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2” 1502 LT Plug Valve Repair Instructions

REV#	DATE	REVISION DESCRIPTION	PREPARED BY	APPROVED BY
A	Dec 9, 2018	CREATION OF DOCUMENT	JZ	RS
B	Sep 6, 2019	UPDATED BODY CAP AND GREASE FITTING TORQUE VALUES	JZ	RS

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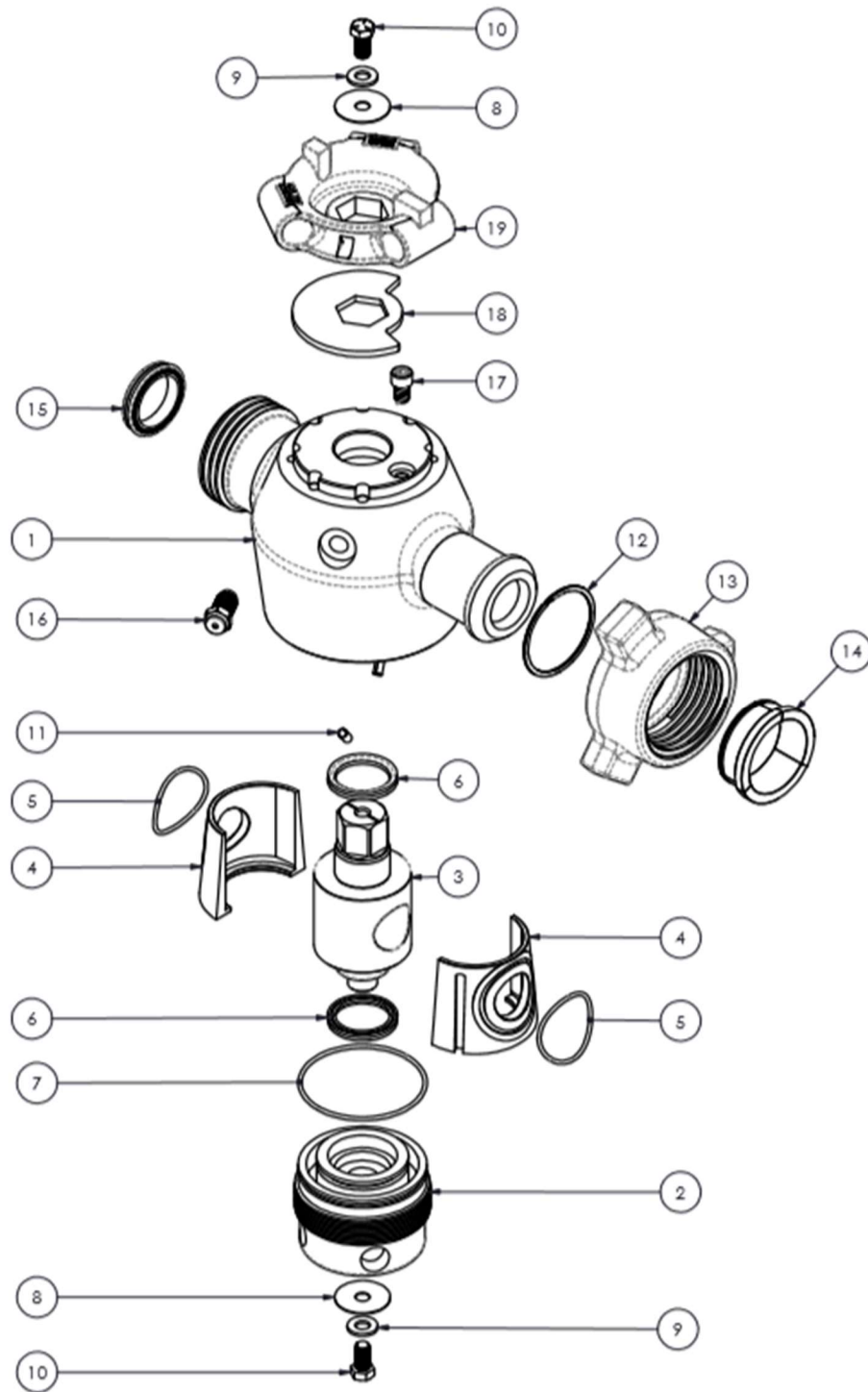
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1.0 Exploded View



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2.0 Parts List

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	03-PVL-23091-01	2" 1502 PLUG VALVE, LT, VALVE BODY, REG, SG	1
2	03-PVL-23000-02	2" 1502 PLUG VALVE, LT, CAP/ ADJ. NUT	1
3	03-PVL-23000-25	2" 1502 PLUG VALVE, LT, PLUG, REG PORT, SG	1
4	03-PVL-23001-20	2" 1502 PLUG VALVE, LT, SEAT INSERT, REG PORT, SG	2
5	10-ROR-11230	O-RING, SEAT INSERT	2
6	10-PVS-02601	PLUG SEAL, LT	2
7	10-ROR-11245	O-RING, CAP/ ADJ. NUT	1
8	10-FLW-01202	WASHER, FLAT, OVERSIZED	2
9	10-FLW-01201	WASHER, FLAT	2
10	10-HCS-00401	HEX CAP SCREW	2
11	10-SRP-01700	SPIRAL HD ROLL PIN	2
12	10-SRE-10334	SNAP RING, 2" 1502 SEGMENTS	1
13	09-WND-23001	WING NUT, 2" 1502	1
14	09-SEG-23000	SEGMENT SET, WINGNUT, 2" 1502	1
15	09-USR-23101	2" 602/1502 SEAL RING	1
16	10-GRZ-02101	BUTTON HEAD GREASE FITTING W/ RELIEF GROOVE	1
17	10-SHC-00302	SOCKET HEAD CAP SCREW	1
18	03-PVL-23000-16	2" 1502 PLUG VALVE, STOP PLATE	1
19	03-PVL-20000-07	2" PLUG VALVE, HANDLE	1

