

**CATERPILLAR  
TH360B  
INSTALLATION  
INSTRUCTIONS**

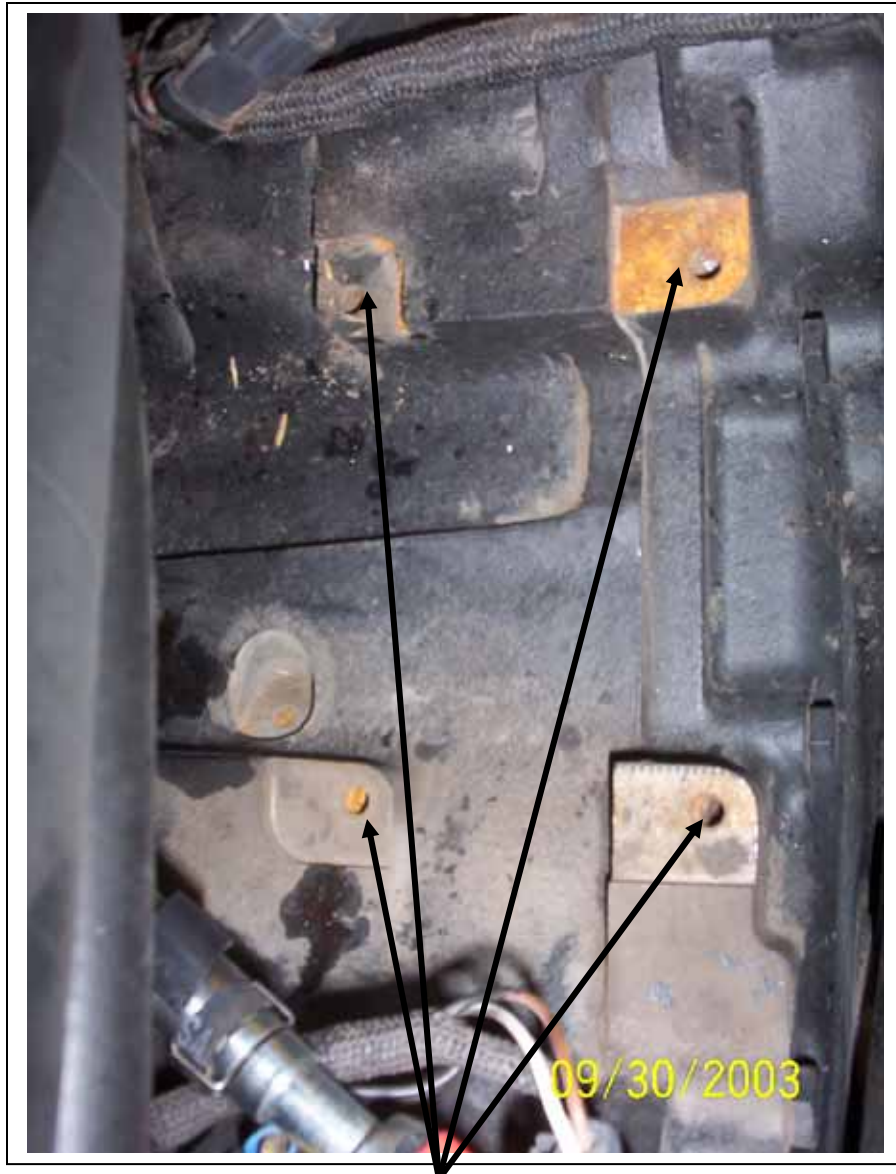


**PHONE: 1-800-267-2665**

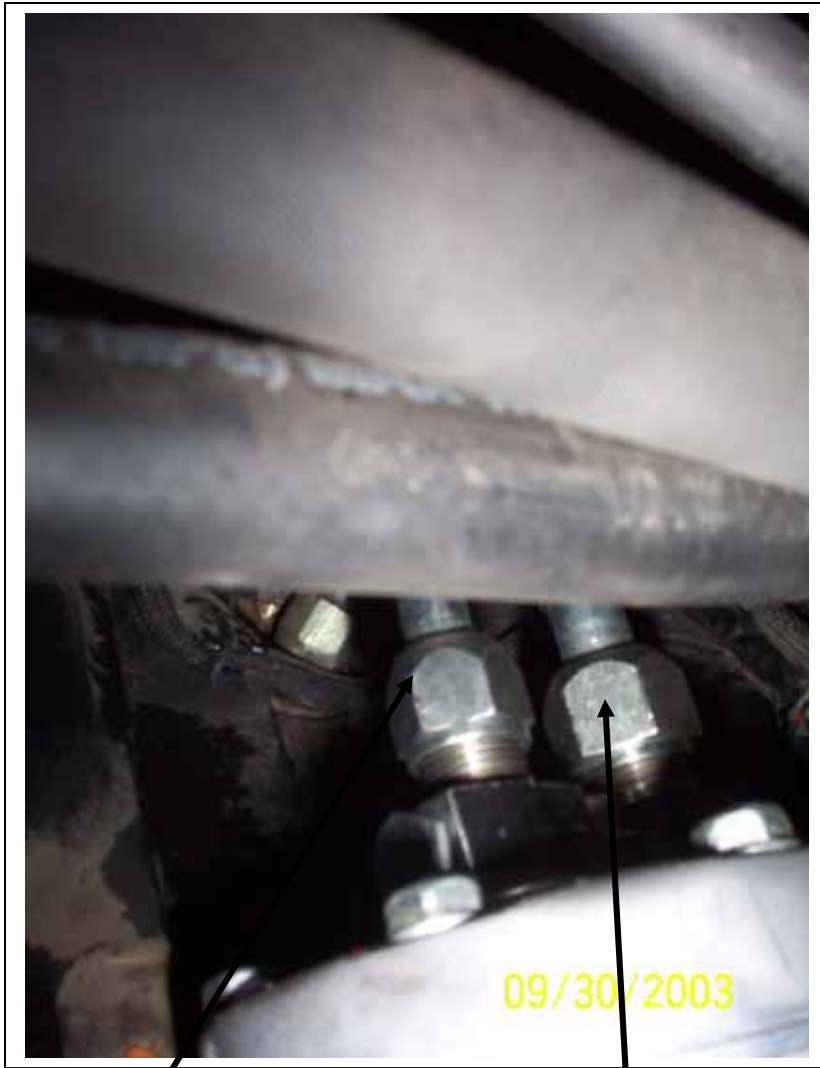
**FAX: 1-888-267-3745**

## COMPRESSOR MOUNT

The compressor mounts on the transmission behind the air cleaner. It runs off a longer 8 groove belt supplied in the kit. Remove the engine air cleaner to gain best access to the compressor mount area.



M8 mount holes for the direct mount compressor



13/32" hose  
