

SKL 873 Terex Loader

Installation Instructions



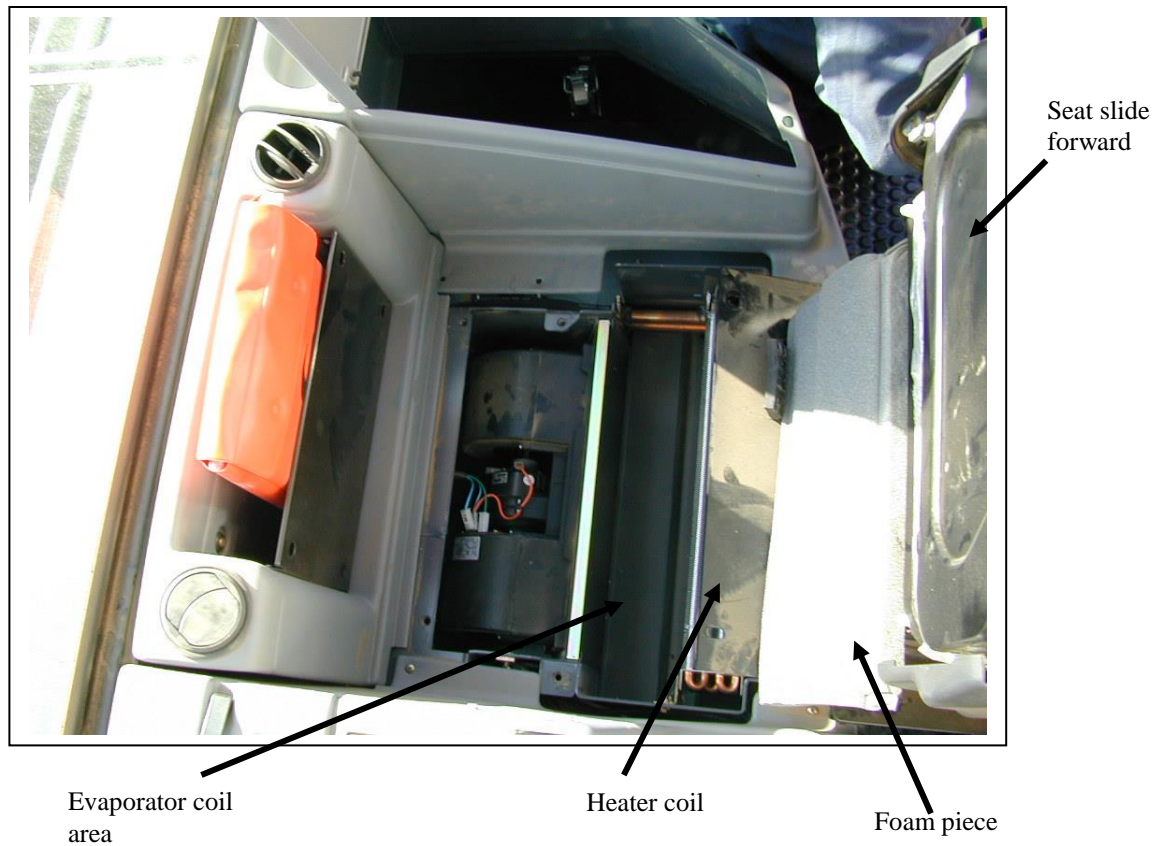
1-800-267-2665

1-888-267-3745 (FAX)

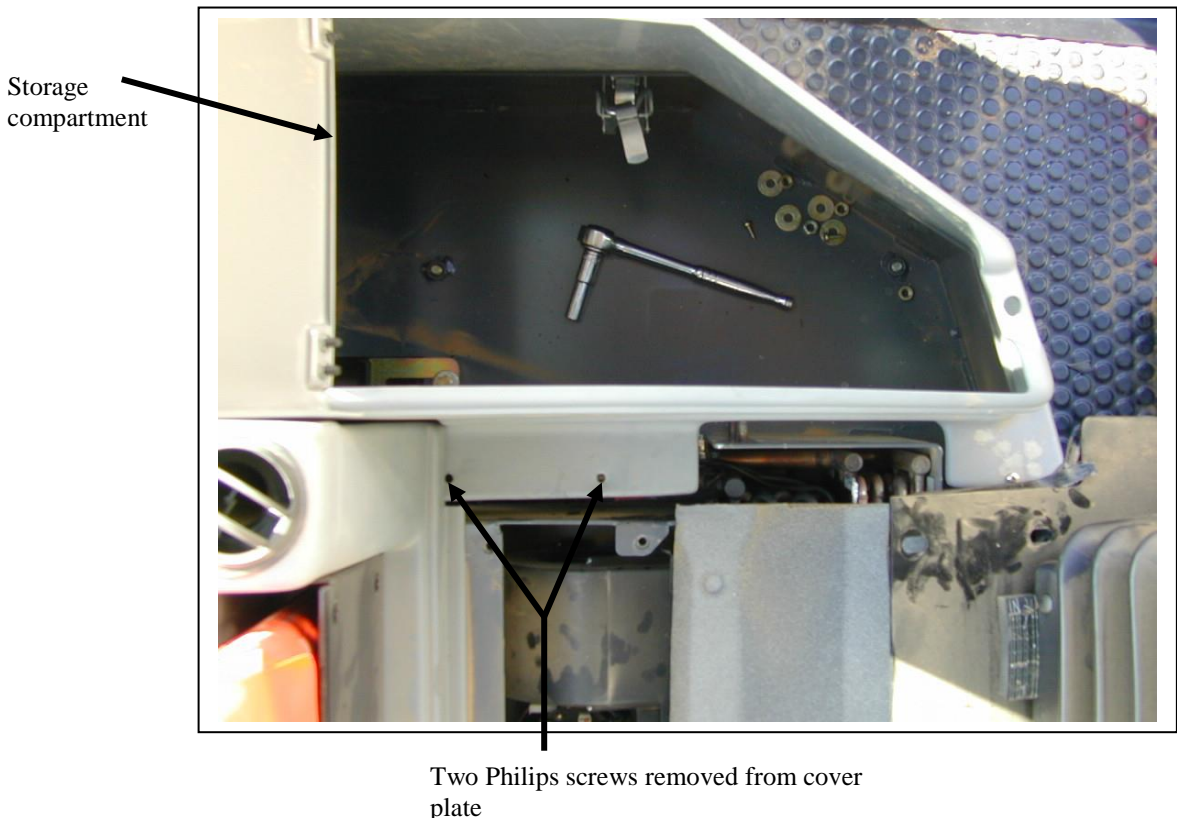
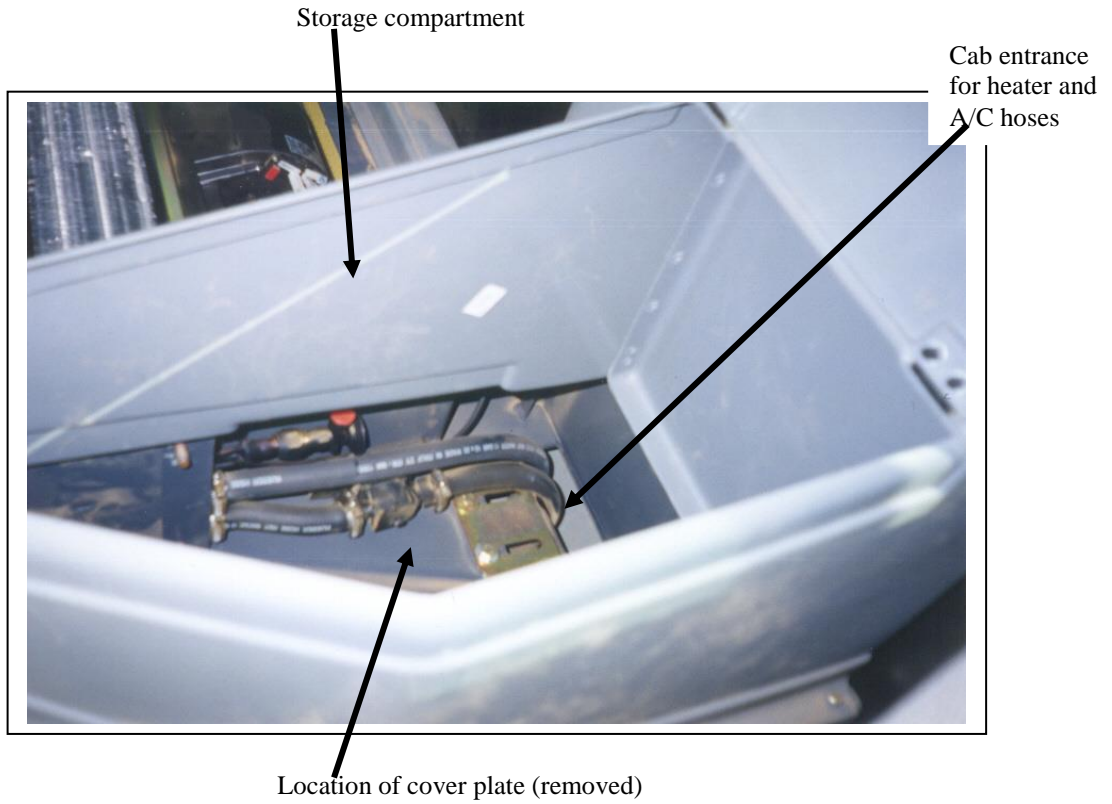
Evaporator: The evaporator setup for the Terex loader is a “drop in” design that goes in under the operators seat. It uses the original heater blowers, air ducts, louvers, blower controls and air filters with some minor modifications to reduce the outside air intake.

