

Title (en)
DEVICE FOR OPERATING CYCLONES

Title (de)
EINRICHTUNG ZUM SCHALTEN VON ZYKLONEN

Title (fr)
DISPOSITIF POUR OUVRIR OU FERMER DES CYCLONES

Publication
EP 1644124 B1 20070822 (DE)

Application
EP 04741687 A 20040601

Priority
• EP 2004050972 W 20040601
• DE 10325055 A 20030602

Abstract (en)
[origin: WO2004105955A1] The invention relates to a device for separating oil from crankcase ventilation gases of an internal combustion engine, comprising at least two oil separation elements in the form of cyclones, said elements being traversed by the crankcase ventilation gases. Said cyclones are connected in parallel. The device is equipped with a control valve that divides the volumetric flow of the crankcase ventilation gases into at least two volumetric sub-flows, depending on the size of the volumetric flow, and conducts said sub-flows to at least two oil separation elements. A control piston releases or seals the access of the gas to the first cyclone or to an additional cyclone according to the dynamic pressure of the crankcase gas.

IPC 8 full level
B04C 11/00 (2006.01); **B04C 5/28** (2006.01); **F01M 13/04** (2006.01); **F01M 13/00** (2006.01); **F01M 13/02** (2006.01)

CPC (source: EP US)
B04C 5/28 (2013.01 - EP US); **B04C 11/00** (2013.01 - EP US); **F01M 13/04** (2013.01 - EP US); **F01M 13/023** (2013.01 - EP US); **F01M 2013/0066** (2013.01 - EP US); **F01M 2013/0427** (2013.01 - EP US)

Cited by
DE102012021309A1; DE102012021309B4; DE102009019643B4; DE102009019643A1

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

DOCDB simple family (publication)
WO 2004105955 A1 20041209; AT E370795 T1 20070915; DE 10325055 A1 20041223; DE 502004004745 D1 20071004; EP 1644124 A1 20060412; EP 1644124 B1 20070822; JP 2006526731 A 20061124; JP 4544638 B2 20100915; US 2006112941 A1 20060601; US 7406961 B2 20080805

DOCDB simple family (application)
EP 2004050972 W 20040601; AT 04741687 T 20040601; DE 10325055 A 20030602; DE 502004004745 T 20040601; EP 04741687 A 20040601; JP 2006508309 A 20040601; US 29208005 A 20051202