

INSTALLATION INSTRUCTIONS

CAT 966F II WHEEL LOADER



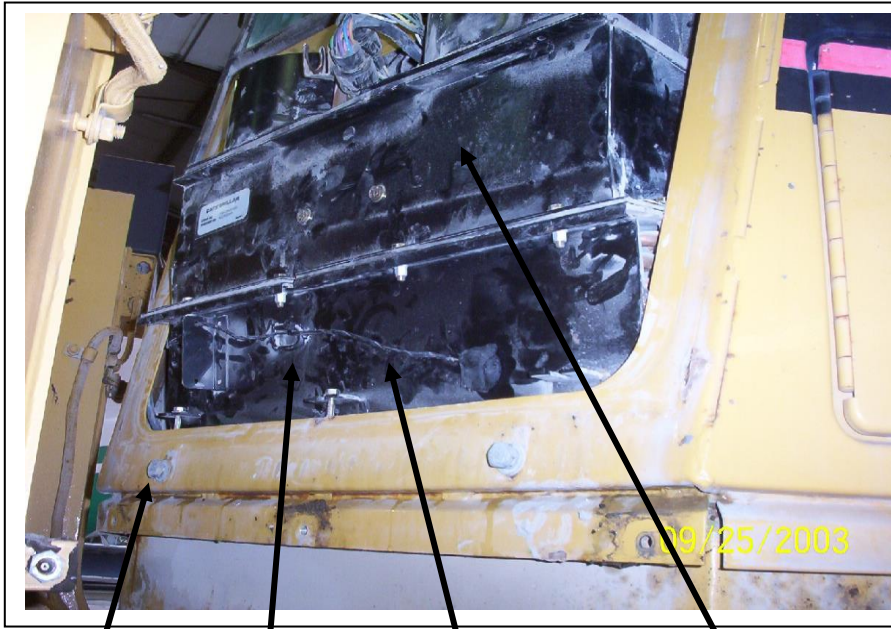
HAMMOND AIR CONDITIONING LTD
INGERSOLL, ONT.
1-800-267-2665
1-888-267-3745 (FAX)

INSTRUCTIONS

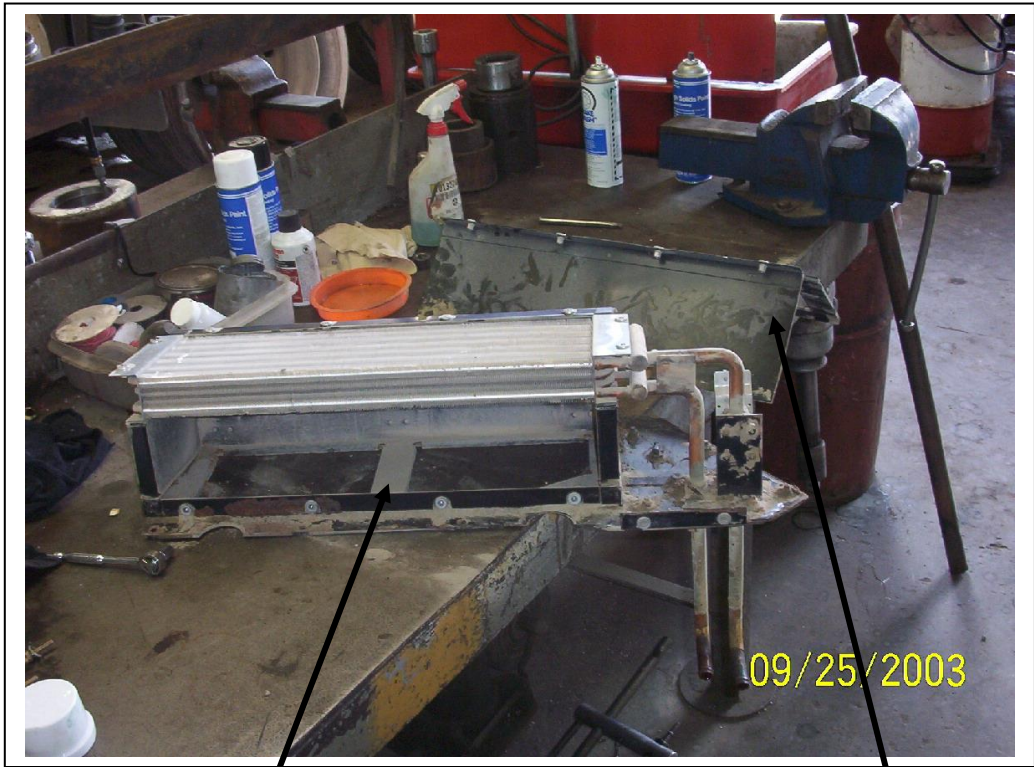
EVAPORATOR COIL:

The evaporator coil mounts with the heater coil assembly, which is mounted in front of the operator's location. This assembly is accessible from the front of the cab.

