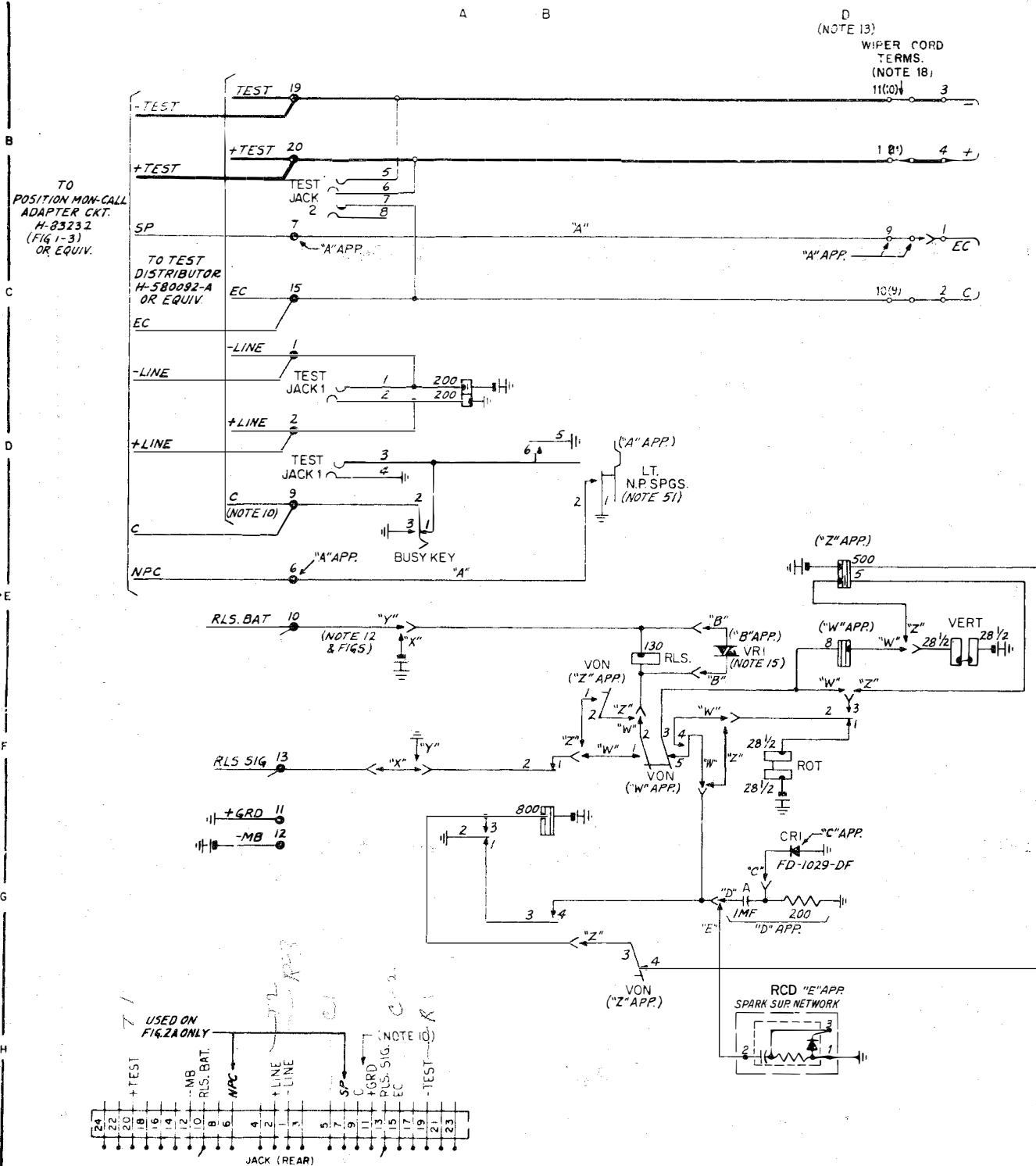


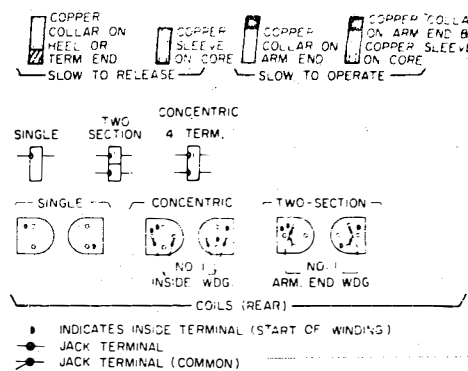
FIGS. 1A OR 1B
FIGS. 2A (SEE FIGS.)



APP. AND/OR WRING	ISSUES		WAS PART OF	SUPERSEDED BY	WIRED BY		FIGURE OR SUFFIX	TABLE	NOTES
	FIRST USED	LAST USED			FACTORY	INSTALLER			
A	10				*		FIG. 2A		16
B	9				*				15
C	9	9	3		*				17
D	1	16		E	*				
E	17				*				
F									
G									
H									
I									
J									
K									
L									
M									
N									
O									
P									
Q									
R									
S									
T									
U									
V									
W	1	7		Z	*				13
X	1				*		FIG. 1A, 2A		12
Y	4				*		FIG. 1B		12
Z	8				*				13

MANUFACTURING NOTES (CONT'D.)

18- WIPER CORD TERMINAL NUMBERS IN () ARE FOR FIGURES 1A AND 1B AND THOSE NOT IN () ARE FOR FIGURE 2A.



FIGURES:

FIGURE 1A - SPECIFY "X" WIRING FOR RELEASE
GROUND.

(A&M) FIGURE 1B - SPECIFY "Y" WIRING FOR RELEASE BATTERY.

FIGURE 2A - SPECIFY "A" WIRING & APPARATUS & "X" WIRING FOR CENTRALIZED SUPERVISOR CONTROL AND RELEASE GROUND.

