

Rebuild Kit Replacement Instructions

Unist 230 Pump 40 μ L Part Number 231-000-411

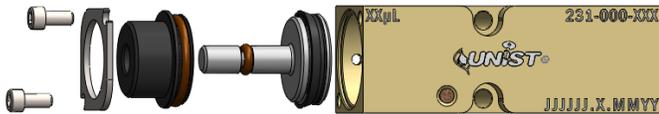
Item numbers in these instructions refer to the drawings found on the back of this sheet.

If any seals are not adequately greased Molykote 55 or equivalent is recommended.

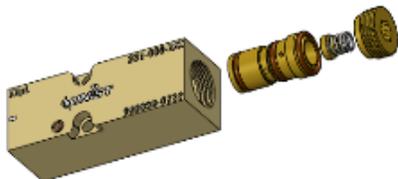
1. Tools Needed:

- 1/4" hex key
- 3/32" hex key
- 7/64" hex key
- A clean surface

2. If necessary, remove the pump from the pump stack using a 7/64" hex key.
3. Remove the two bolts (item 20) that hold the air cap to the pump body using an 3/32" hex key.
4. Remove air cap (item 18), air piston (item 16), metering pin (item 15), and spring (item



- 14) from the air side. Set on a clean surface.
5. Use the 1/4" hex key to remove the brass plug (item 12) from the fluid side (bottom) of the pump.
6. Remove the check seal, spring, pump inserts and all seals (items 2-11). Depending how long the pump has been in service and what fluids have been ran through the pump this can be accomplished by either banging



the bottom of the pump body on a hard smooth surface or pushing on the inserts from the opposite side to force the parts out.

7. Discard all old seals and internal pump components. Clean any debris from the inside of the pump block to ensure

contaminants do not interfere with pump performance upon re-assembly.

8. Drop the brass washer (item 2) into the fluid side of the pump body. Ensure it sits flat on the internal shelf
9. Ensure there is a light coat of grease on the -012 O-ring (item 3) and drop it on top of the washer. Ensure it sits flat on the washer.
10. The -005 X-ring (item 4) should be in the counter bore of the fluid inlet insert (item 5). Ensure this is assembled and lightly greased.
11. Insert the fluid inlet insert (item 5) into the pump body with the -005 X-ring (item 4) facing the washer.
12. Ensure there is an -012 O-ring (item 3) and -005 O-ring (item 6) installed on the fluid displacement chamber (item 7) and they are lightly greased. Install this assembly with the O-ring facing the other insert.
13. Ensure the outlet check valve is assembled with the flat check seal (item 8) and the brass housing (item 9). Install this assembled with the seal facing the inside of the pump.
14. Install the outlet check valve spring (item 10) around the nub on the outlet check valve housing (item 9)
15. Ensure the -013 O-ring (item 11) is lightly greased and install on the chamfer of the displacement chamber (item 7)
16. Install and tighten the brass plug (item 12) to 75 in-lbs [8.5 Nm]

17. Flip the pump over and install the metering pin return spring (item 15) and metering pin (item 14). Ensure the metering pin has a light coat of grease around the smaller diameter shaft.
18. Ensure the air piston (item 16) is coated with super lube or equivalent grease. Install the air piston into the air cap (18). Twist the parts as you slide them together.
19. Ensure there is a -016 O-ring (item 17) installed in the groove of the air cap (item 16) and install the assembly into the pump.
20. Use the air cap retainer (item 19) to hold the air cap in place and tighten screws (item 20) to 6 in-lbs using 3/32" hex key.
21. Replace the 3 O-rings on the pump manifold block with the 3 -007 O-rings that were shipped with the rebuild kit.

