

Title (en)

Combustion engine valve control for an electromagnetic actuator with gas springs

Title (de)

Gaswechselventilsteuerung für Brennkraftmaschinen mit einem mit Gasfedern ausgerüsteten elektromagnetischen Aktuator

Title (fr)

Commande des soupapes de moteur à combustion pour un actionneur électromagnétique, équipé avec des ressorts à gaz

Publication

EP 1138883 A3 20011205 (DE)

Application

EP 00710039 A 20001213

Priority

DE 10008991 A 20000225

Abstract (en)

[origin: US2001017113A1] A gas exchange valve control for internal combustion engines includes an electromagnetic actuator equipped with gas springs. The gas exchange valve control has an armature, which drives the gas exchange valve and is arranged to oscillate between stroke-separated switching magnets against the gas springs. The armature serving as the separating piston between the gas springs is moveable without friction in a closed armature stroke space. A housing-like yoke, which encloses the armature stroke space, including the adjacent switching magnets, exhibits between the switching magnets a device which serves to shorten the respective magnetic circuit of the respective switching magnet.

IPC 1-7

F01L 9/04

IPC 8 full level

F01L 1/46 (2006.01); **F01L 9/04** (2006.01); **F01L 9/20** (2021.01)

CPC (source: EP US)

F01L 1/465 (2013.01 - EP US); **F01L 9/20** (2021.01 - EP US); **F01L 2301/00** (2020.05 - EP US)

Citation (search report)

- [A] DE 19838118 A1 20000224 - BAYERISCHE MOTOREN WERKE AG [DE]
- [A] EP 0870906 A1 19981014 - BAYERISCHE MOTOREN WERKE AG [DE]
- [A] DE 19651846 A1 19980618 - FEV MOTORENTECH GMBH & CO KG [DE]
- [A] GB 2137420 A 19841003 - FEV FORSCH ENERGIE TECH VERBR
- [A] PATENT ABSTRACTS OF JAPAN vol. 2000, no. 05 14 September 2000 (2000-09-14)

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

US 2001017113 A1 20010830; US 6415751 B2 20020709; DE 10008991 A1 20010830; DE 50009722 D1 20050414; EP 1138883 A2 20011004; EP 1138883 A3 20011205; EP 1138883 B1 20050309; ES 2234553 T3 20050701

DOCDB simple family (application)

US 77879501 A 20010208; DE 10008991 A 20000225; DE 50009722 T 20001213; EP 00710039 A 20001213; ES 00710039 T 20001213