

Title (en)
FUEL-INJECTED PISTON COMBUSTION ENGINE

Title (de)
BRENNKRAFTKOLBENMASCHINE MIT KRAFTSTOFFEINSPRITZUNG

Title (fr)
MOTEUR A COMBUSTION INTERNE A PISTON AVEC INJECTION DE CARBURANT

Publication
EP 0788580 A1 19970813 (DE)

Application
EP 96900531 A 19960113

Priority
• DE 9600078 W 19960113
• DE 19514571 A 19950420

Abstract (en)
[origin: DE19514571C1] For known structural reasons, there are so far no fuel-injected piston combustion engines operating at pressure ratios higher than 1:21. It is the purpose of this invention to produce a fuel-injected piston combustion engine operating at pressures from over 1:25 to about 1:40 with a simultaneous pressure drop in the exhaust gases to 1 bar. The Otto-cycle operating mode achieved provides very high efficiencies, resulting in fuel consumptions of under 80g/HPh. As will be seen from fig. 2, this aim is achieved by a design with a centrally rotating cylinder block (10) and a cylinder fitted centrally therein, in which a piston (15) connected to the uncranked mainshaft (13) by a rigid connecting rod (136) rotates in the big-end bearing (14) and the rotation speed ratio between the cylinder block and the mainshaft is 1:1 with no intermediate gearing, so that only deceleration and acceleration forces act on the cylinder block. Production of a fuel-injected piston combustion engine, mainly for transport (automobile) drives to reduce CO₂ emissions.

IPC 1-7
F02B 57/08; **F01B 13/02**

IPC 8 full level
F01B 13/02 (2006.01); **F02B 57/08** (2006.01); **F01P 3/00** (2006.01)

CPC (source: EP US)
F01B 13/02 (2013.01 - EP US); **F02B 57/08** (2013.01 - EP US); **F01P 2003/005** (2013.01 - EP US)

Citation (search report)
See references of WO 9633342A1

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

DOCDB simple family (publication)
DE 19514571 C1 19960725; EP 0788580 A1 19970813; EP 0788580 B1 20000920; US 6079376 A 20000627; WO 9633342 A1 19961024

DOCDB simple family (application)
DE 19514571 A 19950420; DE 9600078 W 19960113; EP 96900531 A 19960113; US 91363797 A 19970905