

Service Call:

Resealing a Hydro Control Valve

Tools Required:

13mm 12pt Socket & Ratchet or Wrench

Large Screwdriver

O-ring Pick Set

5mm Hex Wrench

6mm Hex Wrench

8mm Socket or Wrench

20mm or 13/16" Deep Socket

Model(s): XT Pro (Non-Lift), TL80,
TL100, & TL80/112

Note: A video is available [online](#) to go with this tech-tip.

Tech Tip Safety Rules




Danger


Failure to obey the instructions and safety rules in the appropriate Operator's Manual and Service Manual for your machine will result in death or serious injury. Many of the hazards identified in the operator's manual are also safety hazards when maintenance and repair procedures are performed.

Do Not Perform Maintenance Unless:

- You are trained and qualified to perform maintenance on this machine.
- You read, understand and obey:
 - manufacturer's instructions and safety rules
 - employer's safety rules and worksite regulations
 - applicable governmental regulations
- You have the appropriate tools, lifting equipment and a suitable workshop.

The information contained in this tech tip is a supplement to the service manual. Consult the appropriate service manual of your machine for safety rules and hazards.

 **WARNING**



Escaping fluid under pressure can penetrate skin causing serious injury.

Relieve pressure before disconnecting hydraulic lines. Keep away from leaks and pin holes. Use a piece of cardboard or paper to search for leaks. Do not use your hand.

Fluid injected into skin must be surgically removed within a few hours by a doctor familiar with this type injury or gangrene will result.

H23877B

Step 1

Position the unit in a safe location.

Step 2

If the upper control needs to be resealed, position the unit in the ground mount position to gain access to the upper control valve area.

If the lower control needs to be resealed, continue to Step 3.

Step 3

Remove the cover to access the valve assembly.

Step 4

Removal of hoses may be necessary to access the valve spools. Mark all hoses, remove them and cap and plug the lines.

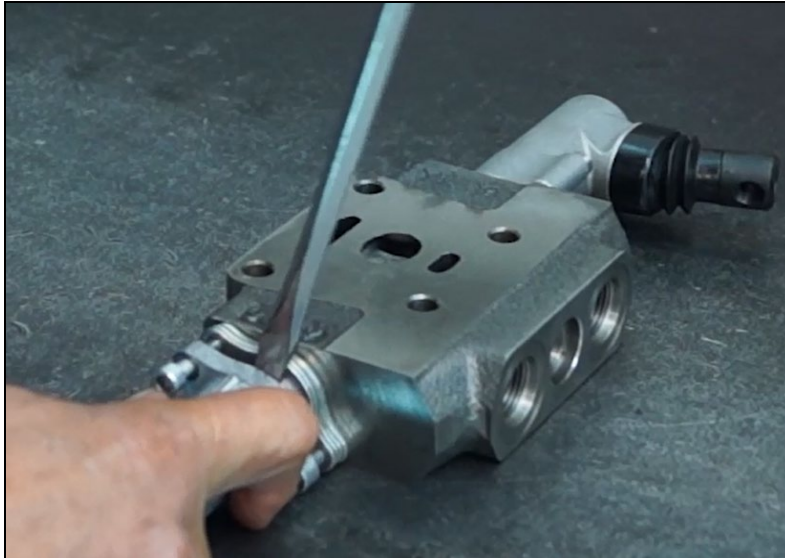


Escaping fluid under pressure can penetrate skin causing serious injury.

Relieve pressure before disconnecting hydraulic lines. Keep away from leaks and pin holes. Use a piece of cardboard or paper to search for leaks. Do not use your hand.

