

Title (en)

Method for operating a piezoelectrically actuated injection valve

Title (de)

Verfahren zum Betreiben eines piezoelektrisch betätigten Einspritzventils

Title (fr)

Procédé de fonctionnement d'une soupape d'injection à commande piézoélectrique

Publication

**EP 2022969 A3 20120704 (DE)**

Application

**EP 08104338 A 20080610**

Priority

DE 102007034188 A 20070723

Abstract (en)

[origin: EP2022969A2] The method involves charging an actuator (12) of an injection valve formed as piezoelectric element with a control voltage (U). The actuator is charged in a test control with a predetermined test voltage. A controlled fluid pressure is detected during the test control in a supply system. The test voltage and the detected fluid pressure information are derived over at operating condition of the injection valve (10) or the actuator. Independent claims are also included for the following: (1) a computer program product (2) a controller for an injection valve, particularly a fuel injection valve of an internal combustion engine of a motor vehicle.

IPC 8 full level

**F02D 41/20** (2006.01); **F02D 41/24** (2006.01); **F02D 43/02** (2006.01); **F02M 51/06** (2006.01); **F02M 65/00** (2006.01); **F02D 41/12** (2006.01)

CPC (source: EP US)

**F02D 41/2096** (2013.01 - EP US); **F02D 41/2438** (2013.01 - EP US); **F02D 41/2467** (2013.01 - EP US); **F02M 51/0603** (2013.01 - EP US); **F02M 65/003** (2013.01 - EP US); **F02D 41/123** (2013.01 - EP US); **F02D 2041/2051** (2013.01 - EP US); **F02D 2200/0602** (2013.01 - EP US); **F02D 2200/0614** (2013.01 - EP US)

Citation (search report)

- [XII] DE 102005001498 A1 20060720 - SIEMENS AG [DE]
- [I] WO 2006029931 A1 20060323 - SIEMENS AG [DE], et al
- [XAI] EP 1138919 A1 20011004 - BOSCH GMBH ROBERT [DE]
- [XAI] WO 2004048763 A1 20040610 - BOSCH GMBH ROBERT [DE], et al

Cited by

CN102422004A; US9200580B2; WO2010121892A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

**EP 2022969 A2 20090211**; **EP 2022969 A3 20120704**; DE 102007034188 A1 20090129; US 2009045267 A1 20090219; US 7905136 B2 20110315

DOCDB simple family (application)

**EP 08104338 A 20080610**; DE 102007034188 A 20070723; US 22023208 A 20080722