

Title (en)  
APPARATUS FOR VARIABLY ADJUSTING THE CONTROL TIMES OF GAS EXCHANGE VALVES IN AN INTERNAL COMBUSTION ENGINE

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

Title (fr)  
DISPOSITIF DE RÉGLAGE VARIABLE DES TEMPS D'OUVERTURE ET DE FERMETURE DE SOUPAPES D'ÉCHANGE DES GAZ D'UN MOTEUR À COMBUSTION INTERNE

Publication  
**EP 2215331 B1 20110629 (DE)**

Application  
**EP 08851456 A 20081104**

Priority  
• EP 2008064936 W 20081104  
• DE 102007056683 A 20071124

Abstract (en)  
[origin: US2010313834A1] An apparatus for variably adjusting the control times of gas exchange valves in an internal combustion engine. The apparatus has a driving element, an output element, at least one pressure chamber, a pressurized medium supply device, and at least one pressure accumulator. The pressurized medium supply device allows pressurized medium to be fed to or discharged from the at least one pressure chamber. A phase angle of the output element relative to the driving element can be changed by supplying or discharging pressurized medium to or from the pressure chamber. The pressure accumulator encompasses a movable element that has a first pressure surface which partially delimits a storage space. The storage space is connected to the pressurized medium supply device. The movable element can be moved against the force of an energy store by pressurizing the storage space.

IPC 8 full level  
**F01L 1/34** (2006.01); **F01L 1/344** (2006.01)

CPC (source: EP US)  
**F01L 1/34** (2013.01 - EP US); **F01L 1/3442** (2013.01 - EP US); **F15B 1/024** (2013.01 - EP US); **F15B 15/12** (2013.01 - EP US); **F01L 2001/34446** (2013.01 - EP US)

Cited by  
EP2324212B1

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**US 2010313834 A1 20101216**; AT E514839 T1 20110715; CN 102625874 A 20120801; CN 102625874 B 20150401; DE 102007056683 A1 20090528; EP 2215331 A1 20100811; EP 2215331 B1 20110629; KR 101468262 B1 20141202; KR 20100097117 A 20100902; WO 2009065728 A1 20090528

DOCDB simple family (application)  
**US 74409308 A 20081104**; AT 08851456 T 20081104; CN 200880117533 A 20081104; DE 102007056683 A 20071124; EP 08851456 A 20081104; EP 2008064936 W 20081104; KR 20107011078 A 20081104