

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
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Application
EP 11728882 A 20110704

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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.

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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

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