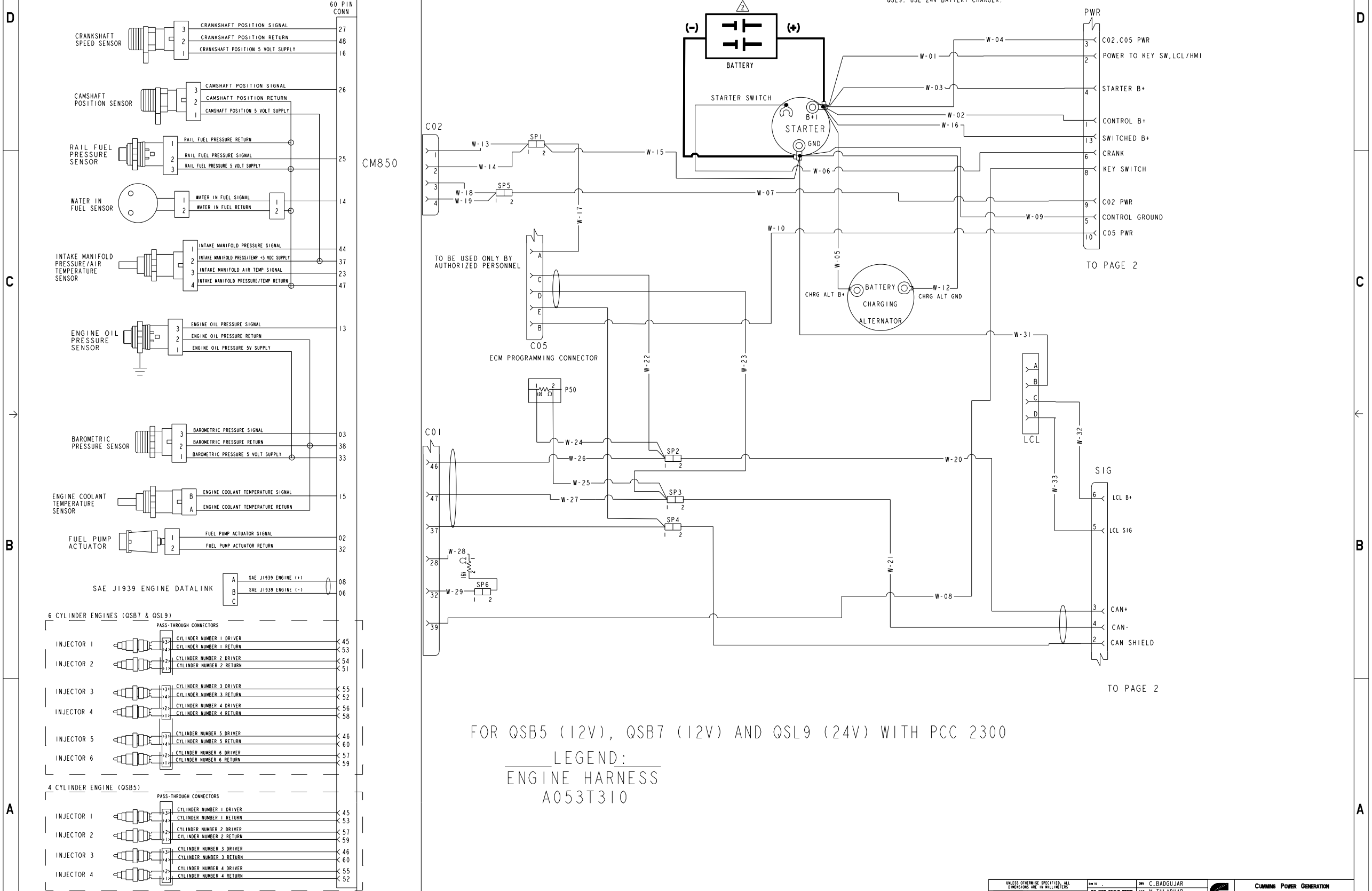


COMES ON THE ENGINE

REV NO	REV	NO	REVISION	REV	NO	DATE
ECO-181411	E	1	SEE SHEET 5	PT	MT	01NOV18
		2	SEE SHEET 5	PT	MT	01NOV18
		3	SEE SHEET 5	PT	MT	01NOV18
		4	SEE SHEET 5	PT	MT	01NOV18

NOTES:

- 1. ALL DEVICES ARE SHOWN DE-ENERGIZED.
- QSB5 AND QSB7: 12V SYSTEM BATTERIES CONNECTED IN PARALLEL.
- OSL9: 24V SYSTEM BATTERIES CONNECTED IN SERIES.
- RELAYS RATED FOR 12V USED ON QSB5 AND OSB7.
- RELAYS RATED FOR 24V USED ON OSL9.
- QSB5 AND OSB7: USE 12V BATTERY CHARGER.
- OSL9: USE 24V BATTERY CHARGER.



