

Title (en)

METHOD FOR CONTROLLING THE FINAL POSITION OF A GAS EXCHANGE VALVE ACTUATED BY AN ELECTROMAGNETIC ACTUATOR IN AN INTERNAL COMBUSTION PISTON ENGINE

Title (de)

VERFAHREN ZUR ENDLAGENANSTEUERUNG EINES DURCH EINEN ELEKTROMAGNETISCHEN AKTUATOR BETÄTIGTEN GASWECHSELVENTILS AN EINER KOLBENBRENNKRAFTMASCHINE

Title (fr)

PROCEDE DE COMMANDE DE LA POSITION DE FIN DE COURSE D'UNE VALVE DE COMMUTATION DES GAZ ACTIONNEE PAR UN ACTUATEUR ELECTROMAGNETIQUE DANS UN MOTEUR A COMBUSTION INTERNE

Publication

**EP 1101016 B1 20020918 (DE)**

Application

**EP 00945689 A 20000525**

Priority

- DE 19924374 A 19990527
- DE 10019739 A 20000420
- EP 0004772 W 20000525

Abstract (en)

[origin: US6427651B1] A method for controlling an electromagnetic actuator operating a gas exchange valve in an internal combustion piston engine. Between two electromagnets an armature, connected to the gas exchange valve, is reciprocated by a return spring between the electromagnets whose alternating energization moves the valve into open and closed positions. The lift of the armature is detected by a sensor array during its movement from one pole face to the other. Depending on the detected actual values of the armature lift, the energy flow to the electromagnets is controlled such that the armature moves at a speed tending to zero at a predetermined distance range from the pole face of the capturing electromagnet. At the end of the lift motion, the current flow through the capturing electromagnet is guided in such a way that the armature is maintained oscillating at a short distance from the pole face of the capturing electromagnet.

IPC 1-7

**F01L 9/04**

IPC 8 full level

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CPC (source: EP US)

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