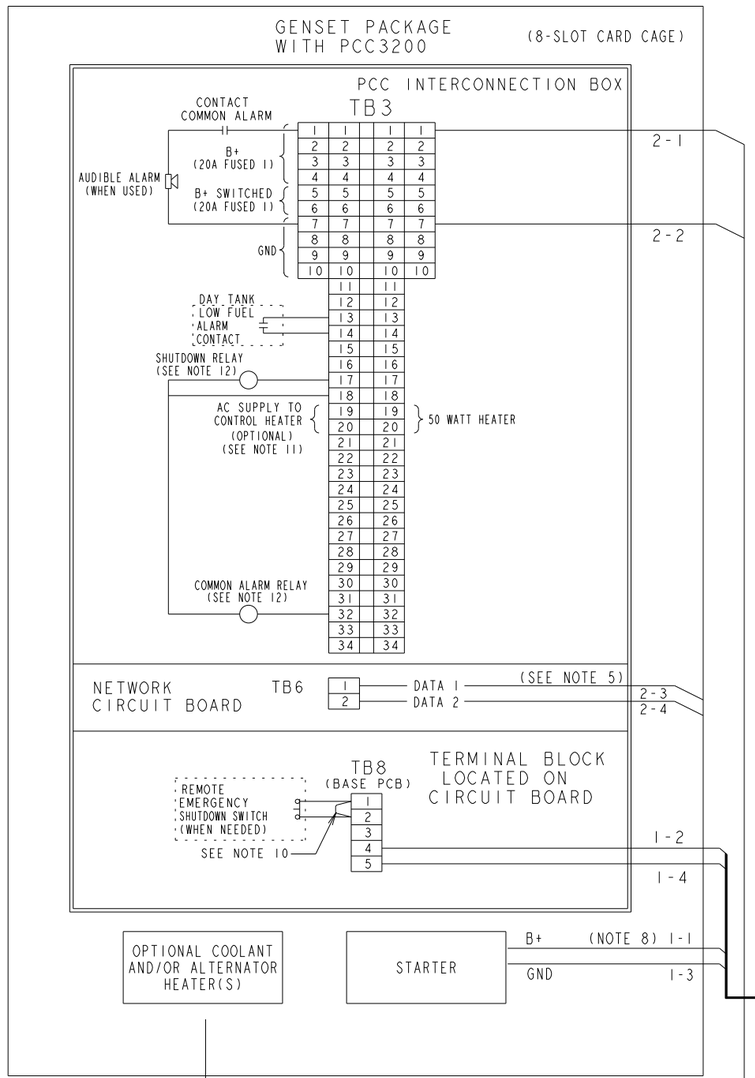
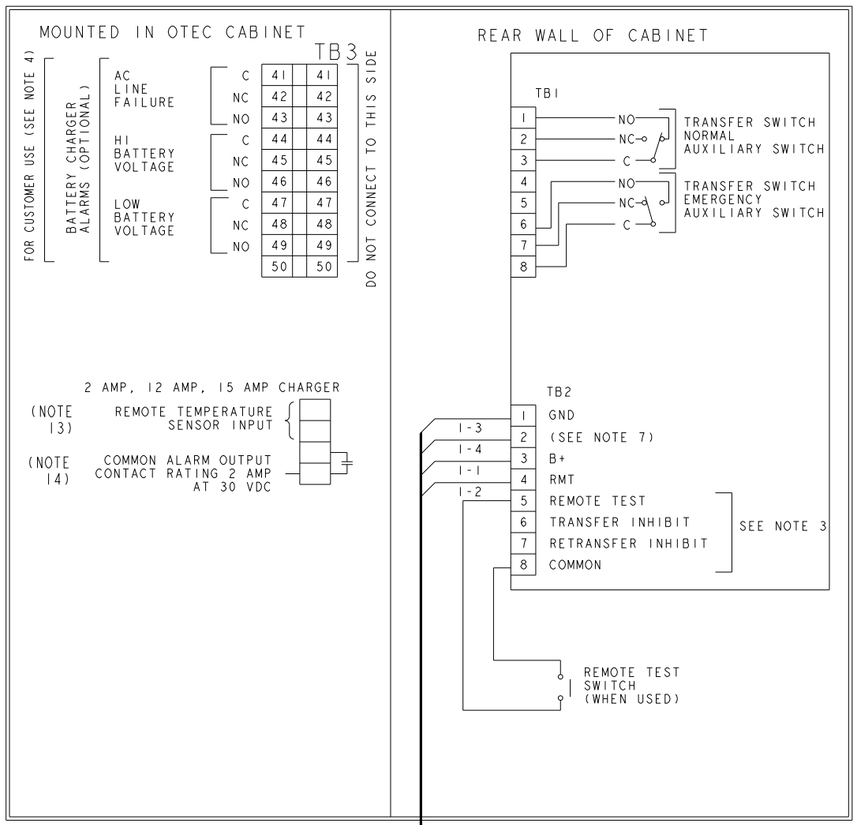
PTC® Creo® Parametric

REL NO	REV	NO	REVISION	DWN	CKD	APVD	DATE
ECO-177126	G	1	SEE SHEET 7	MSC	LHS	T.BEAUCAGE	01FEB19
		2	SEE SHEET 9	MSC	LHS	T.BEAUCAGE	01FEB19
		3	SEE SHEET 9	MSC	LHS	T.BEAUCAGE	01FEB19
		4	SEE SHEET 9	MSC	LHS	T.BEAUCAGE	01FEB19
		5	SEE SHEET 10	MSC	LHS	T.BEAUCAGE	01FEB19
		6	SEE SHEET 10	MSC	LHS	T.BEAUCAGE	01FEB19
		7	SEE SHEET 10	MSC	LHS	T.BEAUCAGE	01FEB19
		8	SEE SHEET 10	MSC	LHS	T.BEAUCAGE	01FEB19
		9	ADD SHEET 11	MSC	LHS	T.BEAUCAGE	01FEB19
		10	ADD SHEET 12	MSC	LHS	T.BEAUCAGE	01FEB19





(NOTE I)

WIRE SIZE (AWG)	DISTANCE IN FEET, ONE WAY (MULTIPLY BY 0.3 FOR METERS)				
	A	B	C	D	E
16	1000	90	-	50	-
14	1600	150	20	80	5
12	2400	225	30	125	10
10	4000	350	50	200	15
8	-	600	80	300	25
6	-	1000	125	500	40

NOTES:

1. WIRE SIZES MUST BE AS FOLLOWS:
   RUN #1-GENSET TO TRANSFER SWITCH-LEAD SIZE MUST BE INCREASED IF A BATTERY CHARGER IS INSTALLED IN THE SWITCH.
   WITH NO BATT CHARGER-LEADS 1-1, -2, -3, -4, -5 USE COL A.
   WITH 2 AMP CHARGER, MAXIMUM VOLTAGE DROP OF 1.5 VOLTS, LEADS 1-1, & 1-3 USE COL B.
   WITH 12/15 AMP CHARGER MAXIMUM VOLTAGE DROP OF 1.5 VOLTS, LEADS 1-1 & 1-3 USE COL. C.
   WITH 2 AMP CHARGER, MAXIMUM VOLTAGE DROP OF 0.75 VOLTS, LEADS 1-1, & 1-3 USE COL D.
   WITH 12/15 AMP CHARGER, MAXIMUM VOLTAGE DROP OF 0.75 VOLTS, LEADS 1-1, & 1-3 USE COL E. TO MEET THE NFPA110 REQUIREMENT TO RETURN A FULLY DISCHARGED BATTERY TO 100% OF IT'S AMPERE-HOUR RATING WITHIN 24 HOURS USE COL. E.
2. FOR MULTIPLE TRANSFER SWITCHES, DUPLICATE RUN #1 FOR EACH SWITCH. DAISY CHAIN CONNECTION IS ACCEPTABLE PROVIDED WIRE SIZE & DISTANCE TO THE LAST SWITCH MEET THE SPECS IN NOTE 1.
3. CONNECT AN OPEN DRY CONTACT BETWEEN THE APPLICABLE TERMINAL AND COMMON (TB2-8). FOR REMOTE TEST, TRANSFER INHIBIT AND RETRANSFER INHIBIT TO ACTIVATE.
4. CONTACTS RATED: 4 AMPS AT 30 VDC OR 120V MAX.
5. REFER TO ONAN 900-0529 POWERCOMMAND NETWORK INSTALLATION & OPERATION MANUAL FOR WIRING INSTRUCTIONS, WIRE SIZE, AND LENGTH. USE STRANDED TWISTED PAIR WIRES WHEN CONNECTING DATA1 AND DATA2 TO NETWORK. PART # 0334-1350 OR EQUAL.
6. INPUTS FOR CUSTOMER FAULTS. GROUNDED SIGNAL REQUIRED TO ACTIVATE INPUT (MAX 50 MA.)
7. NO JUMPER IS REQUIRED BETWEEN TB2-1 & TB2-2 OR BETWEEN TB2-2 & TB2-3.
8. CONFIGURATION SHOWN IS FOR ATS-MOUNTED BATTERY CHARGER. IF WALL-MOUNTED CHARGER IS USED, CONNECT B+ AND GND FROM CHARGER DIRECTLY TO BATTERY OR STARTER.
9. TRANSFER SWITCH SHOWN CLOSED TO NORMAL.
10. OPEN CONNECTION TO INITIATE EMERGENCY STOP THESE TERMINALS MUST BE SHORTED TOGETHER IF REMOTE EMERGENCY STOP OPTION NOT USED. JUMPER SHOWN BETWEEN TB8-1 AND TB8-2 NOT SUPPLIED WITH UNIT.
11. 120VAC OR 240VAC AT 50W.
12. CUSTOMER SUPPLIED EITHER 12 OR 240VDC RELAYS OUTPUT SIGNAL 20ma @ 24VDC MAX.
13. USE THE INVENTER REMOTE TEMPERATURE PROBE (0193-0530).
14. THE FOLLOWING FAILS WILL CAUSE A BATTERY CHARGER ALARM OUTPUT: LOW BATTERY VOLTAGE, HIGH BATTERY VOLTAGE, LOW AC INPUT VOLTAGE, HIGH AC INPUT VOLTAGE OVERCURRENT, HIGH CHARGER TEMPERATURE, BATTERY FAILURE, HIGH BATTERY TEMPERATURE (NOT AVAILABLE ON 2 AMP CHARGER).

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS

DIM		HOLE	
X	± 1	0.00- 4.99	+0.15/-0.08
.X	± 0.8	5.00- 9.99	+0.20/-0.10
.XX	± 0.38	10.00-17.49	+0.25/-0.13
		17.50-24.99	+0.30/-0.13

ANG TOL ± 1.0° | SCALE 1/1

THIS DOCUMENT (AND THE INFORMATION SHOWN THEREON) IS CONFIDENTIAL AND PROPRIETARY AND SHALL NOT BE DISCLOSED TO OTHERS IN HARD COPY OR ELECTRONIC FORM, REPRODUCED BY ANY MEANS, OR USED FOR ANY PURPOSE WITHOUT WRITTEN CONSENT OF CUMMINS INC.

SIM TO 0630_1974
DO NOT SCALE PRINT

DWN G_COLLEEN
CKD J MILLER
APVD J MILLER
DATE 13FEB04

FOR INTERPRETATION OF DIMENSIONING AND TOLERANCING, SEE ASME Y14.5M-1994

FIRST USED ON OTEC

CUMMINS POWER GENERATION

WD-INTERCONNECTION

SITE CODE PGF

DWG SIZE D | 0630_2810 | CAD SHEET 1 of 12

Drawing Name: 0630-2810 Revision: G
Part Name: 0630-2810 Revision: G
ECO-177126 Sheet 1 of 13

PTC® Creo® Parametric

REL NO	REV	NO	REVISION	DWN	CKD	APVD	DATE
ECO-177126	G	-	---	MSC	LHS	T.BEAUCAGE	01FEB19

OTEC
UTILITY TO GENSET

GENSET PACKAGE WITH PCC3100

PCC INTERCONNECTION BOX

TB1

B+ (20A FUSE)	1	1
SWITCH B+ (10A FUSE)	2	2
GROUND	3	3
GROUND	4	4
REMOTE START	5	5
REMOTE EMERGENCY STOP	6	6
COMMON ALARM (N/O)	7	7
COMMON ALARM (COMMON)	8	8
COMMON ALARM (N/C)	9	9
BREAKER CONTROL (N/O)	10	10
BREAKER CONTROL (N/O)	11	11
NET POWER (+)	12	12
NET POWER (-)	13	13
NET DATA 1	14	14
NET DATA 2	15	15
CUSTOMER FAULT 1	16	16
CUSTOMER FAULT 2	17	17
CUSTOMER FAULT 3	18	18
CUSTOMER FAULT 4	19	19
FAULT RESET	20	20
ENGINE IDLE	21	21
LOW FUEL	22	22
NOT ON AUTO	23	23
PRE-HIGH ENGINE TEMP	24	24
HIGH ENGINE TEMP	25	25
OVERSPEED	26	26
OVERCRANK	27	27
LOW ENGINE TEMP	28	28
LOW FUEL	29	29
LOW COOLANT	30	30
PRE-LOW OIL PRESSURE	31	31
LOW OIL PRESSURE	32	32
COMMON	33	33
RETURN	34	34
RUPTURE BASIN	35	35
CONT HTR 1	36	36
CONT HTR 2	37	37
(N/O) READY TO LOAD	38	38
(N/O) LOAD DUMP	39	39
COMMON	40	40

(SEE NOTE 6)

(SEE NOTE 7)

AC SUPPLY TO CONTROL HEATER (OPT)

2-1 1-1 2-2 1-3 1-2

AUDIBLE ALARM (WHEN USED)

REMOTE EMERGENCY STOP SWITCH (WHEN USED)

