

**544G/624G
JOHN DEERE LOADER
ELECTRIC CONDENSER**



HAMMOND AIR CONDITIONING
TEL:1-800-267-2665 or 519-485-5961
FAX:1-888-267-3745 or 519-485-3745

EVAPORATOR

The evaporator is designed to be mounted in the existing factory heater box alongside the heater core.

- 1) Remove the seat and heater cover to expose the heater/blower area. Remove the plastic air distribution channel over top of the heater coil.
- 2) In the drain pan area knock out the two drain plugs and install the copper drain extensions with epoxy.
- 3) Remove the metal bracket from the right rear corner of the evaporator/heater coil area. This bracket is riveted into place and can best be removed by chiseling off the rivet heads. Pull the metal bracket away to reveal a hole for running the A/C hoses into the cab.
- 4) Loosen the bolts that hold the heater coil in place and slide the evaporator coil into place. The fittings go on the left side of the cab.
- 5) Connect the short pieces of drain tube with the restrictors onto the copper drain extensions outside and underneath the cab.
- 6) The thermostat can either be set up as one which can be operator controlled or pre-set and hidden away. The option is left up to the installer. If pre-setting the thermostat – rotate the knob all the way clockwise and then back off approx. 1/8 turn (until you feel the click). This setting will give optimum performance. Feed the probe from the thermostat into the evaporator area and insert into the coil at a point approximately 6” from the end between the first and second row of tubes straight down about 4” to 5”.
- 7) On some late model machines the flex hose that connects the front defrost blower intake to the plastic ducting is not installed. When re-assembling the heater/evaporator box, cut out the plastic plug and install the flex duct provided. This stops any backfeed of air by the heater and evaporator coils if the front defrost blowers are not on.

CONDENSER

The condenser is mounted on the right hand side engine compartment door and is provided air flow with a 14" power fan.



On the outside of the door, orient the cut-out template so that the condenser will be oriented correctly- that the bolt holes will line up with the inserts on the coil and the fittings will be oriented properly. The fittings on the condenser face rearward (point away from the door hinge) with the 13/32" fitting on top.



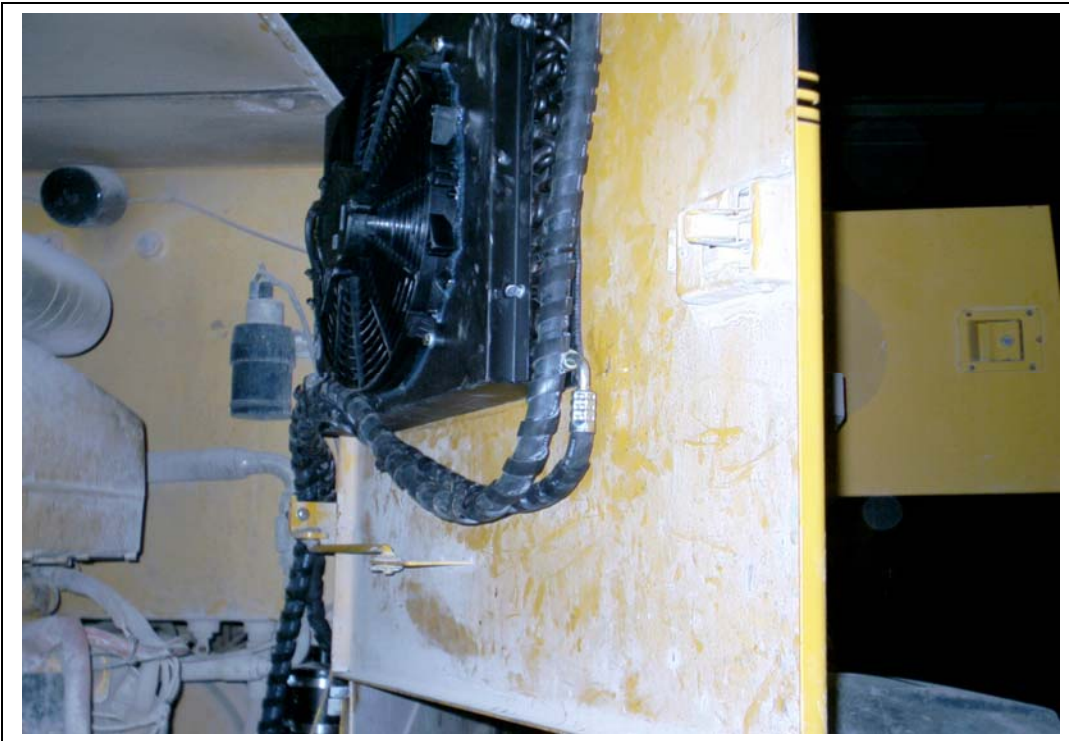
Mark the large cut out on the door (intake for the condenser) and the bolt locations. Cut out the intake using a jigsaw or similar tool and drill out the bolt holes to 3/8".

