

Legacy

UU1 Unloader Valve Patent Pending

Direct mount pressure regulating unloader valve.
 Unique design allows adjustment in both vertical and horizontal positions
 to fit a variety of pump inlet and outlet configurations.



1/4" port for mounting thermal pump protector

SPECIFICATIONS

Part Number	9.175-018.0	
Maximum Volume	6 GPM	
Maximum Discharge Pressure	3500 PSI	
Maximum Temperature	195°F	
Port Size	Inlet: Outlet	1/2" NPT-F 3/8" NPT-F
Dimensions	6.00" x 3.00" x 1.75"	
Weight	1.6 lbs	
Material	Brass, Stainless Steel , Buna-N	

Horizontal Slider



3/8" Banjo Bolt



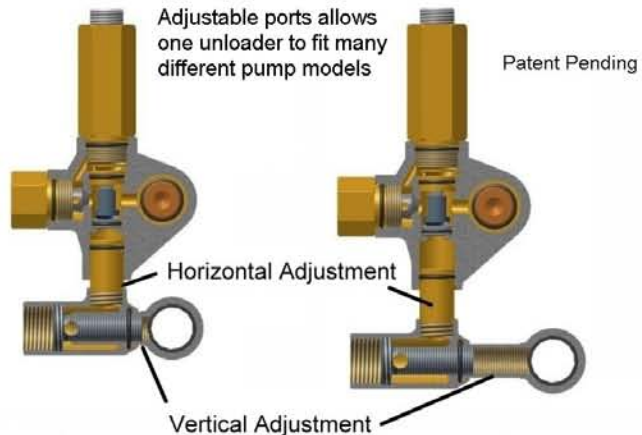
Additional banjo bolt, seal washers, horizontal and vertical slider, are included with each unloader to fit a wide variety and size of pumps.



Vertical Slider



Seal Washer



For correct operation, follow the directions of this manual.

