

PRODUCT: Torq-Matic Wrench

DATE: Jun 10, 2011

SUBJECT: HIGH PRESSURE CONTROL SEATS FOR HYDRAULIC VALVE

SERIAL NUMBERS: ALL TM-80 MODELS THRU # 800131, ALL TM-120 MODELS THRU # 120097

DISCUSSION:

Hydraulic control valves for Torq-Matic wrenches have been installed by Canrig with pressure control seats on the torque cylinder valve rated for 320 bar (4641 psi). However, the wrench torque cylinder may operate at hydraulic pressures up to 355 bar (5150 psi). At higher operating pressures, the pressure control cones (darts) have a tendency to stick and cause the valve to malfunction.

RECOMMENDATION:

Replacing the pressure control seats and cones as well as associated o-ring seals with the higher pressure versions will increase the pressure rating of the valve from 320 bar to 355 bar. These components should be replaced during the next available maintenance period.

Kit part number AY50784 contains the components necessary to replace the existing components with equivalent high pressure components. The AY50784 kit can be used for both the TM-80 and TM-120 and includes the following items:

Item #	Canrig P/N	Qty	Description
1	S12888	2	O-Ring, 3 x 1.5, NBR 90 SH
2	H11293	2	Seat, Pressure Control
3	H10560	2	Valve, Cone, Press Control
4	S12889	2	O-Ring, 6.86 x 1.78 HNBR 90 SH Red Spot

The following tools are required to perform the replacement:

- 1 ea 4mm socket head wrench
- 1 ea mini-pick
- 1 ea small magnetized Phillips-head screwdriver
- 1 set small needle nose pliers

Follow the steps below.

1. Disconnect electrical power to wrench and HPU, following lock out and tag out procedures.
2. Dissipate any residual hydraulic pressure in the control lines by manually activating at least two of the valves on the tong valve bank.
3. Locate the torque cylinder valve. The torque cylinder valve is located on the tong valve bank. On the TM-80, the torque cylinder valve is located second from the right as you are looking at the tong valve bank. On the TM-120, the torque cylinder valve is located second from the left as you are looking at the tong valve bank. A solenoid is attached to the valve (see Fig 1). The parts to be replaced are located at the interface between the solenoid valve and the torque cylinder valve body.

Notice: The repair is best performed with the repairer in the supine position. Due to the small size of the replacement parts, laying out white absorbent pads

underneath the work area will make it easier to locate parts should they fall.