2-10 2-8 2-6 2-5 2-4 2-11 2-12 2-15 2-9 2-7 2-3

DAYTANK
LOW FUEL ALARM CONTACT

2-13 1-4
SPLICE BY INSTALLER
2-14 1-5

MOUNTED IN OTEC CABINET

FOR CUSTOMER USE (SEE NOTE 5)

BATTERY CHARGER ALARMS (OPTIONAL)

AC LINE FAILURE
HI BATTERY VOLTAGE
LOW BATTERY VOLTAGE

TB3 — DO NOT CONNECT TO THIS SIDE

C	41	41
NC	42	42
NO	43	43
C	44	44
NC	45	45
NO	46	46
C	47	47
NC	48	48
NO	49	49
	50	50

2 AMP, 12 AMP, 15 AMP CHARGER

(NOTE 12) REMOTE TEMPERATURE SENSOR INPUT

(NOTE 13) COMMON ALARM OUTPUT CONTACT RATING 2 AMP AT 30 VDC

REAR WALL OF CABINET

TB1

1-4 1-5

NO / NC / C — TRANSFER SWITCH NORMAL AUXILIARY SWITCH

NO / NC / C — TRANSFER SWITCH EMERGENCY AUXILIARY SWITCH

TB2

1-3 1-1 1-2

1	GND (SEE NOTE 8)
2	
3	B+
4	RMT
5	REMOTE TEST
6	TRANSFER INHIBIT
7	RETRANSFER INHIBIT
8	COMMON

SEE NOTE 4

REMOTE TEST SWITCH (WHEN USED)

RUN #2 SEE NOTE 2

RUN #1 SEE NOTE 1

RUN #2 SEE NOTE 2

RUN #2 SEE NOTE 2

ANNUNCIATOR 300-4510-XX

TB1

2-1	1	24VDC
	2	12VDC (SELECT ONE)
2-2	3	GND
2-3	4	GEN RUNNING
2-13	5	UTILITY ON
2-14	6	EPS LOADED
2-9	7	PRE-LOP
2-7	8	LOP
2-8	9	PRE-HET
2-6	10	HET
2-11	11	LET
2-5	12	OVERSPEED
2-4	13	OVERCRANK
2-10	14	NOT IN AUTO
	15	CHARGER MALFUNCTION
2-12	16	LOW FUEL
	17	CUSTOMER FAULT 1
	18	
	19	
	20	NO CONNECTION
	21	
	22	
	23	
	24	

TB2

	1	NO CONNECTION
	2	
	3	
2-15	4	LOW COOLANT
	5	CUSTOMER FAULT 2
	6	CUSTOMER FAULT 3
	7	
	8	

ANNUNCIATOR 300-5929

TB1

	1	CUSTOMER FAULT 1
	2	CUSTOMER FAULT 2
	3	CUSTOMER FAULT 3
2-14	4	GENSET SUPPLYING LOAD
	5	CHARGER AC FAILURE
2-15	6	LOW COOLANT LEVEL
2-12	7	LOW FUEL LEVEL
2-13	8	NORMAL UTILITY OR CHECK GENSET
	9	
	10	
	11	
	12	
	13	
	14	
2-2	15	GND
2-1	16	BATT
NC	17	GND

TB2

	1	GND
2-10	2	NOT IN AUTO
2-3	3	GENSET RUNNING
	4	
	5	
	6	
2-4	7	FAIL TO START
2-11	8	LOW COOLANT TEMP
2-8	9	PRE-HIGH ENGINE TEMP
2-6	10	HIGH ENGINE TEMP
2-9	11	PRE-LOW OIL PRESSURE
2-7	12	LOW OIL PRESSURE
2-5	13	OVERSPEED
	14	

TB3

1	
2	
3	
4	
5	
6	
7	
8	

0541-0814 ANNUNCIATOR

2-1	3	B+
2-2	6	GND
	1	DATA1
	2	DATA2

(SEE NOTE 6)

(SEE NOTE 1)

WIRE SIZE (AWG)	DISTANCE IN FEET, ONE WAY (MULTIPLY BY 0.3 FOR METERS)				
	A	B	C	D	E
16	1000	90	-	50	-
14	1600	150	20	80	5
12	2400	225	30	125	10
10	4000	350	50	200	15
8	-	600	80	300	25
6	-	1000	125	500	40

NOTES:

1. WIRE SIZES MUST BE AS FOLLOWS:
   RUN #1-GENSET TO TRANSFER SWITCH-LEAD SIZE MUST BE INCREASED IF A BATTERY CHARGER IS INSTALLED IN THE SWITCH.
   WITH NO BATT CHARGER-LEADS 1-1, -2, -3, -4, -5 USE COL A.
   WITH 2 AMP CHARGER, MAXIMUM VOLTAGE DROP OF 1.5 VOLTS, LEADS 1-1, & 1-3 USE COL B.
   WITH 12/15 AMP CHARGER MAXIMUM VOLTAGE DROP OF 1.5 VOLTS, LEADS 1-1 & 1-3 USE COL. C.
   WITH 2 AMP CHARGER, MAXIMUM VOLTAGE DROP OF 0.75 VOLTS, LEADS 1-1, & 1-3 USE COL D.
   WITH 12/15 AMP CHARGER, MAXIMUM VOLTAGE DROP OF 0.75 VOLTS, LEADS 1-1, & 1-3 USE COL E. TO MEET THE NFPA110 REQUIREMENT TO RETURN A FULLY DISCHARGED BATTERY TO 100% OF IT'S AMPERE-HOUR RATING WITHIN 24 HOURS USE COL. E.
2. FOR 300-4510 ANNUNCIATOR, RUN #2-GENSET TO ANNUNCIATOR-ALL LEADS, USE COL. A.
3. FOR MULTIPLE TRANSFER SWITCHES, DUPLICATE RUN #1 FOR EACH) SWITCH. DAISY CHAIN CONNECTION IS ACCEPTABLE PROVIDED WIRE SIZE & DISTANCE TO THE LAST SWITCH MEET THE SPECS IN NOTE 1.
4. CONNECT AN OPEN DRY CONTACT BETWEEN THE APPLICABLE TERMINAL AND COMMON (TB2-8). FOR REMOTE TEST, TRANSFER INHIBIT AND RETRANSFER INHIBIT TO ACTIVATE.
5. CONTACTS RATED: 4 AMPS AT 30 VDC OR 120V MAX.
6. NETWORK CONNECTIONS: USE BELDEN 9729 24 GAUGE TWISTED, STRANDED, SHIELDED CABLE. SHIELD SHOULD BE GROUNDED AT ONE END. TOTAL NETWORK LENGTH NOT TO EXCEED 4000 FEET. UP TO 20 NODES CAN BE CONNECTED TO THE NETWORK. (NOTE ANY COMMUNICATIONS WIRE CONNECTED TO THE GENSET SHOULD BE STRANDED CABLE.).
7. INPUTS FOR CUSTOMER FAULTS. GROUNDED SIGNAL REQUIRED TO ACTIVATE INPUT (MAX 50 MA.)
8. INSTALL JUMPER BETWEEN TB2-1 & TB2-2. FOR SETS WITH PCC 3100 CONTROL.
9. TRANSFER SWITCH SHOWN CLOSED TO NORMAL.
10. CONTACTS RATED: 2 AMPS AT 30 VDC OR 0.60 AMPS AT 120 VAC.
11. REFER TO 0900-0301 FOR INSTALLATION OF 0300-5929.
12. USE THE INVENTER REMOTE TEMPERATURE PROBE (0193-0530).
13. THE FOLLOWING FAILS WILL CAUSE A BATTERY CHARGER ALARM OUTPUT:
    LOW BATTERY VOLTAGE, HIGH BATTERY VOLTAGE, LOW AC INPUT VOLTAGE, HIGH AC INPUT VOLTAGE OVERCURRENT, HIGH CHARGER TEMPERATURE, BATTERY FAILURE, HIGH BATTERY TEMPERATURE (NOT AVAILABLE ON 2 AMP CHARGER).
14. NETWORK CONNECTIONS: USE BELDEN 9729 24 GAUGE TWISTED, STRANDED, SHIELDED CABLE. SHIELD SHOULD BE GROUNDED AT ONE END. TOTAL NETWORK LENGTH NOT TO EXCEED 4000 FEET. UP TO 20 NODES CAN BE CONNECTED TO THE NETWORK. (NOTE ANY COMMUNICATIONS WIRE CONNECTED TO THE GENSET SHOULD BE STRANDED CABLE.).

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS

DIM: X ±1 / .X ±0.8 / .XX± 0.38
HOLE: 0.00-4.99 +0.15/-0.08; 5.00-9.99 +0.20/-0.10; 10.00-17.49 +0.25/-0.13; 17.50-24.99 +0.30/-0.13
ANG TOL ± 1.0°
SCALE 1/1

SIM TO 0630_1974
DO NOT SCALE PRINT
FOR INTERPRETATION OF DIMENSIONING AND TOLERANCING, SEE ASME Y14.5M-1994
FIRST USED ON OTEC

