

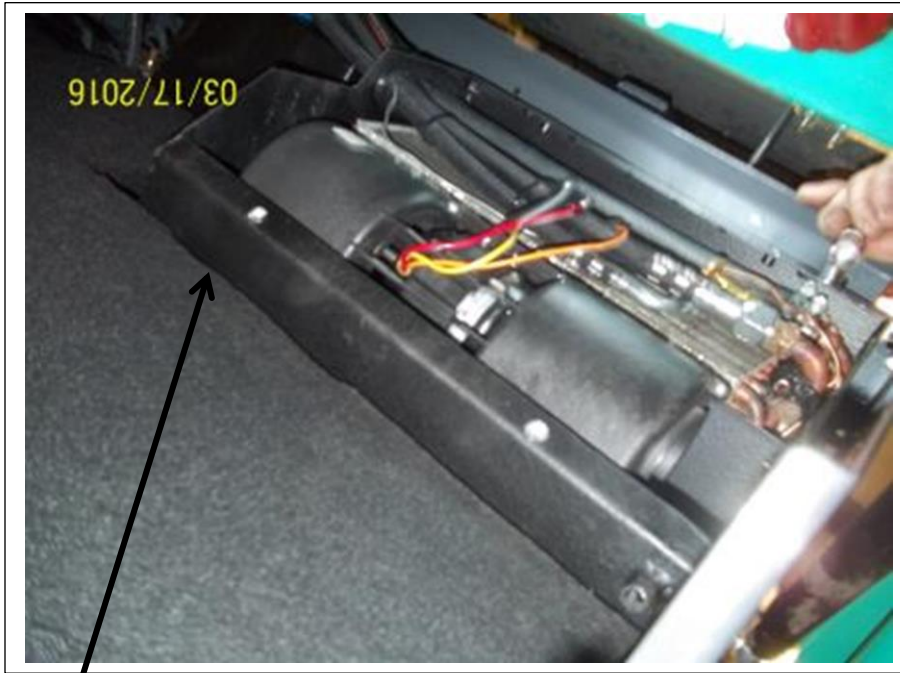
IHI  
AS-34 SKID STEER



PHONE: (519) 485-5961 OR 1-800-267-2665  
FAX: (519) 485-3745 OR 1-888-267-3745

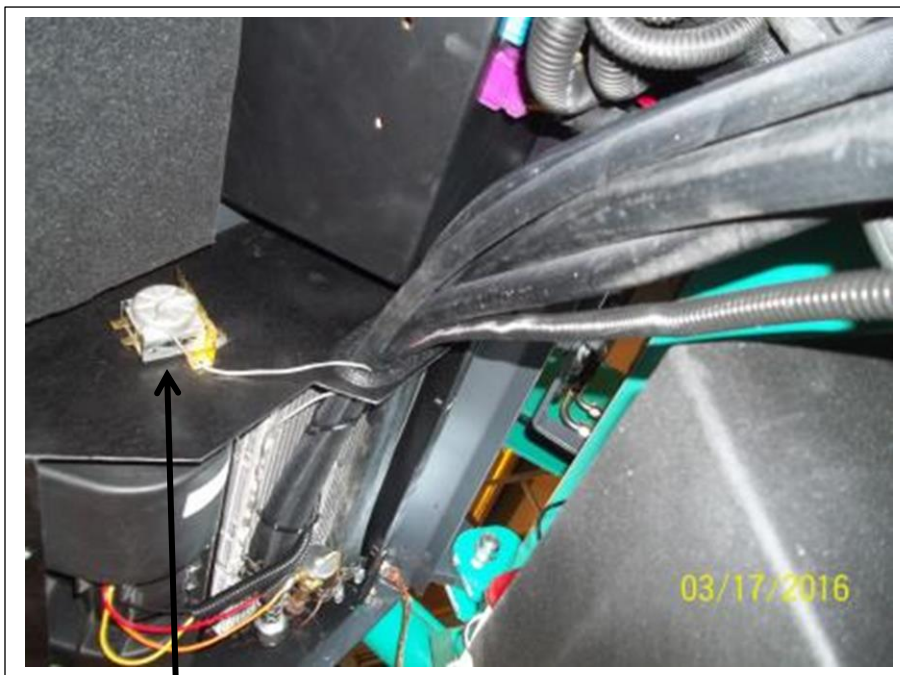
## EVAPORATOR

With the cab tilted up, the evaporator will mount to the back of the cab. Some foam may need to be trimmed.

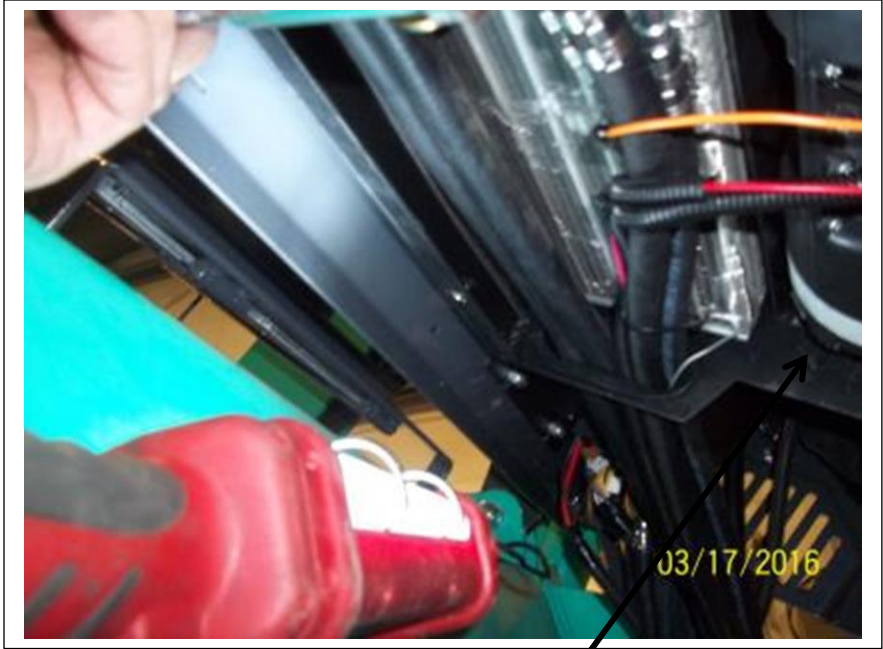


Cut a bit of the insulation

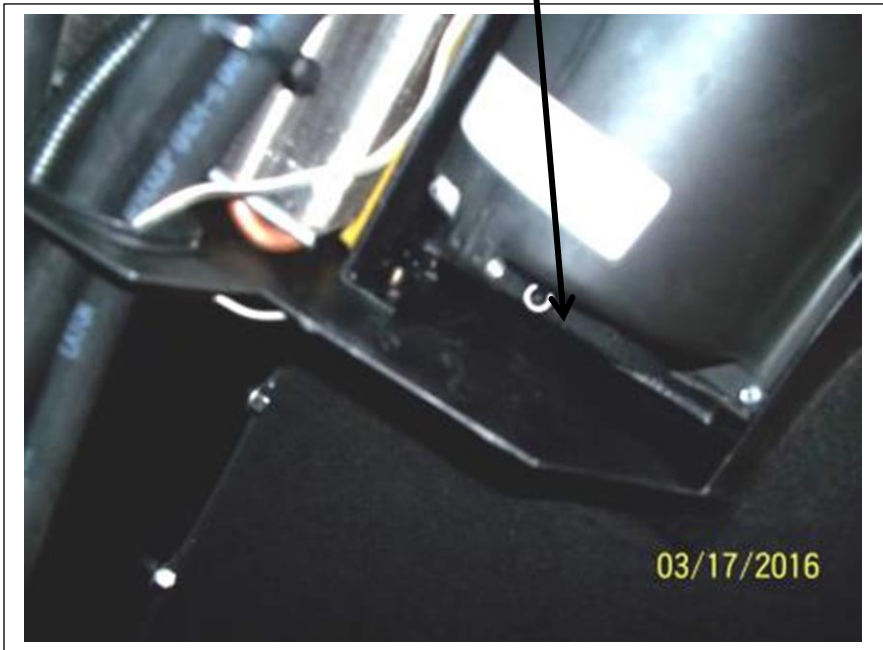
Evaporator box with the lid off. It fits over two existing studs. Once held up install M8 washers and nuts. Two more M8 bolts go through tabs to secure the evaporator to the back of the cab.



