

Installation Manual

1968-72 FORD TRUCK

DOCUMENT #1-1073

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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 During the installation you might find the opportunity to repair or upgrade non-working or out of date components.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.

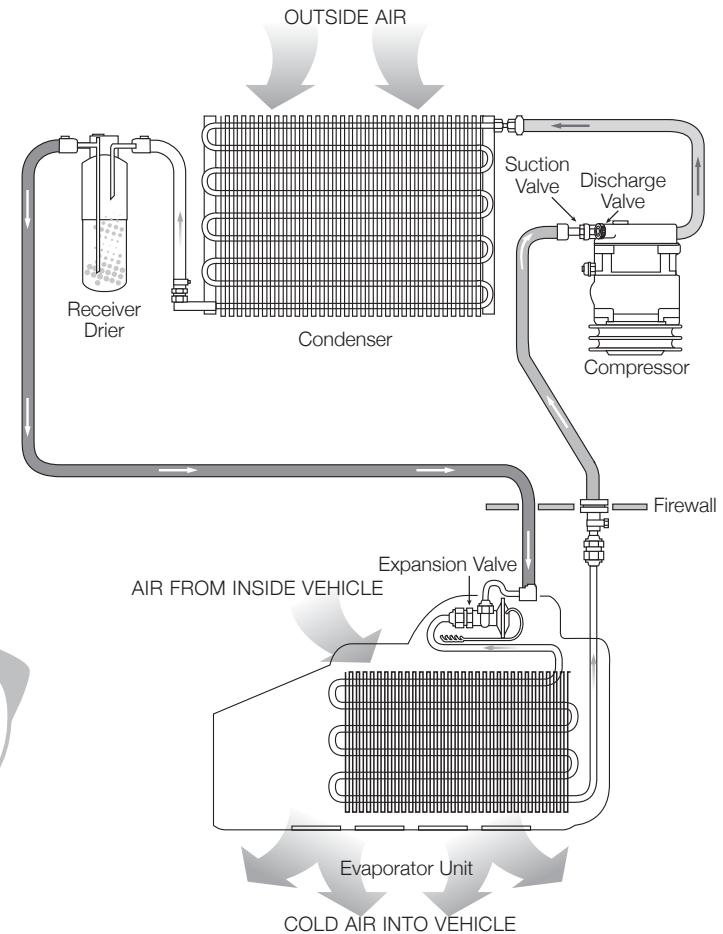
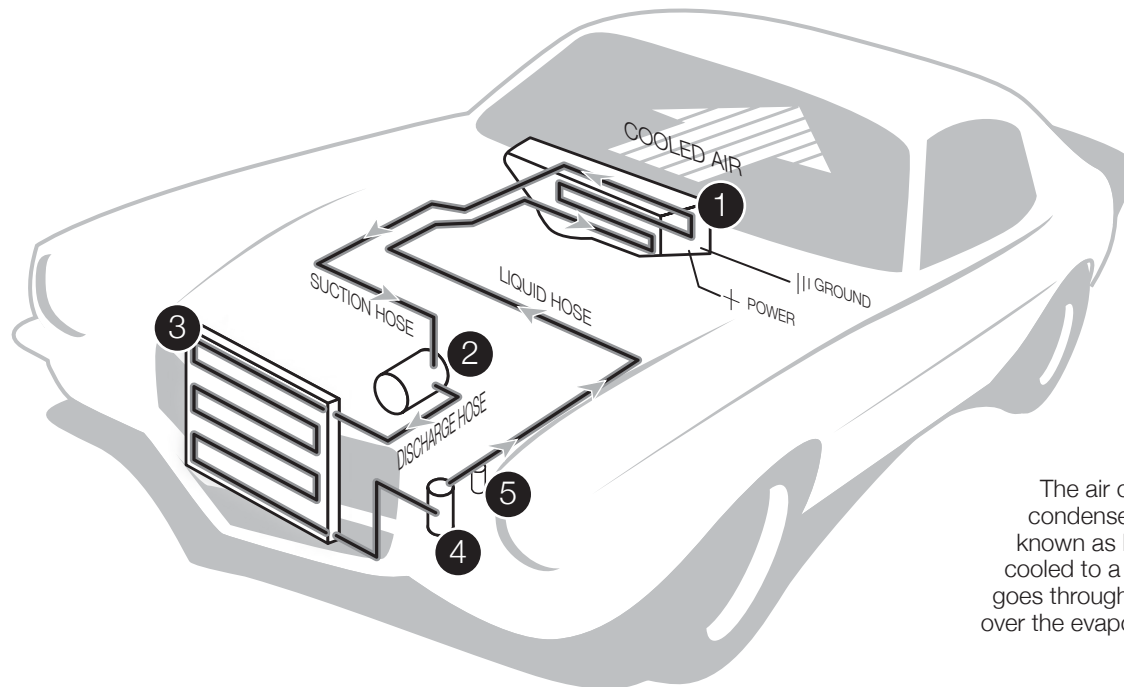
Procedures, During Installation:

- ☐ 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.





