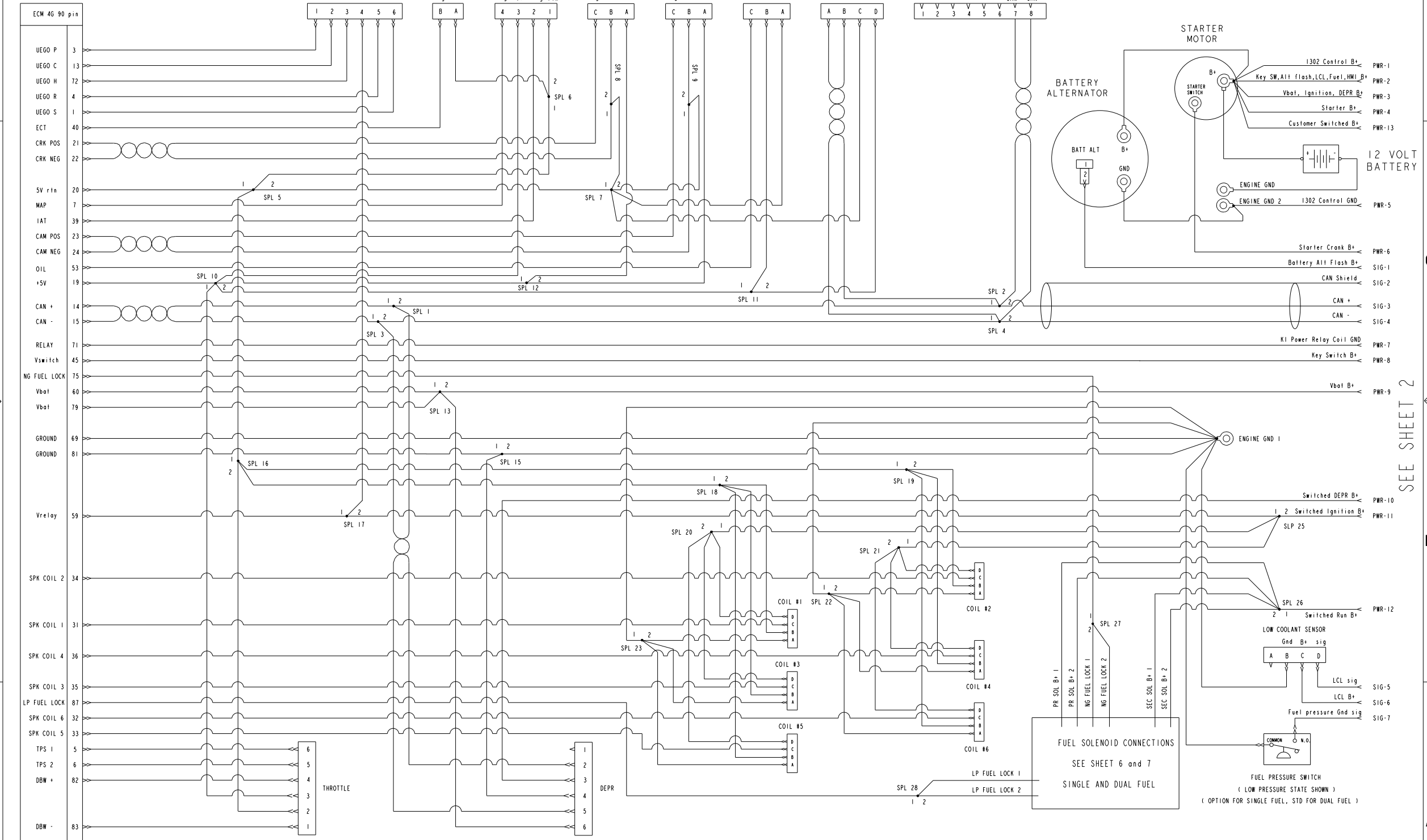


REV NO	LET	NO	REVISION	APP	DATE
ECO-176504	C	1	SEE SHEET 5	AGJ/AGJ/P.LARSON	30MAR18

- NOTES:
- CONTROL HARNESS = A047Y650
 - ENGINE HARNESS = A047V568

FIRING ORDER 1-5-3-6-2-4

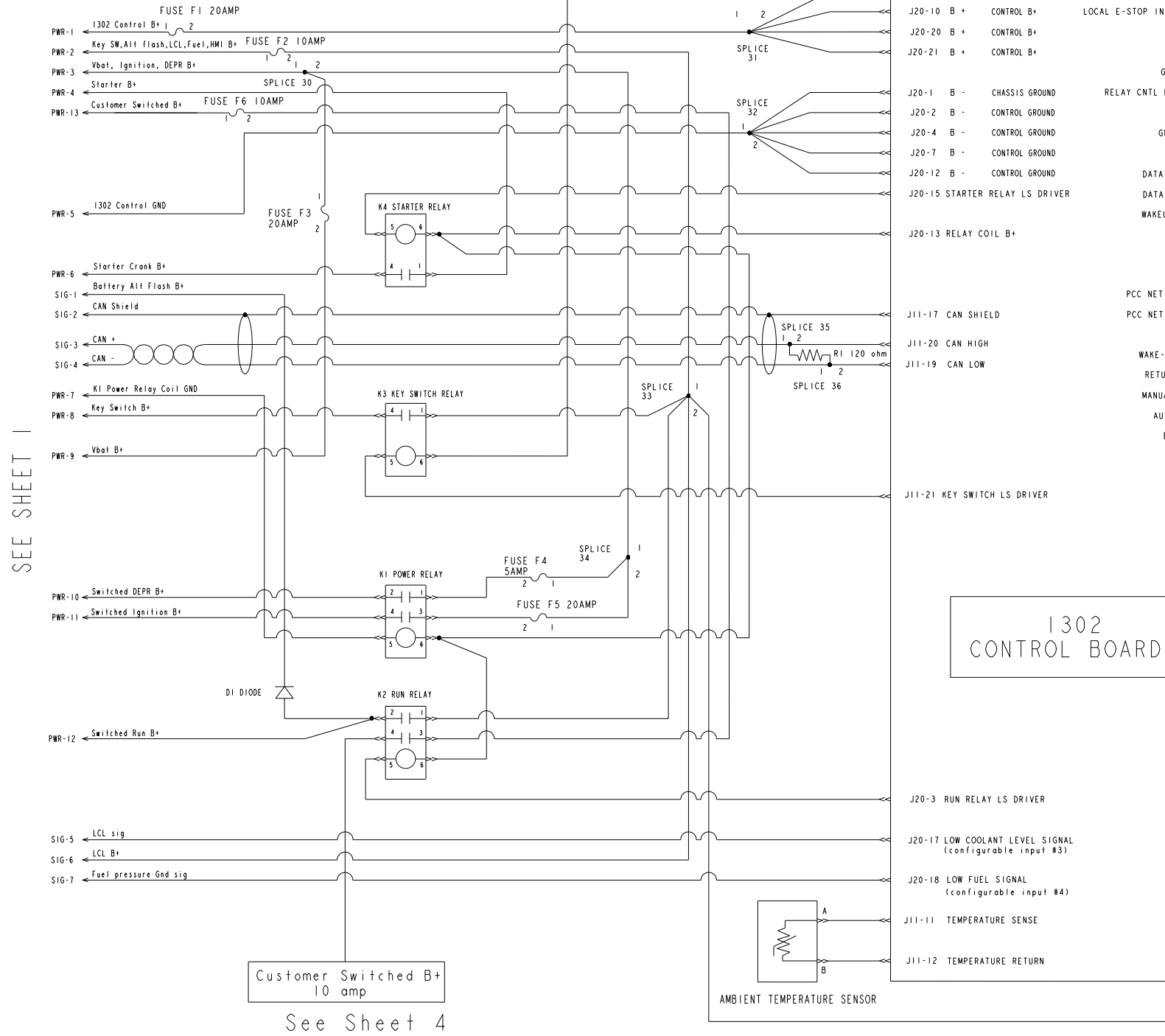


SEE SHEET 2

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		DO NOT SCALE PRINT	DATE: 07APR15	SCALE: 1/1	PROPERTY OF CUMMINS POWER GENERATION GROUP
SIZE	SCALE	DATE	DATE	DATE	DATE
X ± 0.1	0.00 - 4.99	0.15/-0.00	0.00 - 4.99	0.15/-0.00	0.00 - 4.99
X ± 0.8	5.00 - 9.99	0.25/-0.13	5.00 - 9.99	0.25/-0.13	5.00 - 9.99
X ± 0.38	10.00 - 17.49	0.25/-0.13	10.00 - 17.49	0.25/-0.13	10.00 - 17.49
	17.50 - 24.99	0.25/-0.13	17.50 - 24.99	0.25/-0.13	17.50 - 24.99
ANG TOL: ± 1.0°					

