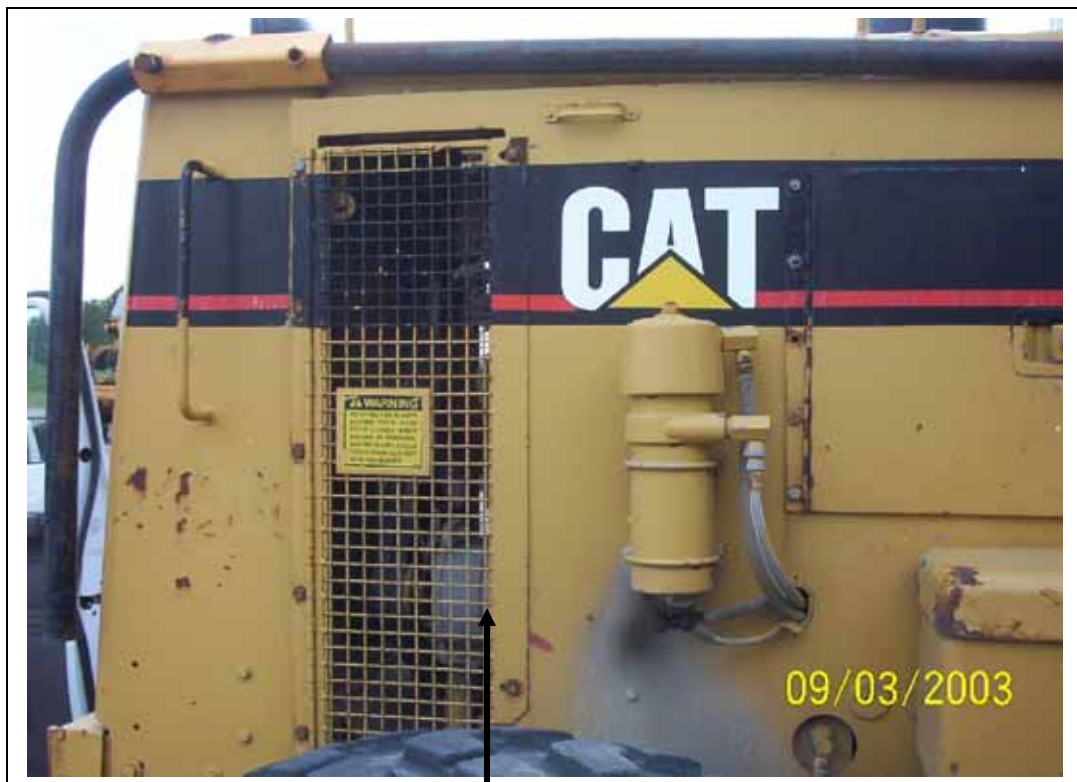


14G/140 G Grader Installation Instructions



1-519-485-5961 or 1-800-267-2665
FAX: 1-519-485-3745 or 1-888-267-3745



Remove screen to access condenser mount area



These bolts are removed and then reinstalled to hold the condenser frame



Condenser frame mount bolts left side



Condenser frame in place. Install separate of condenser coil for easy fit.



Reinstall condenser after frame is in place



Use Allen wrench to reinstall condenser to frame.



5/16" line at condenser

13/32" line at condenser



Run hoses down beside alternator and forward towards the cab along the right frame rail.



Mount location for drier bracket. Remove the nut and install the straight drier bracket overtop the clamps.



Drier and bracket installed. The existing lines may have to be moved aside a bit.



Compressor mount location. Some lines and wires need to be rerouted a little bit to make room for the compressor and mount.

