



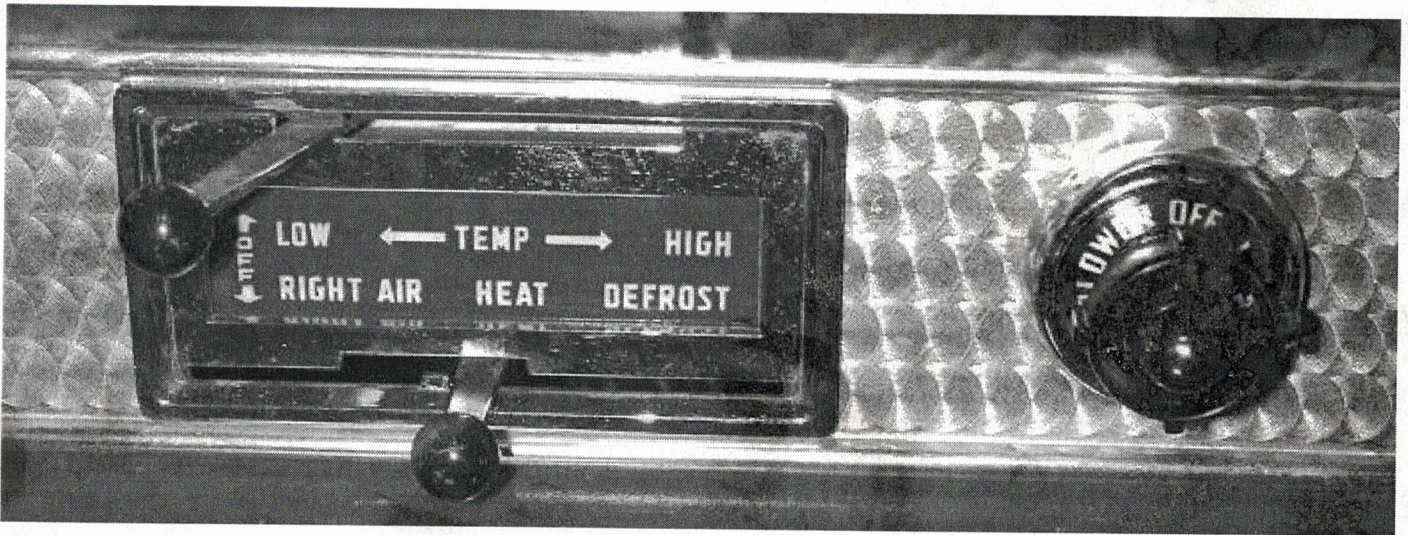
specializing in "AIR CONDITIONING, PARTS AND SYSTEMS" for your classic

# "PERFECT FIT" IN-DASH

## HEAT/ COOL/ DEFROST 1957 FORD THUNDERBIRD CONTROL & OPERATING INSTRUCTIONS

The controls on your new "Perfect Fit" system, offer 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 ABOVE 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 AVAILABLE.



**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 LOWER CONTROL LEVER CAN BE MOVED TO THE LEFT AND WILL OPEN THE PASSENGER FRESH AIR DOOR.



855 580 6739  
DAVID

877-302 8830  
800 407 9112

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.

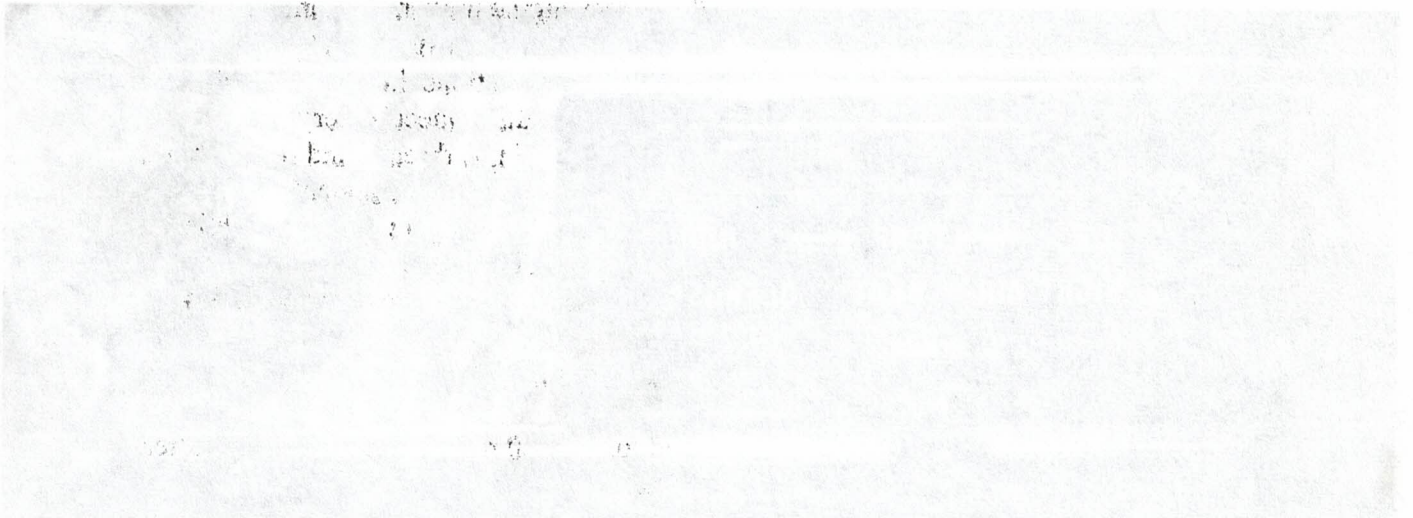
**FACE AND FLOOR / DEFROST MODE:** When the cable is MOVED all the way RIGHT, it will direct the air to the floor / and defrost ducts. The lever can be moved any position from LEFT to RIGHT. This will give blend between all distribution outlets.

**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 LEVER in the Face Mode (air-flow out the face outlets).

When the Mode control knob is pushed all the way to the LEFT against the lower stop in the control bezel 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 1955-57 FORD THUNDERBIRD***

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.

Power pack  
Firewall Block Off  
Flex Hose 2"dia. x 16.6 ft.  
Sack Kit Hardware  
Sack Kit Control  
Air Plenum  
Glove Box

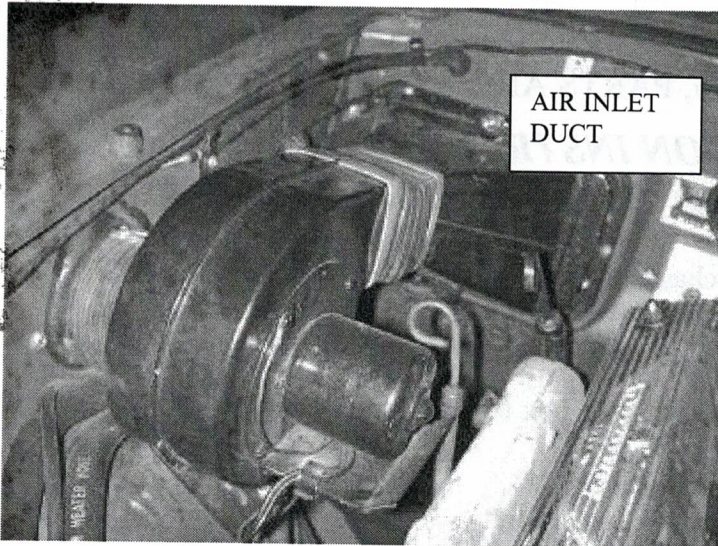
### ***IMPORTANT INFORMATION***

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 GROUND CABLE.

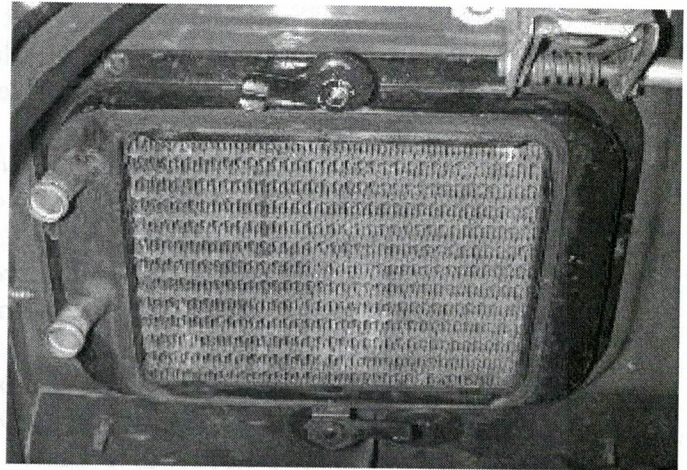
Disconnect battery ground cable. Drain radiator.



Disconnect air inlet duct and the flexible adapter. Remove the duct. Retain the duct, flex adapter and all of its original hardware.

Remove screws around perimeter of the heater frame.

Remove the heater assembly.

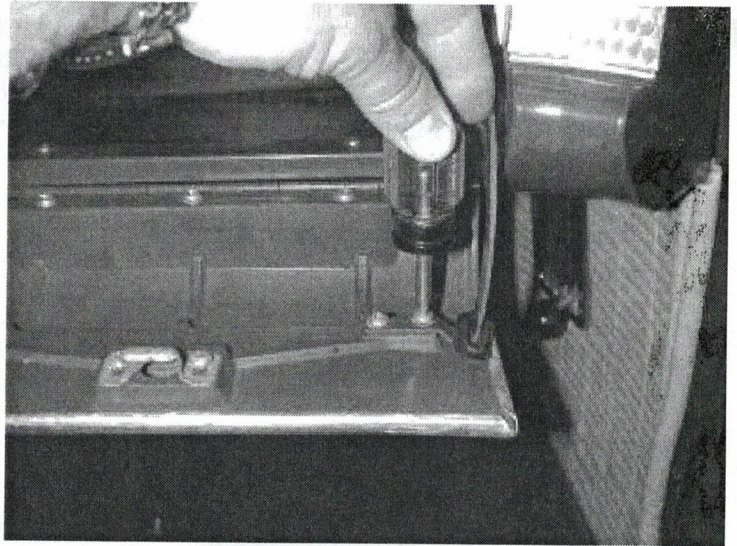


Lay assembly on bench. Remove (4) screws that hold the coil to the housing.

Discard screws and the original heater coil. Retain housing.