Thermostat

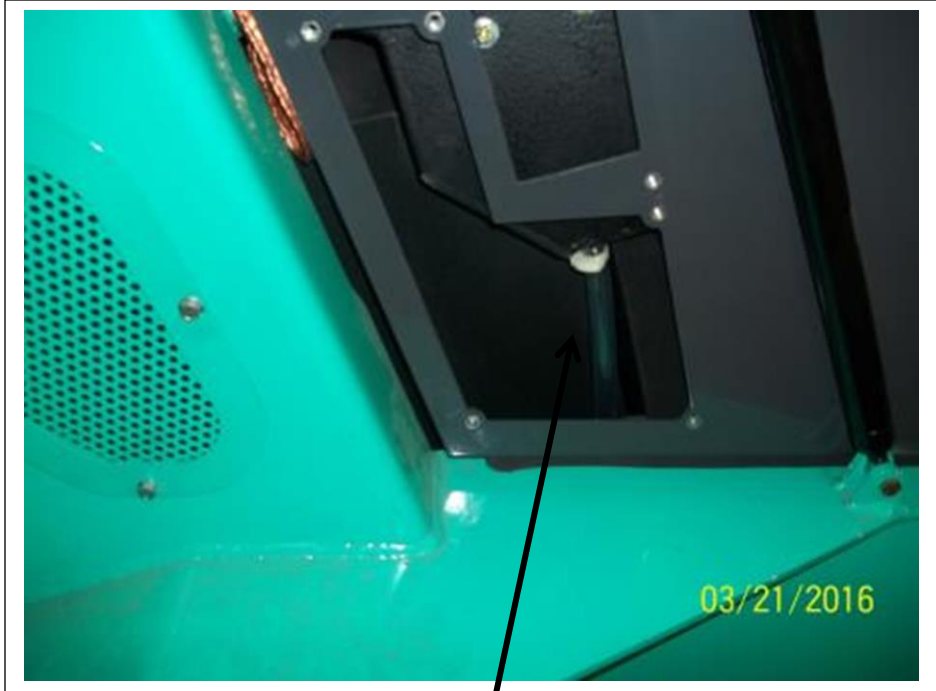


One mounting stud here.





Remove plate behind the seat and install expanded metal grill and filter for air recirculation.

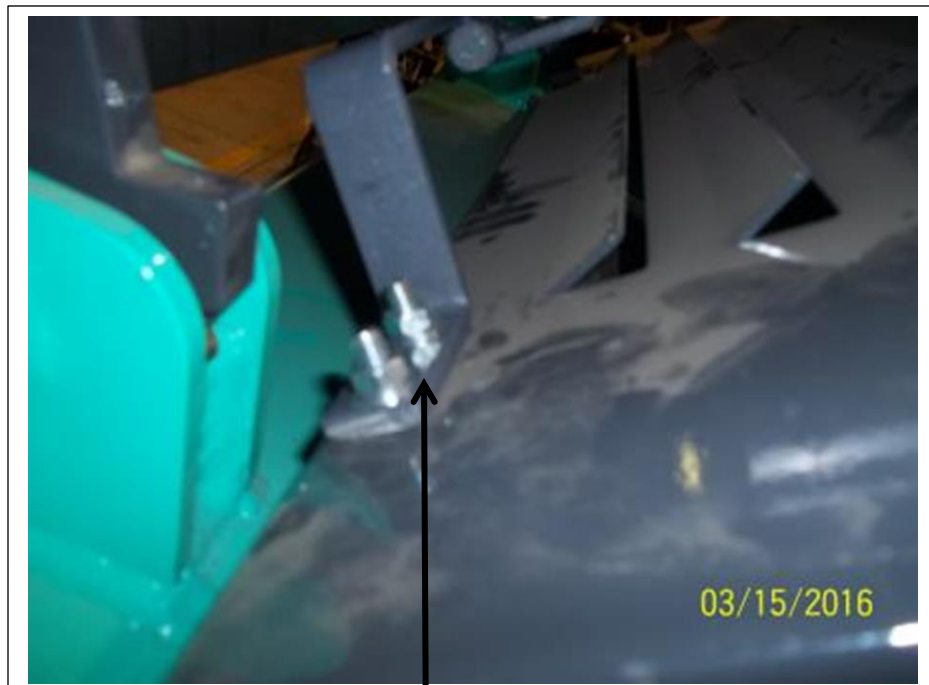


Condensate drain tube connected to the evaporator box.

## CONDENSER



Condenser assembly installed on engine cover

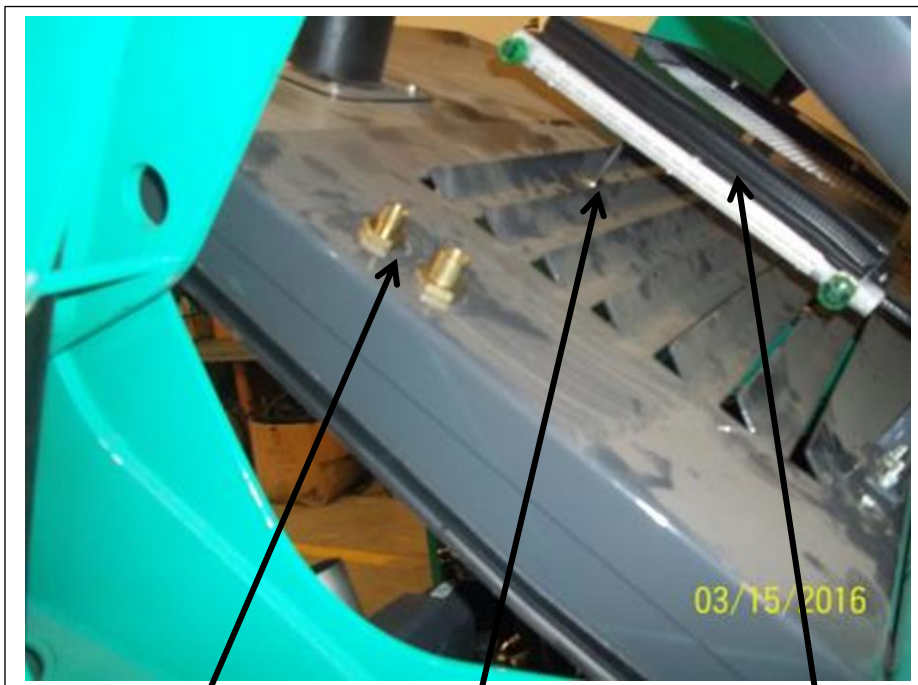


One side of the condenser brackets bolted through existing holes in the engine cover. Insert bolts from the bottom



Cut away the insulation around bulkheads.

