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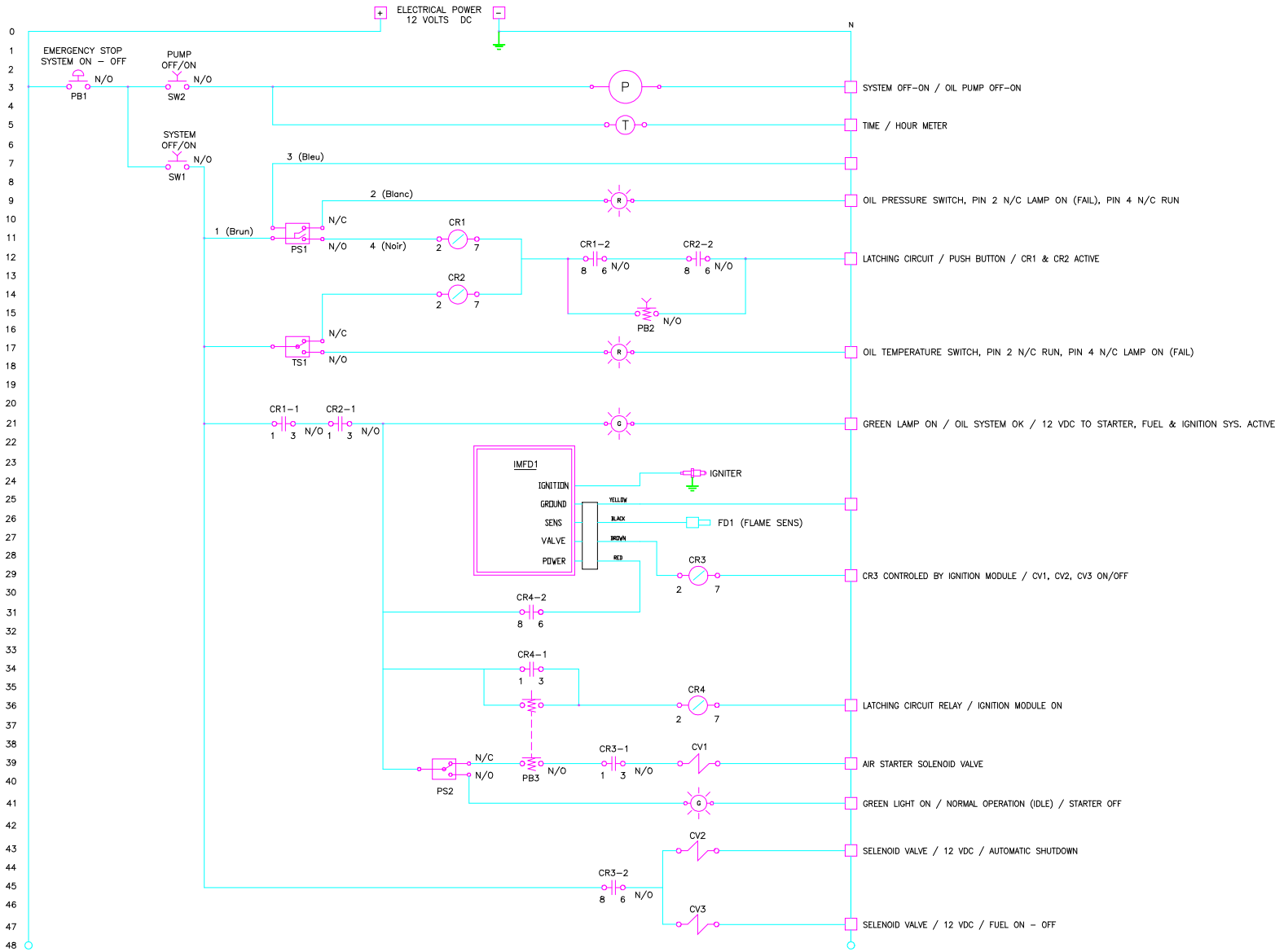
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ELECTRICAL SCHEMATIC