1. Remove the access panel from in front of the cab. This will allow access to the heater/blower area. Remove the heater box from the machine. It is easier to get the heater box out of the cab if the machine is articulated all the way to the right side.
2. Remove the cover from the heater box and remove the spacer blocks from under the heater. The process is easiest if the heater core is completely removed.
3. Insert the evaporator assembly into location. One end cap is provided to replace the original spacer on the fitting end of the box.
4. Secure the refrigerant lines to the bracket extending down. A new plate is provided with cutouts for the lines. **The washer nipple will have to be re-installed on the plate**.
5. Re-install the heater core and re-secure the cover.
6. Install the thermostat probe into the coil at this time, as it will be easier than when the unit is back in the machine. There is a hole present for this in the heater core.
7. Remove the knockouts on the bottom of the cab directly below the heater box location. Glue in the copper drain tube pieces using a quick set epoxy.
8. Re-install the heater box and blower box into the cab.
9. After testing , install the front access panel.



Bolts for access cover Heater box Thermostat probe in place through existing knockout Blower box



Heater box removed from cab Heater box lid



Locator pins on box

End cap

Locator pins on heater coil



End cap flipped over so it cups out to accommodate the evaporator coil

New plate supplied with a cutout for the A/C lines. Reuse the nipple for the window washer hose.

Heater box disassembled



The A/C pipe work may have to be bent slightly to fit down through the slot

Heater coil back in place

Evaporator coil in place

End cap supplied on evap coil



Slotted replacement plate

Use tar tape to seal the area around the A/C lines coming out of the box and through the plate.

Heater cover re-installed



Heater coil

Use silicone or tar tape to seal any air leaks around the end caps.



ReUsed nipple for the windshield washer hose.

Slotted plate

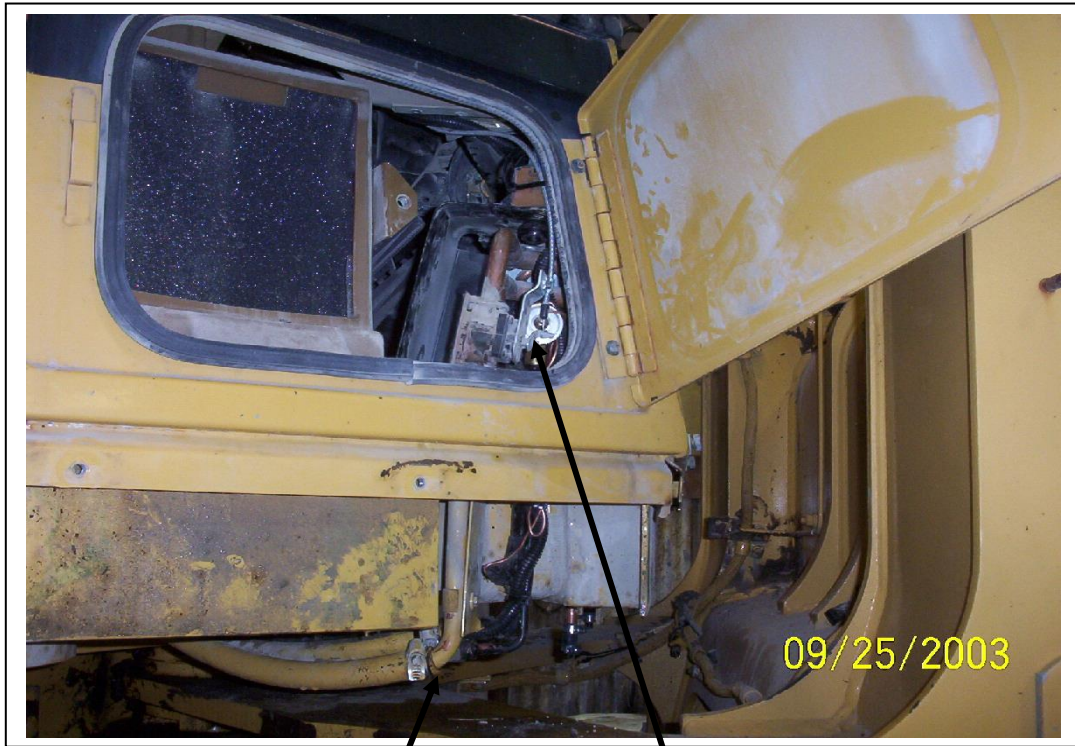
Seal this area with tar tape



Remove knockouts and glue in copper drain extensions before replacing the heater A/C box.



Install short sections of drain tube and restrictor once the epoxy is hard.



A/C hoses connected to the A/C pipes.

RE-connect the heater control cable and run the clutch wire up with the A/C lines through the tar tape.

