CASE 521D/621D
INSTALLATION INSTRUCTIONS

ARCTIC WOLF™
BY HAMMOND AIR CONDITIONING LTD.

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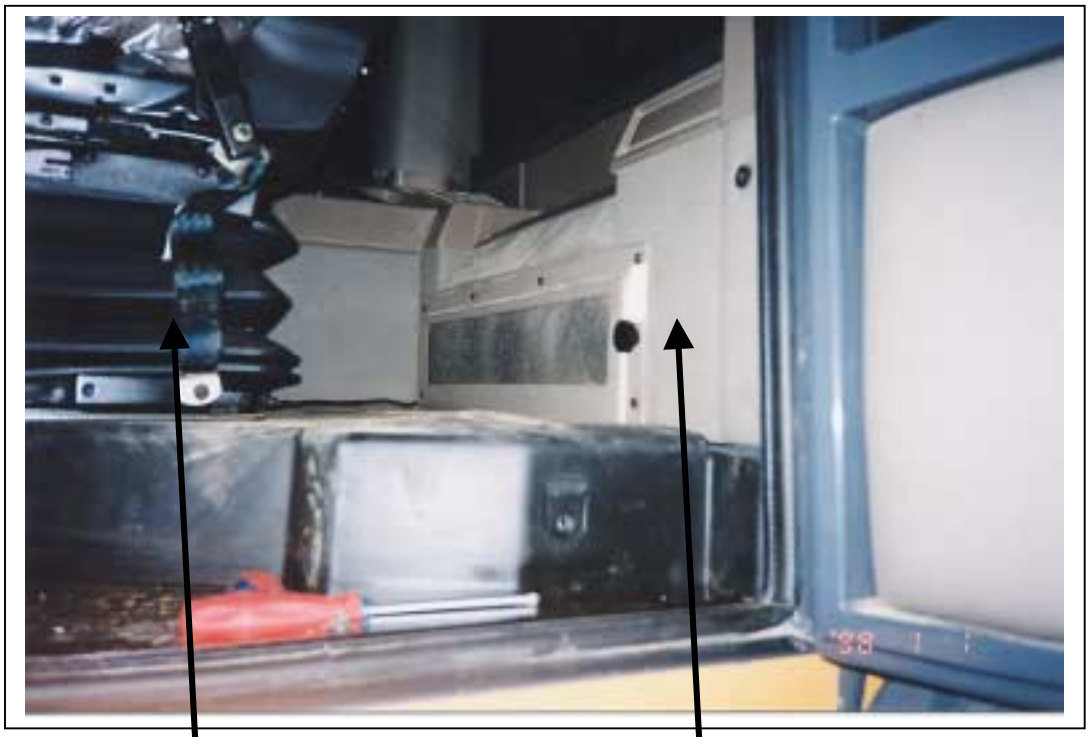
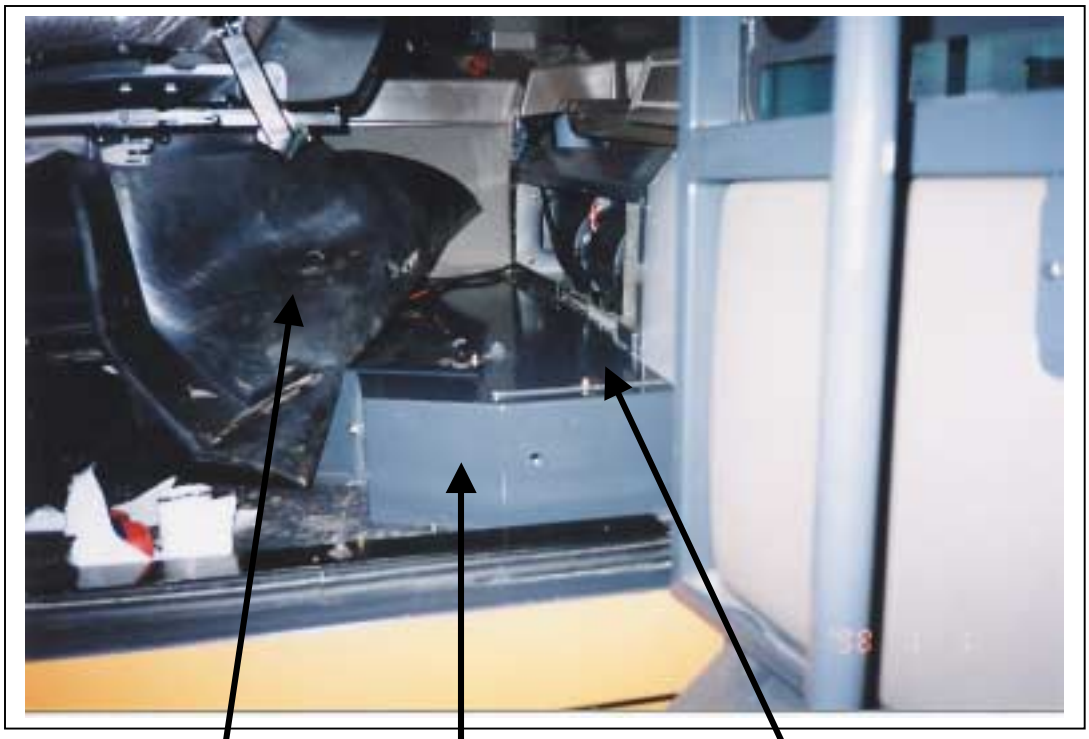
EVAPORATOR



