

Title (en)
Cooling system for engine

Title (de)
Kühlsystem für einen Motor

Title (fr)
Système de refroidissement pour moteur

Publication
EP 2333268 A3 20120104 (EN)

Application
EP 10191902 A 20101119

Priority
JP 2009266408 A 20091124

Abstract (en)
[origin: EP2333268A2] A cooling system (1) includes a cooling portion (2) for flowing a coolant therethrough, a coolant sensitive sensor portion (3) detecting a temperature of the coolant, a heat exchanging device (4) using a heat of the coolant, a circulation flow varying device (5) for varying a circulation flow, a circulation path (6) for flowing the coolant therethrough, and a controller (7) for regulating the circulation flow by controlling the circulation flow varying device while referring to the temperature of the coolant upon a receipt of a request for a requested flow from the heat exchanging device. The controller (7) determines a condition for warming-up when the warming-up of the engine is performed in accordance with the temperature of the coolant, controls the circulation flow varying device for warming-up the engine without circulating the coolant, and increases the circulation flow to the requested flow for a predetermined period of time when the requested flow is requested during the warming-up.

IPC 8 full level
F01P 7/16 (2006.01)

CPC (source: EP US)
F01P 7/162 (2013.01 - EP US); **F01P 2023/00** (2013.01 - EP US); **F01P 2037/02** (2013.01 - EP US); **F01P 2060/08** (2013.01 - EP US)

Citation (search report)

- [XAY] EP 1308610 A2 20030507 - BAYERISCHE MOTOREN WERKE AG [DE]
- [X] DE 10332947 A1 20050203 - DAIMLER CHRYSLER AG [DE]
- [YA] DE 3810174 A1 19891005 - HELLA KG HUECK & CO [DE]
- [A] DE 4109498 A1 19920924 - BOSCH GMBH ROBERT [DE]

Cited by
EP3369906A1; FR3002281A1; EP3088715A1; US10280859B2

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 2333268 A2 20110615; EP 2333268 A3 20120104; EP 2333268 B1 20130501; CN 102072007 A 20110525; JP 2011111910 A 20110609; JP 4860746 B2 20120125; US 2011120394 A1 20110526

DOCDB simple family (application)
EP 10191902 A 20101119; CN 201010566219 A 20101124; JP 2009266408 A 20091124; US 95282710 A 20101123