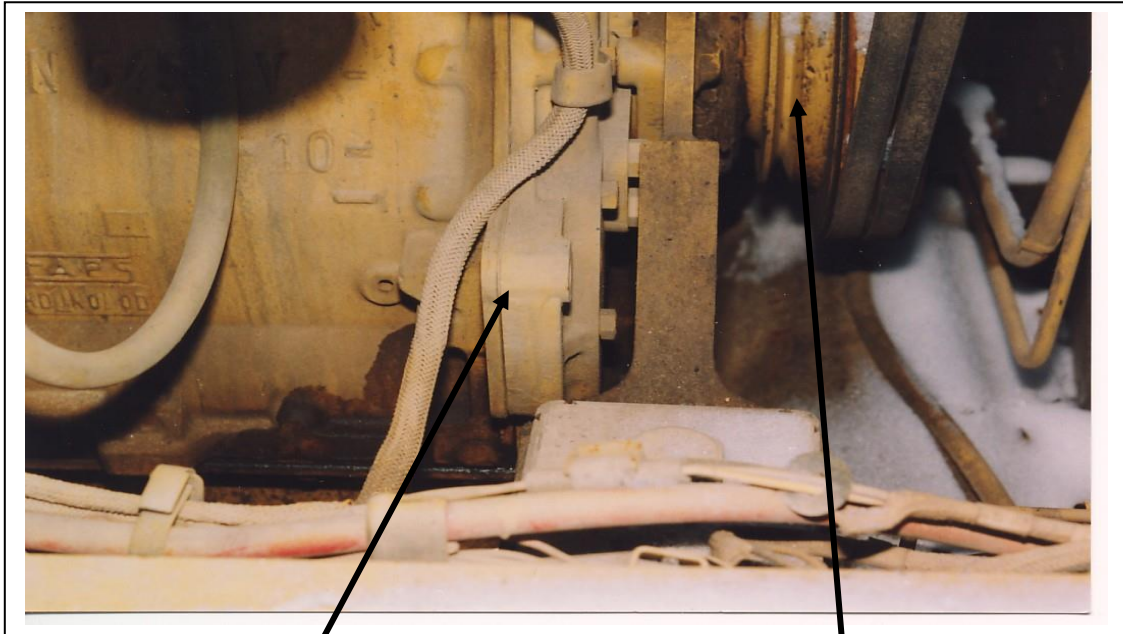


A/C hoses connected and secured to heater lines.

COMPRESSOR:

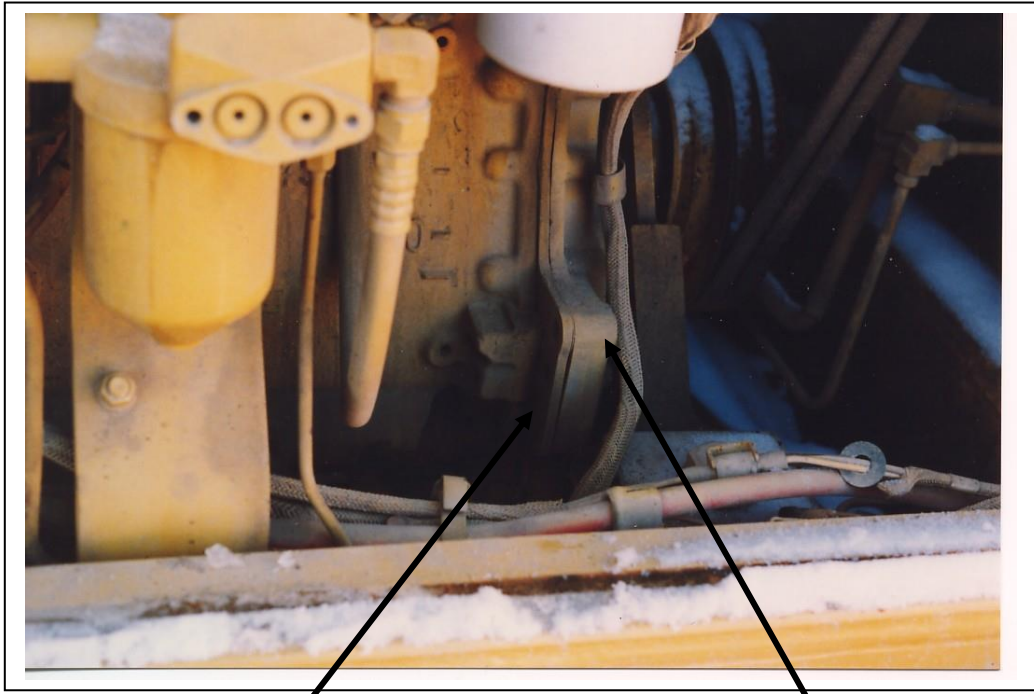
The compressor mounts on the left hand side of the engine and drives off of an open pulley on the crankshaft. The compressor mount bolts on the side of the engine mount casting as shown in the picture.

