

Title (en)
FUEL INJECTION DEVICE FOR AN INTERNAL COMBUSTION ENGINE

Title (de)
KRAFTSTOFFEINSPRITZEINRICHTUNG FÜR EINE BRENNKRAFTMASCHINE

Title (fr)
SYSTEME D'INJECTION DE CARBURANT POUR MOTEUR A COMBUSTION INTERNE

Publication
EP 1490592 B1 20050713 (DE)

Application
EP 02795011 A 20021217

Priority
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• DE 10211439 A 20020315

Abstract (en)
[origin: WO03078828A1] The fuel injection device is provided with a high-pressure fuel pump (10) for each cylinder of the internal combustion engine and a fuel injection valve (12) connected thereto. A pump plunger (18) of the high-pressure fuel pump (10) defines a pump working chamber (22) which is connected to a pressure chamber (40) of the fuel injection valve (12) which comprises an injection valve member (24) which is used to control the injection openings (32) and which can move by means of the pressure prevailing in the pressure chamber (40) counter to the closing force in an opening direction (29). A control valve (70) is used to control a connection (64) between a control pressure chamber (52) connected to the pump working chamber (22) defined by a control piston (50) and a discharge chamber (24). When the injection valve member (28) is in a closed position, the control piston (50) releases a main connection (84) having a large through-flow diameter. When the injection valve member (28) is in an open position, said control piston closes the main connection (84) and releases only a bypass connection (80) having a low through-flow diameter. The bypass connection (80) is embodied in a housing part (54) defining the control pressure chamber (52).

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IPC 8 full level
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WO 03050408 A1 20030619 - BOSCH GMBH ROBERT [DE], et al

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