straight fitting

1/2" hose straight fitting

Connect A/C hoses to the compressor before sliding into place and bolting down.



Compressor bolted into place

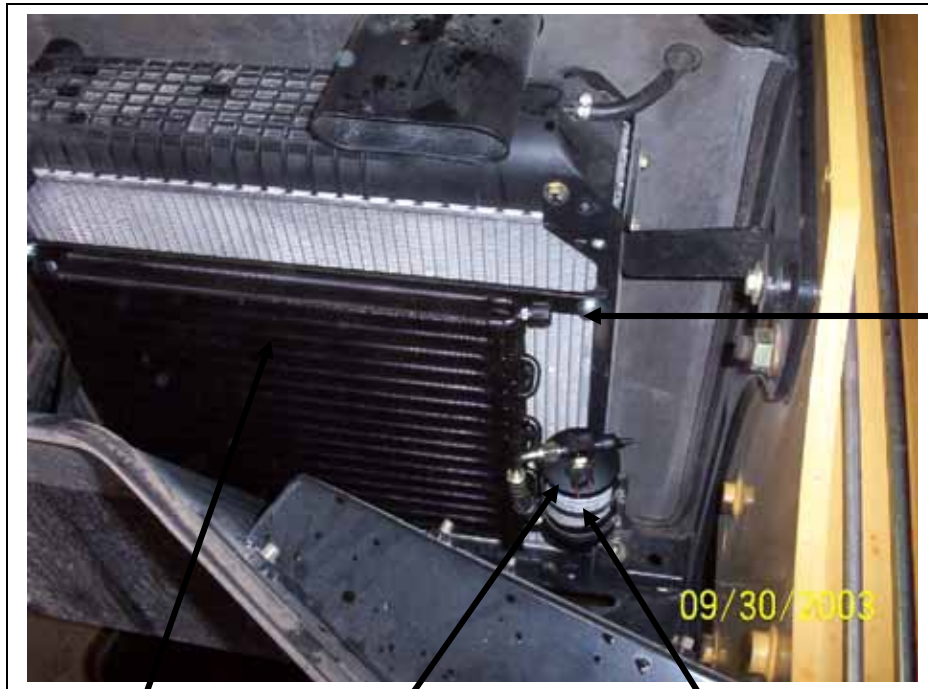


Oil fill plug and clutch wire point towards the cab.

Longer belt in place around the compressor. Check the alignment

## CONDENSER

The condenser mounts on the intake side of the radiator using the existing M8 holes. The receiver drier is pre mounted to the condenser frame.



