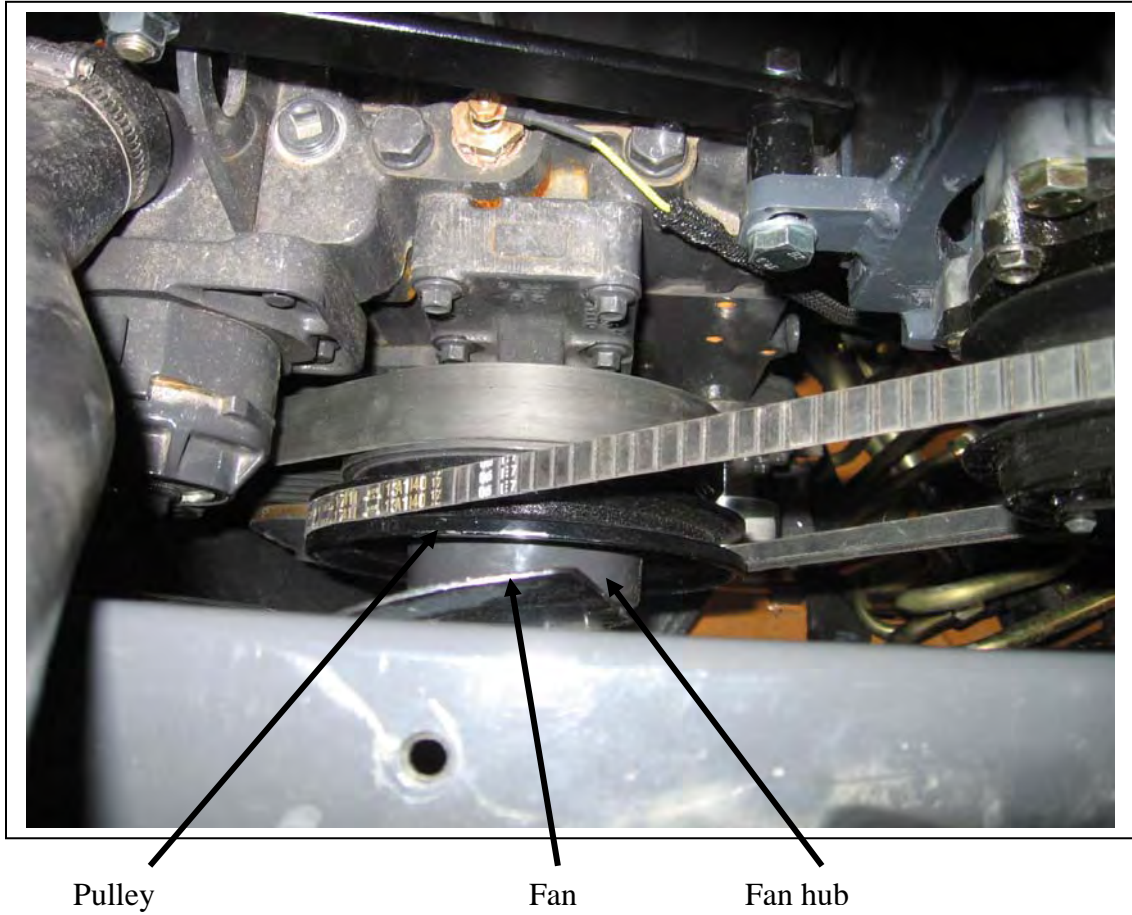


**CASE 430/440**  
**TIER II**  
**SKIDSTEER**  
**INSTALLATION INSTRUCTIONS**  
**A/C ONLY**

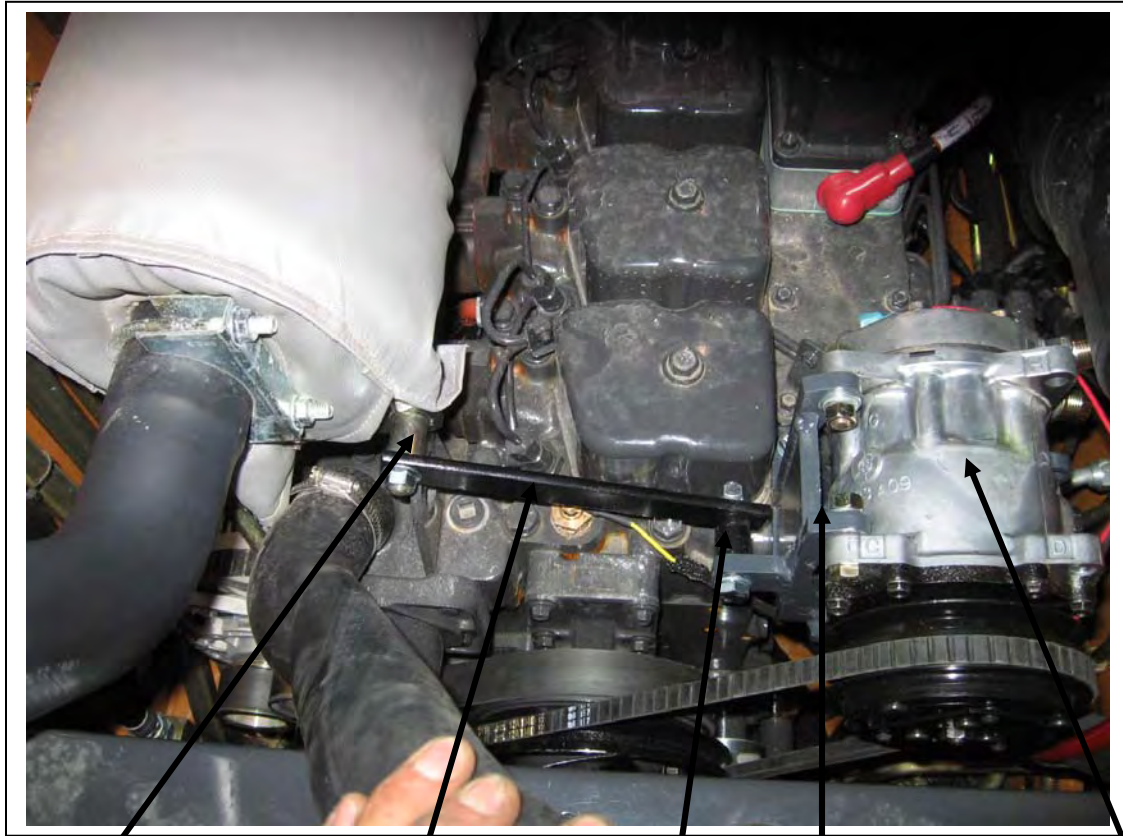


PHONE: 1-800-267-2665  
FAX: 1-888-267-3745

## COMPRESSOR, MOUNT AND PULLEY



Install the pulley spacer and pulley to the fan hub using M8 x 35mm bolts provided. Unbolt the fan blades and slide the spacer then the pulley over the fan hub. Put the 17410 belt around the pulley before re-installing the fan.



Existing spacer from original exhaust support bracket.

New exhaust support bracket

New spacer supplied with kit.

Compressor mount. Bolts to engine using three m10 bolts

Compressor

Install mount bracket

Install exhaust support bracket.

Install compressor into the mount with fittings pointing towards the right side if the machine using the 3/8" x 1 1/2" bolts provided. Tension the belt and tighten the compressor bolts.