Steps:

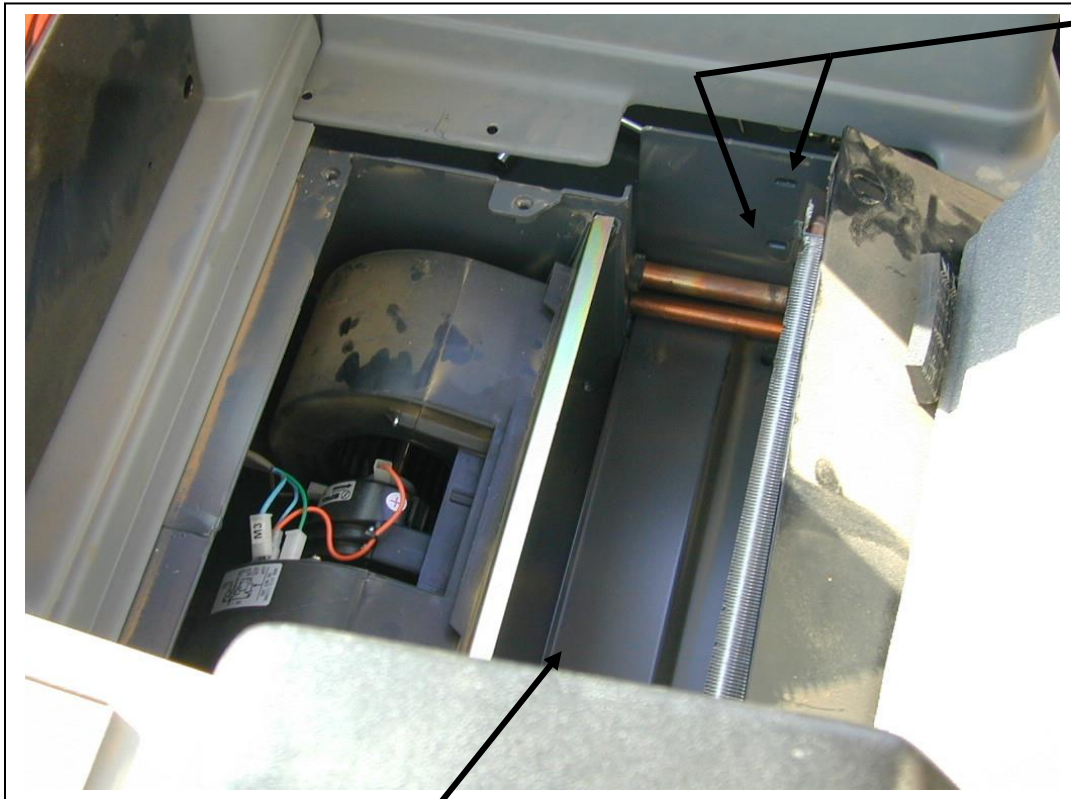
1. Unbolt the seat plate from the seat platform. Leave the seat attached to the plate. Slide the seat plate forward towards the steering wheel to expose the blowers and foam piece that covers the top of the heater box. Remove the foam piece and put aside for later re-installation.



2. Open the storage compartment to the right of the operators seat. Remove the contents of the compartment. Remove the rubber mat on the bottom of the compartment.
3. Remove the triangular shaped cover plate from the left hand wall of the storage compartment. Remove the four M8 nuts that hold the cover plate to the left wall and rear wall of the compartment. Remove the two Philips screws from the plastic storage compartment cover that screw into the cover plate on the heater box side of the storage compartment. Slide the cover plate out to the right and remove it from the storage compartment.



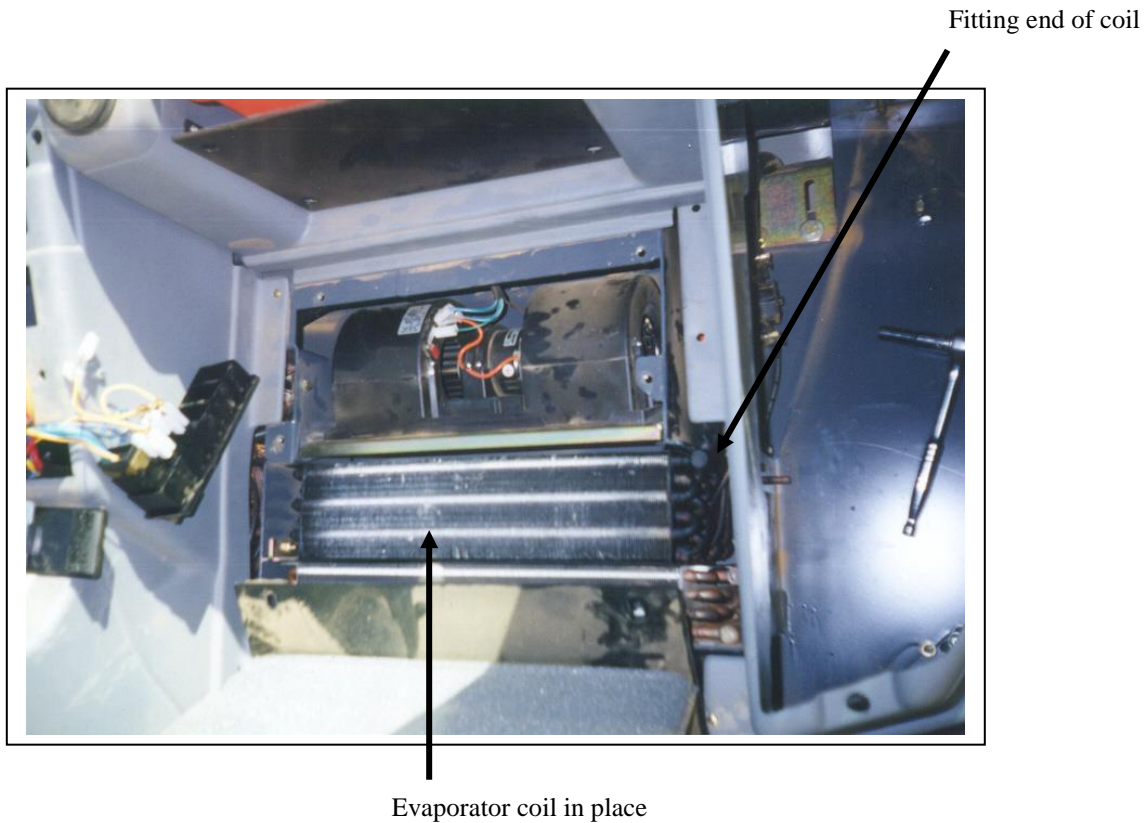
4. Remove the heater coil retaining bracket from the right hand side of the heater box. It sits between the heater coil and blowers and is held in place with two M6 bolts and nuts. Discard the bracket and hardware, it will not be reused.



Holes from bolts holding the heater coil retaining bracket

Evaporator area

5. Slide the evaporator coil into place with the fittings on the right side pointing towards the back of the cab. On the left side of the evaporator coil, the front flange on the evaporator coil should be in between the heater coil flange and the coil retaining bracket.



6. The evaporator coil should sit flush with the heater coil at the top.



7. The thermostat probe is run from the thermostats location on the right hand control console towards the back of the console and through the existing grommet for the blower wires. This grommet can be easily accessed by temporarily removing the blower assembly. This is done by pulling up on the blower assembly frame and sliding it out of its hole. Run the thermostat probe along the top of the evaporator and insert it five inches deep into the coil between the second and third rows of tubes from the front, about half way along the length of the coil.



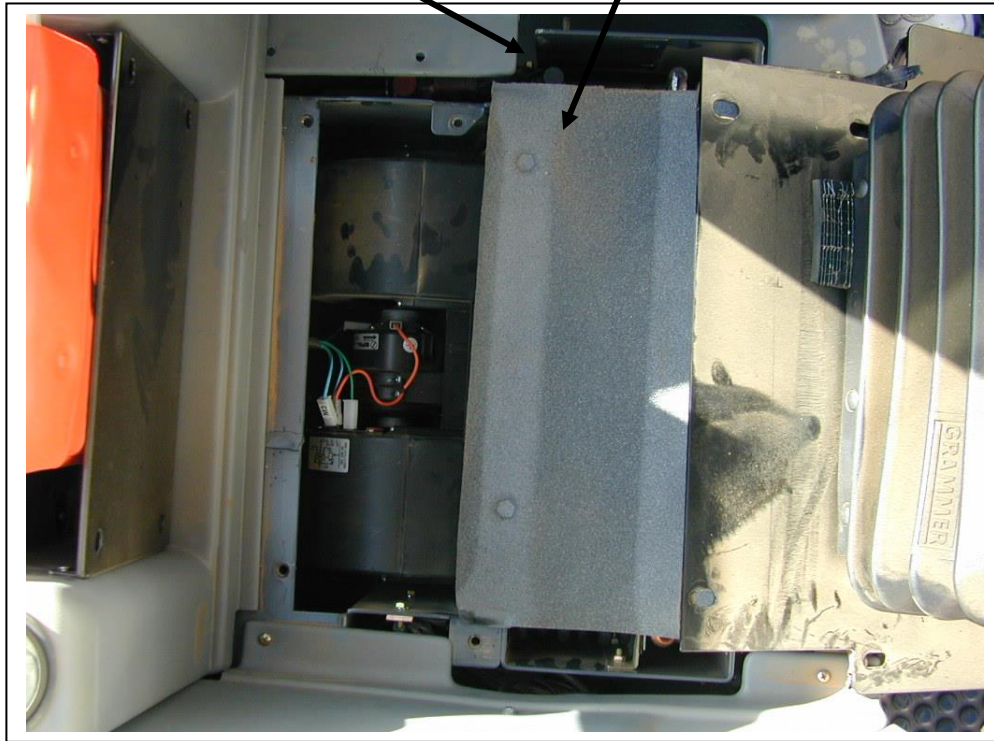
Thermostat probe

Blower assembly removed from its spot

8. Using tar tape, seal the area all around the heater and A/C lines as they exit the heater box area. Also plug the two small holes left from the removal of the M6 bolts holding the right heater coil retaining bracket.
9. When the system has been all assembled and tested the foam pieces can be placed back on top of the heater and evaporator coils and the seat plate can be re-assembled. Also use tar tape to seat the hose inlet area into the cab and then re-install the triangular cover plate. Replace all the other items into the storage compartment.

Seal the heater and A/C lines to eliminate air leakage out of the box

Foam piece back in place

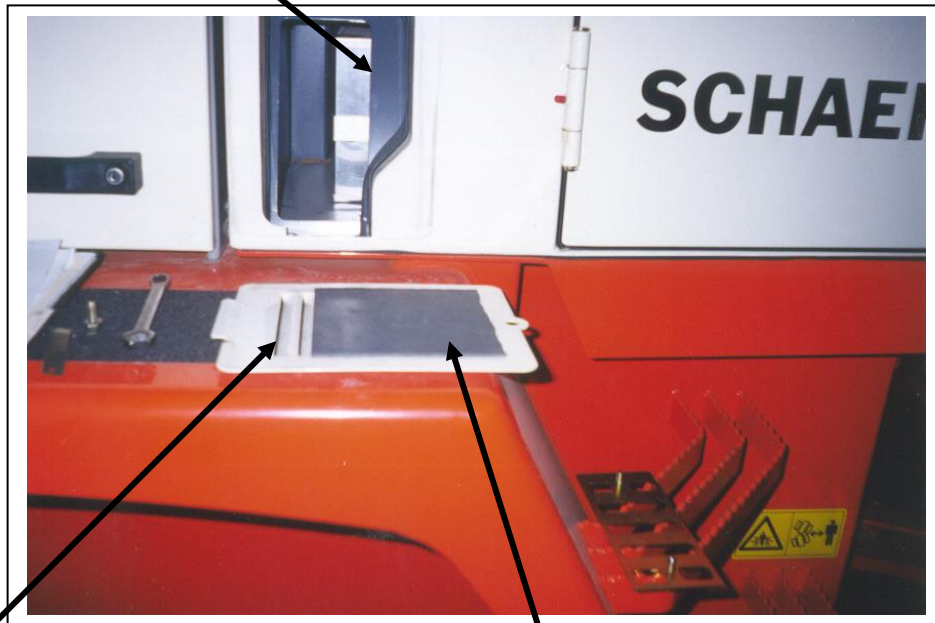


10. The outside filtered air intake for the cab is not designed for extreme climates and needs to be restricted to achieve the maximum cooling potential. This is done by removing the outside air intake panel on the right side of the cab, just behind the right door. On the back side of the air intake panel install the 6.5" X 6.5" piece of self adhesive foam so that it covers all but the bottom two louvered vents.



