

99 Model Control Relays

Relay K1		
	A - TB1-2 (Switched B+)	
	B - Gnd	
	NO - 120VAC (Aux Transformer Via 2A in-line fuse) to K3 NO (to A1 Close and A6 Spring Charge)	Remove for 750KW unit to be controlled by Relay K5
	NC - B+ to A8 (shunt Trip)	
	NC - B+ to K4 Reset A (K4 - radiator fans)	
Relay K2		
	A - B+	
	B - TB1-7 (TB1-8 to Gnd) Alarm NO pn PCC	
	NO - B+ to A8	
Relay K3		
	A - Switched B+	
	B - TB1-11 (TB1-10 to Gnd) CB Close	
	NO - 120VAC to A1 (Bkr Close)	
	NC - B+ to A8 (shunt trip)	
Latching Relay K4		
	Latch A - B+	
	Latch B - to Gnd through thermostat	
	Reset A - B+ through K1 NC	For 750KW unit; B+ through K1 NC and K4 NO
	Reset B - Gnd	
	NO - TB1-40 to radiator fans	For 750KW Unit; Switched B+ through K5 NO and K4 NO to Radiator Fans
Relay K5		
		For 750KW unit only
	A - Switched B+	For 750KW unit only
	B - To gnd through TB1-40 (Tb1-38 to Gnd)	For 750KW unit only
	NO - 120VAC L1 (or L2) from Aux Transf through 2A in-line fuse to K3 NO (to A1 Close and A6 Spring Charge)	For 750KW unit only
	NO - Switched B+ to K4 NO to Radiator Fans (Not through K4 NO to Cooling fans)	For 750KW unit only

