

Title (en)

HYDRAULIC EXCAVATOR MAIN VALVE AND HYDRAULIC EXCAVATOR HAVING SAME

Title (de)

HAUPTVENTIL FÜR EINEN HYDRAULIKBAGGER UND HYDRAULIKBAGGER DAMIT

Title (fr)

VANNE PRINCIPALE D'EXCAVATEUR HYDRAULIQUE ET EXCAVATEUR HYDRAULIQUE ÉQUIPÉ DE CELLE-CI

Publication

**EP 2597211 A4 20171129 (EN)**

Application

**EP 11809285 A 20110720**

Priority

- CN 201010232583 A 20100721
- CN 2011077403 W 20110720

Abstract (en)

[origin: EP2597211A1] A main control valve for a hydraulic excavator and a hydraulic excavator having the same. The hydraulic excavator main control valve comprises: a straight travel valve unit (1), a rotary unit (2), a dozer blade unit (3), a boom 2\hammer unit (5), an arm 1 unit (6), a travel left unit (7), an oil inlet unit, a travel right unit (8), a boom 1 unit (9), a bucket unit (10), an arm 2 unit (11), and an oil return passage (T2). The main control valve for hydraulic excavator is oil supplied by three pumps (P1, P2, P3) comprising a first pump (P1), a second pump (P2), and a third pump (P3). The first pump (P1) and the second pump (P2) are two variable pumps having the same displacement, and the third pump is standalone. The three pumps (P1, P2, P3) are under total power control, and the rated pressure of the third pump (P3) is less than the rated pressure of the first pump (P1) and that of the second pump (P2). The main control valve for hydraulic excavator further comprises a level-mode oil supply circuit, through which the first pump (P1), the second pump (P2) and third pump (P3) supply oil confluent to the arm cylinder of the hydraulic excavator. The main control valve for hydraulic excavator makes single-movements more rapid, and oil flow distribution is done appropriately during composite-movements. The valve also has the advantages of high work efficiency when in a level position and energy-saving when excavating.

IPC 8 full level

**E02F 9/22** (2006.01); **E02F 3/32** (2006.01); **E02F 3/43** (2006.01)

CPC (source: EP KR)

**E02F 3/325** (2013.01 - EP); **E02F 3/43** (2013.01 - KR); **E02F 9/22** (2013.01 - KR); **E02F 9/2239** (2013.01 - EP); **E02F 9/2282** (2013.01 - EP); **E02F 9/2285** (2013.01 - EP); **E02F 9/2292** (2013.01 - EP); **E02F 9/2296** (2013.01 - EP); **F15B 2211/20576** (2013.01 - EP); **F15B 2211/3116** (2013.01 - EP)

Citation (search report)

- No further relevant documents disclosed
- See references of WO 2012010097A1

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 2597211 A1 20130529**; **EP 2597211 A4 20171129**; **EP 2597211 B1 20210526**; CN 101886405 A 20101117; CN 101886405 B 20120111; JP 2013532781 A 20130819; JP 5869567 B2 20160224; KR 20130143550 A 20131231; WO 2012010097 A1 20120126

DOCDB simple family (application)

**EP 11809285 A 20110720**; CN 201010232583 A 20100721; CN 2011077403 W 20110720; JP 2013519947 A 20110720; KR 20137004303 A 20110720