Title (en)

APPARATUS FOR REGULATING THE AIR-FUEL RATIO IN AN INTERNAL-COMBUSTION ENGINE

Publication

EP 0081759 A3 19841128 (DE)

Application

EP 82111154 A 19821202

Priority

DE 3149136 A 19811211

Abstract (en)

[origin: US4492205A] To prevent stumbling operation of an internal combustion (IC) engine (E) during warm-up due to switching back-and-forth between control of the air-fuel composition of the mixture being applied to the engine based on a preset, rich mixture and controlled by a lambda sensor, the lambda sensor internal resistance is sensed and, when the internal resistance of the lambda sensor, when exposed to a rich mixture, is substantially less than when exposed to a fuel-lean mixture, an indication is thereby provided that the sensor has reached proper operating temperatures - see FIG. 3 - is capable of providing output voltages within the evaluation range of two threshold circuits (9, 10) which receive reference values from a voltage divider (6, 7, 8) and of resuming control based on the output voltages of the sensor. The minimum operating temperatures of the sensor are asymmetrical, with respect to lean or rich air-fuel mixtures being applied to the engine, to permit either uninterrupted control of the engine in accordance with a preset air-fuel mixture during warm-up or only by the sensor, after it has reached its operating temperature, thereby preventing back-and-forth switching between control based on the preset conditions and on output signals from the sensor.

IPC 1-7

F02D 35/00

IPC 8 full level

F02D 35/00 (2006.01); **F02D 41/14** (2006.01); **F02D 45/00** (2006.01)

CPC (source: EP US)

F02D 41/1479 (2013.01 - EP US); **F02D 41/148** (2013.01 - EP US)

Citation (search report)

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DE3149136A1; FR2570127A1; WO9009517A1; WO9005840A1

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

EP 0081759 A2 19830622; **EP 0081759 A3 19841128**; **EP 0081759 B1 19880316**; DE 3149136 A1 19830623; DE 3149136 C2 19900531; DE 3278245 D1 19880421; JP H0380976 B2 19911226; JP S58106152 A 19830624; US 4492205 A 19850108

DOCDB simple family (application)

EP 82111154 A 19821202; DE 3149136 A 19811211; DE 3278245 T 19821202; JP 21565382 A 19821210; US 43418182 A 19821014