

Title (en)

VALVE DRIVE FOR GAS EXCHANGE VALVES OF AN INTERNAL COMBUSTION ENGINE HAVING A MAIN CAMSHAFT AND CAM CARRIERS WHICH CAN BE DISPLACED BETWEEN ROTARY BEARINGS OF THE MAIN CAMSHAFT INTO TWO OR MORE DISCRETE DISPLACEMENT POSITIONS

Title (de)

VENTILTRIEB FÜR GASWECHSELVENTILE EINER BRENNKRAFTMASCHINE MIT EINER GRUNDNOCKENWELLE UND ZWISCHEN DREHLAGERN DER GRUNDNOCKENWELLE IN ZWEI ODER MEHR DISKRETE VERSCHIEBESTELLUNGEN VERSCHIEBBAREN NOCKENTRÄGERN

Title (fr)

MÉCANISME DE SOUPAPE DESTINÉ À DES SOUPAPES D'ÉCHANGE DES GAZ D'UN MOTEUR À COMBUSTION INTERNE, COMPORTANT UN ARBRE À CAMES DE BASE ET DES SUPPORTS DE CAMES POUVANT ÊTRE DÉPLACÉS ENTRE DEUX OU PLUSIEURS POSITIONS DE DÉPLACEMENT DISCRÈTES SITUÉES ENTRE DES COUSSINETS DE L'ARBRE À CAMES DE BASE

Publication

EP 2702253 A1 20140305 (DE)

Application

EP 12716256 A 20120420

Priority

- DE 102011018503 A 20110423
- EP 2012001711 W 20120420

Abstract (en)

[origin: WO2012146361A1] The invention relates to a valve drive (1) for gas exchange valves (2) of an internal combustion engine, having at least one main camshaft (4), having at least one cam carrier (5) which is axially displaceable on the main camshaft (4) and which comprises at least one cam group (6, 7) with at least three cams (13, 14, 15) with different cam profiles, having devices (21, 22, 23, 24, 25) for the axial displacement of the cam carrier (5) on the main camshaft (4) into a number of discrete displacement positions corresponding to the number of cams (13, 14, 15) of the cam group (6, 7), and having a locking device (26) with a spring-loaded ball (28) for locking the cam carrier (5) in the discrete displacement positions. In order inter alia to reduce the required installation space, it is proposed according to the invention that the main camshaft (4) is mounted at both sides of the cam carrier (5) in a positionally fixed rotary bearing (3), and that the spring-loaded ball (28) of the locking device (26) is arranged in a recess (27) of the main camshaft (4) and pushes the cam carrier (5), in two outer displacement positions, in each case against a positionally fixed axial stop (3, 18).

IPC 8 full level

F01L 1/047 (2006.01); **F01L 1/053** (2006.01); **F01L 1/18** (2006.01); **F01L 1/24** (2006.01); **F01L 13/00** (2006.01)

CPC (source: EP)

F01L 1/053 (2013.01); **F01L 13/0036** (2013.01); **F01L 1/185** (2013.01); **F01L 1/24** (2013.01); **F01L 13/0005** (2013.01); **F01L 2001/0473** (2013.01); **F01L 2001/0476** (2013.01); **F01L 2013/0052** (2013.01)

Citation (search report)

See references of WO 2012146361A1

Designated contracting state (EPC)

AL 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 RS SE SI SK SM TR

DOCDB simple family (publication)

DE 102011018503 A1 20121025; EP 2702253 A1 20140305; EP 2702253 B1 20150318; JP 2014512486 A 20140522; JP 5901742 B2 20160413; WO 2012146361 A1 20121101

DOCDB simple family (application)

DE 102011018503 A 20110423; EP 12716256 A 20120420; EP 2012001711 W 20120420; JP 2014506790 A 20120420