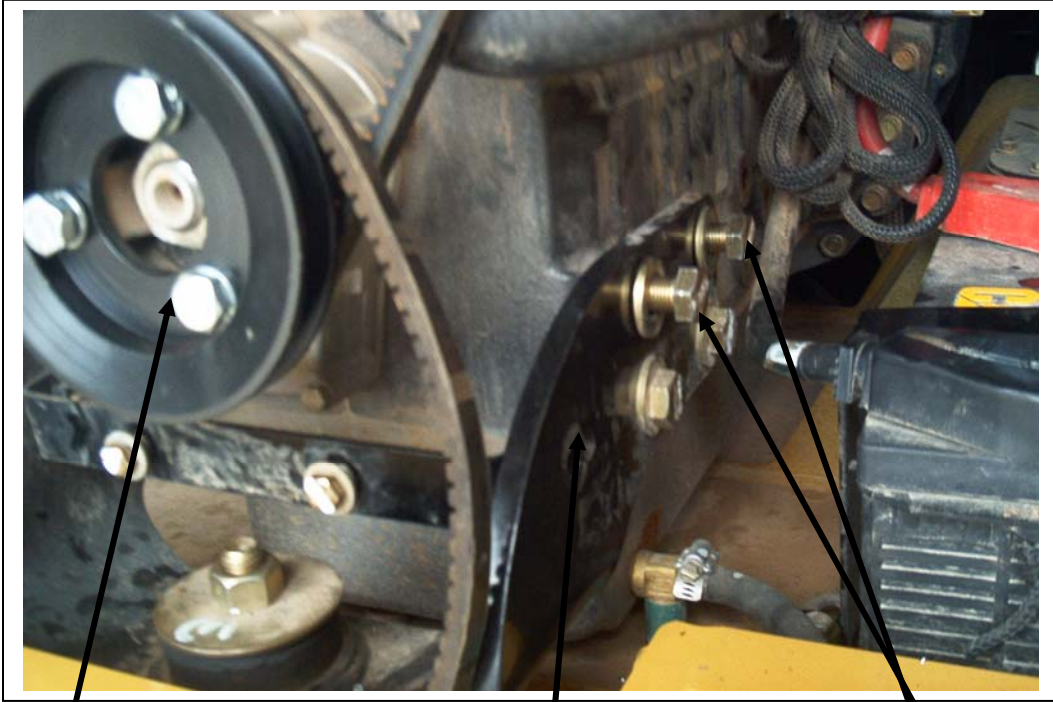


**CATERPILLAR
247B/257B SERIES
SKID STEER
INSTALLATION INSTRUCTIONS**



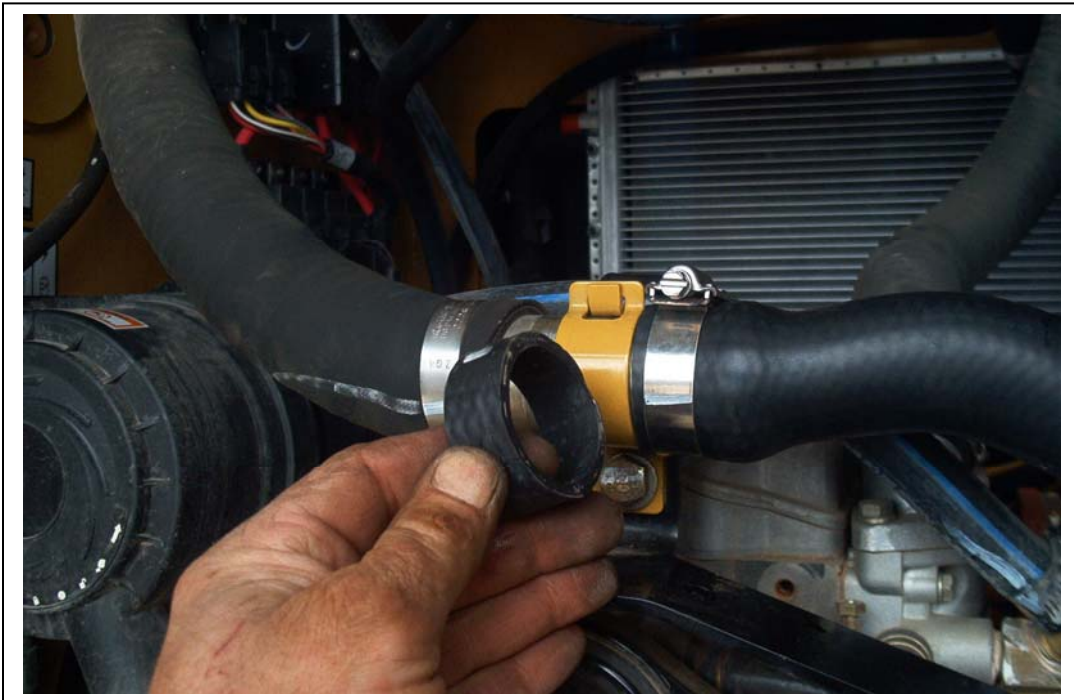
PHONE (519) 485-5961 OR 1-800-267-2665
FAX (519) 485-3745 OR 1-888-267-3745



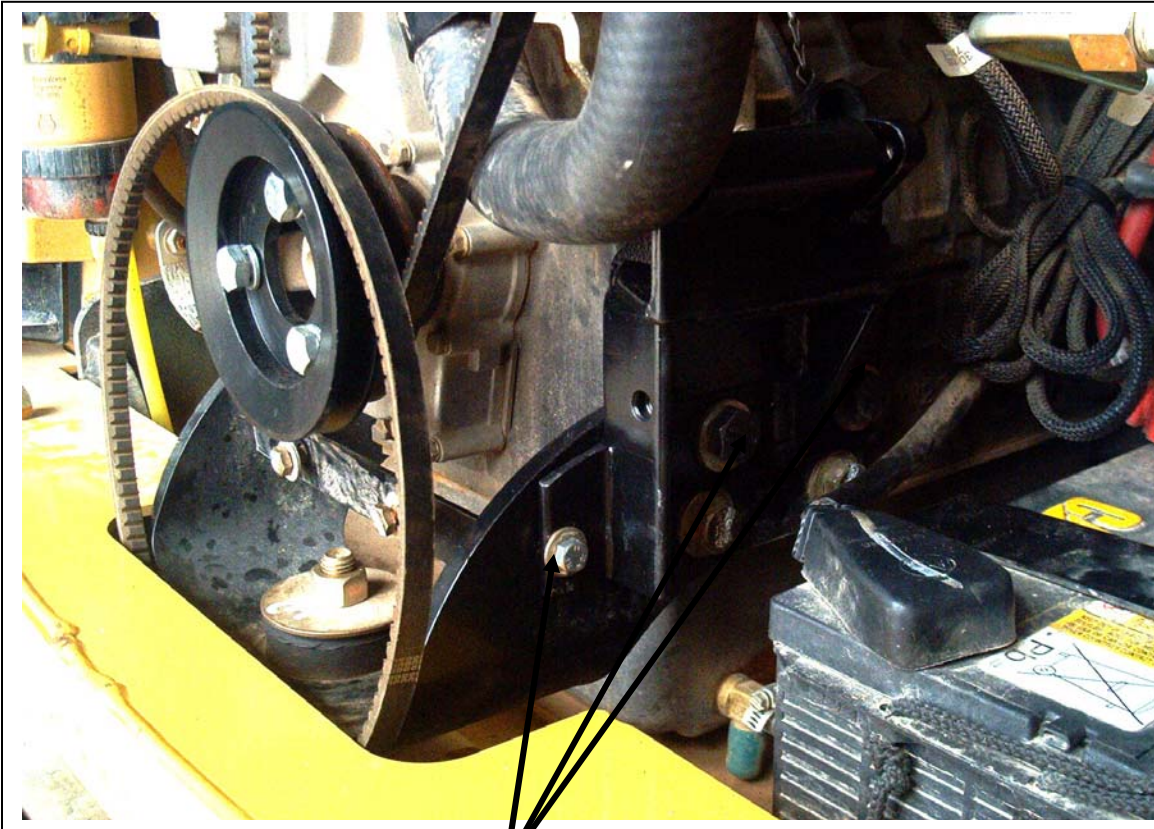
Install add on pulley.

Remove 8mm bolt
at front of engine
mount bracket.

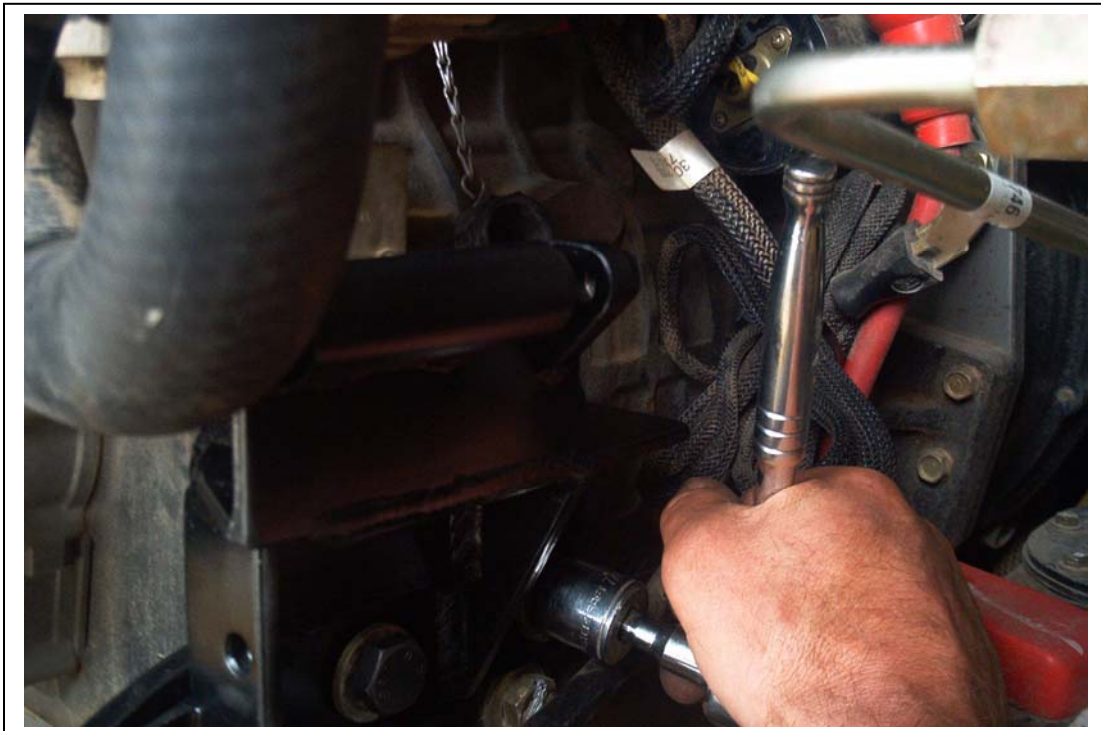
Remove top two 14mm
engine mount bolts.