Pigtail Assignments

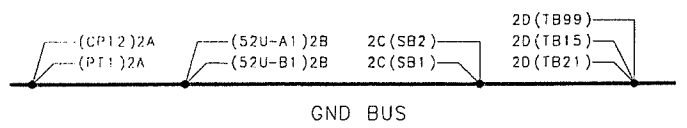
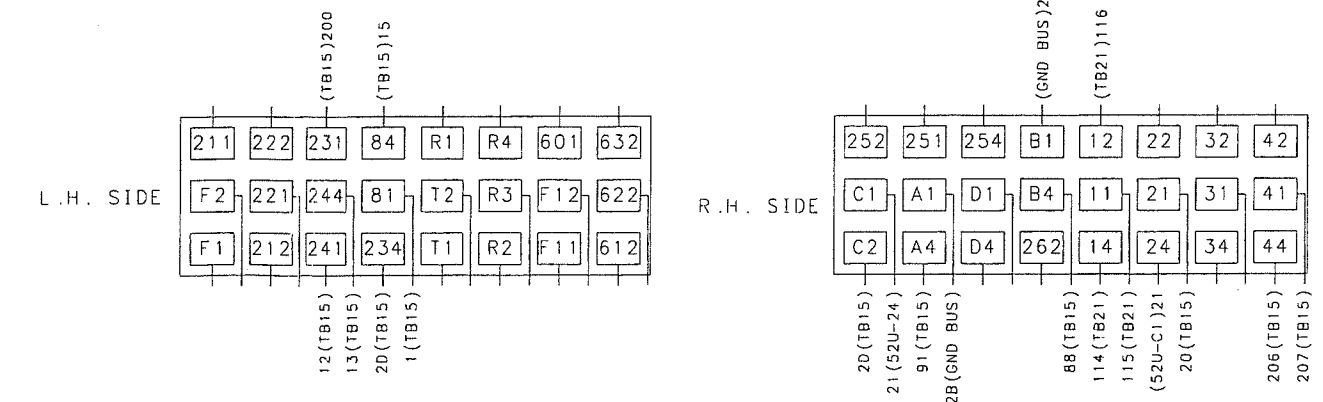
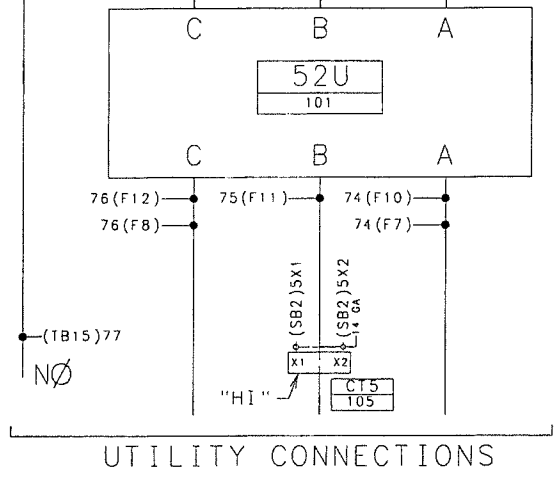
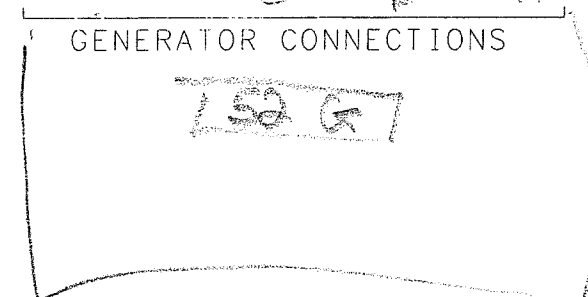
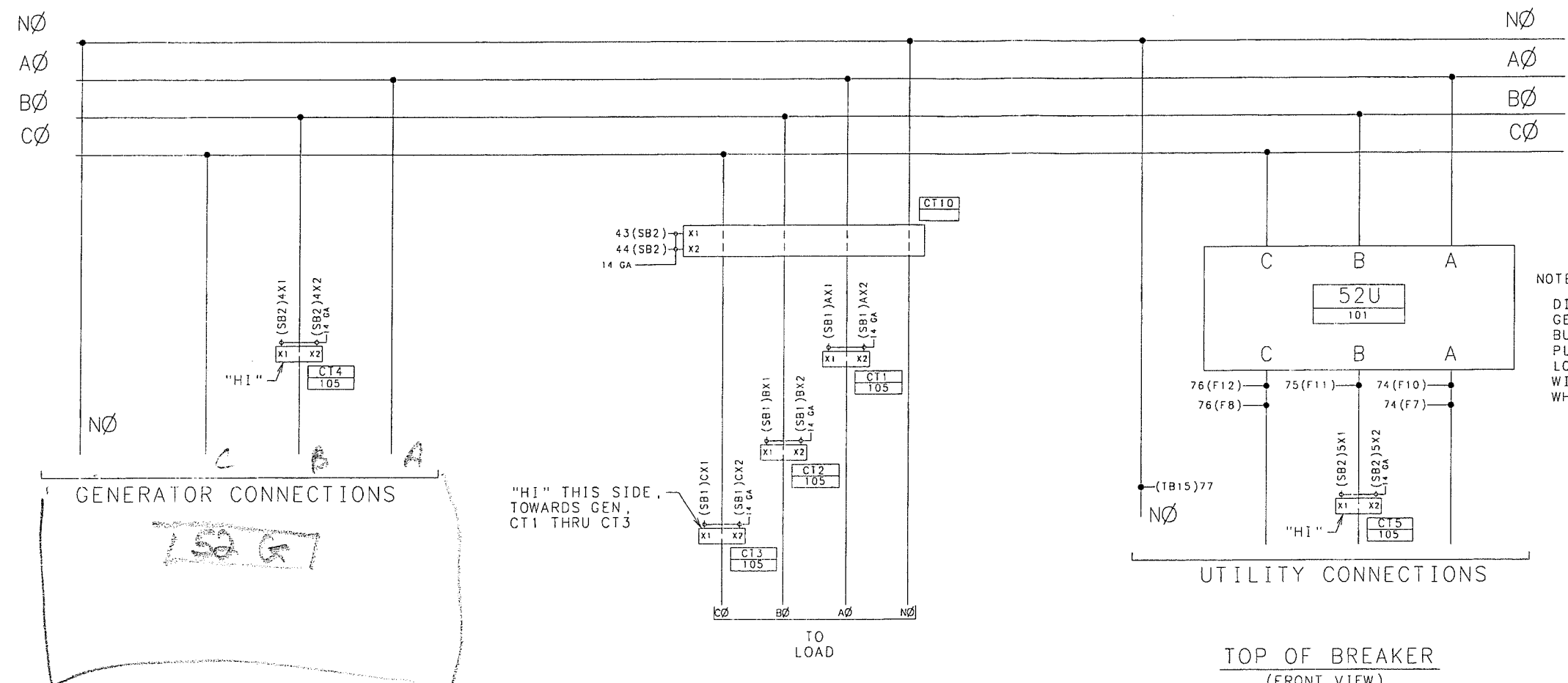
Status	Obsolete; Only 20 in existence	Current; BSE design and build	Current; JSI design and build, 2002 and forward	Do not use; Retrofit with CIB, design and build not final	Do not use; Retrofit with CIB, design and build not final
PIGTAIL HARNESS PIN ASSIGNMENTS (DOMINION)	2000DQKC (Dominion) with 21" CIB	2000DQKC (Dominion) with 16" CIB	1500DFLE (PCC 1) CIB	750 (PCC1) No CIB, With PLTR Cutler Hammer Breaker	750 (PCC1) No CIB, With PLTR Square D Masterpact Breaker
P1-A FUSED B+	TB33-1	TB33-1	TB33-4	TB1-1	TB1-1
P1-B B-	TB33-3	TB33-3	TB33-12 (Crimp all TB33-12 destined wires together)	TB1-3	TB1-3
P1-C CB OVERCURRENT (84)	TB33-36	TB33-36	TB30-68 (TB30-67 to B+)	KBA	81 (84 to B+)
P1-D REMOTE START	TB33-12	TB33-12	TB30-5	TB1-5	TB1-5
P1-E EMERGENCY STOP	TB33-15	TB33-15	TB30-6	TB1-6	TB1-6
P1-F REMOTE START RETURN	TB33-14	TB33-14	TB33-12 (Crimp all TB33-12 destined wires together)	TB1-3	TB1-3
P1-G COMMON SHUTDOWN	TB33-6	TB33-6	K32-6 (K32-9 to B+)	TB1-8 (TB1-7 TO B+)	TB1-8 (TB1-7 TO B+)
