

Title (en)  
CONTROL VALVE FOR A DEVICE FOR VARIABLY ADJUSTING THE CONTROL TIMES OF GAS EXCHANGE VALVES OF AN INTERNAL COMBUSTION ENGINE

Title (de)  
STEUERVENTIL FÜR EINE VORRICHTUNG ZUR VARIABLEN EINSTELLUNG DER STEUERZEITEN VON GASWECHSELVENTILEN EINER BRENNKRAFTMASCHINE

Title (fr)  
SOUPAPE DE COMMANDE POUR UN DISPOSITIF DE REGLAGE VARIABLE DES INSTANTS D'ACTIONNEMENT DE SOUPAPES DE REMPLACEMENT DE GAZ DANS UN MOTEUR A COMBUSTION INTERNE

Publication  
**EP 1945917 B1 20090819 (DE)**

Application  
**EP 06807333 A 20061017**

Priority  
• EP 2006067482 W 20061017  
• DE 102005052481 A 20051103

Abstract (en)  
[origin: US2007095315A1] The invention relates to a control valve ( 20 ) for an apparatus ( 1 ) for the variable setting of the control times of gas exchange valves ( 110, 111 ) of an internal combustion engine ( 100 ), having a valve housing ( 22 ) of hollow configuration which has at least one inflow connection (P), at least one outflow connection (T) and at least two working connections (A, B), and having a control plunger ( 35 ). In order to retain relatively high flexibility in the design of the control valve components ( 22, 35 ) and to simplify the connection of the control valve ( 20 ) to the surrounding construction ( 3 ), it is proposed to arrange a pressure medium guide insert ( 27 ) of hollow configuration within the valve housing ( 22 ), and to form at least one pressure medium channel ( 34 ) which extends substantially in the axial direction, the pressure medium guide insert ( 27 ) engaging around the pressure medium channel ( 34 ) at least partially, the pressure medium channel ( 34 ) communicating with at least one of the connections (A, B, P, T) and, via a radial opening ( 33 b-d), with the interior of the pressure medium guide insert ( 27 ), and the control plunger ( 35 ) being arranged within the pressure medium guide insert ( 27 ).

IPC 8 full level  
**F01L 1/34** (2006.01); **F01L 1/344** (2006.01); **F15B 13/04** (2006.01); **F15B 13/044** (2006.01); **F15B 21/041** (2019.01); **F16K 11/07** (2006.01); **F16K 31/122** (2006.01)

CPC (source: EP US)  
**F01L 1/34** (2013.01 - EP US); **F01L 1/344** (2013.01 - EP US); **F01L 1/3442** (2013.01 - EP US); **F15B 13/0402** (2013.01 - EP US); **F15B 13/0442** (2013.01 - EP US); **F15B 21/041** (2013.01 - EP US); **F01L 2001/34426** (2013.01 - EP US); **F01L 2001/3443** (2013.01 - EP US); **F01L 2001/34433** (2013.01 - EP US); **F01L 2001/3444** (2013.01 - EP US); **Y10T 137/86767** (2015.04 - EP US)

Cited by  
DE102015213135B3; DE102021104936A1; DE102020003430A1; WO2017008792A1; US10473001B2

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**US 2007095315 A1 20070503**; **US 7389756 B2 20080624**; AT E440207 T1 20090915; CN 101300408 A 20081105; CN 101300408 B 20110928; DE 102005052481 A1 20070524; DE 502006004615 D1 20091001; EP 1945917 A1 20080723; EP 1945917 B1 20090819; JP 2009515090 A 20090409; WO 2007051704 A1 20070510

DOCDB simple family (application)  
**US 55575106 A 20061102**; AT 06807333 T 20061017; CN 200680041152 A 20061017; DE 102005052481 A 20051103; DE 502006004615 T 20061017; EP 06807333 A 20061017; EP 2006067482 W 20061017; JP 2008539384 A 20061017