

Models Industrial Unloader/Regulator (High Pressure)

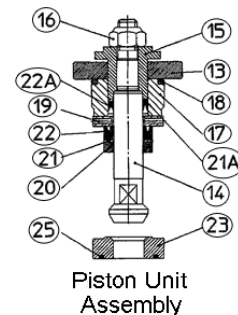
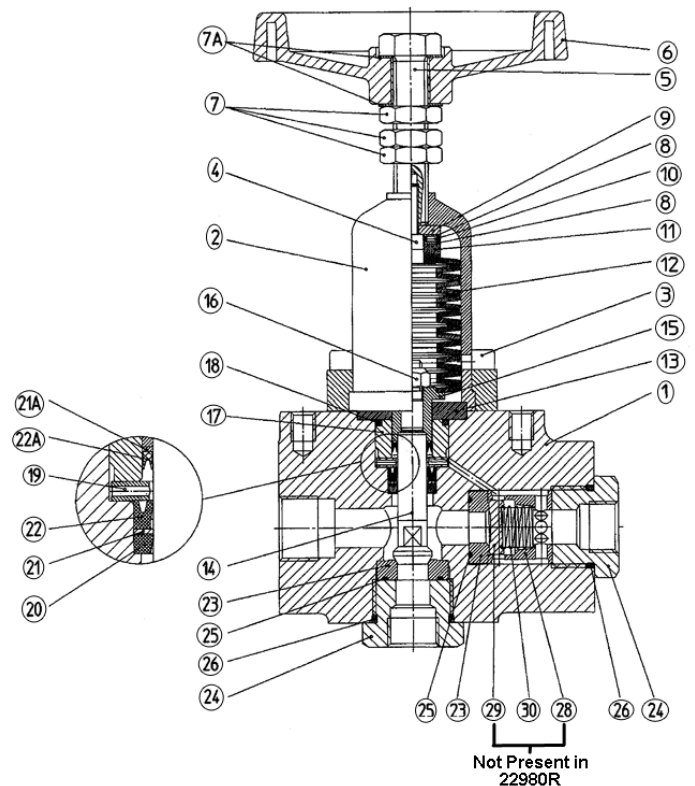
22980 - Unloader

22980R - Regulator

Item	Part#	Description	Quantity
1	08500	Casing	1
2	06880	Spring Guide	1
3	07381	Inner Hexagon Screw	4
4	08503	Inner Hexagon Screw	1
5	08504	Stud Bolt	1
6	08505	Hand Wheel	1
7	08506	Hexagon Nut	3
7A	08882	Washer	2
8	08507	Disc	2
9	08508	Bearing Part I	1
10	12323	Axial Bearing	1
11	08510	Bearing Part II	1
12	12218	Spring Plate	18
13	06714	Centering Disc	1
14 ⁺	06687	Piston	1
15 ⁺	06715	Seal Support	1
16 ⁺	06713	Hexagon Nut	1
17	06716	Cylinder	1
18 ⁺	12004	O-Ring	1
19	08519	Spacer Ring	1
17	06716	Cylinder	1
20	08520	Guide Ring	1
21 ⁺	07392	Support Ring	1
21A ⁺	06718	Support Ring	1
22 ⁺	07391	Seal Pack	1
22A ⁺	06717	Seal Ring	1
23 ⁺	08523	Valve Seat (22980)	2
23 [°]	08523	Valve Seat (22980R)	1
24	08524	Valve Plug	2
25 ⁺	07489	O-Ring (22980)	2
25 [°]	07489	O-Ring (22980R)	1
26 ⁺	12057	O-Ring (22980)	2
26	12057	O-Ring (22980R)	1
28	08530	Spacer Pipe (22980)	1
29 ⁺	08531	Valve Plate (22980)	1
30 ⁺	12216	Valve Spring (22980)	1
30	07423-0100	Plug, 22980R (not shown)	4
32	06934	Seal, 22980R (not shown)	4
+	09543	Unloader Repair Kit	
°	09547	Regualtor Repair Kit	

Operating Specifications

	U.S.	Metric
Max. Pressure:	7250 PSI	(500 bar)
Maximum Flow:	26.4 GPM	(100 l/min.)
Minimum:	2.1 GPM	(8.0 l/min.)
Maximum Temperature:	160° F	70° C
Inlet Port:		3/4" BSP
Outlet Port:		1/2" BSP
Bypass:		1/2" BSP
Weight:		15.4 lbs.



SAFETY INSTRUCTIONS

IMPORTANT! Observe direction of flow. The bypass must under no circumstances be closed or fitted with any shut-off device.

IMPORTANT! Continuous bypass operation without releasing the water can cause the liquid to heat up which in turn could damage the unit and endanger persons.

Possible preventive measures:

1. Limit the bypass duration (maximum temperature 160 °F [70 °C]); the duration is to be calculated by the operator and in conjunction with the operating conditions.
2. Use fittings (e.g. thermal relief valve on water inlet) to avoid heat increase.

