

INSTALLATION INSTRUCTIONS

FORD

3930/ 4630/ 5030



PHONE (519)485-5961 OR 1-800-267-2665

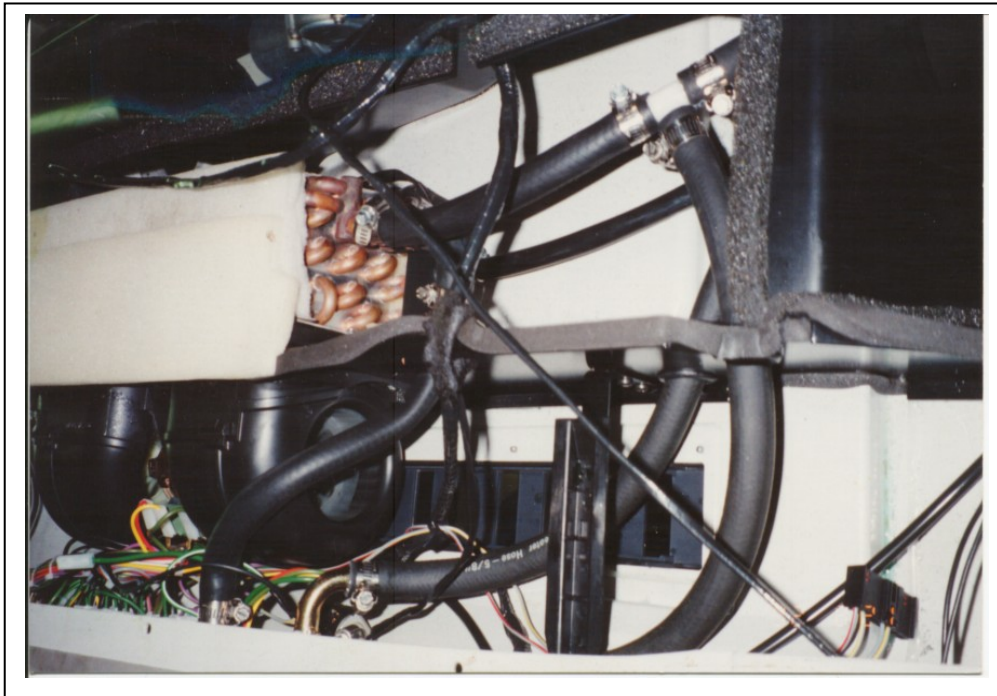
FAX (519)485-3745 OR 1-888-267-3745

EVAPORATOR

Remove roof. Disconnect and pinch off heater lines. Remove heater core. The new assembly is a heat cool unit, with both a heater and evaporator in one. Evaporator comes with a drain pan assembly that is installed together. From the drain pan there are two outlets for moisture to drain from the evaporator box. Drill two 3/4" holes in cab headliner on inside of pillars as shown in pictures. Hook up drain tube to both sides and clamp hose with hose clamps provided. Drain tube will run to the front of cab stopping just before 3/4" holes drilled in headliner. Install 90 Degree elbows through holes. Attach drain tube to 90s and clamp. Using self adhesive tie pads tie the tubes to the columns. Drill two more 3/4" holes in the floor for drain tubes to exit. Leave an inch or two of drain tube through floor for proper drainage. Push drain tube restrictors in end of tube and clamp.



Showing drain tube coming through roof.

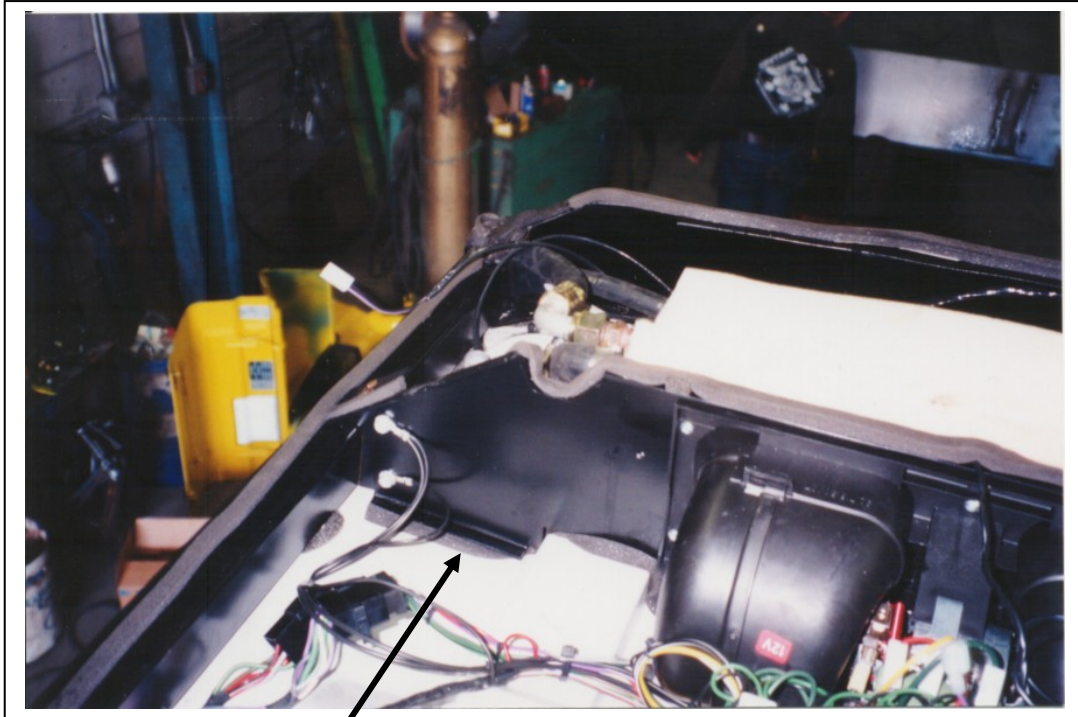


Bend the two tabs that originally held the heater core outwards instead of in to allow a longer coil. This may include cutting a weld or two. Mount the new coil and drain pan using self drilling screws and clips. Use tar tape and foam to seal the evaporator to the blowers and support the drain pan.



Notch out the corner of the cab post to allow the two AC hoses and the clutch wire to enter the evaporator area. When complete cover with tar tape so the roof makes a good seal.

Connect the AC lines and heater line to the coil. Use tar tape and foam to seal all air gaps around the evap coil so all the blower air goes through it.



Use tar tape or silicon to seal any areas that may leak air and reduce the AC systems effectiveness.

Notch the plastic shroud for hoses and drain tubes as required and re-install. Seal it all the way around to limit air leaks. Seal the top of the coil if possible to limit air leaks.



Notch and seal as required.

Plastic shroud.

Thermostat probe is inserted in evaporator 1/3 down from expansion valve and 1/2 way up from bottom of core. Drill a 1/2" hole in headliner as shown in picture below for thermostat. Using 14-gauge wire draw power for thermostat from extra terminal on blower switch. wire from thermostat (14 gauge) will run down columns with hoses. Make sure all wire is encased in wire loom and tied securely to prevent rubbing.



