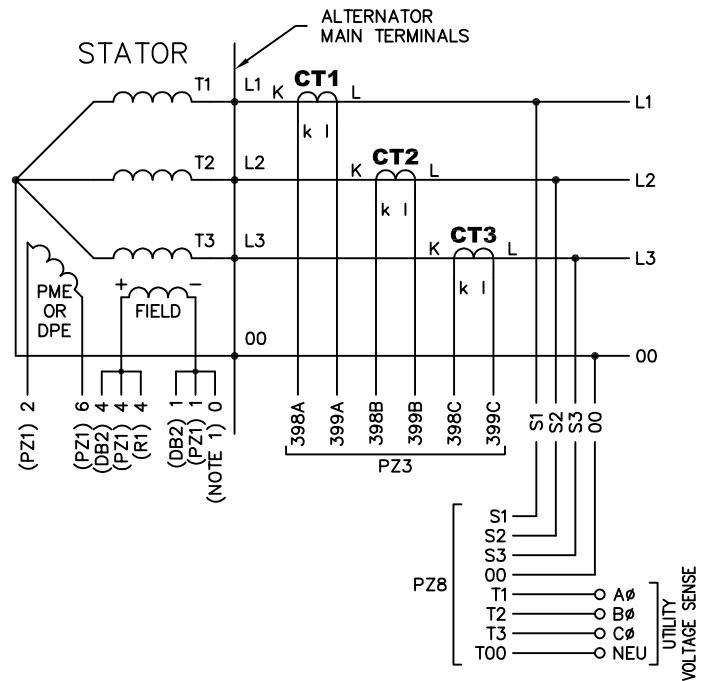
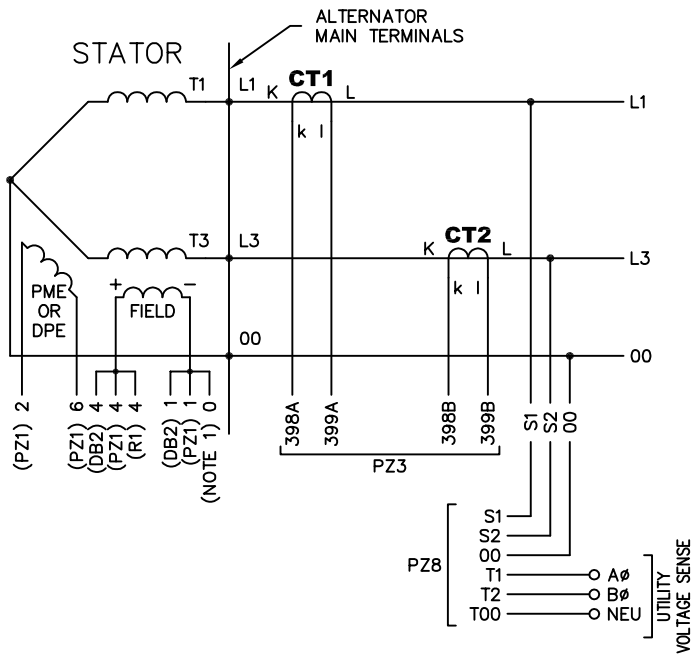


