WFC 423DA - Water Fuel Injection System

Water Fuel Injection System ®

Water Fuel Injector System ® processes and converts water into a useful hydrogen fuel on demand at the point of gas ignition.

The **Water Injector System** ® is design variable to be retrofitted by replacing fossil-fuel injectors-ports affixed to conventional jet engines, heating system, rocket engines, even replacing internal combustion engine spark plugs.

The Water Fuel Management (WFMS) System is a digital computer logic control system which systematically activates the **Water Fuel Injection System** ® in the following way

... using water as fuel.

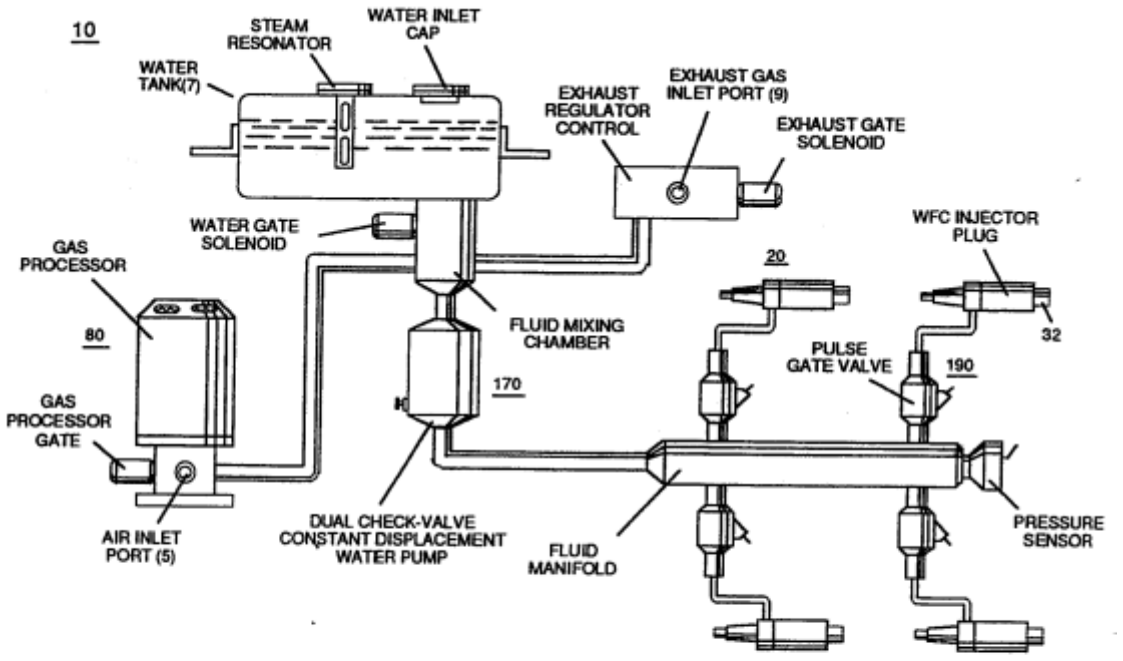
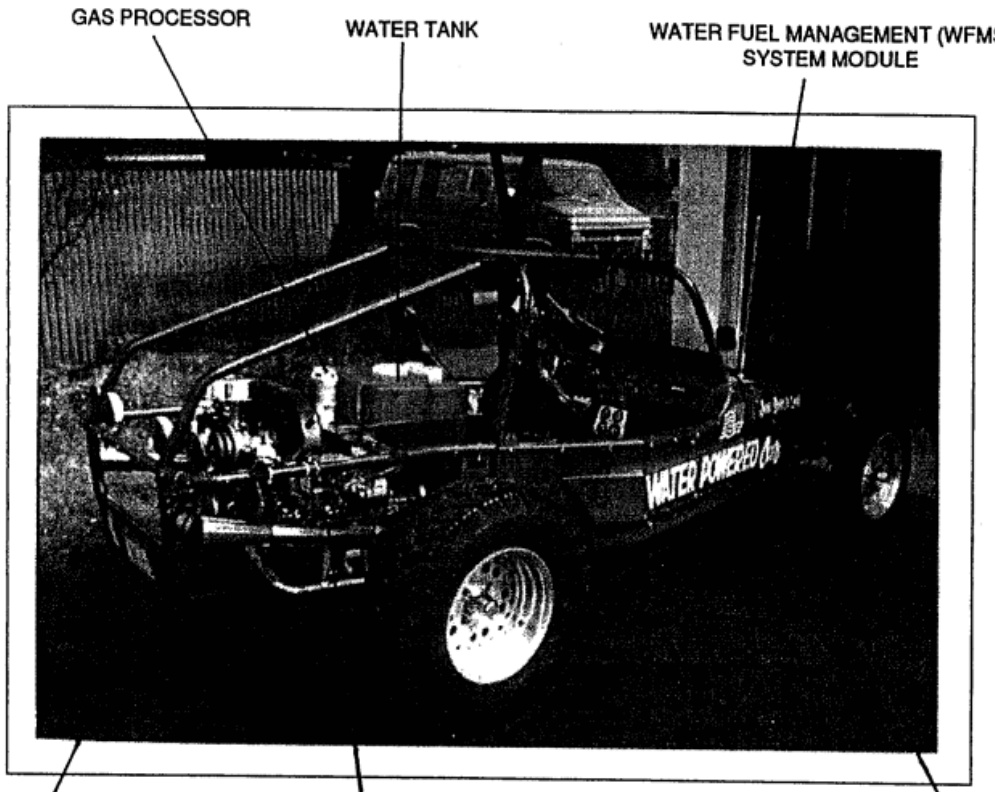


FIGURE 4-1: WATER FUEL INJECTOR SYSTEM

Duge Buggy: Read Side View

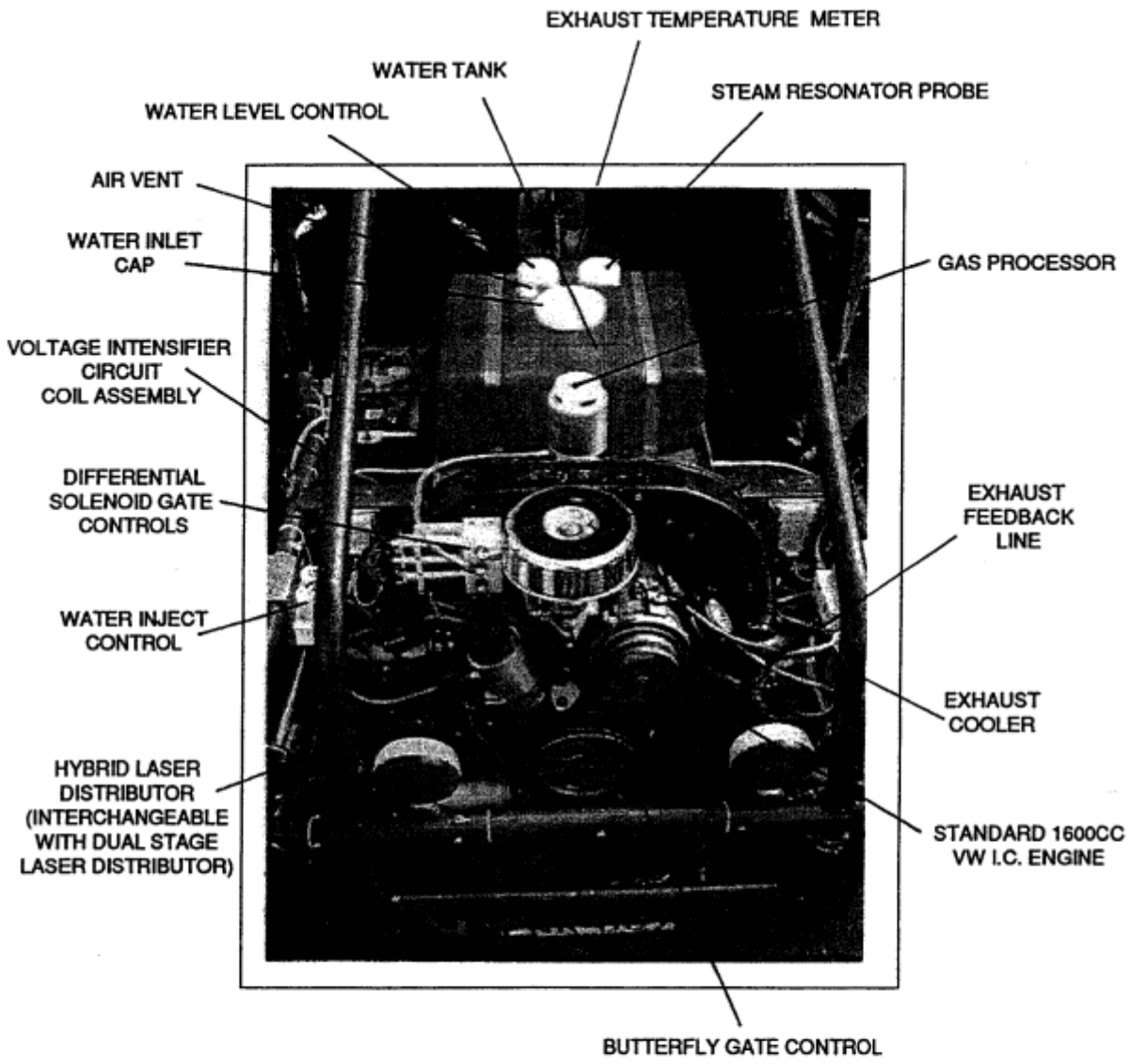
WFC PROJECT 423 DA



WATER FUEL INJECTION SYSTEM ®
(Component Placement prior to debugging stage)

