

Standard and Stainless Steel Circulation Valves

Introduction

This instruction sheet covers the standard (steel, non-corrosive) and stainless steel circulation valves. These valves are used in circulation kits to regulate the flow of fluid through a circulating fluid system.

Circulation Valve Repair



WARNING: Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.

Tools and Material Required

The following tools and materials are needed to repair the circulation valve:

- large and small adjustable wrenches
- Parker O-Lube or equivalent O-ring lubricant (Nordson part 900223)

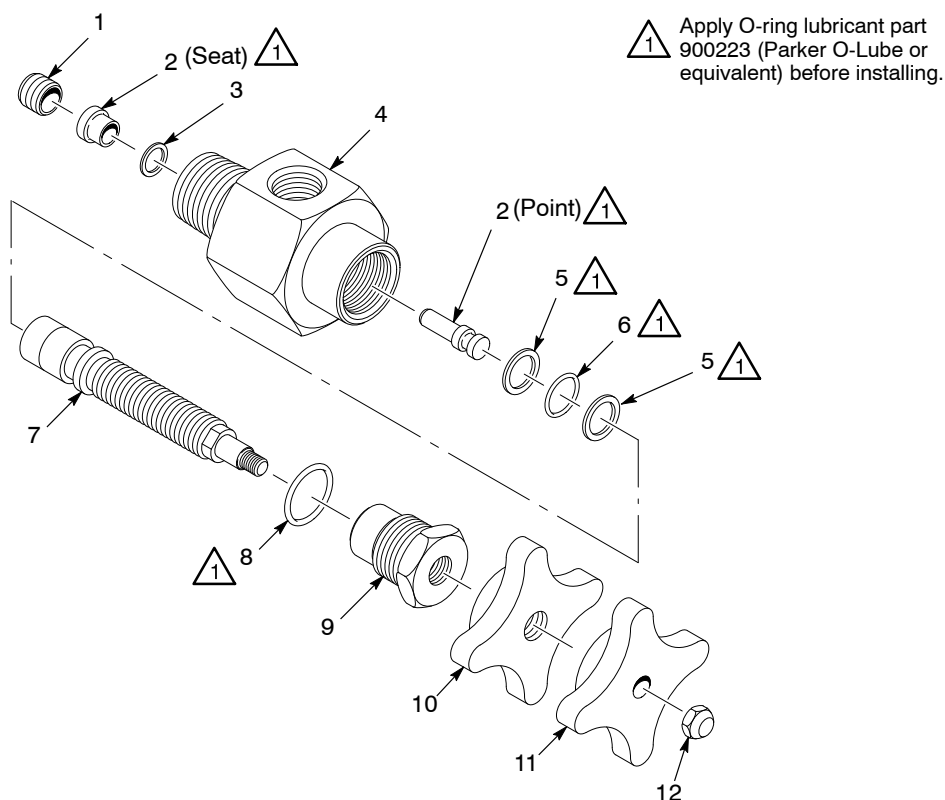
Disassembly

1. Loosen the lock nut knob (10) and rotate the adjustment knob (11) counterclockwise until the valve is fully opened.
2. Unscrew the cap (9) from the body (4).
3. Remove the lock nut knob, adjusting knob, cap, stem (7), and point (2) from the circulation valve as an assembly. Use care to prevent damaging the point.
4. Remove the point from the keyed slot in the stem. Remove the lock nut (12) and unscrew the lock nut knob and adjustment knob from the stem.
5. Unscrew the stem from the cap. Remove the O-rings and backup ring (5, 6, and 8) from the stem and cap.
6. Use a hex wrench to remove the hollow lock screw (1) from the body.
7. Carefully remove the seat (2) and seal washer (3) from the body.

Clean and inspect the valve parts. Replace any damaged or worn parts. A damaged seat or point makes circulation rate control difficult and can prevent the circulation valve from closing completely.

