

Title (en)
DEVICE AND METHOD FOR CONTROLLING THE LIFT OF AN OUTLET GAS EXCHANGE VALVE OF AN INTERNAL COMBUSTION ENGINE

Title (de)
VORRICHTUNG UND VERFAHREN ZUR REGELUNG DES HUBVERLAUFES EINES AUSLASSGASWECHSELVENTILS EINER BRENNKRAFTMASCHINE

Title (fr)
DISPOSITIF ET PROCEDE POUR REGULER LA LEVEE D'UNE SOUPAPE D'ECHANGE GAZEUX D'ECHAPPEMENT D'UN MOTEUR A COMBUSTION INTERNE

Publication
EP 1812693 B1 20091007 (DE)

Application
EP 05803031 A 20051019

Priority
• EP 2005011246 W 20051019
• DE 102004054775 A 20041112

Abstract (en)
[origin: WO2006050795A1] The invention relates to a device and method for controlling the lift of an outlet gas exchange valve of an internal combustion engine. The device comprises a controllable electric motor with an actuating element for actuating the outlet gas exchange valve, a controller device for controlling the electric motor and energy storage means acting upon the outlet gas exchange valve in two opposite drive directions. The controller device controls the electric motor according to a stored set trajectory, enabling the outlet gas exchange valve to move from a first end position into a second end position and vice versa by pivoting the rotor of the electric motor backwards and forth. According to the invention, at least two different set trajectories are provided in order to control the speed of the rotor of the electric motor so that the electric motor can be controlled. Lower kinetic energy is transferred to the outlet gas exchange valve when control is exerted by means of the set trajectory during the valve opening process than when control is exerted by means of the other set trajectory.

IPC 8 full level
F01L 9/20 (2021.01); **F01L 9/22** (2021.01)

CPC (source: EP US)
F01L 9/20 (2021.01 - EP US); **F01L 9/22** (2021.01 - EP); **F01L 9/22** (2021.01 - US)

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
WO 2006050795 A1 20060518; AT E445086 T1 20091015; DE 102004054775 A1 20060524; DE 102004054775 B4 20060921; DE 502005008295 D1 20091119; EP 1812693 A1 20070801; EP 1812693 B1 20091007; US 2007209620 A1 20070913; US 7753015 B2 20100713

DOCDB simple family (application)
EP 2005011246 W 20051019; AT 05803031 T 20051019; DE 102004054775 A 20041112; DE 502005008295 T 20051019; EP 05803031 A 20051019; US 79816307 A 20070510