

# ***Installation Manual***

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## ***1965-66 FORD PICKUP***

DOCUMENT #1-1072

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# ***Congratulations...***

You have just purchased the highest quality, best performing A/C system ever designed for your vehicle.

Congratulations! ! You have just purchased the highest quality, best performing A/C system ever designed for your 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

Firewall Block Off Assembly

Flex Hose 2"dia. x 3ft.

Flex Hose 2"dia. x 4ft x 2ea..

Flex Hose 2 ½"dia. x 2 ft.

Sack Kit Louver

Sack Kit Hardware

Sack Kit Control

Glove Box



## Check List, Pre-Installation:

- ☐ Before beginning the installation check the shipping box for the correct components. YOUR BOXED UNIT INCLUDES A LIST OF MAJOR COMPONENTS AND A LIST OF BAGGED PARTS. We have a 5 stage check process to make sure you have everything you'll need.
- ☐ **If your vehicle has been or is being modified, some procedures will need to be adjusted to fit your particular application.**
- ☐ A basic cleaning of the engine compartment and interior before beginning will make things go more smoothly.
- ☐ Check condition of engine mounts. Excessive engine movement can damage hoses to A/C and/or heater.
- ☐ Before starting, check vehicle interior electrical functions (interior lights, radio, horn, etc). Make a note of anything that does not work as it's supposed to. During the installation you might find the opportunity to repair or upgrade non-working or out of date components. When you're ready to start the installation, **DISCONNECT THE BATTERY FIRST.**
- ☐ Drain the radiator. Retain the coolant and reuse, or dispose of properly.
- ☐ SAFETY FIRST: Wear eye protection while drilling/cutting, deburr sharp edges, and never get in a hurry or force a part.
- ☐ Tools: Your installation only requires the basic tools everyone has in their garage, nothing exotic or specific to A/C or Heat equipment.

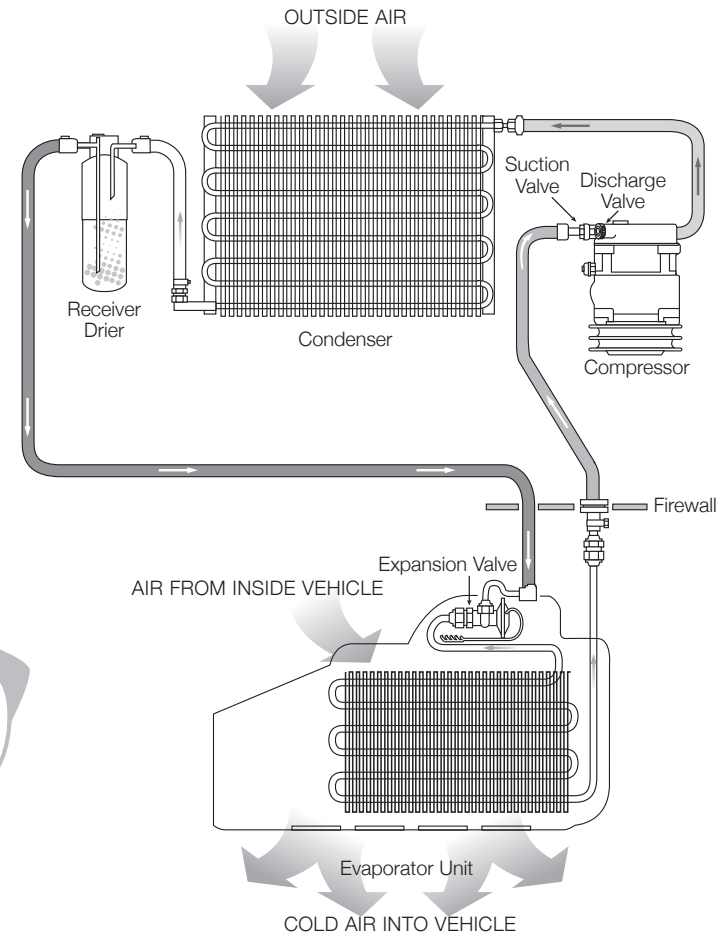
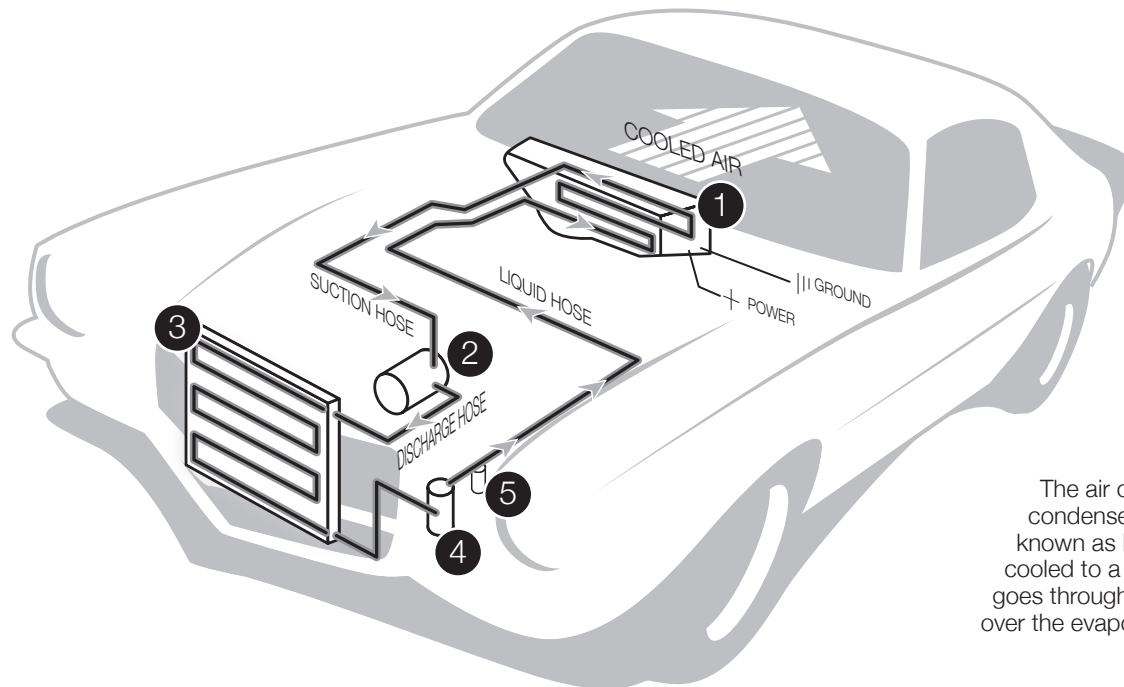
## Procedures, During Installation:

- ☐ Fittings: Use one or two drops of mineral oil (supplied with your kit) on ALL rubber o-rings, threads and where o-rings seat in fittings. Do not use thread tape or sealants.
- ☐ Measure twice (or more), cut once
- ☐ **Should you have any technical questions, or feel you have defective components (or missing items), call us immediately, we will be glad to assist you. Our toll-free number is listed on every page, we're here to help!**

**CAUTION: DISCONNECT BATTERY GROUND CABLE**  
**YOU CAN NOW BEGIN THE INSTALLATION...**

## A Basic Overview of Automotive A/C....

- 1 **Evaporator with Blower Fan** In order to remove the heat from the air in the vehicle, the A/C evaporator allows the refrigerant to absorb the heat from the air passing over it. The blower fan moves cool air out into the car interior.
- 2 **Compressor** The compressor pumps and circulates the refrigerant through the system.
- 3 **Condenser** The condenser is a heat exchanger mounted at the front of the vehicle. Heat drawn out of the interior of the car is expelled here.
- 4 **Receiver/Drier** The drier not only dries refrigerant, it also filters the refrigerant and stores it under certain operating conditions.
- 5 **High Pressure Switch** A pressure switch is used to shut down the system if high or low pressure is detected, basically it acts as a safety switch.

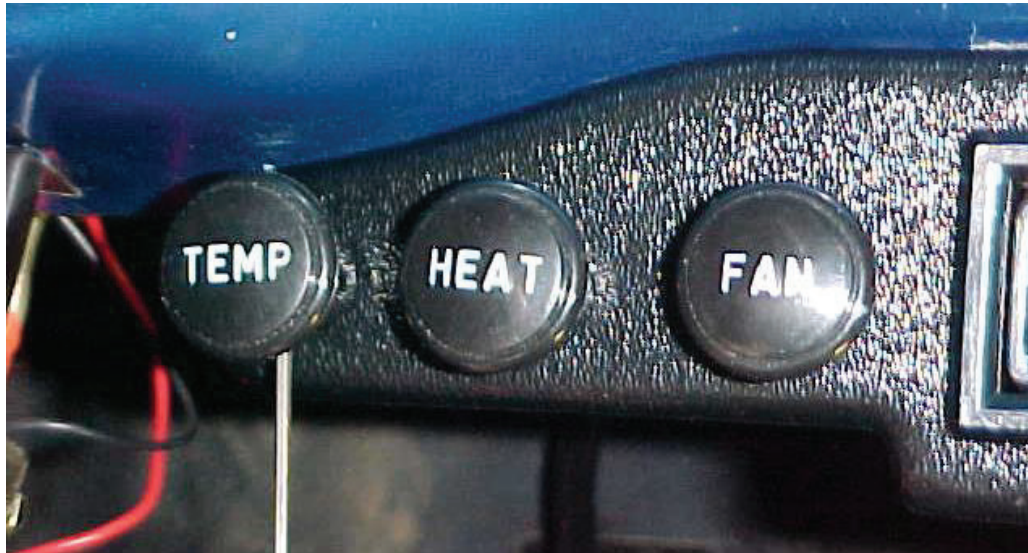


The air conditioning system in your car is comprised of a compressor, condenser, expansion valve, receiver/drier, and evaporator. Refrigerant (also known as Freon) is compressed in the compressor. In the condenser, gas is cooled to a liquid state and travels to the expansion valve. As the liquid refrigerant goes through the expansion valve it rapidly cools in the evaporator. A fan blows over the evaporator and cools the air that blows out your vents

**“PERFECT FIT SERIES”  
IN-DASH  
HEAT/ COOL/ DEFROST**

**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.



THE PICTURE YOU SEE SHOWS THE CONTROLS IN THE HEAT MODE. THIS MEANS THAT THE AIR WILL BE DISTRIBUTED THROUGH THE HEATER OUTLETS. THIS ALSO HAS THE TEMPERATURE LEVER IN THE COLDEST POSITION. WITH THE CONTROLS IN THIS POSITION YOU WILL GET THE AIR THROUGH THE HEATER OUTLETS AND THE OUTLET TEMPERATURE AT THE COLDEST POSSIBLE DEGREE.



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.