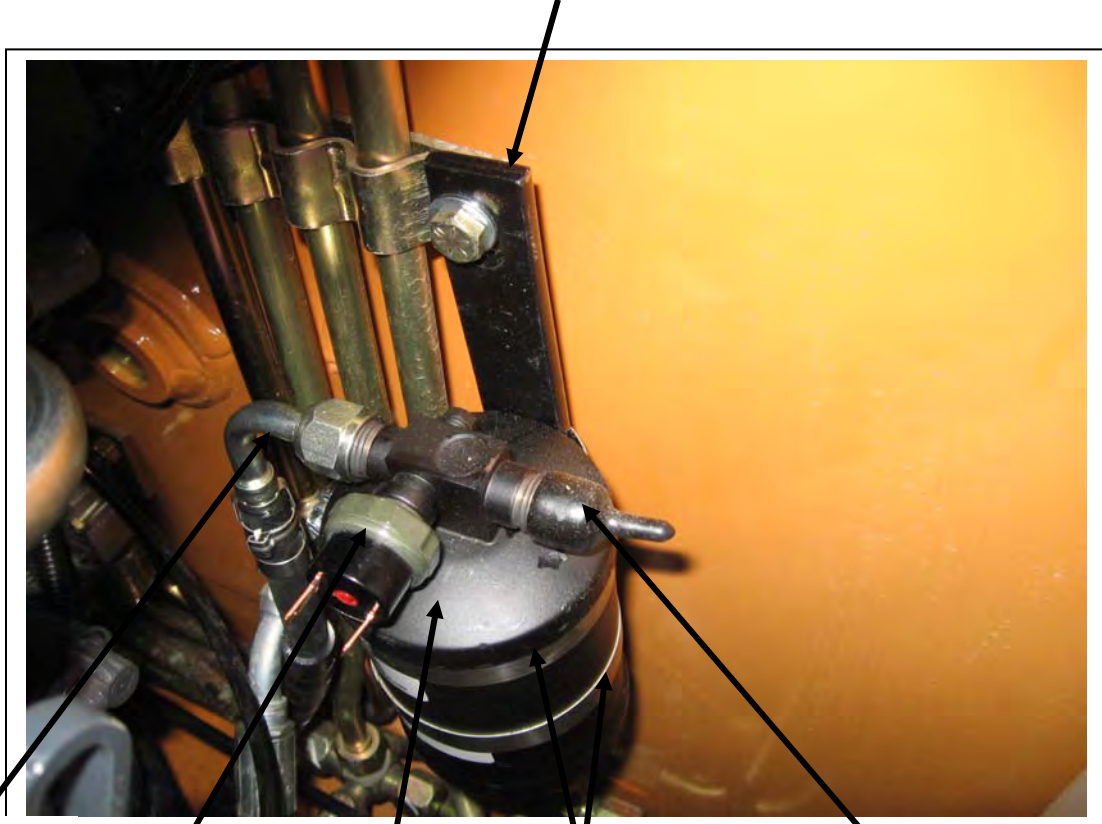
Upper rad hose.

Compressor in place.



## DRIER

Mount drier bracket to the pipe support bracket on the right side of the engine compartment below the air cleaner.



5/16" line from the condenser.

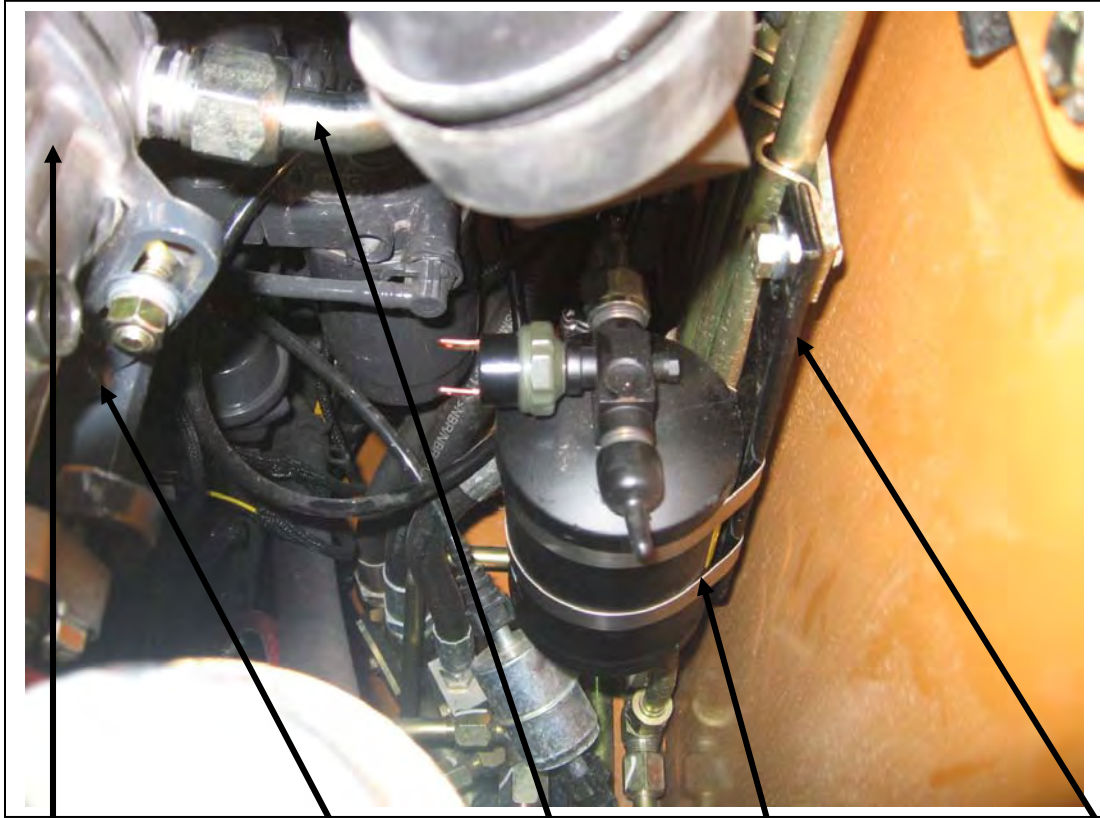
Binary switch

Receiver drier

#48 gear clamps

Drier outlet

- 1) Install the drier to the bracket using the #48 gear clamps provided. The "in" side should face toward the front of the skidsteer.



Compressor

Compressor  
mount

1/2" fitting on  
compressor.

Drier

Drier bracket

## CONDENSER

Position the 11" power fan on the underside of the engine hood as shown in the picture. Mark the four mount hole and drill the holes on the engine hood.



Underside of engine hood.

11" 12volt power fan.





Top side of engine hood      1/4" x 3/4" countersunk      Countersink the mount holes from the top  
 hood      oil (      bolts.      side so the bolt heads are close to flush.  
 towards the back of the cab.      The condenser should sit w  
 the right and the exhaust on the left.      They can stick up about 11/16".

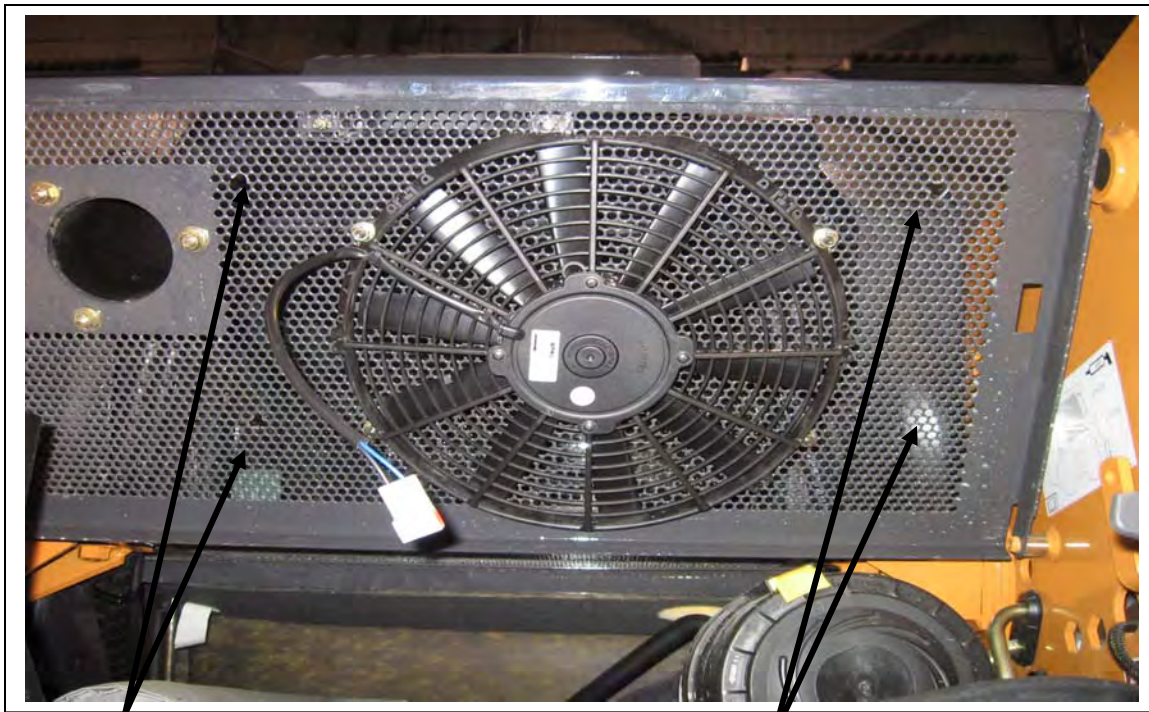


1" x 2 1/2" hole in engine  
 hood for A/C lines.

