

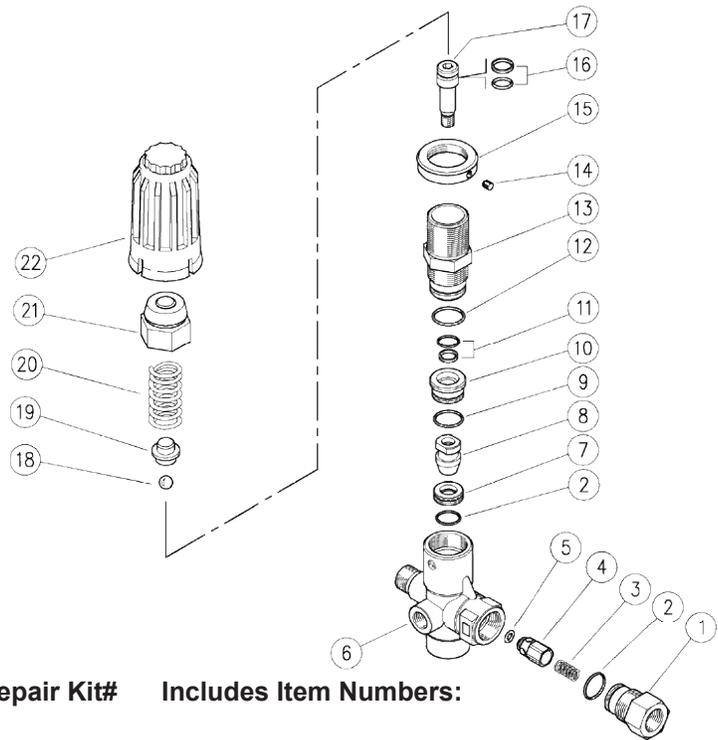
# Model 22085

# Pressure Actuated Unloader

## Parts List

Item	Part#	Description	Qty
1	05455-NPT	Outlet Fitting, 3/8" FNPT	1
2*	08573	O-Ring	2
3	08536	S.S. Spring	1
4	03025	Check Valve	1
5*	05457	O-Ring	1
6	05458-NPT	Valve Housing	1
7*	05459	Seat	1
8*	05460	Piston	1
9*	08706	O-Ring	1
10	05461	Spacer Ring	1
11*	05462	Stem Seal	1
12*	08719	O-Ring	1
13	05463	Piston Housing	1
14	08557	Set Screw	1
15	05464	Lock Nut	1
16*	05465	Piston Seal	1
17	05466	Piston Rod	1
18*	08624	Ball S.S. 11/32"	1
19	05467	Spring Seat	1
20	05468	Spring	1
21	05469	Adjusting Nut	1
22	05470	Handle	1

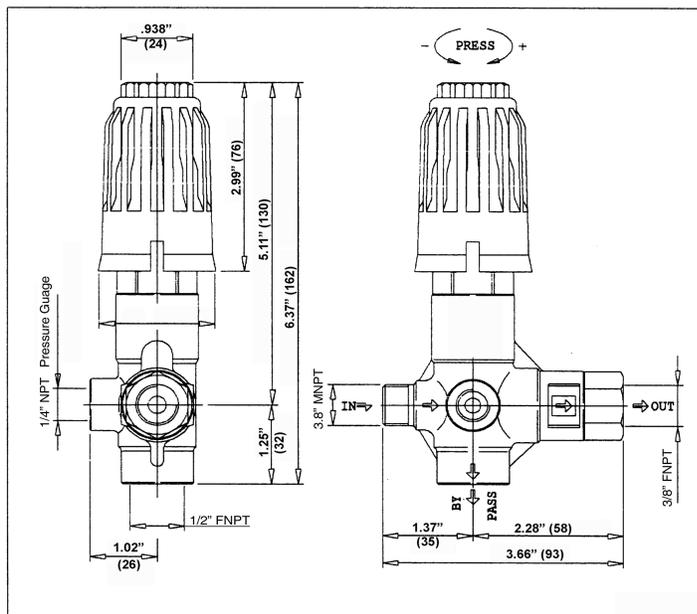
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## Operating Conditions

Maximum Flow:	10.5 GPM (40 l/min)
Maximum Pressure:	Continuous 5,100 PSI (350 bar) Intermittent 5,655 PSI (390 bar)
Continuous Temperature:	140° F (60° C)
Intermittent Temperature:	194° F (90° C)
Inlet Port:	3/8" MBSP
Outlet Port:	3/8" FNPT
By-Pass:	1/2" FBSP

**Giant Industries shall not be considered responsible for any damage resulting from the use of an incorrect fitting or from a lack of maintenance.**



Dimensions Inches (mm)

## MAINTENANCE

Maintenance should be performed only by qualified personnel. Every 400 hours, or 10,000 cycles, inspect & lubricate seals with water resistant grease. Every 800 hrs, or 20,000 cycles, inspect the wear of the seals & internal parts and, if necessary, replace with original Giant parts, carefully installing parts & lubricating with water resistant grease.