FOR QSB5 (12V), QSB7 (12V) AND OSL9 (24V) WITH PCC 2300

LEGEND:
ENGINE HARNESS
A053T310

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		DO NOT SCALE PRINT	APP'D C. BADGUJAR	CUMMINS POWER GENERATION	
X ± 1	0.00 - 4.99 +0.15/-0.00		APP'D M. TULADHAR		DIAGRAM, GENSET SCHEMATIC DATE: 20NOV15 SITE CODE: PGF PART NO: A054B421 CAD SHEET: 1 OF 5
-4 ± 0.8	5.00 - 9.99 +0.20/-0.13				
± 0.8	10.00 - 17.49 +0.25/-0.13				
± 1.0	17.50 - 24.99 +0.30/-0.13	SCALE: 1/1	DATE: 20NOV15	PGF	

REV NO	REV	NO	REVISION	REV	NO	DATE
ECO-181411	E	1		PT	MT	01NOV18

D

D

C

C

B

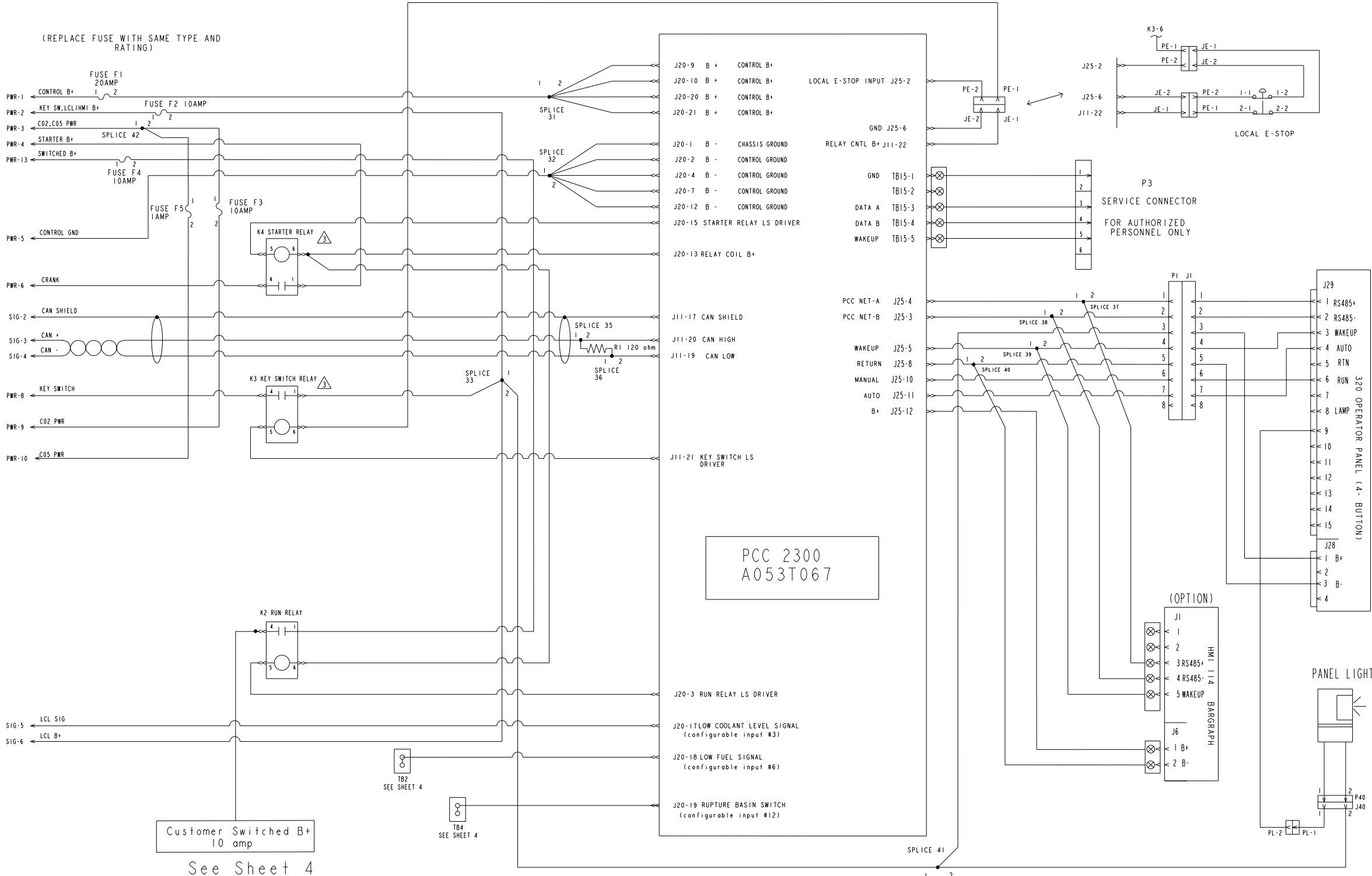
B

A

A

SEE SHEET 1

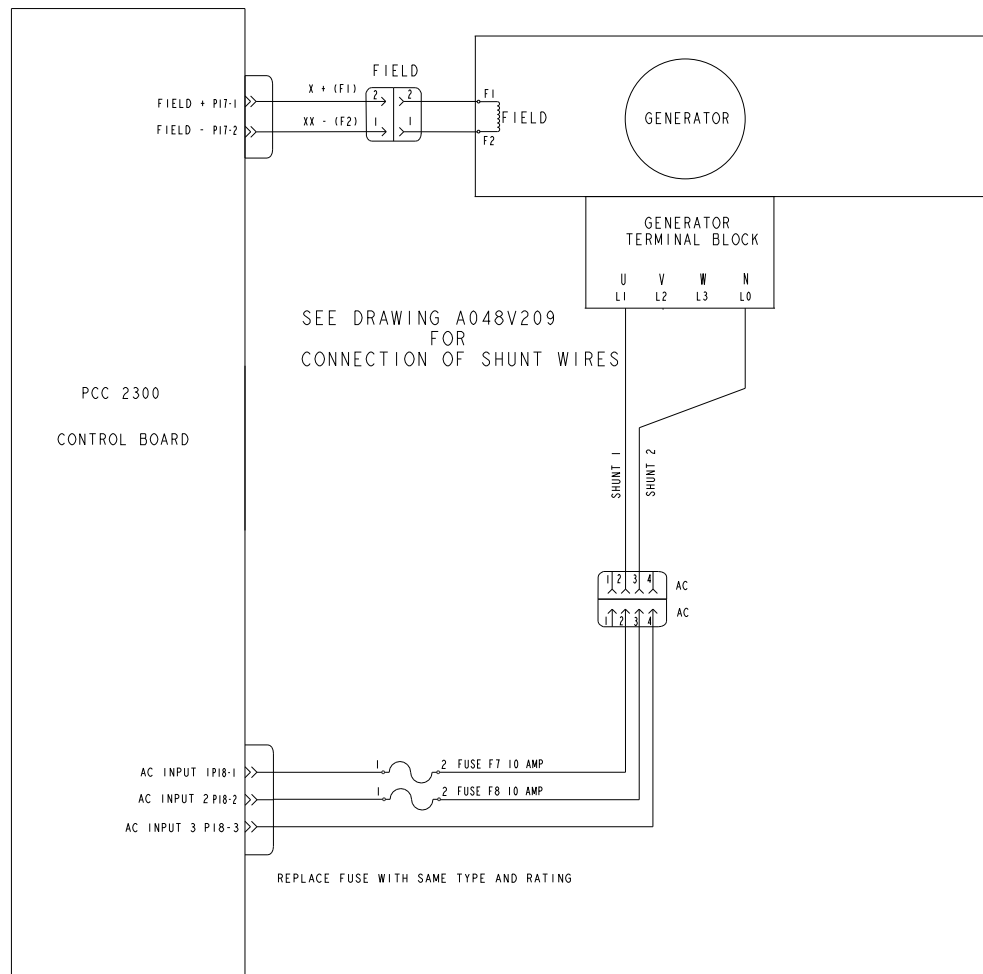
SEE SHEET 1



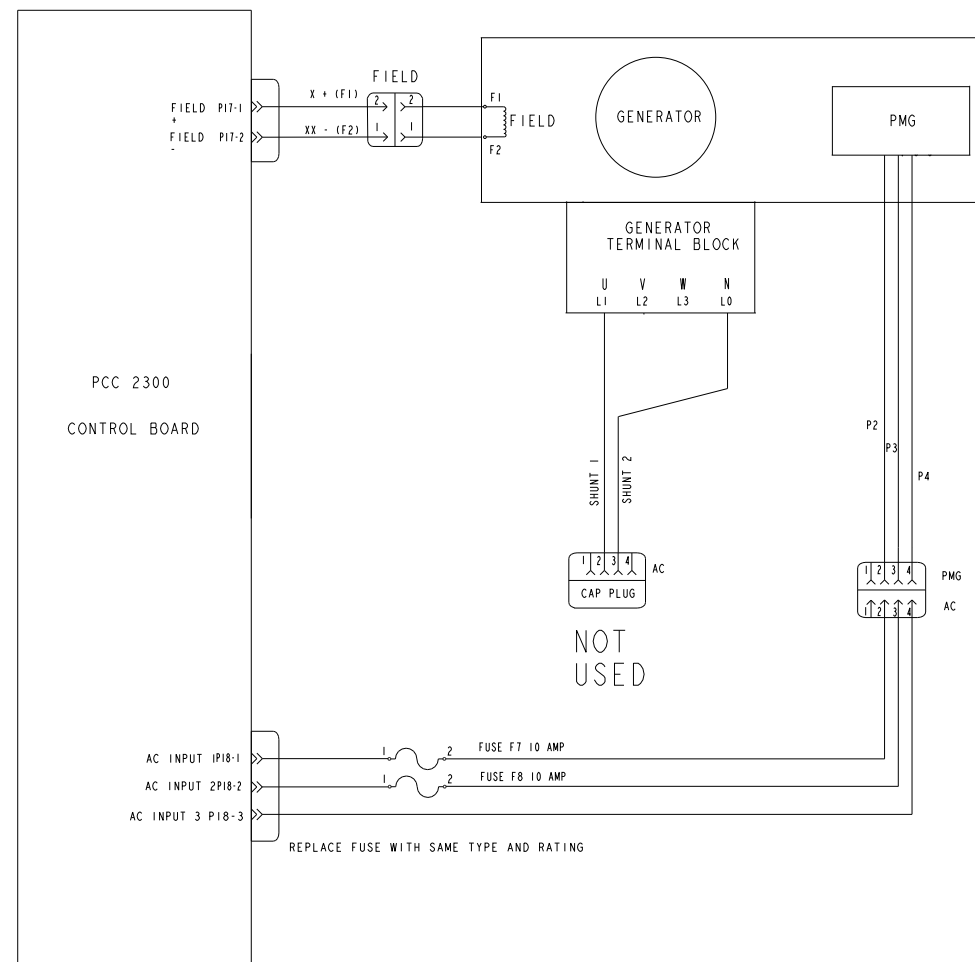
LEGEND
CONTROL HARNESS
A053R492

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		DO NOT SCALE PRINT	DATE	SCALE	APPD	DATE	SCALE	DATE	SCALE	DATE	SCALE
X ± 1	0.00 - 4.99 +0.15/-0.00		20NOV15	1/1	C. BADGUJAR	20NOV15	1/1	20NOV15	1/1	20NOV15	1/1
Y ± 1	5.00 - 9.99 +0.20/-0.10				M. TULADHAR						
Z ± 1	10.00 - 17.49 +0.25/-0.13				M. TULADHAR						
ANG	0.38										
ANG TOL	± 1.0°										

