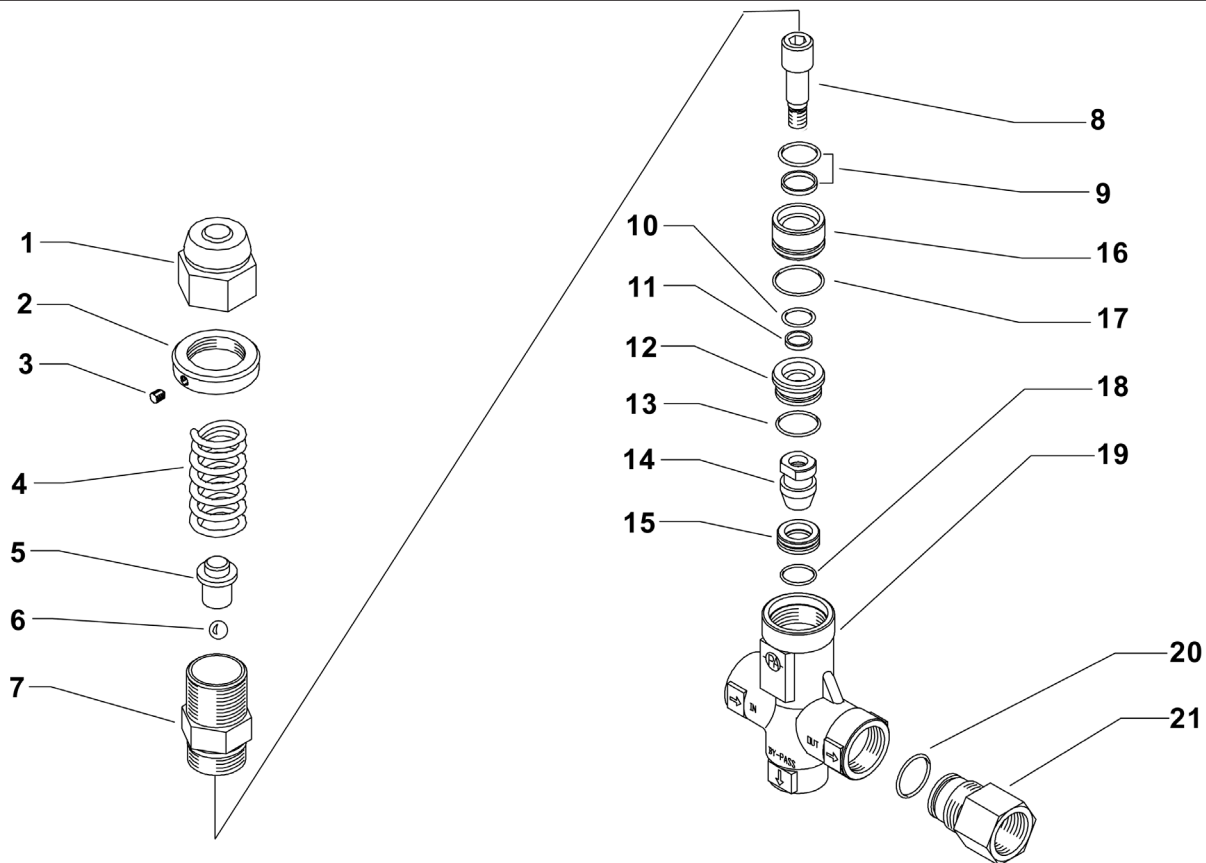


# Model 22106-51

# Pressure Actuated Unloader 316 S.S.



Item	Part#	Description	Quantity
1	05469	Nut	1
2	05464	Spacer	1
3	08557	Grub Screw	1
4	04478	Spring	1
5	04222	Spring Holder	1
6	08624	Ball	1
7	04298	Piston Holder	1
8	04479	Piston	1
9	04208	Stem Seal and O-Ring	1
10	04217	O-Ring	1
11	04216	Back-Up Ring	1
12	04481	Spacer Ring	1
13	04482	O-Ring	1
14	04483	Piston	1
15	04485	Seat	1
16	04480	Spacer Ring	1
17	08831	O-Ring, Viton	1
18	04484	O-Ring	1
19	04486	Housing	1
20	04482	O-Ring	1
21	04488	Discharge Fitting	1