M8  
mount  
bolt

Condenser

Binary pressure switch

Receiver drier



M8 mount bolts for the condenser frame.

## EVAPORATOR

The evaporator mounts beside the heater coil under the seat. Remove the plastic panels until the lid of the heater box can be removed.



Heater box area with lid removed

Remove and save this foam gasket.



Remove and discard this plate.



Disconnect the heater lines and unbolt the heater coil

This flange needs to be cut off the heater coil to make room for the A/C evaporator coil.



Carefully score the flange with a cut off wheel or grinder and break it off. Grind it flush with the fins of the heater coil.

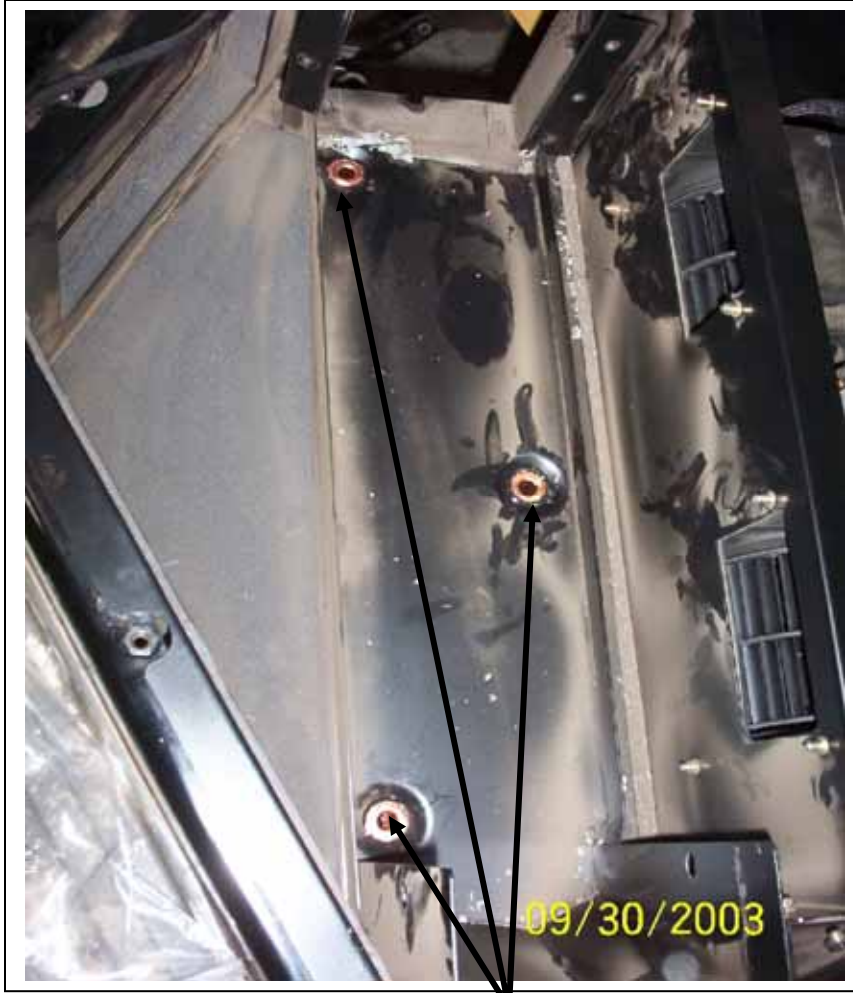


Flange removed from the coil.



Remove the three plugs in the bottom of the box to accommodate the drain tubes.





Use 5 min epoxy to glue the three copper drains into the holes in the box.



Copper drain tubes glued in place as seen from the bottom of the box. Install short lengths of drain tubes onto the copper extensions including the drains restrictor. Use the # 4 gear clamps.

Thermostat probe exits the cab through this grommet and then comes into the heater box between the heater and the A/C coils.

Thermostat probe inserted into the evaporator coil.



Remount and reconnect the heater coil.

Slip the evaporator coil in beside the heater coil.

Use the original M6 bolts to secure the fitting end of the coil.



The other end of the evaporator coil slips between the heater coil and box flange, This sandwiches the coil in place.



Re-install the foam block.

Re-install the end bracket overtop of the coil outlets.

## ELECTRICAL



Thermostat probe and 14 gauge clutch wire pass through this grommet.

Thermostat

Clutch wire connected to the thermostat.



Connect the other end of the ATO fuse holder to the thermostat. Mount the thermostat just ahead of the blower switch. Drill a 7/16" hole in the plastic to mount it.