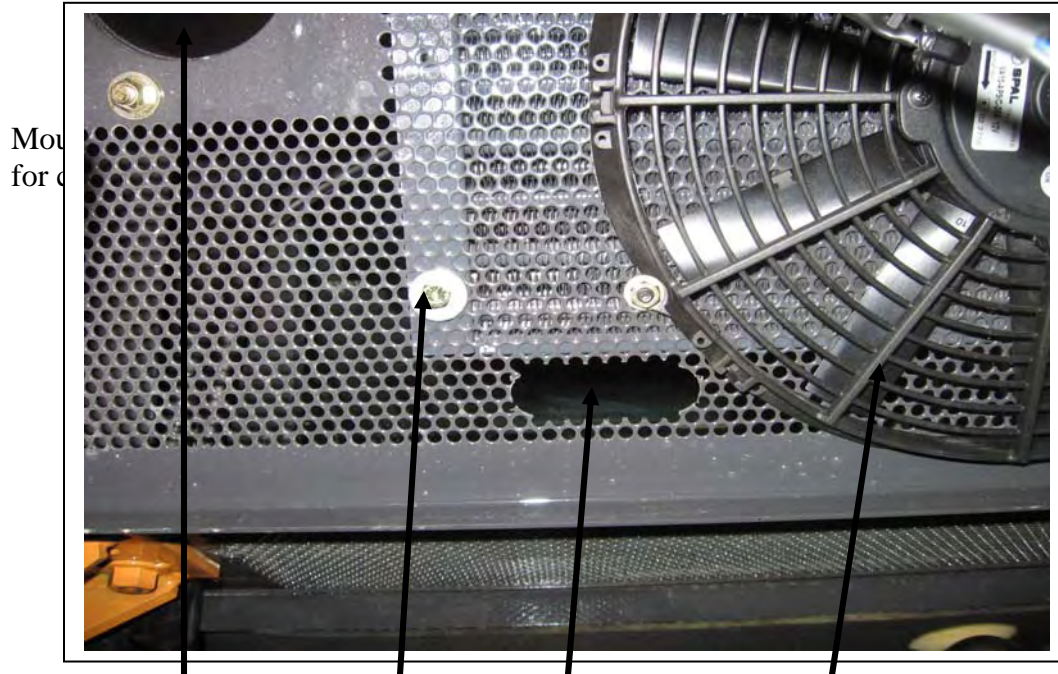
Condenser coil

Condenser fittings

Locate the mounting nuts on the bottom flanges of the condenser onto the engine hood. Drill the mounting holes to secure the condenser. Mark the area for the hole to run the A/C hoses up through to engine hood. It should be just above the top edge of the condenser just to the left of the power fan.







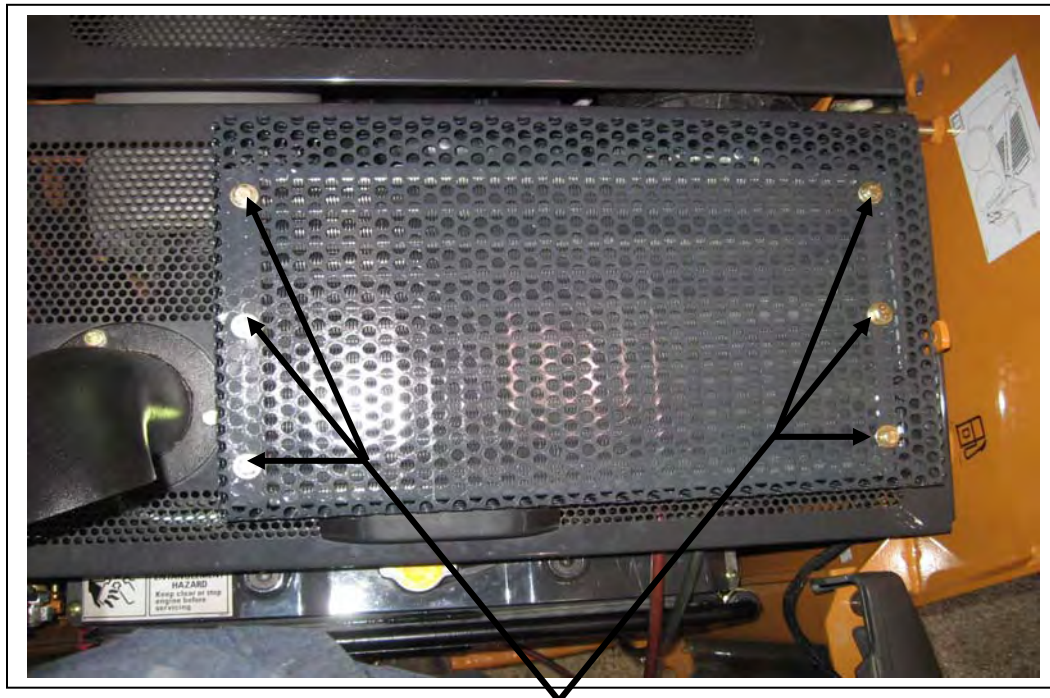
Mounting  
for condenser

Exhaust pipe

Mounting bolts  
for condenser

Slotted hole for  
A/C hoses.

Power  
fan



Mounting bolts for condenser cover.

After the condenser is installed and the A/C hoses are connected to it , the protective cover can be installed.



Condenser in place with engine cover closed.

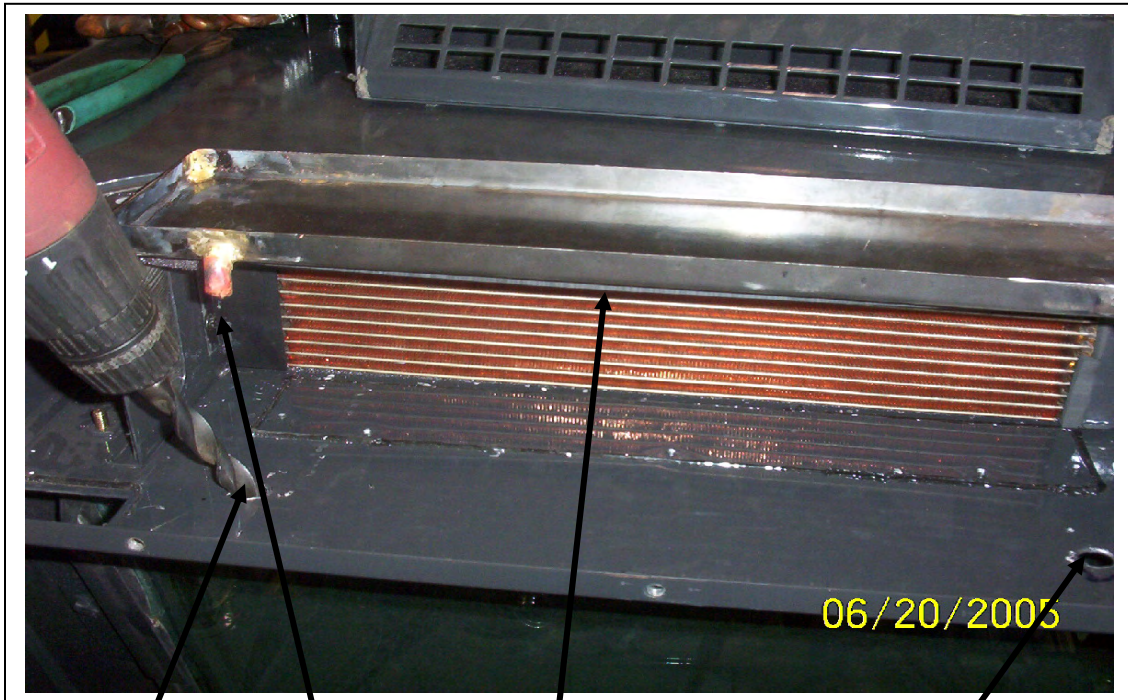


## EVAPORATOR



Remove cover from top of machine. The evaporator will be installed beside the existing heater coil.





