

Title (en)

Method, control and/or regulation device for operation of an internal combustion engine

Title (de)

Verfahren zum Betreiben eines Kraftstoffeinspritzsystems, sowie Steuer- und/oder Regelgerät zum Betreiben eines Kraftstoffeinspritzsystems

Title (fr)

Procédé, et appareil de commande et/ou de régulation destinés à un moteur à combustion interne

Publication

EP 1394397 A3 20091209 (DE)

Application

EP 03014503 A 20030703

Priority

DE 10239614 A 20020829

Abstract (en)

[origin: EP1394397A2] The method involves monitoring the variation of the piezoelectric actuator (24) voltage at least in a closed position of the closure element (42) at which the actuator voltage is greater than null and drawing a conclusion re a leak in the coupler region from the voltage variation via its relationship with the bias force and hence the pressure change in the hydraulic coupler. Independent claims are also included for the following: (a) a computer program for implementing the inventive method (b) a control and/or regulating device for operating the fuel injection system (c) and n internal combustion engine with an inventive control and/or regulating device.

IPC 8 full level

F02D 41/20 (2006.01); **F02M 65/00** (2006.01); **F02D 41/22** (2006.01); **F02D 41/38** (2006.01); **F02D 45/00** (2006.01); **F02M 47/00** (2006.01); **F02M 47/02** (2006.01); **F02M 51/00** (2006.01); **F02M 51/06** (2006.01); **F02M 59/46** (2006.01); **F02M 61/20** (2006.01); **G01R 31/28** (2006.01); **H01L 41/04** (2006.01)

CPC (source: EP)

F02D 41/2096 (2013.01); **F02D 41/221** (2013.01); **F02M 63/00** (2013.01); **F02D 2041/2051** (2013.01); **F02D 2041/224** (2013.01); **F02D 2041/225** (2013.01); **F02D 2200/0602** (2013.01); **F02M 47/027** (2013.01); **F02M 2200/21** (2013.01); **F02M 2700/05** (2013.01)

Citation (search report)

- [X] DE 10002270 C1 20010628 - BOSCH GMBH ROBERT [DE]
- [A] EP 0971119 A2 20000112 - ISUZU MOTORS LTD [JP]
- [A] EP 1167729 A1 20020102 - BOSCH GMBH ROBERT [DE]

Cited by

US10018138B2; WO2010142488A1; WO2015189059A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

Designated extension state (EPC)

AL LT LV MK

DOCDB simple family (publication)

EP 1394397 A2 20040303; **EP 1394397 A3 20091209**; DE 10239614 A1 20040311; JP 2004138048 A 20040513

DOCDB simple family (application)

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