

Title (en)

INJECTION PUMP WITH CONSTANT INJECTION PRESSURE AND PREDOSAGE, AND A SYSTEM THEREFOR

Publication

EP 0077235 B1 19850814 (FR)

Application

EP 82401738 A 19820927

Priority

FR 8118558 A 19811001

Abstract (en)

[origin: EP0077235A1] 1. An injector pump for passing a premetered amount of fuel to an injector (17) having a needle (18), of the type comprising a piston (21), a discharge chamber (20), a delivery piston (5) with mechanical control by cam or eccentric in accordance with any law of movement, said piston delivering fuel in a delivery chamber (6), and an injection piston (9) which is actuated exclusively by the pressure obtaining in the delivery chamber (6) with a return spring (13) acting there against, said piston in turn delivering the fuel in an injection chamber (12) which is intended to feed the injector (17), characterised in that it comprises a pressure regulator (19) for limiting the pressure in the delivery chamber (6) to a value which is high but preregulated and independent of the operating condition of the engine and the load thereon, that the constant pressure which is thus defined in the injection chamber (12) is transmitted to the injector (17) but at the same time to the discharge chamber (20) thereof to prevent injection as long as an electrically operated valve (26) does not suppress the application of said pressure to said discharge chamber so as to have immediate application of the preregulated constant pressure at the precise moment of injection, which is determined electrically, and that it further comprises a single three-way electrically operated valve (26) to provide both for the premetering effect, by delayed communicating of the injection chamber (12) with the feed pressure (7), and for determining the time of injection by suppressing the pressure in the discharge chamber (20) of the injector (17), the common way (28) of the three-way electrically operated valve (26) being for that purpose in communication with the discharge chamber (20) while the other two ways (27 and 29) of the valve (26) are respectively connected to the injection chamber (12) and to the feed pressure (7), excitation of said valve (26) being controlled by a single rectangular pulse per cycle, of which the two edges, the rising edge (34) and the falling edge (35), are determined by an electronic device which independently controls the injection advance and the premetered amount.

IPC 1-7

F02M 59/32

IPC 8 full level

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CPC (source: EP)

F02M 47/027 (2013.01); **F02M 59/32** (2013.01); **F02B 2075/025** (2013.01)

Citation (examination)

DE 1103685 B 19610330 - PIERRE ETIENNE BESSIERE

Cited by

EP0629776A1; EP0240353A3; EP0962649A1; EP0724688A4; WO9963217A1

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