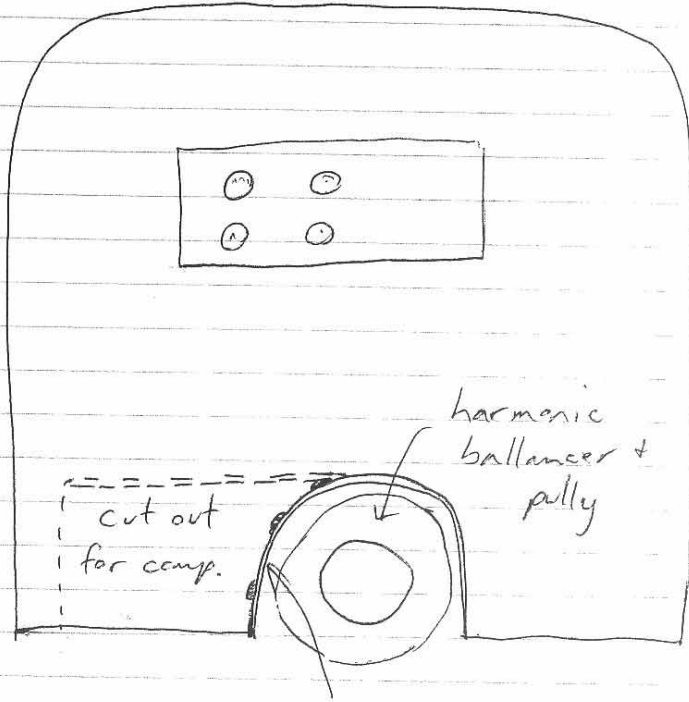


Existing counter weight needs to be changed to factory setup that includes the A/C compressor drive pulley. (must be purchased from Cat Dealer)

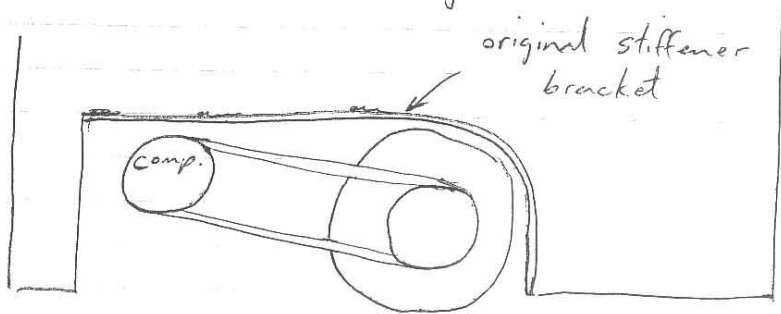


This area of the front engine cover needs to be cut out to accommodate the A/C compressor and belt.

140 G cutout
for compressor



stiffener bracket - cut or grind welds
off of piece being removed and straighten
out + re weld to cut edge





Location of ceiling mount evaporator unit in cab.





Run hoses and wiring down front right cab post. Secure with tie wraps and double hose clamps.

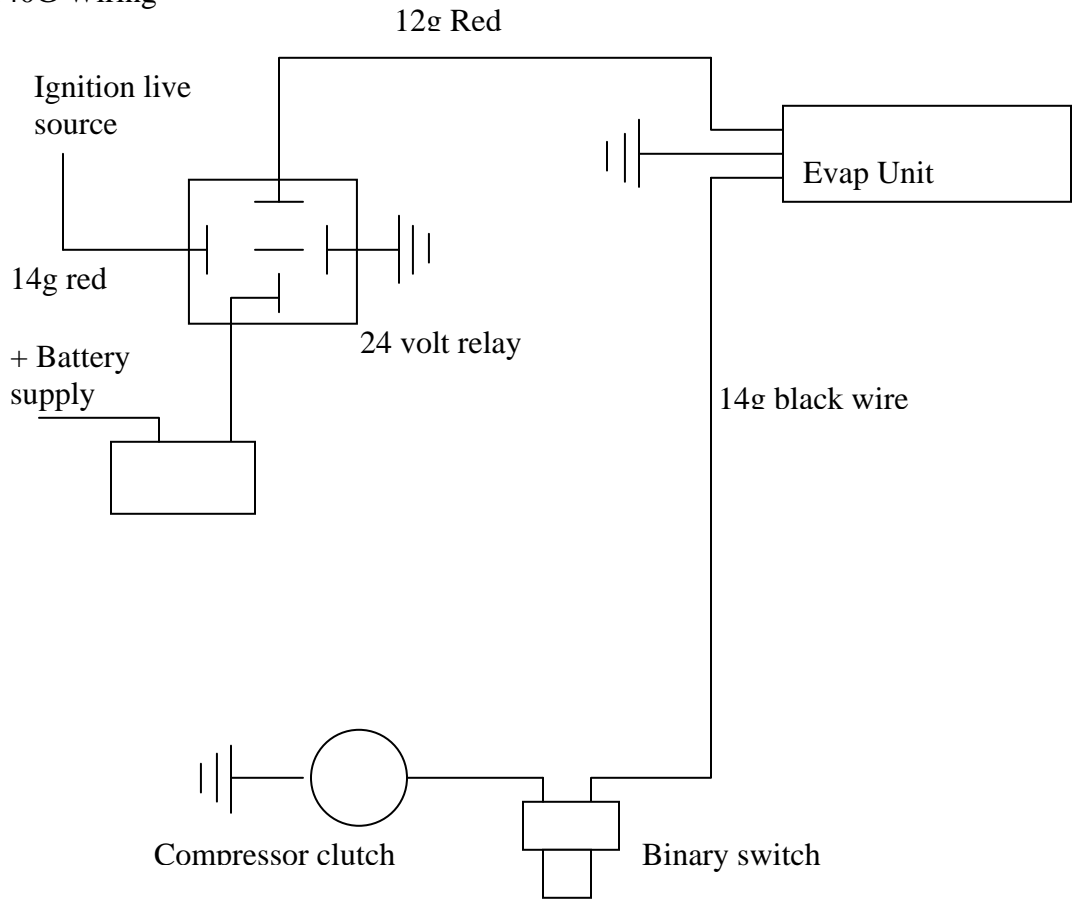


Route the hoses, wiring and drain tube through the floor beside the hydraulic control assembly.

