

Title (en)  
Internal combustion engine with an exhaust emission aftertreatment device for reducing nitrogen oxides (NOx) emissions and method for controlling such an engine

Title (de)  
Verfahren und Vorrichtung zur NOx-Reduktion von Abgas im Abgasstrang einer Brennkraftmaschine

Title (fr)  
Procédé et dispositif de réduction catalytique de NOx de gaz d'échappement dans la ligne d'échappement d'un moteur à combustion interne

Publication  
**EP 1770252 B1 20160406 (EN)**

Application  
**EP 05109065 A 20050930**

Priority  
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Abstract (en)  
[origin: EP1770252A1] The present invention relates to a turbocharged direct injection internal combustion engine (10) comprising an intake air manifold (19) in order to feed the engine (10) with fresh air, an exhaust manifold (20) to evacuate the exhaust gases, at least one turbocharger including a turbine (11) and a compressor (12) and at least one NO x storage catalyst (13) used as exhaust emission aftertreatment device for reducing nitrogen oxides (NO x ) emissions and disposed in said exhaust manifold (20) downstream said turbine (11). It is an object of the present invention to provide an engine (10) of the above mentioned kind, which overcomes the above described problems, in particular an engine which is enabled to elevate the NO x conversion and limit the HC emissions under the mid to high engine loads and high engine speeds.. With respect to the object an engine (10) is provided, which is characterized in that a first additional pipe (24) is arranged which enables a connection between said intake air manifold (19) and said exhaust manifold (20) in such a manner, that said first additional pipe (24) leads into the exhaust manifold (20) downstream said at least one NO x storage catalyst (24) and a predetermined amount of intake air can be guided into said exhaust manifold (20) by means of a control valve (18,26) disposed in said first additional pipe (24) bypassing the engine (10).

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Citation (examination)  
• JP 2003343245 A 20031203 - TOYOTA MOTOR CORP  
• EP 1486647 A2 20041215 - DAIMLER CHRYSLER AG [DE]

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