Title (en)

Fuel injection system

Title (de)

Kraftstoffeinspritzsystem

Title (fr)

Système d'injection de carburant

Publication

**EP 0688950 B1 19980812 (DE)**

Application

**EP 95107822 A 19950523**

Priority

DE 4421714 A 19940621

Abstract (en)

[origin: EP0688950A1] The injection valve has a valve needle (31) to control an injection aperture (36). The needle is loaded in opening direction by fuel from the pump working chamber, and by a spring (45) in closing direction. The spring is located in a fuel-filled chamber (43), which is not under high pressure. One end of the valve needle defines a damper chamber (39), the axial wall of which forms a stop (40) to limit the valve needle movement. The damper chamber is connected via a throttle aperture to the fuel chamber. The throttle is formed by a connection (42) and an opening in a spring-loaded pressure journal (48). <IMAGE>

IPC 1-7

**F02M 45/08**; F02M 61/20

IPC 8 full level

**F02M 41/12** (2006.01); **F02M 45/08** (2006.01); **F02M 61/10** (2006.01); **F02M 61/20** (2006.01)

CPC (source: EP KR US)

**F02M 45/08** (2013.01 - EP US); **F02M 47/00** (2013.01 - KR); **F02M 61/20** (2013.01 - EP US); **F02M 61/205** (2013.01 - EP US); F02M 2200/28 (2013.01 - EP US)

Citation (examination)

WO 9008256 A1 19900726 - VOEST ALPINE AUTOMOTIVE [AT]

Cited by

US6244249B1; WO2008031903A1; WO9811342A1

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

**EP 0688950 A1 19951227**; **EP 0688950 B1 19980812**; DE 4421714 A1 19960104; DE 59503133 D1 19980917; JP H0821337 A 19960123; KR 100377894 B1 20030522; KR 960001469 A 19960125; US 5533481 A 19960709

DOCDB simple family (application)

**EP 95107822 A 19950523**; DE 4421714 A 19940621; DE 59503133 T 19950523; JP 15355095 A 19950620; KR 19950016364 A 19950620; US 45275595 A 19950530