

Title (en)

Accumulator fuel injection system.

Title (de)

Speicher-Kraftstoffeinspritzsystem.

Title (fr)

Système d'injection de combustible à accumulateur.

Publication

EP 0641931 A1 19950308 (EN)

Application

EP 93307029 A 19930906

Priority

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Abstract (en)

A method of reducing undesired premixed burning in an internal combustion engine includes lifting an injector needle (830) of a fuel injector (720) a constant low-lift increment (858) from a valve seat (846) of a valve covers orifice (VCO) nozzle (850) having an injection hole (854) opening into the valve seat (846), and preventing lifting of the needle (830) beyond the low-lift increment (858) for a sufficient interval of time to inject a relatively small initial fuel charge into the engine from the VCO nozzle, the injection producing a highly atomized, wide-angle spray plume with relatively low penetration. The interval terminates when lifting forces imposed on the needle overcome holding forces imposed on the needle by a stop plate (620) which has opposed first and second surfaces exposed to an ambient fluid pressure and to a fluid vapor pressure, respectively. A subsequent step includes lifting the needle (830) to a higher lift position (858) to inject a main fuel charge into the engine, the main fuel charge being injected as a relatively narrow jet having high penetration. The stop plate (620) preferably has opposed rough and smooth flat surfaces orientable such that preventing step will occur when the smooth surface faces downwardly and will not occur when the plate is inverted such that the rough surface faces downwardly. <IMAGE>

IPC 1-7

F02M 45/08; **F02M 57/02**; **F02M 61/18**; **F02M 47/02**; **F02M 59/10**

IPC 8 full level

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Citation (search report)

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