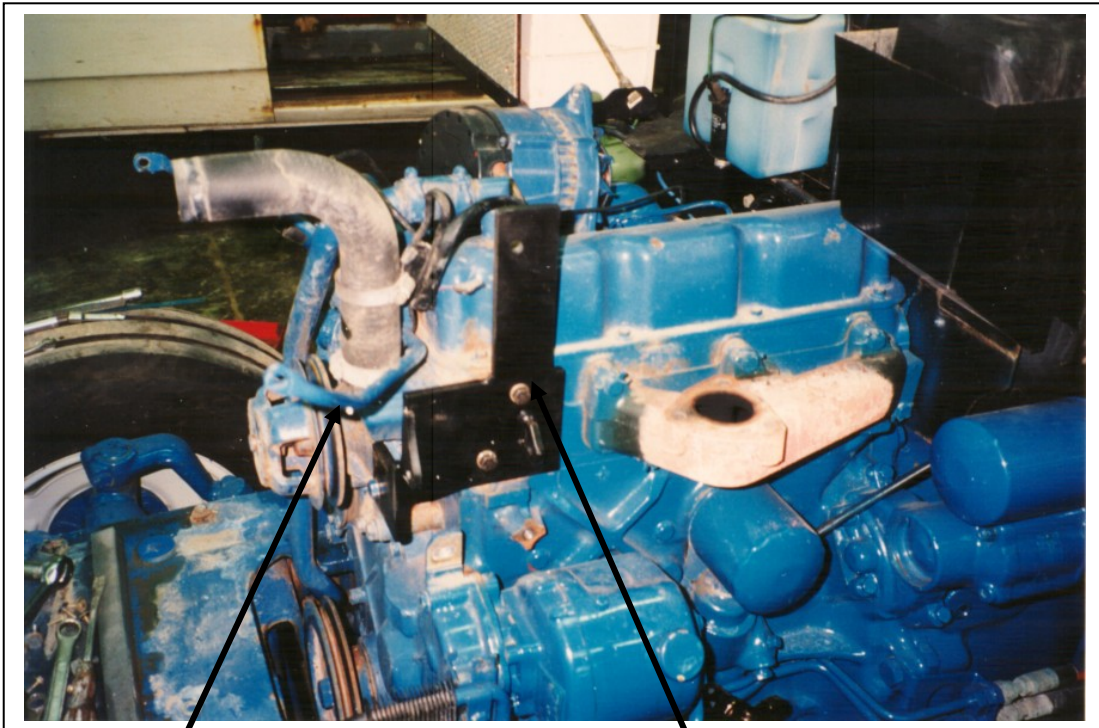
Install 4 recirculation louvers towards the back of the cab to help move air around the cab.



AC hoses notched and sealed through plastic shroud.

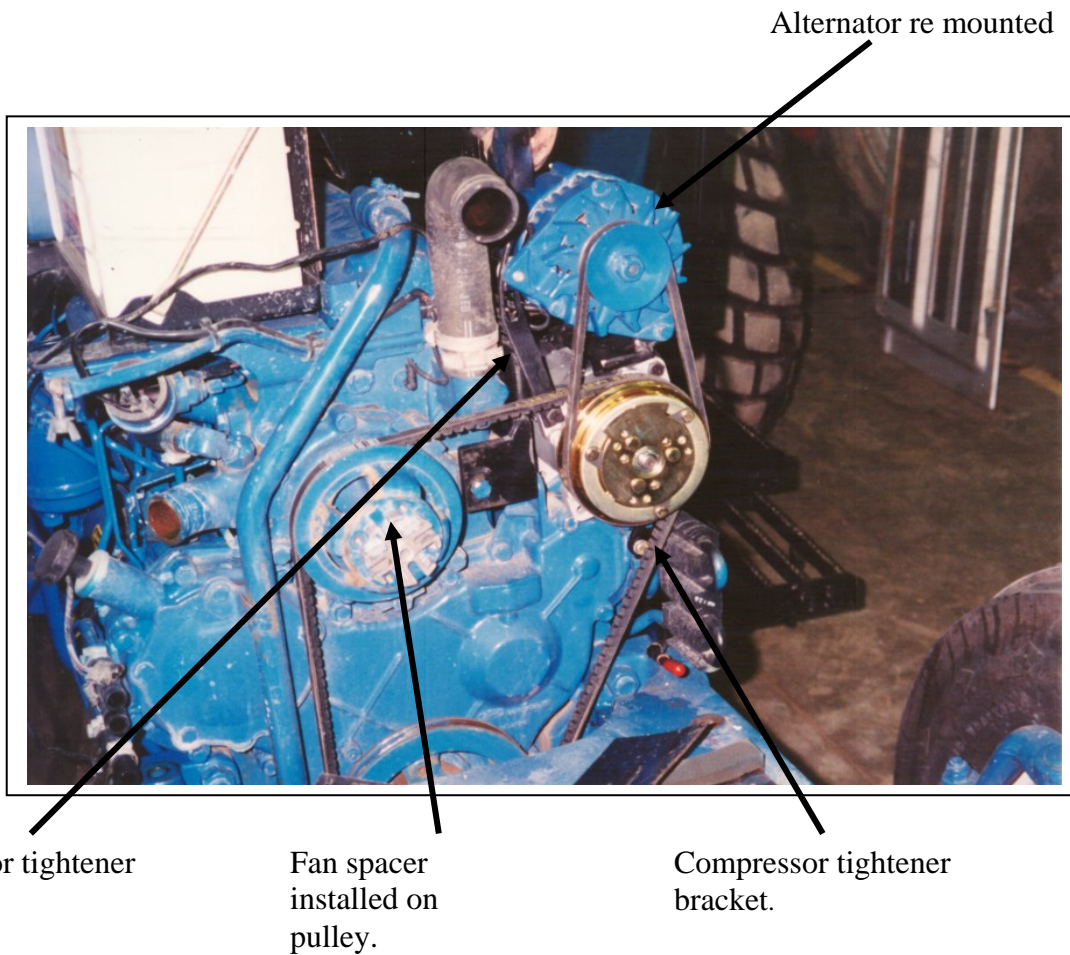
COMPRESSOR MOUNT 3930/4630

Remove engine cowling, exhaust piping back to exhaust manifold and the radiator and fan as shown below.

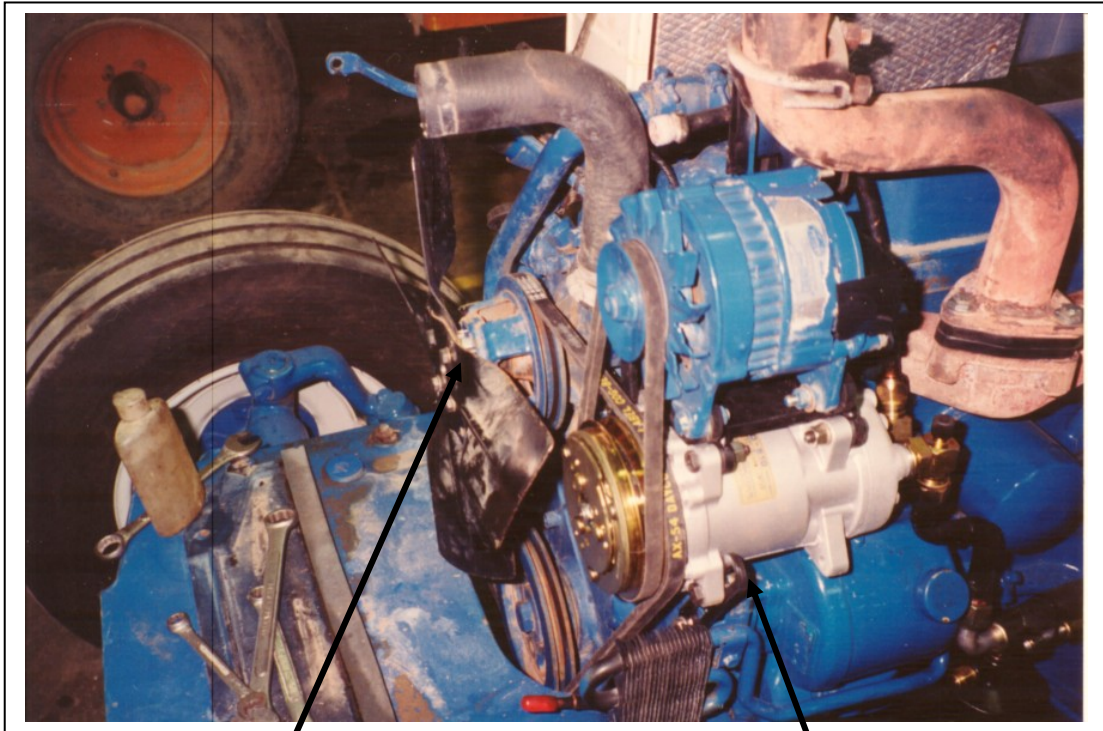


Cut this bracket off back by
valve cover.

Bolt compressor mount into
place.



The plastic fan shroud must be modified at the bottom by cutting out the tapered section to allow the fan to move around.

