Title (en)

INTERNAL COMBUSTION ENGINE AND METHOD FOR DETERMINING A LEAKAGE OF A CRANKCASE AND / OR A TANK BLEEDING SYSTEM

Title (de)

BRENNKRAFTMASCHINE UND VERFAHREN ZUR ERKENNUNG EINER LECKAGE VON EINEM KURBELGEHÄUSE- UND/ODER EINEM TANK-ENTLÜFTUNGSSYSTEM

Title (fr)

MOTEUR A COMBUSTION INTERNE ET PROCEDE DE DETECTION DE FUITE D'UN SYSTEME D'EVACUATION DE GAZ D'UN CARTER ET / OU RESERVOIR

Publication

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Application

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Abstract (en)

[origin: WO2017016737A1] The invention relates to an internal combustion engine with a combustion air intake system in which a compressor is arranged and in which a throttle element is arranged downstream of the compressor in the flow direction of the combustion air. The internal combustion engine also comprises a tank ventilation system and a crankcase ventilation system. The tank ventilation system can be connected to the intake system downstream of the throttle element via a first non-return valve in a first line and upstream of the compressor via a second non-return valve in a second line and a third non-return valve in a second sub-line. The crankcase ventilation system can be connected to the intake system downstream of the throttle element via a fourth non-return valve in a third line and upstream of the compressor via a fourth line and the third non-return valve. The intake system can be connected to the second line downstream of the throttle element at a transitional point between the second line and the second sub-line via a fifth non-return valve in a fifth line. A nozzle is formed at the transitional point from the fifth line to the second line and the second sub-line, and the second line opens into the nozzle downstream of the second non-return valve. A first pressure sensor for measuring the pressure in the second line is provided in the second line between the second non-return valve and the nozzle. By means of the internal combustion engine design according to the invention with a crankcase and a tank ventilation system and by means of the corresponding methods, only a single pressure sensor is required to diagnose or detect a leak. A second pressure sensor can be advantageously used to locate a leak.

IPC 8 full level

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