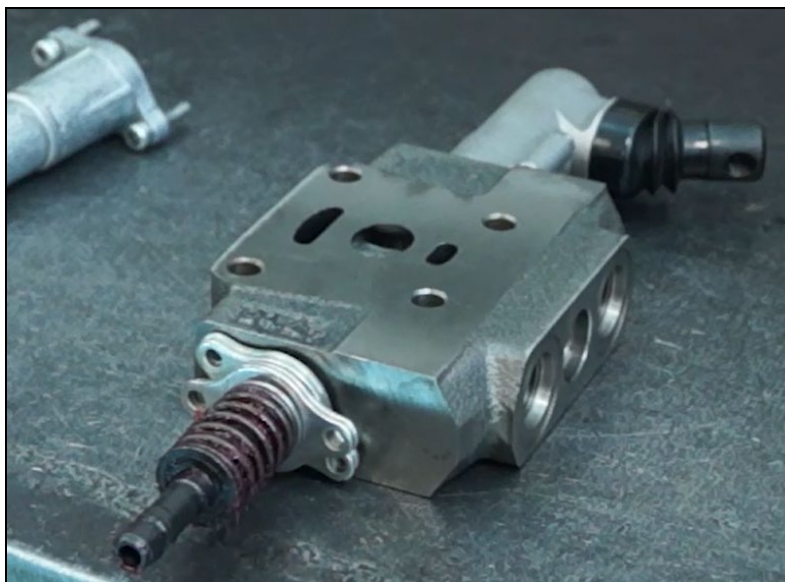
Step 5

Remove the return cap. A flat screwdriver may be required to pull the cap off the detent groove.



Step 6

Remove the spring packs from the valve spool.



Depending on which valve being resealed, it will either take a 5mm or 6mm hex wrench.

The use of a screwdriver or similar tool may be used to hold the spool on the lever box end to remove the spring packs.

Step 7

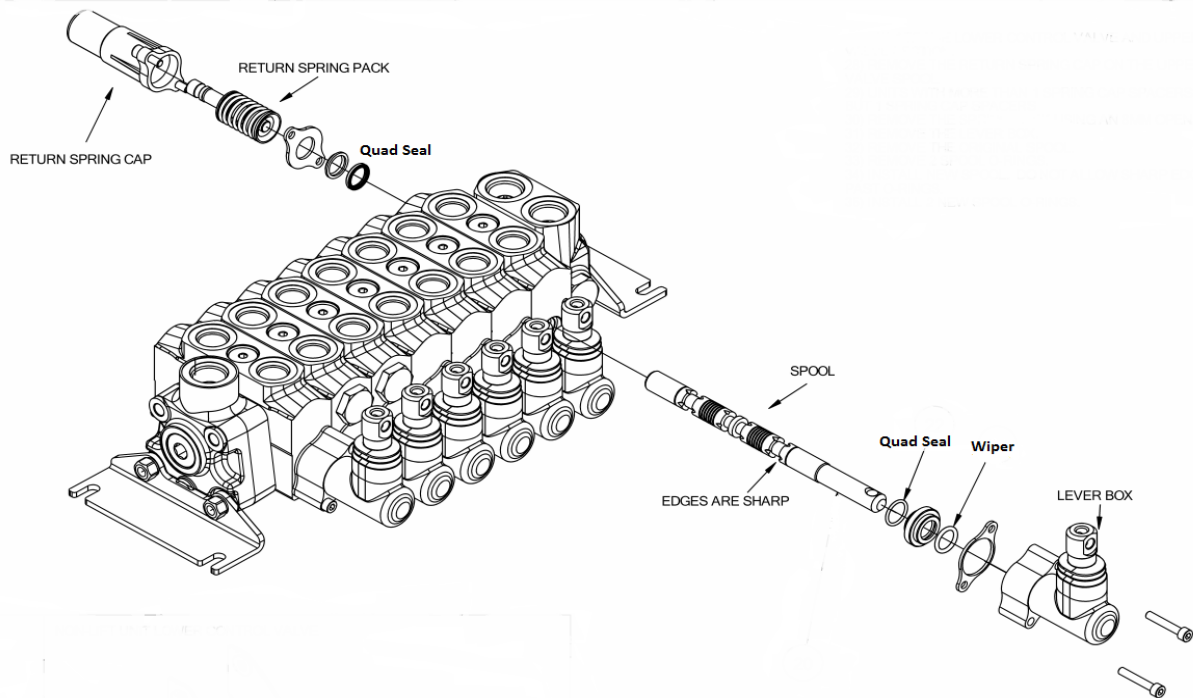
Remove the seal retaining flanges or lever boxes (Handles).



