

Title (en)

A combustion condition detecting and control device for an internal combustion engine

Title (de)

Zustandsdetektion- und Steuerungsvorrichtung der Verbrennung für eine Brennkraftmaschine

Title (fr)

Dispositif de commande et de détection des conditions de combustion par un moteur à combustion interne

Publication

EP 0546827 B1 19970409 (EN)

Application

EP 92311273 A 19921210

Priority

- JP 5204192 A 19920311
- JP 17439892 A 19920701
- JP 18620992 A 19920618
- JP 32613891 A 19911210

Abstract (en)

[origin: EP0546827A2] In a burning condition detecting device in an internal combustion engine in which a high voltage is applied to a spark plug by way of a diode and a series gap of a distributor. A voltage charger circuit is provided to on-off actuates the primary coil to induce a charging voltage in the secondary circuit either during establishing the spark discharge or during a predetermined period of time immediately after an end of the spark discharge. The charging voltage is applied to the spark plug to electrically charge a stray capacity inherent in the spark plug so as to form a sparkplug voltage. A voltage divider circuit is provided to divide the sparkplug voltage in accordance with a high impedance element and a low impedance element. A voltage level detecting circuit is provided to detect a sparkplug voltage waveform divided by the voltage divider circuit. A distinction circuit detects a degree of variation of an attenuation time period of the spark plug voltage waveform so as to determine a variation of an air-fuel ratio of an air-fuel mixture gas injected into a cylinder of the internal combustion engine by a fuel injector. <IMAGE>

IPC 1-7

F02P 17/00; F02D 41/14; F02P 15/00

IPC 8 full level

F02D 35/02 (2006.01); **F02D 41/14** (2006.01); **F02P 17/12** (2006.01); **F02P 17/00** (2006.01)

CPC (source: EP)

F02D 35/021 (2013.01); **F02P 17/12** (2013.01); **F02P 2017/006** (2013.01); **F02P 2017/121** (2013.01); **F02P 2017/123** (2013.01); **F02P 2017/125** (2013.01)

Cited by

EP0801226A3; DE19520852C1; US5682860A; EP0752580A3; US5814994A

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

EP 0546827 A2 19930616; **EP 0546827 A3 19940216**; **EP 0546827 B1 19970409**

DOCDB simple family (application)

EP 92311273 A 19921210