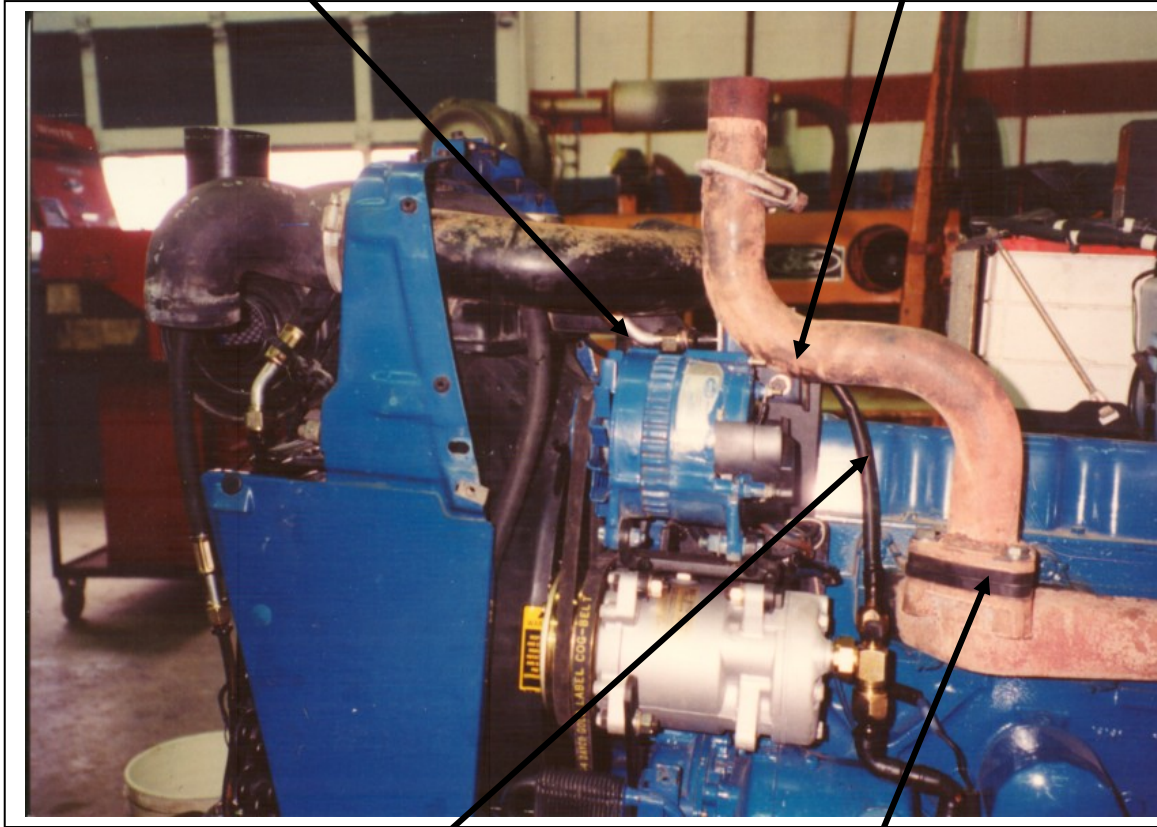


Fan and spacer bolted on with longer 5/16" bolts

Compressor tightener bracket

13/32" hose attaching to special copper line.

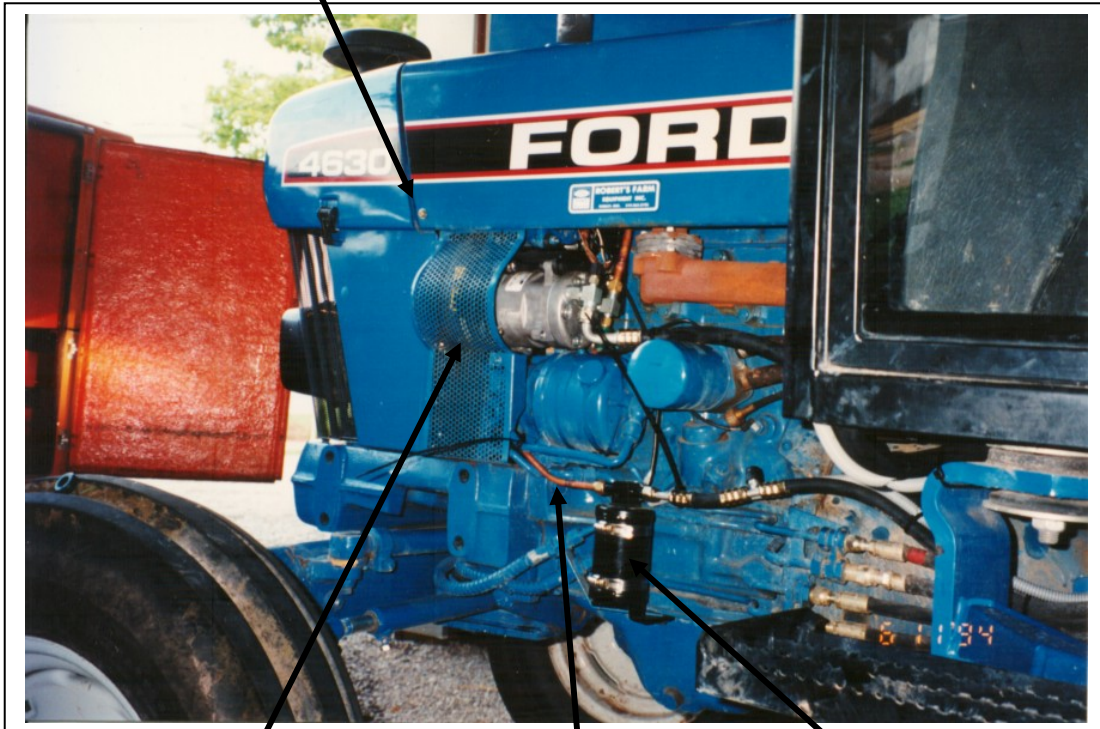
Cut off most of the exhaust support bracket leaving the existing hole near the pipe. Use the supplied spacers and hardware to bolt it to the main mount bracket.



Use 13/32" Copper pipe to get past the hot exhaust area. It may need to be bent a little on site..

Use two or three exhaust spacers as needed to clear the alternator. Use muffler cement in between all surfaces.

Sometimes extra washers need to be used behind engine cover to space it out for clearance with alternator.



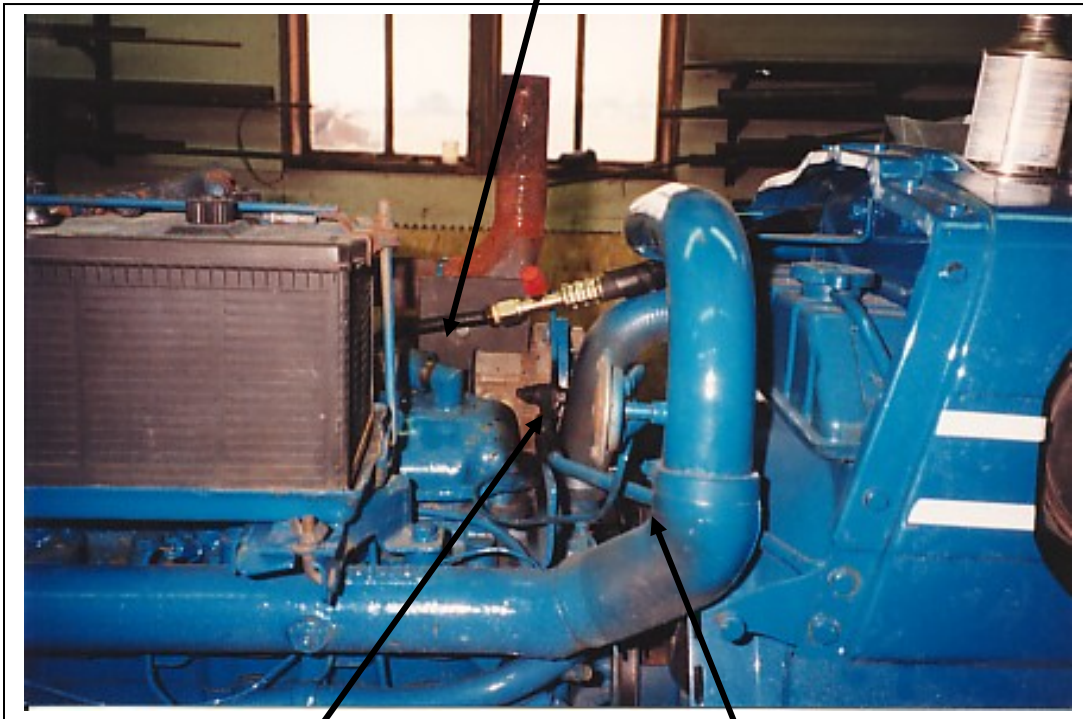
Original alternator cover modified as required to fit back over compressor.