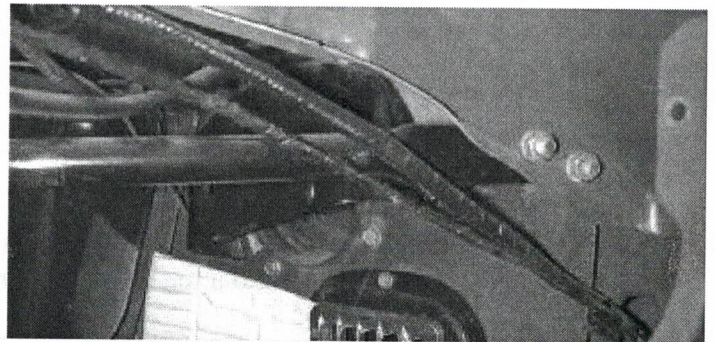


Carefully remove glove box door and the glove box. Retain all original hardware.



Locate behind glove box opening the tubular support brace. Remove and retain nuts and washers from center of the vehicle.

Remove and discard brace, bolts, nuts and washers from the end of the brace next to the passenger door.



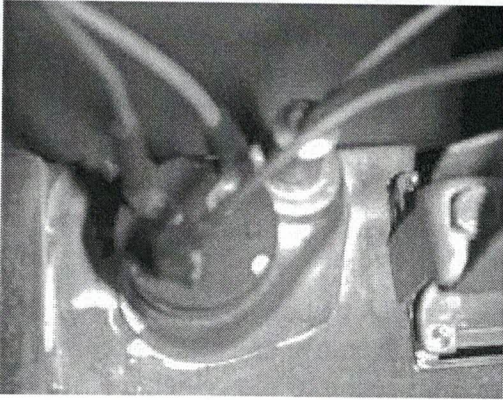
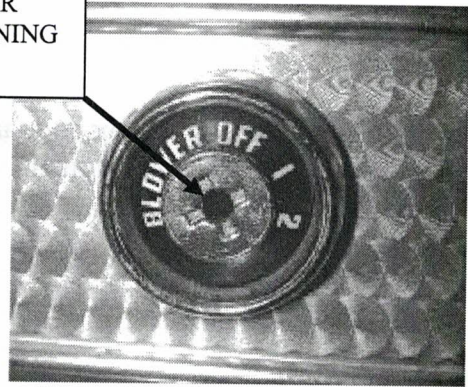
Locate the blower switch. Using a small screw driver loosen the set screw in the knob.

Remove and retain the knob for later reinstallation.

Using a pair of pointed nose pliers loosen and remove the center retaining nut.

Remove the trim bezel, retaining nut and retain.

CENTER  
RETAINING  
NUT

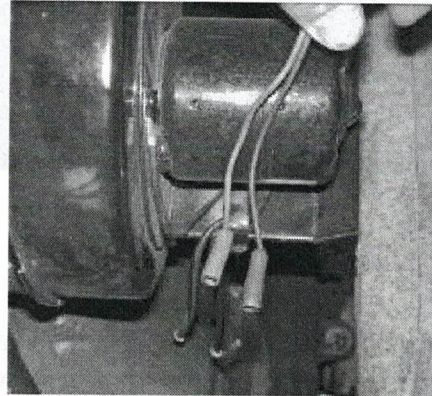


Disconnect electrical connections from the blower switch.

Remove and discard the blower switch.

Locate the brown wire and label. It will be the power wire for the a/c system. Upgrade the fuse to 25 amps.

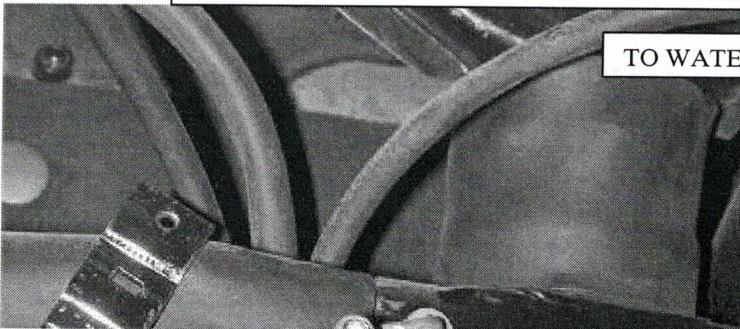
Located under the hood and beside blower assembly are (2) electrical connections. Disconnect and pull wires through firewall to inside of the car and discard.



Located on top of the duct assembly is (2) vacuum hoses. One goes to the water valve on the engine. And one goes to a tee connection next to the wiper motor.

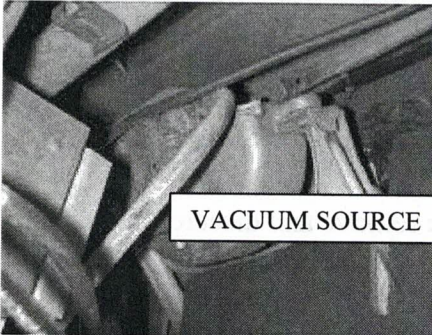
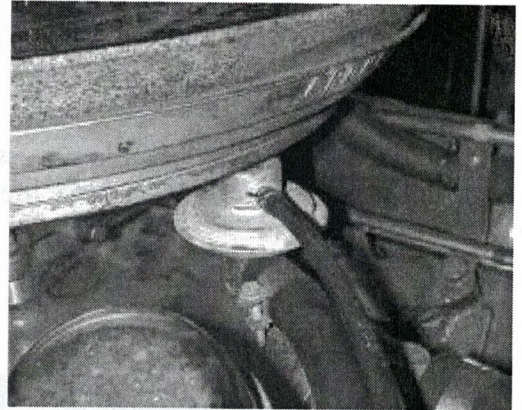
TO TEE CONECTION NEXT TO WIPER MOTOR

TO WATER VALVE ON ENGINE



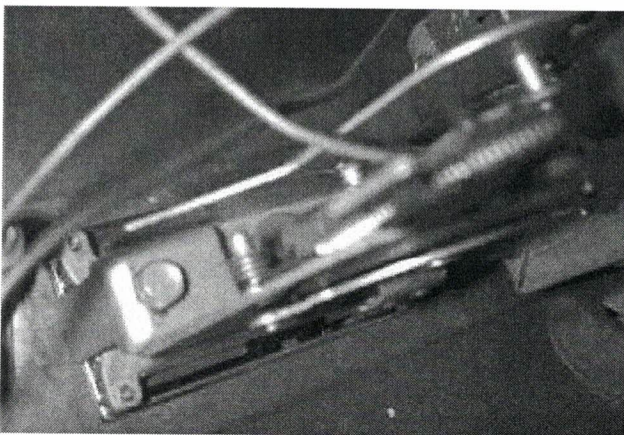
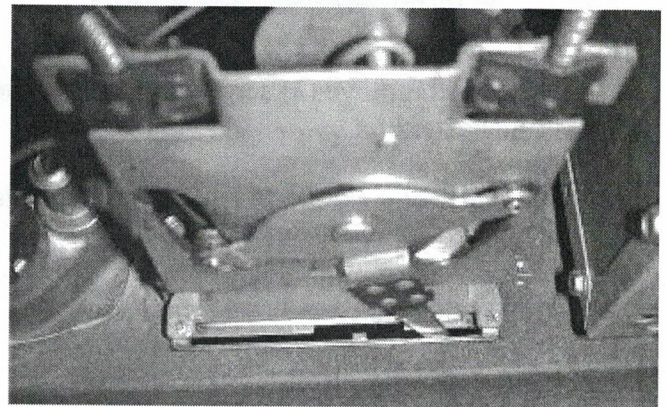
Water valve on engine. Disconnect vacuum tube.

Remove the water valve and discard.



Remove tee assembly and connect the source to the wiper motor.

Remove cable clips from the (3) control cables. Retain the attachment hardware.



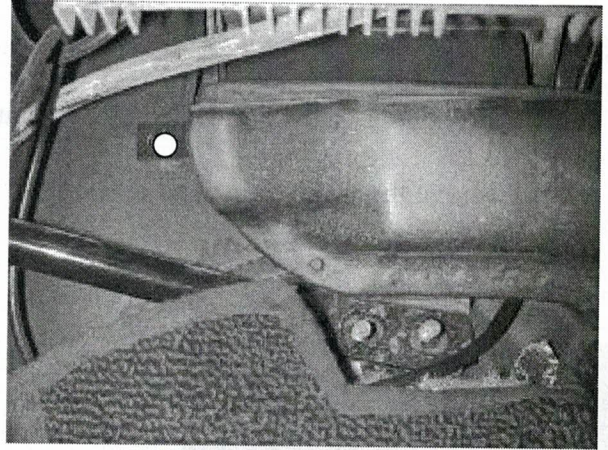
Locate behind the dash (2) screws that hold the control head in place.

NOTE: there is one on both sides of the control head.

Retain all original hardware.

Locate on end of the blower assembly the defrost / heat duct. Remove the screw from the drivers end.

Discard screw.

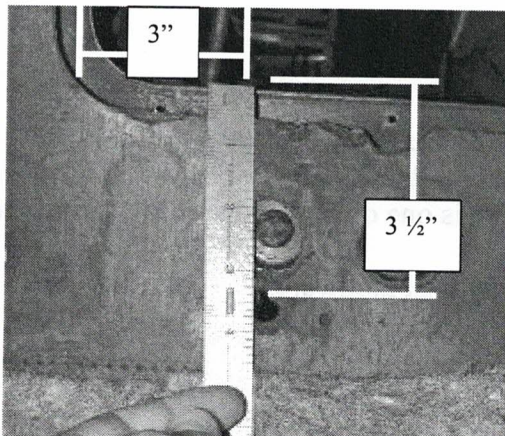
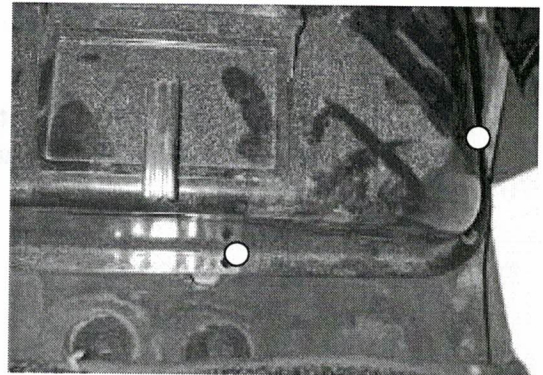


Located above heater box remove and discard the defrost duct hoses.

Locate and remove (3) screws around perimeter of the heater box.

