

Title (en)

Method for recirculating the exhaust gases in an internal combustion engine apparatus and the relative internal combustion engine apparatus

Title (de)

Verfahren zur Abgasrückführung in einer Brennkraftmaschine und Brennkraftmaschine zur Durchführung dieses Verfahrens

Title (fr)

Procédé de recirculation des gaz d'échappement dans un moteur à combustion interne et moteur à combustion interne mettant en oeuvre ce procédé

Publication

**EP 1548269 A1 20050629 (EN)**

Application

**EP 04106791 A 20041221**

Priority

IT MI20032554 A 20031222

Abstract (en)

Method for recirculating the exhaust gases (EGR system) in an internal combustion engine whereby the gases to be recirculated are cooled to a temperature at which the condensable elements are condensed. The method comprises separating the particulate prior to cooling and separating the condensate, which is expelled before the gas is reintroduced into the air intake line. <IMAGE>

IPC 1-7

**F02M 25/07**

IPC 8 full level

**F02M 25/07** (2006.01); **F02B 37/00** (2006.01)

CPC (source: EP)

**F02M 26/05** (2016.02); **F02M 26/10** (2016.02); **F02M 26/22** (2016.02); **F02M 26/23** (2016.02); **F02M 26/35** (2016.02); **F02B 29/0406** (2013.01);  
**F02B 37/00** (2013.01); **F02M 26/32** (2016.02); **F02M 26/44** (2016.02)

Citation (applicant)

- US 4055158 A 19771025 - MARSEE FREDERICK J
- US 6301887 B1 20011016 - GOREL ALEXANDER [US], et al
- US 6367256 B1 20020409 - MCKEE HEATHER [US]

Citation (search report)

- [XA] US 4055158 A 19771025 - MARSEE FREDERICK J
- [X] US 6301887 B1 20011016 - GOREL ALEXANDER [US], et al
- [XA] US 2001045090 A1 20011129 - GRAY CHARLES L [US]
- [XA] EP 0869275 A1 19981007 - CATERPILLAR INC [US]

Cited by

DE102010005784A1; FR2962164A1; EP2161438A3; US2016305374A1; DE102011087256A1; US8015809B2; EP1724453A1; EP2354520A3;  
FR2893677A1; US2011079002A1; US8418461B2; US9957923B2; EP2161438A2; US8307647B2; WO2012000811A1; WO2009081226A1;  
WO2012045673A1; WO2011066871A1; WO2006045488A1; EP2354520A2; US8733329B2

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