Title (en)

FUEL INJECTION VALVE FOR INTERNAL COMBUSTION ENGINES

Title (de)

BRENNSTOFFEINSPRITZVENTIL FÜR VERBRENNUNGSKRAFTMASCHINEN

Title (fr)

SOUPAPE D'INJECTION DE CARBURANT POUR DES MOTEURS À COMBUSTION INTERNE

Publication

EP 4107386 A1 20221228 (DE)

Application

EP 21706532 A 20210216

Priority

- CH 1732020 A 20200217
- EP 2021053797 W 20210216

Abstract (en)

[origin: WO2021165275A1] The fuel injection valve (10) has a hydraulic control device (72) for controlling the axial movement of the injection valve member (56). The stem (76) of the intermediate valve member (78) of mushroom-shaped configuration of the intermediate valve (83) is guided in the guide recess (74) of the intermediate part (66). In the open position, the intermediate valve member (78) opens up a second connection (118, 117, 96) between a high-pressure fuel inlet (86) and a valve chamber (44) and, in the closed position, the intermediate valve member (78) shuts off the second connection (118, 117, 96) between the high-pressure fuel inlet (86) and the valve chamber (44). In the closed position of the intermediate valve member (78), the head (80) of the intermediate valve member (80) lies with a side facing toward the intermediate part (66) against the intermediate valve seat (82) via a first sealing surface (111.2), which runs around the stem (76) or the guide recess (74) at a first radial spacing (r1) so as to form a first annular sealing surface (121) which is continuous in the circumferential direction, and via a second sealing surface (112.2), which runs around the stem (76) or the guide recess (74) at a second radial spacing (r2) so as to form a second annular sealing surface (122) which is continuous in the circumferential direction, wherein the first radial spacing (r1) is greater than the second radial spacing (r2).

IPC 8 full level

F02M 47/02 (2006.01); **F02M 63/00** (2006.01)

CPC (source: EP KR US)

F02M 47/025 (2013.01 - EP KR US); **F02M 47/027** (2013.01 - EP KR); **F02M 63/0014** (2013.01 - US); **F02M 63/0028** (2013.01 - US); **F02M 63/0029** (2013.01 - EP KR); **F02M 63/0035** (2013.01 - EP KR); **F02M 63/0071** (2013.01 - EP KR); **F02M 63/0077** (2013.01 - EP KR); **F02M 63/0078** (2013.01 - EP KR); F02M 2200/07 (2013.01 - EP KR)

Citation (search report)

See references of WO 2021165275A1

Designated contracting state (EPC)

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Designated validation state (EPC)

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DOCDB simple family (application)

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