

Title (en)
Exhaust recirculation system

Title (de)
Abgasrückführsystem für eine Verbrennungskraftmaschine

Title (fr)
Système de recirculation de gaz d'échappement

Publication
EP 1589214 A3 20100929 (DE)

Application
EP 05001654 A 20050127

Priority
DE 102004019554 A 20040422

Abstract (en)
[origin: EP1589214A2] An automotive piston engine has an exhaust gas return system which all important functions within a single housing (1). The components within the unit are an exhaust gas return valve (19), an exhaust gas cooling unit (10) with heat exchanger (15), a by-pass passage (8) with a regulator flap (33). In addition, the exhaust gas return valve has a valve seat (31) that is cooled by a coolant from the exhaust gas cooling unit (10).

IPC 8 full level
F02M 25/07 (2006.01); **F28F 3/02** (2006.01)

CPC (source: EP US)
F02M 26/26 (2016.02 - EP US); **F02M 26/28** (2016.02 - EP US); **F02M 26/30** (2016.02 - EP US); **F02M 26/32** (2016.02 - EP US); **F02M 26/57** (2016.02 - EP US); **F28D 9/0031** (2013.01 - EP US); **F28D 9/0056** (2013.01 - EP US); **F28F 3/02** (2013.01 - EP US); **F28F 9/00** (2013.01 - EP US); **F02M 26/51** (2016.02 - EP US); **F02M 26/66** (2016.02 - EP US); **F02M 26/70** (2016.02 - EP US); **F28F 2009/224** (2013.01 - EP US); **F28F 2250/102** (2013.01 - EP US); **F28F 2255/14** (2013.01 - EP US)

Citation (search report)
• [A] EP 1164280 A2 20011219 - PIERBURG AG [DE]
• [A] WO 03098026 A1 20031127 - BEHR GMBH & CO KG [DE], et al

Cited by
DE102006054225B4; EP2299099A3; FR2938321A1; EP2413080A3; CN109029014A; EP1925899A3; FR2907890A1; FR2907885A1; EP2055921A1; FR2914701A1; FR2907889A1; EP2310658A4; EP1707790A1; WO2007098854A1; WO2006082049A1; WO2010102697A1; WO2007062939A1; EP2299099A2; DE102009042258A1; WO2008053091A1; WO2008053090A1; WO2009068480A1; EP2188582A1; WO2008142263A3; WO2008053093A1; WO2008058737A1; WO2008114005A3; EP2227667B1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA HR LV MK YU

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EP 1589214 A2 20051026; EP 1589214 A3 20100929; EP 1589214 B1 20110706; AT E515634 T1 20110715; DE 102004019554 A1 20051117; DE 102004019554 B4 20070830; DE 102004019554 C5 20140327; US 2005235973 A1 20051027; US 7077114 B2 20060718

DOCDB simple family (application)
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