

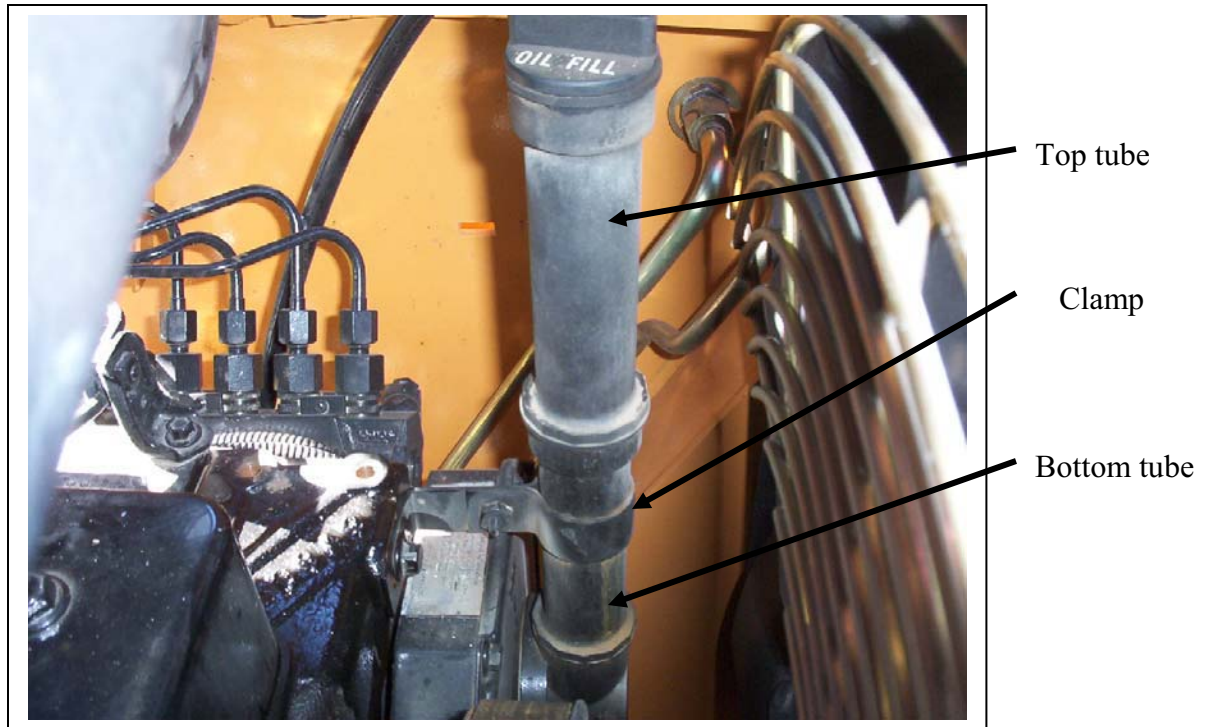
**CASE 85/90/95XT**  
**SKID STEER**  
**INSTALLATION INSTRUCTIONS**



PHONE: 1-800-267-2665

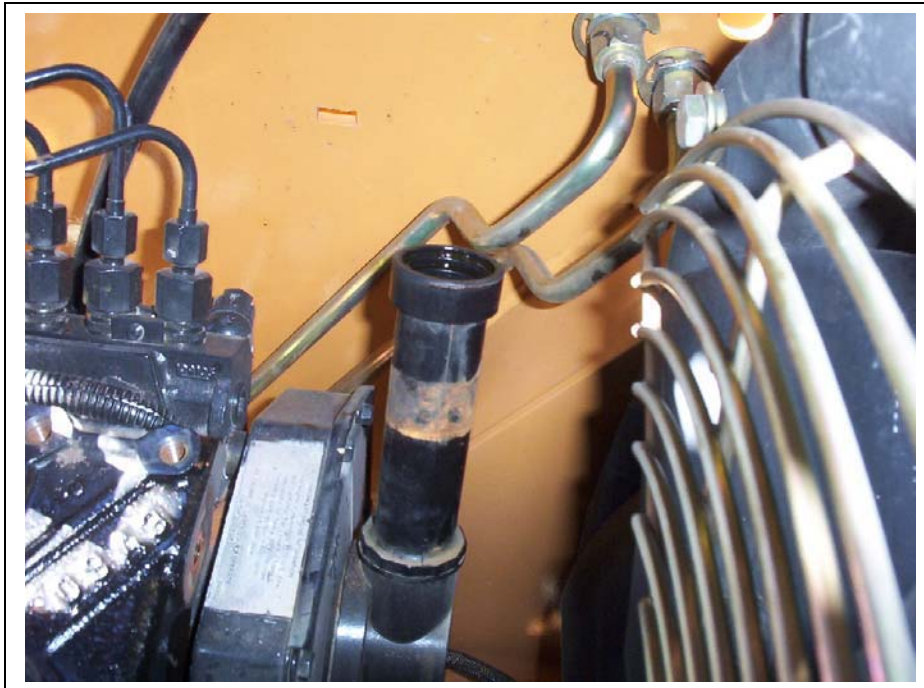
FAX: 1-888-267-3745

## COMPRESSOR MOUNT

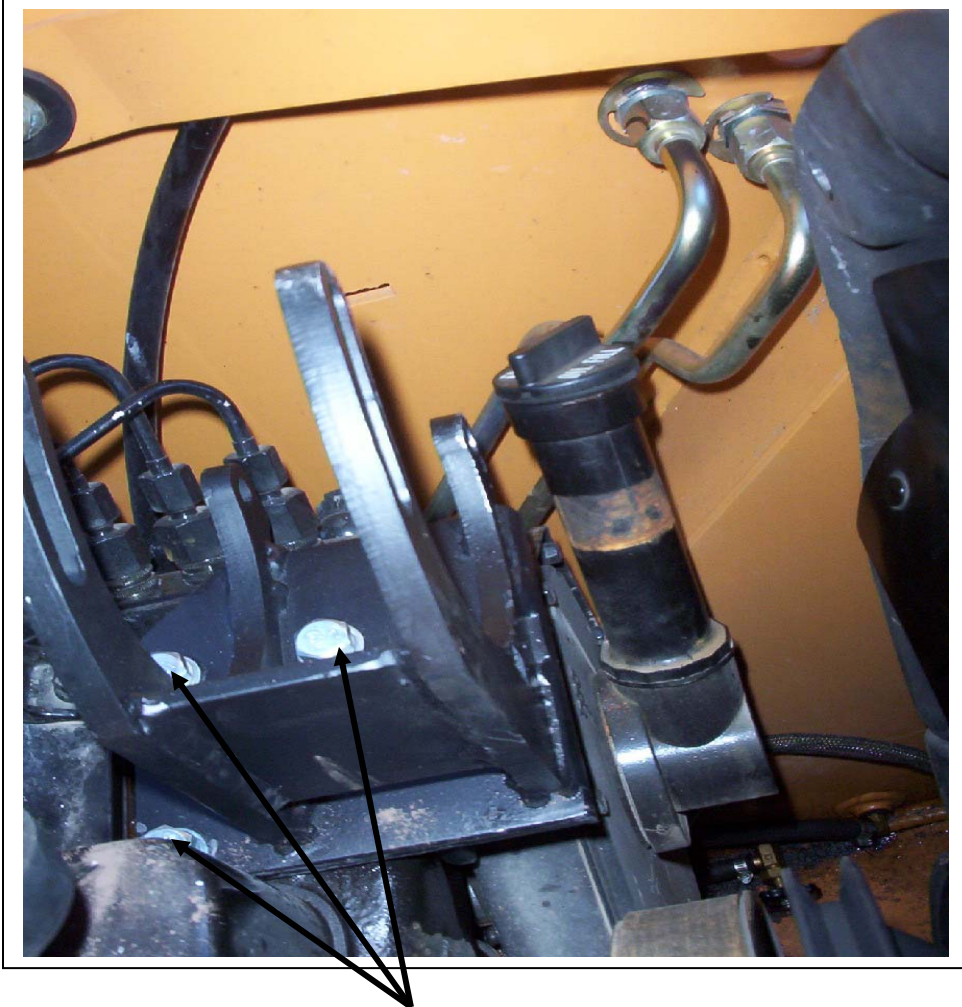


Steps:

- 1) Remove the top section of the oil filler tube
- 2) Remove the clamp securing the bottom section of the oil filler
