



Additel 927

Maintenance and Repair Manual

Additel Corporation

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[Version No.: 1408V2.0]

Additel Corporation

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Maintenance and Repair Manual of ADT927

Note: Maintenance and/or repair of the ADT925 must be performed with the media completely drained.

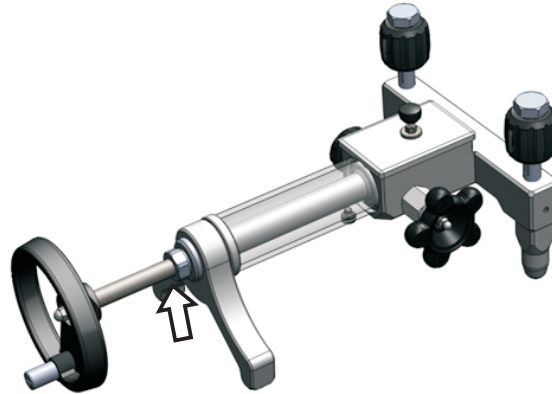
Maintenance and repair must only be performed by authorized personnel.

The pump needs to be maintained as needed.

1. Maintenance Instructions:

1.1 Pre-pressure screw press

- ① Rotate the pre-pressure screw press counterclockwise until it is all the way out, as shown in picture 1.1.1 Clean the lead threads and apply lubricating grease. Then turn the pre-pressure screw press all the way in and all the way out several times to ensure smooth operation.

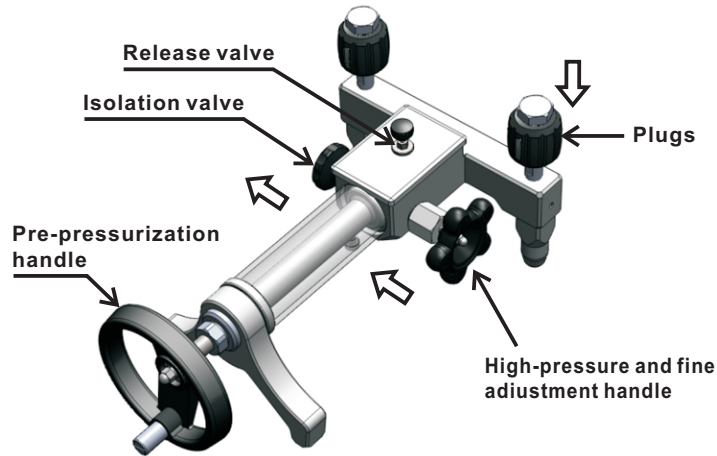


Picture 1.1.1

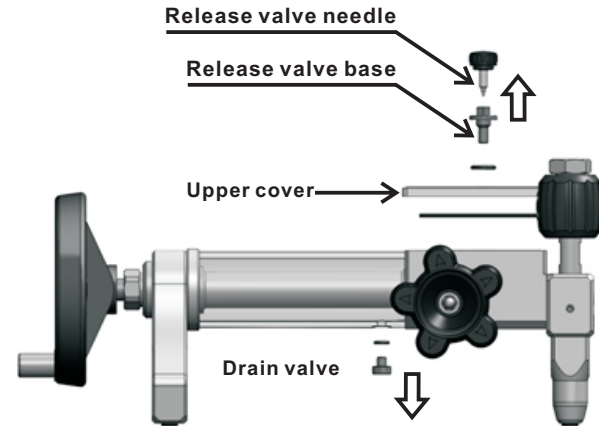
1.2 Pump cleaning

The inside of the pump needs to be cleaned regularly, or else contaminants may cause damage to the sealing system and could potentially contaminate the device under test.

- ① Tight the two plugs on the connection ports to make sure there is no leakage.
- ② Open the Release valve and the isolation valve, then rotate the pre-pressurization handle and the high-pressure pressurization and fine pressure adjustment handle all the way in. Please refer to picture 1.2.1.