SERVICE AND ADJUSTMENT

Servicing and adjusting work is only to be carried out by a skilled tradesman.

TO RENEW THE PISTON ROD SEALS AND SLEEVES

Relieve the spring pack by means of the hand wheel (6). Screw out the four inner hexagon screws (3). Remove the spring guide (2) along with the spring plates (12) and hand wheel. **CAUTION: The hexagon nuts (7) are not to be shifted from the set position. These are the locking nuts to retain the maximum adjusting pressure.** Note the sequence of the spring plates (12) for reassembling. Push out complete piston assembly (13-22A) over the bypass. Hold piston (14) with size 10 wrench and remove hexagon nut (16). Take off cylinder, seal support (15), centering disc (13), spacer ring (19) and guide ring (20) together with seals from piston (14). Take note of the sequence for reassembling. Check inner cylinder surface (17) and piston surface (14). Check seals and replace as necessary. Dirt or damage will cause seals to wear out quickly. Grease all parts lightly with silicone before reinstalling. Tighten hexagon nut (16) to 18.5 ft.-lbs. (25 Nm). Center bypass valve seat (23) within casing and tighten to 111 ft.-lbs. (150 Nm) with valve plug (24). Thereafter, insert complete piston unit from the above side. Fit spring guide (2) and flange (2A) along with plate springs (12), tighten inner hexagon screws (3) at 36 ft.-lbs. (49 Nm).

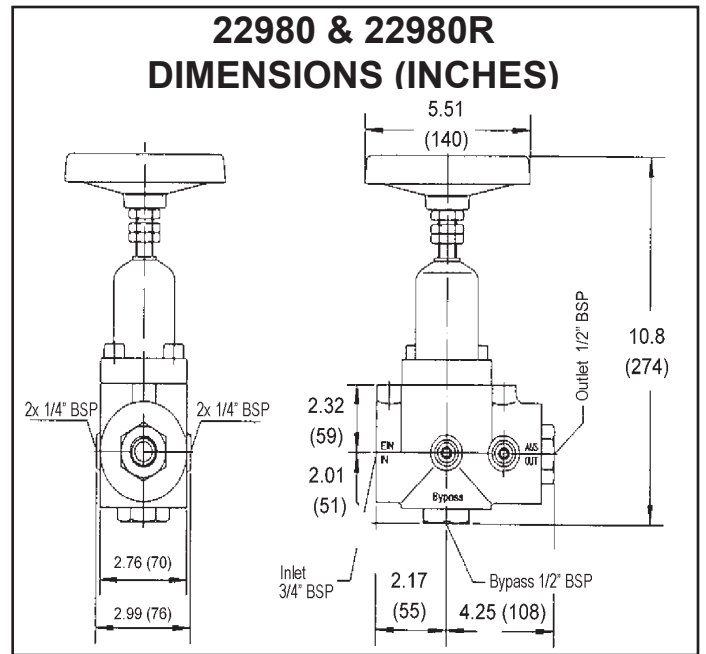
TO CHECK AND REPLACE VALVES

Screw out plugs (24 or 28), pull out spacer pipe (28) underneath plug (24 or 28). Check whether the valve plate (29) underneath or the piston (14) are worn out. Remove valve seats (23) and check sealing surfaces and o-rings for damage. Replace as necessary.

TO ADJUST PRESSURE

The spring packing is pre-tensioned by means of the hand wheel (6) while the pump is running and the gun is open (in the case of more than one gun, all guns have to be open) until required operating pressure is reached. If adjustment of the selected nozzle sizes is correct, no water will flow through the bypass. The hexagon nut (7) is then to be locked to the spring guide (2).

IMPORTANT! If the nozzle hole is too small, on no account is the valve to be adjusted to an operating pressure higher than that of the pump. It is advisable in this case to install nozzles more suitable for this purpose.



DEFECT	CAUSE	REMEDY
Valve switches on & off repeatedly when gun is closed	Gun Leaking	Repair/Replace Gun
	Leak in Discharge Line	Identify & Fix Leak
	Seal Ring (22) leaks Kick-Back valve is defective	Replace Seal Ring. Check valve seat (23), valve plate (29), spring (30) & o-ring (25).
Leakage at spring guide	Piston Seal (22A) Leaking	Replace Seal Ring (22A)
	Cylinder o-ring (18) leaks	Replace o-ring (18)
Switches to Bypass while gun is open	Nozzle too small/Too much water	Install larger nozzle
	Bypass valve worn	Replace piston (14), bypass valve seat (23) & o-ring (25)
Pressure gauge reading jumps when spray gun is shut off	Valve activation pressure is set higher than operating pressure	Turn hand wheel to operating pressure level and secure with locknut (7)
	Dirt in valve	Clean valve of any deposits. Grease parts before reassembly



WARNING: This product might contain a chemical known to the State of California to cause cancer, and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

GIANT
Performance Under Pressure

Giant Industries, Inc.
900 N. Westwood Ave.
Toledo, Ohio 43607
419-531-4600
419-531-6836 Fax
www.giantpumps.com