Deburr the edges and use the trim strip provided if desired. Bolt the condenser assembly into place using the hardware provided. The condenser intake screen (perforated steel with edging) goes on the outside of the door.



5/16" fitting

13/32" fitting



COMPRESSOR

The compressor is mounted on the left hand side of the engine. There is an open drive pulley present.

- 1) The compressor mount is located on the left of the engine as shown in the picture.



Compressor mount

Open pulley

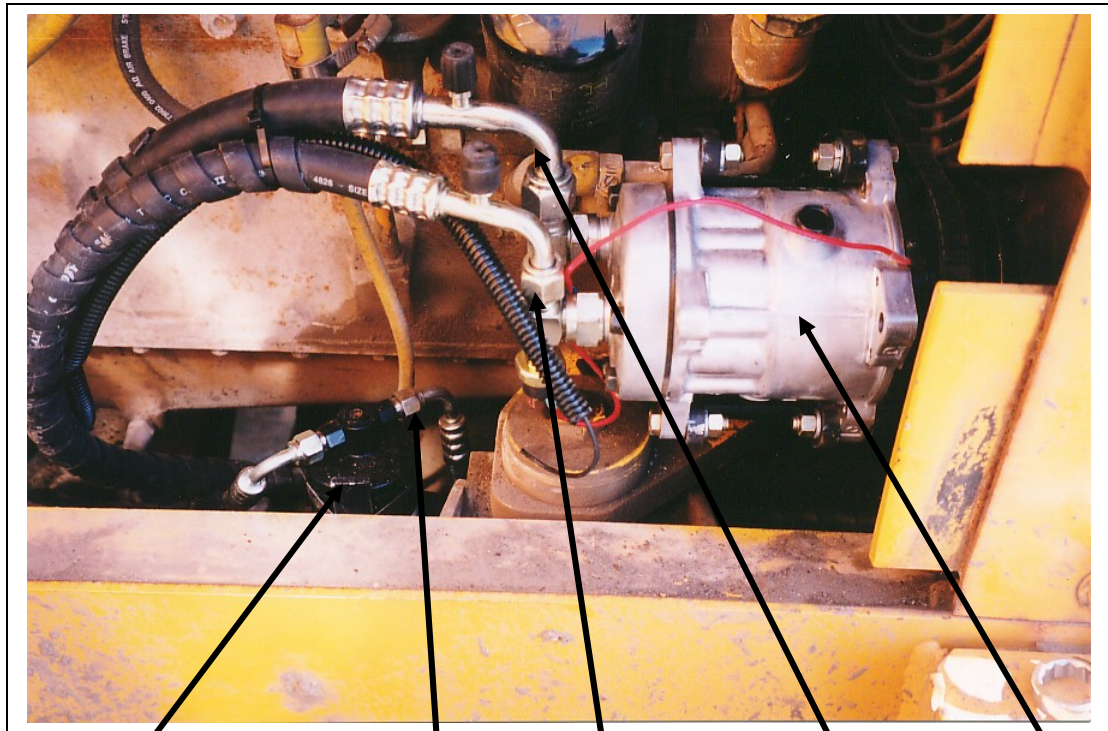
- 2) Secure the mount assembly to the engine mount bracket provided on the open bolt holes and tighten.