- 3) Remove bottom tube. (Do not re-install)

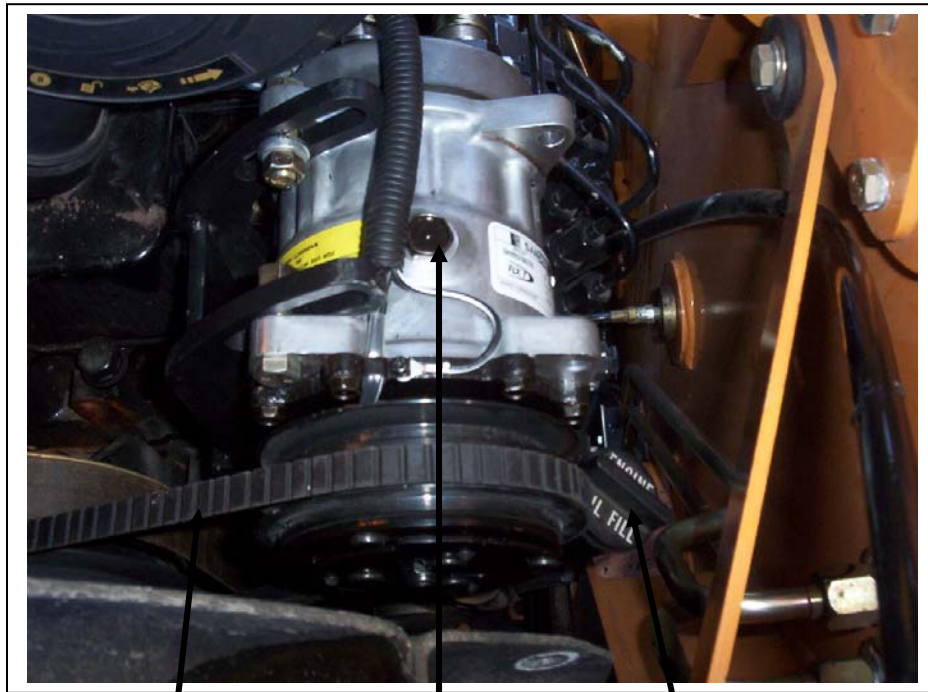


- 4) Install the top tube directly into engine where the lower tube was previously screwed into and tighten.
- 5) Push the entire tube towards the wall seen in the background.
- 6) Re-install cap.



Three of four bolts shown

- 7) Install compressor mount as shown with the four 10MM bolts provided
- 8) Use lock and flat washers and tighten.



