locate the evaporator. Slide evaporator under the instrument panel and up into place.

Insert a/c tubes through the original heater holes and heater tubes through (2) new holes drilled.

Locate in the hardware sack kit (1) ¼ - 20 x 1 bolt and washer.

Attach unit to firewall through the lower original hole that mounted the original heater.



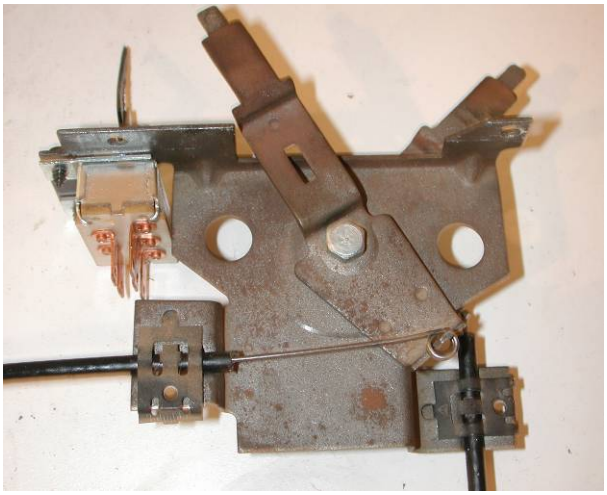
Locate in the hardware sack kit (1) #10 x ¾" tek screw.

Attach support brace on blower to the air inlet box using the #10 screw.

Locate original brace and (1) nut and (1) #10 x ¾" tek screw.

Attach brace to the original stud on vehicle. Carefully adjust bracket to lay flat on the distribution duct. Attach to duct using the #10 screw.

CAUTION: BE SURE THAT THE UNIT IS LEVEL BEFORE ATTACHING BRACE TO DISTRIBUTION DUCT.



Locate the original control assembly.

Locate in the control sack kit the blower switch, (2) 3/16” push nut, (2) control cables, original switch mounting screws and cable clips.

Attach blower switch assembly to the original control head using the original hardware.

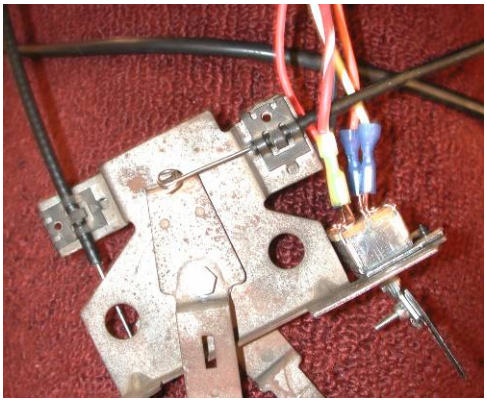
Attach longest of the cables to the temp lever using (1) push nut and the original cable clip.

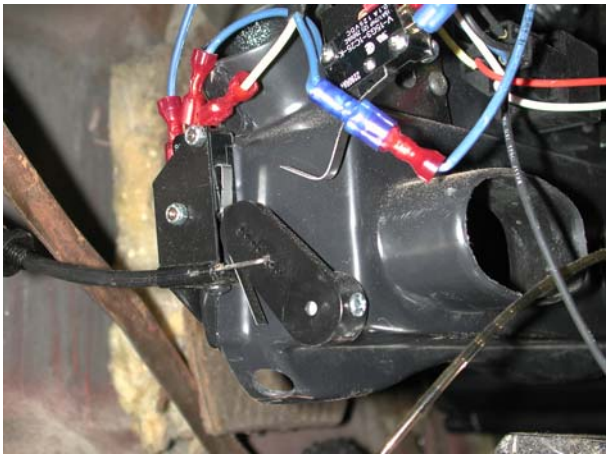
Attach shortest of the cables to mode control lever using (1) push nut and the original cable clip.

Locate wire harness from the control sack kit.

Route main harness across front of unit and to the resistor and blower motor. Route blue clutch wire over evaporator and out through grommet in the firewall. Secure ground from the blower motor using (1) #10 x ¾ “hex head Tek screw.