Mount bolts

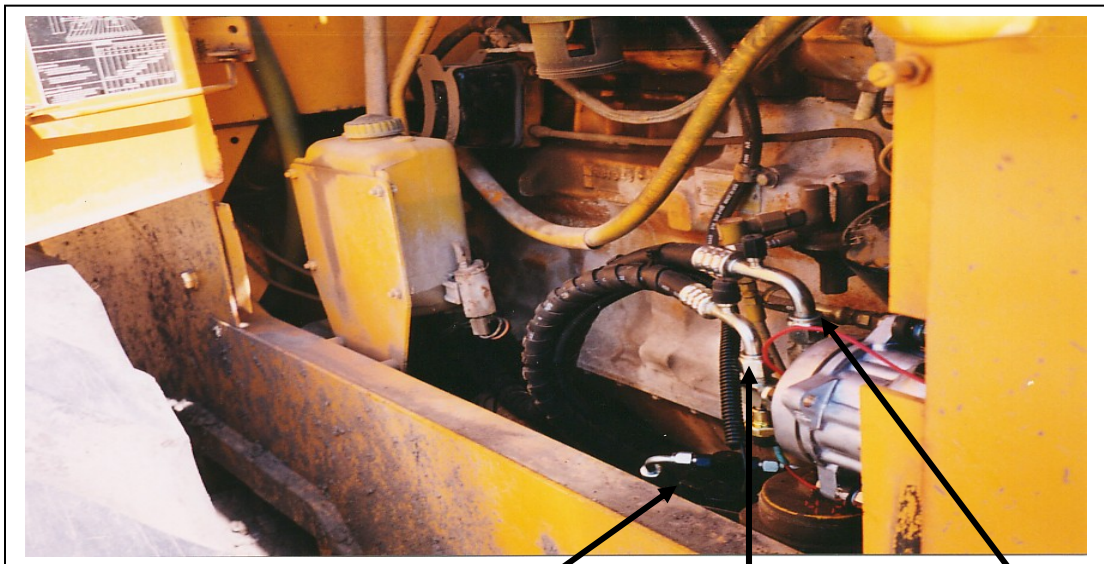
Compressor mount

- 3) Mount the compressor to the bracket with the hardware provided. The back groove on the compressor pulley should line up with the open groove on the crankshaft.

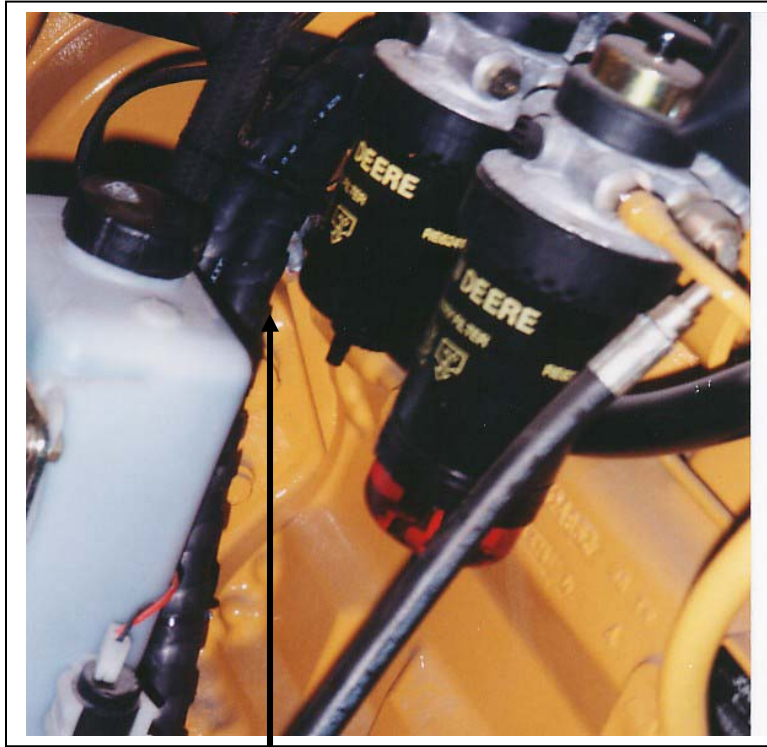


Receiver drier 5/16" fitting on inlet side 13/32" rotolock 1/2" rotolock Compressor

4) Install the belt provided and tighten the compressor to the correct belt tension.