MATERIAL BILL

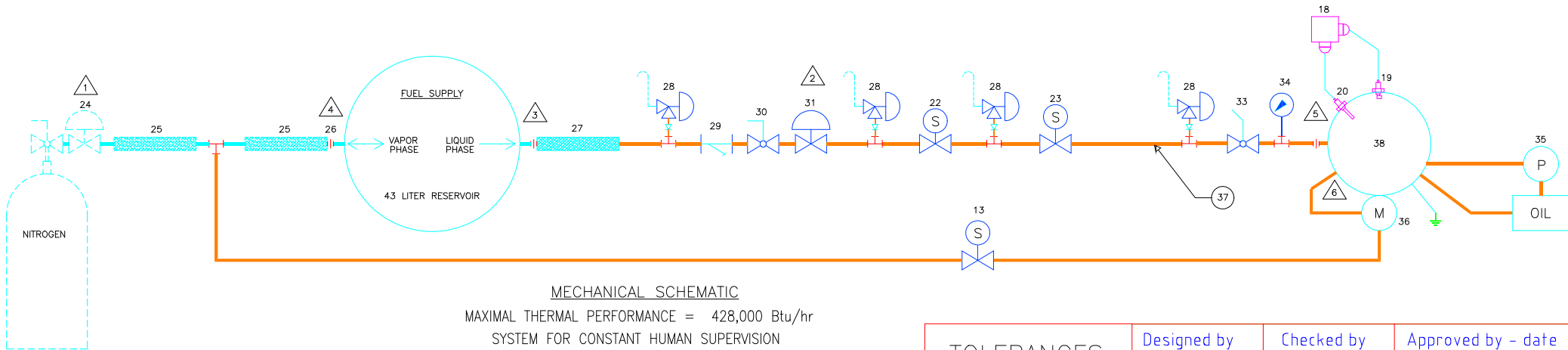
NO.	REF.	DESCRIPTION	MANUFACTURER	MODEL	DETAILS
1	PB1	MUSHROOM SWITCH / EMERGENCY SHUTOFF / SYSTEM ON-OFF / 12 VDC	CUTLER-HAMMER	E22EHB2	CSA
2	SW1	TOGGLE SWITCH / SYSTEM ON-OFF / 12 VDC	POLLAK	34-571 (25370)	CSA / UL
3	SW23	TOGGLE SWITCH / OIL PUMP ON-OFF / 12 VDC	POLLAK	34-571 (25370)	CSA / UL
4	TIME	HOUR METER / 12 VDC	MURPHY	TM4594	CE
5	PS1	PRESSURE SWITCH (N/O) / DOUBLE CONTACT / CLOSE @ 35 PSIG. / 12 VDC	PROSENS	PSD25-OP-0145H	cULus / CE
6	TS1	TEMPERATURE SWITCH (N/C) / DOUBLE CONTACT / OPEN @ 100 °C / 12 VDC	PROSENS	TSD25N-OP-0284-H	cULus / CE
7	-	LAMP INDICATOR (RED) / OIL PRESSURE FAIL / 12 VDC	COLE HERSEE	PL-118-RC	-
8	-	LAMP INDICATOR (RED) / OIL TEMPERATURE FAIL / 12 VDC	COLE HERSEE	PL-118-RC	-
9	-	LAMP INDICATOR (GREEN) / OIL SYSTEM STATUS OK / 12 VDC	COLE HERSEE	PL-118-GC	-
10	PB2	PUSH BUTTON SWITCH / SET - RESET IGNITION & FUEL SYST. / 12 VDC	POLLAK	24-360	-
11	CR1	CONTACT RELAY / LATCHING CIRCUIT / STARTER & IGNITION MODULE / 12 VDC	CARLO GAVAZZI	RCPB 002	CSA / -40°F
12	PS2	PRESSURE SWITCH / DOUBLE CONTACT / 2" - 20" WATER PRESSURE / 12 VDC	ANTUNES CONTROLS	RHGP-G8102113005	ULC
13	CV1	SOLENOID VALVE / AIR STARTER SUPPLY / 1/4 FNPT / 12 VDC	AFC	AFC121	CSA / -40°F
14	CR2	CONTACT RELAY / STARTER DEACTIVATED / 12 VDC	CARLO GAVAZZI	RCPB 002	CSA / -40°F
15	CR4	CONTACT RELAY / STARTER, IGNITION, FUEL ACTIVATION / 12 VDC	CARLO GAVAZZI	RCPB 002	CSA / -40°F
16	-	LAMP INDICATOR (GREEN) / SPEED STATUS OK / 12 VDC	COLE HERSEE	PL-118-GC	-
17	PB3	PUSH BUTTON SWITCH / DOUBLE (N/O) CONTACTS / 12 VDC	POLLAK	24-360	-
18	IMFD1	IGNITION MODULE / FLAME DETECTION / 12 VDC @ 10,000 VDC	FENWAL	35-530-800-007	CSA / -40°F
19	SP1	IGNITION SPARK DEVICE	MAXON	18110	-
20	FD1	FLAME ROD / FLAME DETECTION DEVICE	MAXON	18117-N	-
21	CR3	CONTACT RELAY / AUTOMATIC SHUTDOWN & FUEL VALVE ON / 12 VDC	CARLO GAVAZZI	RCPB 002	CSA / -40°F
22	CV2	SOLENOID VALVE / AUTOMATIC SHUTDOWN / 1/4 FNPT / 12 VDC	AFC	AFC121	CSA / -40°F