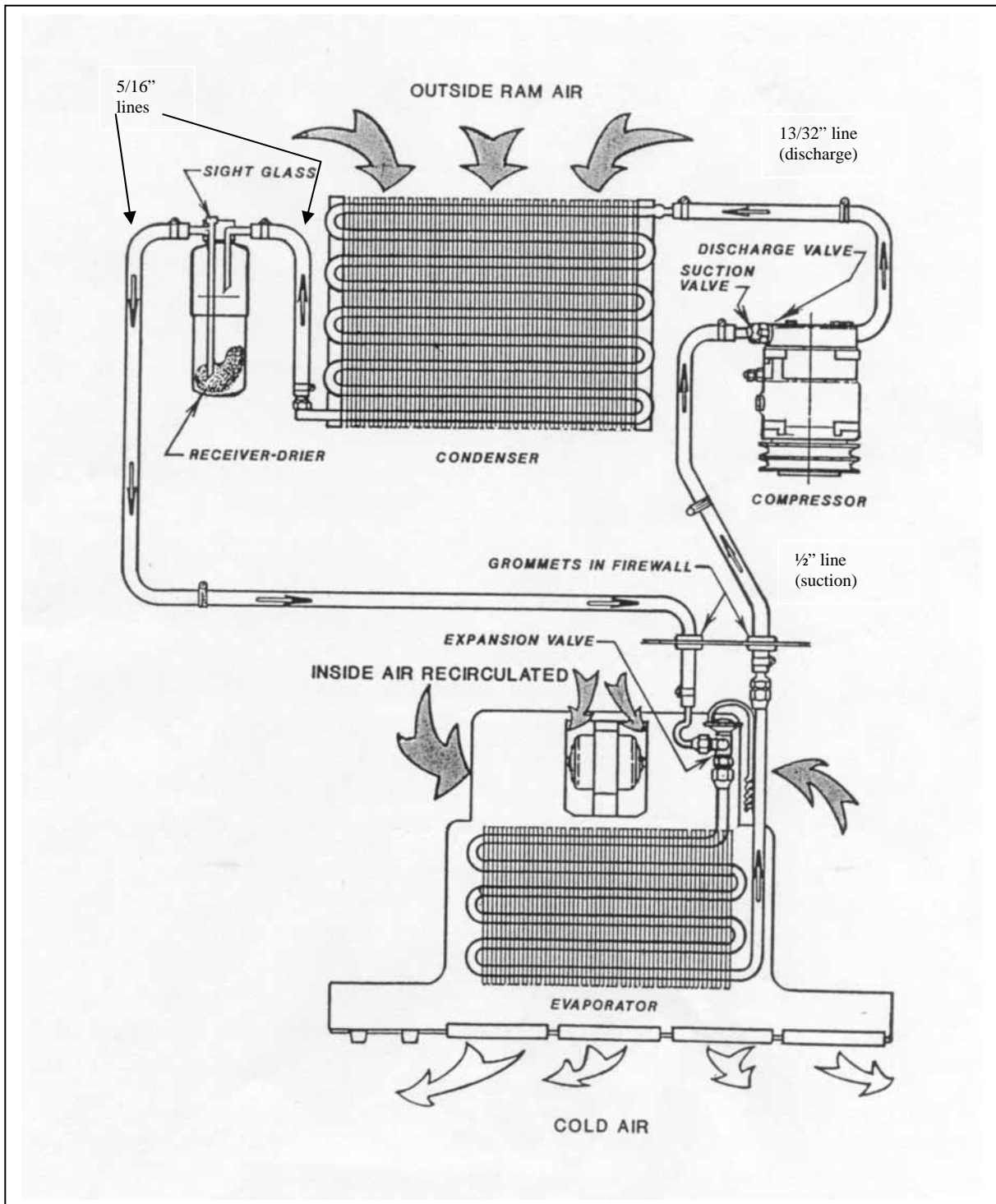


The A/C hoses and wiring must run along with these other hoses in the area of the machine articulation joint.

140G Wiring



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.