White wire going from the clutch terminal on the blower switch to a switch block. Connect it to an inline ATO fuse holder and install a 7.5 Amp ATO fuse in it.



Thermostat, decal and knob in place. Test for full 12Volt power to the thermostat on all three blower speeds.



Connect the clutch wire to the wire on the compressor.



Binary switch on drier.

Clutch wire from the compressor.

Clutch wire from the thermostat.

TH220/360/460B

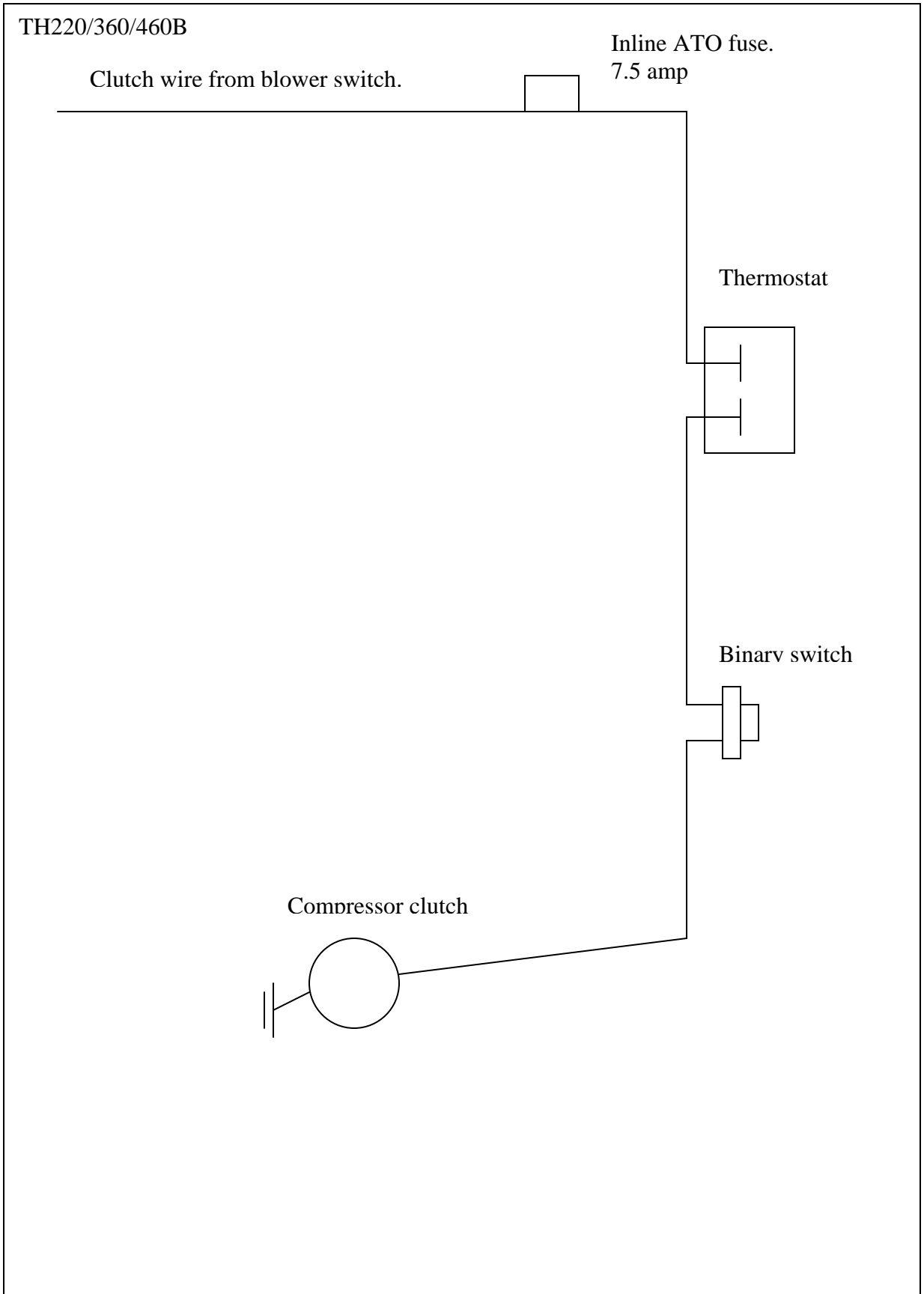
Clutch wire from blower switch.

