

Title (en)

METHOD AND CIRCUIT ARRANGEMENT FOR OPERATING A SOLENOID VALVE

Title (de)

VERFAHREN UND SCHALTUNGSANORDNUNG ZUM BETRIEB EINES MAGNETVENTILS

Title (fr)

PROCEDE ET CIRCUIT POUR FAIRE FONCTIONNER UNE ELECTROVANNE

Publication

**EP 1173658 B1 20050921 (DE)**

Application

**EP 01911384 A 20010125**

Priority

- DE 0100279 W 20010125
- DE 10006849 A 20000216
- DE 10057778 A 20001122

Abstract (en)

[origin: WO0161156A1] The invention relates to a method and a circuit arrangement for operating a solenoid valve (MV), especially for actuating an electrohydraulic gas exchange valve gear, an injection valve or an inlet or outlet valve of an internal combustion engine. The aim of the invention is to enable the solenoid valve (MV) to be controlled as simply as possible. The solenoid valve (MV) is impinged upon in a controlled manner and in a cycle that comprises three phases. The solenoid valve (MV) is connected to a first voltage (U\_1) for a predetermined period (T\_1) during a pick-up phase for producing a pick-up current, whereby said voltage has a predetermined value. Said solenoid valve (MV) is connected to a second voltage (U\_2) in a holding phase for producing a holding current, whereby said voltage has a predetermined value. Said valve is separated from the two voltages (U\_1, U\_2) in a switching-off phase.

IPC 1-7

**F01L 9/02**; **F01L 9/04**

IPC 8 full level

**F01L 9/10** (2021.01); **F01L 9/20** (2021.01); **F02D 13/02** (2006.01); **F02D 41/20** (2006.01); **F16K 31/06** (2006.01)

CPC (source: EP US)

**F01L 9/10** (2021.01 - EP US); **F01L 9/20** (2021.01 - EP US); **F02D 41/20** (2013.01 - EP US)

Citation (examination)

- DE 3920064 A1 19910103 - BOSCH GMBH ROBERT [DE]
- US 4729056 A 19880301 - EDWARDS ARTHUR J [US], et al

Cited by

DE102009011244A1

Designated contracting state (EPC)

DE FR IT SE

DOCDB simple family (publication)

**WO 0161156 A1 20010823**; AU 4043901 A 20010827; AU 771141 B2 20040311; DE 50107464 D1 20060202; EP 1173658 A1 20020123; EP 1173658 B1 20050921; JP 2003522919 A 20030729; US 2002157650 A1 20021031; US 6772737 B2 20040810

DOCDB simple family (application)

**DE 0100279 W 20010125**; AU 4043901 A 20010125; DE 50107464 T 20010125; EP 01911384 A 20010125; JP 2001559982 A 20010125; US 95908202 A 20020115