

Title (en)
LUBRICANT PUMP SYSTEM

Title (de)
SCHMIERSTOFFPUMPENSYSTEM

Title (fr)
SYSTÈME DE POMPAGE DE LUBRIFIANT

Publication
EP 2440785 A1 20120418 (DE)

Application
EP 10724493 A 20100604

Priority
• EP 2010057836 W 20100604
• DE 102009024698 A 20090612
• DE 102009048320 A 20091005

Abstract (en)
[origin: WO2010142611A1] The invention relates to a characteristic-map-controlled lubricant pump system (1) comprising a lubricant pump (2) for supplying an internal combustion engine (3) with lubricant, wherein the lubricant pump (2) is controlled by a proportional valve (6), an actuating unit (9), which is arranged in the lubricant pump (2) and preloaded by a spring (10), a first pressure chamber (11) acting on the actuating unit (9), which first pressure chamber is arranged in the lubricant pump (2) and is pressurized in a characteristic-map-controlled manner and thereby moves the actuating unit (9) toward the spring (10) and upstream of which first pressure chamber the proportional valve (6) is arranged, at least one second pressure chamber (12,12') acting on the actuating unit (9), which at least one second pressure chamber is arranged in the lubricant pump (2) and is likewise pressurized and thereby moves the actuating unit (9) toward the spring (10), wherein the at least one second pressure chamber (12,12') has smaller dimensions than the first pressure chamber (11), wherein, if the proportional valve (6) fails, the lubricant pump (2) is pressurized exclusively by means of the at least one second pressure chamber (12,12').

IPC 8 full level
F04C 14/22 (2006.01); **F01M 1/16** (2006.01); **F04C 14/28** (2006.01)

CPC (source: EP KR US)
F01M 1/16 (2013.01 - EP KR US); **F04C 2/332** (2013.01 - EP KR US); **F04C 14/223** (2013.01 - EP KR US); **F04C 14/226** (2013.01 - EP KR US); **F04C 14/28** (2013.01 - KR); **F04C 2270/18** (2013.01 - EP KR US); **F04C 2270/24** (2013.01 - KR); **F04C 2270/70** (2013.01 - EP KR US)

Citation (search report)
See references of WO 2010142611A1

Cited by
EP3135913A1; US10018199B2

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 SE SI SK SM TR

DOCDB simple family (publication)
WO 2010142611 A1 20101216; CN 102459904 A 20120516; CN 102459904 B 20150401; EP 2440785 A1 20120418; EP 2440785 B1 20140108; JP 2012529589 A 20121122; JP 5589068 B2 20140910; KR 101753419 B1 20170703; KR 20120027038 A 20120320; US 2012148423 A1 20120614; US 8992184 B2 20150331

DOCDB simple family (application)
EP 2010057836 W 20100604; CN 201080026230 A 20100604; EP 10724493 A 20100604; JP 2012514429 A 20100604; KR 20117031682 A 20100604; US 201013377463 A 20100604