ENGINEERING NOTES:

51-INSTALLER SHALL ADJUST LEFT NORMAL POST SPRINGS
TO OPERATE ON LEVELS ON WHICH POSITION CALLING
IS REQUIRED.

MANUFACTURING NOTES:

10-SHELF JACKS 9 & 11 MAKE CONTACT WHEN SWITCH
IS REMOVED.

11-PRIOR TO ISSUE 3, "IN" TERMINAL OF NUMBER 2
WINDING ON RELAY "A" WAS WIRED TO RELAY "B"
SPRING 6.

12-PRIOR TO ISSUE 4, "X" WIRING WAS PART OF
CIRCUIT & "Y" WIRING WAS NOT SHOWN.

13-PRIOR TO ISSUE 8, "W" WIRING AND APPARATUS WERE PART OF CIRCUIT AND "Z" WIRING AND APPARATUS WERE NOT SHOWN. BEGINNING WITH ISSUE 8, "Z" WIRING AND APPARATUS SUPERSEDE "W" WIRING AND APPARATUS.

14-PRIOR TO ISSUE 8, SWITCH JACK WAS 20 POINT.

15-PRIOR TO ISSUE 9, RELEASE-MAGNET COIL HAD 1000-OHM N.-I. WINDING, AND "B" WIRING & APPARATUS WERE NOT SHOWN. BEGINNING WITH ISSUE 9, OMIT RELEASE-MAGNET COIL'S N.-I. WINDING, AND PROVIDE "B" WIRING APPARATUS. FOR FIELD CONVERSION, VARISTOR MAY BE ADDED WITHOUT RELEASE-MAGNET COIL CHANGE.

16-PRIOR TO ISSUE 10, FIGURE 2A AND "A" WIRING A
APPARATUS WERE NOT SHOWN. FIGURE 2A IS TO BE
FURNISHED WHEN A TEST CONNECTOR ARRANGED FOR
CENTRALIZED SUPERVISOR CONTROL IS REQUIRED.

17-PRIOR TO ISSUE 10, "C" WIRING & APPARATUS WAS
PART OF "B" WIRING & APPARATUS, "C" WIRING
& APPARATUS IS NO LONGER FURNISHED.
(NOTES CONTINUED)

STOCKLIST DH-58466-34 (FIG. 3A)
STOCKLIST DH-58466-33 (FIG 2A)
STOCKLIST DH-58466-32 (FIG. 1)
STOCKLIST DH-58466-31 (FIG. 1)
STOCKLIST DH-58466-30 (FIG. 1)
RUNNING LIST RL-58466
JUMPER LIST JL-58466 (FIGS. 1A & 1B)

ASSOCIATE DRAWINGS

ASSOCIATED DRAWINGS		
DRAWING NO	ISS	DESCRIPTION
AH-58466	17	ADJUSTMENT
E-58466	9	EXPLANATION



6-18-68
FNC

DESIGNED	DR. J.W.A.	TEST CONNECTOR CIRCUIT
APP'D. G. SORBER	CK. J.N.	
SCALE: 1" = 1"	DATE: 10/1/54	
DO NOT SCALE DRAWING		

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 ELECTRIC COMPANY. IT IS THE POLICY OF ATLANTA ELECTRIC COMPANY THAT
 CONCEPTS AND THE INFORMATION THEREIN BEING THIS DRAWING IS DELIVERED

H-58466	SHEET 1 OF 2
---------	--------------

AUTOMATIC ELECTRIC COMPANY
 NORTHLAKE, ILL. U.S.A.O. GENOA, ILL. U.S.A.O. WAUKESHA, WISC. U.S.A.O.

