

Title (en)
FUEL INJECTOR VALVE FOR A COMBUSTION ENGINE

Publication
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Application
EP 81102371 A 19810328

Priority
DE 3024424 A 19800628

Abstract (en)
[origin: EP0042915A2] 1. Fuel-injection valve for internal combustion engines, with a valve needle (3) which opens under the action of the fuel pressure, in the direction of the fuel flow, counter to the force of a closing spring (7), and an induction coil (37) which is installed inside the valve support (18, 18') and can be connected to an evaluating circuit (46), a conducting body (8), composed of a material which can be magnetised, such as soft iron, and coupled to the valve needle (3), projecting into the magnetic field which is generated by the induction coil (37)8 this conducting body (8) influencing the magnetic flux through the induction coil (37) as a function of the position of the valve needle (3), characterised by the following features : (a) the induction coil (37) is located on a supporting body (17, 43) which is made of a material which can be magnetised, such as soft iron, and which is inserted into the valve support (18, 18') ; (b) on the side remote from the valve needle (3), the supporting body (17, 43) is connected to the valve support (18, 18'), which is likewise composed of a material which can be magnetised, the connection being such that magnetic conduction is obtained ; (c) at the end facing the valve needle (3), the supporting body (17, 43) is sealed and magnetically screened with respect to the valve support (18, 18') by means of a separating body (19) which is composed of a magnetically non-conducting material ; (d) the supporting body (17, 43) contains a fuel inlet bore (28), and (e) the end face (15) of the supporting body (17, 43) which faces the valve needle (3) forms, with the conducting body (8), an axial air-gap (14) in the magnetic circuit, this air-gap being variable with the position of the valve needle.

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