Title (en)

METHOD FOR THE DIAGNOSIS OF THE VOLTAGE CONTROL FOR A PIEZOELECTRIC ACTUATOR OF AN INJECTION VALVE

Title (de)

VERFAHREN ZUR DIAGNOSE DER SPANNUNGSANSTEUERUNG FÜR EINEN PIEZOELEKTRISCHEN AKTOR EINES EINSPRITZVENTILS

Title (fr)

PROCEDE DE DIAGNOSTIC DE LA COMMANDE DE TENSION POUR ACTIONNEUR PIEZO-ELECTRIQUE D'UNE SOUPAPE D'INJECTION

Publication

EP 1272754 A1 20030108 (DE)

Application

EP 01911413 A 20010202

Priority

- DE 0100393 W 20010202
- DE 10016476 A 20000401

Abstract (en)

[origin: WO0175289A1] The invention relates to a method for the diagnosis of a control voltage for a piezoelectric actuator of an injection valve. The control voltage is measured for the individual phases of the injection procedure. A corresponding tolerance band (B1 ... B4) is provided for each control phase. Said band is placed above the desired value of the control voltage (Ua). The tolerance regions (B1 ... B4) are determined according to operating and/or environmental conditions. When the corresponding tolerance regions are not obtained for the individual control cycles, said measuring errors are counted in repeated measurements. A permanent error is diagnosed when a predetermined number of the measuring errors is exceeded. The counter is set back when the number has not been exceeded after a while. The error memory can be set back during service by means of a service plug when an error occurs.

IPC 1-7

F02D 41/20; F02D 41/22; H01L 41/04; F02D 41/38; F02M 51/06

IPC 8 full level

F02M 47/00 (2006.01); **F02D 41/20** (2006.01); **F02D 41/22** (2006.01); **F02D 41/38** (2006.01); **F02D 45/00** (2006.01); **F02M 51/06** (2006.01); **F02M 65/00** (2006.01)

CPC (source: EP US)

F02D 41/2096 (2013.01 - EP US); **F02D 41/221** (2013.01 - EP US); F02D 41/3809 (2013.01 - EP US)

Citation (search report)

See references of WO 0175289A1

Designated contracting state (EPC)

DE ES FR IT

DOCDB simple family (publication)

WO 0175289 A1 20011011; DE 10016476 A1 20011206; DE 50107910 D1 20051208; EP 1272754 A1 20030108; EP 1272754 B1 20051102; ES 2248289 T3 20060316; JP 2003529714 A 20031007; US 2004008032 A1 20040115; US 6820474 B2 20041123

DOCDB simple family (application)

DE 0100393 W 20010202; DE 10016476 A 20000401; DE 50107910 T 20010202; EP 01911413 A 20010202; ES 01911413 T 20010202; JP 2001572745 A 20010202; US 24033803 A 20030701