

Title (en)

Fuel injector with a direct control of the injection needle and a variable stroke amplifier

Title (de)

Kraftstoffinjektor mit direkter Steuerung des Einspritzventilglieds und variabler Übersetzung

Title (fr)

Injecteur de carburant avec contrôle direct de l'aiguille et amplificateur variable de course

Publication

EP 1705365 A3 20090218 (DE)

Application

EP 06100702 A 20060123

Priority

DE 102005012929 A 20050321

Abstract (en)

[origin: EP1705365A2] The injector has a prestroke sleeve (13) that travels a prestroke distance during the opening movement of an injection valve unit (9) until it reaches a changeover point of the pressure boosting. A prestressing spring (21) is provided in the form of a tube spring and is contained between a collar (22) and a lower end of the sleeve. The spring operates to continuously build up the force required to switch the pressure boosting from one opening pressure to another opening pressure during the passage through the prestroke distance.

IPC 8 full level

F02M 51/06 (2006.01); **F02M 45/08** (2006.01); **F02M 45/12** (2006.01); **F02M 63/00** (2006.01)

CPC (source: EP US)

F02M 45/083 (2013.01 - EP US); **F02M 45/12** (2013.01 - EP US); **F02M 51/0603** (2013.01 - EP US); **F02M 2200/26** (2013.01 - EP US); **F02M 2200/703** (2013.01 - EP US)

Citation (search report)

- [DX] EP 1174615 A2 20020123 - DELPHI TECH INC [US]
- [A] DE 10326259 A1 20050105 - BOSCH GMBH ROBERT [DE]

Cited by

US12065995B2; AT511075A4; AT511075B1; US9038601B2; US9133801B2; US9291138B2; US9581120B2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK YU

DOCDB simple family (publication)

EP 1705365 A2 20060927; **EP 1705365 A3 20090218**; **EP 1705365 B1 20101103**; AT E487052 T1 20101115; DE 102005012929 A1 20060928; DE 502006008205 D1 20101216; US 2006208107 A1 20060921

DOCDB simple family (application)

EP 06100702 A 20060123; AT 06100702 T 20060123; DE 102005012929 A 20050321; DE 502006008205 T 20060123; US 37755806 A 20060317