

INSTALLATION INSTRUCTIONS

CAT 950F II WHEEL LOADER



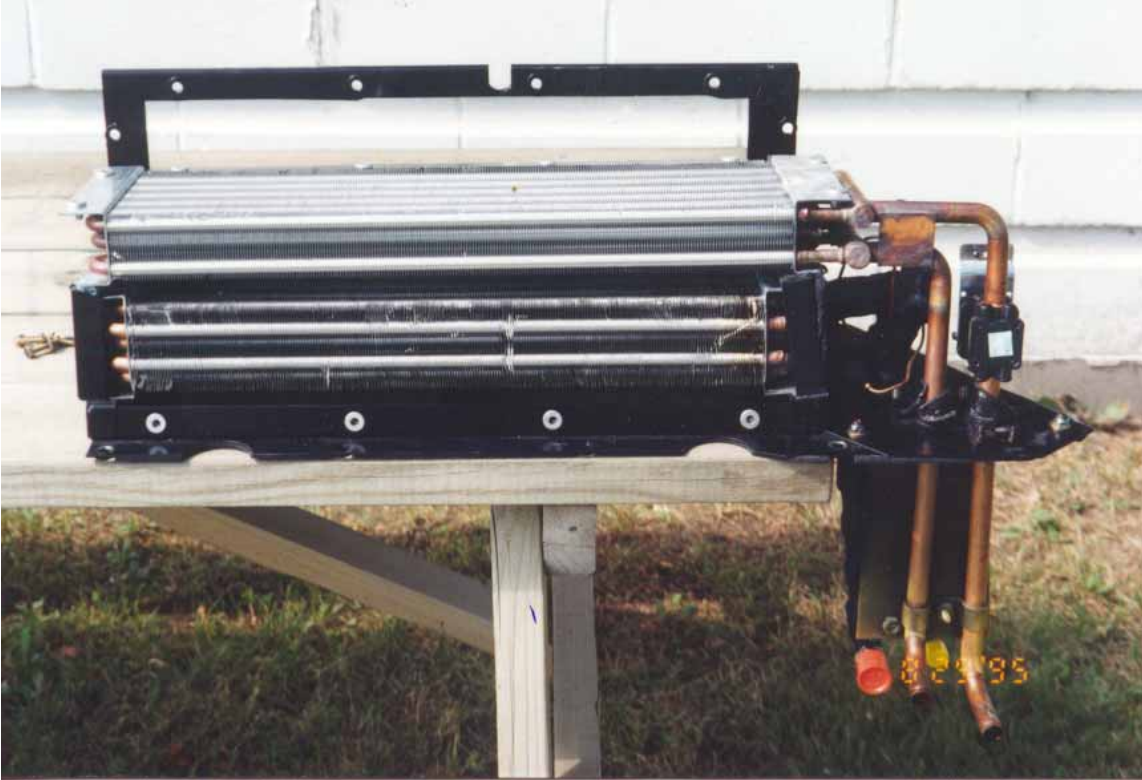
HAMMOND AIR CONDITIONING LTD
INGERSOLL, ONT.
1-800-267-2665
1-888-267-3745 (FAX)

