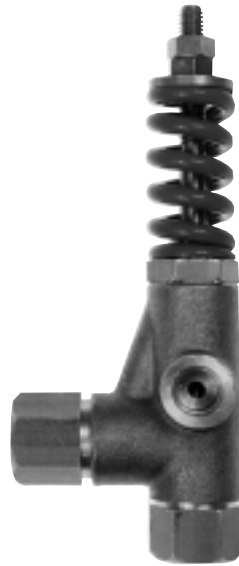




7570, 7572



7573, 7575

FEATURES

- Provides system pressure setting and protection for single gun and pump — non-weep — installation.
- Compact size with optional ports for easy installation.
- Handle permits easy adjustments of pressure.
- Pressure sensitive feature permits wide range of flows and immediate pressure when gun opens.
- Color coded spring for easy identification and simple change from one model to another.
- Optional QS (Quick Start) version reduces initial startup load on electric motors and gas engines.

Pressure Sensitive Regulating Unloader Models

With Handle 7570, 7572

Without Handle 7573, 7575

Quick Start 7570QS
7572QS

SPECIFICATIONS

	U.S. Measure	Metric Measure
MODEL 7570 AND 7570QS		
Flow Range	2.5-7.8 GPM	(9-33 L/M)
Pressure Range	150-1450 PSI	(10-100 BAR)
Weight	1.4 lbs.	(0.63 Kg)
Dimensions	3.1 x 2.0 x 6.4"	(80 x 50 x 163 mm)
MODEL 7572 AND 7572QS		
Flow Range	2.5-7.0 GPM	(9-30 L/M)
Pressure Range	850-3450 PSI	(60-242 BAR)
Weight	1.4 lbs.	(0.63 Kg)
Dimensions	3.1 x 2.0 x 6.4"	(80 x 50 x 163 mm)
MODEL 7573		
Flow Range	2.5-7.0 GPM	(9-30 L/M)
Pressure Range	150-1450 PSI	(10-100 BAR)
Weight	1.2 lbs.	(0.54 Kg)
Dimensions	1.75 x 1.5 x 6.4"	(45 x 38 x 163 mm)
MODEL 7575		
Flow Range	2.5-7.0 GPM	(9-30 L/M)
Pressure Range	850-3450 PSI	(60-242 BAR)
Weight	1.2 lbs.	(0.54 Kg)
Dimensions	1.75 x 1.5 x 6.4"	(45 x 38 x 163 mm)
COMMON SPECIFICATIONS		
Maximum Temperature	160°F	(71°C)
Inlet Port	3/8" NPTF	(3/8" NPTF)
Discharge Port	3/8" NPTF	(3/8" NPTF)
By-Pass Port	3/8" NPTF	(3/8" NPTF)

“Customer confidence is our greatest asset”

SELECTION: This is a pressure sensitive **regulating unloader**. It is designed for systems with a **single** pump, solenoid (gate) valve, nozzle, and standard gun. **“Weep” guns are not recommended with this unloader.**

This unloader holds established system pressure in the discharge line when the trigger gun is closed or solenoid (gate) valve is closed or the nozzle is clogged, by-passing the unrequired flow. It returns to established system pressure without delay upon squeezing the trigger gun or opening the solenoid (gate) valve.

NOTE: For **multiple pump** systems, it is best to use a pressure regulator not an unloader.

Select the specific model of unloader to meet both the desired system flow (combined nozzle flow rate requirement) and the desired system pressure.

Exercise caution when matching the system requirements to the unloader flow capacity and pressure rating. Operation below the minimum flow of the unloader causes the unloader to cycle. Operation beyond the rated unloader flow causes premature valve wear, unloader cycling and prevents attaining desired system pressure.

Select a high pressure nozzle sized to provide for both the desired **system flow** and pressure and **unloader by-pass**.