P1-H CB "B" CONTACT (212)	TB33-42	TB33-42	TB30-63	B12	212
P1-J CB "A" CONTACT (14)	TB33-38	TB33-38	TB30-61	B7	244
P1-K CB "A" CONTACT RETURN (11)	TB33-39	TB33-39	TB30-62	B8	241
P1-L GROUND FAULT	TB33-44	TB33-44	TB30-70	TB1-17	TB1-17
P1-M AUTO MODE	TB33-23	TB33-23	TB30-23 (TB30-33 to B+)	TB1-23	TB1-23
P1-N EMERGENCY STOP RETURN	TB33-16	TB33-16	Not Used	Not Used	Not Used
P1-P UTILITY CB POSITION	TB33-34	TB33-34	TB30-47	TB1-47	TB1-47
P1-Q GENSET INHIBIT/POS RETURN	TB33-31	TB33-31	TB33-12 (Crimp all TB33-12 destined wires together)	TB1-3	TB1-3
P1-R UTILITY CB POSITION RETURN	TB33-35	TB33-35	TB33-12 (Crimp all TB33-12 destined wires together)	TB1-3	TB1-3
P1-S SYNC ENABLE	TB33-27	TB33-27	TB30-50	TB1-50	TB1-50
P1-T GENSET CB INHIBIT	TB33-28	TB33-28	TB30-52	TB1-52	TB1-52
P1-U GROUND FAULT RETURN	TB33-45	TB33-45	TB33-12 (Crimp all TB33-12 destined wires together)	TB1-3	TB1-3
P1-V EXTERNAL LOAD SET KW+	TB35-11	TB33-60	TB30-59	TB1-59	TB1-59
P1-W EXTERNAL LOAD SET KW-	TB35-10	TB33-61	TB30-60	TB1-60	TB1-60
P1-X CB "A" CONTACT (234)	TB33-40	TB33-40	TB30-65 (TB30-66 TO B+)	B4 (B5 To B+)	234 (231 to B+)
P1-Y CB "B" CONTACT RETURN (211)	TB33-43	TB33-43	TB30-64	B11	211
P1-Z	Not Used	Not Used	Not Used	Not Used	Not Used

