

Title (en)
Injection Nozzle

Title (de)
Einspritzdüse

Title (fr)
Buse d'injection

Publication
EP 1591655 B1 20090617 (DE)

Application
EP 05101213 A 20050218

Priority
DE 102004020550 A 20040427

Abstract (en)
[origin: EP1591655A1] The injection nozzle for an internal combustion engine has a lift-adjustable first nozzle needle (6) to control an injection of fuel through a first orifice (3), and a second nozzle needle (9) with an additional pressure step (13) facing a second injection orifice (4). The additional pressure step is deactivated when the second nozzle needle is closed and activated when it is opened and thereby initiates an additional opening force in the second nozzle needle which is of such magnitude that the opening forces can predominate even if after the opening of the second nozzle needle the control valve (2) again occupies its open position.

IPC 8 full level
F02M 45/08 (2006.01); **F02M 61/10** (2006.01); **F02M 61/18** (2006.01); **F02M 47/02** (2006.01); **F02M 61/12** (2006.01)

CPC (source: EP)
F02M 45/086 (2013.01); **F02M 61/18** (2013.01); **F02M 47/02** (2013.01); **F02M 61/12** (2013.01); **F02M 2200/46** (2013.01)

Citation (examination)
WO 2004070192 A1 20040819 - BOSCH GMBH ROBERT [DE], et al

Cited by
EP1724462A3

Designated contracting state (EPC)
DE FR GB IT

DOCDB simple family (publication)
EP 1591655 A1 20051102; EP 1591655 B1 20090617; DE 102004020550 A1 20051124; DE 502005007483 D1 20090730

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