

Title (en)

Fuel injection system for internal combustion engines

Title (de)

Kraftstoffeinspritzeinrichtung für Brennkraftmaschinen

Title (fr)

Dispositif d'injection de carburant dans un moteur à combustion interne

Publication

EP 1241347 A3 20040310 (DE)

Application

EP 02004726 A 20020301

Priority

DE 10112432 A 20010315

Abstract (en)

[origin: EP1241347A2] The device has a fuel pump per cylinder connected to an injection valve, a first control valve for the connection between the pump's working chamber and a diversion control chamber and a second control valve for the pressure in a control pressure chamber that acts on a valve closure element in the closing direction. The diversion control chamber is a pressure reservoir in which a raised pressure is maintained relative to the fuel tank pressure. The device has a fuel pump (10) per cylinder connected to a fuel injection valve (12), a first electrically controlled valve (60) for controlling the connection between the pump's working chamber and a cut-off control chamber (62) and a second electrically controlled control valve (68) for controlling the pressure in a control pressure chamber that acts at least indirectly on a valve closure element in the closing direction. The cut-off control chamber is a pressure reservoir in which a raised pressure is maintained with respect to the pressure in the fuel tank (24).

IPC 1-7

F02M 45/12; **F02M 45/00**; **F02M 45/06**; **F02M 47/02**; **F02M 59/36**; **F02M 63/00**; **F02M 61/20**

IPC 8 full level

F02M 45/00 (2006.01); **F02M 45/02** (2006.01); **F02M 45/04** (2006.01); **F02M 45/06** (2006.01); **F02M 45/12** (2006.01); **F02M 47/02** (2006.01); **F02M 59/36** (2006.01); **F02M 61/20** (2006.01); **F02M 63/00** (2006.01)

CPC (source: EP US)

F02M 45/00 (2013.01 - EP US); **F02M 45/02** (2013.01 - EP US); **F02M 45/04** (2013.01 - EP US); **F02M 45/06** (2013.01 - EP US); **F02M 45/12** (2013.01 - EP US); **F02M 47/027** (2013.01 - EP US); **F02M 55/04** (2013.01 - EP US); **F02M 59/366** (2013.01 - EP US); **F02M 61/205** (2013.01 - EP US); **F02M 63/0007** (2013.01 - EP US); **F02M 2200/40** (2013.01 - EP US)

Citation (search report)

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- [XY] PATENT ABSTRACTS OF JAPAN vol. 018, no. 360 (M - 1634) 7 July 1994 (1994-07-07)

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Designated contracting state (EPC)

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EP 1241347 A2 20020918; **EP 1241347 A3 20040310**; **EP 1241347 B1 20060510**; DE 10112432 A1 20020919; DE 50206716 D1 20060614; US 2002129792 A1 20020919; US 6651626 B2 20031125

DOCDB simple family (application)

EP 02004726 A 20020301; DE 10112432 A 20010315; DE 50206716 T 20020301; US 9742902 A 20020315