

Title (en)

METHOD FOR CONTROLLING A PIEZO-ACTUATED FUEL-INJECTION VALVE

Title (de)

VERFAHREN ZUM ANSTEUERN EINES PIEZOBETRIEBENEN KRAFTSTOFF-EINSPRITZVENTILS

Title (fr)

PROCEDE DE COMMANDE D'UNE SOUPAPE D'INJECTION DE CARBURANT ACTIONNEE PAR UN ACTIONNEUR PIEZOELECTRIQUE

Publication

EP 1423593 A1 20040602 (DE)

Application

EP 02760150 A 20020902

Priority

- DE 0203226 W 20020902
- DE 10143501 A 20010905

Abstract (en)

[origin: WO03023212A1] According to the invention, the current guided to the piezo actuator and the voltage which is consequently established thereon is used for calculating with the help of a non-linear actuator model, the characteristics of the longitudinal variations (s) and the force (F) exerted by the actuator (F), and variables therefrom or the derived variables (dF/dt) therefrom determine the beginning of the opening (tA) of a servovalve and the duration of injection (D).

IPC 1-7

F02D 41/20; H01L 41/04

IPC 8 full level

F02M 45/02 (2006.01); **F02D 41/20** (2006.01); **F02D 41/40** (2006.01); **F02M 51/00** (2006.01); **F02M 51/06** (2006.01); **H02N 2/06** (2006.01); **H10N 30/80** (2023.01); **F02M 45/08** (2006.01); **F02M 63/00** (2006.01)

CPC (source: EP US)

F02D 41/2096 (2013.01 - EP US); **F02D 2041/143** (2013.01 - EP US); **F02D 2041/1433** (2013.01 - EP US); **F02D 2041/2055** (2013.01 - EP US); **F02M 45/08** (2013.01 - EP US); **F02M 51/0603** (2013.01 - EP US)

Designated contracting state (EPC)

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

DOCDB simple family (publication)

WO 03023212 A1 20030320; DE 10143501 C1 20030528; DE 50208611 D1 20061214; EP 1423593 A1 20040602; EP 1423593 B1 20061102; JP 2005501999 A 20050120; JP 4047809 B2 20080213; US 2005072854 A1 20050407; US 7040297 B2 20060509

DOCDB simple family (application)

DE 0203226 W 20020902; DE 10143501 A 20010905; DE 50208611 T 20020902; EP 02760150 A 20020902; JP 2003527256 A 20020902; US 79501504 A 20040305