

Title (en)

Internal combustion engine with a pump for exhaust gas recirculation

Title (de)

Brennkraftmaschine mit einer Pumpe zur Abgasrückführung

Title (fr)

Moteur à combustion interne comprenant une pompe pour recycler des gaz d'échappement

Publication

EP 1870590 A1 20071226 (EN)

Application

EP 06425428 A 20060622

Priority

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Abstract (en)

An internal combustion engine, in particular a diesel engine, has a pipe (17) for exhaust gas recirculation (EGR) having an entrance extremity (16) that branches off the engine exhaust pipe (12) downstream of a device (13) for treating the exhaust gas, and an exit extremity that flows into the pipe (5) for air intake into the engine, upstream of a booster compressor (10). Along the EGR pipe (17) a pump is interposed (19) that creates the necessary pressure difference to activate exhaust gas recirculation, thus without the need to provide a butterfly valve on the intake or exhaust and thus avoiding the consequent loss of engine efficiency. In one embodiment, the pump (19) is controlled by a variable speed electric motor (20) that is controlled as a function of the engine operating conditions, to vary the quantity of EGR in the engine. In this way it is also possible to avoid the use of the conventional EGR valve to regulate the quantity of EGR, with consequent simplification and cost reduction.

IPC 8 full level

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CPC (source: EP)

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Citation (search report)

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