FIG. 3A

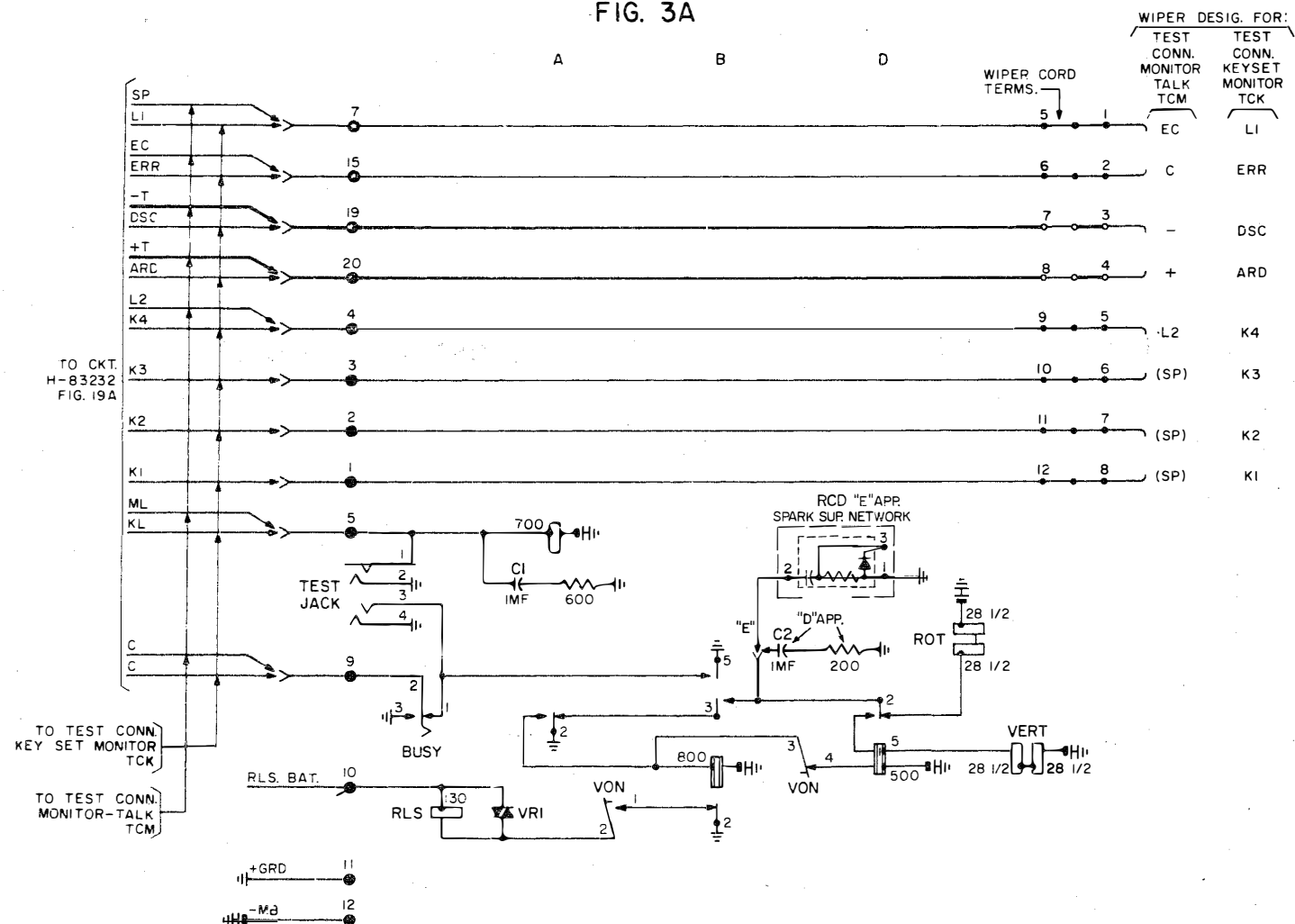
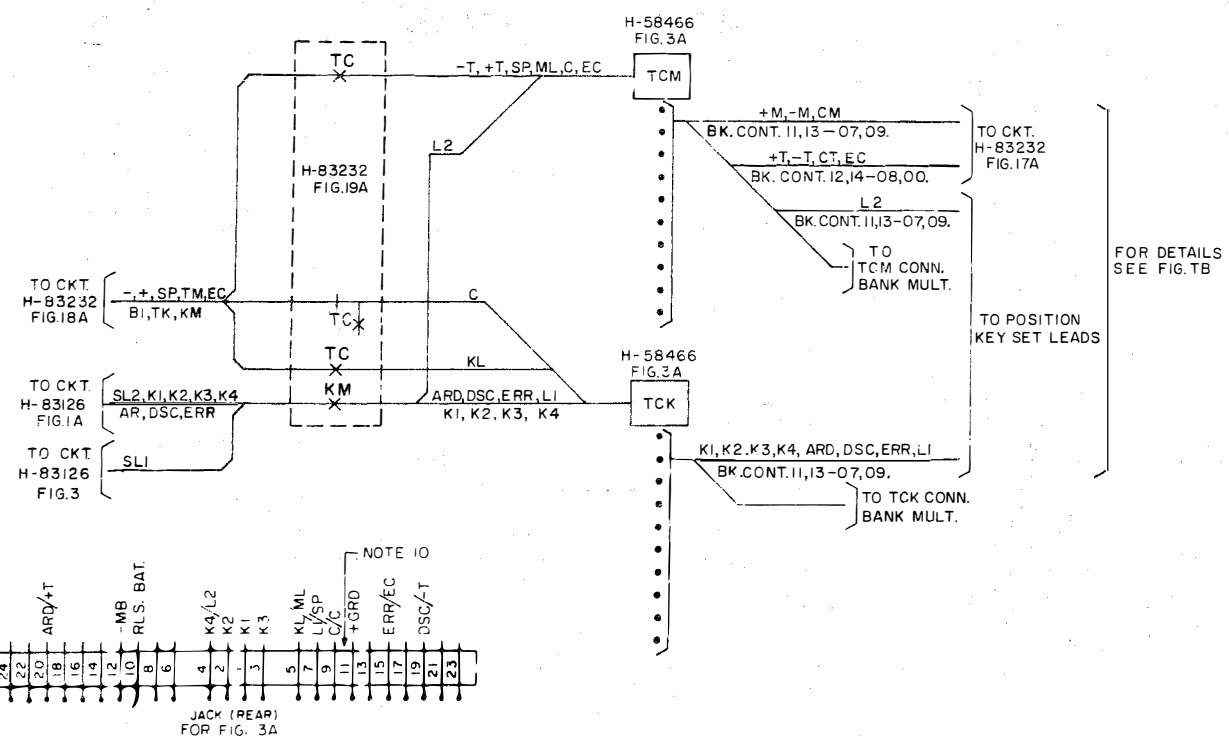