DWN	G_COLLEEN
CKD	J MILLER
APVD	J MILLER
DATE	13FEB04

CUMMINS POWER GENERATION

WD-INTERCONNECTION

SITE CODE PGF

DWG SIZE D — 0630_2810

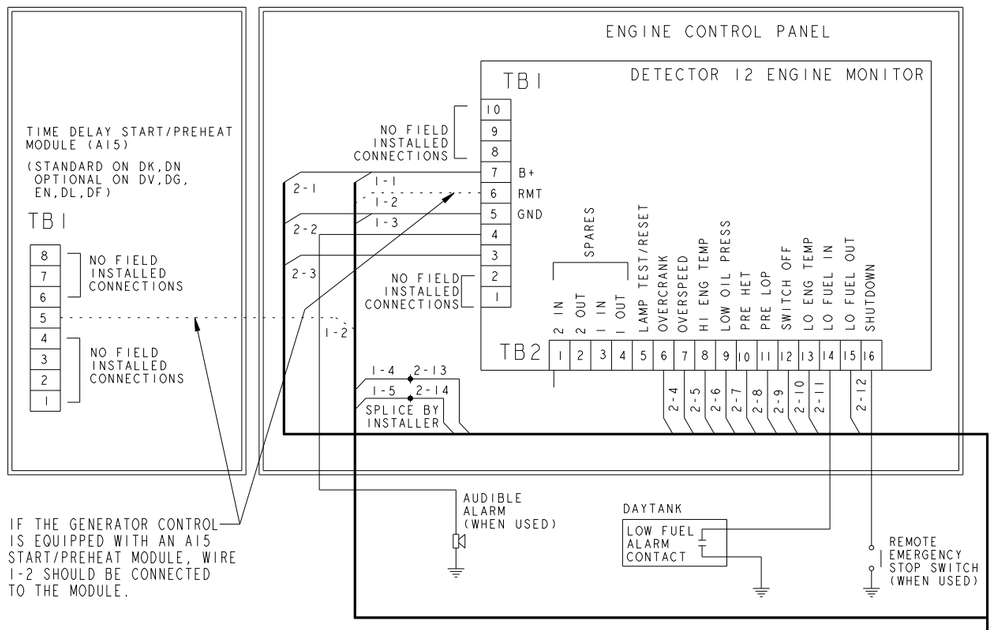
CAD SHEET 2 of 12

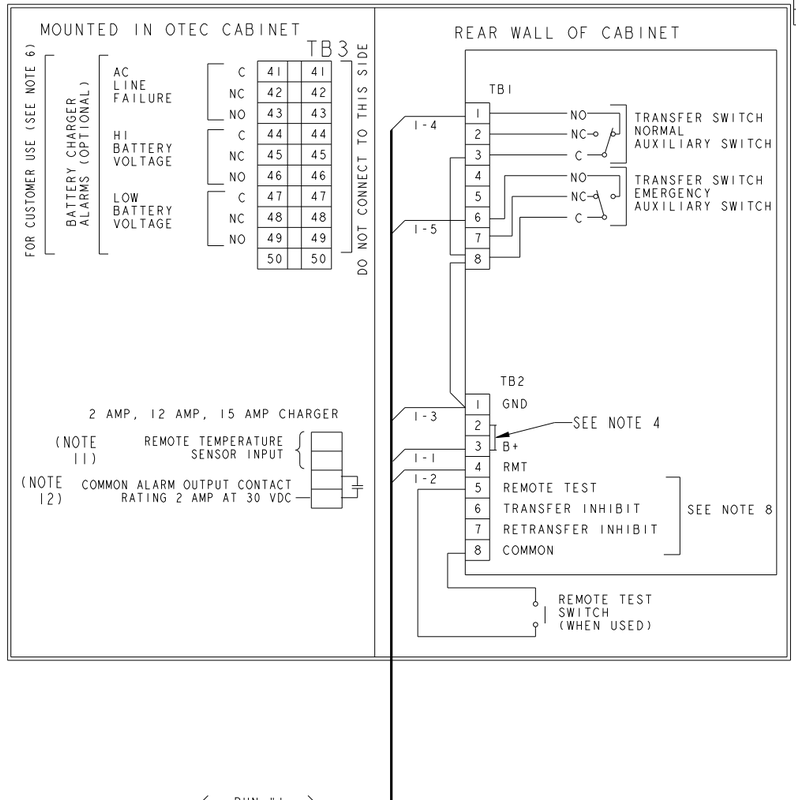
PTC® Creo® Parametric

REL NO	REV	NO	REVISION	DWN	CKD	APVD	DATE
ECO-177126	G	-	---	MSC	LHS	T.BEAUCAGE	01FEB19

OTEC UTILITY TO GENSET

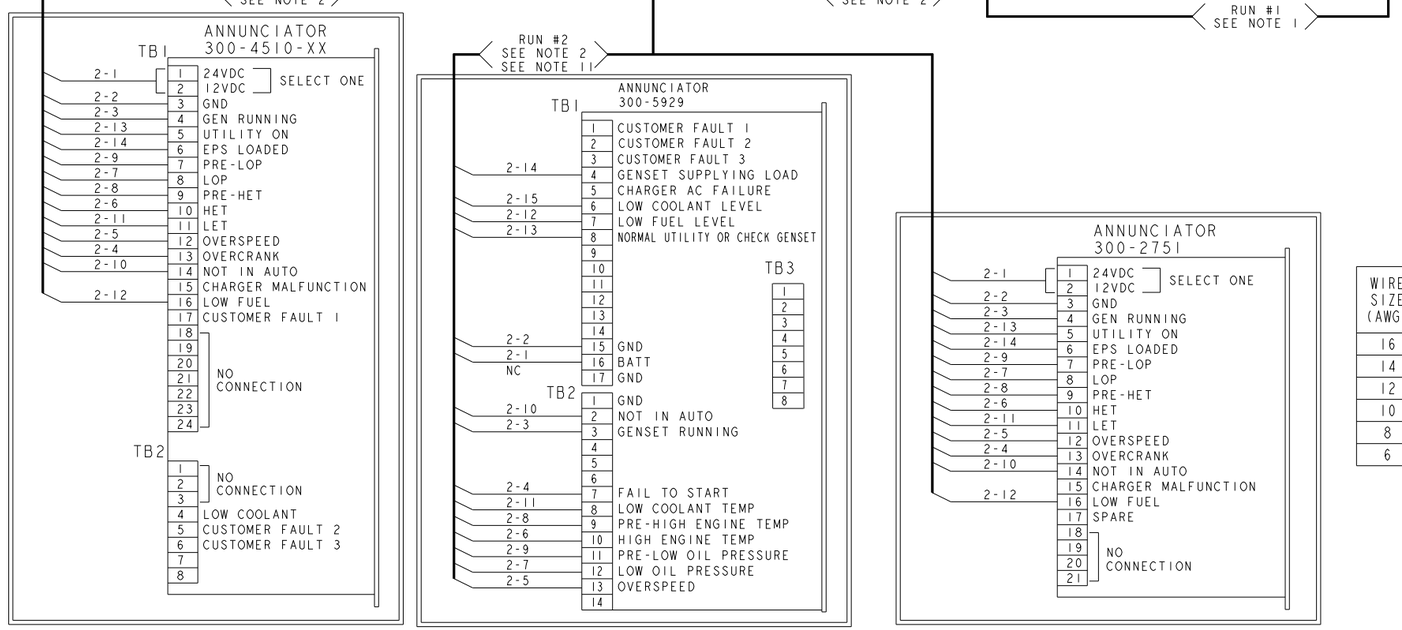
CUMMINS POWERGENERATOR SET WITH DETECTOR CONTROL





NOTES:

1. WIRE SIZES MUST BE AS FOLLOWS:
   RUN #1-GENSET TO TRANSFER SWITCH-LEAD SIZE MUST BE INCREASED IF A BATTERY CHARGER IS INSTALLED IN THE SWITCH.
   WITH NO BATT CHARGER-LEADS 1-1, -2, -3, -4, -5 USE COL A.
   WITH 2 AMP CHARGER, MAXIMUM VOLTAGE DROP OF 1.5 VOLTS, LEADS 1-1, & 1-3 USE COL B.
   WITH 12/15 AMP CHARGER MAXIMUM VOLTAGE DROP OF 1.5 VOLTS, LEADS 1-1 & 1-3 USE COL. C.
   WITH 2 AMP CHARGER, MAXIMUM VOLTAGE DROP OF 0.75 VOLTS, LEADS 1-1, & 1-3 USE COL D.
   WITH 12/15 AMP CHARGER, MAXIMUM VOLTAGE DROP OF 0.75 VOLTS, LEADS 1-1, & 1-3 USE COL E. TO MEET THE NFPA110 REQUIREMENT TO RETURN A FULLY DISCHARGED BATTERY TO 100% OF IT'S AMPERE-HOUR RATING WITHIN 24 HOURS USE COL. E.
2. RUN #2-GENSET TO ANNUNCIATOR-ALL LEADS, USE COL. A.
3. FOR MULTIPLE TRANSFER SWITCHES, DUPLICATE RUN #1 FOR EACH SWITCH. DAISY CHAIN CONNECTION IS ACCEPTABLE PROVIDED WIRE SIZE & DISTANCE TO THE LAST SWITCH MEET THE SPECS IN NOTE 1.
4. INSTALL JUMPER BETWEEN TB2-2 & TB2-3.
5. 300-4510-XX ANNUNCIATOR MAY BE USED ALSO. WIRE TB1 AS SHOWN.
6. CONTACTS RATED: 4 AMPS AT 30 VDC OR 120V MAX.
7. TRANSFER SWITCH SHOWN CLOSED TO NORMAL.
8. CONNECT AN OPEN DRY CONTACT BETWEEN THE APPLICABLE TERMINAL AND COMMON (TB2-8). FOR REMOTE TEST, TRANSFER INHIBIT AND RETRANSFER INHIBIT TO ACTIVATE.
9. CONTACTS RATED: 2 AMPS AT 30 VDC OR 0.60 AMPS AT 120 VAC.
10. REFER TO 0900-0301 FOR INSTALLATION OF 0300-5929.
11. USE THE INVENTER REMOTE TEMPERATURE PROBE (0193-0530).
12. THE FOLLOWING FAILS WILL CAUSE A BATTERY CHARGER ALARM OUTPUT:
    LOW BATTERY VOLTAGE, HIGH BATTERY VOLTAGE, LOW AC INPUT VOLTAGE, HIGH AC INPUT VOLTAGE OVERCURRENT, HIGH CHARGER TEMPERATURE, BATTERY FAILURE, HIGH BATTERY TEMPERATURE (NOT AVAILABLE ON 2 AMP CHARGER).
13. NETWORK CONNECTIONS: USE BELDEN 9729 24 GAUGE TWISTED, STRANDED, SHIELDED CABLE. SHIELD SHOULD BE GROUNDED AT ONE END. TOTAL NETWORK LENGTH NOT TO EXCEED 4000 FEET. UP TO 20 NODES CAN BE CONNECTED TO THE NETWORK. (NOTE ANY COMMUNICATIONS WIRE CONNECTED TO THE GENSET SHOULD BE STRANDED CABLE.).



(SEE NOTE 1)

WIRE SIZE (AWG)	DISTANCE IN FEET, ONE WAY (MULTIPLY BY 0.3 FOR METERS)				
	A	B	C	D	E
16	1000	90	-	50	-
14	1600	150	20	80	5
12	2400	225	30	125	10
10	4000	350	50	200	15
8	-	600	80	300	25
6	-	1000	125	500	40

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS
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ANG TOL ± 1.0°
SCALE 1/1
SIM TO 0630_1974
DO NOT SCALE PRINT

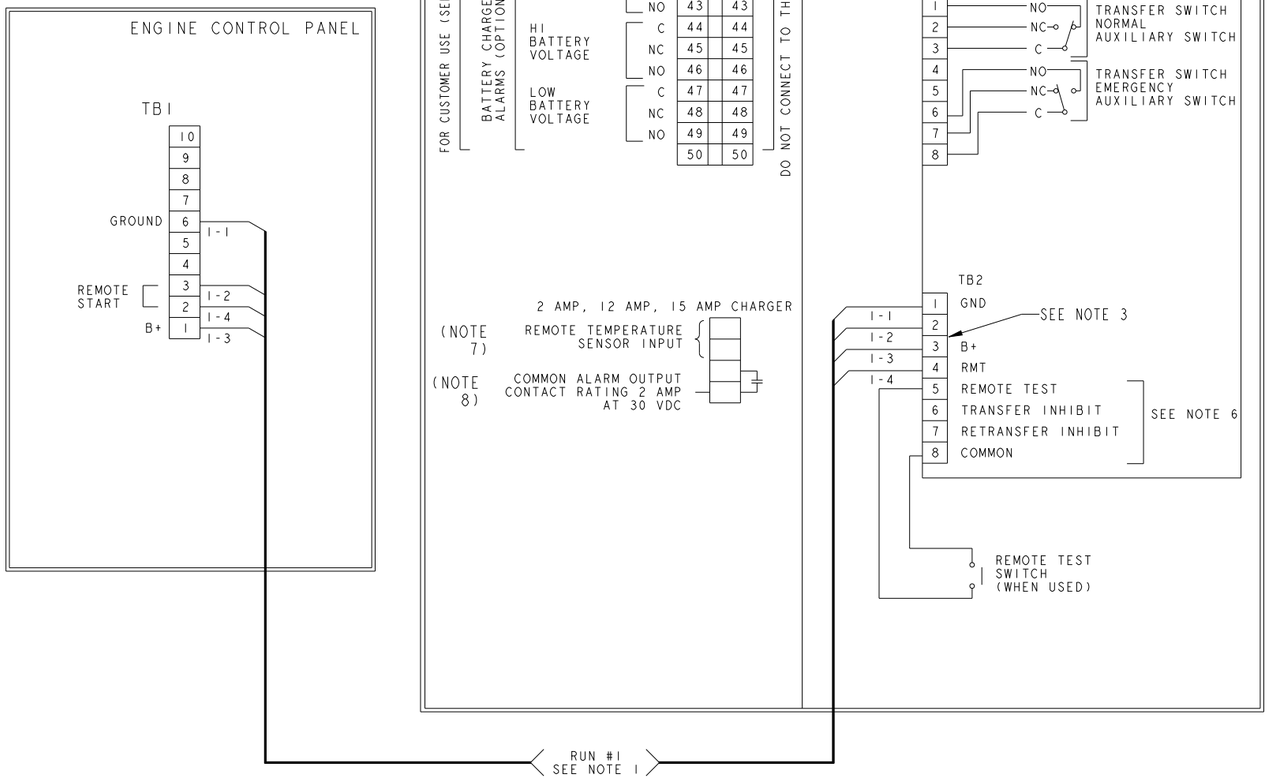
FIRST USED ON OTEC
FOR INTERPRETATION OF DIMENSIONING AND TOLERANCING, SEE ASME Y14.5M-1994
DWN G_COLLEEN
CKD J MILLER
APVD J MILLER
DATE 13FEB04
CUMMINS POWER GENERATION
WD-INTERCONNECTION
SITE CODE PGF
DWG SIZE D
0630_2810
CAD SHEET 3 of 12

PTC® Creo® Parametric

REL NO	REV	NO	REVISION	DWN	CKD	APVD	DATE
ECO-177126	G	-	---	MSC	LHS	T.BEAUCAGE	01FEB19

OTEC
UTILITY TO GENSET

CUMMINS POWERGENERATOR SET SERIES GGDB ALL SPECS, GN SPEC B, DN SPEC B WITH TWO WIRE CONTROL



(SEE NOTE 1)

WIRE SIZE (AWG)	DISTANCE IN FEET, ONE WAY (MULTIPLY BY 0.3 FOR METERS)				
	A	B	C	D	E
16	1000	90	-	50	-
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NOTES:

1. WIRE SIZES MUST BE AS FOLLOWS:
   RUN #1-GENSET TO TRANSFER SWITCH-LEAD SIZE MUST BE INCREASED IF A BATTERY CHARGER IS INSTALLED IN THE SWITCH.
   WITH NO BATT CHARGER-LEADS 1-1, -2, -3, -4, -5 USE COL A.
   WITH 2 AMP CHARGER, MAXIMUM VOLTAGE DROP OF 1.5 VOLTS, LEADS 1-1, & 1-3 USE COL B.
   WITH 12/15 AMP CHARGER MAXIMUM VOLTAGE DROP OF 1.5 VOLTS, LEADS 1-1 & 1-3 USE COL. C.
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2. FOR MULTIPLE TRANSFER SWITCHES, DUPLICATE RUN #1 FOR EACH SWITCH. DAISY CHAIN CONNECTION IS ACCEPTABLE PROVIDED WIRE SIZE & DISTANCE TO THE LAST SWITCH MEET THE SPECS IN NOTE 1.
3. DO NOT INSTALL JUMPER BETWEEN TB2-2 & TB2-3 OR BETWEEN TB2-2 & TB2-1.
4. CONTACTS RATED: 4 AMPS AT 30 VDC OR 120V MAX.
5. TRANSFER SWITCH SHOWN CLOSED TO NORMAL.
6. CONNECT AN OPEN DRY CONTACT BETWEEN THE APPLICABLE TERMINAL AND COMMON (TB2-8). FOR REMOTE TEST, TRANSFER INHIBIT AND RETRANSFER INHIBIT TO ACTIVATE.
7. USE THE INVENTER REMOTE TEMPERATURE PROBE (0193-0530).
8. THE FOLLOWING FAILS WILL CAUSE A BATTERY CHARGER ALARM OUTPUT:
   LOW BATTERY VOLTAGE, HIGH BATTERY VOLTAGE, LOW AC INPUT VOLTAGE, HIGH AC INPUT VOLTAGE OVERCURRENT, HIGH CHARGER TEMPERATURE, BATTERY FAILURE, HIGH BATTERY TEMPERATURE (NOT AVAILABLE ON 2 AMP CHARGER).