CAUTION

A MINIMUM BY-PASS FLOW of 5% of the UNLOADER RATED FLOW CAPACITY is required for proper unloader performance.

When properly set this unloader protects the pump from pressure extremes associated with obstructions in the discharge line, while maintaining the established system pressure. When no flow is required by the system, the unloader by-passes all the system flow and relieves the load on the pump. Pressure is held in the discharge line (between the unloader and gun or solenoid valve) ready for a quick return to high pressure operation.

INSTALLATION: This unloader operates properly when mounted in any direction, however, it is preferred to keep the plumbing to a minimum and the adjusting nut easily accessible. The best location is directly on the pump discharge manifold head. Plumbing to and from the unloader should be at least the size of the unloader ports and flexible, high pressure hose (minimum single wire braid) is required. **NOTE:** The QS (*Quick Start*) models must be mounted in a **vertical** position to properly activate the Quick Start feature.

This a a flow through design unloader. The standard **inlet connection** of the 7570 and 7572 (with handle) is at the **back** with an alternate port on the bottom. The unloader can be mounted directly in the discharge line. The standard **inlet connection** of the 7573 and 7575 (without handle) is at the **bottom**. The unloader should be mounted on the discharge manifold with the discharge line plumbed into the unloader discharge port.

The **by-pass connection** is on the **side** of the unloader and can be plumbed in one of the following methods. Note that prolonged by-pass can result in significant heat build-up and frequent by-pass can result in premature wear to the valve. A **MINIMUM BY-PASS OF 5%** is necessary for the unloader to operate properly.

CAUTION

If the entire output is directed through the unloader (zero by-pass) the “cushioning” feature of the by-pass fluid is eliminated and the unloader can malfunction or wear prematurely.

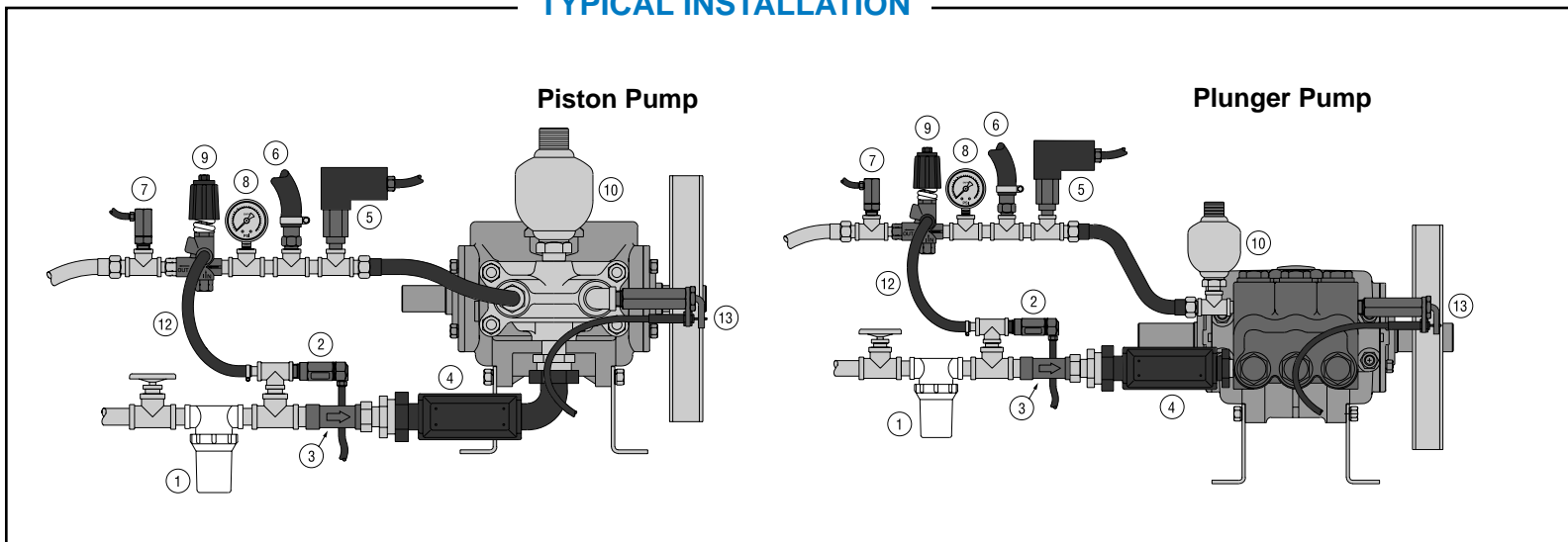
Check the amount of by-pass by disconnecting the by-pass line and measuring the flow into a graduated container.

