

**INSTALLATION INSTRUCTIONS**  
**FORD 7700 / 7710 TRACTORS**



Hammond Air Conditioning  
125 Samnah Cres.  
Ingersoll, on.  
N5C 3J7  
1-800-267-2665  
1800-267-3745 (FAX)

## **EVAPORATOR:**

Remove bolts holding roof in place. Tilt roof in place, support with prop rod.  
Remove heater cover. Evaporator fits behind heater coil. It may be necessary to trim heater box to accommodate expansion valve. Drain tubes will connect to existing Outlets in heater box. Drain tubes will follow the roof and exit down both front columns. They should stick out far enough for them to drain freely with drain tube restrictors clamped on.

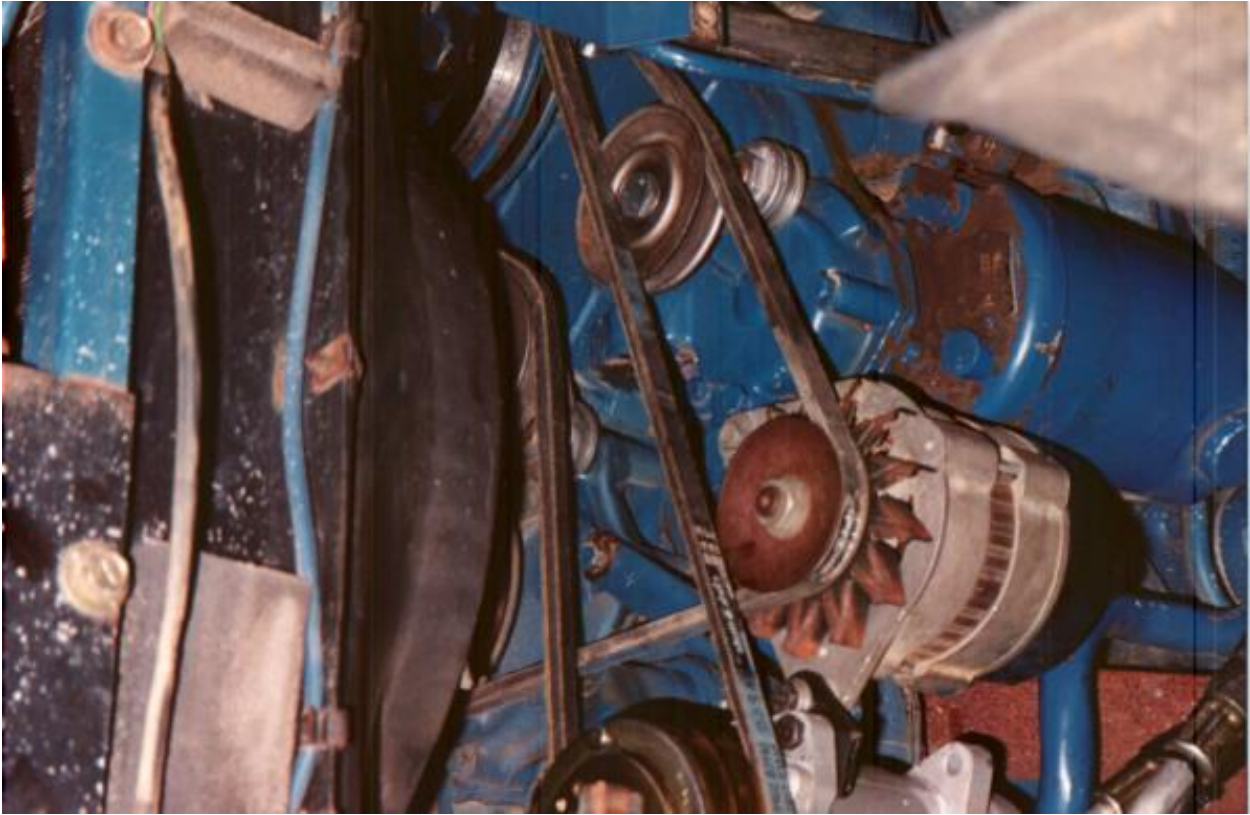
Using self-drilling screws attach flanges of evap to flanges of heater.  
Insert thermostat probe into evaporator approx., 4" from fitting side, 2" to 3" up from bottom of evaporator.

Thermostat mounts between heater controls and blower switch.



**PULLEY:**

Using bolts supplied install new compressor pulley on crank pulley.



