

Title (en)
Device for actuating a hydraulic user apparatus with an actuation speed that is independent of the resisting load affecting the hydraulic apparatus

Title (de)
Einrichtung zur Betätigung einer hydraulischen Vorrichtung mit einer Betätigungsgeschwindigkeit, die unabhängig von der an der hydraulischen Vorrichtung wirkenden Last ist

Title (fr)
Dispositif pour l'actionnement d'un appareil hydraulique dont la vitesse est indépendante de la charge agissant sur l'appareil hydraulique

Publication
EP 0786598 A1 19970730 (EN)

Application
EP 97100802 A 19970120

Priority
IT MI960117 A 19960124

Abstract (en)
A hydraulic control device for the actuation of a hydraulic user apparatus with an actuation speed that is independent of the resisting load affecting the hydraulic user apparatus. The device comprises a double-acting pilot valve (1), which can be actuated so as to connect a user apparatus actuation branch (A, B) to a pressurized branch (P) of a hydraulic circuit and so as to connect the other user apparatus actuation branch (B, A) to a discharge branch (T) of the hydraulic circuit, and a pressure compensation unit (2), which is arranged on the pressurized branch (P) of the hydraulic circuit entering the pilot valve (1). The pilot valve (1) has: a first inlet (3) connected to the pressurized branch (P1) of the hydraulic circuit; at least one second inlet (4a, 4b) connected to the discharge branch (T) of the hydraulic circuit; a first outlet (5) connected to a first user apparatus actuation branch (A, B); a second outlet (6) connected to the second user apparatus actuation branch (A, B); a first outlet port (7) connected to a first monitoring duct (8); a second outlet port (9) connected to a second monitoring duct (10); a third outlet port (11) connected to a control duct (12) which is connected to the pressure compensation unit (2) to actuate it in contrast with the pressure along the pressurized branch (P) of the hydraulic circuit. The pilot valve (1) has a slider (15) movable on command into three positions: a first position, wherein the slider connects the first inlet (3) to the first outlet (5), to the first port (7), and to the third port (11) and the second inlet (4b) to the second outlet (6) and to the second port (9); a second position, wherein it connects the first inlet (3) to the second outlet (6), to the second port (9), and to the third port (11) and the second inlet (4a) to the first outlet (5) and to the first port (7); and a third position, or idle position, wherein it closes the first inlet (3). <IMAGE>

IPC 1-7
F15B 11/05

IPC 8 full level
F15B 11/028 (2006.01); **F15B 13/04** (2006.01)

CPC (source: EP)
F15B 11/028 (2013.01); **F15B 13/0417** (2013.01); **F15B 2211/30535** (2013.01); **F15B 2211/3122** (2013.01); **F15B 2211/324** (2013.01); **F15B 2211/50518** (2013.01); **F15B 2211/5153** (2013.01); **F15B 2211/55** (2013.01); **F15B 2211/6054** (2013.01); **F15B 2211/6055** (2013.01); **F15B 2211/76** (2013.01)

Citation (applicant)
DE 3841507 C1 19890629

Citation (search report)
• [DA] DE 3841507 C1 19890629
• [A] DE 4324177 A1 19940217 - HEILMEIER & WEINLEIN [DE]
• [A] EP 0224936 A2 19870610 - SAUER GETRIEBE AG [DE]

Cited by
US8464757B2; EP2157319A1; US2010300552A1; EP1106839A3; US6994116B2; WO2009062572A1; WO2066842A1

Designated contracting state (EPC)
DE DK SE

DOCDB simple family (publication)
EP 0786598 A1 19970730; **EP 0786598 B1 20000927**; DE 69703166 D1 20001102; DE 69703166 T2 20010517; DK 0786598 T3 20001227; IT 1281708 B1 19980226; IT MI960117 A0 19960124; IT MI960117 A1 19970724

DOCDB simple family (application)
EP 97100802 A 19970120; DE 69703166 T 19970120; DK 97100802 T 19970120; IT MI960117 A 19960124