

Title (en)

INTERNAL COMBUSTION ENGINE HAVING AT LEAST ONE CYLINDER COMPRISING A TORSION-PROOF CAMSHAFT

Title (de)

BRENNKRAFTMASCHINE MIT ZUMINDEST EINEM ZYLINDER MIT EINER DREHSTEIFEN NOCKENWELLE

Title (fr)

MOTEUR À COMBUSTION INTERNE DOTÉ D'AU MOINS UN CYLINDRE ÉQUIPÉ D'UN ARBRE À CAMES RIGIDE À LA TORSION

Publication

**EP 2201223 A1 20100630 (DE)**

Application

**EP 08804579 A 20080923**

Priority

- EP 2008062655 W 20080923
- AT 16252007 A 20071011

Abstract (en)

[origin: WO2009049996A1] The invention relates to an internal combustion engine having at least one cylinder comprising a torsion-proof camshaft (6) for actuating at least one gas exchange valve (1, 2) via a pushrod (4a, 4b) and a valve lever (3a, 3b), wherein a gas exchange cam (8a, 8b) of the camshaft (6) acts upon the pushrod (4a, 4b) via an adjustable transmission lever (5a, 5b). In order to adjust the timing of the gas exchange valves (1, 2) and of the fuel injection pump (11) in a manner that is as simple as possible, the invention provides that the camshaft (6) drives a mechanical fuel injection pump via an injection cam (10), and that the timing of the fuel injection pump (11) can be changed by means of a phase shifter (12) acting upon the camshaft (6).

IPC 8 full level

**F01L 1/34** (2006.01); **F02M 59/10** (2006.01)

CPC (source: EP)

**F01L 1/34** (2013.01); **F02M 59/102** (2013.01); **F02M 59/24** (2013.01)

Citation (search report)

See references of WO 2009049996A1

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)

**WO 2009049996 A1 20090423**; AT 503893 A2 20080115; AT 503893 A3 20101215; AT 503893 B1 20110415; AT E507372 T1 20110515; DE 502008003375 D1 20110609; EP 2201223 A1 20100630; EP 2201223 B1 20110427

DOCDB simple family (application)

**EP 2008062655 W 20080923**; AT 08804579 T 20080923; AT 16252007 A 20071011; DE 502008003375 T 20080923; EP 08804579 A 20080923