

Title (en)
A HYDRAULIC VALVE ARRANGEMENT FOR CONTROLLABLY OPERATING A GAS EXCHANGE VALVE OF AN INTERNAL COMBUSTION PISTON ENGINE

Title (de)
HYDRAULISCHE VENTILANORDNUNG ZUR STEUERBAREN BETÄTIGUNG EINES GASWECHSELVENTILS EINES HUBKOLBEN-
VERBRENNUNGSMOTORS

Title (fr)
AGENCEMENT DE SOUPAPE HYDRAULIQUE POUR FAIRE FONCTIONNER DE MANIÈRE COMMANDÉE UNE SOUPAPE D'ÉCHANGE
GAZEUX D'UN MOTEUR À COMBUSTION INTERNE À PISTON

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Application
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Abstract (en)
[origin: WO2013121100A1] Invention relates to a hydraulic valve arrangement (10) for controllably operating a gas exchange valve of an internal combustion piston engine, the arrangement comprising a body part (12) in which body part a first fluid chamber (14.1) is arranged bordered by radial surfaces (16.1', 16.2') of first and second piston parts and having a volume that increases in response to the piston parts (16.1, 16.2) moving relative to the body part in a first direction, and a second fluid chamber (14.2) is arranged bordered by radial surface (16.2'') of the second piston part having a volume that decreases in response to the second piston part moving relative to the body part in a first direction. The first and the second piston parts are arranged slidably in respect to each other and that the movement of the second piston (16.2) part relative to the body part (12) is arranged controllable by a fluid control system (24) arranged in connection with the hydraulic valve arrangement (10).

IPC 8 full level
F01L 9/10 (2021.01)

CPC (source: EP FI)
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Citation (search report)
• [XA] DE 10310300 A1 20040923 - BOSCH GMBH ROBERT [DE]
• [X] DE 10127205 A1 20020905 - BOSCH GMBH ROBERT [DE]
• [X] WO 9966178 A1 19991223 - BOSCH GMBH ROBERT [DE], et al
• [X] EP 1731771 A2 20061213 - BOSCH GMBH ROBERT [DE]
• [X] WO 03027450 A1 20030403 - BOSCH GMBH ROBERT [DE], et al
• [X] WO 03008770 A1 20030130 - BOSCH GMBH ROBERT [DE], et al
• [X] WO 03027449 A1 20030403 - BOSCH GMBH ROBERT [DE], et al
• [X] DE 102004022447 A1 20051201 - BOSCH GMBH ROBERT [DE]
• [X] DE 102007025619 A1 20081204 - BOSCH GMBH ROBERT [DE]
• [X] DE 10024268 A1 20011122 - BOSCH GMBH ROBERT [DE]

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