Drill a 3/4" and 5/8" holes to install bulkhead fittings as shown in the engine cover.



Bulkhead fittings

Pins mounted through the engine lid.

The coil hinges up for easy cleaning when required.



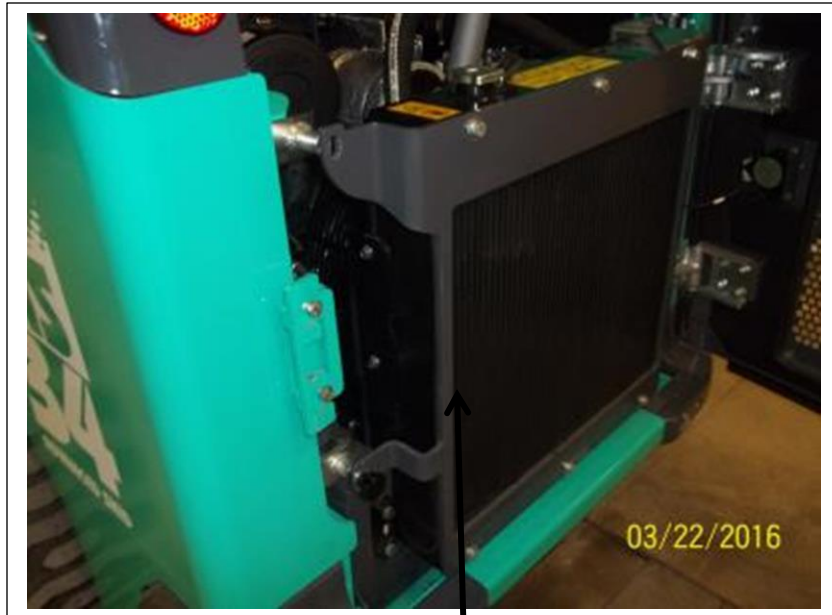
Install nuts on the pin bottoms and tighten. Remove the nuts to hinge the coil for cleaning.



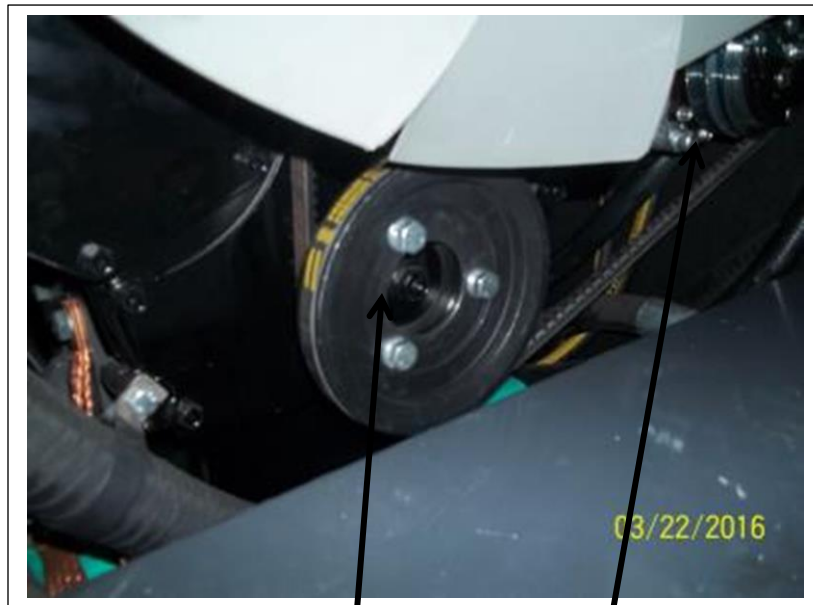
Connect hoses from the coil to the bulkhead fittings.



## COMPRESSOR



Open engine compartment door to access the engine



Add on pulley mounts to the face of the crank shaft as shown.

Compressor mounts to standoff bracket



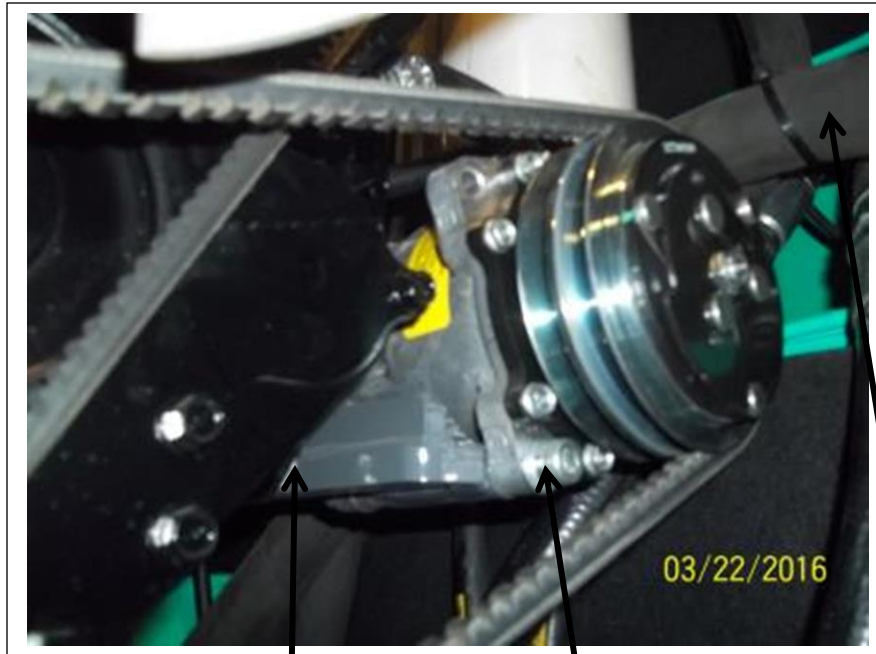
Install pad onto compressor



Compressor will mount here.

Spacer will go to back of mount.

These hose from the radiator will go over the top of the compressor.



M10 bolt and spacer at back

M10 Allen head bolt at front.

Rad hose over top of compressor



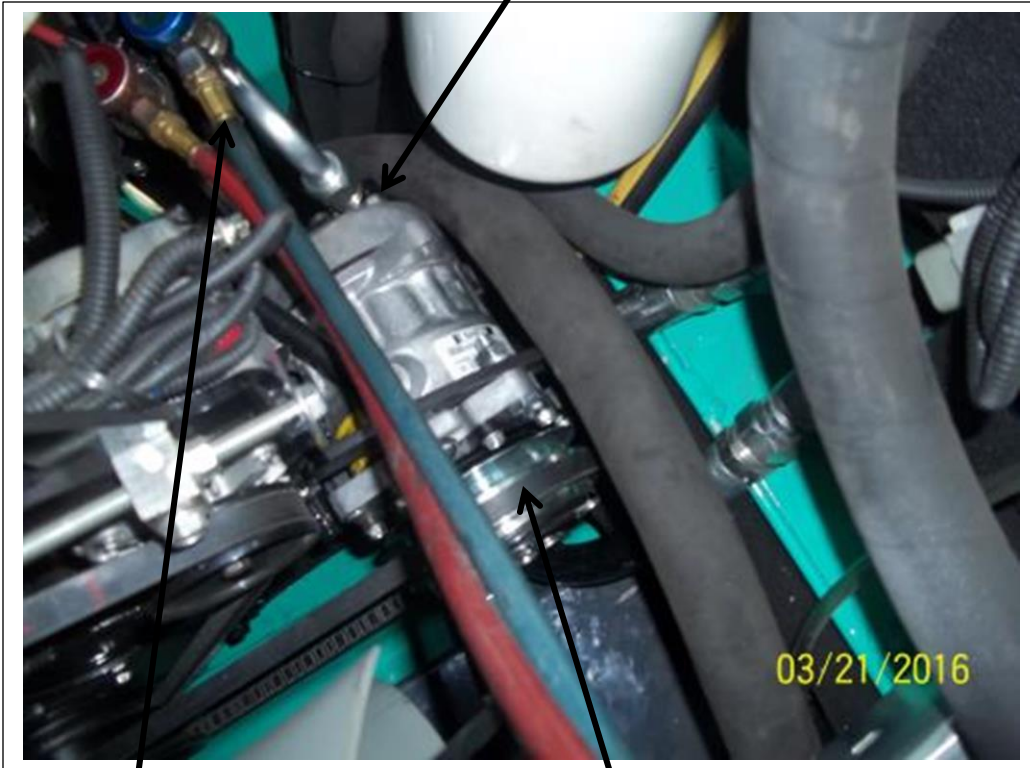
M10 bolt, spacer and lockwasher.