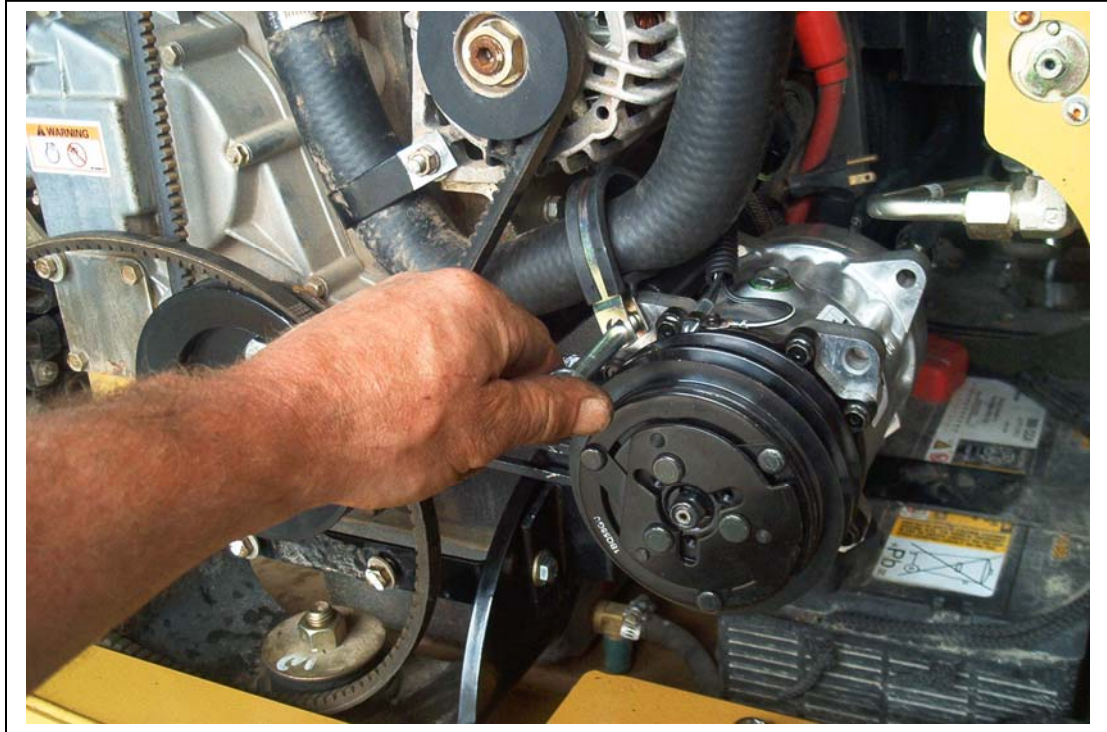


Drain coolant from system
Remove approximately $\frac{3}{4}$ " from coolant hose.
Insert hose splice as left as possible.



Install compressor mount as shown. New 14mm and 8mm bolts supplied in kit. Reuse 14mm washers. New 8mm lock and flat washers supplied,



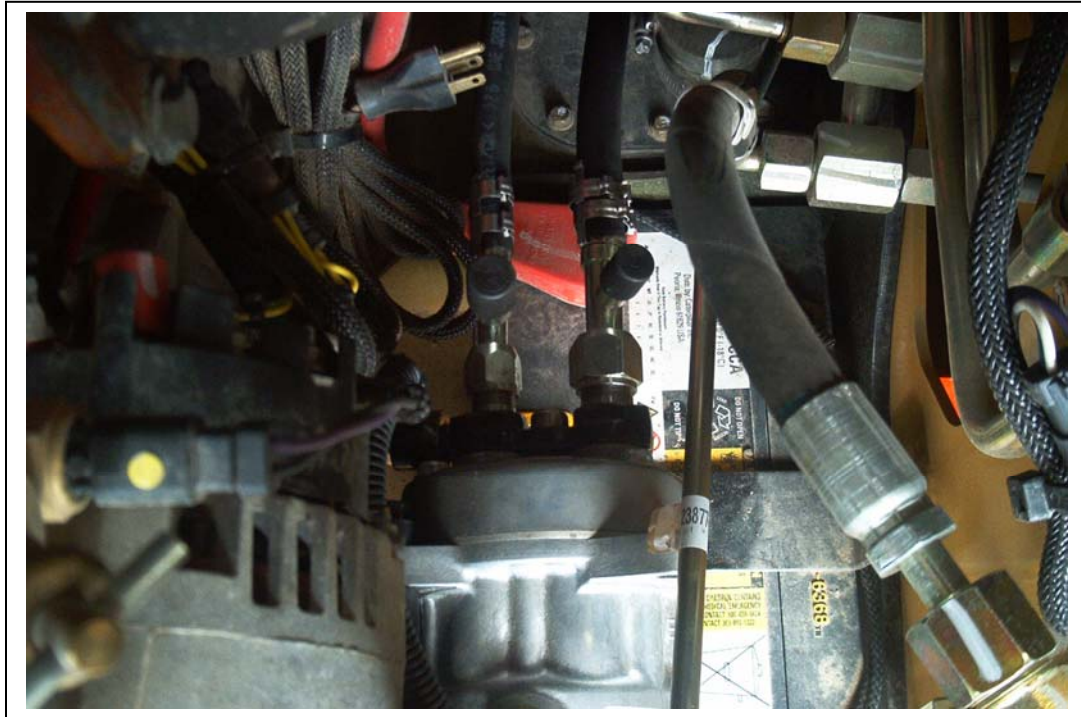


Install compressor as shown with long (140 x 10mm bolt. Be sure to install hose clamp prior to inserting bolt.



Install belt as shown.

Install tightener as shown with 3/8" hardware provided.



Compressor installed with hoses attached.

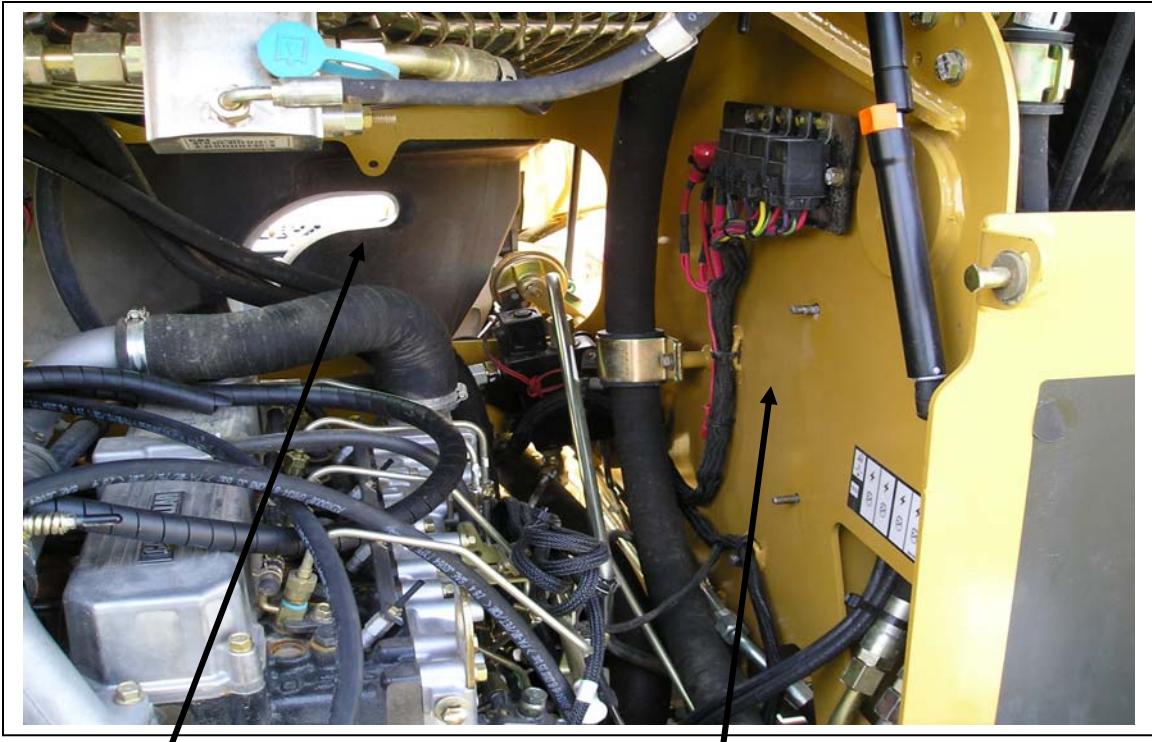


The belt cover will need to be cut to accommodate the compressor belt.



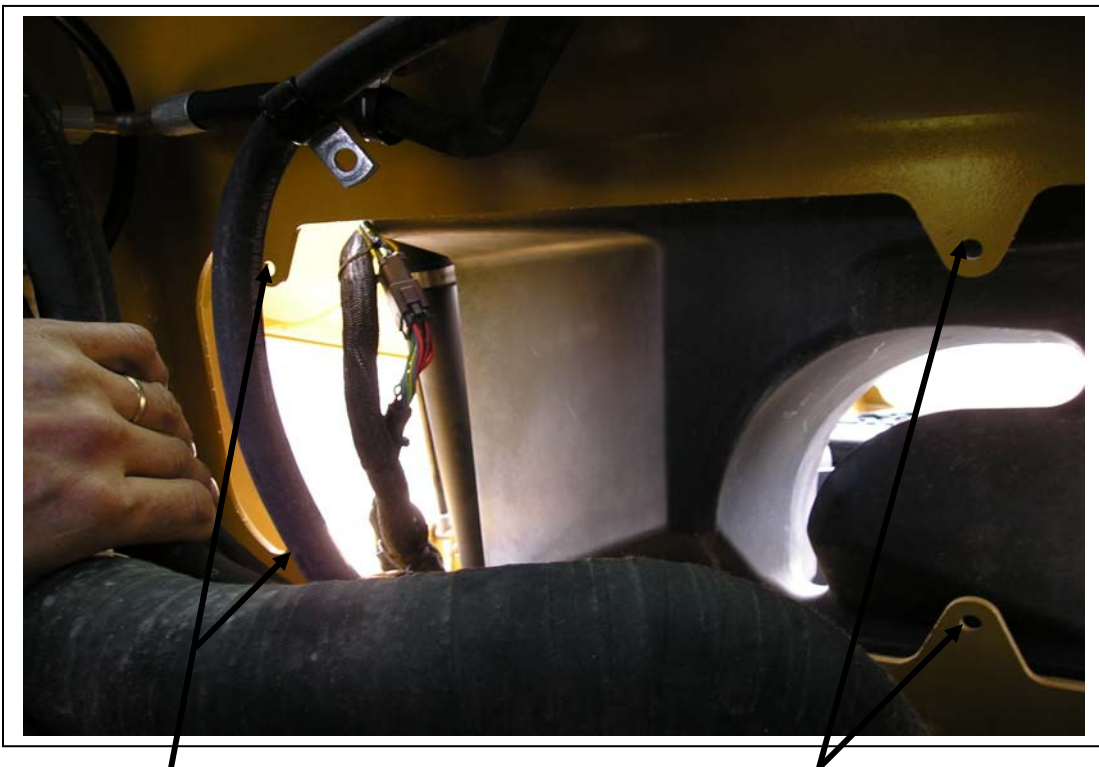
The compressor mount has been designed so by removing two bolts, the compressor can easily be removed and pulled forward and out of the way to give access to the battery. Ensure you leave enough hose when installing to be able to do this.