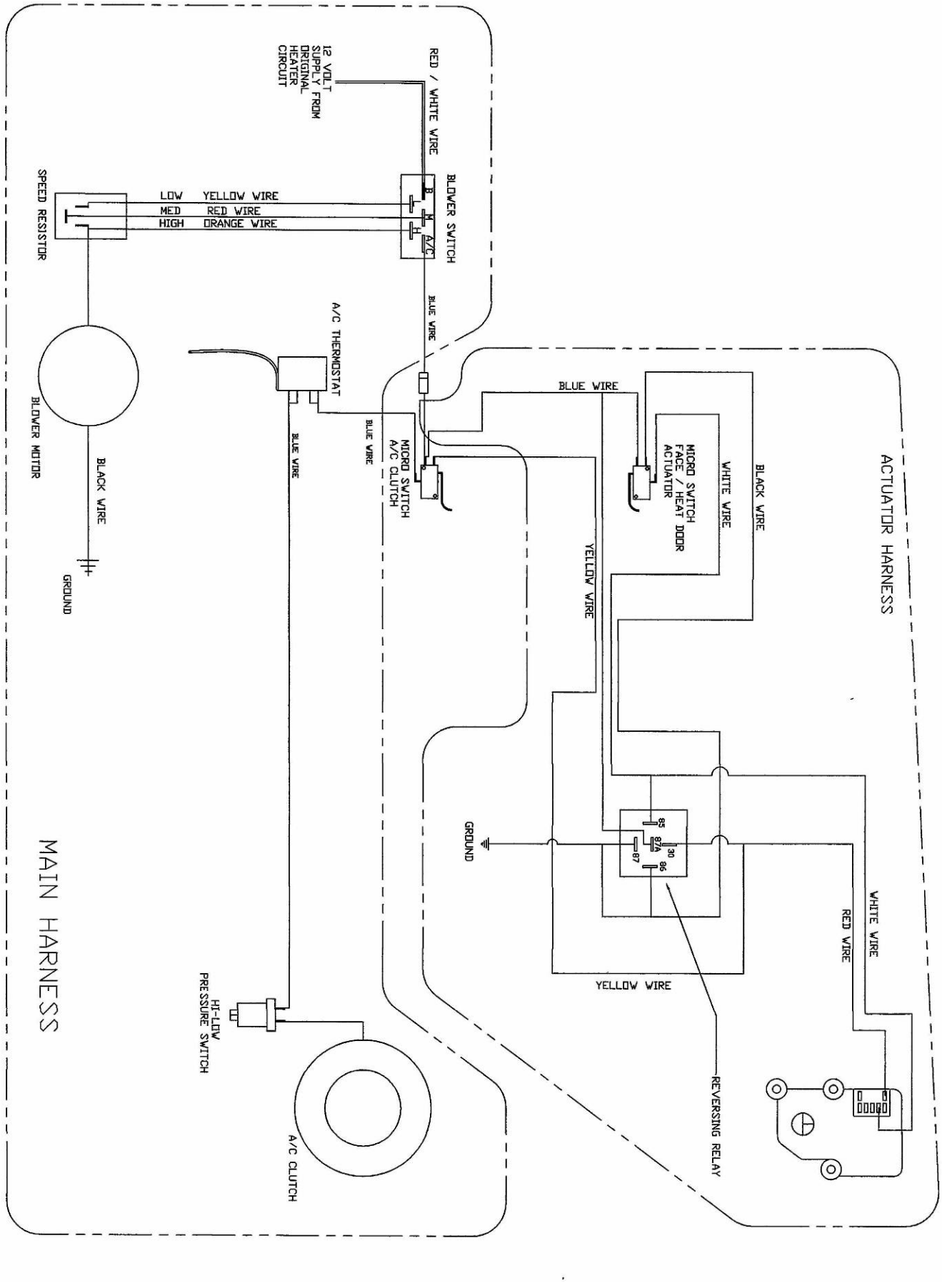
Attach harness to the blower switch according to wiring diagram on the next page.



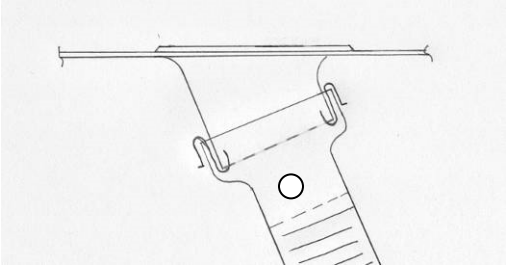


Attach micro switch wires from main harness to the switch on side of the face / head duct.