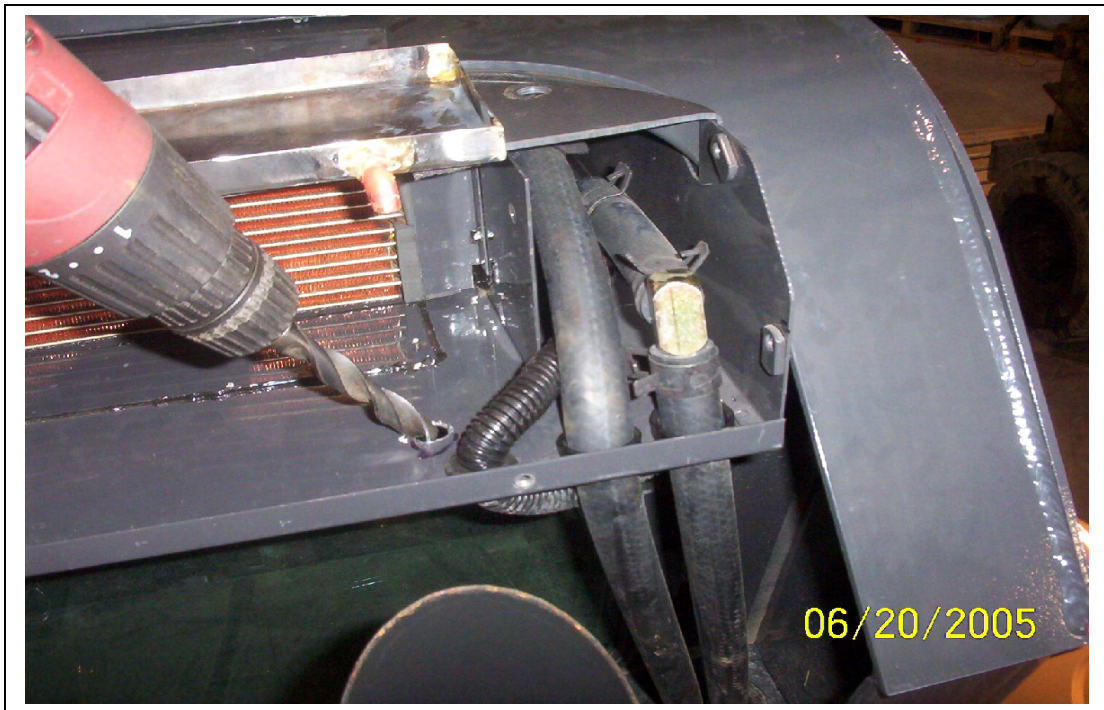
Drain pan  
hole

Drain tube

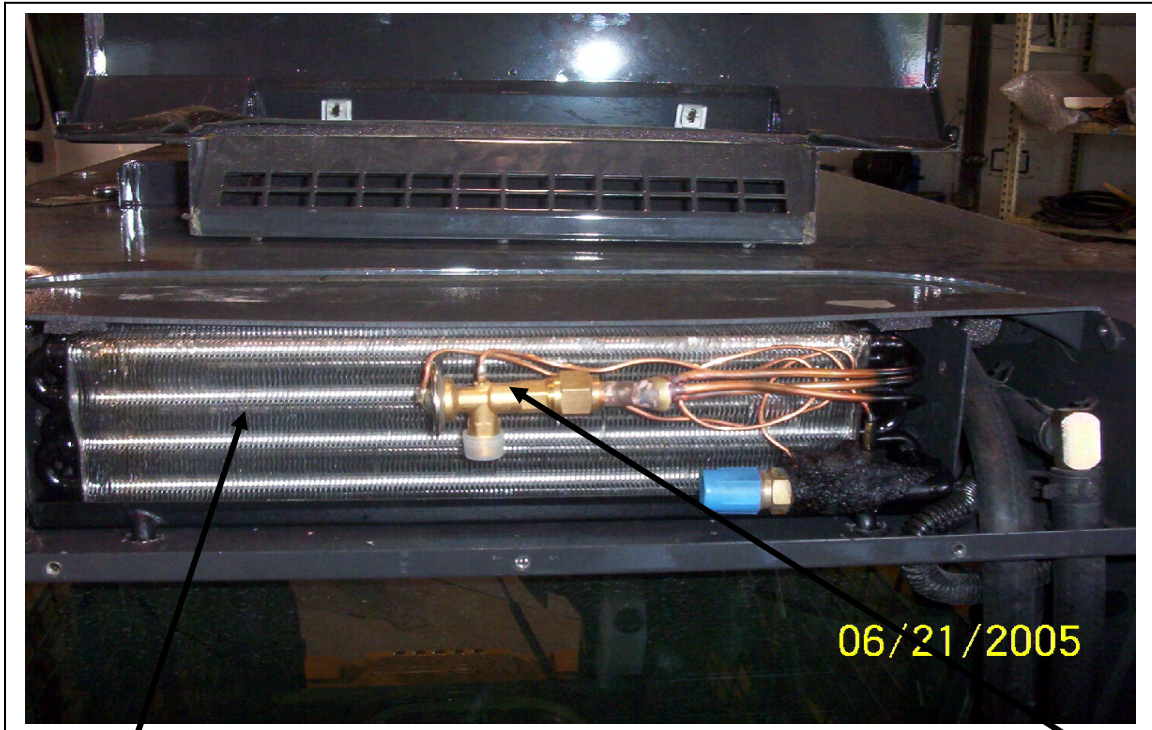
Drain pan

Drain pan holes.

Set the evaporator drain pan in place. Mark the location of the two drain tubes and drill holes to allow the tubes to stick through.



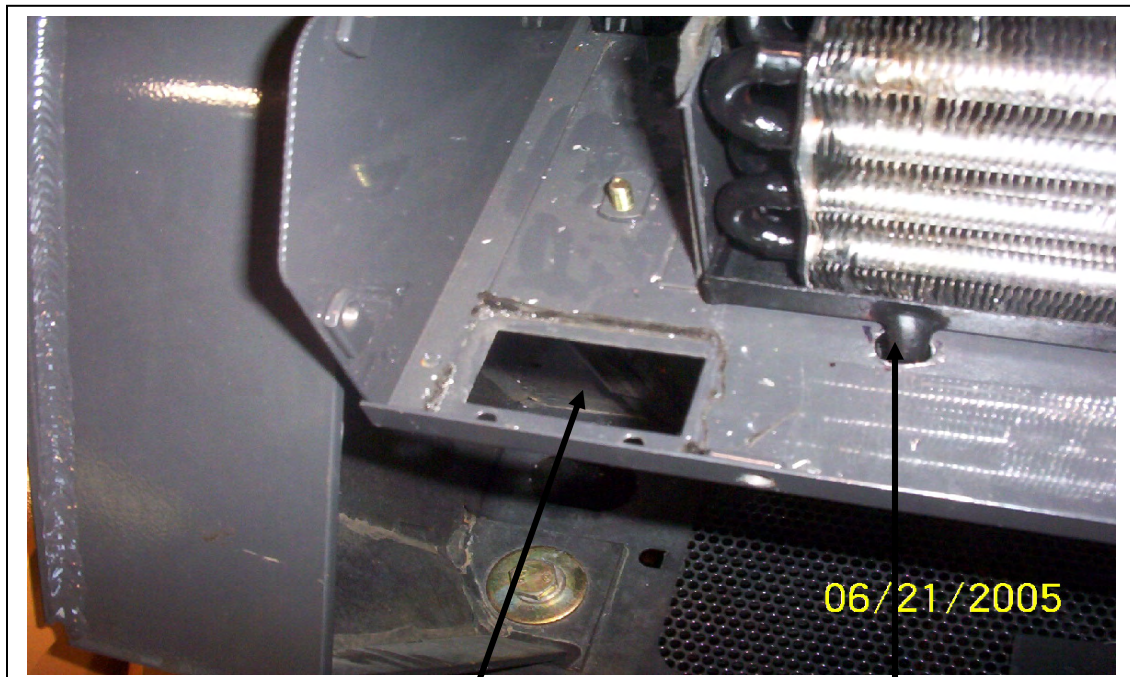




Evaporator

Expansion valve

Install the evaporator coil and drain pan as shown.