Picture is to show compressor pulley. Belt configuration is not for 7700 or 7710.

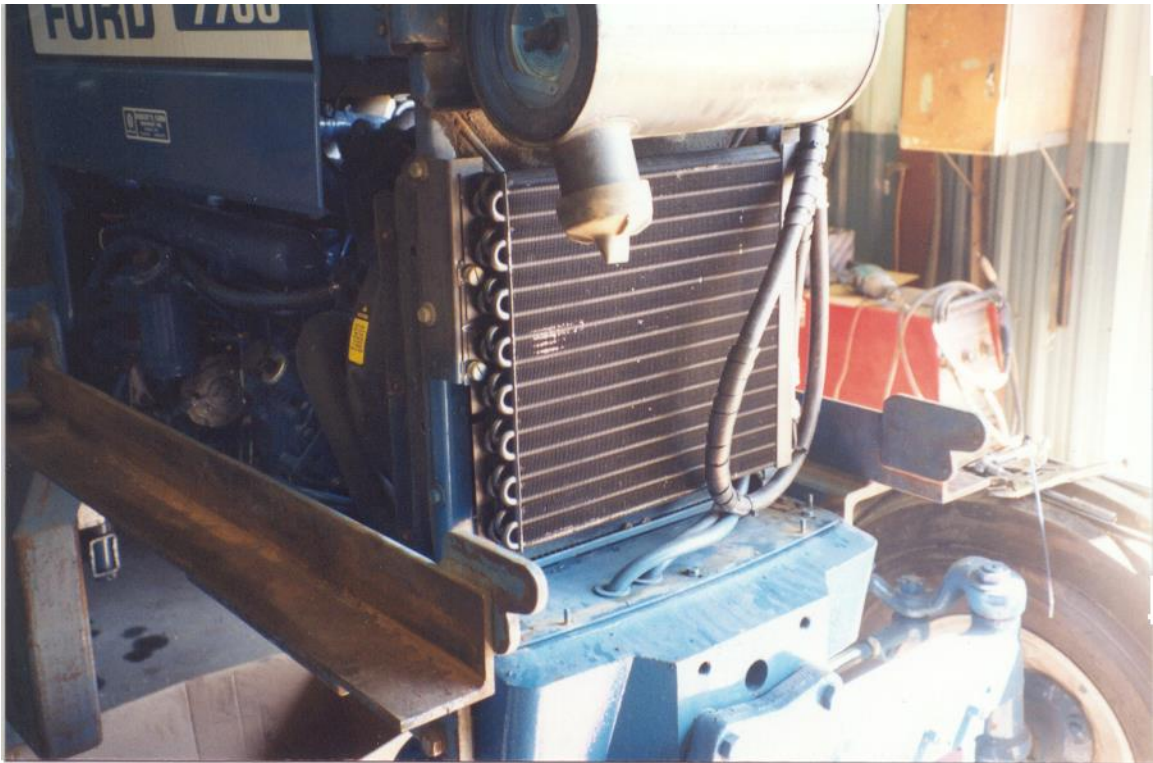
## **RECEIVER DRIER:**

Receiver drier mounts on left side of engine with bracket and bolts supplied. 5/16 inlet hose comes from compressor, 5/16 outlet hose goes to expansion valve at evaporator.