REFER TO THE WIRING DRAWING FOR PROPER CONNECTIONS.



Reinstall the control head using original hardware.

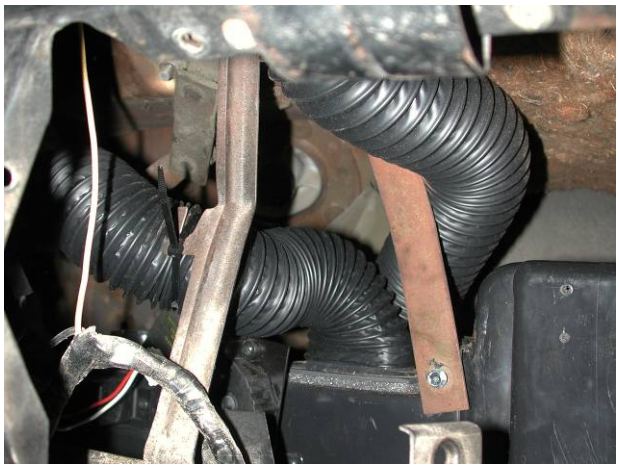


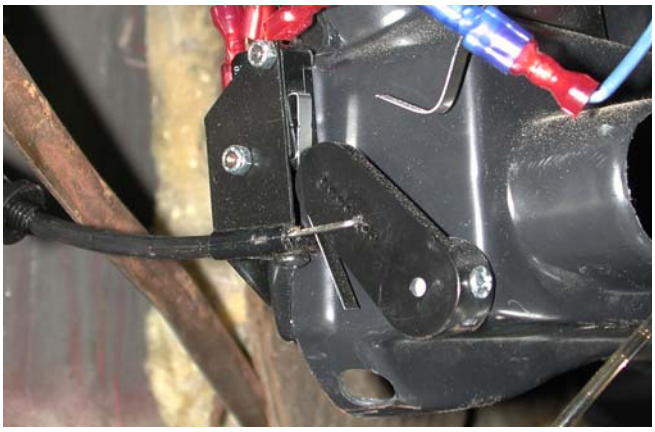
Locate in the hardware sack kit (2) defrost hose adapters. Locate the 2” dia x 1ft. flex hose and (1) piece 2ft long and cut to 18”.

Attach hose to the adapters using (2) #8 pan head screws provided.

Attach assembly with the 12” hose to rear outlet on defrost duct, around unit brace and push on to passengers defrost outlet on the dash.

Attach assembly with the 18” hose to front outlet on defrost duct and over to the drivers defrost outlet.





Locate the mode control cable and (1) #8 x 3/8 pan head screw.

Insert cable into 3rd hole from the pivot of the crank arm.

Attach cable flag to bracket using the #8 screw.

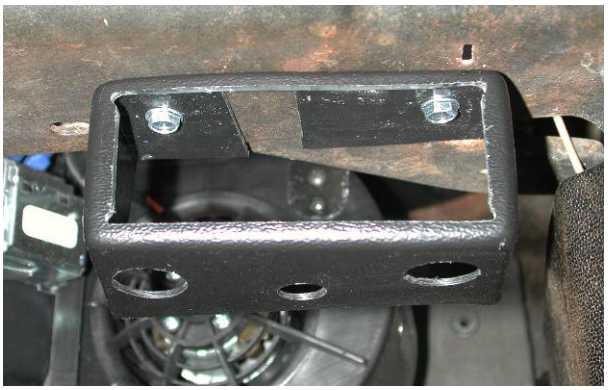
Route Temp Cable over top of the evaporator and out through hole along with the clutch wire.

Locate in the hardware sack kit the remote louver bezel, (2) #8 x 3/8” pan head screws and (2) #10 x ¾” hex head tek screws.

Attach remote louver bezel on drivers side of instrument panel using (2) #10 tek screws.

Insert louver assembly into the bezel.