This copper pipe is no longer used as the new hose is flexible enough to make bends.

Receiver drier mounts to oil pan bolt with 1/4" spacer.

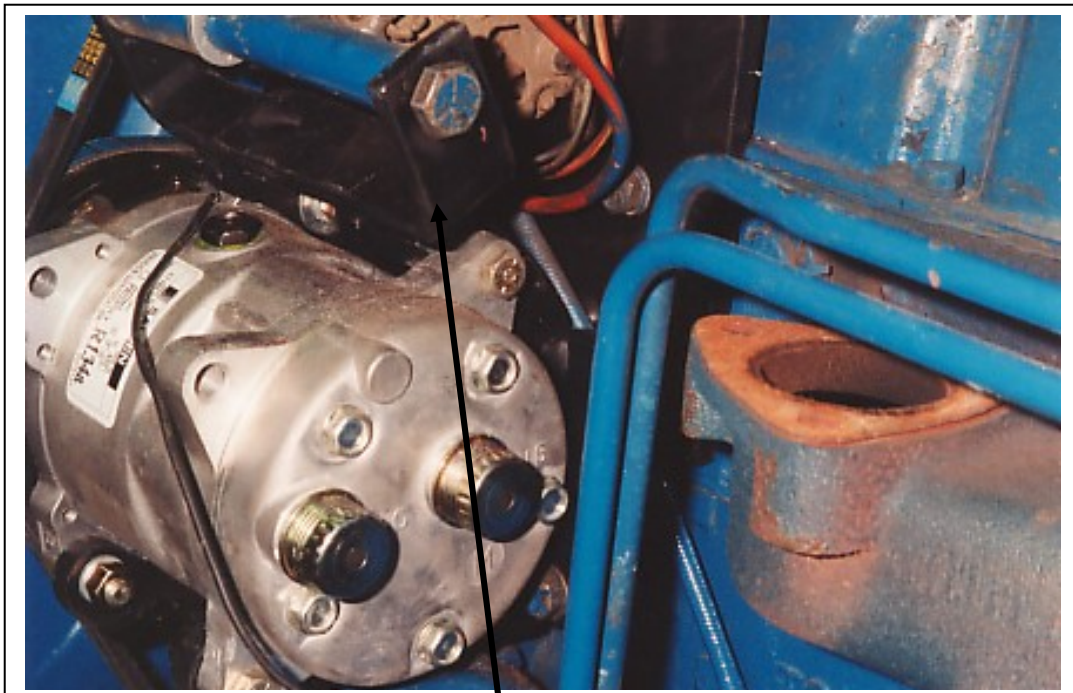
COMPRESSOR MOUNT 5030

Copper pipe to get past the exhaust area

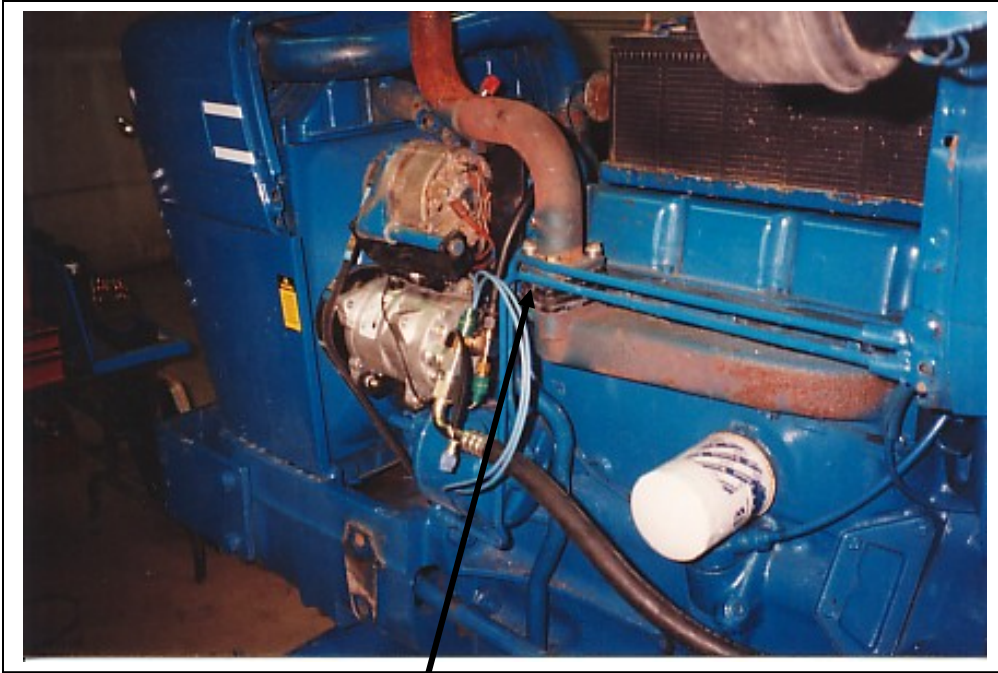


Weld tab to rad support bracket to bolt the alternator tightener bracket to.

Cut this bracket off on the alternator side to make room for the alternator to be raised up.



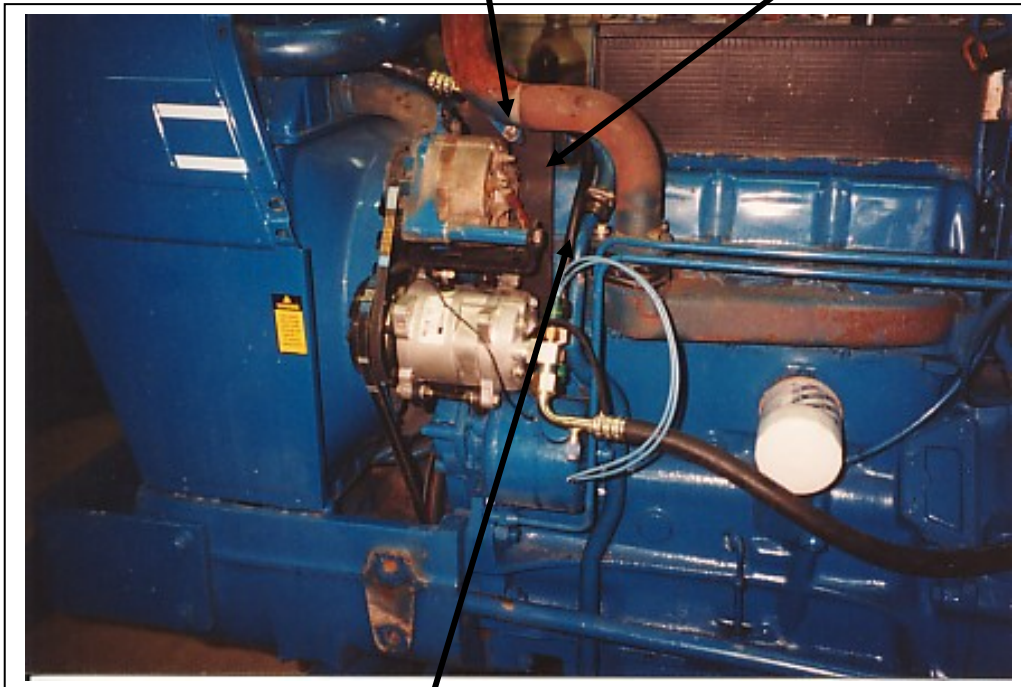
Weld original alternator bracket to the top of the compressor tightener ears.