REV NO	LTN	NO	REVISION	APP	DATE
ECO-176504	C	-	AGJ/AGJ/P.LARSON	30MAR18

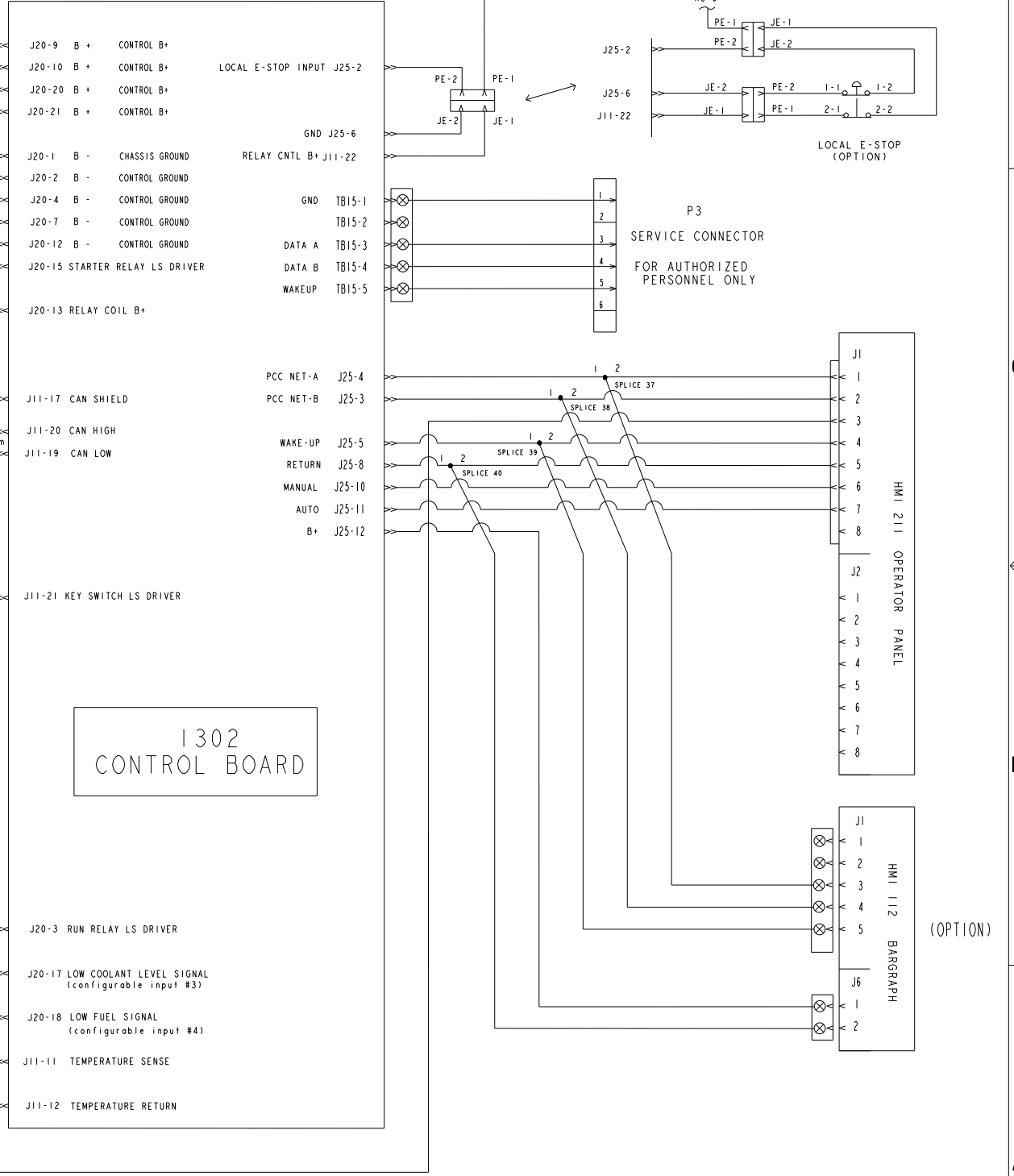
(REPLACE FUSE WITH SAME TYPE AND RATING)



