

Title (en)
PUSH ROD BASED VARIABLE VALVE TIMING SYSTEMS

Title (de)
AUF EINER SCHUBSTANGE BASIERENDE VARIABLE VENTILSTEUERZEIT

Title (fr)
SYSTÈMES DE SYNCHRONISATION DE SOUPAPE VARIABLE BASÉS SUR UNE TIGE DE POUSSÉE

Publication
EP 3073069 A1 20160928 (EN)

Application
EP 15160887 A 20150325

Priority
EP 15160887 A 20150325

Abstract (en)
A camshaft system (60) for driving a pivot movement of a rocker arm (46) of a valve actuation assembly (40) for operating a valve (30) of an internal combustion engine (10) with adjustable closing times is disclosed. The camshaft system (60) comprises a camshaft (56) with a cam lobe (58) and a split push rod (48) interacting with the cam lobe (58) to be displaced, during a rotation of the camshaft (56), in accordance with an actuation movement. The split push rod (48) comprises a rocker part (48A) and a cam part (48B), wherein a lower end (48A') of the rocker part (48A) and an upper end (48B'') of the cam part (48B) are configured to form a tilt connection (49) allowing for changes in a tilt angle (\pm) between the rocker part (48A) and the cam part (48B). An upper end (48A'') of the rocker part (48A) is configured for interacting with the push rod section (46B) of the rocker arm (46), and a lower end (48B') of the cam part (48B) is configured for being displaced by the cam lobe (58). Moreover, the camshaft system (60) comprises an intermediate guidance element (62) with an intermediate guidance face (63) for guiding the tilt connection (49), wherein the intermediate guidance face (63) comprises a decoupling section (63B) for increasing the tilt angle (\pm) up to and beyond 180°. The herein disclosed configurations allow for a at least partly cam-decoupled valve actuation.

IPC 8 full level
F01L 13/00 (2006.01); **F01L 1/14** (2006.01)

CPC (source: EP)
F01L 1/146 (2013.01); **F01L 13/00** (2013.01); **F01L 13/0031** (2013.01)

Citation (search report)
• [X] WO 9421897 A1 19940929 - WRIDE DONALD CHARLES [AU]
• [X] DE 4330913 A1 19950316 - MAK MASCHINENBAU KRUPP [DE]

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CN107387190A; CN115003899A; CN111788369A; US11391186B2; US11506092B2

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

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 3073069 A1 20160928

DOCDB simple family (application)
EP 15160887 A 20150325