

Adding 6th valve to D series

In this set of instructions, the right side of the tractor will be your right when driving down the road. *Thumb installation instructions are opposite.*

PRESSURE WASH VALVE SECTION AND SURROUNDING AREA THOROUGHLY

Working from the back of the machine, pull the floor mat forward.

Remove the LH foot pedal.

Remove the torx head bolts that hold down the boot around the pedal linkage.

If there is a plastic defroster crossover tube along the floor in back, remove the two black plastic plugs to access the torx screws. After screws are removed, pull up on the center of the tube. You'll have to put a pretty good bend in this tube to get it to come out of the socket on the RH side. After it comes out of the RH socket, swing the RH side up 90° to disconnect the LH side.

Remove floor pan. If there is a loop made from round rod bolted to the floor pan, remove it. This loop is not used with 6th valve.

REWASH VALVE SECTION AND SURROUNDING AREA

Run outriggers down just enough to bring tires off the ground.

Remove RH wheel.

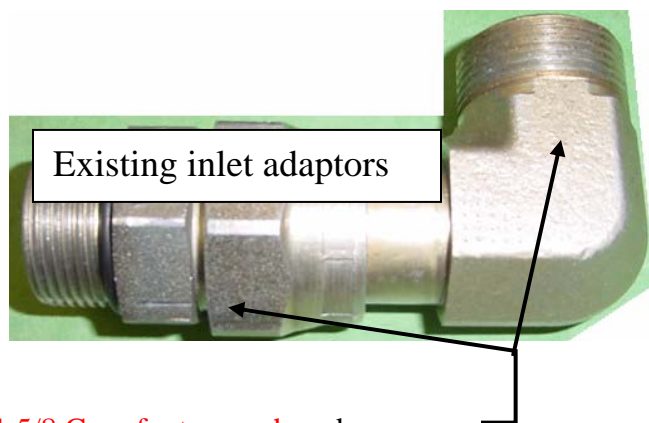
Run the outriggers down to raise the machine enough to comfortably work underneath.

Lay the boom out flat and let it rest on the ground.

Very Important !!!

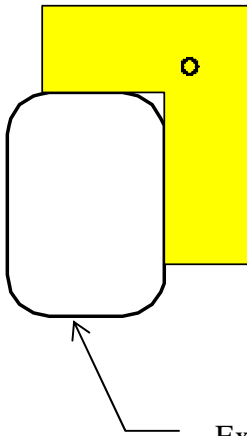
Block rear of machine up with safety stands or sound wooden blocks.

Do not rely on outriggers to support tractor while working under tractor.



Use 1 5/8 Crowfoot wrench and breaker bar to loosen hose where it connects to existing elbow. Just break it loose for now. Also break loose here.

Loosen the valve stack tie bolt closest to the back. Remove the nuts from each end of rod.



Cut out a pc of cardboard as shown. Have someone hold it on the inside of frame with top and front edges even with existing cutout. Go underneath tractor and slam rod into cardboard several times to mark it. Bring cardboard to outside of frame and center punch frame. Drill 5/8 hole thru frame. Take care not to drill into wires or hoses. *We use a Hougén Rotabroach cutter which is a high quality hole saw. This won't quite make it all the way thru the frame but you can knock out the slug with a punch and heavy hammer. This is much easier than trying to drill with a regular twist drill.*

Existing cut out for outrigger hoses behind RH wheel.

Slide tie rod out thru hole. If rod isn't centered with hole, use C/L of rod to mark out position for next two holes.

Don't loosen the other two tie rods yet.

Notice: There are thin shims around each tie bolt between every section. It is imperative that these shims stay in place as the tie bolts are replaced.

Replace the tie rod you removed with new 15½" long rod.

Put nut and washer on LH end of rod.

Imperative: before removing remaining tie bolts. Place a socket or pipe nipple (2" long) over RH end of new rod. Put washer and nut on stud and snug nut.

Change out the other two tie rods one at a time. No need to install nuts on RH side at this time. Just push rod thru so RH end is flush w/ inlet section.

The hydraulic tank vent hose is located between the front of the cab and the RH side of the engine cowling. Pull the loose end of this hose out and attach it to a small shop vac. (Use a cork or duct tape or some sort of adaptor)

Make sure shop vac is clean inside. If vac should stop for any reason, we don't want a bunch of dirt sucked back into hydraulic reservoir.

Vacuum on this line will help keep the oil in the tank as hoses are removed.

Take a break before you turn the shop vac on 'cause your going to want to work fast once it's on.

Loosen pressure line hose completely. *The crowsfoot wrench with no breaker bar works best here, as there is no room to work.* Remove the small hose on the inlet section.