- 1) Install the compressor mount. The mount aligns to existing threaded holes and uses the hardware provided in the kit.
- 2) Install the compressor onto the mount using the hardware provided.
- 3) Install belt and tighten.



Compressor mount area. 2 threaded 3/8" holes and 1 through hole.

Open pulley on crank lines up with rear pulley on compressor.



3/8" threaded holes use 3/8" x 1 1/2" hardware.

Open hole use 3/8" x 2 1/2" bolt and nut

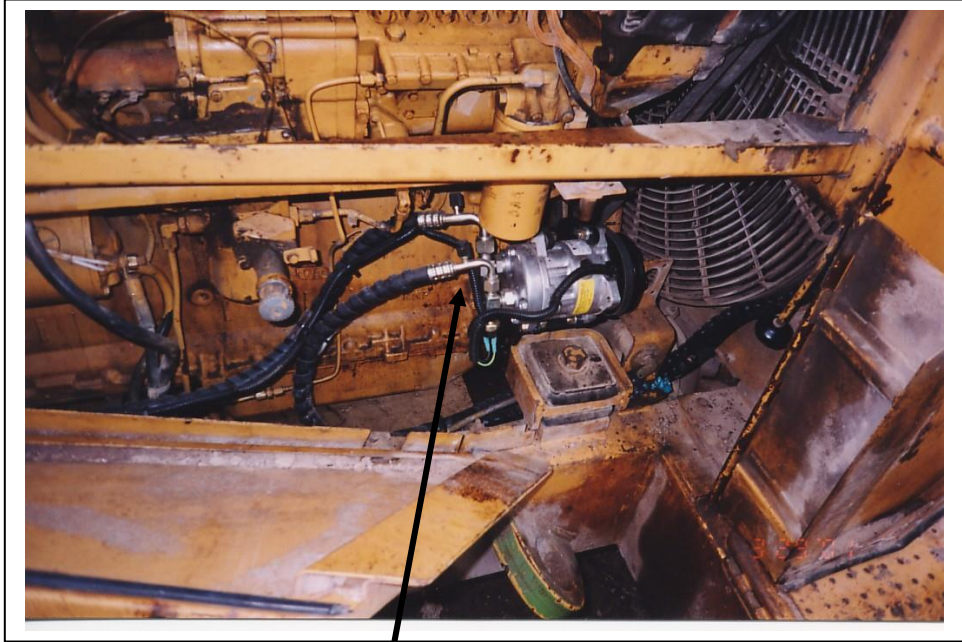


Binary switch on 13/32" rotolock fitting.

Compressor in place.

Belt on rear groove of compressor.

966E shown

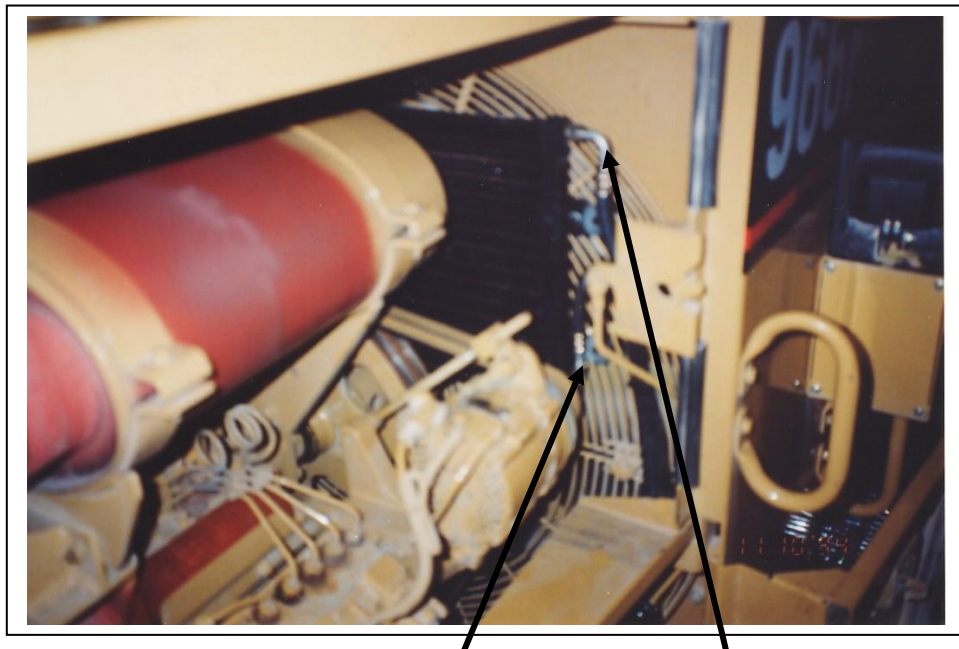


Keep rotolocks pointed a bit towards the engine block so fittings are clear of the fuel filter.

