

Title (en)
METHOD FOR OPERATING AN INTERNAL COMBUSTION ENGINE, IN PARTICULAR OF A MOTOR VEHICLE, AND INTERNAL COMBUSTION ENGINE

Title (de)
VERFAHREN ZUM BETREIBEN EINER VERBRENNUNGSKRAFTMASCHINE, INSBESONDERE EINES KRAFTFAHRZEUGS, SOWIE VERBRENNUNGSKRAFTMASCHINE

Title (fr)
PROCÉDÉ DE FONCTIONNEMENT D'UN MOTEUR À COMBUSTION INTERNE, EN PARTICULIER D'UN VÉHICULE À MOTEUR, ET MOTEUR À COMBUSTION INTERNE

Publication
EP 4248076 A1 20230927 (DE)

Application
EP 21805470 A 20211102

Priority
• DE 102020130841 A 20201123
• EP 2021080344 W 20211102

Abstract (en)
[origin: WO2022106188A1] The invention relates to a method for operating an internal combustion engine (1) in a powered operation, in which the internal combustion engine (1) has an intake valve device (10) and a sudden load variation is carried out in which a torque provided by the internal combustion engine (1) is increased from a first value to a second value which is higher than the first value. While the sudden load variation is being carried out, the intake valve device (10) is operated according to an operating method different from the Miller method and is thereby closed later than in the Miller method. After the sudden load variation has been carried out, and while the internal combustion engine (1), via its output shaft, provides the torque having the second value after the sudden load variation has been carried out, the internal combustion engine (1) is switched over from the operating method different from the Miller method to the Miller method, and as a result the intake valve device (10) is operated according to the Miller method and is thereby closed earlier than in the operating method.

IPC 8 full level
F02D 41/10 (2006.01); **F02D 13/02** (2006.01); **F02D 41/00** (2006.01)

CPC (source: EP US)
F02D 13/0226 (2013.01 - EP US); **F02D 13/0269** (2013.01 - EP US); **F02D 41/0007** (2013.01 - US); **F02D 41/10** (2013.01 - EP US); **F02D 41/0007** (2013.01 - EP); **F02D 2041/001** (2013.01 - EP US); **Y02T 10/12** (2013.01 - EP)

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

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
WO 2022106188 A1 20220527; CN 116324147 A 20230623; DE 102020130841 A1 20220525; EP 4248076 A1 20230927; US 12006885 B2 20240611; US 2023417197 A1 20231228

DOCDB simple family (application)
EP 2021080344 W 20211102; CN 202180063566 A 20211102; DE 102020130841 A 20201123; EP 21805470 A 20211102; US 202118033966 A 20211102