Title (en)

FUEL INJECTION VALVE FOR INTERNAL COMBUSTION ENGINES

Title (de)

KRAFTSTOFFEINSPRITZVENTIL FÜR BRENNKRAFTMASCHINEN

Title (fr)

SOUPAPE D'INJECTION DE CARBURANT POUR MOTEUR A COMBUSTION INTERNE

Publication

EP 0975866 A1 20000202 (DE)

Application

EP 98965574 A 19981117

Priority

- DE 9803387 W 19981117
- DE 19802244 A 19980122

Abstract (en)

[origin: DE19802244A1] A fuel injection valve for IC engines has a housing (1) that has a supply for fuel from a high pressure fuel source plus an injection needle guided in the housing that works with a sealing face located at its one end with a valve seat in the housing. Thereby the needle controls a connection between a pressure chamber permanently connected to the supply and at least one injection opening. At its other end it is exposed directly to the pressure in a control pressure chamber (7) bounded by a movable wall (6) via a Z- throttle (8) permanently connected to the supply (5) in a cylinder (4). The movable wall is in working connection with the injection needle. From the control pressure chamber, a relief pipe containing a drain throttle (26) leads away, whose outlet is controlled in a relief chamber by a solenoid valve (29). Its valve member (45,50) is connected with an armature (40) and is guided in an insert (10) which accommodates the valve seat (28) of the solenoid valve, the relief pipe with drain throttle and the control pressure chamber. It is tensioned by the housing of the solenoid valve with the housing of the fuel injection valve. The insert additionally accommodates the cylinder with the movable wall.

IPC 1-7

F02M 47/02

IPC 8 full level

F02M 47/00 (2006.01); **F02M 47/02** (2006.01); **F02M 61/16** (2006.01); **F02M 63/00** (2006.01)

CPC (source: EP KR US)

F02M 47/02 (2013.01 - KR); **F02M 47/027** (2013.01 - EP US); **F02M 61/168** (2013.01 - EP US); **F02M 63/0031** (2013.01 - EP US); F02M 2547/003 (2013.01 - EP US)

Citation (search report)

See references of WO 9937909A1

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

DE 19802244 A1 19990729; DE 59810087 D1 20031211; EP 0975866 A1 20000202; EP 0975866 B1 20031105; JP 2001516426 A 20010925; JP 4260228 B2 20090430; KR 100680523 B1 20070209; KR 20000070729 A 20001125; US 6302087 B1 20011016; WO 9937909 A1 19990729

DOCDB simple family (application)

DE 19802244 A 19980122; DE 59810087 T 19981117; DE 9803387 W 19981117; EP 98965574 A 19981117; JP 53771699 A 19981117; KR 19997006979 A 19990803; US 38138099 A 19990920