

Title (en)
CONTROL VALVE

Title (de)
STEUERVENTIL

Title (fr)
VANNE DE COMMANDE

Publication
EP 2470757 B1 20130724 (DE)

Application
EP 10742794 A 20100729

Priority
• DE 102009039385 A 20090829
• EP 2010061009 W 20100729

Abstract (en)
[origin: WO2011023488A1] The invention relates to a control valve (12) for a device (11) for the variable adjustment of the valve timing of gas exchange valves (9, 10) of an internal combustion engine (1), said control valve comprising a substantially hollow-cylindrical valve box (34), a control piston (36) and a securing ring (42). The valve box (34) is arranged in a receptacle (31) inside the device (11), the securing ring (42) projecting over the valve box (34) in the radial direction and the control piston (36) being arranged so as to be axially displaceable inside the valve box (34).

IPC 8 full level
F01L 1/344 (2006.01); **F01L 1/46** (2006.01); **F16B 21/18** (2006.01); **F16K 11/07** (2006.01); **F16K 27/04** (2006.01)

CPC (source: EP US)
F01L 1/3442 (2013.01 - EP US); **F01L 1/46** (2013.01 - EP US); **F01L 1/34** (2013.01 - EP US); **F01L 2001/34426** (2013.01 - EP US); **F01L 2001/3444** (2013.01 - EP US); **F01L 2303/00** (2020.05 - EP US)

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

DOCDB simple family (publication)
DE 102009039385 A1 20110303; BR 112012004446 A2 20160322; BR 112012004446 A8 20171010; BR 112012004446 A8 20171205; BR 112012004446 A8 20171219; CN 102482957 A 20120530; CN 102482957 B 20141029; EP 2470757 A1 20120704; EP 2470757 B1 20130724; US 2012152189 A1 20120621; US 8567360 B2 20131029; WO 2011023488 A1 20110303

DOCDB simple family (application)
DE 102009039385 A 20090829; BR 112012004446 A 20100729; CN 201080038508 A 20100729; EP 10742794 A 20100729; EP 2010061009 W 20100729; US 201013392212 A 20100729