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2" 602 TE Repair Instructions

REV#	DATE	REVISION DESCRIPTION	PREPARED BY	APPROVED BY
A	Dec 9, 2018	CREATION OF DOCUMENT	JZ	JJ
B	Jun 19, 2019	UPDATED PART NUMBERS	JZ	RS

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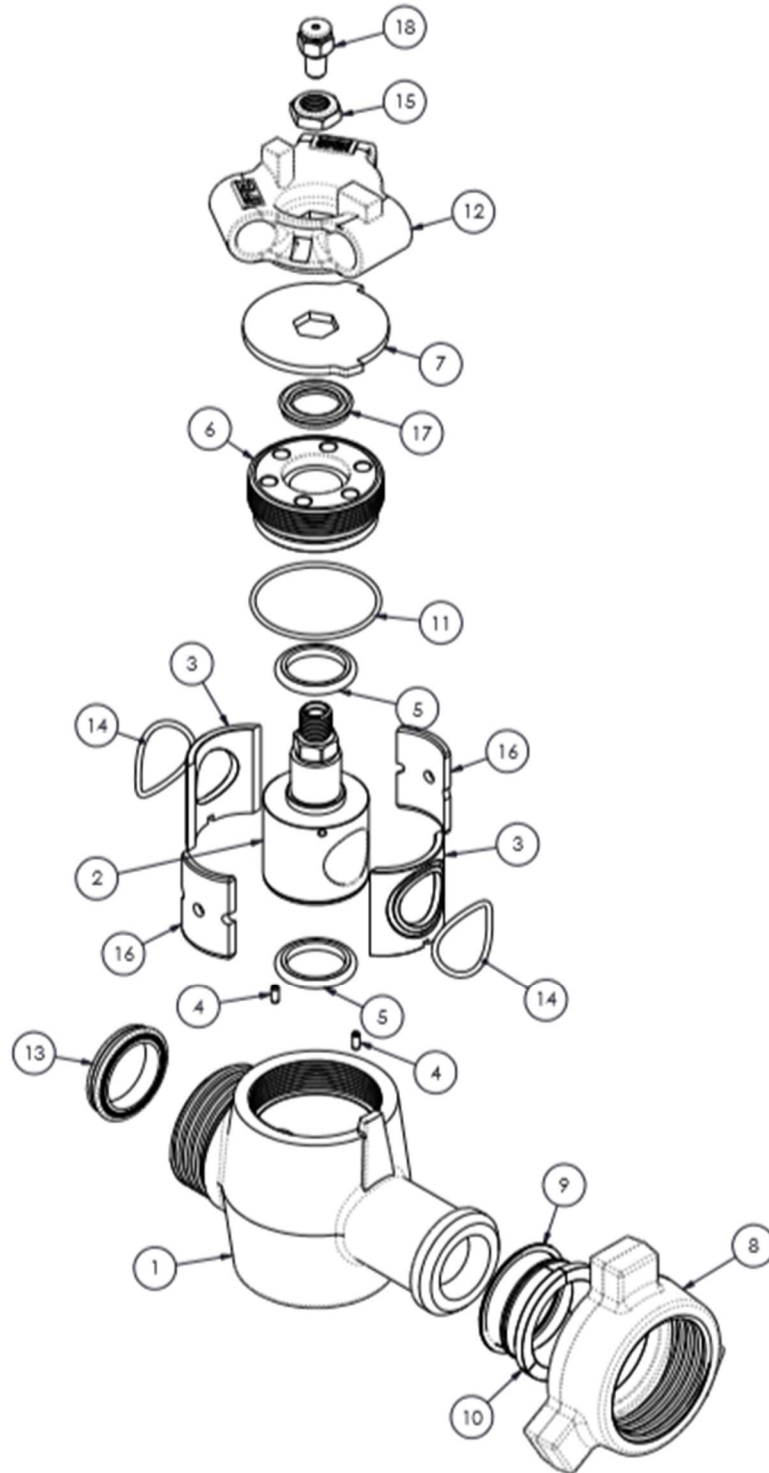
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1.0 Exploded View



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2.0 Parts List

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	03-PVT-22011-01	2" 602 Top Entry Valve Body	1
2	03-PVT-22011-31	2" 602 Top Entry Plug	1
3	03-PVT-22011-32	2" 602 Top Entry Seat Insert	2
4	10-SRP-01701	Heavy-Duty Spring Pin	2
5	03-PVT-20001-22	2" 602 Plug Seal	2
6	03-PVT-22001-02	2" 602 Top Entry Cap/ Adj. Nut	1
7	03-PVT-22000-03	2in 602 TE Valve Top (stopper) Plate	1
8	09-WND-22001	2" 602 Wing Nut	1
9	10-SRE-10306	2" 602 Segment Snap Ring	1
10	09-SEG-22000	2" 602 Segment Set	1
11	10-ROR-11235	Cap O-Ring	1
12	03-PVL-20000-07	2in 602 TE Plug Valve Handle	1
13	09-USR-22101	2" 602/ 1502 Seal Ring	1
14	10-ROR-12450	Seat Insert O-Ring	2
15	10-HLN-00905	Nylon-Insert Lock Nut	1
16	03-PVT-22000-30	2" 602 Top Entry Seat Spacer	2
17	03-PVT-20001-23	Weather Seal	1
18	10-GRZ-02103	NPT Button Head Grease Fitting	1

3.0 Disassembly Instructions

Note: When removing an NPT grease fitting, never stand in front of the fitting. Trapped pressure could result in the fitting being projected while removing.

