

Title (en)
FUEL INJECTOR

Title (de)
KRAFTSTOFFEINSPRITZVENTIL

Title (fr)
INJECTEUR DE CARBURANT

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Application
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Abstract (en)
A fuel injector (10) for a compression ignition internal combustion engine is described. The fuel injector (10) comprises a fuel injection valve having an injection valve member (14) moveable, in use, under the influence of fuel pressure within a control chamber (20) acting upon it, between a closed position and an open position. The fuel injector comprises a moveable plate (28) located inside the control chamber (20). The moveable plate (28) is configured to move into and out of contact with a sealing surface (34) of the control chamber (20). The moveable plate (28) includes an inlet orifice (38) and a spill orifice (40). The provision of inlet and spill orifices (38, 40) in the moveable plate allows both orifices to be made very small, resulting in a significant reduction in dynamic leakage. An embodiment of the invention is described in which the moveable plate (28) defines additional fluid channels (60a, 60b, 62a, 62) for high pressure fuel entering the control chamber (20) when the moveable plate (28) is moved out of sealing contact with the sealing surface (34) of the control chamber (20). The additional flow paths allow high pressure fuel to enter the control chamber (20) bypassing the inlet orifice, resulting in a rapid termination of an injection event.

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Citation (search report)

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