Dune Buggy: Rear Side View

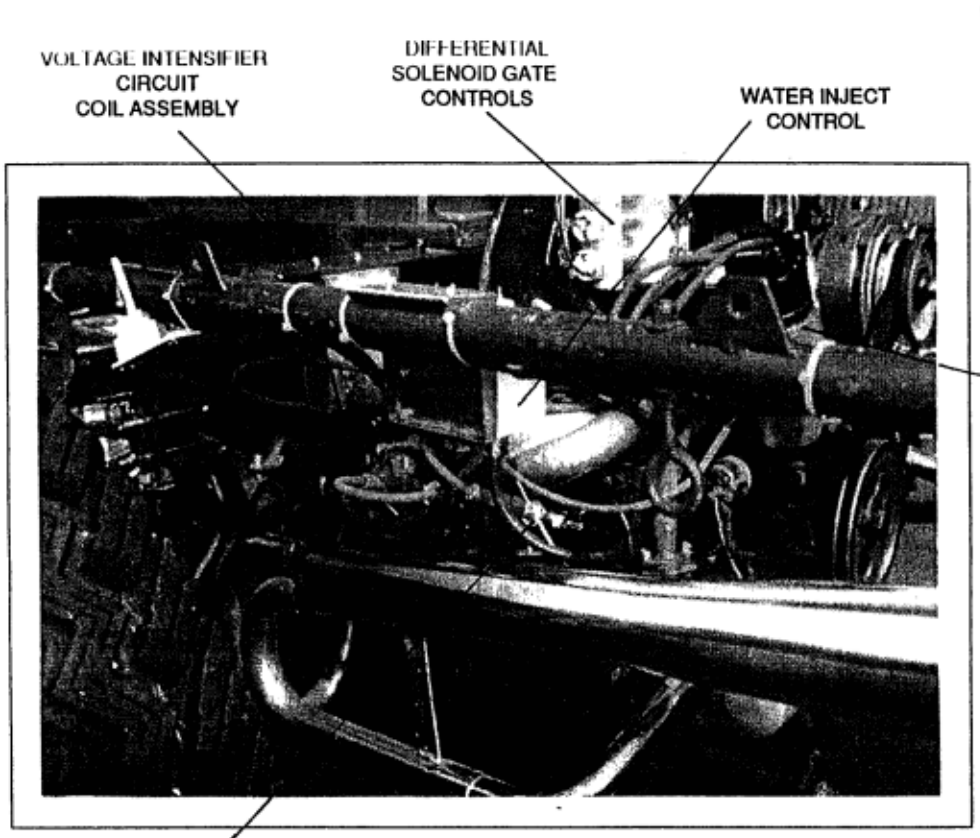
Dune Buggy: Rear View



WATER FUEL INJECTION SYSTEM ®
(Component Placement prior to debugging stage)

Dune Buggy: Rear View

Dune Buggy: I.C. Engine Side View



WATER FUEL INJECTION SYSTEM ®
(Component Placement prior to debugging stage)

Dune Buggy: I.C. Engine Side View

Water Fuel Injection System - Page 1

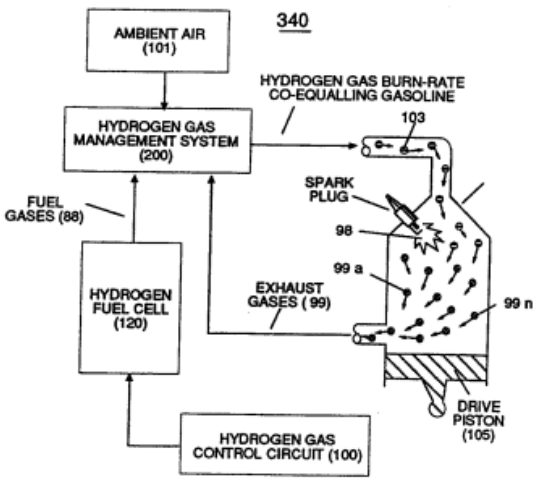


FIGURE 3-38: RETROFIT ENERGY SYSTEM

WFC **Hydrogen Gas Management System** is ideally suited as a retrofit energy system to both reciprocating (rotary piston engine) and turbine jet engines associated with the aviation industry ... but in different ways:

> Reciprocating WFC fuel-kits can be similar to **car design** (340) of Figure (3-38) of WFC (422 DA);

Whereas, **Water Fuel Injector Kit** (10) of Figure (4-1) can be alternately be used as a self-contained Fuel-unit having no pressurized vessel which converts water directly into thermal explosive energy (gtnt) on demand, as illustrated (10) of Figure (4-1) as to Figure (40) of Figure (4-2).

Figure (4-1)

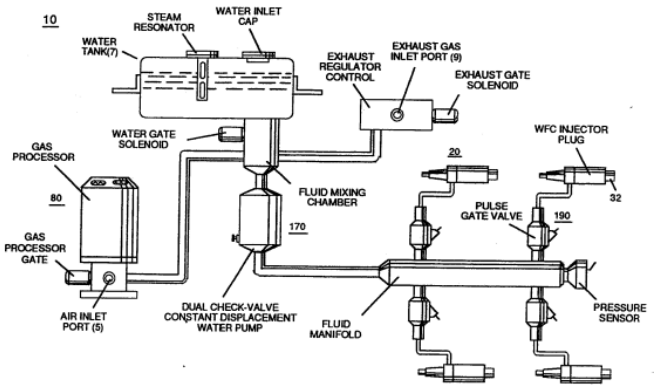


FIGURE 4-1: WATER FUEL INJECTOR SYSTEM

Figure (4-2)

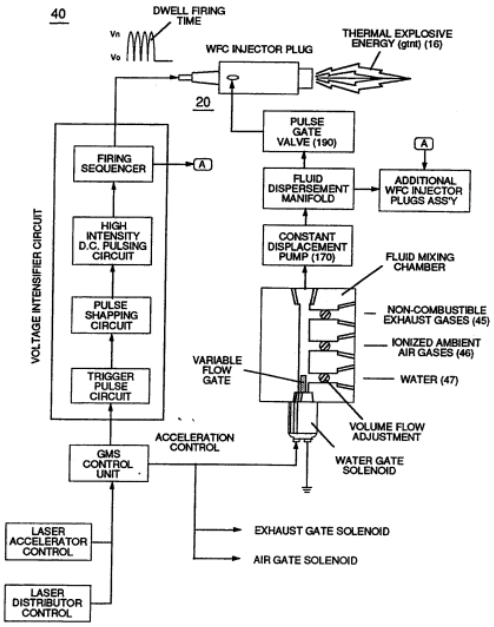


FIGURE 4-2: WATER FUEL MANAGEMENT (WFIS) SYSTEM

Operationally, **Water Fuel** injector assembly (10) of Figure (4-1) as to (40) of Figure (4-2) performs several function simultaneously to produce thermal explosive **energy-yield** (gtnt) (16) on demand:

First **water mist** (47) of Figure (4-4) is injected into **fuel-mixing chamber** (35) of Figure (4-5) by way of **water spray ports** (41a xxx 41n) of Figure (4-4);

Figure (4-5)

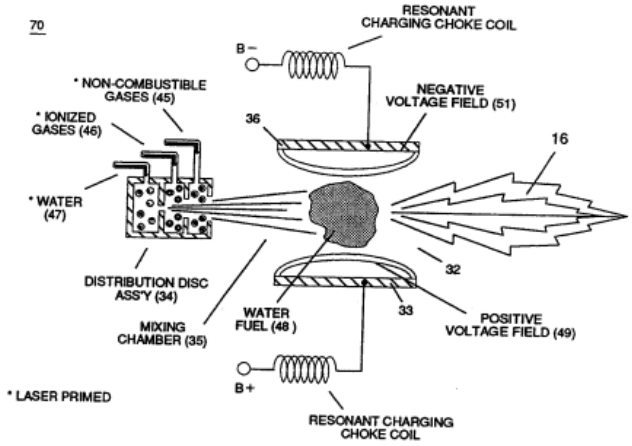


FIGURE 4-5: VOLTAGE TRIGGERING

Figure (4-4)