**Repair Kit#**  
09788

**Includes Item Numbers:**

9, 10, 11, 13, 14, 15, 17, 18 & 20

### Operating Conditions

<b>Max. Flow:</b>	21.1 (80 L/min)
<b>Pressure Range:</b>	406-4060 PSI (28-280 Bar)
<b>Permissible Pressure:</b>	4500 PSI (310 Bar)
<b>Max. Temperature:</b>	194 °F (90 °C)*
<b>Inlet Port:</b>	1/2" BSP
<b>Outlet Port:</b>	1/2" BSP
<b>By-Pass:</b>	1/2" BSP
<b>Weight:</b>	1.9 lbs. (840 g)
*Continuous duty Temp. = 158 °F (60 °C)	

**GIANT**  
Performance Under Pressure

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## INSTRUCTIONS

This product is to be utilized with clean fresh water, even slightly additivated with normal detergents. For use involving different or corrosive liquids, contact Giant. Appropriate filtration should be installed when using unclean liquids. Choose the valve in line with the data of nominal running (system rated pressure, maximum flow and maximum temperature). **In any case, the pressure of the machine should not exceed the permissible pressure rate imprinted on the valve.**

## INSTALLATION

This accessory, on a system that produces hot water, must be fitted in **front of the heat source**. The valve keeps system pressure steady when flow rate varies. **Always install a safety valve that protects the pressurized inlet plumbing.** In case of direct discharge into a tank, avoid anything that might interfere with the flow or make it uneven. Choose a correct nozzle size, which allows a regular discharge on bypass, at least 5% of the total flow of the system in order to achieve a constant pressure value and avoid troublesome 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.

## OPERATION

The valve regulates system pressure through a piston acting on a cone. When the cone is in its normal position, it partially obstructs the bypass port.

## DISCHARGE SYSTEM AND WATER SUPPLY

The bypass line should be returned into a tank with baffles. If the pump is fed directly from the water main, it is advisable to install a pressure reducing valve before the pump, in order to avoid dangerous pressure spikes which could badly damage manifolds and suction valves.

## PRESSURE ADJUSTMENT/SETTING

Adjustments must be carried out when the system is in pressure and the gun is operating. This operation will be easier to perform if the right nozzle was selected. Pressure is increased by rotating the adjustment knob. In case pressure does not increase despite turning of the knob, **do not force**, but check the nozzle flow rate/pressure ratio is correct. When reaching the desired pressure level, tighten the nut (pos 1) with the gub screw (pos 3) and secure it with a paint drop, in order to display any possible loosening or tampering.

## MAINTENANCE

Maintenance has to be carried out by qualified technicians.

STANDARD: every 400 working hours (about 10,000 cycles), check and lubricate the seals with water resistant grease.

SPECIAL: every 800 working hours (about 20,000 cycles), control the wear of the seals and internal parts and, if necessary, replace with new parts taking care during installation and to lubricate with water resistant grease.

**ATTENTION: assemble the valve correctly, resetting all conditions to starting levels and carefully repeat all operations described above. The manufacturer is not to be considered responsible for damage as a result from incorrect fitting and maintenance.**

Dimensions - mm [inches]		Troubleshooting Guide		
		<b>Problem</b>	<b>Cause</b>	<b>Remedy</b>
		Cycling	Damaged check valve O-ring Leaky connections Restricted bypass	Replace Check and re-new Clean and adjust
		Does not reach pressure	Unloader not properly sized Piston O-rings worn out Material matter between seat and kick back valve Worn out nozzle	change spring or type of valve Replace Clean the seat Replace
		Pressure peaks	There is not a minimum of 5% of total flow in bypass	Reset
			Excessive flow in bypass	Change type of valve or adjust passages
			Spring totally compressed	Loosen know and change nozzle
High bypass pressure	Jammed check valve	Clean or replace		
	Check valve O-ring worn out	Replace		
	Material matter on check valve	Clean		