Inline ATO fuse.  
7.5 amp

Thermostat

Binary switch

Compressor clutch





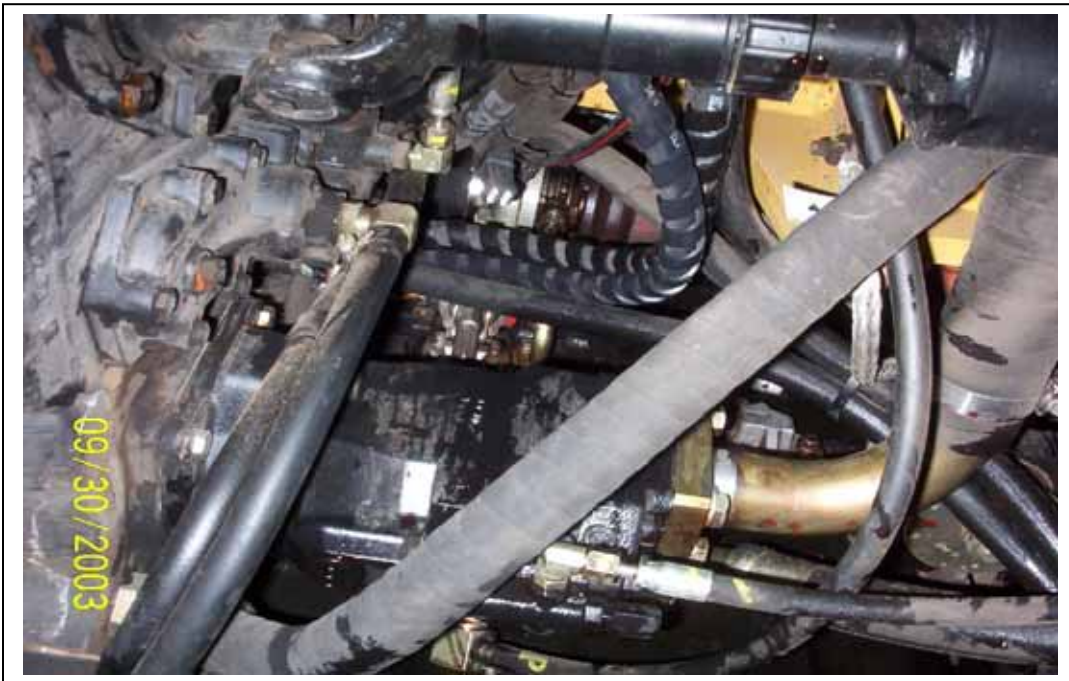
## HOSE RUNS



13/32" straight fitting attached to the compressor

1/2" straight fitting attached to the compressor.

Connect the hoses to the compressor before sliding into place and bolting down.



A/C hoses coming from the compressor.



