

Title (en)

Electro-hydraulic unit for the control of the valves of an internal-combustion engine.

Title (de)

Elektro-Hydraulikblock zum Steuern der Ventile einer Brennkraftmaschine.

Title (fr)

Bloc électro-hydraulique de commande des soupapes pour moteur à combustion interne.

Publication

EP 0139566 A1 19850502 (FR)

Application

EP 84401876 A 19840921

Priority

FR 8315128 A 19830923

Abstract (en)

1. An electrohydraulic valve-control unit for an internal combustion engine provided with an electronic control system supplying an electric signal for opening the valve, which unit comprises : a three-way feed/drain solenoid valve (2) receiving the said electric signal ; a three-way feed/drain hydraulic distributor (4) whose switching slide valve (70) is operated by a hydraulic pilot actuator (60, 76) connected to the said solenoid valve, the said slide valve (70) having an end (76) constituting the piston of the said hydraulic pilot actuator ; the said distributor having a first aperture (32) connected to a high pressure source (36, 38), a second aperture (44) connected to a lowpressure vessel (100), and a third utilization aperture (66) ; a hydraulic power actuator (6) whose working chamber (68) is connected to the third aperture (66) of the distributor ; means (93) for returning the piston (90) of the said actuator to the rest position ; means (10) for connecting, in respect of thrust, the rod (92) of the said actuator to the stem (12) of the valve (14) which is to be controlled ; the three components - solenoid valve (2), hydraulic distributor (4) and power actuator (6) being disposed side by side in a single unit mounted on an engine component (8) fastened to the cylinder head (16) of the engine ; said control unit being characterized : in that, in the absence of the electric signal for the opening of the valve, the solenoid valve (2) is in the feed position and subjects the piston (76) of the hydraulic pilot actuator to the high pressure, while when it is energized by the said electric signal, the said solenoid valve assumes the drain position and establishes the low pressure on the said piston (76) ; and in that the other end (78) of the slide valve (70) is always subjected to the high pressure, whereby the slide valve (70) moves to the position in which it feeds the power actuator (6), in response to the said electric signal, through the action of a fall in pressure on the piston (76).

Abstract (fr)

L'invention concerne l'industrie des moteurs à combustion interne. Le bloc de commande comprend : une électrovalve (2) excitée par les signaux d'un dispositif de contrôle électronique (22, 24, 26, 30) ; un distributeur hydraulique (4) dont le tiroir (70) est piloté par l'électro-valve (2) ; un vérin hydraulique de puissance (6) dont la tige (92) commande en poussée l'ouverture de la soupape (14) lorsque le tiroir (70) vient en position d'alimentation. Application à la commande des soupapes sur les moteurs Diésel.

IPC 1-7

F01L 9/02

IPC 8 full level

F01L 9/10 (2021.01)

CPC (source: EP)

F01L 9/10 (2021.01)

Citation (search report)

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