Air intake panel removed

Outside air filter



Two vents left open

6.5" x 6.5" foam installed

11. While the outside air intake panel is off, the slider plate to control this inside air re-circulation louvers can be removed. This slider plate is located on the lower right side of the right control console, just inside the right side door. Remove the two fasteners holding the slider plate on and let the plate fall down inside the air passage. Remove the slider plate from inside the cab by removing the filter and reach in behind it. By removing the slider plate, the inside air re-circulation cannot be accidentally shut off.

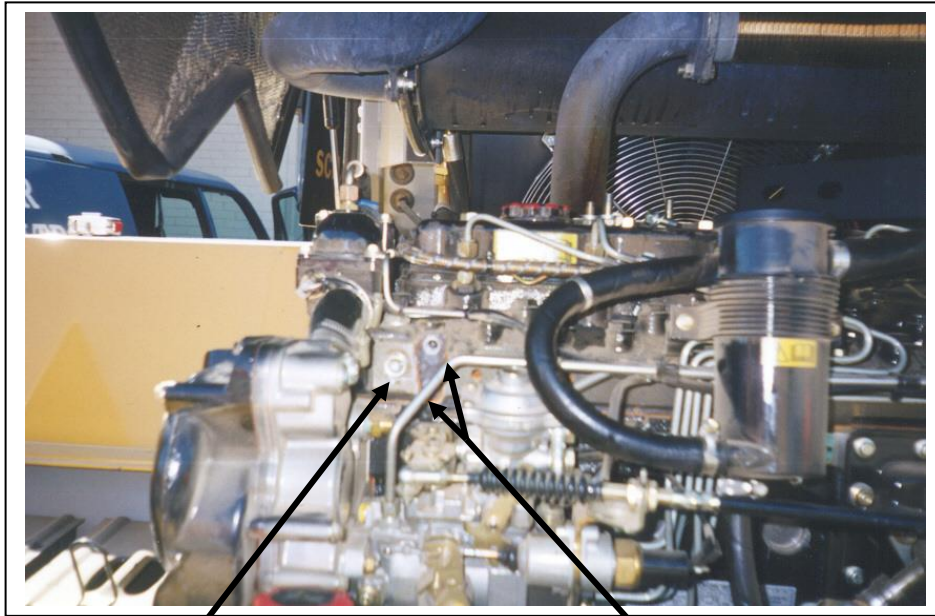


Slider plate location

Compressor mount: The compressor is located on the top rear of the engine. It drives off of the open pulley on the crank.

Steps:

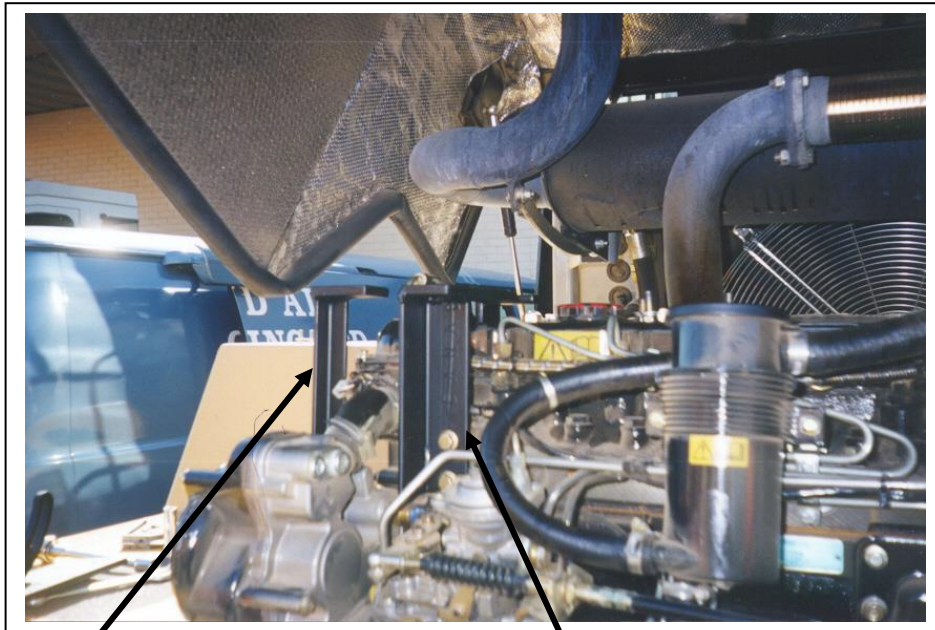
1. Remove the engine lifting bracket from the front rear of the engine, just behind the injector pump. Retain the two M10 bolts for reuse.



1/2" NPT Plug

Engine lifting bracket bolt locations

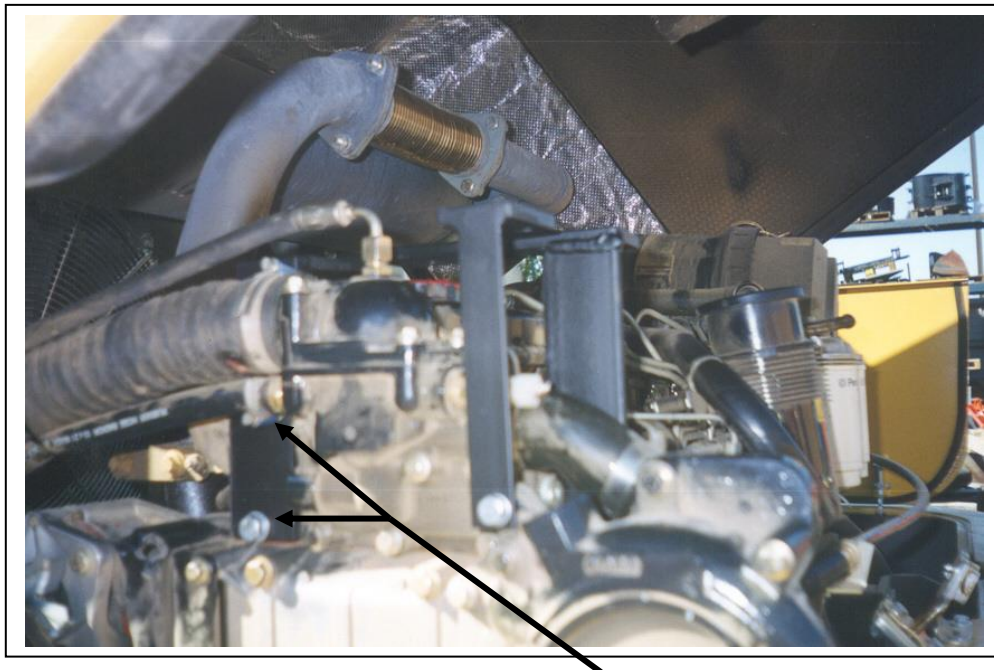
2. Remove the screen cover from in front of the engine to expose the crank pulleys.
3. Bolt the 2"x 2" angle compressor mount brace onto the same holes as the engine lifting bracket previously was snug the bolts up but don't tighten them completely. There is a notch in the bracket to go around a 1/2" NPT plug. If the plug is hitting, it may have to be turned in a bit so it allows more clearance between it and the mount brace.



1" x 1" Angle mount brace

2" x 2" Angle compressor mount brace.

4. Install the 1" x 1" angle mount brace onto the open M8 threaded hole on the water pump housing. Use the M8 hardware provided in the kit. Snug the bolt up but don't tighten it completely.
5. The third mount brace is located just in front (cab side) of the thermostat housing and to the right of the upper radiator hose. It bolts onto the head with two bolts, a M10 X 25mm bolt in the lower hole and a M10 x 20mm bolt in the upper hole. Slide the bracket down into place past the radiator hose and bolt into place loosely.



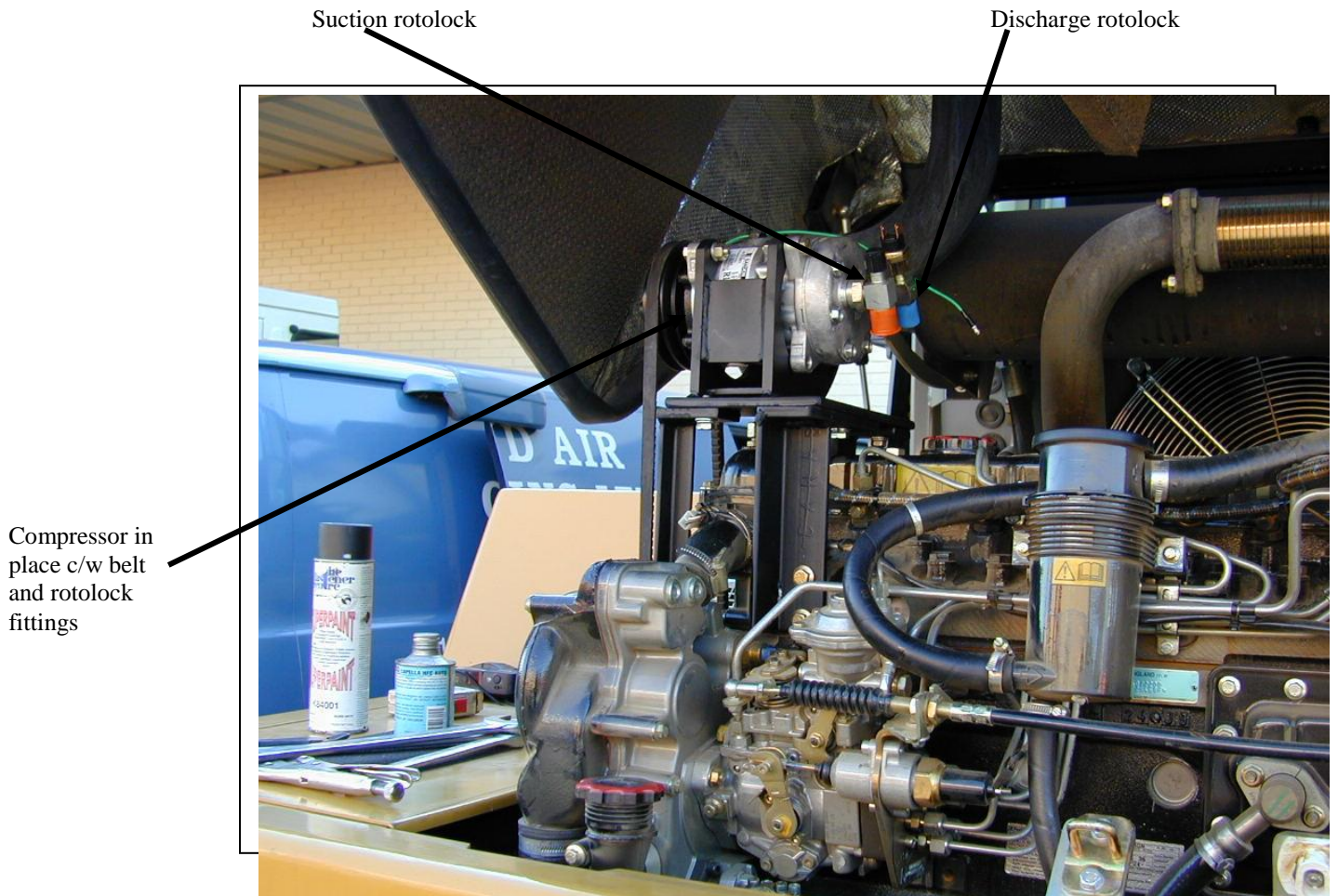
Mounting bolts for third mount brace top hole M10 x 20mm bolt bottom hole M10 x 25mm bolt

6. Install the main mount plate by sitting in on top of the three mount braces. Line up the threaded holes in the main mount plate with the slotted hole in the three mount braces. Bolt in place with the 3/8" x 1" hardware provided. Securely tighten all the bolts on the mount braces.



