

Title (en)

DEVICE FOR VARIABLY ADJUSTING THE CONTROL TIMES OF GAS EXCHANGE VALVES OF 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 DES SOUPAPES D'ÉCHANGE DES GAZ D'UN MOTEUR À COMBUSTION INTERNE

Publication

**EP 2238319 A1 20101013 (DE)**

Application

**EP 08870856 A 20081218**

Priority

- EP 2008067864 W 20081218
- DE 102008005277 A 20080119

Abstract (en)

[origin: US2011162603A1] A device for variably adjusting the control times of gas exchange valves of an internal combustion engine. The device has a driving element, an output element, at least one pressure chamber, at least one mechanism limiting the angle of rotation, and a pressure accumulator. A phase angle between the output and driving element is changed by delivering or discharging pressure medium to or from the pressure chambers. The mechanism limiting the angle of rotation has a receiving member and an engaging element to which a force is applied towards the receiving member (45). When locked, where the engaging element engages into the receiving member, the mechanism limiting the angle of rotation limits the phase angle of the output element relative to the driving element at least to an angular spread. The mechanism limiting the angle of rotation can be unlocked by applying pressure medium to the receiving member.

IPC 8 full level

**F01L 1/344** (2006.01)

CPC (source: EP US)

**F01L 1/3442** (2013.01 - EP US); **F01L 2001/34446** (2013.01 - EP US); **F01L 2001/34466** (2013.01 - EP US)

Citation (search report)

See references of WO 2009089984A1

Cited by

CN103452614A

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

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

**US 2011162603 A1 20110707; US 8459221 B2 20130611**; AT E533925 T1 20111215; CN 101910571 A 20101208; CN 101910571 B 20130410; DE 102008005277 A1 20090723; EP 2238319 A1 20101013; EP 2238319 B1 20111116; KR 101489985 B1 20150206; KR 20100102667 A 20100924; WO 2009089984 A1 20090723

DOCDB simple family (application)

**US 86332608 A 20081218**; AT 08870856 T 20081218; CN 200880124992 A 20081218; DE 102008005277 A 20080119; EP 08870856 A 20081218; EP 2008067864 W 20081218; KR 20107015811 A 20081218