

Title (en)
Dual source fuel injector

Title (de)
Doppelter Brennstoffzulauf eines Kraftstoffeinspritzventils

Title (fr)
Injecteur de carburant à double source

Publication
EP 1312789 A3 20041215 (DE)

Application
EP 02025290 A 20021113

Priority
DE 10156657 A 20011117

Abstract (en)
[origin: EP1312789A2] Two or more bores (11) connect the second supply channel (10) to discharge the second fluid into the fluid chamber (6) or the first supply channel (7), where a swirling flow is produced.

IPC 1-7
F02M 43/04; **F02M 51/06**; **F02M 61/16**; **B01F 5/04**; **B60L 11/18**

IPC 8 full level
F02M 43/04 (2006.01); **F02M 51/06** (2006.01); **F02M 51/08** (2006.01); **F02M 61/16** (2006.01)

CPC (source: EP US)
F02M 43/04 (2013.01 - EP US); **F02M 51/0682** (2013.01 - EP US); **F02M 55/008** (2013.01 - EP US); **F02M 61/162** (2013.01 - EP US)

Citation (search report)

- [Y] DE 19650559 C1 19980326 - MTU FRIEDRICHSHAFEN GMBH [DE]
- [Y] DE 4230641 A1 19940317 - BOSCH GMBH ROBERT [DE]
- [A] CA 2279149 A1 20010130 - GFI CONTROL SYSTEMS INC [US]
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- [A] US 5546902 A 19960820 - PALUCH JOHN W D [AU], et al

Cited by
CN103061938A

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)
EP 1312789 A2 20030521; **EP 1312789 A3 20041215**; **EP 1312789 B1 20090624**; DE 10156657 A1 20030821; DE 10156657 C2 20031204; DE 50213630 D1 20090806; JP 2003166450 A 20030613; JP 4308503 B2 20090805; US 2003213858 A1 20031120; US 6976642 B2 20051220

DOCDB simple family (application)
EP 02025290 A 20021113; DE 10156657 A 20011117; DE 50213630 T 20021113; JP 2002334296 A 20021118; US 29280902 A 20021113