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.

DEFROST / HEAT / FACE DOOR CONTROL: When the Control Knob is PUSHED to the RIGHT position the air is distributed to the DEFROST outlets and the drivers and passenger outlets. When the knob is MOVED to the CENTER position the air is distributed to the HEATER outlets. When the lever is moved to the LEFT POSITION the air is distributed to the FACE outlets.

In the FACE position the Compressor clutch is engaged and you have AIR CONDITIONING.

TEMPERATURE CONTROL: The Temperature Knob 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.

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

Under glove box opening locate the Fresh Air Inlet duct.

Remove screws around the inlet flange.

Remove Inlet Duct and discard. Retain original hardware.

Located on engine side of the firewall.

Drain radiator, disconnect water valve cable from the valve, and then remove heater hoses from the heater connections. NOTE: RETAIN T- FITTING ON SUPPLY LINE.

Also remove (3) nuts that attach heater assembly to the firewall.



Located on top of the heater assembly remove the 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.

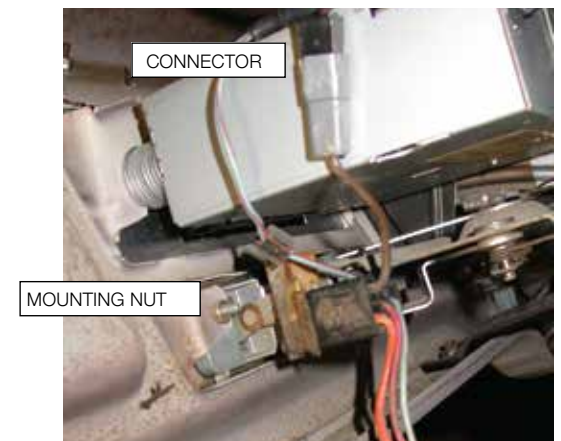
Disconnect wires from the heater. And disconnect the door control cables.

Remove and discard heater assembly.

Locate the control panel. On the back side there are (2) nuts. One on each side of the control head.

Disconnect power wire connector and electrical plug on the blower switch. Discard wire harness to the resistor.

Remove control head and retain the original hardware.





Remove original blower switch and the (3) control cables.

Discard the cables and switch, retain all original hardware.

Install new blower switch using the original hardware and switch knob.

Locate one of the long control cables from the kit.

Using the original hardware attach the cable to top side of the control head as shown.

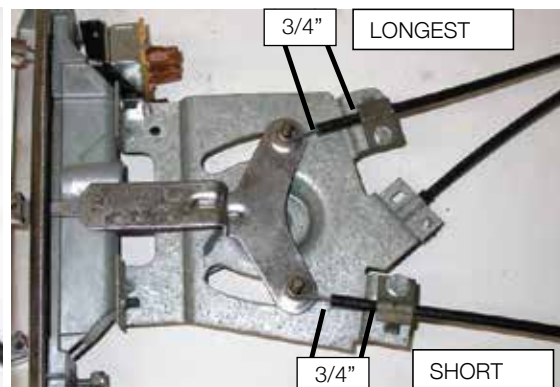
Locate the (2) remaining control cables.

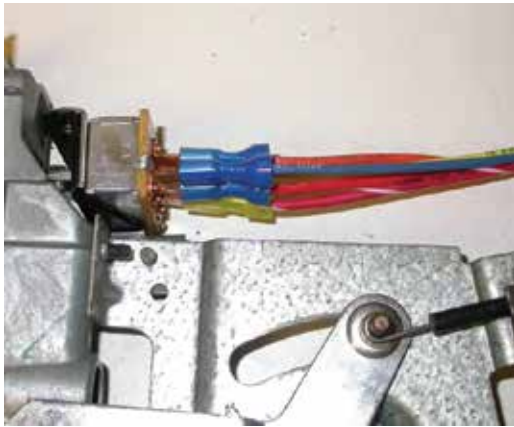


Attach both of the cables to bottom of the control head and attach to the control arm as shown. The end of the cable housing for both cables will be $\frac{3}{4}$ ".

