

Title (en)

METHOD AND SYSTEM TO DETERMINE THE STATE OF NEEDLE VALVE OF A FUEL INJECTOR

Title (de)

VERFAHREN UND SYSTEM ZUR BESTIMMUNG DES ZUSTANDS EINES NADELVENTILS EINES EINSPRITZVENTILS

Title (fr)

PROCÉDÉ ET SYSTÈME POUR DÉTERMINER L'ÉTAT D'UN POINTEAU D'UN INJECTEUR DE CARBURANT

Publication

EP 3994348 A1 20220511 (EN)

Application

EP 20737395 A 20200701

Priority

- GB 201909434 A 20190701
- EP 2020068476 W 20200701

Abstract (en)

[origin: GB2585196A] A fuel injector including a solenoid-controlled actuator, said solenoid controlled actuator 201 including a coil 202 connected to high side 211 and low side 212 terminals. Activation of the actuator causes a needle of a needle valve to move away from a closed position where the valve needle tip is in contact with a valve seat (see box 204), to an open position where the valve needle tip is away from said valve seat. The tip and seat acting as a switch 203, with said valve seat being connected to ground potential, and where said fuel injector defines a flow path for current to flow from a high side point of the injector via said needle and seat, to ground, when said needle valve is in the closed position. The high side point is connected to the high side terminal 211 of said solenoid via a first resistor R1.

IPC 8 full level

F02D 41/20 (2006.01); **F02M 65/00** (2006.01)

CPC (source: EP GB)

F02D 41/20 (2013.01 - EP GB); **F02M 51/06** (2013.01 - GB); **F02M 65/005** (2013.01 - GB); **F02D 2041/2055** (2013.01 - EP GB); **F02D 2041/2058** (2013.01 - EP GB); **F02D 2041/2068** (2013.01 - EP GB); **F02D 2400/22** (2013.01 - EP GB); **F02M 65/005** (2013.01 - EP)

Citation (search report)

See references of WO 2021001409A1

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)

GB 201909434 D0 20190814; **GB 2585196 A 20210106**; **GB 2585196 B 20211027**; EP 3994348 A1 20220511; WO 2021001409 A1 20210107

DOCDB simple family (application)

GB 201909434 A 20190701; EP 2020068476 W 20200701; EP 20737395 A 20200701