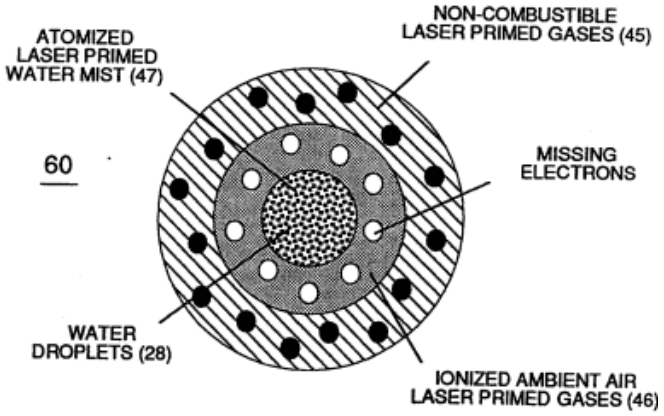


FIGURE 4-4: SPRAY PATTERN

Secondly,**ionized air gases** (46a xxx 46n) of Figure (4-4) (laser primed ambient air gases having missing electrons) produced by **Ambient Air Ionizer** (80) of Figure (4-6) as to Figure (4-1) and **non-combustible gases** (45) of Figure (4-4) are intermixed with **expelling water mist** (47a xxx 47n) to form **Water-fuel** mixture (48) by way of **gas mixing disc** (34) of Figure (4-5) as to (30) of Figure (4-2);

thirdly, the resultant moving **Water-Fuel** mixture (48) of Figure (4-5) enters into **Voltage Igniter Stage** (180) of Figure (4-5) and exposed to high intensity voltage fields (33/36) (*typically 2,000 volts or above @ 10 Khz or above*) of opposite electrical polarity (E7 / E8)

...which, in turn, not only performs electrical polarization process (160) of Figure (3-26) undergoing **Dielectric Resonant** (240) of Figure (3-31);

(160) of Figure (3-26)

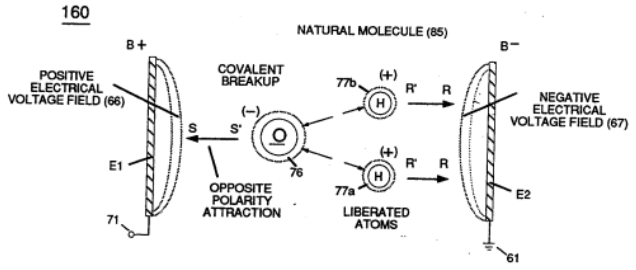


FIGURE 3-26: ELECTRICAL POLARIZATION PROCESS

Figure (3-31)

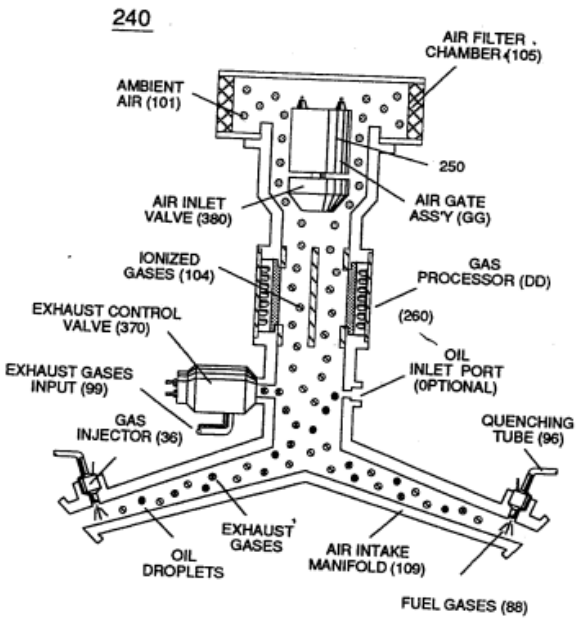


FIGURE 3-31: HYDROGEN GAS INJECTION SYSTEM

but, also, sets up and triggers **Hydrogen Fracturing Process** (390) of Figure (3-42) as to Figure (3-6) under control state (on demand) via **electrical-static spark ignition** (49/51) of Figure (4-5)

Hydrogen Fracturing Process (390) of Figure (3-42)

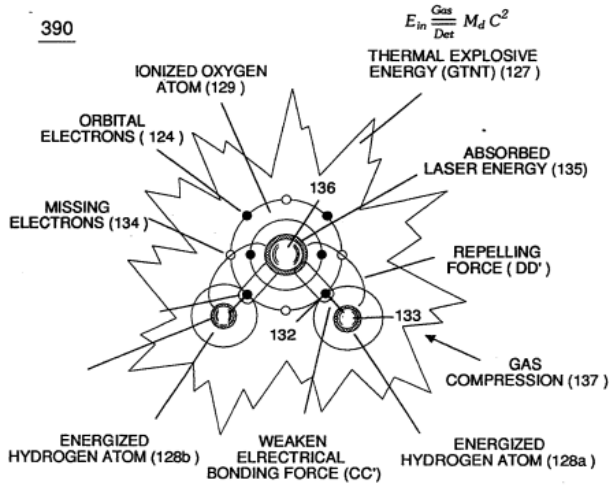


FIGURE 3-42: HYDROGEN FRACTURING PROCESS

Figure (3-6)

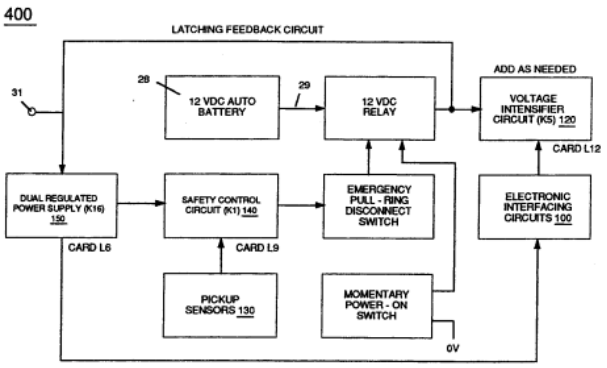


FIGURE 3-6: SAFETY INTERLOCK CIRCUIT

Figure (4-5)

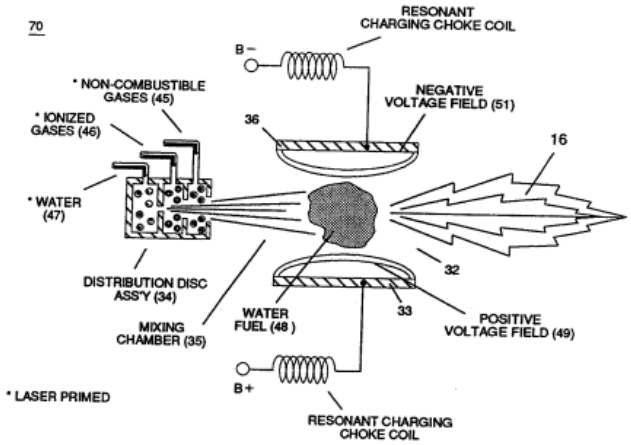


FIGURE 4-5: VOLTAGE TRIGGERING

.... releasing **thermal explosive energy** (gtnt) (16) passing beyond gas exit port (32) of Figure (4-5), as further illustrated in Figure (4-2) as to Figure (4-1).

Figure (4-2)

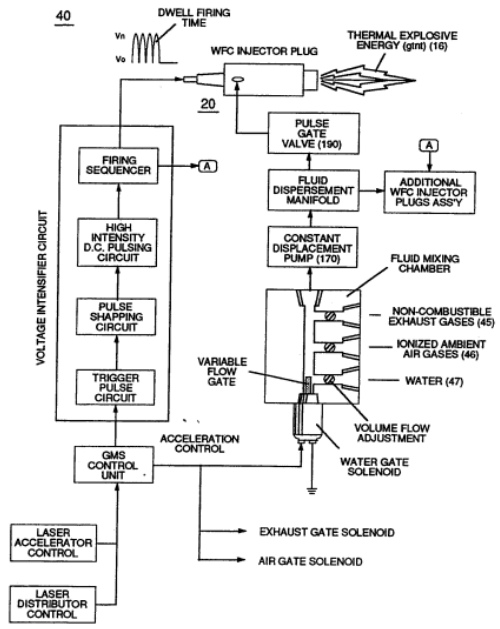


FIGURE 4-2: WATER FUEL MANAGEMENT (WFIS) SYSTEM

Figure (4-1)

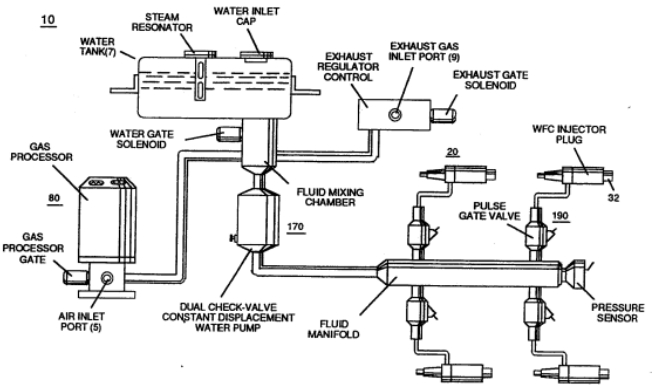


FIGURE 4-1: WATER FUEL INJECTOR SYSTEM

Water Fuel Injection System - Page 2

> To ensure proper energy-flame projection and subsequent energy-flame stability, **constant displacement water pump** (170) causes and allows **ionized ambient air gases** (46), **noncombustible gases** (45), and **water** (47) to be displaced under static pressure up to and beyond 125 lbs psi, respectively.

