

Title (en)

REGULATING DEVICE FOR AN ADJUSTABLE HYDRAULIC PUMP WITH SEVERAL CONSUMERS

Title (de)

REGELEINRICHTUNG FÜR EINE VERSTELLBARE HYDROPUMPE MIT MEHREREN VERBRAUCHERN

Title (fr)

DISPOSITIF DE REGULATION POUR POMPE HYDRAULIQUE A CYLINDREE VARIABLE, COMPORTANT PLUSIEURS CONSOMMATEURS

Publication

EP 1017942 B1 20030611 (DE)

Application

EP 98951462 A 19980924

Priority

- DE 19742157 A 19970924
- EP 9806083 W 19980924

Abstract (en)

[origin: DE19742157A1] The invention relates to a regulating device for an adjustable hydraulic pump (1). Said device has a delivery flow control valve (15) and an output control valve (27). The delivery flow control valve (15) is subjected to the pressure difference between a first control line (18b) which is connected to the delivery line (5b) downstream of a metering throttle (6b), and a second control line (19) which is connected to the delivery line (5b) upstream of the metering throttle (6b). The delivery flow control valve (15) then regulates the adjusting pressure for an adjusting device (7) according to this pressure difference in order to adjust the delivery volume of the hydraulic pump (1). The output control valve (27) is situated between the first control line (18b) and a pressure medium tank (4). The control pressure in the first control line (18b) acts upon the output control valve (27) in the direction of opening and the adjusting device (7) acts upon the output control valve (27) by means of a spring measurement device (29) in the direction of closing. According to the invention, several consumers, each connected to the hydraulic pump (1) by a separate delivery line (5a-d) in which an adjustable metering throttle is located, can be controlled by the regulating device. A first control line (18a-18d) is connected to the delivery line leading to the designated consumer upstream of the designated metering throttle (6a-6d). A first pressure change device (17, 40, 41) selects the highest of the control pressures in the first lines (18a-18d) and conveys this to the delivery flow control valve (15). The output control valve (27) is only connected to the first control lines (18b, 18d) of the selected, output-controlled consumers, the first control lines (18a, 18c) of the remaining, non output-controlled consumers being separated from the output control valve (27).

IPC 1-7

F04B 49/08

IPC 8 full level

F04B 49/08 (2006.01)

CPC (source: EP US)

F04B 49/08 (2013.01 - EP US); **F04B 2205/061** (2013.01 - EP US)

Designated contracting state (EPC)

DE FR GB IT SE

DOCDB simple family (publication)

DE 19742157 A1 19990401; **DE 19742157 C2 19990701**; CA 2292417 A1 19990401; CA 2292417 C 20071120; DE 59808716 D1 20030717; EP 1017942 A1 20000712; EP 1017942 B1 20030611; US 6311489 B1 20011106; WO 9915792 A1 19990401

DOCDB simple family (application)

DE 19742157 A 19970924; CA 2292417 A 19980924; DE 59808716 T 19980924; EP 9806083 W 19980924; EP 98951462 A 19980924; US 50924300 A 20000323