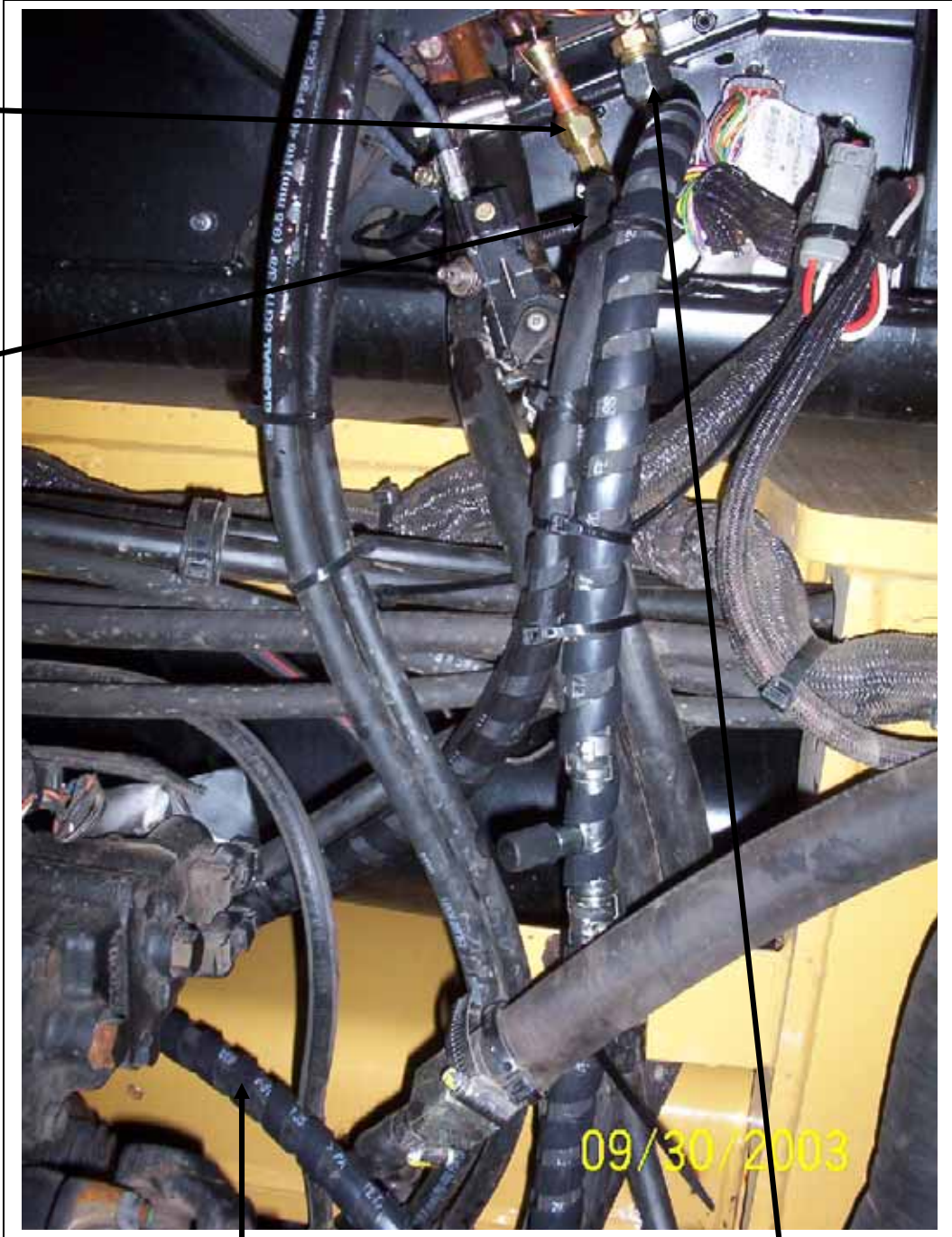
5/16" hose coming from the drier

13/32" hose going up to the condenser.

1/2" suction side access port.

Expansion valve

5/16" straight fitting at the expansion valve

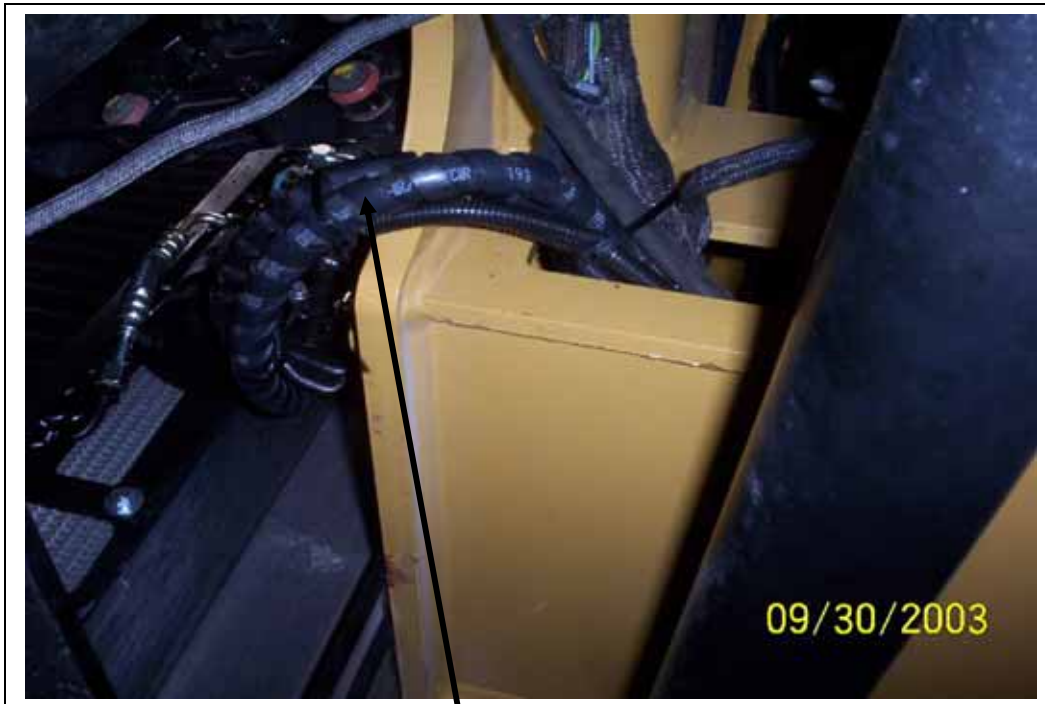


13/32" hose running towards the condenser

1/2" 90o fitting at the evaporator.



5/16" hose running between the drier and the expansion valve.



5/16" hose, 13/32" hose and the clutch wires entering the condenser area after passing through a double walled area of the frame.



