

## Delivery Valve Spindle - Maintenance

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This bulletin applies to the “UK screw down valve” type of delivery valve as shown overleaf. These valves are usually fitted with instantaneous connectors but can be fitted with other connection types, e.g. storz.

This is a polite notice to remind you that the delivery valve spindle needs to be checked according to the maintenance schedule outlined here.

This delivery valve may be fitted to Prima, KP and Prima SmartCAFS pumps, and also the previous range of World Series pumps.

### 1. After each use -

- Check that the valve opens and closes freely without the need to exert excessive torque to the handwheel. Do not overtighten in either direction. If stiff, dismantle the spindle and investigate.
- Check that there are no leaks around the spindle. If leaking, change O ring (9).
- Check that the twist release mechanism operates freely and that the female instantaneous seal is in place.
- Check visually for any damage.

### 2. Every three months -

- Fully open the valve and, using a torch, examine the non return flap rubber sealing washer (14) If damaged or worn, replace the rubber sealing washer. To do this it is first necessary to remove the outlet adaptor, (2) see page 3, section 1, for instructions. Then remove one of the circlips (5) and withdraw the pivot pin (3). The flap (13) can then be extracted from the valve. Replace the rubber sealing washer (14) and plastic inserts (16). Apply Loctite 222 to the screw threads before hand tightening. Reassemble by reversing the above instructions.
- Fully close the valve, and using a small brush, apply Lithium EP21 plus Moly Grease to the exposed spindle threads.
- If the spindle stop is the old roll pin type replace with the latest Nyloc nut type.
- If the spindle is of the latest Nyloc nut type check that the nut is still tight, and that the spindle protrudes through the nut. **DO NOT ATTEMPT TO UNSCREW IT (ANTI-CLOCKWISE) UNLESS THE NUT IS TO BE CHANGED.** If the spindle end has worn flush with the nut it should be replaced immediately.
- Check there is no leakage from the flap pivot pin O rings (4) and change if necessary.
- Grease pivot pin (3) and check that the non return flap is free to articulate.
- Check that circlips (5) are firmly in place.

### 3. Every two years -

- Remove the spindle (see instructions page 3), regrease it, fit a new Nyloc nut (12) and O ring (9) and refit.
- Inspect the twist release mechanism components and instantaneous seal for damage or corrosion and replace as necessary.



Screw down valve



Screw down valve, view through the connector showing the spindle with the Nyloc nut and washer fitted to the end of the spindle.

## Instructions for Removing / Changing Spindles

The spindle retaining nut may be removed and replaced by accessing through the instantaneous coupling. Access is much easier if the coupling is removed, but this will take longer.

1. With the valve still bolted to the pump, remove the outlet adaptor. To do this dismantle the twist release mechanism, taking care to retain all components. Using a soft mallet strike the cam boss so that the adaptor turns anti-clockwise.

Note: Alternatively special spanners are available to enable the adaptor to be removed without dismantling the twist release mechanism, see photograph below.

If a storz connector is fitted this may also need a special spanner to remove from the valve body.



2. Remove the handwheel from the spindle using a 13mm spanner. Retain the nut, plain washer and spring washer.

3. To remove the spindle half open the valve and grip the Nyloc nut using a 19mm open spanner. Using a special 14.5mm square "spanner" or 17mm socket spanner to grip the square on top of the spindle, turn the spindle anti-clockwise to disengage from the Nyloc nut.

4. To remove an old style spindle half open the valve so that the pin is accessible through the valve outlet. Using a 1/8" pin punch, gently hammer the punch to knock the pin, taking care not to jam the punch in the hole.

5. Unscrew the spindle from the valve. Any excessive stiffness indicates damage to the thread in the valve body which should be returned for inspection and repair. Remove any residual Loctite from the 12mm thread using a fine wire brush (applies to spindle with Nyloc nut).

