

Title (en)

Fuel injection valve.

Title (de)

Kraftstoffeinspritzventil.

Title (fr)

Soupape d'injection de combustible.

Publication

**EP 0307651 B1 19950719 (DE)**

Application

**EP 88113541 A 19880820**

Priority

DE 3731211 A 19870917

Abstract (en)

[origin: EP0307651A2] In the lean-burn operation of spark ignition internal combustion engines, improvements in consumption and emission are obtained if the fuel is injected directly into the combustion chamber. Owing to large charge cycle control cross-sections, the space for installation of injection valve and spark plug is very limited and malfunctions in the combustion process occur owing to excessive gaps between injection valve and ignition device. <?>By the development of a fuel injection valve, which has wire electrodes on the injection side for forming a spark ignition device, the spark gap crossing in the area of the fuel introduced by the injection valve, optimum flame propagation conditions are obtained even for poorly flammable fuels or in the case of an extremely low proportion of fuel in the combustion chamber filling (stratified charge operation). <IMAGE>

IPC 1-7

**F02M 57/06**

IPC 8 full level

**F02M 57/06** (2006.01); **F02M 61/08** (2006.01); **F02P 13/00** (2006.01); **F02B 1/04** (2006.01)

CPC (source: EP US)

**F02M 57/06** (2013.01 - EP US); **F02M 61/08** (2013.01 - EP US); **F02P 13/00** (2013.01 - EP US); **F02B 1/04** (2013.01 - EP US)

Cited by

EP0632198A1; GB2240587A; US10554304B2

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

**EP 0307651 A2 19890322**; **EP 0307651 A3 19900314**; **EP 0307651 B1 19950719**; BR 8804783 A 19890425; DE 3731211 A1 19890330; DE 3731211 C2 19901213; DE 3854174 D1 19950824; JP H01104961 A 19890421; US 4967708 A 19901106

DOCDB simple family (application)

**EP 88113541 A 19880820**; BR 8804783 A 19880916; DE 3731211 A 19870917; DE 3854174 T 19880820; JP 23018788 A 19880916; US 23671088 A 19880826