CAT 950F II INSTRUCTIONS

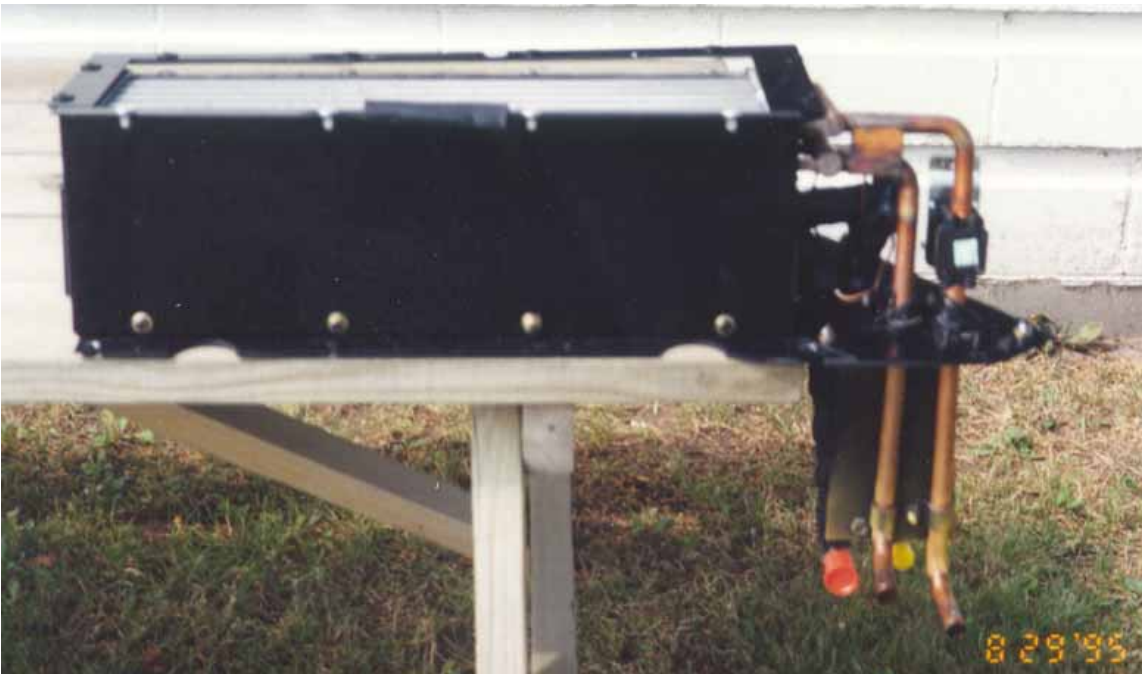
EVAPORATOR COIL:

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

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.
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. End caps are provided to replace the original spacers.
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.
7. Check to be sure the drains are clear and re-install in the machine.



Heat /cool assembly with cover off.



Assembly with cover on.



Assembly with thermostat and probe in place.



Underside of cab showing hoses to evaporator.

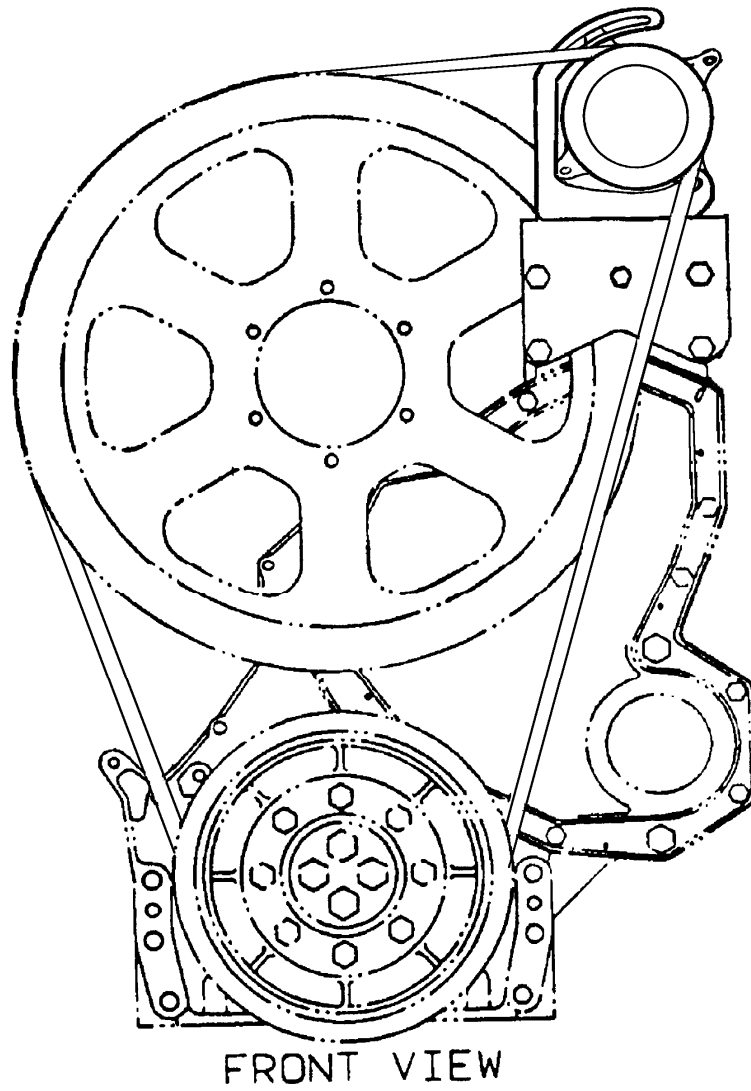
COMPRESSOR:

The compressor mounts on the right hand side of the engine and drives off of an open pulley on the crankshaft. The compressor mount bolts on the factory mount point just ahead of the injector pump.

