Title (en)

METHOD FOR CONTROLLING AN ELECTROMAGNETIC ACTUATOR FOR ACTIVATING A GAS EXCHANGE VALVE ON A RECIPROCATING INTERNAL COMBUSTION ENGINE

Title (de)

VERFAHREN ZUR ANSTEUERUNG EINES ELEKTROMAGNETISCHEN AKTUATORS ZUR BETÄTIGUNG EINES GASWECHSELVENTILS AN EINER KOLBENBRENNKRAFTMASCHINE

Title (fr)

PROCEDE DE COMMANDE D'UN ACTIONNEUR ELECTROMAGNETIQUE DESTINE A ACTIONNER UNE SOUPAPE D'ECHANGE DES GAZ D'UN MOTEUR A PISTONS

Publication

**EP 1101015 A1 20010523 (DE)**

Application

**EP 00941968 A 20000520**

Priority

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- EP 0004584 W 20000520

Abstract (en)

[origin: US6340008B1] The invention relates to a method for controlling an electromagnetic actuator for activating a gas exchange valve on a reciprocating internal combustion engine, said gas exchange valve having two electromagnets that are set apart from each other and between which an armature that acts on the gas exchange valve against the force of at least one return spring is guided in such a way that it can move back and forth between the pole faces of the two electromagnets. The electromagnets are alternately subjected to a receiving current by means of a control unit and the movement of the armature on its path from one pole face to the other is detected by means of a sensor unit. Actual values relating to the movement of the armature are detected by the sensor unit in a first phase (I) beginning with the start of the release of the armature from the pole face of the holding electromagnet; the receiving electromagnet is controlled by the control unit in terms of the supply of current, according to the detected actual values relating to the movement of the armature, in a second phase (II), in such a way that the armature moves at a predetermined speed and with an acceleration around zero, within a predetermined range away from the pole face of the receiving electromagnet; and in a third phase (III), the supply of current of the receiving electromagnet is influenced in such a way that the armature meets the pole face at a predetermined minimum speed.

IPC 1-7

**F01L 9/04**

IPC 8 full level

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