





DESIG.	CODE	OPTION	CKT. FIG.	MECH. REQ.			CIRCUIT PREPARATION		TEST SET PREP.	SEE TEST NOTE NO.	DIRECT CURRENT FLOW REG.			REMARKS		
				RESID.	BSP FIG.	CONT. PRESS.	ARM. TRVL.	TEST CLIP DATA			TEST WDG.	TEST FOR	AFTER SOAK		TEST	READI.
RELAYS																
A	221R		1	7-11	6		B	TST JK 2	TST JK 1	N	1/2	F/R	0	FS	15.1	14.2
								TST JK 2	TST JK 1	N		F/R	NO	FS	13.3	14.4
B	222GP	AA	1	5-4	141		27	6B(K)	GRD	3/5	P	0	FS	28	26.5	ADJ. "B"
								6B(K)	GRD		P	NO	FS	22	23.5	ADJ. "A"
								2(B)	GRD	4/12	S	0	FS	28.5	27	
								2(B)	GRD	9	S	NO	FS	20	21	
B	222H	BB	1	5-4	72		27	6B(K)	GRD	3/13	P	0	FS	23.5	22.5	ADJ. "C"
								6B(K)	GRD	3/13	P	NO	FS	20	21	ADJ. "B"
								6B(K)	GRD	3/10/14	P	0	FS	28	26.5	ADJ. "B"
								6B(K)	GRD	3/10/14	P	NO	FS	22	23.5	ADJ. "B"
								6B(K)	GRD	3/10	P	0	FS	28.5	27	ADJ. "A"
								2(B)	GRD		S	0	FS	28.5	27	
								2(B)	GRD	11	S	NO	FS	20	21	

TEST NOTES:  
 1. ARM. NEED NOT TOUCH CORE.  
 2. TEST CONTACT FOLLOW ON MAKE CONTACTS MIN. 3 CONTACT SEPARATION ON ALL CONTACTS MIN. 3.  
 3. REG. FOR SPGS. 1-2. SPGS. 1 & 2 SHALL MAKE BEFORE SPG. 1 STRIKES THE BUSHING ON SPG. 4.  
 4. PRIOR TO ISSUE 16 B SEC. OPR. REQ'S. WERE TEST 30.5 MA, READJ. 29 MA.  
 5. ADJ. "B" ADDED ON ISSUE 15D, IS FOR USE WITH LINES NOT EXCEEDING 1500.0 EXTERNAL CKT. AND NOT EQUIPPED WITH RELAY TYPE SUBSETS.  
 6.  
 7. ADJ. "A" IS FOR USE WITH RELAY TYPE SUBSETS, OR IN AREAS WHERE THE CORRESPONDING TRIPPING RANGE IS SATISFACTORY.  
 8. TEST AND READJ. DURING THE RINGING INTERVAL USING ±1% RES. AS SPEC. BELOW:  
 TEST NO. NO. OPR. OPR.  
 HIGH IMPEDANCE DIST. 1230.0 1120.0 900.0 970.0  
 TUBE DIST. 1640.0 1315.0 1080.0 1160.0  
 9. CONTACTS 1-2 MAY MAKE AND 3-4, 6-7 MAY BREAK.  
 10. ADJ. "A" IS SUPERSEDED BY ADJ. "B" ON ISS. 15D.  
 11. CONTACTS 1-2 MAY MAKE AND CONTACTS 3-4, 5-6 MAY BREAK.  
 12. TEST CONTS. 4-5 MAY MAKE BEFORE CONTS. 12-13 BREAK.  
 13. ADJ. "B" IS SUPERSEDED BY ADJ. "A" FOR OFFICES WITH SOV SILENT INTERVAL BAT. ON ISS. 16 B. ADJ. "B" IS "A & M ONLY" FOR OFFICES WITH 60-75 V. SILENT INTERVAL BAT.

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				RESID.	BSP FIG.	CONT. PRESS.	ARM. TRVL.	TEST CLIP DATA			TEST WDG.	TEST FOR	AFTER SOAK		TEST
C	221CL		1	5-4	10		12	5(VON)	GRD	1	0	500	90	85	
								5(VON)	GRD	1	NO	500	62	69	
								TST JK 1	TST JK 2	V-M	20/4	H			100
								TST JK 1	TST JK 2	V-M	3/4	R			155
								5(VON)	GRD	3	NO	500	62	69	140
D	222GD		1	5-4	112		27	4(E)	GRD	5/6	0	FS	9.1	8.6	
								4(E)	GRD	6	NO	FS	5.4	5.7	
								4(E)	GRD	7	0	FS	24.5	23	
								4(E)	GRD	7/8	NO	FS	14.7	15.5	
E	221HL		1	5-4	111		13	1(C)	GRD	1/9	0	500	90	85	
								1(C)	GRD	1/9	NO	500	61	65	
								TST JK 1	TST JK 2	V-M	20/4	H			111
								TST JK 1	TST JK 2	V-M	3/4	R			200
								1(C)	GRD	3/9	NO	500	61	65	175
F	222LB	B		5-4	14		12	3(A)	GRD		0	FS	12.7	12.1	
								3(A)	GRD		NO	FS	10.1	10.7	