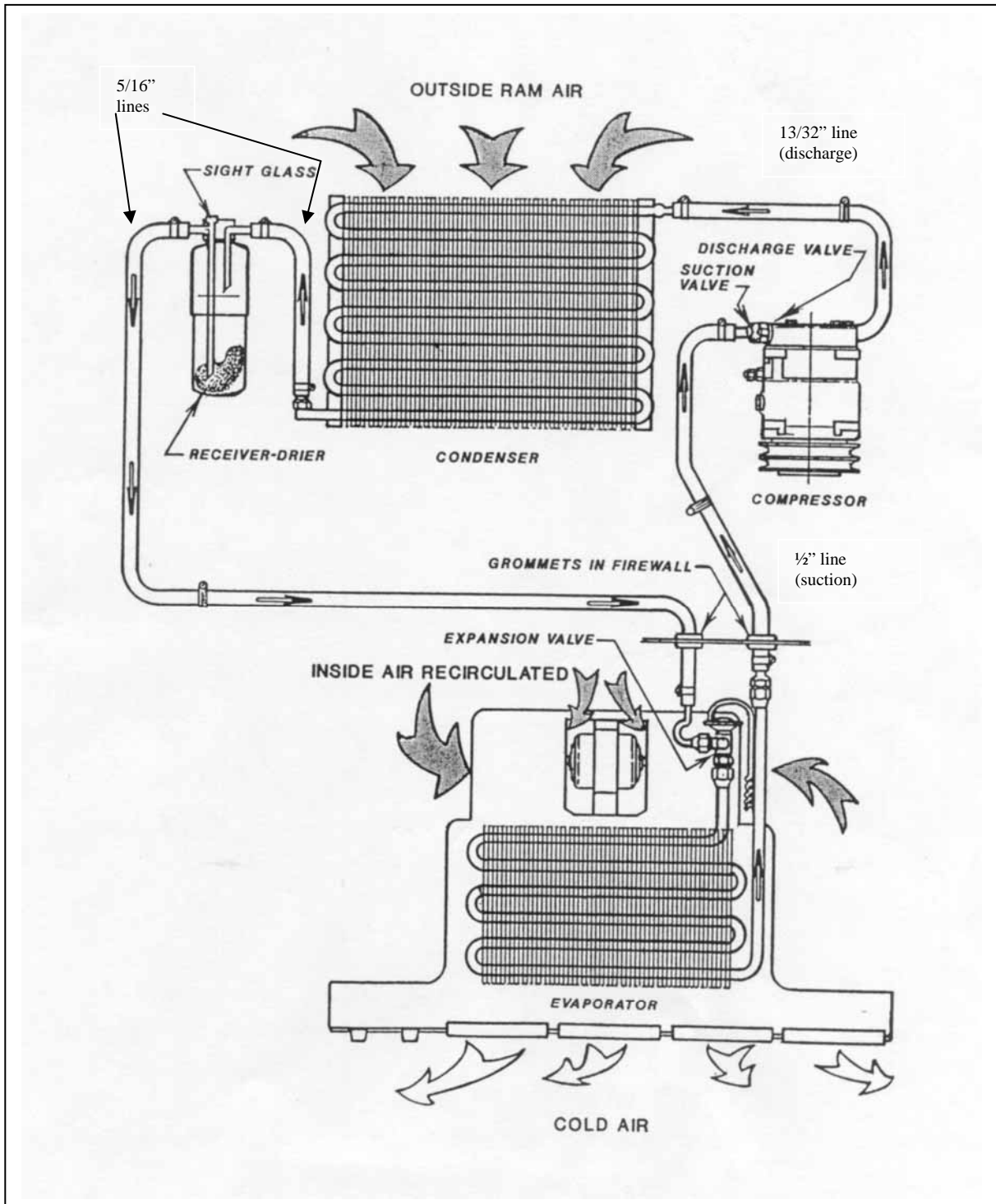
13/32" 90o fitting with access port at the top fitting on the condenser.

5/16" 90o fitting connected to the outlet of the drier.

## **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 2.75 to 3 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.

