

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 2593651 A1 20130522 (DE)

Application
EP 11728882 A 20110704

Priority
• DE 102010027215 A 20100715
• EP 2011061230 W 20110704

Abstract (en)
[origin: WO2012007307A1] The invention relates to a method and to a control unit (24) for controlling a single-cylinder or multiple-cylinder internal combustion engine (10) having at least one fuel injector (14) per cylinder (12), at least one camshaft (20) for actuating inlet valves (16) and/or outlet valves (18), and having a control unit (24) which controls the fuel injectors (14) in such a way that they inject in each case one fuel pre-injection per cylinder (12) during a starting phase of the internal combustion engine (10). In order to make an improved pre-injection strategy possible during the starting phase, according to the invention at least one cylinder pressure signal (P) which is supplied by a cylinder pressure sensor (32) for measuring the pressure in a cylinder (12) is evaluated with regard to interference signals (S1), and the evaluation result is taken into consideration at least during the starting phase in a determination of the camshaft angle.

IPC 8 full level
F02D 41/06 (2006.01); **F02D 41/34** (2006.01)

CPC (source: EP KR US)
F02D 13/0203 (2013.01 - KR); **F02D 35/023** (2013.01 - EP KR US); **F02D 41/009** (2013.01 - EP KR US); **F02D 41/062** (2013.01 - EP KR US); **F02D 41/30** (2013.01 - KR US); **F02M 69/04** (2013.01 - KR US); **F02D 2041/0092** (2013.01 - EP KR US)

Citation (search report)
See references of WO 2012007307A1

Citation (examination)
• DE 19741820 A1 19990325 - BOSCH GMBH ROBERT [DE]
• US 2007239343 A1 20071011 - OKUBO KATSURA [JP], et al
• WO 2004048761 A1 20040610 - RICARDO CONSULTING ENG [GB], et al

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 102010027215 A1 20120119; DE 102010027215 B4 20130905; EP 2593651 A1 20130522; KR 101775387 B1 20170906; KR 20130129903 A 20131129; US 2013180506 A1 20130718; US 9273656 B2 20160301; WO 2012007307 A1 20120119

DOCDB simple family (application)
DE 102010027215 A 20100715; EP 11728882 A 20110704; EP 2011061230 W 20110704; KR 20137003754 A 20110704; US 201113810274 A 20110704