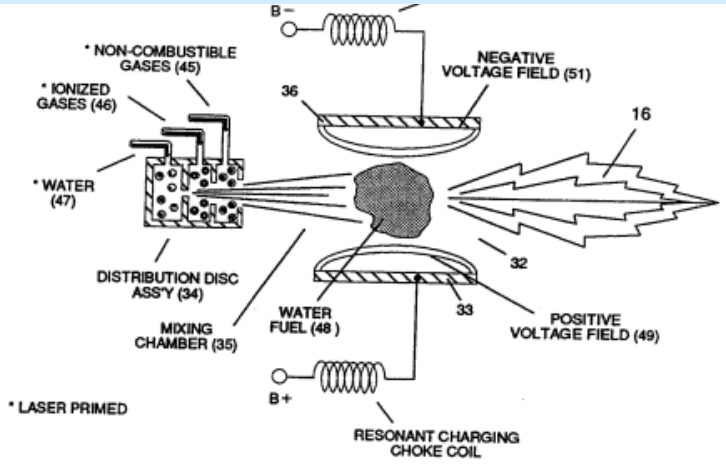


FIGURE 4-5: VOLTAGE TRIGGERING

Energy-Flame density is enhanced and sustained by causing **ionized gases** (46a xxx 46n) of **spray port** (42) to be deflected into **liquid spray path** (41), together **water mist** (47) and **ionized air gas** (46) are, now, directed toward and deflected through non-combustible **gas spray path** (43)

... producing uniformed **water-fuel mixture** (48), as illustrated in Figure (4-5).

Energy-Flame temperature is regulated by controlling the volume flow-rate of each **fluid-mediums** (47 / 45 / 46) in direct relationship to **applied voltage intensity** (33 / 36), as further illustrated in Figure (4-2) as to Figure (4-5).

Figure (4-2)

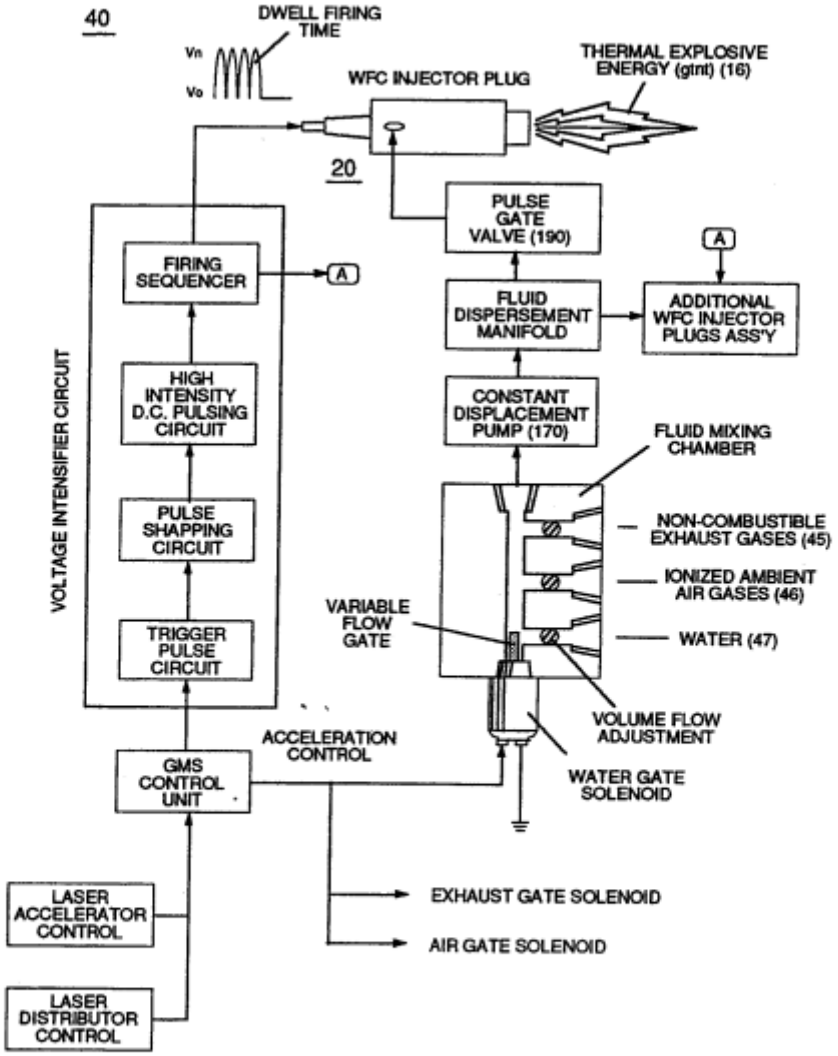


FIGURE 4-2: WATER FUEL MANAGEMENT (WFIS) SYSTEM

To elevate **Energy-flame-temperature** still further, simply increase **fluid-displacement** (46/47) while maintaining or reducing the volume flow rate of **non-combustible gases** (45) during an increase of **applied voltage amplitude** (V0 xxx Vo) of Figure (4-2) as to **Voltage Intensifier Circuit** (110) of Figure (4-9) and **Electron Extraction Circuit** (120) of Figure (4-10).

Figure (4-9)

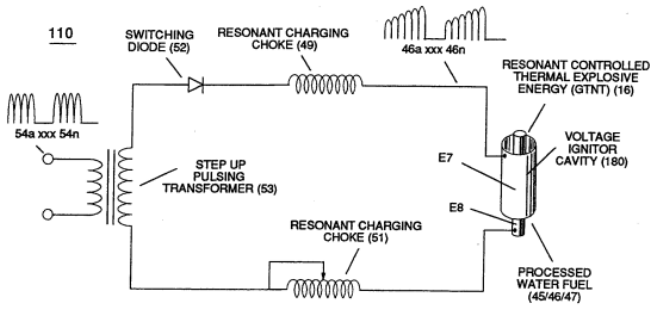


FIGURE 4-9: VOLTAGE INTENSIFIER CIRCUIT

Figure (4-10)

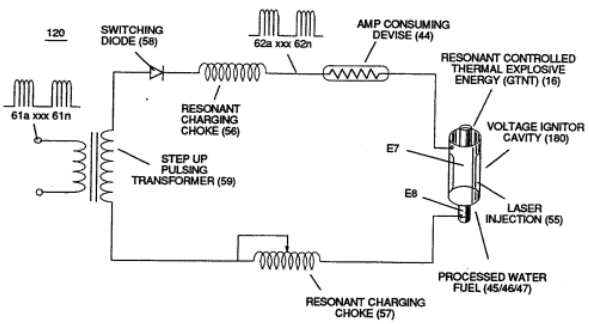


FIGURE 4-10: ELECTRON EXTRACTION CIRCUIT

> To lower **Energy-flame** temperature simply increase the amount of **non-combustible gases** (45a xxx) or reduced the **fluid flow rate** (45 / 46 / 47) uniformly while lowering **pulse voltage amplitude** (xxx V0).

To establish a predetermined or given **Energy-flame** temperature adjust **fluid-medium** (45 / 46 / 47) [illegible] applied voltage amplitude [illegible] with other to obtain the desired

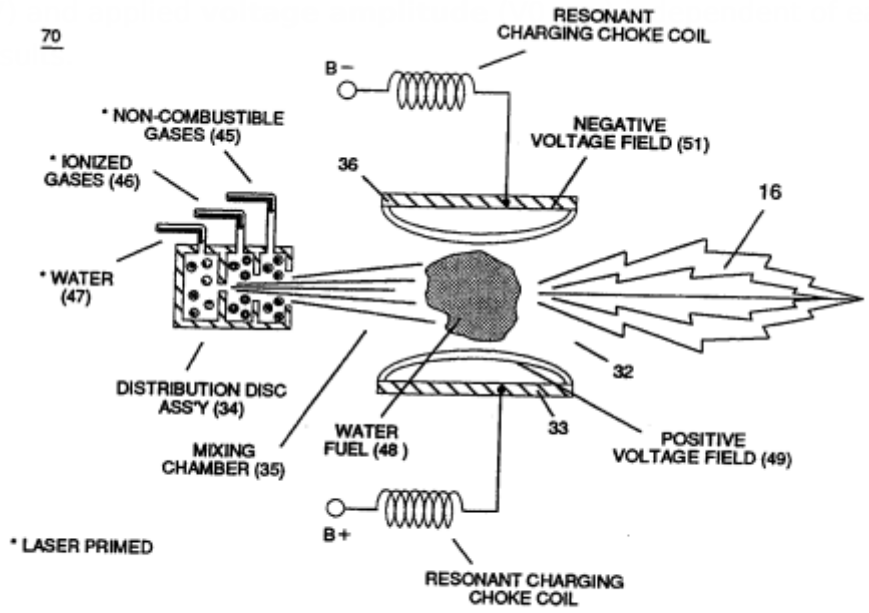


FIGURE 4-5: VOLTAGE TRIGGERING

The resultant **energy-flame** pattern is further maintained by allowing the ignited, compressed, and moving gases (29) of Figure (4-5) to be projected to, pass through and beyond **nozzle-port** (32) under pressure due to gas expansion caused by thermal gas ignition.