For upper controls, the single stick mounting bracket will also need to be removed as it is used to retain the spool seals and wipers.

Step 8

Remove the spool out of the bottom of the valve.





Step 9

Remove the old flanges, wipers and O-rings from both ends of the spool.

NOTE: The flange under the return spring on the enable spool for the XT Pro is slightly thicker than standard and must be reused or reordered.

The TL upper control valve does not have any such special flange. It cannot be reused.

Step 10

Install the spool and center it in the valve, being careful not to damage the spool.

Step 11

Blow any residual oil out of the seal cavities on both ends of the spool where the quad seals are installed.



Failure to perform this step can result in damage to the quad seal.

Step 12

Install the seal retaining flange, lever boxes (handles), or single stick plate as required.

There is a special bushing inside the lever box that must be reused. It has an internal O-ring to seal the spool and an external O-ring to seal the casting.



Do not allow the internal O-rings to slide across any sharp edges of the spool during assembly or disassembly to prevent the seals from getting cut.

Torque the lever box mounting screws to 4.43 ft-lbs. (53 in-lbs.).

Step 13

Install the new quad seal, wiper, and flange. Using the special installation bushing along with a 20mm or 13/16" deep socket is helpful in the seal installation.



Only the special thickness seal retaining flange on the enable spool return kit on the XT Pro upper control valve can be reused if it is undamaged.

Step 14

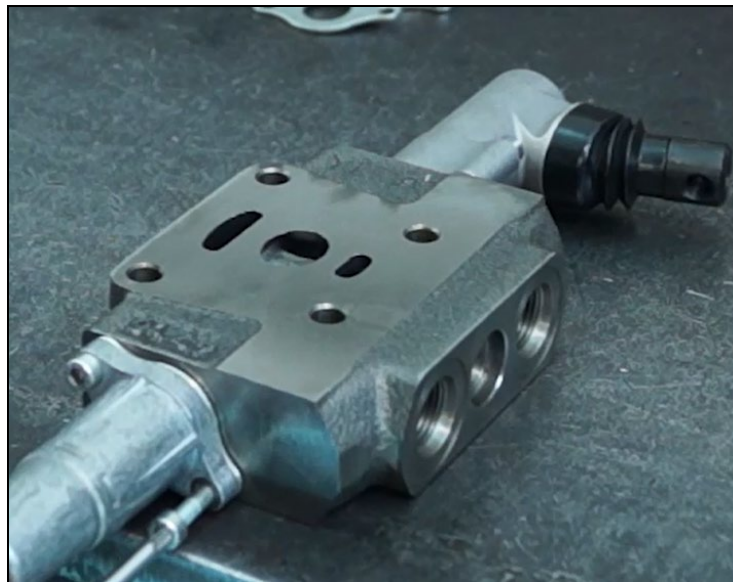
Install the return springs, you will need to hold the spools that are controlled by the single stick from turning while torqueing the return springs to 4.43 ft-lbs. (53 in-lbs.).

Step 15

When the spring pack is tight on the spools with lever-boxes, rotate the spool a few degrees counterclockwise to prevent the spool from binding with the lever box pin.

Step 16

Install the return caps and torque the mounting screws to 4.43 ft-lbs. (53 in-lbs.).



Step 17

Reattach the hoses to the proper locations.



Escaping fluid under pressure can penetrate skin causing serious injury.

Relieve pressure before disconnecting hydraulic lines. Keep away from leaks and pin holes. Use a piece of cardboard or paper to search for leaks. Do not use your hand.

Step 18

Fully tests all functions on the resealed valves through their full range of motion.

Purge air from the lines before anyone operates from the platform.