Picture.1.2.1

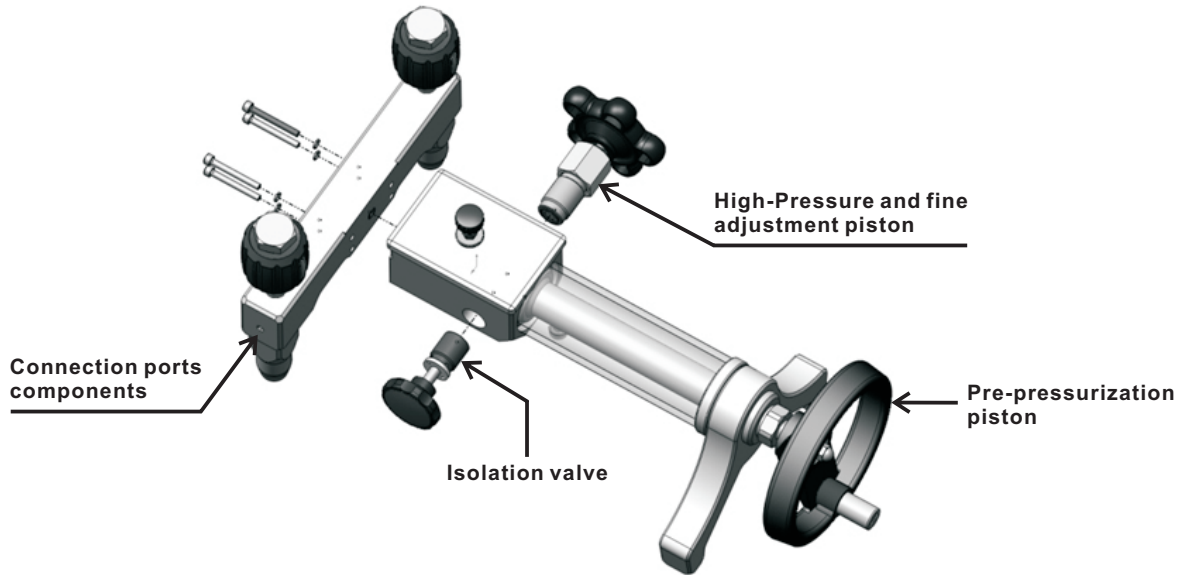


Picture.1.2.2

- ③ Open the drain valve to drain all the liquid media out. Then disassemble the release valve needle, release valve base and the upper cover. Please refer to picture 1.2.2

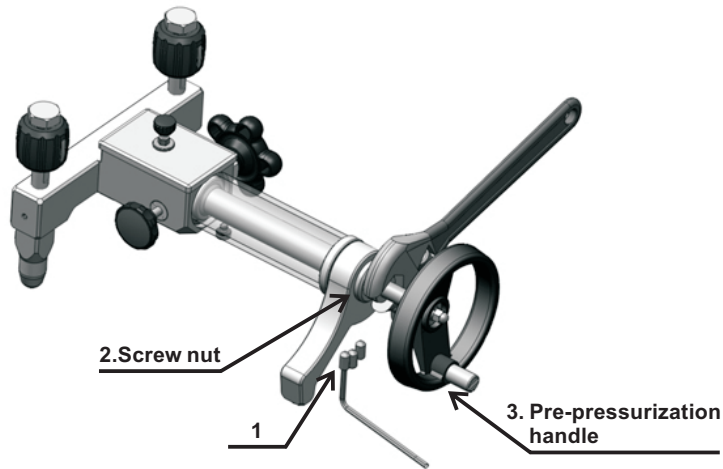
- ④ Use detergent to clean the pump. The detergent needs to be compatible with NBR, UPVC, brass and stainless steel. Rotate the pre-pressurization screw press in and out several times to clean the inside of the pump. Next, blow-dry the pump (note: the pressure of the plastic chamber should not exceed 100kPa).
- ⑤ Reassemble all parts and ensure operation.

2. Repair Instructions:

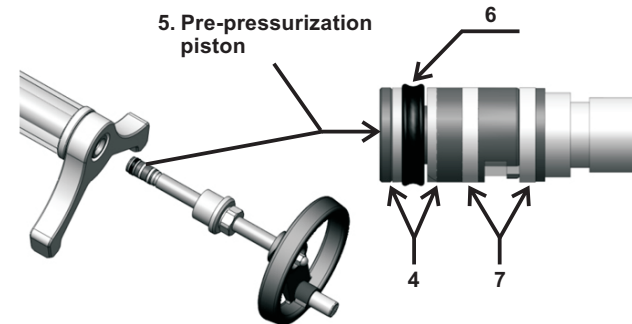


2.1 Pre-pressurization piston

- ① Please refer the “Pump cleaning” part of maintenance section to drain the media. Turn the pre-pressurization handle out to the middle position.
- ② Use a 4 mm socket head wrench to remove the three lock bolts on the bottom of the pump. And use a 24 mm wrench to unscrew the screw nut, as shown in picture 2.1.1.