Locate 2” dia x 3ft flex hose from the unit box. Attach flex hose to the louver assembly using (2) #8 x 3/8” pan head screws. Route over steering column and attach to left outlet on the face / heat duct.



Repeat mounting process for the passenger side.

Locate 2” dia x 4ft. flex hose from the unit box.

Attach flex hose to the louver assembly using (2) #8 x 3/8” pan head screws. Route over evaporator and behind the defrost duct. Attach to right outlet on the face / heat duct.

Locate center face distribution hose adapter, (2) pieces of 2 ½”dia flex duct 1ft long and (2) #10 x ¾” tek screws.

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

Attach 8” flex duct between center hose adapter and the distribution duct hose adapters.

Locate Center Louver Bezel Assembly and (4) #8 x 3/8” pan head screws.

Attach bezel assembly over the hose adapter and fasten with (2) #8 screws on the bottom.

Caution: Carefully check under the Instrument Panel for all cables, electrical harness, or Flex Hoses 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 unit.

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

Locate in the hardware sack kit the 5/8” hose nipple.

Remove and discard ½” nipple from the engine.

Using a small amount of pipe sealer attach 5/8” nipple to the engine.

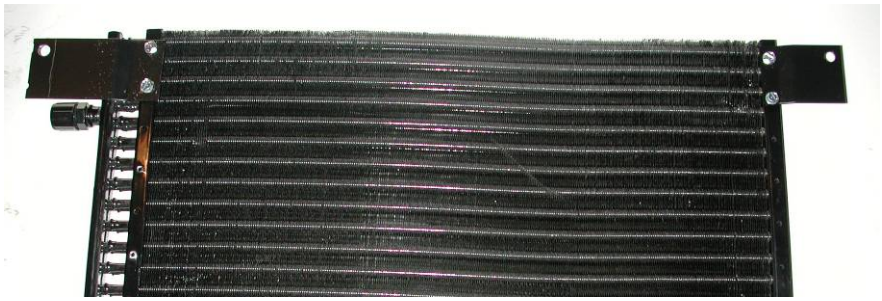
Locate the Water Valve and (3) worm gear clamps.

Supply line from engine is attached to the LOWER heater hookup tube. Cut 6” off end of the **RETURN LINE** and install water valve using (3) worm gear clamps as shown above.
Attach other end of return line to the pipe nipple previously installed.

Attach temperature control cable to the water valve. Adjust valve to the off position. Set control lever in the cold position.

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

Locate the Condenser, (1) Right top condenser mounting bracket, (1) Left top condenser mounting bracket and (4) #10 x 3/8” hex head screws.
Attach brackets to the condenser as shown.



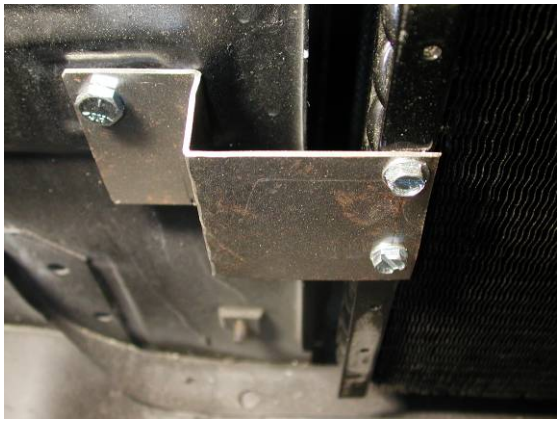
Remove light bezels and then the grill. Retain original hardware.
Remove top radiator mounting bolts and retain. Loosen the lower mounting bolts.

Slide condenser into position.

Push radiator back toward the engine.

Top brackets line up to the upper radiator mounting bolts. Between radiator and the radiator support.

Reinstall the radiator mounting bolts.