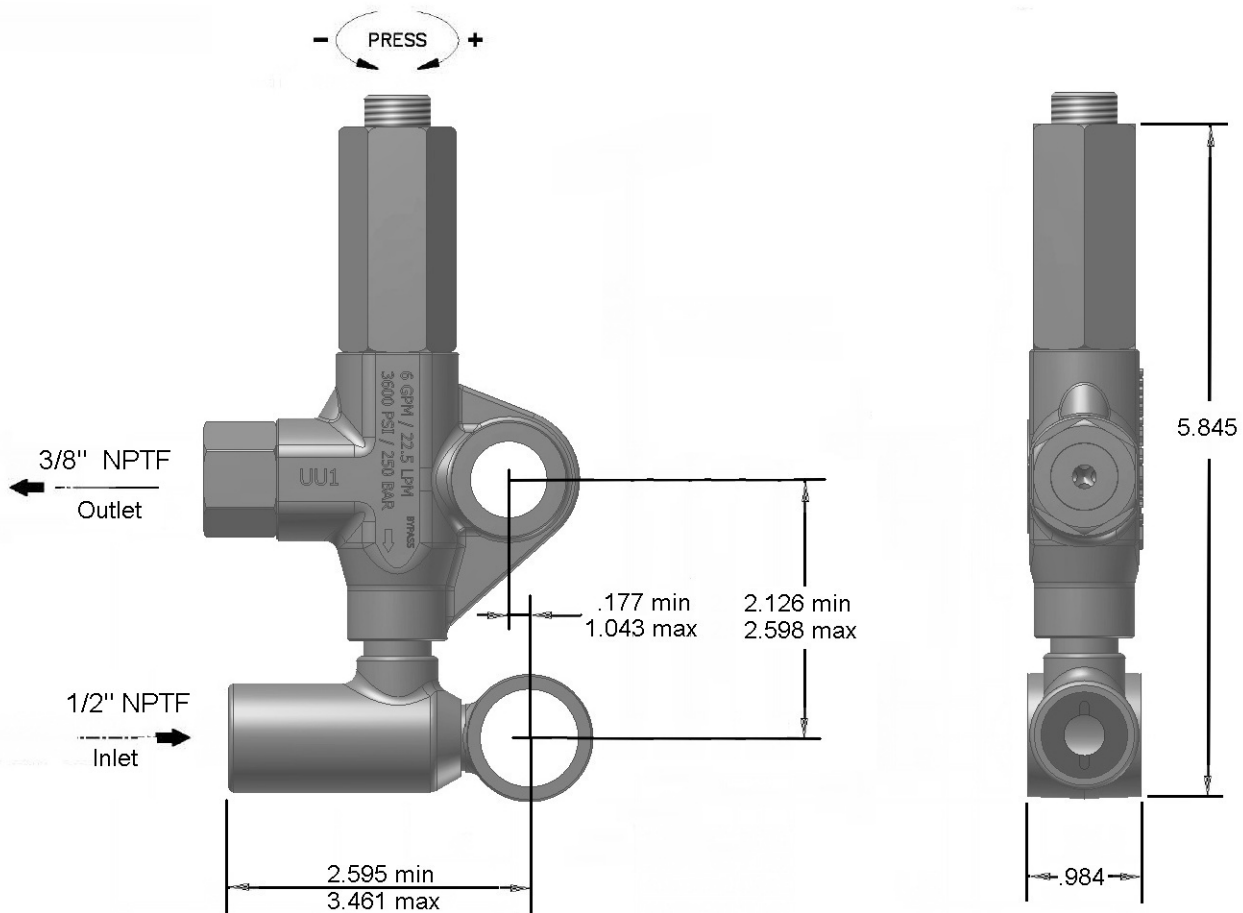
LEGACY • USA

Phone: (800) 752-0177 or consult our web page at www.spraymart.com

UU1 Unloader

DIMENSIONAL DRAWING

Last update: 7/9/09



INSTRUCTIONS

Conditions

The unloader is to be used with clean fresh water and mild detergents. For applications using corrosive liquids please contact our Technical department. Appropriate filtration should be installed upstream from the pump and unloader to prevent contamination. Pressure of the pump should not exceed the rated pressure of the unloader valve.

Installation

The unloader valve when used with a hot water pressure washer should be placed up stream from the heating source. A safety relief valve is recommended in conjunction with the unloader valve to prevent over pressurization of the system. Choose a correct nozzle size, which allows for a 5% continual bypass of the unloader to avoid high pressure spikes during shut off gun closure.

Operating

The unloader valve regulates the pressure of the system through a piston that acts on a ball correctly positioned which closes the bypass opening. When the ball closes the bypass opening a check valve closes the discharge line which in turn reduces the load on the engine/motor.

Adjustment of the unloader valve system pressure should be done while the pump is in operation and the shut off gun is open. Avoid high pressure spikes during shut off gun closure. Normal pressure spikes should not exceed 400 psi above operating pressure.

It is recommended that a thermal pump protector, 8.712-544.0, be installed in the inlet banjo bolt to protect from excessive temperature build up that can occur during bypass.

PROBLEMS AND SOLUTIONS

PROBLEMS	PROBABLE CAUSES	SOLUTIONS
Frequent cycling of unloader	Damaged check valve O ring Leaking connection or shut off gun Restricted bypass	Replace Repair leak Clean
Unloader does not reach pressure	Unloader not properly sized Piston O rings worn out Obstruction between seat and piston Worn out spray nozzle	Change spring or type of valve Replace Clean the seat Replace
High pressure spikes	There is not a min of 5% of total flow in bypass Spring totally compressed	Reduce spring pressure Reduce spring pressure and nozzle size
Unloader does not bypass at low pressure	Jammed check valve Check valve O ring worn out Obstruction on check valve	Clean or replace Replace Clean

For a correct utilization, follow the directions described in this manual and re-print them on the Operator Manual of the machine.

MAINTENANCE

Maintenance to be performed by a Trained Technician.

Every 400 working hours (10,000 cycles), check and lubricate the seals with water resistant grease.

Every 800 working hours(20,000 cycles), inspect seals, o'rings, and internal parts for wear, replace if necessary. Replace with original parts taking care during installation to lubricate with water resistant grease