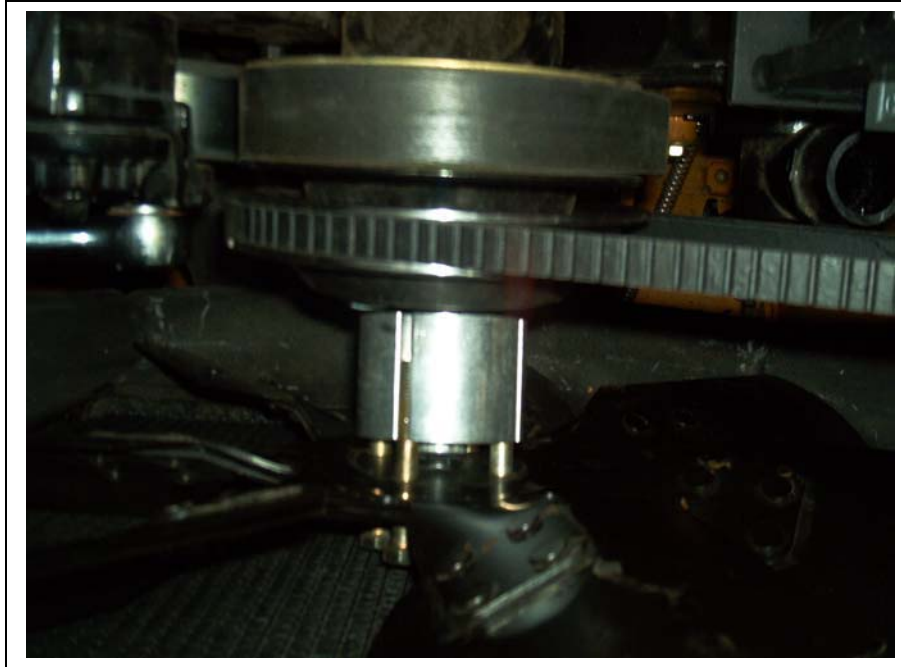
17380 belt

Compressor

Oil fill

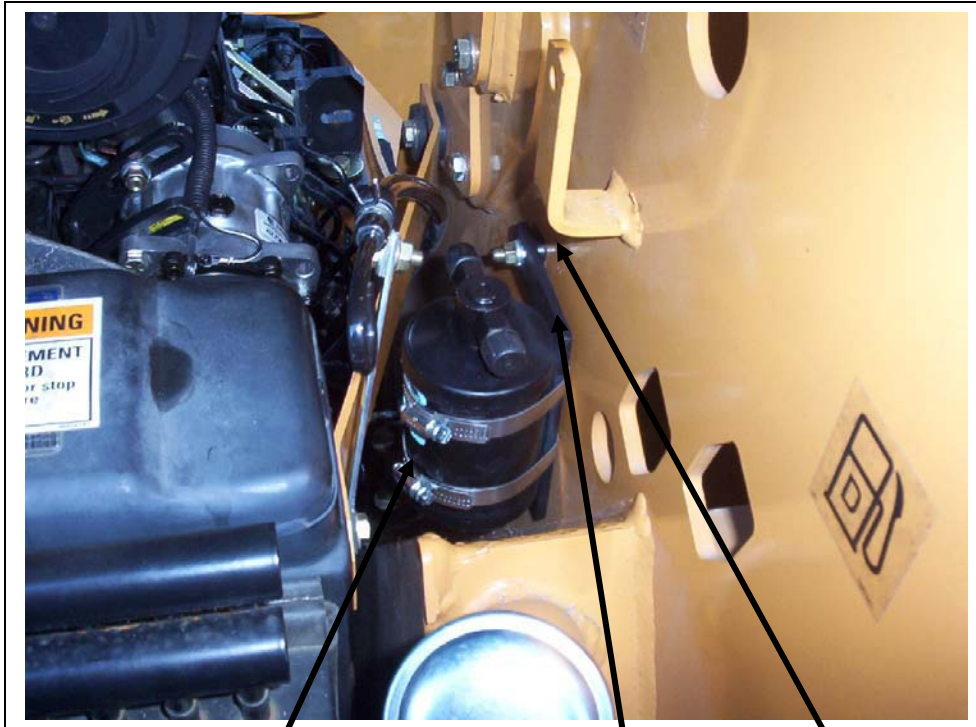
- 9) Install the compressor as shown with 3/8" hardware supplied.
- 10) Install belt as shown and check alignment.
- 11) Tighten belt and bolts.
- 12) Note location of oil fill to right of the compressor.

## ADD ON PULLEY



- 1) Loosen the 4 fan bolts but do not remove.
- 2) Pull fan and spacer back enough to slip add-on pulley between spacer and water pump pulley.
- 3) Re fasten spacer and fan blade and tighten bolts.

