

Title (en)
FUEL INJECTION VALVE FOR INTERNAL COMBUSTION ENGINES

Title (de)
KRAFTSTOFFEINSPRITZVENTIL FÜR BRENNKRAFTMASCHINEN

Title (fr)
SOUPAPE D'INJECTION DE CARBURANT POUR MOTEURS A COMBUSTION

Publication
EP 1387940 B1 20070117 (DE)

Application
EP 02735007 A 20020322

Priority

- DE 0201038 W 20020322
- DE 10121892 A 20010505

Abstract (en)
[origin: WO02090755A1] The invention relates to a fuel injection valve for internal combustion engines, comprising a housing (12), in which a piston-shaped valve member (35) is arranged in a longitudinally displaceable manner in a bore (34). The end on the combustion chamber side of said valve member connects at least one injection port (39) to a pressure chamber (37) embodied in the housing (12) by means of a longitudinal movement in opening direction. An inlet channel (14) is configured in the housing (12), which leads to the pressure chamber (37) and by means of which the pressure chamber (37) can be filled with fuel at high pressure. A control chamber (20) filled with fuel is also configured in the housing (12), wherein the pressure in the control chamber (20) exerts at least indirectly a force upon the valve member (35) acting in closing direction. The control chamber (20) is connected to the inlet channel (14) and can be connected to the leak oil chamber (23) by a control valve (16), in which the pressure is significantly lower than in the inlet channel (14). A damping chamber (46) is configured in the housing (12), which is connected to the inlet channel (14) by means of a throttle (44).

IPC 8 full level
F02M 47/00 (2006.01); **F02M 47/02** (2006.01); **F02M 55/04** (2006.01); **F02M 61/10** (2006.01); **F02M 61/16** (2006.01); **F02M 63/00** (2006.01)

CPC (source: EP US)
F02M 47/027 (2013.01 - EP US); **F02M 55/04** (2013.01 - EP US); **F02M 2200/315** (2013.01 - EP US)

Citation (examination)
DE 19842067 A1 20000316 - DAIMLER CHRYSLER AG [DE]

Designated contracting state (EPC)
DE FR GB

DOCDB simple family (publication)
WO 02090755 A1 20021114; CN 1462337 A 20031217; DE 10121892 A1 20021107; DE 50209290 D1 20070308; EP 1387940 A1 20040211; EP 1387940 B1 20070117; JP 2004519598 A 20040702; US 2003168528 A1 20030911; US 6691934 B2 20040217

DOCDB simple family (application)
DE 0201038 W 20020322; CN 02801462 A 20020322; DE 10121892 A 20010505; DE 50209290 T 20020322; EP 02735007 A 20020322; JP 2002587792 A 20020322; US 31238703 A 20030324