CONDENSER



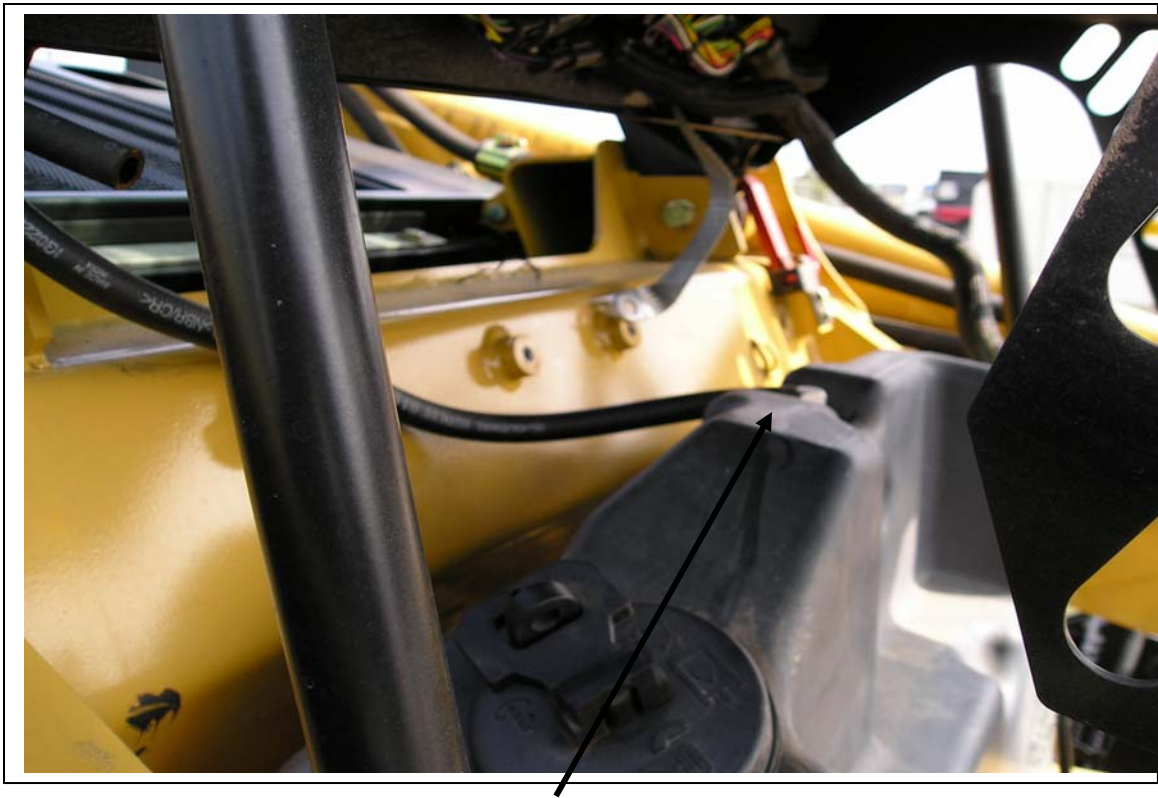
Condenser mounting area.

Remove air cleaner and pipe for easier access to condenser mounting area.

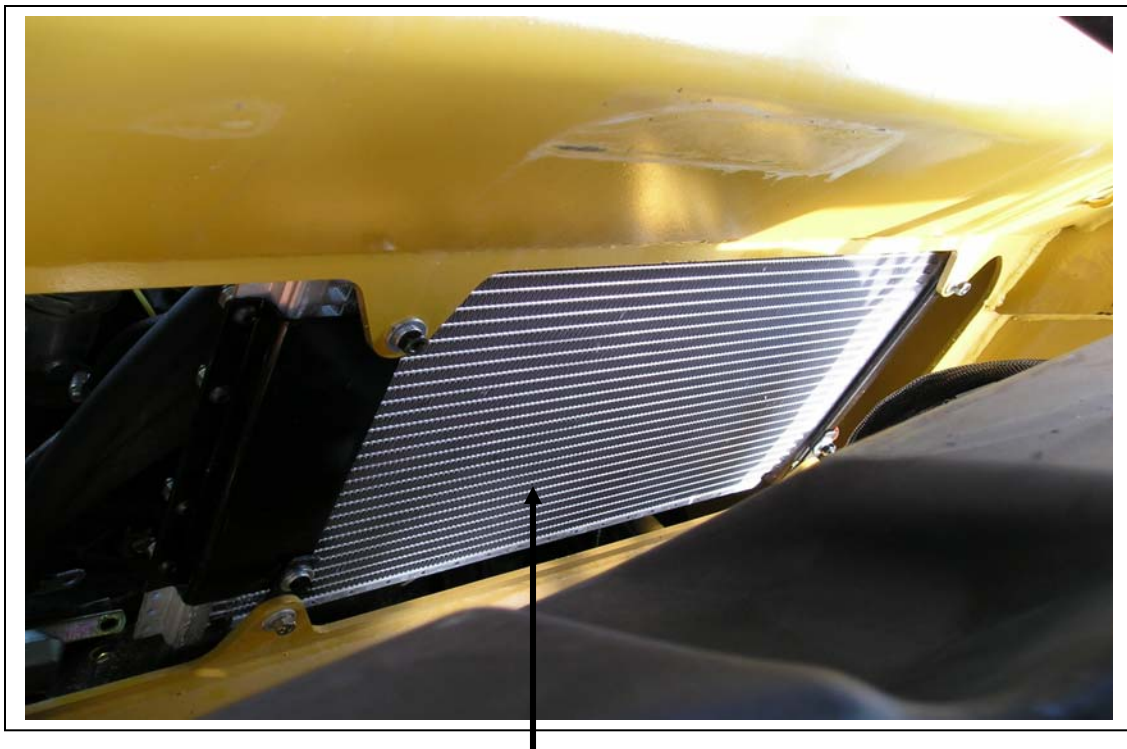


Left hand condenser mounting points

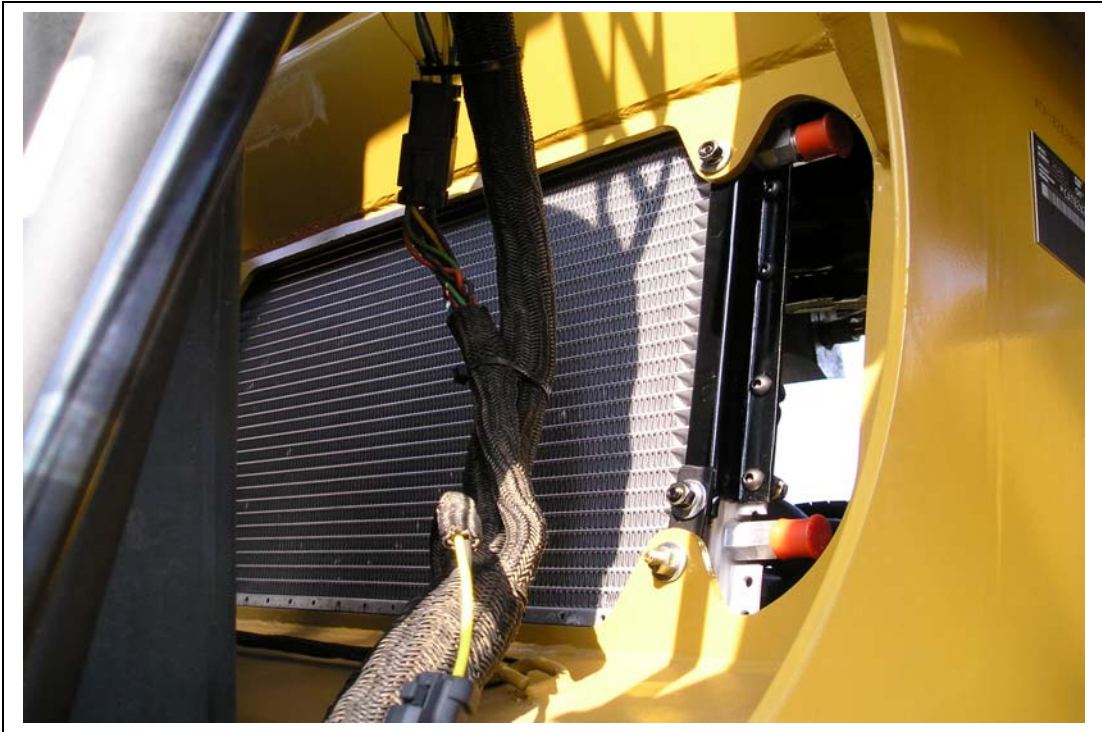
Right hand condenser mounting points.



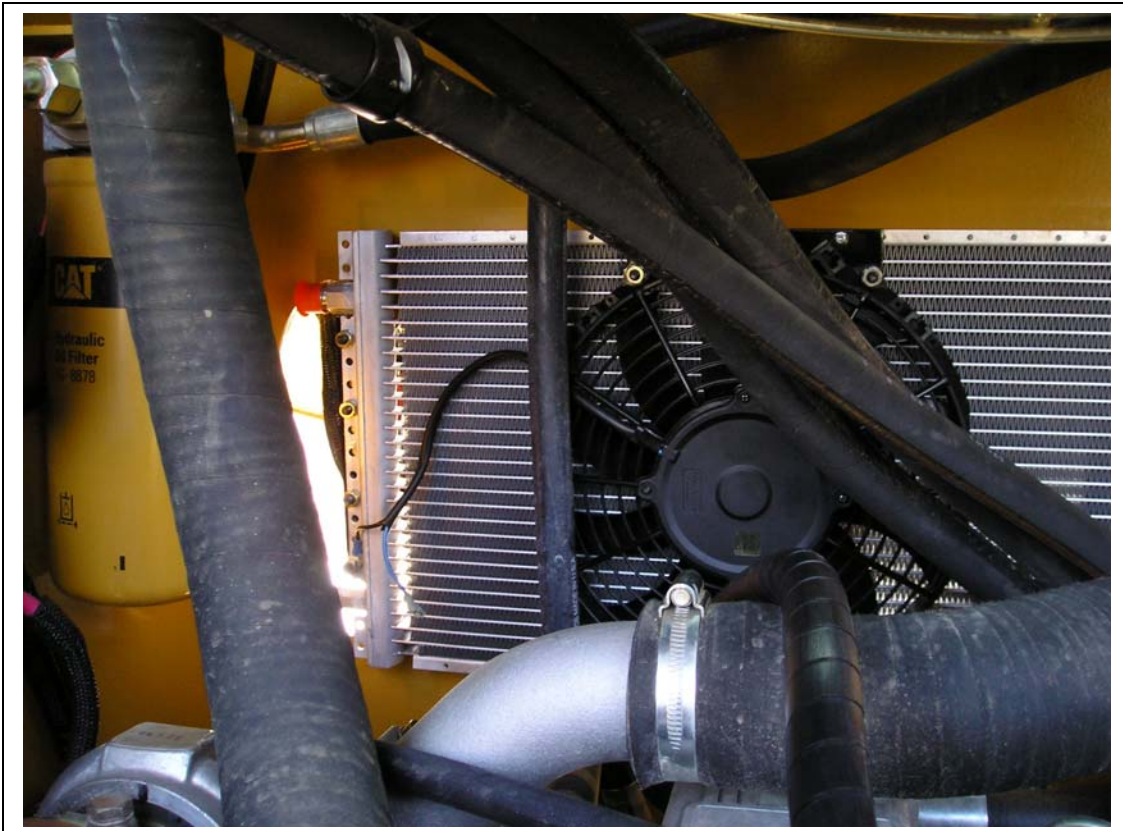
Remove fuel tank mount bracket and pull tank towards the front of the machine. This needs to be done when the heater box is already unbolted from the machine.