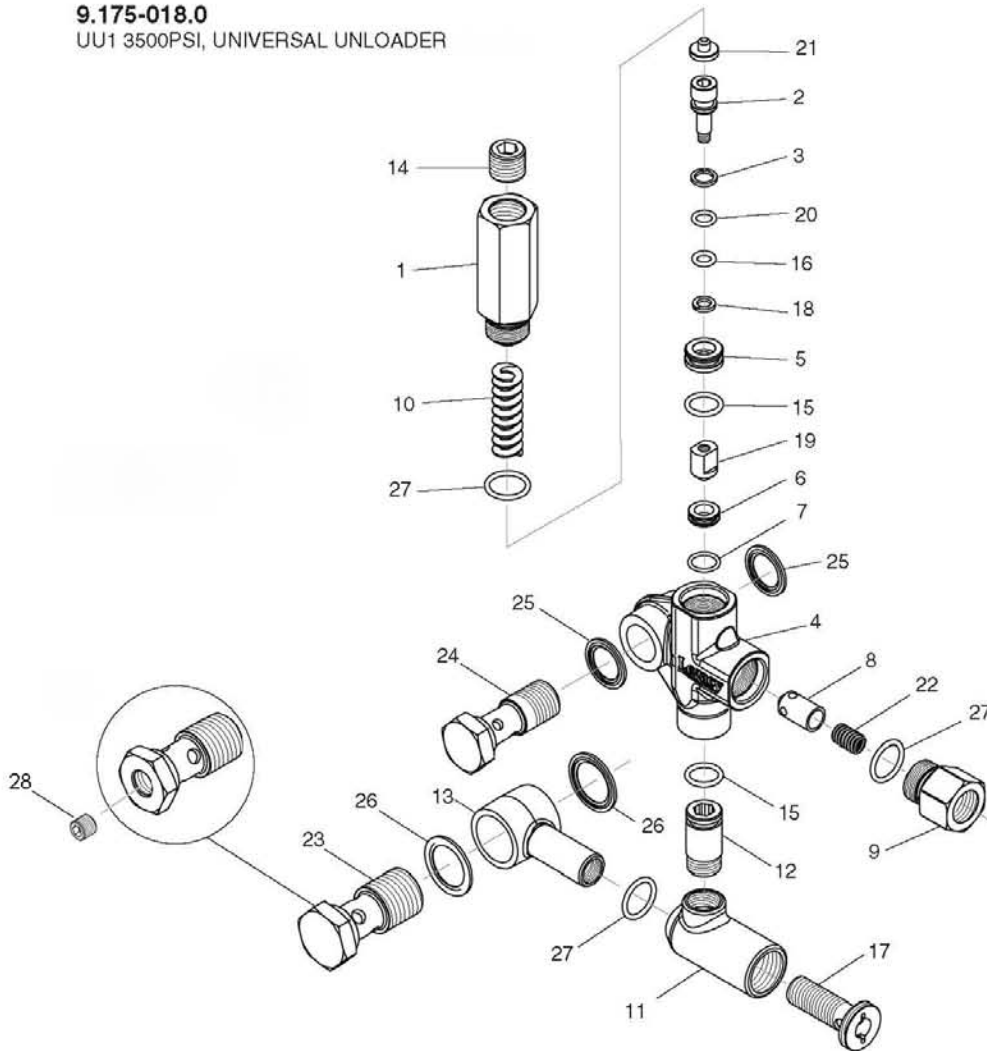
The manufacturer is not responsible for damage as a result of improper installation or maintenance.

Technical data, descriptions, and illustrations are subject to change without notification.

UU1 UNLOADER EXPLODED VIEW

9.175-018.0

UU1 3500PSI, UNIVERSAL UNLOADER



UU1 UNLOADER EXPLODED VIEW PARTS LIST

ITEM	PART #	DESCRIPTION	KIT	QTY	ITEM	PART #	DESCRIPTION	KIT	QTY
1		Piston housing	A	1	17	9.149-006.0	Sliding connector guide		1
2		Piston	C	1	18		O-ring backup	A	1
3	8.749-795.0	Piston O-ring back up		1	19		Conical seal	C	1
4	8.749-796.0	Main block		1	20		O-ring 6.75 X 1.78 BN80	A	1
5	9.152-372.0	Piston ring		1	21		Spring seat	C	1
6		Ball seat	C	1	22		Plunger spring	B	1
7		O-ring 10.5 ID X 1.5 CS	A,C	1	23	8.762-001.0	Banjo bolt 1/2"		1
8		Plunger	B	1		8.762-011.0	Banjo bolt 1/2"-1/4"NPT		1
9	9.152-016.0	Plunger housing		1		8.762-000.0	Banjo bolt 3/8"		1
10		Bypass spring	C	1	24	8.762-000.0	Banjo bolt 3/8"		1
11	9.149-001.0	Low pressure port		1	25	9.802-893.0	Seal washer 3/8"		2
12	9.152-017.0	Sliding connector, 30mm		1	26	9.803-921.0	Seal washer 1/2" (0120, 0130)		2
	8.762-005.0	Sliding connector, 40mm		1		9.802-893.0	Seal washer 3/8" (0140)		2
13	9.149-002.0	Sliding connector H 1/2"		1	27		O-RING 15 ID x 2CS	A,B	3
	9.149-005.0	Sliding connector H 3/8"		1	28	8.706-865.0	Plug, 1/4"		1
14	9.196-011.0	Plug 5/8 -18 UNF		1					
15		O-ring 12 ID x 2 CS	A	2	Kit A	9.104-038.0	O-ring Repair Kit		
16		O-ring 6 ID X 2 CS	A	1	Kit B	9.104-039.0	Outlet Kit		
					Kit C	9.104-040.0	Stem Repair Kit		

8.780-010.0 rev. 7/09