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3.0 Disassembly Instructions

1. Remove the top washers (8 & 9) and plug bolt (10), plug valve handle (19), and stop plate (18). Turn valve over so that the body cap (2) is facing up. Leaving the bottom plug bolt (10) in place, screw out (turning counter-clockwise) the body cap (2). This will allow the entire internal assembly to be removed from the valve cavity at once.
2. Remove the plug bolt (10) that attaches the plug (3) to the cap (2).
3. Remove the plug (3) and seat inserts (4).
4. Remove the seat insert O-rings (5), cap O-ring (7) and plug seals (6).
5. Clean all old lubricant and debris from the parts and valve body (1) cavity.

4.0 Assembly Instructions

4.1 Valve Body Assembly

1. Clean any grease, rust, debris etc. from the bore of the valve body (1) so that bare metal is exposed.
2. Check surfaces around the valve bore (1) and inside the valve pocket for sharp edges that could cause damage to O-rings or the seat inserts.
3. Check the threads of the valve cap (2) for any damage or burrs.
4. After inspection, grease the sealing groove of the cap (2) and install the cap O-ring (7) in the groove. Make sure the O-ring is seated properly into the groove.
5. Check the roll pins (11) in the valve body by gently sliding a seat (4) into the valve. The seat (4) should move freely up and down the length of the roll pin slots without interference.
6. Apply a thin film of lubricant to the recess in the valve body (1) and install the plug seal (6) with the metal back towards the recess, facing away from the pressure.

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7. Apply a thin film of lubricant to the recess in the cap (2) and install the plug seal (6) with the metal back towards the recess, facing away from the pressure.
8. Check the plug (3) outside diameter for surface defects such as scratches, dings, nicks, or sharp edges that could affect the sealing area. Repair any defects.
9. Check the surface finish of the seats (4) making sure they do not have any scratches, dings, nicks or sharp edges that could also affect the sealing area. Repair any defects.
10. Pack the body cap plug seal (6) with valve grease.
11. Install the bottom end of the plug (3) (opposite the hex) into the cap (2). Push down on the plug until it shoulders against the cap.
12. Apply a thin film of valve grease to the entire O.D. of the plug (3).
13. Place the seat inserts (4) around the plug (3), making sure the bottom shoulder of the seat fits with the groove of the cap (2).
14. Place the O-rings (5) in to the grooves on the seat inserts (4). Pack with valve grease to retain the rings and thoroughly grease the sealing surfaces.
15. Secure the plug (3) to the cap (2) with the plug bolt (10) and two washers (8 & 9). Do not tighten the bolt past "finger tight". This allows the valve cap (2) to rotate freely during installation.
16. Lubricate the valve pocket (1) with valve grease.
17. Apply anti-seize to the cap (2) threads.
18. Support the valve body so that the plug (3) hex can pass through unobstructed.
19. Install the plug (3), seat inserts (4) and body cap (2) assembly into the valve body.
20. Screw the cap assembly into the valve body (1) until snug. With a wrench, tighten the cap down until it is bottomed out or cannot be tightened anymore. At this

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point, back the cap off ¼ turn. With a torque wrench, re-tighten the cap to **125 ft*lbs.**

21. Apply anti-seize to the threads of the button head grease fitting (12). Do **NOT** use Teflon tape on the grease fitting.
22. Install the button head grease fitting (12). Torque to **125 ft*lbs.**

4.2 Wingnut Assembly

23. Place the 2" segment snap ring (12) onto the wing end of the valve body (1).
24. Place 2" 1502 wing nut (13) on male end and install the segment set (14).
25. Secure the segments (14) with the snap ring (12).

4.3 Handle Assembly

26. Install the stop bolt (17) onto the top of the valve body (1). Thread until tight.
27. Place the stop plate (18) onto the hex of the plug (3) and align properly with stop bolt. Proper alignment will allow the stop plate to rotate, with the plug, 90 degrees.
28. Place the handle (19) onto the hex of the plug (3). Align handle so that the two alignment tabs are parallel with the open position of the plug.
29. Secure the handle (19) to the plug (3) with the two washers (8 & 9) and plug bolt (10).

4.4 Greasing Procedure

30. With the valve in the open position, grease to 4,000 psi.
31. Cycle the valve to the closed position and then back to the open position. Repeat greasing the valve to 4,000 psi. Complete this cycle a total of 4 times. This ensures that no air is trapped in the cavity of the valve.

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