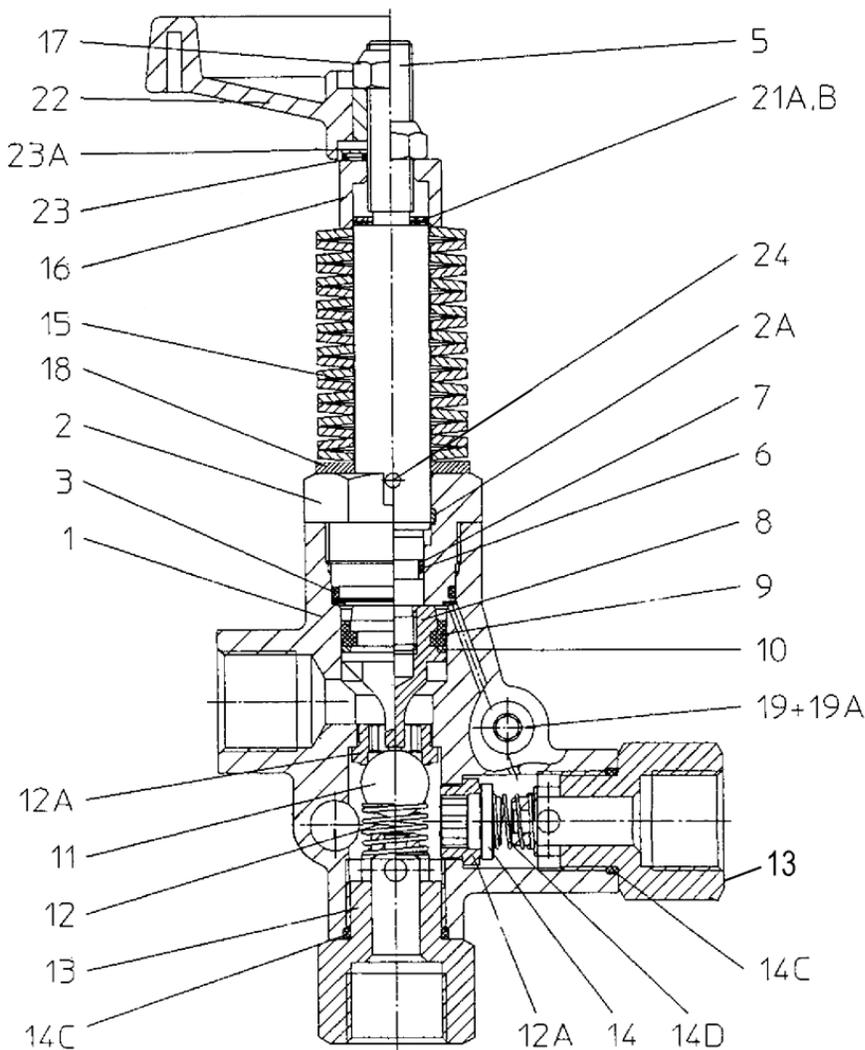


Models 22973C-3000

Unloader



When ordering handwheel versions add "H" to model number

Item	Part #	Description	Qty.	Item	Part #	Description	Qty.
1	12232	Valve Body	1	14D	06017-0100	Spring, Outlet Valve	1
2	12240	Guide Plug	1	15	12220	Spring, Orange	18
2A	12241	Guide Ring	1	16	12245	Spacer Sleeve	1
3	12057	O-Ring	1	17	12246	Self-Locking Hexagon Nut	1
5	12242	Piston Rod	1	18	12223	Washer, Spring	1
6	12204	O-Ring, Valve Stem	1	19	06685	Plug	4
7	12205	Backup Ring, Valve Stem	1	19A	12017	O-Ring, Plug	4
8	12206	Piston	1	21A	06821	Spacer Disc, 0.5 mm	1
9	05005	Cup, 28mm	1	21B	06822*	Spacer Disc, 1.0 mm	3
10	05015	Backup ring, 28mm	1	22	06774	Spoked Handwheel ("H" versions)	1
11	12207	Ball	1	23	06775	Axial Needle Bearing ("H" versions)	1
12	12216	Valve Spring	1	23A	06776	Disc ("H" versions)	1
12A	12208	Seat	2	24	12247	Serrated Pin	1
13	12243	Fitting	2				
14	12244	Valve Plate	1				
14C	07035	O-Ring	2				

*May not be present

Repair Kit: Part Number Parts Included:

09461 2A, 3, 6, 7, 9, 10, 11, 12, 12A, 14, 14C, 14D, 19A

NOTE: This kit includes both o-ring part numbers 12057 and 07332 (item #3). Discard unused o-ring.

SPECIFICATIONS:

	U.S.	Metric
Pressure Range:	580-3000 PSI	(40-200 Bar)
Maximum Flow:	26.4 GPM	(99 LPM)
Minimum Flow:	2.1 GPM	(8 LPM)
Maximum Temp.:	160 °F	(70 °C)
Inlet Port:	3/4" FNPT	
Outlet Port:	3/4" FNPT	
Bypass:	3/4" BSP	

INSTALLATION OF 22973-3000 UNLOADERS

- 1) The unloader is to be positioned on the discharge side of the pumping unit.
- 2) The bottom port (inlet) receives the pump discharge.
- 3) The side port (outlet) is the pressure outlet. Make sure all side ports are tightened securely.
- 4) The backside port (bypass) redirects the pumped media when the pressure outlet is closed.
- 5) The proper sized bypass line can be directed to a holding tank, to atmosphere, or back to the pump inlet.

NOTE: Bypass lines returning to the pump inlet should be equipped with a thermal relief valve to prevent excessive heat buildup in the bypass line that can damage the pumping system during periods of prolonged bypass.

- 6) If a pulsation dampener (accumulator) is used in your pumping system, the pulsation dampener (accumulator) must be positioned on the downstream side of the unloader. **REMEMBER:** IMPROPER PLACEMENT OF THE PULSATION DAMPENER (ACCUMULATOR) CAN AFFECT THE UNLOAD CAPACITY OF THE UNLOADER AND CAN LEAD TO SEVERE SYSTEM DAMAGE AND POSSIBLE BODILY INJURY.

CAUTION: A properly sized pressure gauge must be used when attempting to adjust the unloader to its pressure setting. Position the gauge between the pump and the unloader.

- 7) Select the proper spring assembly for your unloader. All spring ratings are based on the maximum operating pressure of the unloaders.

NOTE: Cracking pressures at which the unloader is activated can rise 300-400 PSI over the rated operating pressures depending on your system.

- 8) Always adjust the unloader springs to the system pressure with the system open. Before adjusting, be sure that the spray nozzle orifice is properly sized for the volume and pressure you desire and then fine tune the unloader.

CAUTION: NEVER USE THE UNLOADER TO COMPENSATE FOR A WORN NOZZLE AS YOU RISK BOTTOMING-OUT THE UNLOADER, WHICH CAN CAUSE THE UNLOADER TO MALFUNCTION AND LEAD TO SEVERE SYSTEM DAMAGE AND POSSIBLE BODILY INJURY.

- 9) Giant Industries, Inc. strongly recommends the use of a pop-off valve positioned downstream of the unloader as a safety backup in case of unloader malfunction.



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

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