23	CV3	SOLENOID VALVE / TURBINE FUEL SUPPLY / 1/4 FNPT / 12 VDC	AFC	AFC121	CSA / -40°F
24	-	REGULATOR / 250 PSIG. MAX. / 245-02P NITROGEN CGA-580	TURBOTORCH	0386-0813	CGA
25	-	FLEXIBLE RUBBER HOSE / 350 PSIG. LP / 3/8" X 72" LG	BISMAR INC.	403943	CSA
26	-	ADAPTOR POL TO FASTFILL	SHERWOOD	SHE PA901H	-
27	-	FLEXIBLE RUBBER HOSE / 350 PSIG. LP / 1/2" X 48" LG	NEE	18C72MP8MP8	CSA / -40°F
28	-	SAFETY RELIEF HYDROSTATIC VALVE / 250 PSIG. LP / 1/4 MNPT	FISHER	H110-250	APP. UL
29	-	FUEL FILTER / LIQUIDE PROPANE / BRASS / 1/4 FNPT	SPIRAX SARCO	Y125-TBT	-
30	-	MANUAL BALL VALVE / MAIN VALVE / 1/4 FNPT X 1/4 FNPT	NEE	S95B41N	CSA/CGA/UL
31	-	PRESSURE REGULATOR / LPG / TIGHT CLOSING / 75 PSI. MAX. / 1/4 FNPT	FISHER	95H+LOCK TIGHT KIT	-
32	-	-	-	-	-
33	-	MANUAL TOGGLE VALVE / FAST CLOSING / 300 PSIG. / 1/4 FNPT	SHERWOOD	LV440	UL
34	-	PRESSURE GAUGE / 300 PSIG. / 1/4 MNPT	WIKA	8345333	-
35	-	OIL PUMP / 60 PSIG. / 1.2 GPM / 12 VDC	SHUREFLOW	800-343-263	CE
36	-	AIR STARTER / 0-20,000 RPM / 0-90 PSIG.	CONCEPTION GLC	SPHS-GT4708R-ASA	-
37	-	RIGID PIPING / GALVANIZED STEEL / SCHEDULE 80 / TYPICAL	CONCEPTION GLC	-	-
38	-	GAS TURBINE / LIQUID PROPANE / 428,000 BTU/HR @ 50,000 RPM	CONCEPTION GLC	SPHS-GT4708R-100	-

NOTE

- 1 NITROGEN PRESSURE SET @ 100 PSIG. MAX.
- 2 LIQUID PROPANE SUPPLY PRESSURE SET @ 50 PSIG. MAX.
- 3 MAIN RESERVOIR CONNECTION 1-1/4" FEMALE ACME SWIVEL (ME220F)
- 4 POL FITTING CONNECTOR INCLUDED WITH ITEM 25 AND CONNECT TO ITEM 26
- 5 MAIN FUEL ENTRY
- 6 STARTER WASTE / PROPANE AND NITROGEN MIXTURE

MECHANICAL SCHEMATIC

MAXIMAL THERMAL PERFORMANCE = 428,000 Btu/hr  
SYSTEM FOR CONSTANT HUMAN SUPERVISION



TOLERANCES

.X = +/- .030  
.XX = +/- .010  
.XXX = +/- .005  
ANGLE = +/- 1°

Designed by  
L. Laforest

Checked by  
-

Approved by - date  
9 octobre 2009

Filename  
-

Date  
9 octobre 2009

Scale  
n/a

**Luc Laforest**  
**Designer & Inventor**

DIY Turbine (GT4708R) Fuel & Control System

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Rev.  
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