

Title (en)

VANE TYPE PHASING DEVICE WITH ELECTROMAGNETICALLY ACTUATED CONTROL VALVE

Title (de)

SCHWENKMOTORVERSTELLER MIT EINEM ELEKTROMAGNETISCH BETÄTIGTEN HYDRAULIKVENTIL

Title (fr)

DEPHASEUR À PALETTES RADIALES COMPRENANT UNE VANNE DE COMMANDE ELECTROMAGNÉTIQUE

Publication

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Application

EP 13826718 A 20131114

Priority

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Abstract (en)

[origin: WO2014075675A1] The invention relates to an oscillating motor camshaft adjuster (14) with an electromagnetically actuated hydraulic valve (12) that has a hollow piston (19) inserted into a bore (85) and longitudinally displaceable by means of an electromagnet (100), which hollow piston (19) is intended for distributing hydraulic fluid to two pressure chambers (9, 10) of the working connections (A, B) assigned to the oscillating motor camshaft adjuster (14). The first working connection (A) branches off from the bore (85) directly adjacent to the electromagnet (100). The hollow piston (19) has a circumferential stay with a control edge (107) facing the electromagnet (100). Thus a space (103) inside the bore (85) is bordered by the stay (102) and the electromagnet (100). A run-off opening (104) is provided in the hollow channel (19) between the stay (102) and the electromagnet (100). This run-off opening (104) hydraulically connects the space (103) to a run-off channel (105) leading to a tank drain (T) inside the hollow piston (19). The stay (102) can be displaced in a direction extending the first working connection (A) in the flow cross-section (106) by means of a force (F-M) of the electromagnet (100) supplied with current. This force (F-M) is directed counter to an elastic force (F-F) that presses the stay (102) in the direction reducing the flow cross-section (106). A throttle point (108) is provided at the stay (102), which throttle point (108) is arranged between the flow cross-section (106) and the space (103). Thus a high control quality is achieved.

IPC 8 full level

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