Unbolt the seat and slide forward

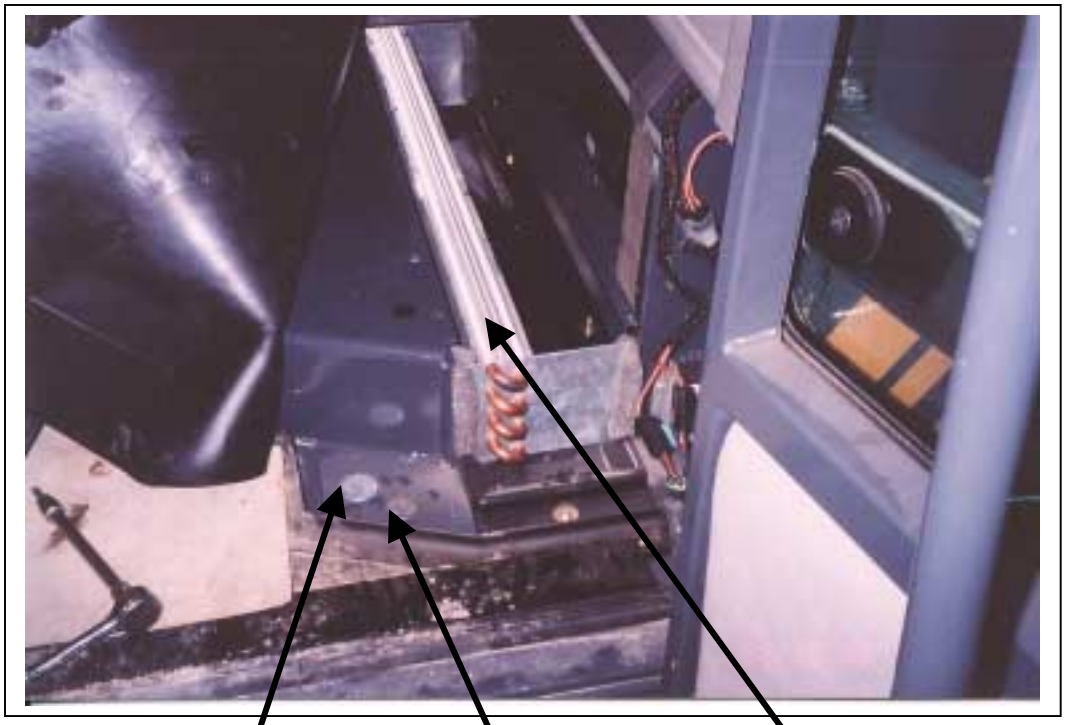
Remove this panel



Move rubber mat out of the way to access the heater area.