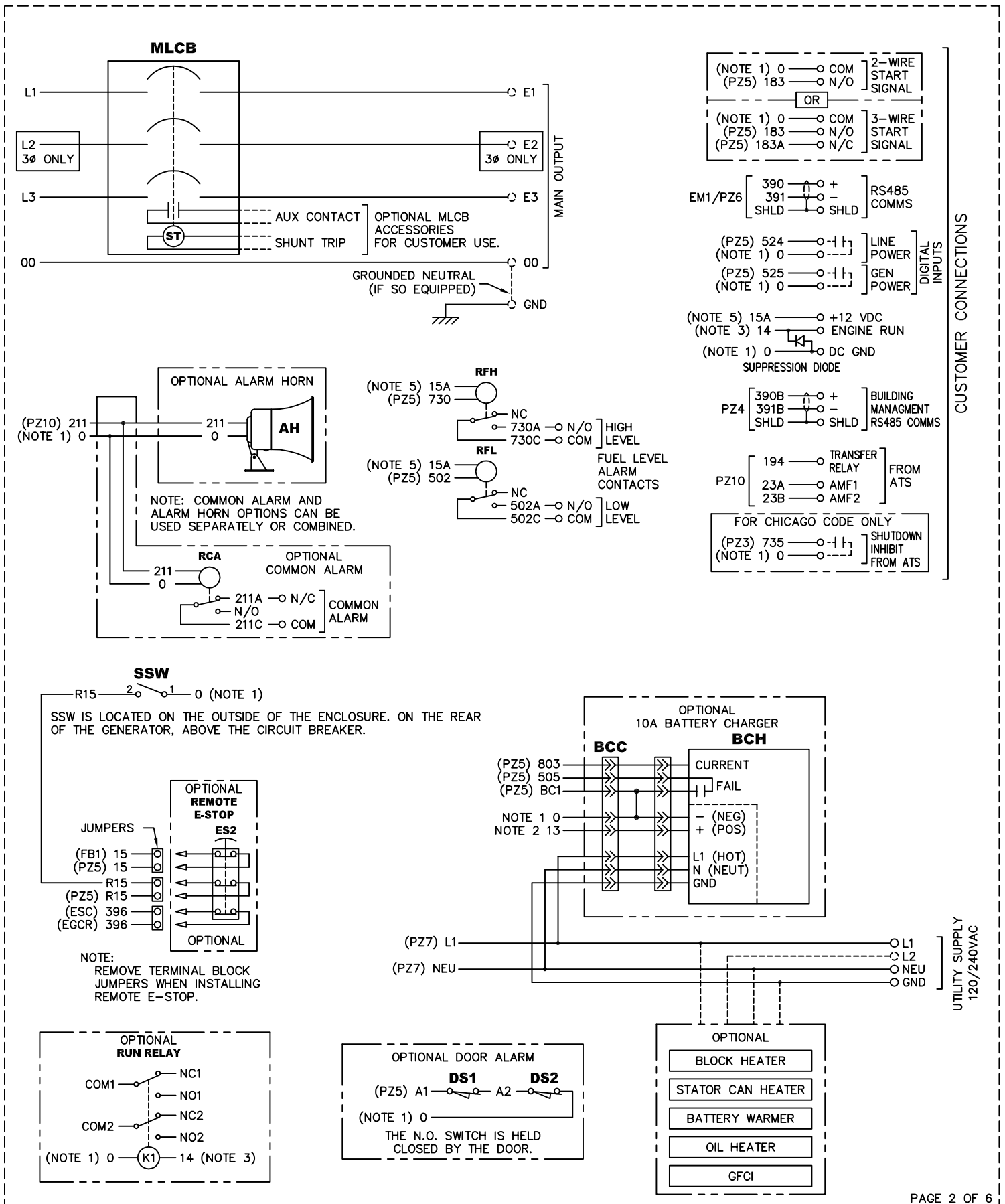


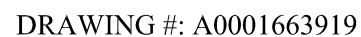
NOTES:

- 1) WIRE# 0 IS CHASSIS GROUND (BATTERY -) UNLESS NOTED OTHERWISE.
- 2) WIRE# 13 IS UNFUSED +12VDC (BATTERY+)
- 3) WIRE# 14 IS FUSED +12VDC WHEN GENERATOR IS CRANKING OR RUNNING.
- 4) WIRE# 15 IS FUSED +12VDC WHEN E-STOP IS NOT ACTIVATED.
- 5) WIRE# 15A IS FUSED +12VDC FOR GENERAL USE.
- 6) WIRE# 15B IS FUSED +12VDC TO THE CONTROL MODULE FOR FUEL, STARTER, PREHEAT, AND EGC RELAYS.
- 7) WIRE# 15M IS FUSED +12VDC FOR THE ELECTRONIC GOVERNOR CONTROL.

