SEMBLY, PARTS, TROUBLESHOOTING

# 6720X-X4X LOWER PUMP END

ALSO COVERS SERVICE KITS 637317-X4X AND 637318-X4X

RELEASED: REVISED: (REV. F)

#### LOWER PUMP DISASSEMBLY

NOTE: All threads are right hand.

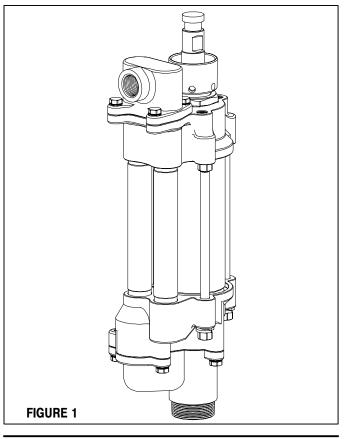
CAUTION: Items (9) tube and (26) pump rod may be ceramic coated. Handle with care so as not to damage them in any way during disassembly or assembly.

- 1. Unscrew four (4) bolts, releasing (34) inlet body, two (35) "O" rings, (32 and 39) lower seats, two (35) "O" rings and two (21) balls.
- 2. Unscrew four (4) bolts, releasing (6) ball cap, four (28) "O" rings, two (27) upper seats and two (14) balls.
- 3. Unscrew (1) solvent cup, releasing (77) bushing, (44) washer, (50) washer, five (51 and 52) "V" packings, (53) washer and (43) wave
- 4. Unscrew (2) gland nut, releasing (38) "O" ring.
- 5. Unscrew three (12) tie rod nuts and pull (11) upper body from pump.
- 6. Remove two (17) downtubes and four (16) seals.
- 7. Remove (9) tube and two (7) "O" rings.
- 8. Pull (26) pump rod assembly from (9) tube.
- 9. Remove (31) cotter pin and unscrew (30) nut, releasing two (29) followers, two (65) cup packings, two (83) gaskets, two (84) ball seats, (85) ball and (86) spacer.
- 10. Remove (40) roll pin and unscrew (37) adapter, where applicable.

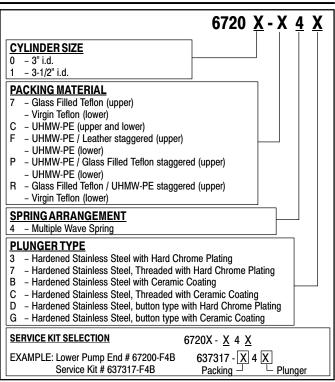
#### LOWER PUMP REASSEMBLY

NOTE: Inspect and replace old parts with new parts as necessary. Look for deep scratches on metallic surfaces. Replace all "O" rings upon reassembly. Lubricate all threads upon reassembly. Refer to sealant and torque notes on page 3.

- 1. Screw (37) adapter to (26) pump rod, securing with (40) roll pin, where applicable.
- 2. Assemble (83) gaskets, (84) ball seats, (85) ball and (86) spacer into (29) followers and assemble (29) followers into (65) cup packings (refer to figure 2, page 3. Assemble to (26) pump rod, securing with (30) nut. NOTE: Assemble cup packings with lips facing away from each other. Torque (30) nut to 50 ft lbs (67.8 Nm).
- 3. Assemble (31) cotter pin, securing (30) nut.
- 4. Slide (26) pump rod and (65) cup packings into (9) tube, being careful not to damage the lips of cup packings. NOTE: On models 6720X-F4X, thoroughly lubricate the inside of (9) tube with a lubricant compatible with the application, prior to assembly.
- 5. Assemble two (16) seals to each (17) downtube, assembling with large i.d. onto downtube.
- 6. Assemble two (17) downtubes to (18) lower body.
- 7. Assemble (7) "O" ring and (9) tube to (18) lower body.
- 8. Screw three (12) nuts onto top end of (10) tie rods and screw tie rods into (11) upper body.
- 9. Assemble (38) "O" ring into (11) upper body, securing with (2) gland
- 10. Assemble (43) wave spring, (53) male washer, five (51 and 52) "V" packings, (50) female packing washer, (44) washer and (77) bushing into (11) upper body and screw (1) solvent cup loosely into (11) upper body, securing packings.
- 11. Assemble (7) "O" ring into (11) upper body and assemble (11) upper body to (9) tube, aligning three (10) tie rods with (18) lower body.
- 12. Assemble three (12) tie rod nuts and three (8) lock washers to (10) tie rods, tightening to 60 ft lbs (81.4 Nm).



