

Title (en)

Apparatus for fixing hydraulic pipes for construction equipment

Title (de)

Vorrichtung zur Befestigung von Hydraulikleitungen für Baumaschinen.

Title (fr)

Appareil de fixation de tuyaux hydrauliques pour équipement de construction.

Publication

**EP 2098644 A3 20170104 (EN)**

Application

**EP 09002909 A 20090228**

Priority

KR 20080020030 A 20080304

Abstract (en)

[origin: EP2098644A2] An apparatus for fixing hydraulic pipes for construction equipment is provided, which can facilitate joint connection of return pipes having a large size to a hydraulic tank (2), in an environment where a working space of an upper frame (6) is narrow such as in a small swing radius construction equipment, by a return pipe block (13) for returning hydraulic fluid of a main control valve (1) to the hydraulic tank (2) without being interfered with a swing motor (4) and so on. The apparatus for fixing hydraulic pipes includes a first return joint pipe (10) having an inlet port joint-connected to a main control valve (1), a second return joint pipe (11) having an outlet port joint-connected to an oil cooler (5), a return pipe block (13) mounted on an upper frame (6) between a frame to which a working device is fixed and a swing motor (4), and joint-connected to an outlet port of the first return joint pipe (10) and an inlet port of the second return joint pipe (11), respectively, and a third return joint pipe (14) having an inlet port joint-connected to the return pipe block (13) and an outlet port joint-connected to the hydraulic tank (2). The return pipe block (13) is mounted on the upper frame (6) to joint-connect the first and second return joint pipes (10,11), and the third return joint pipe (14) is joint-connected to the return pipe block (13) and the hydraulic tank (2), respectively, after the swing motor (4) is mounted on the upper frame (6).

IPC 8 full level

**E02F 9/00** (2006.01); **E02F 9/22** (2006.01)

CPC (source: EP KR US)

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Citation (search report)

- [X] JP 2008019675 A 20080131 - KOBELCO CONSTR MACHINERY LTD
- [X] JP H1172101 A 19990316 - YUTANI JUKO KK, et al
- [X] JP 2007002446 A 20070111 - KOBELCO CONSTR MACHINERY LTD

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EP2581505A3; EP2840189A3; US9303389B2

Designated contracting state (EPC)

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 SE SI SK TR

Designated extension state (EPC)

AL BA RS

DOCDB simple family (publication)

**EP 2098644 A2 20090909**; **EP 2098644 A3 20170104**; CN 101525889 A 20090909; CN 101525889 B 20121128; JP 2009209679 A 20090917; JP 5401122 B2 20140129; KR 100974277 B1 20100806; KR 20090094990 A 20090909; US 2009223582 A1 20090910

DOCDB simple family (application)

**EP 09002909 A 20090228**; CN 200910118697 A 20090303; JP 2009048738 A 20090303; KR 20080020030 A 20080304; US 39743709 A 20090304