

Title (en)
FUEL INJECTION SYSTEM

Title (de)
KRAFTSTOFFEINSPRITZSYSTEM

Title (fr)
SYSTEME D'INJECTION DE CARBURANT

Publication
EP 0910739 A1 19990428 (DE)

Application
EP 98912246 A 19980217

Priority
• DE 9800452 W 19980217
• DE 19717493 A 19970425

Abstract (en)
[origin: DE19717493A1] The invention relates to a fuel injection system having a fuel injection pump, the high-pressure delivery of which is determined by an electrically operated valve (24) which controls a discharge channel (21). The high-pressure delivery phase is determined by closing this valve (24). In order to carry out an injection, sub-divided into a pre-injection and a main injection, and in order to simplify control of the electrically operated valve (24), the cam (5) driving the pump piston (1) is so designed as to create an area in which the pump piston (1), in order to interrupt injection between pre-injection and main injection, maintains the position attained, moves backward, or moves forward more slowly, and the valve (24) is controlled in such a way that, at low rotational speed, the pump working area (10) is closed when the pump piston (1) is in front of the beginning of the cam area (V) preceding the area (P), and open when the pump piston (1) is in the cam area (V), and is closed again at the beginning of the cam area (H) following the area (P), before being opened again in order to complete injection; whereas at high rotational speed the first closing of the valve (24) per delivery stroke takes place in the area (P) without prior pre-injection.

IPC 1-7
F02M 45/06; **F02M 59/36**; **F02M 41/12**

IPC 8 full level
F02M 41/12 (2006.01); **F02M 45/06** (2006.01); **F02M 59/36** (2006.01)

CPC (source: EP US)
F02M 41/125 (2013.01 - EP US); **F02M 45/06** (2013.01 - EP US); **F02M 45/063** (2013.01 - EP US); **F02M 59/366** (2013.01 - EP US)

Citation (search report)
See references of WO 9849442A1

Designated contracting state (EPC)
DE FR GB IT

DOCDB simple family (publication)
DE 19717493 A1 19981029; CN 1089854 C 20020828; CN 1224484 A 19990728; CZ 291627 B6 20030416; CZ 419598 A3 19990616; DE 59801622 D1 20011108; EP 0910739 A1 19990428; EP 0910739 B1 20011004; JP 2000513783 A 20001017; RU 2196246 C2 20030110; US 6079388 A 20000627; WO 9849442 A1 19981105

DOCDB simple family (application)
DE 19717493 A 19970425; CN 98800536 A 19980217; CZ 419598 A 19980217; DE 59801622 T 19980217; DE 9800452 W 19980217; EP 98912246 A 19980217; JP 54646098 A 19980217; RU 99101049 A 19980217; US 20258298 A 19981217