

Title (en)
Method for detecting abnormal combustion in an internal combustion engine

Title (de)
Verfahren zur Erkennung einer anormalen Verbrennung für Verbrennungsmotoren

Title (fr)
Procédé de détection de combustion anormale pour moteurs à combustion interne

Publication
EP 2166214 B1 20130220 (FR)

Application
EP 09290618 A 20090805

Priority
FR 0805132 A 20080918

Abstract (en)
[origin: EP2166214A1] The method involves estimating cylinder pressure from a physical module and intake pressure measurement, and detecting abnormal combustion by comparing value of unit e.g. cylinder pressure gradient, calculated from cylinder pressure measurement with another value of unit e.g. cylinder pressure gradient, calculated from cylinder pressure estimation. An amplitude of the pre-ignition is characterized. A flow of the detected abnormal combustion in the combustion chamber is controlled based on the amplitude of the pre-ignition.

IPC 8 full level
F02D 35/02 (2006.01); **F02D 19/12** (2006.01); **F02D 41/40** (2006.01)

CPC (source: EP US)
F02D 19/12 (2013.01 - EP US); **F02D 35/023** (2013.01 - EP US); **F02D 35/024** (2013.01 - EP US); **F02D 41/0025** (2013.01 - EP US);
F02D 41/402 (2013.01 - EP US)

Cited by
EP3112644A4; WO2019038470A1; US9869290B2; US10508639B2; WO2014079648A1; WO2014079649A1

Designated contracting state (EPC)
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 SE SI SK SM TR

DOCDB simple family (publication)
EP 2166214 A1 20100324; EP 2166214 B1 20130220; FR 2936019 A1 20100319; FR 2936019 B1 20100910; JP 2010071284 A 20100402;
JP 5405950 B2 20140205; US 2010077992 A1 20100401; US 8677975 B2 20140325

DOCDB simple family (application)
EP 09290618 A 20090805; FR 0805132 A 20080918; JP 2009212869 A 20090915; US 56233909 A 20090918