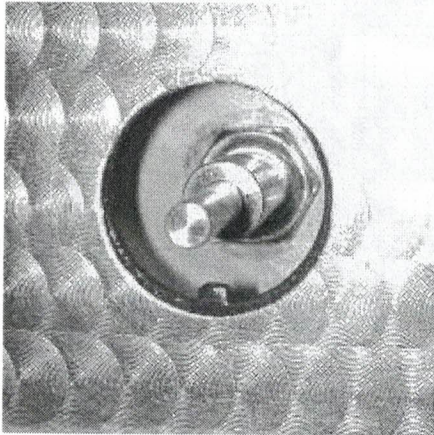
Remove heater assembly from behind the glove box.

Discard the heater and mounting hardware..



Locate and drill (1) 13/16" dia. hole as shown.

**Modification of the vehicle is complete.**



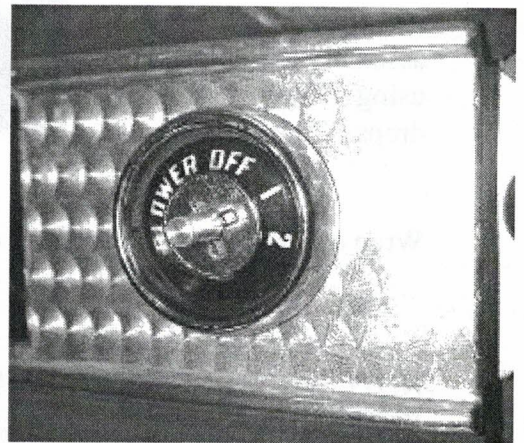
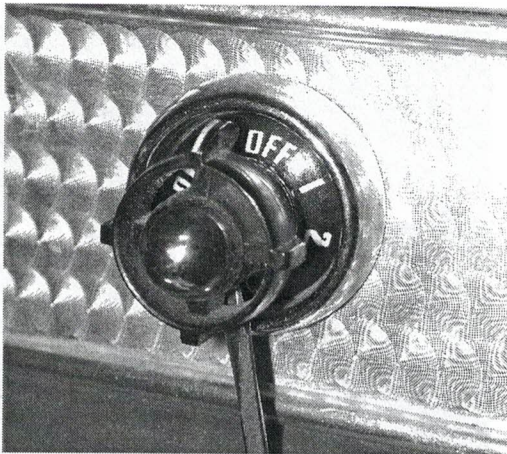
Locate the blower switch assembly and (2) switch nut.

Insert into the original blower switch hole and attach using the switch nut.

NOTE: SWITCH SHOULD BE INSTALLED SO THAT SWITCH NUT IS AT THE END OF THE SHAFT.

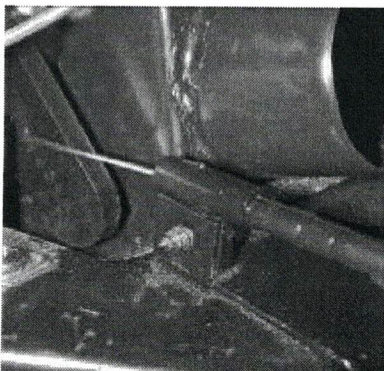
Locate the original switch bezel and shaft nut.

Slide over the switch shaft.



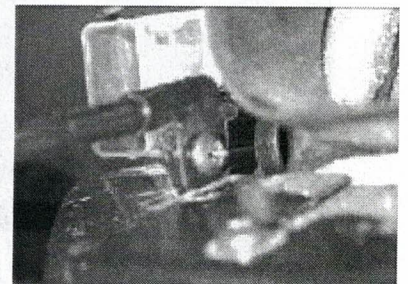
Reinstall knob, tighten securely

**Locate the Power Pack and set it on the bench.**



Locate shortest of the control cables. Insert offset end into the crank arm into 2<sup>nd</sup> hole from the pivot of the door.

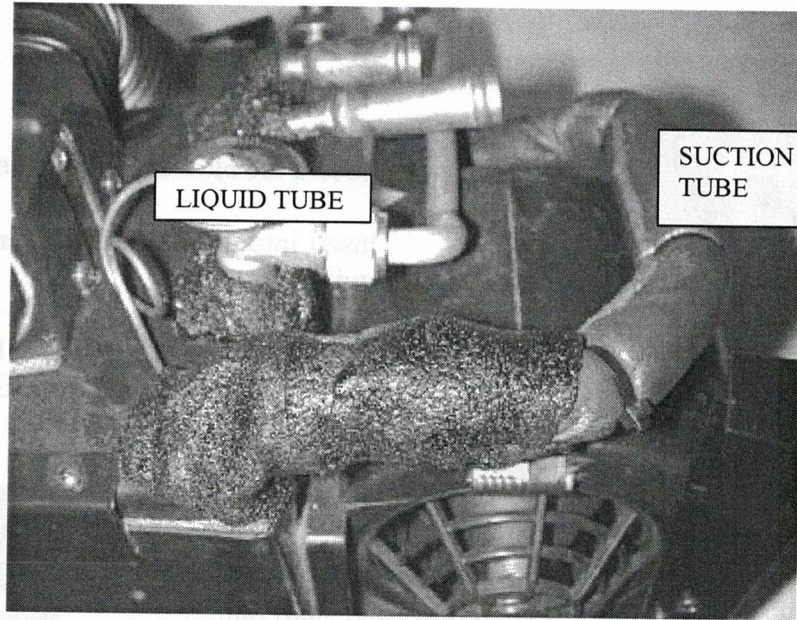
Locate (1) #8 x 3/8" pan head screw. Attach flag on the cable to bracket as shown.



Locate the suction tube assembly, (1)#10 o-ring , liquid tube, (1) #6 o-ring and refrigerant tape.

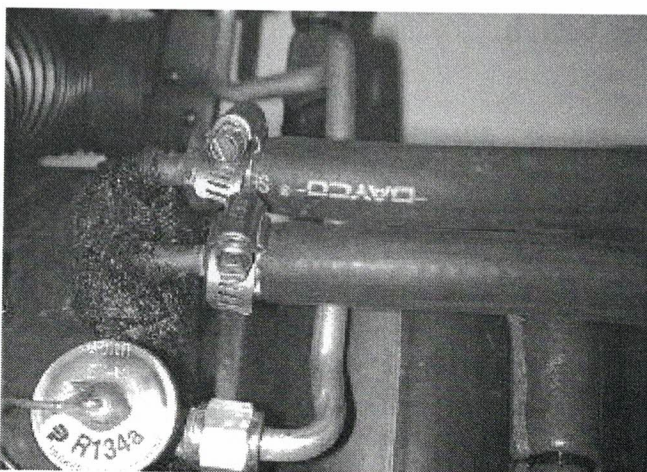
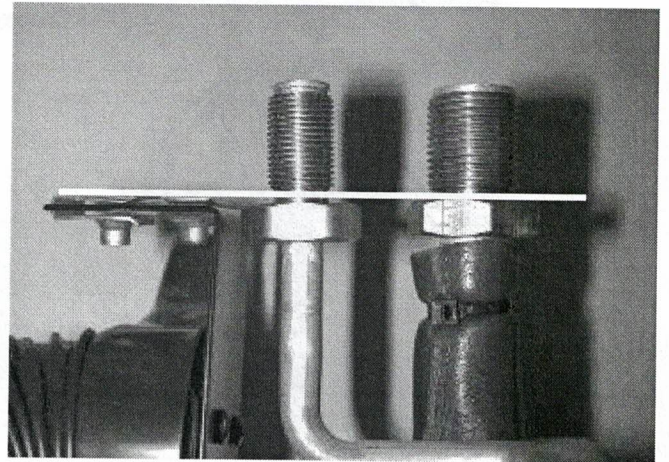
Attach liquid tube to the expansion valve using #6 o-ring and a few drops of mineral oil.

Attach suction tube assembly to #10 fitting using #10 o-ring and few drops of mineral oil.



Wrap all exposed metal surfaces on the suction tube with refrigerant tape.

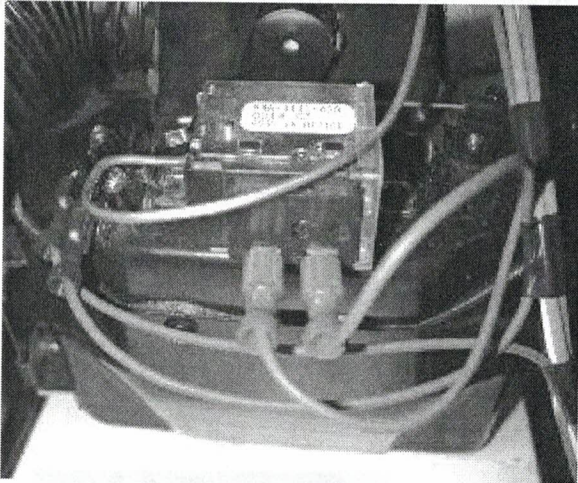
**NOTE: WHEN ATTACHING THE REFRIGERANT TUBES. MAKE SURE THAT THEY ARE INLINE WITH REAR MOUNTING BRACKET.**