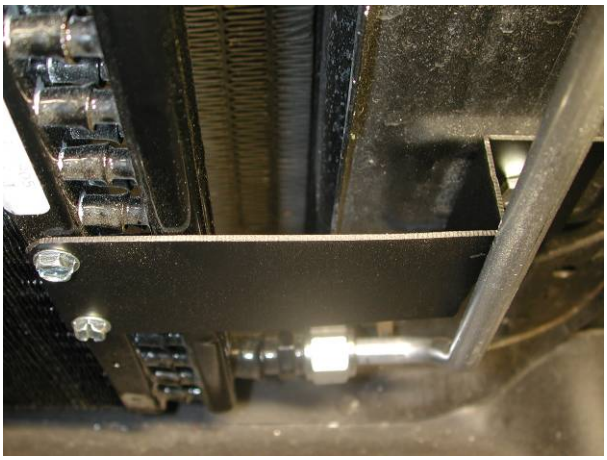
Locate the left lower condenser mounting bracket, (1) ¼”-20 x 5/8” bolt, ¼”-20 flange nut, and (2) #10 x 3/8” hex head screws.

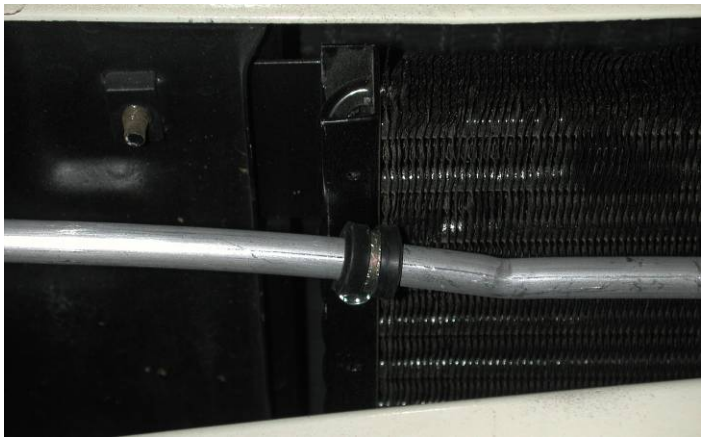
Install the bracket as shown.

Locate the right lower condenser mounting bracket, (1) ¼”-20 x 5/8” bolt, ¼”-20 flange nut, and (2) #10 x 3/8” hex head screws.

Install the bracket as shown.

Locate the Liquid Tube and (1) #6 o-ring. Attach tube to #6 fitting on the condenser.



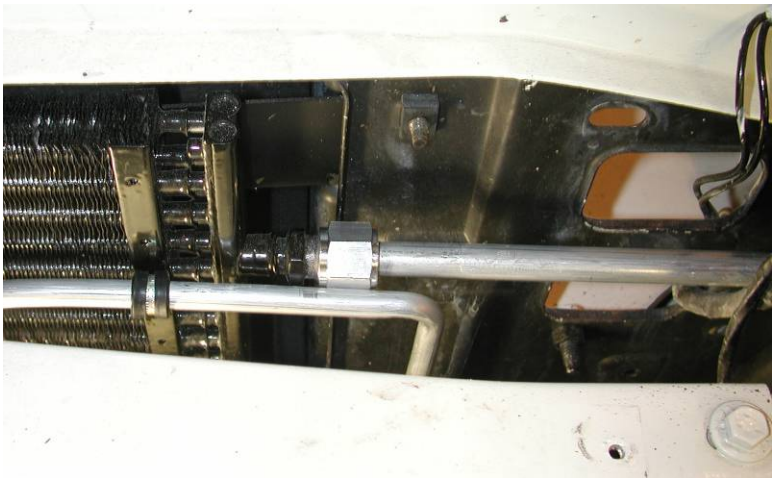


Route liquid tube in front of the condenser.

Locate (1) 3/8” hose clamp and (1) #10 x 3/8” hex head screw.