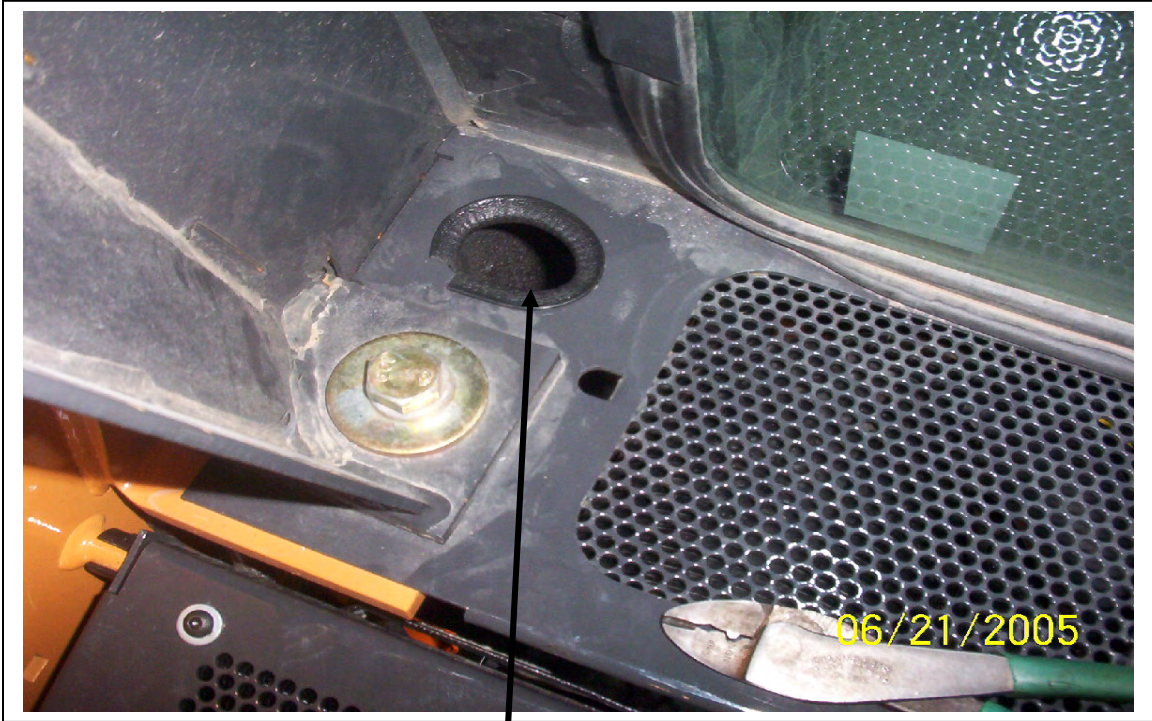


Hoses will be routed through here.

Drain tube



## HOSE RUNS



Knock out at left side behind rear window. Install trim as shown. On some machines the knockout may not be there and a 2" hole will have to be drilled.



5/16" hose to receiver drier.

Hose wrap all hoses.

1/2" hose to compressor





Hose run from evaporator through the knock outs. Run the electrical from the thermostat to the binary at the drier at the same time.



Hose run with cab lifted. "P" clamp as shown.



Trim around this hole before running hoses.

Hose run through cab wall.

Protective sheath.



"P" clamp hoses as shown along lower part of cab. A cover plate is not provided in this kit, but is available from the Case dealer.





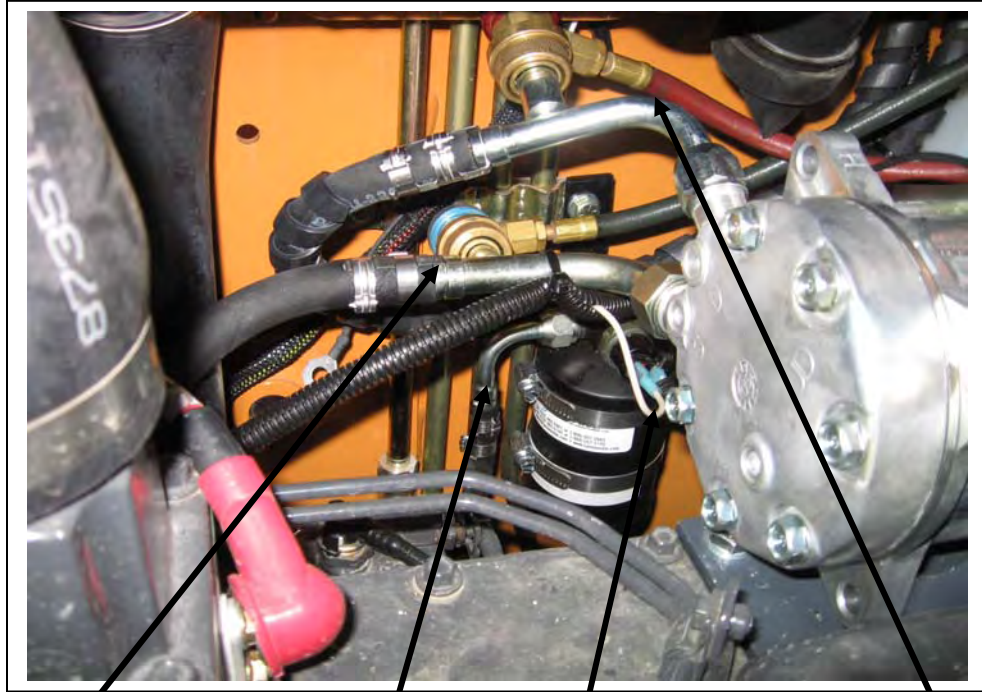
Remove floor plate to allow hose run. Hoses must run around the pivot point of cab hinge as shown. (similar to heater hose arrangement on other side)



Trim this hole also







1/2" hose from evaporator coil.

5/16" hose out to expansion valve

Clutch wire from relay.

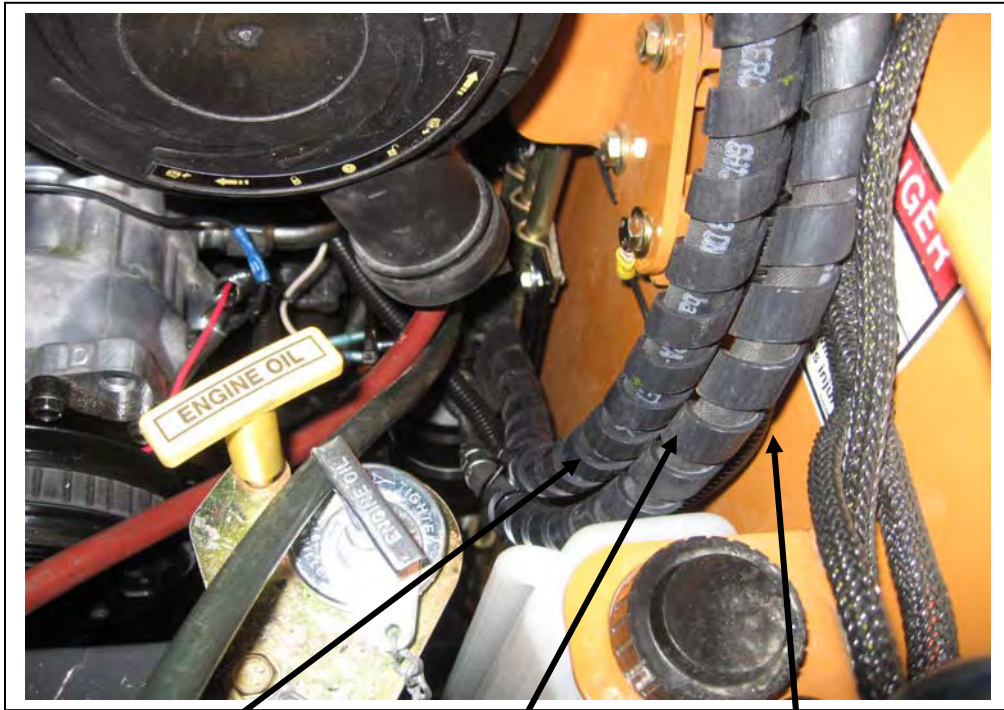
13/32" hose to condenser.



Compressor clutch wire.

5/16" hose from condenser.





13/32" hose to condenser.

5/16" hose from condenser.

Power and ground wires to condenser.