Tightener bracket

Compressor tightens this way.



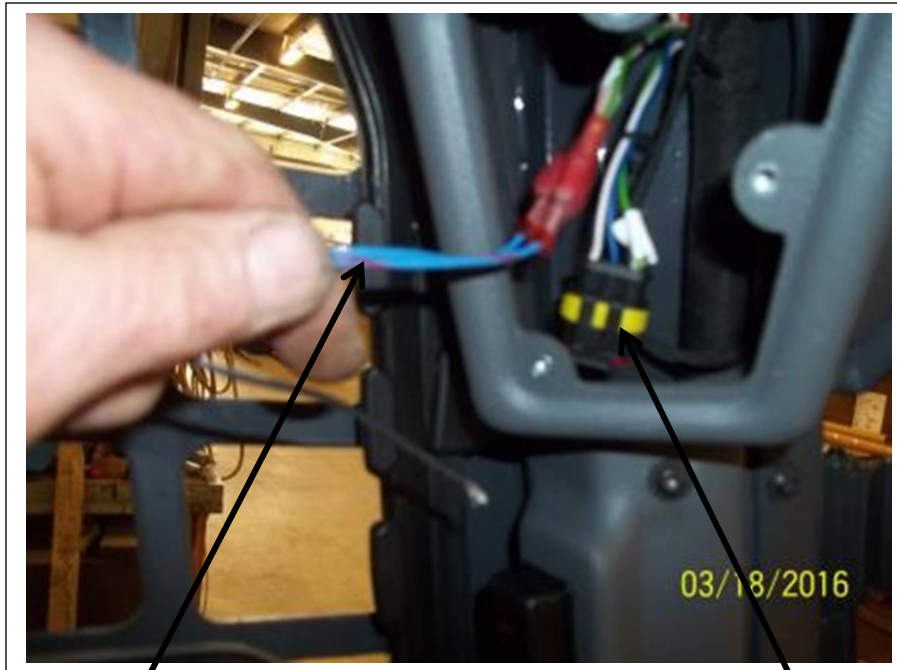
Vertical "O" ring pad fitting on compressor.



Access ports on the fittings coming off the compressor.

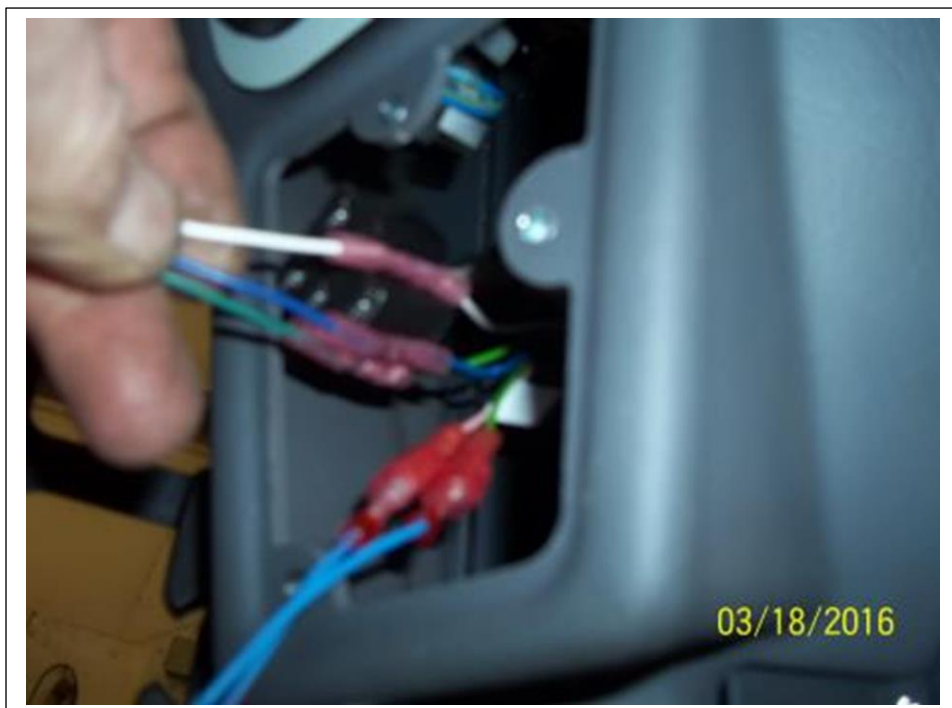
Install belt on front drive pulley and tighten all bolts.