Remove cover

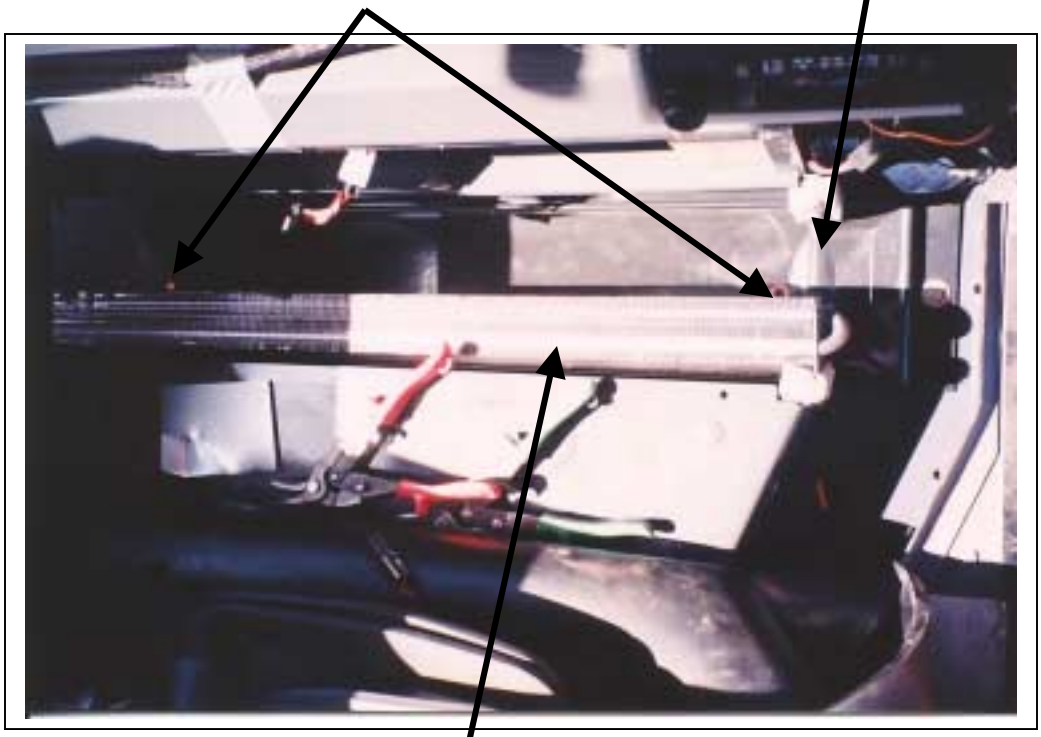
Remove this plate



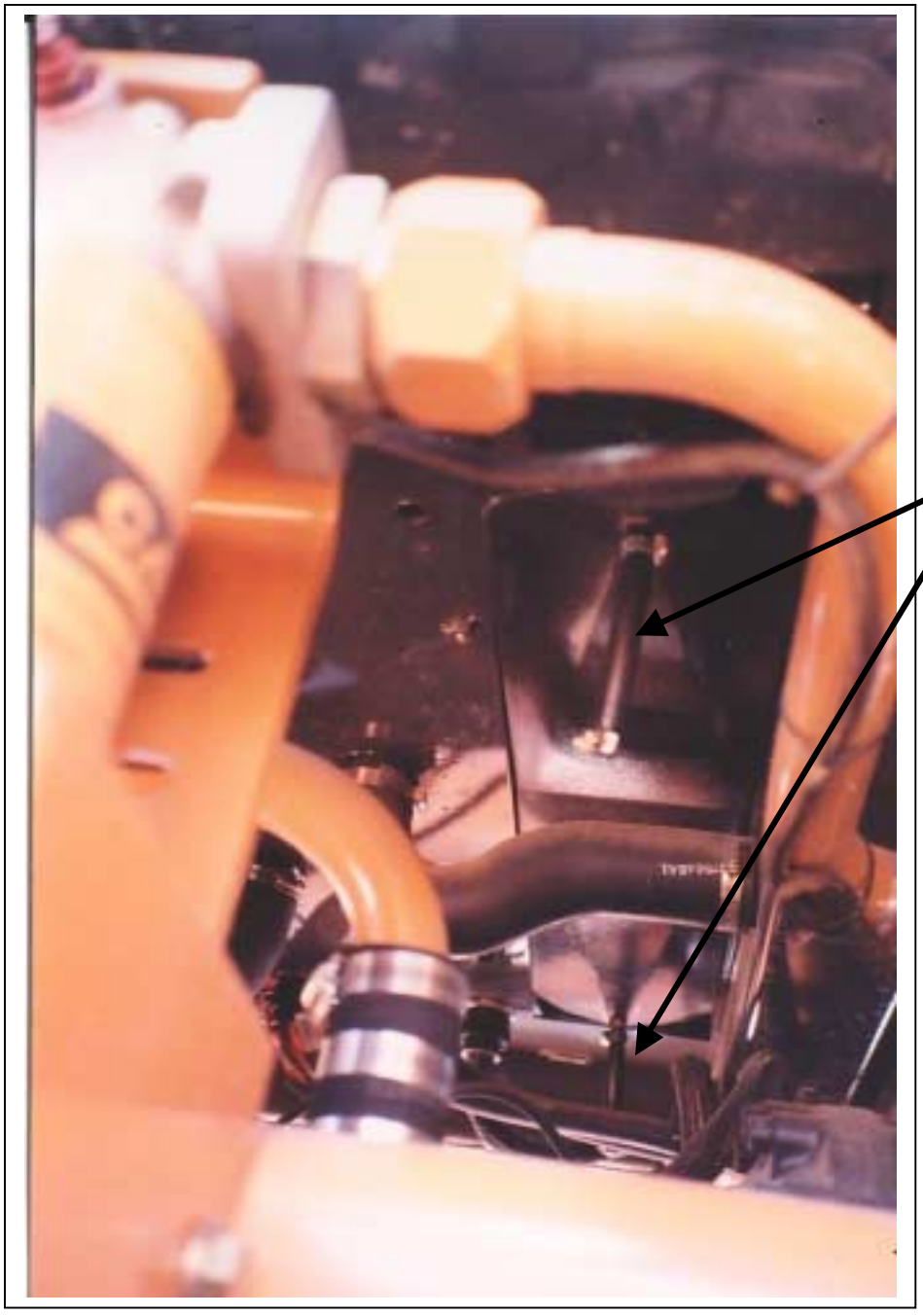
½” A/C line knockout 5/16” A/C line knockout Heater coil

Copper drain tubes epoxied into existing holes

Metal notched out for A/C coil fittings.