# LOWER PUMP END DESCRIPTION CHART





## **PARTS LIST**

ITEM	DESCRIPTION (Size in Inches)	QTY	PART NO.	[MTL]
1	Solvent Cup (6720X-X43, -X4B)	(1)	94174	[SS]
İ	(6720X-X4 <u>7,</u> -X4 <u>C,</u> -X4 <u>D,</u> -X4 <u>G</u> )	(1)	94172	[SS]
2	Gland Nut (6720X-X43, -X4B)	(1)	94167	[SS]
	(6720X-X4 <u>7</u> , -X4 <u>C</u> , -X4 <u>D</u> , -X4 <u>G</u> )	(1)	94165	[SS]
4	Bolt (M10 x 1.5 - 6g x 25 mm)	(8)	96729603	[SS]
<b>♦</b> 5	Lock Washer (M10)	(8)	95026	[SS]
6	Ball Cap	(1)	94614	[SS]
<b>⊬</b> 7	"O" Ring (6720 <u>0</u> -X) (1/16" x 3-3/8" o.d.)	(2)	Y328-42	[T]
	(6720 <u>1</u> -X) (1/16" x 3-7/8" o.d.)	(2)	Y328-44	[T]
◆ 8	Lock Washer (1/2")	(3)	Y14-816-T	[SS]
9	Tube (model 6720 <u>0</u> -X4 <u>B</u> , -X4 <u>C</u> , -X4 <u>G</u> )	(1)	94606	[CSS]
	(model 6720 <u>0</u> -X4 <u>3,</u> -X4 <u>7,</u> -X4 <u>D</u> )	(1)	94606-1	[PSS]
	(model 6720 <u>1</u> -X4 <u>B</u> , -X4 <u>C</u> , -X4 <u>G</u> )	(1)	94605	[CSS]
	(model 6720 <u>1</u> -X4 <u>3</u> , -X4 <u>7</u> , -X4 <u>D</u> )	(1)	94605-1	[PSH]
10	Tie Rod	(3)	94683	[SH]
11	Upper Body	(1)	94612	[SS]
12	Tie Rod Nut (M12 x 1.75)	(6)	96729728	[SS]
14	Ball (15/16" o.d.)	(2)	92409	[SS]
<b>♦</b>	"O" Ring (3/32" x 1-5/8" o.d.)	(2)	Y328-127	[T]
<b>⊬</b> 16	Seal	(4)	94611	[T]
17	Downtube	(2)	94607	[SS]
18	Lower Body	(1)	94613	[SS]
<b>♦</b>	"O" Ring (3/32" x 2-1/8" o.d.)	(2)	Y328-135	[T]
21	Ball (1-1/4" o.d.)	(2)	92408	[SS]
26	Pump Rod (model 6720X-X4B)	(1)	94610	[CSH]
	(model 6720X-X4 <u>C</u> )	(1)	92224-2	[CSH]
	(model 6720X-X4 <u>3</u> )	(1)	94610-1	[PSH]
	(model 6720X-X4 <u>7</u> )	(1)	92224-1	[PSH]
	(model 6720X-X4 <u>D</u> )	(1)	94922-1	[PSH]
	(model 6720X-X4 <u>G</u> )	(1)	94922-2	[CSH]
27	Upper Seat	(2)	94609	[SH]
<b>∷</b> ∠28	"O" Ring (1/16" x 1-5/8" o.d.)	(2)	Y328-29	[T]
29	Follower (model 67200-X)	(2)	94664	[SS]
	(model 6720 <u>1</u> -X)	(2)	94507	[SS]
30	Hex Slotted Nut (M16 x 2)	(1)	96728779	[SS]
<b>⊬</b> 31	Cotter Pin (1/8" o.d. x 1-1/4" long)	(1)	96728761	[SS]
32	Lower Seat	(1)	94608	[SH]
34	Inlet Body	(1)	94663	[SS]
<b>\$\$</b>	"O" Ring (1/16" x 2-1/8" o.d.)	(2)	Y328-33	[T]
37	Adapter (except 6720X-X4B and -X43)	(1)	94673	[SH]

