

Title (en)

INTERNAL COMBUSTION ENGINE COMPRISING AN OIL RETURN LINE HAVING AN OIL DUCT

Title (de)

BRENNKRAFTMASCHINE MIT EINEM EINEN ÖLKANAL AUFWEISENDEN ÖLRÜCKLAUF

Title (fr)

MOTEUR A COMBUSTION INTERNE POURVU RETOUR D'HUILE COMPRENANT UN CONDUIT D'HUILE

Publication

EP 3250797 B1 20201125 (DE)

Application

EP 15831045 A 20151203

Priority

- DE 102015101410 A 20150130
- DE 2015100516 W 20151203

Abstract (en)

[origin: WO2016119768A1] The invention relates to an internal combustion engine (1) comprising an oil sump (4) arranged underneath a crank drive (3). The oil sump (4) is filled with oil (8) up to an oil level (7) during operation of the internal combustion engine (1). The oil sump upper part (5) is equipped with multiple through openings (9), each of which is assigned an oil duct (10) for returning the oil (8) to the oil sump (4). In the oil duct (10), a collection point (11) is provided underneath the oil sump upper part (5), into which collection point a section of the oil duct (10) designed as an immersion tube (12) is immersed to below a collection level (13) of the oil volume in the collection point (11). In this way, the oil volume in this collection point (11) seals the free opening of the oil duct (10) during operation and prevents, in particular, an undesired compensation of potential pressure differences between the gas volume within the oil sump (4) and the gas volume within a cylinder crankcase (2), which could otherwise impede the reliable return of the oil (8) due to a gas flow in the opposite direction to the oil flow. For this purpose, the collection point (11) is configured in such a way that the oil level (7) in the oil sump (4) is constantly lower than the collection level (13) of the oil volume in the collection point (11).

IPC 8 full level

F01M 11/00 (2006.01); **F01M 11/02** (2006.01)

CPC (source: CN EP)

F01M 11/0004 (2013.01 - CN EP); **F01M 2011/005** (2013.01 - CN EP); **F01M 2011/023** (2013.01 - CN EP)

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)

WO 2016119768 A1 20160804; CN 107429583 A 20171201; CN 107429583 B 20191203; DE 102015101410 A1 20160804; EP 3250797 A1 20171206; EP 3250797 B1 20201125

DOCDB simple family (application)

DE 2015100516 W 20151203; CN 201580077040 A 20151203; DE 102015101410 A 20150130; EP 15831045 A 20151203