## DRIER



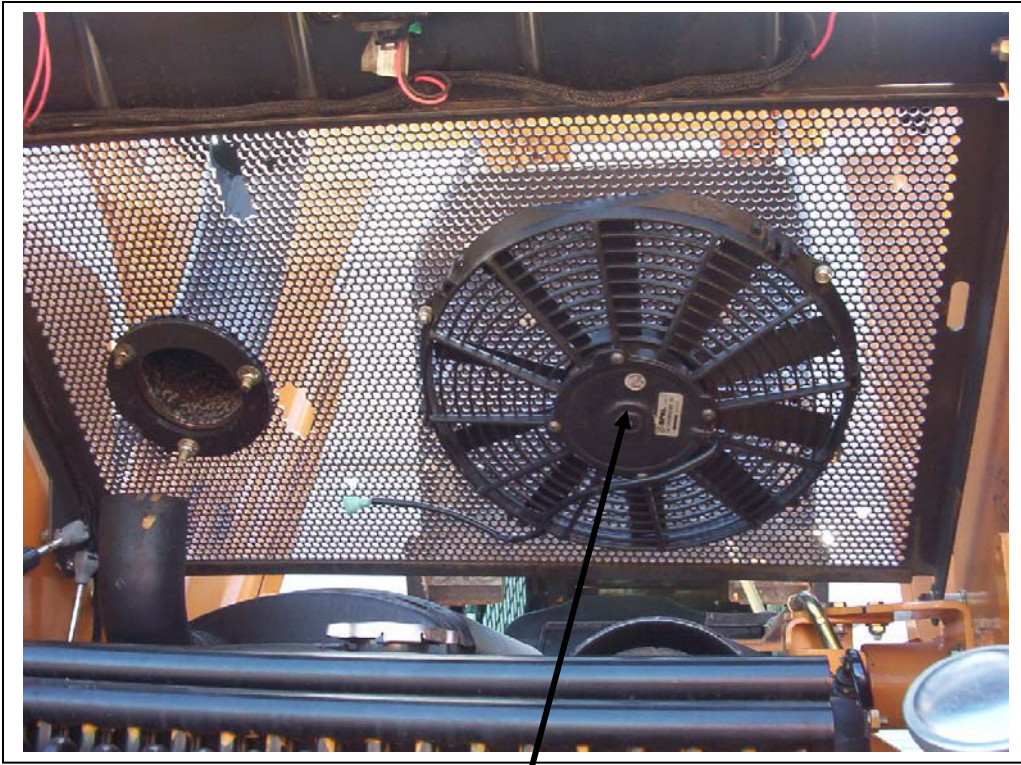
Receiver drier

Drier bracket

1/4" spacer

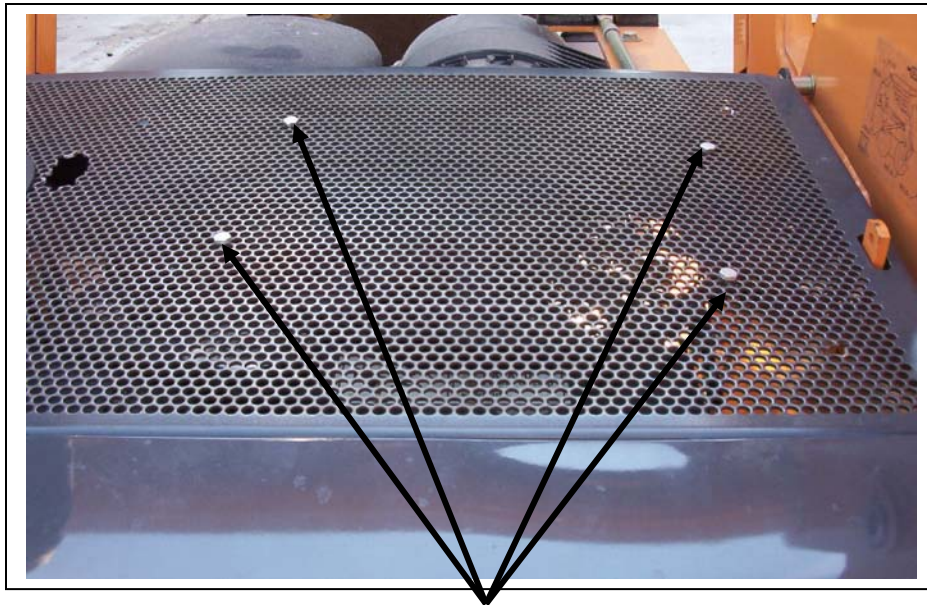
- 1) Install drier bracket as shown in picture. Use the 5/16" hardware provided.
- 2) Use the spacer between the wall and bracket to allow room for gear clamps.
- 3) Install the drier to the bracket using the #48 gear clamps provided. The "in" side should face toward the front of the skidsteer.

## CONDENSER

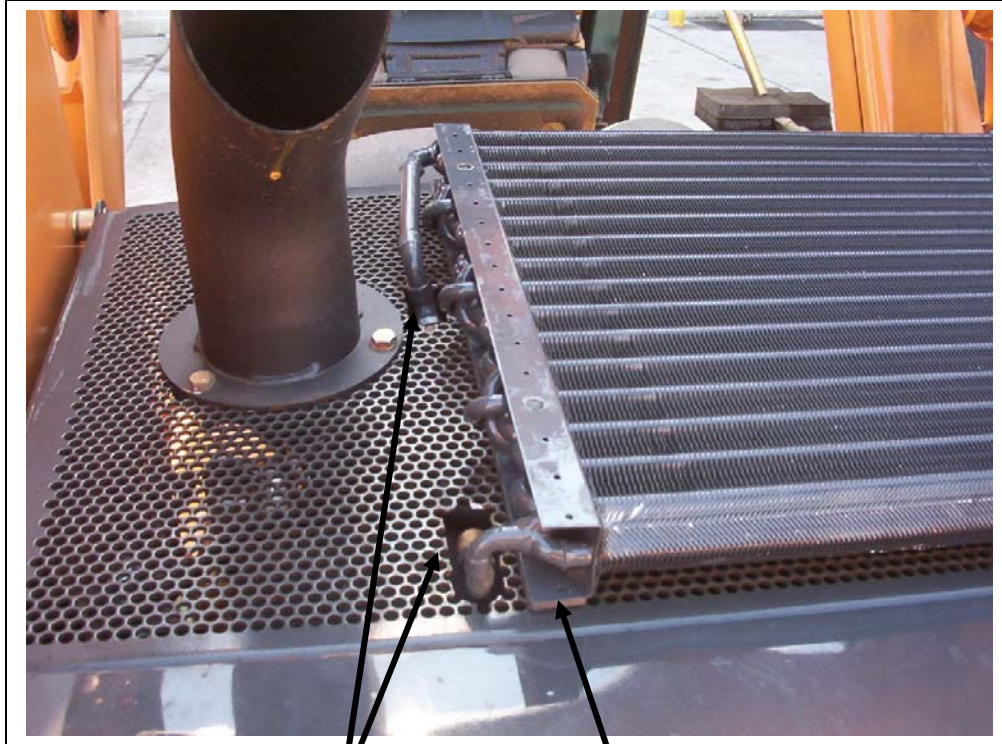


Condenser fan

- 1) Install the fan beneath the lid as shown. Use the 1/4" hardware provided.



1/4" bolts through engine lid



These areas need to be cut away to allow fittings down through the lid.

1/4" spacer bars

- 2) Set the condenser in place on top of the screened lid and mark the areas which need to be cut away.
- 3) Cut the holes as shown.
- 4) Note: The 1/4" spacer bars are required under the flanges to prevent the fan mounting bolt heads from making contact with the coil.





Some minor grinding or drilling may be required to allow bolts to align when fastening the coil to the lid. Tighten into place.



Condenser mounted in place with  $\frac{1}{4}$ " spacer bars under flanges



Install cover over condenser coil as shown using the hardware provided.

## EVAPORATOR ASSEMBLY

The evaporator mounts as a ceiling unit directly in front of the rear window with the ducting running along each side as shown.



A hole drilling template is provided to ensure the mounting holes are drilled in the correct location. All the mounting hardware is provided in the kit. The evaporator/blower box will pull tightly into the soft ceiling of the skid steer. Ensure the wiring is fed through the air ducts prior to installing the louvers.



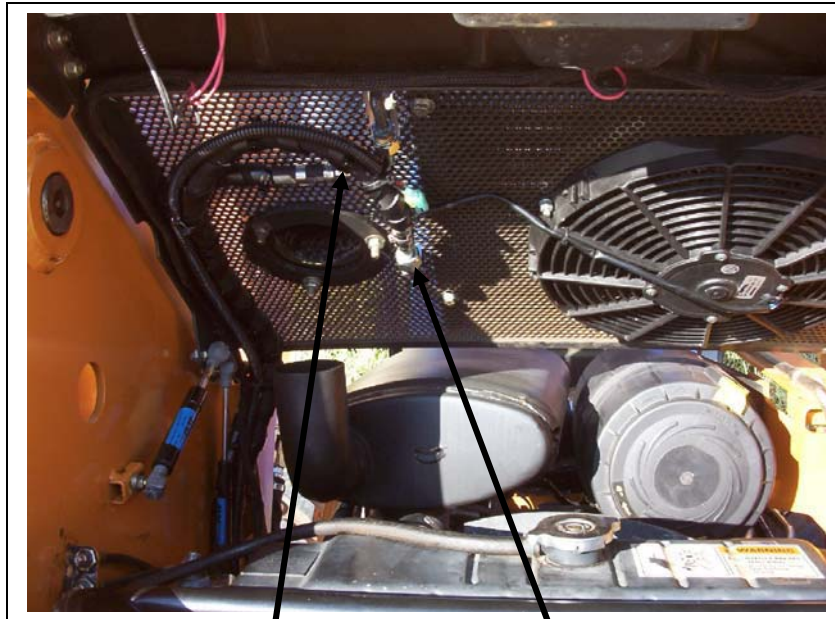
Drill 3/16" hole to secure the front end of each duct.

