

Title (en)
VARIABLE COMPRESSION RATIO ENGINE

Title (de)
MOTOR MIT VARIABLEM VERDICHTUNGSVERHÄLTNIS

Title (fr)
MOTEUR A RAPPORT VOLUMETRIQUE VARIABLE

Publication
EP 3377743 A1 20180926 (FR)

Application
EP 16812995 A 20161117

Priority
• FR 1561059 A 20151117
• FR 2016052985 W 20161117

Abstract (en)
[origin: CA3005570A1] The invention relates to a variable compression ratio engine comprising a stationary engine block in which movable members, including a combustion piston, a rod, and a crankshaft, interact to enable the piston to translate in a combustion cylinder of the engine block, defining a stroke of the combustion piston ranging from top dead center to bottom dead center, wherein the translation is caused by forces resulting from the combustion of a mixture in the cylinder and inertial forces of the crankshaft. The engine is characterized in that it comprises a self-contained device for adjusting the position of the top dead center of the combustion piston, the self-contained device being connected to or built into at least one of the movable members and having a high-pressure hydraulic chamber to counteract the combustion and inertial forces at the bottom dead center, a low-pressure hydraulic chamber to counteract the inertial forces at the top dead center, at least one calibrated pipe to enable hydraulic fluid to flow between the high- and low-pressure hydraulic chambers, and return means to bring the device back to a nominal position. The calibrated pipe and return means are configured so that the self-contained device forms a highly damped oscillating system.

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CPC (source: EP KR US)
F02B 75/04 (2013.01 - EP US); **F02B 75/045** (2013.01 - KR US); **F02B 75/048** (2013.01 - US); **F02D 15/02** (2013.01 - US); **F16C 3/28** (2013.01 - EP KR US); **F16C 7/04** (2013.01 - EP US); **F16C 7/06** (2013.01 - EP KR US)

Citation (search report)
See references of WO 2017085410A1

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