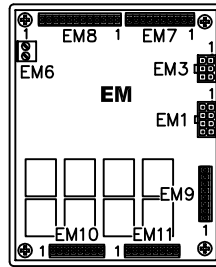
LEGEND

AH - ALARM HORN	FLS - FUEL LEVEL SENDER	RB1 - RELAY BOARD
ALT - DC CHARGE ALTERNATOR	GA - GOVERNOR ACTUATOR	RCA - RELAY COMMON ALARM
BCC - BATTERY CHARGER CONNECTOR	GFB - GENERATOR FLUID BASIN	RFL - RELAY FUEL LEVEL LOW ALARM
BCH - BATTERY CHARGER	GND - GROUND BAR CONNECTION	SC - STARTER CONTACTOR
CT - CURRENT TRANSFORMER	GP - GLOW PLUG	SM - STARTER MOTOR
DB - DIODE BRIDGE	LD - LEAK DETECTOR (FUEL TANK)	SSW - STOP SWITCH
DS - DOOR SWITCH	MLCB - MAIN LINE CIRCUIT BREAKER	ST - SHUNT TRIP
EGC - ELECTRONIC GOVERNOR CONTROL	MPU1 - MAGNETIC PICKUP	TC - TRICLOPS LED PANEL
EGCR - EGC RELAY	OPS - OIL PRESSURE SENDER	WLS - COOLANT LEVEL SENDER
EM - (I/O) EXTENDER MODULE	OTS - OIL TEMPERATURE SENDER	WTS - COOLANT TEMPERATURE SENDER
ES2 - REMOTE EMERGENCY STOP	PHC - PRE-HEAT CONTACTOR	
ESC - EMERGENCY STOP CONNECTOR	PME - PERMANENT MAGNET EXCITER	
ESJ - EMERGENCY STOP JUMPER	PZ - POWER ZONE 410 CONNECTOR	
FB - FUSE BLOCK	R - RESISTOR	





OPTIONAL EXTENDER MODULE I/O
WITH INSTALLATION HARNESS

**EM1**RS485
COMMS

PIN	WIRE	FROM	FUNC
1	391	PZ6	RS485 RX
2	391	CUST CON	RS485 RX
3	—	—	RS485 GND
4	—	—	RS485 GND
5	390	PZ6	RS485 TX
6	390	CUST CON	RS485 TX
7	SHLD	PZ6	RS485 GND
8	SHLD	CUST CON	RS485 GND

EM3CAN
BUS

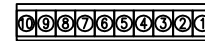
PIN	WIRE	FROM	FUNC
1	—	—	CAN HI
2	—	—	CAN HI
3	—	—	CAN LO
4	—	—	CAN LO
5	—	—	CAN SHIELD
6	—	—	CAN SHIELD

EM6

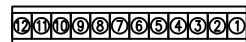
POWER



PIN	WIRE	FROM	FUNC
1	15A	NOTE 5	6–36 +VDC
2	0	NOTE 1	GND

EM7DIGITAL INPUTS
PULL LOW TO ACTIVATE

PIN	WIRE	FROM	FUNC
1	447	GFB	GEN FLUID BASIN ALARM
2	—	—	DIN2
3	—	—	DIN3
4	—	—	DIN4
5	COM5	GFB	INPUT COMMON GND
6	—	—	DIN5
7	—	—	DIN6
8	—	—	DIN7
9	—	—	DIN8
10	—	—	INPUT COMMON GND

EM8

ANALOG INPUTS

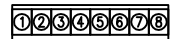
PIN	WIRE	FROM	FUNC
1	—	—	+5V
2	—	—	AN1
3	—	—	GND
4	—	—	+5V
5	—	—	AN2
6	—	—	GND
7	—	—	+5V
8	—	—	AN3
9	—	—	GND
10	—	—	+5V
11	—	—	AN4
12	—	—	GND

