

Title (en)
FUEL INJECTION VALVE

Title (de)
BRENNSTOFFEINSPRITZVENTIL

Title (fr)
SOUPAPE D'INJECTION DE CARBURANT

Publication
EP 1045974 A1 20001025 (DE)

Application
EP 99948655 A 19990720

Priority
• DE 9902229 W 19990720
• DE 19849210 A 19981026

Abstract (en)
[origin: DE19849210A1] The fuel injection valve has a magnet coil (15) acting on an armature (17) in a lifting direction against a restoring spring (23) and a valve needle connected to a valve closure body, whereby the armature can move between a stop (21) limiting its movement in the lifting direction and a second stop (26) connected to the valve needle for limiting movement in the opposite direction. A damping spring (41) is arranged between the second stop and the armature.

IPC 1-7
F02M 51/06

IPC 8 full level
F02M 51/06 (2006.01)

CPC (source: EP KR US)
F02M 51/0671 (2013.01 - EP US); **F02M 51/0685** (2013.01 - EP US); **F02M 61/20** (2013.01 - KR); **F02M 2200/306** (2013.01 - EP US)

Citation (search report)
See references of WO 0025018A1

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

DOCDB simple family (publication)
DE 19849210 A1 20000427; CZ 20002388 A3 20010314; CZ 294046 B6 20040915; DE 59907862 D1 20040108; EP 1045974 A1 20001025; EP 1045974 B1 20031126; JP 2002528672 A 20020903; KR 20010033464 A 20010425; US 6367769 B1 20020409; WO 0025018 A1 20000504

DOCDB simple family (application)
DE 19849210 A 19981026; CZ 20002388 A 19990720; DE 59907862 T 19990720; DE 9902229 W 19990720; EP 99948655 A 19990720; JP 2000578556 A 19990720; KR 20007006965 A 20000622; US 58245500 A 20000831