- 1) Install the compressor mount.
- 2) Install the compressor onto the mount.
- 3) Install belt and tighten.



Compressor in place showing line runs.



Schematic of compressor mount layout and belt run.

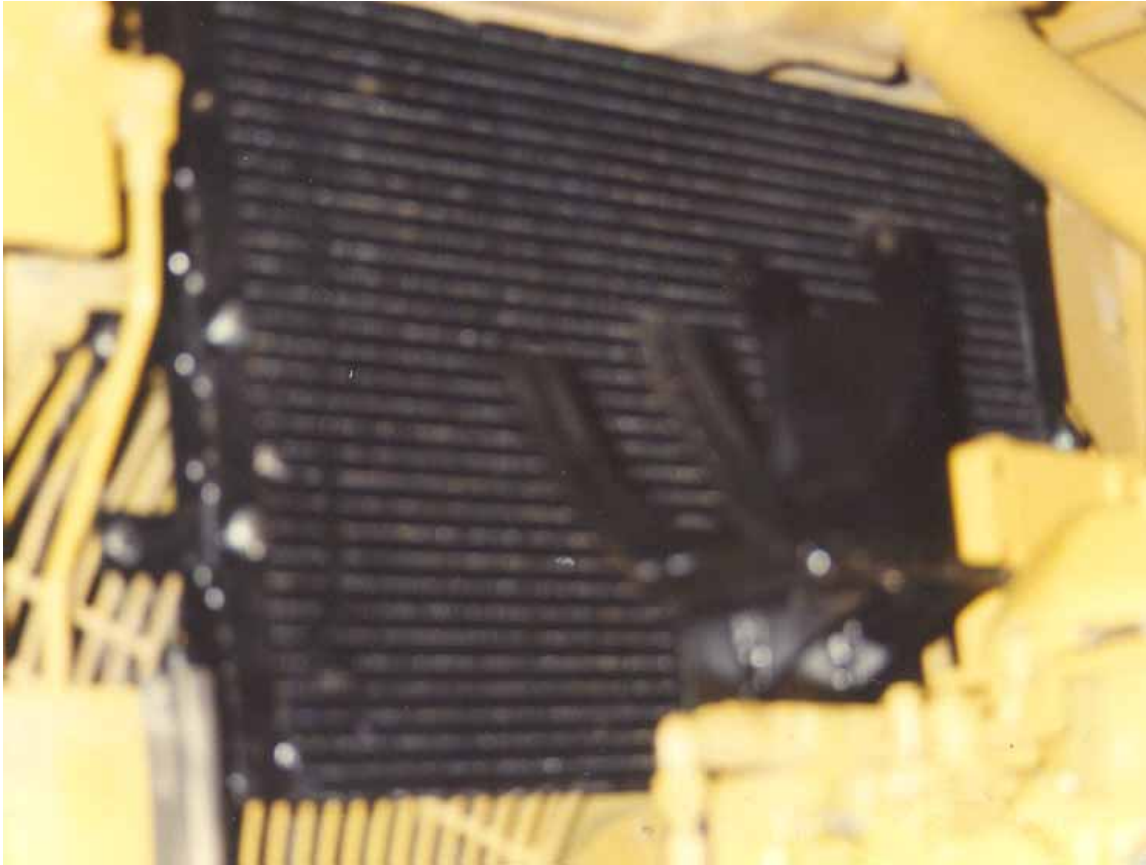
CONDENSER:

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 flatwashers supplied.



Condenser as viewed from left side.



Condenser as viewed from right side with compressor mount visible.

