

Title (en)
OPTIMIZED OIL COOLING SYSTEM FOR AN INTERNAL COMBUSTION ENGINE

Title (de)
OPTIMIERTE ÖLKÜHLUNG FÜR EINE BRENNKRAFTMASCHINE

Title (fr)
REFROIDISSEMENT D'HUILE OPTIMISEE D'UN MOTEUR A COMBUSTION INTERNE

Publication
EP 1751411 A1 20070214 (DE)

Application
EP 05750261 A 20050518

Priority
• EP 2005005417 W 20050518
• DE 102004024516 A 20040518

Abstract (en)
[origin: WO2005113959A1] The invention relates to an engine cooler module arrangement (1), an engine block (3), a cooler module (9) and a method for cooling oil circulating in an oil circuit of an engine by means of a coolant. The coolant flows through a coolant channel which is formed in the engine block (3) and cooler module (9). A bypass channel (2) is arranged parallel to the coolant channel. A partial coolant flow is guided through said bypass channel to an oil-coolant heat exchanger (8), parallel to a partial coolant flow flowing through the engine block (3). The cooler module (9) is at least partially integrated into the engine.

IPC 8 full level
F01P 11/08 (2006.01); **F01M 5/00** (2006.01); **F01P 3/20** (2006.01); **F01P 7/16** (2006.01); **F01P 11/04** (2006.01)

CPC (source: EP KR US)
F01M 5/00 (2013.01 - KR); **F01M 5/002** (2013.01 - EP US); **F01P 3/20** (2013.01 - EP US); **F01P 7/165** (2013.01 - EP US); **F01P 11/08** (2013.01 - EP KR US); **F01P 11/04** (2013.01 - EP US); **F01P 2060/04** (2013.01 - EP US)

Citation (search report)
See references of WO 2005113959A1

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 MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
WO 2005113959 A1 20051201; AT E487035 T1 20101115; CN 1957164 A 20070502; CN 1957164 B 20111123; DE 102004024516 A1 20051215; DE 502005010485 D1 20101216; EP 1751411 A1 20070214; EP 1751411 B1 20101103; KR 20070012454 A 20070125; RU 2006144857 A 20080627; RU 2384713 C2 20100320; US 2007227474 A1 20071004; US 7717070 B2 20100518

DOCDB simple family (application)
EP 2005005417 W 20050518; AT 05750261 T 20050518; CN 200580016171 A 20050518; DE 102004024516 A 20040518; DE 502005010485 T 20050518; EP 05750261 A 20050518; KR 20067023212 A 20061106; RU 2006144857 A 20050518; US 56921905 A 20050518