CONDENSER:

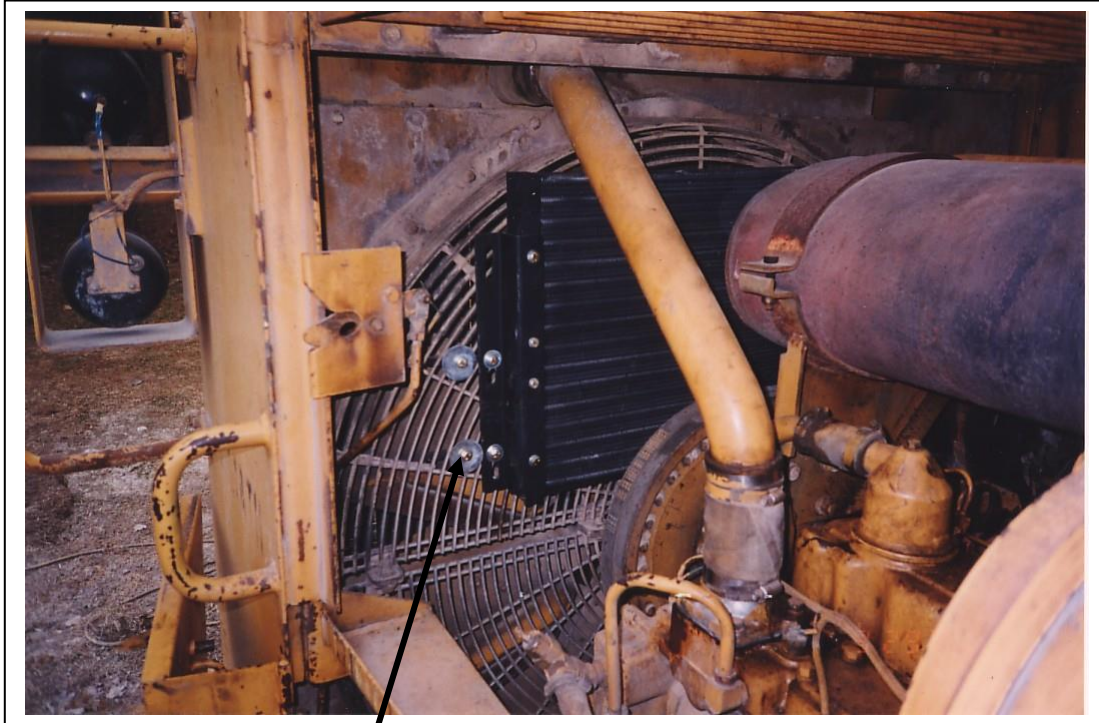
The condenser mounts on the engine side of the fan screen using the 'Z' brackets and locking bars supplied. **Ensure the fittings are oriented toward the compressor side and that the larger of the two fittings is at the top**.

1. Slide the condenser and frame in across the face of the fan screen above the fan hub.
2. Slip the locking bars through the fan screen and rotate to the point when the bars are at an angle to the fan screen bars.
3. Tighten the bars into place and 'lock' with the extra bolts and large flat washers supplied.



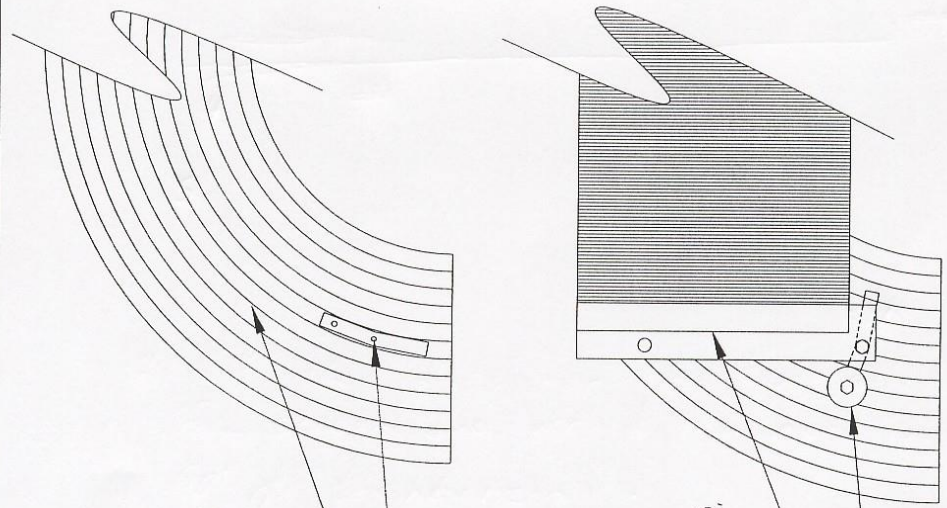
Straight 5/16" fitting 90° 13/32" fitting

****NOTE:**** Condenser shows older mount bracket setup. New bracket is a longer 1 piece setup.



2nd retaining bolt on spinlock bar. Condenser coil can be removed leaving the spinlock bars in place.