SEE SHEET 1

Customer Switched B+
10 amp
See Sheet 4

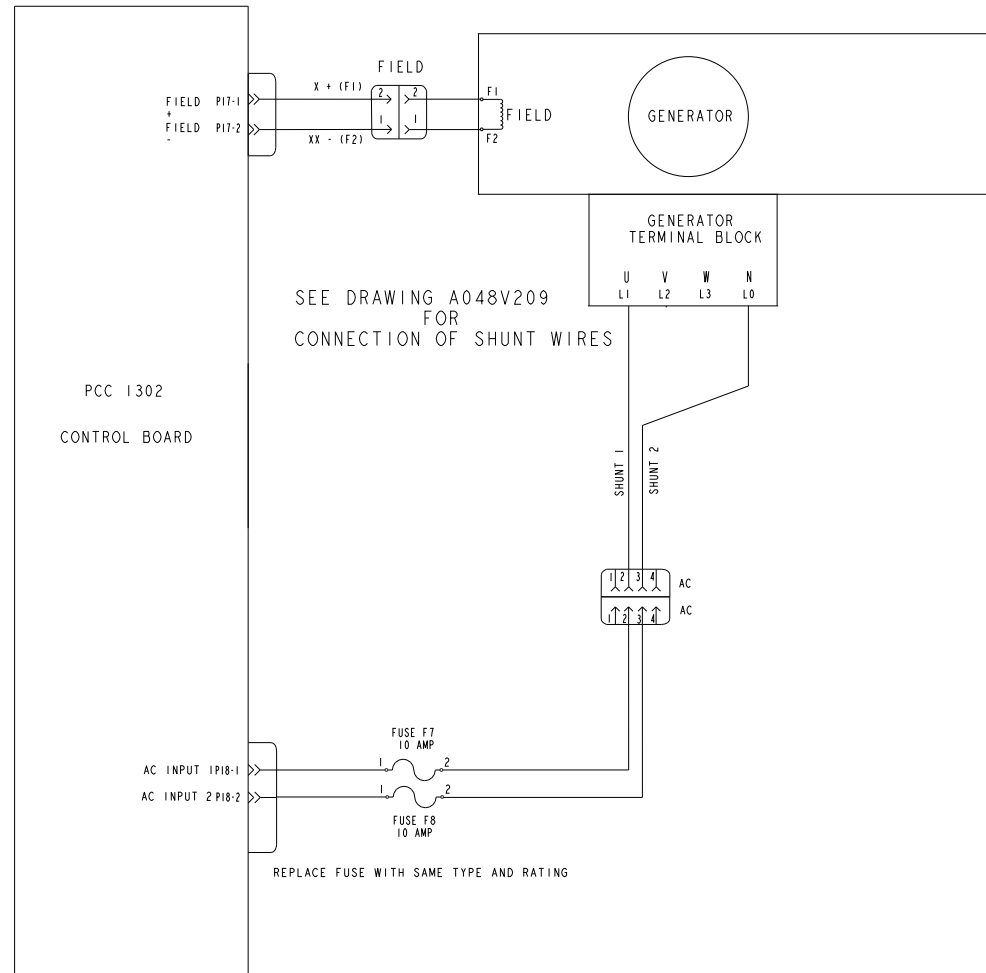
1302
CONTROL BOARD



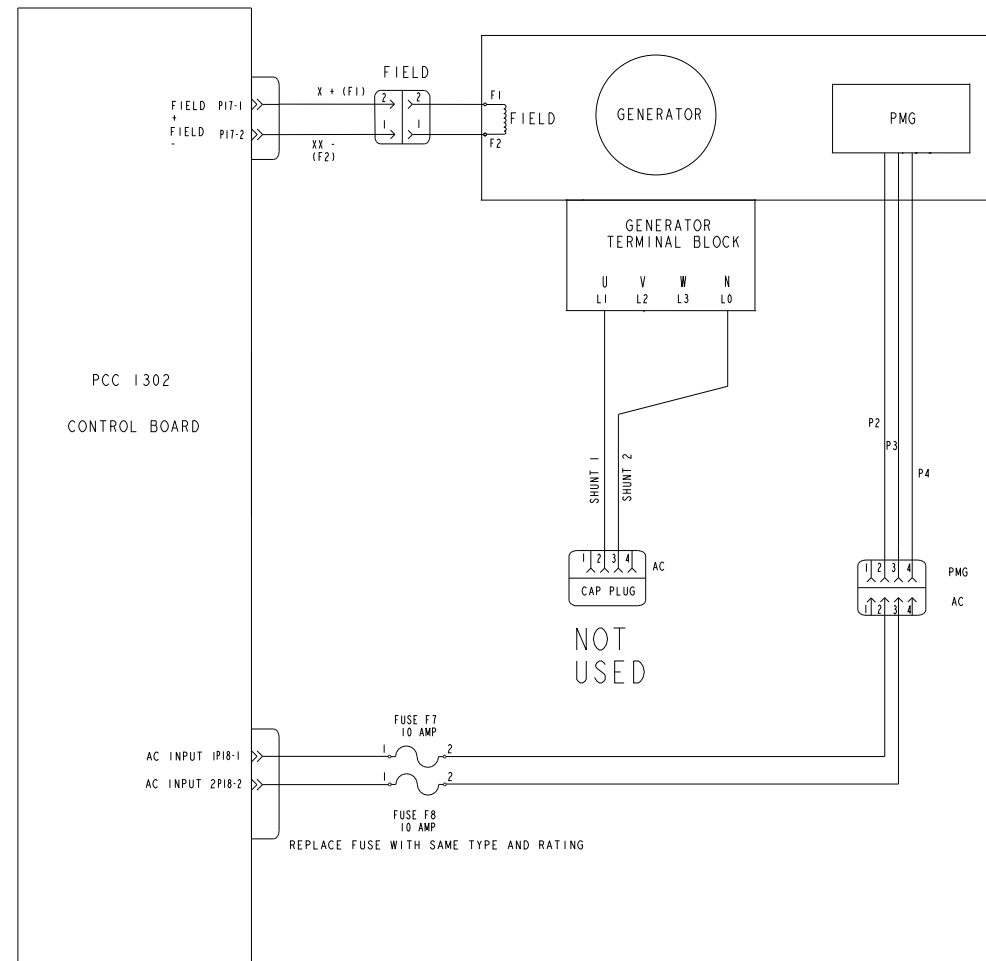
A

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		REV NO	NO	REVISION	APP	DATE
DO NOT SCALE PRINT		ECO-176504	C	AGJ/AGJ/P.LARSON	30MAR18
ANG TOL: ± 1.0°		SCALE: 1/1		CONFIDENTIAL - PROPERTY OF CUMMINS POWER GENERATION GROUP		
SITE CODE		PGF		ARROW		
CUMMINS POWER GENERATION		SHEET		2 OF 8		
SCHEMATIC, GENSET		PART NO		A052B811		