ITEM	DESCRIPTION (Size in Inches)	QTY	PART NO.	[MTL]
<b>~ 38</b>	"O" Ring (1/16" x 2-1/4" o.d.)	(1)	Y328-34	[T]
39	Seat	(1)	67181	[SH]
40	Roll Pin (except 6720X-X4B and -X43)	(1)	Y178-115-S	[SS]
43	Wave Spring (6720X-XX3, -XXB)	(1)	94145	[SH]
	(6720X-X4 <u>7,</u> -X4 <u>C,</u> -X4 <u>D,</u> -X4 <u>G</u> )	(1)	94136	[SH]
44	Washer (6720X-X43, -X4B)	(1)	94191	[SS]
	(6720X-X4 <u>7,</u> -X4 <u>C,</u> -X4 <u>D,</u> -X4 <u>G</u> )	(1)	94193	[SS]
50	Washer (6720X-X4 <u>3</u> , -X4 <u>B</u> )	(1)	94197-1	[D]
	(6720X-X4 <u>7,</u> -X4 <u>C,</u> -X4 <u>D,</u> -X4 <u>G</u> )	(1)	94195-2	[PPS]
<b>⊬</b> 51	"V" Packing (6720X-743, -74B, -R43, -R4B)	(3)	93689-2	[GFT]
	(6720X-C43, -C4B, -F43, -F4B, -P43, -P4B)	(3)	93689-4	[UH]
	(6720X-747, -74C, -74D, -74G, -R47, -R4C, -R4D, -R4G)	(3)	93455-2	[GFT]
	(6720X-C47, -C4C, -C4D, -C4G, -F47, -F4C, -F4D, -F4G, -P47, -P4C, -P4D, -P4G)	(3)	93455-4	[UH]
<b>∠</b> 52	"V" Packing (6720X-F43, -F4B)	(2)	93689-1	[L]
	(6720X-743, -74B, -P43, -P4B)	(2)	93689-2	[GFT]
	(6720X-C43, -C4B, -R43, -R4B)	(2)	93689-4	[UH]
	(6720X-F47, -F4C, -F4D, -F4G)	(2)	93455-1	[L]
	(6720X-747, -74C, -74D, -74G, -P47, -P4C, -P4D, -P4G)	(2)	93455-2	[GFT]
	(6720X-C47, -C4C, -C4D, -C4G, -R47, -R4C, -R4D, -R4G)	(2)	93455-4	[UH]
53	Washer (model 6720X-X43, -X4B)	(1)	94272	[SS]
	(6720X-X4 <u>7,</u> -X4 <u>C,</u> -X4 <u>D,</u> -X4 <u>G</u> )	(1)	94194	[SS]
<b>~</b> 65	Cup Packing (model 6720 <u>0-74X, -R4X)</u>	(2)	93449-3	[T]
	(model 6720 <u>0-C</u> 4X, - <u>F</u> 4X, - <u>P</u> 4X)	(2)	93449-4	[UH]
	(model 6720 <u>1-7</u> 4X, - <u>R</u> 4X)	(2)	92963-3	[T]
	(model 6720 <u>1-C</u> 4X, - <u>F</u> 4X, - <u>P</u> 4X)	(2)	92963-4	[UH]
77	Bushing (model 6720X-X43, -X4B)	(1)	94180-1	[D]
	(6720X-X4 <u>7,</u> -X4 <u>C,</u> -X4 <u>D,</u> -X4 <u>G</u> )	(1)	94182-2	[PPS]
83	Gasket	(2)	92425	[Ny]
84	Ball Seat	(2)	92424	[TC]
85	Ball (.1875" o.d.)	(1)	93508-1	[TC]
86	Spacer	(1)	94936	[SH]
~	Service Kit (model 6720 <u>0</u> -X4X)		637317-X4X	
~	Service Kit (model 67201-X4X)		637318-X4X	

- \*\* Models built prior to serial # C9209XXX require a quantity of 4 each of items (28) and (35), (also included in service kits).
- ◆ Models built after serial # C9209XXX include items (5), (8), (15) and (20).