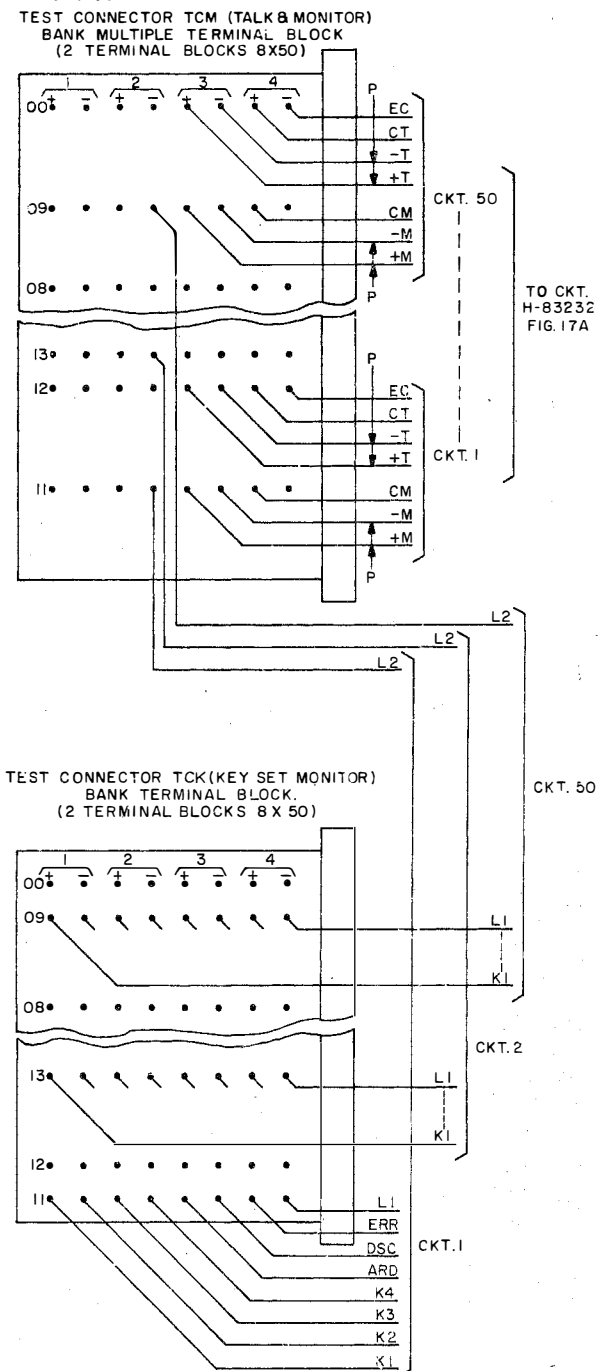
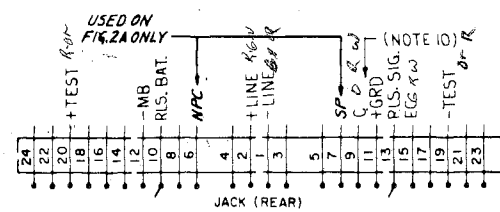
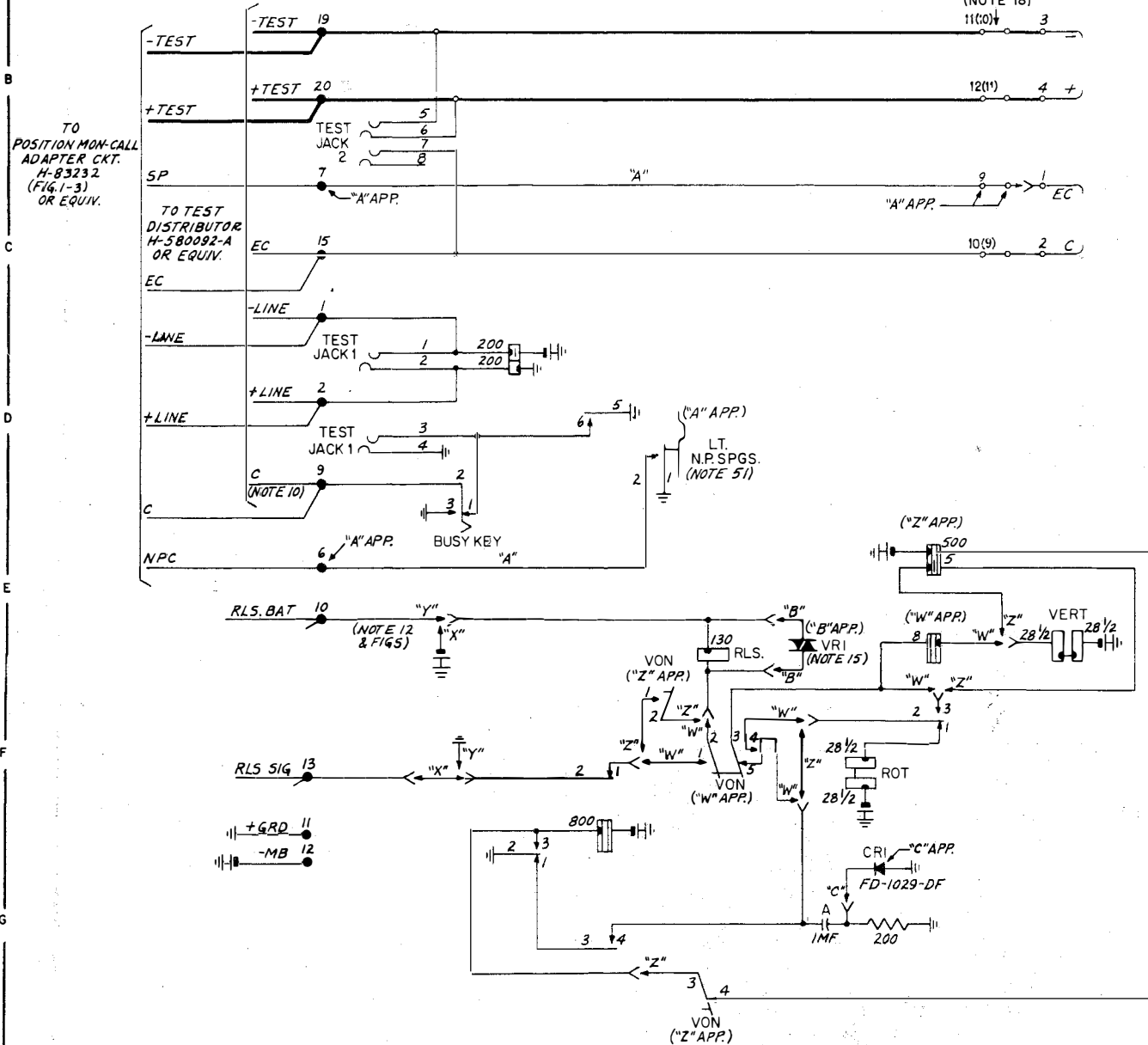