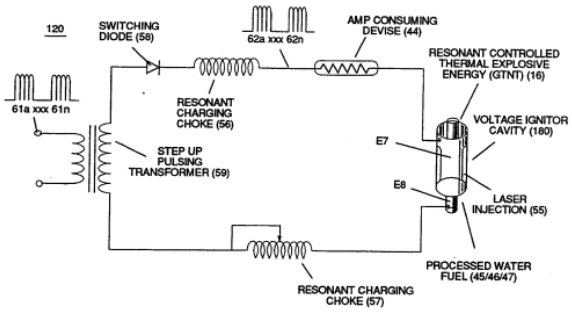


FIGURE 4-10: ELECTRON EXTRACTION CIRCUIT

Voltage Igniter Stage (180) of Figure (4-5) as to **Voltage Intensifier Circuit** (110) Figure (4-9) as to **Extraction Circuit** (10) of Figure (4-10) performs several functions simultaneously to initiate and trigger thermal explosive energy-yield (gtnt) (16) beyond normal gas burning levels:

Figure (4-9)

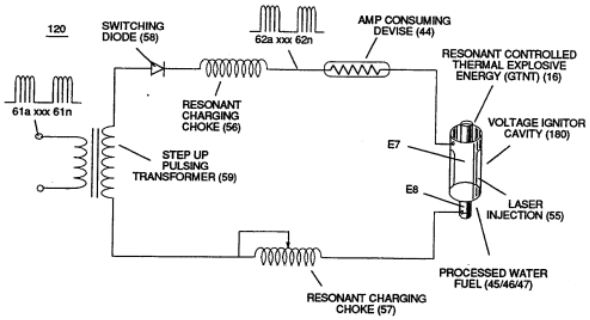


FIGURE 4-10: ELECTRON EXTRACTION CIRCUIT

Figure (4-10)

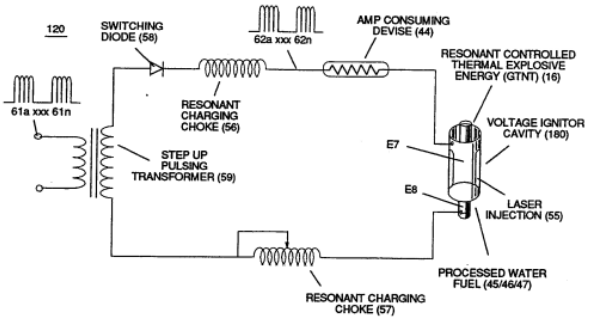


FIGURE 4-10: ELECTRON EXTRACTION CIRCUIT

Water droplets (28a xxx 28n) escaping from **spray-mist** (47) and exposed to high intensity voltage fields of opposite polarity 33/36) are stimulated to undergo **Electrical Polarization Process** (160) of Figure (3-26)

Figure (3-26)

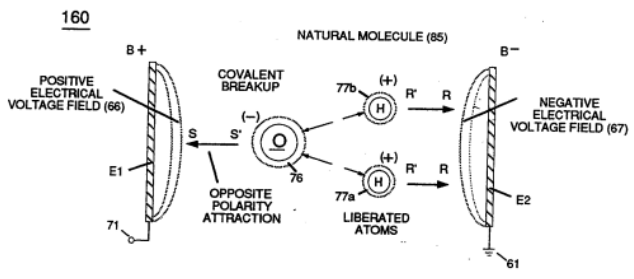


FIGURE 3-26: ELECTRICAL POLARIZATION PROCESS

Figure (3-30)

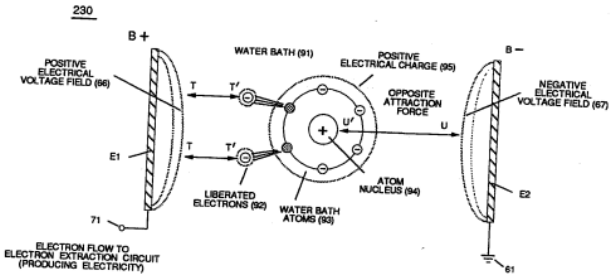


FIGURE 3-30: ELECTRON EJECTION

... which not only separates and splits the unlike atoms of the water molecule but also causes the unlike atoms (hydrogen atoms 77a /77b and oxygen atom 76) to experience **electron ejection** (230) of Figure (3-30) as to (71) of Figure (4-10) since **voltage intensifier circuit** (110) of Figure (4-9) inhibits and prevents electron flow to enter into **gas ignition process** (180), as further illustrated in Figure (4-8).

Figure (4-8)

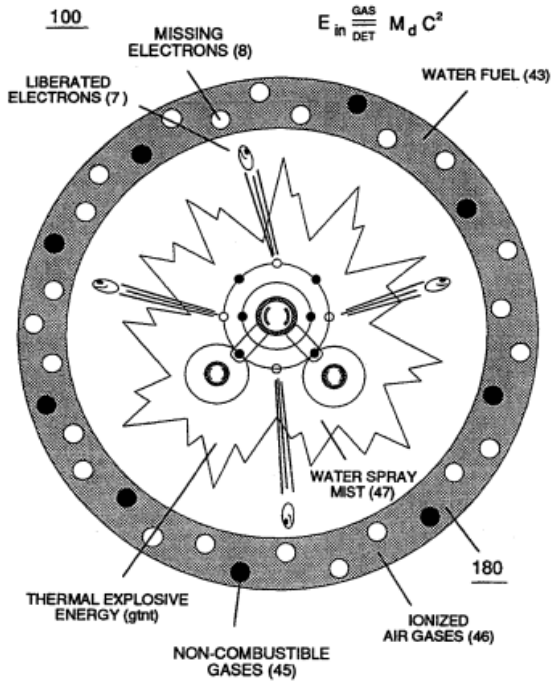


FIGURE 4-8: GAS IGNITION STAGE

Figure (4-10)

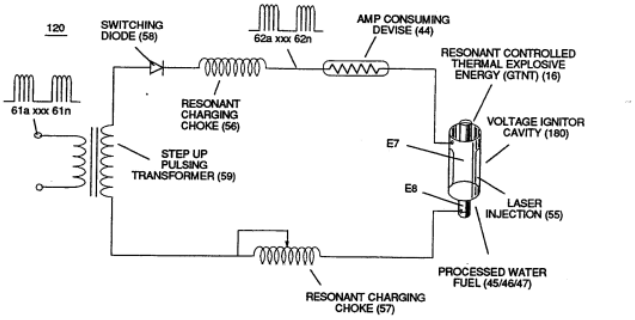


FIGURE 4-10: ELECTRON EXTRACTION CIRCUIT

Figure (4-9)

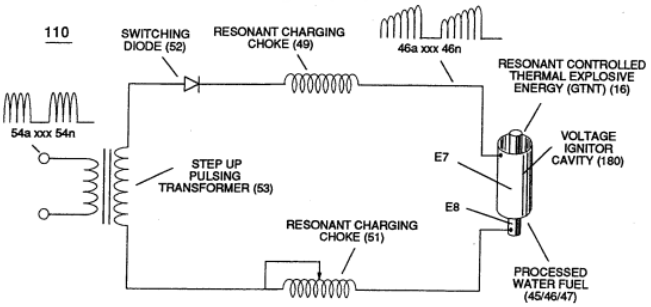


FIGURE 4-9: VOLTAGE INTENSIFIER CIRCUIT

Water Fuel Injection System - Page 3

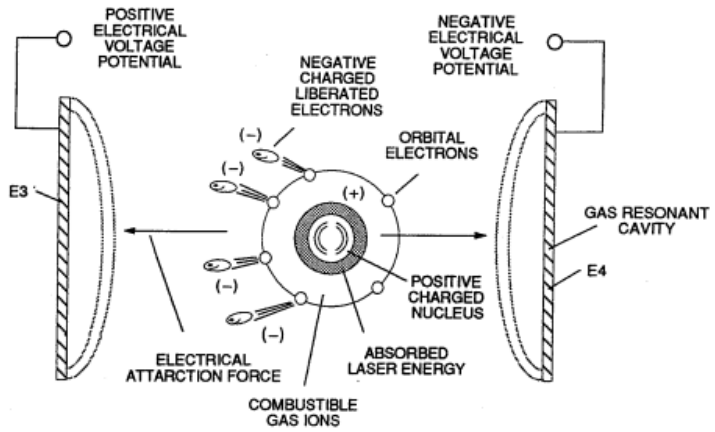


FIGURE 1-15: DESTABILIZING COMBUSTIBLE GAS IONS

The newly liberated water molecule atoms (**oxygen** 76 and **hydrogen atoms** 77a/77b) immediately interact with **laser primed ionized ambient air gases** (7a xxx 7n of Figure 1-15) (see WFC memo 420) to cause the resultant highly energized and mass destabilized **combustible gas atoms** (93a xxx 93n) of Figure (4-10) to perform **Hydrogen Fracturing Process** (80) of Figure (4-9) when **electrostatic force** (14/16) thermally ignites (*kinetic agitation*) destabilized water-fuel mixture (93a xxx 93n) under gas compression

... preventing the formation of the water molecule during thermal gas ignition

Figure (4-9)

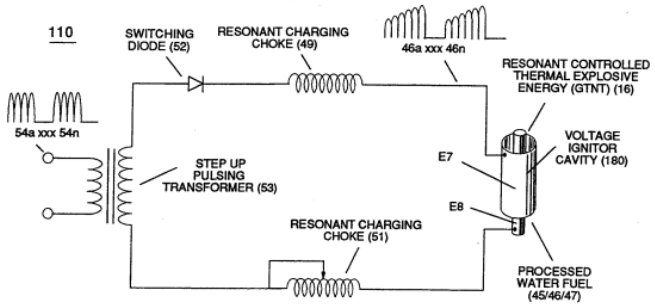


FIGURE 4-9: VOLTAGE INTENSIFIER CIRCUIT

Figure (4-10)

