

Title (en)

Oil pump combination for an internal combustion engine

Title (de)

Ölpumpenkombination für eine Brennkraftmaschine

Title (fr)

Combination des pompes d'huiles pour un moteur à combustion interne

Publication

**EP 1316683 A3 20040121 (DE)**

Application

**EP 02025133 A 20021109**

Priority

DE 10159088 A 20011201

Abstract (en)

[origin: EP1316683A2] Oil pump combination comprises a main oil pump (10) having a pump housing for suctioning lubricating oil located in an oil collecting device (2); and an oil suction pump (54) for an exhaust gas turbocharger of an I.C. engine. At least two pump chambers are arranged in the pump housing with each chamber containing a pair of toothed wheels (42) for forming a pumping stage. Both toothed wheels of the main oil pump and drive toothed wheels of the oil suction pump are arranged under each other as well as angled toward each other. <??>Preferred Features: Both toothed wheels of the main oil pump and the oil suction pump are arranged below each other by 1/2 tooth and angled toward each other by 1/4 tooth.

IPC 1-7

**F01M 1/02**

IPC 8 full level

**F01M 1/02** (2006.01); **F04C 2/16** (2006.01); **F04C 11/00** (2006.01); **F01M 1/12** (2006.01)

CPC (source: EP)

**F01M 1/02** (2013.01); **F01M 2001/0269** (2013.01); **F01M 2001/123** (2013.01)

Citation (search report)

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**EP 1316683 A2 20030604**; **EP 1316683 A3 20040121**; **EP 1316683 B1 20050525**; DE 10159088 A1 20030618; DE 50203186 D1 20050630

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