

Title (en)
IMPROVEMENTS TO COMPRESSION OR SPARK IGNITION FOUR-STROKE INTERNAL COMBUSTION ENGINES HAVING A VARIABLE COMPRESSION RATIO ENABLING HIGH SUPERCHARGING PRESSURE LEVELS

Title (de)
VERBESSERTE VIERTAKTBRENNKRAFTMASCHINE MIT VARIABLEM VERDICHTUNGSVERHÄLTNIS

Title (fr)
PERFECTIONNEMENTS APPORTES AUX MOTEURS A COMBUSTION INTERNE A QUATRE TEMPS, A RAPPORT VOLUMETRIQUE VARIABLE AUTORISANT DE HAUTS TAUX DE PRESSIONS DE SURALIMENTATION ET FONCTIONNANT PAR ALLUMAGE PAR COMPRESSION OU PAR ALLUMAGE COMMANDE

Publication
EP 0689642 A1 19960103 (FR)

Application
EP 94911313 A 19940321

Priority
• LU 9400001 W 19940321
• LU 88235 A 19930319

Abstract (en)
[origin: WO9421905A1] An engine including an assembly of at least two cylinders (2 and 3) with different displacements, and two crankshafts (4 and 5) coupled at the same rotational speed via a gear train (19, 20, 21) and a variably timed transmission having three concentric shafts (17, 28, 32) separable from the drive assembly (18) and designed to reduce the compression ratio as the intake pressure increases. The highest and lowest compression ratios are set within the angular displacement limits between the two crankshafts (4 and 5) by means of the compression ratios between the two cylinders (2 and 3), and between said two cylinders (2 and 3) and the clearance space, so that (a) the start of the variably timed transmission stroke increases the translation of the piston (8) by units of angular displacement between the two crankshafts (4 and 5) at the end of compression phase, and (b) the end of the variably timed transmission stroke combines combustion gas expansion on the piston (8) at least from the maximum torque on the crank of the short-stroke crankshaft (5).

IPC 1-7
F02B 41/00; **F02D 15/04**

IPC 8 full level
F02B 75/18 (2006.01); **F02B 33/22** (2006.01); **F02B 41/00** (2006.01); **F02D 15/04** (2006.01); **F02B 1/04** (2006.01); **F02B 3/06** (2006.01); **F02B 75/02** (2006.01)

CPC (source: EP US)
F02B 41/00 (2013.01 - EP US); **F02D 15/04** (2013.01 - EP US); **F02B 1/04** (2013.01 - EP US); **F02B 3/06** (2013.01 - EP US); **F02B 2075/027** (2013.01 - EP US)

Citation (search report)
See references of WO 9421905A1

Designated contracting state (EPC)
BE DE ES FR GB IT SE

DOCDB simple family (publication)
WO 9421905 A1 19940929; AU 6386394 A 19941011; CN 1059486 C 20001213; CN 1119465 A 19960327; DE 69406651 D1 19971211; DE 69406651 T2 19980520; EP 0689642 A1 19960103; EP 0689642 B1 19971105; ES 2111294 T3 19980301; JP H08507844 A 19960820; LU 88235 A1 19941003; US 5638777 A 19970617

DOCDB simple family (application)
LU 9400001 W 19940321; AU 6386394 A 19940321; CN 94191530 A 19940321; DE 69406651 T 19940321; EP 94911313 A 19940321; ES 94911313 T 19940321; JP 52089294 A 19940321; LU 88235 A 19930319; US 52555495 A 19950919