

Title (en)
INJECTION DEVICE FOR A DIESEL ENGINE

Publication
EP 0418601 B1 19921111 (DE)

Application
EP 90116430 A 19900828

Priority
DE 3931456 A 19890921

Abstract (en)
[origin: EP0418601A1] In an injection device for a diesel engine in which the diesel fuel is fed by an injection pump (1) via a balanced pressure valve (7) and via a first line to a chamber (14) in front of the nozzle needle seat (12) of the injection nozzle, and before the injection pump (1) commences delivery an additional liquid is fed in in predetermined quantities via a second line at excess pressure to the chamber (14) in front of the nozzle needle seat (12) via a non-return valve (21) opening in the direction of this chamber, whereupon the additional liquid and the diesel fuel are injected together under the pressure of the injection pump (1), the second line is a hammer pipe (20) or is connected to a hammer pipe (20), which is connected via a non-return valve (21) opening in the direction of the hammer pipe (20) to a pressure source (16) for the additional liquid, and opens out between the non-return valve (23) opening in the direction of the chamber (14) in front of the nozzle needle seat (12) and a controllable shut-off valve (24) which in the open position connects the hammer pipe (20) to a return (26) and on closing causes an impact pressure due to conversion of the kinetic energy of the flowing additional liquid into potential energy. <IMAGE>

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F02M 43/00; **F02M 43/04**

IPC 8 full level
F02M 43/00 (2006.01); **F02M 43/04** (2006.01); **F02B 3/06** (2006.01); **F02B 47/04** (2006.01)

CPC (source: EP)
F02M 43/00 (2013.01); **F02M 43/04** (2013.01); **F02B 3/06** (2013.01); **F02B 47/04** (2013.01)

Cited by
KR100714852B1; CN101975130A; FR2711735A1; CN102937061A; EP2995806A1; US5251576A; EP0488831A1; FR2750458A1; US6390384B1; DE4435823C1; EP0528150A1; CN105003370A; GB2322411A; FR2759738A1; GB2322411B; US6698673B1; WO0138721A3; WO9920890A1; WO9506815A1; WO9715756A1; EP0459083B1

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