

## High Flow Relief Valve

Model

# 7595

### FEATURES

- Provides system pressure setting and protection for single or multiple gun and pump systems.
- Heavy duty, high flow design quickly and conveniently mounts directly into discharge line.
- Functions as a secondary pressure relief to assure system and pump protection from deadhead or excessive pressure.

### SPECIFICATIONS

	U.S. Measure	Metric Measure
Maximum Flow.....	53 gpm	(200 lpm)
Pressure Range.....	260-2600 psi	(18-180 bar)
Maximum Operating Temperatures:		
Standard Buna o-rings.....	140°F	(60°C)
Standard Buna o-rings (Intermittent) .	195°F	(90°C)
Optional FPM o-rings.....	240°F	(116°C)
Inlet Port .....	3/4" NPTF	(3/4" NPTF)
By-Pass Port.....	1/2" NPTF	(1/2" NPTF)
Weight.....	29.0 oz.	(0.82 kg)
Dimensions.....	6.25 x 2.04 x 1.53"	(159 x 52 x 39 mm)

Relief Valve is stamped with a European safety pressure. Use only at above specifications to assure proper relief valve life and performance.

For FPM version add .0110 to model number.

For EPDM version add .0220 to model number.

#### **⚠ CAUTIONS AND WARNINGS**

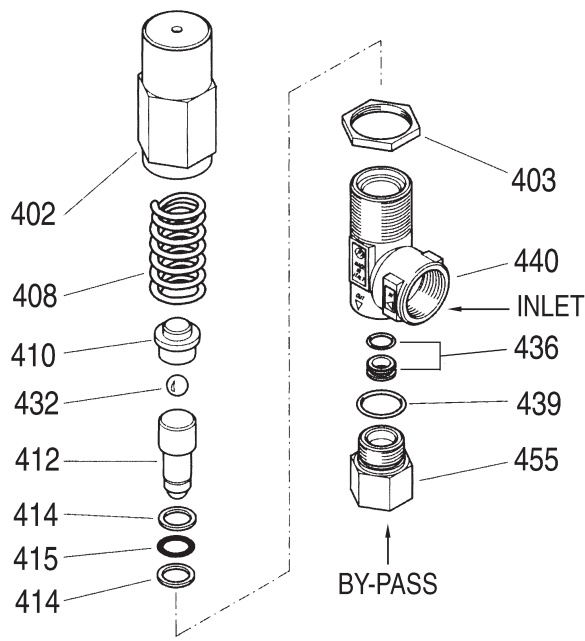
All High Pressure Systems require a primary pressure regulating device (i.e. regulator, unloader) and a secondary pressure relief device (i.e. pop-off valve, relief valve). Failure to install such relief devices could result in personal injury or damage to pump or property. CAT PUMPS does not assume any liability or responsibility for the operation of a customer's high pressure system.

Read all CAUTIONS and WARNINGS before commencing service or operation of any high pressure system. The CAUTIONS and WARNINGS are included in each service manual and with each Accessory Data sheet. CAUTIONS and WARNINGS can also be viewed online at [www.catpumps.com/cautions-warnings](http://www.catpumps.com/cautions-warnings) or can be requested directly from CAT PUMPS.

#### **WARRANTY**

View the Limited Warranty on-line at [www.catpumps.com/warranty](http://www.catpumps.com/warranty).

## EXPLODED VIEW



## PARTS LIST

ITEM	P/N	MATL	DESCRIPTION	QTY
402	—	BB	Cap, Adjusting	1
403	—	BB	Nut, Locking	1
408	—	STL	Spring	1
410	—	BB	Retainer, Spring	1
412	701601	S	Piston	1
414	701600	PTFE	Back-up-Ring, Piston	2
415	33014	NBR	O-Ring, Piston - 70D	1
	33577	FPM	<i>O-Ring, Piston</i>	1
	76014	EPDM	<i>O-Ring, Piston</i>	1
432	31075	SSSS	Ball, Seat, 13/32"	1
436	33806	NBR	Seat, w/O-Ring	1
439	33044	NBR	O-Ring, By-Pass Fitting - 85D	1
	31324	FPM	<i>O-Ring, By-Pass Fitting</i>	1
	76064	EPDM	<i>O-Ring, By-Pass Fitting</i>	1
440	—	BB	Body w/3/4"NPTF Port	1
455	39634	BB	Fitting, By-Pass (1/2" NPTF)	1
468	39078	NBR	Kit, Repair (Incls: 412,414,415,432,436,439)	1
	76078	FPM	<i>Kit, Repair</i> (Incls: 412,414,415,432,436,439)	1
	76178	EPDM	<i>Kit, Repair</i> (Incls: 412,414,415,432,436,439)	1

*Italics are optional items.*

MATERIAL CODES (Not Part of Part Number): BB=Brass  
NBR=Medium Nitrile (Buna-N) PTFE=Pure Polytetrafluoroethylene  
S=304SS SSSS=440SS STL=Steel

**SELECTION:** Select a relief valve to meet or exceed the flow and pressure requirements of the system.

**INSTALLATION:** The relief valve should be mounted in the discharge line **before any other accessories in the system** to provide optimum protection to the pump. The by-pass port (1/2" NPTF) is at the bottom. Relief valve by-pass liquid may be returned to the reservoir or drain to the floor. By-pass returned to the inlet of the pump should be done with caution to avoid pressure spikes or excessive heat build-up from recirculating liquids. The inlet port (3/4" NPTF) is located at the side.

**OPERATION:** The adjusting cap is located at the top of the relief valve. Using a wrench, the pressure setting may be **increased** by turning clockwise or **decreased** by the turning **counterclockwise**.

The relief valve should be set in **small** increments. Check your pressure gauge following each adjustment. It may be convenient to **set your unloader or regulating device** for the system working pressure in **small** increments, as you are setting the relief valve. The final adjustment for the relief valve should be set to relieve at approximately **200 psi above the system working pressure**.

**REMEMBER, THE RELIEF VALVE IS A SECONDARY SAFETY DEVICE. IT DOES NOT REPLACE A PRESSURE REGULATOR OR UNLOADER.**

## TROUBLESHOOTING

Valve chatters	<ul style="list-style-type: none"> <li>Valve is improperly set. Repeat adjustment procedure.</li> </ul>
Valve continually by-passes	<ul style="list-style-type: none"> <li>Seat, ball or piston is worn. Replace as needed.</li> </ul>
Leaking out the top of valve	<ul style="list-style-type: none"> <li>O-Rings on piston is worn or cut. Replace as needed.</li> </ul>



### CAT PUMPS

1681 - 94TH LANE N.E. MINNEAPOLIS, MN 55449-4324  
PHONE (763) 780-5440 — FAX (763) 780-2958  
e-mail: techsupport@catpumps.com  
www.catpumps.com