REV NO	LTN	NO	REVISION	BY	CHK	APPD	DATE
ECO-176504	C	-	-----	AGJ	AGJ	P. LARSON	30MAR18



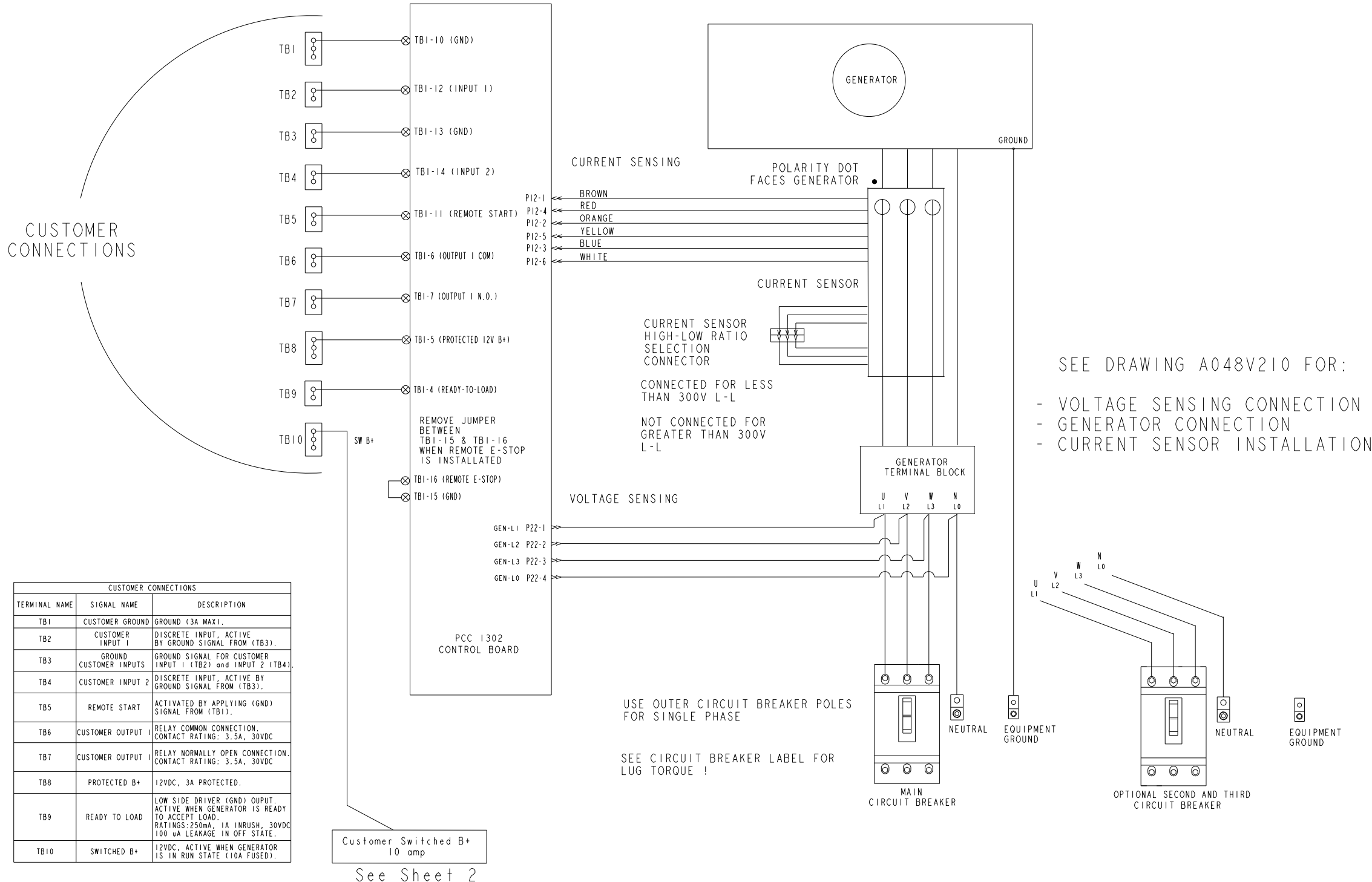
SHUNT EXCITATION CONFIGURATION



PERMANENT MAGNET GENERATOR EXCITATION CONFIGURATION

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		DO NOT SCALE PRINT	DATE	SCALE	1/1	ANG TOL: ± 1.0°
X ±0.1	0.00-4.99	+0.15/-0.00	DATE	DATE	DATE	DATE
X ±0.05	5.00-9.99	+0.20/-0.10	DATE	DATE	DATE	DATE
XX ±0.25	10.00-17.49	+0.25/-0.13	DATE	DATE	DATE	DATE
	17.50-24.99	+0.30/-0.12	DATE	DATE	DATE	DATE

