

Title (en)

METHOD FOR DETERMINING A CLOSING TIME OF A FUEL INJECTOR

Title (de)

VERFAHREN ZUR BESTIMMUNG EINES SCHLIESSZEITPUNKTES EINES KRAFTSTOFFINJEKTORS

Title (fr)

PROCÉDÉ DE DÉTERMINATION DE L'INSTANT DE FERMETURE D'UN INJECTEUR DE CARBURANT

Publication

**EP 3143268 A1 20170322 (DE)**

Application

**EP 15722133 A 20150504**

Priority

- DE 102014209326 A 20140516
- EP 2015059650 W 20150504

Abstract (en)

[origin: WO2015173039A1] The invention relates to a method for the determining a closing time (tS) of a fuel injector comprising a piezoelectric actuator and a valve needle, wherein in order to close the valve needle of the fuel injector, the piezoelectric actuator is discharged; According to the invention, a variable (U) characterizing an extension of the piezoelectric actuator (110) is measured on said piezoelectric actuator; the discharge is interrupted during a time interval ( $\Delta t$ ), before the end of the discharging process; and the closing time (tS) is determined from the variation of the first variable (U) during the time interval ( $\Delta t$ ).

IPC 8 full level

**F02D 41/20** (2006.01); **F02D 41/38** (2006.01); **F02D 41/40** (2006.01)

CPC (source: CN EP KR)

**F02D 41/2096** (2013.01 - CN EP KR); **F02D 41/3809** (2013.01 - CN EP KR); **F02D 41/40** (2013.01 - CN EP KR);  
**F02D 2041/2055** (2013.01 - CN EP KR); **Y02T 10/40** (2013.01 - EP KR)

Citation (search report)

See references of WO 2015173039A1

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 102014209326 A1 20151119**; CN 106460700 A 20170222; EP 3143268 A1 20170322; KR 20170007292 A 20170118;  
WO 2015173039 A1 20151119

DOCDB simple family (application)

**DE 102014209326 A 20140516**; CN 201580025216 A 20150504; EP 15722133 A 20150504; EP 2015059650 W 20150504;  
KR 20167031663 A 20150504