

Title (en)

VALVE TRAIN WITH VARIABLE VALVE ACTUATION

Title (de)

VARIABLER VENTILBETRIEB

Title (fr)

COMMANDE DE SOUPAPE VARIABLE

Publication

**EP 3384137 B1 20200520 (EN)**

Application

**EP 16805471 A 20161205**

Priority

- GB 201521380 A 20151203
- GB 201522141 A 20151215
- EP 2016079754 W 20161205

Abstract (en)

[origin: GB2545006A] A valve train assembly 70 comprising a number of valves each having a valve stem 73, at least one main camshaft 54 with a number of main cams (55, Fig. 2), main rocker arms 71, each corresponding to a valve and having a valve stem actuation portion, a pivot axis parallel to the main cam shaft 54 and a main cam follower for following the corresponding main cam, at least one auxiliary cam 56 arranged on the main camshaft 54, at least one auxiliary cam follower 74 for each auxiliary cam 56 and each movably arranged on one of the main rocker arms 71 between a first and a second position, and a latch (29, Fig. 1) arranged on the respective main rocker arm 71 for locking the auxiliary cam follower 74 in the first position, wherein at least one rotatable control rod 59 for controlling the latches between the first and second position, wherein the control rod 59 comprises for each latch a transmission element 60, which converts the torque in the at least one control rod 59 into a control force tangential to the control rod 59 to control movement of the latch between the first and second position.

IPC 8 full level

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

CPC (source: EP GB US)

**F01L 1/047** (2013.01 - EP US); **F01L 1/185** (2013.01 - EP GB US); **F01L 13/0036** (2013.01 - EP GB US); **F01L 13/0015** (2013.01 - GB);  
**F01L 2001/186** (2013.01 - EP US); **F01L 2305/00** (2020.05 - EP US)

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)

**GB 201521380 D0 20160120; GB 2545006 A 20170607;** CN 108291461 A 20180717; CN 108291461 B 20200728; EP 3384137 A1 20181010;  
EP 3384137 B1 20200520; GB 201522141 D0 20160127; GB 2545033 A 20170607; JP 2019501328 A 20190117; US 2018363518 A1 20181220;  
WO 2017093565 A1 20170608

DOCDB simple family (application)

**GB 201521380 A 20151203;** CN 201680070928 A 20161205; EP 16805471 A 20161205; EP 2016079754 W 20161205;  
GB 201522141 A 20151215; JP 2018528652 A 20161205; US 201615781183 A 20161205