Assembly

1. Lubricate new O-rings (6, 8) with O-ring lubricant. Install the back-up rings and O-rings on the stem (7) and cap (9).
2. Thread the stem into the cap (9) and install the lock nut knob (10), adjustment knob (11) and lock nut (12) on the stem.
3. Lubricate the seal washer (3) with O-ring lubricant and install it into the body (4).
4. Install the point (2) into the keyed slot in the stem.
5. Install the cap and stem assembly into the body. Tighten the cap securely.
6. With the lock nut knob up against the adjustment knob, turn the adjustment knob fully in (clockwise).
7. Lubricate the seat (2) with O-ring lubricant and install it into the body, over the point. Do not force the seat in. You may have to center the point in the body with a small tool such as a screwdriver before you can install the seat.
8. Turn the adjustment knob full out (counterclockwise).
9. Thread the lock screw (1) into the body and tighten it.



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Figure 1 Circulation Valve Repair and Parts

Parts

To order parts, call the Nordson Finishing Customer Support Center at (800) 433-9319 or your local Nordson representative.

Standard Circulation Valve

See Figure 1.

Item	Part	Description	Quantity	Note
—	750022	VALVE, circulation	1	
1	981700	• SCREW, lock, hollow, $\frac{5}{8}$ -18	1	
2	750030	• POINT and seat assembly	1	A
3	750027	• WASHER, seal	1	A
4	750023	• BODY, circulation valve	1	
5	954012	• BACK-UP RING, single, $\frac{3}{8} \times \frac{1}{2}$ in.	2	B
6	940120	• O-RING, hotpaint, 0.375 x 0.500 x 0.063 in.	1	B
7	750024	• STEM	1	
8	940160	• O-RING, hotpaint, 0.625 x 0.750 x 0.063 in.	1	B
9	750025	• CAP	1	
10	750028	• NUT, lock, $\frac{7}{16}$ -20	1	
11	750029	• KNOB	1	
12	984122	• NUT, lock, #10-32	1	
NOTE A: Noted parts included in Carbide Seat service kit, part 106244. Refer to <i>Service Kits</i> .				
B: Noted parts included in Seal service kit, part 106243. Refer to <i>Service Kits</i> .				

Stainless Steel Circulation Valve

See Figure 1.

Item	Part	Description	Quantity	Note
—	750222	VALVE, circulating, stainless steel	1	
1	981701	• SCREW, lock, hollow, $\frac{5}{8}$ -18	1	
2	750030	• POINT and seat assembly	1	A
3	750227	• WASHER, seal, PTFE	1	A
4	750223	• BODY, circulation valve, stainless steel	1	
5	954012	• BACK-UP RING, single, $\frac{3}{8} \times \frac{1}{2}$ in.	2	
6	940128	• O-RING, Viton, black, 0.375 x 0.500 in.	1	
7	750224	• STEM	1	
8	940166	• O-RING, Viton, black, 0.625 x 0.750 in.	1	
9	750225	• CAP, 316 stainless steel	1	
10	750028	• NUT, lock, $\frac{7}{16}$ -20	1	
11	750029	• KNOB	1	
12	984122	• NUT, lock, #10-32	1	
NOTE A: Included in Carbide Seat service kit, part 106244.				

Service Kits

See Figure 1.

Seal Service Kit for Standard Circulation Valve

Item	Part	Description	Quantity	Note
–	106243	SERVICE KIT, seal, circulation valve	1	
5	954012	• BACK-UP RING, single, $\frac{3}{8} \times \frac{1}{2}$ in.	2	
6	940120	• O-RING, hotpaint, 0.375 x 0.500 x 0.063 in.	1	
8	940160	• O-RING, hotpaint, 0.625 x 0.750 x 0.063 in.	1	

Carbide Seat Service Kit for Standard and Stainless Circulation Valves

Item	Part	Description	Quantity	Note
–	106244	SERVICE kit, carbide seat, circulation valve	1	
2	750030	• POINT and seat assembly	1	
3	750027	• WASHER, seal	1	A
3	750227	• WASHER, seal, PTFE	1	B
NOTE A: Used with standard circulation valve part 750022. B: Used with stainless steel circulation valve part 750222.				

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