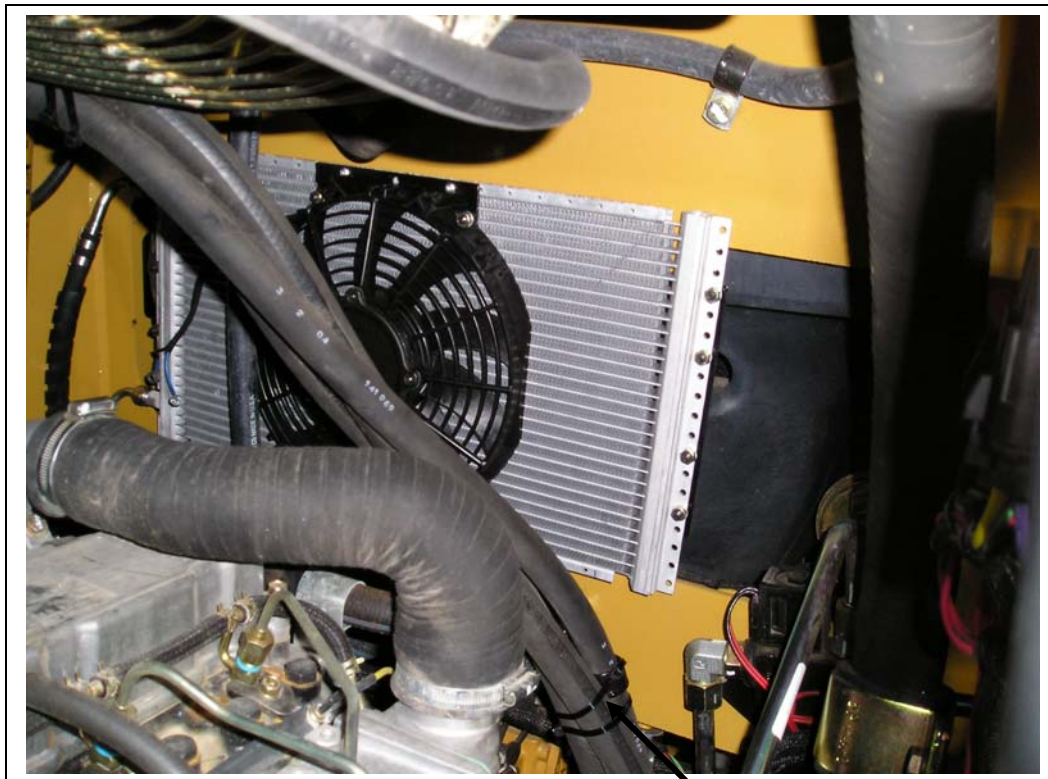
Condenser in place on mount points seen from fuel tank side.



Fitting side of condenser as seen from fuel tank side.

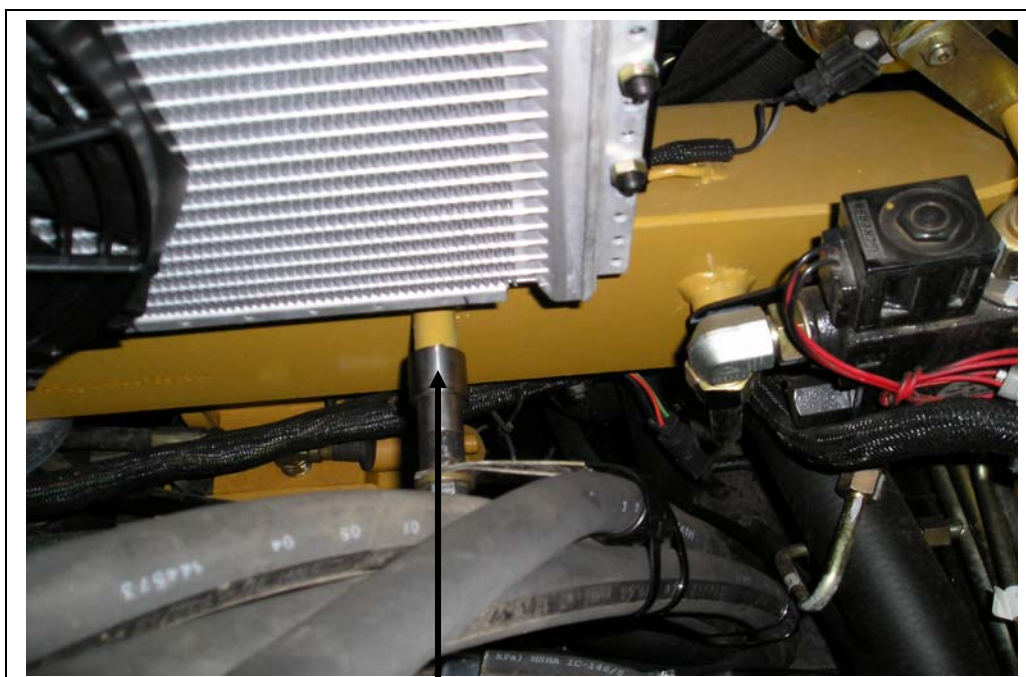


Left end of condenser in position from engine side.



Right end of condenser.

Hoses tied back off of power fan.



Spacer and longer bolt to hold hoses off of the condenser assembly on right end.

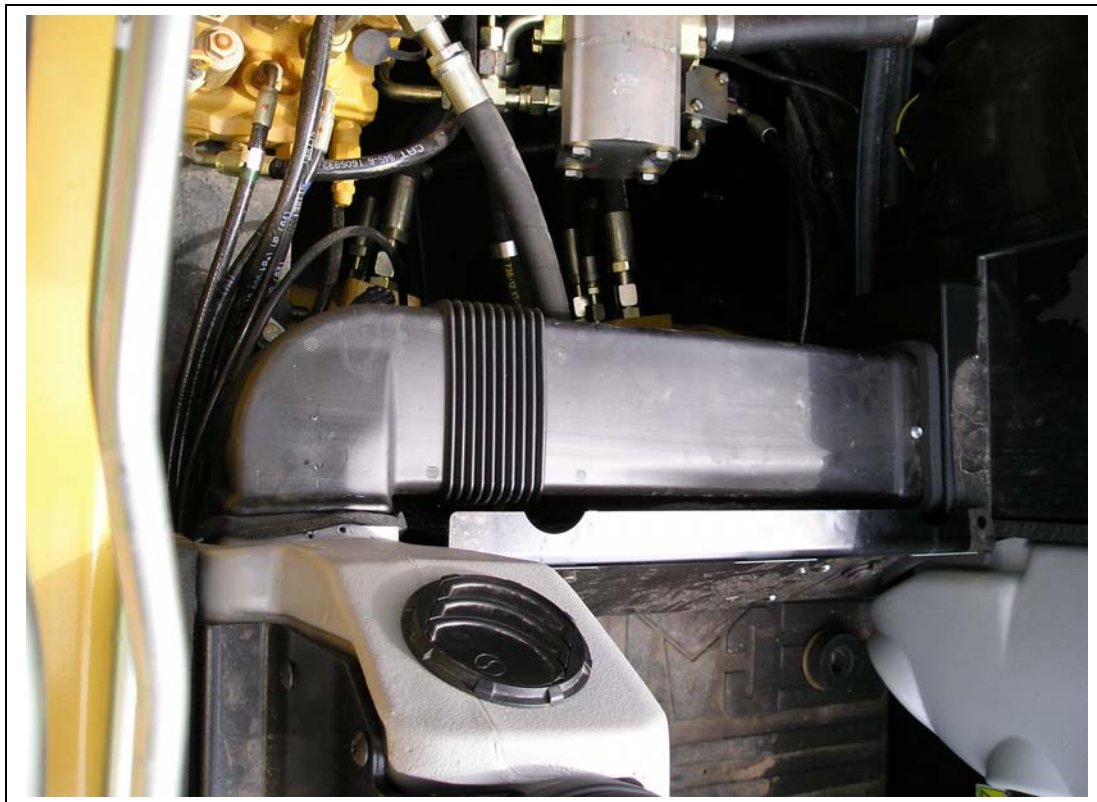
EVAPORATOR



Raise cab to remove heater box and install condenser and hoses.



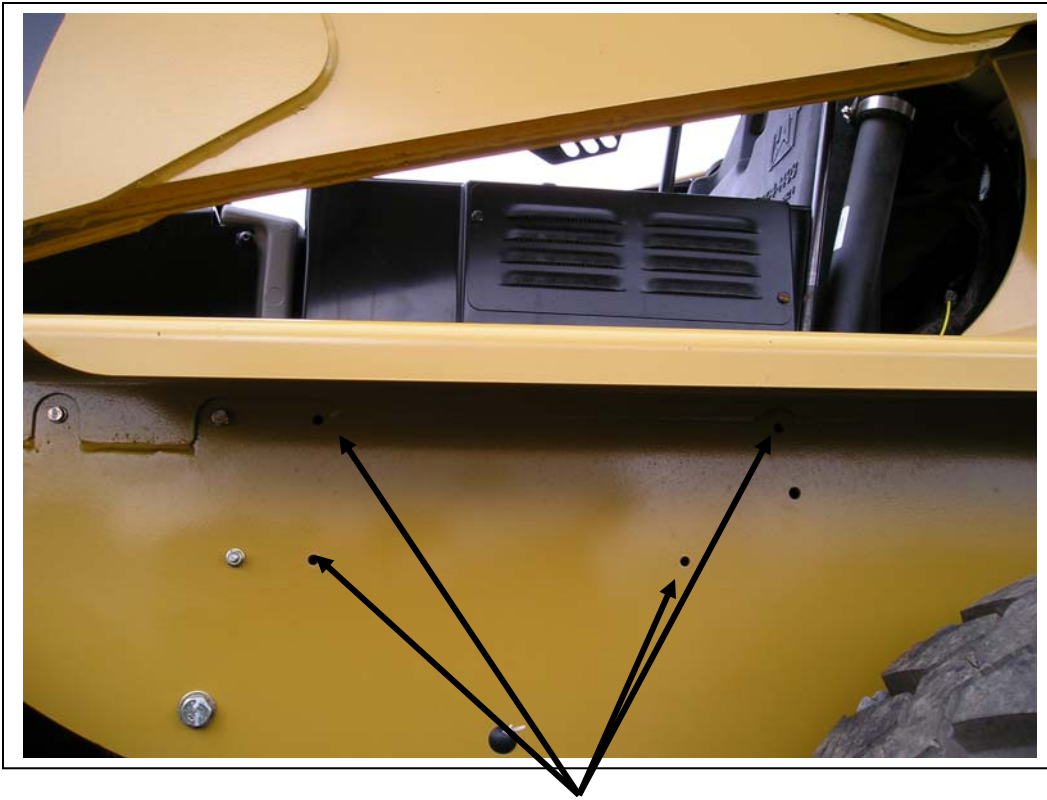
Existing heater box.



