

Title (en)  
FUEL INJECTION DEVICE

Title (de)  
KRAFTSTOFFEINSPRITZEINRICHTUNG

Title (fr)  
SYSTEME D'INJECTION DE CARBURANT

Publication  
**EP 1125047 B1 20060426 (DE)**

Application  
**EP 00967523 A 20000812**

Priority  
• DE 0002735 W 20000812  
• DE 19939419 A 19990820

Abstract (en)  
[origin: DE19939419A1] The invention relates to a fuel injection device (1) comprising one or more pump-nozzle units (6; 36) or pump-line-nozzle units per cylinder which are provided for compressing the fuel. The fuel injection device (1) also comprises means for generating two different injection pressures during injection and at least one valve (24) for controlling the injection with a cross-section control. The pump-nozzle unit (6) or a pump-line-nozzle unit enables the fuel injection to be carried out over a broad r.p.m. range with a high level of precision.

IPC 8 full level  
**F02M 45/00** (2006.01); **F02M 45/02** (2006.01); **F02M 45/08** (2006.01); **F02M 45/12** (2006.01); **F02M 47/02** (2006.01); **F02M 57/02** (2006.01); **F02M 63/00** (2006.01)

CPC (source: EP KR US)  
**F02M 45/00** (2013.01 - EP US); **F02M 47/027** (2013.01 - EP KR US); **F02M 57/023** (2013.01 - EP KR US); **F02M 63/0007** (2013.01 - EP KR US); **F02M 2200/21** (2013.01 - EP KR US); **F02M 2200/40** (2013.01 - EP KR US)

Citation (examination)  
DE 19517578 A1 19951116 - CATERPILLAR INC [US]

Designated contracting state (EPC)  
DE ES FR GB IT

DOCDB simple family (publication)  
**DE 19939419 A1 20010301**; DE 50012651 D1 20060601; EP 1125047 A1 20010822; EP 1125047 B1 20060426; JP 2003507638 A 20030225; JP 4550340 B2 20100922; KR 100715639 B1 20070508; KR 20010080112 A 20010822; US 6725840 B1 20040427; WO 0114712 A1 20010301

DOCDB simple family (application)  
**DE 19939419 A 19990820**; DE 0002735 W 20000812; DE 50012651 T 20000812; EP 00967523 A 20000812; JP 2001518561 A 20000812; KR 20017004591 A 20010412; US 83001301 A 20010727