

Title (en)

HYDRAULIC CAMSHAFT ADJUSTER

Title (de)

HYDRAULISCHER NOCKENWELLENVERSTELLER

Title (fr)

DEPHASEUR HYDRAULIQUE D'ARBRE A CAMES

Publication

EP 2300693 B1 20120815 (DE)

Application

EP 09765567 A 20090610

Priority

- EP 2009004172 W 20090610
- DE 102008028640 A 20080618

Abstract (en)

[origin: WO2009152987A1] The invention relates to a hydraulic cam shaft adjuster (2) having a driven outer body (4) comprising at least one hydraulic chamber (18), and an inner body (6) disposed on the inside of the outer body (4), which can be firmly attached to the camshaft and has at least one pivoting wing (8) extending into the hydraulic chamber in the radial direction, thus partitioning the hydraulic chamber into a first working chamber (22) and a second working chamber (24). The inner body (6) further comprises at least one oil inlet and oil outlet conduit (14, 16) extending from a jacket interior (10) to a jacket exterior (12) of the inner body (6) up to one of the two working chambers (22). For this purpose the inner body (6) is assembled using at least one first element (28) and one second element (30), wherein the two elements each have at least one geometry (39, 41, 50, 52) at front sides (38, 40) facing each other, said geometry forming the oil inlet and oil outlet conduit of the inner part together with the other element.

IPC 8 full level

F01L 1/344 (2006.01)

CPC (source: EP US)

F01L 1/022 (2013.01 - EP US); **F01L 1/3442** (2013.01 - EP US); **F01L 1/024** (2013.01 - EP US); **F01L 1/026** (2013.01 - EP US);
F01L 1/352 (2013.01 - EP US); **F01L 2001/34459** (2013.01 - EP US); **F01L 2001/34466** (2013.01 - EP US); **F01L 2001/34469** (2013.01 - EP US);
F01L 2001/34479 (2013.01 - EP US); **F01L 2001/34483** (2013.01 - EP US); **F01L 2303/00** (2020.05 - EP US)

Cited by

DE102014216850A1; DE102016212861A1; DE102014216848A1; DE102014209178A1; DE102014209181A1; DE102013226460B4;
DE102014215286B4; DE102014209178B4; DE102014216848B4; DE102014215286A1; DE102013226460A1; WO2015090299A1;
DE102013009729A1; WO2018010714A2; WO2016029909A1; US10267188B2; DE102014209179A1; WO2015139695A1; WO2015139696A1;
WO2015172779A1; US9982575B2; US10100686B2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)

DE 102008028640 A1 20091224; CN 102124188 A 20110713; CN 102124188 B 20141029; EP 2300693 A1 20110330;
EP 2300693 B1 20120815; ES 2393085 T3 20121218; JP 2011524495 A 20110901; JP 5313342 B2 20131009; US 2011126785 A1 20110602;
US 8550046 B2 20131008; WO 2009152987 A1 20091223

DOCDB simple family (application)

DE 102008028640 A 20080618; CN 200980123117 A 20090610; EP 09765567 A 20090610; EP 2009004172 W 20090610;
ES 09765567 T 20090610; JP 2011513924 A 20090610; US 96677410 A 20101213