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ANG TOL ± 1.0°
SCALE 1/1

SIM TO 0630_1974
DO NOT SCALE PRINT
DWN G_COLLEEN
CKD J MILLER
APVD J MILLER
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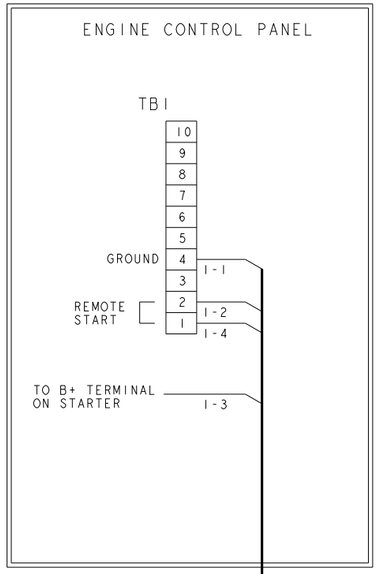
FOR INTERPRETATION OF DIMENSIONING AND TOLERANCING, SEE ASME Y14.5M-1994
FIRST USED ON OTEC
CUMMINS POWER GENERATION
WD-INTERCONNECTION
SITE CODE PGF
DWG SIZE D
0630_2810
CAD SHEET 4 of 12

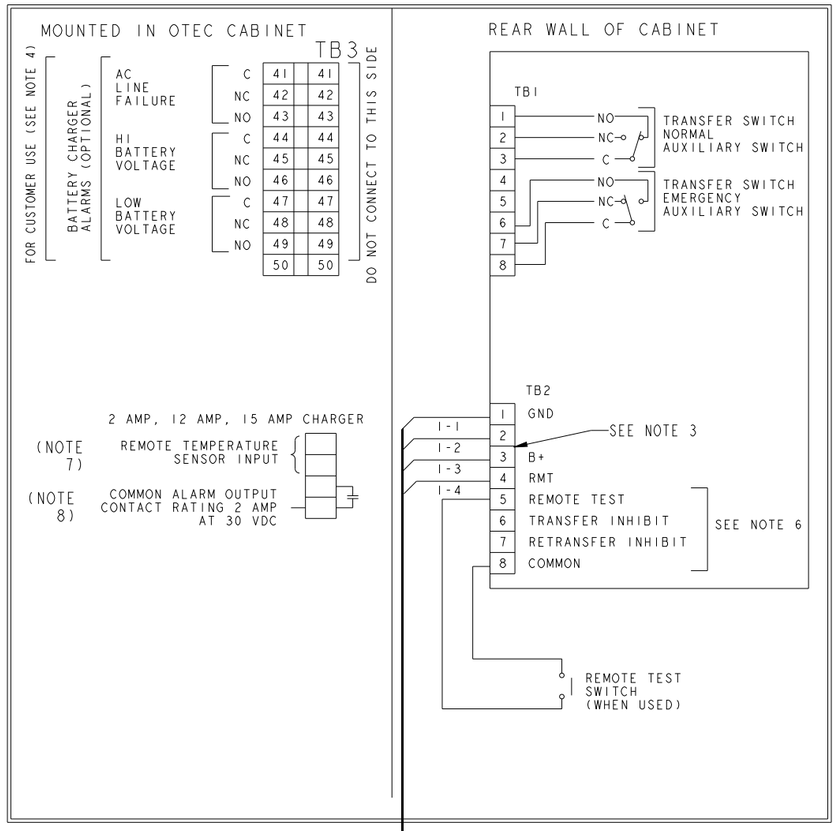
REL NO	REV	NO	REVISION	DWN	CKD	APVD	DATE
ECO-177126	G	-	---	MSC	LHS	T.BEAUCAGE	01FEB19

CUMMINS POWERGENERATOR SET

SERIES GN SPEC A, DN SPEC A WITH TWO WIRE CONTROL



OTEC
UTILITY TO GENSET



(SEE NOTE 1)

WIRE SIZE (AWG)	DISTANCE IN FEET, ONE WAY (MULTIPLY BY 0.3 FOR METERS)				
	A	B	C	D	E
16	1000	90	-	50	-
14	1600	150	20	80	5
12	2400	225	30	125	10
10	4000	350	50	200	15
8	-	600	80	300	25
6	-	1000	125	500	40

NOTES:

1. WIRE SIZES MUST BE AS FOLLOWS:
   RUN #1-GENSET TO TRANSFER SWITCH-LEAD SIZE MUST BE INCREASED IF A BATTERY CHARGER IS INSTALLED IN THE SWITCH.
   WITH NO BATT CHARGER-LEADS 1-1, -2, -3, -4, -5 USE COL A.
   WITH 2 AMP CHARGER, MAXIMUM VOLTAGE DROP OF 1.5 VOLTS, LEADS 1-1, & 1-3 USE COL B.
   WITH 12/15 AMP CHARGER MAXIMUM VOLTAGE DROP OF 1.5 VOLTS, LEADS 1-1 & 1-3 USE COL. C.
   WITH 2 AMP CHARGER, MAXIMUM VOLTAGE DROP OF 0.75 VOLTS, LEADS 1-1, & 1-3 USE COL D.
   WITH 12/15 AMP CHARGER, MAXIMUM VOLTAGE DROP OF 0.75 VOLTS, LEADS 1-1, & 1-3 USE COL E. TO MEET THE NFPA110 REQUIREMENT TO RETURN A FULLY DISCHARGED BATTERY TO 100% OF IT'S AMPERE-HOUR RATING WITHIN 24 HOURS USE COL. E.
2. FOR MULTIPLE TRANSFER SWITCHES, DUPLICATE RUN #1 FOR EACH SWITCH. DAISY CHAIN CONNECTION IS ACCEPTABLE PROVIDED WIRE SIZE & DISTANCE TO THE LAST SWITCH MEET THE SPECS IN NOTE 1.
3. DO NOT INSTALL JUMPER BETWEEN TB2-2 & TB2-3 OR BETWEEN TB2-2 & TB2-1.
4. CONTACTS RATED: 4 AMPS AT 30 VDC OR 120V MAX.
5. TRANSFER SWITCH SHOWN CLOSED TO NORMAL.
6. CONNECT AN OPEN DRY CONTACT BETWEEN THE APPLICABLE TERMINAL AND COMMON (TB2-8). FOR REMOTE TEST, TRANSFER INHIBIT AND RETRANSFER INHIBIT TO ACTIVATE.
7. USE THE INVENTER REMOTE TEMPERATURE PROBE (0193-0530).
8. THE FOLLOWING FAILS WILL CAUSE A BATTERY CHARGER ALARM OUTPUT:
   LOW BATTERY VOLTAGE, HIGH BATTERY VOLTAGE, LOW AC INPUT VOLTAGE HIGH AC INPUT VOLTAGE OVERCURRENT, HIGH CHARGER TEMPERATURE, BATTERY FAILURE, HIGH BATTERY TEMPERATURE (NOT AVAILABLE ON 2 AMP CHARGER).

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS
DIM: X ±1; .X ±0.8; .XX± 0.38
HOLE: 0.00- 4.99 +0.15/-0.08; 5.00- 9.99 +0.20/-0.10; 10.00-17.49 +0.25/-0.13; 17.50-24.99 +0.30/-0.13
ANG TOL ± 1.0°
SCALE 1/1

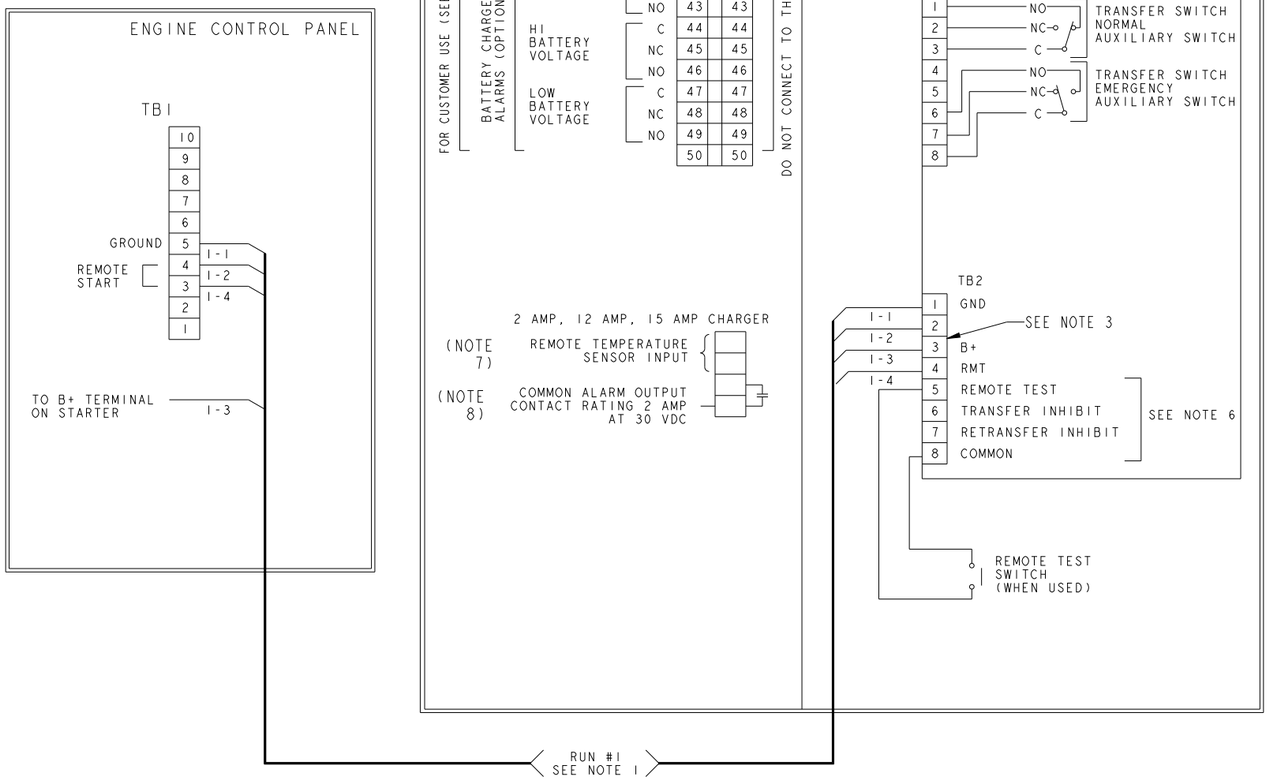
SIM TO 0630_1974
DO NOT SCALE PRINT
FOR INTERPRETATION OF DIMENSIONING AND TOLERANCING, SEE ASME Y14.5M-1994
DWN G_COLLEEN
CKD J MILLER
APVD J MILLER
DATE 13FEB04
FIRST USED ON OTEC
CUMMINS POWER GENERATION
SITE CODE PGF
WD-INTERCONNECTION
DWG SIZE D
0630_2810
CAD SHEET 5 OF 12

PTC® Creo® Parametric

REL NO	REV	NO	REVISION	DWN	CKD	APVD	DATE
ECO-177126	G	-	---	MSC	LHS	T.BEAUCAGE	01FEB19

OTEC
UTILITY TO GENSET

CUMMINS POWERGENERATOR SET
SERIES DG, GGFB, GGFC, GGHB, GGHC, GGHD WITH TWO WIRE CONTROL



(SEE NOTE 1)

WIRE SIZE (AWG)	DISTANCE IN FEET, ONE WAY (MULTIPLY BY 0.3 FOR METERS)				
	A	B	C	D	E
16	1000	90	-	50	-
14	1600	150	20	80	5
12	2400	225	30	125	10
10	4000	350	50	200	15
8	-	600	80	300	25
6	-	1000	125	500	40

NOTES:

1. WIRE SIZES MUST BE AS FOLLOWS:
   RUN #1-GENSET TO TRANSFER SWITCH-LEAD SIZE MUST BE INCREASED IF A BATTERY CHARGER IS INSTALLED IN THE SWITCH.
   - WITH NO BATT CHARGER-LEADS 1-1, -2, -3, -4, -5 USE COL A.
   - WITH 2 AMP CHARGER, MAXIMUM VOLTAGE DROP OF 1.5 VOLTS, LEADS 1-1, & 1-3 USE COL B.
   - WITH 12/15 AMP CHARGER MAXIMUM VOLTAGE DROP OF 1.5 VOLTS, LEADS 1-1 & 1-3 USE COL. C.
   - WITH 2 AMP CHARGER, MAXIMUM VOLTAGE DROP OF 0.75 VOLTS, LEADS 1-1, & 1-3 USE COL D.
   - WITH 12/15 AMP CHARGER, MAXIMUM VOLTAGE DROP OF 0.75 VOLTS, LEADS 1-1, & 1-3 USE COL E. TO MEET THE NFPA110 REQUIREMENT TO RETURN A FULLY DISCHARGED BATTERY TO 100% OF IT'S AMPERE-HOUR RATING WITHIN 24 HOURS USE COL. E.
2. FOR MULTIPLE TRANSFER SWITCHES, DUPLICATE RUN #1 FOR EACH SWITCH. DAISY CHAIN CONNECTION IS ACCEPTABLE PROVIDED WIRE SIZE & DISTANCE TO THE LAST SWITCH MEET THE SPECS IN NOTE 1.
3. DO NOT INSTALL JUMPER BETWEEN TB2-2 & TB2-3 OR BETWEEN TB2-2 & TB2-1.
4. CONTACTS RATED: 4 AMPS AT 30 VDC OR 120V MAX.
5. TRANSFER SWITCH SHOWN CLOSED TO NORMAL.
6. CONNECT AN OPEN DRY CONTACT BETWEEN THE APPLICABLE TERMINAL AND COMMON (TB2-8). FOR REMOTE TEST, TRANSFER INHIBIT AND RETRANSFER INHIBIT TO ACTIVATE.
7. USE THE INVENTER REMOTE TEMPERATURE PROBE (0193-0530).
8. THE FOLLOWING FAILS WILL CAUSE A BATTERY CHARGER ALARM OUTPUT:
   LOW BATTERY VOLTAGE, HIGH BATTERY VOLTAGE, LOW AC INPUT VOLTAGE, HIGH AC INPUT VOLTAGE OVERCURRENT, HIGH CHARGER TEMPERATURE, BATTERY FAILURE, HIGH BATTERY TEMPERATURE (NOT AVAILABLE ON 2 AMP CHARGER).