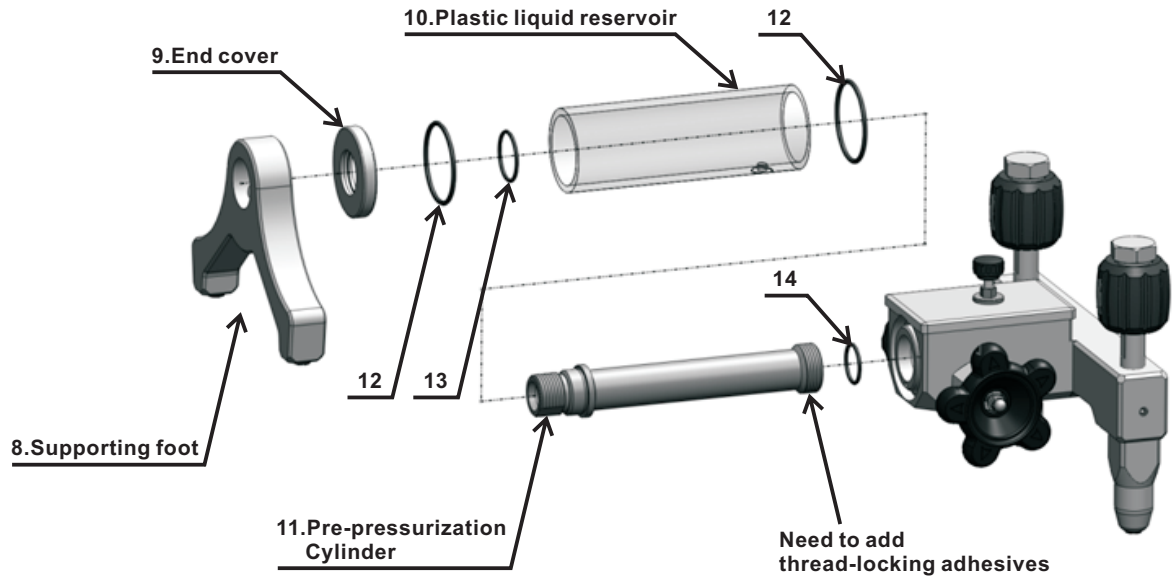
Picture.2.1.1



Picture.2.1.2

- ③ Pull out the pre-pressurization piston from the pump chamber, as shown in picture 2.1.2.
- ④ Please refer to picture 2.1.2 to exchange the damaged parts of the piston.

- ⑤ Please refer to picture 2.1.3 to remove the supporting foot, end cover, plastic liquid reservoir and parts 12 and 13. Use a 22 mm wrench to remove the pre-pressurization cylinder and part 14.



Picture.2.1.3

- ⑥ Exchange the damaged parts, and reassemble the parts in reverse order.
⑦ Pre-pressurization piston parts list.

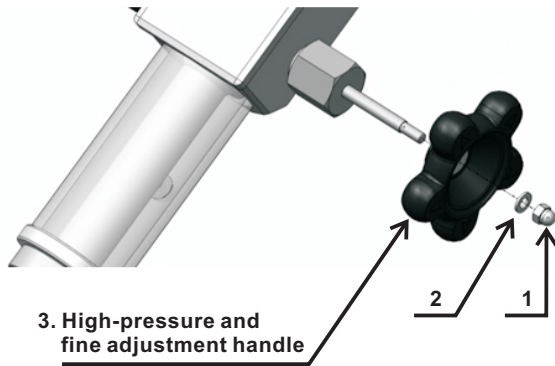
No.	Part No.	Name	Quantity
1	1710300261	Lock screws	3
2	1220116503	Screw nut	1
3	1653000015	Handle	1
	1220116008	Handle spacer	1
	1220116009	Handle axle	1
	1220116010	Handle cover	1
	1653000019	Round pin	1
4	1220115004	Retainer ring	2
5	1220115044	Pre-pressurization piston	1
6	1611300112	Star shape sealing ring	1
7	1220121126	Guide ring	2
8	1220116505	Supporting foot	1
9	1220115033	End cover	1
10	1220116504	Plastic liquid reservoir	1
11	1220116509	Pre-pressurization Cylinder	1
12	1611300093	O-ring	2
13	1611300088	O-ring	1
14	1611300078	O-ring	1

- ⑧ Please note: The threads of the pre-pressurization cylinder need to have thread-locking adhesive applied (LOCTITE 277). After securing it tight to the pump body the adhesive will need to solidify for at least 24 hours before reassembling the other parts. .

