

Title (en)  
MULTI-JOINT CRANK DRIVE OF AN INTERNAL COMBUSTION ENGINE AND METHOD FOR OPERATING A MULTI-JOINT CRANK DRIVE

Title (de)  
MEHRGELENKSKURBELTRIEB EINER BRENNKRAFTMASCHINE SOWIE VERFAHREN ZUM BETREIBEN EINES  
MEHRGELENKSKURBELTRIEBS

Title (fr)  
MÉCANISME BIELLE-MANIVELLE À ARTICULATIONS MULTIPLES POUR MOTEUR À COMBUSTION INTERNE AINSI QUE PROCÉDÉ DE  
FONCTIONNEMENT D'UN MÉCANISME BIELLE-MANIVELLE À ARTICULATIONS MULTIPLES

Publication  
**EP 3068992 A1 20160921 (DE)**

Application  
**EP 14808830 A 20141113**

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Abstract (en)  
[origin: WO2015070980A1] The invention relates to a multi-joint crank drive (10) of an internal combustion engine (1), comprising a plurality of coupling members (11) rotatably supported on crank pins (6) of a crankshaft (2) and a plurality of articulation connecting rods (15) rotatably supported on crank pins (19) of an eccentric shaft (8), wherein each of the coupling members (11) is pivotably connected to a piston connecting rod (4) of a piston (3) of the internal combustion engine (1) and to one of the articulation connecting rods (15). According to the invention, in order to reduce free mass forces of the second order, the multi-joint crank drive (10) is designed or adjusted in such a way that a crankshaft rotational angle range of an intake phase is greater than 180 degrees; that a crankshaft rotational angle range of a compression phase is less than 180 degrees; that a crankshaft rotational angle range of an expansion phase is greater than 180 degrees; and that a crankshaft rotational angle range of an exhaust phase is less than 180 degrees. The invention further relates to a method for operating a multi-joint crank drive (10) of an internal combustion engine (1).

IPC 8 full level  
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CPC (source: EP US)  
**F02B 41/04** (2013.01 - US); **F02B 75/045** (2013.01 - EP US); **F02B 75/048** (2013.01 - US)

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