

Title (en)
HYDRAULIC CIRCUIT DEVICE

Title (de)
HYDRAULISCHE SCHALTKREISVORRICHTUNG

Title (fr)
CIRCUIT HYDRAULIQUE

Publication
EP 1403528 A1 20040331 (EN)

Application
EP 02738707 A 20020613

Priority
• JP 0205930 W 20020613
• JP 2001204580 A 20010705

Abstract (en)
A hydraulic circuit device (2, 20), comprising an electromagnetic proportional valve (6) having a supply position for supplying hydraulic oil to a main engine side, a discharge position for discharging the hydraulic oil from the main engine side, and a stop position for stopping the supply and discharge of the hydraulic oil installed in a hydraulic oil feed passage (5) to a main engine hydraulic circuit (1) to regulate the supply flow and pressure of the hydraulic oil.

IPC 1-7
F15B 11/02

IPC 8 full level
F15B 11/05 (2006.01); **B29C 45/17** (2006.01); **B29C 45/67** (2006.01); **F04B 49/02** (2006.01); **F15B 11/02** (2006.01); **F15B 11/16** (2006.01);
F15B 21/08 (2006.01)

CPC (source: EP KR)
F04B 49/022 (2013.01 - EP); **F15B 9/03** (2013.01 - KR); **F15B 11/165** (2013.01 - EP); **F15B 21/087** (2013.01 - EP); **F04B 2205/05** (2013.01 - EP);
F15B 2211/20538 (2013.01 - EP); **F15B 2211/40515** (2013.01 - EP); **F15B 2211/40553** (2013.01 - EP); **F15B 2211/413** (2013.01 - EP);
F15B 2211/41581 (2013.01 - EP); **F15B 2211/426** (2013.01 - EP); **F15B 2211/50572** (2013.01 - EP); **F15B 2211/5157** (2013.01 - EP);
F15B 2211/528 (2013.01 - EP); **F15B 2211/605** (2013.01 - EP); **F15B 2211/6309** (2013.01 - EP); **F15B 2211/6323** (2013.01 - EP);
F15B 2211/6655 (2013.01 - EP); **F15B 2211/6656** (2013.01 - EP)

Cited by
CN105642865A; CN102312872A; US11772349B2; US11241810B2; EP3643422A1; US9180583B2; US10562254B2; US11951666B2;
US11958226B2; US12076901B2

Designated contracting state (EPC)
DE IT

DOCDB simple family (publication)
EP 1403528 A1 20040331; EP 1403528 A4 20110629; CN 1274965 C 20060913; CN 1464945 A 20031231; JP 2003021103 A 20030124;
JP 3783582 B2 20060607; KR 100781029 B1 20071129; KR 20030029160 A 20030411; TW 552354 B 20030911; WO 03004879 A1 20030116

DOCDB simple family (application)
EP 02738707 A 20020613; CN 02802316 A 20020613; JP 0205930 W 20020613; JP 2001204580 A 20010705; KR 20037003299 A 20030305;
TW 91113287 A 20020618