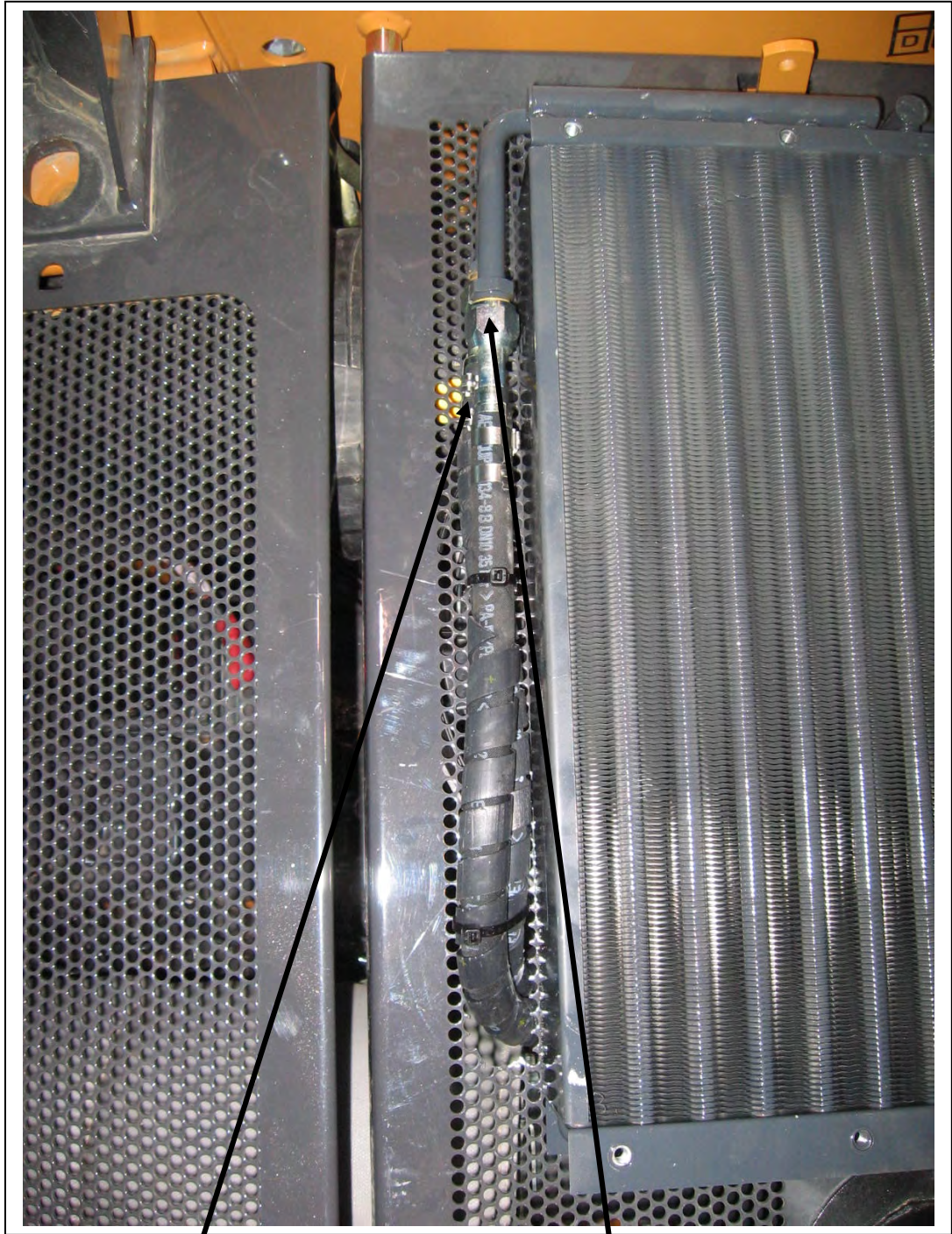


13/32" hose to condenser

5/16" hose from condenser

Electrical connection at condenser fan. If fan pushes out instead of pulling in, reverse the wires.



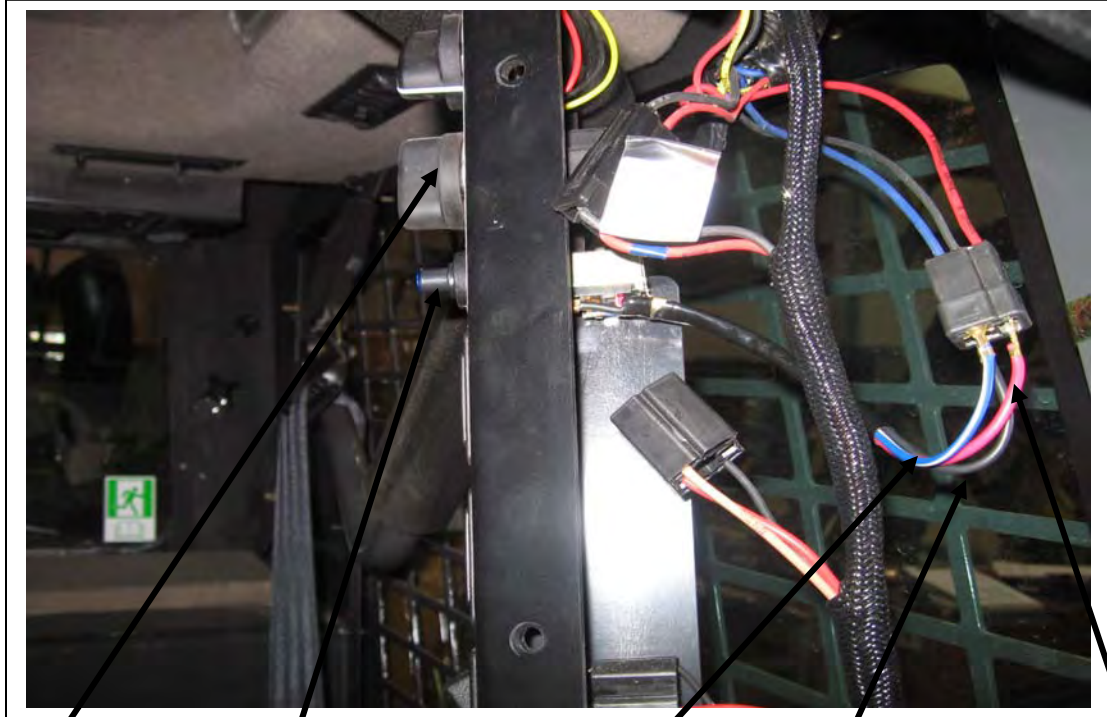


5/16" fitting at condenser  
(in behind 13/32" line)

13/32" fitting at condenser.



# ELECTRICAL



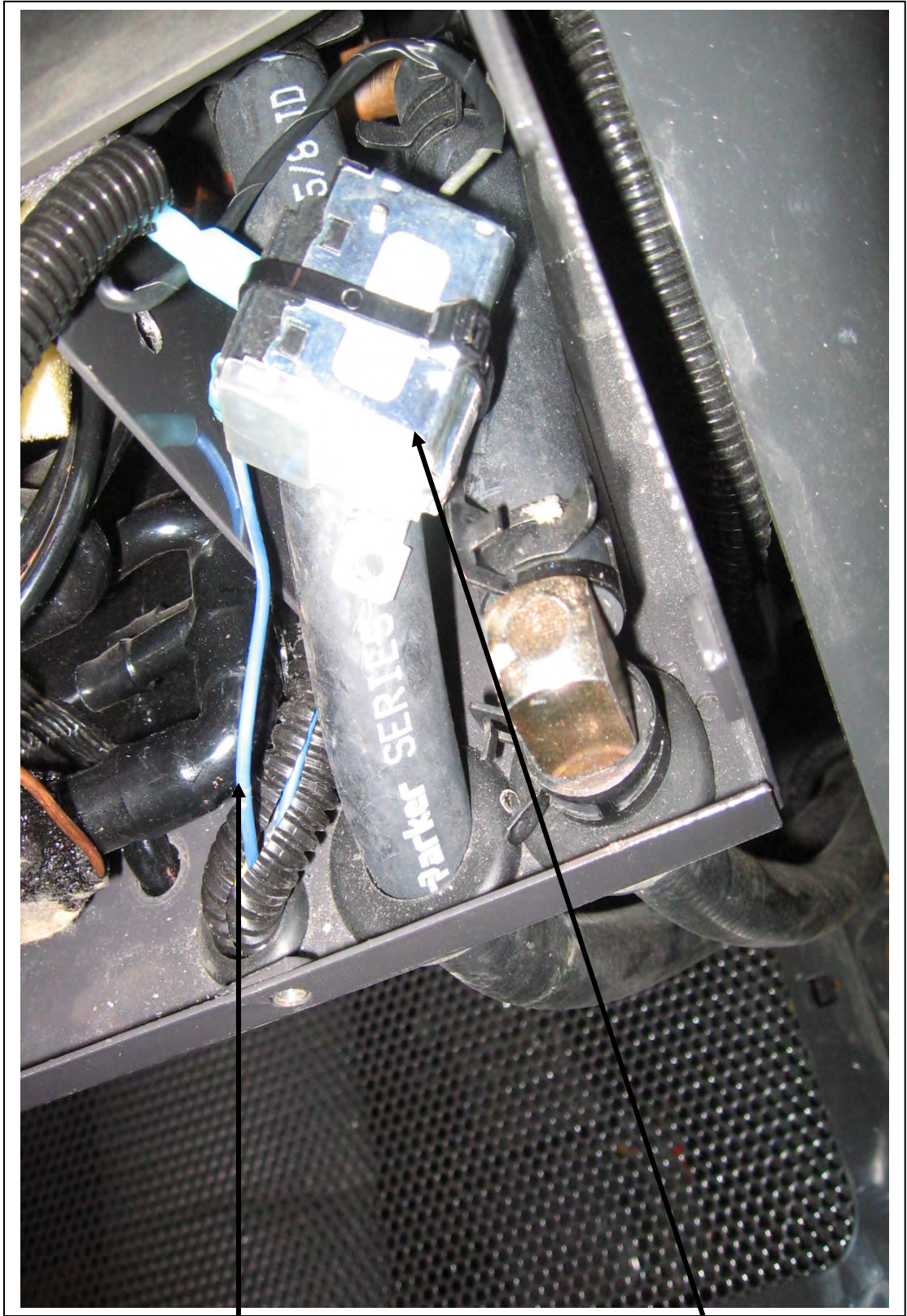
Power switch

A/C on off push button  
switch location.

