

Title (en)
FUEL INJECTOR HAVING A CONTROL VALVE

Title (de)
KRAFTSTOFFINJEKTOR MIT STEUERVERTIL

Title (fr)
INJECTEUR DE CARBURANT MUNI D'UNE SOUPAPE DE COMMANDE

Publication
EP 3384149 A1 20181010 (DE)

Application
EP 16788726 A 20161102

Priority
• DE 102015224177 A 20151203
• EP 2016076439 W 20161102

Abstract (en)
[origin: WO2017092955A1] The invention relates to a fuel injector (100) for injecting fuel into the combustion chamber of an internal combustion engine. The fuel injector (100) comprises a control valve (1) and an injection valve element (11). The injection valve element (11) bounds a control chamber (15) and is guided in the fuel injector (11) in such a way that the injection valve element can be moved longitudinally. The injection valve element (11) opens and blocks at least one injection opening (13) into the combustion chamber by means of the motion of the injection valve element. The control valve (1) controls the pressure in the control chamber (15). The control valve (1) comprises a magnet assembly (2), an armature (5), a valve piece (4), and a valve seat (7) formed on the valve piece (4). The armature (5) comprises an armature plate (50), which can be controlled by the magnet assembly (2). The armature (5) interacts at least indirectly with the valve seat (7) in order to relieve the control chamber (15). A crown ring (20) is clamped between the valve piece (4) and the magnet assembly (2).

IPC 8 full level
F02M 47/02 (2006.01); **F02M 51/00** (2006.01); **F02M 61/12** (2006.01); **F02M 61/16** (2006.01); **F02M 63/00** (2006.01)

CPC (source: EP KR)
F02M 47/027 (2013.01 - EP KR); **F02M 51/005** (2013.01 - KR); **F02M 61/12** (2013.01 - KR); **F02M 61/161** (2013.01 - EP KR); **F02M 63/0071** (2013.01 - KR); **F02M 63/0073** (2013.01 - EP KR); **F02M 51/005** (2013.01 - EP); **F02M 61/12** (2013.01 - EP); **F02M 63/0071** (2013.01 - EP); **F02M 2200/9069** (2013.01 - EP KR)

Citation (search report)
See references of WO 2017092955A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
WO 2017092955 A1 20170608; CN 108291509 A 20180717; CN 108291509 B 20201204; DE 102015224177 A1 20170608; EP 3384149 A1 20181010; EP 3384149 B1 20200506; KR 102623972 B1 20240111; KR 20180090842 A 20180813

DOCDB simple family (application)
EP 2016076439 W 20161102; CN 201680070780 A 20161102; DE 102015224177 A 20151203; EP 16788726 A 20161102; KR 20187018585 A 20161102