

Title (en)
FUEL INJECTION VALVE CONTROLLED BY A PILOT VALVE

Title (de)
PILOTVENTIL GESTEUERTES BRENNSTOFFEINSPRITZVENTIL

Title (fr)
SOUPAPE D'INJECTION DE CARBURANT COMMANDEE PAR UNE SOUPAPE PILOTE

Publication
EP 1656498 B1 20081126 (DE)

Application
EP 04738118 A 20040730

Priority
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Abstract (en)
[origin: WO2005019637A1] The hydraulic control device (20) of the fuel injection valve (10) comprises a pilot valve (70). The pilot valve rod (66) co-operates with both the actuator (18) and the pilot valve seat (68). A discharge chamber (72) is located adjacent to the pilot valve seat (68) and is connected to the low-pressure outlet (76) by means of a throttle passage (74). In order to complete the injection process, the pilot valve rod (66) is inserted into the discharge chamber (72) until it hits the pilot valve seat (68). This leads to an increase in pressure which, in turn, leads to the control body (38) being rapidly lifted from its position on the discharge chamber body (46). The injection valve member (22) is thereby displaced very rapidly into the closing position thereof in order to complete the injection process. The movement of the pilot valve rod (66) can also be mechanically used to support the rapid closing movement of the injection valve member (22).

IPC 8 full level
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CPC (source: EP)
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Cited by
JP2012127329A; US9109556B2; DE102011001563A1; CN102472211A; JP2011226458A; US2012152206A1; WO2011122051A1; DE102012100020A1; US8708250B2; DE112011101121T5; US8695892B2; US9127629B2; JP2011226459A; DE102011056406A1; US8573507B2

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