## **CONDENSER:**

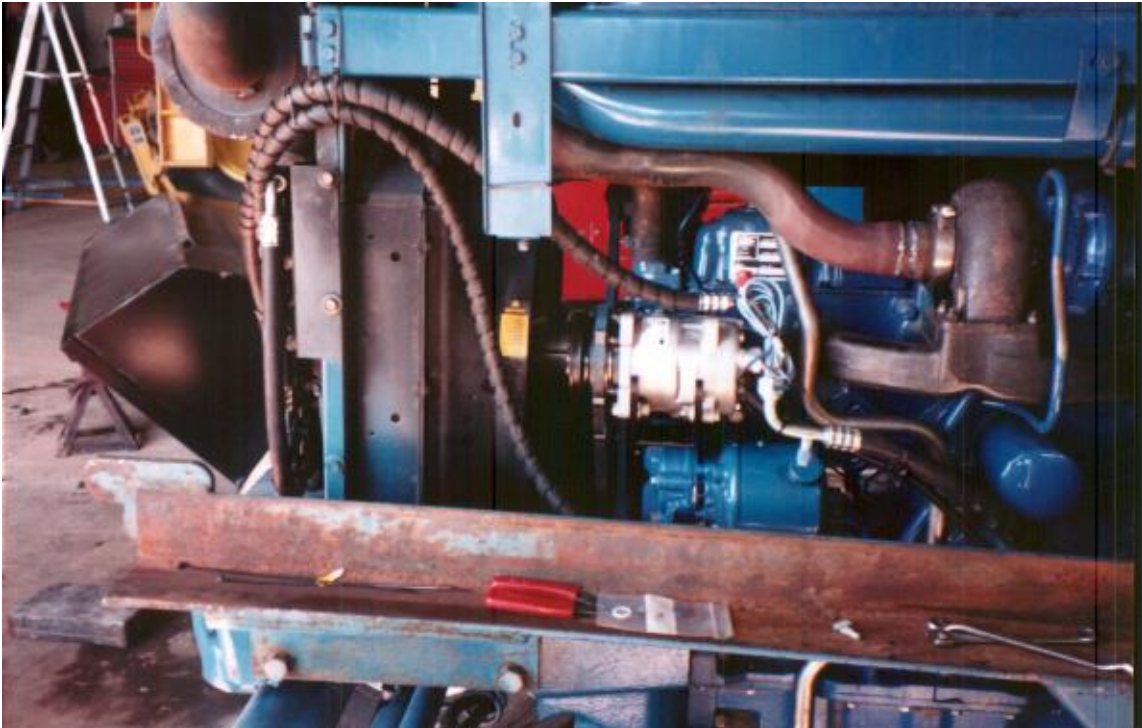
Condenser mounts in front of radiator with existing hardware. 13/32 hose coming from compressor connects to top inlet of condensor. 5/16 hose goes to inlet side of drier.





## **COMPRESSOR:**

Compressor comes with a mount and all necessary hardware. Compressor mounts on left side of engine. The mount bracket has adjusting ears for proper belt tension. Align mount so that belt runs off back pulley of compressor.



## **HOSE ROUTING:**

Hoses will run along left side of engine to condenser and under cab, up column to evaporator.

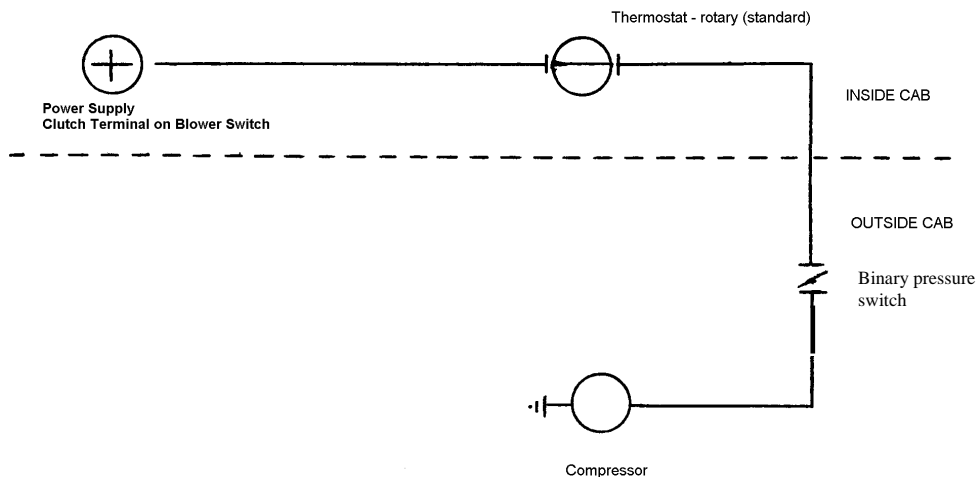
Hose wrap is supplied for any areas near heat or where rubbing can occur. Secure the hoses with cable ties where necessary. Install o-rings on all fittings. Lubricate o-rings with pag or ester oil only.

Tar tape fitting on suction side of evaporator.

## **ELECTRICAL:**

Power for the thermostat will come either from an ignition live or the extra terminal on the blower switch.

Using the 14 gauge wire supplied connect one side to power the other side will go to the compressor via the pressure switch(s). Ensure all wire is in wire loom and fastened securely with cable ties to prevent any damage.



## **TESTING:**

Pressure test system to 250 p.s.i. Using dry nitrogen or shop air.

