

Title (en)

INLET METERING VALVE FOR AN ENGINE FUEL PUMP

Title (de)

EINLASSDOSIERVENTIL FÜR EINE MOTORKRAFTSTOFFPUMPE

Title (fr)

VANNE DE DOSAGE D'ENTRÉE POUR POMPE À COMBUSTIBLE DE MOTEUR

Publication

EP 4100641 A1 20221214 (EN)

Application

EP 21703405 A 20210202

Priority

- GB 202001442 A 20200203
- EP 2021052448 W 20210202

Abstract (en)

[origin: GB2591519A] An inlet metering valve (IMV) assembly for an engine fuel pump of a gasoline direct-injection (GDI) system, comprises an IMV cartridge assembly 26 and a solenoid assembly (28, figs. 2,3). The IMV cartridge assembly 26 comprises an IMV valve body 42 of non-magnetic material and a hollow pole piece 44, the pole piece 44 comprising a peripheral wall 47 and a longitudinal cavity 50 containing a guide 62 of non-magnetic material, an armature 60 and a metering pin 68, the metering pin 68 being fixed to the armature 60. The peripheral wall 47 of the pole piece 44 has an external or internal groove comprising a narrowed portion 72 connecting a first slope-shaped portion 70, a second slope-shaped portion 71 to induce a constant magnetic force of the armature 60 when the coil current varies, eg between 0.8A and 1.6A. The valve body 42, armature 60 and guide 62 may have bores 80 for pressure balancing and cooling.

IPC 8 full level

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CPC (source: EP GB)

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