

Title (en)

Fuel injector for a common-rail injection system having injection rate shaping

Title (de)

Injektor für ein Common-Rail-Kraftstoffeinspritzsystem mit Einspritzverlaufsformung

Title (fr)

Injecteur de carburant avec régulation du taux d'injection pour un système d'injection du type common-rail

Publication

**EP 1314881 A3 20060322 (DE)**

Application

**EP 02024236 A 20021031**

Priority

DE 10158028 A 20011127

Abstract (en)

[origin: EP1314881A2] The device has an injection nozzle with a nozzle needle (31) and a control chamber (3) divided into 3 sections (13,15,17) by a control piston (11) with two grooves with a sliding element between them and separates a high pressure connection from a feed channel to the nozzle needle with the nozzle closed. A hydraulic connection (55) controlled by a valve (57) is arranged between the high pressure connection (1) or the second (15) of the 3 sections and the nozzle needle feed channel (5).

IPC 8 full level

**F02M 45/08** (2006.01); **F02M 61/16** (2006.01); **F02M 45/12** (2006.01); **F02M 47/00** (2006.01); **F02M 47/02** (2006.01); **F02M 47/06** (2006.01); **F02M 63/00** (2006.01)

CPC (source: EP US)

**F02M 45/08** (2013.01 - EP US); **F02M 45/12** (2013.01 - EP US); **F02M 47/027** (2013.01 - EP US); **F02M 63/0007** (2013.01 - EP US)

Citation (search report)

- [DA] DE 19963920 A1 20010712 - BOSCH GMBH ROBERT [DE]
- [A] DE 10002704 A1 20010802 - BOSCH GMBH ROBERT [DE]
- [A] US 5397055 A 19950314 - PAUL MARIUS A [US], et al

Cited by

EP2177744A4; WO2012084682A1; DE102010063981A1; US8602322B2

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 1314881 A2 20030528**; **EP 1314881 A3 20060322**; DE 10158028 A1 20030612; JP 2003184705 A 20030703; US 2003111548 A1 20030619; US 6758417 B2 20040706

DOCDB simple family (application)

**EP 02024236 A 20021031**; DE 10158028 A 20011127; JP 2002342876 A 20021126; US 30370402 A 20021126