

Title (en)
PRESSURE CONTROL VALVE

Title (de)
DRUCKREGELVENTIL

Title (fr)
SOUPAPE DE RÉGULATION DE PRESSION

Publication
EP 2859216 B1 20170201 (DE)

Application
EP 13721721 A 20130507

Priority
• FR 1255351 A 20120608
• EP 2013059518 W 20130507

Abstract (en)
[origin: WO2013182366A1] The invention relates to a pressure control valve for a high-pressure accumulator (22) of an injection device of an internal combustion engine, comprising a magnetic actuator (10). The magnetic actuator (10) has a magnetic core (30) having contacting pins (41a, 41b) and a magnetic armature (33) having an armature plate (34), wherein the contacting pins (41a, 41b) protrude from a magnetic core end face (31) and pass through feedthroughs (43a, 43b) formed in the armature plate (34). The armature plate (34) is movably arranged in an armature space (44), which is hydraulically connected by means of a pressure equalization channel (50) to a valve chamber (23) connected to low pressure. The pressure equalization channel (50) has an opening (51) on the magnetic core end face (31), by means of which opening the pressure equalization channel (60) opens into the armature space (44). Furthermore, a passage for the fuel from one end face of the armature plate (34) to the other end face of the armature plate (34) is provided for the pressure equalization, which passage is formed by at least one of the feedthroughs (43a, 43b) in the armature plate (34). A residual air gap disk (50), which has further feedthroughs (53a, 53b) in correspondence with the feedthroughs (43a, 43b), is arranged between the magnetic core (30) and the armature plate (43). The additional feedthrough (53b) in the residual air gap disk (50) lying near the opening (61) has a radial extension (54) that extends in the direction of the opening (61).

IPC 8 full level
F02M 63/02 (2006.01); **F02M 63/00** (2006.01)

CPC (source: EP US)
F02M 63/0017 (2013.01 - EP US); **F02M 63/0033** (2013.01 - US); **F02M 63/0073** (2013.01 - US); **F02M 63/025** (2013.01 - EP US);
F02M 2200/07 (2013.01 - EP US)

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

DOCDB simple family (publication)
WO 2013182366 A1 20131212; CN 104334868 A 20150204; CN 104334868 B 20170322; EP 2859216 A1 20150415; EP 2859216 B1 20170201;
FR 2991727 A1 20131213; FR 2991727 B1 20140704; IN 10005DEN2014 A 20150814; JP 2015522742 A 20150806; JP 5989955 B2 20160907;
US 2015152827 A1 20150604; US 9410522 B2 20160809

DOCDB simple family (application)
EP 2013059518 W 20130507; CN 201380029633 A 20130507; EP 13721721 A 20130507; FR 1255351 A 20120608;
IN 10005DEN2014 A 20141125; JP 2015515442 A 20130507; US 201314406245 A 20130507