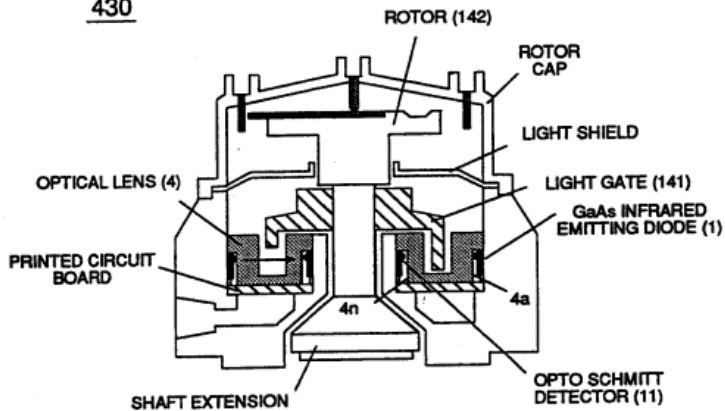# Laser Distributor

430

FIGURE 3-44: LASER DISTRIBUTOR

Laser Distributor assembly (430) of

Figure (3-44) functions in similar manner as **Laser Accelerator** (20) of Figure (3-10) except **light-gate** (141) of Figure (3-44) rotates in the <u>same direction</u> of **Spark-rotor** (142) and being displaced opposite to **rotor blade** (142), allowing intermixed **processed ambient air gases** (101) and **Fuel-Gases** (88) to enter **engine cylinder** (102) of Figure (3-38), as illustrated in **Injector Control Circuit** (300) of Figure (3-4).
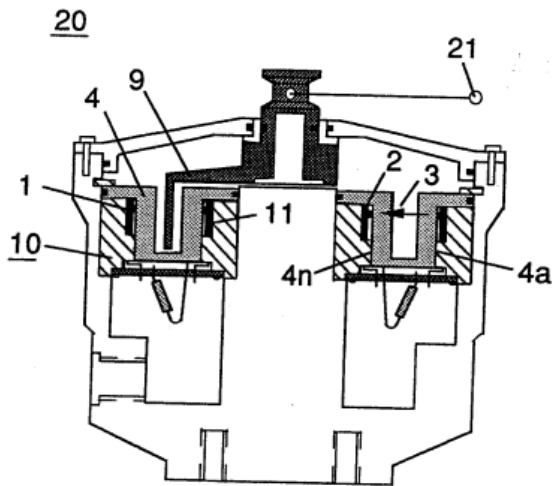
20

21

9

4

1

10

11

2   3

4n

4a

FIGURE 3-10:LASER ACCELERATOR

340

AMBIENT AIR
(101)

HYDROGEN GAS BURN-RATE
CO-EQUALLING GASOLINE

103

HYDROGEN GAS
MANAGEMENT SYSTEM
(200)

SPARK
PLUG

FUEL
GASES (88)

98

99 a

HYDROGEN
FUEL CELL
(120)

EXHAUST
GASES (99)

99 n

HYDROGEN GAS
CONTROL CIRCUIT (100)

DRIVE
PISTON
(105)

FIGURE 3-38: RETROFIT ENERGY SYSTEM

37   39   41   (21a xxx 21n)
(41a xxx 41n)