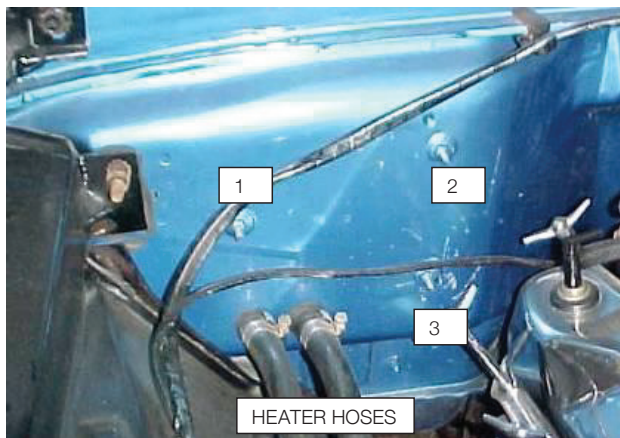
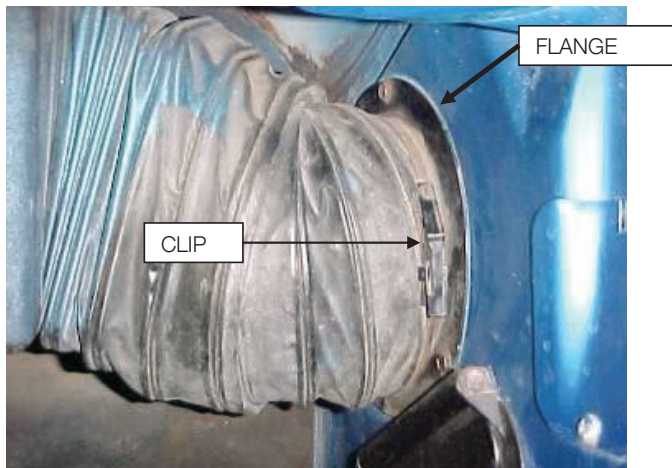
FACE AND FLOOR / DEFROST MODE: When the push pull cable is pulled all the way OUT, it will direct the air to the floor / and defrost ducts. The cable can be moved any position from full in to full out. This will give blend between all distribution outlets.

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.



**CAUTION: DISCONNECT BATTERY GROUND CABLE**

Remove Glove box door, and glove box. Retain the glove box door and all original hardware. Discard the glove box housing.

Under the glove box opening locate the Fresh Air Inlet duct. Remove the clip around the inlet flange

Remove flange and discard. Retain original hardware.

Located on engine side of the firewall.

Drain radiator and then remove heater hoses from the heater connections. Also remove (3) nuts that attach heater assembly to the firewall.



Located on top of the heater assembly remove defrost ducts and discard. Also disconnect control cable and discard the hardware.



Pull heater box out of the firewall holes and rotate to gain access to the resistor mounted on back of the heater.

Disconnect wires from the heater.

Remove and discard heater assembly.

Located on the instrument panel is the original heater blower switch and cable combination.





Remove the control knob as shown.

Located on back of the switch is a Brown wire. Disconnect from the switch. This is the power wire for the new heater / a/c unit.

Remove the entire assembly along with original wire harness and discard.

Locate on top of the dash (2) defrost outlets. Remove the cover and the flex duct adapter. Retain the cover and all of its hardware. Discard flex hose adapter.





Modifications to the vehicle are complete. You can now begin installing your new Classic Auto Air "Perfect Fit Series" system.

Locate in the hardware sack kit (2) Defrost hose adapters. Also locate the 2" dia. x 12" and 2" x 24" flex hose.

Use (1) piece 12" long and attach to one of the hose adapter using (2) #8 x 1/2" pan head Philips screw. Use (1) piece 24" long and attach to the other hose adapter using (2) #8 x 1/2" pan head philips screw.

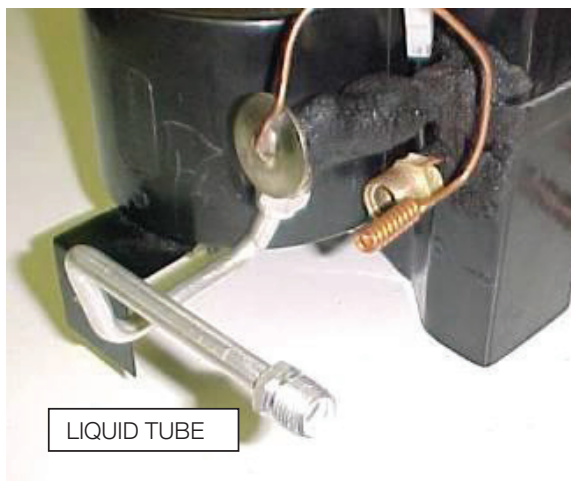
Insert the 11" assembly in the right hole in top of the dash and attach along with the original defrost grills and original hardware. The 24" assembly goes in the left hole.

Locate the Evaporator from the kit. Carefully set the Evaporator on a bench.

Locate in the Control Sack Kit shortest of the (2) Control cables. Insert cable in to Door crank arm as shown. Using (1) #8 x 1/2" Pan Head Phillips screw attach cable clip to the attachment bracket.

Locate the Defrost Duct Assembly and (2) #8 x 1/2" pan head screws from the hardware sack kit. Attach duct to the rear support bracket as shown.

Rotate heater hookup tubes to the vertical position as shown. tighten the clamps securely.



Locate in the hardware sack kit the small #6 liquid tube.

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

Tighten securely. Be sure that the tube is parallel to the base of unit and perpendicular to the back of the unit.



Locate in the hardware sack kit the #10 Suction Tube.

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

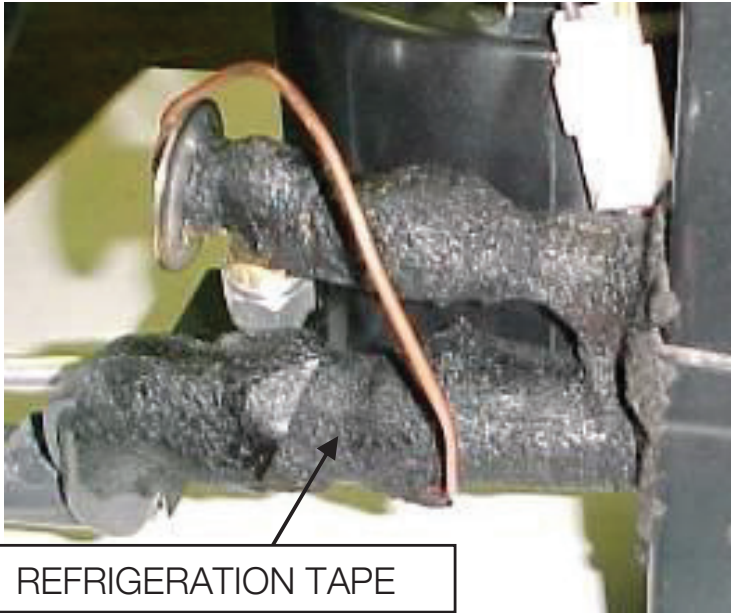
Tighten securely. Be sure that the suction tube is parallel to the liquid tube previously attached.