FIG. TB (FOR REFERENCE ONLY)



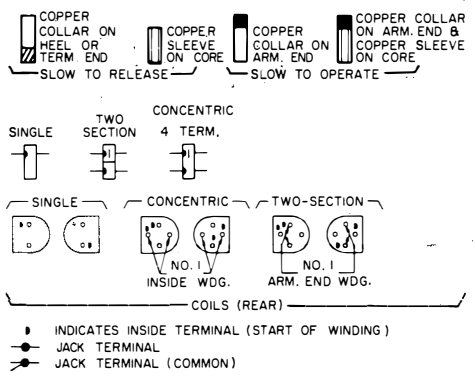
FIGS. 1A OR 1B
FIGS. 2A (SEE FIGS.)



APP. AND/OR WIRING	ISSUES		SUPERSEDED BY	WIRED BY		FIGURE OR SUFFIX	TABLE	NOTES
	FIRST USED	LAST USED		FACTORY	INSTALLER			
A	10			*		FIG. 2A	16	
B	9			*			15	
C	9	9	B	*			17	
D								
E								
F								
G								
H								
I								
J								
K								
L								
M								
N								
O								
P								
Q								
R								
S								
T								
U								
V								
W	1	7	Z	*			13	
X	1			*		FIG. 1A, 2A	12	
Y	4			*		FIG. 1B	12	
Z	8			*			13	

MANUFACTURING NOTES (CONT'D.)

18- WIPER CORD TERMINAL NUMBERS IN () ARE FOR FIGURES 1A AND 1B. AND THOSE NOT IN () ARE FOR FIGURE 2A.



FIGURES:
FIGURE 1A - SPECIFY "X" WIRING FOR RELEASE GROUND.
(A&M) FIGURE 1B - SPECIFY "Y" WIRING FOR RELEASE BATTERY.
FIGURE 2A - SPECIFY "A" WIRING & APPARATUS & "X" WIRING FOR CENTRALIZED SUPERVISOR CONTROL AND RELEASE GROUND.

ENGINEERING NOTES:

51-INSTALLER SHALL ADJUST LEFT NORMAL POST SPRINGS TO OPERATE ON LEVELS ON WHICH POSITION CALLING IS REQUIRED.

MANUFACTURING NOTES:

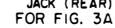
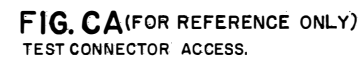
- 10-SHELF JACKS 9 & 11 MAKE CONTACT WHEN SWITCH IS REMOVED.
- 11-PRIOR TO ISSUE 3, "IN" TERMINAL OF NUMBER 2 WINDING ON RELAY "A" WAS WIRED TO RELAY "B" SPRING 6.
- 12-PRIOR TO ISSUE 4, "X" WIRING WAS PART OF CIRCUIT & "Y" WIRING WAS NOT SHOWN.
- 13-PRIOR TO ISSUE 8, "W" WIRING AND APPARATUS WERE PART OF CIRCUIT AND "Z" WIRING AND APPARATUS WERE NOT SHOWN. BEGINNING WITH ISSUE 8, "Z" WIRING AND APPARATUS SUPERSEDE "W" WIRING AND APPARATUS.
- 14-PRIOR TO ISSUE 8, SWITCH JACK WAS 20 POINT.
- 15-PRIOR TO ISSUE 9, RELEASE-MAGNET COIL HAD 1000-OHM N.-I. WINDING, AND "B" WIRING & APPARATUS WERE NOT SHOWN. BEGINNING WITH ISSUE 9, OMIT RELEASE-MAGNET COIL'S N.-I. WINDING, AND PROVIDE "B" WIRING & APPARATUS. FOR FIELD CONVERSION, VARISTOR MAY BE ADDED WITHOUT RELEASE-MAGNET COIL CHANGE.
- 16-PRIOR TO ISSUE 10, FIGURE 2A AND "A" WIRING AND APPARATUS WERE NOT SHOWN. FIGURE 2A IS TO BE FURNISHED WHEN A TEST CONNECTOR ARRANGED FOR CENTRALIZED SUPERVISOR CONTROL IS REQUIRED.
- 17-PRIOR TO ISSUE 10, "C" WIRING & APPARATUS WAS PART OF "B" WIRING & APPARATUS, "C" WIRING & APPARATUS IS NO LONGER FURNISHED. (NOTES CONTINUED).

STOCKLIST	DH-58466-34 (FIG. 3A)
STOCKLIST	DH-58466-33 (FIG. 2A)
STOCKLIST	DH-58466-32 (FIG. 1)
STOCKLIST	DH-58466-31 (FIG. 1)
STOCKLIST	DH-58466-30 (FIG. 1)
MFG.	RUNNING LIST RL-58466
DIS.	JUMPER LIST JL-58466 (FIGS. 1A & 1B)

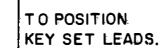
ASSOCIATED DRAWINGS		
DRAWING NO.	ISS	DESCRIPTION
AH-58466	17	ADJUSTMENT
E-58466	9	EXPLANATION

