

Title (en)
HYDRAULIC CIRCUIT FOR WORK VEHICLE

Title (de)
HYDRAULISCHER SCHALTKREIS FÜR ARBEITSFAHRZEUG

Title (fr)
CIRCUIT HYDRAULIQUE POUR VÉHICULE DE TRAVAIL

Publication
EP 3779212 A4 20211229 (EN)

Application
EP 19778403 A 20190306

Priority
• JP 2018060461 A 20180327
• JP 2019008773 W 20190306

Abstract (en)
[origin: EP3779212A1] A hydraulic circuit (100) includes a first actuator (11), a second actuator (12), a hydraulic pump (13), a first direction switching valve (15), a second direction switching valve (16), a pilot pump (14), a first operation device (17), a second operation device (18), an electromagnetic pressure reduction valve (19) that controls a primary pressure of pilot hydraulic oil supplied to the second operation device (18), and an ECU (10). While the first operation device (17) is operated, the ECU (10) transmits, to the electromagnetic pressure reduction valve (19), a first command to reduce the primary pressure from a reference pressure to a first command pressure and keep the first command pressure. When the second operation device (18) is also operated, the ECU (10) transmits, to the electromagnetic pressure reduction valve (19), a second command to gradually increase the primary pressure from the first command pressure to a second command pressure.

IPC 8 full level
F15B 11/08 (2006.01); **E02F 9/22** (2006.01); **F15B 11/00** (2006.01); **F15B 11/02** (2006.01); **F15B 11/17** (2006.01)

CPC (source: EP KR)
E02F 3/425 (2013.01 - EP); **E02F 9/2221** (2013.01 - KR); **E02F 9/2228** (2013.01 - EP); **E02F 9/2235** (2013.01 - EP);
E02F 9/2242 (2013.01 - EP); **E02F 9/2267** (2013.01 - KR); **E02F 9/2282** (2013.01 - EP); **E02F 9/2285** (2013.01 - EP KR);
F15B 11/08 (2013.01 - KR); **F15B 11/16** (2013.01 - KR); **F15B 11/166** (2013.01 - EP); **F15B 11/17** (2013.01 - KR); **F15B 11/167** (2013.01 - EP);
F15B 2211/20546 (2013.01 - EP); **F15B 2211/20576** (2013.01 - EP); **F15B 2211/30595** (2013.01 - EP); **F15B 2211/329** (2013.01 - EP);
F15B 2211/355 (2013.01 - EP); **F15B 2211/36** (2013.01 - EP); **F15B 2211/50554** (2013.01 - EP); **F15B 2211/526** (2013.01 - EP);
F15B 2211/575 (2013.01 - EP); **F15B 2211/6316** (2013.01 - EP); **F15B 2211/6355** (2013.01 - EP); **F15B 2211/6653** (2013.01 - EP);
F15B 2211/7053 (2013.01 - EP); **F15B 2211/7058** (2013.01 - EP); **F15B 2211/7135** (2013.01 - EP); **F15B 2211/7142** (2013.01 - EP);
F15B 2211/78 (2013.01 - EP)

Citation (search report)
• [A] WO 2011114929 A1 20110922 - YANMAR CO LTD [JP], et al
• [A] EP 2837831 A1 20150218 - HITACHI CONSTRUCTION MACHINERY [JP]
• [A] JP H0885974 A 19960402 - HITACHI CONSTRUCTION MACHINERY
• [A] EP 1172488 A1 20020116 - CATERPILLAR MITSUBISHI LTD [JP]
• See also references of WO 2019188061A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
EP 3779212 A1 20210217; **EP 3779212 A4 20211229**; AU 2019246449 A1 20201008; JP 2019173803 A 20191010; JP 6893894 B2 20210623;
KR 102642076 B1 20240228; KR 20200135275 A 20201202; WO 2019188061 A1 20191003

DOCDB simple family (application)
EP 19778403 A 20190306; AU 2019246449 A 20190306; JP 2018060461 A 20180327; JP 2019008773 W 20190306;
KR 20207007942 A 20190306