

Title (en)
EXHAUST VALVE FOR COMBUSTION ENGINES

Title (de)
AUSLASSVENTIL FÜR VERBRENNUNGSMOTOR

Title (fr)
SOUPAPE D'ÉCHAPPEMENT POUR MOTEURS A COMBUSTION

Publication
EP 1242760 A4 20050323 (EN)

Application
EP 99967736 A 19991229

Priority
US 9931159 W 19991229

Abstract (en)
[origin: WO0150047A1] An exhaust valve (10) includes a housing (44) having a passageway (46) extending axially therethrough. The exhaust valve (10) also includes a rotatable butterfly plate (50) disposed in the passageway (46) of the housing (44) and having an annular groove (52) in a periphery thereof. The exhaust valve (10) further includes a ring seal (60) disposed in the groove (52) and being radially compressible and expandable for engagement and disengagement with the housing for opening and closing the passageway (46) to allow and prevent exhaust gases flowing therethrough.

IPC 1-7
F16K 1/22; F16K 1/226; F02D 9/04; F02D 9/10

IPC 8 full level
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CPC (source: EP)
F02D 9/04 (2013.01); **F02D 9/1015** (2013.01); **F02D 9/1025** (2013.01); **F02D 9/1065** (2013.01); **F16K 1/2261** (2013.01); **F02D 9/10** (2013.01); **Y02T 10/12** (2013.01)

Citation (search report)

- [XY] DE 19530579 A1 19960814 - SCHMITZ & SCHULTE GMBH & CO KG [DE]
- [X] US 4872642 A 19891010 - OSHIMA AKIRA [JP]
- [Y] US 4884744 A 19891205 - PADGAONKAR ARVIND J [US]
- [A] US 3807690 A 19740430 - PFUNDSTEIN K
- [A] US 5632304 A 19970527 - KEMPKA KARL H [DE], et al
- [X] PATENT ABSTRACTS OF JAPAN vol. 010, no. 286 (M - 521) 27 September 1986 (1986-09-27)
- See references of WO 0150047A1

Designated contracting state (EPC)
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