REV NO	LTN	NO	REVISION	APP	CHKD	APPD	DATE
ECO-176504	C	-	-----	AGJ	AGJ	P. LARSON	30MAR18

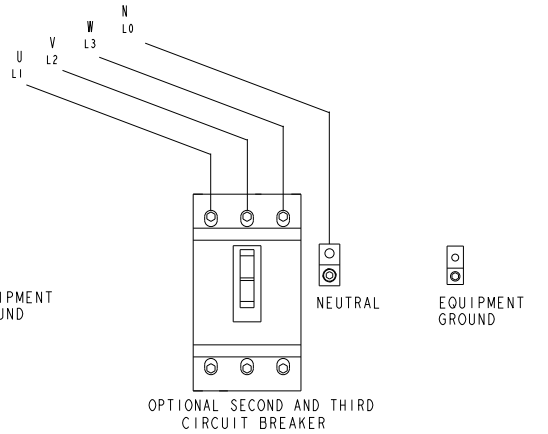


CUSTOMER CONNECTIONS		
TERMINAL NAME	SIGNAL NAME	DESCRIPTION
TB1	CUSTOMER GROUND	GROUND (3A MAX).
TB2	CUSTOMER INPUT 1	DISCRETE INPUT, ACTIVE BY GROUND SIGNAL FROM (TB3).
TB3	GROUND CUSTOMER INPUTS	GROUND SIGNAL FOR CUSTOMER INPUT 1 (TB2) and INPUT 2 (TB4).
TB4	CUSTOMER INPUT 2	DISCRETE INPUT, ACTIVE BY GROUND SIGNAL FROM (TB3).
TB5	REMOTE START	ACTIVATED BY APPLYING (GND) SIGNAL FROM (TB1).
TB6	CUSTOMER OUTPUT 1	RELAY COMMON CONNECTION, CONTACT RATING: 3.5A, 30VDC
TB7	CUSTOMER OUTPUT 1	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

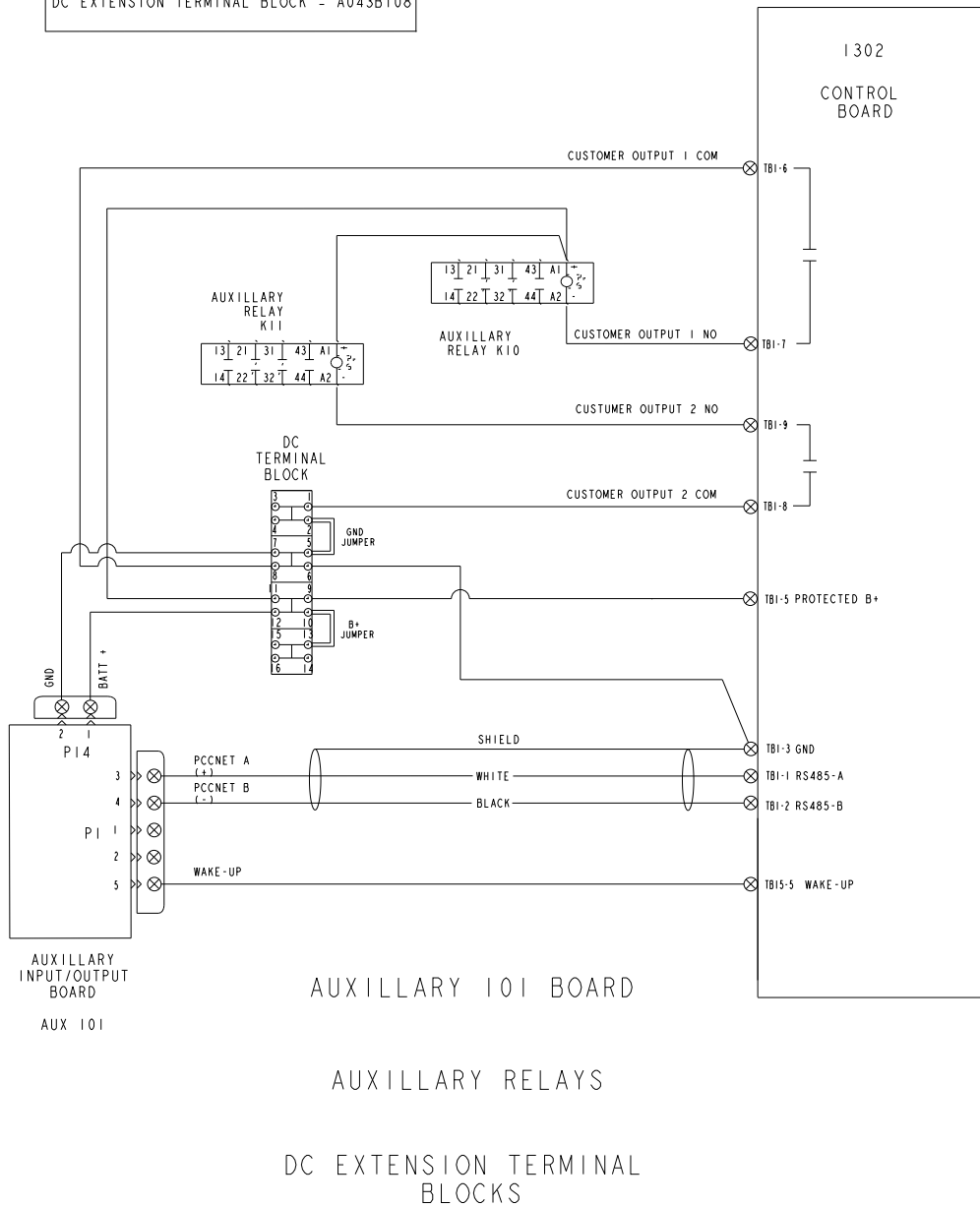
USE OUTER CIRCUIT BREAKER POLES FOR SINGLE PHASE
SEE CIRCUIT BREAKER LABEL FOR LUG TORQUE !