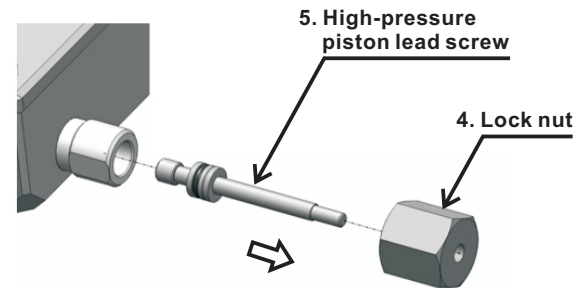
2.2 High-pressure and fine adjustment piston

- ① Refer the "Pump cleaning" section to drain out all the liquid in the pump.
- ② Rotate the High-pressure and fine adjustment piston handle all the way out. Use a wrench to remove part 1, part 2 and the handle as shown in picture 2.2.1.

- ③ Use a 24 mm wrench to remove the lock nut and rotate the high pressure piston lead screw manually until it can be pulled out. Please refer to picture 2.2.2.

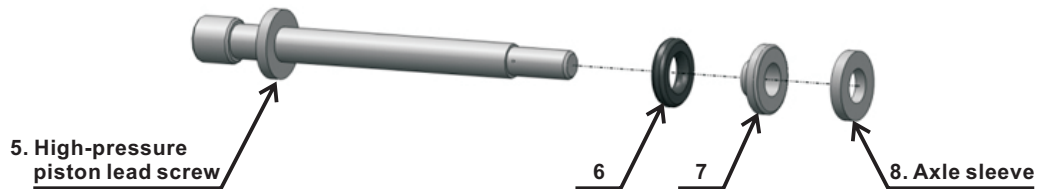


Picture.2.2.1



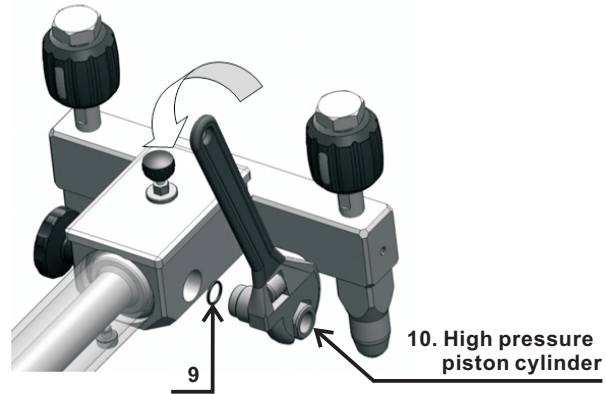
Picture.2.2.2

- ④ Please refer to picture 2.2.3 to exchange all the damaged parts.



Picture.2.2.3

- ⑤ Use a 18 mm wrench to unscrew the high pressure piston cylinder as shown in picture 2.2.4.



Picture 2.2.4

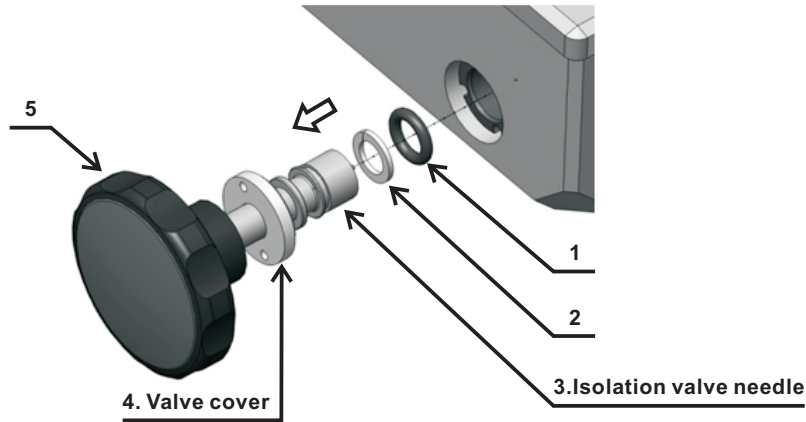
- ⑥ Exchange all the damaged parts and reassemble them back in reverse order.
Please make sure that part 9 is in the groove when reassembled.
- ⑦ High pressure and fine adjustment piston parts list.