**ATTENTION:** Re-assemble the unloader in proper order, paying special attention to the **spring seat (item 19)** which must always be in place.

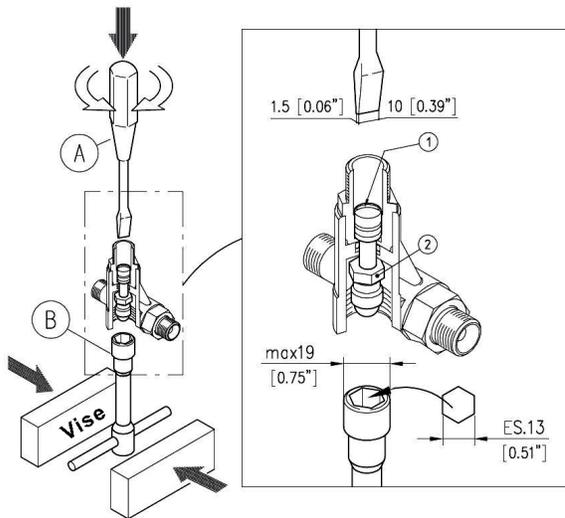
**Ring nut (item 15)** must always be in place when operating. It is a mechanical safety feature that limits the maximum pressure to prevent injury to people or damage to equipment.

## INSTALLATION

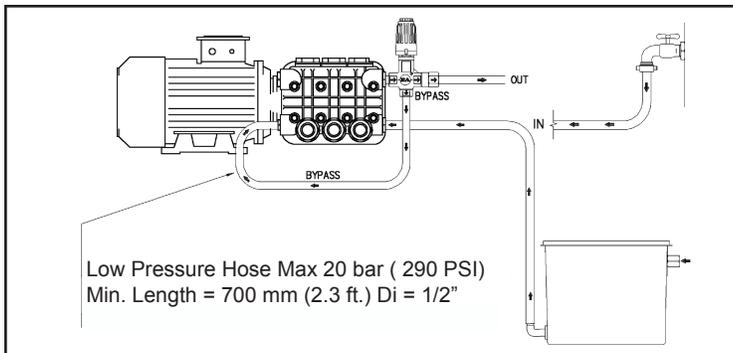
On a hot water system, this accessory must be located before (ahead of) the heat source. The use of thermal sensors or thermal relief valves should be considered to prevent excessive fluid temperatures. Choose the correct nozzle size which allows a regular discharge on by-pass. At least 5% of the total system flow is required to achieve a constant pressure and avoid excessive pressure spikes at closure. If the nozzle wears out, the pressure drops. On installation of a new nozzle, re-adjust the system to the original pressure setting. This adjustment should be made while the system is operating and the nozzle is open.

## PROBLEM HANDLING: CAUSES AND SOLUTIONS

PROBLEMS	PROBABLE CAUSES	SOLUTIONS
Frequent unloader recycles	Damaged check valve O-Ring Leaking connections Restricted bypass	Replace Check and renew Clean or adapt
Unloader does not reach pressure	Unloader not properly sized Piston O rings worn out Material matter between seat and shutter Worn out nozzle	Change spring or type of valve Replace Clean the seat Replace
Pressure peaks	Less than 5% of total flow in bypass Excessive flow in bypass Spring totally compressed	Reset Change type of valve or adjust passages Loosen knob and change nozzle
Unloader does not bypass at low pressure	Jammed check valve Check valve O ring worn out Material matter on check valve	Clean or replace Replace Clean
Unloader causes oscillations to the hydraulic system	Bypass system unfit  Bypass tube not properly sized Bypass obstructed or throttled	Stick to the installation scheme represented at the bottom of this page, with bypass directed into the pump Enlarge diameter Clean or reset



To separate the piston (8) from the piston housing (13) insert a 13mm socket (max. 3/4" ID) into by-pass port and onto hexagonal part of piston. Secure in place. Using a flat blade screwdriver (10mm wide x 1.5mm), insert fully into slot on top of piston housing (tap into place with a hammer, if needed, to seat completely). Turn to unthread until parts are separated.



**GIANT**  
Performance Under Pressure

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