

Title (en)
FUEL INJECTION VALVE

Title (de)
BRENNSTOFFEINSPRITZVENTIL

Title (fr)
SOUPAPE D'INJECTION DE CARBURANT

Publication
EP 1430217 A1 20040623 (DE)

Application
EP 02754260 A 20020621

Priority
• DE 0202298 W 20020621
• DE 10143500 A 20010905

Abstract (en)
[origin: DE10143500A1] The device has a valve needle that interacts with a valve seat surface to form a seal and an armature (20) connected to the needle and acted on by a restoring spring in the closing direction. The armature has a peripheral guide collar guided by a counter surface. The collar (34) has a flat deviating from the circular outer contour of the armature so that at least one aperture (40) is formed between the collar and the counter surface (41).

IPC 1-7
F02M 51/06

IPC 8 full level
F02M 51/06 (2006.01); **F02M 61/12** (2006.01); **F02M 61/16** (2006.01); **F02M 63/00** (2006.01)

CPC (source: EP KR US)
F02M 51/0625 (2013.01 - EP KR US); **F02M 51/0671** (2013.01 - EP KR US); **F02M 51/0685** (2013.01 - EP KR US);
F02M 61/16 (2013.01 - EP KR US); **F02M 61/165** (2013.01 - EP US); **F02M 2200/306** (2013.01 - EP KR US);
F02M 2200/505 (2013.01 - EP KR US); **Y10S 239/90** (2013.01 - EP KR US)

Citation (search report)
See references of WO 03027482A1

Designated contracting state (EPC)
DE FR GB IT

DOCDB simple family (publication)
DE 10143500 A1 20030320; CN 100416083 C 20080903; CN 1473240 A 20040204; DE 50203981 D1 20050922; EP 1430217 A1 20040623;
EP 1430217 B1 20050817; JP 2005504216 A 20050210; JP 4739668 B2 20110803; KR 100878132 B1 20090114; KR 20040044852 A 20040531;
US 2006011751 A1 20060119; US 7093779 B2 20060822; WO 03027482 A1 20030403

DOCDB simple family (application)
DE 10143500 A 20010905; CN 02802835 A 20020621; DE 0202298 W 20020621; DE 50203981 T 20020621; EP 02754260 A 20020621;
JP 2003531017 A 20020621; KR 20047003339 A 20020621; US 41604603 A 20031009