# **LOWER PUMP REASSEMBLY (continued)**

- 13. Turn pump assembly upside down and assemble two (21) balls, two (35) "O" rings, (32 and 39) seats (chamfered side into lower body first) and two (20) "O" rings into (18) lower body. Refer to figure 2, page 3, for the location of (39) seat (with orifice).
- 14. Assemble (34) inlet body to (18) lower body, securing with four (5) lock washers and four (4) bolts. NOTE: Torque (4) bolts to 45 ft lbs (61.0 Nm).
- 15. Assemble (15) "O" rings to groove in (27) upper seats and set upper seats on (11) upper body. Set (14) balls on (27) upper seats. NOTE: Assemble upper seats with chamfered side up.
- 16. Assemble two (28) "O" rings to (6) ball cap and assemble ball cap to (11) upper body, securing with four (5) lock washers and four (4) bolts. NOTE: Torque (4) bolts to 45 ft lbs (61.0 Nm).
- 17. Tighten (2) gland nut to 100 ft lbs (135.6 Nm).

PAGE 2 OF 4 6720X-X

## **PARTS LIST**

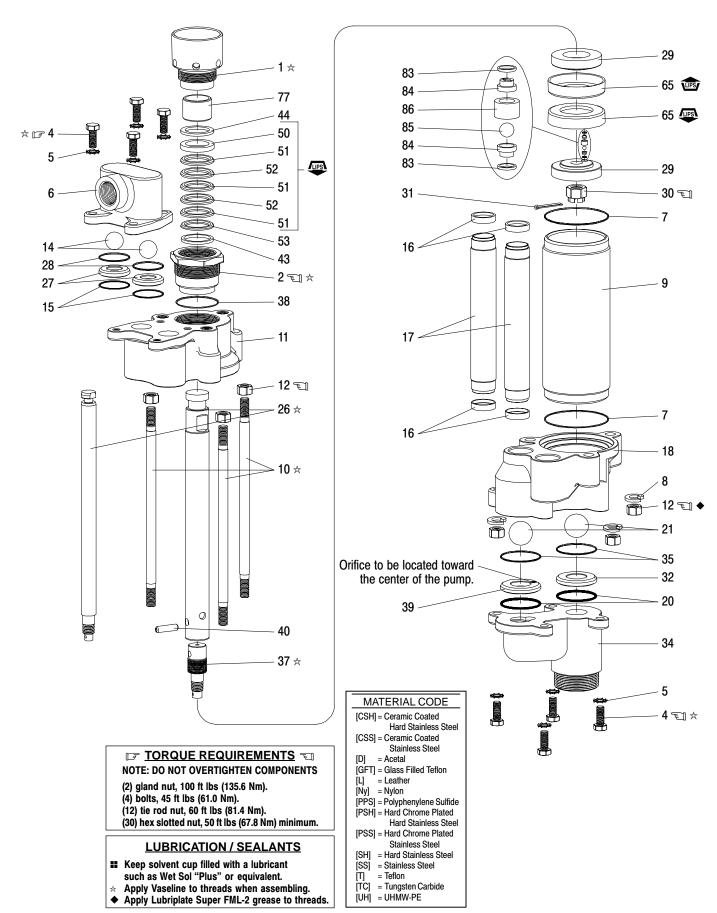


FIGURE 2

6720X-X PAGE 3 OF 4

### TROUBLE SHOOTING

- No material at outlet (pump continually cycles). Check material supply, disconnect or shut off the air supply and replenish the material, reconnect.
- Material on one stroke only (fast downstroke). The (21) ball may not be seating in the (32) lower seat (see lower pump disassembly).
  Remove the ball from the lower seat, clean and inspect the ball and seat area. If ball or lower seat is damaged, replace.
- Material on one stroke only (fast upstroke). The (21) ball may not be seating in the (39) lower seat (see lower pump disassembly). Remove
- the ball from the lower seat, clean and inspect the ball and seat area. If ball or lower seat is damaged, replace. Check for worn or damaged seals. Replace the seals as necessary. Also, check for a damaged orifice in (39) seat.
- Material leakage out of the solvent cup or material appears on the pump plunger rod. Tighten the solvent cup until leakage discontinues. If this procedure does not aid in stopping the leakage problem, the upper packings may be worn (see lower pump disassembly). Replace the packings as necessary.



PAGE 4 OF 4 6720X-X