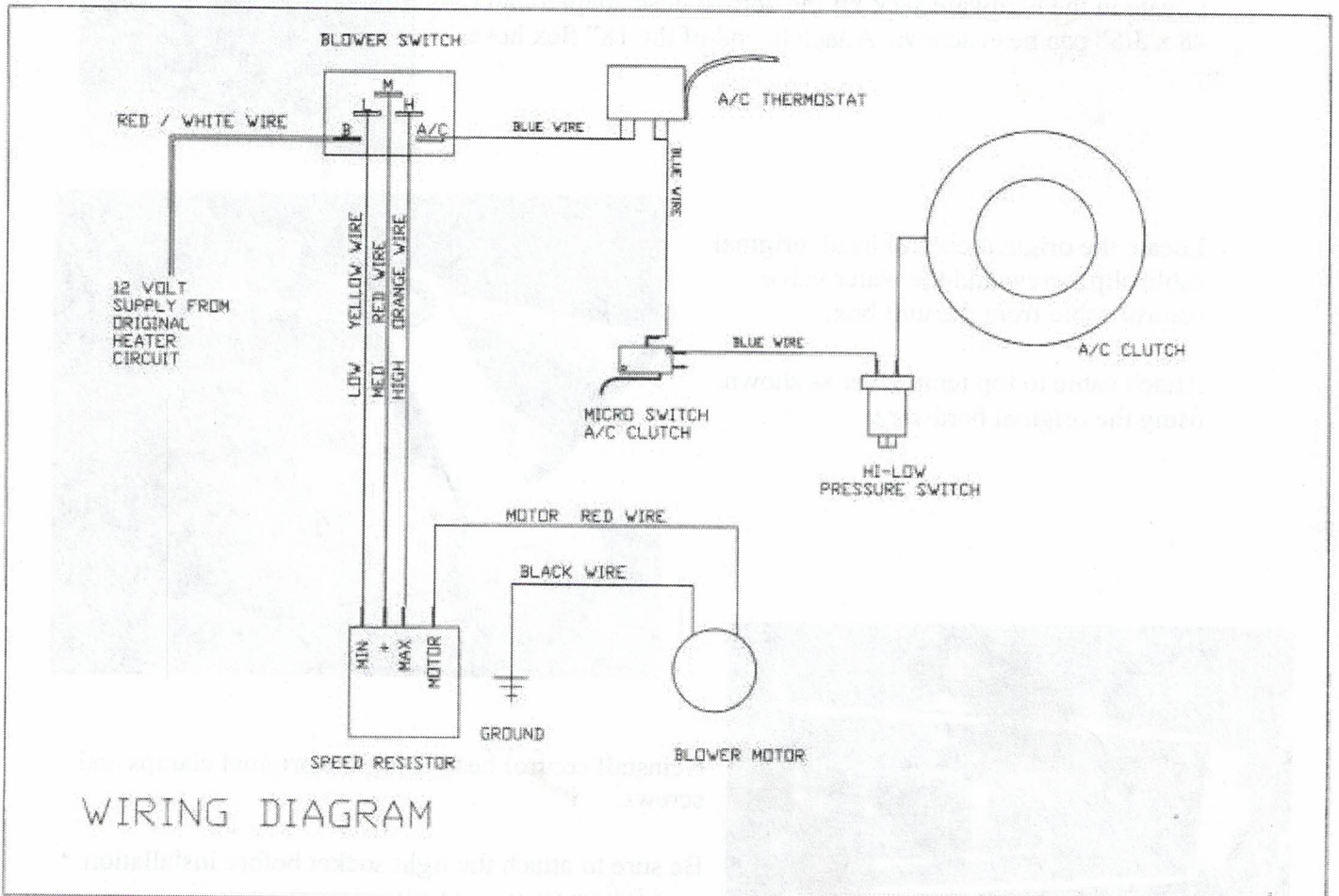
Locate (2) pieces of 5/8" dia. heater hose and (2) #8 hose clamps supplied.

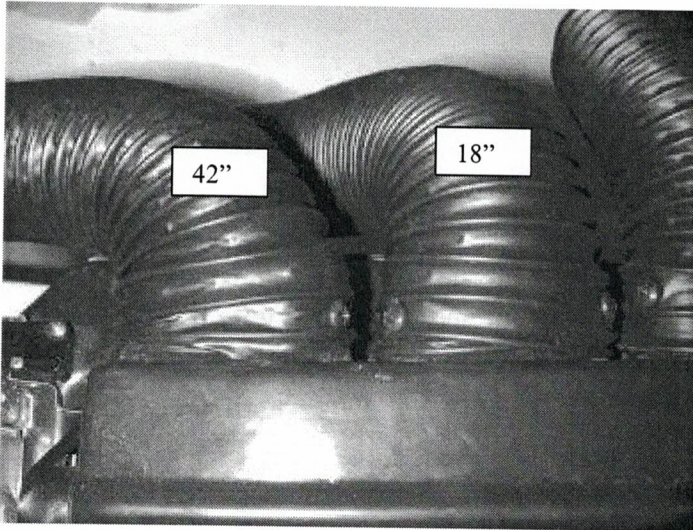
Attach shortest of the hoses to rear heater fitting using the worm gear clamp.

Attach remaining hose to front heater fitting using the worm gear clamp.



Locate wire harness from the unit box. Attach harness to the blower motor and ground the wire from the motor (see top pg-13). Refer to wiring diagram below.



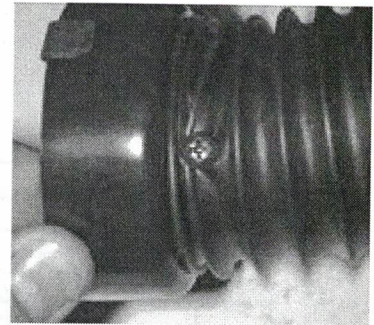


Locate 2" dia. x 2ft. flex hose from the kit, cut (1) piece 18". Locate 2" dia. x 4ft. flex hose, cut (1) piece 42".

Attach 18" hose to defrost outlet on back of the unit using (2) #8 x 3/8" pan head screws.

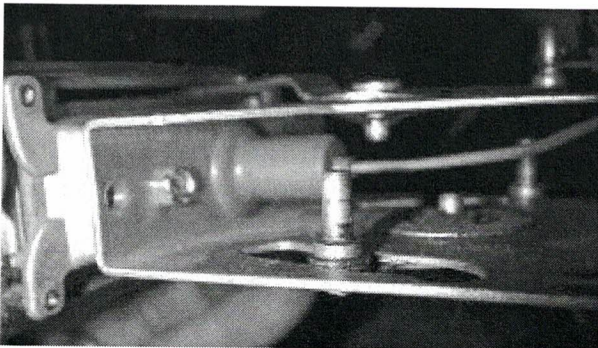
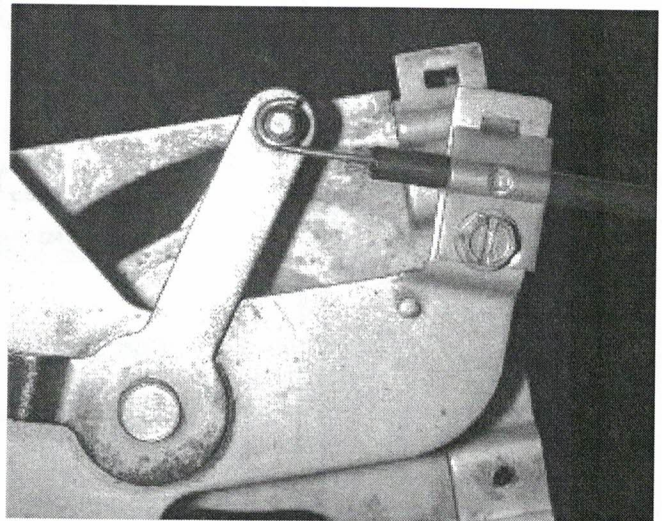
Attach 42" hose to heat outlet on back of the unit using (2) #8 x 3/8" pan head screws.

Locate in the hardware sack kit the defrost hose adapter and (2) #8 x 3/8" pan head screws. Attach to end of the 18" flex hose.



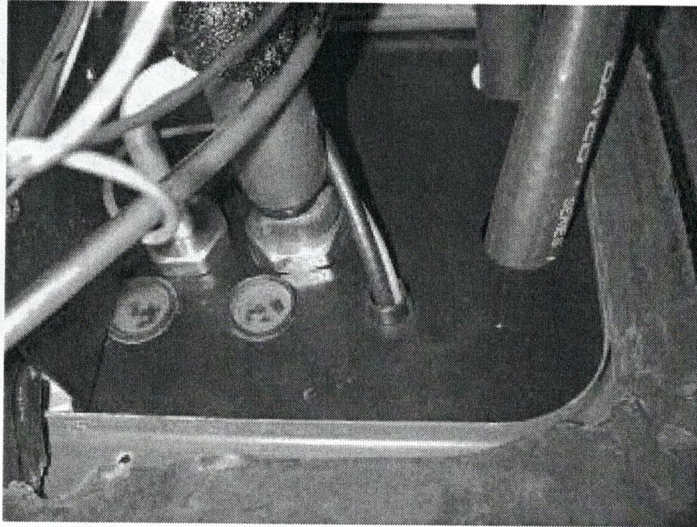
Locate the original control head, original cable clip, screw and the water valve control cable from the unit box.

Attach cable to top temp lever as shown using the original hardware.



Reinstall control head using the original clamps and screws.

Be sure to attach the light socket before installation.



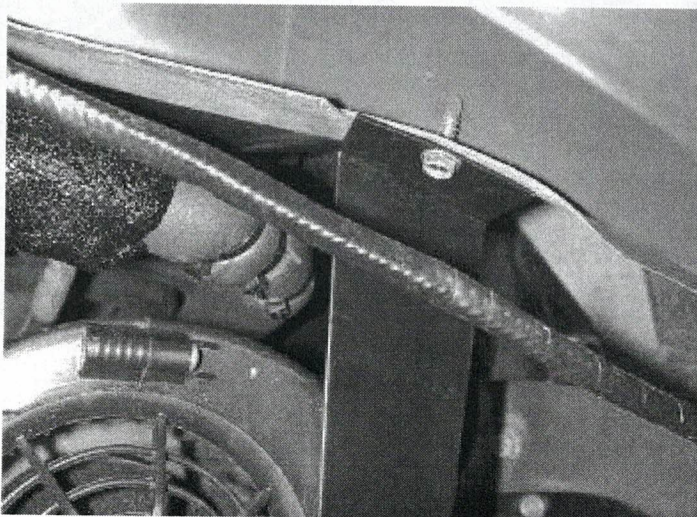
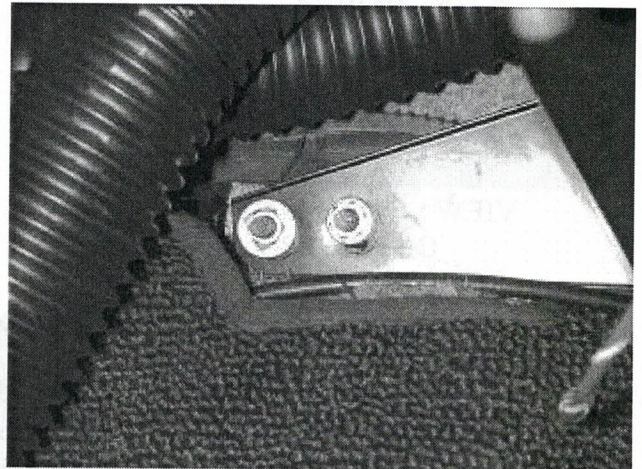
This picture is for reference only.

When installing power pack the heater hoses, clutch wire and temperature control cable will go through the firewall mounting plate.

Insert items through the opening. The mounting plate will be attach later.

Locate power pack and insert it up and behind instrument panel behind the glove box opening.