Locate the capillary coil attached to the expansion valve. Route coil down and attach to suction tube using the Bulb Clamp located in the hardware sack kit.

**CAUTION: THE BULB IS DESIGNED TO REGULATE THE FLOW OF REFRIGERANT THROUGH THE EXPANSION VALVE. IT IS VERY IMPORTANT THAT THE BULB BE LOCATED AS SHOWN.**

THE BULB SHOWN IS APPROXIMATELY  
45 DEG. BELOW CENTER.

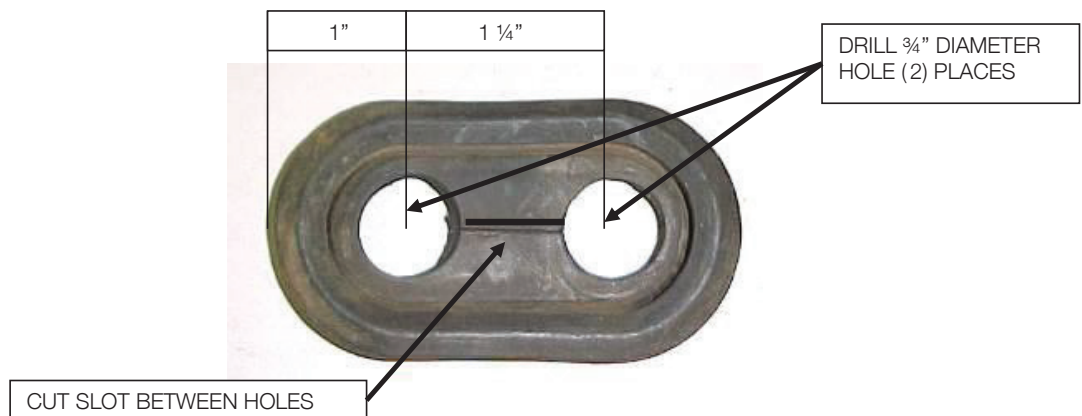


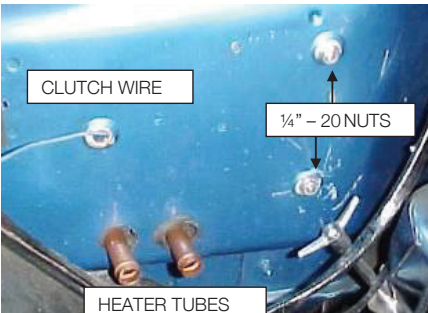
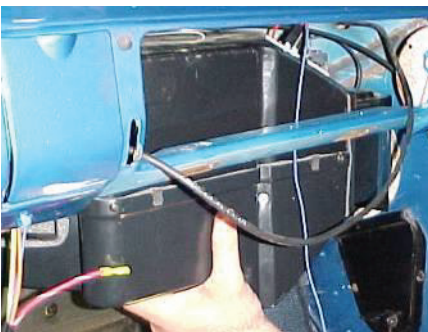
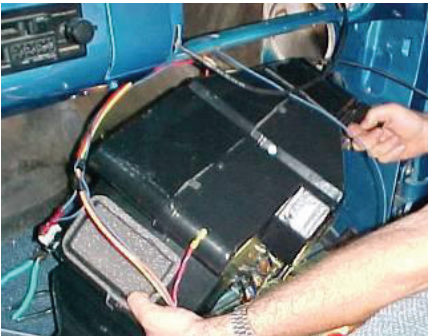


Locate in the hardware sack kit the refrigeration insulation tape. Wrap all of the exposed metal surface from the unit to the insulation on the tube.

Locate on passenger side and left of the hood hinge, the oval rubber plug. Carefully remove and modify as shown below.

After modification set aside for later installation.





Place evaporator on floor of the truck as shown in the picture.

Rotate evaporator so that tubes are facing rear of the truck.

Insert tubes into the air inlet hole in the kick panel.

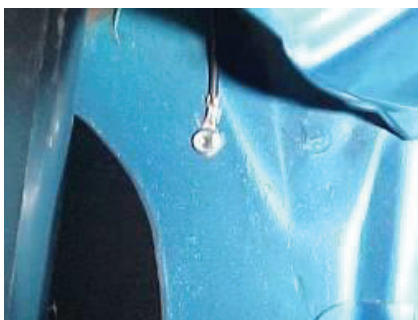
Rotate evaporator into place. The tubes will insert through hole that the oval plug was removed from out under the hood.

The evaporator has Heater tubes that will insert through the original heater tube holes in firewall. Insert studs on rear mounting bracket through original heater mounting holes in the firewall.

Attach using (2) 1/4" – 20 flange nuts provided in the hardware sack kit.

Also insert clutch wire from the Thermostat through 3rd hole as shown.





Locate the Inlet Block off Plate. Install between motor support bracket and the kick panel.

Rotate over the tubes and attach using original hardware. Tighten securely.

Locate in the hardware sack kit (2) #10 x 5/8" pan head Philips screws.

Attach blower support bracket to holes in the inlet cover plate.

Also locate in the Hardware Sack Kit (1) #10 x 3/4" Hex Head Tek Screw. Locate Black wire with Ring Terminal from the blower motor. Attach the wire as shown.

Locate and drill (1) 11/16 dia. hole in firewall under evaporator 4" and a little down from the heater connection.

Locate in the hardware sack kit (1) 9" piece of 5/8 dia. drain tube.

Attach over drian nipple and through the hole..