Receiver drier 13/32" hose 1/2" hose

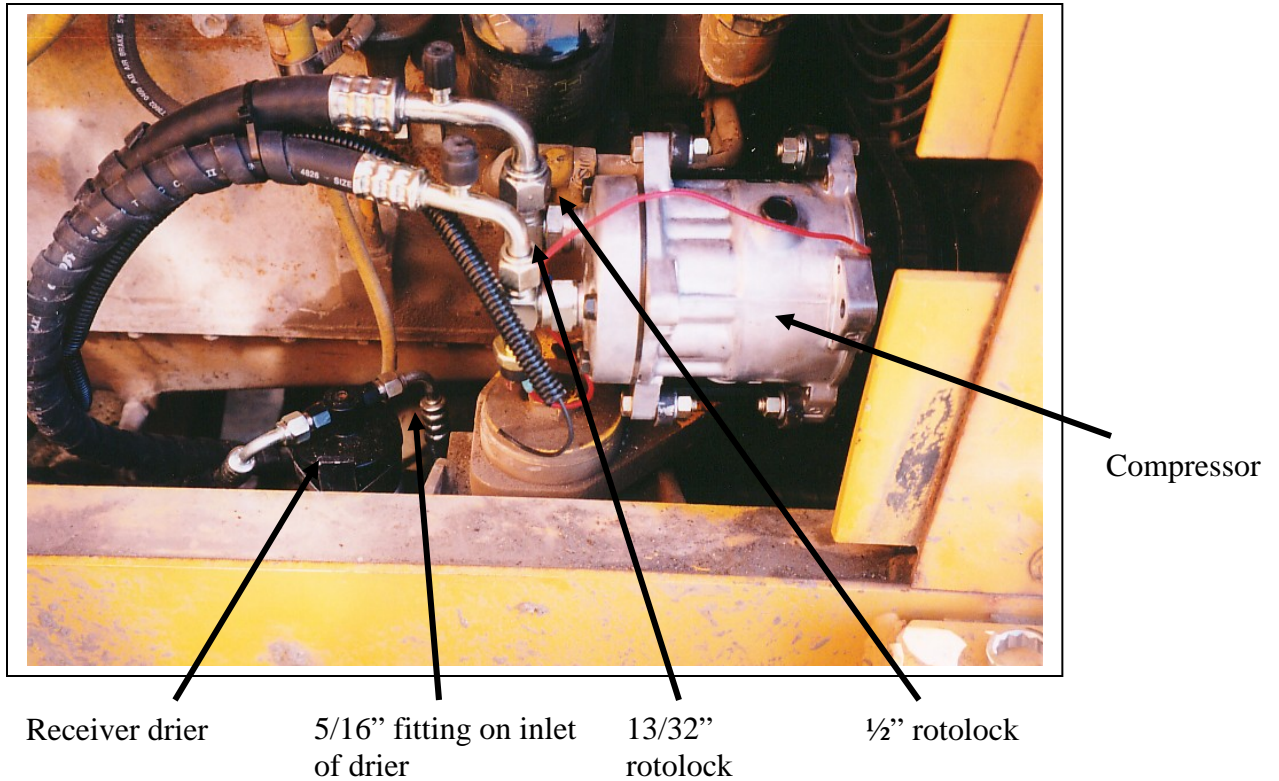


5/16" and 1/2" going across the top of the engine towards the right rear corner of the cab