Attach using the original hardware.

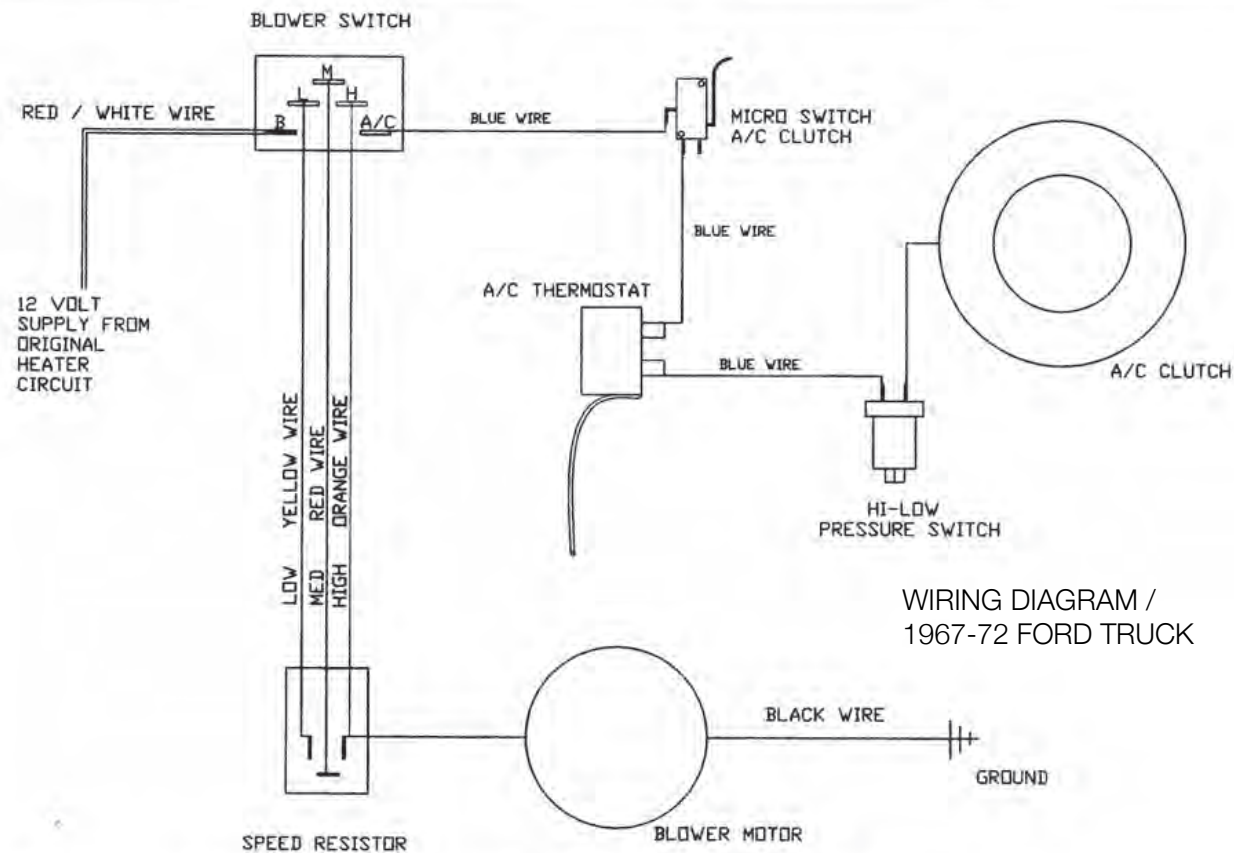
Set control assembly aside for later installation.