EM9

OUTPUTS; PULSE WIDTH MODULATION & ANALOG



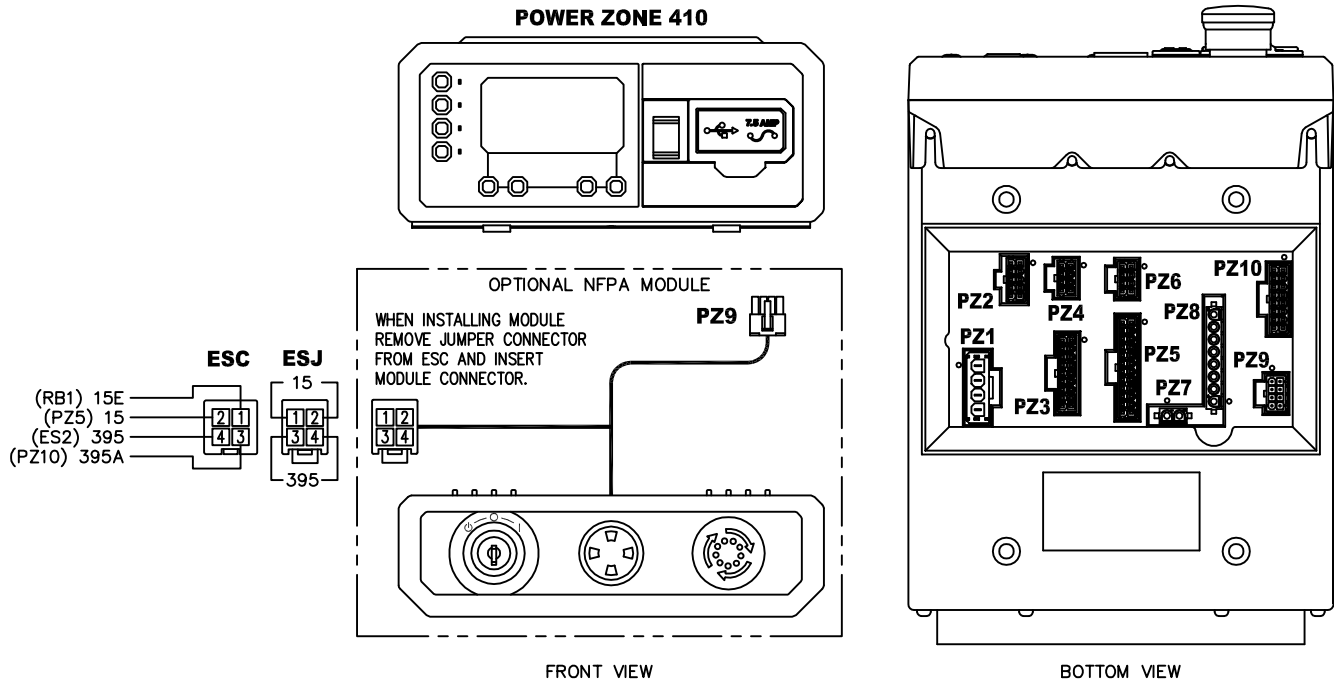
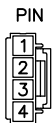
PIN	WIRE	FROM	FUNC
8	—	—	A02–
7	—	—	A02+
6	—	—	A01–
5	—	—	A01+
4	—	—	PWM2–
3	—	—	PWM2+
2	—	—	PWM1–
1	—	—	PWM1+

ANALOG
MAX
10V 0.01APULSE WIDTH
MODULATION
MAX
36V 0.1A**EM10**RELAY OUTPUTS 1–4
MAX 30V 5A

PIN	WIRE	FROM	FUNC
1	—	—	DOUT1 (COM)
2	—	—	DOUT1 (N/O)
3	—	—	DOUT2 (COM)
4	—	—	DOUT2 (N/O)
5	—	—	DOUT3 (COM)
6	—	—	DOUT3 (N/O)
7	—	—	DOUT4 (COM)
8	—	—	DOUT4 (N/O)