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

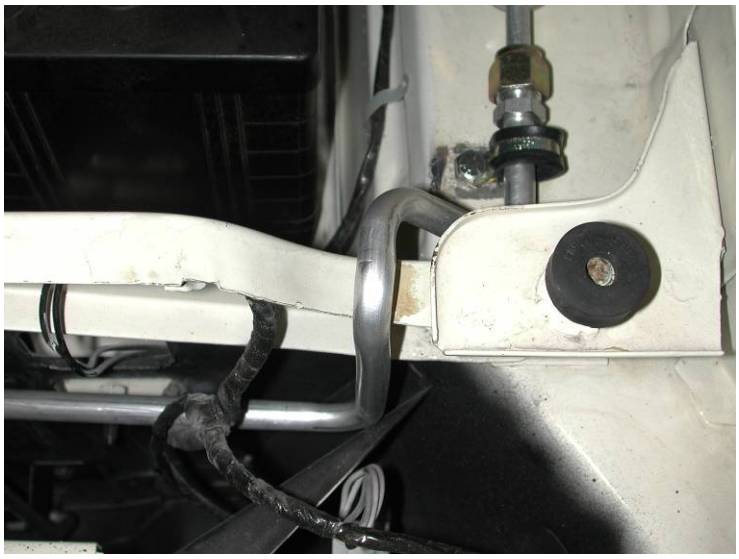
Attach to the upper condenser fitting using (1) #8 o-ring and a few drops of mineral oil.



Locate (1) #8 hose clamp (1) #6 hose clamp, and (2) #10 tek screws.

Attach liquid tube to the condenser as shown.

Also attach discharge tube to original hole next to the battery as shown.



Locate the short Liquid Tube, (2) #6 o-rings, Receiver Drier, Hi/Low Pressure switch and (3) #10-32 x 1” screws and nuts.

Attach pressure switch to the liquid tube using a few drops of mineral oil.

Attach tube to fitting from the unit using (1) #6 o-ring and a few drops of mineral oil.

Using the tube as a locating device. Mark and drill 3/16” dia. hole (3) places for the drier.

Attach drier using the ¼”-20 X 1 screws and nuts. Hookup liquid tube to the drier using (1) #6 o-ring and a few drops of mineral oil.

Locate Pressure Switch and harness. Attach to port on the liquid tube.
Locate in the hardware sack kit the refrigerant tape. Seal around tubes at the firewall.

Locate the Liquid Hose and (2) #6 o-rings. Use (1) #6 o-ring and a few drops of mineral oil. Attach straight end to the drier using (1) #6 o-ring and a few drops of mineral oil.

Other end routes along passenger inner fender and attaches to liquid tube from the condenser. Use (1) #6 o-ring and a few drops of mineral oil.

Locate the Discharge hose, (1) hose clamp, (1) #10 x ¾" tek screw and (2) #8 o-rings.

Attach end with the service port to compressor and other end to tube behind the battery. Use (1) #8 o-ring on each of the fittings and a few drops of mineral oil.

Clamp discharge hose to inner fender next to the battery as shown.

Locate the suction hose and (2) #10 o-rings. Attach end with the service port to compressor and the other end to the fitting at firewall. Use (1) #10 o-ring on each of the fittings and a few drops of mineral oil.

Locate (2) white wires from the pressure switch. Route (1) of the white wires along with the #10 refrigerant hose. Attach to the compressor clutch.

Other white wire attaches to Blue Clutch wire from the thermostat.

Reconnect the battery. And reinstall grille and head light bezels 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.

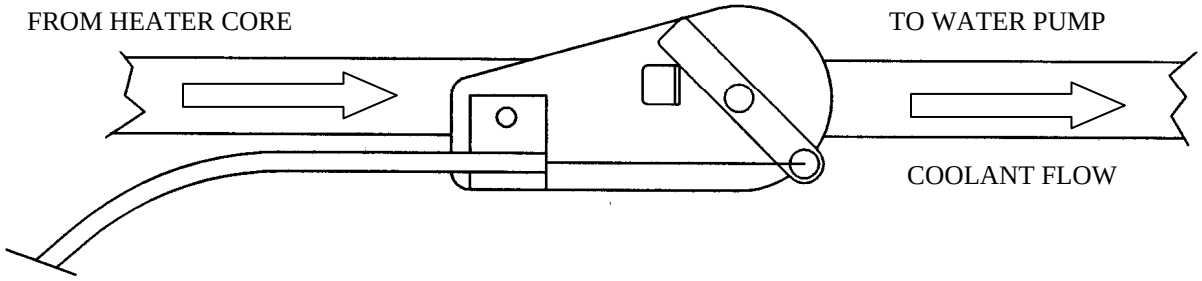
IMPORTANT

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


EXISTING HOLES
DRILL (2) 7/8" HOLES
TEMPLATE FIREWALL 1969 ROADRUNNER