Remove existing inlet elbow. Put a cork or plastic plug in the pressure hose to minimize vacuum leak. **Make sure the plug is big enough that it doesn't get sucked into the hose.**

Remove the two inlet section mounting bolts.

Remove nut and temporary spacer from remaining tie bolt.

Remove inlet section. **Pay close attention to the 3 thin shims between the inlet section and the next section.** These must be in place when the 6th valve section goes on.

Place section seals (o-rings) in the 6th valve and place it over the 3 tie bolts.

Slide the tie bolts to the right just enough so there is some bare (un-threaded) rod showing. This is important so the 3 new shims you add won't hang on the threads as rod is pushed thru inlet section.

Place a new shim over each tie rod. Make sure there is only one shim on each rod. They are so thin that two can be sandwiched together and look like only one. This can cause the valve spool to bind and act sticky. *Been there, done that.*

Place inlet section in vice and remove existing adaptor from inlet section (*impact wrench*) and replace with elbow as shown on page 2. **Do not clamp on ground surface!**

You will have to remove the adaptor for the small hose on the inlet section in order to get the new elbow in.

Make sure section seals are in place in inlet section and replace section.

Put washers and nuts on tie rods and snug slightly.

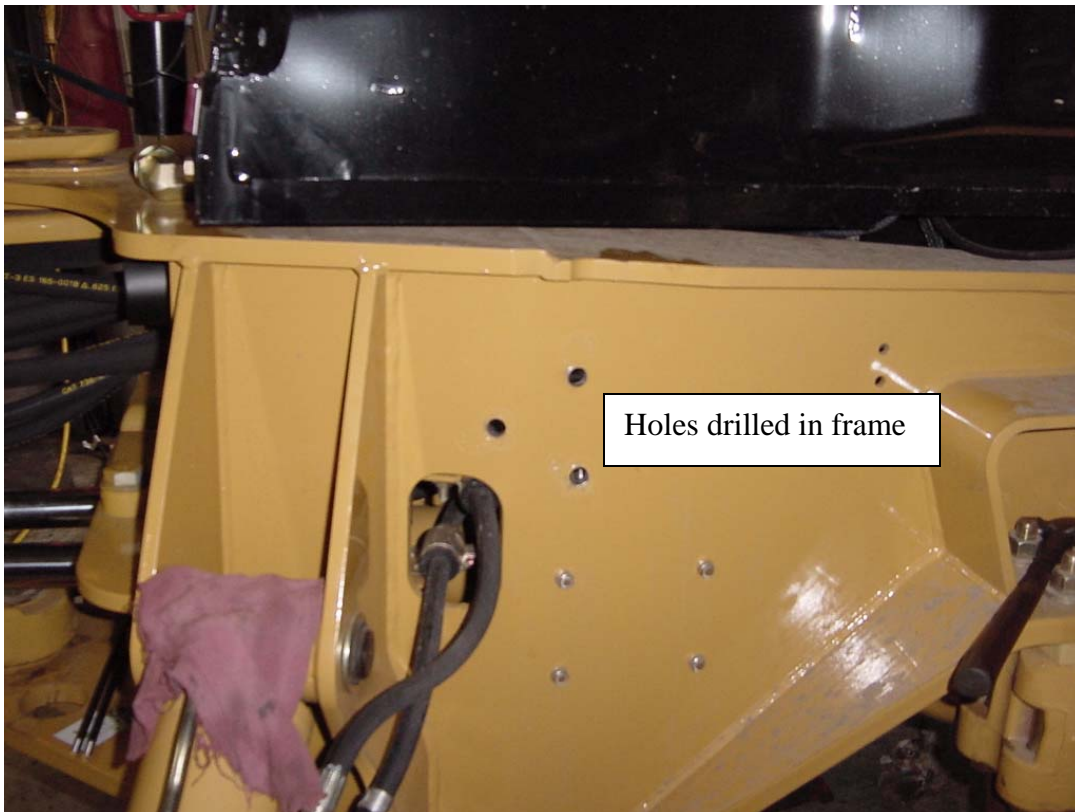
Replace the two mounting bolts and snug slightly.

