

Title (en)

VARIABLE VALVE TRAIN FOR INTERNAL COMBUSTION ENGINES FOR ACTUATING GAS EXCHANGE VALVES

Title (de)

VARIABLER VENTILTRIEB FÜR BRENNKRAFTMASCHINEN ZUR BETÄTIGUNG VON GASWECHSELVENTILEN

Title (fr)

COMMANDE VARIABLE POUR ACTIONNER DES SOUPAPES DE CHANGEMENT DES GAZ SUR DES MOTEURS À COMBUSTION INTERNE

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Application

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Abstract (en)

[origin: WO2011018075A2] The invention relates to a variable valve train for internal combustion engines for actuating gas exchange valves which can be operated set to different opening lifts. The aim of the invention is to provide a variable valve train for actuating gas exchange valves of internal combustion engines, characterised by having a simple structure whilst at the same time reducing exerted frictional forces. The claimed valve train for internal combustion engines for actuating gas exchange valves consists of a camshaft driven by a crankshaft of the internal combustion engine, said camshaft consisting of several individual cam sleeves which can be displaced axially against each other. The individual cam sleeves which be displaced separately against each other are connected via an axially extending toothing, said toothing of the respective adjacent cam sleeves being embodied in an engaging manner. Several different cam profiles with similar base-circle sections are arranged on each cam sleeve, said base-circle sections can be brought into contact with the gas exchange valves by displacing the individual cam sleeves. A selector shaft rotating with the cam sleeves is arranged inside the cam sleeves, said selector shaft being operatively connected to the respective cam sleeve via a shifting mechanism. Said shifting mechanisms are mounted respectively in a fixed manner in each cam sleeve and in a sliding manner in a shifting contour arranged on the selector shaft. Said selector shaft is connected to a displacement part which can be displaced axially and which is also rotationally fixed on the cam sleeve by means of the shifting mechanism. An actuator which is fixed to the housing of the internal combustion engine can be operatively connected to the displacement part for producing a relative rotation of the selector shaft in relation to the cam sleeve.

IPC 8 full level

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