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS
DIM: X ±1, .X ±0.8, .XX± 0.38
HOLE: 0.00- 4.99 +0.15/-0.08; 5.00- 9.99 +0.20/-0.10; 10.00-17.49 +0.25/-0.13; 17.50-24.99 +0.30/-0.13
ANG TOL ± 1.0°
SCALE 1/1
SIM TO 0630_1974
DO NOT SCALE PRINT
DWN G_COLLEEN
CKD J MILLER
APVD J MILLER
DATE 13FEB04
FIRST USED ON OTEC
SITE CODE PGF
DWG SIZE D
0630_2810
CAD SHEET 6 of 12

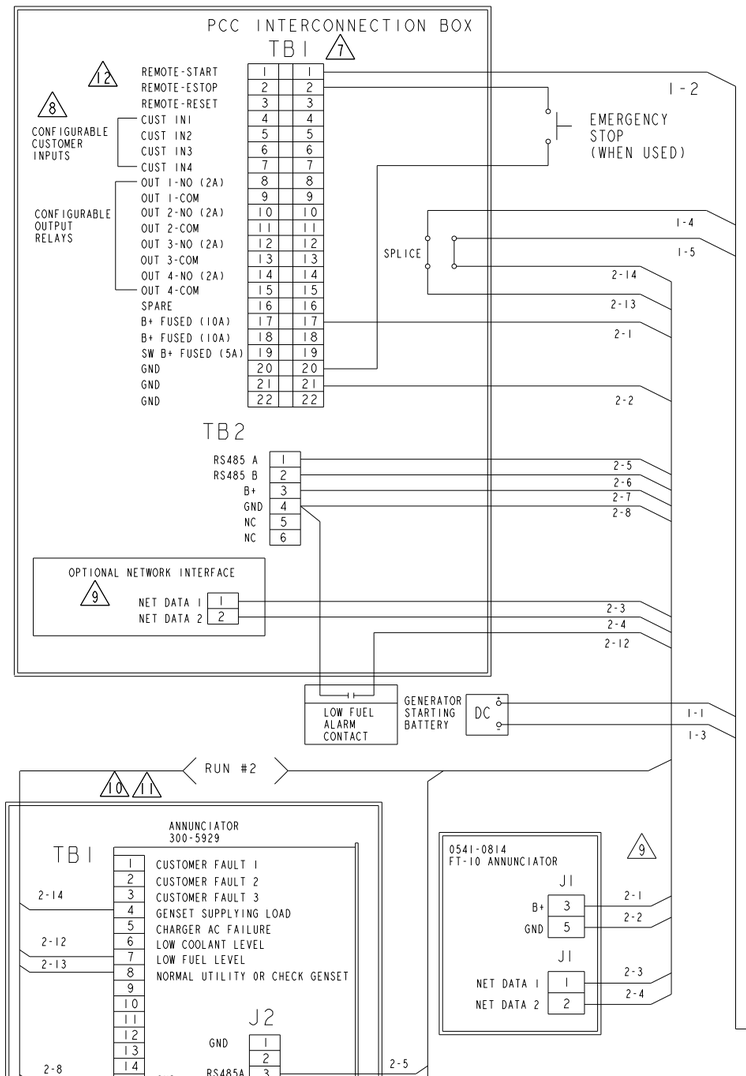
FOR INTERPRETATION OF DIMENSIONING AND TOLERANCING, SEE ASME Y14.5M-1994

CUMMINS POWER GENERATION
WD-INTERCONNECTION

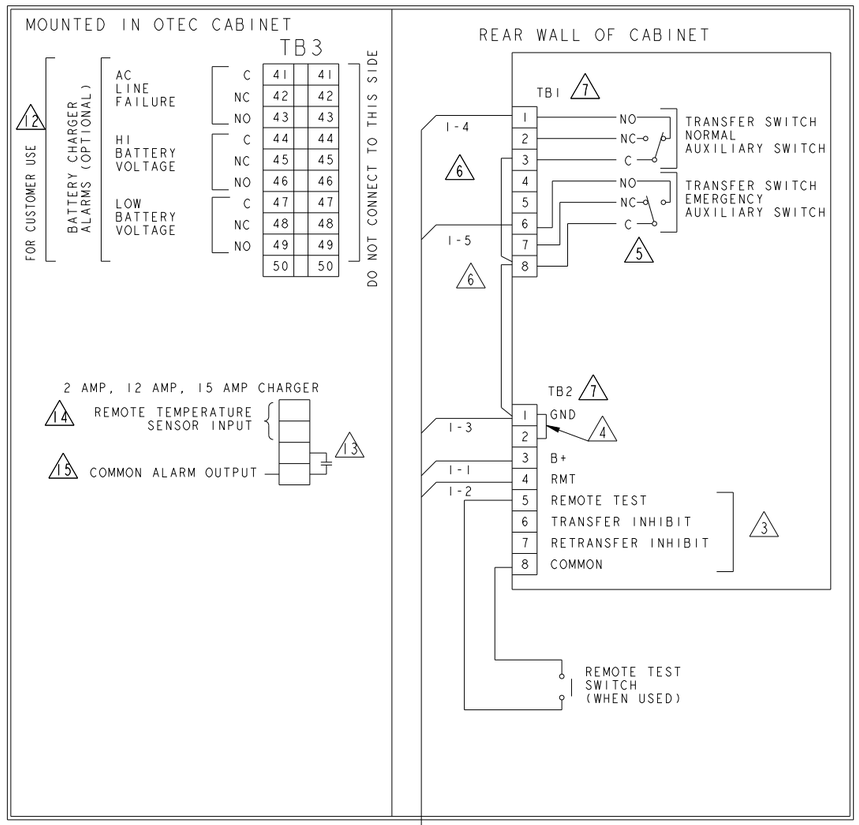
PTC® Creo® Parametric

REL NO	REV	NO	REVISION	DWN	CKD	APVD	DATE
ECO-177126	G	1	UPDATED WIRE DIAGRAM, SEE ECO	MSC	LHS	T.BEAUCAGE	01FEB19

CUMMINS POWER GENERATOR SET WITH PCC 2100 CONTROL



OTEC UTILITY TO GENSET



WIRE SIZE (AWG)	DISTANCE IN FEET, ONE WAY (MULTIPLY BY 0.3 FOR METERS)				
	A	B	C	D	E
16	1000	90	-	50	-
14	1600	150	20	80	5
12	2400	225	30	125	10
10	4000	350	50	200	15
8	-	600	80	300	25
6	-	1000	125	500	40

NOTES:

1. WIRE SIZES MUST BE AS FOLLOWS:
   RUN #1-GENSET TO TRANSFER SWITCH-LEAD SIZE MUST BE INCREASED IF A BATTERY CHARGER IS INSTALLED IN THE TRANSFER SWITCH ENCLOSURE.

   WITH NO BATTERY CHARGER-LEADS 1-1, 1-2, 1-3, 1-4 AND 1-5 USE COLUMN A.

   WITH 2 AMP BATTERY CHARGER, MAXIMUM VOLTAGE DROP OF 1.5 VOLTS, LEADS 1-1 AND 1-3 USE COLUMN B.

   WITH 12/15 AMP BATTERY CHARGER, MAXIMUM VOLTAGE DROP OF 1.5 VOLTS, LEADS 1-1 AND 1-3 USE COLUMN C.

   WITH A 2 AMP BATTERY CHARGER, MAXIMUM VOLTAGE DROP OF 0.75 VOLTS, LEADS 1-1 AND 1-3 USE COLUMN D.

   WITH 12/15 AMP BATTERY CHARGER, MAXIMUM VOLTAGE DROP OF 0.75 VOLTS, LEADS 1-1 AND 1-3 USE COLUMN E. COLUMN E MEETS THE NFPA110 REQUIREMENT TO RETURN A FULLY DISCHARGED BATTERY TO 100% OF ITS AMP-HOUR RATING WITHIN 24 HOURS.
2. FOR MULTIPLE TRANSFER SWITCHES, DUPLICATE RUN #1 FOR EACH SWITCH. DAISY CHAIN CONNECTION IS ACCEPTABLE PROVIDED WIRE SIZE AND DISTANCE TO THE LAST SWITCH MEET THE SPECS IN NOTE 1.
3. CONNECT AN OPEN DRY CONTACT BETWEEN THE APPLICABLE TERMINAL AND COMMON (TB2-8). FOR REMOTE TEST, TRANSFER INHIBIT AND RETRANSFER INHIBIT, CLOSE TO ACTIVATE.
4. INSTALL JUMPER BETWEEN TB2-1 AND TB2-2.
5. TRANSFER SWITCH SHOWN CLOSED TO NORMAL.
6. THIS CONNECTION IS MADE IF ATS POSITION DISPLAY IS DESIRED IN REMOTE ANNUNCIATOR AND ATS DOES NOT HAVE NETWORK INTERFACE. THE CONFIGURABLE INPUT IS PROGRAMMED "EPS SUPPLYING LOAD" AND BOUND TO ANNUNCIATOR OVER NETWORK.
7. TB1 IN THE GENSET CONTROL AND TB2 IN TRANSFER SWITCH WILL ACCEPT A MAXIMUM WIRE SIZE OF 12 AWG. WIRE MUST BE STRANDED.
8. CONNECTIONS TO TB1-4 THRU TB1-7 IN THE GENSET CONTROL ARE FOR CUSTOMER USE AND MAY BE CONFIGURED TO DISPLAY CUSTOM ALARM MESSAGES ON THE GENSET CONTROL.
   LOW FUEL IS REQUIRED FOR NFPA110 COMPLIANCE.
9. REFER TO CUMMINS 0900-0529, POWERCOMMAND FT-10 NETWORK INSTALLATION AND OPERATION MANUAL, FOR WIRING INSTRUCTIONS, WIRE SIZE AND LENGTH. USE STRANDED TWISTED PAIR WIRES WHEN CONNECTING DATA 1 AND DATA 2 TO NETWORK, PART NO. 0334-1350 OR EQUIVALENT.
10. REFER TO CUMMINS 0900-0301, POWERCOMMAND UNIVERSAL ANNUNCIATOR 0300-5929 OWNER MANUAL, FOR INSTALLATION INSTRUCTIONS. USE 18 AWG TWISTED PAIR OR CAT 5 CABLE. TOTAL NETWORK LENGTH CANNOT EXCEED 4000 FEET. UP TO 20 NODES CAN BE CONNECTED TO THE NETWORK. (NOTE: ANY COMMUNICATIONS WIRE CONNECTED TO THE GENSET SHOULD BE STRANDED CABLE)
11. 0300-5929 ANNUNCIATOR COMMUNICATION ONLY AVAILABLE WITH PCC2100 SOFTWARE VERSION 2.400 OR HIGHER.
12. BATTERY CHARGER CONTACTS RATED 4 AMPS AT 30 VDC OR 120 VAC MAXIMUM ON THE 0300-3257 (10A 12V) AND 0300-3298 (10A 24V) CHARGERS.
13. BATTERY CHARGER COMMON ALARM CONTACT RATED 2 AMPS AT 30 VDC ON THE 0300-6026 (2A) AND 0300-5878 (12A/15A) CHARGERS.
14. BATTERY TEMPERATURE SENSOR, 0193-0530, CAN BE USED ON THE 0300-6026 (2A) AND 0300-5878 (12A/15A) BATTERY CHARGERS.
15. THE FOLLOWING FAILS WILL CAUSE A BATTERY CHARGER ALARM OUTPUT ON THE 0300-6026 (2A) AND 0300-5878 (12A/15A) CHARGERS:

LOW BATTERY VOLTAGE	OVERCURRENT
HIGH BATTERY VOLTAGE	HIGH CHARGER TEMPERATURE
LOW AC INPUT VOLTAGE	BATTERY FAILURE
HIGH AC INPUT VOLTAGE	HIGH BATTERY TEMPERATURE (NOT AVAILABLE ON 0300-6026)