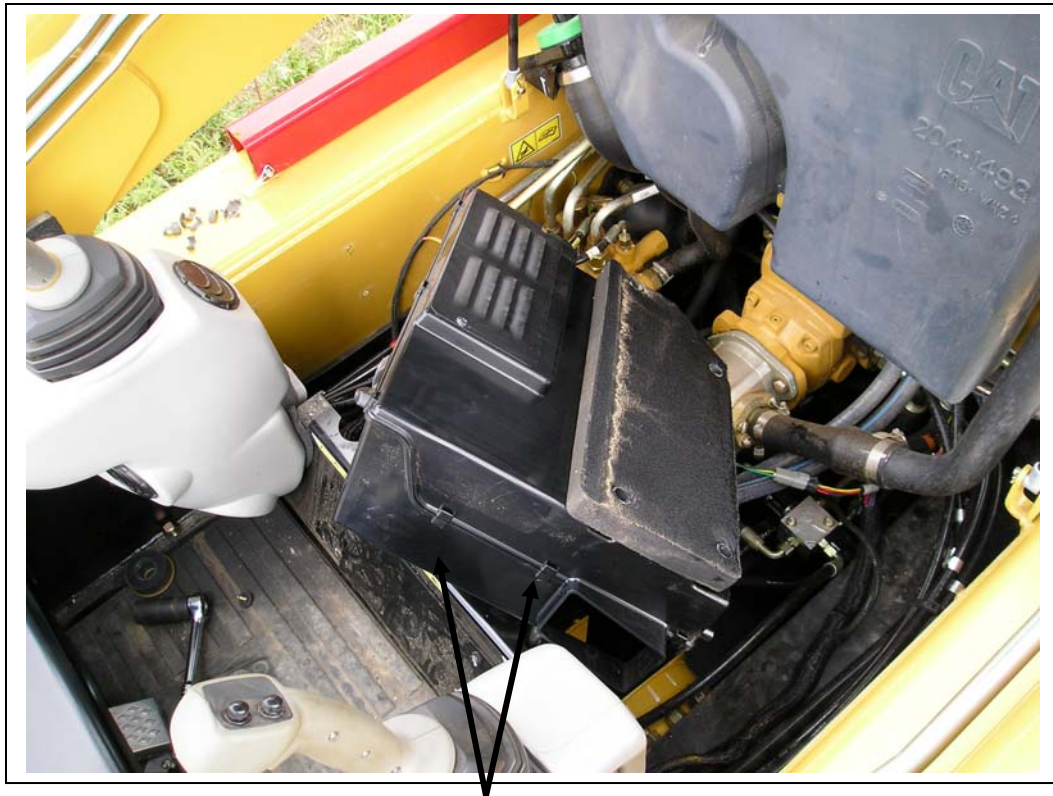
Remove air channel



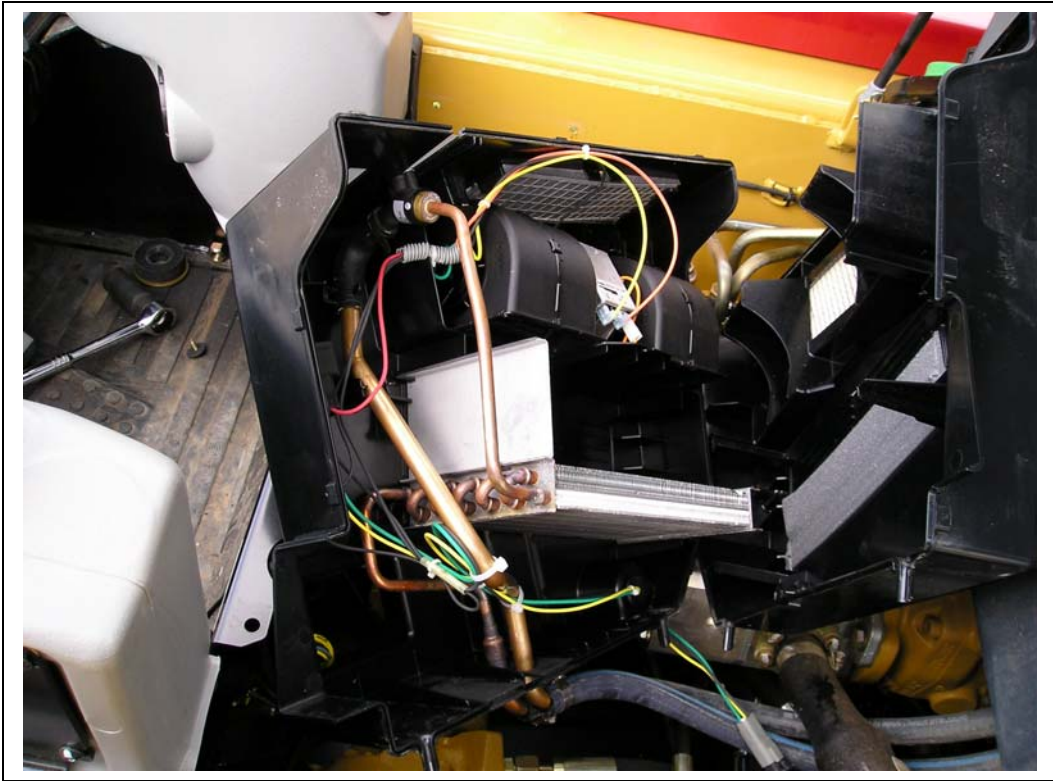
Heater box with cab up



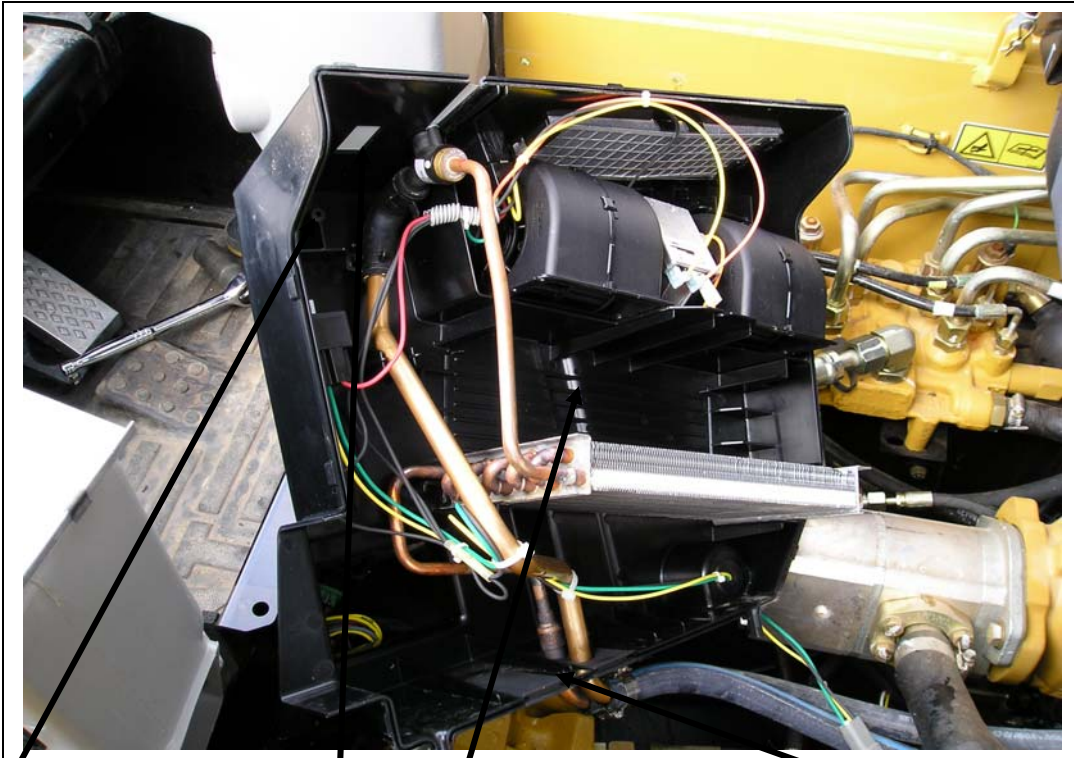
Remove four mounting bolts



Remove retaining clips from two part box.



Back cover off box.

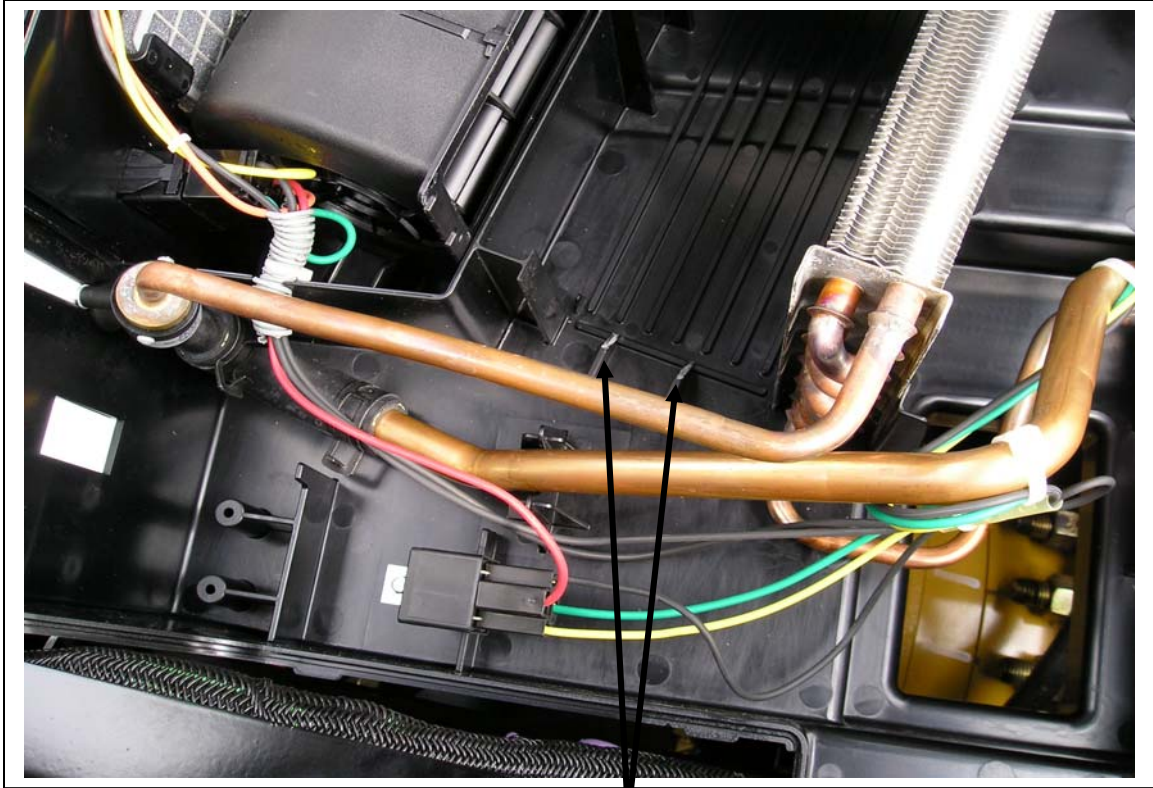


Area for thermostat.