Bus PT Module

Status	Obsolete; Only 20 in existence	Current; BSE design and build	Current; JSI design and build, 2002 and forward	Do not use; Retrofit with CIB, design and build not final	Do not use; Retrofit with CIB, design and build not final
PIGTAIL HARNESS PIN ASSIGNMENTS (DOMINION)	2000DQKC (Dominion) with 21" CIB	2000DQKC (Dominion) with 16" CIB	1500DFLE (PCC 1) CIB	750 (PCC1) No CIB, With PLTR Cutler Hammer Breaker	750 (PCC1) No CIB, With PLTR Square D Masterpact Breaker
P2-A UTIL LINE SIDE L1	1KA1-4 (Old TB32-4)	1KA1-4 (Old TB32-3)	1KA1-4 (Old TB31-4)	Retrofit with CIB	Retrofit with CIB
P2-B UTIL LINE SIDE L2	2KA1-4 (Old TB32-3)	2KA1-4 (Old TB32-2)	2KA1-4 (Old TB31-3)	Retrofit with CIB	Retrofit with CIB
P2-C UTIL LINE SIDE L3	3KA1-4 (Old TB32-2)	3KA1-4 (Old TB32-1)	3KA1-4 (Old TB31-2)	Retrofit with CIB	Retrofit with CIB
P2-D UTIL LINE SIDE N	4KA1-4 (Old TB32-1)	4KA1-4 (Old TB32-4)	4KA1-4 (Old TB31-1)	Retrofit with CIB	Retrofit with CIB
P2-E GEN LINE SIDE L1	F36-B	F36-B	F36-B (Old TB31-8)	Retrofit with CIB	Retrofit with CIB
P2-F GEN LINE SIDE L2	F35-B	F35-B	F37-B (Old TB31-7)	Retrofit with CIB	Retrofit with CIB
P2-G GEN LINE SIDE L3	F34-B	F34-B	F38-B (Old TB31-6)	Retrofit with CIB	Retrofit with CIB
P2-H GEN LINE SIDE N	4KA1-2 (Old TB32-5)	4KA1-2 (Old TB32-5)	4KA1-2 (Old TB31-5)	Retrofit with CIB	Retrofit with CIB

625-3989

REV NO.	DATE	DESCRIPTION	BY	CHKD	APPROVED	DATE
1	11-02-99	LONG TERM RELEASE	RR	MF	WF	11-02-99
2	11-02-99	RECORD RELEASE	CB	MF	WF	11-02-99



CLASSIFICATION OF CHARACTERISTICS	
CRITICAL	APPROVED N/A
MAJOR	DATE 11-02-99
MINOR (NONE)	
LINE BELOW SYMBOL	APPLIES TO UPPER LIMIT
LINE ABOVE SYMBOL	APPLIES TO LOWER LIMIT
NO LINE WITH SYMBOL	APPLIES TO BOTH LIMITS

REV	DATE	DESCRIPTION OR MATERIAL	BY	CHKD	APPROVED	DATE
1	11-02-99		R. RYAN			11-02-99
2	11-02-99		M. FEDEWA			11-02-99
3	11-04-99		M. FEDEWA			11-04-99

REVISIO DWG

MINNEAPOLIS, MINNESOTA 55432

FILE WIRING DIAGRAM (3P BREAKER COMPT)