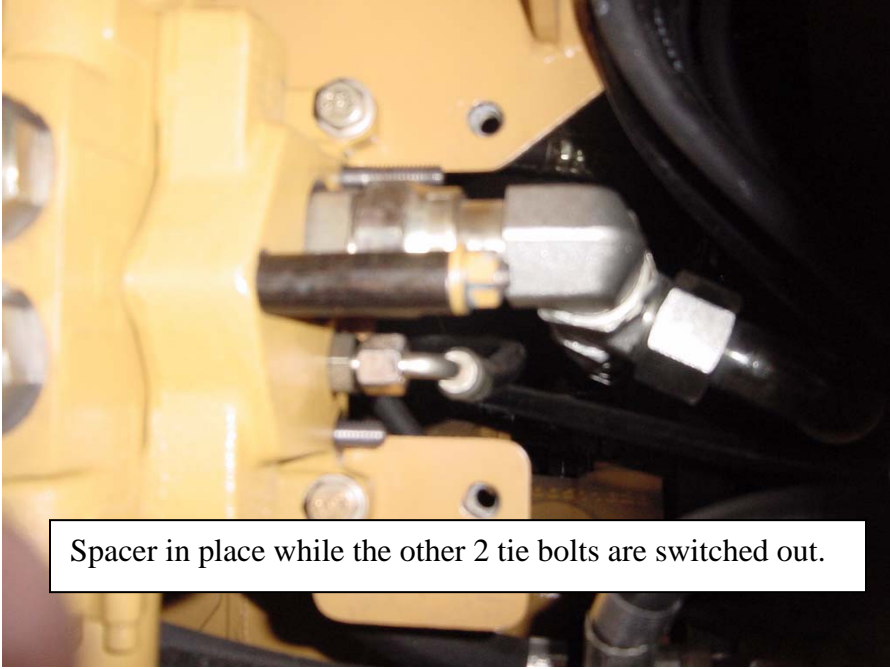
Now tighten the tie bolts then tighten the mounting bolts.

Remove plug from pressure hose. Re-attach hose. (Easier said than done)

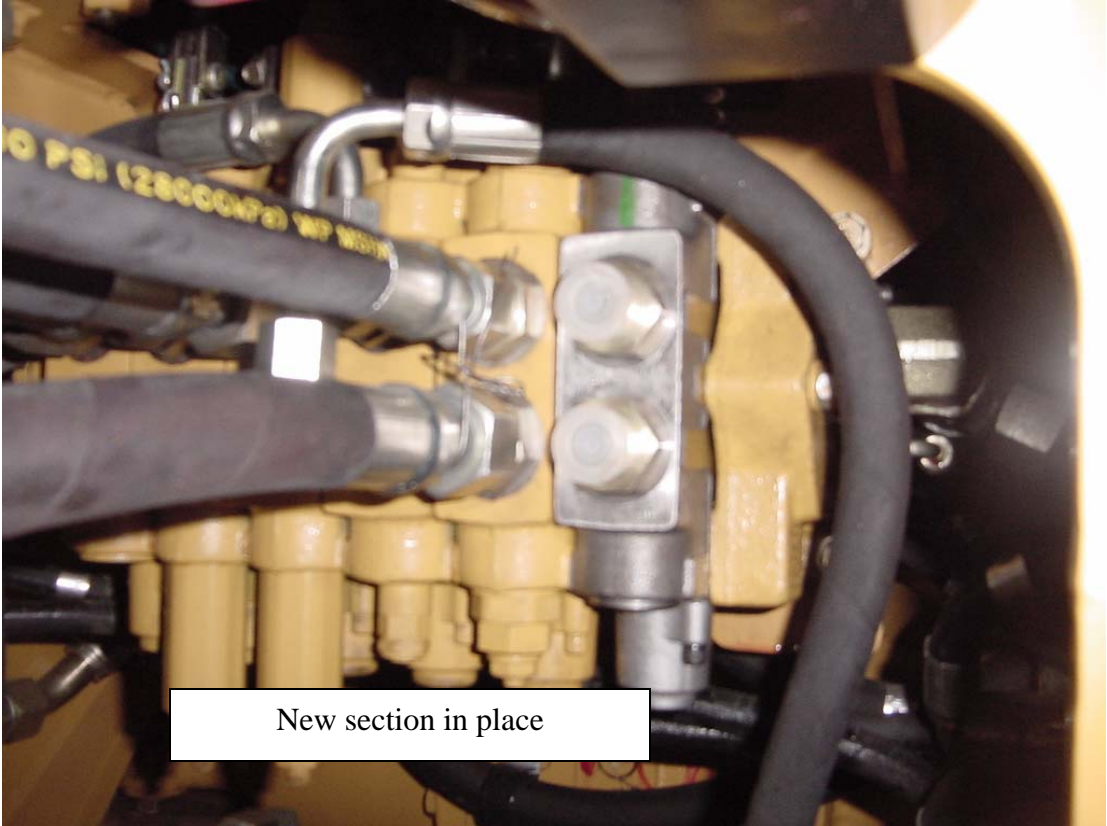
Hook up the linkages as shown in CAT parts breakdown.

Leave floor out until the pressures on port reliefs have been set.





Spacer in place while the other 2 tie bolts are switched out.



New section in place

Look to the Thumb Installation guide for plumbing instructions.