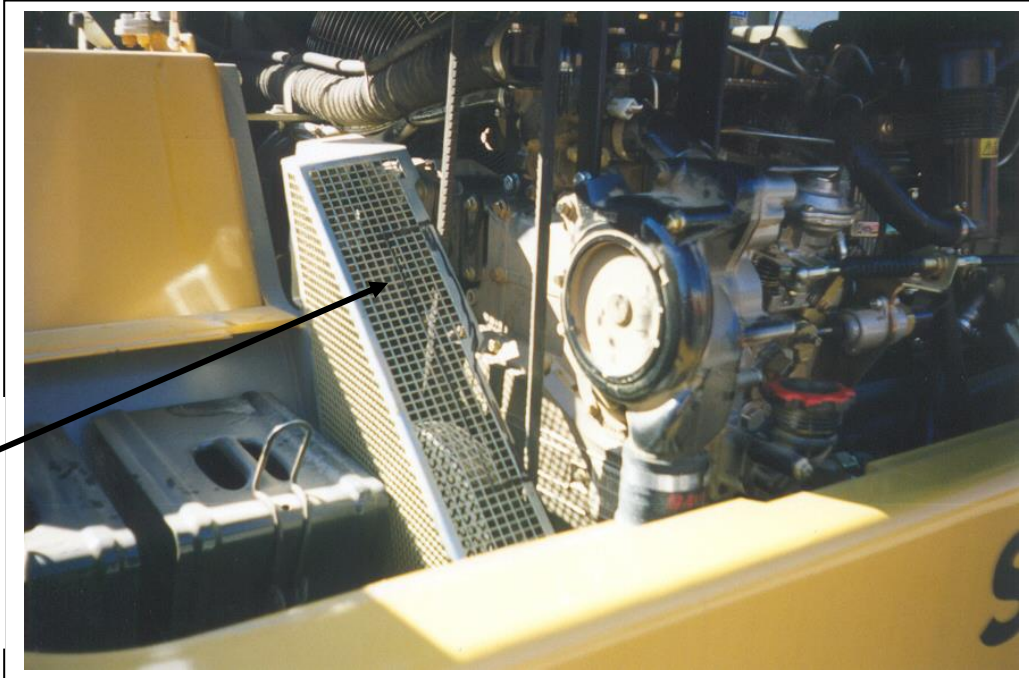
Main mount plate

7. Set the compressor onto the tightener ears and loosely bolt in place using the 3/8" x 1 1/2" hardware provided. Install the 17720 drive belt around the open pulley on the crank and the front groove on the compressor. Snug up the belt and check for the correct belt alignment. This can be done with a straight edge across the crank pulley face or by checking the clearance distance between the alternator belt and the compressor belt. If the alignment needs adjusting, loosen the bolts holding the main mount plate and correct the alignment. Properly tension the compressor belt and tighten all mount bolts.

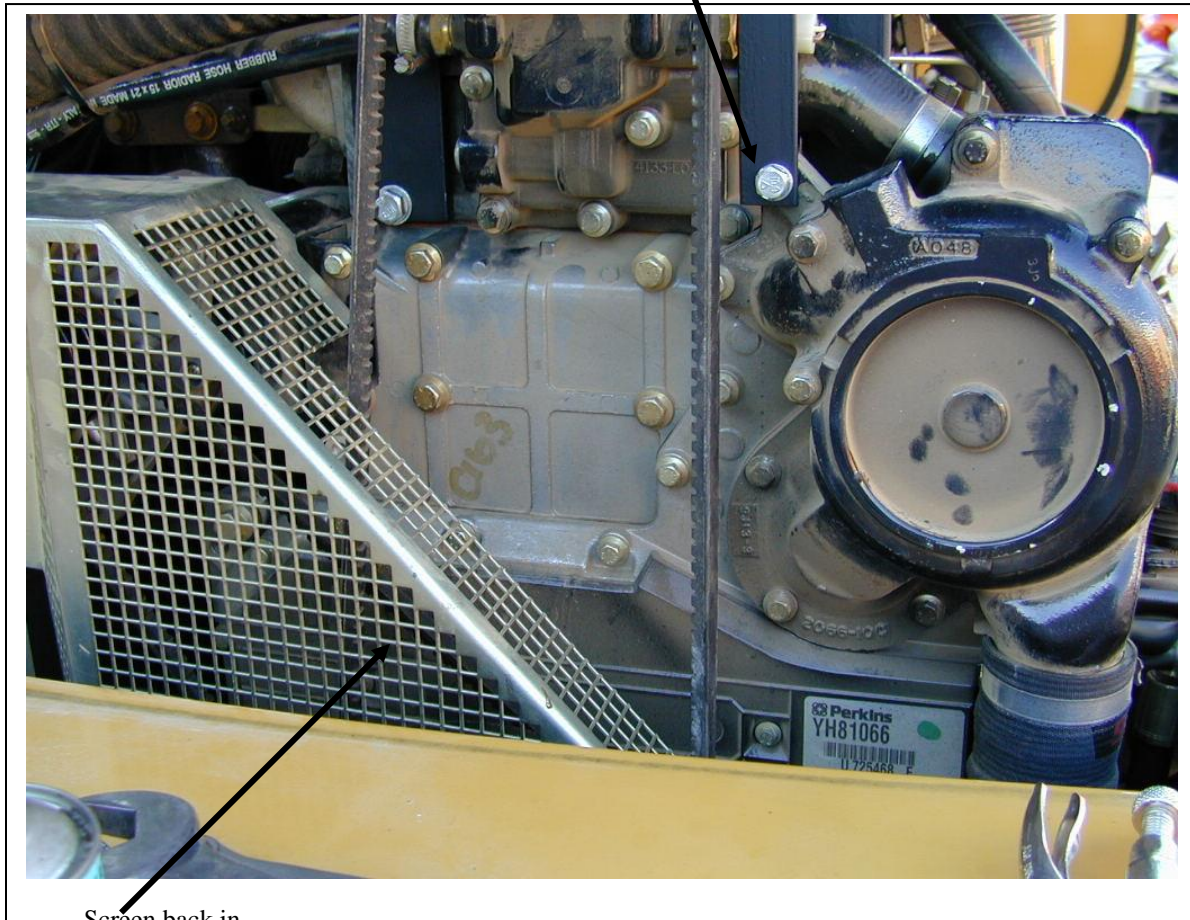


8. Re-place the screen cover back in front of the engine. Mark on the screen the area that will have to be cut away to accommodate the compressor drive belt. Use metal snips or a jigsaw to remove the necessary metal. Re-bolt the screen cover down into place.

Screen set in place showing area to be notched out



M8 Bolt for 1" x 1" angle mount brace



Screen back in place

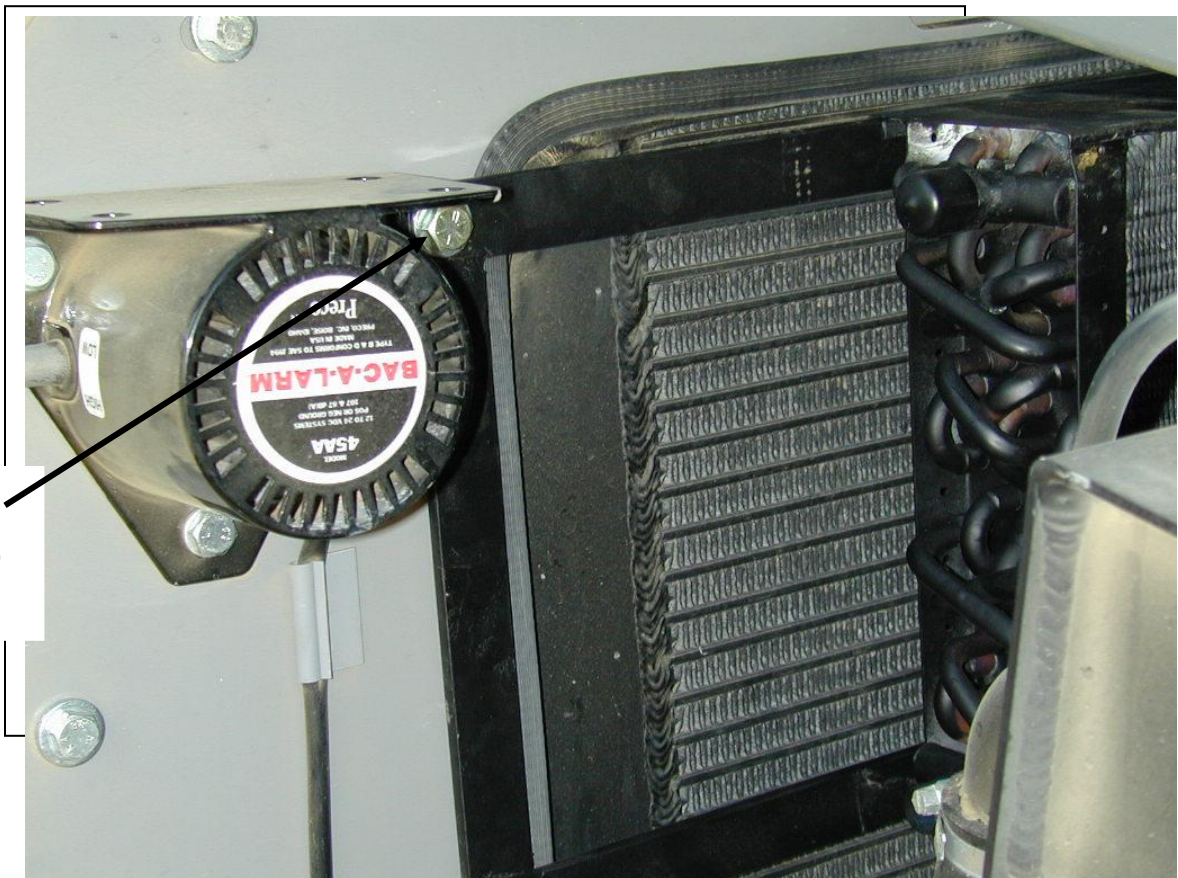
9. Install the rotolock fitting onto the fitting ports on the back of the compressor. Remove the caps from the compressor ports. Install the white nylon gaskets into the grooves in the ends of the fitting ports. Attach the 13/32" rotolock fitting onto the discharge port (closest to cab), mark "dis" or "D". Have the binary switch on the 13/32" rotolock pointing up and slightly towards the back of the machine. Attach the 1/2" rotolock fitting (large one) onto the suction port, marked "suc" or "S". Have the 134a access port pointing up and slightly towards the back of the machine. Oil all contacts surfaces on the rotolocks with PAG refrigerant oil.

