

Title (en)
Circuit assembly

Title (de)
Kreislaufanordnung

Title (fr)
Agencement de circuit

Publication
EP 2317094 A3 20131106 (DE)

Application
EP 10188486 A 20101022

Priority
DE 102009050880 A 20091027

Abstract (en)
[origin: EP2317094A2] The circulation arrangement (1) has a heat exchanger and a storage unit (8), where the heat exchanger cools an engine block (12) by a coolant circuit (2). The storage unit is provided for the heat in another coolant circuit (3). The heat is to be delivered to a heating unit (11). The storage unit is integrated in a third coolant circuit (4) for additional cooling of the engine block. The heat exchanger is a coolant cooler, particularly high-temperature coolant cooler.

IPC 8 full level
F01P 7/16 (2006.01)

CPC (source: EP)
F01P 7/165 (2013.01); **F01P 9/06** (2013.01); **F01P 2003/028** (2013.01); **F01P 2011/205** (2013.01); **F01P 2060/08** (2013.01)

Citation (search report)

- [X] EP 1331113 A1 20030730 - EBERSPAECHER J GMBH & CO [DE]
- [X] DE 19521292 A1 19961212 - OPEL ADAM AG [DE]
- [X] US 6032869 A 20000307 - ITO KOICHI [JP], et al
- [A] US 2009205590 A1 20090820 - VETROVEC JAN [US]

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FR3059728A1

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 2317094 A2 20110504; **EP 2317094 A3 20131106**; **EP 2317094 B1 20151223**; DE 102009050880 A1 20110922

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EP 10188486 A 20101022; DE 102009050880 A 20091027