

Title (en)
OPPOSED PISTON TYPE FREE PISTON ENGINE PUMP UNIT

Publication
EP 0085800 B1 19870513 (EN)

Application
EP 82300655 A 19820210

Priority
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Abstract (en)
[origin: EP0085800A2] A free piston engine pump converts combustion energy into hydraulic power in an efficient, controlled and relatively uncomplicated manner, for example, for vehicle propulsion, auxiliary system power, etc. The free piston engine pump is substantially naturally mass balanced having opposed engine pistons 5, 6 driving respective in-line hydraulic pumps 3. An adjustable accumulator 49 with a deformable fluid-tight chamber 50 containing a compressible fluid stores and delivers energy for compression, and an arrangement of control valves 67-69 and check valves 62, 63, 65, 66 enables selective operation of the free piston engine pump in primary (high flow) and secondary (high pressure) modes. Plural free piston engine pumps 1a, 1b, may be interfaced for parallel operation sharing common elements 53 min , 64 min and functions. Cycle rate, intermittent operation and start-up also may be controlled. Electronic monitoring and control 150 of one or more operational parameters of a free piston engine pump also are disclosed.

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IPC 8 full level
F04B 17/05 (2006.01)

CPC (source: EP)
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Cited by
DE10033443A1; JP4751000B2; WO9202730A1; WO2020044176A1; JP2003533629A

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