

ITEM	QTY	DESCRIPTION	REPAIR KIT
1	1	Rotor 2 1/2-12 UN RH	--
2	1	O-Ring #142	Included
3	3	Metric O-Ring 2.5 x 86	Included
4	1	Bearing Cover / Internal	--
5	1	Snap Ring	Included
6	1	Metric O-Ring 2.5 x 134	Included
7	1	Ball Bearing	Included
8	1	O-Ring #136	Included
9	1	Snap Ring	Included
10	1	Seal Assembly	Included
11	2	Floating Seal Assembly	Included
12	8	Coil Spring	Included
13	2	Back Up Washer	Included
14	2	O-Ring #226	Included
15	1	Housing	--
16	2	Roll Pin	--
17	1	Seal Assembly	Included
18	2	Metric O-Ring 2.5 x 35	Included
19	1	End Cap	--
20	1	Ball Bearing	Included
21	1	Bearing Cover/ External	--
22	4	M6 Lock Washer	--
23	4	M6 x 12 Cap Screw	--
24	1	Snap Ring	Included
25	4	M8 x 30 Socket Cap Screw	--
26	4	Spring lock washers	Included
27	1	Spring	Included
28	12	1/8" NPT Pipe Plug	--
29	4	Roll Pin	--

DISASSEMBLY

Step 1

Position the union assembly in the vertical position with the rotor threads down.

Step 2

Remove & save items #22 (Lock Washer) & #23 (Cap Screw).

Step 3

Remove & save item #21 (Bearing Cover).

- a) Ensure item #21 is free from damage.
- b) Remove and discard item #18 (O-Ring).
 - i) Replace with new O-Ring from Repair Kit.

Step 4

Remove & discard item #24 (Snap Ring).

- a) Replace with new Snap Ring from Repair Kit.

Step 5

Remove & save items #25 (Cap Screw) & #26 (Lock Washer).

Step 6

Separate items #19 (End Cap) & #20 (Ball Bearing) from item #15 (Housing).

- a) Remove & discard item #20 & item #3 (O-Ring) from item #19.
 - i) Save item #19.
 - ii) Remove and discard item #27 (Spring), replace from kit.
- b) Replace with new Ball Bearing from Repair Kit.
- c) Replace and lubricate new O-Rings from Repair Kit.

Step 7

Remove & discard items #17 (Seal Assembly) & #18 (O-Ring).

- a) Take note of the condition of items #16 (pin).
 - i) If damaged replace; #16 not included in kit.
- b) Replace with new Seal Assembly from Repair Kit.
- c) Replace and lubricate new O-Ring from Repair Kit.

DISASSEMBLY CON'T

Step 8

Remove and discard items #11 (Floating Seal Assembly), #12 (Springs), #13 (Backup Washer) & #14 (O-Ring) from item #15 (Housing).

- a) Replace with new Floating Seal Assembly from Repair Kit.
- b) Replace with new Springs from Repair Kit.
- c) Replace with new Backup washer from Repair Kit.
- d) Replace and lubricate new O-Ring from Repair Kit.

Step 9

Rotate Union Assembly 180 degrees with rotor threads up.

Step 10

Remove & Save item #5 (Snap Ring).

- a) Ensure part is free from damage.

Step 11

Push item #15 (Housing) down and separate from item #4 (Bearing Cover) & #7 (Ball Bearing).

- a) Remove item #3 (O-Ring) & #6 (O-Ring) from item #4.
 - i) Save item #4.
 - (1) Ensure part is free from damage.
 - ii) Replace and lubricate new O-Rings from Repair Kit.

Step 12

Lift item # 1 (Rotor) out from item #15 (Housing)

Step 13

Remove and discard items #11 (Floating Seal Assembly), #12 (Springs), #13 (Backup Washer) & #14 (O-Ring) from item #15 (Housing).

- a) Save item #15.
 - i) Ensure part is free from damage.
- b) Replace with new Floating Seal Assembly from Repair Kit.
- c) Replace with new Springs from Repair Kit.
- d) Replace with new Backup Washer from Repair Kit.
- e) Replace and lubricate new O-Ring from Repair Kit.

Step 14

Remove & discard items #2 (O-Ring), #7 (Ball Bearing), #8 (O-Ring), #9 (Snap Ring) & #10 (Seal Assembly) from item #1 (Rotor).

- a) Save item #1.
 - i) Ensure part is free from damage.
- b) Replace and lubricate new O-Ring from Repair Kit.
- c) Replace with new Ball Bearing from Repair Kit.
- d) Replace with new Snap Ring from Repair Kit.
- e) Replace and lubricate new O-Ring from Repair Kit.
- f) Replace with new Seal Assembly from Repair Kit.

