

Title (en)  
FUEL INJECTION SYSTEM

Title (de)  
KRAFTSTOFFEINSPRITZSYSTEM

Title (fr)  
SYSTEME D'INJECTION DE CARBURANT

Publication  
**EP 0882180 A1 19981209 (DE)**

Application  
**EP 97931698 A 19970702**

Priority  

- DE 9701380 W 19970702
- DE 19648690 A 19961125

Abstract (en)  
[origin: DE19648690A1] Disclosed is a fuel injection system, comprising an injection pump which is fed under high pressure by an electrically operated valve working in a discharge channel (30), the phase being determined by the valve closing. In order to achieve a two step injection, i.e. a preliminary injection and a main injection, and to simplify the stimulation of the electrically-operated valve (24), the cam driving the pump piston (1) is so featured as to offer an area (P) where the pump piston stops in its tracks or withdraws, thereby interrupting the injection between the preliminary and the main injection.

IPC 1-7  
**F02M 45/06; F02M 45/08; F02M 59/36; F02M 41/12**

IPC 8 full level  
**F02M 41/12** (2006.01); **F02M 45/06** (2006.01); **F02M 45/08** (2006.01); **F02M 59/36** (2006.01); **F04B 49/22** (2006.01)

CPC (source: EP KR US)  
**F02M 41/12** (2013.01 - KR); **F02M 41/125** (2013.01 - EP US); **F02M 45/06** (2013.01 - KR); **F02M 45/063** (2013.01 - EP US);  
**F02M 45/083** (2013.01 - EP US); **F02M 59/36** (2013.01 - KR); **F02M 59/366** (2013.01 - EP US); **F04B 49/225** (2013.01 - EP US);  
**F04B 2203/0209** (2013.01 - EP US)

Designated contracting state (EPC)  
DE FR GB

DOCDB simple family (publication)  
**US 6016786 A 20000125**; CN 1079495 C 20020220; CN 1207157 A 19990203; CZ 189898 A3 19990113; CZ 291287 B6 20030115;  
DE 19648690 A1 19980528; DE 59708561 D1 20021128; EP 0882180 A1 19981209; EP 0882180 B1 20021023; HU 220411 B 20020128;  
HU P9901494 A2 19990830; HU P9901494 A3 20000328; JP 20000504388 A 20000411; KR 100539986 B1 20060228;  
KR 19990076796 A 19991015; PL 186623 B1 20040227; PL 327975 A1 19990104; RU 2177559 C2 20011227; SK 284424 B6 20050401;  
SK 90398 A3 19990111; WO 9823858 A1 19980604

DOCDB simple family (application)  
**US 11734099 A 19990106**; CN 97191634 A 19970702; CZ 189898 A 19970702; DE 19648690 A 19961125; DE 59708561 T 19970702;  
DE 9701380 W 19970702; EP 97931698 A 19970702; HU P9901494 A 19970702; JP 52410998 A 19970702; KR 19980704921 A 19980626;  
PL 32797597 A 19970702; RU 98115715 A 19970702; SK 90398 A 19970702