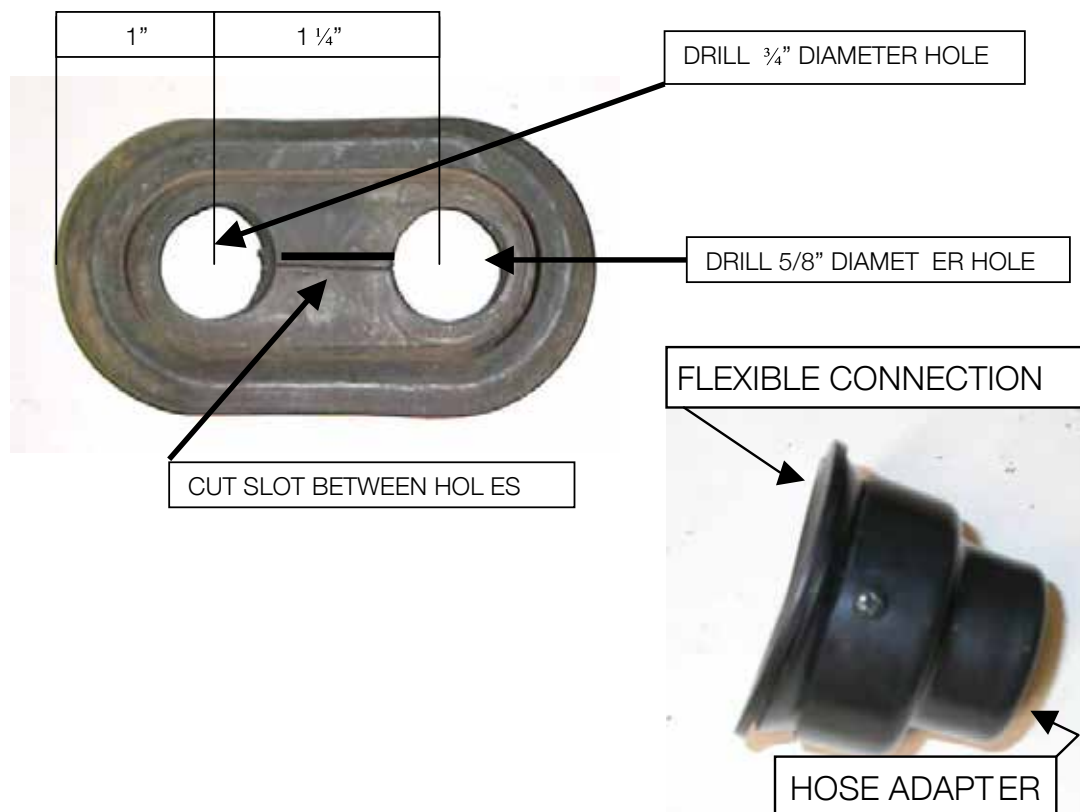
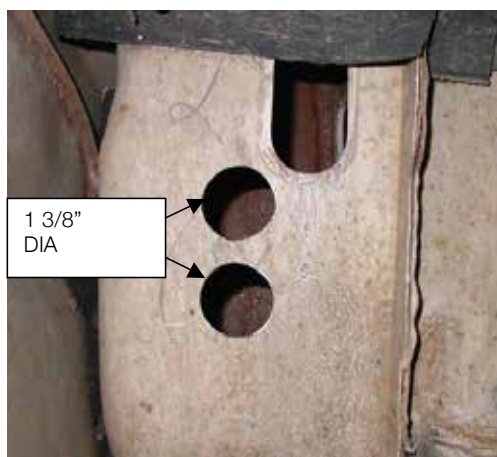




Locate wire harness and attach to the blower switch.

Refer to the wiring diagram below.





Remove original defrost duct hoses and flexible connections at top of the dash. Remove hoses from the flex hose adapter.

Locate in the hardware sack kit (2) hose adapters and (4) #8 x 3/8 pan head screws.