Heater coil

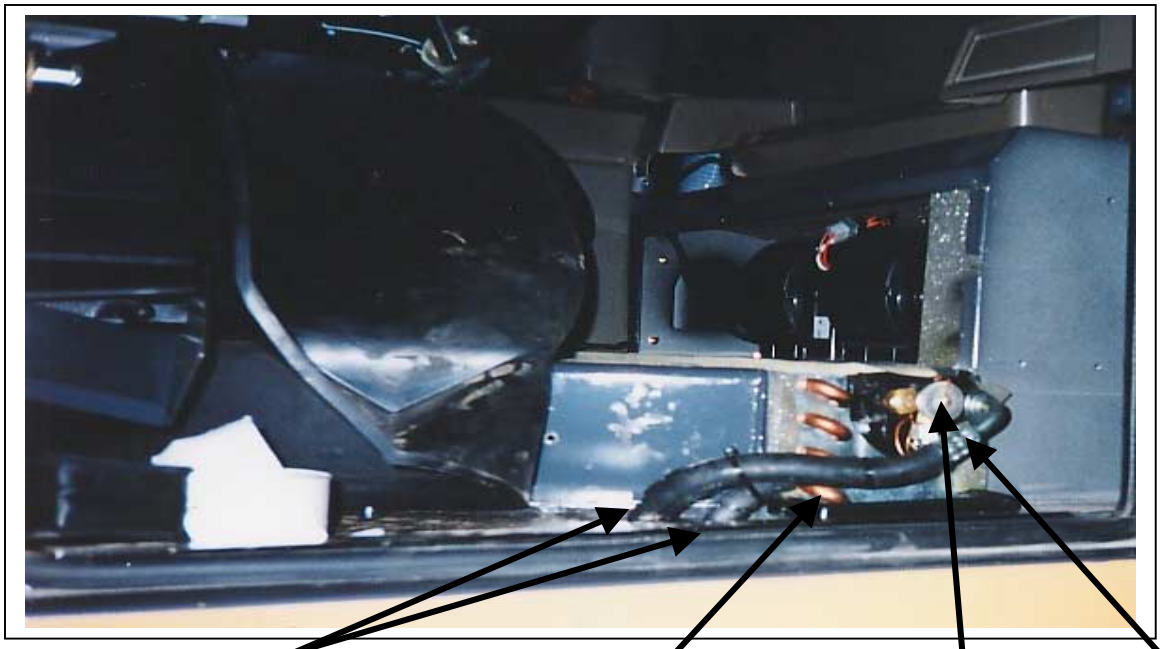


Drain lines and restrictors installed under cab.

Heater coil

Evaporator coil

Thermostat probe inserted 2” from end of coil between the 1st and 2nd row of tubes on the heater coil side



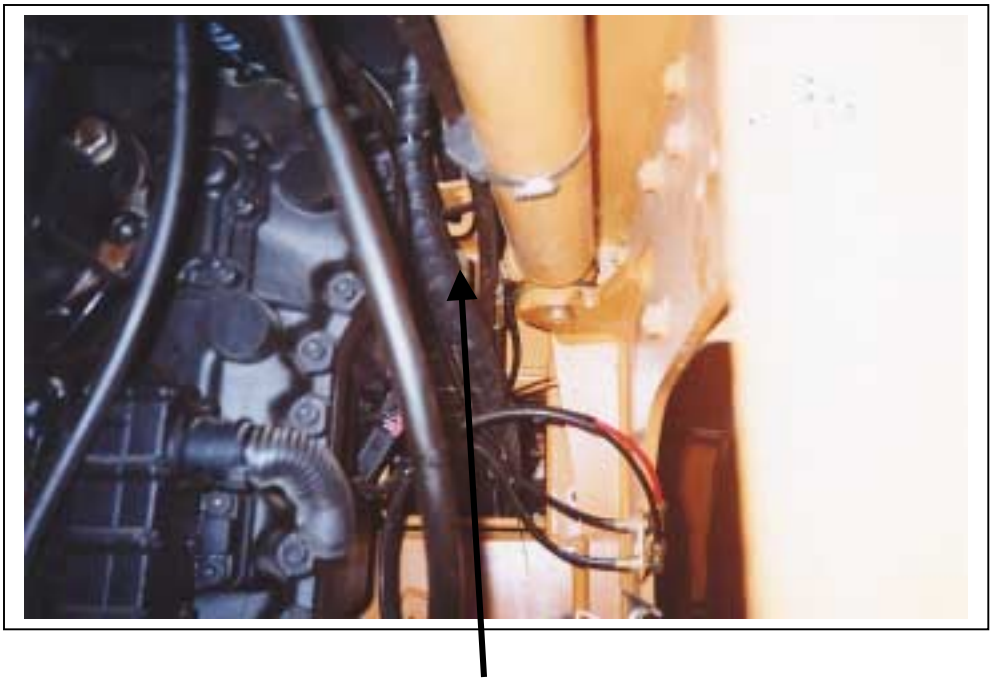
Existing knockouts in cab floor

Heater coil flange notched out to allow A/C coil fittings through.