Power out to  
thermostat(blue)

Ground wire  
for light

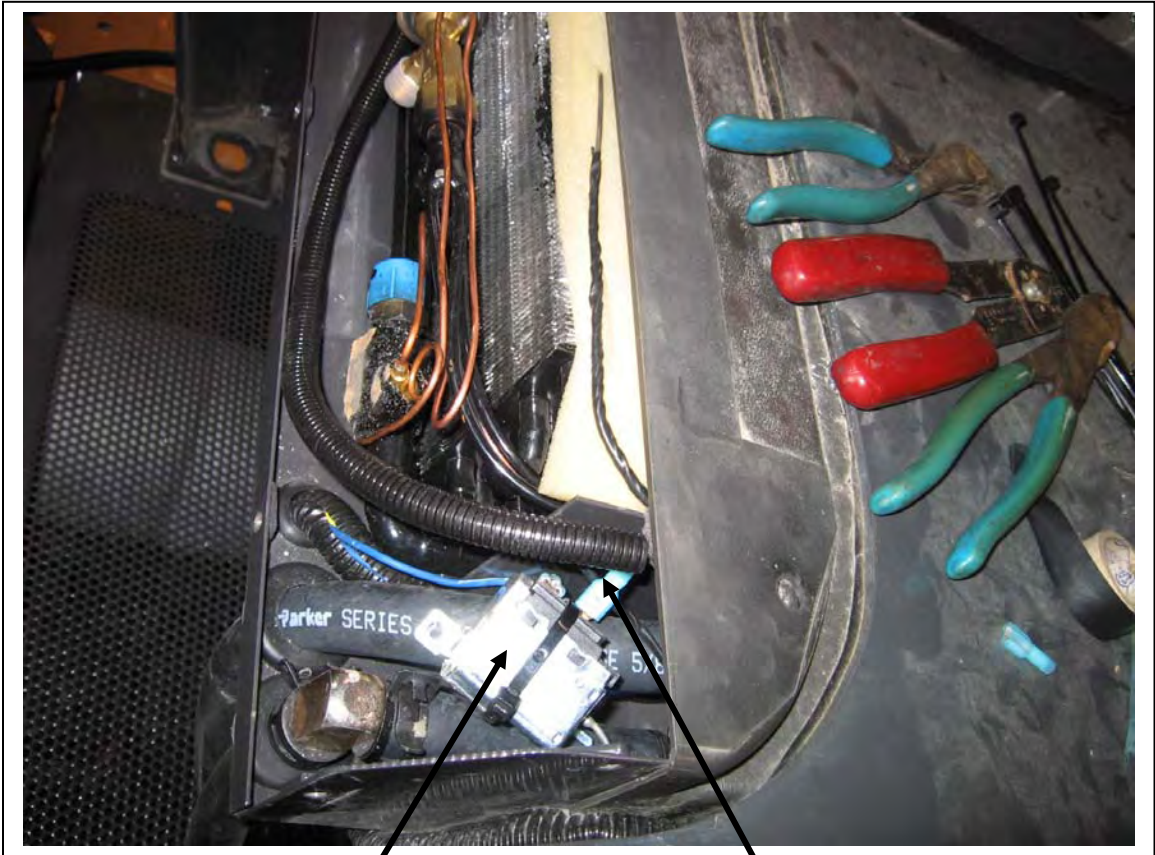
Power in  
from blower  
switch (red)



Find the blue wire in the electrical bundle from A/C on-off switch. Cut out of bundle as long as possible. Install a blue female QDT on wire and plug into one side of the thermostat.

Thermostat





Thermostat

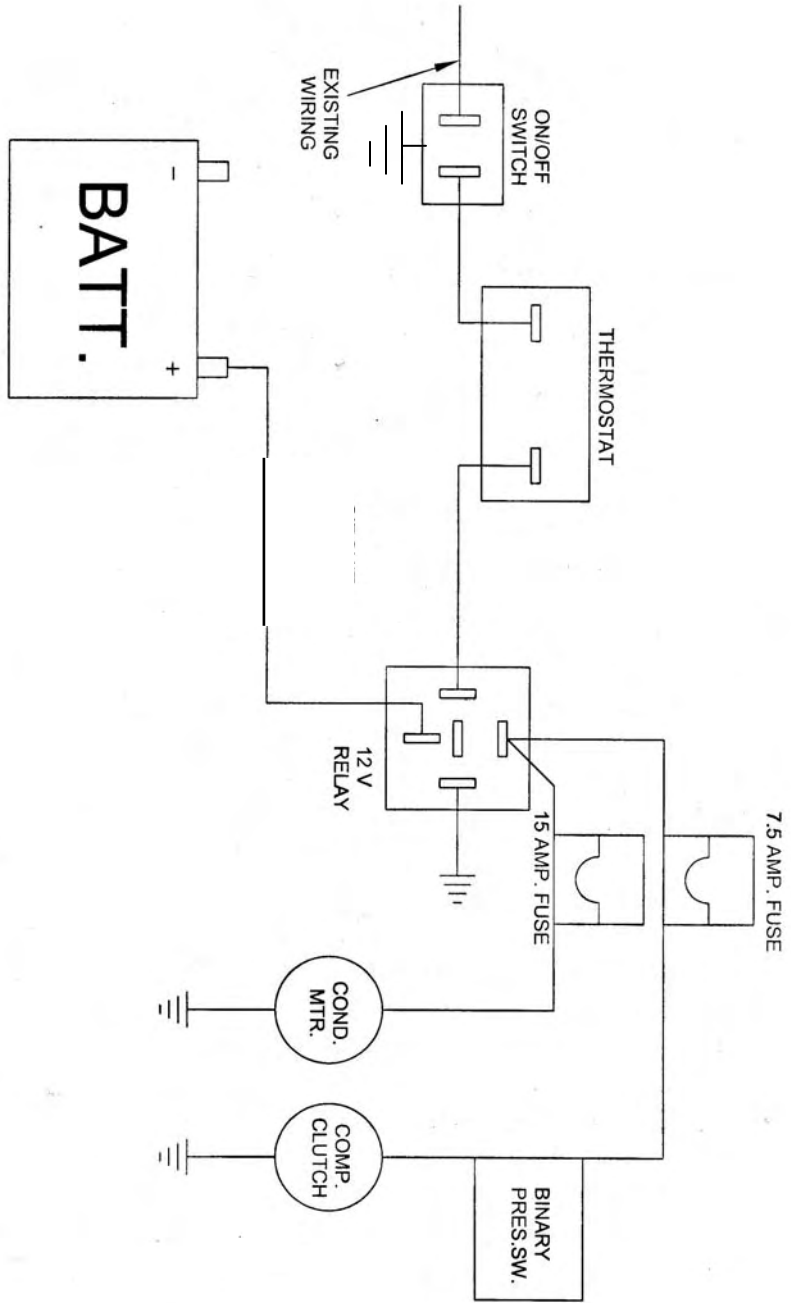
14g black wire running with  
A/C hoses.

The wire to feed the thermostat power exists in the harness. Use a test light with the key on and the a/c switch on to identify the correct wire.


Install thermostat as shown.

Connect the long wire in loom assembly to the other terminal on the thermostat. The other end of this wire connects to the relay located near the power distribution fuse box on the left of the cab.

