

Title (en)

Fuel injection control apparatus for direct injection engine and a method for controlling the apparatus

Title (de)

Kraftstoffeinspritzungssteuergerät für eine Direkteinspritzbrennkraftmaschine und Methode , um dieses Gerät zu steuern

Title (fr)

Dispositif et procédé de commande de papillon pour un moteur à combustion interne à injection directe et méthode de commande de cet appareil

Publication

EP 1172542 A3 20060315 (EN)

Application

EP 01117139 A 20010713

Priority

- JP 2000214384 A 20000714
- JP 2001209377 A 20010710

Abstract (en)

[origin: EP1172542A2] A fuel injection control apparatus for an engine (1) of direct injection type having an injector (2), wherein engine control unit (51) obtains a reference value (Qstd) which is reduced so as to reflect only a decrease of a commanded value of a final fuel injection quantity (Qfinc), which decrease takes place while the idling speed of the engine is controlled, and the engine control unit further obtains an average fuel injection quantity (Qave), which average fuel injection quantity is changed so as to reflect a change of the final fuel injection quantity. The engine control unit updates a learning compensation value (Qdtrm) on the basis of a difference (#Q) of the average fuel injection quantity with respect to the reference value, and compensates the commanded value of the fuel injection quantity according to the updated learning compensation value.

IPC 8 full level

F02D 41/38 (2006.01); **F02M 65/00** (2006.01); **F02D 41/08** (2006.01); **F02D 41/14** (2006.01); **F02D 41/22** (2006.01); **F02D 41/24** (2006.01); **F02D 45/00** (2006.01)

CPC (source: EP)

F02D 31/008 (2013.01); **F02D 41/1402** (2013.01); **F02D 41/2441** (2013.01); **F02D 41/2467** (2013.01); **F02D 41/3809** (2013.01); **F02D 41/2474** (2013.01); **F02D 2041/389** (2013.01)

Citation (search report)

- [X] US 5755212 A 19980526 - AJIMA TAKUMI [JP]
- [X] PATENT ABSTRACTS OF JAPAN vol. 018, no. 224 (M - 1596) 22 April 1994 (1994-04-22)
- [X] PATENT ABSTRACTS OF JAPAN vol. 018, no. 123 (M - 1568) 28 February 1994 (1994-02-28)
- [X] PATENT ABSTRACTS OF JAPAN vol. 012, no. 336 (M - 739) 9 September 1988 (1988-09-09)

Cited by

EP2116708A3; KR100432034B1; EP1529940A3; CN109328264A; EP3453865A4; US10711727B2; US9512798B2

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

EP 1172542 A2 20020116; **EP 1172542 A3 20060315**; **EP 1172542 B1 20130828**; JP 2002089333 A 20020327; JP 4543588 B2 20100915

DOCDB simple family (application)

EP 01117139 A 20010713; JP 2001209377 A 20010710