Title (en)

COMBUSTION INITIATION SYSTEM EMPLOYING HARD DISCHARGE IGNITION.

Title (de)

VERBRENNUNGSSTARTSYSTEM UNTER VERWENDUNG EINER HARTEN ENTLADUNGSZÜNDUNG.

Title (fr)

SYSTEME DE DEMARRAGE DE COMBUSTION UTILISANT UN ALLUMAGE A DECHARGE DURE.

Publication

EP 0174346 A4 19860730 (EN)

Application

EP 85901280 A 19850226

Priority

• US 58369484 A 19840227
• US 70148285 A 19850214

Abstract (en)

[origin: WO8503980A1] A system for initiating combustion of fuel, especially for internal combustion engines, employs a very rapid, intense high power electrical breakdown arc to increase the rate of combustion and thereby reduce the need for advanced engine timing. The use of a distribution circuit (46) which has exceptionally low inductance and resistance results in the rapid electrical breakdown and coupling of at least 50% of stored pulse energy to the breakdown arc channel within the first half period of the discharge current cycle. The resulting arc discharge effects detonation of the fuel mixture through the cooperative effects of photolysis, supersonic hydrodynamic shockwave and high temperature thermal plasma. High voltage pulse generation distribution and switching circuits (Figures 29-36) are provided. Several discharge electrode geometres and closely coupled pulse forming networks for the discharge device are disclosed.

IPC 1-7

F02P 1/00

IPC 8 full level

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CPC (source: EP)

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