RECEIVER DRIER

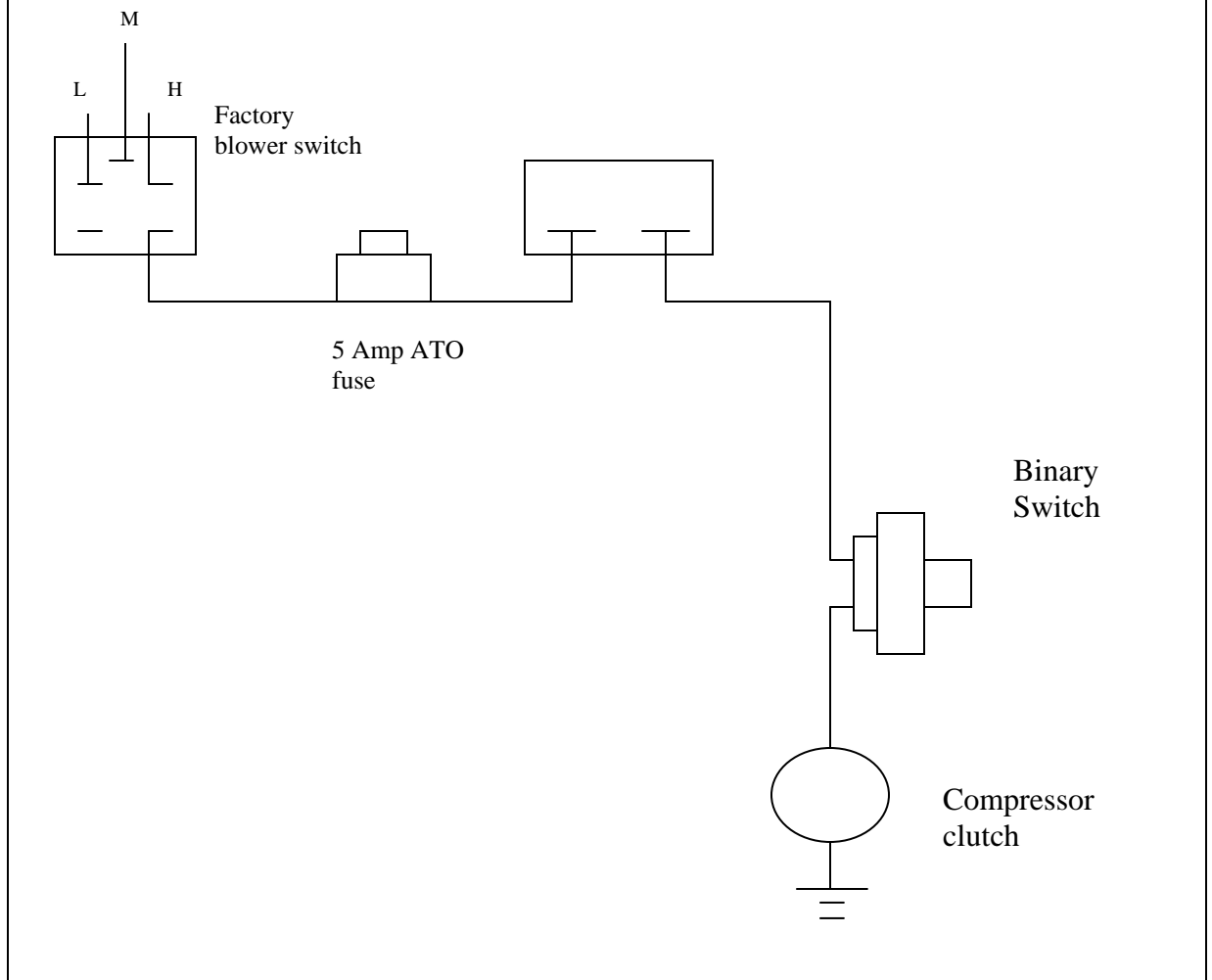
The drier is mounted using a 90o bracket just ahead of the compressor mount.

- 1) Remove the nut retaining the fuel tank strap just ahead of the left rear engine mount.
- 2) Place the 90o drier bracket over the fuel tank strap bolt and replace the nut.
- 3) Secure the drier to the 90o bracket using the two #48 gear clams provided.

