

Title (en)
Internal-combustion engine provided with a purifying device for the separation of particles of lubricating oil from the crankcase blow-by gases

Title (de)
Brennkraftmaschine mit einer Gasreinigungsvorrichtung mit Ölabscheider für Durchblasgas des Kurbelgehäuses

Title (fr)
Moteur à combustion avec un dispositif pour séparer les particules d'huile de lubrification des gas de carter

Publication
EP 1199448 A1 20020424 (EN)

Application
EP 01124657 A 20011016

Priority
IT TO20000973 A 20001017

Abstract (en)
An internal-combustion engine (1) provided with a cylinder head (2), a crankcase (4), a plurality of cylinders (3) and breather means (6) for gases which have escaped into the crankcase (4) through the cylinders (3) and containing in suspension particles of lubricating oil; the breather means (6) are provided with a purifying device (8) adapted to separate the particles of oil from the gases and formed by a column-type integrated unit accommodated in a vertical cavity (10) of the crankcase (4) and comprising a hollow outer casing (15) through which the gases to be purified pass, deflector means (16) of generally helical configuration accommodated inside the casing (15) and adapted to divert the gases to be purified along an ascending helical conveying path for separating under centrifugal action the particles of oil from these gases, and a substantially tubular intermediate element (17) accommodated inside the casing (15) downwardly with respect to the deflector means (16), through which the gases to be purified flow internally and upwardly towards the deflector means (16), and which delimits externally with the casing (15) a separate chamber (18) for conveying under gravity the oil particles projected under centrifugal action against an internal surface (19) of the casing (15) adjacent to the deflector means (16). <IMAGE> <IMAGE>

IPC 1-7
F01M 13/04

IPC 8 full level
F01M 13/04 (2006.01)

CPC (source: EP)
F01M 13/04 (2013.01); **F01M 2013/0427** (2013.01)

Citation (search report)
• [A] DE 2201877 A1 19730719 - STEYR DAIMLER PUCH AG
• [A] DE 1164158 B 19640227 - MASCHF AUGSBURG NUERNBERG AG
• [A] US 5531811 A 19960702 - KLOBERDANZ THOMAS W [US]
• [A] US 5902378 A 19990511 - OBREJANU MARCEL [CA]
• [A] US 2413324 A 19461231 - THEODOR HOLZWARTH HANS
• [A] DE 3152747 A1 19830630 - BAYERISCHE MOTOREN WERKE AG [DE]

Cited by
DE102007045865B4; EP1471218A1; US7055510B2

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 1199448 A1 20020424; EP 1199448 B1 20060118; AT E316197 T1 20060215; DE 60116698 D1 20060406; DE 60116698 T2 20060824; ES 2256135 T3 20060716; IT 1321034 B1 20031230; IT TO20000973 A0 20001017; IT TO20000973 A1 20020417

DOCDB simple family (application)
EP 01124657 A 20011016; AT 01124657 T 20011016; DE 60116698 T 20011016; ES 01124657 T 20011016; IT TO20000973 A 20001017