

TECH TIPS

Service Call:

**No Drive in One Direction and the engine lugs down while trying to drive.
or
Squealing noise is heard from the Traction manifold while driving.**

Tools Needed:

7/16" wrench or socket and ratchet
Allen key set
1-1/2" wrench or socket and ratchet.
Catch pan.
Absorbent rags.
Lathe or Bench grinder.
Pry bars.
ORB plugs as required.

Model:

IC Booms + Scissors



Tech Tips 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.

Step 1

Locate the Traction manifold and clean the surface to reduce the possibility of contaminating the Hydraulic system with debris.



Step 2

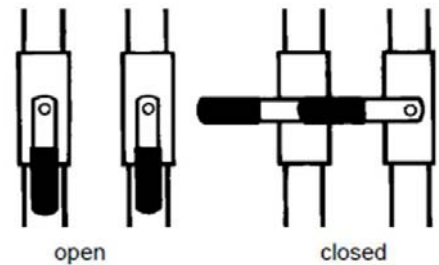
Place the large catch pan under the manifold.

Place the absorbent rags to prevent oil from contaminating the ground.



Step 3

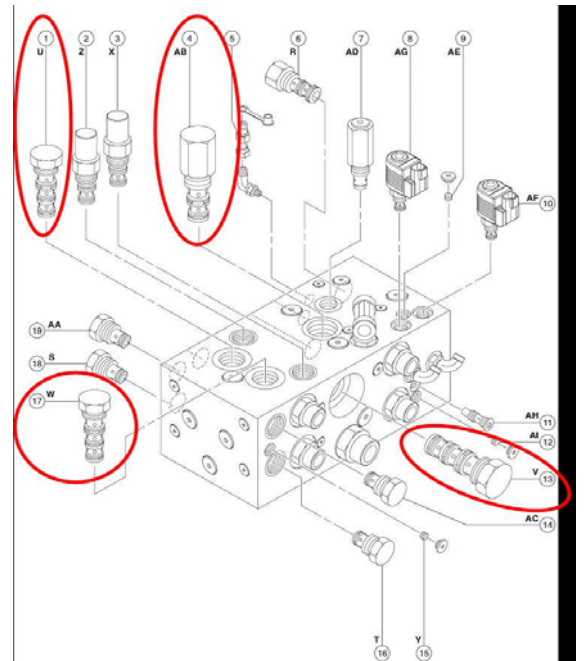
Shut off ball valves on hydraulic tank.



Step 4

Remove and inspect the hot oil shuttle valve and flow divider valves as identified in the picture.

Note: Machines may have different manifolds please reference the appropriate serial number specific service manual to identify the correct valves for your machine.



Step 5

If the valve cap is threaded on to the cartridge completely as indicated in this picture and the O-rings and back-up rings are in good condition, ensure the cavity is clear of oil to prevent the O-rings from being pushed off the valve during installation, lubricate the O-rings on the outside of the cartridge with hydraulic oil; re-install the valve and torque the specifications in the service manual, and continue with step 4.

Note: It is always a good idea to replace any valve that does not pass the above inspection or could not be made to pass the above inspection following the replacement of the O-rings or Back-up rings.

If when you go to remove your valve and only the cap comes off as seen in the picture to the right re-install the cap to prevent contamination and/or excess oil leakage, order a new valve; proceed to step 6

If the cartridge is not screwed up tight to the valve cap as indicated in this picture please refer to step 8.



Step 6

Remove the valve cap.

Using a lathe or bench grinder carefully remove the outer threads from the valve cap so your cap looks similar to this:

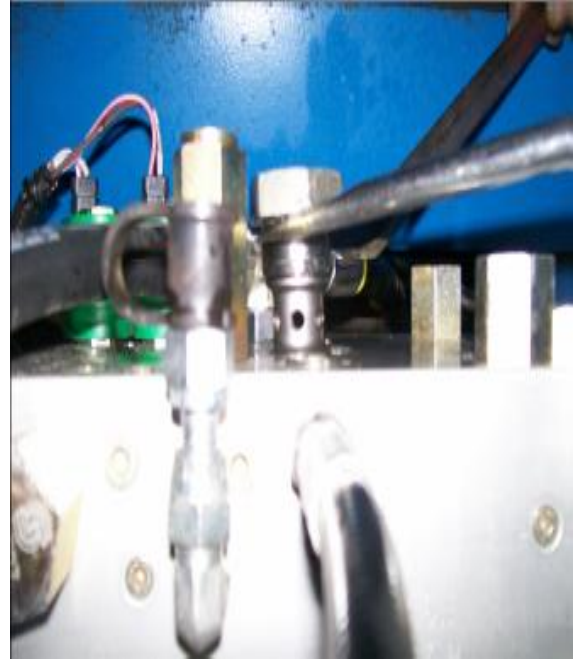


Step 7

Thread the modified cap back on to the cartridge body. Using suitable pry bars pull the old cartridge body from the manifold.

Note: Remove the cartridge body from the modified valve cap and discard. Keep the valve cap. It maybe required when working on other valves.

Please proceed to step 10.



Step 8

As noted in step 5 it is always better to replace this valve with new parts. If the machine is on rent and new parts are not available in a timely fashion the following may help however it is still recommended that new parts be ordered and installed as soon a possible.

Note: The contents of the cartridge are under spring tension.

Carefully remove the cartridge body from the valve cap.

Clean and inspect the valve pieces, the valve cap and the cartridge threads.

If there is no scoring and the threads do not appear to be damaged proceed to step 9.

If there is scoring and/or the threads in the cap or on the cartridge appear to be damaged order a new valve and proceed to step 10.



Step 9

In order to prevent binding or misalignment the valve must be assembled and held with the springs compressed.

Apply Red Loctite to the threads on the cartridge and install the valve cap.

Note: Installing too much Loctite can damage to the valve.

Remove your spring retaining device.

Confirm the O-rings and back-up rings were not damaged during assembly and proceed to step 10.



Step 10

Install the Valve.

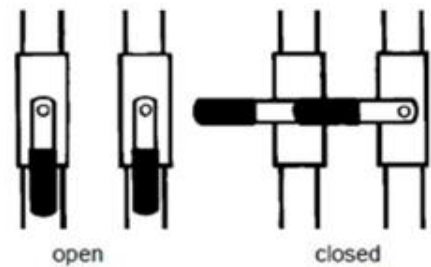
Note: Machines may have different manifolds please reference the appropriate serial number specific service manual to identify the correct torques values for your machine.

Continue with step 4 until you have inspected all of the flow control valves.



Step 11

Open the Ball valves on the hydraulic tank that were closed in step 3.



Step 12

Before returning the unit to service please check and adjust the hot oil shuttle relief (charge) pressure.

Note: Machines may have different manifolds please reference the appropriate serial number specific service manual to identify the correct valves for your machine.

