

Title (en)

Fuel injection system for internal combustion engine

Title (de)

Kraftstoffeinspritzeinrichtung für eine Brennkraftmaschine

Title (fr)

Système d'injection de carburant pour moteur à combustion interne

Publication

**EP 1260705 B1 20041020 (DE)**

Application

**EP 02008448 A 20020413**

Priority

DE 10123994 A 20010517

Abstract (en)

[origin: DE10123994A1] The device has an electrically controlled valve that controls the connection of the pump's working chamber to a relief chamber and a second valve that controls the connection of a fuel injection valve control pressure chamber and the pump's working chamber. The valves are controlled by a common actuator that controls pressure in an actuator pressure chamber. Both control valves have a valve element subjected to actuator pressure chamber pressure. The device has a fuel pump (10) per engine cylinder forming a unit with a fuel injection valve (12). An electrically controlled valve (60) controls the connection of the pump's working chamber to a relief chamber and a second valve (70) controls the connection of a control pressure chamber in the fuel injection valve and the pump's working chamber. The valves are controlled by a common actuator (64) that controls the pressure in an actuator pressure chamber. Both control valves have a valve element subjected to the pressure in the actuator pressure chamber.

IPC 1-7

**F02M 57/02**; **F02M 59/46**; **F02M 47/02**

IPC 8 full level

**F02M 45/02** (2006.01); **F02M 47/00** (2006.01); **F02M 47/02** (2006.01); **F02M 51/00** (2006.01); **F02M 51/06** (2006.01); **F02M 57/02** (2006.01); **F02M 59/36** (2006.01); **F02M 59/46** (2006.01); **F02M 61/20** (2006.01); **F02M 63/00** (2006.01)

CPC (source: EP US)

**F02M 45/02** (2013.01 - EP US); **F02M 47/027** (2013.01 - EP US); **F02M 57/02** (2013.01 - EP US); **F02M 59/36** (2013.01 - EP US); **F02M 59/366** (2013.01 - EP US); **F02M 59/468** (2013.01 - EP US); **F02M 63/0026** (2013.01 - EP US); **F02M 63/0049** (2013.01 - EP US); **F02M 63/0061** (2013.01 - EP US); **F02M 2200/703** (2013.01 - EP US)

Cited by

US7281523B2; WO2004072470A1

Designated contracting state (EPC)

DE FR GB IT SE

DOCDB simple family (publication)

**EP 1260705 A1 20021127**; **EP 1260705 B1 20041020**; DE 10123994 A1 20021121; DE 50201333 D1 20041125; JP 2002349387 A 20021204; JP 3658575 B2 20050608; US 2002170537 A1 20021121; US 6758414 B2 20040706

DOCDB simple family (application)

**EP 02008448 A 20020413**; DE 10123994 A 20010517; DE 50201333 T 20020413; JP 2002143695 A 20020517; US 14708602 A 20020517