

Title (en)

Crankcase ventilation device for an internal combustion engine with V-shaped arranged cylinders

Title (de)

Vorrichtung zur Entlüftung des Kurbelgehäuses einer Brennkraftmaschine mit V-förmig angeordneten Zylindern

Title (fr)

Dispositif de ventilation du carter de vilebrequin d'un moteur à combustion interne avec des cylindres agencés en V

Publication

EP 0599095 B1 19960214 (DE)

Application

EP 93117700 A 19931102

Priority

DE 4239108 A 19921120

Abstract (en)

[origin: EP0599095A1] The invention relates to a device for ventilating the crankcase (2) of an internal combustion engine (1) with cylinders arranged in a V shape, in which device a resonance chamber (18) is provided between the banks (3, 4) of cylinders. The channels (9, 10, 11, 12, 13) for feeding back the oil from the cylinder heads (5, 6) are separated from the crankcase gas by virtue of their mouths lying below the level (17) of oil in the oil sump (7). Thus, the blow-by cannot be washed out by the oil in the countercurrent inside the channels (9 to 13). By means of openings (21) the spaces of the cylinder heads (5, 6) are connected to the crankcase (2). The resonance chamber (18) is connected to the individual chambers of the crankcase (2) via openings (19). An oil separator (23) is located above the resonance chamber (18), the volume of the said oil separator (23) being connected via openings (22 and 31) to the resonance chamber (18) and to the crankcase (2). In this way, the spaces of the cylinder heads (5, 6) and the volume of the oil separator (23) act as Helmholtz resonators and smooth, together with the volume of the resonance chamber (18), the gas pulsations, prevailing in the crankcase (2), in the ventilation line (26) to the mixture preparing system (8). In addition to the damping of the gas oscillations, the particularly non-stressing treatment of the oil is a particular advantage. <IMAGE>

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IPC 8 full level

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Cited by

EP0967381A1; CN107227990A; DE102004013763A1; EP0653550A1; DE202005013734U1; RU2692853C2; DE102005023227A1; DE10026113A1; DE10026113B4; EP3358157A1; GB2559416A; CN108397260A; GB2559416B; US10718241B2

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