Expansion valve

½” A/C line

ELECTRICAL



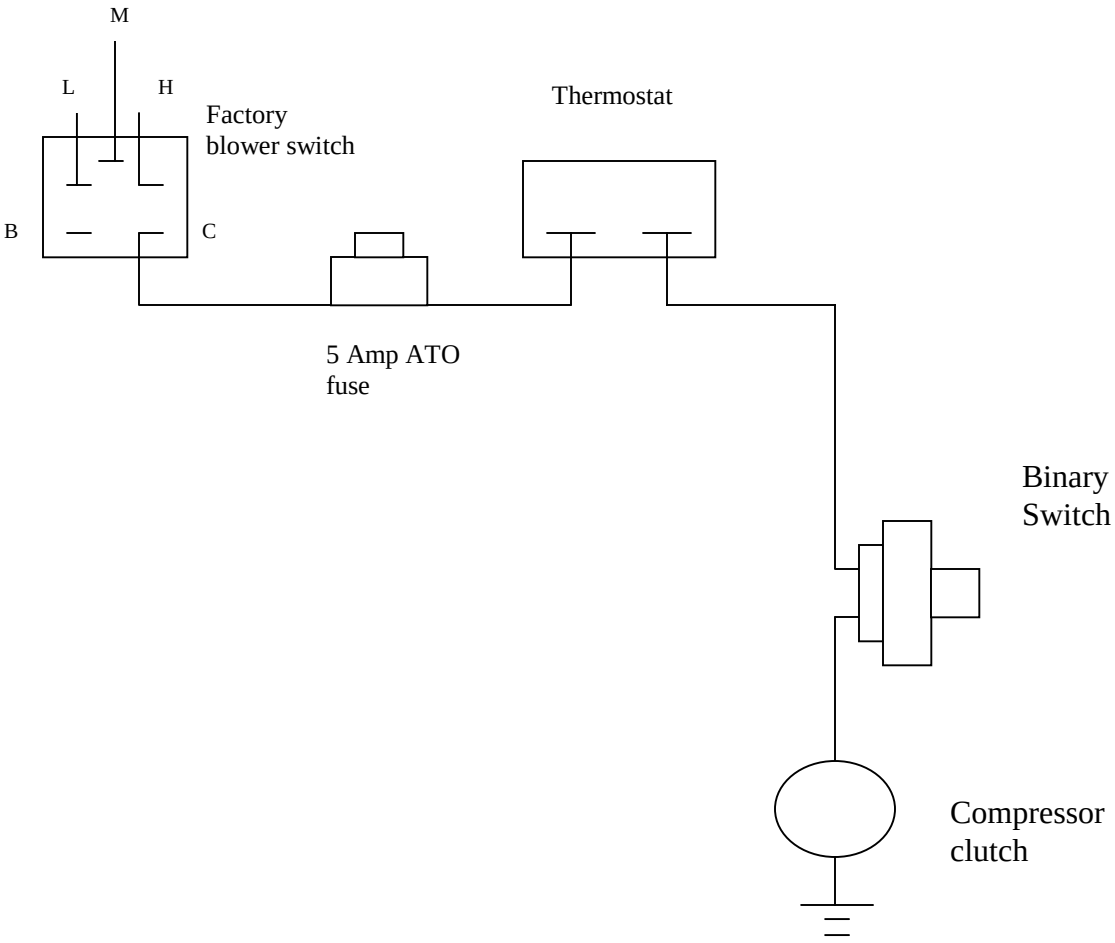
Hoses and clutch wire going back towards engine on left side of machine.

Thermostat location in cab on right control panel

Clutch wire in electrical compartment on right of cab. Run over to the thermostat keeping clear of the filter intake cover.

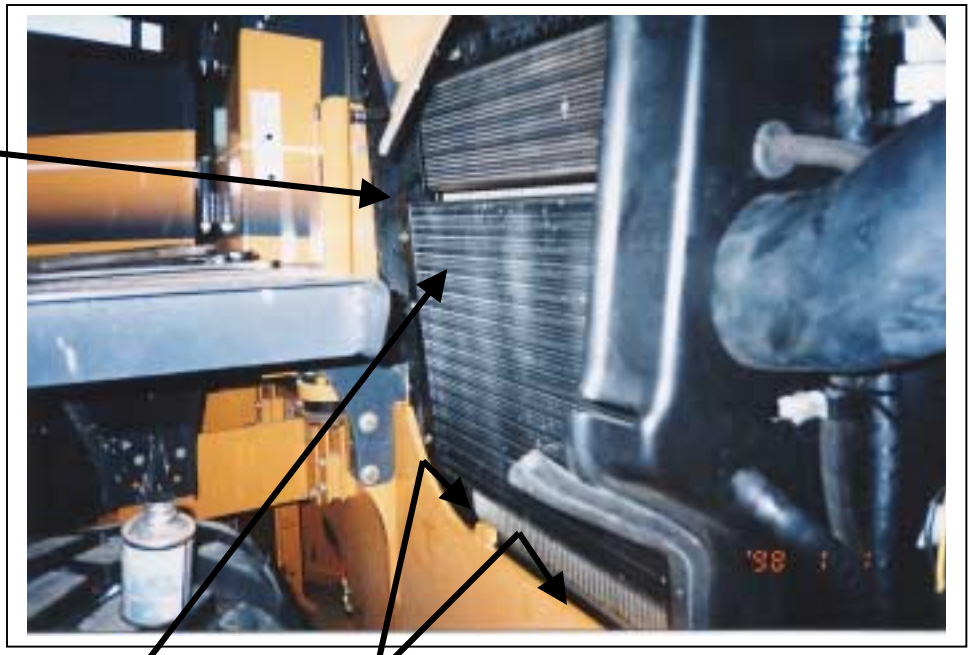
Clutch wire on right side of cab going up with hydraulic control lines

