

Title (en)
Engine with at least two cylinder banks

Title (de)
Brennkraftmaschine mit mindestens zwei Zylinderbankreihen

Title (fr)
Moteur avec au moins deux bancs de cylindres

Publication
EP 1310637 A3 20040114 (DE)

Application
EP 02020994 A 20020920

Priority
DE 10154669 A 20011107

Abstract (en)
[origin: EP1310637A2] Internal combustion engine comprises an oil separation chamber provided with an inlet and outlet opening in each of the cylinder head covers (16, 18) as part of the crankcase ventilator. The oil separation chambers are connected via their inlet openings to the respective camshaft chamber (17). <??>Preferred Features: The oil separation chamber is integrated in the cylinder head cover so that the inlet opening of the oil separation chamber is arranged in the middle of the cylinder head cover relative to its longitudinal extension. The oil separation chamber is sealed by a separate cover. The outlet opening of the second oil separation chamber leads to an oil separator integrated in the cylinder head cover. A pressure regulator fixed to the oil separator has an outlet leading to the intake pipe of the engine.

IPC 1-7
F01M 13/00; **F02B 75/22**; **F01M 13/04**; **F01M 13/02**

IPC 8 full level
F01M 13/00 (2006.01); **F01M 13/02** (2006.01); **F01M 13/04** (2006.01); **F02B 75/22** (2006.01); **F02F 7/00** (2006.01); **F02B 75/18** (2006.01)

CPC (source: EP US)
F01M 13/022 (2013.01 - EP US); **F01M 13/0416** (2013.01 - EP US); **F02B 75/22** (2013.01 - EP US); **F02F 7/006** (2013.01 - EP US); **F02B 2075/1832** (2013.01 - EP US); **F02B 2275/18** (2013.01 - EP US)

Citation (search report)

- [X] US 4958613 A 19900925 - HIRAOKA TOYOKI [JP], et al
- [X] US 5285754 A 19940215 - BELL LAWRENCE E [US]
- [A] US 5069192 A 19911203 - MATSUMOTO EIICHI [JP], et al
- [A] DE 19700733 A1 19980723 - BOSCH GMBH ROBERT [DE]
- [A] US 3469565 A 19690930 - WEBER ROBERT L, et al

Cited by
EP2657496A1

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

DOCDB simple family (publication)
EP 1310637 A2 20030514; **EP 1310637 A3 20040114**; **EP 1310637 B1 20061122**; AT E346224 T1 20061215; DE 10154669 A1 20030522; DE 50208762 D1 20070104; JP 2003184534 A 20030703; US 2003089323 A1 20030515; US 6880506 B2 20050419

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