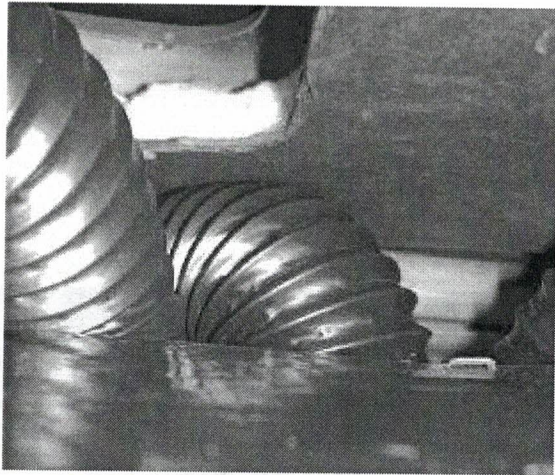
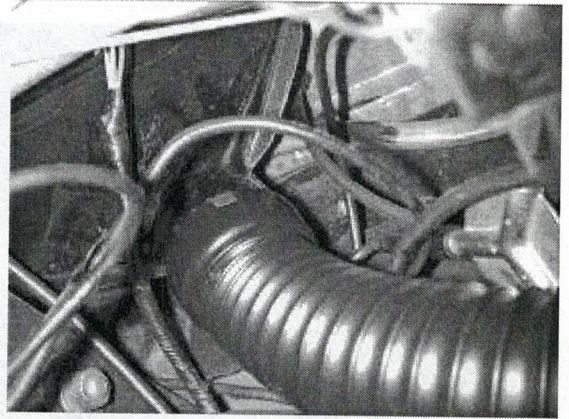
Attach driver's side mounting bracket over studs that the support brace attaches to. Use original nuts and flat washers.



Locate in the hardware sack kit (1) #10 x 3/4" tek screw.

Attach blower support brace to the body rib as shown.

Route 18" defrost duct over to drivers defrost diffuser. Push s-clips over edge of the inlet.



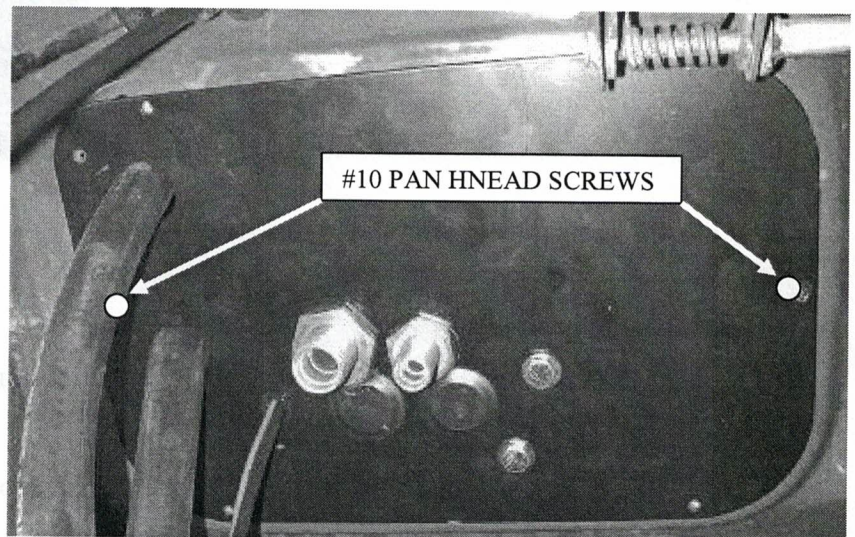
VIEW LOOKING UP THE REAR OF POWER PACK

Short flex hose from top rear of the power pack needs to be inserted into the passenger defrost diffuser.

Locate the unit mounting plate assembly and (2) #10 x 5/8" pan head screws.

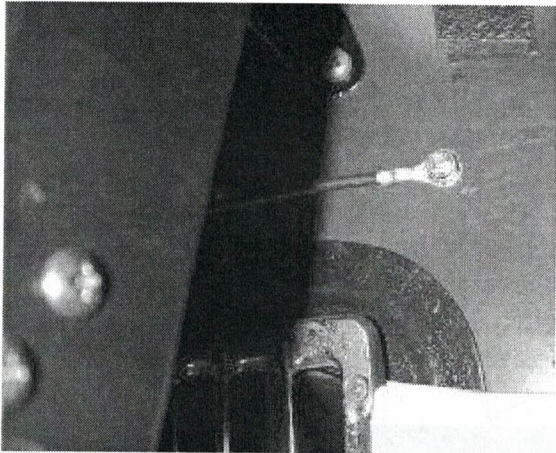
Insert temperature cable and clutch wire through grommet hole in the mounting bracket.

Insert heater hoses through holes in the mounting plate. Short hose through the lower hole.



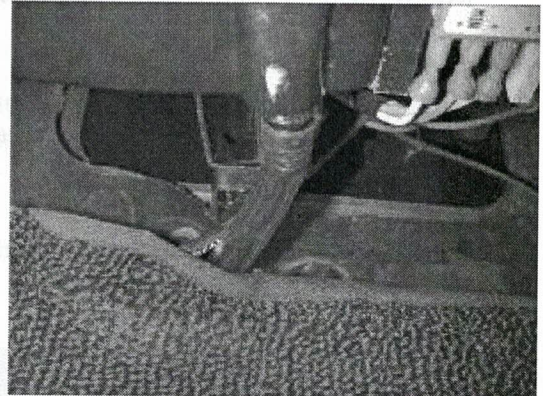
Insert #6 and #10 fitting through mounting bracket and attach using the fitting nut. Locate (2) 1/4" - 20 x 5/8" hex head screws and flat washers. Attach rear unit brace to the mounting bracket.

Using #10 pan head screws attach the mounting bracket to the original holes.



Locate (1) #10 x 3/4" tek screw. Locate black wire from blower motor and ground just above air inlet in the kick panel.

Locate clear drain tube from the hardware sack kit. Attach to the drain fitting on unit and out through the hole previously drilled.

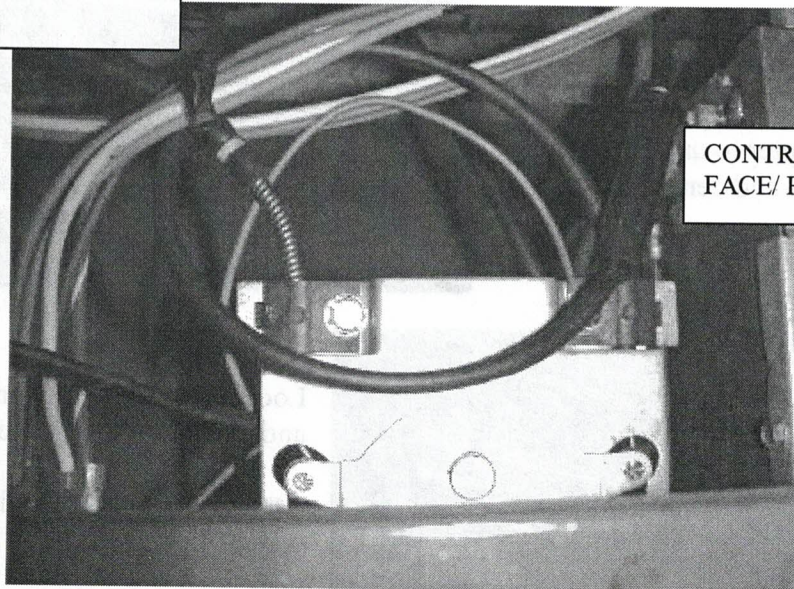


Looking up to the bottom of the control head.

Attach control cable from the face / heat door to lower lever next to the radio. Use original hardware.

Attach control cable from air inlet door to it's original location and original hardware.

ORIGINAL FRESH AIR CABLE



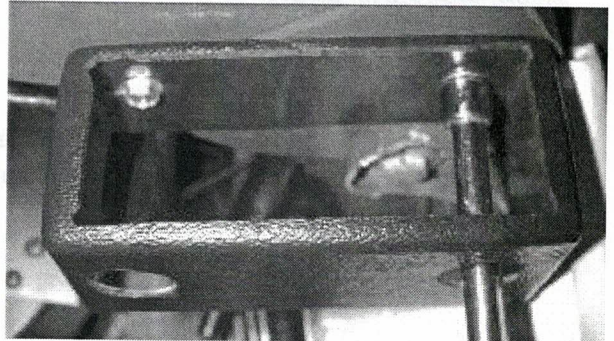
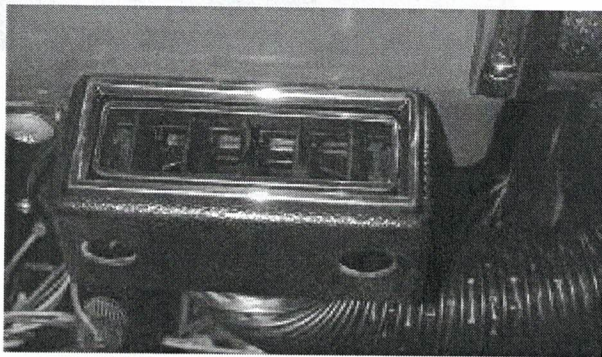
CONTROL CABLE FROM FACE/ HEAT DOOR

**CAUTION:** Control cables are equipped with inline adjusters. Adjust the Defrost, Heat / Face door and Water valve cable so that full travel of the Control cable operates the door to its full travel. Make sure that water valve completely closes when 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 thin metal arm on the switch. Make sure that the Clutch Micro Switch is depressed when lever is in the face position.

Locate in the hardware sack kit (1) of the outboard louver assemblies and (2) #10 x 3/4" hex head screws.

Attach to underside of instrument panel next to the kick panel on passenger side.



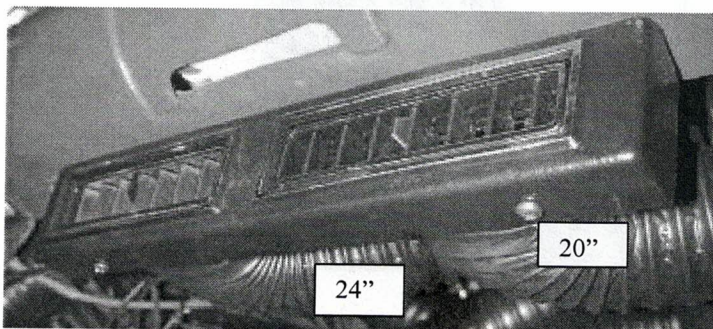
Locate second of the outboard louvers and (2) #10 x 3/4" hex head screws.

Attach housing to left of the steering column on drivers side.

Insert louver assemblies into the housings.

Locate the center hose adapter and (2) #10 x 3/4" tek screws.

Attach hose adapter to underside of the instrument panel and centered on the ash tray.



