

Title (en)

METHOD AND DEVICE FOR DETECTING LEAKS IN A VEHICLE LUBRICATION SYSTEM

Title (de)

VERFAHREN UND VORRICHTUNG ZUR LECKAGEDETEKTION EINES FAHRZEUG-SCHMIERSYSTEMS

Title (fr)

PROCÉDÉ ET DISPOSITIF DE DÉTECTION DE FUITES DANS UN SYSTÈME DE LUBRIFICATION DE VÉHICULE

Publication

**EP 2751397 A1 20140709 (DE)**

Application

**EP 12768739 A 20120830**

Priority

- DE 102011053176 A 20110831
- EP 2012066882 W 20120830

Abstract (en)

[origin: WO2013030291A1] The invention relates to a method for detecting leaks in a lubrication system (16) for lubricating rotating or oscillating components in an internal combustion engine (30) or in a gearbox, preferably an automatic gearbox. A leak in the lubrication system (16) is detected by comparing an oil pressure in the lubrication system (16) with a pre-determinable limit pressure from a table or characteristic diagram for various rpm, torque and oil temperature values, and at least one of the additional parameters of oil pump rpm, valve setting of an oil pump volume flow control, vehicle acceleration, vehicle lateral acceleration and/or lubrication oil level, wherein if a first threshold pressure is underrun, a warning signal is emitted and/or if a second, lower threshold pressure is underrun, the rpm of the internal combustion engine (30) is limited and/or if a third, even lower threshold pressure is underrun, the internal combustion engine (30) is switched off. In a coordinated aspect, a device for heating up a lubrication system (16) of rotating or oscillating components for an internal combustion engine (30) or a gearbox is proposed for executing the method according to the invention, in which a waste-gas/oil heat exchanger is arranged in an oil suction pipe (2) between oil pump (3) and oil sump (1), wherein a pressure lower than the ambient pressure and lower than the pressure in the waste gas system can be set on the oil side in the waste gas heat exchanger, preventing oil escaping from the heat exchanger in the event of a leak.

IPC 8 full level

**F01M 1/22** (2006.01); **F01M 5/02** (2006.01)

CPC (source: EP)

**F01M 1/22** (2013.01); **F01M 5/021** (2013.01)

Citation (search report)

See references of WO 2013030291A1

Cited by

CN108087531A; CN108087530A; CN110671312A; CN108087532A; CN109004795A

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)

**DE 102011053176 A1 20130228**; EP 2751397 A1 20140709; EP 2751397 B1 20151118; WO 2013030291 A1 20130307

DOCDB simple family (application)

**DE 102011053176 A 20110831**; EP 12768739 A 20120830; EP 2012066882 W 20120830