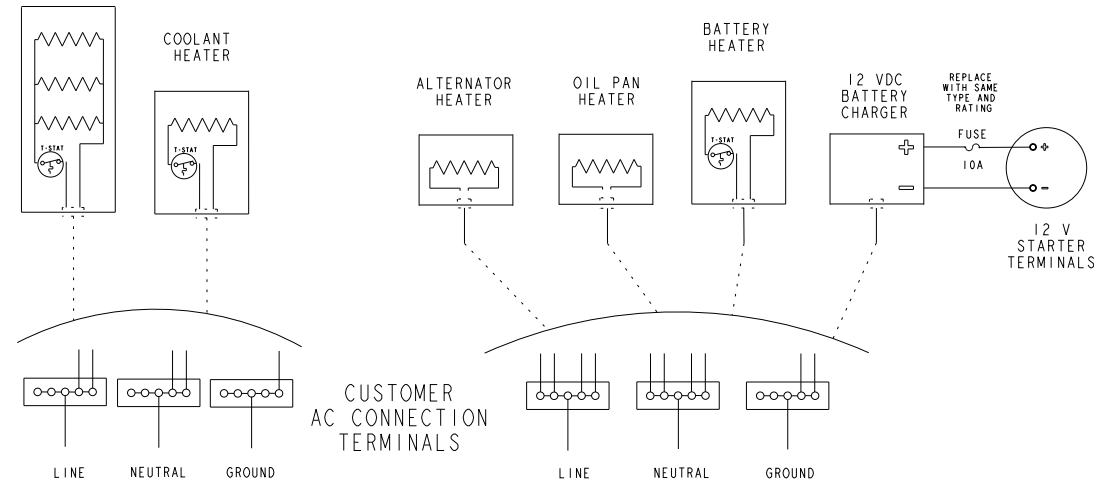
UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		DO NOT SCALE PRINT	APPD P. LARSON	DATE 07APR15	SITE CODE	PGF	REV E	A052B811	SHEET 4 of 7
± 0.1	0.00 - 4.99	± 0.15 / -0.00	APPD P. LARSON	DATE 07APR15					
± 0.8	5.00 - 9.99	± 0.25 / -0.13	DATE 07APR15						
± 0.38	10.00 - 17.49	± 0.25 / -0.13							
	17.50 - 24.99	± 0.20 / -0.12							

REV NO	LTN	NO	REVISION	APP	CHK	APPD	DATE
ECO-176504	C	1	CONTINUOUSLY WAS CONTINUOUSLY	AGJ	AGJ	P. LARSON	30MAR18

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



CLOSED CRANKCASE VENTILATION HEATERS



NOTICE !
 CCV HEATERS MUST BE CONNECTED TO A CONTINUOUSLY ENERGIZED CIRCUIT FROM BOTH UTILITY & GENERATOR

INSTALLER TO PROVIDE BRANCH CIRCUITS TO POWER ALL ACCESSORIES

ALL ACCESSORIES ARE SINGLE PHASE 120 Vac 60 Hz
 SOME CANADIAN ACCESSORIES REQUIRE 120 Vac RECEPTACLE
 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
- 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 192 Watts, 120Vac, 1.67 amps
- CCV heaters 120 Watts, 120Vac, 1.0 amps

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		DO NOT SCALE PRINT	DESIGNED BY: K. DEIVASIGAMANI	CUMMINS POWER GENERATION	
DATE	SCALE	DATE	APP'D BY: P. LARSON	SCHEMATIC, GENSET	
18.00-17.49	1:1	17.50-24.99	DATE: 07APR15	SITE CODE: LEAN BURN	
ANG TOL: ± 1.0°	SCALE: 1/1	PROPERTY OF: CUMMINS POWER GENERATION GROUP	PGF	SHEET 5 OF 7	