By-Pass to Reservoir: Ideally the by-pass line should be directed to a reservoir with at least one baffle between the supply line to the pump (from the reservoir) and the return by-pass line (from the unloader into the reservoir). This baffle minimizes turbulence and air bubbles that could enter the pump inlet feed line. **The reservoir capacity should be 6 to 10 times the rated system flow per minute.**

By-Pass to Pump Inlet: Although not recommended, by-pass fluid can be returned to the inlet line of the pump or directly to a pump inlet port (**systems up to 10 GPM**). When using this method an *Inlet Pressure Regulator* should be installed on the inlet line to avoid excessive inlet pressure. Be certain the *Inlet Pressure Regulator* is **between** the pump inlet and the by-pass line connection. When using this method, a *Thermo Valve* should be installed in the by-pass line to protect the pump from temperature build-up and premature seal failure.

The by-pass line should be **connected to the pump inlet line at a gentle angle of 45° or less and no closer than 10 times the pump inlet port diameter** e.g. 1-1/2" port size = 15" distance from pump inlet port. **Refer to Technical Bulletin 64 for additional information on the size and length of the by-pass line.**

TYPICAL INSTALLATION



By-Pass to Drain: If the by-pass is limited and infrequent, the by-pass can easily drain to an unpressurized drain line (to the ground).

The **outlet connection** is located at the **front** of the unloader and marked with an arrow. Plumbing for the spray gun, nozzle or solenoid valve should be connected in from this discharge port.

It is recommended that a secondary protective device such as the *CAT PUMP Pop-Off Valve* be installed to assure pump protection should the unloader malfunction. Refer to Troubleshooting for more information on malfunction of unloader.

Preferred mounting of the *Prrrrr-o-lator* (pulsation dampener) is directly **on the Discharge Manifold Head**. When using an *Inlet Pressure Regulator*, mount the *Prrrrr-o-lator* **downstream from the unloader** to assure optimum performance of the regulator.

CAUTION

Oversizing the *Prrrrr-o-lator* may cause delayed response from the unloader.

PRESSURE ADJUSTMENT: Setting and adjusting the unloader pressure must be done with the system “on”. Start the system with the unloader backed off to the **lowest pressure** setting. Squeeze the trigger and read the pressure on the gauge at the pump. If more pressure is desired, release the trigger, turn adjusting nut one quarter turn, squeeze the trigger and read the pressure. Repeat this process until desired pressure is attained. Pressure fluctuation from this established system pressure is minimal with the opening of each additional gun.

Monitor the by-pass flow at each adjustment. If the by-pass flow, drops below 5% of rated unloader flow, STOP ADJUSTMENT. The nozzle selection is improperly sized to achieve the desired system pressure.

Proceed by accepting the attained pressure OR selecting a smaller nozzle OR increasing the pump RPM providing you stay within specifications.