REV NO	REV	NO	REVISION	REV	NO	APPRO	DATE
ECO-181411	E	PT	MT	M. TULADHAR	01NOV18



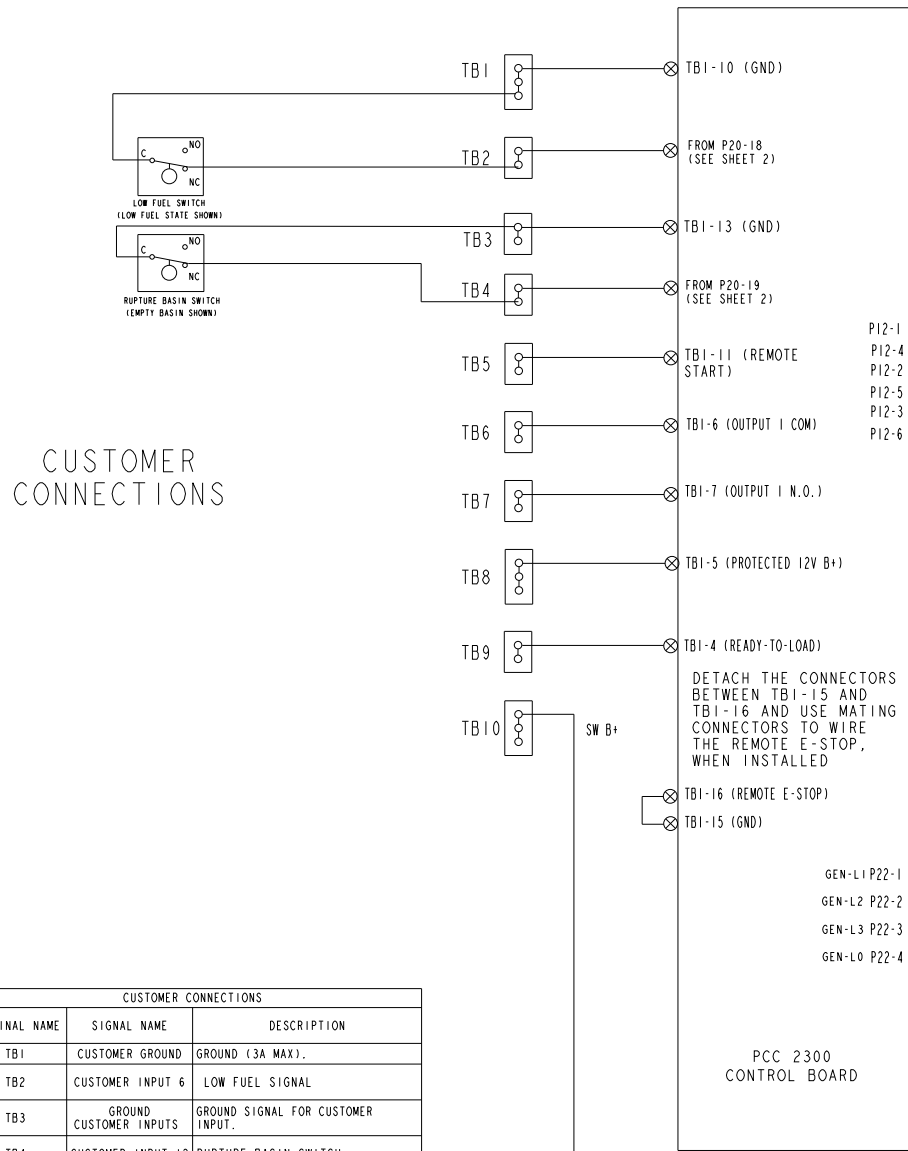
SHUNT EXCITATION CONFIGURATION



PERMANENT MAGNET GENERATOR EXCITATION CONFIGURATION

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		DO NOT SCALE PRINT	BY: C. BADGUJAR	CUMMINS POWER GENERATION DIAGRAM, GENSET SCHEMATIC
DIM TOL SCALE X ± 1 0.00-4.99 +0.15/-0.00 Y ± 0.8 5.00-9.99 +0.20/-0.13 Z ± 0.38 10.00-17.49 +0.25/-0.13 X ± 0.38 17.50-24.99 +0.20/-0.13	DATE: 20NOV15 SITE CODE:	DATE: 20NOV15 SITE CODE:	PART NO: A054B421 REV: E SHEET: 3 of 5	