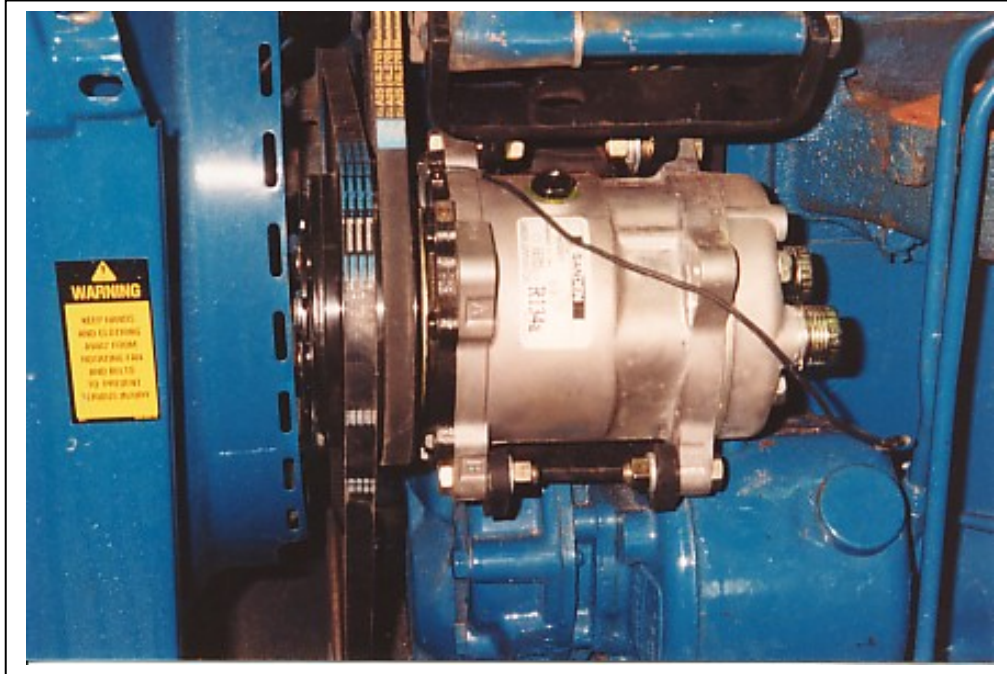
Exhaust spacers. Use three or four as required.
Use exhaust cement in between the spacers.

Cut most of the exhaust pipe support bracket off, except for enough to drill a hole and bolt it to the bracket on the compressor mount.

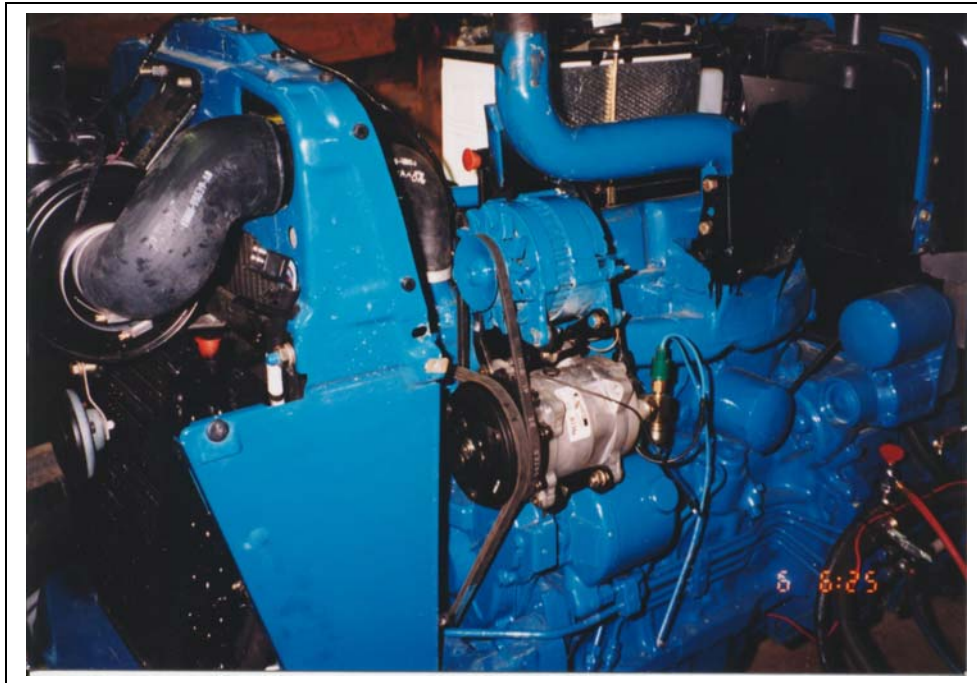
Depending on the alternator style, this bracket may need to be notched out to accommodate the alternator body to allow for proper travel for belt tensioning.



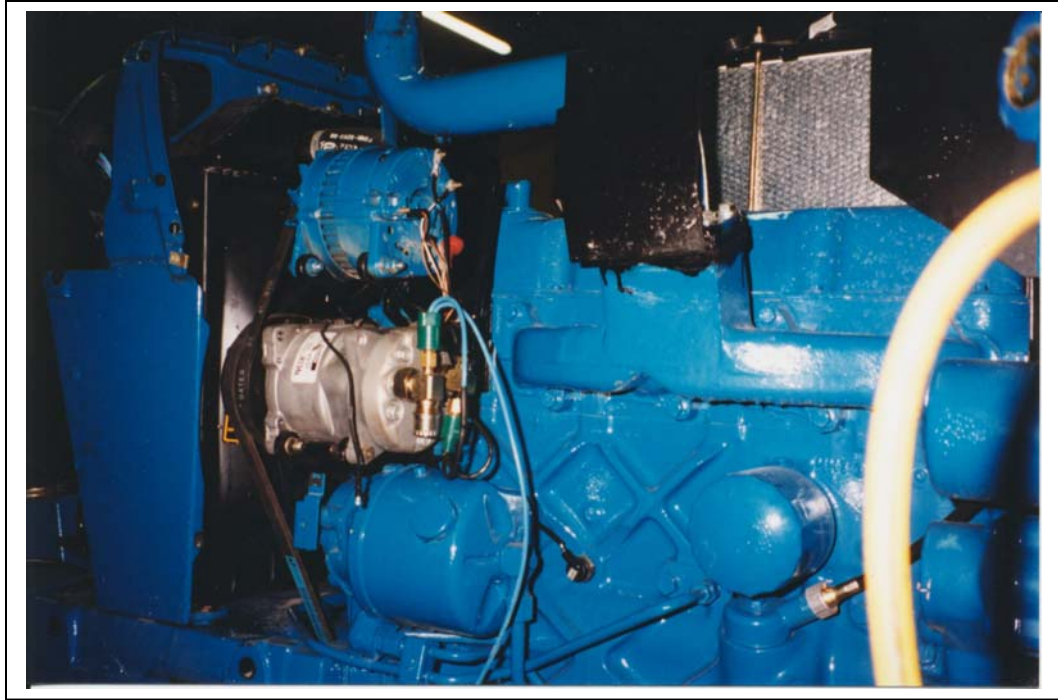
Copper pipe for the 13/32" hose to get past the exhaust area.



Compressor mount with older style alternator on it.

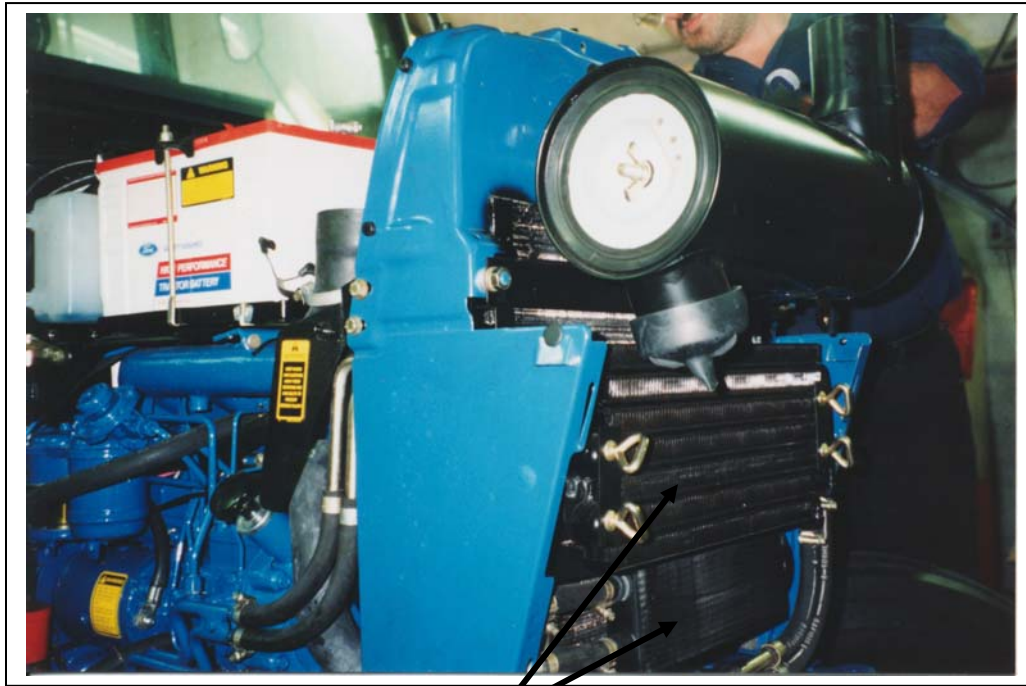


Compressor mount with newer style alternator on it. Position alternator and weld mount tabs to the top of the compressor mount. Position alternator so belt and hood fit.



