

Title (en)

Fuel injection device for an internal combustion engine

Title (de)

Kraftstoffeinspritzeinrichtung für eine Brennkraftmaschine

Title (fr)

Dispositif d'injection de carburant pour moteur à combustion interne

Publication

EP 1284360 B1 20050518 (DE)

Application

EP 02016075 A 20020719

Priority

DE 10139545 A 20010810

Abstract (en)

[origin: EP1284360A2] The pressure chamber (40) of the fuel injection valve (12) has a connection (100) with the spring chamber (46), in which a non return valve (102) is located. It opens towards the pressure chamber.

IPC 1-7

F02M 59/46; **F02M 61/16**; **F02M 63/00**; **F02M 55/00**; **F02M 57/02**; **F02M 59/36**

IPC 8 full level

F02M 45/08 (2006.01); **F02M 55/00** (2006.01); **F02M 57/02** (2006.01); **F02M 59/36** (2006.01); **F02M 59/46** (2006.01); **F02M 61/10** (2006.01); **F02M 61/16** (2006.01); **F02M 61/20** (2006.01); **F02M 63/00** (2006.01); **F02M 59/48** (2006.01)

CPC (source: EP US)

F02M 45/08 (2013.01 - EP US); **F02M 57/023** (2013.01 - EP US); **F02M 59/466** (2013.01 - EP US); **F02M 61/16** (2013.01 - EP US); **F02M 61/205** (2013.01 - EP US); **F02M 59/366** (2013.01 - EP US); **F02M 59/48** (2013.01 - EP US); **F02M 61/168** (2013.01 - EP US); **F02M 63/0007** (2013.01 - EP US); **F02M 2200/304** (2013.01 - EP US); **F02M 2200/40** (2013.01 - EP US)

Designated contracting state (EPC)

DE ES FR GB IT

DOCDB simple family (publication)

EP 1284360 A2 20030219; **EP 1284360 A3 20040317**; **EP 1284360 B1 20050518**; DE 10139545 A1 20030220; DE 50203132 D1 20050623; JP 2003106242 A 20030409; US 2003042334 A1 20030306; US 6817547 B2 20041116

DOCDB simple family (application)

EP 02016075 A 20020719; DE 10139545 A 20010810; DE 50203132 T 20020719; JP 2002230053 A 20020807; US 21623002 A 20020812