DWG NO. 625-3989

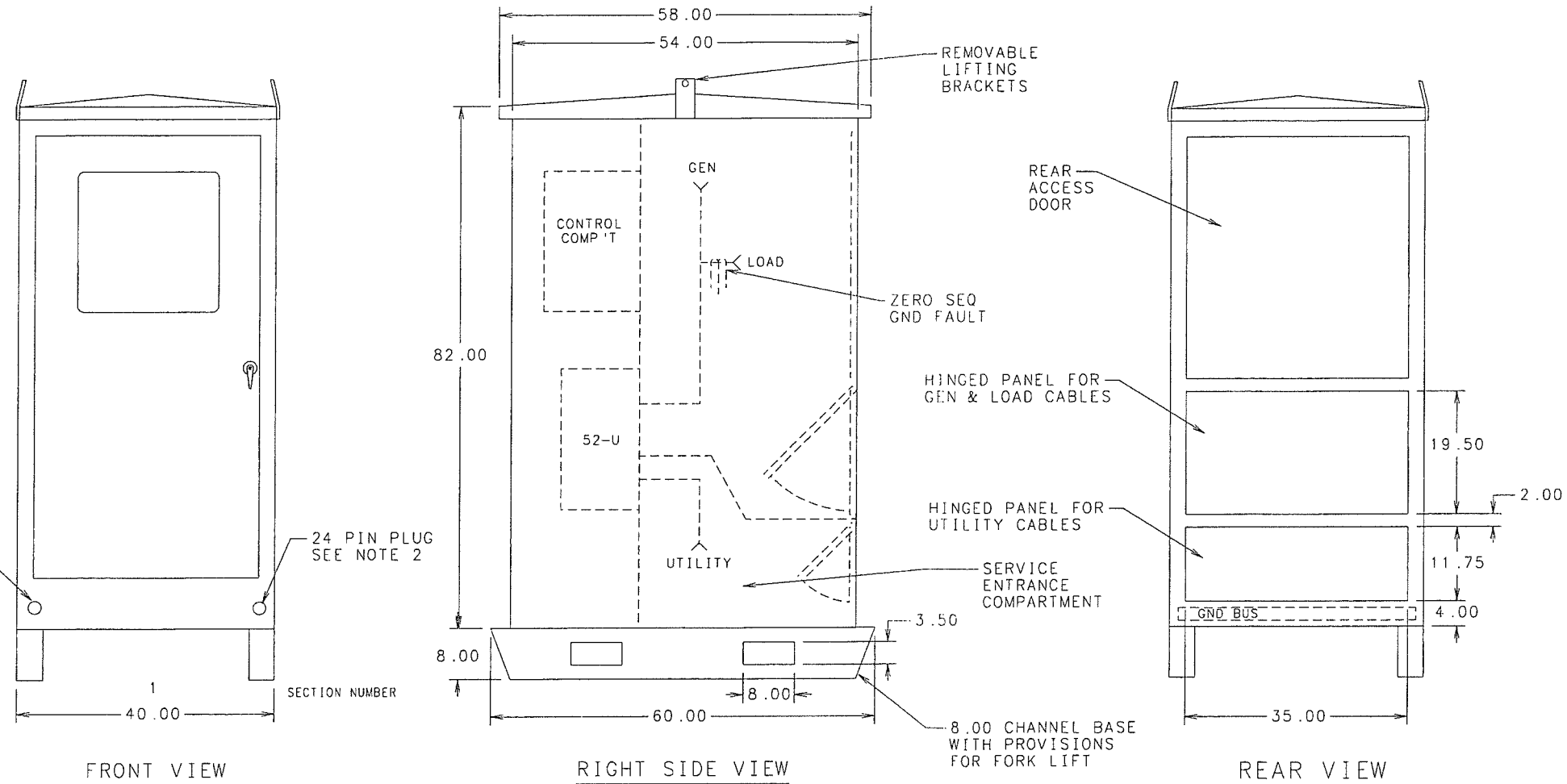
DATE 11-02-99

PLTS

310-1345 D

CIRCUIT BREAKER SCHEDULE						
DESIG	MFR & TYPE	FRAME	TRIP	AIC	MOUNTING	TERMINALS
52-U	SQUARE D-MP	2000A	2000A	75,000A	FM/EO	6-#4 TO 500MCM/PH & N
52-U	SQUARE D-MP	2500A	2500A	75,000A	FM/EO	8-#4 TO 500MCM/PH & N