Wiring diagram 521D and 621D CASE



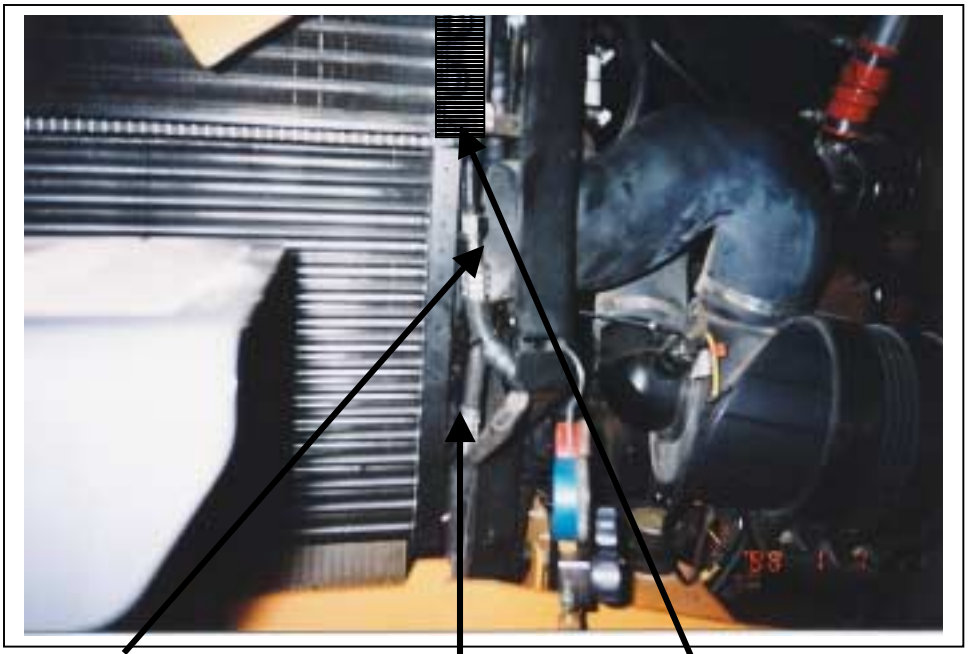
CONDENSER

The upper brackets use the existing oil cooler mounts with 1 ½" spacers and M8 x 60 mm bolts



Condenser coil

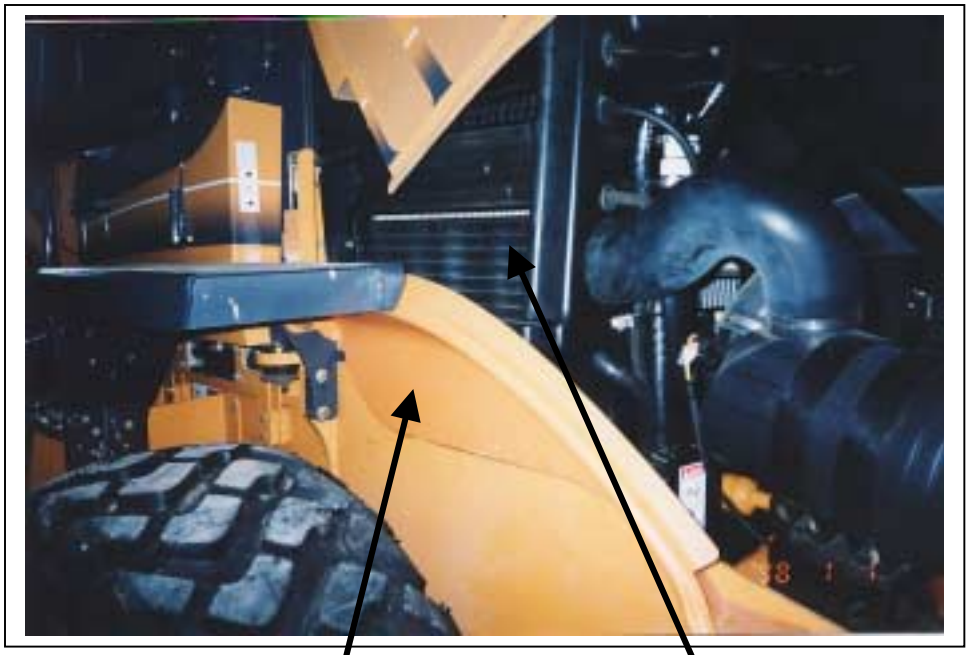
Lower condenser mount bolts. Remove the existing M8 bolts and replace with M8 x 20mm bolts with large OD flat washers. Slip the slotted lower condenser brackets onto the bolts behind the flat washers.



13/32" line

5/16" line

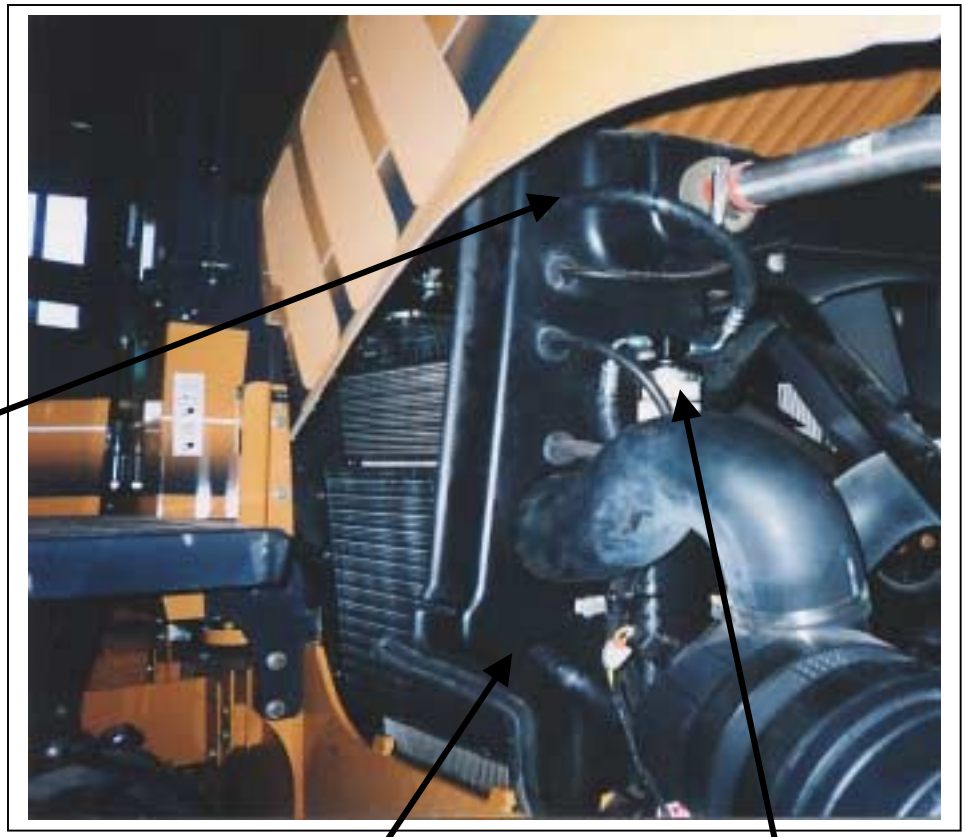
Upper bracket bolts to oil cooler mount using the 1 ½" spacer and M8 x 60mm bolts



