

Title (en)  
OIL AND VACUUM PUMPS GROUP FOR A MOTOR VEHICLE ENGINE

Title (de)  
ÖL- UND VAKUUMPUMPENAGGREGAT FÜR EINE FAHRZEUGBRENNKRAFTMASCHINE

Title (fr)  
ENSEMBLE DE POMPES A HUILE ET A VIDE POUR UN MOTEUR DE VEHICULE AUTOMOBILE

Publication  
**EP 1613862 A1 20060111 (EN)**

Application  
**EP 03723067 A 20030416**

Priority  
IT 0300243 W 20030416

Abstract (en)  
[origin: WO2004092588A1] An oil and vacuum pumps group (1) for a motor vehicle engine comprises a motion transmission shaft (30) extending along a main axis X-X, an oil pump (10) and a vacuum pump (20) fitted on the motion transmission shaft and a gear (40) also fitted on the motion transmission shaft and adapted to derive a rotary motion from a driving gear (41) of a motor vehicle engine and to transfer said rotary motion to the motion transmission shaft to drive the oil pump and the vacuum pump. Advantageously, the oil and vacuum pumps group of the invention is structurally independent from and adapted to be associated with said motor vehicle engine. Preferably, the oil pump (10) and the vacuum pump (20) are units which are structurally independent from each other and the gear (40) of the oil and vacuum pumps group is operatively placed between the oil pump and the vacuum pump.

IPC 1-7  
**F04C 11/00**; **F01M 1/02**

IPC 8 full level  
**F01M 1/02** (2006.01); **F04C 11/00** (2006.01); **F04C 23/00** (2006.01); **F04C 2/10** (2006.01); **F04C 18/344** (2006.01)

CPC (source: EP US)  
**F01M 1/02** (2013.01 - EP US); **F04C 11/005** (2013.01 - EP US); **F04C 23/00** (2013.01 - EP US); **F04C 2/10** (2013.01 - EP US); **F04C 18/344** (2013.01 - EP US); **F04C 2220/10** (2013.01 - EP US)

Citation (search report)  
See references of WO 2004092588A1

Cited by  
DE102014204946A1

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 PT RO SE SI SK TR

DOCDB simple family (publication)  
**WO 2004092588 A1 20041028**; AT E488697 T1 20101215; AU 2003230211 A1 20041104; AU 2003230211 A8 20041104; DE 60335036 D1 20101230; EP 1613862 A1 20060111; EP 1613862 B1 20101117; US 2007059187 A1 20070315

DOCDB simple family (application)  
**IT 0300243 W 20030416**; AT 03723067 T 20030416; AU 2003230211 A 20030416; DE 60335036 T 20030416; EP 03723067 A 20030416; US 55339803 A 20030416