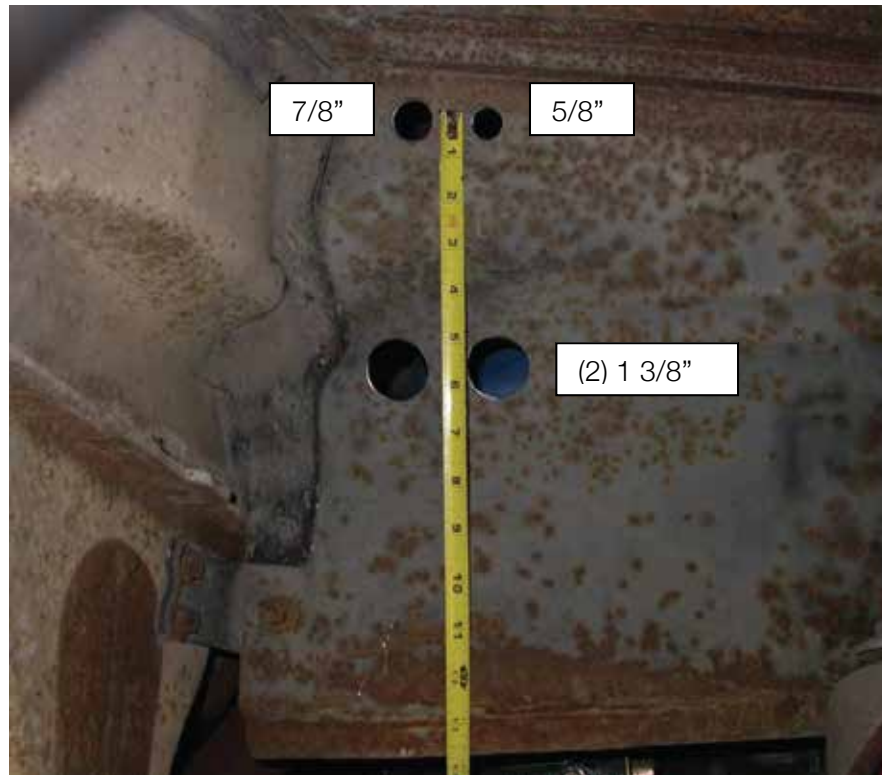
Insert flexible connector into hose adapter and attach to the hose adapter using the #8 screws.

IT WILL BE NECESSARY TO REMOVE THE PASSENGER TIRE AND WHEEL FOR ACCESS INSIDE THE FENDER WELL.

Locate rubber oval plug on the air inlet plenum inside passenger fender well.

Carefully remove the plug and modify as shown in the picture below. Set aside for later installation.

Locate and drill (2) 1 3/8" diameter holes approximately as shown.



Holes that will be drilled through the inner fender panel need to be located approximately as shown.

The 7/8" diameter and the 5/8" diameter are 13 1/2" from bottom edge of the fender. And 1 1/4" inch apart.

The (2) 1 3/8" diameter holes are 5 3/4" below the top holes and 1 1/2" apart.

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



Locate (4) hose grommets and install them into the 1 3/8" diameter holes as shown.



Locate the evaporator and slide into place by inserting a/c tubes through the air inlet hole and out through oval hole into the fender well.

It may be necessary to support unit.

Route heater hoses through air inlet opening and insert through grommets in the air box.

Locate the air inlet block off and (2) #10 x 3/8" hex head screws.

Slide block off over the inlet and attach to the kick panel using the original hardware.

Using (2) #10 screws attach the blower bracket to block off as shown

Hold the evaporator level with the bottom of the instrument panel.

Attach lower evaporator brace to the firewall using (1) #10 x 3/4" tek screw.





Attach upper evaporator bracket using (1) #10 x 3/4" tek screw.

Locate the modified rubber oval plug.

Inside fender well, slide plug over the a/c tubes and snap in place.



Route heater hoses and insert through grommets in the inner fender.

Locate the short liquid and suction hoses.

Insert bulkhead end through holes previously drill in the inner fender. Attach using nut on engine side of the fender.

Connect 45 deg fittings to a/c tubes using o-rings and a few drops of mineral oil.



Attach the hoses together using (1) tywrap supplied in the kit.



Locate in the hardware sack kit (2) 1" hole plugs.

Plug holes in firewall where the original heater tubes came through.

Locate (2) modified Defrost hose adaptors. Also locate the 2" dia. x 12" and 2" x 24" flex hose.

WHEN CUTTING THE FLEX HOSE FIRMLY STRETCH THE HOSE BEFORE CUTTING.

Cut (1) piece 11" long and attach to one of the hose adaptor using (2) #8 x 1/2" pan head Philips screw. Use (1) piece 24" long and attach to the other hose adaptor using (2) #8 x 1/2" pan head philips screw.



Insert the 11" assembly in right defrost hole in top of the dash. The 24" assembly goes in the left hole.

Locate the center duct support bracket and (1) #10 x 3/4" tek screw.

Remove the dash brace bolt and attach the brace through this bolt.

Use the #10 x 3/4" tek screw to secure right side of the support bracket. Reinstall control head using the original nuts. .