Non fitting end of condenser with new bracket design.



SLIP THE SPINLOCK
BETWEEN THE FAN
SCREEN BARS

FAN SCREEN
SPINLOCK

AND ROTATE 90 DEG.
AND TIGHTEN DOWN

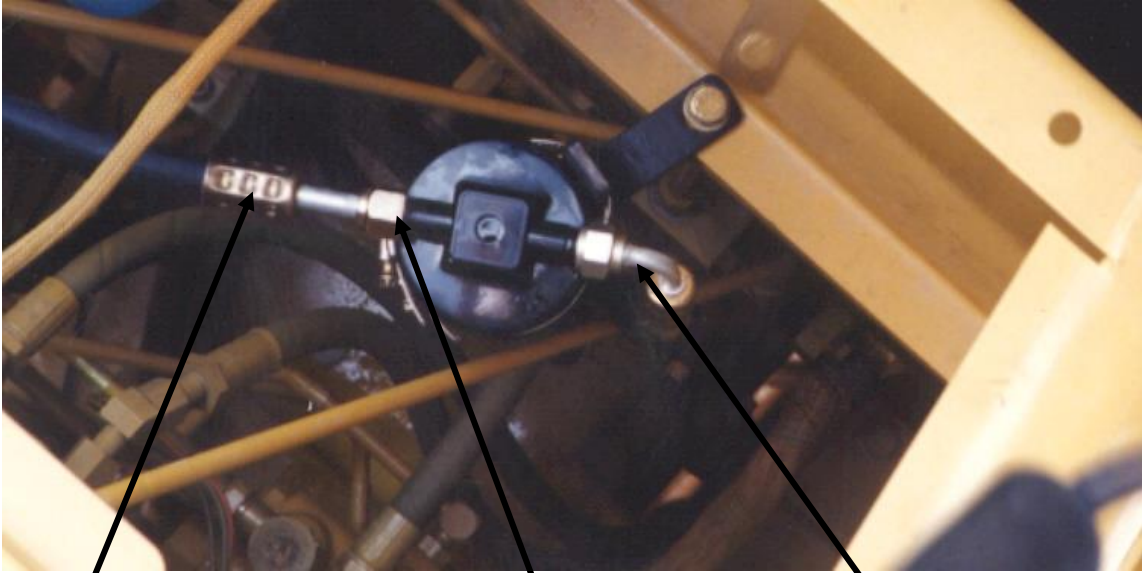
CONDENSER
FENDER WASHERS

DRAWING TITLE:		SPINLOCK INFO.	
DRAWN BY:	J.S.	REV:	0
APPROVED BY:	J.L.	UNITS:	S.A.E.
MODIFIED ON:	MAR. 15, 2002		

RECEIVER DRIER:

The receiver drier is mounted at the back of the cab in the compartment with the brake reservoirs.

1. The drier bracket is bolted to an existing location with the hardware provided in the kit. (see picture for approximate location)
2. Attach the drier to the bracket with the gear clamps provided.
3. Orient the drier so the 'INLET' fitting is to the outside.



This fitting will be a 90⁰ fitting

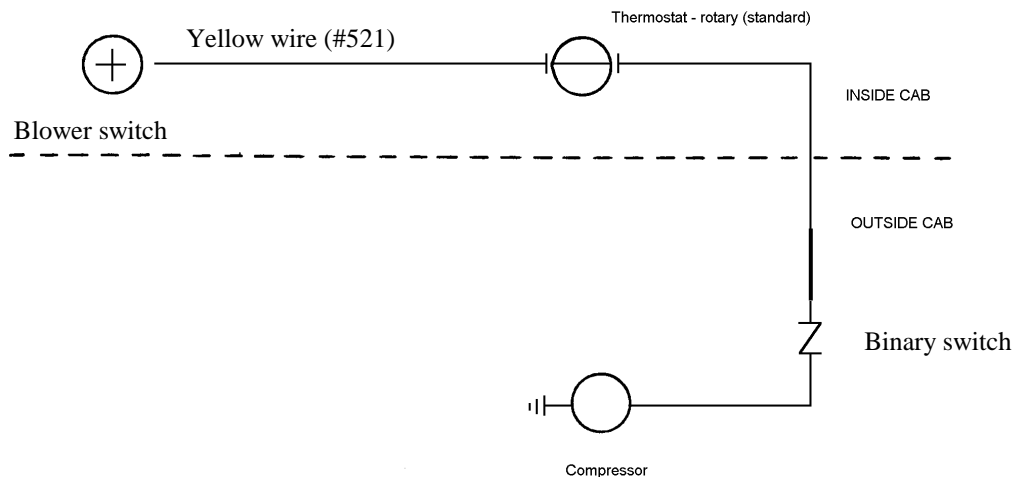
Inlet side of drier

Outlet to the evaporator.