Locate 2" dia. flex hose that is attached to the defrost hose adaptors.

Attach over the defrost duct as shown.



Route Wire Harness and control cable that is attached to evaporator over the dash brace.

Locate the Blower Switch and (2) switch nuts. Attach blower switch to wire harness using the diagram below.

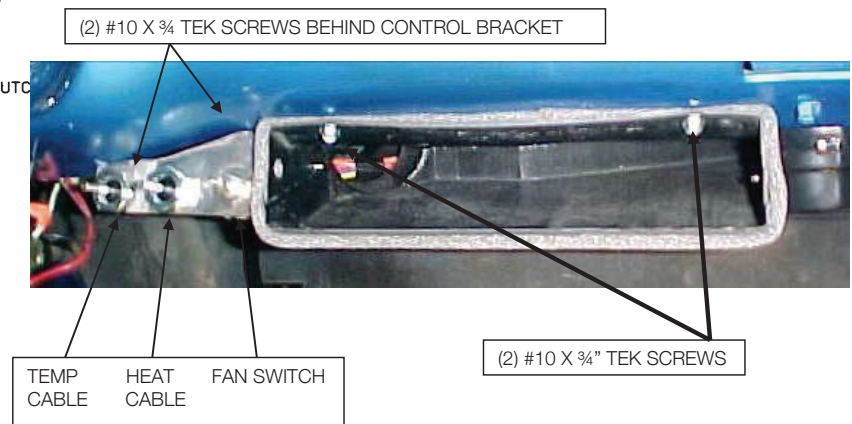
Locate brown wire that attached to original blower switch. Cut off the terminal and attach a 1/4" male spade connector.

Locate red / white stripped wire on wire harness and plug it into the brown wire.

Locate the Temperature Control cable in the control sack kit. Route cable below ducts and behind evaporator. You will find a hole in the rear mounting bracket. Pass cable through hole and then out through firewall along side the clutch wire.



Attach the Blower Switch, Heat cable assembly, and Temperature cable assembly to the control bracket. As shown below.



# WIRING DIAGRAM 1965 -66 FORD TRUCK



NOTE: CHECK "HEAT" LEVER FOR SMOOTH OPERATION AND FULL DOOR TRAVEL.

Locate Center Louver Bezel. Attach over front of outlet.

Use (3) #8 x 1/2" pan head philips screws.

Locate in the Control Sack kit (3) Knobs.

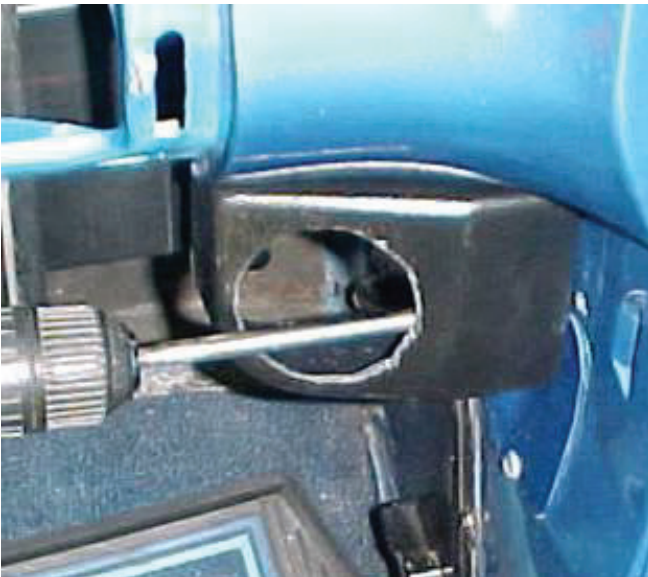
Attach to control cables and blower switch using an allen wrench.



Locate in kit. Passenger side Ball Louver and the 2" dia. x 36" flex hose. Remove the ball louver and retain.

Locate (2) #10 x 3/4" hex head tek screw and attach Housing to Passengers Kick Panel through opening in the front.

Reattach ball louver assembly.





Cut 27" of flex hose and attach to outlet on top of the center duct just inside glove box. Route up and over the glove box opening and down. Attach to passengers side louver.

Locate drivers side louver. Attach to drivers kick panel as you did the passenger louver.

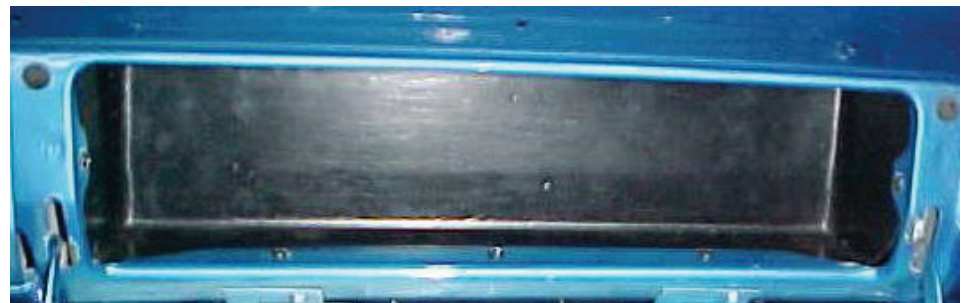
Locate remaining 2" dia. x 48" flex duct and cut 44". Attach to hose adapter on the back of the louver.

Route flex hose from drivers louver up and behind instruments and then down. Connect to the center duct outlet

Install Glove Box Door using the original hardware.

NOTE: DOOR SPRING

Locate New Glove Box and install using original hardware.



**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 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 the lever is in the face position.

The engine compartment components should be installed at this time. Carefully follow the electrical diagram provided on page 11.

COMPRESSOR MOUNTING COMPONENTS WILL DIFFER DEPENDING ON THE ENGINE AND DRIVE ACCESSORIES THAT YOUR VEHICLE IS EQUIPT WITH. THE FOLLOWING INSTRUCTIONS SHOW THE PROPER INSTALLATION SEQUENCE FOR THIS VEHICLE

Remove battery, original fan, fan shroud, drain and remove radiator. Retain all original hardware.