Using a soap and water solution spray all connections and fittings to find any leaks.

With pressure still in system operate thermostat and check compressor clutch engagement.

## **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 2.5 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.

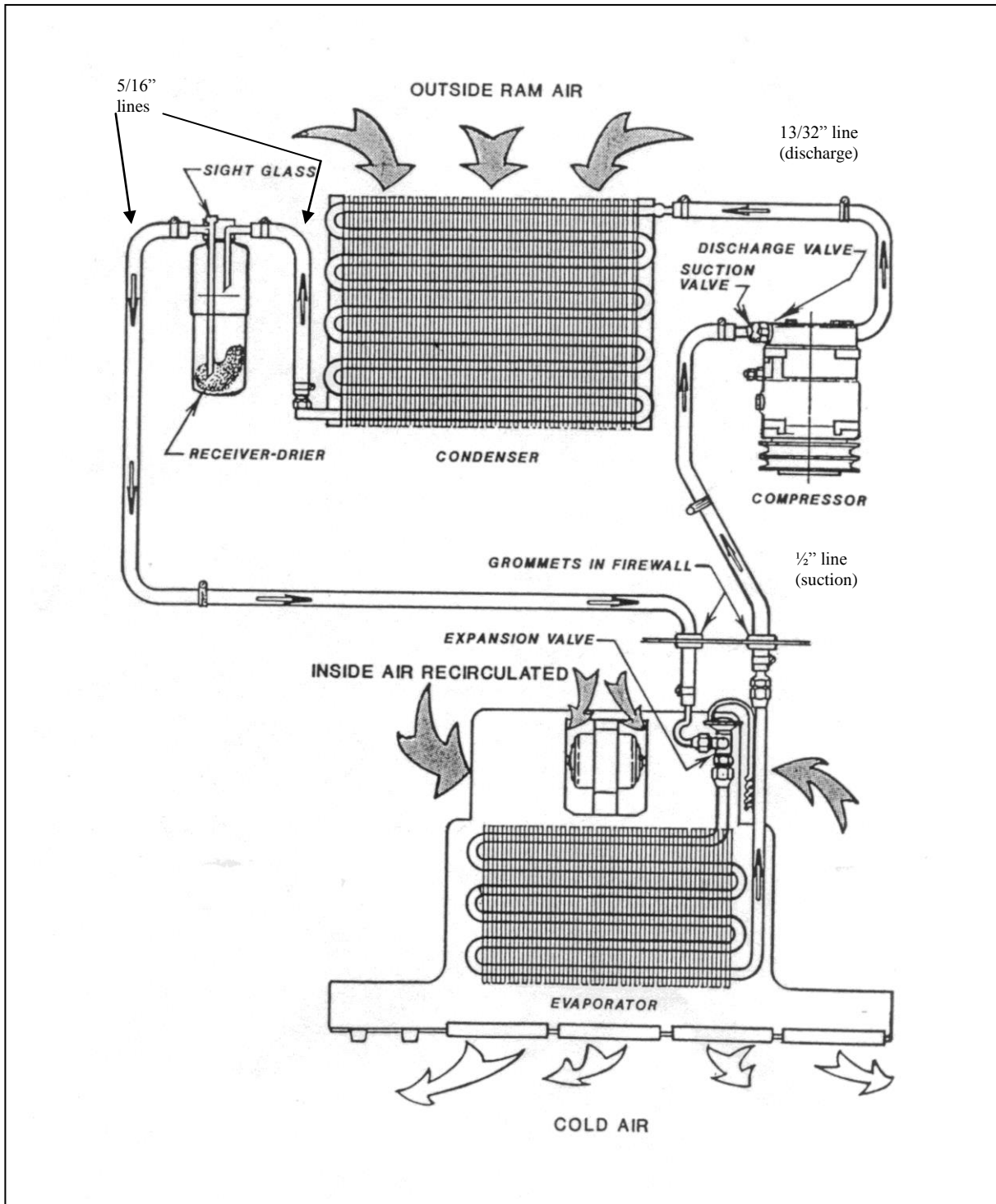
## **TOOL REQUIREMENTS:**

Aeroquip E-Z clip pliers.

R134a manifold gauge set, vacuum pump, scale and hose cutters.



