

Title (en)

DEVICE FOR VARIABLY ADJUSTING THE CONTROL TIMES OF GAS EXCHANGE VALVES OF AN INTERNAL COMBUSTION ENGINE

Title (de)

VORRICHTUNG ZUR VARIABLEN EINSTELLUNG DER STEUERZEITEN VON GASWECHSELVENTILEN EINER BRENNKRAFTMASCHINE

Title (fr)

DISPOSITIF DE RÉGLAGE VARIABLE DES TEMPS DE COMMANDE DES SOUPAPES D'ÉCHANGE DE GAZ D'UN MOTEUR À COMBUSTION INTERNE

Publication

EP 2331797 B1 20180509 (DE)

Application

EP 09782804 A 20090909

Priority

- EP 2009061674 W 20090909
- DE 102008050672 A 20081007

Abstract (en)

[origin: WO2010040617A1] The invention relates to a device (11) for variably adjusting the control times of gas exchange valves (9, 10) of an internal combustion engine (1) having a hydraulic phase shifting device (12), a camshaft (6, 7), and a pressure accumulator (15), wherein the phase shifting device (12) can be brought into a drive connection with a crankshaft (2) and is connected to the camshaft (6, 7) in a rotationally fixed manner, wherein a phase position of the camshaft (6, 7) relative to the crankshaft (2) can be variably adjusted by means of the phase shifting device (12) and wherein the interior of the camshaft (6, 7) comprises a cavity (38).

IPC 8 full level

F01L 1/344 (2006.01)

CPC (source: EP KR US)

F01L 1/34 (2013.01 - KR); **F01L 1/344** (2013.01 - EP KR US); **F01L 1/3442** (2013.01 - EP US); **F01L 2001/0475** (2013.01 - EP US); **F01L 2001/34446** (2013.01 - EP US)

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 SM TR

DOCDB simple family (publication)

DE 102009034011 A1 20100408; DE 102009034011 B4 20180405; CN 102177317 A 20110907; CN 102177317 B 20140702;
EP 2331797 A1 20110615; EP 2331797 B1 20180509; JP 2012505335 A 20120301; KR 101600123 B1 20160304; KR 20110082555 A 20110719;
US 2011239966 A1 20111006; US 8622038 B2 20140107; WO 2010040617 A1 20100415

DOCDB simple family (application)

DE 102009034011 A 20090721; CN 200980139926 A 20090909; EP 09782804 A 20090909; EP 2009061674 W 20090909;
JP 2011530439 A 20090909; KR 20117010411 A 20090909; US 200913123125 A 20090909