Once the desired system pressure is reached, stop adjusting and set the top locking nut to hold the system pressure. **Do not read the pressure at the gun or nozzle for setting system pressure.** Check the nozzle as part of regular maintenance and replace if worn. **Do not adjust unloader pressure setting to compensate for a worn nozzle.**

Approximate Pressure Reading at Gauge	Gauge Between Pump/Unloader	Gauge Between Unloader/Gun-Nozzle-Valve
System in operation (gun open)	system pressure	system pressure
System in by-pass (gun closed)	low pressure 0-150 PSI	system pressure +200 PSI

TROUBLESHOOTING

Unloader cycles	<ul style="list-style-type: none"> ● Worn O-ring or check valve ● Fitting leaking downstream ● O-ring in gun worn
Fluid leaking from bottom	<ul style="list-style-type: none"> ● O-ring for seat or inlet fitting cut or worn
Fluid leaking from middle	<ul style="list-style-type: none"> ● O-ring for piston worn or cut
Unloader will not come up to pressure	<ul style="list-style-type: none"> ● Not properly sized for system pressure ● Foreign material in unloader ● Piston o-rings worn ● Nozzle worn
Extreme pressure spikes	<ul style="list-style-type: none"> ● Adjusting nut turned completely into unloader ● Restricted by-pass or no by-pass ● System flow exceeds unloader rating

WARRANTY

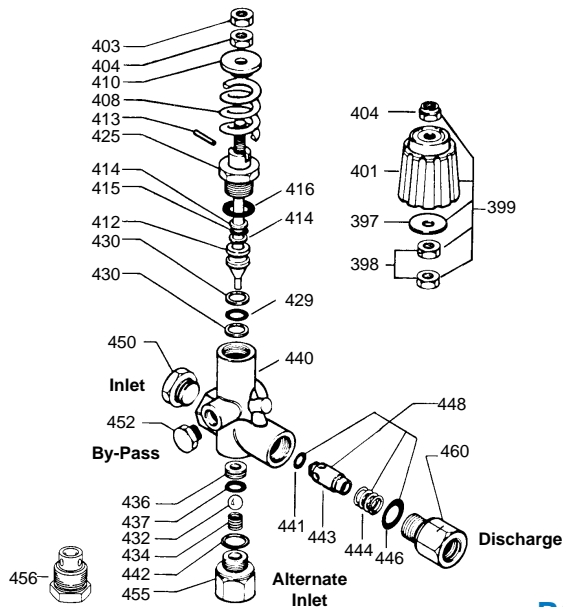
90 Day Warranty
Refer to complete Cat Pump Warranty for further information.

- | | |
|---|-------------------------------|
| 1 Inlet Filter | 7 Quick Start Valve |
| 2 Thermo Valve | 8 Pressure Gauge |
| 3 Inlet Pressure Regulator | 9 Pressure Regulator/Unloader |
| 4 C. A.T. Tube
(Captive Acceleration Tube) | 10 Pulsation Dampener |
| 5 Pressure Switch | 11 Chemical Injector |
| 6 Pop-Off Valve | 12 By-pass Hose |
| | 13 Throttle Controller |

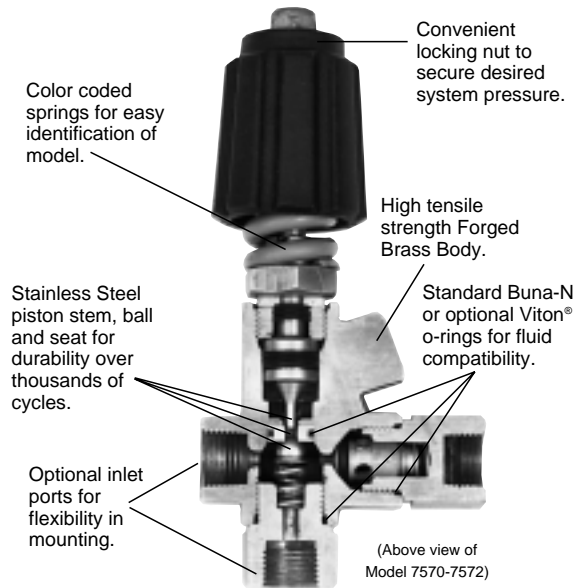
★ Preferred mounting of Pulsation Dampener [Prrrrr-O-Lator] is directly on the discharge manifold of the pump. The preferred mounting of the by-pass hose [when returning to the inlet] is before the Pressure Reducing Valve. If this is not possible, then mount the Prrrrr-O-Lator after the Pressure Unloading Valve to prevent pressure spikes to the pump inlet.

