

Title (en)

METHOD AND DEVICE FOR CONTROLLING AND DIAGNOSING A CAMSHAFT DISPLACEMENT DEVICE

Title (de)

VERFAHREN UND VORRICHTUNG ZUM STEUERN UND DIAGNOSE EINER NOCKENWELLEVERSTELLEINRICHTUNG

Title (fr)

PROCEDE ET DISPOSITIF POUR ASSURER LA COMMANDE ET DIAGNOSTIQUER UN DISPOSITIF DE DEPLACEMENT D'ARBRE A CAMES

Publication

EP 1776519 A1 20070425 (DE)

Application

EP 05773839 A 20050801

Priority

- EP 2005053746 W 20050801
- DE 102004039216 A 20040812

Abstract (en)

[origin: WO2006018377A1] The invention relates to an internal combustion engine comprising a camshaft that acts on gas exchange valves, and a phase displacement device by which means a phase (PH) between the camshaft and a crankshaft can be displaced. Said internal combustion engine also comprises an exhaust gas probe which is used to detect a variable characterising an air/fuel ratio in the cylinder, at least one sensor for detecting the phase (PH), and at least one regulating element which acts on the internal combustion engine. Measuring data records (MDS) associated with the different detected phases (PH) are determined, and comprise, in addition to the detected phase (PH), at least the detected variable characterising the air/fuel ratio in the cylinder. An optimisation method (OPT) is carried out, enabling a correction value to be determined for the detected phase (PH) according to the measuring data records (MDS), such that a quality function (GF) that depends on the variables associated with the measuring data records (MDS) is minimised or maximised. During the subsequent operation of the internal combustion engine, at least one regulating variable for controlling a regulating element is determined according to a detected phase (PH) corrected by means of at least one correction value (dPH). A defect in the internal combustion engine is diagnosed according to the correction value (dPH) for the detected phase (PH).

IPC 8 full level

F02D 41/14 (2006.01); **F01L 1/344** (2006.01)

CPC (source: EP KR)

F01L 1/34 (2013.01 - EP); **F01L 1/344** (2013.01 - KR); **F02D 13/0238** (2013.01 - EP); **F02D 41/009** (2013.01 - EP); **F02D 41/14** (2013.01 - KR); **F02D 41/1454** (2013.01 - EP); **F01L 1/3442** (2013.01 - EP); **F01L 13/0036** (2013.01 - EP); **F01L 2001/0537** (2013.01 - EP); **F01L 2800/00** (2013.01 - EP); **F01L 2800/11** (2013.01 - EP); **F01L 2800/12** (2013.01 - EP); **F02D 13/0219** (2013.01 - EP); **Y02T 10/12** (2013.01 - EP)

Citation (search report)

See references of WO 2006018377A1

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

WO 2006018377 A1 20060223; CN 100549394 C 20091014; CN 101040110 A 20070919; DE 102004039216 A1 20060413; DE 102004039216 B4 20081218; EP 1776519 A1 20070425; KR 101196129 B1 20121030; KR 20070046888 A 20070503

DOCDB simple family (application)

EP 2005053746 W 20050801; CN 200580034898 A 20050801; DE 102004039216 A 20040812; EP 05773839 A 20050801; KR 20077004496 A 20050801