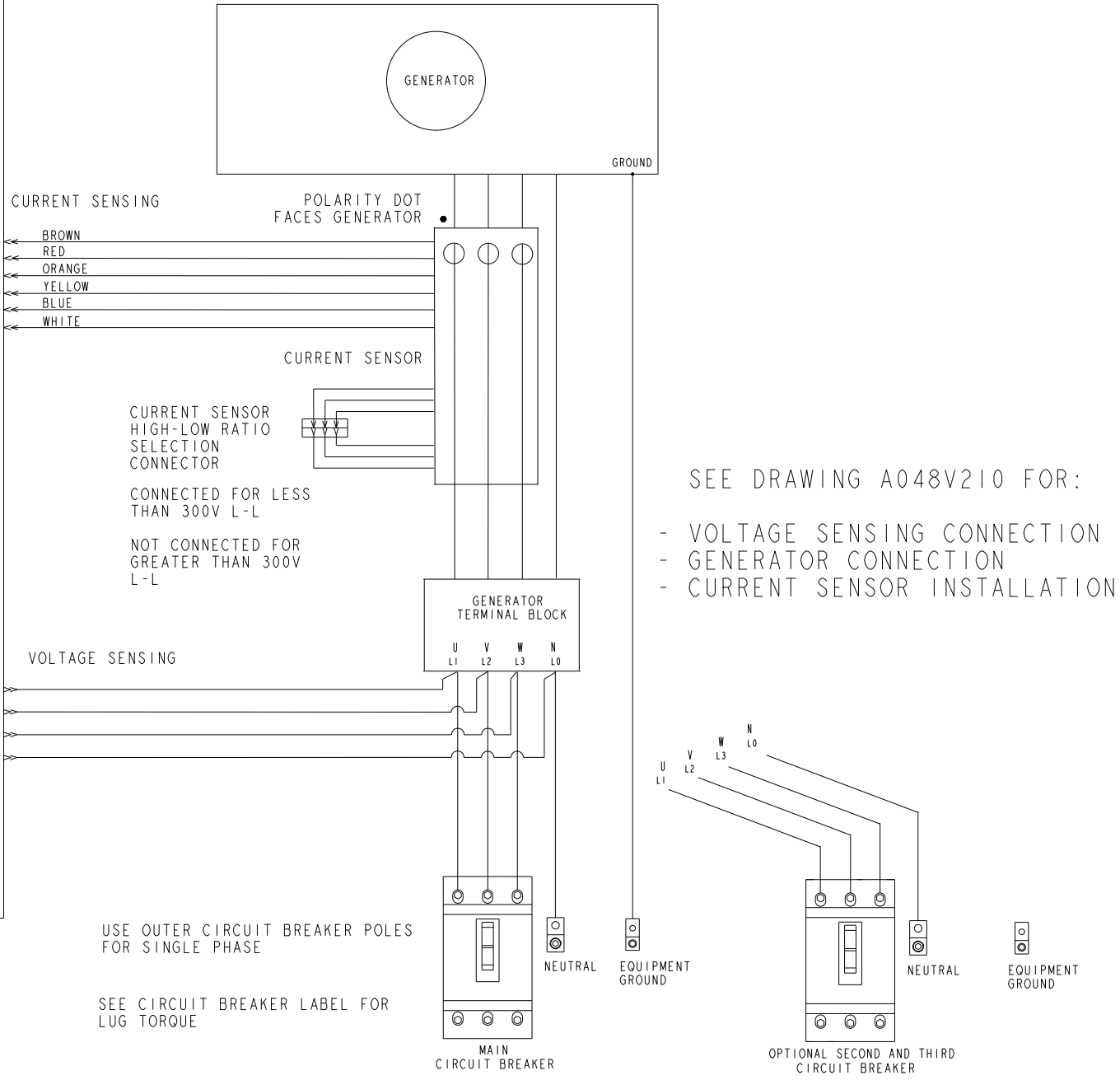
REV NO	REV	NO	REVISION	REV	NO	APPD	DATE
ECO-181411	E	PT	MT	M. TULADHAR	01NOV18



CUSTOMER CONNECTIONS

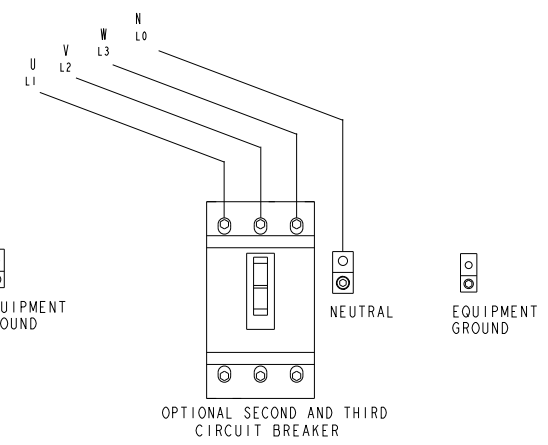
TERMINAL NAME	SIGNAL NAME	DESCRIPTION
TB1	CUSTOMER GROUND	GROUND (3A MAX).
TB2	CUSTOMER INPUT 6	LOW FUEL SIGNAL
TB3	GROUND CUSTOMER INPUTS	GROUND SIGNAL FOR CUSTOMER INPUT.
TB4	CUSTOMER INPUT 12	RUPTURE BASIN SWITCH
TB5	REMOTE START	ACTIVATED BY APPLYING (GND) SIGNAL FROM (TB1).
TB6	CUSTOMER OUTPUT I	RELAY COMMON CONNECTION. CONTACT RATING: 3.5A, 30VDC
TB7	CUSTOMER OUTPUT I	RELAY NORMALLY OPEN CONNECTION. CONTACT RATING: 3.5A, 30VDC
TB8	PROTECTED B+	12VDC, 3A PROTECTED.
TB9	READY TO LOAD	LOW SIDE DRIVER (GND) OUTPUT. ACTIVE WHEN GENERATOR IS READY TO ACCEPT LOAD. RATINGS: 250mA, 1A INRUSH, 30VDC 100 uA LEAKAGE IN OFF STATE.
TB10	SWITCHED B+	12VDC, ACTIVE WHEN GENERATOR IS IN RUN STATE (10A FUSED).