Locate following components from the under hood components box:

Condenser

Receiver Drier / Hi -Low pressure switch

Drier mounting bracket

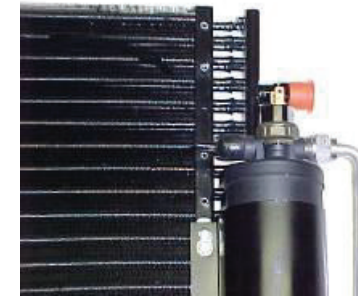
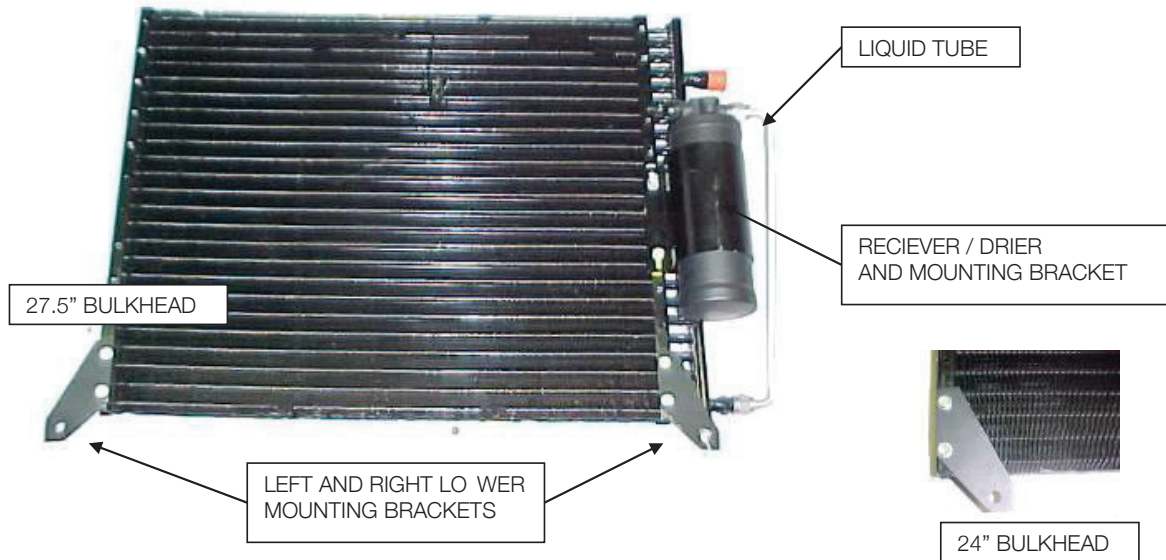
Discharge Tube

Liquid Tube (2)

(4) Condenser mounting brackets

(4) #10 x 3/8 hex washer head screws





NOTE: VEHICLES EQUIPT WITH 27.5" RADIATOR BULKHEAD ATTACH LOWER LEFT BRACKET AS SHOWN IN THE LEFT PICTURE. THOSE EQUIPT WITH 24" RADIATOR BULKHEAD ATTACH AS SHOWN IN THE RIGHT PICTURE.

Locate Condenser, (2) Lower condenser mounting brackets, Liquid Tube (Condenser to Drier), and reciever drier with mounting bracket.

Attach these components on condenser as shown above. Use (2) #6 o-ring and a few drops of mineral oil.

Attach brackets and drier bracket to the condenser using (6) #10 x 3/8" hex head screws.

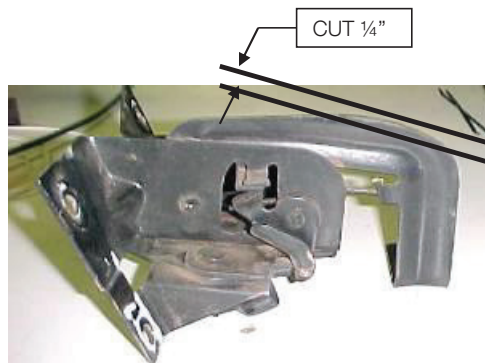
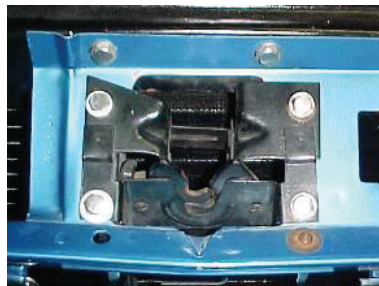
Locate the Hi / Low Pressure switch.

Attach to port on top of the Drier using a few drops of mineral oil. Tighten securly.

Locate in the hardware sack kit (2) 1/4 - 20 j-clips.

Located at the bottom of radiator opening are (2) holes. Push the j-clips over holes as shown.

NOTE: CONDENSER BRACKETS MOUNT IN FRONT OF BULKHEAD AND BEHIND THE GRILL.



Locate and remove the Hood Latch Assembly. Retain original hardware.

Modify latch assembly as shown. Reinstall using original hardware.

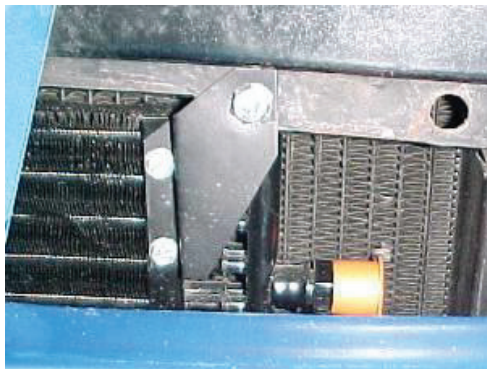
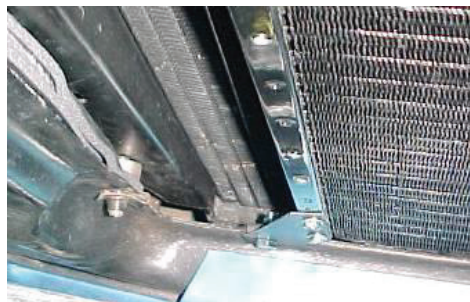
Place condenser assembly from the engine side of bulkhead into opening in the bulkhead.