Self drilling screws are provided to fasten the other end to the outlets of the evaporator box. Connect electrical connectors and install switch panel & louvers.

## HOSE RUNS



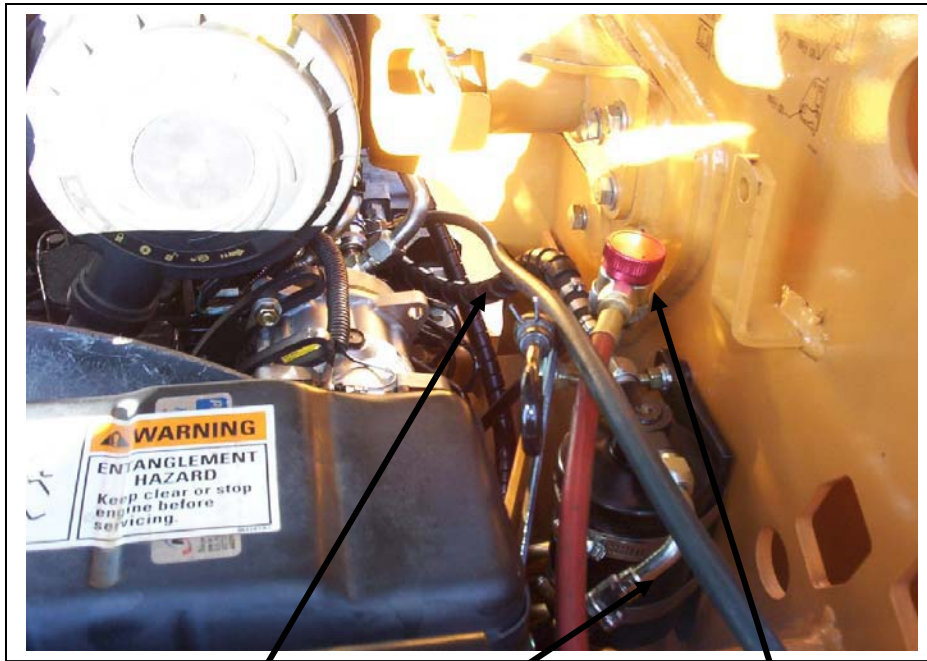
Drill a 2 ½" hole using a hole saw on the right side of the operators compartment as shown. This will carry the heater lines, A/C lines and the electrical from the engine compartment to the heater / evap assembly.



#6 hose to drier

#8 hose to compressor

Run the #8 hose from the condenser to the compressor and the #6 hose to the drier as shown down along the left side of the body. Wrap all hoses where there is any chance of contact to ensure there will not be any rubbing. Secure the hoses in place using tie wraps.



Inlet hose from condenser

Outlet hose to expansion valve.

High pressure access port at drier.



Using the nylon seal provided, install the rotolock fittings as shown.

#8 fitting with binary switch connected to discharge side of compressor.



Heater lines

A/C lines and wiring

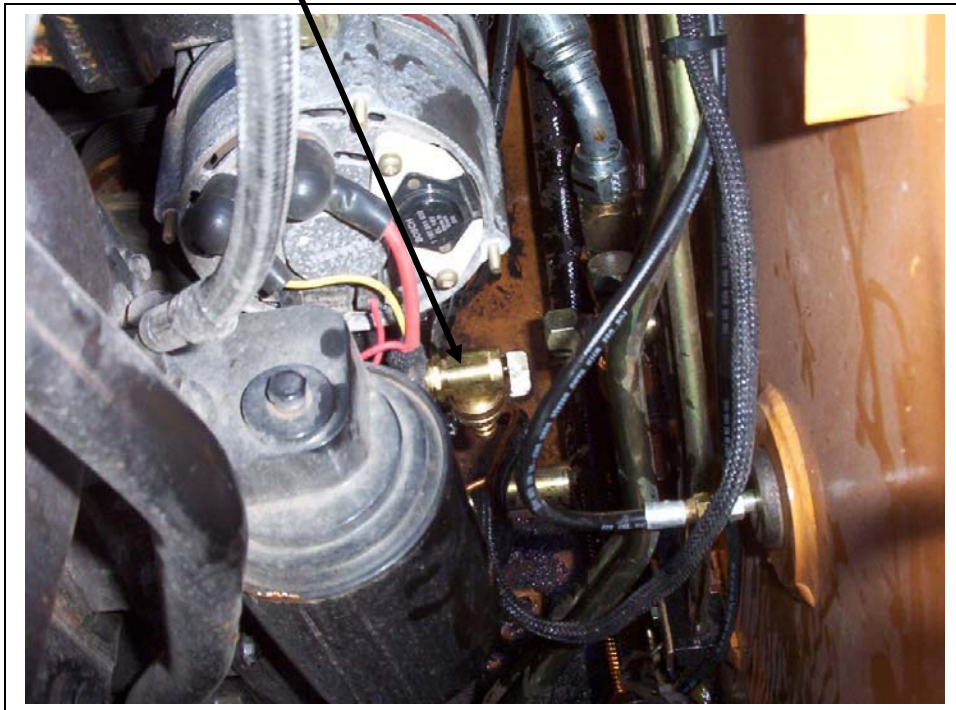
The two heater lines coming from the evaporator box runs across the back of the cab and are secured in place with a clamp. The blue cover adds additional protection for the hose. The heater lines loop down under the engine to connect to the heater taps.



Secure hoses at this point to prevent rubbing.



Install water taps as shown. Use pipe sealer or Teflon tape to prevent leaks. Tighten so the fitting is pointing as shown.







Heater lines

A/C lines

Drain hose

After all the hoses are connected, squeeze all the hoses and electrical between the cab and the plastic cover. Use cable ties to secure all lines.

