

Title (en)

Oil circuit, especially for an internal-combustion engine.

Title (de)

Ölkreislauf, insbesondere für einen Verbrennungsmotor.

Title (fr)

Circuit d'huile, particulièrement pour un moteur à combustion interne.

Publication

EP 0166698 A2 19860102 (DE)

Application

EP 85810295 A 19850625

Priority

CH 313584 A 19840629

Abstract (en)

[origin: US4616609A] To control the viscosity of oil circulating in a forced-oil circulation path of an engine, oil is conducted to a receptacle located, for example, within the oil pan of the engine or in communication with the overflow outlet stub (14) of the oil pump (3), and oil is conducted from this intermediate receptacle, for example in form of a pan (6) in two parallel paths. One of the paths conducts the oil directly to the suction inlet of the pump after, however, having to overcome a static pressure, for example by flowing over an elevated weir, notch, or through an overpressure valve; the other path is through a flow resistance element (7), for example a constricted tube, a lamella package, or the like, and then to the cooling portion of the oil pan, remote from the suction inlet of the pump. If the oil is cold, little of the cold and hence high-viscosity oil can flow through the flow restriction path, and back-pressure will build up, so that oil can flow through the overflow, weir, or the like, directly to the pump inlet, for rapid heating by the operating temperature of the engine; as the oil thins, and the viscosity drops, more oil will flow through the oil flow resistance path. If the oil is excessively diluted, it will be rapidly closed, since no back-pressure will develop and all the oil will flow through the second path, and be cooled by the oil pan.

Abstract (de)

In einem Kraftfahrzeugverbrennungsmotor ist zwischen dem Motorblock (1) und der Ölwanne (2) eine Auffangwanne (6) angeordnet, welche das vom Motorblock (1) zurückfließende Schmieröl auffängt. Das Öl gelangt einerseits über einen laminaren Strömungswiderstand (7) in einen gekühlten Bereich der Ölwanne (2), andererseits über einen Überlauf (8) direkt zum Ansaugstutzen (4) der Ölpumpe (3). Dadurch wird rasch die optimale Viskosität des Öls erreicht und eingehalten, trotz witterungsbedingt unterschiedlicher Kühlung der Ölwanne.

IPC 1-7

F01M 1/02; **F01M 5/00**

IPC 8 full level

F01M 1/02 (2006.01); **F01M 5/00** (2006.01); **F01M 11/00** (2006.01); **F01M 5/02** (2006.01)

CPC (source: EP US)

F01M 1/02 (2013.01 - EP US); **F01M 5/002** (2013.01 - EP US); **F01M 11/0004** (2013.01 - EP US); **F01M 2005/023** (2013.01 - EP US); **F01M 2011/005** (2013.01 - EP US)

Cited by

RU207833U1; CN102588062A; EA019697B1; DE4204522C1; US4721185A; EP0443092A1; US5161643A; US8402929B2; EP1304452A1; WO2009042464A3

Designated contracting state (EPC)

CH DE FR GB IT LI NL SE

DOCDB simple family (publication)

EP 0166698 A2 19860102; **EP 0166698 A3 19870114**; US 4616609 A 19861014

DOCDB simple family (application)

EP 85810295 A 19850625; US 74957785 A 19850627