RECEIVER DRIER:

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

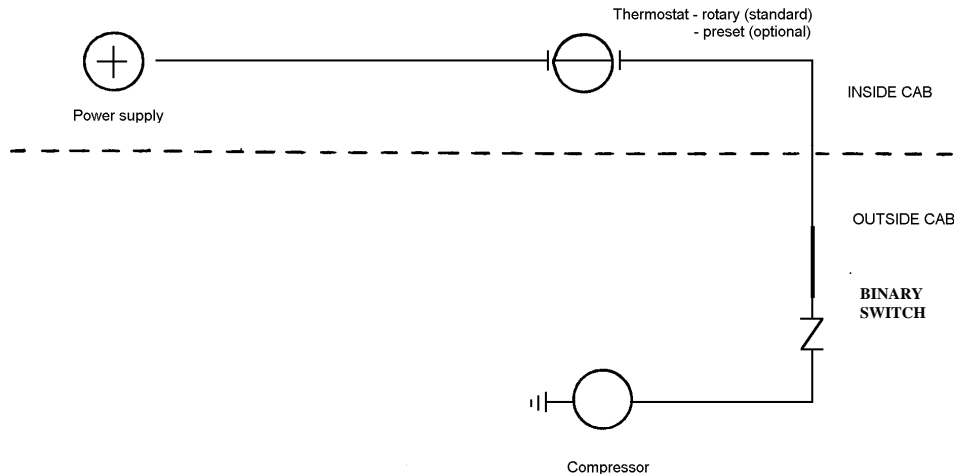
1. The drier bracket is bolted to an existing location with hardware already in place. (see picture for approximate location)
2. Attach the drier to the bracket with the gear clamps provided.
3. Orient the drier so the 'INLET' fitting is to the outside.



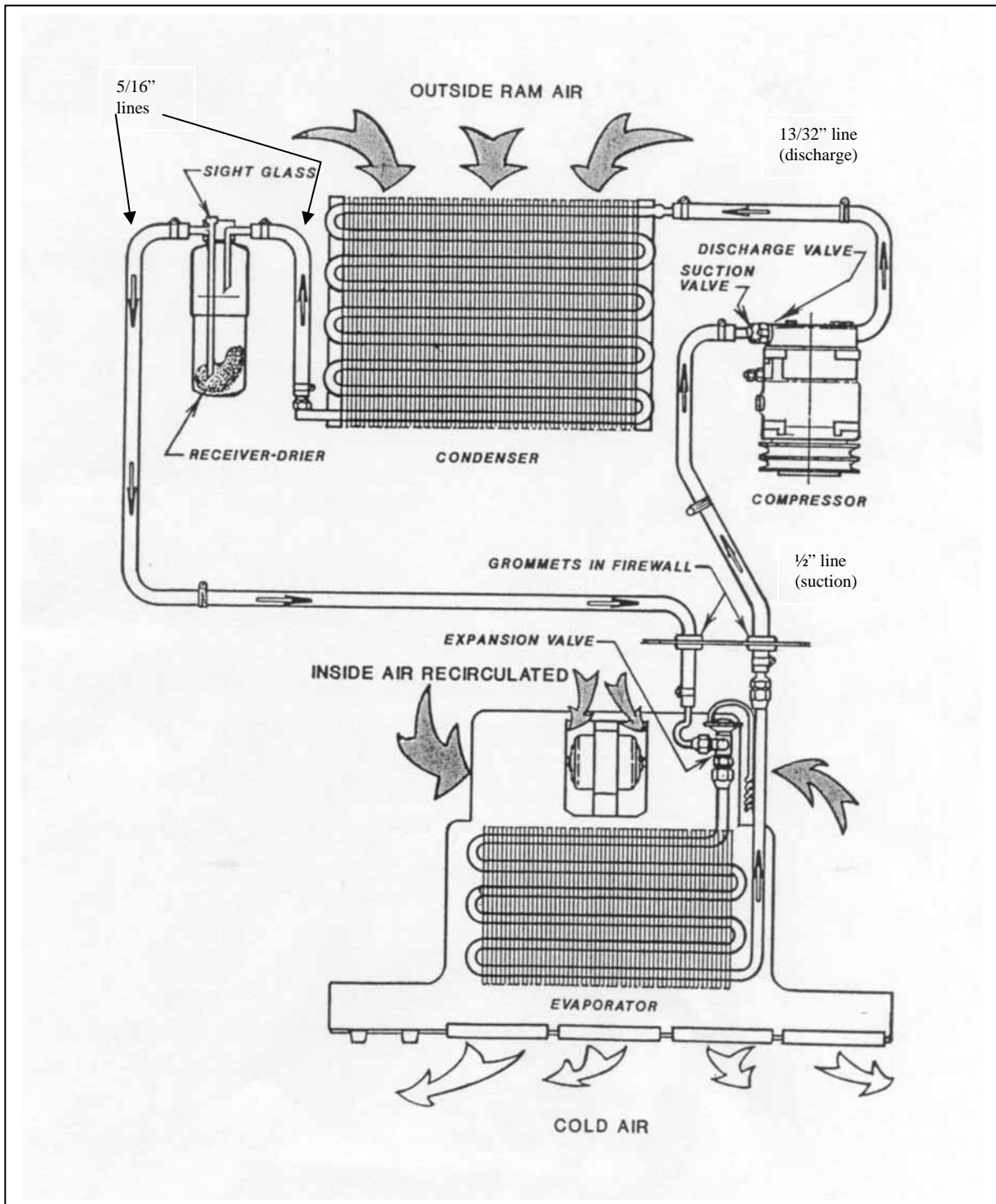
Drier in place at back of cab.

