

Title (en)  
EXHAUST-GAS COOLING MODULE FOR AN INTERNAL COMBUSTION ENGINE

Title (de)  
ABGASKÜHLMODUL FÜR EINE VERBRENNUNGSKRAFTMASCHINE

Title (fr)  
MODULE DE REFROIDISSEMENT DES GAZ D'ÉCHAPPEMENT D'UN MOTEUR À COMBUSTION INTERNE

Publication  
**EP 2558703 A1 20130220 (DE)**

Application  
**EP 11711505 A 20110323**

Priority  
• DE 102010014843 A 20100413  
• EP 2011054460 W 20110323

Abstract (en)  
[origin: WO2011128194A1] There are frequently problems in recirculating sufficient exhaust-gas quantities in large-volume supercharged engines via an exhaust-gas heat exchanger (5) and an exhaust-gas recirculation valve (14). In order to avoid these problems, it is proposed to arrange two exhaust-gas channels (20, 22) in the exhaust-gas cooling module, which exhaust-gas channels (20, 22) extend separately from one another from the inlet (26) of the exhaust-gas recirculation valve housing (2) via the exhaust-gas heat exchanger (5) to the exhaust-gas non-return valve housing (10). Exhaust-gas non-return flaps (68, 70, 72, 72) which prevent a return flow of the exhaust gas are arranged in the cooling module behind said separate exhaust-gas channels (20, 22), with the result that pressure pulses which are present can be used to ensure a sufficient exhaust-gas recirculated quantity.

IPC 8 full level  
**F02M 25/07** (2006.01)

CPC (source: EP US)  
**F02M 26/38** (2016.02 - EP US); **F02M 26/44** (2016.02 - EP US); **F02M 26/69** (2016.02 - EP US); **F02M 26/05** (2016.02 - EP US); **F02M 26/32** (2016.02 - EP US); **F02M 26/47** (2016.02 - EP US); **F02M 26/73** (2016.02 - EP US); **Y02T 10/12** (2013.01 - US)

Citation (search report)  
See references of WO 2011128194A1

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

DOCDB simple family (publication)  
**DE 102010014843 A1 20111013**; **DE 102010014843 B4 20200625**; CN 202073661 U 20111214; EP 2558703 A1 20130220; US 2013025577 A1 20130131; US 9239031 B2 20160119; WO 2011128194 A1 20111020

DOCDB simple family (application)  
**DE 102010014843 A 20100413**; CN 201120095414 U 20110402; EP 11711505 A 20110323; EP 2011054460 W 20110323; US 201113637652 A 20110323