

Title (en)

Control apparatus and computer program for driving a fuel valve in an internal combustion engine

Title (de)

Steuergerät und Computerprogramm zum Ansteuern eines Kraftstoffventils einer Brennkraftmaschine

Title (fr)

Appareil de commande et programme informatique de pilotage du dosage du carburant dans un moteur à combustion interne

Publication

**EP 1460255 A3 20060719 (DE)**

Application

**EP 03023174 A 20031013**

Priority

DE 10312712 A 20030321

Abstract (en)

[origin: EP1460255A2] The computer (50) contains a memory (52) which may be a diskette, a CD or a flash memory. The computer sends control signals to a piezoelectric valve actuator (100) and to a direct fuel injection system. The piezoelectric actuator drives the valve (300) via a hydraulic adjuster (200) which consists of a piston and cylinder unit.

IPC 8 full level

**F02D 41/20** (2006.01)

CPC (source: EP)

**F02D 41/2096** (2013.01); **F02D 2041/2055** (2013.01)

Citation (search report)

- [X] WO 02092985 A1 20021121 - SIEMENS AG [DE], et al
- [X] DE 19931233 A1 20010118 - SIEMENS AG [DE]
- [X] WO 0123754 A1 20010405 - BOSCH GMBH ROBERT [DE], et al
- [A] SPURK J H ET AL: "Interaction of nonlinear dynamics and unsteady flow in fuel injectors", 1992, SAE TECH PAP SER; SAE TECHNICAL PAPER SERIES 1992 PUBL BY SAE, WARRENDALE, PA, USA, PAGE(S) 1 - 8, XP002382139
- [A] "KRAFTFAHR- TECHNISCHES TASCHENBUCH. Bosch Auflage 21", 1994, STUTTGART, XP002382135

Designated contracting state (EPC)

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DOCDB simple family (publication)

**EP 1460255 A2 20040922**; **EP 1460255 A3 20060719**; **EP 1460255 B1 20090318**; DE 10312712 A1 20040930; DE 50311306 D1 20090430; ES 2320746 T3 20090528

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