Locate the center louver assembly, and (2) #8 x 3/8" pan head screws.

Attach assembly to the hose adaptor using #8 screws.

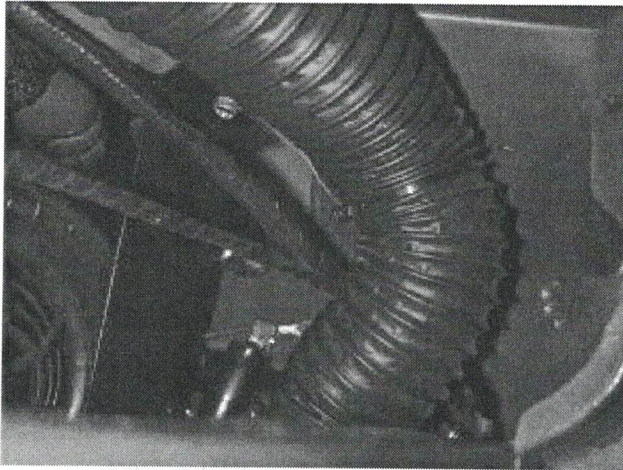
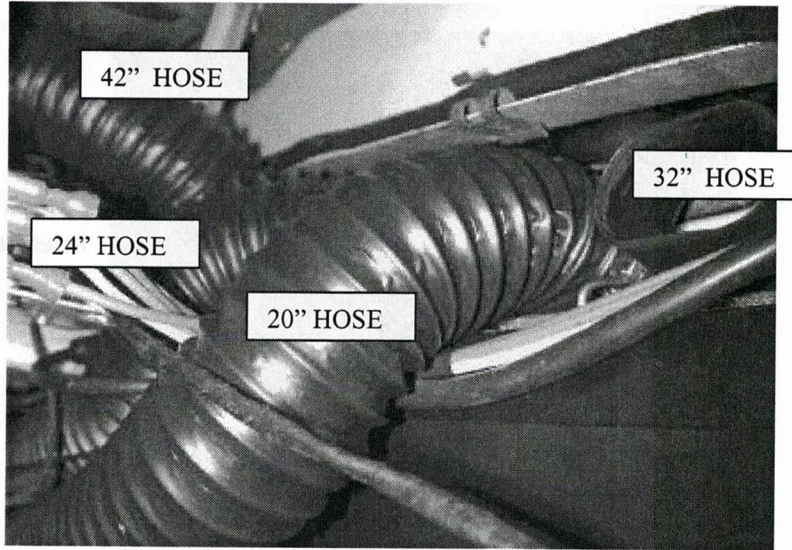
Locate 2" dia. x 2ft., 3ft. and 4ft. flex hose from the kit.

Cut (1) piece 20" long, (1) piece 24" long, and (1) piece 42" long.

Attach 42" piece to left face outlet and route over top of the radio. Then down and attach to the drivers louver.

Attach 24" piece to next outlet and route to the left side of the center louvers.

Attach 20" piece to next outlet and route to right side of the center louvers.



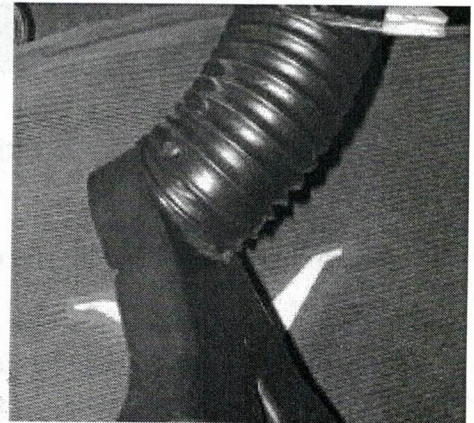
Cut (1) piece of 2" x 3ft. flex hose to 32" long.

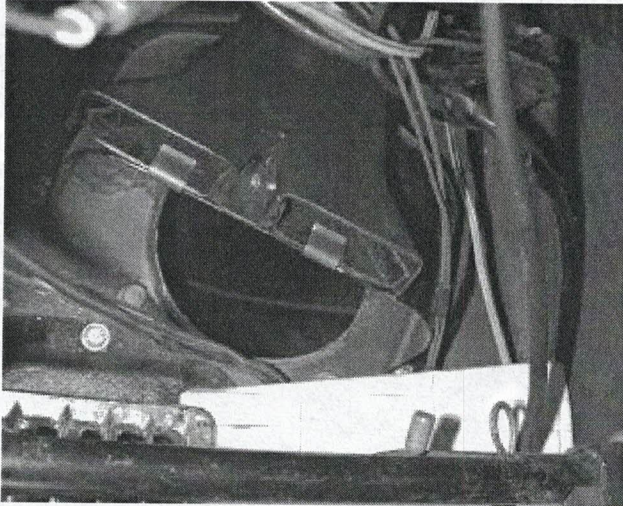
Attach to last outlet on power pack. Route it up and over to the passenger side louver.

Use a ty-wrap through the original hole to hold duct in place.

Locate in the hardware sack kit the remote heat dump, (2) #8 x 3/8" pan head screws and (2) u-clip fasteners

Attach flex hose to the heat dump using #8 screws.



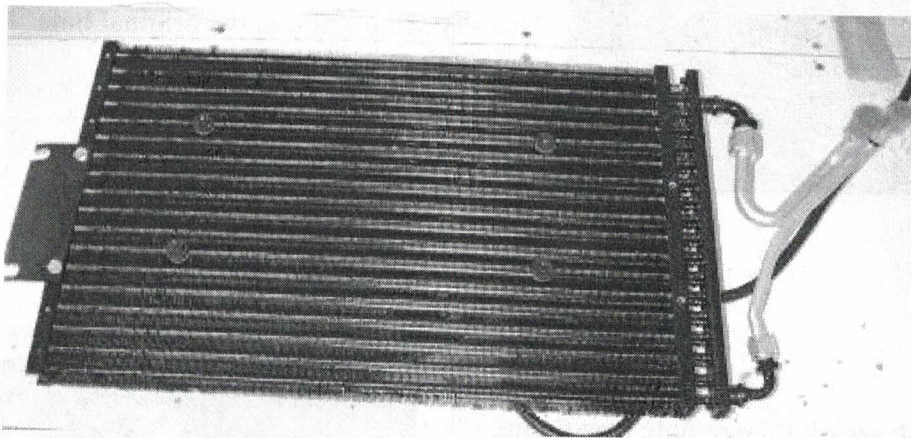


Attach heat dump assembly to drivers air inlet deflector using the u-clips.

***Engine compartment components should be installed at this time.  
Carefully follow the electrical diagram provided on page 7***

## **REMOVE RADIATOR**

Locate following components from the condenser kit. Condenser, (1) left condenser mounting bracket, discharge tube (1) #8 o-ring, liquid tube (1) #6 o-ring and (2) #10 x 3/8" hex head screws..



Attach left condenser bracket to 3<sup>rd</sup> hole from bottom of the condenser, using the #10 screws.

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

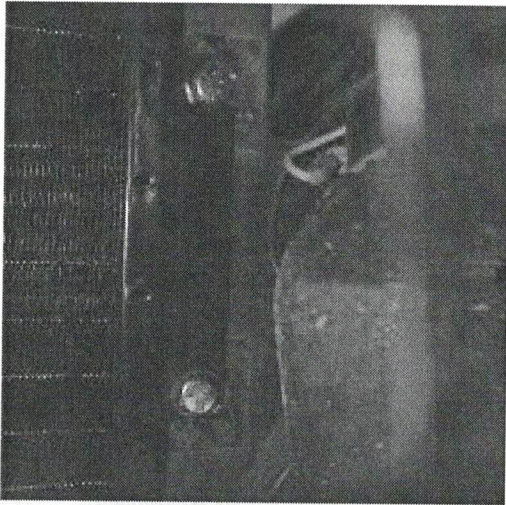
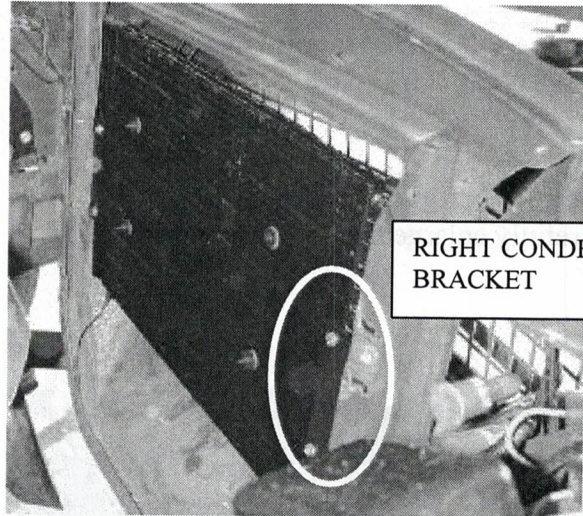
Attach liquid tube to #6 fitting on the condenser using #6 o-ring and a few drops of mineral oil.

Route fan wires along the liquid tube.

Locate in the condenser sack kit (4) 5/16" -18 x 1/2" bolt and washers.

Loosly attach these to the radiator support on grille side of the support.

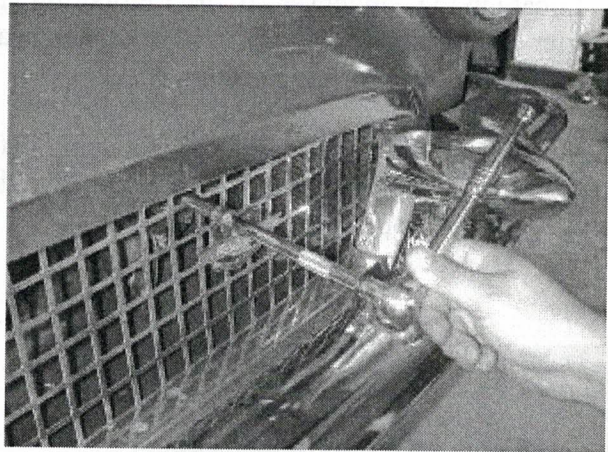
Carefully rotate condenser into position. Hook the tube assemblies through opening on passenger side.