No.	Ording No.	Name	Quantity
1	1710300178	Acorn nut	1
2	1710300016	Flat washer	1
3	QB002.02	Handle	1
4	1220115039	Lock nut	1

No.	Ording No.	Name	Quantity
5	1220115038	High pressure piston lead screw	1
6	1220210076	Sealing ring	1
7	1611300025	O-ring	1
8	1220115040	Axle sleeve	1
9	1611300051	O-ring	1
10	1220115037	High pressure piston cylinder	1

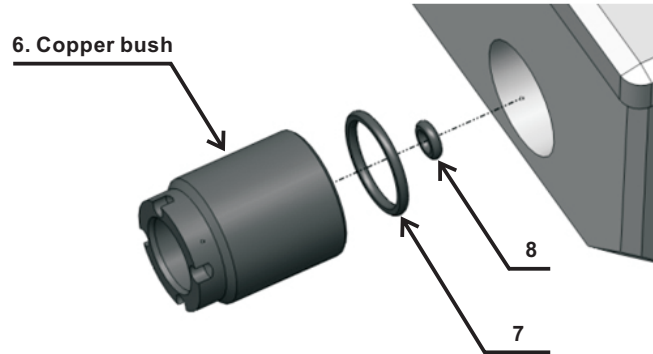
2.3 Isolation valve

- ① Please refer to the “Pump cleaning” section to drain out all the liquid in the pump.
- ② Use a 90-degree needle nose pliers to remove the valve cover and then unscrew the isolation valve, as shown in the picture below.



Picture 2.3.1

③ Use needle nose pliers to remove the copper bush, as shown in picture 2.3.2.



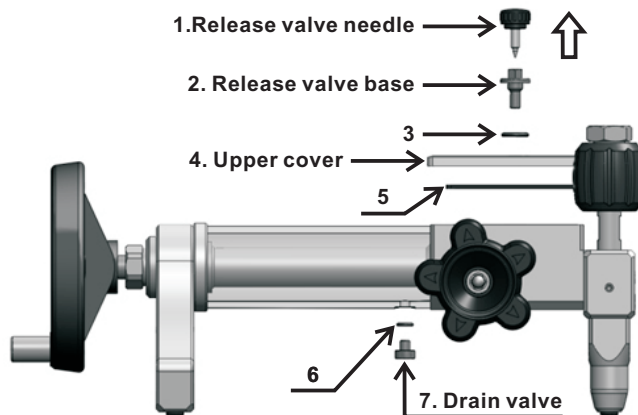
Picture 2.3.2

- ④ Please exchange all the damaged parts, and reassemble the parts in reverse order.
- ⑤ Isolation valve piston parts list.

No.	Ording No.	Name	Quantity
1	1611300029	O-ring	1
2	1220113022	Retainer ring	1
3	1220113024	Isolation valve needle	1
4	1220113023	Valve cover	1
5	1650700039	Isolation valve handle	1
6	1220113021	Copper bush	1
7	1611300056	O-ring	1
8	1611300008	O-ring	1

2.4 Pump body

- ① Remove the release valve needle manually, and use an 8 mm wrench to unscrew the release valve base. Then, remove the drain valve, as shown in picture 2.4.1.



Picture 2.4.1

- ④ Please exchange all the damaged parts, and reassemble the parts in reverse order.
 ⑤ Isolation valve piston parts list.

No.	Ording No.	Name	Quantity
1	1220113042	Release valve needle	1
	1650700037	Release valve handle	1
2	1220115002	Release valve base	1
3	1611300054	O-ring	1
4	1220115001	Upper cover	1
5	1611300173	Rubber gasket	1
6	1611300024	O-ring	1
7	1220115036	Drain valve	1

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