

Title (en)

Separately cooled turbo charger for maintaining a no-flow strategy of a cylinder block coolant lining

Title (de)

Separat gekühlter Turbolader zur Aufrechterhaltung einer No-Flow Strategie eines Zylinderblockkühlmittelmantels

Title (fr)

Turbosoufflante refroidie séparément pour le maintien d'une stratégie sans écoulement d'une enveloppe de réfrigérant à bloc cylindre

Publication

**EP 2392794 B1 20190227 (DE)**

Application

**EP 10165035 A 20100607**

Priority

EP 10165035 A 20100607

Abstract (en)

[origin: EP2392794A1] The engine (1) has a cylinder block coolant jacket operated in a turbine housing (13) in a turbocharger (12) during a subphase of a heating phase of the engine according to nitrogen oxide flow strategy. A cooling circuit (4) is separated from the cylinder block coolant jacket and connected with a common pump (7) that is joined to the cylinder block coolant jacket. A bypass (11) is provided downstream to the pump and upstream to a cylinder block coolant inlet (9). The housing is made of light material i.e. aluminum, where the housing or the turbocharger is provided with the cooling circuit. An independent claim is also included for a method for controlling coolant during a heating phase of an internal combustion engine.

IPC 8 full level

**F01P 7/16** (2006.01); **F01P 3/02** (2006.01)

CPC (source: EP US)

**F01P 7/165** (2013.01 - EP US); **F02B 39/005** (2013.01 - EP US); **F01P 2003/027** (2013.01 - EP US); **F01P 2060/12** (2013.01 - EP US); **F01P 2060/16** (2013.01 - EP US)

Citation (examination)

- FR 2936566 A1 20100402 - RENAULT SAS [FR]
- WO 2007058225 A1 20070524 - TOYOTA MOTOR CO LTD [JP], et al
- EP 2309106 A1 20110413 - FORD GLOBAL TECH LLC [US]
- US 2011232590 A1 20110929 - BENET FREDERIC [FR]

Cited by

DE102015201240A1; DE112012005840B4; DE102012217229A1; EP3807504A4; CN107636274A; DE102013208676B4; DE102015201242A1; US10337389B2; DE102015201242B4; DE202015100454U1; DE102015201241A1; US10287966B2; US11555439B2; WO2017012875A1; US11293330B2; US11629630B2; DE102015201240B4

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**EP 2392794 A1 20111207**; **EP 2392794 B1 20190227**; CN 102269037 A 20111207; CN 102269037 B 20151125; US 2011296834 A1 20111208; US 8833073 B2 20140916

DOCDB simple family (application)

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