

Title (en)

Cam shaft phaser for internal combustion engines for vehicles

Title (de)

Nockenwellenverstelleinrichtung für Brennkraftmaschinen von Kraftfahrzeugen

Title (fr)

Déphaseur d'arbres à cames d'un moteur à combustion interne pour véhicules automobiles

Publication

**EP 1452698 B1 20070124 (DE)**

Application

**EP 04004005 A 20040223**

Priority

DE 10308072 A 20030226

Abstract (en)

[origin: EP1452698A1] A compact drive for the timing adjusters in an IC engine has one of the adjusters (2) driven off the crankshaft (3, 4) by a chain or belt drive (5) and the other adjuster (1) driven directly off the first adjuster via meshing gear wheels. This provides a compact drive with easy maintenance access. Each adjuster comprises a hydraulically controlled rotor and stator design with the rotors rigidly fitted to the inlet or outlet camshaft. The chain/belt drive wheel is axially spaced from the meshing gears for improved access.

IPC 8 full level

**F01L 1/053** (2006.01); **F01L 1/02** (2006.01); **F01L 1/344** (2006.01)

CPC (source: EP US)

**F01L 1/022** (2013.01 - EP US); **F01L 1/024** (2013.01 - EP US); **F01L 1/026** (2013.01 - EP US); **F01L 1/344** (2013.01 - EP US); **F01L 2001/0537** (2013.01 - EP US)

Cited by

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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)

**EP 1452698 A1 20040901**; **EP 1452698 B1 20070124**; AT E352703 T1 20070215; DE 10308072 A1 20040909; DE 502004002717 D1 20070315; ES 2279987 T3 20070901; PT 1452698 E 20070430; US 2004221826 A1 20041111; US 6928971 B2 20050816

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