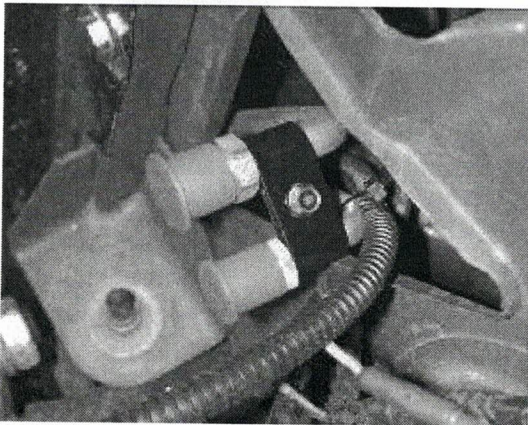
Slide condenser left side bracket into the 5/16" bolts.

Locate right side condenser mounting bracket and (2) #10 x 3/8" hex head screws.

Attach right side bracket over 5/16" bolts and attach the bracket to condenser using (2) #10 x 3/8" hex head screw.

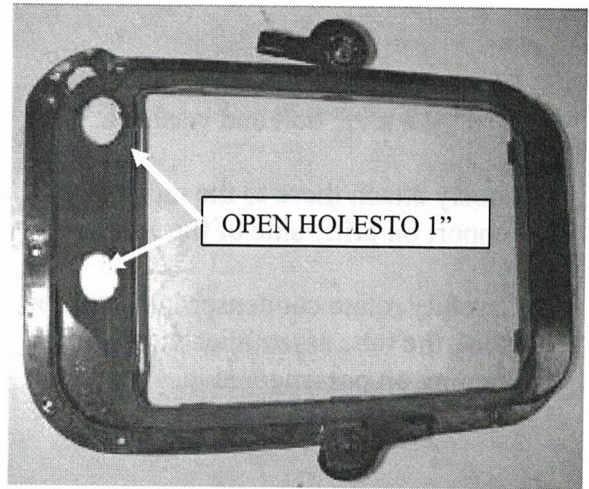
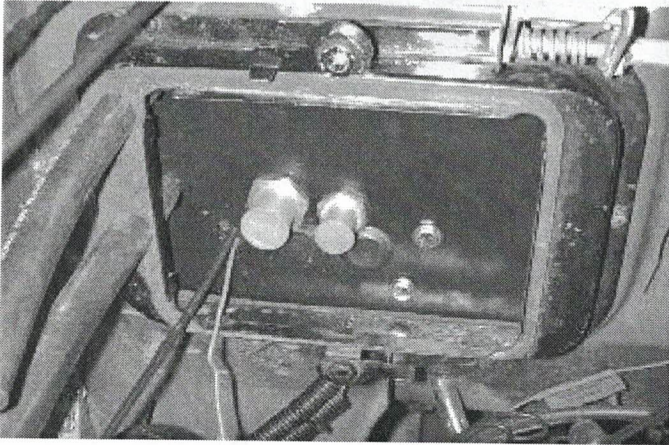


Tighten condenser bolts using a long extension through the grill.



Locate the condenser tube support bracket. Attach bracket to the condenser tubes as shown.

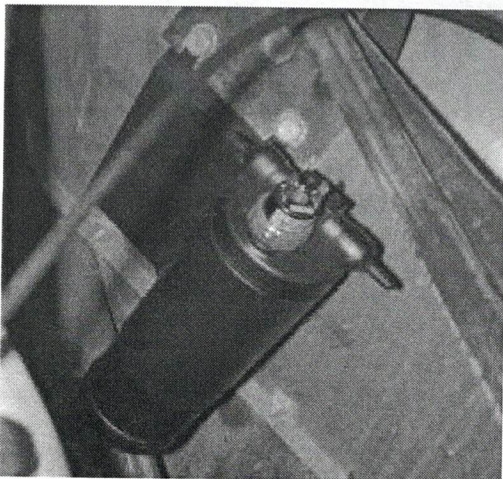
Locate the original heater core frame.  
Carefully enlarge the heater hose holes to 1".



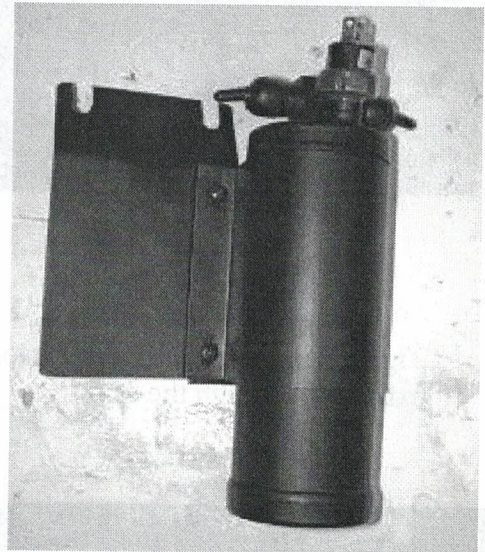
Insert the heater hoses through the frame.  
Attach frame over the block off using  
original hardware.

Locate in the condenser kit, drier mounting bracket,  
drier clamp, filter / drier, (2) #10 x 1/2" hex head screws  
and the hi-low pressure switch.

Attach drier to the mounting bracket using #10 screws  
and drier clamp. Attach hi-low pressure switch to drier  
using a few drops of mineral oil.



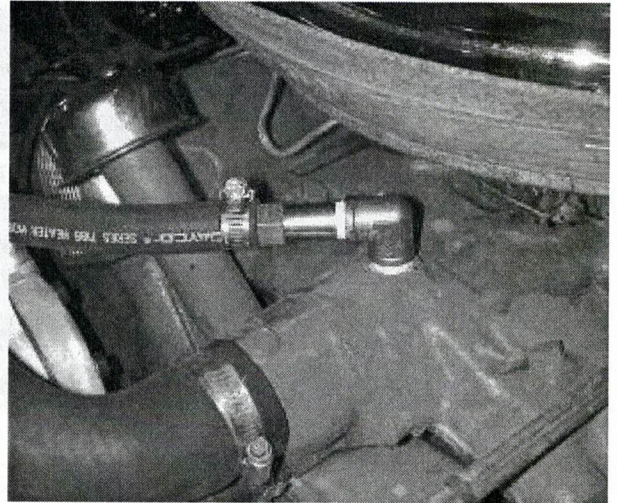
Loosen bolts that support the original blower and  
slide drier assembly behind the original bracket.  
Tighten bolts.



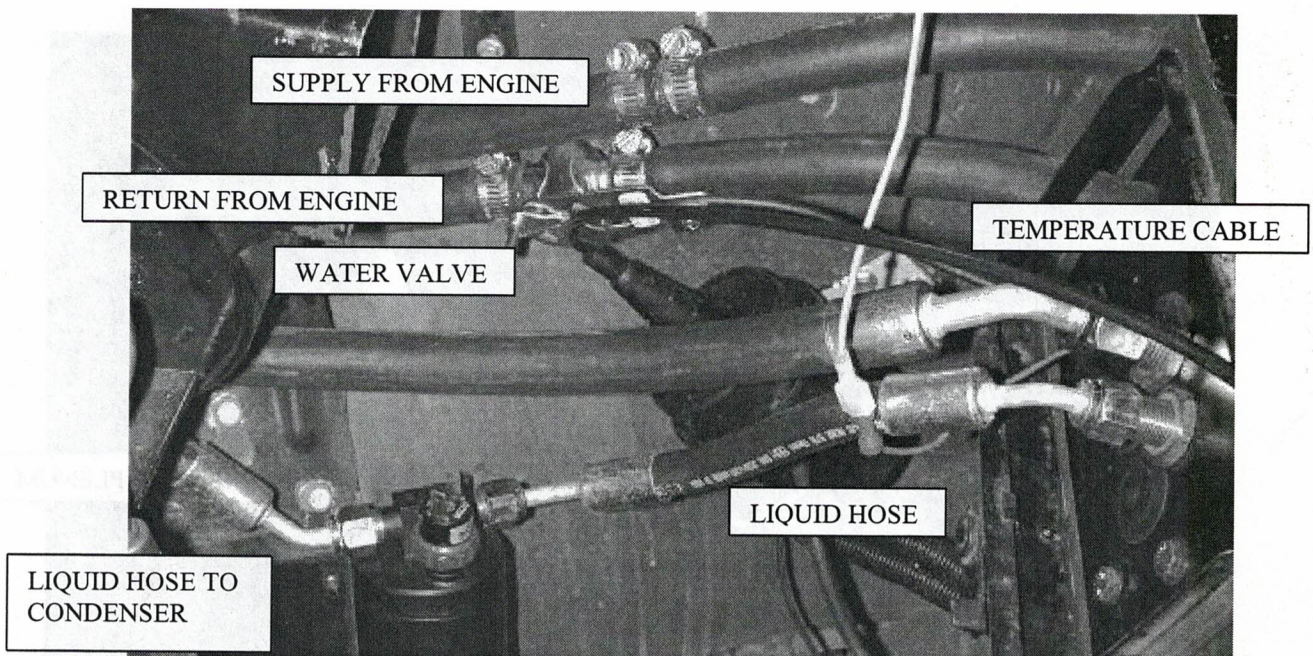
Locate the 90 deg 5/8" water fitting .

Install fitting where the water valve was on the water neck. This is the supply line from the engine.

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



Locate the water valve, 5/8" hose splice and (4) worm gear clamps. Note: it is recommended that you replace the heater hoses from the engine at this time.

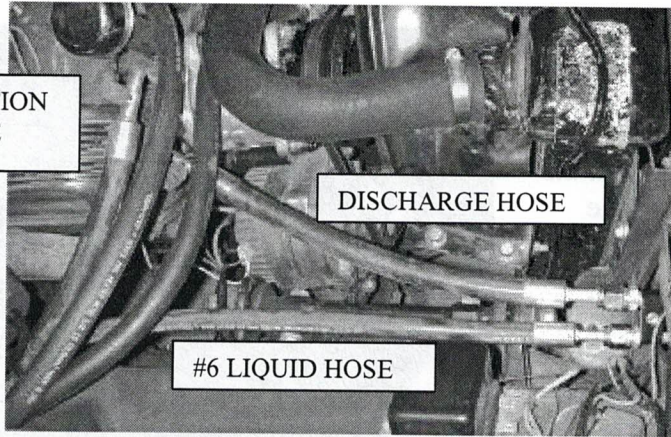


Locate short #6 liquid tube and (2) #6 o-rings. Attach hose between #6 fitting on block off and the drier.

Locate long #6 liquid hose and (2) #6 o-rings. Attach hose between drier and fitting on the condenser.

Locate #10 suction hose and (2) #10 o-rings. Attach hose to fitting on block off and end with the service port to the compressor.

Locate #8 discharge hose and (2) #8 o-ring. Attach hose to condenser fitting and the end with the service port to the compressor.