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS
DIM: X ±1; .X ±0.8; .XX± 0.38
HOLE: 0.00- 4.99 +0.15/-0.08; 5.00- 9.99 +0.20/-0.10; 10.00-17.49 +0.25/-0.13; 17.50-24.99 +0.30/-0.13
ANG TOL ± 1.0°
SCALE 1/1
SIM TO 0630_1974
DO NOT SCALE PRINT
DWN G_COLLEEN
CKD J MILLER
APVD J MILLER
DATE 13FEB04
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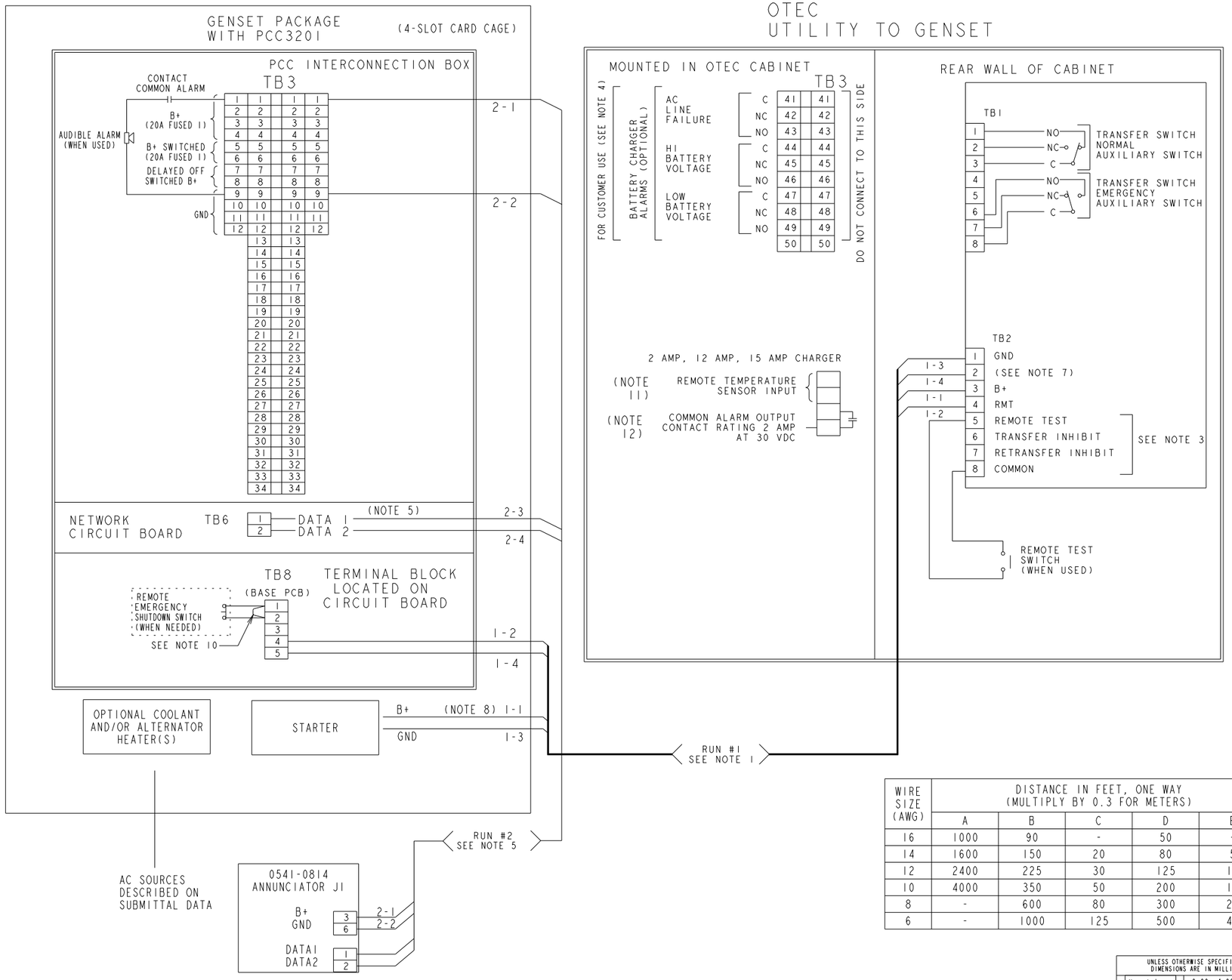
FOR INTERPRETATION OF DIMENSIONING AND TOLERANCING, SEE ASME Y14.5M-1994
FIRST USED ON OTEC
CUMMINS POWER GENERATION
WD-INTERCONNECTION
SITE CODE PGF
DWG SIZE D
0630_2810
CAD SHEET 7 of 12

Drawing Name: 0630-2810 Revision: G
Part Name: 0630-2810 Revision: G
ECO-177126 Sheet 7 of 13

PTC® Creo® Parametric

REL NO	REV	NO	REVISION	DWN	CKD	APVD	DATE
ECO-177126	G	-	---	MSC	LHS	T.BEAUCAGE	01FEB19



WIRE SIZE (AWG)	DISTANCE IN FEET, ONE WAY (MULTIPLY BY 0.3 FOR METERS)				
	A	B	C	D	E
I6	1000	90	-	50	-
I4	1600	150	20	80	5
I2	2400	225	30	125	I0
I0	4000	350	50	200	I5
8	-	600	80	300	25
6	-	1000	125	500	40

NOTES:

1. WIRE SIZES MUST BE AS FOLLOWS:
   RUN #I-GENSET TO TRANSFER SWITCH-LEAD SIZE MUST BE INCREASED IF A BATTERY CHARGER IS INSTALLED IN THE SWITCH.
   WITH NO BATT CHARGER-LEADS I-I, -2, -3, -4, -5 USE COL A.
   WITH 2 AMP CHARGER, MAXIMUM VOLTAGE DROP OF I.5 VOLTS, LEADS I-I, &I-3 USE COL B.
   WITH I2/I5 AMP CHARGER MAXIMUM VOLTAGE DROP OF I.5 VOLTS, LEADS I-I & I-3 USE COL. C.
   WITH 2 AMP CHARGER, MAXIMUM VOLTAGE DROP OF 0.75 VOLTS, LEADS I-I, &I-3 USE COL D.
   WITH I2/I5 AMP CHARGER, MAXIMUM VOLTAGE DROP OF 0.75 VOLTS, LEADS I-I, & I-3 USE COL E. TO MEET THE NFPAII0 REQUIREMENT TO RETURN A FULLY DISCHARGED BATTERY TO I00% OF IT'S AMPERE-HOUR RATING WITHIN 24 HOURS USE COL. E.
2. FOR MULTIPLE TRANSFER SWITCHES, DUPLICATE RUN #I FOR EACH SWITCH. DAISY CHAIN CONNECTION IS ACCEPTABLE PROVIDED WIRE SIZE & DISTANCE TO THE LAST SWITCH MEET THE SPECS IN NOTE I.
3. CONNECT AN OPEN DRY CONTACT BETWEEN THE APPLICABLE TERMINAL AND COMMON (TB2-8). FOR REMOTE TEST, TRANSFER INHIBIT AND RETRANSFER INHIBIT TO ACTIVATE.
4. CONTACTS RATED: 4 AMPS AT 30 VDC OR I20V MAX.
5. REFER TO ONAN 900-0529 POWERCOMMAND NETWORK INSTALLATION & OPERATION MANUAL FOR WIRING INSTRUCTIONS, WIRE SIZE, AND LENGTH. USE STRANDED TWISTED PAIR WIRES WHEN CONNECTING DATAI AND DATA2 TO NETWORK. PART # 0334-I350 OR EQUAL.
6. INPUTS FOR CUSTOMER FAULTS. GROUNDED SIGNAL REQUIRED TO ACTIVATE INPUT (MAX 50 MA.)
7. NO JUMPER IS REQUIRED BETWEEN TB2-I & TB2-2 OR BETWEEN TB2-2 & TB2-3.
8. CONFIGURATION SHOWN IS FOR ATS-MOUNTED BATTERY CHARGER. IF WALL-MOUNTED CHARGER IS USED, CONNECT B+ AND GND FROM CHARGER DIRECTLY TO BATTERY OR STARTER.
9. TRANSFER SWITCH SHOWN CLOSED TO NORMAL.
10. OPEN CONNECTION TO INITIATE EMERGENCY STOP THESE TERMINALS MUST BE SHORTED TOGETHER IF REMOTE EMERGENCY STOP OPTION NOT USED. JUMPER SHOWN BETWEEN TB8-I AND TB8-2 NOT SUPPLIED WITH UNIT.
11. USE THE INVENTER REMOTE TEMPERATURE PROBE (0193-0530).
12. THE FOLLOWING FAILS WILL CAUSE A BATTERY CHARGER ALARM OUTPUT:
    LOW BATTERY VOLTAGE, HIGH BATTERY VOLTAGE, LOW AC INPUT VOLTAGE, HIGH AC INPUT VOLTAGE OVERCURRENT, HIGH CHARGER TEMPERATURE, BATTERY FAILURE, HIGH BATTERY TEMPERATURE (NOT AVAILABLE ON 2 AMP CHARGER).

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS
DIM: X ±1 | .X ±0.8 | .XX± 0.38
HOLE: 0.00- 4.99 +0.15/-0.08 | 5.00- 9.99 +0.20/-0.10 | 10.00-17.49 +0.25/-0.13 | 17.50-24.99 +0.30/-0.13
ANG TOL ± 1.0° | SCALE 1/1
THIS DOCUMENT AND THE INFORMATION SHOWN THEREON IS CONFIDENTIAL AND PROPRIETARY AND SHALL NOT BE DISCLOSED TO OTHERS IN HARD COPY OR ELECTRONIC FORM, REPRODUCED BY ANY MEANS, OR USED FOR ANY PURPOSE WITHOUT WRITTEN CONSENT OF CUMMINS INC.
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CKD J MILLER
APVD J MILLER
DATE 13FEB04
FOR INTERPRETATION OF DIMENSIONING AND TOLERANCING, SEE ASME Y14.5M-1994
FIRST USED ON OTEC
CUMMINS POWER GENERATION
WD-INTERCONNECTION
SITE CODE .
PGF
DWG SIZE D
0630_2810
CAD SHEET 8 of 12

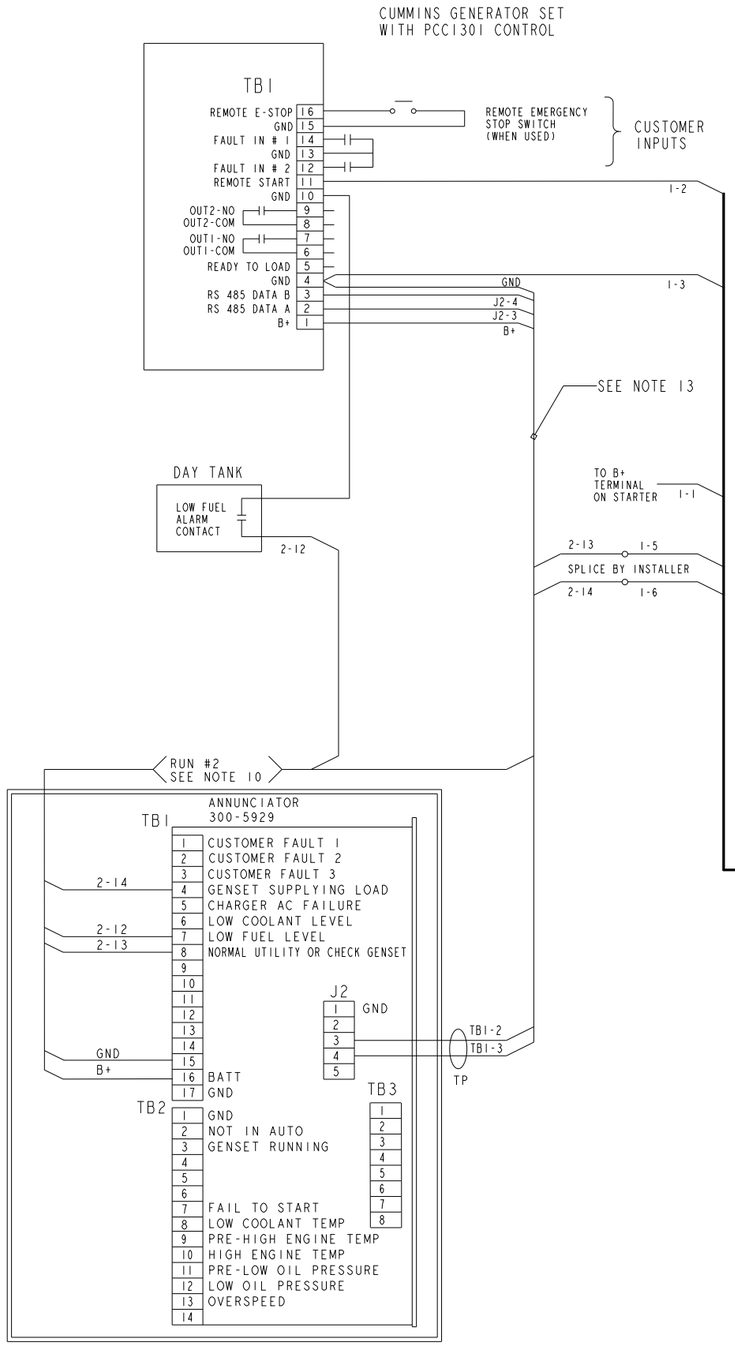
Drawing Name: 0630-2810 Revision: G
Part Name: 0630-2810 Revision: G
ECO-177126 Sheet 8 of 13

PTC® Creo® Parametric

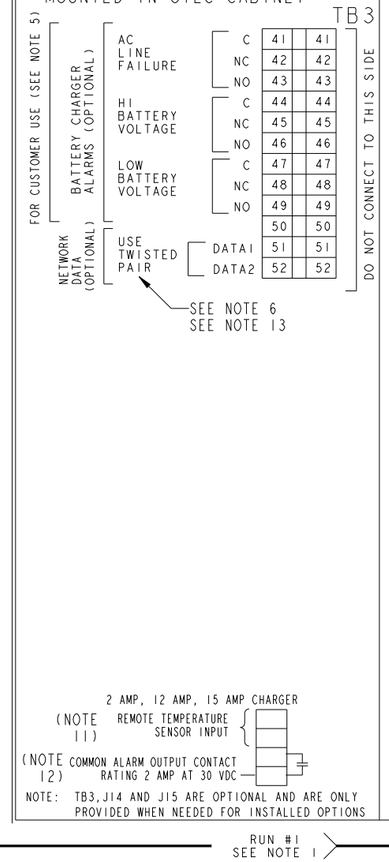
REL NO	REV	NO	REVISION	DWN	CKD	APVD	DATE
ECO-177126	G	2	ZONE D6, DAY TANK CONNECTION TO	-	-	-	-
			"TB1-10" WAS "TB1-1"	MSC	LHS	T.BEAUCAGE	01FEB19
		3	ZONE B5, "TB1-2" WAS "J2-3"	MSC	LHS	T.BEAUCAGE	01FEB19
		4	ZONE B5, "TB1-3" WAS "J2-4"	MSC	LHS	T.BEAUCAGE	01FEB19