REV NO.	LIT NO.	REVISION	ZONE	DR	CHKD	APPROVED	DATE
---	A	1		JA	JA	MF	9-2-99
---	B	1		RR	RR	RS	10-26-99
TR01503	C	1		CB	RR	RS	7-24-00



- NOTES:
- SECTION LABELED PER UL 891, "STANDARD FOR DEAD-FRONT SWITCHBOARD", AND UL 1008 "STANDARD FOR TRANSFER SWITCH EQUIPMENT."
 - USE 8 PIN PLUG FOR AC CONTROL CONNECTIONS AND 24 PIN PLUG FOR DC CONTROL CONNECTIONS.
 - SWITCHBOARD RATINGS:
SHORT CIRCUIT CONSTRUCTION: 75,000A.
SERVICE: 3 PHASE, 4 WIRE, 60 HZ
 - LEGEND:
52-U UTILITY POWER CIRCUIT BREAKER
FM FIXED MOUNTED
AIC AMPERES INTERRUPTING CAPACITY
EO ELECTRICALLY OPERATED
GF ZERO SEQUENCE GROUND FAULT
SE RATED FOR SERVICE ENTRANCE

CLASSIFICATION OF CHARACTERISTICS		TOLERANCE UNLESS OTHERWISE SPECIFIED		DATE	
KEY INSTRUCTION (NO TOLERANCE)	APPROVED <i>M/A</i>	DO NOT SCALE PRINT	DATE	DATE	DATE
CRITICAL	DATE 8-19-99	FRONT	8-19-99	8-19-99	8-19-99
MAJOR		REAR			
MINOR (NONE)		TOP			
LINE BELOW SYMBOL	APPLIES TO UPPER LIMIT	BOTTOM			
LINE ABOVE SYMBOL	APPLIES TO LOWER LIMIT	RIGHT SIDE			
NO LINE WITH SYMBOL	APPLIES TO BOTH LIMITS	LEFT SIDE			

