

Title (en)

Valve operating apparatus and method for an engine

Title (de)

Ventilsteuerungseinrichtung in einem Brennkraftmaschine und Verfahren

Title (fr)

Dispositif d'actionnement de soupape de moteur à combustion interne, et procédé de commande

Publication

EP 1536107 A1 20050601 (EN)

Application

EP 04028150 A 20041126

Priority

AU 2003906627 A 20031128

Abstract (en)

A valve operating apparatus for an internal combustion engine including: a housing (2); a reciprocating piston (1) residing wholly within the housing (2), the reciprocating piston (1) driving one or more poppet valves (7); a first fluid supply path (3) and a first fluid drain path (5), each path being controllable to supply or drain fluid to/from a first reciprocating piston end (16); a second fluid supply path (4) and a second fluid drain path (6), each path being controllable to supply or drain fluid to/from a second reciprocating piston end (17); wherein said reciprocating piston (1), in use, is driven between a first position and a second position by controlling said fluid in said supply and drain paths (3, 4, 5, 6), thereby operating said one or more poppet valves (7), characterised in that a connector (9) passes through an aperture (14) in said housing (2) to connect said reciprocating piston (1) to said one or more poppet valves (7), said reciprocating piston (1) in co-operation with an internal wall of the housing forming a seal to prevent substantial egress of fluid from the housing (2) through said aperture (14). <IMAGE>

IPC 1-7

F01L 9/02; **F01L 1/26**

IPC 8 full level

F01L 1/26 (2006.01); **F01L 9/10** (2021.01)

CPC (source: EP US)

F01L 1/26 (2013.01 - EP US); **F01L 9/10** (2021.01 - EP US)

Citation (applicant)

- DE 19826047 A1 19991216 - BOSCH GMBH ROBERT [DE]
- WO 03106820 A1 20031224 - BOSCH GMBH ROBERT [DE], et al
- WO 9207172 A1 19920430 - LOTUS CAR [GB]
- US 6321703 B1 20011127 - DIEHL UDO [DE], et al

Citation (search report)

- [X] DE 19931129 A1 20000113 - STELZIG ARMIN [DE]
- [XP] EP 1403473 A1 20040331 - CATERPILLAR INC [US]
- [A] US 2003164163 A1 20030904 - LEI NING [US], et al
- [X] PATENT ABSTRACTS OF JAPAN vol. 009, no. 077 (M - 369) 6 April 1985 (1985-04-06)

Cited by

EP2063075A1; EP2065572A3; US7878166B2; US8381693B2; WO2009065566A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

EP 1536107 A1 20050601; BR PI0416410 A 20070109; CA 2546813 A1 20050609; CN 1882765 A 20061220; JP 2007533898 A 20071122; KR 20060111612 A 20061027; US 2007113804 A1 20070524; WO 2005052324 A1 20050609

DOCDB simple family (application)

EP 04028150 A 20041126; AU 2004001668 W 20041129; BR PI0416410 A 20041129; CA 2546813 A 20041129; CN 200480034429 A 20041129; JP 2006540100 A 20041129; KR 20067012575 A 20060623; US 58124104 A 20041129