OTEC UTILITY TO GENSET

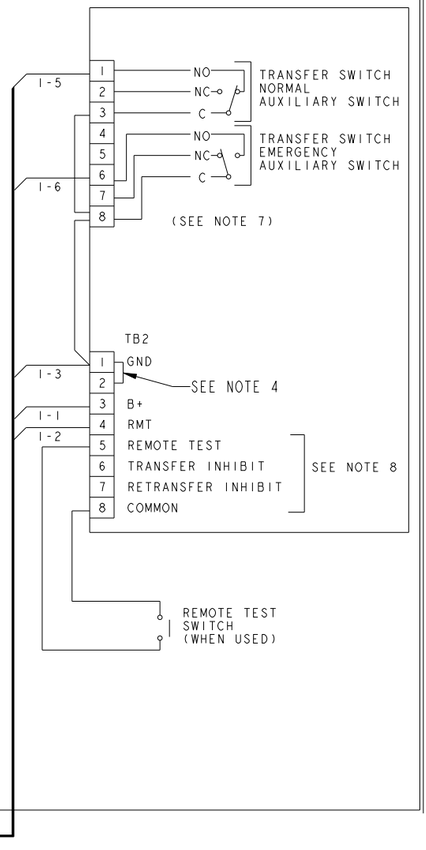
CUMMINS GENERATOR SET
WITH PCC1301 CONTROL



MOUNTED IN OTEC CABINET



REAR WALL OF CABINET



RUN #1
SEE NOTE 1

WIRE SIZE (AWG)	DISTANCE IN FEET, ONE WAY (MULTIPLY BY 0.3 FOR METERS)				
	A	B	C	D	E
16	1000	90	-	50	-
14	1600	150	20	80	5
12	2400	225	30	125	10
10	4000	350	50	200	15
8	-	600	80	300	25
6	-	1000	125	500	40

NOTES:

1. WIRE SIZES MUST BE AS FOLLOWS:
   RUN #1-GENSET TO TRANSFER SWITCH-LEAD SIZE MUST BE INCREASED IF A BATTERY CHARGER IS INSTALLED IN THE SWITCH.
   WITH NO BATT CHARGER-LEADS 1-1, -2, -3, -5, -6 USE COL. A.
   WITH 2 AMP CHARGER, MAXIMUM VOLTAGE DROP OF 1.5 VOLTS, LEADS 1-1, & 1-3 USE COL B.
   WITH 12/15 AMP CHARGER MAXIMUM VOLTAGE DROP OF 1.5 VOLTS, LEADS 1-1 & 1-3 USE COL. C.
   WITH 2 AMP CHARGER, MAXIMUM VOLTAGE DROP OF 0.75 VOLTS, LEADS 1-1, & 1-3 USE COL D.
   WITH 12/15 AMP CHARGER, MAXIMUM VOLTAGE DROP OF 0.75 VOLTS, LEADS 1-1, & 1-3 USE COL E. TO MEET THE NFPA110 REQUIREMENT TO RETURN A FULLY DISCHARGED BATTERY TO 100% OF IT'S AMPERE-HOUR RATING WITHIN 24 HOURS USE COL. E.
2. RUN #2-GENSET TO ANNUNCIATOR-ALL LEADS, USE COL. A
3. FOR MULTIPLE TRANSFER SWITCHES, DUPLICATE RUN #1 FOR EACH SWITCH. DAISY CHAIN CONNECTION IS ACCEPTABLE PROVIDED WIRE SIZE & DISTANCE TO THE LAST SWITCH MEET THE SPECS IN NOTE 1.
4. INSTALL JUMPER BETWEEN TB2-1 & TB2-2.
5. CONTACTS RATED: 4 AMPS AT 30 VDC OR 120V MAX.
6. USE STRANDED TWISTED PAIR WIRES WHEN CONNECTING DATA1 AND DATA2 TO THE NETWORK.
7. TRANSFER SWITCH SHOWN CLOSED TO NORMAL
8. CONNECT AN OPEN DRY CONTACT BETWEEN THE APPLICABLE TERMINAL AND COMMON (TB2-8). FOR REMOTE TEST, TRANSFER INHIBIT AND RETRANSFER INHIBIT. CLOSE TO ACTIVATE.
9. CONTACTS RATED: 2 AMPS AT 30 VDC OR 0.60 AMPS AT 120 VAC.
10. REFER TO 0900-0301 FOR INSTALLATION OF 0300-5929.
11. USE THE INVENTER REMOTE TEMPERATURE PROBE (0193-0530).
12. THE FOLLOWING FAILS WILL CAUSE A BATTERY CHARGER ALARM OUTPUT:
    LOW BATTERY VOLTAGE, HIGH BATTERY VOLTAGE, LOW AC INPUT VOLTAGE, HIGH AC INPUT VOLTAGE OVERCURRENT, HIGH CHARGER TEMPERATURE, BATTERY FAILURE, HIGH BATTERY TEMPERATURE (NOT AVAILABLE ON 2 AMP CHARGER).
13. NETWORK CONNECTIONS: USE BELDEN 9729 24 GAUGE TWISTED, STRANDED, SHIELDED CABLE. SHIELD SHOULD BE GROUNDED AT ONE END. TOTAL NETWORK LENGTH NOT TO EXCEED 4000 FEET. UP TO 20 NODES CAN BE CONNECTED TO THE NETWORK. (NOTE ANY COMMUNICATIONS WIRE CONNECTED TO THE GENSET SHOULD BE STRANDED CABLE.).

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS
DIM: X ±1, .X ±0.8, .XX± 0.38
HOLE: 0.00- 4.99 +0.15/-0.08; 5.00- 9.99 +0.20/-0.10; 10.00-17.49 +0.25/-0.13; 17.50-24.99 +0.30/-0.13
ANG TOL ± 1.0°
SCALE 1/1
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SIM TO 0630_1974
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CKD J MILLER
APVD J MILLER
DATE 13FEB04
CUMMINS POWER GENERATION
WD-INTERCONNECTION
SITE CODE PGF
SIZE D
0630_2810
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Drawing Name: 0630-2810 Revision: G
Part Name: 0630-2810 Revision: G
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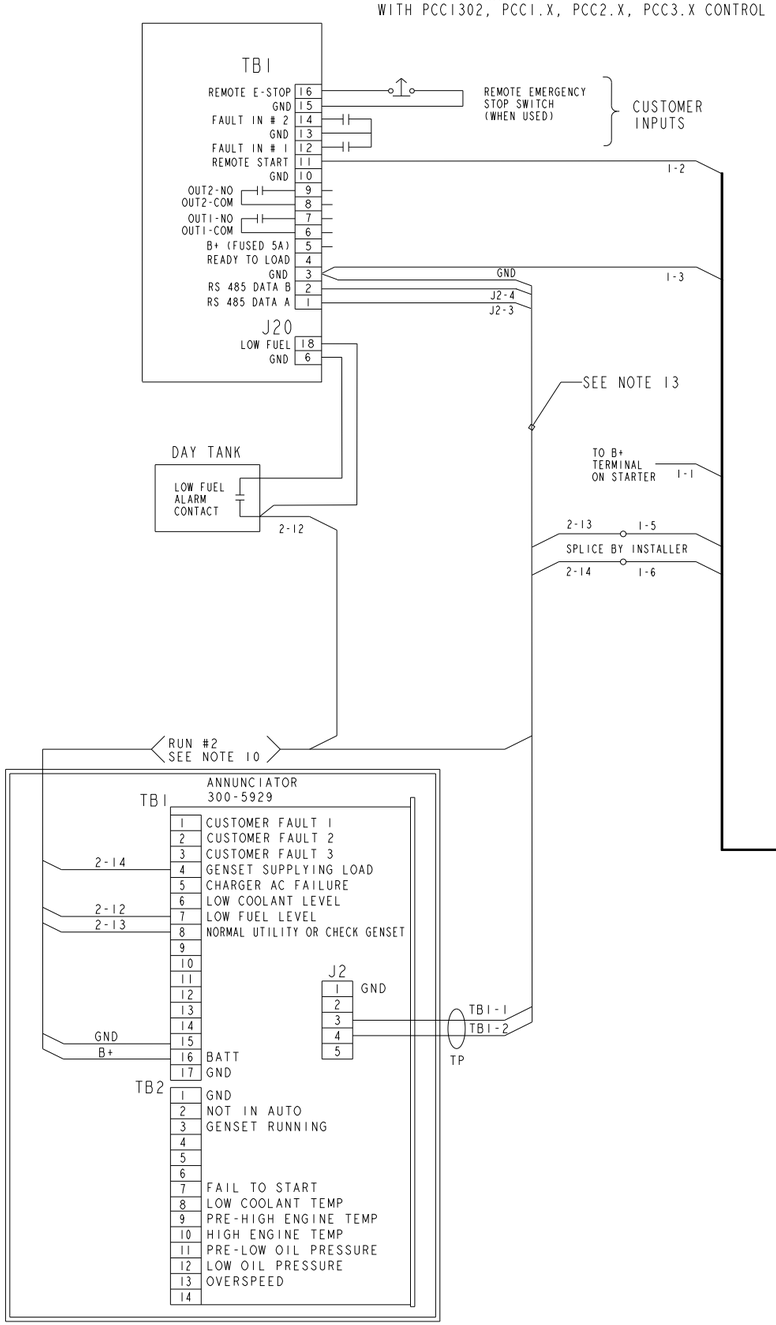
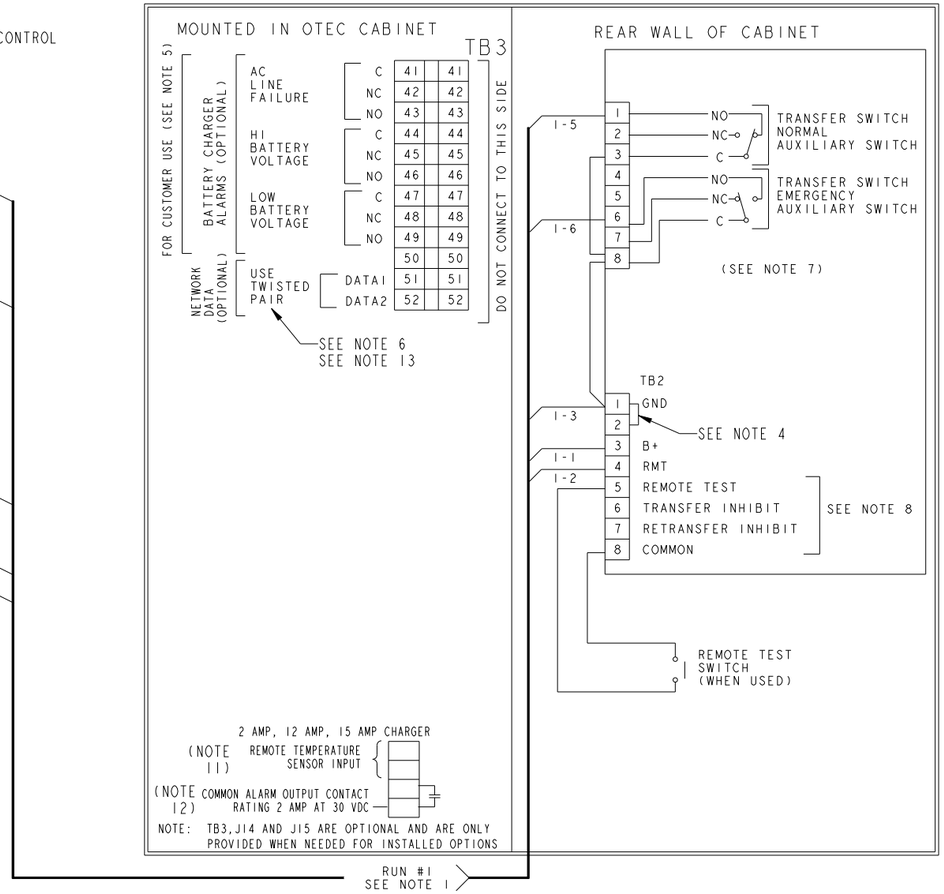
PTC® Creo® Parametric

REL NO	REV	NO	REVISION	DWN	CKD	APVD	DATE
ECO-177126	G	5	ZONE B6, RMV CUSTOMER FUSED B+ SEE	-	-	-	-
			NOTE 14	MSC	LHS	T.BEAUCAGE	01FEB19
		6	ZONE A6, B+ WAS CUSTOMER FUSED B+ AND	-	-	-	-
			CONNECTED LINE TO BUS	MSC	LHS	T.BEAUCAGE	01FEB19
		7	ZONE B5, "TB1-1" WAS "J2-1"	MSC	LHS	T.BEAUCAGE	01FEB19
		8	ZONE B5, "TB1-2" WAS "J2-2"	MSC	LHS	T.BEAUCAGE	01FEB19

CUMMINS GENERATOR SET
WITH PCC1302, PCC1.X, PCC2.X, PCC3.X CONTROL



OTEC UTILITY TO GENSET



WIRE SIZE (AWG)	DISTANCE IN FEET, ONE WAY (MULTIPLY BY 0.3 FOR METERS)				
	A	B	C	D	E
16	1000	90	-	50	-
14	1600	150	20	80	5
12	2400	225	30	125	10
10	4000	350	50	200	15
8	-	600	80	300	25
6	-	1000	125	500	40

NOTES:

1. WIRE SIZES MUST BE AS FOLLOWS:
   RUN #1-GENSET TO TRANSFER SWITCH-LEAD SIZE MUST BE INCREASED IF A BATTERY CHARGER IS INSTALLED IN THE SWITCH.
   WITH NO BATT CHARGER-LEADS 1-1, -2, -3, -5, -6 USE COL. A.
   WITH 2 AMP CHARGER, MAXIMUM VOLTAGE DROP OF 1.5 VOLTS, LEADS 1-1, &1-3 USE COL B.
   WITH 12/15 AMP CHARGER MAXIMUM VOLTAGE DROP OF 1.5 VOLTS, LEADS 1-1 & 1-3 USE COL. C.
   WITH 2 AMP CHARGER, MAXIMUM VOLTAGE DROP OF 0.75 VOLTS, LEADS 1-1, &1-3 USE COL D.
   WITH 12/15 AMP CHARGER, MAXIMUM VOLTAGE DROP OF 0.75 VOLTS, LEADS 1-1, & 1-3 USE COL E. TO MEET THE NFPA110 REQUIREMENT TO RETURN A FULLY DISCHARGED BATTERY TO 100% OF IT'S AMPERE-HOUR RATING WITHIN 24 HOURS USE COL. E.
2. RUN #2-GENSET TO ANNUNCIATOR-ALL LEADS, USE COL. A
3. FOR MULTIPLE TRANSFER SWITCHES, DUPLICATE RUN #1 FOR EACH SWITCH. DAISY CHAIN CONNECTION IS ACCEPTABLE PROVIDED WIRE SIZE & DISTANCE TO THE LAST SWITCH MEET THE SPECS IN NOTE 1.
4. INSTALL JUMPER BETWEEN TB2-1 & TB2-2.
5. CONTACTS RATED: 4 AMPS AT 30 VDC OR 120V MAX.
6. USE STRANDED TWISTED PAIR WIRES WHEN CONNECTING DATA1 AND DATA2 TO THE NETWORK.
7. TRANSFER SWITCH SHOWN CLOSED TO NORMAL
8. CONNECT AN OPEN DRY CONTACT BETWEEN THE APPLICABLE TERMINAL AND COMMON (TB2-8). FOR REMOTE TEST, TRANSFER INHIBIT AND RETRANSFER INHIBIT. CLOSE TO ACTIVATE.
9. CONTACTS RATED: 2 AMPS AT 30 VDC OR 0.60 AMPS AT 120 VAC.
10. REFER TO 0900-0301 FOR INSTALLATION OF 0300-5929.
11. USE THE INVENTER REMOTE TEMPERATURE PROBE (0193-0530).
12. THE FOLLOWING FAILS WILL CAUSE A BATTERY CHARGER ALARM OUTPUT:
    LOW BATTERY VOLTAGE, HIGH BATTERY VOLTAGE, LOW AC INPUT VOLTAGE, HIGH AC INPUT VOLTAGE OVERCURRENT, HIGH CHARGER TEMPERATURE, BATTERY FAILURE, HIGH BATTERY TEMPERATURE (NOT AVAILABLE ON 2 AMP CHARGER).
13. NETWORK CONNECTIONS: USE BELDEN 9729 24 GAUGE TWISTED, STRANDED, SHIELDED CABLE. SHIELD SHOULD BE GROUNDED AT ONE END. TOTAL NETWORK LENGTH NOT TO EXCEED 4000 FEET. UP TO 20 NODES CAN BE CONNECTED TO THE NETWORK. (NOTE ANY COMMUNICATIONS WIRE CONNECTED TO THE GENSET SHOULD BE STRANDED CABLE.).

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS
DIM: X ±1 | .X ±0.8 | .XX± 0.38
HOLE: 0.00- 4.99 +0.15/-0.08 | 5.00- 9.99 +0.20/-0.10 | 10.00-17.49 +0.25/-0.13 | 17.50-24.99 +0.30/-0.13
ANG TOL ± 1.0°
SCALE 1/1
SIM TO 0630_1974
DO NOT SCALE PRINT
DWN G_COLLEEN
CKD J MILLER
APVD J MILLER
DATE 13FEB04

FOR INTERPRETATION OF DIMENSIONING AND TOLERANCING, SEE ASME Y14.5M-1994
FIRST USED ON OTEC
CUMMINS POWER GENERATION
SITE CODE PGF
WD-INTERCONNECTION
DWG SIZE D
0630_2810
CAD SHEET 10 OF 12

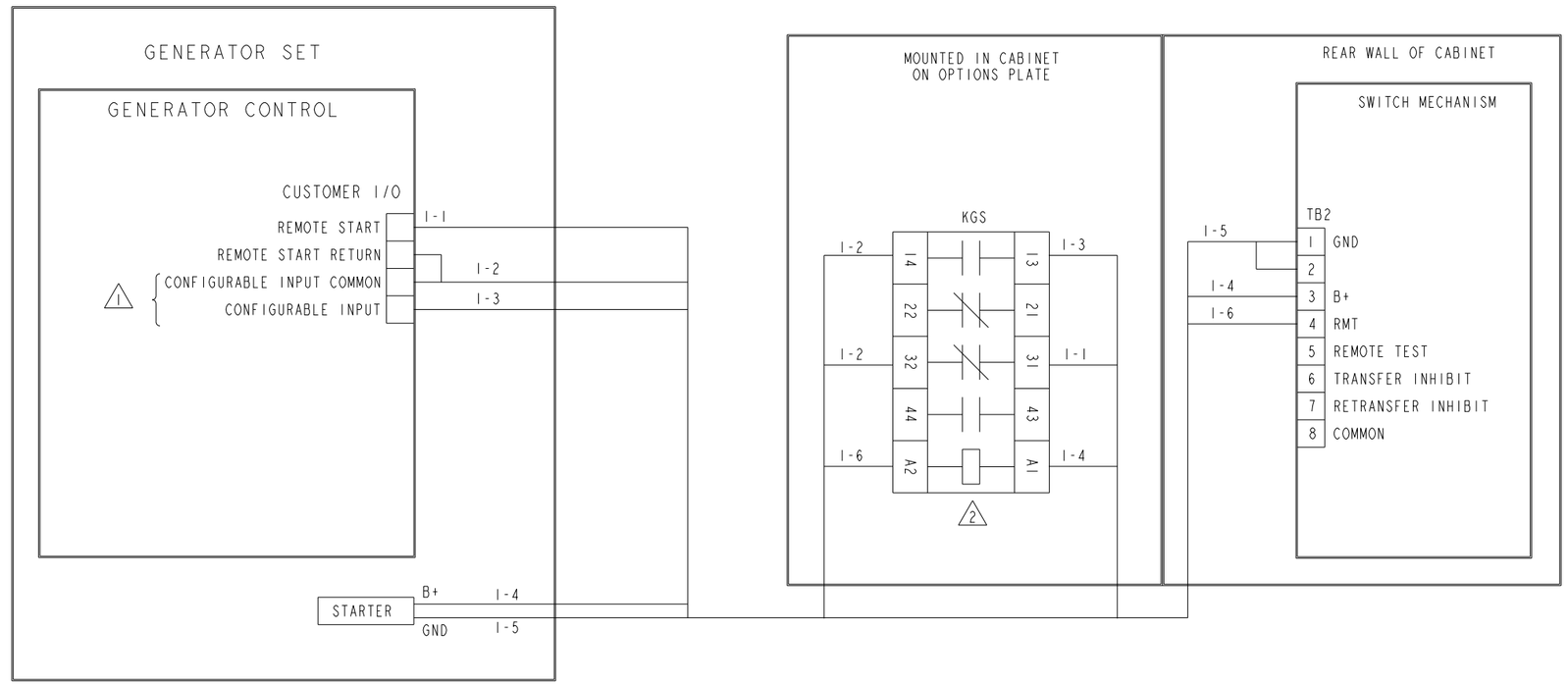
PTC® Creo® Parametric

REL NO	REV	NO	REVISION	DWN	CKD	APVD	DATE
ECO-177126	G	9	ADD SHEET 11	MSC	LHS	T.BEAUCAGE	01FEB19

NFPA 70 ARTICLE 700.10(D)(3) COMPLIANT GENERATOR CONTROL WIRING

CUMMINS PCC 1302, PCC2300, PCC3300 GENERATOR SET CONTROLS

SINGLE ATS CONFIGURATION



NOTES:

1. THESE PHYSICAL CONNECTIONS CAN BE ANY OF THE ONBOARD CONFIGURABLE CUSTOMER INPUTS AVAILABLE FROM THE GENSET CONTROL BOARD OR AUX 101 OR 102 BOARDS CONFIGURED FOR FUNCTION POINTER "START SIGNAL INTEGRITY"
2. KGS IS PROVIDED STANDARD. RELAY CAN ALSO BE ORDERED BY SELECTING FEATURE L101-7 OR L201-7 WHEN CONFIGURING PRODUCT OR AS AN ACCESSORY KIT.
3. REFERENCE TECHNICAL SERVICE BULLETIN TSB180133 FOR ADDITIONAL INFORMATION.

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS

DIM		HOLE	
X	±1	0.00- 4.99	+0.15/-0.08
.X	±0.8	5.00- 9.99	+0.20/-0.10
.XX	±0.38	10.00-17.49	+0.25/-0.13
		17.50-24.99	+0.30/-0.13

ANG TOL ± 1.0° | SCALE 1/1

SIM TO 0630_1974 | DO NOT SCALE PRINT

DWN G_COLLEEN | CKD J MILLER | APVD J MILLER | DATE 13FEB04

FOR INTERPRETATION OF DIMENSIONING AND TOLERANCING, SEE ASME Y14.5M-1994 | FIRST USED ON OTEC

CUMMINS POWER GENERATION

WD-INTERCONNECTION

SITE CODE PGF | DWG SIZE D | 0630_2810 | CAD SHEET 11 OF 12

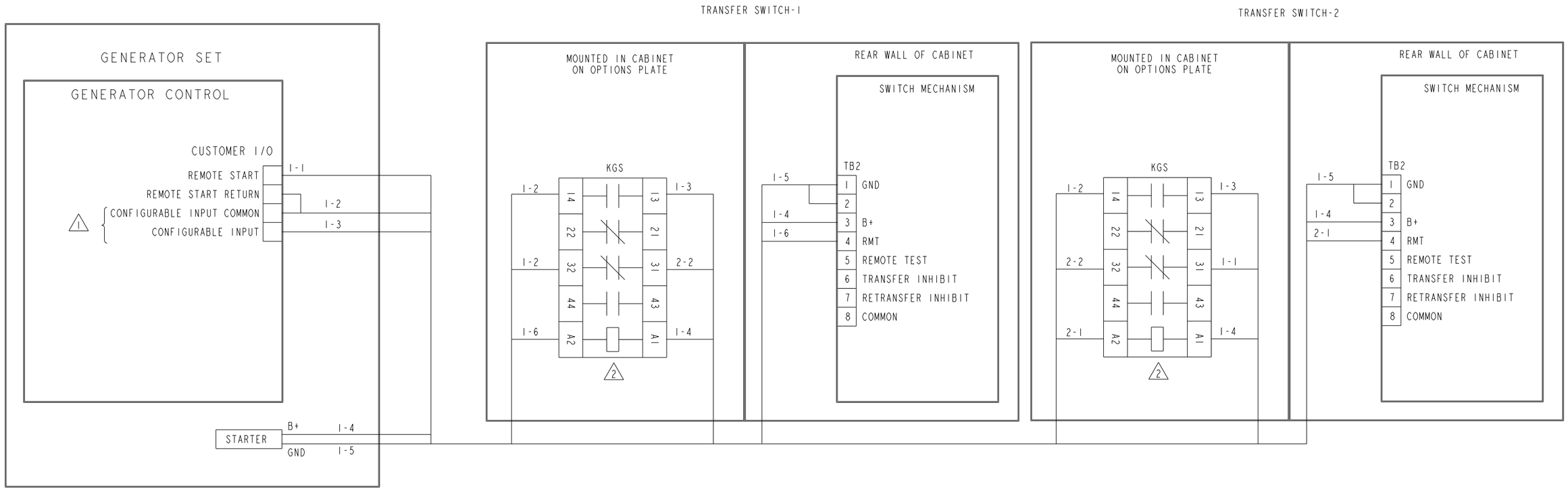
PTC® Creo® Parametric

REL NO	REV	NO	REVISION	DWN	CKD	APVD	DATE
ECO-177126	G	10	ADD SHEET 12	MSC	LHS	T.BEAUCAGE	01FEB19

NFPA 70 ARTICLE 700.10(D)(3) COMPLIANT GENERATOR CONTROL WIRING

CUMMINS PCC 1302, PCC2300, PCC3300 GENERATOR SET CONTROLS

DUAL ATS CONFIGURATION



NOTES:

1. THESE PHYSICAL CONNECTIONS CAN BE ANY OF THE ONBOARD CONFIGURABLE CUSTOMER INPUTS AVAILABLE FROM THE GENSET CONTROL BOARD OR AUX I01 OR I02 BOARDS CONFIGURED FOR FUNCTION POINTER "START SIGNAL INTEGRITY"
2. KGS IS PROVIDED STANDARD. RELAY CAN ALSO BE ORDERED BY SELECTING FEATURE L101-7 OR L201-7 WHEN CONFIGURING PRODUCT OR AS AN ACCESSORY KIT.
3. REFERENCE TECHNICAL SERVICE BULLETIN TSB180133 FOR ADDITIONAL INFORMATION.

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN MILLIMETERS	SIM TO 0630_1974	DWN G_COLLEEN	CUMMINS POWER GENERATION	
DIM: X ±1, .X ±0.8, .XX± 0.38 — HOLE: 0.00- 4.99 +0.15/-0.08, 5.00- 9.99 +0.20/-0.10, 10.00-17.49 +0.25/-0.13, 17.50-24.99 +0.30/-0.13	DO NOT SCALE PRINT	CKD J MILLER	WD-INTERCONNECTION	
		APVD J MILLER	SITE CODE .	
		DATE 13FEB04		
ANG TOL ± 1.0° — SCALE 1/1	THIS DOCUMENT (AND THE INFORMATION SHOWN THEREON) IS CONFIDENTIAL AND PROPRIETARY AND SHALL NOT BE DISCLOSED TO OTHERS IN HARD COPY OR ELECTRONIC FORM, REPRODUCED BY ANY MEANS, OR USED FOR ANY PURPOSE WITHOUT WRITTEN CONSENT OF CUMMINS INC.	FOR INTERPRETATION OF DIMENSIONING AND TOLERANCING, SEE ASME Y14.5M-1994	FIRST USED ON OTEC	PGF — DWG SIZE D — 0630_2810 — CAD SHEET 12 OF 12

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Part Name: 0630-2810 Revision: G
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Part A007M970 G

Description	Legacy Name	External Regulations	Application Status	Release Phase Code	Security Classification	Alternates
DIAGRAM,INTERCONNECT WIRING	0630-2810	No External Regulations Apply	Production Only	Production	Internal use Only	

Part Specifications :A007M970 G

Name	Description	Legacy Name
A030B356	SPECIFICATION,MATERIAL	CES10903
A014L346	DRAWING,WIRING SCHEMATIC	0630-2810