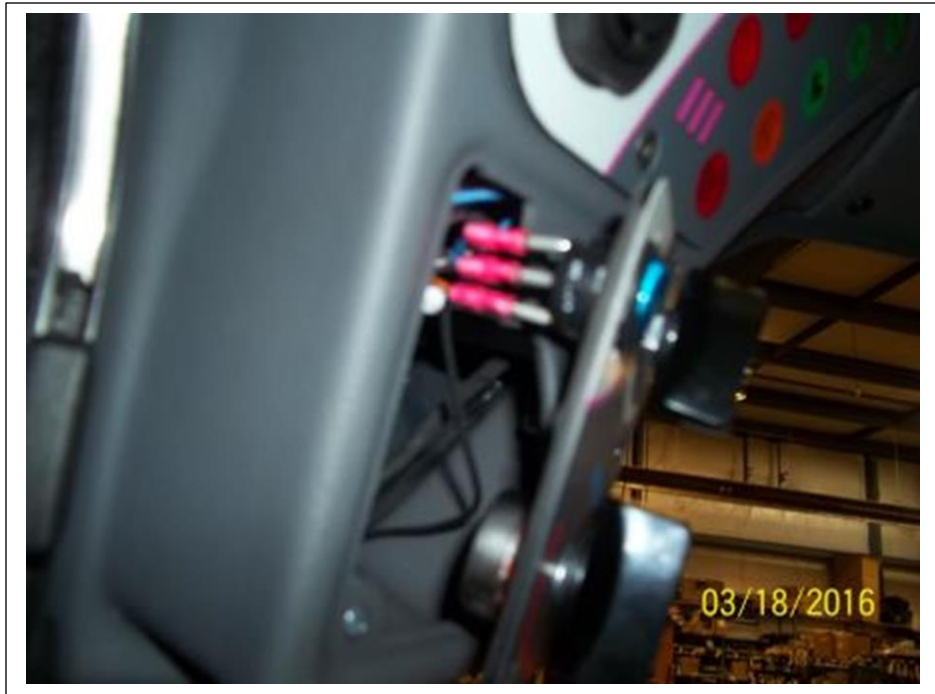
ELECTRICAL



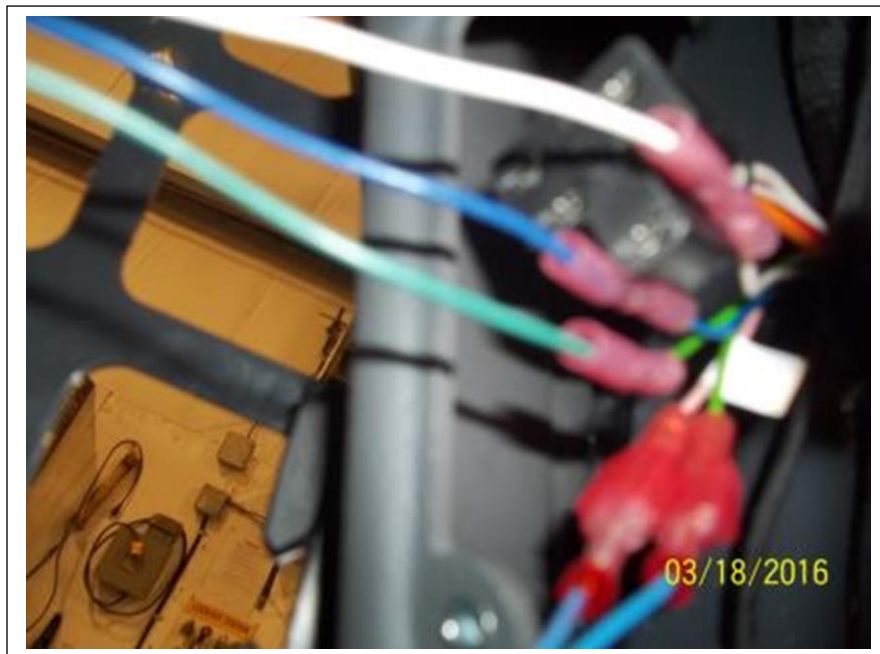
AC switch wired extended

The switch wire and the heater control wires are short and it may be easier to extend each wire first. Cut the wires off close to this connector and extend the wires. 6' extensions provided in the kit.



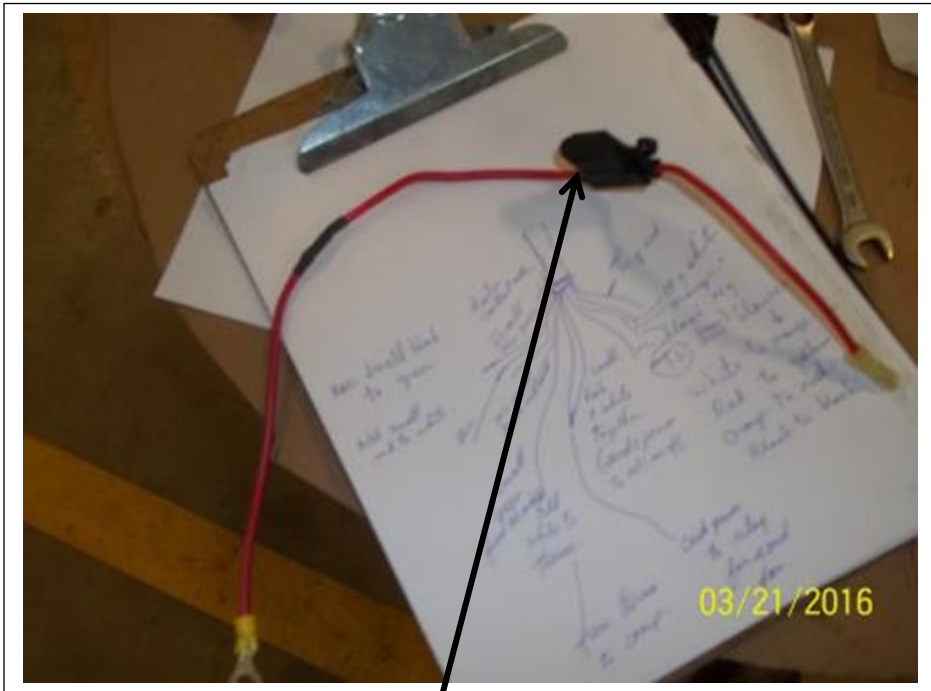


Ground wire added.