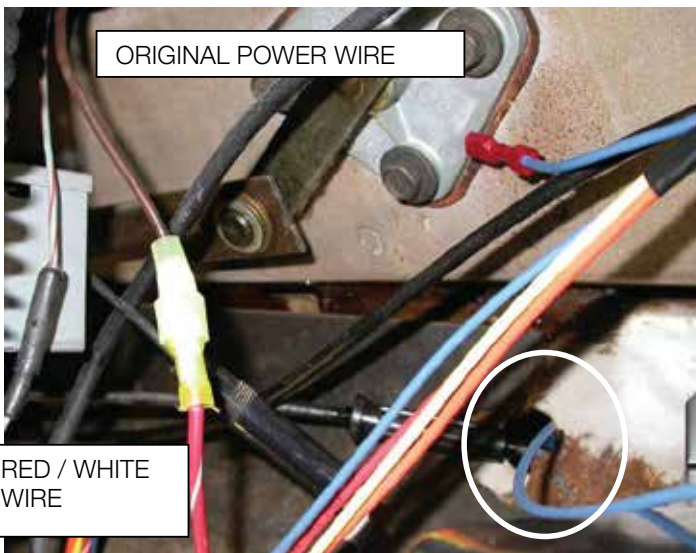


Route wire harness over top of the evaporator and attach to the blower motor and the thermostat.

Route blue clutch wire out existing hole that the original temp cable used.

Also route temperature cable out the same hole.

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 and (1) 90 degree drain elbow.

Attach over drian nipple and then cut hose so that 90 deg elbow goes out through the hole. Attach remainder of hose to elbow going through the firewall.



Locate the Face Duct Assembly from the unit box. Also locate (4) #8 x 3/8" pan head screws.

Route longest of the cables over the upper evaporator brace. Loop cable around and down to outlet of the evaporator.

Lay the face duct assembly from the kit on the floor of the truck.

Attach the cable to back of the face duct using (1) #8 x 3/8" pan head screw.

Insert the cable wire into third hole from center of the crack arm.





Slide the duct assembly over outlet on the evaporator.

Attach front of the duct to the support brace using (2) #8 x 3/8" pan head screws.

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

Attach over the defrost duct as shown.

Attach blue wires from the micro switch on side of the ducts to blue wires on the wire harness.

Locate the 2" x 48" flex hose and cut a piece 38".

Attach to outlet on front of the duct and route over top of the evaporator to the passenger side.



Locate the passenger louver. Attach the housing to bottom of the dash using (2) #10 x 3/4" tek screws and (2) flat washers on the left side, to space the housing level with the dash.



(2) FLAT WASHERS



ATTACH SCREWS
THROUGH HOLES



Route flex hose down and pull hose through face of the housing.

Attach hose to the louver assembly. Insert louver assembly into the housing.

Locate the last of the under dash louver assemblies.



Attach housing to dash on drivers side of the steering wheel using same method as the passenger housing.

Locate the 2" x 48" long flex hose. Attach hose to back outlet on the face duct. Route up and behind instrument cluster, over and down to the drivers louver assembly. Attach to adapter on the back of the louver.



Locate Center Louver Bezel. Attach over front of outlet. Use (3) #8 x 1/2" pan head philips screws.

Attach remaining cable to the face duct.

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

Attach the flag to bracket using (1) #8 x 3/8" pan head screw.





CAUTION: The control cables are equipped with inline adjusters. Adjust the Heat / Face door, and the Defrost / Face door cable so that the full travel of the Control cable, operates the door to its full travel.

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.

Install new glove box using the original hardware.

Reinstall the Glove Box Door using the original hardware.

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

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

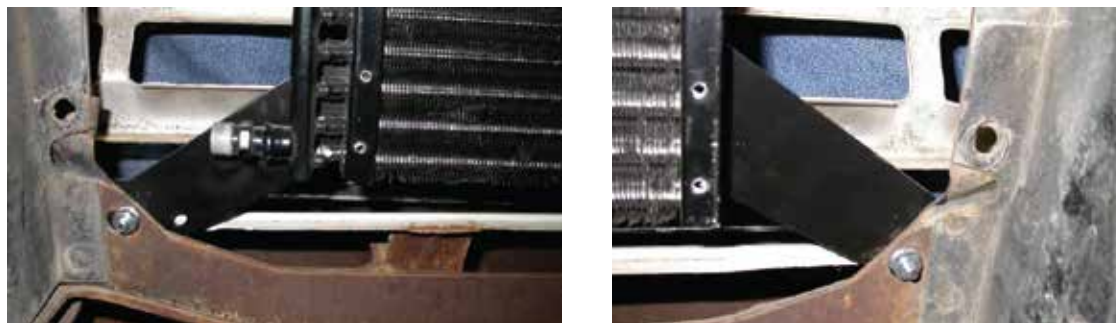




VIEW SHOWING UPPER BRACKETS FROM GRILLE SIDE OF BULKHEAD.