These illustrations show the basic elements for a typical installation of a high pressure piston or plunger pump. **Not all components shown are required for all applications or systems.** Each component presents potential problems that too often are ascribed to a perfectly functioning pump, such as: a clogged strainer, a partially closed shut-off valve, a faulty gauge, or a malfunctioning regulator/unloader. Proper system installation, routine lubrication, monitoring and maintenance of components are your basic guarantees of optimum pump performance. CAT PUMPS does not assume any liability or responsibility for the design or operation of a customer’s high pressure system.

EXPLODED VIEW



CUTAWAY



PARTS LIST

ITEM	DESCRIPTION	MODEL NUMBER								QTY
		7570	MATL	7572	MATL	7573	MATL	7575	MATL	
397	Washer, Flat	33633	STZP	33633	STZP	33633	STZP	33633	STZP	1
398	Nut, Jam (M8)	32116	STZP	32116	STZP	—	—	—	—	2
399	Assembly, Complete Handle (Incls: 397,398,401,404)	32087	NY	32087	NY	—	—	—	—	1
401	Handle, Black	33782	NY	33782	NY	33782	NY	33782	NY	1
403	Nut, Adjusting (M8)	—	—	—	—	81109	STZP	81109	STZP	1
404	Nut, Adjusting w/Nylon Insert	32811	STZP	32811	STZP	—	—	—	—	1
408	Spring, White 1450 PSI	32090	STL	—	—	32090	STL	—	—	1
	Spring, Blue 3450 PSI	—	—	32092	STL	—	—	32092	STL	1
410	Washer, Retaining	—	BB	—	BB	—	BB	—	BB	1
412	Stem, Piston (Prior to 6/88)	32119	S	32119	S	32119	S	32119	S	1
	Stem-2, Piston	33219	S	33219	S	33219	S	33219	S	1
413	Pin, Locking, Piston	32818	S	32818	S	32818	S	32818	S	1
414	Back-up-Ring, Stem	32873	PTFE	32873	PTFE	32873	PTFE	32873	PTFE	2
415	O-Ring, Stem	33533	NBR	33533	NBR	33533	NBR	33533	NBR	1
	O-Ring, Stem	<i>33572</i>	<i>FPM</i>	<i>33572</i>	<i>FPM</i>	<i>33572</i>	<i>FPM</i>	<i>33572</i>	<i>FPM</i>	1
416	O-Ring, Fitting	32113	NBR	32113	NBR	32113	NBR	32113	NBR	1
	O-Ring, Fitting	<i>33567</i>	<i>FPM</i>	<i>33567</i>	<i>FPM</i>	<i>33567</i>	<i>FPM</i>	<i>33567</i>	<i>FPM</i>	1
425	Retainer, Piston	33318	BB	33318	BB	33318	BB	33318	BB	1
429	O-Ring, Piston	32919	NBR	32919	NBR	32919	NBR	32919	NBR	1
	O-Ring, Piston	<i>33575</i>	<i>FPM</i>	<i>33575</i>	<i>FPM</i>	<i>33575</i>	<i>FPM</i>	<i>33575</i>	<i>FPM</i>	1
430	Back-up-Ring, Piston	33303	PTFE	33303	PTFE	33303	PTFE	33303	PTFE	2
432	Ball	32289	S	32289	S	32289	S	32289	S	1
434	* Spring	33781	STZP	33781	STZP	33781	STZP	33781	STZP	1
436	Seat	33640	S	33640	S	33640	S	33640	S	1
437	O-Ring, Seat	32008	FPM	32008	FPM	32008	FPM	32008	FPM	1
