

Title (en)

Camshaft adjuster with emergency operation device

Title (de)

Nockenwellenversteller mit Vorrichtung zum Notbetrieb

Title (fr)

Dispositif de réglage d'arbres à came avec dispositif de fonctionnement en urgence

Publication

EP 2520772 B1 20160629 (DE)

Application

EP 12165842 A 20120427

Priority

US 201161481339 P 20110502

Abstract (en)

[origin: EP2520772A2] The adjusting device (10) has an emergency operation unit (20) which comprises a freewheel element (22) that is activated in an emergency mode. The adjusting movement of camshaft relative to the crankshaft from current position in a primary direction to an emergency position, is carried out in the active state of freewheel element to block the displacement movement of the camshaft in a secondary direction.

IPC 8 full level

F01L 1/344 (2006.01); **F01L 1/34** (2006.01)

CPC (source: EP US)

F01L 1/352 (2013.01 - EP US); **F01L 2001/34459** (2013.01 - EP US); **F01L 2250/02** (2013.01 - EP US); **F01L 2800/12** (2013.01 - EP US); **F01L 2820/032** (2013.01 - EP US); **F01L 2820/035** (2013.01 - EP US)

Cited by

CN105940192A; DE102017111222B3; US9920660B2; DE102021105281A1; WO2015117580A3; DE102017101287A1; DE102017101287B4

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 RS SE SI SK SM TR

DOCDB simple family (publication)

EP 2520772 A2 20121107; **EP 2520772 A3 20130220**; **EP 2520772 B1 20160629**; JP 2012233478 A 20121129; US 2012279466 A1 20121108; US 8757115 B2 20140624

DOCDB simple family (application)

EP 12165842 A 20120427; JP 2012105136 A 20120502; US 201213461830 A 20120502