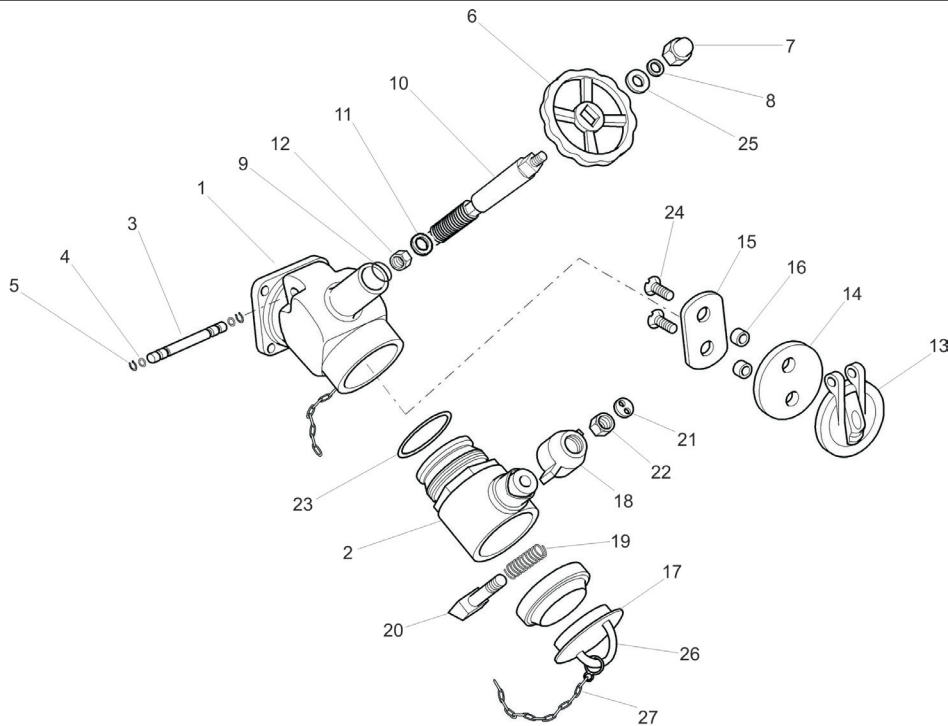
6. Generously apply Lithium EP21 plus Moly Grease to the large diameter only of the reused or replacement spindle. Screw the spindle into the valve body until four large diameter threads are showing inside the body.

7. Apply Loctite 2701 to the thread of a new Nyloc nut. Place a new washer (11) over the small thread at the lower end of the spindle and screw on the Nyloc nut (12). Grip the nut using a 19mm open spanner and turn the spindle clockwise using the handwheel square until fully tight when approximately 4mm of spindle will protrude through the nut.

It should be noted that Nyloc nuts lose effectiveness if refitted after removal. Used nuts should always be discarded and a new nut fitted.

8. Use a 13mm spanner to replace the handwheel ensuring that both the plain washer and spring washer are fitted under the 8mm dome nut.

9. Replace the O ring (23) and refit the outlet adaptor and twist release mechanism.



Item	Description	Quantity	Aluminium	Gunmetal	Notes
	Complete assembly	-	56544/01	56545/01	
1	Main Body	1	N/A	N/A	Valve body and connector
2	2.5" I/C Body	1	N/A	N/A	are not available separately
3	Pivot Pin	1	56979/03	56979/03	If required, order complete valve – see top of list
4	'O' Ring	2	56979/02	56979/02	
5	Circlip	2	56979/01	56979/01	
6	Screw Down Handle	1	56979/22	56979/22	Crank handle - order 56132/03
7	Domed Nut	1	56979/09	56979/09	
8	Spring Washer	1	56979/08	56979/08	
9	'O' Ring	1	56979/10	56979/10	
10	Screw Down Spindle	1	56979/16	56979/16	
11	Washer	1	56979/30	56979/30	
12	Nyloc nut	1	MS141/7	MS141/7	
13	Non Return Flap	1	56979/18	56979/19	
14	Non Return Flap Washer	1	56979/07	56979/07	
15	Retaining Washer	1	56979/06	56979/20	
16	Washer Insert	2	56979/05	56979/05	
17	Instantaneous Seal	1	FWP1003/A	FWP1003/A	
18	Twist Release Knob	1	56979/26	56979/27	
19	Release Spring	1	56979/14	56979/14	
20	Release Plunger	1	56979/13	56979/21	
21	Knob Closure bung	1	56979/31	56979/25	
22	Nyloc Nut	1	56979/32	MS141/5	
23	'O' Ring	1	56979/15	56979/15	
24	Countersunk Screw	2	56979/04	56979/04	
25	Plain Washer	1	MS125/9	MS125/9	
26	Blank cap	1	2415	2415	
27	Chain	1	TH4749	TH4749	