TEST NOTES:  
 1. FOR USE WHEN TIME REQ. ARE NOT APPLIED.  
 2. TEST HOLD- USE LEAK A IN PULSING TEST SET.  
 3. FOR USE WHEN TIME REQ. ARE APPLIED.  
 4. CONNECT GROUND TO SLEEVE WIPER AND TO TEST JACK 3.  
 5. CONTACTS 1-2 SHALL MAKE BEFORE SPRING 1 STRIKES THE BUSHING ON SPRING 4.  
 6. SPGS. 1-2 ONLY.  
 7. WHOLE COMB.  
 8. CONTS. 1-2 MAY MAKE & CONTS. 3-4, 5-6 MAY BREAK.  
 9. TEST-CONT. PRESS. MIN. 15 GRAMS FOR SPGS. 3-4.  
 10. JK. SPGS. "C" & "H" WHEN "U" OPT. IS FURNISHED OR SPGS. "I" & "S" WHEN "T" OPT. IS FURNISHED SHALL MAKE CONT. WHEN SW. IS REMOVED.

DESIG.	CODE	OPTION	CKT. FIG.	MECH. REQ.			CIRCUIT PREPARATION		TEST SET PREP.	SEE TEST NOTE NO.	DIRECT CURRENT FLOW REG.			REMARKS		
				RESID.	BSP FIG.	CONT. PRESS.	ARM. TRVL.	TEST CLIP DATA			TEST WDG.	TEST FOR	AFTER SOAK		TEST	READI.
H	2226N		1	5-4	19		18	3(Z)	GRD	1	0	FS	23.5	21		
								3(Z)	GRD	1	NO	FS	17.5	18.5		
J	223AC		1	5-4	261		18	(H) NO	3(Z)	GRD	2	P	0	FS	62.5	59.5
								(H) NO	3(Z)	GRD	3	P	NO	FS	45.5	48
								(H) NO	3(Z)	GRD	4	P	NO	FS	35	
								7(U)	8(U)	GRD		S	0	FS	20	
K	224AU		1	5-4	258		27	5(A)	BAT.	5/61	P	0		28.5	27	
								5(A)	BAT.	7/8	P	NO		20	21.5	
								2T(K)	GRD		S	0	FS	37	34	
								2T(K)	GRD	9	S	NO	FS	42.5	45	
Z	225M		1	5-4	305		16	(B) O	12(B) OR	GRD	10	0	FS	18	17	
								(B) O	3(B)	GRD	10	NO	FS	9.1	9.6	

TEST NOTES:  
 1. TEST CONTACT SEP ON ALL CONTACTS MIN. 15.  
 2. TEST CONTACT SEP. MIN. 13.  
 3. AS PERMITTED BY SEQUENCE ANY TWO BREAK CONTACTS MAY BREAK.  
 4. NO BACK CONTACTS SHALL BREAK.  
 5. SPGS. 11 AND 27 ONLY.  
 6. CONTACTS 17-27 SHALL MAKE BEFORE SPG. 11 STRIKES BUSHING ON 4T AND BEFORE SPG. 18 STRIKES BUSHING ON 4B.  
 7. SHORT CKT. SPGS. 3-4 OF TEST JK.  
 8. CONTACTS 17-27 SHALL MAKE BEFORE 18-28 MAKE CONTACTS 18-28 SHALL MAKE BEFORE CONTACTS 37-4T AND 38-4B BREAK.  
 9. AS PERMITTED BY SEQUENCE ANY TWO BREAK CONTACTS MAY BREAK AND CONTACTS 17-27 AND 18-28 MAY MAKE.  
 10. CONNECT GRD. TO 12(B) WHEN 222GP IS USED. CONNECT GRD. TO 3(B) WHEN 222H IS USED.

FIG. K (MFR. DISC.)

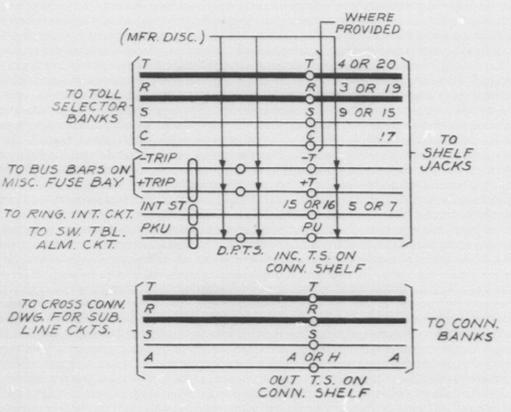
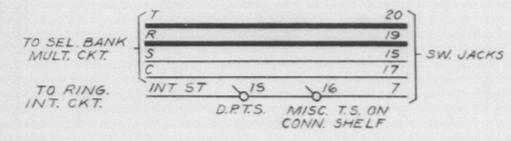


FIG. 51 (FOR FIG. 1)



EQUIPMENT NOTES:  
 201. FIG. K IS RATED "MFR. DISC." & FIG. 51 IS ADDED ON ISSUE 14D.