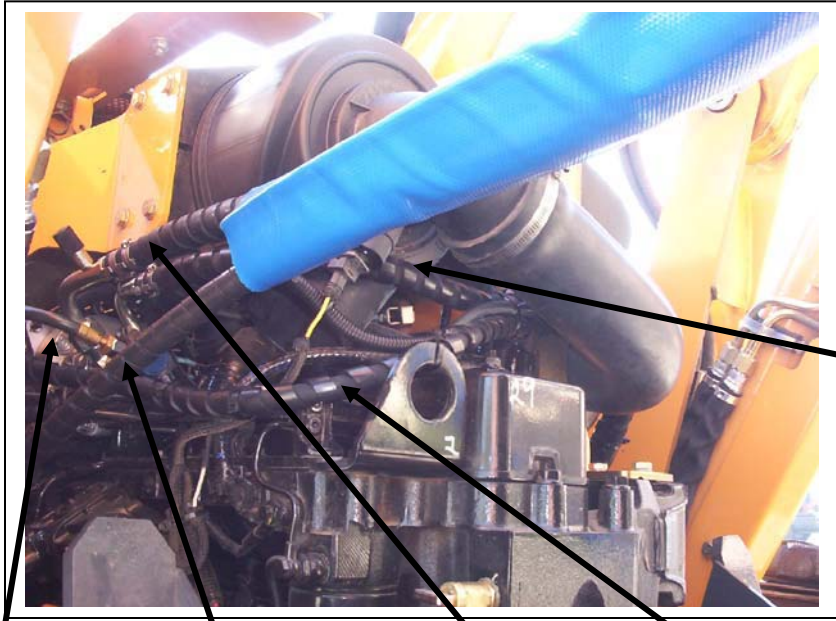




Water lines looping down under the engine and connected to heater tap.



A/C lines and electrical ground wire coming from condenser.



13/32" hose to condenser

Compressor

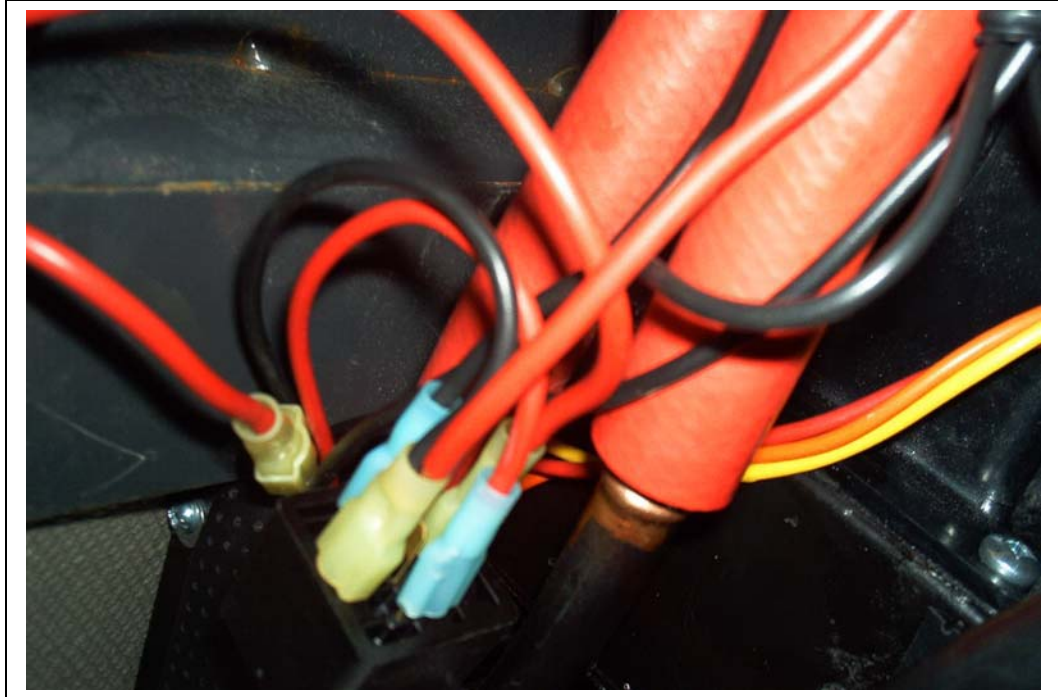
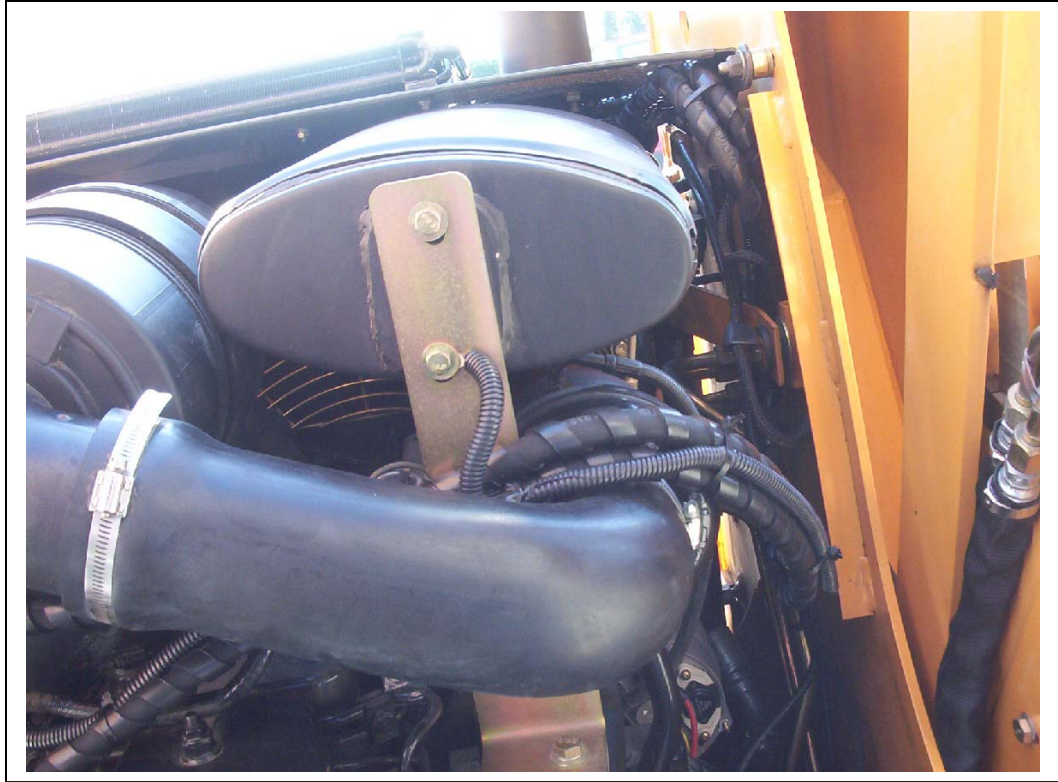
5/16" hose from drier to evaporator