Condenser installation: The condenser coil mounts on the air intake side of the radiator towards the top of the radiator coil. It is on a frame that allows the coil to slide out to the left for easy cleaning of it and the radiator.

Steps:

1. Open both the left and right radiator compartments access doors directly behind the cab.
2. Remove the condenser coil from its frame.
3. Slide the condenser frame across in front of the radiator with the fitting end of the condenser frame to the right. Position the frame so the top right mounting hole is between the back up alarm and the edge of the radiator opening. Make sure the condenser frame is straight or parallel to the top of the radiator and then mark all four mounting holes.

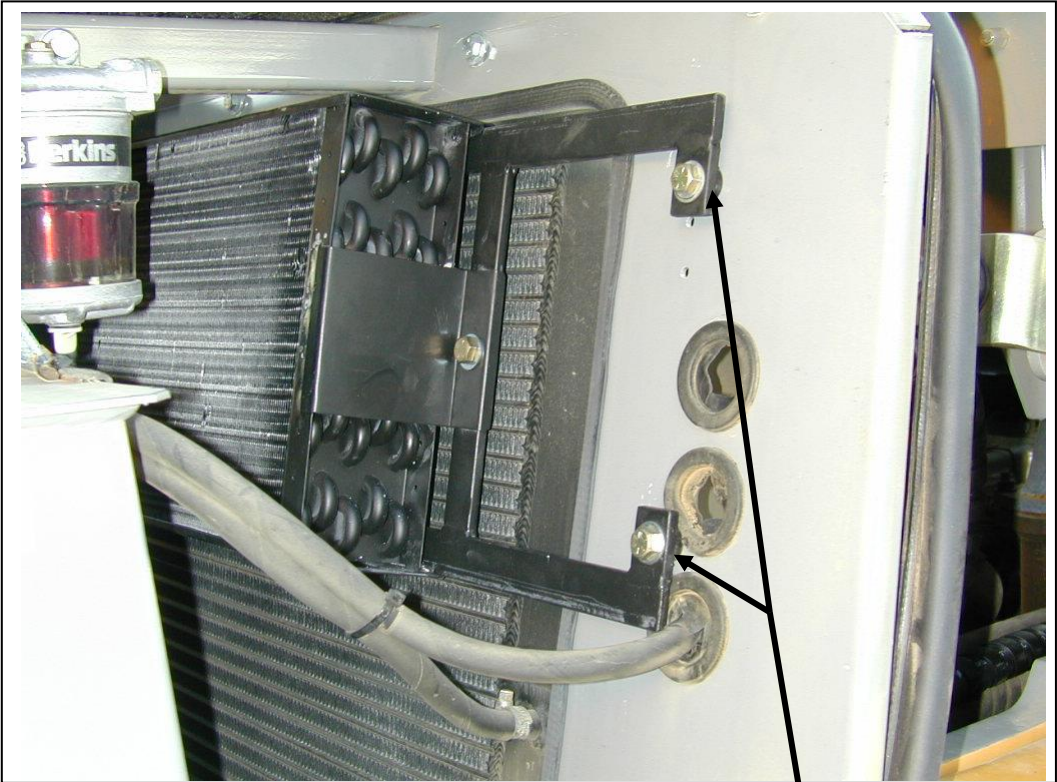
Right side of
condenser frame
(Top mount hole)



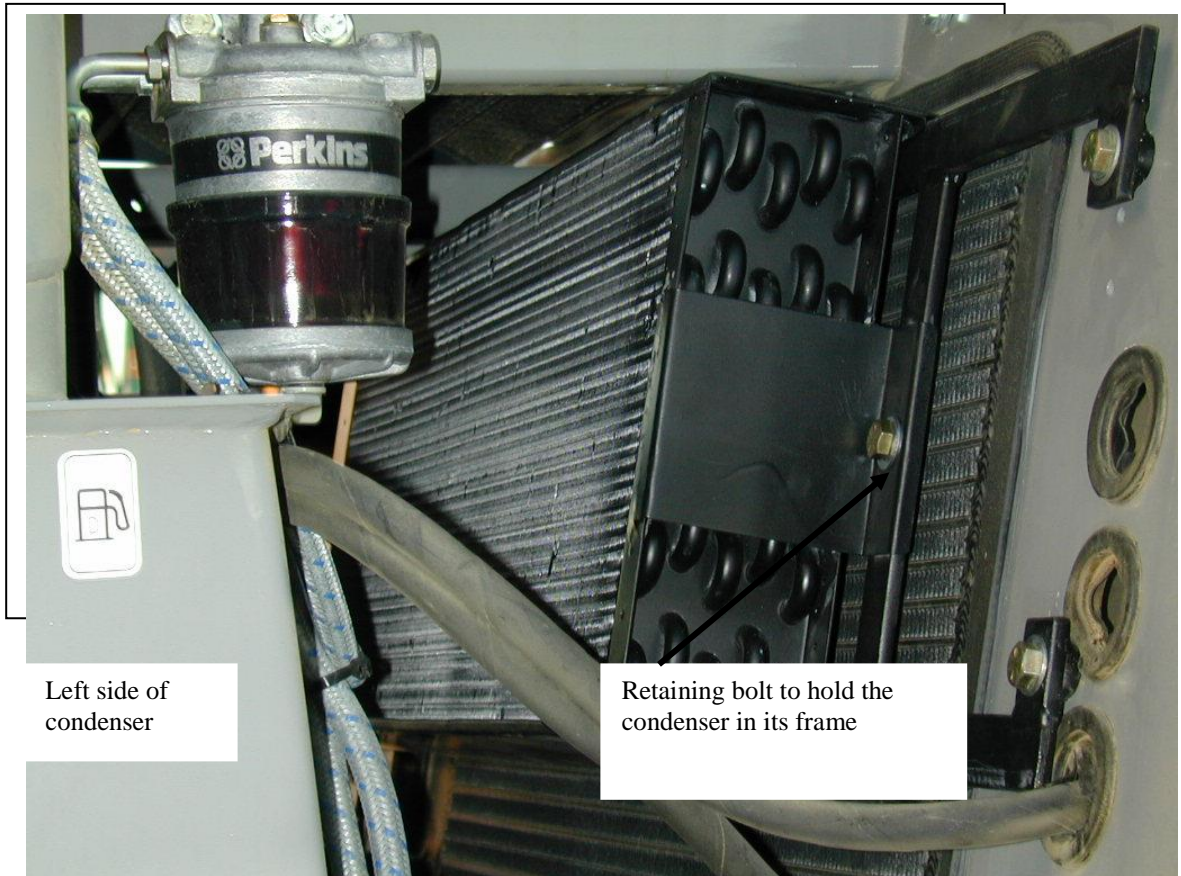
Mount bolts locations for the right side condenser mounts



- 4. Drill the four mounting holes in the radiator frame. Drill the holes out to 7/16". Check to ensure that the holes are not being drilled into the radiator tanks.