38
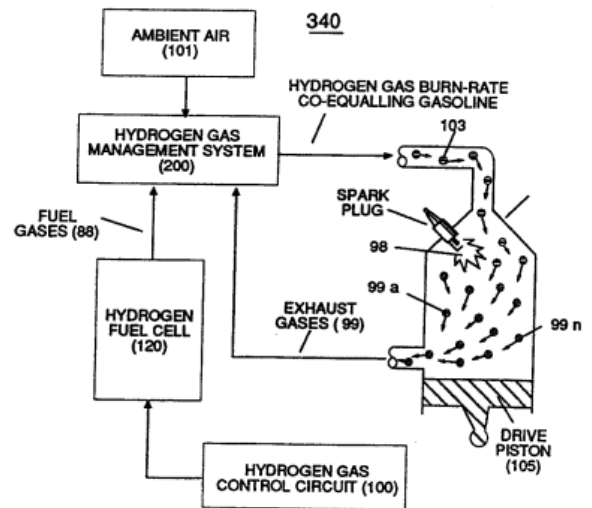
50% DUTY CYCLE PULSE

FIGURE 3-16: VARIABLE CLOCK PULSE TRAIN

Rotating **light-gate triggering circuit assembly** (430) sequentially activates **Pulse Shaping Generator** (440) of Figure (3-4) to produce a <u>constant 50% Duty-cycle Pulse-Train</u> (see Figure 3-16 once again) to **Analog voltage Generator** (40) of **Hydrogen Gas Management System** (200) of Figure (3-1) as to Figure (3-5).
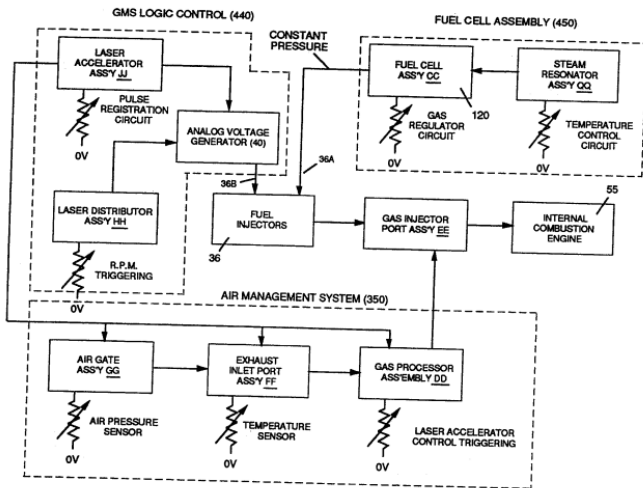
Figure (3-1)

200

GMS LOGIC CONTROL (440)

FUEL CELL ASSEMBLY (450)

LASER ACCELERATOR ASS'Y JJ

PULSE REGISTRATION CIRCUIT — 0V

CONSTANT PRESSURE

FUEL CELL ASS'Y CC

STEAM RESONATOR ASS'Y QQ

GAS REGULATOR CIRCUIT — 0V — 120

TEMPERATURE CONTROL CIRCUIT — 0V

ANALOG VOLTAGE GENERATOR (40)

LASER DISTRIBUTOR ASS'Y HH

R.P.M. TRIGGERING — 0V

36B

FUEL INJECTORS — 36

36A

GAS INJECTOR PORT ASS'Y EE

INTERNAL COMBUSTION ENGINE — 55

AIR MANAGEMENT SYSTEM (350)

AIR GATE ASS'Y GG

AIR PRESSURE SENSOR — 0V

EXHAUST INLET PORT ASS'Y FF

TEMPERATURE SENSOR — 0V

GAS PROCESSOR ASSEMBLY DD

LASER ACCELERATOR CONTROL TRIGGERING — 0V

FIGURE 3-1: HYDROGEN GAS MANAGEMENT SYSTEM

Figure (3-4)

300

PULSE SHAPING GENERATOR (440)

Laser Distributor Ass'y (HH)

Laser Distributor circuit K12

Led pickup logic circuit K7

LASER DISTRIBUTOR CARD L8

GATED FREQUENCY OSCILLATOR K15 — CARD L7

VARIABLE PULSE FREQUENCY GENERATOR K2 — CARD L1

Inject Circuit K10

Gas Injector circuit K13
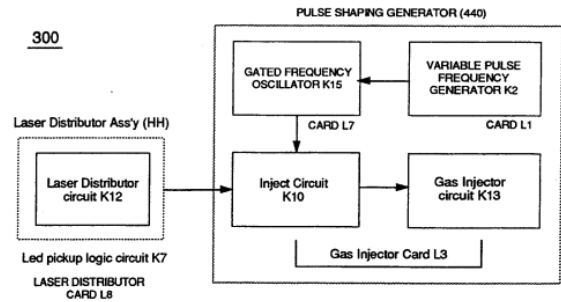
Gas Injector Card L3

FIGURE 3-4: INJECTOR CONTROL CIRCUIT

Interlocking **Laser Accelerator output** {JJ) with **Laser Distributor output** (HH) of Figure (3-1) causes **Fuel-Injectors** (36) to be "Tuned" with both **Air Management System** (350) of Figure (3-2) and **Hydrogen Gas Control Circuit** (100) of Figure (3-5) to maintain constant **Fuel-mixing Ratio** (290) of Figure (3-3) during engine performance.
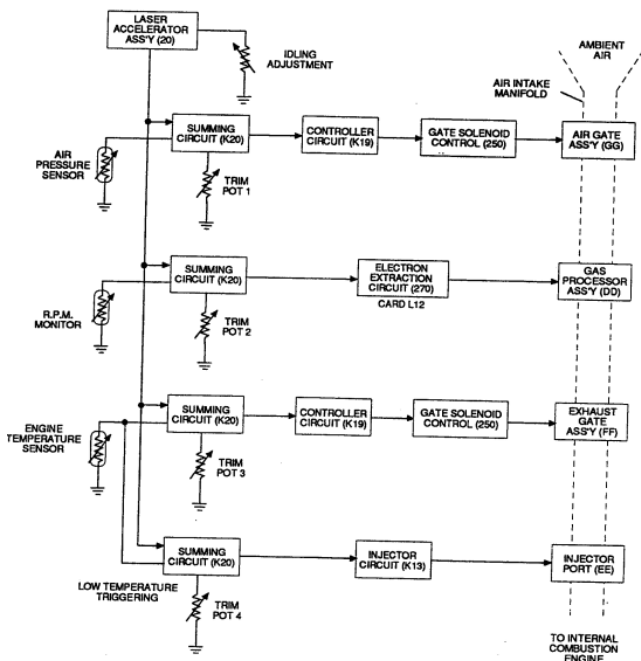

