

Title (en)
Cooling system for an internal combustion engine

Title (de)
Kühlanlage für eine Brennkraftmaschine

Title (fr)
Système de refroidissement pour un moteur à combustion interne

Publication
EP 0640753 B1 19980812 (DE)

Application
EP 94108811 A 19940608

Priority
DE 4324178 A 19930719

Abstract (en)
[origin: EP0640753A1] In a cooling system for an internal combustion engine (10) of a motor vehicle with a radiator (11) and a thermostat valve (15), by means of which the temperature of the coolant can be controlled in warm-up operation, mixed operation and radiator operation, the thermostat valve (15) containing an expansion element, which is electrically heatable for reducing the coolant temperature, the expansion element is designed in such a way that in warm-up operation and/or in mixed operation the coolant temperature is adjusted to an upper working temperature limit without heating of the expansion element. In addition a control unit is provided which, as a function of detected operating and/or environmental variables of the internal combustion engine, triggers the heating of the expansion element as required, in order to shift the operating mode of the cooling system from warm-up operation or from mixed operation at the upper working temperature limit to mixed operation or radiator operation at a coolant temperature lower than the upper working temperature limit. <IMAGE>

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F01P 7/16

IPC 8 full level
F01P 7/16 (2006.01); **F03G 7/06** (2006.01)

CPC (source: EP US)
F01P 7/167 (2013.01 - EP US); **F01P 2025/13** (2013.01 - EP US); **F01P 2025/32** (2013.01 - EP US); **F01P 2025/62** (2013.01 - EP US); **F01P 2025/64** (2013.01 - EP US); **F01P 2025/66** (2013.01 - EP US); **F01P 2070/04** (2013.01 - EP US)

Cited by
DE102004034066B4; FR3088960A1; DE10012197A1; DE10012197B4; WO2016142406A1; WO2005017326A1; US7299786B2; US7367316B2; US7249588B2; US7290527B2; US7311083B2; US7424882B2; EP0664383B1; US7398762B2; US7703439B2; US8251044B2; US8371264B2; US8671909B2; US10724422B2

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