ASSEMBLY

Step 1

Position item #1 (rotor) in the vertical position with the rotor threads down

Step 2

Install item #7 (Ball Bearing) and secure with item #9 (Snap Ring) onto item #1 (Rotor)

Step 3

Install lubricated item #8 (O-Ring) & item #10 (Seal Assembly) onto item #1 (Rotor).

- a) Ensure seal face of item #10 is free from any damage or debris.
- b) Ensure slots in item #10 are aligned with dent drives in item #1.
- c) Apply a small amount of Mobil One oil to Seal face.

Step 4

Position #15 (Housing) in a vertical position with large Bearing Side up

- a) Install items #11,#12,#13, & #14.
 - i) Ensure seal face of item #11 is free from any damage or debris and apply a small amount of Mobil One oil to face.
 - ii) Ensure item #29 (Pins) are straight and free from damage.
 - iii) Ensure slots in item #11 are aligned with item #29 (Pins).

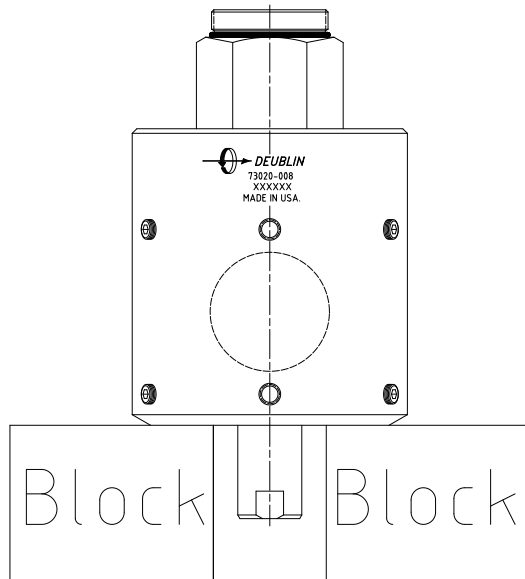
Step 5

Lower item #15, large bearing side, down onto item #1 (Rotor).

- a) Take care not to damage the seal faces.
- b) Item #15 will be in its proper position when item #7 (Ball Bearing) is completely seated on to Item # 15.

Step 6

Rotate Item # 15 onto two 2-1/2" blocks, so that item #1 (Rotor) extends through the blocks and is not supported.



Step 7

Install lubricated item #3 (O-Ring) into item #4 (Bearing Cover).

Step 8

Install lubricated item #6 (O-Ring) into item #15 (Housing).

Step 9

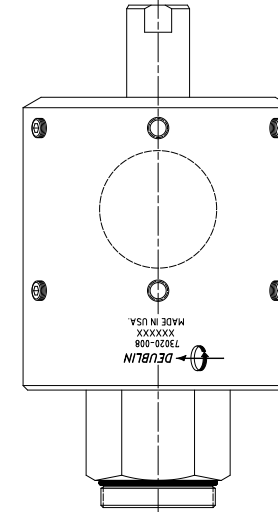
Install item #4 into item #15.

Step 10

Install item #5 (Snap Ring) into item #15.

Step 11

Rotate union with item #1 (Rotor) thread side down.



- a) Install items #11, #12, #13, & #14
 - i) Ensure seal face of item #11 is free from any damage or debris and apply small amount of Mobil One oil to face.
 - ii) Ensure item #29 (Pins) are straight and free from damage.
 - iii) Ensure slots in item #11 are aligned with item #29 (Pins).

Step 12

Install lubricated item #18 (O-Ring) into item #17 (Seal Assembly).

Step 13

Install item #17 onto item #1 (Rotor).

- a) Ensure seal face of item #17 is free from any damage or debris.
- b) Ensure item #16 (Pins) are straight and free from damage.
- c) Ensure slots in item #17 are aligned with item #16 (Pins).

Step 14

Install lubricated item #3 (O-Ring) into item #19 (End Cap pilot side O-Ring groove).

Step 15

Install Item #19 onto item #15.

- a) Secure item #19 with item #26 (Lock Washer) & item #25 (Cap Screw).
- b) Torque screws to 12 ft-lbs.

Step 16

Install item #27 (Spring) into item #19 bearing counter bore.

Step 17

Install item #20 (Ball Bearing) onto item #1 (Rotor) and into item #15 (Housing).

- a) Secure item #20 with item #24 (Snap Ring).

Step 18

Install lubricated item #3 (O-Ring) into Item #19 (Face O-Ring Groove).

Step 19

Install item # 18 (O-Ring) into item #21 (Bearing Cover).

Step 20

Install item #21 onto item #19.

- a) Secure item #21 with item #22 (Lock Washer) & item #23 (Hex Screw).
- b) Torque screws to 7 ft-lbs.