

Parker DC25 Series Priority Flow Control Service Manual

General Description

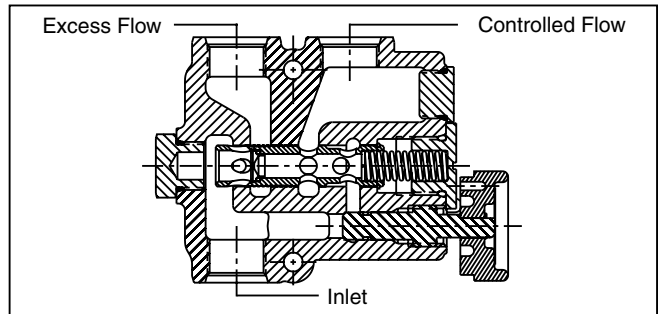
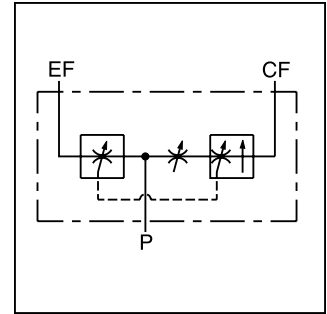
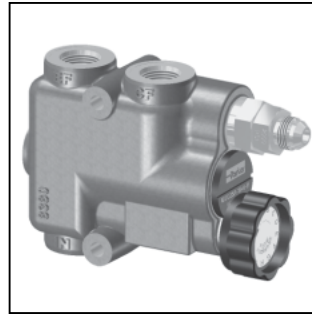
Series DC25 accessory valves are priority flow controls. They are designed for applications where two separate hydraulic circuits are to be served from a single pump. The valve provides a priority flow to the primary (CF) circuit, and an excess flow to a secondary (EF) circuit or to the tank. When the excess flow port is plugged, the valve will function as a restrictive-type, pressure compensated flow control.

Features

- Excess flow can be used in a secondary circuit
- Hardened metering spool

Specifications

Input Flow	112.5 LPM (30 GPM)
Adjustable Controlled Flow Range	3.75-97.5 LPM (1-26 GPM)
Accuracy of Adjustment	± 10% @ 11.25 LPM (3 GPM) or greater
Operating Pressure	SAE Ports 210 Bar (3000 PSI)
	NPTF Ports 138 Bar (2000 PSI)
Minimum Operating Pressure	4.8 Bar (70 PSI)
Operating Temperature Range (Ambient)	Nitrile Seals: -40°C to +93°C (-40°F to +200°F)
Material	Body – High strength cast iron Spool – Hardened and ground steel
Filtration	ISO Code 16/13, SAE Class 4 or better
Mounting Position	In-line; no restrictions
Knob Rotation	360° full adjustment



Operation

Flow enters the inlet port and passes through an adjustable control orifice. The control orifice can be varied externally in the adjustable version.

Flow through the adjustable control orifice causes a pressure drop which is sensed across the compensator spool. Excess flow across the compensator spool increases the pressure drop across it. This changes the pressure drop and shifts the spool allowing it to maintain priority flow and diverting more flow to the excess flow port. When pressure in the excess flow port exceeds the pressure in the controlled flow port, the spool will also shift to maintain the required priority flow to the primary circuit.

If the controlled flow port is blocked, the compensator spool will return to the closed position, allowing no flow through the valve.

DC25

Priority Flow Control

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Flow Control Adjustment

Knob Adjustment

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Port Size

Code	Description
10	SAE-10
12	SAE-12
50	1/2" NPTF
75	3/4" NPTF

Service Parts

Relief Valve Kits	
34 to 86 Bar (500 to 1250 PSI)	20089001
121 to 138 Bar (1750 to 2000 PSI)	20089004
138 to 179 Bar (2000 to 2600 PSI)	20089005 (SAE ported valves only)
179 to 207 Bar (2600 to 3000 PSI)	20089006 (SAE ported valves only)
Knob Kit	00712017

Note: The body and the spool are not service items.

Dimensions

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

#12 SAE Ports
 1-1/16 UN-2B Thread
 3 Places

