

Title (en)
VEHICLE COOLING SYSTEM

Title (de)
FAHRZEUGKÜHLSYSTEM

Title (fr)
SYSTEME DE REFROIDISSEMENT DE VEHICULE

Publication
EP 3112630 A1 20170104 (EN)

Application
EP 16177126 A 20160630

Priority
IT UB20151905 A 20150703

Abstract (en)
A coolant system for a vehicle (10) with an internal combustion (IC) engine (12) includes a first coolant circuit (18) and air to liquid heat exchanger (14) for the engine (12) and a second coolant circuit (24) for a plurality of vehicle systems such as oil cooler, fuel cooler and charge air cooler (36, 48, 60). Additionally, an HVAC compressor (72) may be cooled. The control through the second cooling circuit (24) is maintained by valves (44, 56, 68, 78) for each heat exchanger (28, 30, 32, 34) and appropriate sensors (42, 54, 66, 74), along with the second coolant circuit pump output, and fan (86) output to achieve efficient heat transfer enabling a compact engine package. An alternate cooling system (90) includes a second heat exchanger (92) that provides a circuit for higher temperature operating heat exchangers (102, 104) and an additional circuit for a lower temperature operating heat exchanger (116).

IPC 8 full level
F01P 7/16 (2006.01)

CPC (source: EP)
F01P 7/165 (2013.01); **F01P 2060/02** (2013.01); **F01P 2060/04** (2013.01); **F01P 2060/10** (2013.01); **F01P 2060/14** (2013.01)

Citation (search report)
• [Y] US 2009078220 A1 20090326 - MEYER ROBERT HORNBLLOWER [US], et al
• [Y] WO 2009002233 A1 20081231 - VOLVO LASTVAGNAR AB [SE], et al
• [A] FR 2610989 A1 19880819 - VALEO [FR]
• [A] DE 102006061440 A1 20080626 - MODINE MFG CO [US]

Cited by
EP4286665A1; US10920656B2; WO2023232518A1

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

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BA ME

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