

Title (en)
Camshaft

Title (de)
Nockenwelle

Title (fr)
Arbre à cames

Publication
EP 1860286 B1 20100303 (DE)

Application
EP 07106778 A 20070424

Priority
DE 102006024793 A 20060527

Abstract (en)
[origin: EP1860286A2] The camshaft (1) has an inner shaft (3) coaxially arranged in an outer shaft (2), and cams rotated against each other. The cams are fixedly connected with the inner shaft and the outer shaft, respectively. Phase adjusters (7, 8) adjust phase conditions of the inner and outer shafts to adjust the cams relative to a drive e.g. crankshaft. Adjustable hydraulic valves (9, 10) of the phase adjusters are arranged adjacent to each other in the inner shaft in an axial direction. An actuation device (12) controls the hydraulic valves and has electromagnets (13, 14) to actuate the hydraulic valves.

IPC 8 full level
F01L 1/34 (2006.01); **F01L 1/047** (2006.01); **F01L 1/344** (2006.01)

CPC (source: EP US)
F01L 1/047 (2013.01 - EP US); **F01L 1/34** (2013.01 - EP US); **F01L 1/34413** (2013.01 - EP US); **F01L 1/3442** (2013.01 - EP US);
F01L 2001/0537 (2013.01 - EP US); **F01L 2001/34426** (2013.01 - EP US); **F01L 2001/34433** (2013.01 - EP US);
F01L 2001/34493 (2013.01 - EP US); **F01L 2001/34496** (2013.01 - EP US)

Cited by
EP2500531A1; EP2653672A1; CN103375214A; GB2472054B; US8820283B2; DE102022109291A1; DE102022109243A1; WO2011010241A1; EP2766582A1

Designated contracting state (EPC)
DE FR GB

DOCDB simple family (publication)
EP 1860286 A2 20071128; **EP 1860286 A3 20080521**; **EP 1860286 B1 20100303**; DE 102006024793 A1 20071129;
DE 502007002976 D1 20100415; US 2007272183 A1 20071129; US 7536986 B2 20090526

DOCDB simple family (application)
EP 07106778 A 20070424; DE 102006024793 A 20060527; DE 502007002976 T 20070424; US 80172507 A 20070510