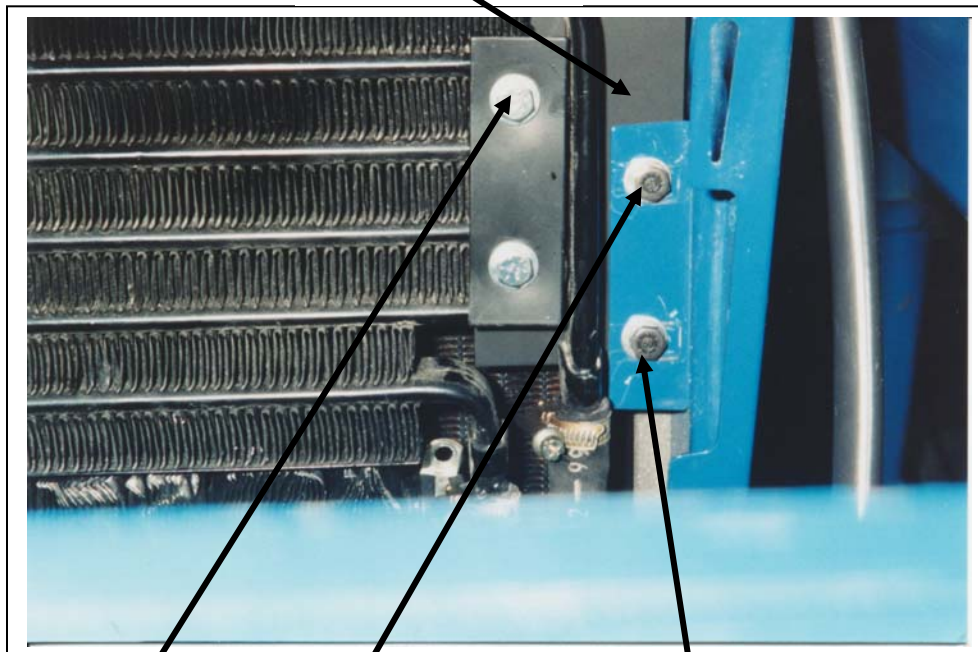
Back view of newer style alternator.

CONDENSER



If one or both oil coolers are present, they will have to be relocated closer to the radiator using the bracket provided.

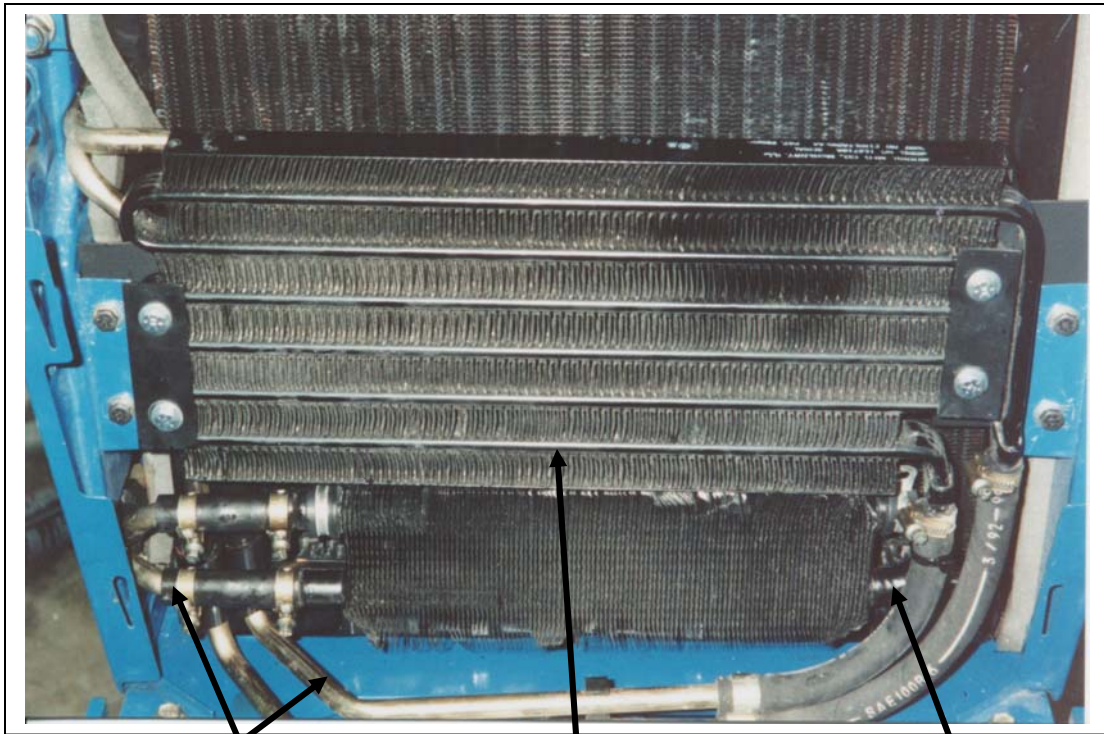
Relocation bracket



1/4" x 1 1/2" bolts

1/4" x 3/4" bolts

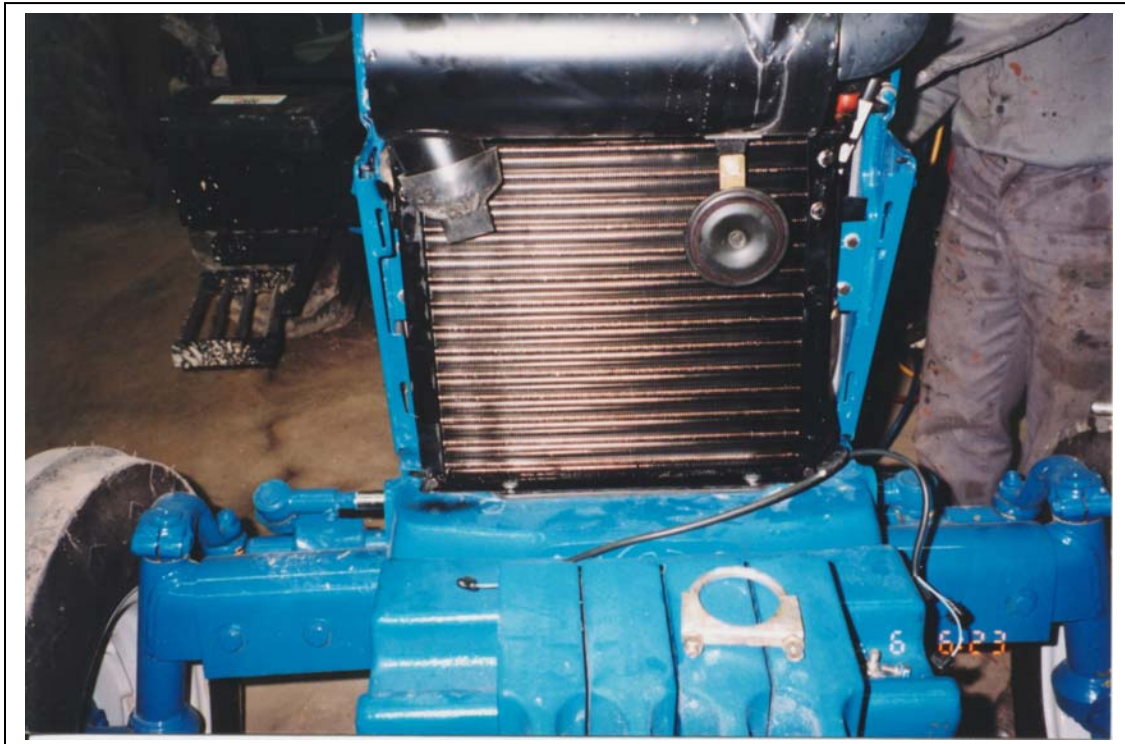
Original bracket removed and clip nuts removed so relocation bracket can be installed.