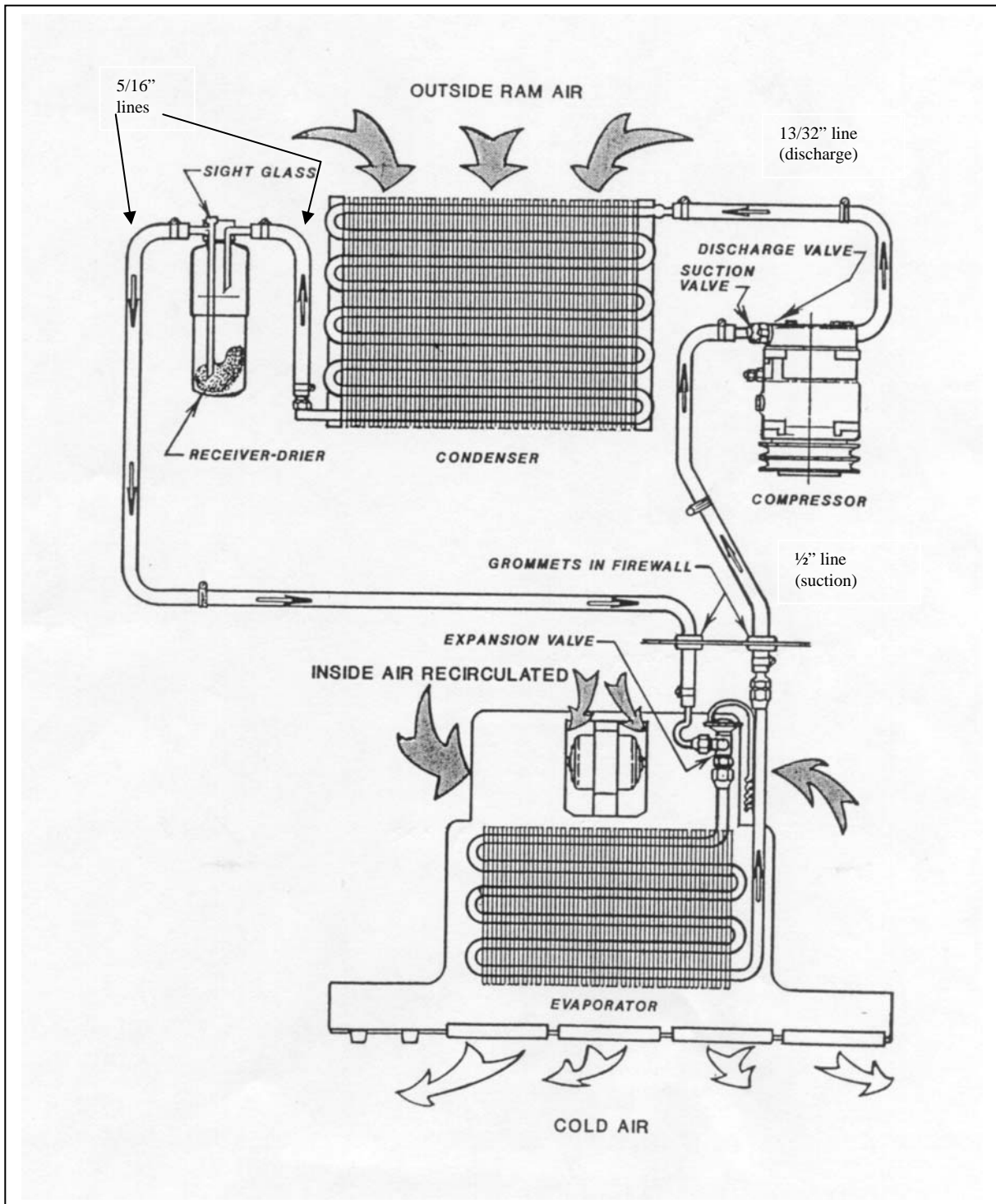


- 4) Make sure the drier inlet is pointed towards the rear of the machine.

Wiring diagram 544-624G



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.

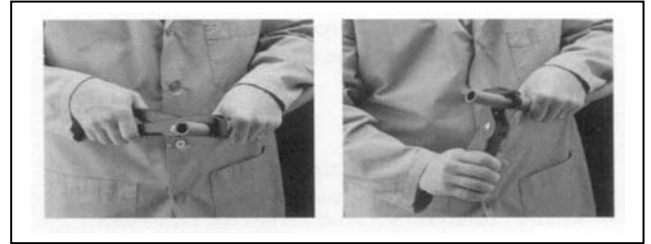
Once the probe is inserted, the A/C system needs to be tested. Run the system to ensure that the thermostat is cycling the compressor off at the appropriate temperature. A core temperature ranging between 25° and 30° F should cause the thermostat to cycle off. The air temperature at the vent outlet closest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