1. Remove the grease fitting (18), nylon locknut (15), handle (12), and stopper plate (7).
2. With a wrench and the top entry cap adapter, screw out (CCW) the valve cap (6).
3. Remove the plug (2) from valve cavity.
4. Remove the spacers (16) from the valve cavity.

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5. Remove the seats (3) from the valve cavity.
6. Remove the seat insert O-rings (14), plug seals (5), and cap O-ring (11).
7. Clean all the old lubricant and debris from the parts and valve body cavity.

4.0 Assembly Instructions

4.1 Body Assembly

1. Check surfaces around the valve bore inside the valve pocket for sharp edges and pitting that could cause cutting of the seat O-Rings (11). Clean the valve pocket to the point where bare metal is exposed around the side walls.
2. Install spring pins (4) in the bottom of the valve. If already installed, check the spring pins for bending or other severe damage.
3. Check the internal threads of the valve body (1) and the external threads of the valve cap (6) for burrs, sharp edges, or other significant damage.
4. With assembly grease, lubricate the cap O-ring (11) and install in the O-ring groove of the cap (6).
5. Lightly lubricate the valve pocket (1) with valve grease.
6. Check the surface finish of the internal diameter of the seat inserts for scratches, sharp edges or general damage. Any defects should be repaired before continuing with assembly.
7. Inspect the seat insert O-rings (14) for any possible defects.
8. Coat the seat inserts O-rings (14) with valve grease and install onto the seats (3).
9. Place the seats into the valve body, making sure to engage the spring pins (4).
10. Check the plug (2) outer diameter for any scratches, sharp edges or general damage. Repair any defects before continuing with the assembly.

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11. Install the plug seals (5) on the top and bottom of the plug. If needed, lightly lubricate the seals with assembly grease.
12. Apply valve grease to both seals.
13. Apply a thin film of valve grease to the entire outer diameter of the plug (2).
14. Push the assembled plug with seals into the valve body, making sure it is properly aligned with the seats (3), 1/3 the way down.
15. Insert the plastic spacers (16) between the seats and around the plug. Using a screwdriver, tap down the spacers until they are bottomed out.
16. Push the assembled plug the remaining way down. Make sure to use straight downwards force. At this point any side to side motion could damage the plug and carriers.

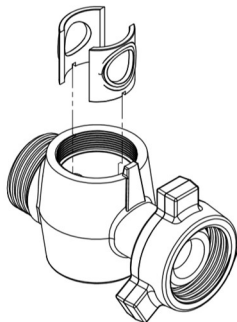


Figure 2 Carrier Install
(Step 9)

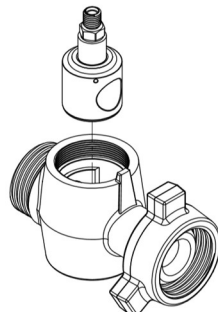


Figure 1 Assembled Plug
Install (Step 14)

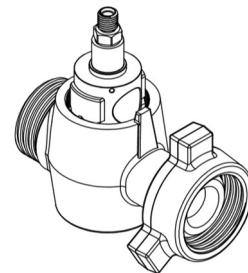


Figure 3 Spacer Install
(Step 15)

17. Lightly coat the threads of the valve body (1) and valve cap (6) with anti-seize. Thread the cap into the valve body and tighten until snug.
18. Using a wrench and the top entry cap adaptor, tighten the valve cap with a half turn of the wrench.
19. With assembly grease, install the weather seal (17) around the plug (2) and into the valve cap (6).

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20. Install the stopper plate (7). Align the plate, with the raised tab on the valve body (1), so that it is only free to rotate 90 degrees.
21. Install the valve handle (12). The indicator tabs on the handle should run parallel with the open position of the valve.
22. Secure the handle to the plug with the nylon lock nut (15).
23. Apply anti-seize compound to the threads on the grease fitting (18). Do NOT use Teflon tape.
24. Install the grease fitting (18). Torque to **125 ft*lbs**.
25. Install the hammer union seal (13) into the thread end of the valve body (1). The small O.D. side of the seal should be facing out of the valve body. If required, use assembly grease.

4.2 Wingnut Assembly

26. Place the 2" 602 segment snap ring (9) onto the wing end of the valve body (1).
27. Place wing nut (8) on the wing end and install the 2" 602 segment set (10).
28. Secure the segments (10) with the snap ring (9).

4.3 Greasing Procedure

29. With the valve in the open position, grease to 3,000 psi.
30. Cycle the valve to the closed position and then back to the open position. Repeat greasing the valve to 3,000 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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