Title (en)

OPERATIONAL METHOD FOR AN INTERNAL COMBUSTION ENGINE HAVING LOW NOX COMBUSTION

Title (de)

BETRIEBSVERFAHREN FÜR EINE BRENNKRAFTMASCHINE MIT NOX-ARMER VERBRENNUNG

Title (fr)

PROCÉDÉ POUR FAIRE FONCTIONNER UN MOTEUR À COMBUSTION INTERNE AVEC UNE COMBUSTION PAUVRE EN NOX (NAV)

Publication

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Application

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Abstract (en)

[origin: WO2012045460A2] The invention relates to an operational method for, in particular, a direct injection internal combustion engine having a plurality of combustion chambers, in particular for a direct- injection spark-ignition engine, for example, a motor vehicle with at least partial low NOx-combustion (NAV) and several operational sub-methods. Said method alternates between a charge compression combustion sub-method with pure charge compression combustion (RZV) and a low NOx operation sub-method. In the event of the low NOx- combustion sub-method being ignited at an ignition time point (ZZP), a predominately homogeneous, lean fuel/exhaust gas/air mixture having a combustion air ratio ?= is spark ignited in the respective combustion chamber by means of an ignition device and a flame front combustion (FFV) that has been ignited by the spark ignition, are converted into a charge compression combustion (RZV). By combining the low NOx- sub-method with the charge compression combustion sub-method, the engine load range, in which charge compression combustion (RZV) can be carried out, is increased, and consequently, the fuel consumption and the NOx-emission values are also reduced in said widened engine load range.

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