

Title (en)  
ENGINE COOLING SYSTEM

Title (de)  
MOTORKÜHLUNGSSYSTEM

Title (fr)  
SYSTÈME DE REFROIDISSEMENT DE MOTEUR

Publication  
**EP 3636893 A1 20200415 (EN)**

Application  
**EP 18812787 A 20180221**

Priority  
• JP 2017110833 A 20170605  
• JP 2018006237 W 20180221

Abstract (en)  
An engine cooling system is provided which includes a cooled portion (10) of an engine (1), a radiator (20) and a sub-heat exchanger (30, 40, 50). If the temperature of a refrigerant at the cooled portion (10) is less than a first predetermined value (T1), the supply of the refrigerant to the cooled portion (10), the radiator (20) and the sub-heat exchanger (30, 40, 50) is reduced. When the temperature of the refrigerant at the cooled portion (10) rises to the first predetermined value (T1) or more, the reduction of supply of the refrigerant to the cooled portion (10) is lifted. Further, if the temperature of the refrigerant is equal to or higher than the first predetermined value (T1) and lower than a second predetermined value (T2), the supply of the refrigerant to the radiator (20) is stopped while the refrigerant is supplied to the sub-heat exchanger (30, 40, 50), and if the temperature of the refrigerant is equal to or higher than the second predetermined value (T2), the refrigerant is supplied to the radiator (20).

IPC 8 full level  
**F01P 7/16** (2006.01); **F01P 3/12** (2006.01); **F01P 3/18** (2006.01); **F01P 3/20** (2006.01); **F02M 26/28** (2016.01)

CPC (source: EP)  
**F01P 3/12** (2013.01); **F01P 3/18** (2013.01); **F01P 3/20** (2013.01); **F01P 7/16** (2013.01); **F01P 7/165** (2013.01); **F02M 26/28** (2016.02); **F01P 2037/02** (2013.01); **F01P 2060/02** (2013.01); **F01P 2060/04** (2013.01); **F01P 2060/045** (2013.01); **F01P 2060/08** (2013.01); **F01P 2060/16** (2013.01)

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 3636893 A1 20200415**; **EP 3636893 A4 20200415**; JP WO2018225305 A1 20200402; WO 2018225305 A1 20181213

DOCDB simple family (application)  
**EP 18812787 A 20180221**; JP 2018006237 W 20180221; JP 2019523340 A 20180221