Figure (3-2)

350

LASER ACCELERATOR ASS'Y (20)

IDLING ADJUSTMENT

AMBIENT AIR

AIR INTAKE MANIFOLD

AIR PRESSURE SENSOR

SUMMING CIRCUIT (K20) — TRIM POT 1

CONTROLLER CIRCUIT (K19)

GATE SOLENOID CONTROL (250)

AIR GATE ASS'Y (GG)

R.P.M. MONITOR

SUMMING CIRCUIT (K20) — TRIM POT 2

ELECTRON EXTRACTION CIRCUIT (270) CARD L12

GAS PROCESSOR ASS'Y (DD)

ENGINE TEMPERATURE SENSOR

SUMMING CIRCUIT (K20) — TRIM POT 3

CONTROLLER CIRCUIT (K19)

GATE SOLENOID CONTROL (250)

EXHAUST GATE ASS'Y (FF)

LOW TEMPERATURE TRIGGERING

SUMMING CIRCUIT (K20) — TRIM POT 4

INJECTOR CIRCUIT (K13)

INJECTOR PORT (EE)

TO INTERNAL COMBUSTION ENGINE

FIGURE 3-2: AIR MANAGEMENT SYSTEM

Figure (3-5)

100

TO "TUNED" INJECTORS (36B)

TO AIR MANAGEMENT SYSTEM (SUMMING CIRCUITS K21)

FUEL GAS TO INJECTORS (36A)

RESONANT CAVITY ASS'Y (CC)

LASER ACCELERATOR ASS'Y (JJ) 20

LASER ACCELERATOR CIRCUIT (K7) 10 — 15

LED PICKUP LOGIC K7 / K12 ACCELERATOR CARD L10

ACCELERATION CARD L5

ACCELERATION CONTROL CIRCUIT (K11) 30 — 19 — 21

ANALOG VOLTAGE GENERATOR (K8) 40

ANALOG VOLTAGE CARD L11

VOLTAGE AMPLITUDE CONTROL CIRCUIT (K9) 50 — 23 — 31 — 32

GAS LOGIC CIRCUIT (K) 310

RESONANT CAVITY TUBULAR TYPE "C" 120

VOLTAGE INTENSIFIER CIRCUIT (K5) 60

VIC PULSING CORE LOGIC K18 CORE MOUNT ASS'Y (MM)

VARIABLE PULSE FREQUENCY GENERATOR (K2) 70

VAR. PULSE FREQ. GENERATOR CARD L1

GATED PULSE FREQUENCY GENERATOR (K3) 80 — 42 — 48

GATED PULSE FREQUENCY GENERATOR CARD L4

CELL DRIVER CIRCUIT (K4) 90

PULSE INDICATOR CIRCUIT (K14) 110

PHASE LOCK LOOP CIRCUIT (K21) 320

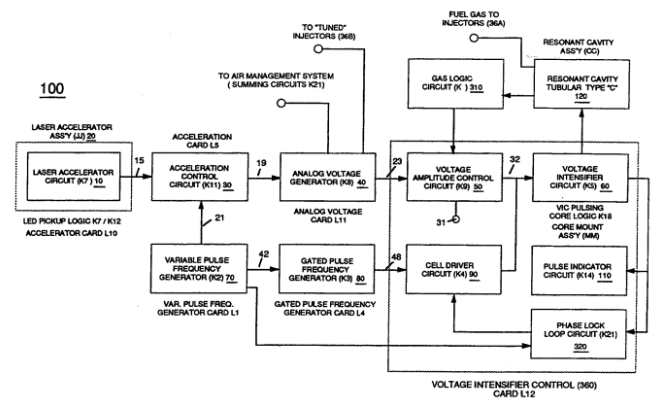VOLTAGE INTENSIFIER CONTROL (360) CARD L12

FIGURE 3-5: HYDROGEN GAS CONTROL CIRCUIT

As **Laser Accelerator** (JJ) advances toward "Peak" engine performance, **Fuel-Injectors** (36) open gate-time (on-time) <u>increases proportionally</u>.

Opposite or <u>reverse movement</u> of **Laser Accelerator** (JI) decreases **Injectors** (36) **on-time** which, in turns, <u>reduces engine speed</u>.

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