DESIGNED		DR. JWA		TEST CONNECTOR CIRCUIT	
APP'D. G. SORBER		DATE		H-58466	
DO NOT SCALE DRAWING		SHEET 1 OF 2		H-58466	
ISSUE 9		CHANGES		H-58466	
ISSUE 10		H-58466		H-58466	
ISSUE 11		H-58466		H-58466	
ISSUE 12		H-58466		H-58466	
ISSUE 13		H-58466		H-58466	
ISSUE 14		H-58466		H-58466	
ISSUE 15		H-58466		H-58466	
ISSUE 16		H-58466		H-58466	
ISSUE 17		H-58466		H-58466	
ISSUE 18		H-58466		H-58466	
ISSUE 19		H-58466		H-58466	
ISSUE 20		H-58466		H-58466	
ISSUE 21		H-58466		H-58466	
ISSUE 22		H-58466		H-58466	
ISSUE 23		H-58466		H-58466	
ISSUE 24		H-58466		H-58466	
ISSUE 25		H-58466		H-58466	
ISSUE 26		H-58466		H-58466	
ISSUE 27		H-58466		H-58466	
ISSUE 28		H-58466		H-58466	
ISSUE 29		H-58466		H-58466	
ISSUE 30		H-58466		H-58466	
ISSUE 31		H-58466		H-58466	
ISSUE 32		H-58466		H-58466	
ISSUE 33		H-58466		H-58466	
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ISSUE 35		H-58466		H-58466	
ISSUE 36		H-58466		H-58466	
ISSUE 37		H-58466		H-58466	
ISSUE 38		H-58466		H-58466	
ISSUE 39		H-58466		H-58466	
ISSUE 40		H-58466		H-58466	
ISSUE 41		H-58466		H-58466	
ISSUE 42		H-58466		H-58466	
ISSUE 43		H-58466		H-58466	
ISSUE 44		H-58466		H-58466	
ISSUE 45		H-58466		H-58466	
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ISSUE 47		H-58466		H-58466	
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ISSUE 61		H-58466		H-58466	
ISSUE 62		H-58466		H-58466	
ISSUE 63		H-58466		H-58466	
ISSUE 64		H-58466		H-58466	
ISSUE 65		H-58466		H-58466	
ISSUE 66		H-58466		H-58466	
ISSUE 67		H-58466		H-58466	
ISSUE 68		H-58466		H-58466	
ISSUE 69		H-58466		H-58466	
ISSUE 70		H-58466		H-58466	
ISSUE 71		H-58466		H-58466	
ISSUE 72		H-58466		H-58466	
ISSUE 73		H-58466		H-58466	
ISSUE 74		H-58466		H-58466	
ISSUE 75		H-58466		H-58466	
ISSUE 76		H-58466		H-58466	
ISSUE 77		H-58466		H-58466	
ISSUE 78		H-58466		H-58466	
ISSUE 79		H-58466		H-58466	
ISSUE 80		H-58466		H-58466	
ISSUE 81		H-58466		H-58466	
ISSUE 82		H-58466		H-58466	
ISSUE 83		H-58466		H-58466	
ISSUE 84		H-58466		H-58466	
ISSUE 85		H-58466		H-58466	
ISSUE 86		H-58466		H-58466	
ISSUE 87		H-58466		H-58466	
ISSUE 88		H-58466		H-58466	
ISSUE 89		H-58466		H-58466	
ISSUE 90		H-58466		H-58466	
ISSUE 91		H-58466		H-58466	
ISSUE 92		H-58466		H-58466	
ISSUE 93		H-58466		H-58466	
ISSUE 94		H-58466		H-58466	
ISSUE 95		H-58466		H-58466	
ISSUE 96		H-58466		H-58466	
ISSUE 97		H-58466		H-58466	
ISSUE 98		H-58466		H-58466	
ISSUE 99		H-58466		H-58466	
ISSUE 100		H-58466		H-58466	

WIPER DESIG. FOR:



TEST CONNECTOR TCM (TALK & MONITOR)
BANK MULTIPLE TERMINAL BLOCK
(2 TERMINAL BLOCKS 8X50) ☐



CIRCUIT EXPLANATION

M

TEST CONNECTOR CIRCUIT
H-58466

SIZE **A**
E- 58466
SHEET 1 TOTAL 3
AUTOMATIC ELECTRIC CO.
NORTHLAKE, ILLINOIS U.S.A.

(Written specifically for circuit issue 15,
but may also apply to later issues. Refer
to H print for appropriate E issue number.)

FEATURES

- (a) Connects the Test Operator to the line under test
- (b) Enables tests to be performed by the Test Operator
- (c) Calling party releases only
- (d) Provides a non-releasing alarm
- (e) Enables tests to be performed from a Call Com-
mander

CIRCUIT OPERATION

A. Figures 1A or 1B and 2A used

1.00 Seizure (Operated: VON springs)

This switch is marked idle by absence of ground on lead C. When the preceding equipment extends the call to this circuit, the line loop across leads -LINE and +LINE is closed to relay A. Relay A operates and closes relay B and #2D. Relay B operates, and grounds lead C to hold the preceding equipment and to mark this switch busy. Relay D operates.

2.00 Vertical Stepping (Operated: Relays A, B, and D;
VON Springs)

Relay A follows the first series of dial pulses and, when at normal, opens relay B and closes #1D, and the VERT magnet in series. The VERT magnet follows the pulses from relay A and steps the shaft up to the dialed level. The VON springs restore on the first vertical step, and open, #2D. Relays B and D remain operated during the pulsing due to their slow-to-

Updated
Section A
Added
Section B
& Feature
(e)
7/71: iw
Grillo
Handwritten signatures and initials
Issue 9

WRITTEN BY

G. P. Bouloukos

APPROVED

IFF 8/13/67

ISSUE

9

DRAWING NO.

E- 58466

When a Test Connector arranged for centralized supervisor control is required, FIG 2A is used with "A" wiring and apparatus. If the dialed level has a normal cost control (NPC, FIG 2A) the LT NP SPGS lead NP C to operate a control relay in the associated circuit.

At the completion of pulsing, relay A re-operates, opens #1D and the VERT magnet in series and closes relay B. The VERT magnet restores. After its slow-to-release interval, relay D restores and transfers the pulsing circuit to the ROT magnet.

3.00 Rotary Stepping (Operated: Relays A and B)

Relay A follows the second series of dial pulses and, when at normal, opens relay B and closes the circuit to the ROT magnet. The ROT magnet follows the pulses from relay A and steps the wipers to the bank contacts of the dialed line.

At the end of pulsing, relay A re-operates, and closes relay B. Relay B does not restore during pulsing due to its slow-to-release characteristics. (As long as relay B is operated and relay D is restored, the rotary pulsing circuit can be re-closed; this allows the tester to step to the next line at any time by dialing the digit one).