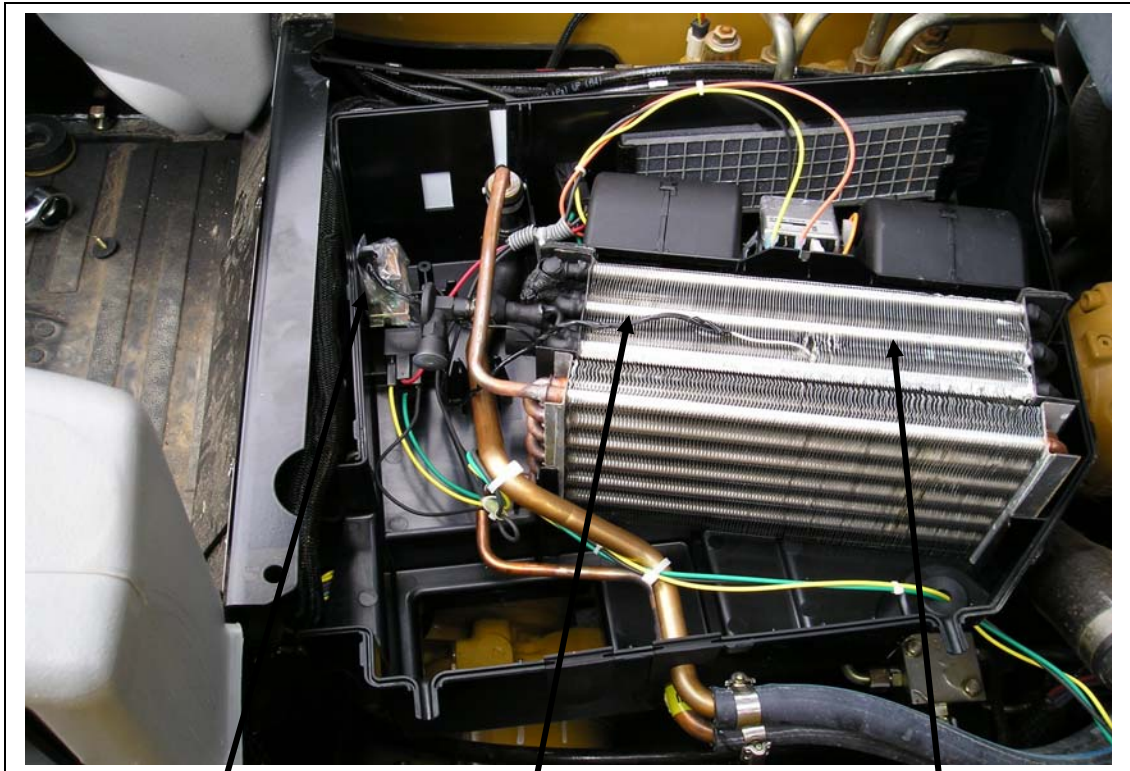
A/C on off switch location.

Area for A/C coil.

Rubber grommet for A/C hoses.



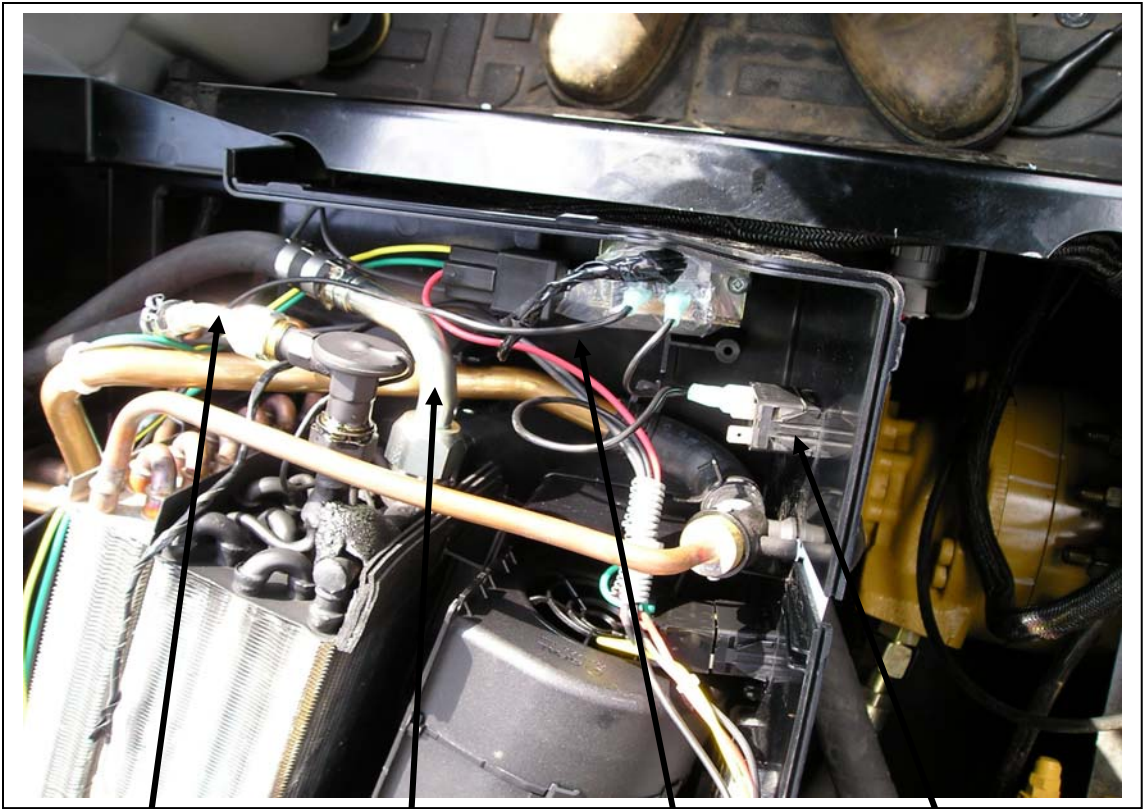
Cut corners off these plastic tabs



Thermostat installed.

Thermostat probe installed.

Evaporator coil installed.



5/16" 45° fitting at expansion valve.

1/2" 90° fitting on evaporator outlet

14g black wire to relay control

A/C on-off rocker switch



Relay control wire exists with other wiring

Hoses exiting the box through rubber grommets.



Drain tubes and restrictors

Seal with tar tape

A/C lines tied to heater lines.

Relay control wire out with other wiring.



A/c lines and relay control wire.

Heater-A/C box back in place.



Heater - A/C box in place with cab back down.

RECEIVER DRIER



Relay mounts up on left side of engine compartment.

5/16" hose to expansion valve

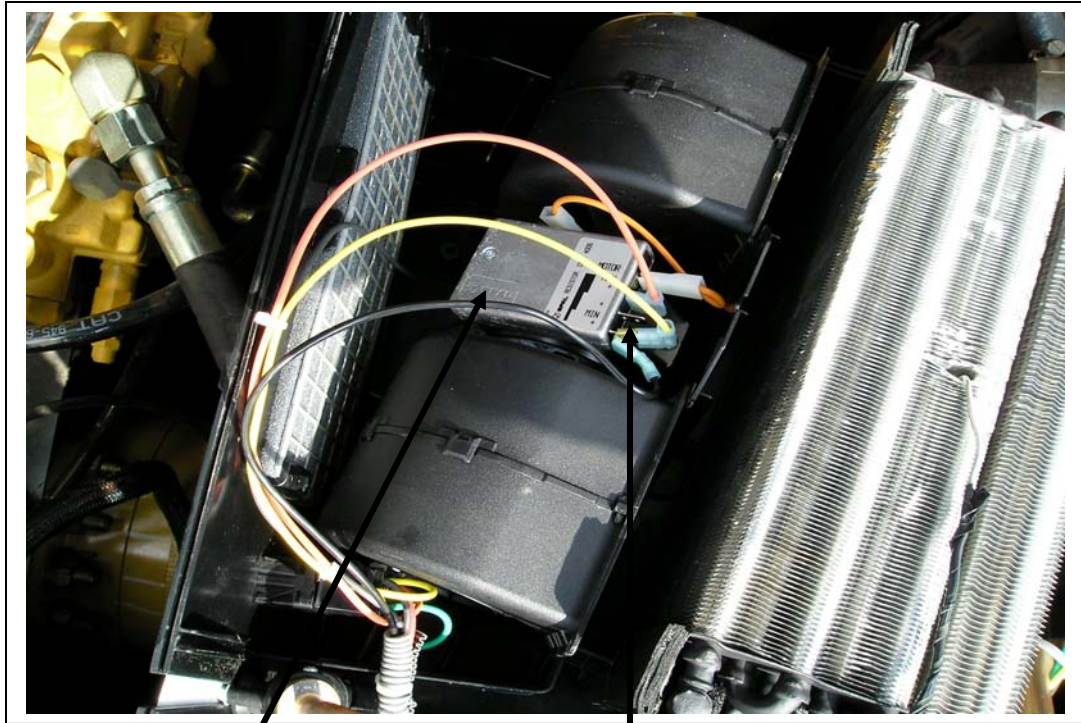
Binary switch

Straight drier bracket

Receiver drier c/w binary switch.

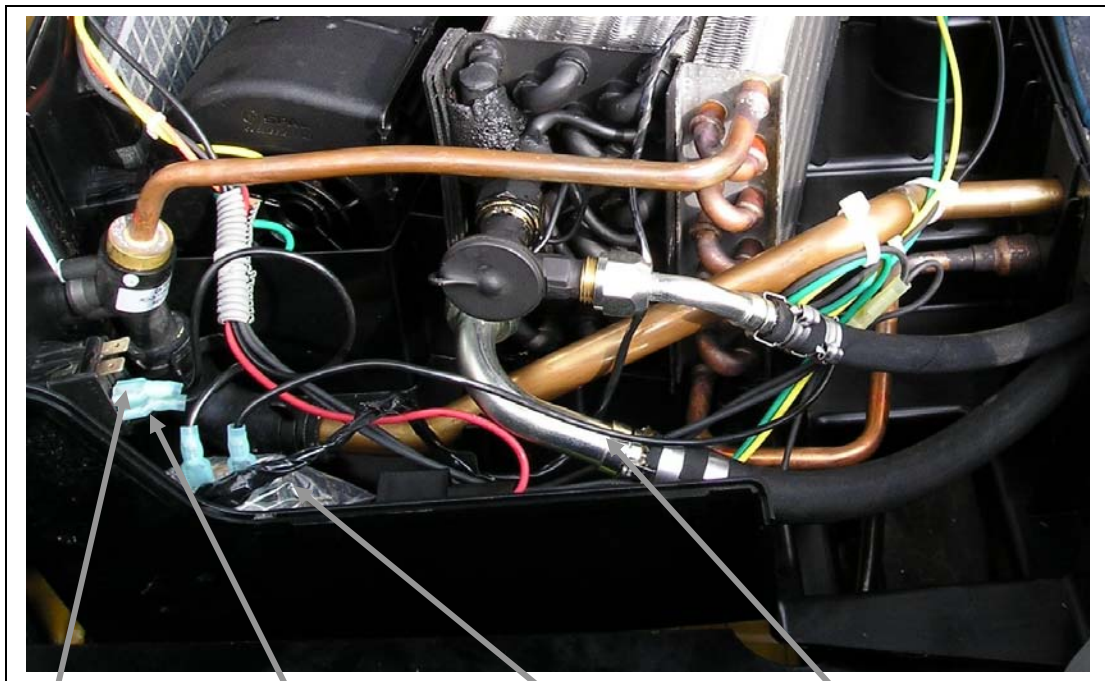
5/16" hose to condenser outlet.