Customer Switched B+
10 amp
See Sheet 2



SEE DRAWING A048V210 FOR:
- VOLTAGE SENSING CONNECTION
- GENERATOR CONNECTION
- CURRENT SENSOR INSTALLATION

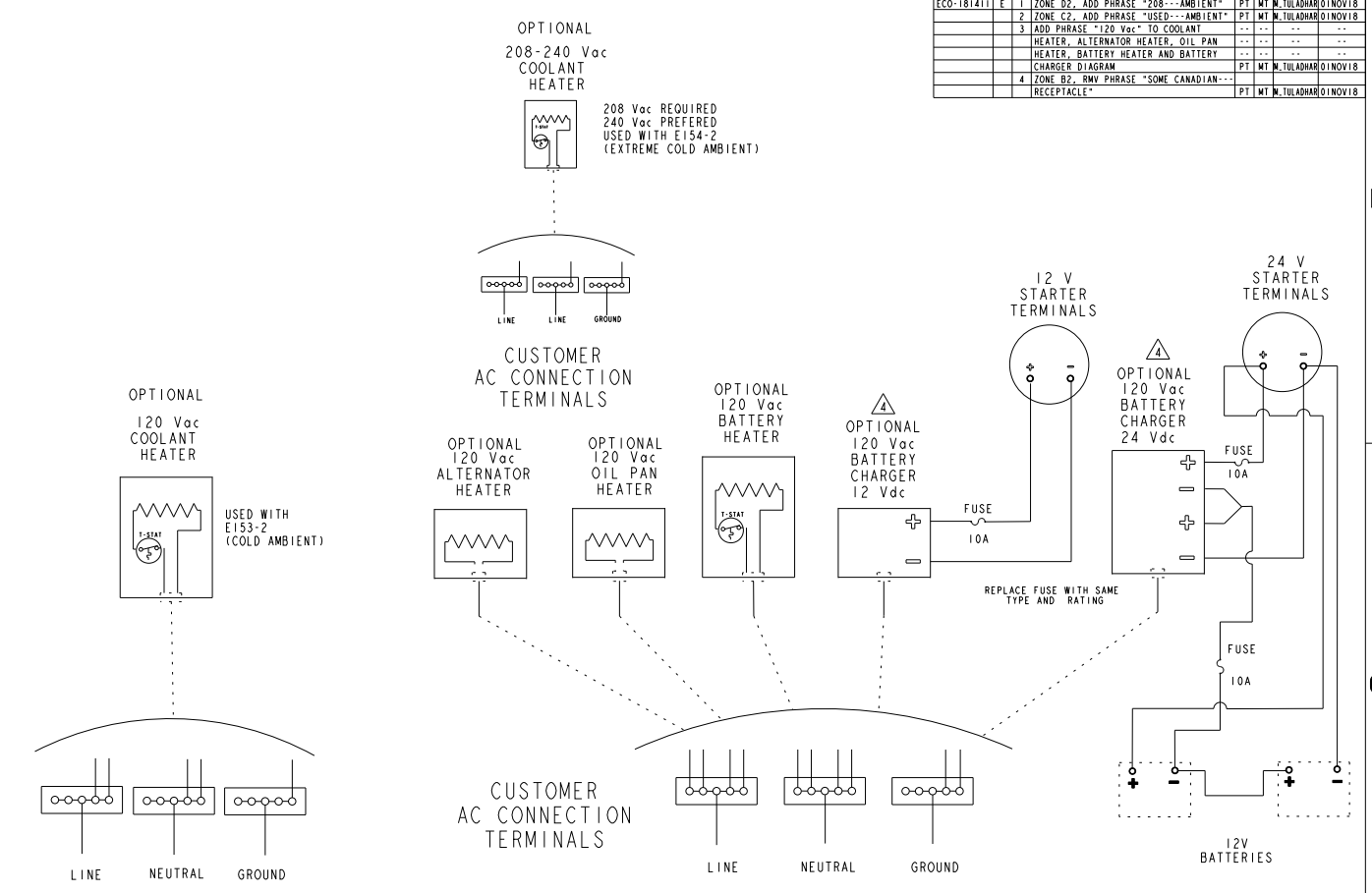
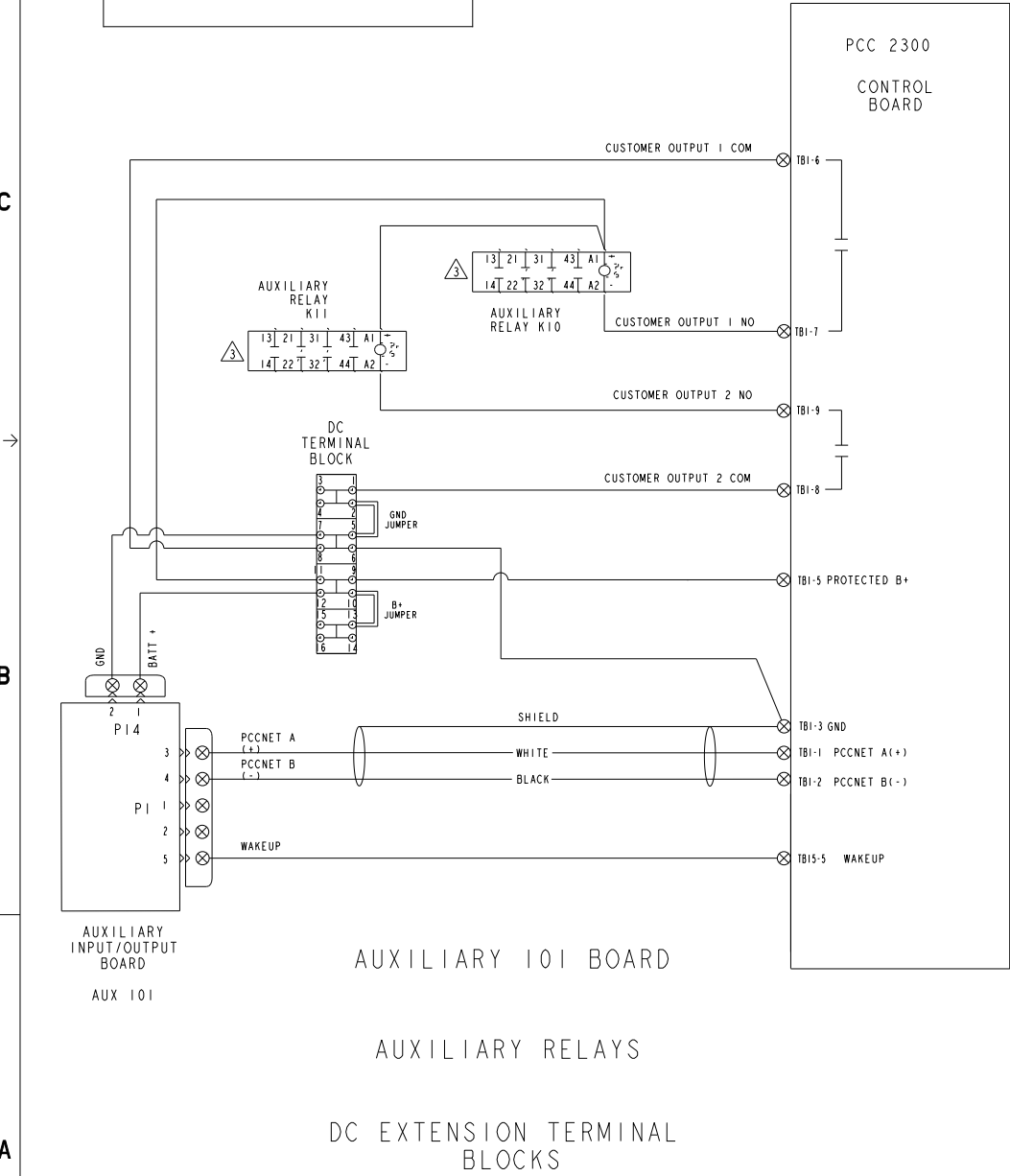
USE OUTER CIRCUIT BREAKER POLES FOR SINGLE PHASE
SEE CIRCUIT BREAKER LABEL FOR LUG TORQUE



UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		DO NOT SCALE PRINT	APPD M. TULADHAR	DATE 20NOV15	PGF	ECO-181411	4 of 5
ANG TOL	SCALE	DATE	APPD M. TULADHAR	DATE 20NOV15	PGF	ECO-181411	4 of 5

REV NO	REV	NO	REVISION	REV	NO	DATE
ECO-181411	E	1	ZONE D2, ADD PHRASE "208---AMBIENT"	PT	MT	M.TULADHAR 01NOV18
		2	ZONE C2, ADD PHRASE "USED---AMBIENT"	PT	MT	M.TULADHAR 01NOV18
		3	ADD PHRASE "120 Vac" TO COOLANT HEATER, ALTERNATOR HEATER, OIL PAN HEATER, BATTERY HEATER AND BATTERY CHARGER DIAGRAM	PT	MT	M.TULADHAR 01NOV18
		4	ZONE B2, RAW PHRASE "SOME CANADIAN RECEPTACLE"	PT	MT	M.TULADHAR 01NOV18

HARNESSES FOR OPTIONS
 AUX 101 = A043A230
 AUXILIARY RELAYS = A042Z041
 DC EXTENSION TERMINAL BLOCK = A043B108



INSTALLER TO PROVIDE BRANCH CIRCUITS TO POWER ALL ACCESSORIES

ALL ACCESSORIES ARE SINGLE PHASE 120/240 Vac 60 Hz

FOLLOW REGIONAL REGULATIONS AND APPLICABLE ELECTRIC CODES FOR INSTALLATION

- Coolant heater (1) 1000 Watts, 120Vac, 8.33 amps
- Coolant heater (2) 1500 Watts, 120Vac, 12.50 amps
- Coolant heater (3) 2000 Watts, 240Vac, 8.4 amps / 1500 Watts, 208Vac, 7.2 amps
- Battery heater 125 Watts, 120Vac, 1.04 amps
- Oil pan heater 150 Watts, 120Vac, 1.25 amps
- Alternator heater 100 Watts, 120Vac, 0.83 amps
- Battery charger (12V), 192 Watts, 120Vac, 1.67 amps (max)
- Battery charger (24V), 300 Watts, 120Vac, 2.5 amps (max)

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		DO NOT SCALE PRINT	APP'D M. TULADHAR	CUMMINS POWER GENERATION	
DATE	SCALE	ANG TOL	DATE	SITE CODE	DIAGRAM, GENSET SCHEMATIC
01NOV18	1/1	± 1.0°	01NOV18	PGF E	A054B421
5 of 5					

Part A054B421 E

Description	Legacy Name	External Regulations	Application Status	Release Phase Code	Security Classification	Alternates
DIAGRAM,GENSET SCHEMATIC	A054B421	No External Regulations Apply	Production Only	Production	Internal use Only	

Part Specifications :A054B421 E

Name	Description	Legacy Name
A030B356	SPECIFICATION,MATERIAL	CES10903
A054B422	DRAWING,ENGINEERING	A054B422