REVISIO DWG 3/32

MINNEAPOLIS, MINNESOTA 55432

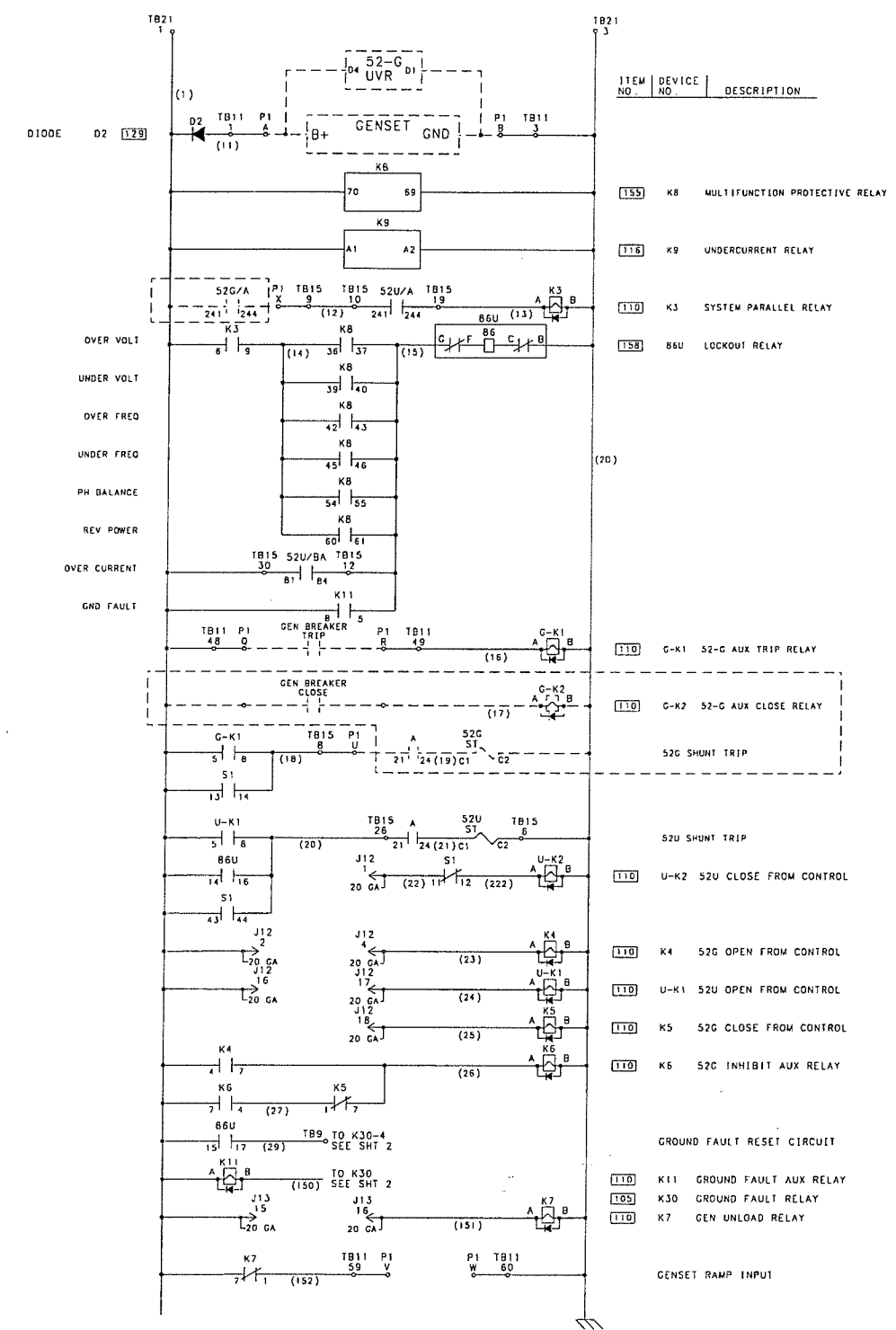
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310-1345

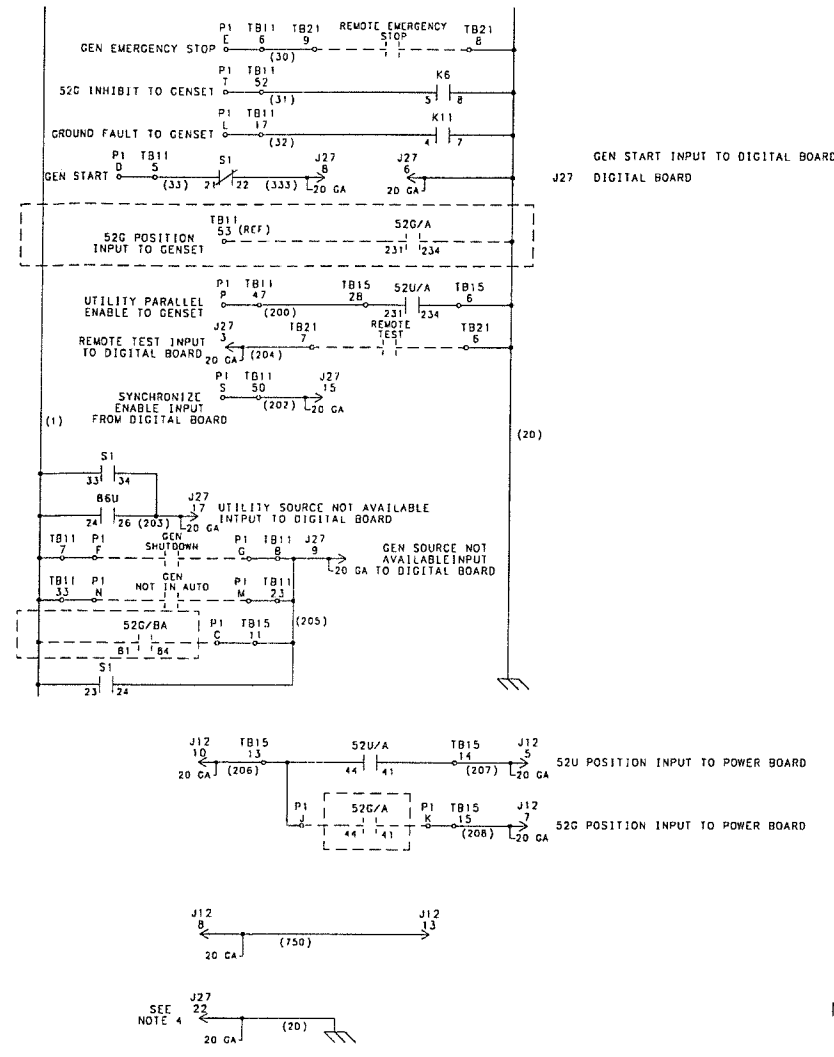
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625-3940