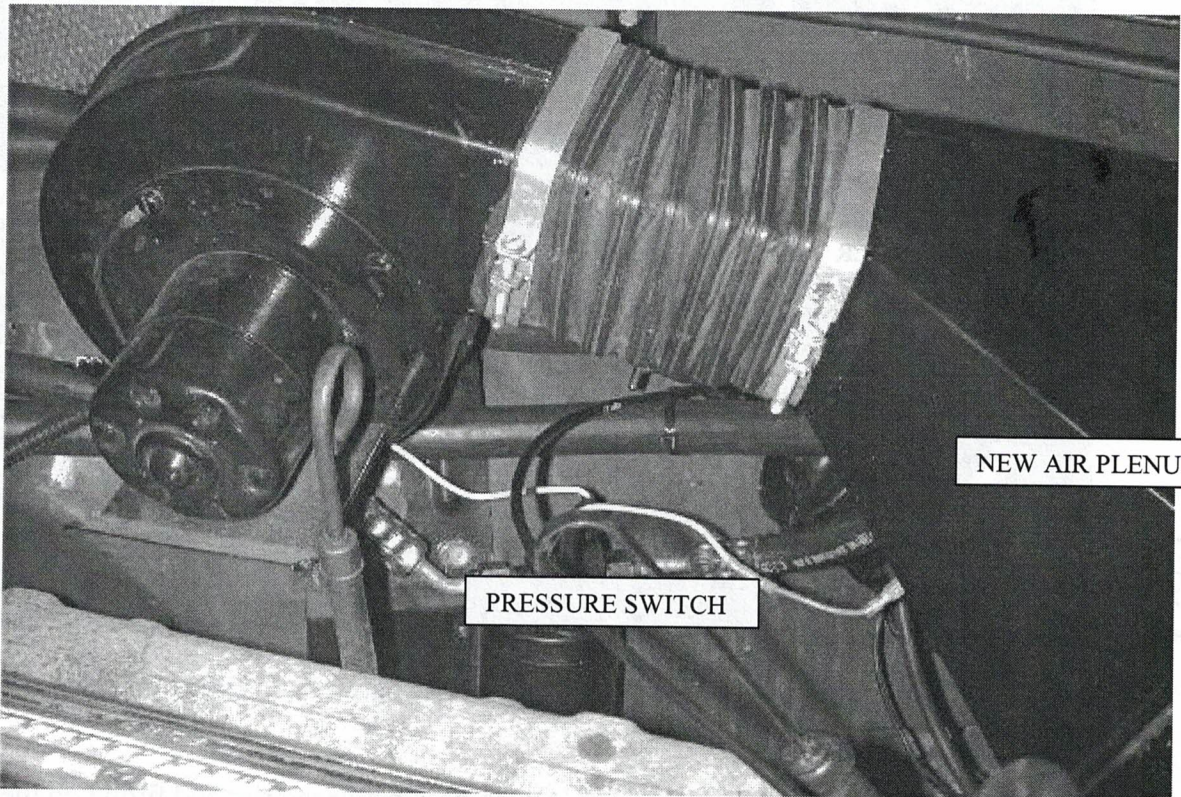


SUCTION HOSE

DISCHARGE HOSE

#6 LIQUID HOSE

Locate the new air plenum. Slide plenum over the refrigerant hoses and attach using original cams. Install flexible hose between the blower and the plenum.

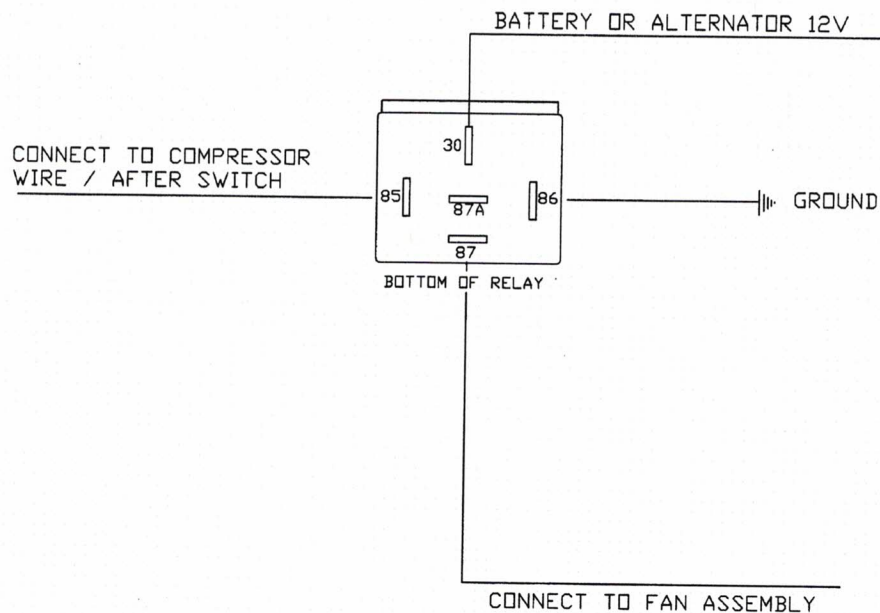


NEW AIR PLENUM.

PRESSURE SWITCH

Locate female bullet connector that is supplied with the Hi-Low pressure switch. Cut one of the white wires from the pressure switch. Attach bullet connector to this wire and plug into the compressor clutch wire. As shown route the long white wire from the pressure switch along the suction hose and connect to the clutch wire that was inserted through firewall.

Fan relay is attached to the condenser. Ground the fan and relay to the body. Follow diagram on next page to hook up the fan. Fan ground needs to be attached with it's own screw.



## AUXILARY FAN RELAY / ELECTRICALS

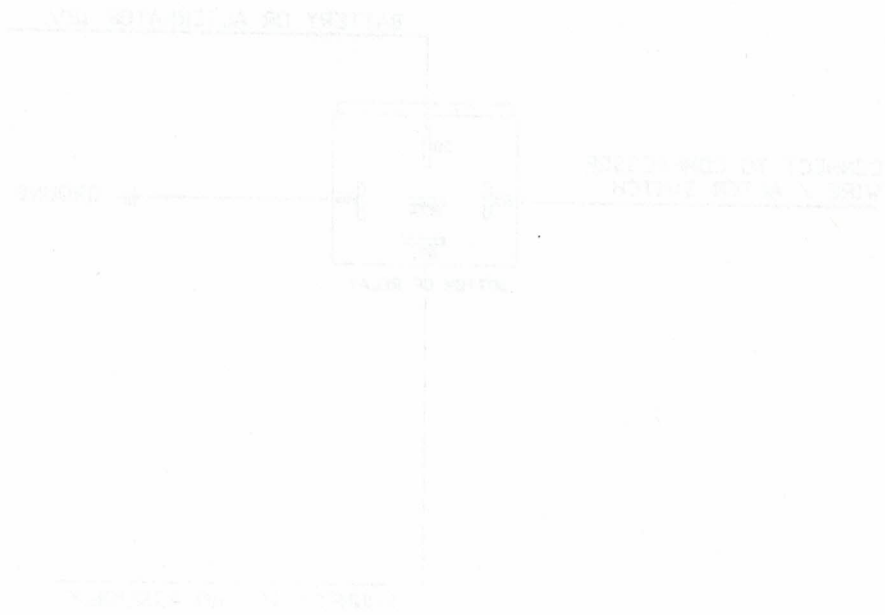
***THE ENGINE COMPARTMENT OF YOUR SYSTEM IS COMPLETE.  
THE UNIT IS READY FOR EVACUATION AND CHARGING.  
THIS SHOULD BE DONE BY A QUALIFIED AND CERTIFIED AIR  
CONDITIONING TECHNICIAN.***

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

***R-12 SYSTEMS      28 oz. OF REFRIGERANT***

***134a SYSTEMS      24 oz OF REFRIGERANT***

***Recommend that power fuse is 25amp minimum***



CONDENSING TECHNOLOGY  
 THIS SHOULD BE DONE BY A QUALIFIED AND CERTIFIED AIR  
 THE UNIT IS REFRIGERANT AND CHARGING  
 THE MOTOR COMPARTMENT OF YOUR SYSTEM IS COMPART

**NOTE:** COMPRESSOR IS SUPPLIED WITH THE  
 CORRECT CHARGE. DO NOT ADD ON TO SYSTEM  
 131e SYSTEMS 34 oz OF REFRIGERANT  
 141e SYSTEMS 22 oz OF REFRIGERANT



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

## "PERFECT FIT SERIES"

### IN-DASH

HEAT/ COOL/ DEFROST

### TECHNICAL DATA SHEET

This data sheet covers the proper installation of the "Temperature Control Water Valve" that is supplied in your Air Conditioning , Heating, and Defrost unit.

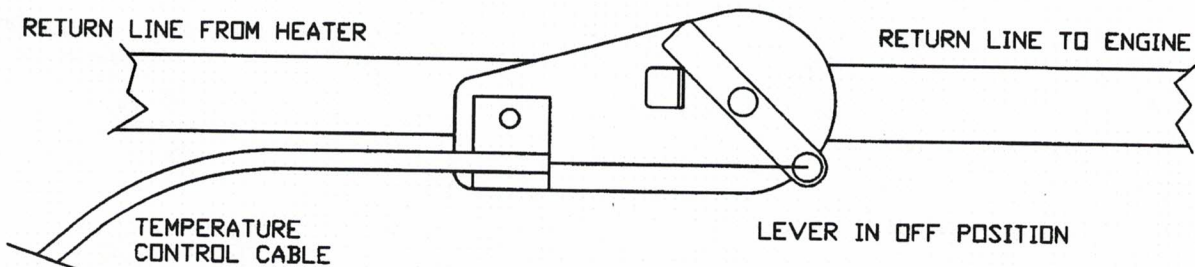
Classic Auto Air has done extensive testing on the correct method to install the water valve in order to get a repeatable and progressive temperature control.

It is necessary to locate the "Supply Line" from the engine on the vehicle and route a hose directly to the heater connection.

NOTE: The supply line will be coming from the engine block after the water has passed through and absorbed heat from the engine. Typically it is located next to the return radiator hose from the engine to the top of the radiator.

Locate the "Return Line" from the heater connection. Cut 6" of 5/8" dia. heater hose and attach it to the inlet side of the water valve. Attach this assembly to the return heater connection. Attach a heater hose from the outlet side of the water valve and route to the return connection on engine.

NOTE: The return connection is typically located on the water pump.



CAUTION: WATER VALVE MUST BE INSTALLED PER THE ABOVE INSTRUCTIONS.

TDS-001 WATERVALVE