ELECTRICAL:

Mount the thermostat on the evaporator cover somewhere near the blower motor. Find the 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 switch, connect the clutch wire to one terminal on the press switch. Connect the other terminal to the clutch wire on the compressor.



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.
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- 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.

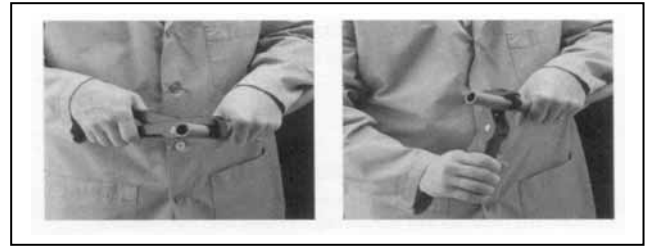
By looking at all these different factors, the area of an evaporator coil most likely to be the coldest can be determined.

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.

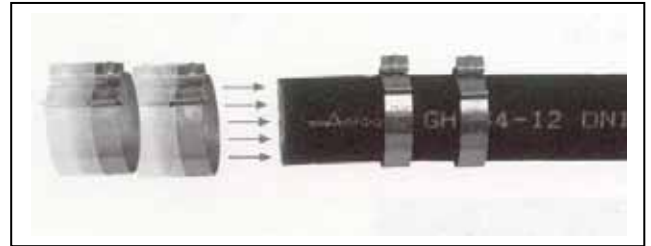
If the thermostat doesn't cycle off after a reasonable cool down period, and the air outlet temperature has dropped below 40° F, the cut in and cut out settings should be adjusted until the compressor is cycling on and off regularly. Let the system run for a decent time period (at least 15 min) and then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

Aeroquip E-Z Clip Assembly Instructions

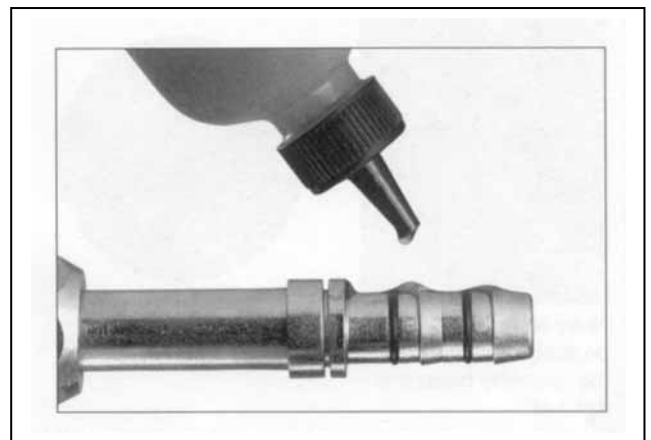
Step 1. Cut the hose to proper length with an appropriate cutting tool. Aeroquip's hand held hose cutter has been specially designed for cutting all non-wire reinforced hose, such as GH-134 Multi-Refrigerant hose. Be sure the cut is made square to the hose length.



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.

