

Title (en)

Fuel injection system for internal combustion engine

Title (de)

Kraftstoffeinspritzeinrichtung für Brennkraftmaschinen

Title (fr)

Système d'injection de carburant pour moteur à combustion interne

Publication

EP 1243785 A3 20040128 (DE)

Application

EP 02004727 A 20020301

Priority

DE 10113654 A 20010321

Abstract (en)

[origin: EP1243785A2] The device has a fuel pump (10) for each cylinder, fuel injection valves (12), and electric control valves (60). A first control valve is located close to the fuel pump, a second control valve (64) is positioned close to the fuel injection valve, and is operated by the pressure in the control pressure chamber (52) of the injection valve, which charges the valve member (28) in closing direction. The second control valve controls a connection (56) between the control pressure chamber and the pump working chamber (22).

IPC 1-7

F02M 45/04; **F02M 57/02**; **F02M 59/36**; **F02M 47/02**; **F02M 45/02**

IPC 8 full level

F02M 45/02 (2006.01); **F02M 45/04** (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 45/02 (2013.01 - EP US); **F02M 45/04** (2013.01 - EP US); **F02M 47/027** (2013.01 - EP US); **F02M 59/366** (2013.01 - EP US); **F02M 61/205** (2013.01 - EP US); **F02M 2200/21** (2013.01 - EP US)

Citation (search report)

- [E] EP 1236884 A2 20020904 - BOSCH GMBH ROBERT [DE]
- [XY] EP 0823550 A1 19980211 - LUCAS IND PLC [GB]
- [X] US 5626119 A 19970506 - TIMMS COLIN T [GB]
- [Y] EP 0823549 A2 19980211 - LUCAS IND PLC [GB], et al

Cited by

US7281523B2; WO2004072470A1

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 1243785 A2 20020925; **EP 1243785 A3 20040128**; DE 10113654 A1 20020926; US 2002134359 A1 20020926; US 6659086 B2 20031209

DOCDB simple family (application)

EP 02004727 A 20020301; DE 10113654 A 20010321; US 10171202 A 20020321