

Title (en)
FUEL INJECTION VALVE

Title (de)
KRAFTSTOFFEINSPRITZVENTIL

Title (fr)
SOUPAPE D'INJECTION DE CARBURANT

Publication
EP 1109998 B1 20050810 (DE)

Application
EP 00952881 A 20000701

Priority
• DE 0002148 W 20000701
• DE 19930641 A 19990702

Abstract (en)
[origin: DE19930641A1] The invention relates to a fuel injection valve for internal combustion engines. Said fuel injection valve comprises a valve member (11) that can be axially outwardly displaced against the force of a closing spring (31) within a bore (9) of a valve body (1). At the combustion chamber end of said valve member a closing head (13) is provided that projects from the bore and that represents a valve closing member. On the side facing the valve body (1) the closing head comprises a valve stem surface (15) which it interacts with a valve face (17) that is located on the front face of the valve body (1) on the combustion chamber end. The valve further comprises at least one injection opening on the closing head which extends from the compression chamber (19). The outlet of said injection opening is covered by the valve body (1) in the closed position of the valve member (11) and is released during the outwardly directed opening stroke. In order to increase the service life of the inventive fuel injection valve a hydraulic valve closure dampening device (37, 39, 41, 43, 45, 47) is integrated into the fuel injection valve.

IPC 1-7
F02M 61/08; **F02M 61/20**; **F02M 61/04**

IPC 8 full level
F02M 61/16 (2006.01); **F02M 55/00** (2006.01); **F02M 61/04** (2006.01); **F02M 61/08** (2006.01); **F02M 61/20** (2006.01); **F02M 63/00** (2006.01)

CPC (source: EP)
F02M 55/002 (2013.01); **F02M 61/045** (2013.01); **F02M 61/08** (2013.01); **F02M 61/20** (2013.01); **F02M 2200/304** (2013.01)

Designated contracting state (EPC)
DE FR GB

DOCDB simple family (publication)
DE 19930641 A1 20010111; BR 0006887 A 20010612; CN 1316036 A 20011003; DE 50010916 D1 20050915; EP 1109998 A1 20010627; EP 1109998 B1 20050810; JP 2003530503 A 20031014; WO 0102717 A1 20010111

DOCDB simple family (application)
DE 19930641 A 19990702; BR 0006887 A 20000701; CN 00801269 A 20000701; DE 0002148 W 20000701; DE 50010916 T 20000701; EP 00952881 A 20000701; JP 2001507927 A 20000701