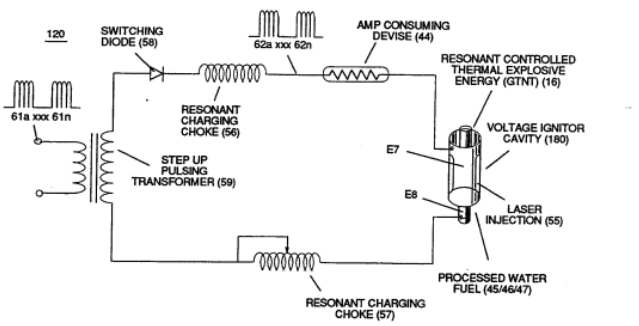


FIGURE 4-10: ELECTRON EXTRACTION CIRCUIT

...satisfying **Energy Gas Detonation Equation**. (Eq 18)

(Eq 18)

$$E_{in} \overset{\text{gas}}{\underset{\text{det}}{=}} M_d C^2$$ Thermal Explosive Energy (gtnt)

Which states

> That, whenever the mass-size of a combustible gas atom is decreased (Md), **thermal explosive energy-yield** (gtnt) is increased (Ein) during thermal gas combustion (Gas // Detonation), as so illustrated in (100) Figure (4-8) as to (90) of Figure (4-7).

Figure (4-7)

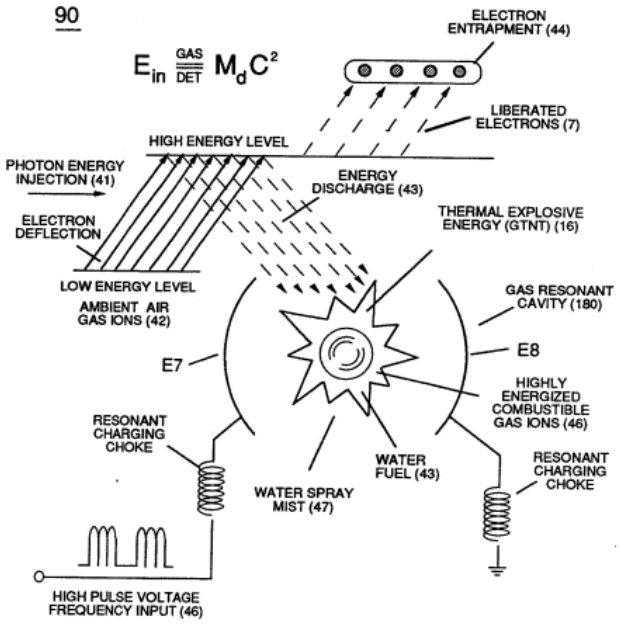


FIGURE 4-7: VOLTAGE IGNITER STAGE

Figure (4-8)

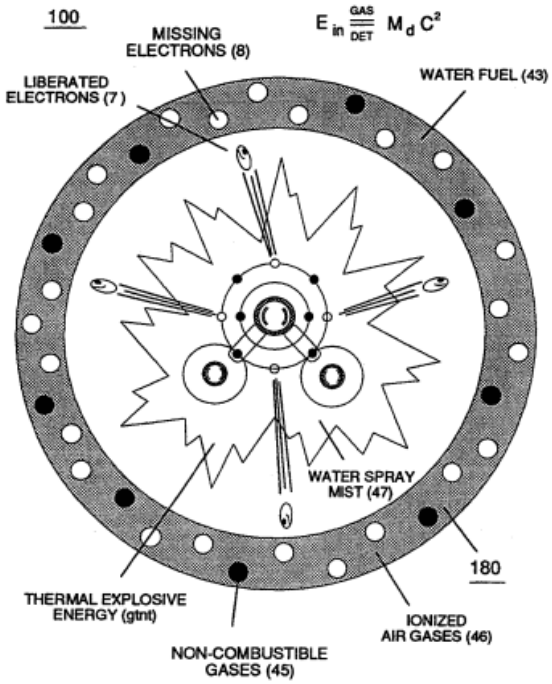


FIGURE 4-8: GAS IGNITION STAGE

Incoming ambient air gases (5a xxx 5n) become **laser primed** and **ionized** when passing through **Ambient Air Ionizer** (**Gas Processor**) (80) of Figure (4-6) as to (10) of Figure (4-1) since **electron extraction circuit** (120) of Figure (4-10) not only captures and consumes ejected electrons (7a xx 7n) of Figure (4-8);

Ambient Air Ionizer (**Gas Processor**) (80) of Figure (4-6)

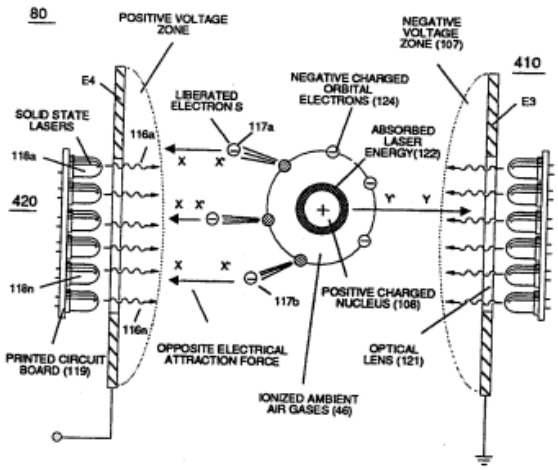


FIGURE 4-6: AMBIENT AIR IONIZER

(10) of Figure (4-1)

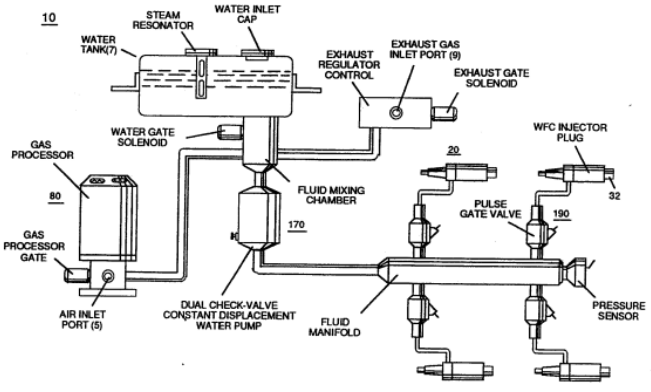


FIGURE 4-1: WATER FUEL INJECTOR SYSTEM

electron extraction circuit (120) of Figure (4-10)

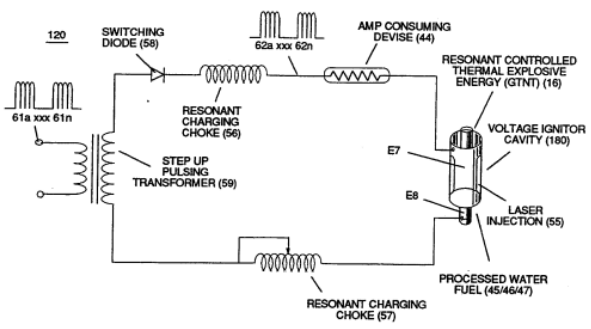


FIGURE 4-10: ELECTRON EXTRACTION CIRCUIT

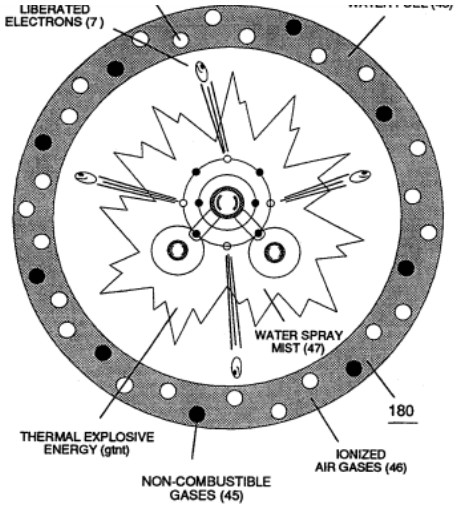


FIGURE 4-8: GAS IGNITION STAGE

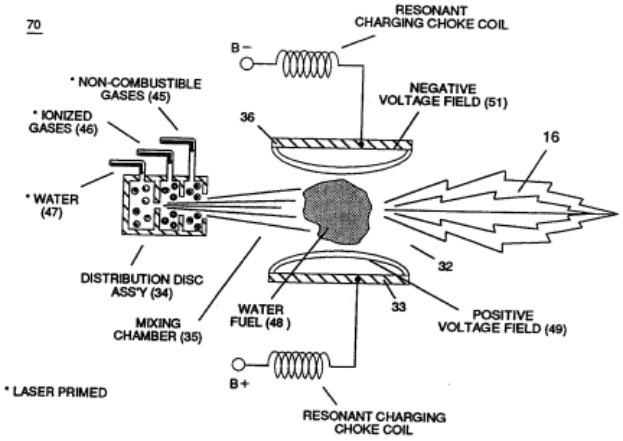


FIGURE 4-5: VOLTAGE TRIGGERING

but, also prevents electron flow into destabilizing gas process (180), as so illustrated in Figure (4-5).

