

Title (en)
FUEL INJECTOR FOR INTERNAL-COMBUSTION ENGINES

Publication
EP 0240693 B1 19901227 (DE)

Application
EP 87102772 A 19870226

Priority
DE 3611316 A 19860404

Abstract (en)
[origin: EP0240693A1] Fuel injector for internal combustion engines for preinjection and main injection with an inwards opening valve needle (18), which is loaded in the closing direction by a closing spring (28) and after one prelift (hv) also by a piston (36) to which fuel is admitted. The piston (36) is displaceably guided in a shim (12) clamped between nozzle bodies (10) and holders (16), on which shim there is also an integrally formed stop (44) to limit the overall lift (hg) of the valve needle. This arrangement has the advantage that the injector need not be made any longer or appreciably longer than an injector without additional pistons and that the dimensional tolerances of the prelift (hv) and overall lift (hg) of the valve needle (18) can be kept extremely small without undue manufacturing expense. <IMAGE>

IPC 1-7
F02M 45/08; **F02M 61/16**

IPC 8 full level
F02M 45/08 (2006.01); **F02M 61/16** (2006.01); **F02M 61/20** (2006.01)

CPC (source: EP)
F02M 45/08 (2013.01); **F02M 61/161** (2013.01); **F02M 61/205** (2013.01)

Cited by
US5464158A; EP0365143A1; WO9403720A1; WO9524552A1; DE102013211658A1; US9605639B2

Designated contracting state (EPC)
DE FR GB IT

DOCDB simple family (publication)
EP 0240693 A1 19871014; **EP 0240693 B1 19901227**; DE 3611316 A1 19871008; DE 3767001 D1 19910207; JP S62240466 A 19871021

DOCDB simple family (application)
EP 87102772 A 19870226; DE 3611316 A 19860404; DE 3767001 T 19870226; JP 7985287 A 19870402