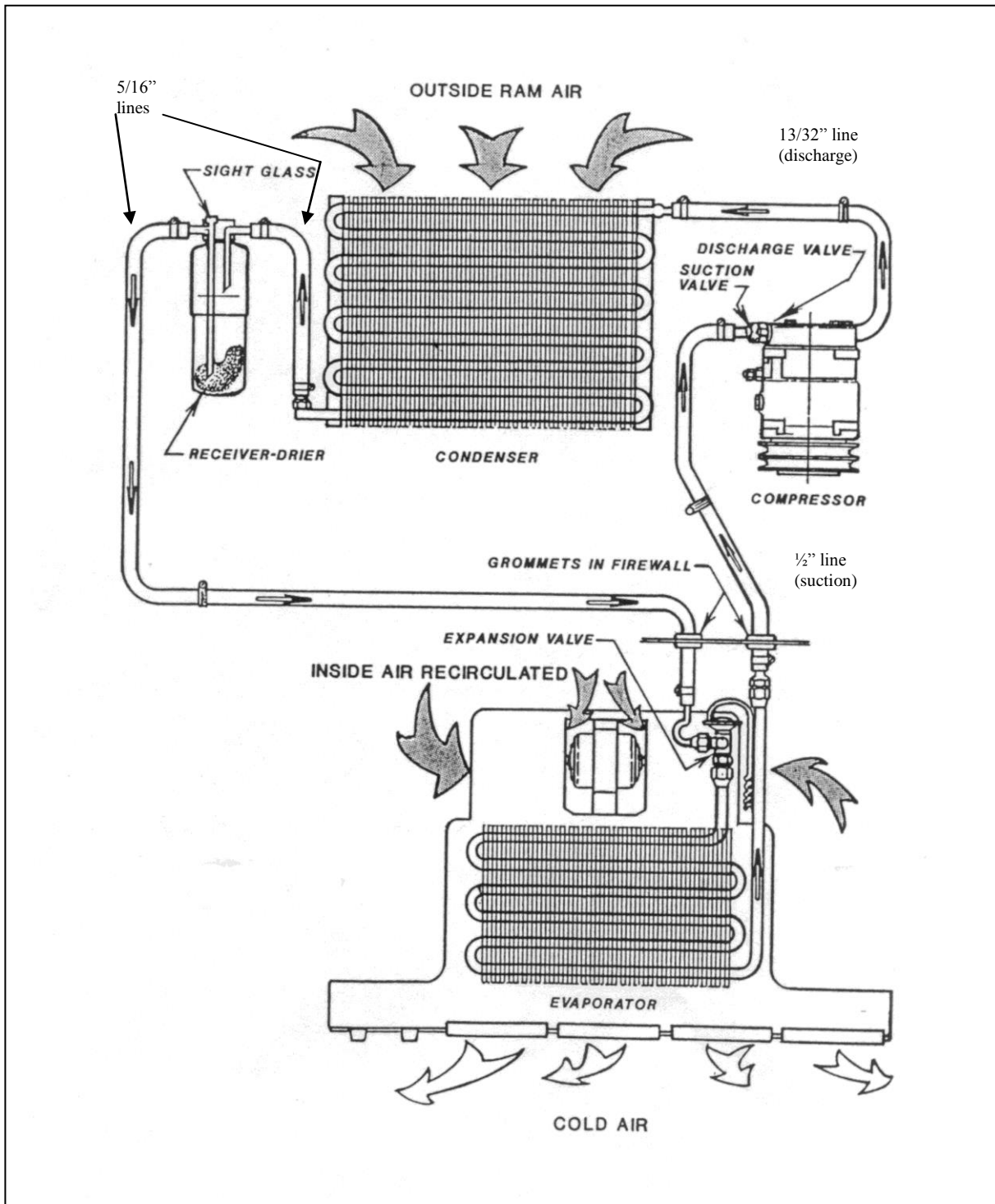
Drier in place at back of cab

ELECTRICAL:

Mount the thermostat on the evaporator cover somewhere near the blower motor. Find the yellow (#521) clutch wire running off the blower switch and cut the wire out of the bundle. Extend the wire with enough length to reach the thermostat terminal. Crimp on a female spade connector and install the wire to the thermostat. Connect the 14ga black clutch wire to the other terminal on the thermostat and route it down out of the heater compartment and along with the 5/16" hose. At the pressure switches, connect the clutch wire to the first press switch lead. Connect the other lead off the first switch to one lead of the second switch. Connect the last lead to the clutch wire on the compressor using a male and female spade connector.



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.