VIEW SHOWING LOWER BRACKETS FROM ENGINE SIDE OF BULKHEAD.



Locate the following components from the under hood components box.

Condenser, (4) Condenser mounting brackets and (8) #10 x 3/8 hex washer head screws.

Locate Condenser, (2) Lower condenser mounting brackets. Attach to bottom holes using (4) #10 x 3/8" hex head screws.

Locate top (2) condenser mounting brackets. Loosely attach to top holes using (4) #10 x 3/8" hex head screws.

Slide condenser assembly into the radiator bulkhead opening from the engine side. Condenser fittings will be on the drivers side. The mounting brackets will be in front of the bulkhead.



Locate (2) #10 x 3/4" tek screws, (2) 1/4"-20 x 5/8" head screws, and flange nuts.

Attach lower condenser brackets to the existing holes using the 1/4" - 20 x 5/8" hex bolt and flange nuts.

Attach upper condenser brackets to upper edge of the bulkhead using the #10 x 3/4" tek screws.

Locate the discharge tube, #8 o-ring, 1/2" clamp and (1) #10 screw and nut.

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

Using the clamp as a guide, drill a 3/16" dia hole and attach clamp with the screw and nut.

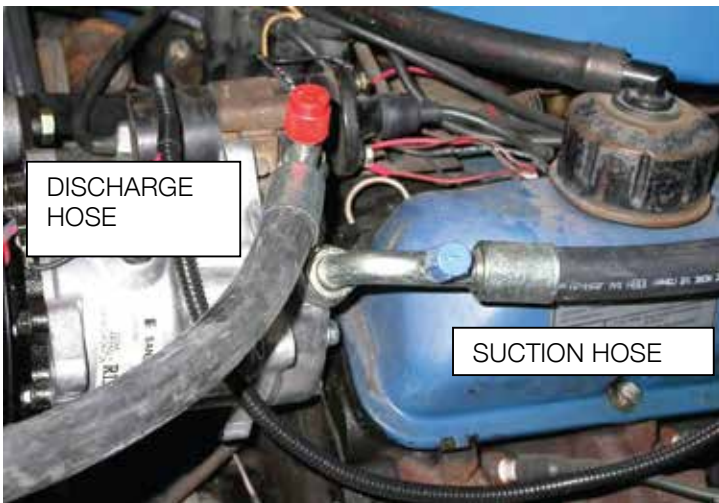
Locate the discharge hose, (2) #8 o-rings, the #10 suction hose assembly, and (2) #10 o-rings.

Attach the #8 hose to the compressor (service port) and straight end of hose to the discharge tube.

Attach using an o-ring and a few drops of mineral oil.

Attach suction hose (w/service port) to the compressor using a #10 o-ring and a few drops of mineral oil.

Route hose behind air cleaner and attach to the firewall using (1) #10 clamp and a tek screw.





Attach straight #10 fitting to the inner fender. Using #10 o-ring and a few drops of mineral oil.

Locate the long liquid tube, (1) #6 o-ring.

Attach end to the lower condenser fitting using #6 o-ring and a few drops of mineral oil.

Locate the receiver drier, drier mounting bracket, #6 hose clamp, (3) #10 tek screw, short liquid hose, long liquid hose and (4) #6 o-rings.

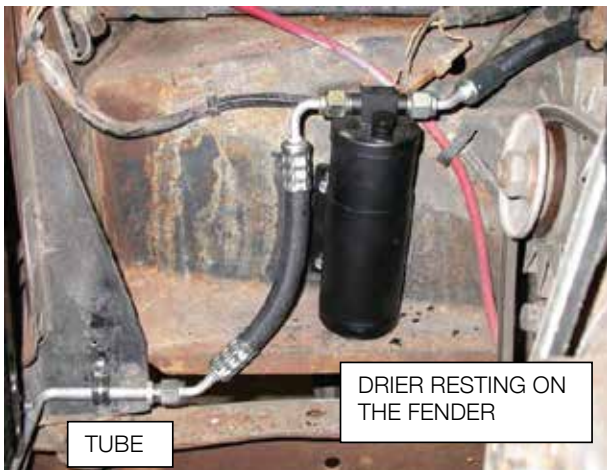
Loosely attach 45 deg fitting on short liquid hose to the liquid tube. The 90 deg end to inlet on the drier. Use #6 o-rings and a few drops of mineral oil on each fitting.

