

Title (en)

Hydraulic device for stepless camshaft phase variation

Title (de)

Hydraulische Einrichtung zur stufenlos variablen Nockenwellenverstellung

Title (fr)

Dispositif hydraulique pour la variation continue du calage d'arbre à cames

Publication

**EP 1589196 A3 20080806 (DE)**

Application

**EP 05007186 A 20050401**

Priority

DE 102004019770 A 20040423

Abstract (en)

[origin: EP1589196A2] A hydraulic timing adjustment for a camshaft of an IC engine has an outer rotor (202) driven from the crankshaft and an inner shaft (204) connected to the camshaft. Tilt mounted flap levers (234) link the inner shaft and the outer rotor and move in hydraulic spaces formed between the flap levers and radial spacers (212). The tilt levers are pivot mounted at one end via ball and socket mountings with the free ends locating in closed bores in the outer ring. The sides of the tilt levers are profiled with a cylindrical drop profile in the centre to interact with profiled surfaces of the radial spacers to form trapped volumes which effectively dampen the end settings of the tilt levers.

IPC 8 full level

**F01L 1/344** (2006.01)

CPC (source: EP)

**F01L 1/3442** (2013.01)

Citation (search report)

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- [Y] DE 19819995 A1 19991111 - PORSCHE AG [DE], et al
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- [A] EP 1302630 A2 20030416 - INA SCHAEFFLER KG [DE]
- [A] DE 10218201 C1 20031030 - PORSCHE AG [DE]

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EP1762706A3; US7421989B2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR LV MK YU

DOCDB simple family (publication)

**EP 1589196 A2 20051026; EP 1589196 A3 20080806**; DE 102004019770 A1 20051110

DOCDB simple family (application)

**EP 05007186 A 20050401**; DE 102004019770 A 20040423