EM11RELAY OUTPUTS 5–8
MAX 30V 5A

PIN	WIRE	FROM	FUNC
1	—	—	DOUT5 (COM)
2	—	—	DOUT5 (N/O)
3	—	—	DOUT6 (COM)
4	—	—	DOUT6 (N/O)
5	—	—	DOUT7 (COM)
6	—	—	DOUT7 (N/O)
7	—	—	DOUT8 (COM)
8	—	—	DOUT8 (N/O)

**PZ1**

PIN	WIRE	FROM	FUNC
1	2	PME	DPE 1 CURRENT LIMITING
2	1	FIELD	FIELD (-)
3	6	PME	DPE 2
4	4	FIELD	FIELD (+)

PZ2

RESERVED FOR
GOVERNOR MODULE

PZ3

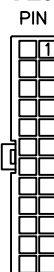
FUNC	FROM	WIRE	PIN
COOLANT TEMP (+)	WTS	68V	10
COOLANT TEMP (RET)	WTS	68R	11
OIL PRESSURE (+5V)	OPS	69V	12
OIL PRESSURE (ANALOG)	OPS	69S	13
OIL PRESSURE (RET)	OPS	69R	14
FUEL LEVEL (+5)	FLS	575	15
FUEL LEVEL (SIG)	FLS	575	16
FUEL LEVEL (RET)	FLS	591	17
SHUTDOWN INHIBIT	CUST CON	735	18

PIN	WIRE	FROM	FUNC
1	743	EGC	CAN HI
2	744	EGC	CAN LO
3	SHLD	EGC	CAN SHIELD
4	398A	CT1	CURRENT A (+)
5	399A	CT1	CURRENT A (-)
6	398B	CT2	CURRENT B (+)
7	399B	CT2	CURRENT B (-)
8	398C	CT3	CURRENT C (+)
9	399C	CT3	CURRENT C (-)

PZ4

FUNC	FROM	WIRE	PIN
RS485-N2	CUST CON	391B	5
RS485-P2	CUST CON	390B	6
RS232-RX4	-	-	7
RS232-TX4	-	-	8

PIN	WIRE	FROM	FUNC
1	-	-	GND (FILTERED COMMS)
2	-	-	GND
3	-	-	+12V BATT
4	SHLD	CUST CON	GND (FILTERED COMMS)

PZ5

FUNC	FROM	WIRE	PIN
FUEL LVL 10% ALARM	RFL	502	13
FUEL LVL 90% ALARM	RFH	730	14
OIL TEMP (A/I)	OTS	523	15
OIL LEVEL (A/I)	-	-	16
EXT CHARGER CURRENT (A/I)	BCC	803	17
SYSTEM 24V	-	-	18
ROCKER IN	ES2	R15	19
ROCKER LOOP	ES2	15	20
ROCKER LOOP	ESC	15	21
EXTERNAL CHARGER FAIL	BCC	505	22
COOLANT LVL (+)	WLS	573V	23
COOLANT LVL (-)	WLS	573R	24

PIN	WIRE	FROM	FUNC
1	567	LD	RUPTURED TANK
2	0	CUST CON	2-WIRE (RET)
3	183	CUST CON	2-WIRE START (1)
4	183A	CUST CON	2-WIRE START (2)
5	525	CUST CON	XFER POSITION 1 (GEN PWR)
6	524	CUST CON	XFER POSITION 2 (LINE PWR)
7	A1	DS	DOOR ALARM
8	BC1	BCC	EXTERNAL CHARGER PRESENT
9	819	TC	TRICLOPS YELLOW LED
10	817	TC	TRICLOPS GREEN LED
11	818	TC	TRICLOPS RED LED
12	820	TC	TRICLOPS +5V