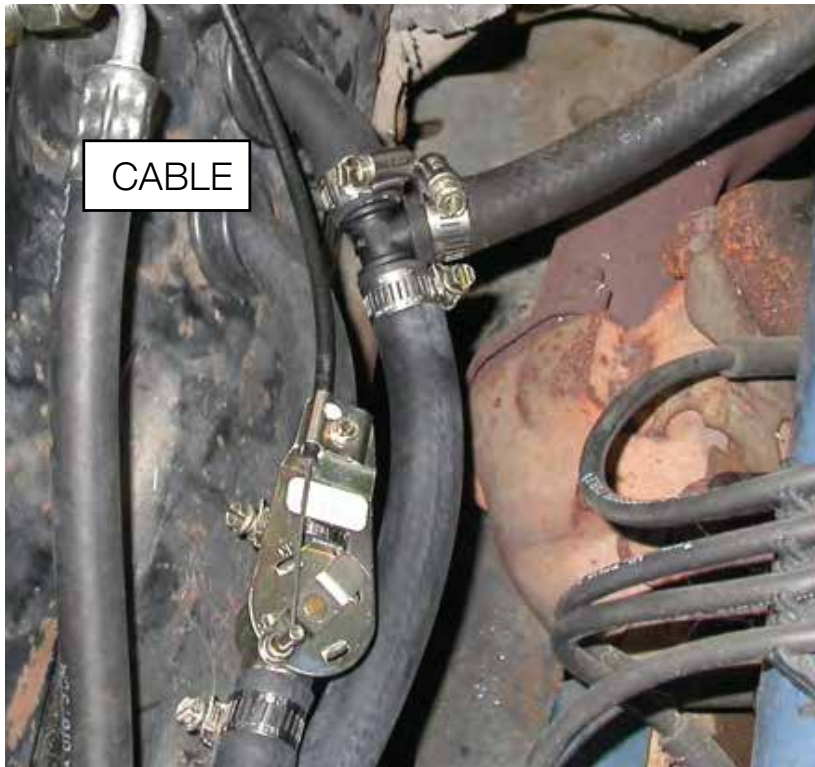
Loosely attach 45 deg fitting of long liquid hose to outlet on drier and other end to fitting on the inner fender.

Use hoses to locate the position of the drier. The drier will rest on the lower lip of the fender. Attach drier using the mounting bracket and (2) #10 tek screws to the inner fender .

Clamp the liquid tube to the radiator support using #6 hose clamp and a #10 screw.

Tighten all #6 fittings.





Locate in Hardware Sack Kit the Water Valve and (3) worm gear clamps.

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

Attach water valve to the front heater hose and attach to the heater hose that goes back to the water pump. Use the worm gear clamps supplied.

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

Reuse the T-fitting on supply line from the back of the engine.

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!

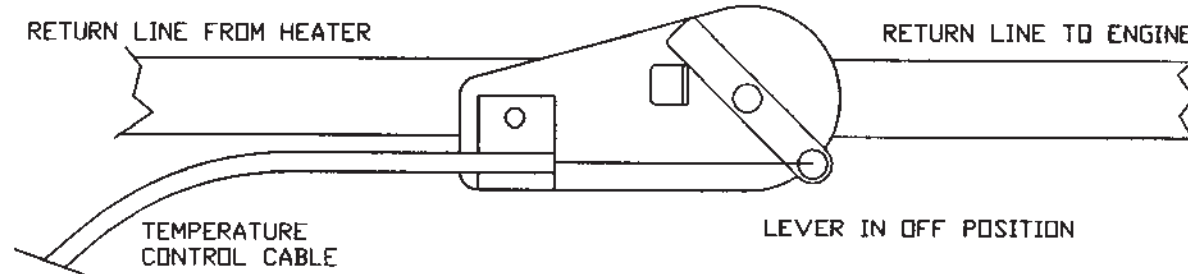
CAUTION: WATER VALVE MUST BE INSTALLED PER THE INSTRUCTIONS.

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.



TDS-001 WATERVALVE

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.**

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Recommend that power fuse is 25amp minimum**