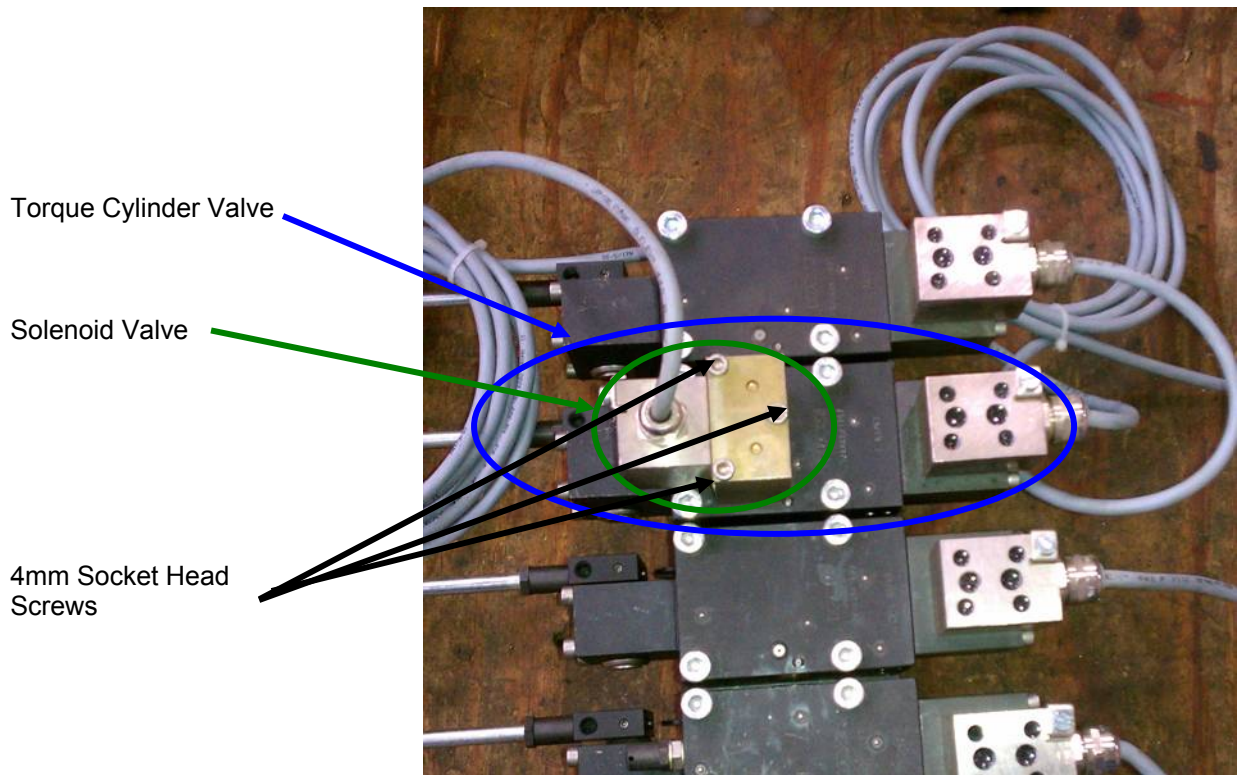


Figure 1: TM-80 Tong Valve Bank

4. Remove the solenoid valve from the tong cylinder valve by loosening the 4mm socket head screws (see Figure 1) with a socket head wrench.

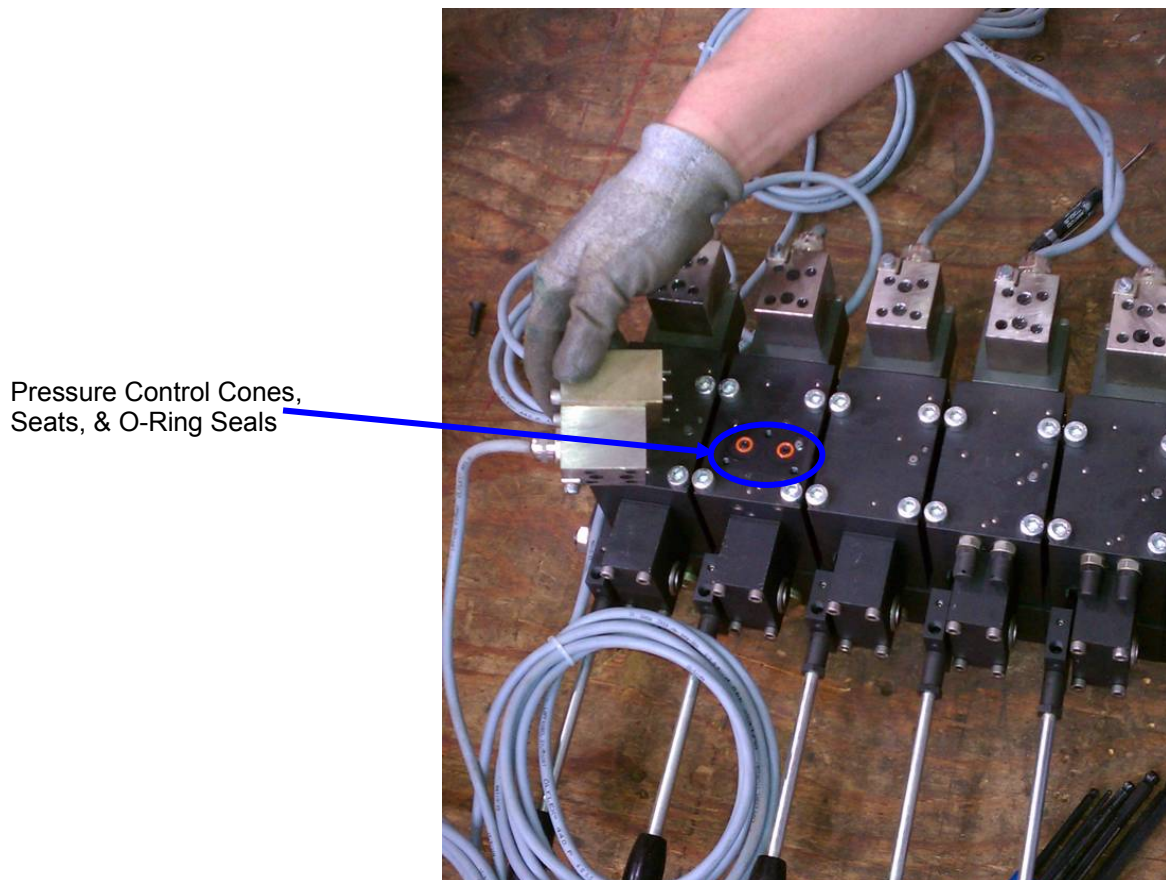


Figure 2

5. Remove pressure control cone, seat, & o-ring seals from both ports using magnetized screwdriver and pick (or needle nose pliers).

