

Title (en)
FUEL INJECTION DEVICE FOR AN INTERNAL COMBUSTION ENGINE

Title (de)
KRAFTSTOFFEINSPRITZVORRICHTUNG FÜR BRENNKRAFTMASCHINEN

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

Publication
EP 1068439 A1 20010117 (DE)

Application
EP 99962098 A 19991130

Priority
• DE 9903783 W 19991130
• DE 19900033 A 19990102

Abstract (en)
[origin: DE19900033A1] The invention relates to a fuel injection device for internal combustion engines in which the fuel injection valve member is controlled by control of the pressure in a control chamber (25). The control chamber is either relieved by a 2-3 relay control valve (28) or connected to a high-pressure fuel source (14). The control valve (28) is configured such that it comprises a valve body (35) which on either side has a valve sealing surface (37, 42) which both cooperate with a first (38) and a second (41) valve seat and control the high-pressure inflow into or outflow out of the control chamber (25). To influence the dynamics of the control processes the valve body has a throttle gap (47) upstream of its second valve sealing surface (42) and a collar (49) downstream of its first valve sealing surface (37). Between said collar (49) and the throttle gap (47) a pressure-fluid channel (26) starts which leads to the control chamber (25) whose inflow and outflow are thus influenced by the said collar and throttle gap.

IPC 1-7
F02M 47/02

IPC 8 full level
F02M 47/00 (2006.01); **F02M 47/02** (2006.01); **F02M 59/46** (2006.01); **F02M 63/00** (2006.01)

CPC (source: EP US)
F02M 47/027 (2013.01 - EP US); **F02M 63/0033** (2013.01 - EP US); **F02M 63/0045** (2013.01 - EP US); **F02M 2200/21** (2013.01 - EP US); **F02M 2200/28** (2013.01 - EP US)

Citation (search report)
See references of WO 0040854A1

Designated contracting state (EPC)
DE FR GB IT

DOCDB simple family (publication)
DE 19900033 A1 20000706; EP 1068439 A1 20010117; JP 2002534637 A 20021015; US 6390066 B1 20020521; WO 0040854 A1 20000713

DOCDB simple family (application)
DE 19900033 A 19990102; DE 9903783 W 19991130; EP 99962098 A 19991130; JP 2000592537 A 19991130; US 62343000 A 20001103