

Title (en)

A fuel injector with axial sealing element

Title (de)

Brennstoffeinspritzeinrichtung mit axialem Dichtelement

Title (fr)

Un injecteur de combustible avec élément d'étanchéité axial

Publication

EP 2187034 B1 20130619 (EN)

Application

EP 08105799 A 20081114

Priority

EP 08105799 A 20081114

Abstract (en)

[origin: EP2187034A1] The invention relates to the field of fuel injectors and specifically to the field of common rail fuel injectors. The common rail fuel injectors typically have a nozzle (12), a nozzle needle (14), a fuel inlet (16), a return fuel path (30), a valve (24), a pressure control chamber (22), a high pressure volume (18) and a low pressure volume (20). The high pressure volume (18) and low pressure volume (20) are separated by a throttle plate (36) with a bore (40) in it to allow flow of fuel from high pressure volume (18) to low pressure volume (20) and vice versa. The invention proposes a modification in the throttle plate (36) and also proposes an additional sealing element called axial sealing element (38). The modified throttle plate (36) is loosely coupled to the needle (14) and provides a large gap with the needle (14) to compensate any radial offset caused during the motion of the needle (14). The axial sealing element (38) prevents the leakage of the fuel from low pressure volume to (20) high pressure volume (18).

IPC 8 full level

F02M 47/02 (2006.01)

CPC (source: EP)

F02M 47/027 (2013.01); **F02M 2200/16** (2013.01); **F02M 2200/28** (2013.01); **F02M 2200/40** (2013.01)

Cited by

CN111263854A; CN110848060A

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)

EP 2187034 A1 20100519; EP 2187034 B1 20130619

DOCDB simple family (application)

EP 08105799 A 20081114