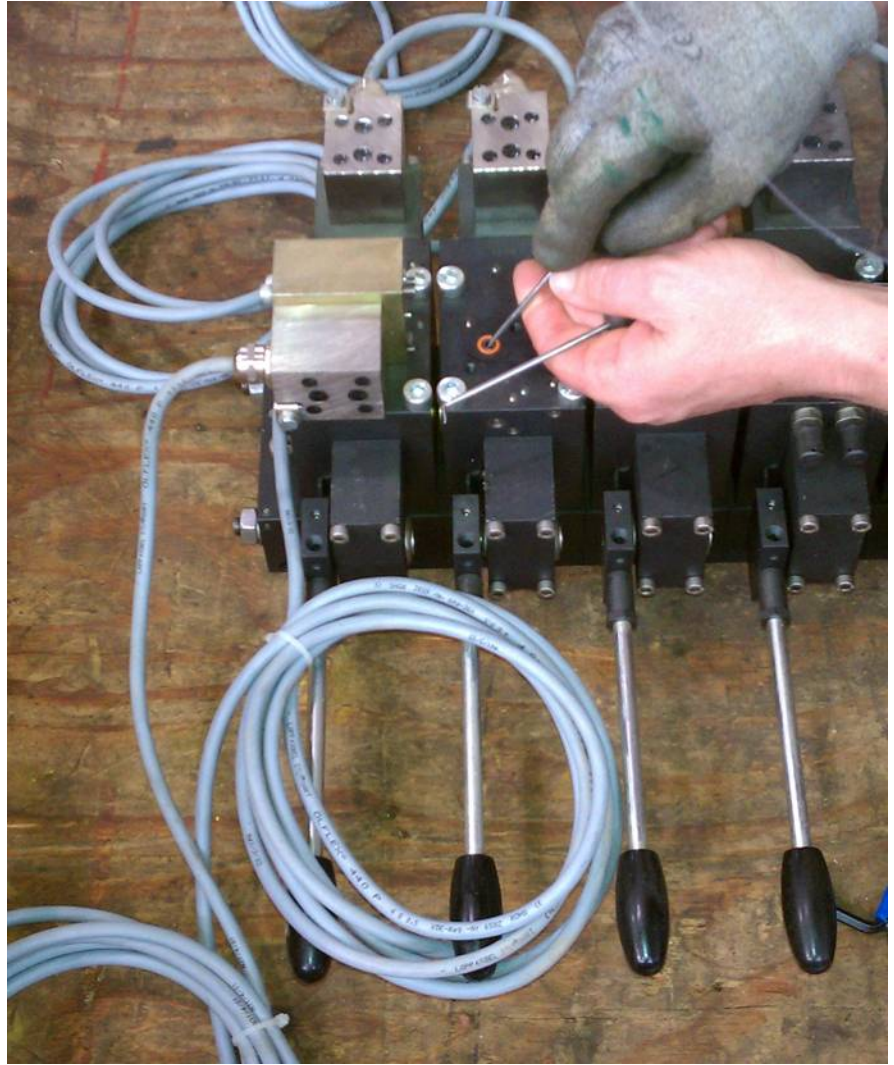


Figure 3

6. Replace removed components with items in kit in the order indicated below with the tools proscribed above.

1st – Small o-ring

2nd – Pressure control seat

3rd – Pressure control cone (dart)

4th – Large o-ring

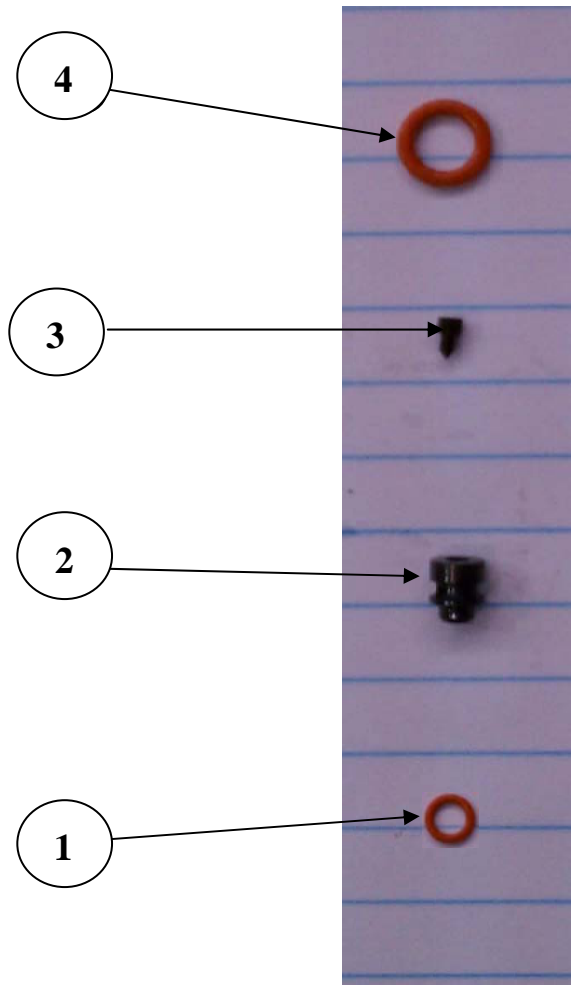


Figure 4

7. Reattach solenoid valve.

8. Reconnect electrical power to wrench and HPU. Verify wrench functionality by performing pump pressure test.

INFORMATION:

For further information contact:

For a complete list of all bulletins go to www.canrig.com

Canrig Drilling Technology Ltd.

8223 Willow Place South
Houston, Texas 77070
Phone: 281.774.5600
Fax: 281.774.5610

9307 52 Street SE
Calgary, AB T2C 2R4
Phone: 403.279.3466
Fax: 403.279.6888