

Title (en)  
High pressure fuel pump

Title (de)  
Hochdruck-Kraftstoffpumpe

Title (fr)  
Pompe à combustible à haute pression

Publication  
**EP 1361360 B1 20041229 (EN)**

Application  
**EP 03252893 A 20030509**

Priority  
GB 0210753 A 20020510

Abstract (en)  
[origin: EP1361360A1] A fuel pump for use in delivering high pressure fuel to a common rail of a fuel injection system includes a pumping plunger (10) which is reciprocable within a plunger bore (12) to cause pressurisation of fuel within a pumping chamber (16). In use, during a pumping stroke, the plunger (10) is driven inwardly within the plunger bore (12) to reduce the volume of the pumping chamber (16), and during a return stroke the plunger (10) moves outwardly from the bore to increase the volume of the pumping chamber (16). An inlet valve arrangement (26) is provided, including an inlet valve (28) which is movable between an inlet open position, in which the pumping chamber (16) communicates with a low pressure fuel source (24), and an inlet closed position, in which communication between the low pressure fuel source (24) and the pumping chamber (16) is broken. The inlet valve (28) is movable from the inlet closed position to the inlet open position in response to fuel pressure acting on the inlet valve (28). The inlet valve arrangement includes an inlet valve actuator (29) which is operable to hold the inlet valve (28) in the inlet open position for at least a part of the pumping stroke. The pump also includes a delivery valve arrangement (42) having a delivery valve (44) which is movable between a delivery open position, in which the pumping chamber (16) communicates with the common rail, and a delivery closed position, in which communication between the common rail and the pumping chamber (16) is broken. The delivery valve (44) is movable from the delivery closed position to the delivery open position in response to fuel pressure acting on the delivery valve (44), and includes a delivery valve actuator (45) which is operable to hold the delivery valve (44) in the delivery open position, for at least a period of the return stroke, thereby to regulate fuel pressure within the common rail. <IMAGE>

IPC 1-7  
**F02M 63/02**

IPC 8 full level  
**F02D 41/38** (2006.01); **F02M 59/36** (2006.01); **F02M 59/46** (2006.01); **F02M 63/02** (2006.01); **F02M 69/54** (2006.01)

CPC (source: EP)  
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Cited by  
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