In terms of performance reliability and safety, **ionized air gases** (46a xxx 46n) and **liquid water** (47a xxx 47n) do not become **energy activated** (volatile) until **water-fuel mixture** (48) reaches **voltage Igniter Stage** (180).

Injected **non-combustible gases** (45a xxx 45n) retards and controls the combustion rate of the **Hydrogen Fracturing Process (**100) of Figure (4-8) during gas-ignition.

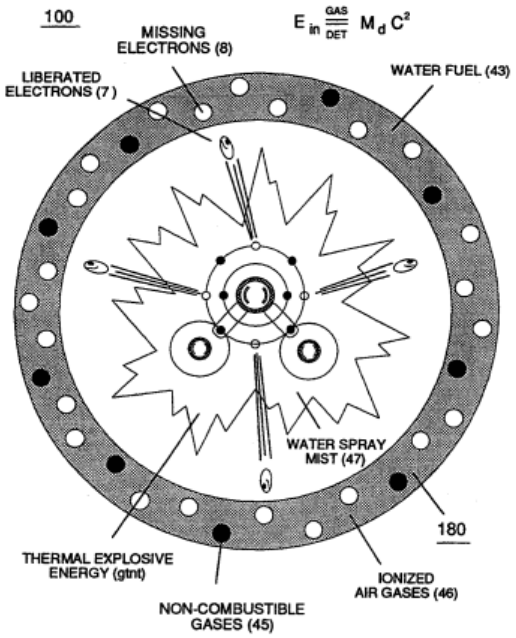


FIGURE 4-8: GAS IGNITION STAGE

> In other or alternate applications, **laser primed ionized liquid oxygen** (68) of Figure (1-21) (see WFC memo 420) and laser primed liquid hydrogen (69) of Figure (1-21) stored in separate fuel-tanks can be used in place of fuel-mixture (48);
>
> or, **liquefied ambient air gases** (6) alone with **water-source** (8) can, also, be substituted as a fuel-source (48) to trigger **Hydrogen Fracturing Process** (100).

laser primed ionized liquid oxygen (68) of Figure (1-21)

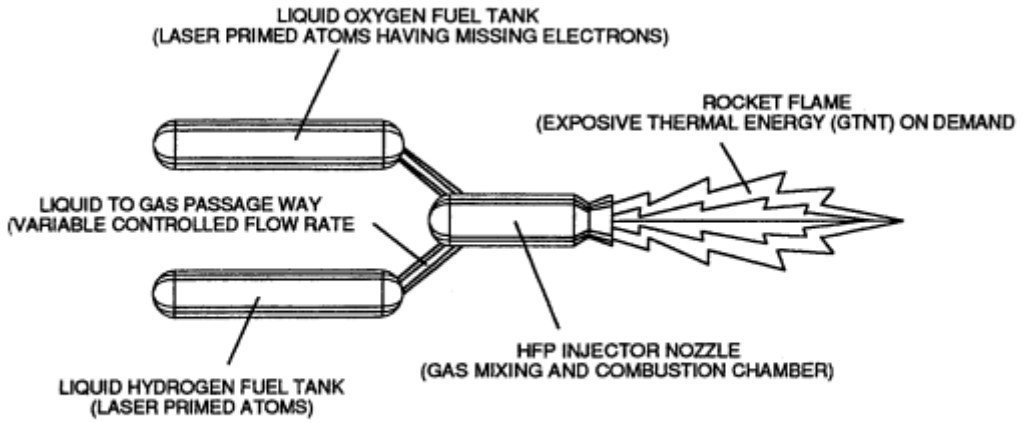


FIGURE 1-21: ATOMIC POWERED ROCKET ENGINE

Additional **WFC Injector Assemblies** (20) of Figure (4-1) are arranged in **cluster array** (20a xxx 2On) to increase energy-yield output (16a xxx 16n) of Figure (4-12/4-13/4-14).

WFC Injector Assemblies (20) of Figure (4-1)

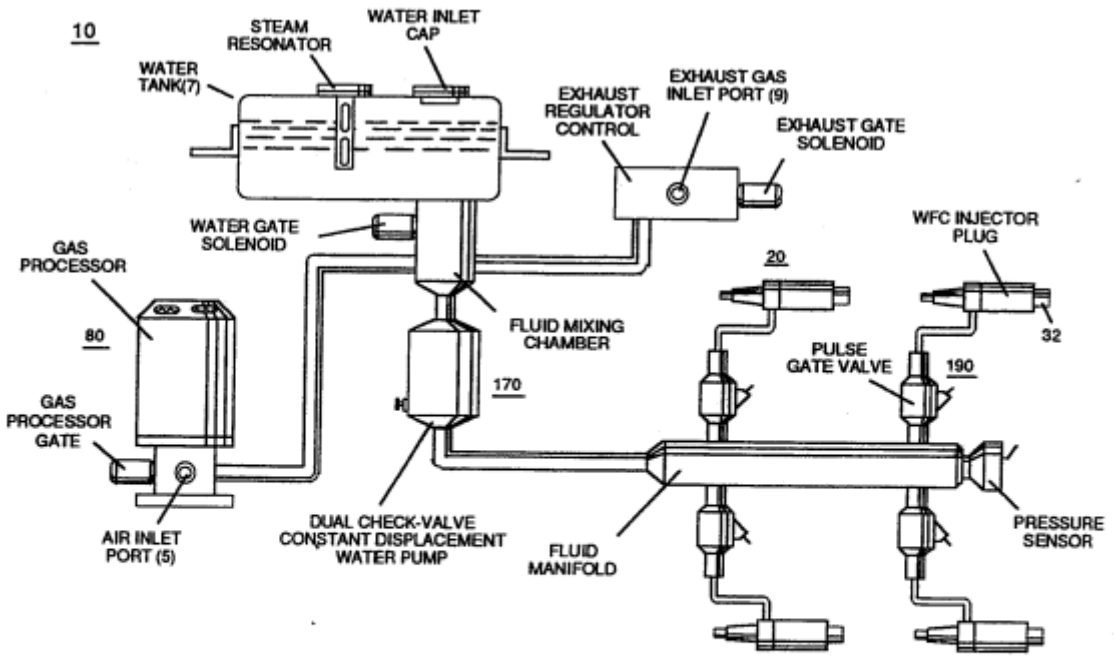


FIGURE 4-1: WATER FUEL INJECTOR SYSTEM

Figure (4-12)

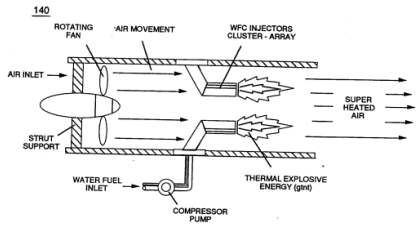


FIGURE 4-12: FURNACE RETROFIT

Figure (4-13)

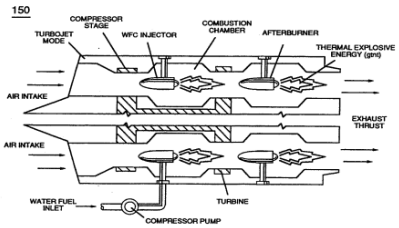


FIGURE 4-13: JET ENGINE RETROFIT

Figure (4-14)

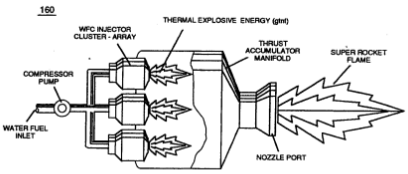


FIGURE 4-14: ROCKET ENGINE RETROFIT

Water Fuel Injection System - Page 4

WFC injector assembly (10) of Figure (4-1) as to (30) of Figure (4-2) is design variable to be retrofitable by replacing fossil-fuel injector ports affixed to **jet engines** (see Figure 4-13)

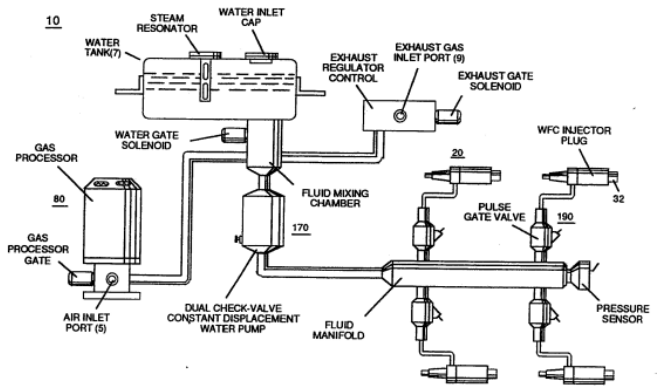


FIGURE 4-1: WATER FUEL INJECTOR SYSTEM

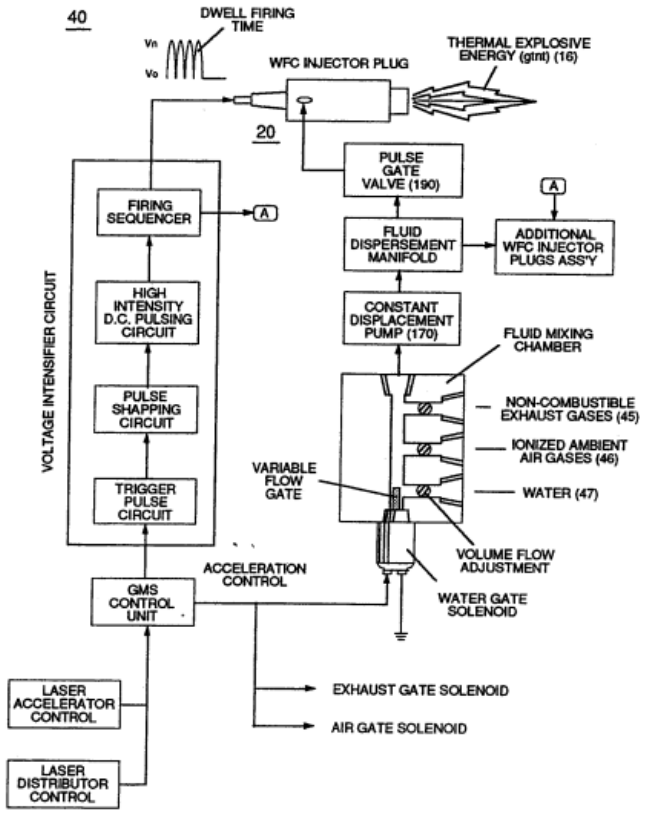


FIGURE 4-2: WATER FUEL MANAGEMENT (WFIS) SYSTEM

> **heating systems** (Figure 4-12), **rockets engines** (Figure 4-14), or even car **spark plugs** (130) of Figure (4-11)

