

Title (en)

AN AIR FUEL CONTROL, AND A PLUNGER AND BARREL ASSEMBLY FOR A FUEL SYSTEM, EITHER FOR AN INTERNAL COMBUSTION ENGINE

Publication

**EP 0253483 A3 19890412 (EN)**

Application

**EP 87304852 A 19870602**

Priority

US 88520086 A 19860714

Abstract (en)

[origin: EP0253483A2] A tamper-proof air fuel control for a compression ignition type i.c. engine is provided wherein fuel is supplied to cylinders in response to the pressure of air in the intake manifold. A pair of oppositely biased springs (40 and 42) controls movement of a stem valve (30) in response to intake manifold air pressure exerted on a flexible diaphragm (28) located between the springs (40 and 42). The stem valve (30) includes a plunger (32) within a barrel (31) in the air fuel control housing (20) in the engine fuel pump. The cross-sectional profiles of the plunger (32) and barrel (31) are designed to meter precisely a controlled amount of fuel to the engine fuel supply system as the intake air pressure increases and to reduce this metered flow as the intake air pressure decreases. A class fit between the barrel (31) and plunger (32) wherein the clearance must not exceed  $1905 \times 10^{-9}$  metres to  $3175 \times 10^{-9}$  metres (0.000075 to 0.000125 inches) and pressure regulating means in the plunger (32) substantially eliminate fuel leakage from the barrel (31). Internal venting means are provided to direct any minimal amount of fuel which might leak to the engine crankcase.

IPC 1-7

**F02D 1/06**; **F02D 7/00**

IPC 8 full level

**F02D 3/00** (2006.01); **F02D 1/06** (2006.01); **F02D 7/00** (2006.01); **F02M 59/20** (2006.01); **F02M 69/00** (2006.01); **F02M 69/52** (2006.01)

CPC (source: EP)

**F02D 1/065** (2013.01); **F02D 7/007** (2013.01); **F02M 59/205** (2013.01)

Citation (search report)

- [AD] US 4187817 A 19800212 - MUNTEAN GEORGE L [US], et al
- [A] FR 2362279 A1 19780317 - CUMMINS ENGINE CO INC [US]
- [AD] US 3795233 A 19740305 - CREWS D, et al

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