

Title (en)
FUEL INJECTION VALVE

Title (de)
BRENNSTOFFEINSPRITZVENTIL

Title (fr)
SOUPAPE D'INJECTION DE CARBURANT

Publication
EP 1458971 A1 20040922 (DE)

Application
EP 02790256 A 20021125

Priority
• DE 0204313 W 20021125
• DE 10162250 A 20011218

Abstract (en)
[origin: WO03052260A1] A fuel injection valve (1) for directly injecting fuel into the combustion chamber of an internal combustion engine, comprising a piezoelectric or magnetostrictive actuator (3) and a valve closing body (11) actuated by the actuator (3). The valve closing body (11) interacts with a valve seat surface (12) to embody a seal seat. An actuating path between the actuator (3) and the valve closing body (11) has a compensation gap (9). The actuator (3) and/or the actuating path is provided with a measuring element (13) measuring the forces exercised by the actuator (3) on the valve closing body (11). The actuator is regulated so as to keep the compensation gap (9) closed.

IPC 1-7
F02M 51/06; **F02M 61/16**

IPC 8 full level
F02M 51/00 (2006.01); **F02M 51/06** (2006.01); **F02M 61/08** (2006.01); **F02M 61/16** (2006.01); **H01L 41/083** (2006.01)

CPC (source: EP KR US)
F02M 51/0603 (2013.01 - EP KR US); **F02M 61/08** (2013.01 - EP KR US); **F02M 61/167** (2013.01 - EP KR US); **H10N 30/101** (2024.05 - KR); **H10N 30/50** (2023.02 - KR); **H10N 30/101** (2024.05 - EP US); **H10N 30/50** (2023.02 - EP US)

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

DOCDB simple family (publication)
WO 03052260 A1 20030626; DE 10162250 A1 20030703; EP 1458971 A1 20040922; JP 2005513324 A 20050512; JP 4272996 B2 20090603; KR 100935811 B1 20100108; KR 20040068253 A 20040730; US 2004118951 A1 20040624; US 6953158 B2 20051011

DOCDB simple family (application)
DE 0204313 W 20021125; DE 10162250 A 20011218; EP 02790256 A 20021125; JP 2003553119 A 20021125; KR 20047009337 A 20021125; US 46853704 A 20040123