Title (en)

VALVE TIMING CONTROLLER, ENGINE DEVICE HAVING THE SAME, AND VEHICLE

Title (de)

VENTILZEITSTEUERUNG, MOTORVORRICHTUNG DAMIT UND FAHRZEUG

Title (fr)

RÉGULATEUR AUTOMATIQUE DU RÉGLAGE DE DISTRIBUTION, DISPOSITIF DE MOTEUR AYANT CELUI-CI ET VÉHICULE

Publication

EP 1835133 A1 20070919 (EN)

Application

EP 05814483 A 20051207

Priority

- JP 2005022484 W 20051207
- JP 2004365549 A 20041217

Abstract (en)

When an engine speed of an engine is low, a force by a spring to bias a low speed lock pin in the direction in which the pin is to be inserted into a low speed pin introduction hole is greater than a centrifugal force acting on a weight. This causes the low speed lock pin to be inserted into the low speed pin introduction hole, so that the phase of an intake camshaft relative to an exhaust camshaft is fixed. When the engine speed of the engine is high, a force to bias a high speed lock pin in the direction in which the pin is to be inserted in a high speed pin introduction hole by a centrifugal force acting on a weight is greater than a force by a spring to bias the high speed lock pin in the direction in which the pin is pulled out from the high speed lock pin introduction hole. This causes the high speed lock pin to be inserted into the high speed pin introduction hole, so that the phase of the intake camshaft relative to the exhaust camshaft is fixed.

IPC 8 full level

F01L 1/34 (2006.01); **F01L 13/00** (2006.01)

CPC (source: EP US)

F01L 1/022 (2013.01 - EP US); **F01L 1/344** (2013.01 - EP US); F01L 1/08 (2013.01 - EP US); F01L 1/181 (2013.01 - EP US); F01L 2001/0535 (2013.01 - EP US); F01L 2301/00 (2020.05 - EP US); F01L 2305/00 (2020.05 - EP US); F01L 2820/01 (2013.01 - EP US); F01L 2820/035 (2013.01 - EP US)

Designated contracting state (EPC)

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Designated extension state (EPC)

AL BA HR MK YU

DOCDB simple family (publication)

EP 1835133 A1 20070919; **EP 1835133 A4 20090826**; BR PI0519514 A2 20090225; CN 100455774 C 20090128; CN 101080552 A 20071128; JP 2006170117 A 20060629; TW 200624657 A 20060716; US 2009272348 A1 20091105; WO 2006064707 A1 20060622

DOCDB simple family (application)

EP 05814483 A 20051207; BR PI0519514 A 20051207; CN 200580043369 A 20051207; JP 2004365549 A 20041217; JP 2005022484 W 20051207; TW 94140461 A 20051117; US 72189505 A 20051207