ELECTRICAL



To blower switch

Double spade adapter

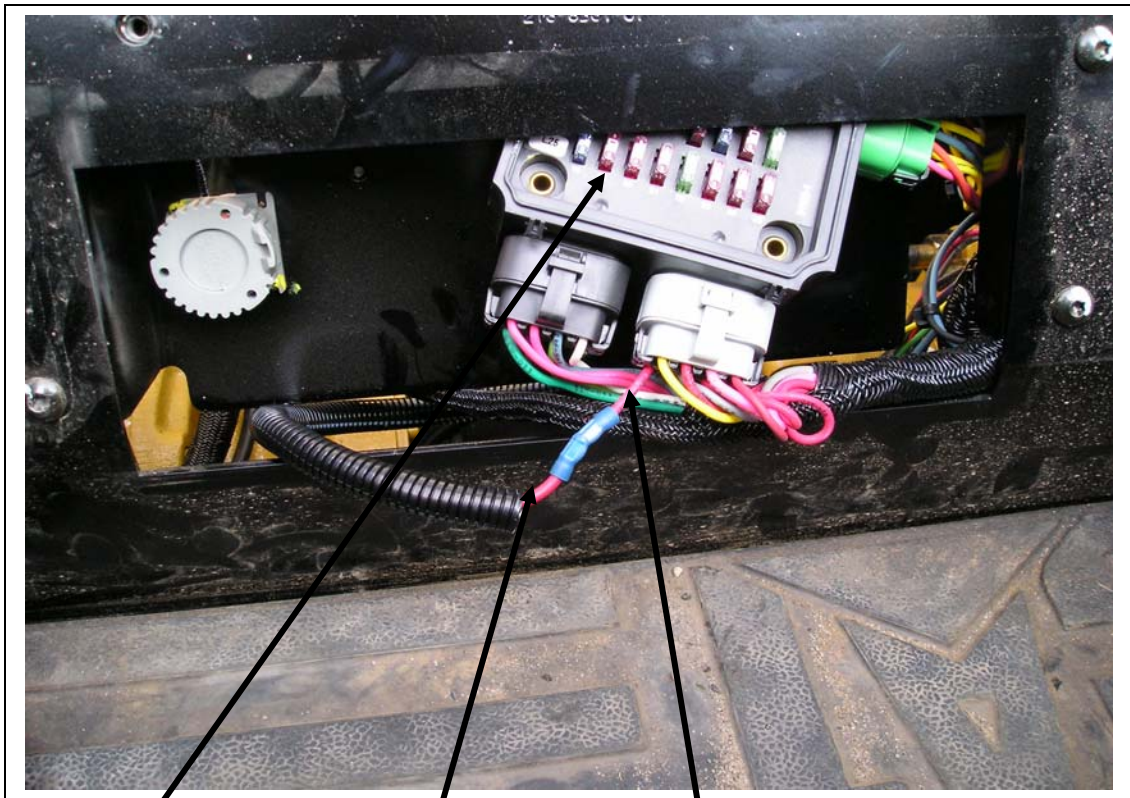


From low speed wire

To thermostat

Thermostat

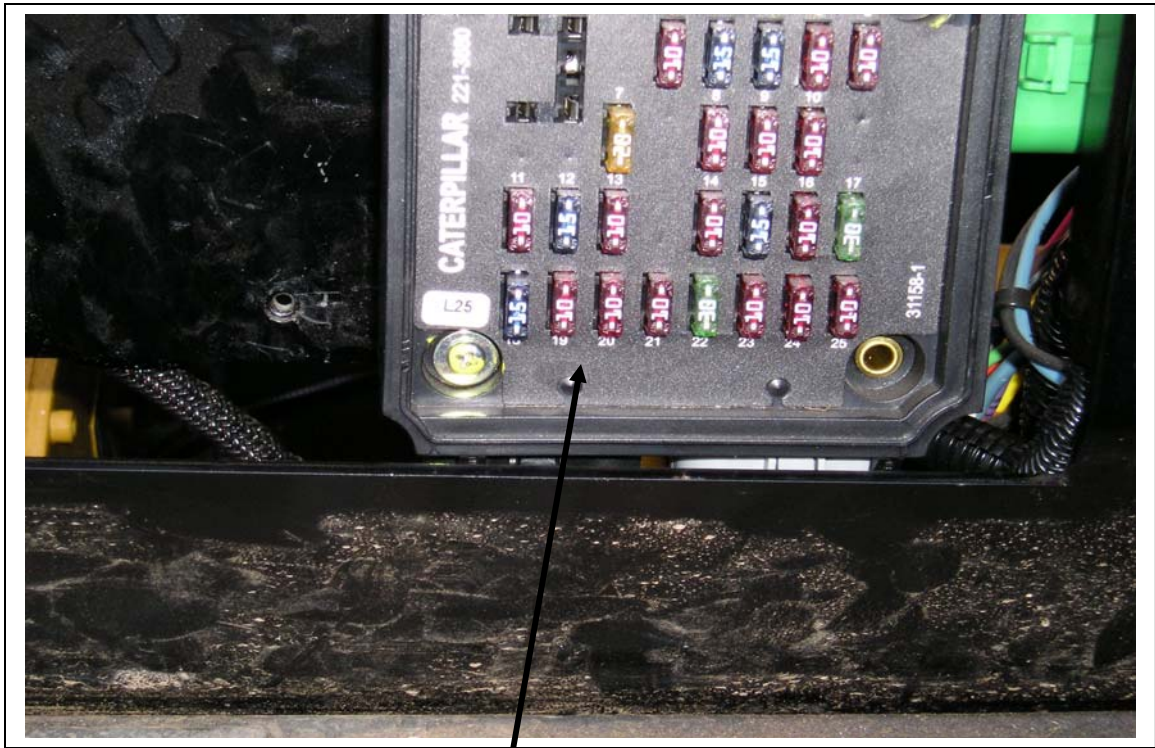
Relay control wire



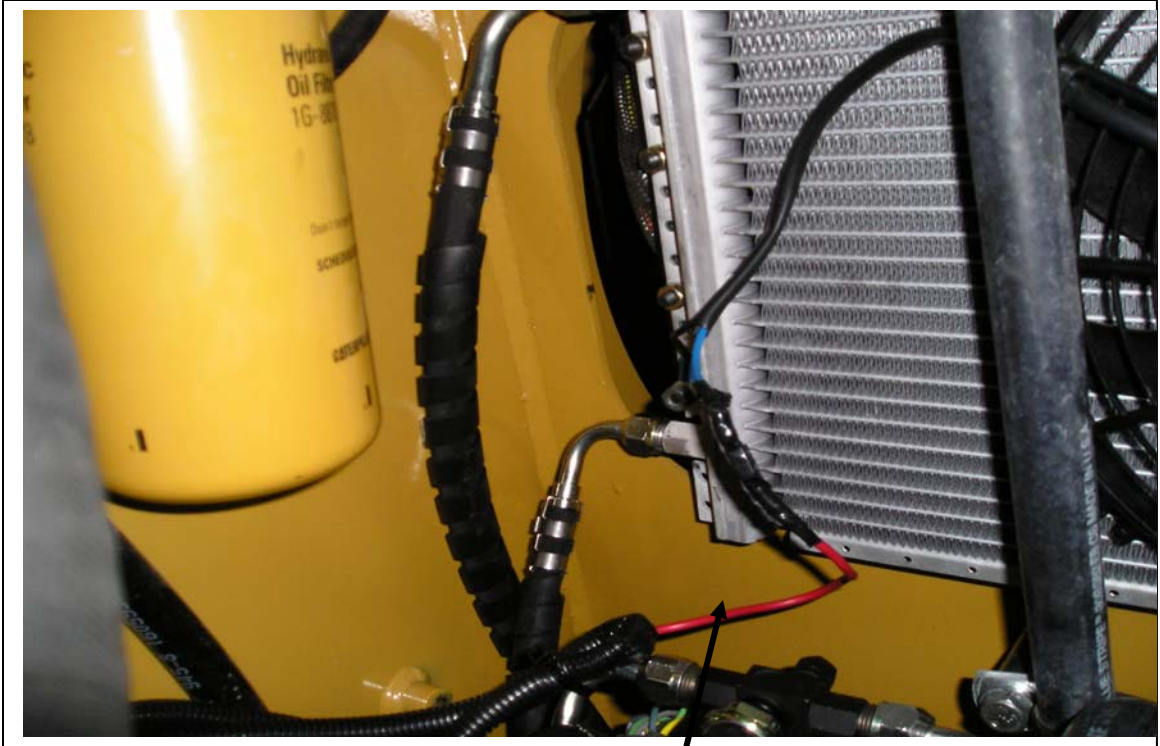
Fuse panel

Power supply for relay.

Wire # 125-A108
Cut wire out of bundle and splice on supplied 12g red wire.