4.00 Testing the Dialed Line (Operated: Relays A and B)

If the called line is busy, ground on the C wiper causes the preceding equipment to give the Test Operator a busy signal. If the called line is idle, the Test Operator may test the called line over the + and - TEST and EC leads.

5.00 Releasing (Operated: Relays A and B)

When the Test Operator releases, the line loop across leads -LINE and +LINE is opened to relay A. Relay A restores and opens relay B. After its slow-to-release interval, relay A restores, removes ground from lead C to release the preceding equipment and closes the release magnet circuit. The release magnet operates and releases the switch shaft. When the shaft returns to normal, the VON Springs operate and open the release magnet. The RLS magnet restores.

B. FIGURE 3A used

1.00 Seizure (Operated: VON Springs)

This switch is marked idle by absence of ground on lead C. When the preceding equipment extends the call to this circuit. Ground on lead KL or ML closes relay A. Relay A operates

and closes relay B and #2D. Relay B operates and grounds lead C to hold the preceding equipment and to mark this switch busy. Relay D operates.

2.00 Vertical Stepping (Operated: Relays A, B, and D;
VON Springs)

Relay A follows the first series of ground pulses and, when at normal, opens relay B and closes #1D, and the VERT magnet in series. The VERT magnet follows the pulses from relay A and steps the shaft up to the dialed level. The VON springs restore on the first vertical step and open #2D. Relays B and D remain operated during the pulsing due to their slow-to-release characteristics.

At the completion of pulsing, relay A re-operates, opens #1D and the VERT magnet in series, and closes relay B. The VERT magnet restores. After its slow-to-release interval, relay D restores and transfers the pulsing circuit to the ROT magnet.

3.00 Rotary Stepping (Operated: Relays A and B)

Relay A follows the second series of ground pulses, and when at normal, opens relay B and closes the circuit to the ROT magnet. The ROT magnet follows the pulses from relay A and steps the wipers to the bank contacts of the dialed line. At the end of pulsing relay A re-operates, and closes relay B. Relay B does not restore during pulsing due to its slow-to-release characteristics. (As long as relay B is operated and relay D is restored, the rotary pulsing circuit can be re-closed; this allows the tester to step to the next line at any time by dialing the digit one).

4.00 Testing the Dialed Line (Operated: Relays A and B)

If the called line is busy, ground on the C wiper causes the preceding equipment to give the Test Operator a busy signal. If the called line is idle, the Test Operator may test the called line for the "Monitor and Talk" function over the +, -, C, EC, and L2 leads, or the Test Operator, by depressing the "Key Set Monitor" key at the call commander may test over the L1, ERR, DSC, ARD, K4, K3, K2, and K1 leads.

5.00 Releasing (Operated: Relays A and B)

When the Test Operator releases, the ground is removed from relay A. Relay A restores and opens relay B. After its slow-to-release interval, relay B restores, removes ground from lead C to release the preceding equipment, and closes the RLS magnet circuit. The RLS magnet operates and releases the switch shaft. When the shaft returns to normal, the VON Springs operate and open the RLS magnet. The RLS magnet restores. The circuit is now at normal.