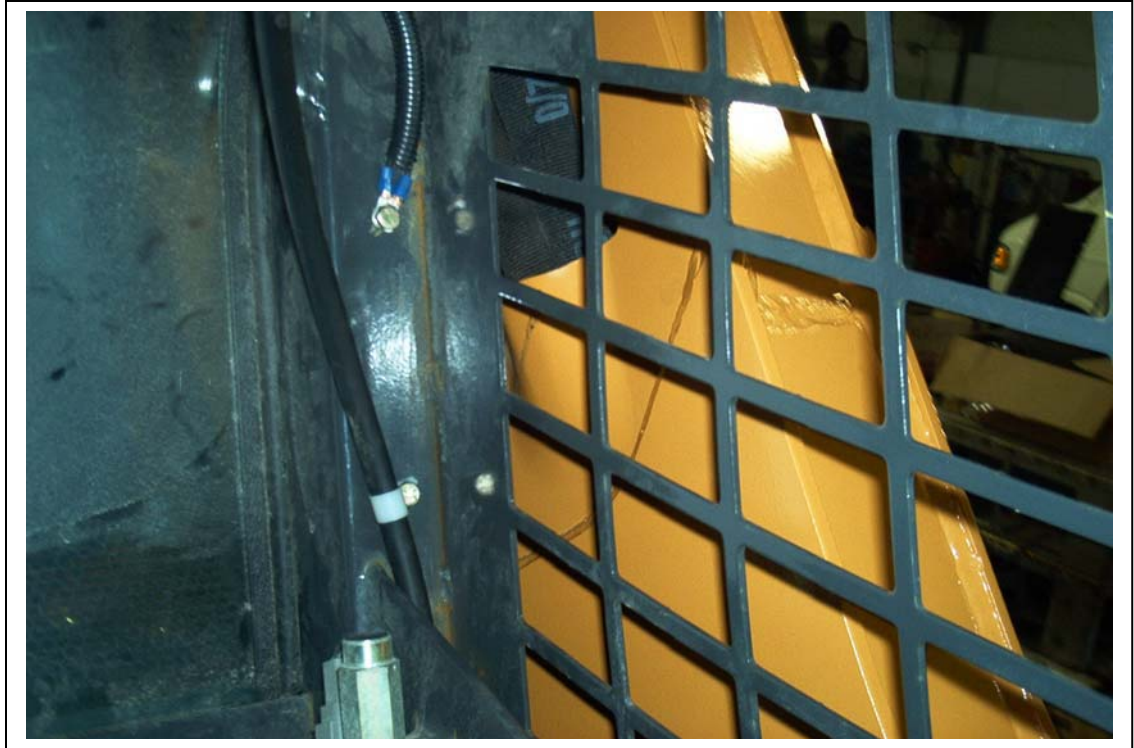
1/2" hose to evaporator

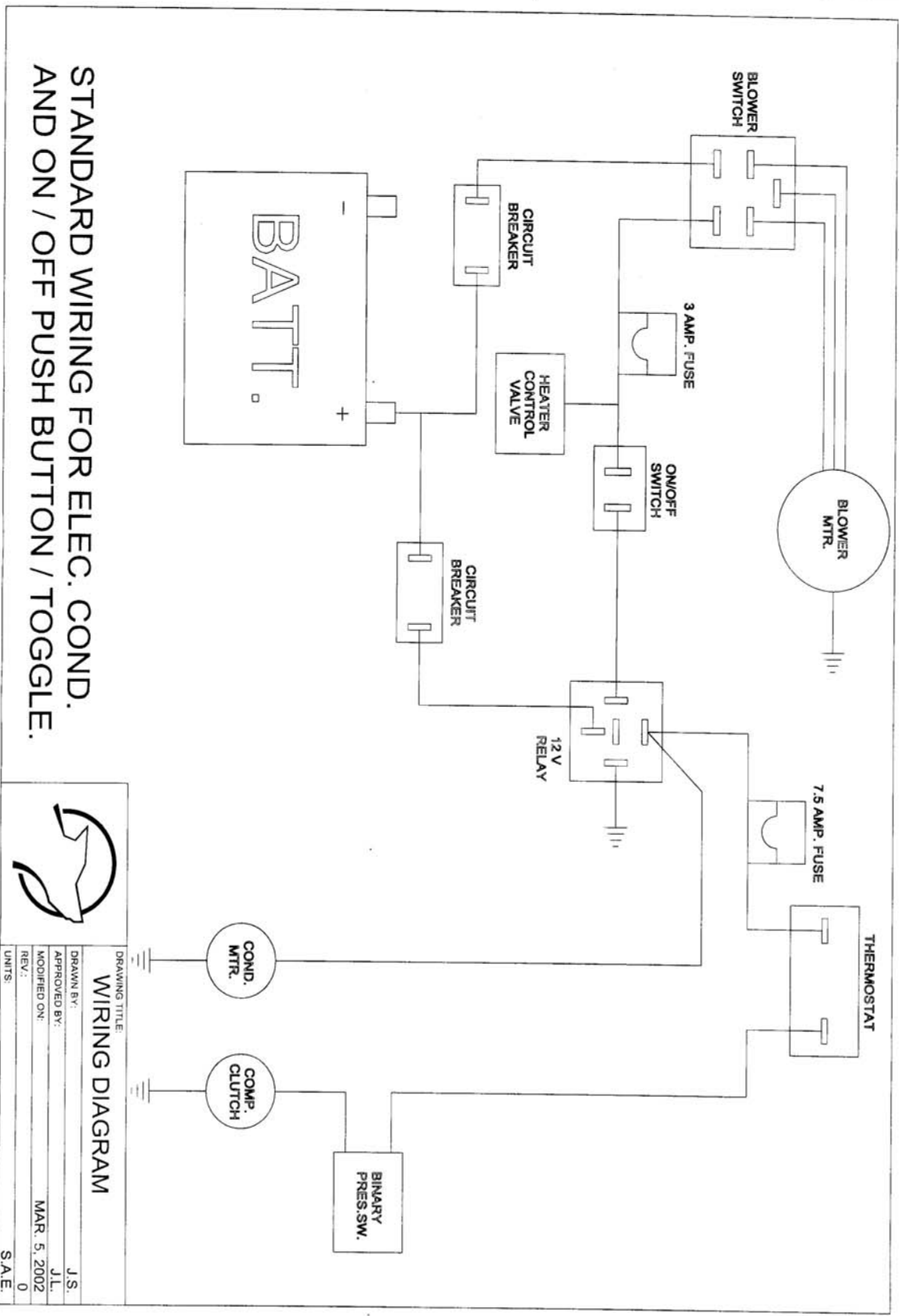
5/16 hose from condenser to drier

**ELECTRICAL:**







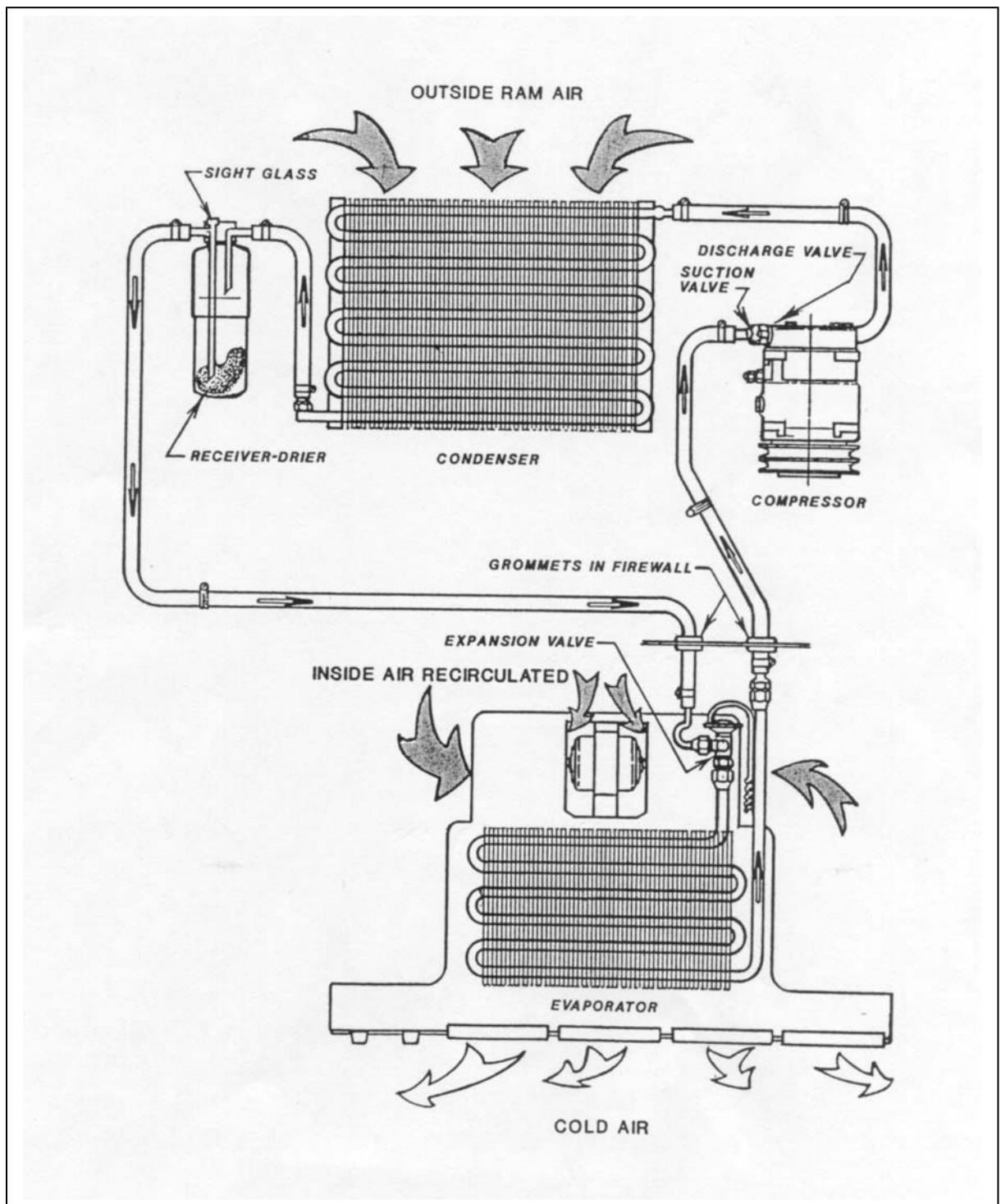


STANDARD WIRING FOR ELEC. COND.  
AND ON / OFF PUSH BUTTON / TOGGLE.

  
 DRAWING TITLE:  
**WIRING DIAGRAM**

DRAWN BY:	J.S.
APPROVED BY:	J.L.
MODIFIED ON:	MAR. 5, 2002
REV.:	0
UNITS:	S.A.E.

## Refrigerant Flow Pattern in a Standard Air Conditioning System





Final checks and charging:

1. Pressure test the system with nitrogen to at least 250 PSI and check all fitting and connections for leaks. The complete electrical system can be tested while there is pressure in the system as well.
2. Vacuum the system out with a good vacuum pump for ½ hour to 45 minutes. Ensure the system holds a vacuum to double check it for leaks. Add 4 oz of PAG oil to the system. Charge the system with 2 1/2 lbs of new 134A refrigerant. Run the system to test it. Check the temperature at the louvers. Add 134A refrigerant in 2 oz increments and check the air temp. A charge of 2 AND ¾ lbs should be about right.
3. Check that the thermostat is cycling the compressor off before coil freeze up problems can occur. The thermostat can be adjusted with the adjustment screw under the plastic cap on the body of the thermostat. See the thermostat setting procedures at the end of this instruction manual.

## 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.

- 1) 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.
- 5) 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.
- 6) 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
- 7) The area of the coil that the refrigerant inlet tube(s) occupy should be the coldest part of the coil.
- 8) 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.