

Title (en)  
Fuel injection system for an internal combustion engine

Title (de)  
Kraftstoffeinspritzeinrichtung für eine Brennkraftmaschine

Title (fr)  
Système d'injection de carburant pour un moteur à combustion interne

Publication  
**EP 1359306 B1 20080206 (DE)**

Application  
**EP 03004640 A 20030303**

Priority  
DE 10218024 A 20020423

Abstract (en)  
[origin: EP1359306A2] The device has a high pressure pump that transports fuel to a high pressure tank(s) with connected injectors. The injectors are also connected to a common low pressure tank in which a defined low pressure is maintained by a pressure maintaining valve. The pressure in the high pressure tank is regulated by driving fuel from the tank to a low pressure region with a pressure regulating valve via a control line connected to the low pressure tank. The device has a high pressure pump (10) that transports fuel under pressure to at least one high pressure tank (12) to which injectors (20) on engine cylinders are connected. The injectors are also connected to a common low pressure tank (50), in which a defined low pressure is maintained by a pressure maintaining valve (52). The pressure in the high pressure tank is regulated by driving fuel from the high pressure tank to a low pressure region with a pressure regulating valve (60) via a control line (62) connected to the low pressure tank.

IPC 8 full level  
**F02D 41/38** (2006.01); **F02M 47/00** (2006.01); **F02D 41/06** (2006.01); **F02M 47/02** (2006.01); **F02M 51/00** (2006.01); **F02M 51/06** (2006.01); **F02M 55/00** (2006.01); **F02M 55/02** (2006.01); **F02M 63/00** (2006.01); **F02M 63/02** (2006.01); **F02M 69/54** (2006.01); **F02D 41/20** (2006.01)

CPC (source: EP US)  
**F02D 41/3809** (2013.01 - EP US); **F02M 47/027** (2013.01 - EP US); **F02M 63/025** (2013.01 - EP US); **F02M 63/029** (2013.01 - EP US); **F02M 69/54** (2013.01 - EP US); **F02D 41/062** (2013.01 - EP US); **F02D 41/2096** (2013.01 - EP US); **F02D 2200/0606** (2013.01 - EP US); **F02M 2200/705** (2013.01 - EP US)

Cited by  
CN105240176A; US7520267B2; US7788908B2; WO2007025803A1; WO2005010351A1

Designated contracting state (EPC)  
DE FR GB IT

DOCDB simple family (publication)  
**EP 1359306 A2 20031105; EP 1359306 A3 20050615; EP 1359306 B1 20080206**; DE 10218024 A1 20031106; DE 50309115 D1 20080320; JP 2003314398 A 20031106; JP 4319854 B2 20090826; US 2004016421 A1 20040129; US 6823846 B2 20041130

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**EP 03004640 A 20030303**; DE 10218024 A 20020423; DE 50309115 T 20030303; JP 2003117261 A 20030422; US 42086103 A 20030423