Title (en)

COOLANT PUMP WITH INTEGRATED CONTROL

Title (de)

KÜHLMITTELPUMPE MIT INTEGRIERTER REGELUNG

Title (fr)

POMPE DE REFROIDISSEMENT AVEC CONTROLE INTEGRE'

Publication

EP 3172446 B1 20191106 (DE)

Application

EP 15739275 A 20150717

Priority

- DE 102014110231 A 20140721
- EP 2015066472 W 20150717

Abstract (en)

[origin: WO2016012378A1] The invention relates to a coolant pump for pumping a coolant for an internal combustion engine in a vehicle which comprises the internal combustion engine and a central engine control. The coolant pump comprises a pump shaft (4) which is rotatably mounted in a pump housing (1) and is driven by the internal combustion engine via a belt drive (3). An impeller (5) is arranged on the pump shaft (4) and is accommodated in a pump chamber (2) of the pump housing (1), pumping a coolant. A axial piston pump (9), which is operated via a wobble plate (8) on a rear face of the impeller (5), conducts part of the pumped coolant away to a hydraulic circuit (11) which extends from the axial piston pump (9) via a proportional valve (13) back to the pumped coolant and has a branch-off (11b) between the axial piston pump (9) and the proportional valve (13) as the hydraulic actuator. A regulating slide valve (7), which adjusts a volume flow of the coolant pumped by the coolant pump, can be moved depending on a pressure in the hydraulic circuit (11). A sensor (19), which detects a parameter characteristic of the volume flow of the pumped coolant, outputs an actual value signal of the parameter. The coolant pump particularly comprises a dedicated pump control (21) which controls the proportional valve (13) in the hydraulic circuit (11) on the basis of the actual value signal of the sensor (19) and a desired value signal of the central engine control.

IPC 8 full level

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Citation (examination)

- DE 102013011209 B3 20140123 - GERAETE & PUMPENBAU GMBH [DE]
- US 2007215115 A1 20070920 - HAZAMA TADASHI [JP]
- DE 102011004172 B3 20120301 - SHW AUTOMOTIVE [DE]

Designated contracting state (EPC)

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DOCDB simple family (publication)

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DOCDB simple family (application)

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