

Title (en)  
METHOD FOR CONTROL OF FUEL INJECTION FOR AN INTERNAL COMBUSTION ENGINE AND ENGINE USING SUCH A METHOD

Title (de)  
KRAFTSTOFFEINSPRITZSTEUERVERFAHREN FÜR EINEN BRENNKRAFTMOTOR UND EIN SOLCHES VERFAHREN EINSETZENDER MOTOR

Title (fr)  
PROCEDE DE CONTROLE DE L'INJECTION DU CARBURANT POUR UN MOTEUR A COMBUSTION INTERNE ET MOTEUR UTILISANT UN TEL PROCEDE

Publication  
**EP 1859133 A1 20071128 (FR)**

Application  
**EP 06709299 A 20060213**

Priority

- FR 2006000317 W 20060213
- FR 0501610 A 20050216

Abstract (en)  
[origin: WO2006087451A1] The invention relates to a method for control of fuel injection for an internal combustion engine, in particular with direct fuel injection, comprising at least one cylinder (10), one piston (30) running in said cylinder, with a projection (34) arranged in a concave bowl (32), a fuel injector (22) and a combustion chamber (26). According to the invention, during high engine loads, a first amount of fuel is injected at a piston (30) position of between 35 and 70 ° before the top dead centre position of said piston, followed by an injection of at least one second amount of fuel, the first amount of fuel being less than the second amount and the fuel is injected into said combustion chamber by means of an injector (22) with a cone angle ( $\alpha < \text{SUB} > 1 < / \text{SUB} >$ ) less than or equal to  $2 \text{Arctg } CD/2F$  where CD is the diameter of the cylinder (10) and F the distance between the points of origin of the fuel jets from the injector (22) and the position of the piston corresponding to a crankshaft angle of 50 ° with relation to the top dead centre (PMH) of the piston.

IPC 8 full level  
**F02B 23/06** (2006.01); **F02B 23/10** (2006.01); **F02D 41/40** (2006.01); **F02M 45/04** (2006.01)

CPC (source: EP KR US)  
**F02B 23/06** (2013.01 - KR); **F02B 23/0651** (2013.01 - EP US); **F02B 23/0672** (2013.01 - EP US); **F02B 23/10** (2013.01 - KR); **F02D 41/40** (2013.01 - KR); **F02D 41/403** (2013.01 - EP US); **F02M 45/04** (2013.01 - KR); **F02B 1/12** (2013.01 - EP US); **F02B 3/06** (2013.01 - EP US); **F02B 23/0669** (2013.01 - EP US); **F02B 2275/14** (2013.01 - EP US); **F02M 45/04** (2013.01 - EP US); **Y02T 10/12** (2013.01 - EP US); **Y02T 10/40** (2013.01 - EP US)

Citation (search report)  
See references of WO 2006087451A1

Citation (examination)  
WO 2005001267 A1 20050106 - DAIMLER CHRYSLER AG [DE], et al

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**FR 2882100 A1 20060818; FR 2882100 B1 20100820**; EP 1859133 A1 20071128; JP 2008530444 A 20080807; KR 101233501 B1 20130214; KR 20070110086 A 20071115; US 2009020098 A1 20090122; US 7874276 B2 20110125; WO 2006087451 A1 20060824

DOCDB simple family (application)  
**FR 0501610 A 20050216**; EP 06709299 A 20060213; FR 2006000317 W 20060213; JP 2007555661 A 20060213; KR 20077021031 A 20060213; US 81629206 A 20060213