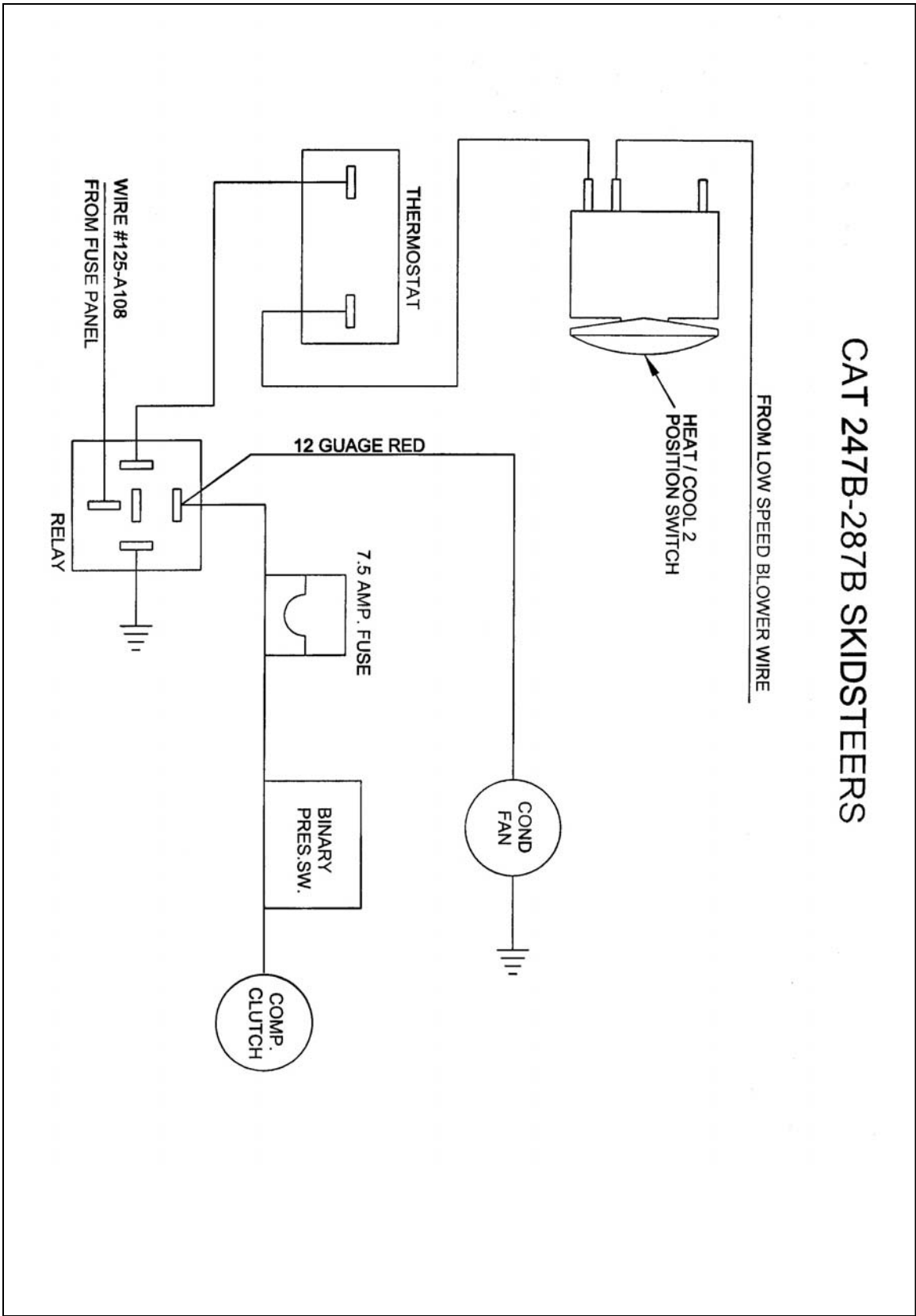


Fuse block back on place.

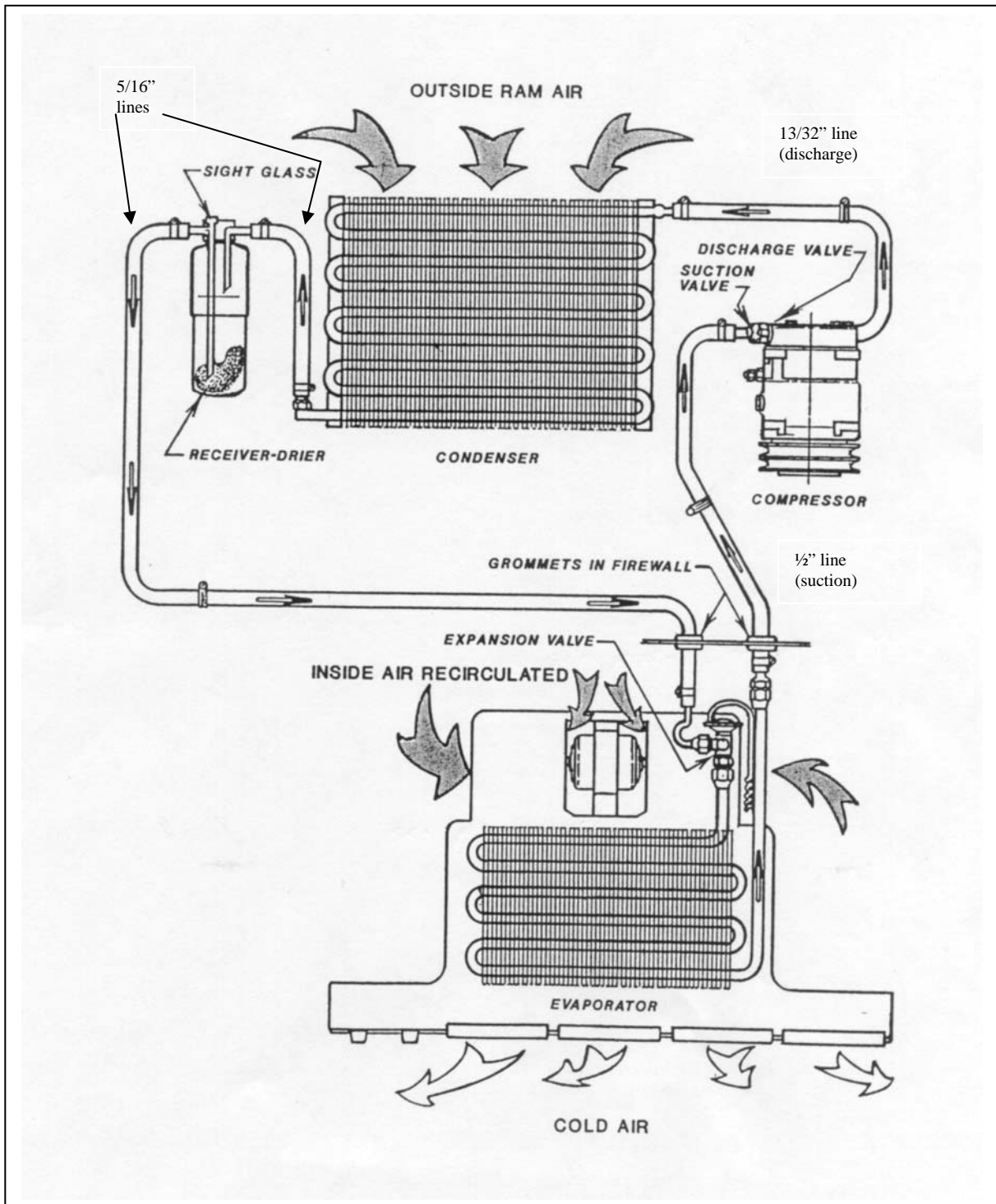


Condenser power wire coming from relay

CAT 247B-287B SKIDSTEERS



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.

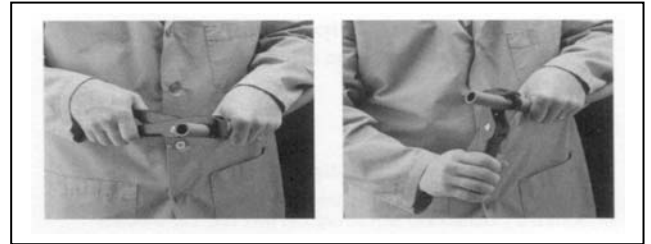
By looking at all these different factors, the area of an evaporator coil most likely to be the coldest can be determined.

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.

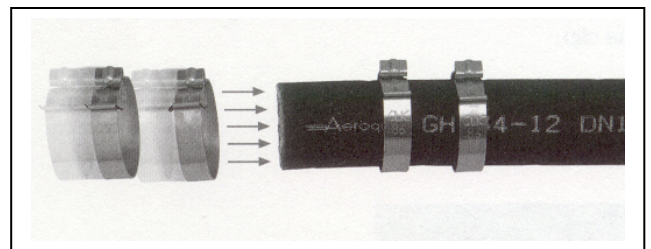
If the thermostat doesn't cycle off after a reasonable cool down period, and the air outlet temperature has dropped below 40° F, the cut in and cut out settings should be adjusted until the compressor is cycling on and off regularly. Let the system run for a decent time period (at least 15 min) and then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

Aeroquip E-Z Clip Assembly Instructions

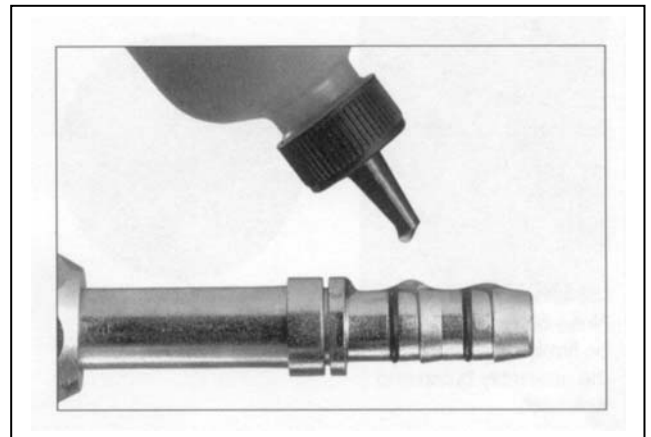
Step 1. Cut the hose to proper length with an appropriate cutting tool. Aeroquips hand held hose cutter has been specially designed for cutting all non-wire reinforced hose, such as GH-134 Multi-Refrigerant hose. Be sure the cut is made square to the hose length.



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.

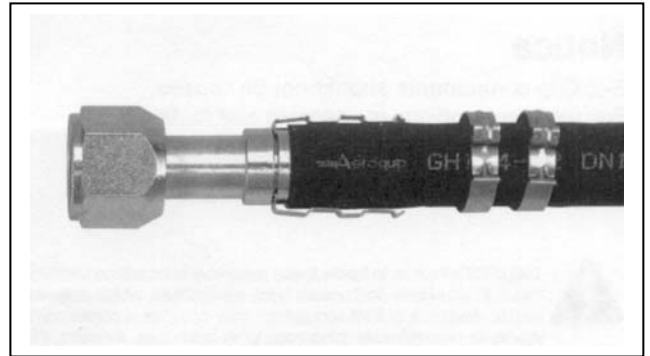


Step 4. Insert the nipple into the hose. To ensure that the nipple is fully inserted, check the gap between the cut end of the hose and the shoulder on the nipple. Care should be taken to avoid kinking or other damage to the hose during nipple insertion. NOTE: Be sure to wipe excess oil from the nipple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

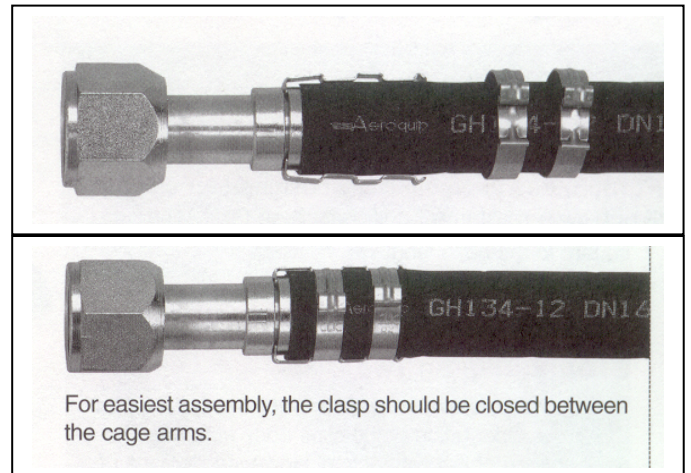


Step 5. Snap the cage into the groove on the nipple. The arms should extend over the hose length. When the cage has been correctly installed in the cage groove, the cage will be able to rotate in the groove. This step **MUST** be performed to ensure:

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.