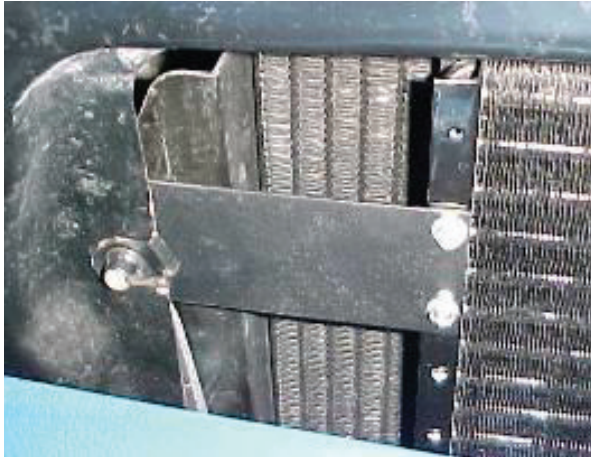
Locate lower condenser mounting brackets in front of the lower flange.

Locate in the hardware sack kit (2) 1/4" -20 x 5/8" hex head screws. Attach lower (2) condenser mounting brackets through front of the grill and into the j-clips.

Locate in the condenser sack kit the last 1/4" -20 j-clip, 1/4" - 20 x 5/8 hex head screw, (2) #10 x 3/8 hex head screws, and Upper Condenser Mounting Bracket.

Attach to upper bulkhead as shown.





Locate in the condenser sack kit the Upper Left Condenser Mounting Bracket and (2) #10 x 3/8" hex head screw. Attach to upper left of condenser the second hole down.

Note left end of the bracket goes between radiator and bulkhead.

Locate the Discharge Tube (1/2" dia.), 1/2" hose clamp, (1) 1/4" - 20 x 5/8" screw, and 1/4" - 20 flange nut.

Attach tube to upper condenser fitting and insert through hole in the bulkhead as shown. Using (1) #8 o-ring and few drops of mineral oil.

Drill 9/32" hole in line with tube clamp and fasten to the bulkhead as shown.

Locate Liquid Tube and route from the Receiver / Drier and over behind the hood latch. Attach using (1) #6 o-ring and a few drops of mineral oil.

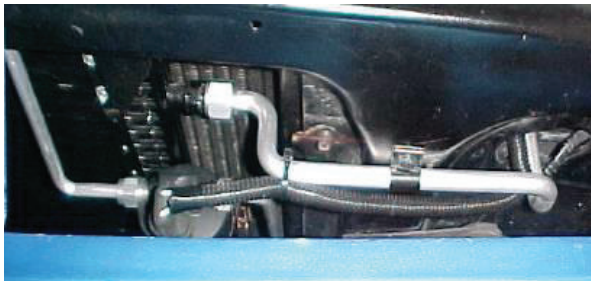
Locate the Oval Rubber Plug that was previously modified and install over the tubes.

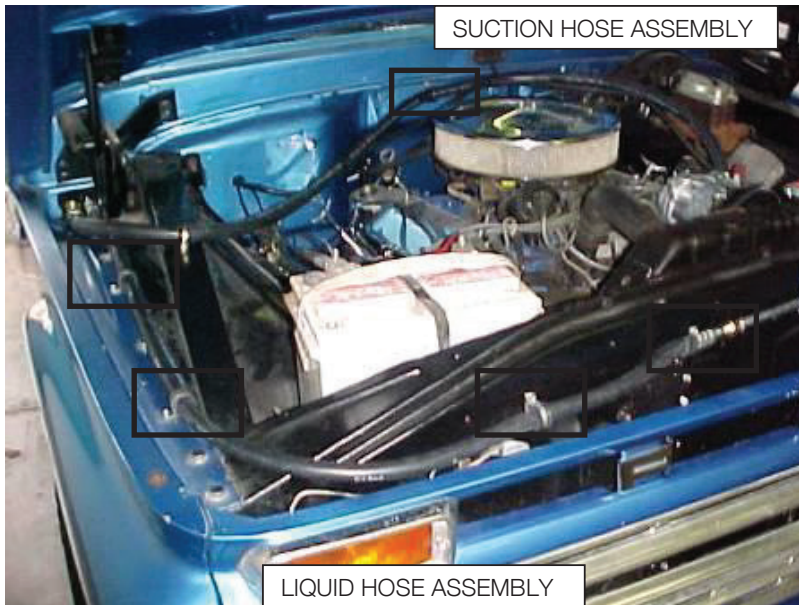
Locate the Liquid Hose Assembly attach one end to the tube as shown.

Route hose along fender flange and around front of radiator bulkhead and attach to Liquid Tube from the receiver / drier. Attach using (2) #6 o-rings and a few drops of mineral oil.

Locate the Suction Hose and attach end with service port to Compressor. Route hose back and along firewall across and in front of hood hinge and back to Fitting from the evaporator. The picture below shows the proper routing.

Attach using (2) #10 o-ring and few drops of mineral oil





Locate (4) #6 hose clamps, and (4) #10 x 3/4" tek screws.

