

Title (en)

Oil sump for combustion engine

Title (de)

Ölwanne für Brennkraftmaschine

Title (fr)

Carter d'huile pour moteur à combustion interne et moteur à combustion interne comprenant un tel carter d'huile

Publication

**EP 1677064 A2 20060705 (FR)**

Application

**EP 05292587 A 20051206**

Priority

- FR 0413033 A 20041207
- FR 0413037 A 20041207

Abstract (en)

The device has a heat exchanger (7) disposed in an oil pan (2) of an internal combustion engine. The exchanger has an upper oil receiving surface (8) conformed for forming an anti-emulsion unit. The surface is disposed at the level or above the level of oil (H) contained in the pan, when the engine operates. The exchanger is constituted by metallic foam (9) permeable to oil, where cooling fluid conduits (10) are cored in the foam. An independent claim is also included for an internal combustion engine equipped with an oil pan that comprises a heat exchanging device.

Abstract (fr)

Carter d'huile (2) pour moteur à combustion interne comprenant un échangeur thermique (7) destiné à interagir avec l'huile. L'échangeur thermique (7) est réalisé à partir d'un matériau (9) perméable à l'huile dans lequel est noyée au moins une conduite (10) de fluide de refroidissement.

IPC 8 full level

**F28F 13/00** (2006.01); **F01M 11/00** (2006.01)

CPC (source: EP)

**F01M 11/0004** (2013.01); **F28D 3/02** (2013.01); **F28F 13/003** (2013.01); **F28D 2021/0089** (2013.01)

Citation (applicant)

- FR 738122 A 19321221
- FR 2721975 A1 19960105 - PEUGEOT [FR], et al
- US 5408965 A 19950425 - FULTON CLARENCE W [CA], et al
- FR 2742856 A1 19970627 - RENAULT [FR]
- FR 2650033 A1 19910125 - DAIMLER BENZ AG [DE]
- FR 2760042 A1 19980828 - RENAULT [FR]

Cited by

US8033321B2; WO2007095905A1; JP2009527720A

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK YU

DOCDB simple family (publication)

**EP 1677064 A2 20060705**; **EP 1677064 A3 20091014**; **EP 1677064 B1 20110511**; AT E509251 T1 20110515

DOCDB simple family (application)

**EP 05292587 A 20051206**; AT 05292587 T 20051206