

Title (en)

Variable-actuation, electro-hydraulic system and device controlling the valves of internal combustion engines

Title (de)

Elektrohydraulisches system und Vorrichtung zur variablen Betätigung der Ventile einer Brennkraftmaschine

Title (fr)

Système et appareil électrohydraulique de contrôle à commande variable de soupapes de moteur à combustion interne

Publication

**EP 1843013 A2 20071010 (EN)**

Application

**EP 07105135 A 20070328**

Priority

IT MI20060608 A 20060330

Abstract (en)

Control system of an electro-hydraulic device actuating the valves of internal combustion engines, comprising a cylinder-hydraulic piston assembly for each engine valve (3) to be actuated and means to transfer the piston displacement to the engine valve stem, means (10) to supply control fluid to the cylinder chamber (1) of said cylinder-piston assembly for actuating said piston (2) in the opening direction of the engine valve (3), in contrast to spring means (4) which recall said engine valve (3) into the closed position thereof. The cylinder chamber (1) is put in communication, alternately, on one side with a high pressure source (HP) and, on the other side, with a low pressure chamber (LP), through a single, 3-way servovalve (10), which is switched into a "state b" for putting the chamber (1) in communication with the high pressure source (HP), for a time (T1) corresponding to an initial part only of the opening run of the engine valve (3) or, alternatively, into a "state a", for putting said chamber (1) in communication with the low pressure (LP), for an initial part only of the closing run of the engine valve (3). The 3-way valve (10) comprises a shutter valve (12), slidable between a home position ("state a") and an active position ("state b") under the action of a pressure differential acting on the opposite sides thereof, and of a control electromagnet (21).

IPC 8 full level

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CPC (source: EP)

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Cited by

CN111636942A; WO2014177422A1

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