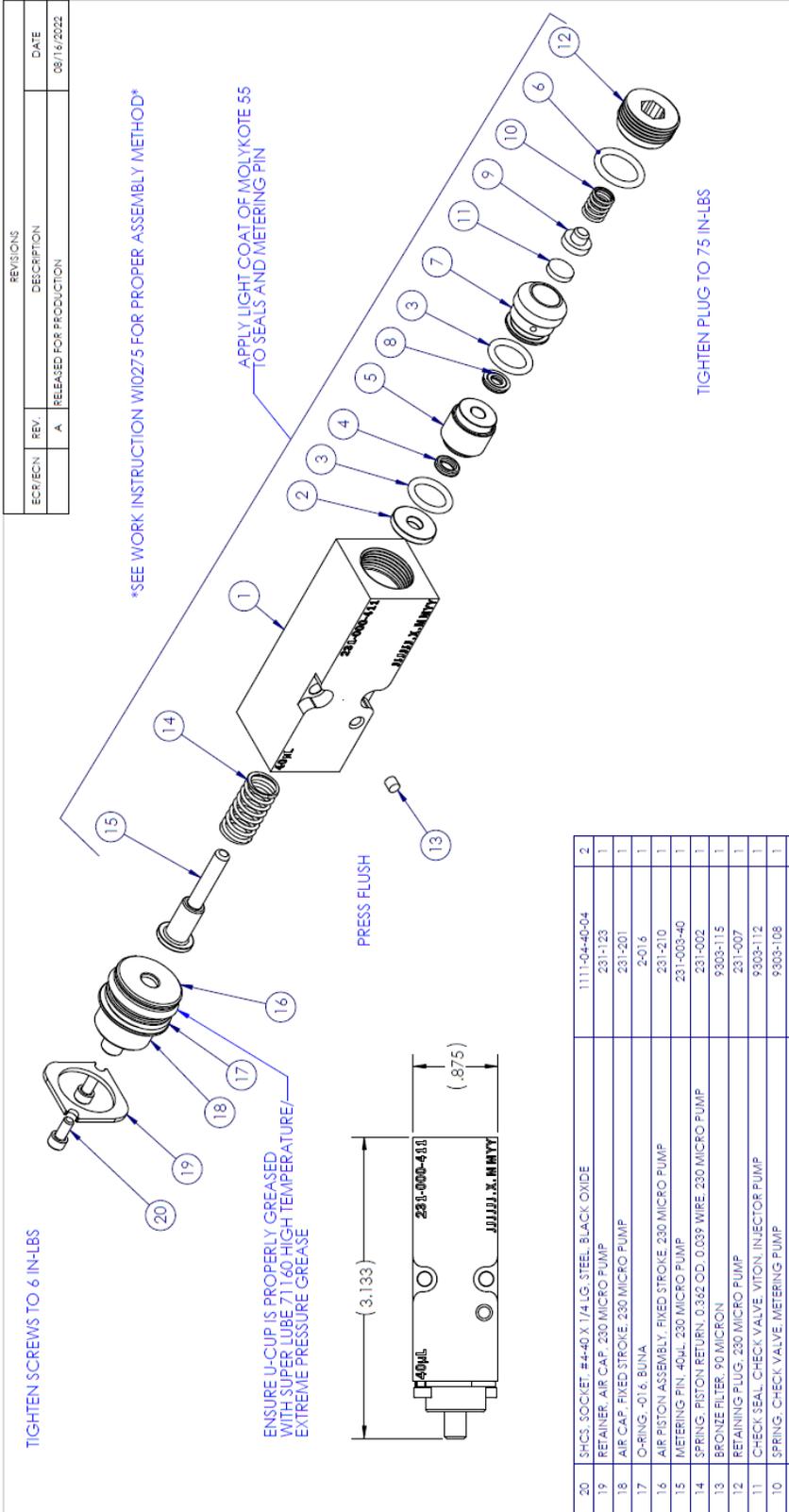


22. Reinstall the pump onto the manifold

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REV. NO.	DESCRIPTION	DATE
A	RELEASED FOR PRODUCTION	08/16/2022



SEE WORK INSTRUCTION WI0275 FOR PROPER ASSEMBLY METHOD

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS: ±.005"
DECIMALS: ±.001"
ANGLES: ±.5°
HOLE POSITION: ±.010"
HOLE LOCATION: ±.015"
THREE PLACE DECIMAL: ±.005"
±.001"
±.005"
±.010"
±.015"
±.020"
±.025"
±.030"
±.035"
±.040"
±.045"
±.050"
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±.465"
±.470"
±.475"
±.480"
±.485"
±.490"
±.495"
±.500"

DATE	REV. NO.	DESCRIPTION
06/29/2022	25	RELEASED

ITEM NO.	DESCRIPTION	QTY.
20	SHCS SOCKET #4-40 X 1/4 LG. STEEL BLACK OXIDE	2
19	RETAINER AIR CAP 230 MICRO PUMP	1
18	AIR CAP FIXED STROKE 230 MICRO PUMP	1
17	O-RING .016 BUNA	1
16	AIR PISTON ASSEMBLY FIXED STROKE 230 MICRO PUMP	1
15	METERING PIN 40µL 230 MICRO PUMP	1
14	SPRING PISTON RETURN 0.562 OD. 0.035 WIRE 230 MICRO PUMP	1
13	BRONZE FILTER 90 MICRON	1
12	RETAINING PLUG 230 MICRO PUMP	1
11	CHECK SEAL CHECK VALVE VITON INJECTOR PUMP	1
10	SPRING CHECK VALVE METERING PUMP	1
9	BODY CHECK VALVE INJECTOR PUMP	1
8	U-CUP STRAIGHT 1/16 CS X 9/32 ID X 9/32 OD. 75 DURO. BLACK VITON	1
7	PUMP INSERT DISPLACEMENT CHAMBER 40µL 230 MICRO PUMP	1
6	O-RING ID .426 CS .070 VITON BROWN	1
5	PUMP INSERT FLUID INLET 40µL 230 MICRO PUMP	1
4	X-RING OD .281 CS .063 VITON 75 DUROMETER BLACK	1
3	O-RING ID .344 CS .070 VITON	2
2	RETAINING WASHER 40µL 230 MICRO PUMP	1
1	PUMP BODY 230 MICRO PUMP	1



UNIST
PUMP ASSEMBLY 40µL VITON FIXED OUTPUT 230 MICRO PUMP
REV DWG. NO. 231-000-411
SCALE: 1:1