

Title (en)
ELECTROHYDRAULIC CONTROL VALVE ARRANGEMENT

Title (de)
ELEKTROHYDRAULISCHE STEUERVERTILANORDNUNG

Title (fr)
ENSEMBLE A VANNES DE REGULATION ELECTROHYDRAULIQUE

Publication
EP 0853731 B1 20001206 (DE)

Application
EP 96933364 A 19960924

Priority
• DE 19536553 A 19950930
• EP 9604156 W 19960924

Abstract (en)
[origin: US6039077A] PCT No. PCT/EP96/04156 Sec. 371 Date Mar. 30, 1998 Sec. 102(e) Date Mar. 30, 1998 PCT Filed Sep. 24, 1996 PCT Pub. No. WO97/13074 PCT Pub. Date Apr. 10, 1997 The invention concerns an electrohydraulic control valve arrangement (10) for controlling the movement of a hydraulic motor. The control valve arrangement (10) comprises a main control valve (11), which can be actuated by the alternating application and relieving of pressure in two control chambers, and an electrohydraulic servo-control valve (14) which operates with electronically controllable piston setpoint input and mechanical actual position data feedback in order to pilot the main control valve accordingly in a manner guided by the setpoint value. The servo-control valve (14) comprises a sleeve-shaped housing element (99) which is disposed so as to be moveable in a pressure-tight manner in a connection block (114) rigidly connected to the housing of the main control valve (11). The servo-control valve (14) further comprises a piston (66) which is likewise disposed so as to be moveable in a pressure-tight manner in the sleeve-shaped housing element and can be driven in alternate directions by means of a controllable electric motor (131) in order to perform incremental deflections with respect to the sleeve-shaped housing element (99) for inputting the position setpoint. The housing element (99) is coupled for movement in a positive and force-locking manner to the piston (16) of the main control valve (11). The servo-control valve (14) is provided with a valve spring arrangement (118, 119) which, in the non-controlled state of the setpoint input motor (131), sets the piston (66) in the setpoint input position associated with the operationally-neutral centre position of the main control valve (11).

IPC 1-7
F15B 13/043; **F15B 9/10**

IPC 8 full level
F15B 13/044 (2006.01); **F15B 9/10** (2006.01); **F15B 13/043** (2006.01); **F16K 3/00** (2006.01); **F16K 31/04** (2006.01)

CPC (source: EP US)
F15B 9/10 (2013.01 - EP US); **F15B 13/0435** (2013.01 - EP US); **Y10T 137/86606** (2015.04 - EP US); **Y10T 137/86614** (2015.04 - EP US)

Cited by
CN108825818A; CN109072949A; US10344888B2; US10180194B2; WO2017151618A1

Designated contracting state (EPC)
AT CH DE GB IT LI

DOCDB simple family (publication)
US 6039077 A 20000321; AT E197985 T1 20001215; DE 19536553 A1 19970403; DE 59606197 D1 20010111; EP 0853731 A2 19980722; EP 0853731 B1 20001206; JP 3242115 B2 20011225; JP H10510616 A 19981013; WO 9713074 A2 19970410; WO 9713074 A3 19970501

DOCDB simple family (application)
US 4396198 A 19980330; AT 96933364 T 19960924; DE 19536553 A 19950930; DE 59606197 T 19960924; EP 9604156 W 19960924; EP 96933364 A 19960924; JP 51393497 A 19960924