

Title (en)

Internal combustion engine with hydraulic camshaft phasing device

Title (de)

Brennkraftmaschine mit einer hydraulischen Vorrichtung zur Drehwinkelverstellung einer Nockenwelle gegenüber einer Kurbelwelle

Title (fr)

Moteur à combustion interne muni d'un déphaseur hydraulique d'arbre à cames

Publication

EP 1544420 B1 20100728 (DE)

Application

EP 04026407 A 20041106

Priority

DE 10358888 A 20031216

Abstract (en)

[origin: EP1544420A2] The device has a rotor (6) with blades (10) fastened to the camshaft (2), and a stator (4) with end wall (5) fastened to a drive pulley (3) driven by the crankshaft. The stator, esp. its web walls, and its inner and outer peripheral walls, is a metal plate or band part, formed by a non-cutting process. The stator has local reinforcements of profiles, beads, etc. extending along direction of special loads. Stator, outer stator housing (13), and drive pulley are fastened to each other by e.g. forming technology. Pressure chambers between stator and rotor are closed at one end by a metal sealing plate (14). Hollows or cutouts in stator walls are filled with metal foam or injected plastic.

IPC 8 full level

F01L 1/34 (2006.01); **F01L 1/344** (2006.01); **F01L 1/46** (2006.01)

CPC (source: EP KR US)

F01L 1/34 (2013.01 - KR); **F01L 1/3442** (2013.01 - EP US); **F01L 1/46** (2013.01 - EP US); **F01L 2301/00** (2020.05 - EP US)

Cited by

CN102052114A; DE102005024241B4; CN102089501A; US9200542B2; US7581316B2; US8434438B2; WO2008015062A3; WO2009065731A1; WO2012084283A1; WO2014146627A3; WO2006024416A1; WO2006125541A1; WO2010003745A1; US7707981B2

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DOCDB simple family (application)

EP 04026407 A 20041106; AT 04026407 T 20041106; BR PI0406256 A 20041215; CN 200410101168 A 20041216; DE 10358888 A 20031216; DE 502004011438 T 20041106; JP 2004360456 A 20041213; KR 20040106808 A 20041216; RU 2004136796 A 20041215; US 1288304 A 20041215