Removable fender well back in place.

Condenser in place

1 1/8” hole drilled in plastic shroud for 5/16” hose



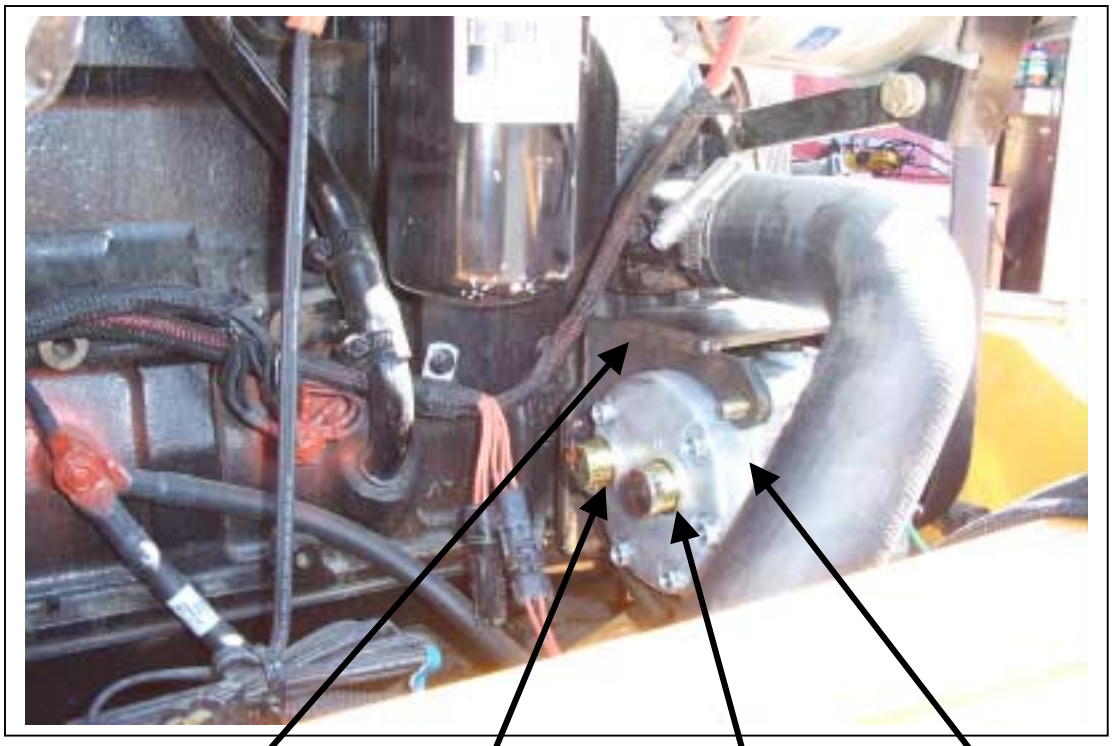
1 1/8” hole drilled in plastic shroud for 13/32” hose

Receiver drier

RECEIVER DRIER

The receiver drier mounts off an existing bolt hole using an M8 x 30 mm bolt and straight bracket. Clamp the drier to the bracket with the two #48 gear clamps.

COMPRESSOR



Mount bracket. Bolt to engine using the three M12 x 30mm bolts provided.