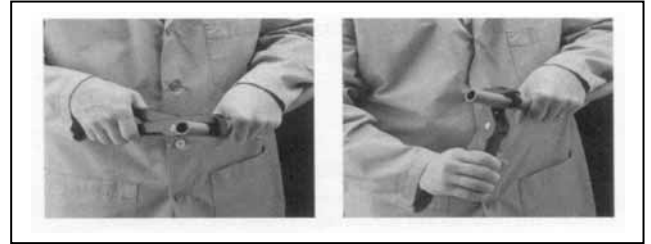


Once the probe is inserted, the A/C system needs to be tested. Run the system to ensure that the thermostat is cycling the compressor off at the appropriate temperature. A core temperature ranging between 25° and 30° F should cause the thermostat to cycle off. The air temperature at the vent outlet closest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

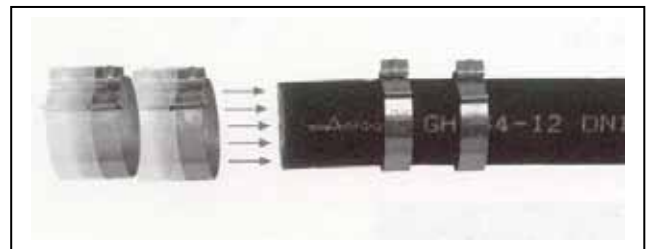
If the thermostat doesn't cycle off after a reasonable cool down period, and the air outlet temperature has dropped below 40° F, the cut in and cut out settings should be adjusted until the compressor is cycling on and off regularly. Let the system run for a decent time period (at least 15 min) and then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

## Aeroquip E-Z Clip Assembly Instructions

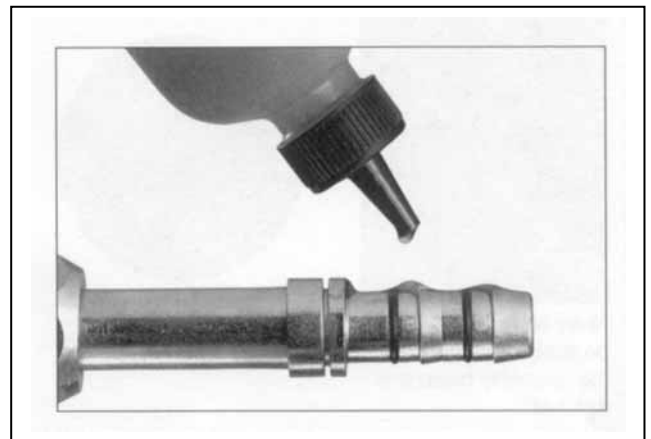
Step 1. Cut the hose to proper length with an appropriate cutting tool. Aeroquip's hand held hose cutter has been specially designed for cutting all non-wire reinforced hose, such as GH-134 Multi-Refrigerant hose. Be sure the cut is made square to the hose length.



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.

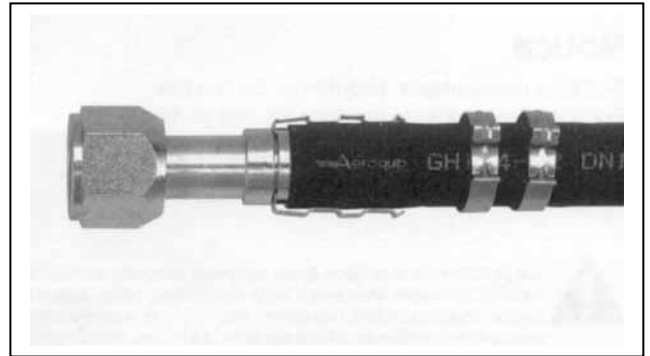


Step 4. Insert the nipple into the hose. To ensure that the nipple is fully inserted, check the gap between the cut end of the hose and the shoulder on the nipple. Care should be taken to avoid kinking or other damage to the hose during nipple insertion. NOTE: Be sure to wipe excess oil from the nipple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

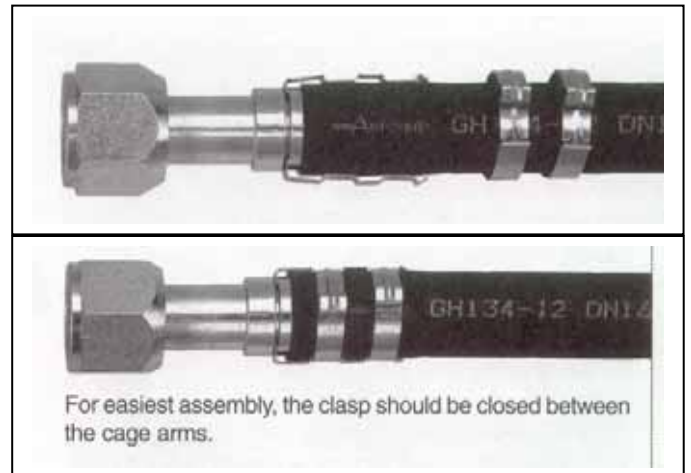


Step 5. Snap the cage into the groove on the nipple. The arms should extend over the hose length. When the cage has been correctly installed in the cage groove, the cage will be able to rotate in the groove. This step **MUST** be performed to ensure:

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.