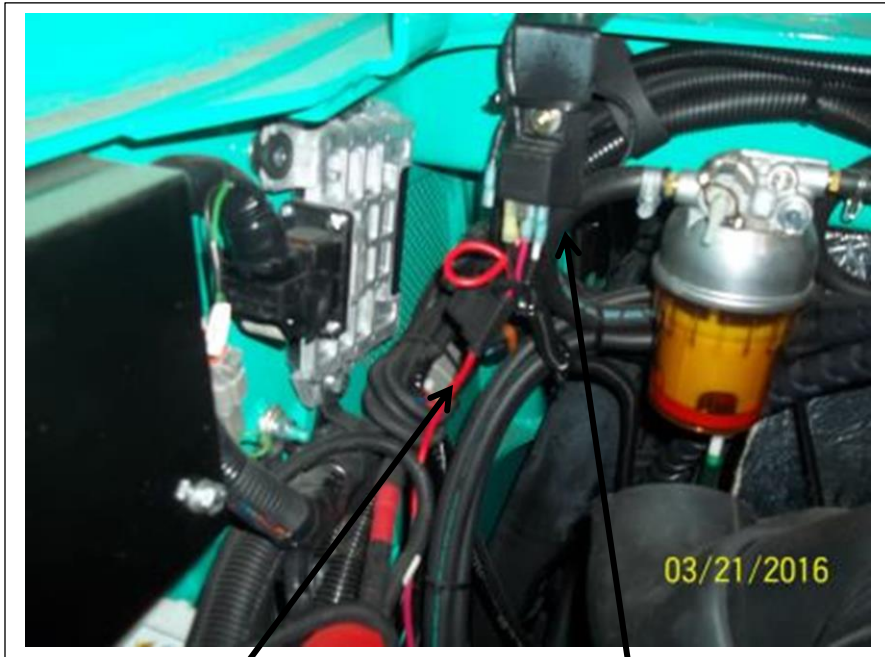




AC on/off switch added

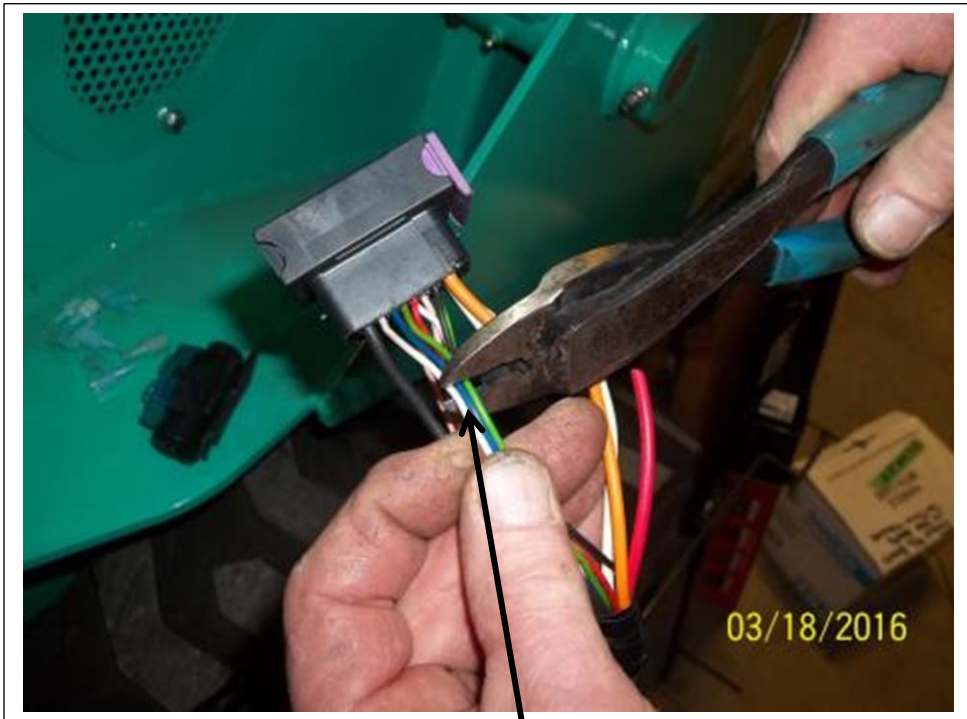


This wire goes from relay to the battery.



ATO fuse holder and fuse

Relay and bracket installed here.



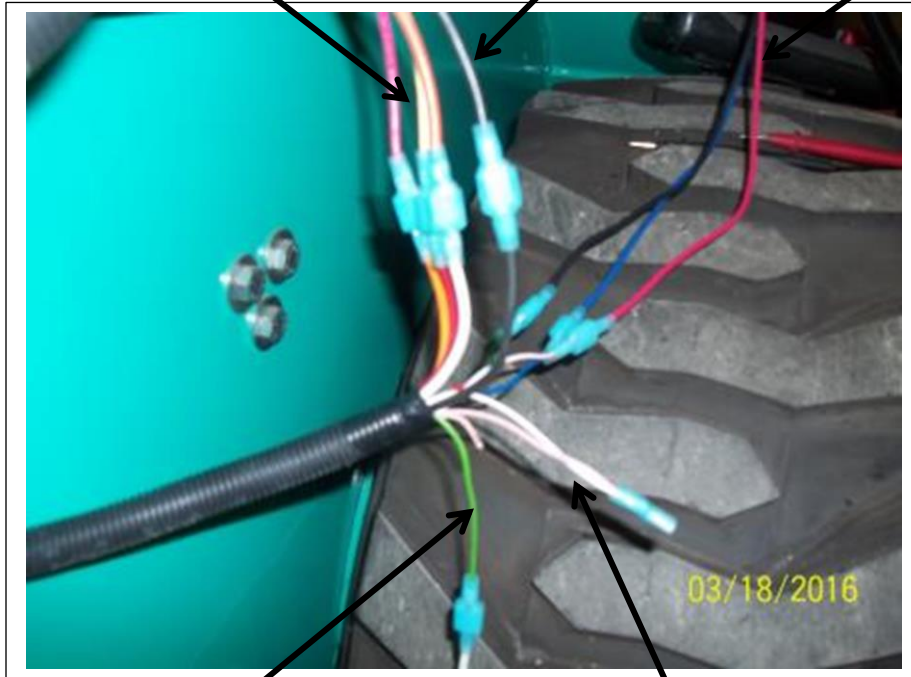
These three are the heater control wires.



3 speeds for blower

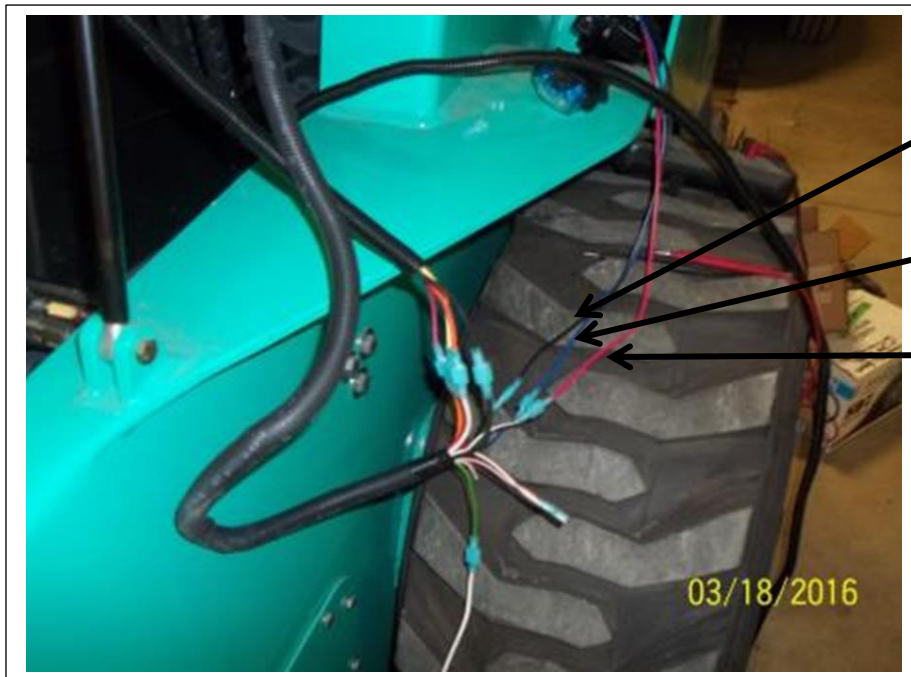
Ground for blower

To heater control motor



Power from AC on/off comes back on this green wire so it goes to the thermostat.

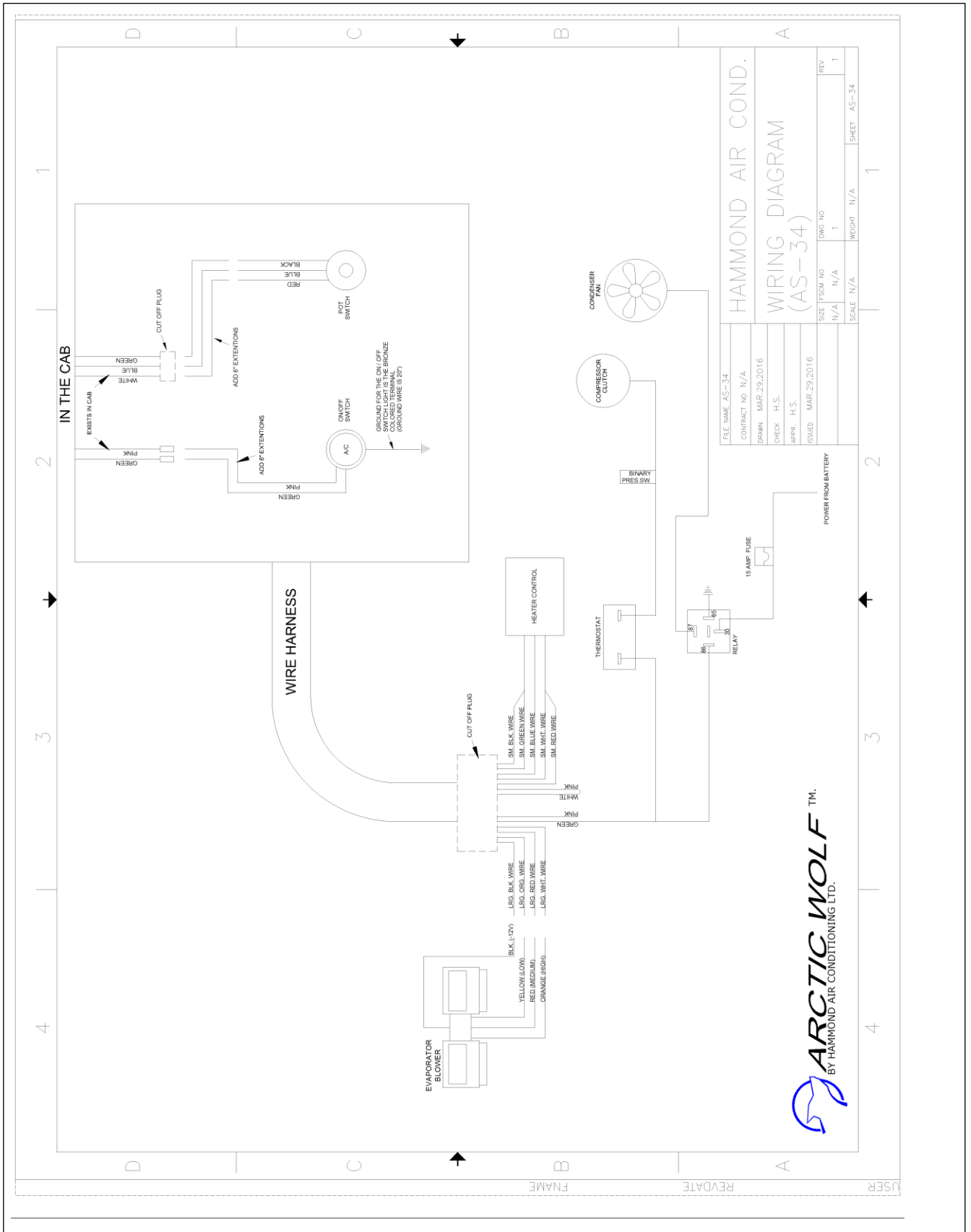
Connect pink and white together. Sends power to AC on/off switch.