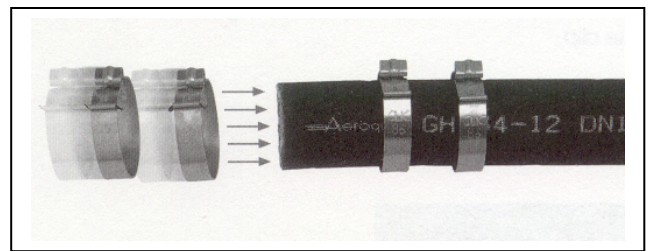
Aeroquip E-Z Clip

Assembly Instructions

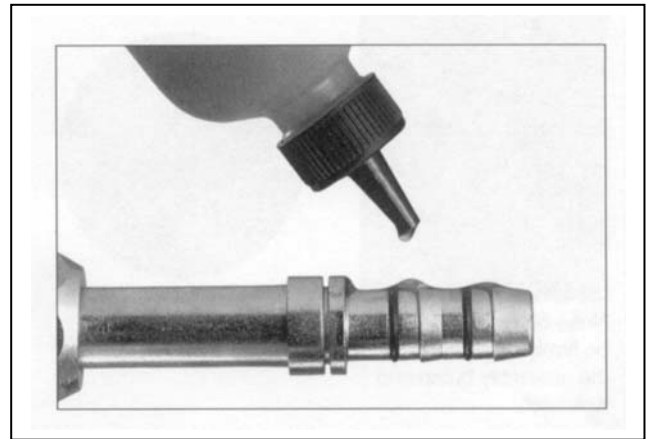
Step 1. Cut the hose to proper length with an appropriate cutting tool. Aeroquip's hand held hose cutter has been specially designed for cutting all non-wire reinforced hose, such as GH-134 Multi-Refrigerant hose. Be sure the cut is made square to the hose length.



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.



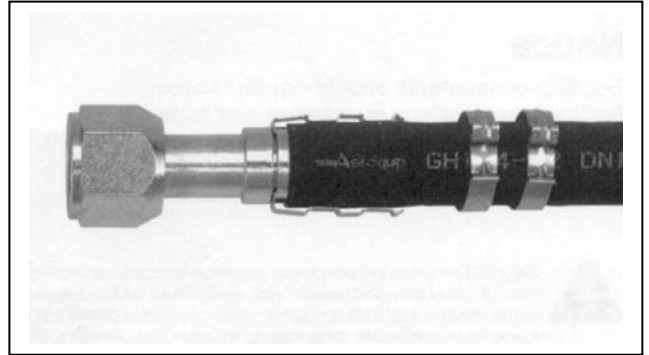
Step 4. Insert the nipple into the hose. To ensure that the nipple is fully inserted, check the gap between the cut end of the hose and the shoulder on the nipple. Care should be taken to avoid kinking or other damage to the hose during nipple insertion.

NOTE: Be sure to wipe excess oil from the nipple and hose.

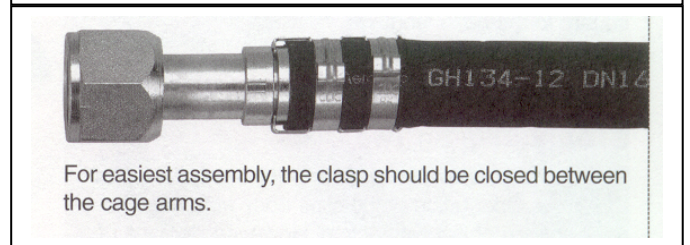
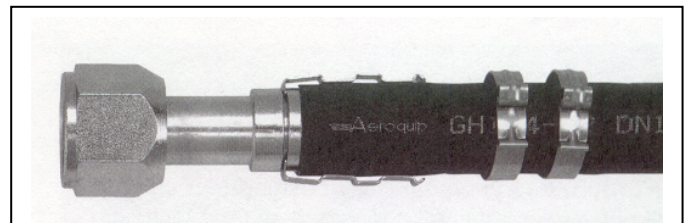


Step 5. Snap the cage into the groove on the nipple. The arms should extend over the hose length. When the cage has been correctly installed in the cage groove, the cage will be able to rotate in the groove. This step **MUST** be performed to ensure:

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.

