

Title (en)

Electromagnetic actuator with spring retainer cap to control combustion engine gas exchange valve

Title (de)

Elektromagnetischer Aktuator mit Federhaltekappe zur Betätigung eines Gaswechselventils an einer Kolbenbrennkraftmaschine

Title (fr)

Actionneur électromagnétique avec un capuchon de ressort pour la commande d'une soupape de moteur à combustion

Publication

**EP 1146205 A3 20011114 (DE)**

Application

**EP 00127671 A 20001218**

Priority

DE 10018739 A 20000415

Abstract (en)

[origin: EP1146205A2] The device has two electromagnets at a distance apart acting as opening and closing magnets, each with a yoke body and coil with pole surfaces facing the armature and passage openings on the side away from the pole surfaces and a protective cap (25) for the opening spring attached to the closing magnet housing (14) at the opening via an axially insertable lock.

IPC 1-7

**F01L 9/04**

IPC 8 full level

**F01L 9/20** (2021.01); **H01F 7/16** (2006.01)

CPC (source: EP US)

**F01L 9/20** (2021.01 - EP US)

Citation (search report)

- [A] WO 9931359 A1 19990624 - TELEFUNKEN MICROELECTRON [DE], et al
- [A] EP 0977213 A1 20000202 - DAIMLER CHRYSLER AG [DE]
- [A] US 5961097 A 19991005 - ZIMMERMANN DANIEL E [US]
- [A] PATENT ABSTRACTS OF JAPAN vol. 1999, no. 01 29 January 1999 (1999-01-29)

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)

**EP 1146205 A2 20011017; EP 1146205 A3 20011114; EP 1146205 B1 20050706**; AT E299229 T1 20050715; DE 10018739 A1 20011018; DE 50010667 D1 20050811; JP 2001317317 A 20011116; US 2001047779 A1 20011206; US 6502534 B2 20030107

DOCDB simple family (application)

**EP 00127671 A 20001218**; AT 00127671 T 20001218; DE 10018739 A 20000415; DE 50010667 T 20001218; JP 2001066926 A 20010309; US 83490201 A 20010416