

Title (en)  
VARIABLE VALVE TRAIN FOR AN ENGINE BRAKING MODE

Title (de)  
VARIABLER VENTILTRIEB FÜR EINEN MOTORBREMSMODUS

Title (fr)  
MÉCANISME DE DISTRIBUTION VARIABLE POUR UN MODE DE FREINAGE DE MOTEUR

Publication  
**EP 4004350 A1 20220601 (DE)**

Application  
**EP 20743649 A 20200717**

Priority  
• DE 102019119870 A 20190723  
• EP 2020070265 W 20200717

Abstract (en)  
[origin: WO2021013718A1] The invention relates to a variable valve train (10) for switching an outlet valve (22) of an internal combustion engine to an engine braking mode. The variable valve train (10) has a camshaft (12) with a first cam (34), which is designed as a normal operation cam, and a second cam (36), which is designed as an engine braking cam. A first rocking lever (14) has a first stroke device (38) which is designed for selectively making or breaking a first operative connection between the first cam (34) and the outlet valve (22) by means of the first rocking lever (14). A second rocking lever (16) has a second stroke device (40) which is designed for selectively making or breaking a second operative connection between the second cam (36) and the outlet valve (22) by means of the second rocking lever (16). A valve device (60) selectively connects the first stroke device (38) or the second stroke device (40) to a fluid feed line (66).

IPC 8 full level  
**F01L 1/18** (2006.01); **F01L 13/06** (2006.01)

CPC (source: CN EP US)  
**F01L 1/181** (2013.01 - CN EP US); **F01L 1/267** (2013.01 - US); **F01L 1/46** (2013.01 - US); **F01L 13/06** (2013.01 - CN EP US); **F01L 1/053** (2013.01 - US); **F01L 13/065** (2013.01 - US); **F01L 2001/186** (2013.01 - CN EP US); **F01L 2001/2444** (2013.01 - US); **F01L 2305/00** (2020.05 - CN EP); **F01L 2305/02** (2020.05 - US); **F01L 2307/00** (2020.05 - CN EP); **F01L 2820/031** (2013.01 - US)

Citation (search report)  
See references of WO 2021013718A1

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)  
**DE 102019119870 A1 20210128**; BR 112022000636 A2 20220329; CN 114096743 A 20220225; EP 4004350 A1 20220601; US 2022251978 A1 20220811; WO 2021013718 A1 20210128

DOCDB simple family (application)  
**DE 102019119870 A 20190723**; BR 112022000636 A 20200717; CN 202080050455 A 20200717; EP 2020070265 W 20200717; EP 20743649 A 20200717; US 202017629320 A 20200717