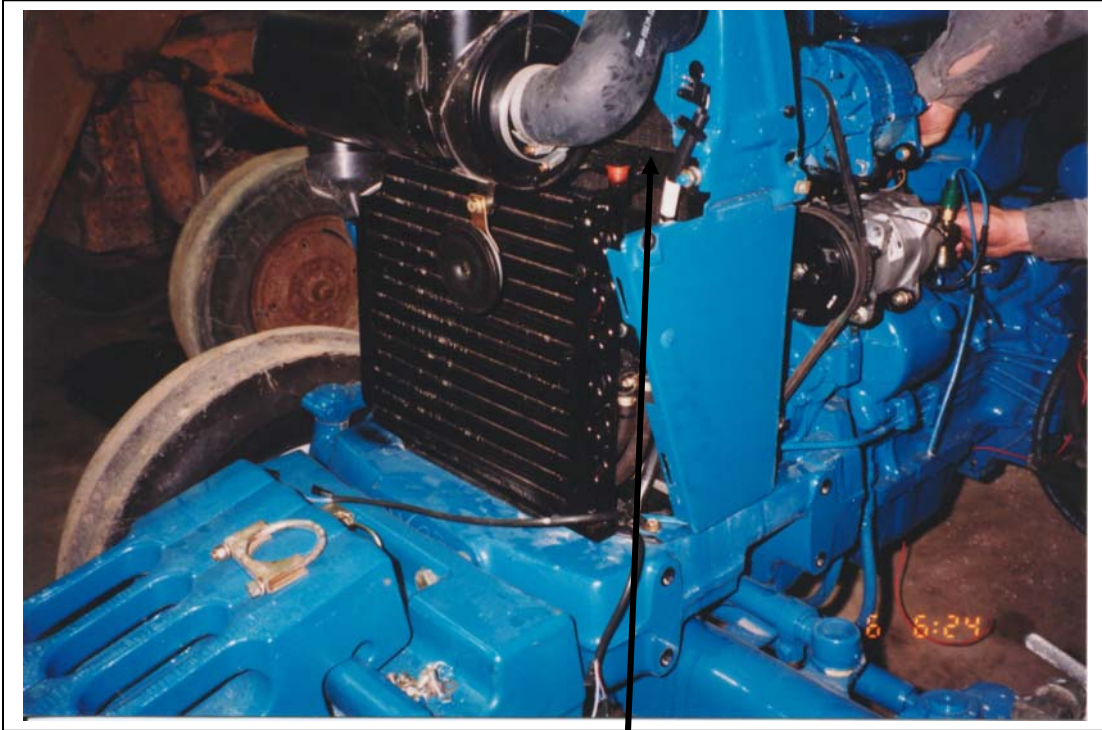
Pipework may have to be pushed in towards the radiator to make room for the condenser.

Oil cooler relocated

Tie wrap this end of oil cooler to upper coolers feed hose.



Lower condenser bracket with special thin head 3/8 Bolts. Ensure there is clearance between condenser and bolt heads after installation.



Bend hinge end and screw or bolt to air cleaner cross bar. Position condenser so it can hinge out as much as possible for cleaning and so the front grill piece will go back on.



Upper hinge screwed to air cleaner bracket.

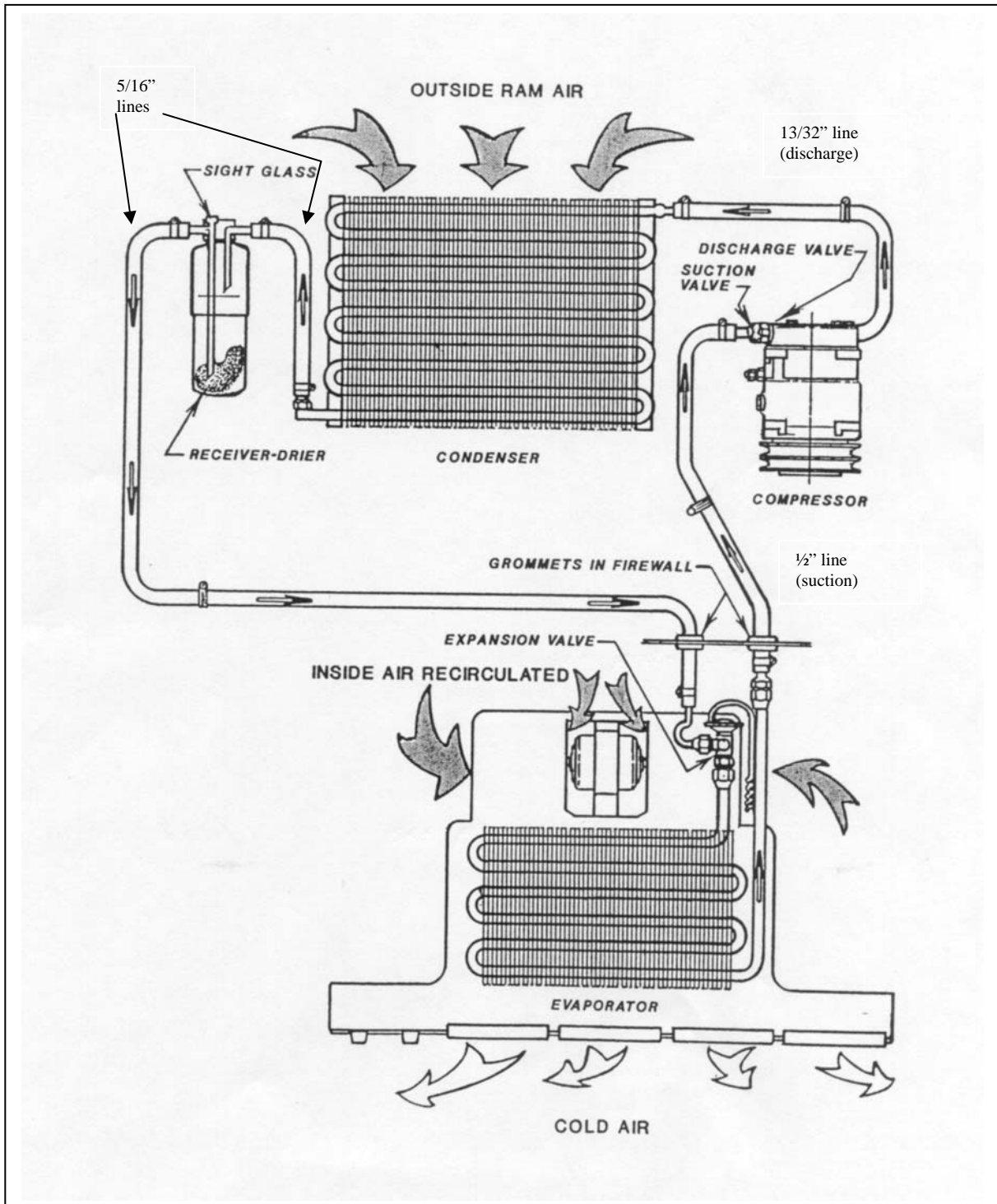
13/32" 90° fitting at condenser.

5/16" hose at condenser.

CHARGING AND TESTING

- 1) Pressure test the system using nitrogen to a pressure of 250 psi. Check for leaks.
- 2) Add 2oz of SP20 Sanden PAG oil to the system.
- 3) Vacuum the system for at least ½ hour.
- 4) Check that the vacuum holds.
- 5) Fill the system with 2.50 lbs of R134a refrigerant. **DO NOT USE ANY OTHER TYPE OF REFRIGERANT OR IT WILL VOID THE WARRANTY.**
- 6) Test the system. Check the cycling temperature of the thermostat. Adjust the thermostat settings if required to avoid coil freeze up problems. See the thermostat setting procedures at the end of these instructions.