REV NO	DATE	REVISION	ZONE	DR	CHKD	APPROVED	DATE
---	A	1		RR	WF	WF	10-20-99
TR01503	B	1		CB	WF	WF	3-1-00



ITEM NO.	DEVICE NO.	DESCRIPTION
155	K8	MULTIFUNCTION PROTECTIVE RELAY
176	K9	UNDERCURRENT RELAY
110	K3	SYSTEM PARALLEL RELAY
158	B6U	LOCKOUT RELAY
110	G-K1	S2-G AUX TRIP RELAY
110	G-K2	S2-G AUX CLOSE RELAY
110	U-K2	S2U CLOSE FROM CONTROL
110	K4	S2G OPEN FROM CONTROL
110	U-K1	S2U OPEN FROM CONTROL
110	K5	S2G CLOSE FROM CONTROL
110	K6	S2G INHIBIT AUX RELAY
110	K11	GROUND FAULT AUX RELAY
105	K30	GROUND FAULT RELAY
110	K7	GEN UNLOAD RELAY



B6U CONTACT DIAGRAM		POSITION
CONTACTS	RELAY	
110	1-013	
120	1-018	
130	1-023	
140	1-018	
150	1-023	
160	1-018	
170	1-023	
180	1-018	
190	1-023	
200	1-018	
210	1-023	
220	1-018	
230	1-023	
240	1-018	
250	1-023	
260	1-018	

SERVICE DISCONNECT SWITCH		
S1	NORM	DISC.
131	114	X
114	132	X
231	124	X
214	222	X
331	134	X
314	344	X

- NOTES:
- DASHED LINE INDICATES THAT THE PORTION INDICATED IS LOCATED IN THE GENSET BREAKER COMPARTMENT OR AT THE GENSET.
 - P1 INDICATES A 24 PIN PLUG WITH PINS A-Z FOR DC SIGNALS.
 - P2 INDICATES A 8 PIN PLUG WITH PINS A-H FOR AC SIGNALS.
 - USE 20GA WIRE TO CONNECT J27-22 ON THE DIGITAL MODULE (0300-5147) TO THE GND STRAP OF THE MEMBRANE PANEL (0300-5271) DO NOT OVERTIGHTEN.

CLASSIFICATION OF CHARACTERISTICS
 ▼ KEY INSTRUCTION (NO TOLERANCE)
 CRITICAL ●
 MAJOR ○
 MINOR (NONE)
 LINE BELOW SYMBOL APPLIES TO UPPER LIMIT
 LINE ABOVE SYMBOL APPLIES TO LOWER LIMIT
 NO LINE WITH SYMBOL APPLIES TO BOTH LIMITS

APPROVED N/A
 DATE 09-14-99

REVISION DWG

QTY	ITEM	PART NO.	DESCRIPTION OR MATERIAL	DATE
	DR	R. RYAN		09-14-99
	CHKD	M. FEDEWA		09-14-99
	APPROVED	M. FEDEWA		09-14-99
	PLTS	PLTS (480V)		

MINNEAPOLIS, MINNESOTA 55432
 SCHEMATIC DIAGRAM
 (PLC DCI & AC)
 625-3940
 1x2

