

Title (en)
VALVE FOR METERING A FLUID

Title (de)
VENTIL ZUM ZUMESSEN EINES FLUIDS

Title (fr)
SOUPAPE SERVANT À DOSER UN FLUIDE

Publication
EP 3559437 A1 20191030 (DE)

Application
EP 17786914 A 20171019

Priority
• DE 102016225776 A 20161221
• EP 2017076701 W 20171019

Abstract (en)
[origin: WO2018114088A1] The invention relates to a valve (1) for metering a fluid, which, in particular, is used as a fuel injection valve for internal combustion engines, comprises an electromagnetic actuator (10) and a valve needle (5) that can be actuated by the actuator (10), wherein an armature (6) of the actuator (10) is guided on the valve needle (5), wherein a stop element (7) which limits the movement of the armature (6) relative to the valve needle (5) is arranged on the valve needle (5), and wherein the armature (6) has a spring holder (27) that opens toward the stop element (7) and into which a spring (27) supported on the stop element (7) is inserted. Here, the valve needle (5) is guided along a longitudinal axis (4) of the housing (2) via the armature (6) and/or the stop element (7). In addition, as viewed along the longitudinal axis (4), a length (f) of the spring folder (25) is smaller than a spring length (F) of the spring in the non-actuated initial state.

IPC 8 full level
F02M 51/06 (2006.01); **F02M 61/12** (2006.01); **F02M 61/20** (2006.01)

CPC (source: EP KR US)
F02M 51/0671 (2013.01 - EP KR US); **F02M 51/0685** (2013.01 - EP KR US); **F02M 55/008** (2013.01 - EP); **F02M 61/12** (2013.01 - EP KR US); **F02M 61/205** (2013.01 - EP KR US); **F02M 63/0075** (2013.01 - EP)

Citation (search report)
See references of WO 2018114088A1

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)
DE 102016225776 A1 20180621; CN 110100089 A 20190806; CN 110100089 B 20211221; CN 110100089 B9 20220111; EP 3559437 A1 20191030; EP 3559437 B1 20210127; EP 3822475 A1 20210519; EP 3822475 B1 20230517; JP 2020502423 A 20200123; JP 6845937 B2 20210324; KR 102394017 B1 20220506; KR 20190097052 A 20190820; US 11359589 B2 20220614; US 2019309712 A1 20191010; WO 2018114088 A1 20180628

DOCDB simple family (application)
DE 102016225776 A 20161221; CN 201780079650 A 20171019; EP 17786914 A 20171019; EP 2017076701 W 20171019; EP 20209959 A 20171019; JP 2019533441 A 20171019; KR 20197017824 A 20171019; US 201716470831 A 20171019