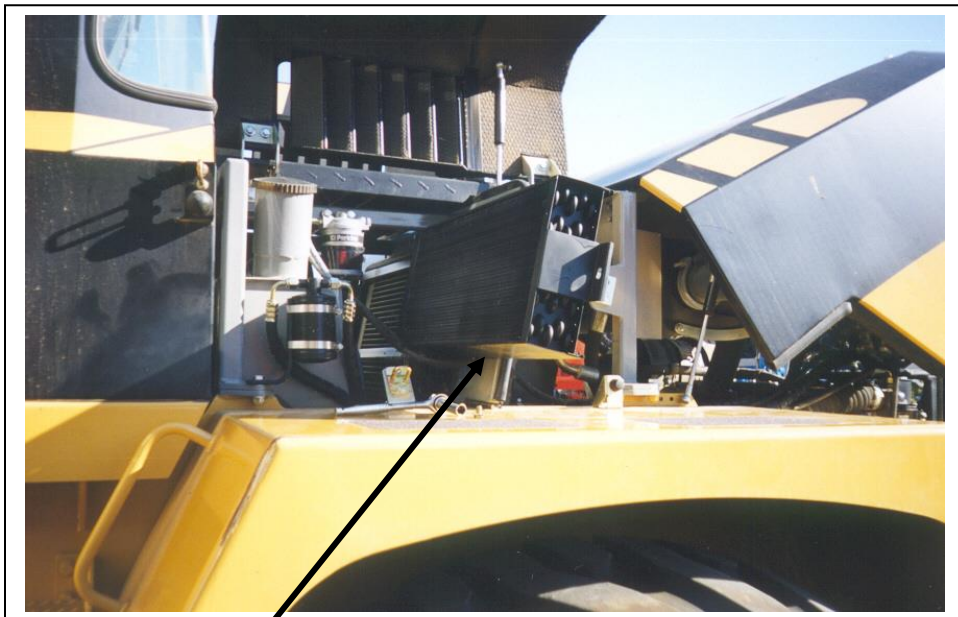


Left hand mounting holes



Left side of condenser

Retaining bolt to hold the condenser in its frame

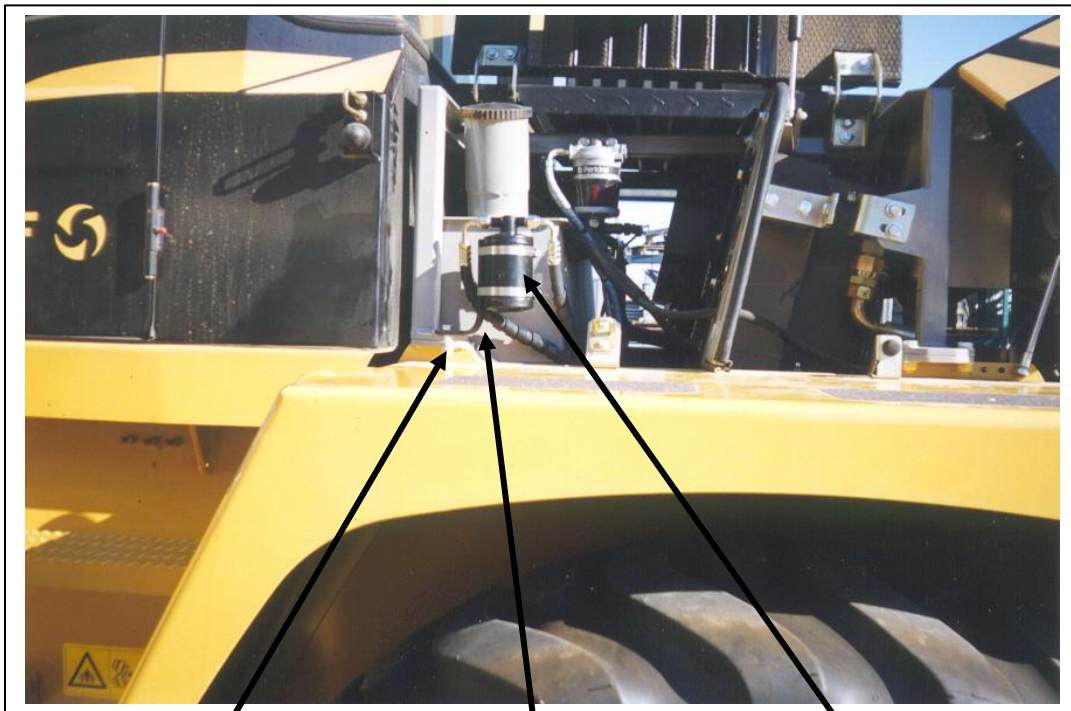


Condenser slid out of its bracket on the left side of the machine

Drier installation: The drier is located just behind the cab on the radiator compartment on the left side of the machine. The 90° drier bracket mounts off of an existing bolt just in front of the fuel fill pipe.

Steps:

1. Remove the M12 bolt that holds the engine cover support frame to the body of the loader. This is located just behind the cab on the left side of the machine.
2. Bolt the 90° drier bracket to this location using the original bolt. Position the bracket so it is pointing towards the back of the machine.
3. Secure the drier to the bracket using the two #48 gear clamps provided. Have the drier inlet pointing towards the back of the machine. (marked "IN")



Drier mounting
bolt

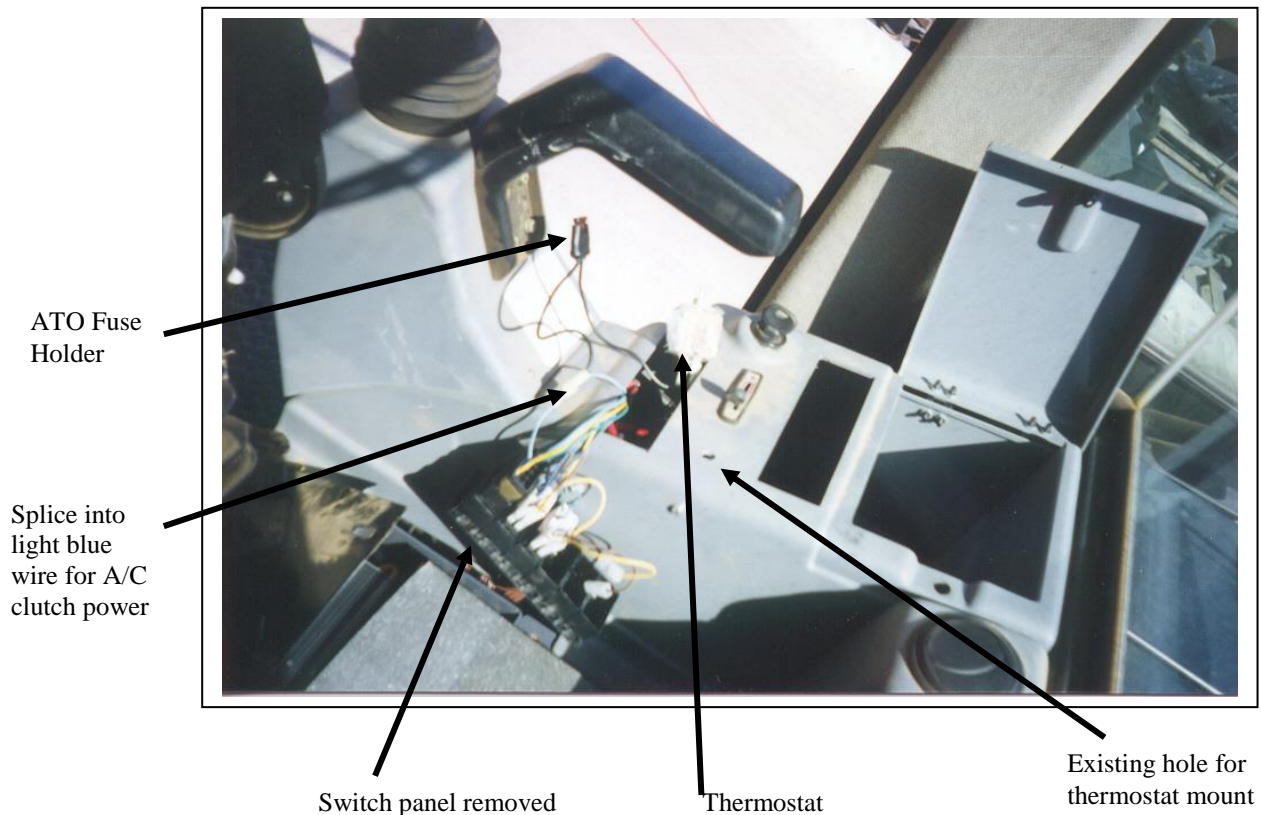
90° Drier
bracket

Drier

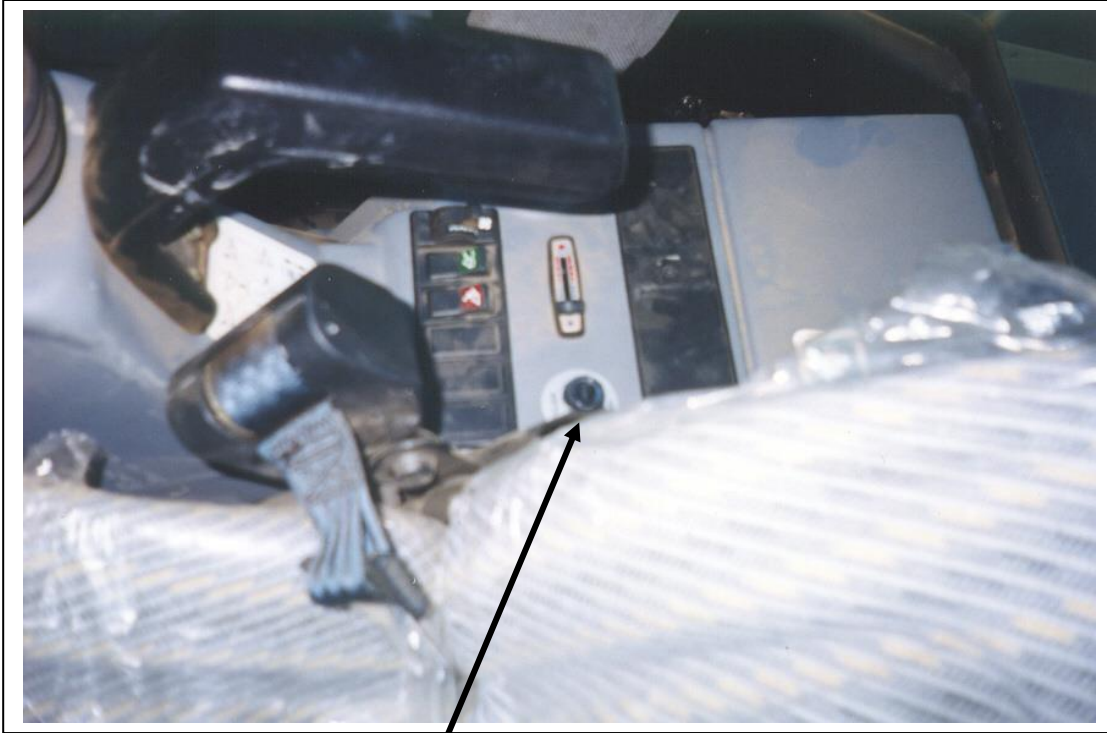
Electrical: The electrical system for the A/C is very straight forward. Power is taken from the blower switch wiring, over to the thermostat and then out of the cab through a hole in the bottom of the right hand console. From there it is routed over to the A/C hoses and back to the compressor.

Steps:

1. Remove the rubber plug just to the left of the heater control lever. File the hole out enough to allow the threaded stem on the thermostat to fit through.
2. Remove the switch panel containing the blower switch from the console.
3. Splice into the wire coming off the blower switch that has full 24 volt power when the switch is set on any of its speeds. This should be the light blue wire. Splice into the wire using the in line ATO fuse holder. Connect the other end of the fuse holder to the thermostat. Install the 5 amp ATO fuse into its holder.



4. From under the cab, run the 14 gauge black wire in loom up into the right hand console and connect it to the other terminal on the thermostat. Run the thermostat probe as explained in the evaporator installation instructions.
5. Once the system has been tested and any adjustments made, the thermostat can be installed in the enlarged hole to the left of the heater control lever. Install the thermostat decal and knob as well.

