

Title (en)
Coolant loop for a combustion engine

Title (de)
Kühlmittelkreislauf für eine Brennkraftmaschine

Title (fr)
Circuit de refroidissement d'un moteur à combustion

Publication
EP 2383447 A3 20170705 (DE)

Application
EP 11001158 A 20110212

Priority
DE 102010018624 A 20100428

Abstract (en)
[origin: EP2383447A2] The refrigerant circuit (1) has a cylinder crankcase (3) with two opposite-lying cylinder banks (3a,3b) and associated cylinder heads (4a,4b). The cylinder crankcase and the cylinder heads are impinged with coolant over separated partial circuits (5,6) of the refrigerant circuit. The partial circuits run parallel to each other. A check valve (9) is arranged in the cylinder crankcase-partial circuit, which allows a flow of coolant only from the inlet side to outlet side through the cylinder banks.

IPC 8 full level
F01P 3/02 (2006.01); **F02F 7/00** (2006.01)

CPC (source: EP KR US)
F01P 3/02 (2013.01 - EP KR US); **F02F 1/14** (2013.01 - KR); **F02F 1/40** (2013.01 - KR); **F01P 2003/027** (2013.01 - EP US); **F01P 2060/08** (2013.01 - EP US); **F02F 7/0012** (2013.01 - EP US)

Citation (search report)
• [X] US 5497734 A 19960312 - OKADA HIROSHI [JP]
• [XI] US 2009007775 A1 20090108 - SEYMOUR JOHN C [US], et al

Cited by
EP3236041A1; FR3050233A1

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

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 2383447 A2 20111102; EP 2383447 A3 20170705; CN 102235225 A 20111109; CN 102235225 B 20150617; DE 102010018624 A1 20111103; DE 102010018624 B4 20151217; KR 101196531 B1 20121101; KR 20110120212 A 20111103; US 2011265741 A1 20111103; US 8567357 B2 20131029

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EP 11001158 A 20110212; CN 201110108439 A 20110428; DE 102010018624 A 20100428; KR 20110030739 A 20110404; US 201113092626 A 20110422