

Parker DWV Series Differential Area Crossover Relief Service Manual

General Description

Series DWV relief valves are differential area, crossover reliefs (cushion valves). They are designed to eliminate or minimize shock, surge, or overload conditions on hydraulic equipment. They may be used with cylinders of equal displacement, or with motors to provide crossover relief when the motors are stopped.

Operation

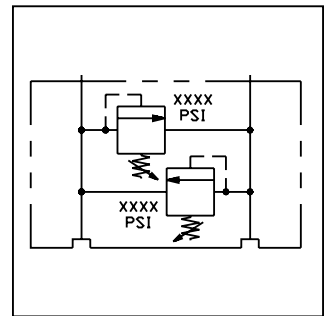
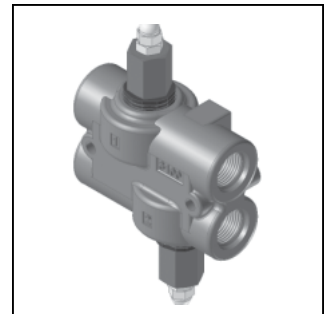
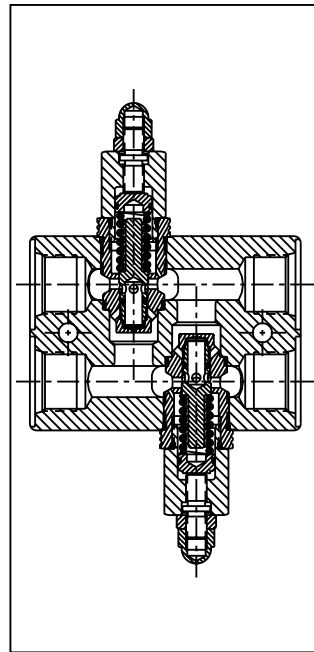
The DWV relief valve relieves oil from one side of the actuator to tank, therefore reducing shock and preventing overload. It also eliminates cavitation and the need for a separate tank connection. The valve should be installed as close to the actuator as possible for best results.

Features

- Compact, low profile design
- Fast response to cushion shocks and protect actuators
- Cartridge style relief valves
- High tensile, compacted graphite body

Specifications

Input Flow	93.75 LPM (25 GPM)
Operating Pressure SAE Ports NPTF Ports	210 Bar (3000 PSI) 138 Bar (2000 PSI)
Operating Temperature Range (Ambient)	Nitrile Seals: -40°C to +93°C (-40°F to +200°F)
Material	Body – High strength cast iron Poppet – Hardened and ground steel
Filtration	ISO Code 16/13 SAE Class 4 or better
Mounting Position	In-line; no restrictions



Ordering Information

DWV				
Differential Area Crossover Relief	Port Size	Adjustment Option	Pressure Range	

Code	Description	Code	Description
8	SAE-8 (3/4" - 16 UNF)	Omit	Shim Adjustable
10	SAE-10 (7/8" - 14 UNF)	A	Screw Adjustable
12	SAE-12 (1 1/16" - 12 UNF)		
50	1/2" - 14 NPT		
75	3/4" - 14 NPT		

Code	Setting	Range
1250	89 Bar (1250 PSI)	35 - 89 Bar (500 - 1250 PSI)
2000	142 Bar (2000 PSI)	89 - 142 Bar (1250 - 2000 PSI)
2500	177 Bar (2500 PSI)	142 - 177 Bar (2000 - 2500 PSI)
3000	210 Bar (3000 PSI)	142 - 210 Bar (2000 - 3000 PSI)

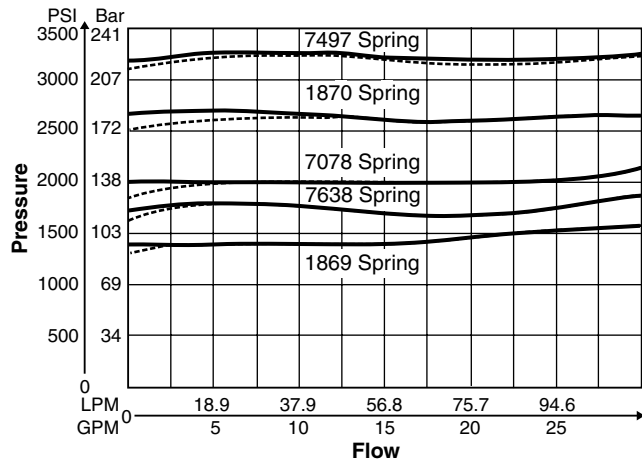
Service Parts

Relief Valve Cartridges	
35 - 89 Bar (500 - 1250 PSI)	WHA-1250
89 - 142 Bar (1250 - 2000 PSI)	WHA-2000
142 - 177 Bar (2000 - 2500 PSI)	WHA-2500
177 - 210 Bar (2500 - 3000 PSI)	WHA-3000
O-Ring Seal Kit	
00712359	
Relief Adjustments	
Screw Adjustment –	
1/4 turn = 200 PSI ±10%	
Shim Adjustment – 100 PSI	
150 - 250 PSI	00462001
250 - 450 PSI	00459001
	00458001

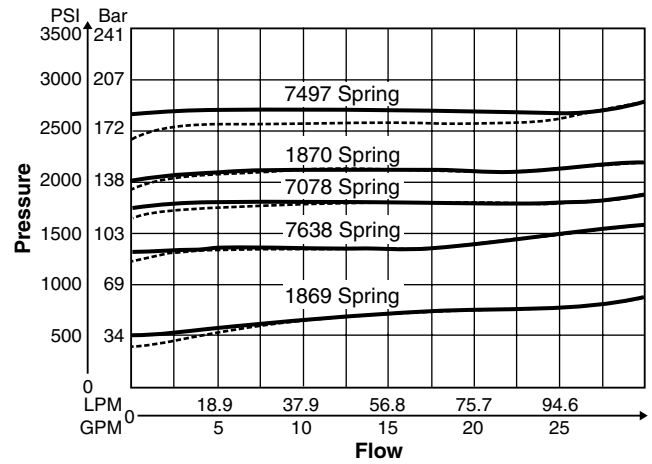
Note: The body and the internal parts of the relief valve (including the spring) are non-service items.

Performance Curves

Low End – 34 to 207 Bar (500 to 3000 PSI)



High End – 34 to 207 Bar (500 to 3000 PSI)



Dimensions

Inch equivalents for millimeter dimensions are shown in (**)