Small black connects with green.

Blue to blue.

Small red connects with white.



## DRIER AND HOSE RUNS



90° drier bracket mounts here in engine compartment. Right side near hood hinge.



#6 hose from bulkhead to drier.

# 8 hose from compressor to bulkhead.

Receiver drier fastened to bracket with gear clamps.

Ensure drier is mounted correctly. Refrigerant flows from condenser through drier to expansion valve



#6 45° fitting to expansion valve

#6 straight fitting from bulkhead

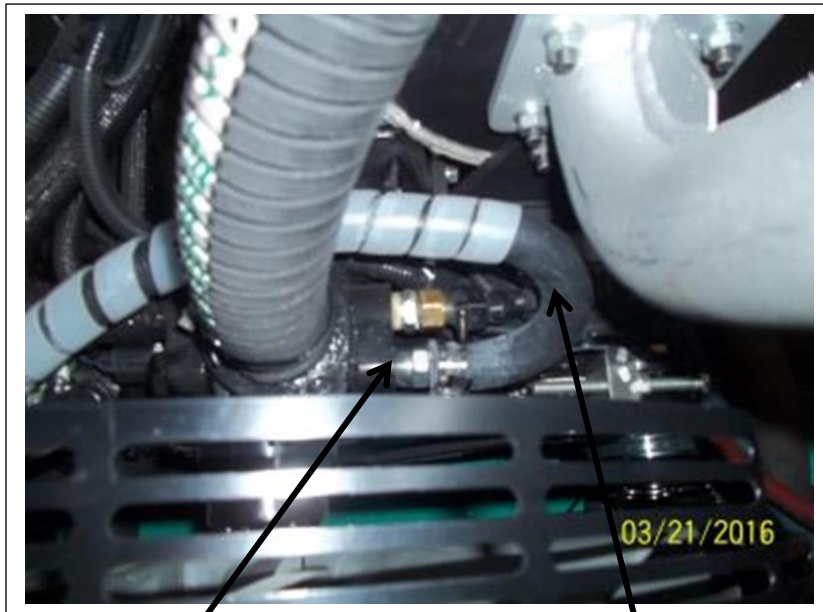


Electrical from the condenser fans.

## HEATER CONNECTIONS

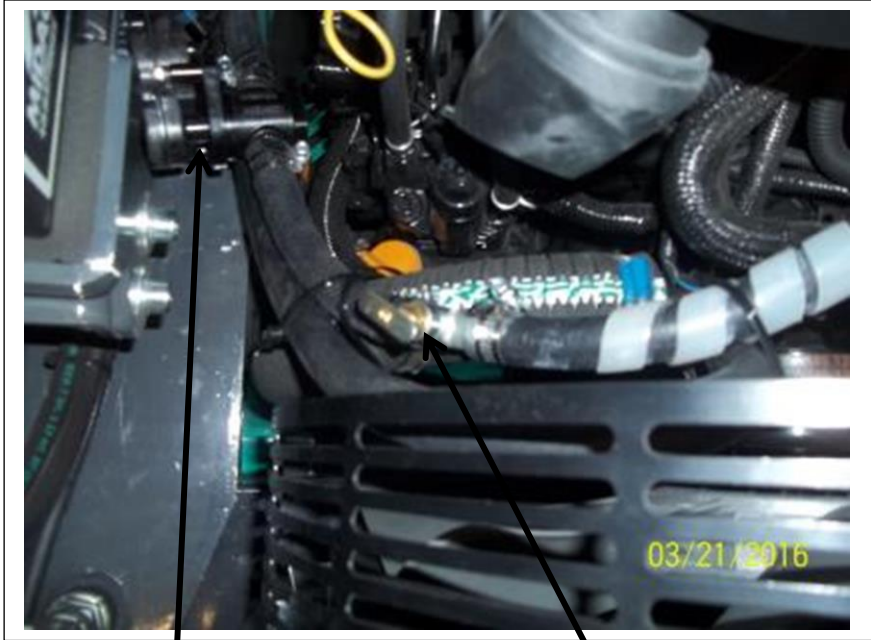


Drain a gallon or more of coolant prior to connecting the heater hoses.



Fitting with hose barb installed.

180 ° hose elbow



Electronic heater control valve.

Manual heater shut off valve mounted before the electronic water valve.