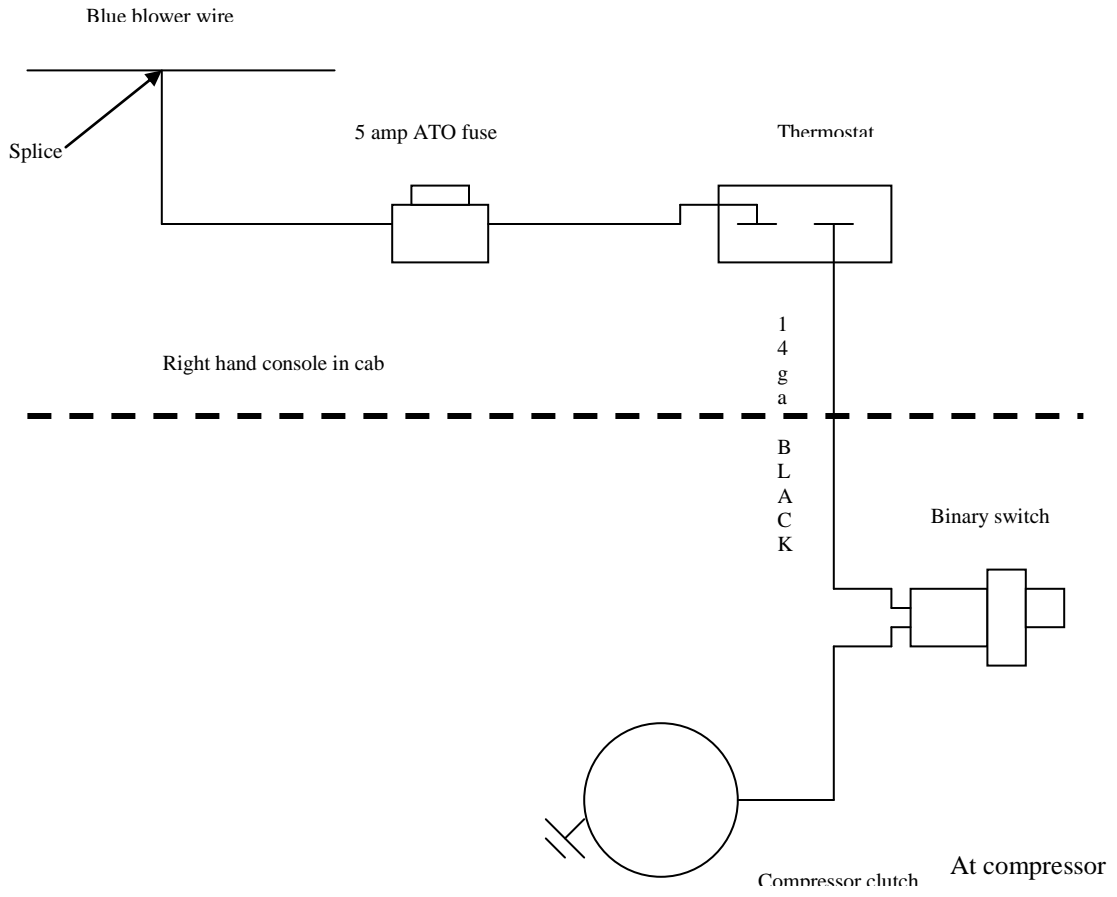


Thermostat installed

6. Complete the running of the 14 gauge black wire from underneath the cab to the compressor by routing it along with the A/C hoses. At the compressor, plug the wire into one side of the binary switch. Connect the clutch wire coming off the compressor to the other side of the binary switch. Secure the wiring as required. In extreme environments all connections should be covered in a protective film i.e.: grease or silicone.

SKL 873 Electrical

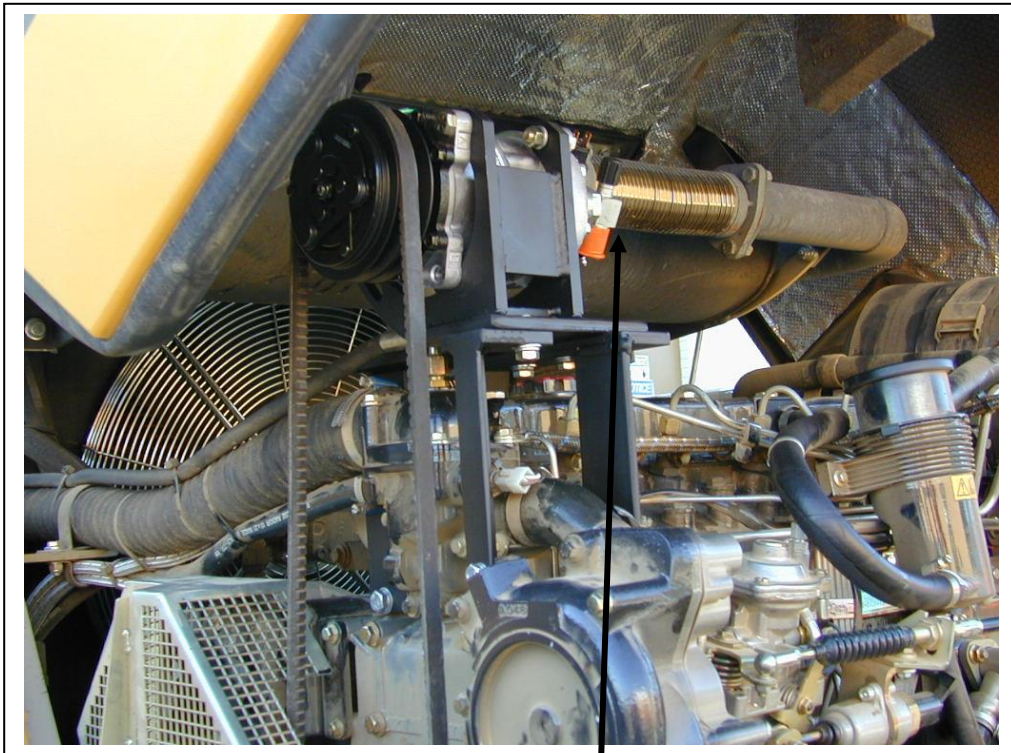
24 Volt System



Hose Runs: The A/C hoses connect all the major components of the system together. They are all pre-cut and crimped. All the fittings require the proper sized “o” ring to be installed on them and all contact surfaces to be lightly oiled with refrigerant oil before final assembly on the machine.

Steps:

1. Starting at the compressor, the ½” hose connects to the ½” rotolock fitting on the compressor with a 90° female fitting. Run the hose towards the cab along the upper rad hose. Before coming to the radiator compartment, run the ½” hose down under the radiator compartment. Bring the hose all the way around the front side of the radiator compartment up to the hole in the cab floor that the heater hoses pass through. Route the ½” hose through the hole in the cab floor and connect the straight fitting to the outlet pipe on the evaporator coil.



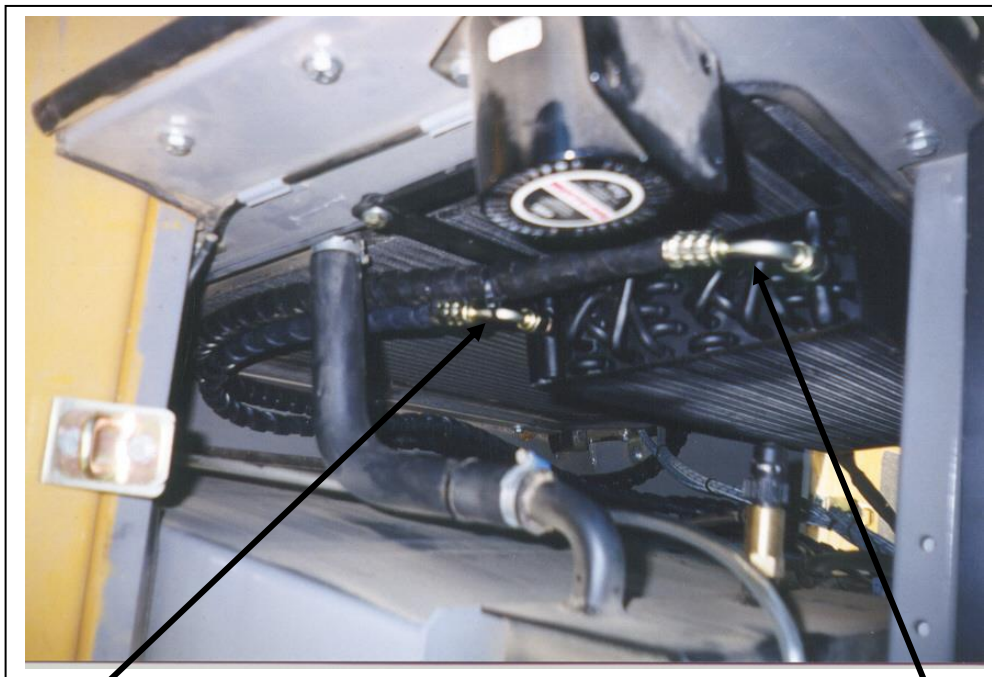
½” Rotolock fitting on the back of the compressor

2. Starting at the compressor, the 13/32” hose connects to the 13/32” rotolock fitting on the compressor (closest to cab with binary switch). The 90° female fitting with 134a port goes on the rotolock fitting and runs towards the cab along with the ½” hose. At the radiator compartment wall run the 13/32” hose through the existing hole low down on the radiator compartment wall. If the hose is run through one of the upper grommets the condenser coil will not be able to slide out. Continue the hose across the bottom of the radiator compartment and up to the top fitting on the condenser coil. Connect the female 90° fitting on the hose to the condenser fitting.



1/2" line, 13/32" line and clutch wire

3. At the lower fitting on the condenser, connect the female 90° 5/16" fitting on the 64" long 5/16" hose. Run the hose down along the bottom of the radiator compartment and up the left side to the inlet side of the drier. Connect the 90° 5/16" fitting to the inlet side of the drier.



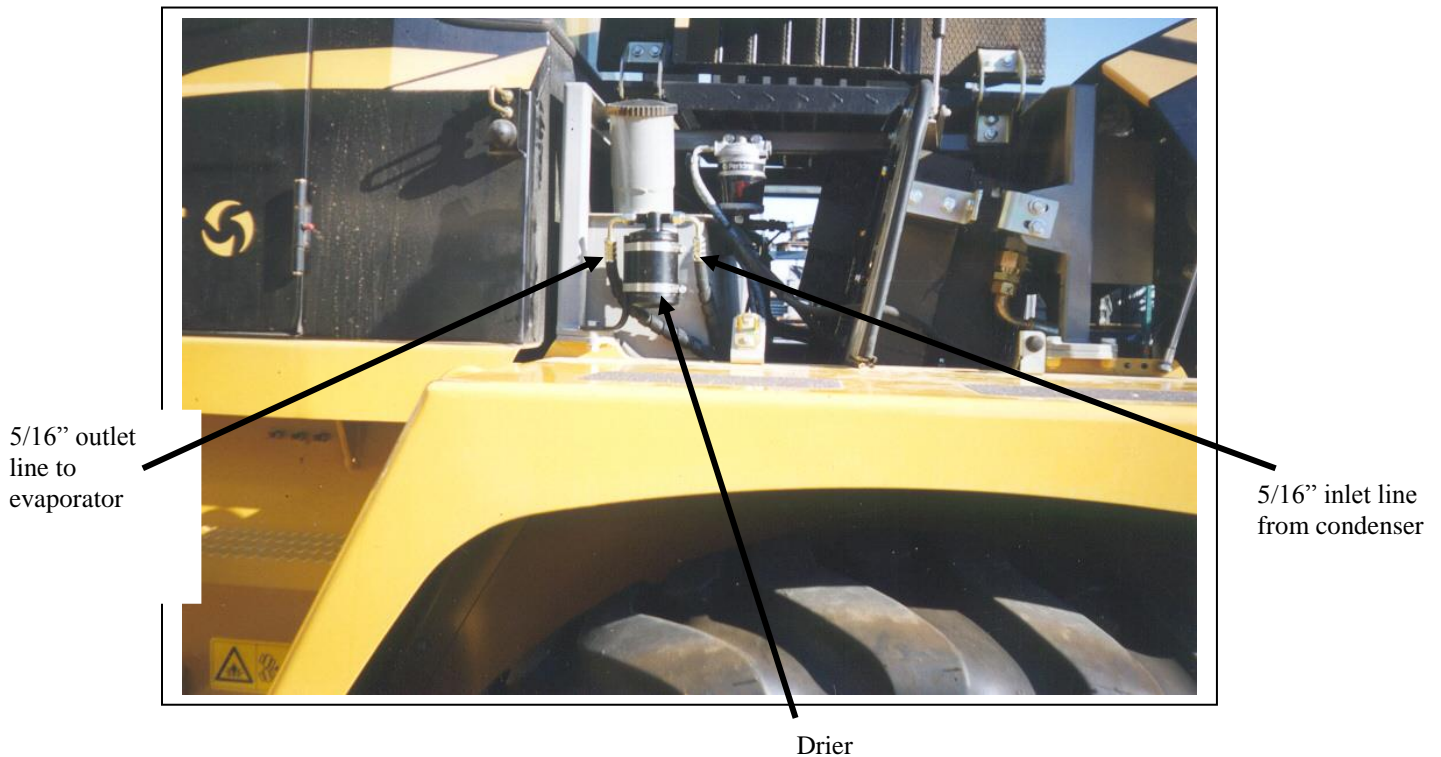
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5/16" fitting at condenser

