

Title (en)
METHOD AND CONTROL UNIT FOR CONTROLLING AN INTERNAL COMBUSTION ENGINE

Title (de)
VERFAHREN UND STEUERGERÄT ZUM STEUERN EINER BRENNKRAFTMASCHINE

Title (fr)
PROCÉDÉ ET APPAREIL DE COMMANDE D'UN MOTEUR À COMBUSTION INTERNE

Publication
EP 2593649 A1 20130522 (DE)

Application
EP 11729631 A 20110705

Priority
• DE 102010027214 A 20100715
• EP 2011061331 W 20110705

Abstract (en)
[origin: WO2012007323A1] The invention relates to the control of an internal combustion engine (10) having at least one fuel injector (14) per cylinder (12), at least one camshaft (20) for actuating at least one inlet valve (16) and/or at least one outlet valve (18), wherein a valve-train adjusting device (21) is provided for the controllable switchover between different valve actuating characteristics, optionally having a camshaft sensor (26) which supplies a camshaft signal (CAM) which is dependent on the camshaft angle, a crankshaft sensor (28) which supplies a crankshaft signal (CRK) which represents the crankshaft angle (CRA), and a control unit (24) which controls the fuel injectors (14) in such a way that they inject predetermined fuel quantities at predetermined injection instants, wherein these stipulations take place as a function of the switching state of the valve-train adjusting device (21). In order to obtain information about this switching state, at least one cylinder pressure signal (P) which is supplied by a cylinder pressure sensor (32) for measuring the pressure in an associated cylinder (12) is evaluated with regard to interference signals (S1, S2), and the evaluation result is taken into consideration in a determination of the switching state of the valve-train adjusting device (21) for stipulating the fuel quantities to be injected and/or the injection instants.

IPC 8 full level
F02D 13/02 (2006.01); **F02D 41/34** (2006.01)

CPC (source: EP KR US)
F02D 13/0226 (2013.01 - EP KR US); **F02D 35/023** (2013.01 - EP KR US); **F02D 41/0002** (2013.01 - EP KR US); **F02D 41/30** (2013.01 - KR US); **F02D 41/345** (2013.01 - EP KR US); **F02D 2041/001** (2013.01 - EP KR US); **F02D 2041/286** (2013.01 - EP KR US); **Y02T 10/12** (2013.01 - EP KR US); **Y02T 10/40** (2013.01 - EP KR US)

Citation (search report)
See references of WO 2012007323A1

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 102010027214 A1 20120119; **DE 102010027214 B4 20130905**; EP 2593649 A1 20130522; KR 20130093601 A 20130822; US 2013206108 A1 20130815; US 9371794 B2 20160621; WO 2012007323 A1 20120119

DOCDB simple family (application)
DE 102010027214 A 20100715; EP 11729631 A 20110705; EP 2011061331 W 20110705; KR 20137003760 A 20110705; US 201113810235 A 20110705