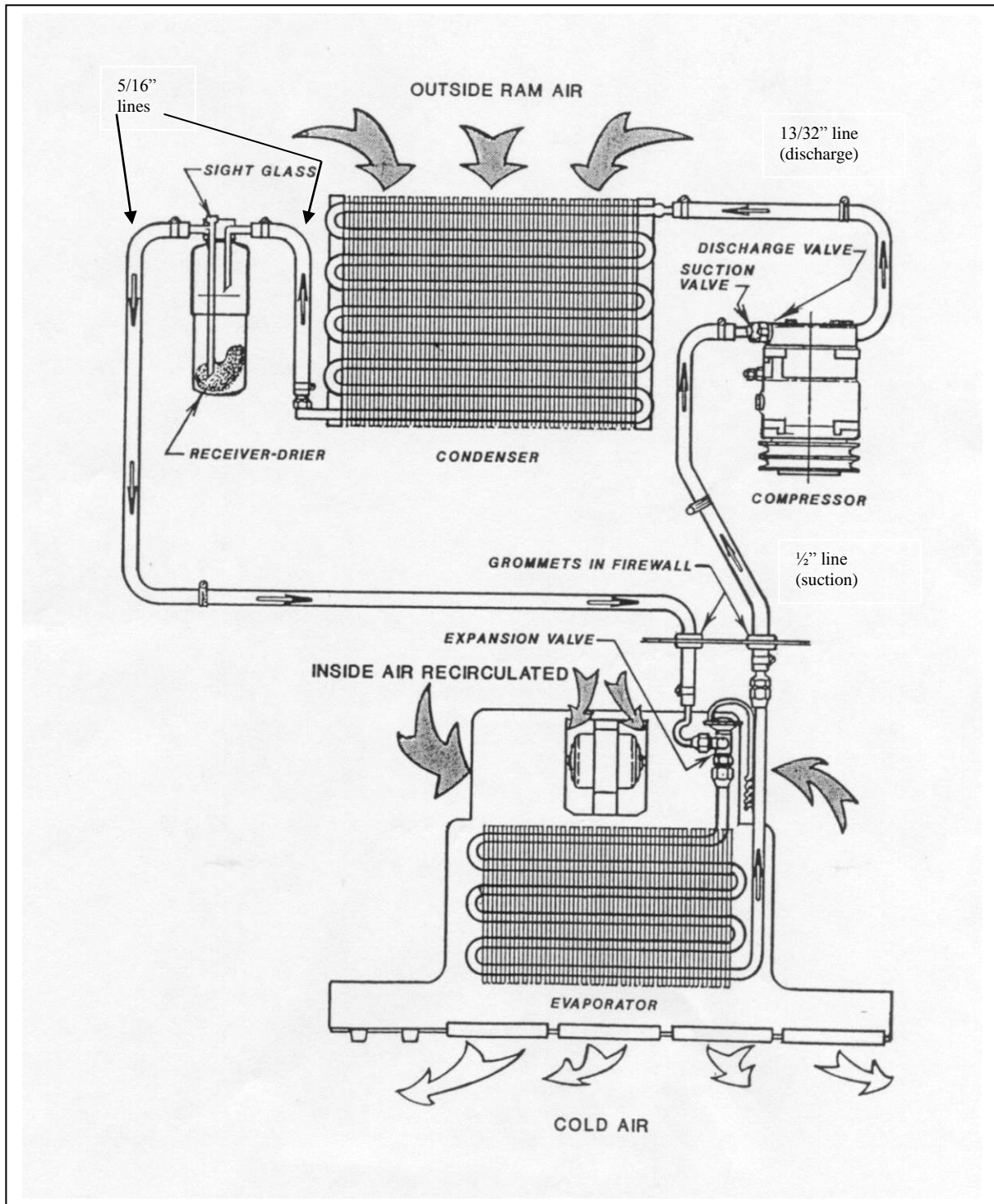
Return line for heat goes here. Remove plug and install fitting with hose barb.

Remove plug and install hose fitting then use 180° hose elbow here

## **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 1.75 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.
- 
- 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.

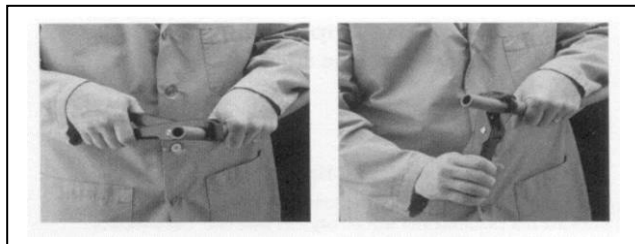
Once the probe is inserted, the A/C system needs to be tested. Run the system to ensure that the thermostat is cycling the compressor off at the appropriate temperature. A core temperature

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

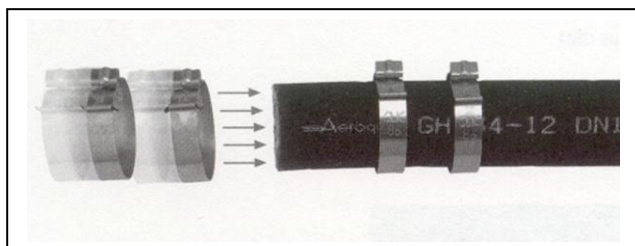
Step 1. Cut the hose to proper length with an appropriate cutting tool. Aeroquip's hand held hose cutter has been specially designed for cutting all non-wire reinforced hose, such as GH-134 Multi-Refrigerant hose. Be sure the cut is made square to the hose length.



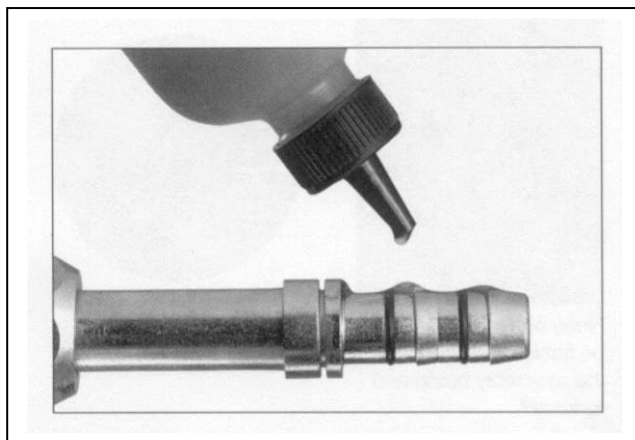
Step 2. Install two proper-sized clips onto the cut end of the hose. Orientation of the clips does not affect the performance of the connection.

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.



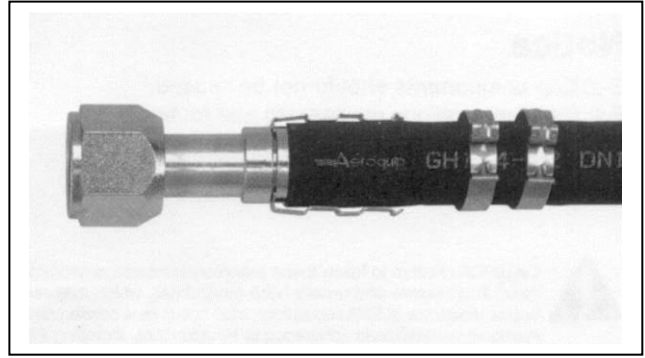
Step 4. Insert the nipple into the hose. To ensure that the nipple is fully inserted, check the gap between the cut end of the hose and the shoulder on the nipple. Care should be taken to avoid kinking or other damage to the hose during nipple insertion.

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

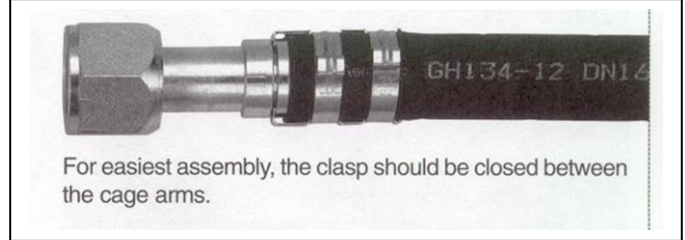
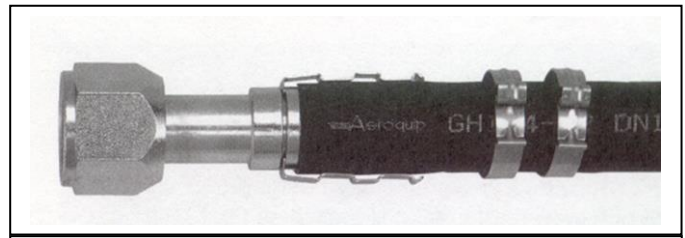


Step 5. Snap the cage into the groove on the nipple. The arms should extend over the hose length. When the cage has been correctly installed in the cage groove, the cage will be able to rotate in the groove. This step **MUST** be performed to ensure:

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.

