

Title (en)

OIL SUPPLY DEVICE AND METHOD OF CONTROLLING ELECTRIC OIL PUMP

Title (de)

ÖLVERSORGUNGSVORRICHTUNG UND VERFAHREN ZUR STEUERUNG EINER ELEKTRISCHEN ÖLPUMPE

Title (fr)

DISPOSITIF D'ALIMENTATION EN HUILE ET PROCÉDÉ DE COMMANDE DE POMPE À HUILE ÉLECTRIQUE

Publication

EP 3306095 A1 20180411 (EN)

Application

EP 16799829 A 20160512

Priority

- JP 2015105767 A 20150525
- JP 2016064163 W 20160512

Abstract (en)

The objective of the present invention is to provide an oil supply device in which a negative pressure in a pump chamber is reduced or eliminated when an electric oil pump is shut down, thereby preventing air from entering the pump chamber and allowing oil to be supplied or recirculated smoothly. This oil supply device (10) includes: an electric oil pump (11) in which a rotary volumetric change pump (20) provided with an inner rotor (21) and an outer rotor (22) is caused to operate by means of a motor (12); and an electric oil pump controller (13) which controls the motor in such a way that, when the electric oil pump (11) is to be shut down, the rotary volumetric change pump (20) is caused to temporarily stop, after which the rotary volumetric change pump (20) is caused to rotate by a predetermined angle in the opposite direction to the direction of rotation during oil supply, and is then shut down.

IPC 8 full level

F04C 14/06 (2006.01); **F04B 49/02** (2006.01); **F04C 2/10** (2006.01); **F04C 15/00** (2006.01); **F04C 15/06** (2006.01)

CPC (source: EP US)

F04B 49/02 (2013.01 - EP US); **F04C 2/102** (2013.01 - EP US); **F04C 13/002** (2013.01 - EP US); **F04C 14/06** (2013.01 - EP US); **F04C 14/04** (2013.01 - US); **F04C 2210/206** (2013.01 - EP US); **F04C 2240/20** (2013.01 - US); **F04C 2240/40** (2013.01 - EP US)

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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 3306095 A1 20180411; **EP 3306095 A4 20190109**; **EP 3306095 B1 20200422**; CN 107614877 A 20180119; CN 107614877 B 20191015; JP 2016217316 A 20161222; JP 6570878 B2 20190904; US 2018135624 A1 20180517; WO 2016190121 A1 20161201

DOCDB simple family (application)

EP 16799829 A 20160512; CN 201680029606 A 20160512; JP 2015105767 A 20150525; JP 2016064163 W 20160512; US 201615576708 A 20160512