Figure (4-12)

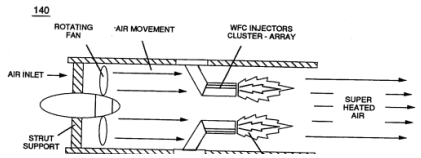


Figure (4-13)

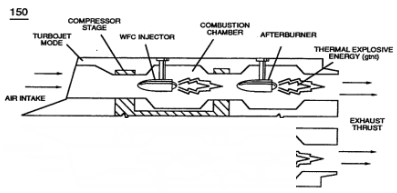


Figure (4-14)

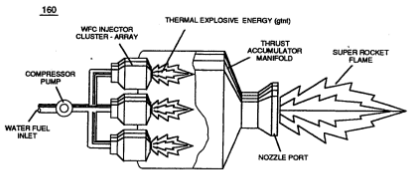


FIGURE 4-14: ROCKET ENGINE RETROFIT

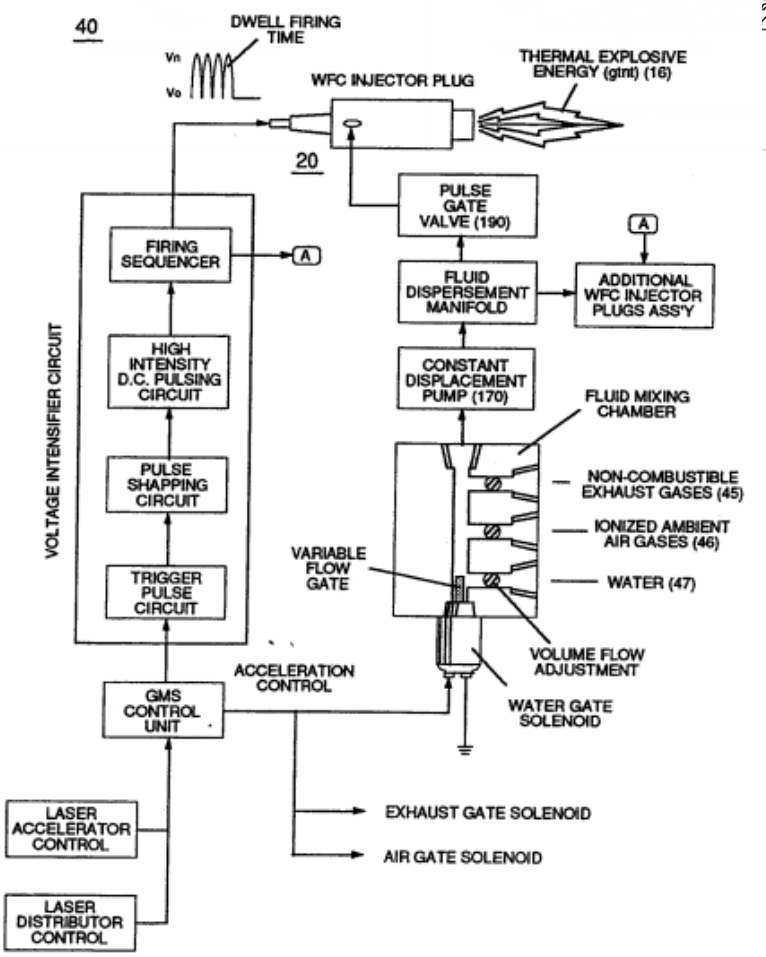


FIGURE 4-2: WATER FUEL MANAGEMENT (WFIS) SYSTEM

which simply uses **Water Fuel** Management (WFMS) System **fluid-metering system** (40) to control **gas ignition** (16), as illustrated in (40) of Figure (4-2).

> Sequential pulsing of **Water Fuel Injector** (20/30) of Figure (4-1) as to (40) of Figure (4-2) is system activated by **Pulse Gate Valve** (190) of Figure (4-1) to further control a predetermined **energy-flame** (16).

In essence, then, the **Water Fuel Injector** system (40) simply processes and converts water into a useful hydrogen fuel on demand at the point of gas ignition

> ... thereby, **co-equally** or **superseding** fossil-fuel safety standards

> ... especially when **ionized ambient air gases** (400 xxx 46n) and **non-combustible gases** (45a xxx 45n) are intermixed with **water supply** (47) prior to entering **Water Fuel Injector Plug** (20/30), as illustrated in (40) of Figure (4-2) as to (10) of Figure (4-1).

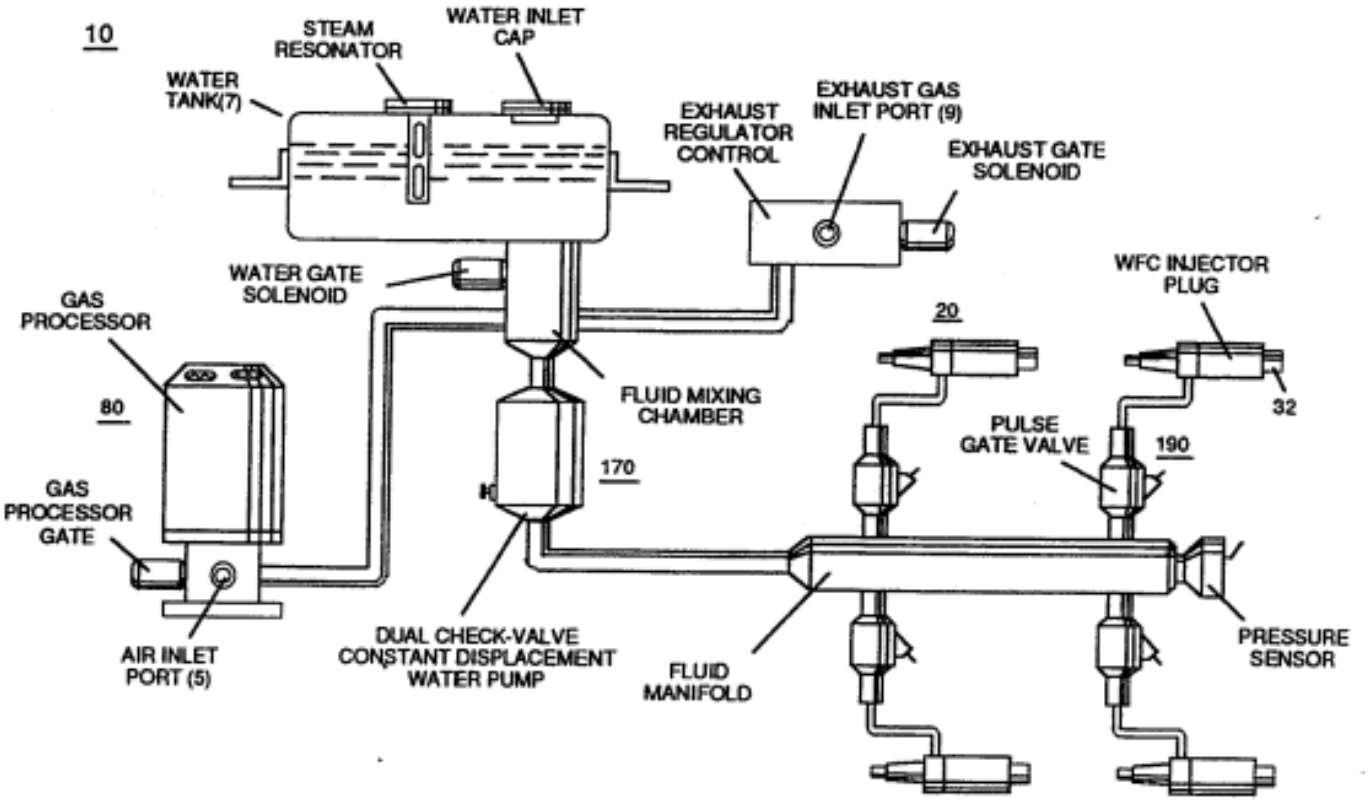


FIGURE 4-1: WATER FUEL INJECTOR SYSTEM