## 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.

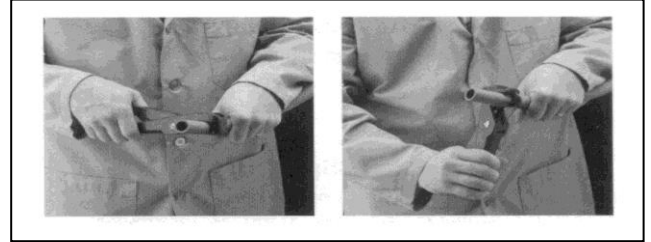
Once the probe is inserted, the A/C system needs to be tested. Run the system to ensure that the thermostat is cycling the compressor off at the appropriate temperature. A core temperature ranging between 25° and 30° F should cause the thermostat to cycle off. The air temperature at the vent outlet closest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

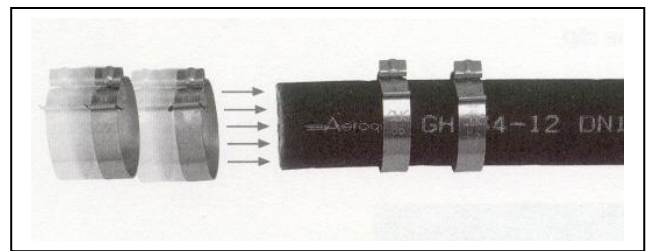
# Aeroquip E-Z Clip

## Assembly Instructions

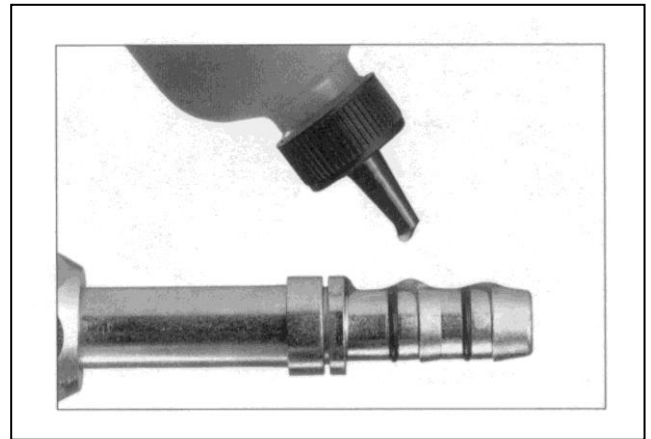
Step 1. Cut the hose to proper length with an appropriate cutting tool. Aeroquip's hand held hose cutter has been specially designed for cutting all non-wire reinforced hose, such as GH-134 Multi-Refrigerant hose. Be sure the cut is made square to the hose length.



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.



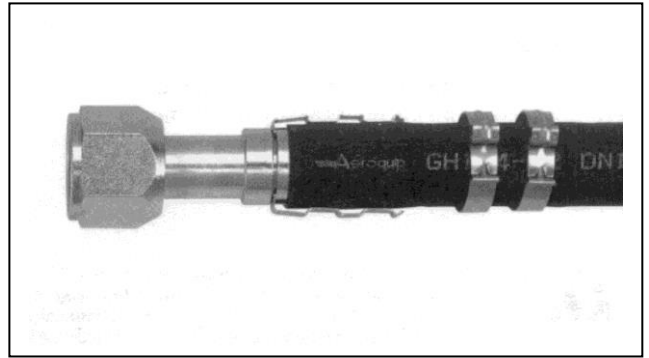
Step 4. Insert the nipple into the hose. To ensure that the nipple is fully inserted, check the gap between the cut end of the hose and the shoulder on the nipple. Care should be taken to avoid kinking or other damage to the hose during nipple insertion.

NOTE: Be sure to wipe excess oil from the nipple and hose.

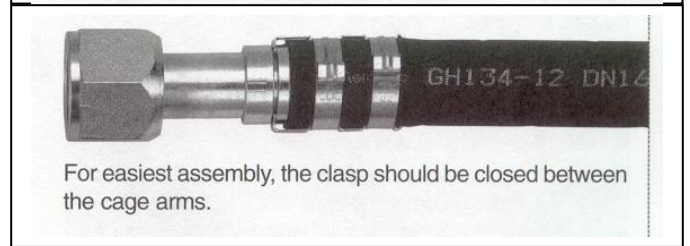


Step 5. Snap the cage into the groove on the nipple. The arms should extend over the hose length. When the cage has been correctly installed in the cage groove, the cage will be able to rotate in the groove. This step **MUST** be performed to ensure:

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.

