

Title (en)
FUEL-AIR RATIO CONTROLLED CARBURETION SYSTEM

Publication
EP 0011994 B1 19830119 (EN)

Application
EP 79302676 A 19791122

Priority
US 96288378 A 19781122

Abstract (en)
[origin: EP0011994A1] An automatic control system for supplying a fuel-air mixture to the inlet of the intake manifold of an internal combustion engine is adapted to regulate the ratio of air to fuel so that this ratio is optimised for prevailing conditions of engine speed and load. The system comprises a variable Venturi structure (13,16) whose input is coupled to a source of combination air and whose output is coupled to the inlet of the intake manifold, a servo motor (32) coupled to a mechanism for adjusting the area of the Venturi throat, a fuel supply metering valve (20) to control the feed of an auxiliary amount of fuel into the Venturi structure, a motor (22) coupled to the valve to adjust the auxiliary fuel feed and means for sensing the difference in air pressure between the input to the Venturi structure and its throat to generate a command signal. A controller (31) responds to the signal and compares the signal with a servo motor set point to produce an output for application to the servo motor (32) to adjust the throat area (14) to comply with the set point. Means are provided to sense the degree of vacuum in the intake manifold to control the auxiliary fuel-control motor (22) to adjust the auxiliary fuel feed, a transducer (25) is coupled to the auxiliary fuel-control motor (22) to produce an auxiliary signal proportional to the degree of vacuum and means are provided to apply the auxiliary signal to the controller (31) to modulate the command signal and cause the rate of air flow through the Venturi structure to assume a value relative to the rate of fuel flow at which the resultant ratio is optimised with respect to the prevailing conditions of speed and load.

IPC 1-7
F02M 9/14; **F02D 35/00**

IPC 8 full level
F02D 41/18 (2006.01); **F02M 9/14** (2006.01); **F02M 43/00** (2006.01)

CPC (source: EP)
F02D 41/18 (2013.01); **F02M 9/14** (2013.01); **F02M 43/00** (2013.01)

Cited by
GB2169347A

Designated contracting state (EPC)
DE FR GB IT SE

DOCDB simple family (publication)
EP 0011994 A1 19800611; **EP 0011994 B1 19830119**; DE 2964565 D1 19830224

DOCDB simple family (application)
EP 79302676 A 19791122; DE 2964565 T 19791122