	O-Ring, Seat	<i>33562</i>	<i>FPM</i>	<i>33562</i>	<i>FPM</i>	<i>33562</i>	<i>FPM</i>	<i>33562</i>	<i>FPM</i>	1
440	Body	—	BB	—	BB	—	BB	—	BB	1
441	O-Ring, Check Valve	32851	NBR	32851	NBR	32851	NBR	32851	NBR	1
	O-Ring, Check Valve	<i>33580</i>	<i>FPM</i>	<i>33580</i>	<i>FPM</i>	<i>33580</i>	<i>FPM</i>	<i>33580</i>	<i>FPM</i>	1
442	O-Ring, Fitting	32113	NBR	32113	NBR	32113	NBR	32113	NBR	1
	O-Ring, Fitting	<i>33567</i>	<i>FPM</i>	<i>33567</i>	<i>FPM</i>	<i>33567</i>	<i>FPM</i>	<i>33567</i>	<i>FPM</i>	1
443	Valve, Check	<i>33248</i>	<i>S</i>	<i>33248</i>	<i>S</i>	<i>33248</i>	<i>S</i>	<i>33248</i>	<i>S</i>	1
444	Spring, Check Valve	—	—	—	—	—	—	—	—	1
446	O-Ring, Fitting	32113	NBR	32113	NBR	32113	NBR	32113	NBR	1
	O-Ring, Fitting	<i>33567</i>	<i>FPM</i>	<i>33567</i>	<i>FPM</i>	<i>33567</i>	<i>FPM</i>	<i>33567</i>	<i>FPM</i>	1
448	Assembly, Check Valve (Incls: 441,443,444,446)	33148	BB	33148	BB	33148	BB	33148	BB	1
	Assembly, Check Valve 303 S.S.	<i>33248</i>	<i>S</i>	<i>33248</i>	<i>S</i>	<i>33248</i>	<i>S</i>	<i>33248</i>	<i>S</i>	1
450	Plug, Hex, Inlet (3/8" NPT)	—	BB	—	BB	—	BB	—	BB	1
452	Plug, Hex, By-Pass (3/8" NPT)	—	BB	—	BB	—	BB	—	BB	1
455	* Fitting, Inlet (3/8" NPT)	32111	BB	32111	BB	32111	BB	32111	BB	1
460	Fitting, Discharge (3/8" NPT)	32112	BB	32112	BB	32112	BB	32112	BB	1
468	Kit, O-Ring (Incls: 414,415,416,429,430,437,441,442,446) (Prior to 6/88)	33146	NBR	33146	NBR	33146	NBR	33146	NBR	1
	Kit-2, O-Ring (Incls: 414,415,416,429,430,437,441,442,446) (After 6/88)	33246	NBR	33246	NBR	33246	NBR	33246	NBR	1
	Kit-2, O-Ring (Incls: 414,415,416,429,430,437,441,442,446) (After 6/88)	32878	FPM	32878	FPM	32878	FPM	32878	FPM	1
	Kit, Valve (Incls: 432,434,436,437,442)	33147	S	33147	S	33147	S	33147	S	1

Italics are optional items. MATERIAL CODES (Not Part of Part Number): BB=Brass FPM=Fluorocarbon (Viton®) NBR=Medium Nitrile (Buna-N) NY=Nylon PTFE=Polytetrafluoroethylene (Teflon®) S=304SS STL=Steel STZP=Steel/Zinc Plated

* Add QS for the Quick Start models. Note: Bottom inlet port becomes a special internally ported plug for the Quick Start and the **spring is eliminated**. On the QS Models, inlet plumbing to the unloader must be to the **back inlet port** (not bottom).

Products described hereon are covered by one or more of the following U.S. patents 3558244, 3652188, 3809508, 3920356, 3930756 and 5035580

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