

Title (en)

HYDRAULICALLY ACTUATED, VARIABLE VALVE GEAR OF AN INTERNAL COMBUSTION ENGINE

Title (de)

HYDRAULISCH BETÄTIGTER, VARIABLER VENTILTRIEB EINER BRENNKRAFTMASCHINE

Title (fr)

MECANISME DE DISTRIBUTION VARIABLE A ACTIONNEMENT HYDRAULIQUE D'UN MOTEUR A COMBUSTION INTERNE

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Application

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Abstract (en)

[origin: WO03102383A1] The invention relates to a hydraulically actuated, variable valve gear (1) of an internal combustion engine, comprising a master piston (3), which is in contact with a cam (2), a slave piston (5) that acts on a gas exchange valve (4) and a pressure chamber (6) of variable volume that is positioned between the master and the slave pistons (3, 5). The chamber is intersected by a path (7) for supplying and selectively draining hydraulic fluid, said path being subjected to the action of a switching element (8), such as an electromagnet for influencing the pressure of the hydraulic fluid. A secondary path (9) branches from the path (7) to a pressure accumulator (10), the latter (10) comprising a piston (12) in the direction of flow of the path (7) that is subjected to the action of a spring element (11). The invention is characterised in that the path (7) is connected to a hydraulic fluid reservoir (13), which consists of a pot-type element (14) comprising a non-return valve (16) on its base (15) that faces the path (7). Said valve opens in the direction of the path (7) and closes in the direction of flow to an inner chamber (18) that is surrounded by the wall (17) of the element (14). An intentional passage (21) in the form of a leakage gap is configured starting from one side of the path (19) of the element (14) and running radially between the wall (17) and a guide (20) for said element (14), said passage supplying the hydraulic fluid from the path (7) to the inner chamber (18), where it accumulates. This configuration permits the provision of a valve gear (1), which prevents the intake of air into the pressure chamber (6) of the valve gear, during the operation of the internal combustion engine.

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