REV NO	LTN	NO	REVISION	BY	CHK	APPD	DATE
ECO-176504	C	-	-----	AGJ	AGJ	P. LARSON	30MAR18

SEC SOL B+ 1 ———< NOT USED

SEC SOL B+ 2 ———< NOT USED

SINGLE FUEL

NATURAL GAS or PROPANE

PRIMARY FUEL SOLENOID # 1

PRIMARY FUEL SOLENOID # 2

PR SOL B+ 1

N G LOCK 1

PR SOL B+ 2

N G LOCK 2

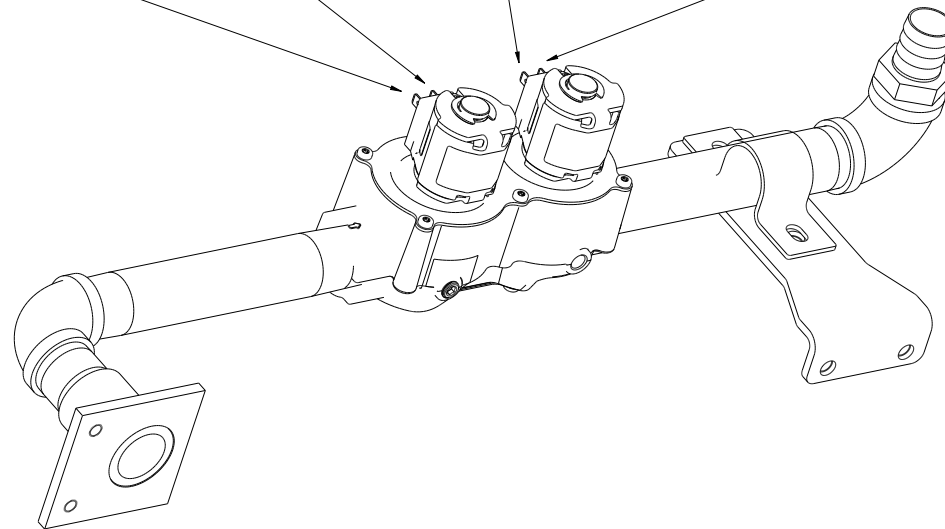
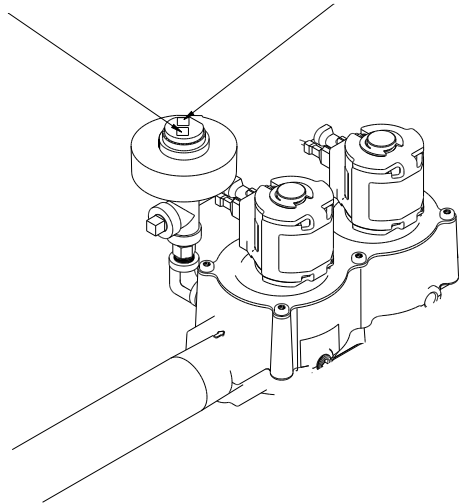
L P LOCK 1

L P LOCK 2

OPTIONAL FUEL PRESSURE SWITCH

FUEL SW C

FUEL SW N.O.



UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		REV NO	K. DEIVASIGAMANI	CUMMINS POWER GENERATION	
DO NOT SCALE PRINT		DES	P. LARSON	SCHEMATIC, GENSET	
		APPD	P. LARSON	LEAN BURN	
		DATE	07APR15	SITE CODE	
		CONFIDENTIAL - PROPERTY OF CUMMINS POWER GENERATION GROUP	ARROW	PGF	E
ANG TOL: ± 1.0°	SCALE: 1/1	PART NO: A052B811		SHEET 6 OF 7	

REV NO	LTN	NO	REVISION	BY	CHK	APPD	DATE
ECO-176504	C	-	-----	AGJ	AGJ	P. LARSON	30MAR18

SECONDARY FUEL - PROPANE

SECONDARY FUEL SOLENOID # 1

SECONDARY FUEL SOLENOID # 2

SEC SOL B+ 1 ← [Symbol] → L P LOCK 1

SEC SOL B+ 2 ← [Symbol] → L P LOCK 2

PRESSURE SWITCH
FUEL SW C
FUEL SW N.O.

DUAL FUEL

PR SOL B+ 1 ← [Symbol] → N G LOCK 1

PR SOL B+ 2 ← [Symbol] → N G LOCK 2

NOT USED

NOT USED

PRIMARY FUEL SOLENOID # 1

PRIMARY FUEL SOLENOID # 2

PRIMARY FUEL - NATURAL GAS

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS		DO NOT SCALE PRINT	BY: K. DEIVASIGAMANI	 CUMMINS POWER GENERATION
X ±1	0.00-4.99 +0.15/-0.00	 ARROW	CHK: P. LARSON	
X ±0.8	5.00-9.99 +0.20/-0.10		APPD: P. LARSON	SHEET 7 of 8
X ±0.25	10.00-17.49 +0.25/-0.13		DATE: 07APR15	
ANG TOL: ± 1.0°	17.50-24.99 +0.30/-0.12	SCALE: 1/1	CONFIDENTIAL - PROPERTY OF CUMMINS POWER GENERATION GROUP FOR INTERNAL USE ONLY FIRST USER OR UNAUTHORIZED REVISIONS ARE PROHIBITED	

Part A052B811 C

Description	Legacy Name	External Regulations	Application Status	Release Phase Code	Security Classification	Alternates
DIAGRAM,GENSET SCHEMATIC	A052B811	None	Production Only	Production	Confidential	

Part Specifications :A052B811 C

Name	Description	Legacy Name
A030B356	SPECIFICATION,MATERIAL	CES10903
A052B812	DRAWING,ENGINEERING	A052B812