

Title (en)
HYDRAULIC CONTROL DEVICE

Publication
EP 0279315 B1 19911009 (DE)

Application
EP 88101810 A 19880208

Priority
DE 3705170 A 19870218

Abstract (en)
[origin: US4811649A] In hydraulic control devices comprising a two-way flow regulator in a reservoir return passage, in which the flow regulator comprises a metering restriction and a pressure equalizer including a control piston with the piston ends disposed in control chambers and subjected to the action of control pressures, the actuation of a single-acting hydraulic motor under load often results in an unavoidable switching shock, because the displacement of the control piston involves the consumption of a certain volume of the pressure fluid. In order to eliminate the switching shock with a simple construction, the end of the control piston subjected to the action of the load pressure is formed as a closure element cooperating with a valve seat in the manner of a poppet valve for holding the load pressure.

IPC 1-7
F15B 11/05

IPC 8 full level
F15B 11/00 (2006.01); **F15B 11/05** (2006.01)

CPC (source: EP US)
F15B 11/05 (2013.01 - EP US); **F15B 2211/40515** (2013.01 - EP US); **F15B 2211/40569** (2013.01 - EP US); **F15B 2211/41563** (2013.01 - EP US); **F15B 2211/426** (2013.01 - EP US); **F15B 2211/428** (2013.01 - EP US); **F15B 2211/46** (2013.01 - EP US); **F15B 2211/465** (2013.01 - EP US); **F15B 2211/47** (2013.01 - EP US); **F15B 2211/7052** (2013.01 - EP US); **F15B 2211/8606** (2013.01 - EP US)

Cited by
EP0893607A1; DE102004020371A1; EP0743459A1; DE19813038A1; DE19813038B4

Designated contracting state (EPC)
AT BE CH DE ES FR GB GR IT LI LU NL SE

DOCDB simple family (publication)
EP 0279315 A2 19880824; EP 0279315 A3 19900307; EP 0279315 B1 19911009; AT E68243 T1 19911015; DE 3705170 C1 19880818; DE 3865313 D1 19911114; ES 2026213 T3 19920416; FI 880600 A0 19880210; FI 880600 A 19880819; FI 89298 B 19930531; FI 89298 C 19930910; GR 3003518 T3 19930316; JP 2744004 B2 19980428; JP S63225701 A 19880920; US 4811649 A 19890314

DOCDB simple family (application)
EP 88101810 A 19880208; AT 88101810 T 19880208; DE 3705170 A 19870218; DE 3865313 T 19880208; ES 88101810 T 19880208; FI 880600 A 19880210; GR 920400001 T 19920103; JP 3646988 A 19880218; US 15636688 A 19880216