13/32" fitting at condenser

4. Connect the 90° 5/16" female fitting to the outlet of the drier and run it back along with the other 5/16" hose to a hole in the bottom center of the radiator compartment. Run the hose through the hole and then route it to the cab along with the 1/2" hose. Bring the 5/16" line up into the cab and connect it to the expansion valve on the evaporator coil.

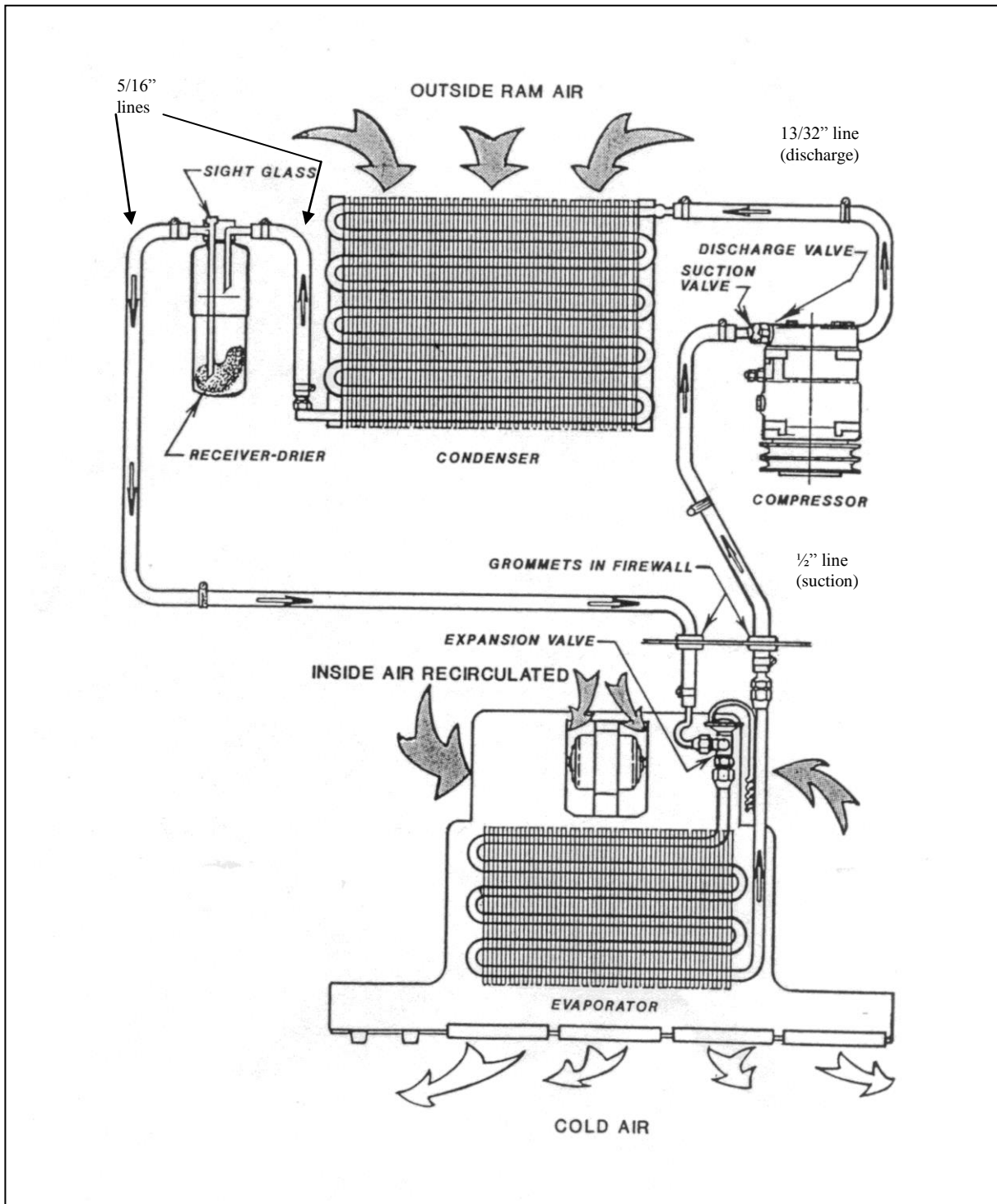


5. Using tar tape, seal all the air gaps around the evaporator line into the evaporator/heater area and around all the lines exiting the cab. Secure all hoses and wiring using the tie wraps provided. Protect hoses from chaffing and rubbing using the hose wrap provided. Make sure the hoses are well secured close to all the fittings to reduce stress on the connections.
6. On many machines, the factory heater control valve does not close very tight and will leak a small amount of radiator fluid past the valve. This can greatly reduce the cooling performance of the A/C system. To solve this problem a heater line shut-off tap has been included on the kit. It should be installed in an easily accessible area of one of the heater lines.



Heater shut-off tap installed
in 5/8" heater line

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.

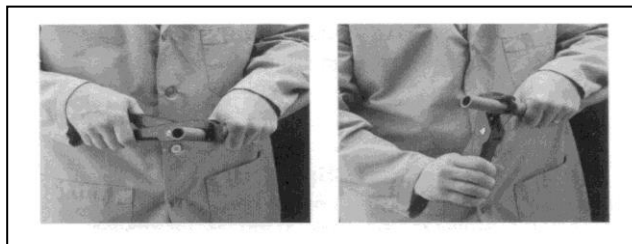
By looking at all these different factors, the area of an evaporator coil most likely to be the coldest can be determined.

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.

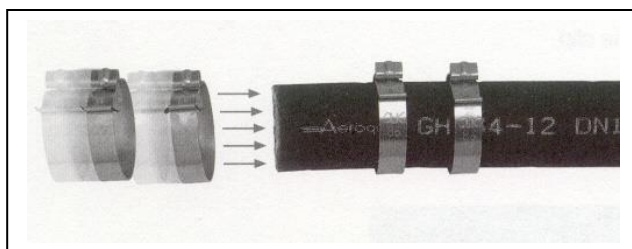
If the thermostat doesn't cycle off after a reasonable cool down period, and the air outlet temperature has dropped below 40° F, the cut in and cut out settings should be adjusted until the compressor is cycling on and off regularly. Let the system run for a decent time period (at least 15 min) and then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

Aeroquip E-Z Clip Assembly Instructions

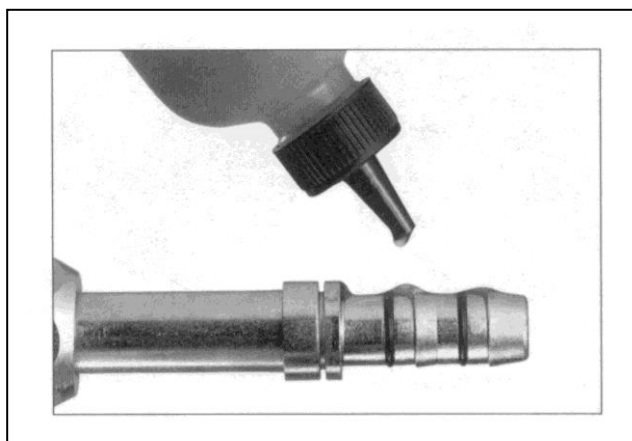
Step 1. Cut the hose to proper length with an appropriate cutting tool. Aeroquip's hand held hose cutter has been specially designed for cutting all non-wire reinforced hose, such as GH-134 Multi-Refrigerant hose. Be sure the cut is made square to the hose length.



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.



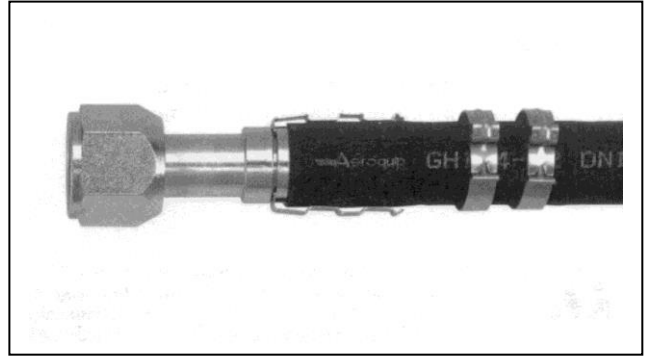
Step 4. Insert the nipple into the hose. To ensure that the nipple is fully inserted, check the gap between the cut end of the hose and the shoulder on the nipple. Care should be taken to avoid kinking or other damage to the hose during nipple insertion. NOTE: Be sure to wipe excess oil from the nipple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



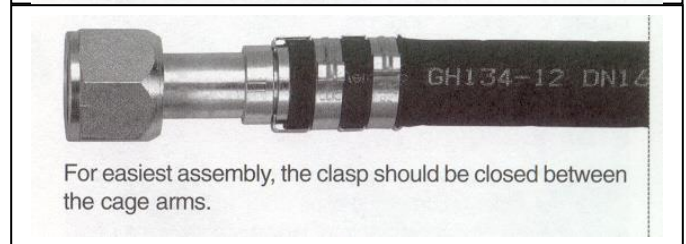
Step 5. Snap the cage into the groove on the nipple. The arms should extend over the hose length. When the cage has been correctly installed in the cage groove, the cage will be able to rotate in the groove.

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.