Refrigerant Flow Pattern in a Standard Air Conditioning System



Thermostat Setting Procedures

- 1) Thermostat types
 - a) preset
 - b) adjustable
 - a) A preset thermostat is adjusted to its specific cut in and cut out temperatures when manufactured and does not have a rotary adjustment for the operator.
 - b) An adjustable or rotary thermostat has been manufactured to a predetermined cut in and cut out temperatures, but it is also operator adjustable to achieve the desired comfort level.

Both types of thermostats can have their factory settings adjusted by turning the setting screws on the body of the thermostat. One body type has the setting screws mounted externally and labeled for direction of rotation. The other body type requires the removal of the plastic end plate to expose the set screw.

- 2) Thermostat probe location: The location of the thermostat probe in an evaporator coil can be very important to achieve the maximum cooling potential of the coil while also preventing coil freeze-up. There is no set location for the thermostat probe to be put that will be optimum for all systems, but several rules of thumb may be followed:
 - a) Insert the probe in the coldest area of the evaporator coil.
 - b) Insert the probe from the top of the coil down, if possible.
 - c) Make sure that at least the last 3" of the thermostat probe are in the coil.

To find the most likely area where the coil is the coldest, consider these factors:

- 1) Direction of air flow through the coil.
 - 2) The coil area likely to have the lowest air flow.
 - 3) The inlet locations of the refrigerant into the coil.
 - 4) The inlet of the hotter outside air into the coil area.
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- 1) Usually the coldest side of the evaporator coil will be the air outlet side. Often the thermostat probe can be inserted between the last and second last row of tubes.
 - 2) The lower air flow area of the evaporator coil in most systems tends to be near either end of the coil. These areas will be colder
 - 3) The area of the coil that the refrigerant inlet tube(s) occupy should be the coldest part of the coil.
 - 4) If the system is equipped with an outside air intake, where and how that air is brought into the evaporator area can have a large effect on the coil temperature. If all the outside air is piped into the evaporator in one area, that area will be considerably warmer in hot weather.

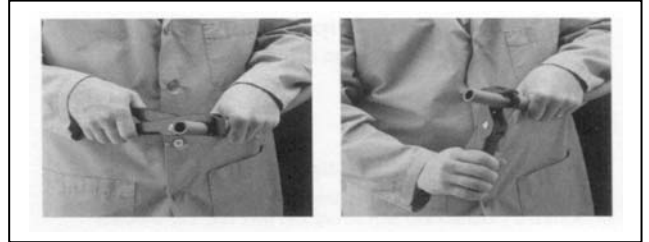
By looking at all these different factors, the area of an evaporator coil most likely to be the coldest can be determined.

Once the probe is inserted, the A/C system needs to be tested. Run the system to ensure that the thermostat is cycling the compressor off at the appropriate temperature. A core temperature ranging between 25° and 30° F should cause the thermostat to cycle off. The air temperature at the vent outlet closest to the evaporator coil should be between 38° F and 45° F when the compressor cycles off.

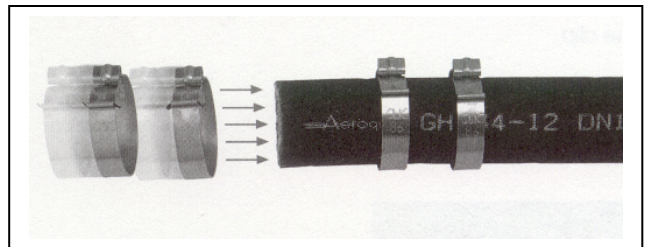
If the thermostat doesn't cycle off after a reasonable cool down period, and the air outlet temperature has dropped below 40° F, the cut in and cut out settings should be adjusted until the compressor is cycling on and off regularly. Let the system run for a decent time period (at least 15 min) and then check the evaporator coil for any signs of freezing.

Aeroquip E-Z Clip Assembly Instructions

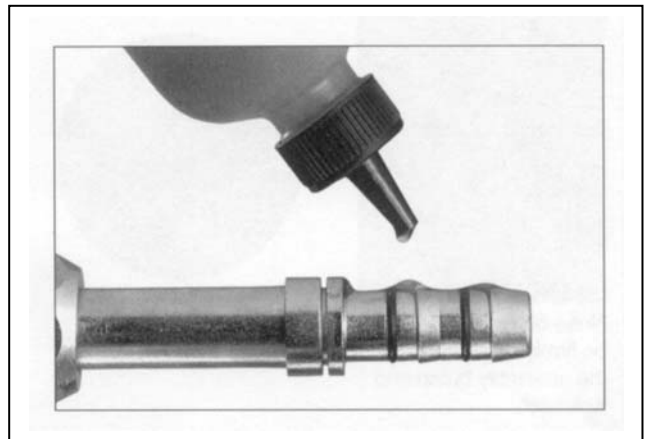
Step 1. Cut the hose to proper length with an appropriate cutting tool. Aeroquip's hand held hose cutter has been specially designed for cutting all non-wire reinforced hose, such as GH-134 Multi-Refrigerant hose. Be sure the cut is made square to the hose length.



Step 2. Install two proper-sized clips onto the cut end of the hose. Orientation of the clips does not affect the performance of the connection. However, for ease of assembly, both clips should have the same orientation. NOTE: Failure to slide the clips over the hose at this time will require the clips to be stretched over the hose or fitting later. This may permanently damage the clip.



Step 3. Lubricate the nipple with a generous amount of the refrigeration or A/C system's compressor lubricating oil. This MUST be done to lower the force of nipple insertion.



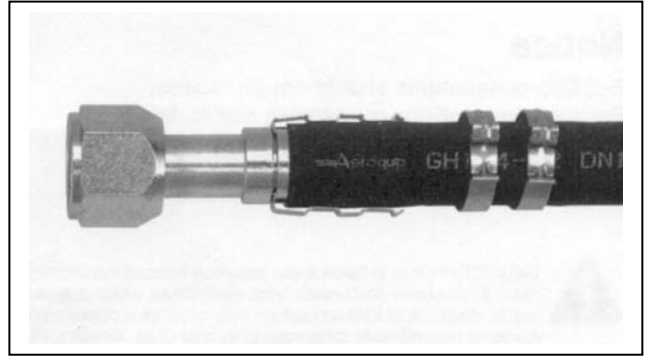
Step 4. Insert the nipple into the hose. To ensure that the nipple is fully inserted, check the gap between the cut end of the hose and the shoulder on the nipple. Care should be taken to avoid kinking or other damage to the hose during nipple insertion. NOTE: Be sure to wipe excess oil from the nipple and hose.



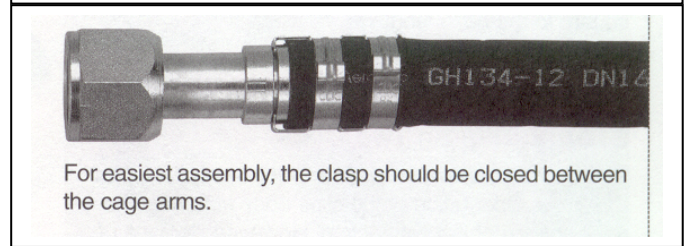
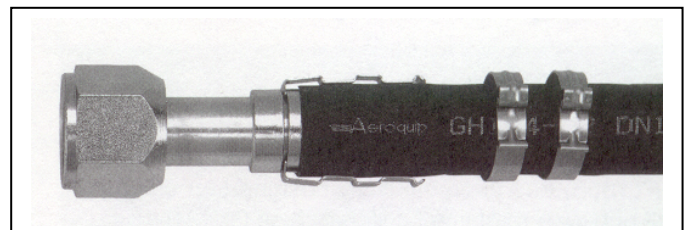
Step 5. Snap the cage into the groove on the nipple. The arms should extend over the hose length. When the cage has been correctly installed in the cage groove, the cage will be able to rotate in the groove.

This step **MUST** be performed to ensure:

1. The clips will be located over the O-rings on the nipple.
2. The connection will be compatible with the connection's pressure rating.



Step 6. Slide the clips over the cage arms and into the channels on each arm.



Step 7. Use the pliers to close the clips. The pliers should be positioned squarely on the clip connection points and should remain square during the closing of the clip.

NOTICE: E-Z Clip components should not be reused.

