

Title (en)

FUEL PUMPING DEVICE FOR TWO-STROKE ENGINES WITH AN ADDITIONAL DRIVING UNIT

Title (de)

KRAFTSTOFFPUMPVORRICHTUNG FÜR ZWEITAKTMOTOREN MIT EINER ZUSÄTZLICHEN ANTRIEBSEINHEIT

Title (fr)

DISPOSITIF DE POMPAGE DE CARBURANT POUR MOTEURS DEUX TEMPS, COMPORTANT UNE UNITE D'ENTRAINEMENT SUPPLEMENTAIRE

Publication

**EP 0954697 A1 19991110 (DE)**

Application

**EP 97935469 A 19970723**

Priority

- DE 9701557 W 19970723
- DE 19631287 A 19960802

Abstract (en)

[origin: DE19631287A1] A fuel pumping device for two-stroke engines has a housing at least in one part upon which are arranged a pulsed air connection (14) pneumatically connected to the crank housing of the two-stroke engine, a fuel aspirating connection and a fuel feeding connection. A membrane (41) to which pulsed air is applied drives together with a membrane disk (42) a pump piston (22). During the suction hub of the pump at the fuel aspirating connection, fuel which flows out of the tank (1) is sucked through a check valve (61) into the compression chamber (51) located upstream of the pump piston, and during the feeding hub, fuel is pumped through another check valve (71) into the fuel feeding connection and into a reservoir (73) and/or injection valve (5). The pulsed air connection (14) opens into a cavity (13) in the housing located between the membrane (41) and the pump piston (22). At least one spring element (15, 35, 94) acts on each side of the membrane (41). The spring element (15) arranged in the cavity (13) of the housing is supported on the membrane (41) by the separate pump piston (22). In the housing cavity (33) located at the other side of the membrane (41) is arranged an electromagnetic driving unit (90) which supports by means of its armature (91) the compression stroke of the pump piston (22) in synchrony with the compression stroke of the two-stroke engine.

IPC 1-7

**F02M 59/10**; **F02M 37/12**; **F02M 51/04**

IPC 8 full level

**F02M 37/06** (2006.01); **F02M 37/12** (2006.01); **F02M 51/04** (2006.01); **F02M 59/10** (2006.01); **F04B 9/125** (2006.01); **F04B 9/127** (2006.01); **F04B 17/04** (2006.01)

CPC (source: EP US)

**F02M 37/12** (2013.01 - EP US); **F02M 51/04** (2013.01 - EP US); **F02M 59/107** (2013.01 - EP US); **F04B 9/125** (2013.01 - EP US); **F04B 9/127** (2013.01 - EP US); **F04B 17/042** (2013.01 - EP US)

Citation (search report)

See references of WO 9805860A1

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**DE 19631287 A1 19980205**; **DE 19631287 B4 20040115**; AU 3846797 A 19980225; AU 709656 B2 19990902; CA 2262522 A1 19980212; DE 59708576 D1 20021128; EP 0954697 A1 19991110; EP 0954697 B1 20021023; ES 2185966 T3 20030501; JP 2000515601 A 20001121; US 6162028 A 20001219; WO 9805860 A1 19980212

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