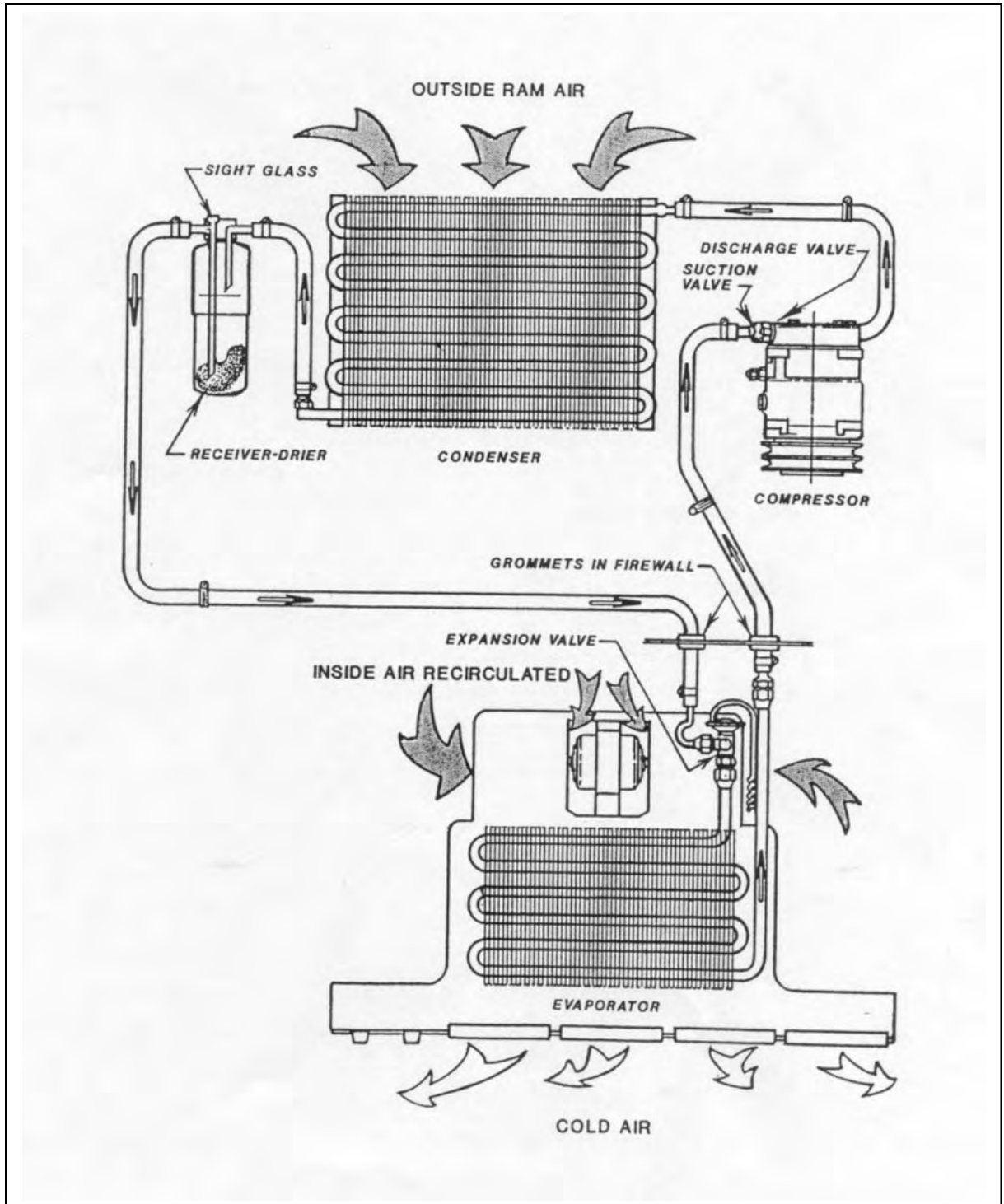




WITH EXISTING HEAT

		DRAWING TITLE:
		<b>410 WIRING DIAGRAM</b>
DRAWN BY:	J.S.	
APPROVED BY:	J.L.	
MODIFIED ON:	NOV. 14, 2005	
REV:	0	
UNITS:	SAE	

## Refrigerant Flow Pattern in a Standard Air Conditioning System





Final checks and charging:

1. Pressure test the system with nitrogen to at least 250 PSI and check all fitting and connections for leaks. The complete electrical system can be tested while there is pressure in the system as well.
2. Vacuum the system out with a good vacuum pump for ½ hour to 45 minutes. Ensure the system holds a vacuum to double check it for leaks. Add 4 oz of PAG oil to the system. Charge the system with 2 1/2 lbs of new 134A refrigerant. Run the system to test it. Check the temperature at the louvers. Add 134A refrigerant in 2 oz increments and check the air temp. A charge of 2 AND ¾ lbs should be about right.
3. Check that the thermostat is cycling the compressor off before coil freeze up problems can occur. The thermostat can be adjusted with the adjustment screw under the plastic cap on the body of the thermostat. See the thermostat setting procedures at the end of this instruction manual.

## 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.

- 1) 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.
- 5) 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.
- 6) 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
- 7) The area of the coil that the refrigerant inlet tube(s) occupy should be the coldest part of the coil.
- 8) 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.

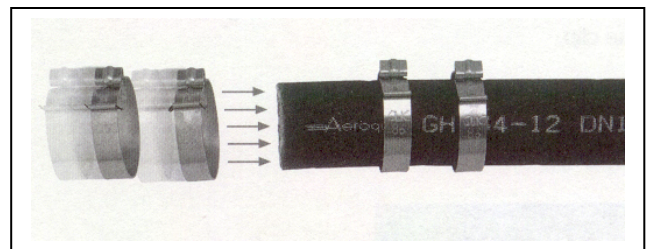
If the thermostat doesn't cycle off after a reasonable cool down period, and the air outlet temperature has dropped below 40° F, the cut in and cut out settings should be adjusted until the compressor is cycling on and off regularly. Let the system run for a decent time period (at least 15 min) and then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

## Aeroquip E-Z Clip Assembly Instructions

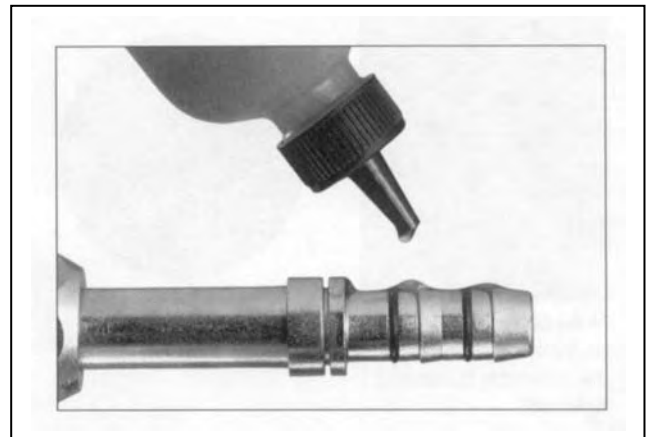
Step 1. Cut the hose to proper length with an appropriate cutting tool. Aeroquip's hand held hose cutter has been specially designed for cutting all non-wire reinforced hose, such as GH-134 Multi-Refrigerant hose. Be sure the cut is made square to the hose length.



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.



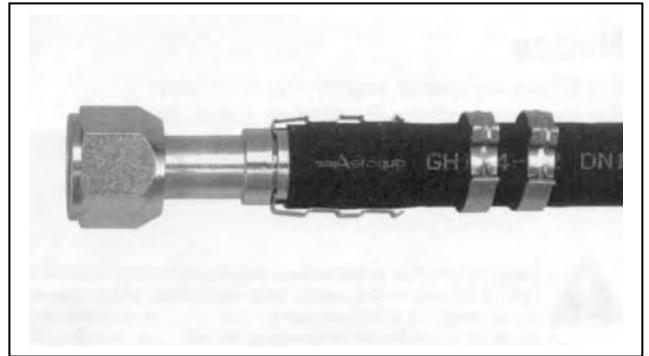
Step 4. Insert the nipple into the hose. To ensure that the nipple is fully inserted, check the gap between the cut end of the hose and the shoulder on the nipple. Care should be taken to avoid kinking or other damage to the hose during nipple insertion. NOTE: Be sure to wipe excess oil from the nipple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



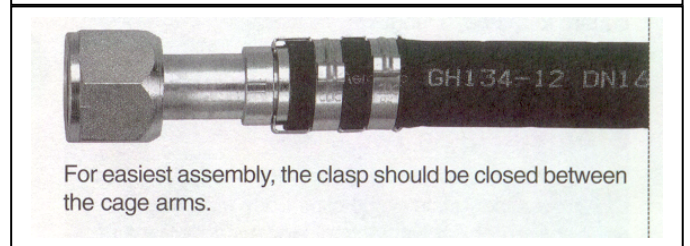
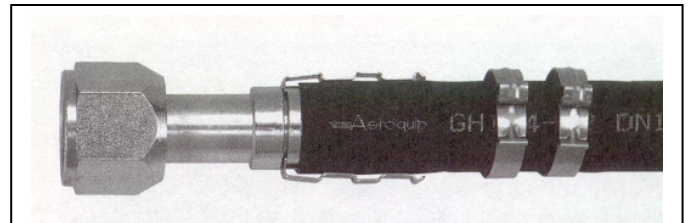


Step 5. Snap the cage into the groove on the nipple. The arms should extend over the hose length. When the cage has been correctly installed in the cage groove, the cage will be able to rotate in the groove. This step **MUST** be performed to ensure:

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.