Fitting for ½" rotolock

Fitting for 13/32" rotolock with binary switch

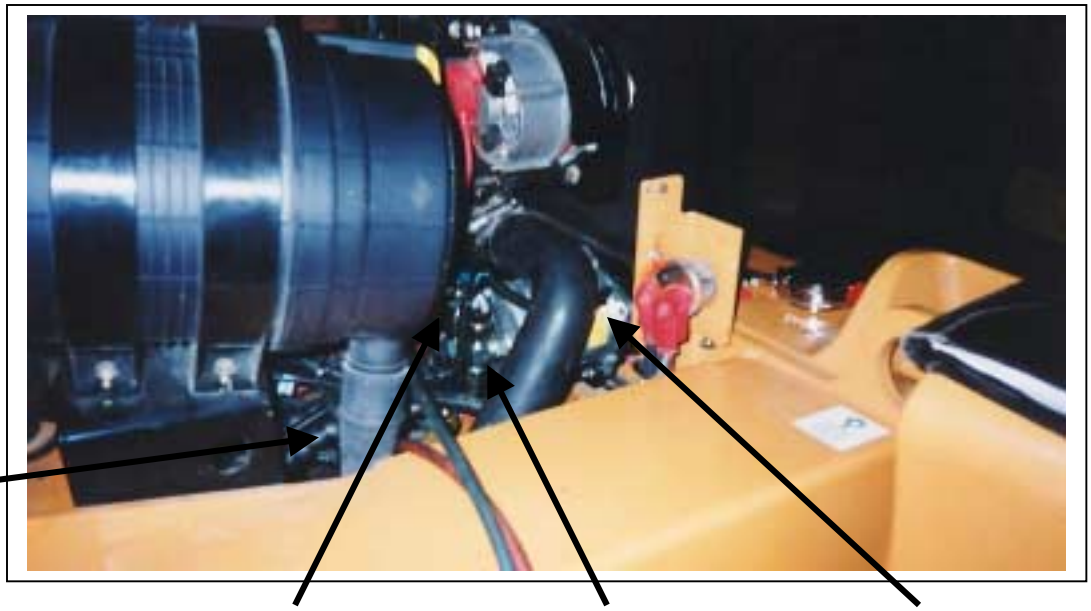
Compressor

Longer belt for A/C

Remove battery disconnect bracket to gain better access to install compressor. Replace when done.

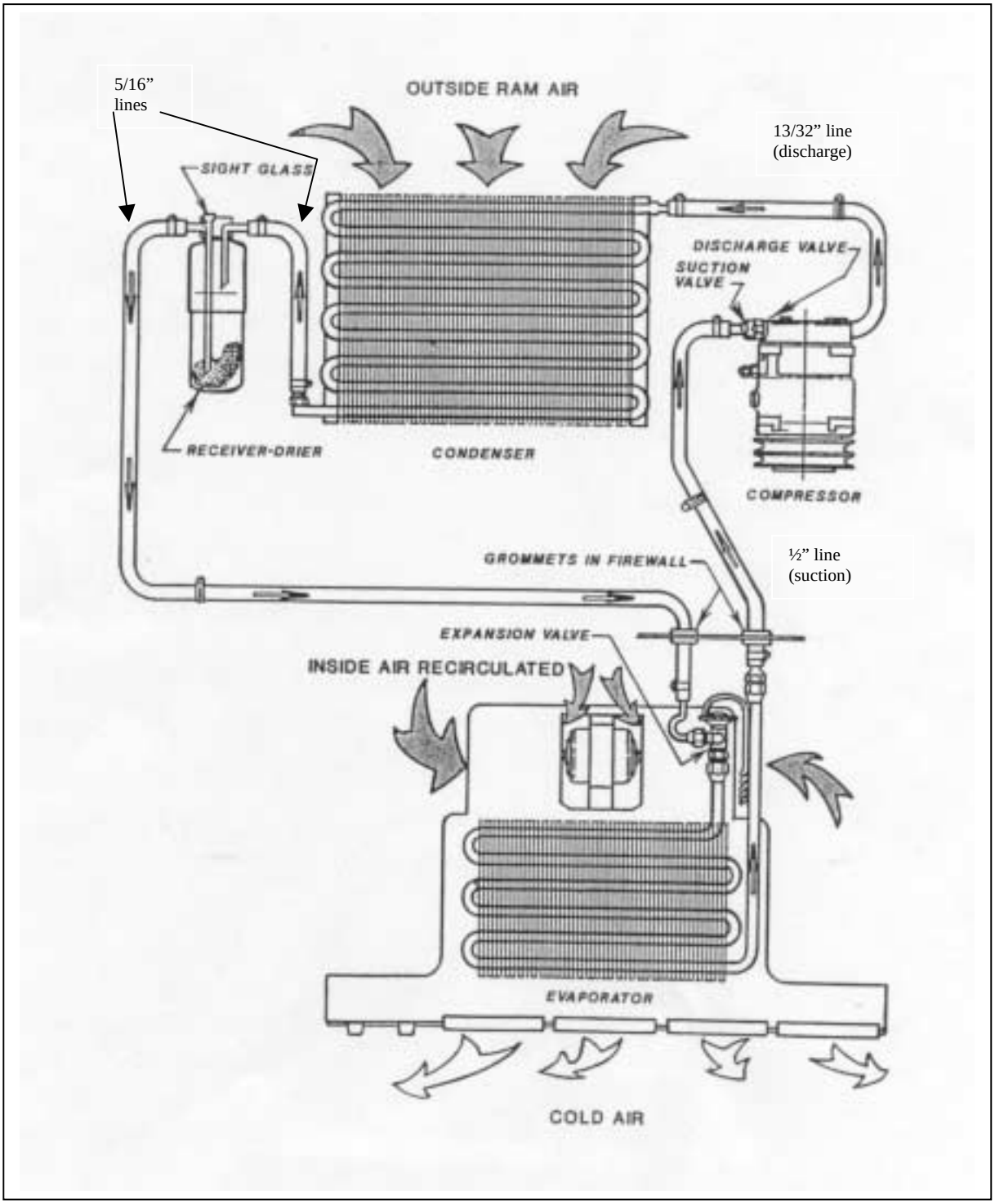
Compressor clutch. Check alignment with a straight edge. Loosen three mount bolts and adjust if required.

The compressor is adjustable downward to ensure the correct tension on the spring loaded adjuster pulley. Use the 3/8” X 1 ½” bolts to secure the compressor to the mount.



Plastic cover shield back in place.

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.