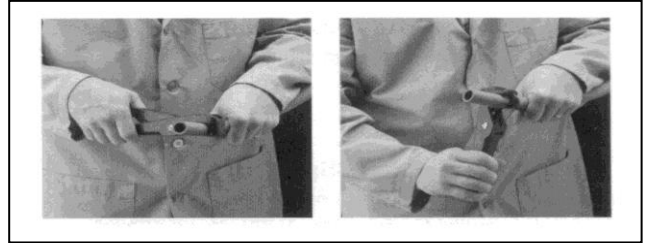
By looking at all these different factors, the area of an evaporator coil most likely to be the coldest can be determined.

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.

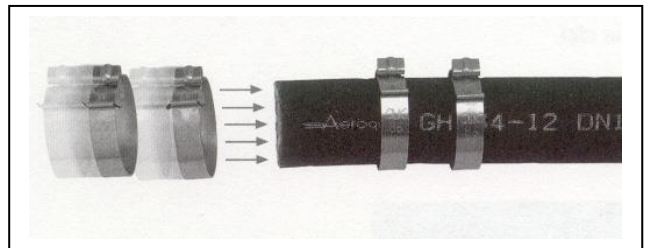
If the thermostat doesn't cycle off after a reasonable cool down period, and the air outlet temperature has dropped below 40° F, the cut in and cut out settings should be adjusted until the compressor is cycling on and off regularly. Let the system run for a decent time period (at least 15 min) and then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

Aeroquip E-Z Clip Assembly Instructions

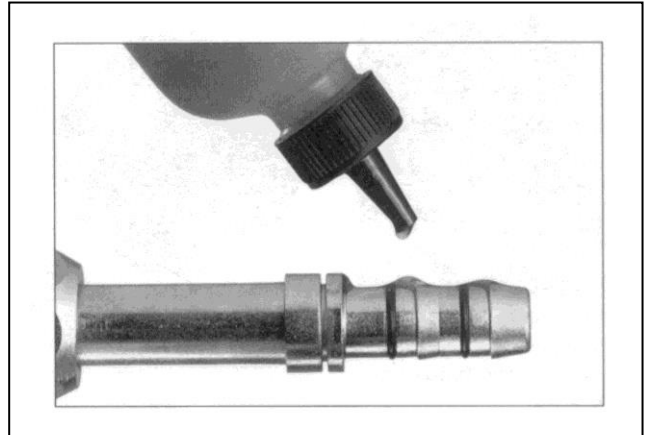
Step 1. Cut the hose to proper length with an appropriate cutting tool. Aeroquip's hand held hose cutter has been specially designed for cutting all non-wire reinforced hose, such as GH-134 Multi-Refrigerant hose. Be sure the cut is made square to the hose length.



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.

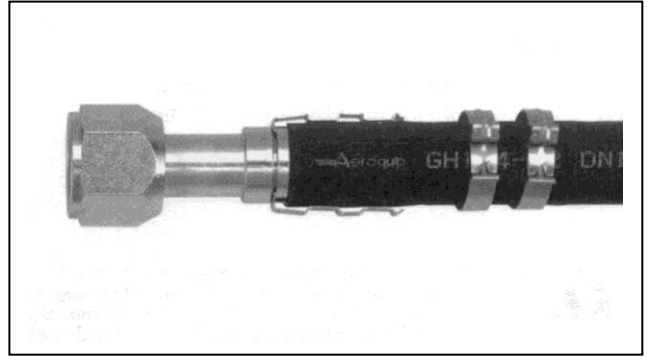


Step 4. Insert the nipple into the hose. To ensure that the nipple is fully inserted, check the gap between the cut end of the hose and the shoulder on the nipple. Care should be taken to avoid kinking or other damage to the hose during nipple insertion. NOTE: Be sure to wipe excess oil from the nipple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

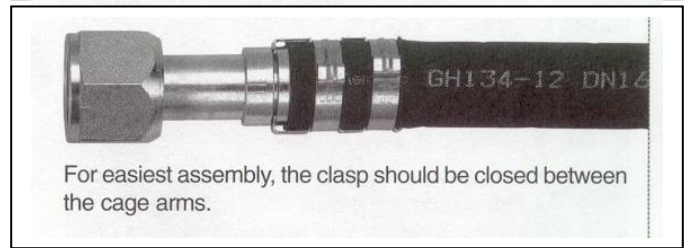
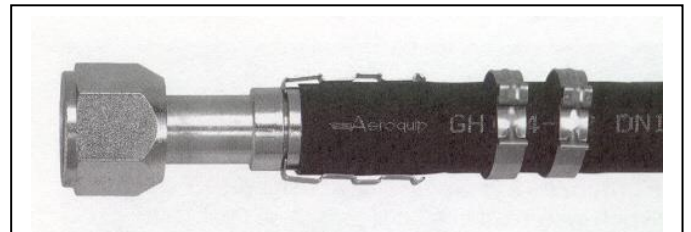


Step 5. Snap the cage into the groove on the nipple. The arms should extend over the hose length. When the cage has been correctly installed in the cage groove, the cage will be able to rotate in the groove. This step **MUST** be performed to ensure:

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.