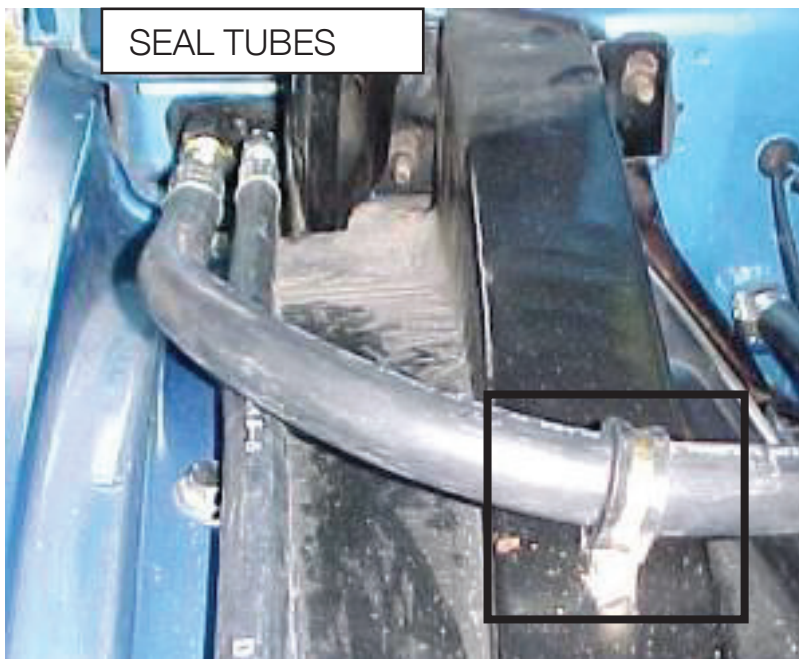
Secure hose to the body approximately as shown.

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

Locate the refrigeration tape and seal around fittings at the firewall.

Locate the Discharge Hose. Attach straight fitting to Tube from the condenser and 45 deg. with service port to the compressor. Attach using (2) #8 o-rings and a few drops of mineral oil.

Locate electrical plug that attaches to the Pressure switch on the drier. Route along discharge hose to the compressor.





There are two white wires attached to the pressure switch route one of them to compressor clutch and attach a Female bullet connector. The other wire route along the Suction hose and attach to clutch wire at the firewall. Secure wires with tywraps provided.

It is recommended that the heater hoses be replaced at this time. Hookup the heater hoses to the connections coming through the firewall.

**NOTE: SUPPLY LINE FROM THE ENGINE WILL BE HOOKED TO THE INBOARD 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 remaining hose that goes back to the engine. Use the worm gear clamps supplied.

Locate control cable that was passed through the firewall. Attach end to the water valve as shown. Be sure that control knob is pushed in all the way and water valve is in the full closed position.

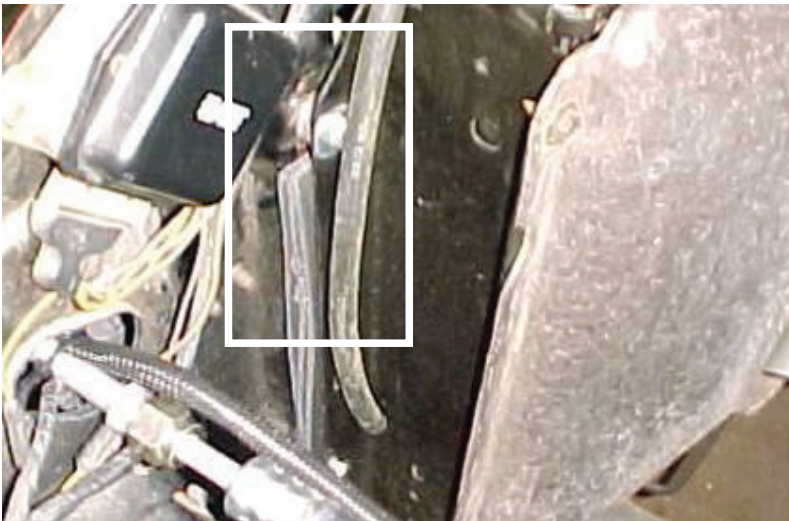
Using the same refrigeration tape, seal around the cable and clutch wire.

Locate in the condenser box (4) 5/16" x 1 1/4" hex head bolts, 5/16" SAE flatwashers, 1/2" spacers and (2) 3/4" x 1" x 10 1/2" closed cell foam.

Reinstall radiator using the spacers and bolts between radiator flange and the bulkhead.

Loosely attach radiator. Insert foam seals between the mounting bolts. Tighten securely.

Reinstall the fan shroud, fan assembly, hookup radiator hoses and refill with coolant.





**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" system.

## IMPORTANT!

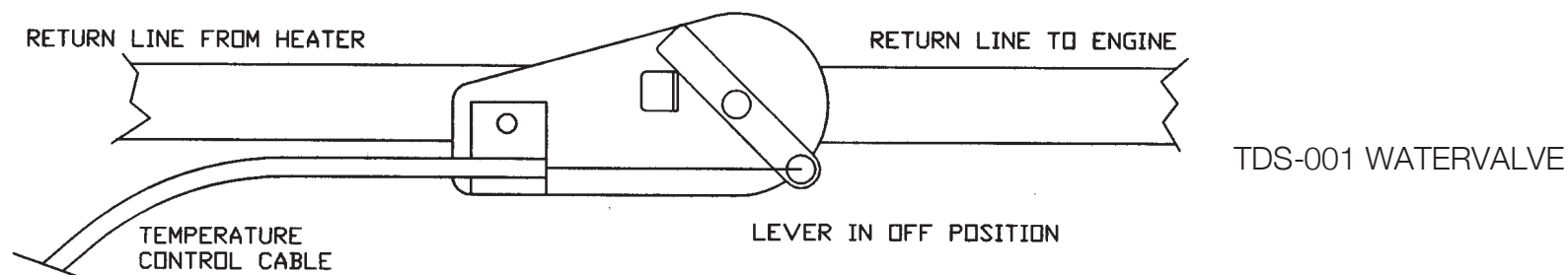
CAUTION: WATER VALVE MUST BE INSTALLED PER THE INSTRUCTIONS.

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 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**