9-27-76 5-26-77
ISS.: #18 ISS.: #19
~~ISS.: #17~~ ~~ISS.: #17~~

*	DESCRIPTION	MFG. ADJ.	FIELD GTEP	EXPLANATION OF TERMS	
*	RELAY ADJUST. (AH) DRG.		040-002-100	-*DENOTES APPLICABLE ADJUSTMENTS. -#1-INSIDE OR ARMATURE END WINDING. -#2-OUTSIDE OR HEEL END WINDING. -S.L.A.=SHORT LEVER ARMATURE. S.R.=SLOW TO RELEASE. S.O.= SLOW TO OPERATE. -A.C.=ALTERNATING CURRENT. O=OPERATE. N.O.=NON-OPERATE. H=HOLD. R=RELEASE. O.C.=OPEN CIRCUIT. -RESID.=RESIDUAL ADJUSTMENT VALUE. -TEST VALUES ARE FOR INSPECTION ONLY. -READJ. VALUES ARE FOR ADJUSTING ONLY. -CURRENT IS SHOWN IN AMPERES. -POS.=TEST WITH POSITIVE BAT.THUR RESIST.OF TEST SET. -NEG.=TEST WITH NEGATIVE BAT.THUR RESIST.OF TEST SET. RELAYS PREFIXED BY GR OR GT HAVE WIRE WRAP TERMS. RELAYS PREFIXED BY R OR RT HAVE SOLDER TERMINALS. THIS ADJUSTMENT APPLIES IN EITHER CASE. - NOTES - 1-TEST WITH BOTH WINDINGS IN SERIES. 2-#1 WINDING TO OPERATE #1 SPRING ONLY. 3-SPRINGS NEED ONLY MAKE CONTACT ON OPERATE TESTS. 4-BOTH TESTS MADE ON #1 WINDING. #1 TEST IS FOR #1 SPRING ONLY. 5-CONNECT RESISTANCE ACROSS TEST JACKS 1 & 2. 6-SHORT LEVER ARM. RESIDUAL MIN..0015", MAX..004". 7-OPERATE AND NON-OPERATE VALUES ARE FOR USE WHEN TIMING REQUIREMENTS ARE NOT APPLIED. GEN.:SHORT TEST JACKS 3 & 4 WHILE TESTING. AH AGREES WITH CIRCUIT ISSUE 17 OR LATER.	
*	GENERAL REQUIREMENTS	100			
*	SW.TEST & SH. JKS.,ETC.	101	230-005-703	-#1-INSIDE OR ARMATURE END WINDING. -#2-OUTSIDE OR HEEL END WINDING. -S.L.A.=SHORT LEVER ARMATURE. S.R.=SLOW TO RELEASE. S.O.= SLOW TO OPERATE. -A.C.=ALTERNATING CURRENT. O=OPERATE. N.O.=NON-OPERATE. H=HOLD. R=RELEASE. O.C.=OPEN CIRCUIT. -RESID.=RESIDUAL ADJUSTMENT VALUE. -TEST VALUES ARE FOR INSPECTION ONLY. -READJ. VALUES ARE FOR ADJUSTING ONLY. -CURRENT IS SHOWN IN AMPERES. -POS.=TEST WITH POSITIVE BAT.THUR RESIST.OF TEST SET. -NEG.=TEST WITH NEGATIVE BAT.THUR RESIST.OF TEST SET. RELAYS PREFIXED BY GR OR GT HAVE WIRE WRAP TERMS. RELAYS PREFIXED BY R OR RT HAVE SOLDER TERMINALS. THIS ADJUSTMENT APPLIES IN EITHER CASE. - NOTES - 1-TEST WITH BOTH WINDINGS IN SERIES. 2-#1 WINDING TO OPERATE #1 SPRING ONLY. 3-SPRINGS NEED ONLY MAKE CONTACT ON OPERATE TESTS. 4-BOTH TESTS MADE ON #1 WINDING. #1 TEST IS FOR #1 SPRING ONLY. 5-CONNECT RESISTANCE ACROSS TEST JACKS 1 & 2. 6-SHORT LEVER ARM. RESIDUAL MIN..0015", MAX..004". 7-OPERATE AND NON-OPERATE VALUES ARE FOR USE WHEN TIMING REQUIREMENTS ARE NOT APPLIED. GEN.:SHORT TEST JACKS 3 & 4 WHILE TESTING. AH AGREES WITH CIRCUIT ISSUE 17 OR LATER.	
*	CLASS A & Z	110	040-500-706		
*	" B	300	040-500-502		
*	" C	301	040-500-504		
*	" W	784	040-500-102		
	TYPE 10 A.C.	118	040-502-702		
	TYPE 59 CODEL UNIT	783	040-500-501		
*	V.O.N.	120			
*	CUP & SHAFT SPGS.	121			
	CAM SPGS.	122			
	NORMAL POST	123			
	RLSE. SPGS.	124			
	R.O.N.	126	230-005-703		
*	VERT. MECH.	130			
*	DOGS	131			
*	ROT. MECH.	132			
*	RLSE. MECH.	133			
*	SHAFTS, WIPERS, ETC.	135			
	MINOR SW	136	230-007-708		
*	TESTING LP PULSED SWS.	144	230-360-506		
	TESTING SX PULSED SWS.	145	230-200-504		
*	TIMING SWITCHES & RLYS.	146	SEE BELOW		
	44 ROT. SW.	163	230-007-706		
	45 " "	162	230-007-705		
	SHUNT FIELD RELAY	175	040-500-706		
	280 POLAR RLY.	201	040-401-701		
	KEYS	753	032-305-700		
	SWITCHBOARD JACKS	754	032-320-700		
	BAR RELAY	55585	040-500-704		
		146	230-360-508		
		146	230-360-509		
				SWITCH STAND: ROT.SW.TEST POSITION FIGS.1A & 2A POS.8 FIGS.1B & 3A POS.11	
				TEST CONNECTOR CIRCUIT	
				REF.:GTEP-108-104-102	

GE AUTOMATIC ELECTRIC
NORTH LAKE, ILLINOIS 60164
INCORPORATED

ENG.: FEH APP'D.: RBK
CIRCUIT OR SWITCH ADJUSTMENT

CKT.: H-58466

AH-58466

3 SHEETS 1

FX-2880-A 1/76 ISSUE:2

NOTES CONTINUED

- 8- HOLD AND RELEASE VALUES ARE USED FOR MAINTENANCE PURPOSES WHEN TIMING REQUIREMENTS ARE APPLIED AFTER TIMING, RELAY MUST MEET TEST AND/OR INSPECTION REQUIREMENTS OF A-110.
9- TEST HOLD - USE 1400 - LOOP IN PULSING TEST SET.) CKTS.H-85681, H-850046 OR EQUIV.
10- TEST HOLD - USE LEAK "A" IN PULSING TEST SET.)
11- CONNECTOR C & E FUNCTION RELAY TIMING TESTS ARE APPLIED AT THE TEST JACKS PER A-146.

RELAYS		SPRING GAUGING	TEST FOR:		RESIST. AT 50V.		CURRENT		SEE NOTE	TESTING INSTRUCTIONS
					READJ.	TEST	READJ.	TEST		
A FIGS.1 & 2 GR-6177-A3 D-280026-B #1-200 Ω #2-200 Ω	.009 RESID.	</								

9-27-76 5-26-77
ISS. #18 ISS:#19

AH-58466

RELAYS	SPRING GAUGING	TEST FOR:	RESIST. AT 50V.		CURRENT		SEE NOTE	TESTING INSTRUCTIONS									
			READJ.	TEST	READJ.	TEST											
D FIGS. 1-3 GR-5030-C2 D-284314-B #1-5 Ω #2-500 Ω SR	.004 RESID. <table border="1"><tr><td>.012</td><td>.008</td></tr></table>	.012	.008	NO. 1						8	<table border="1"> <tr> <td>READJ.</td> <td>TEST</td> </tr> <tr> <td>.125 SEC.</td> <td>LEAK A</td> </tr> <tr> <td>.200 SEC.</td> <td>.250 SEC.</td> </tr> </table> INS. V.O.N. SPGS. 3 & 4. POS. TO V.O.N. SPG. 4.	READJ.	TEST	.125 SEC.	LEAK A	.200 SEC.	.250 SEC.
		.012	.008														
		READJ.	TEST														
.125 SEC.	LEAK A																
.200 SEC.	.250 SEC.																
NO. 2	0	780	660	.039	.043	7											
	NO	970	1100	.034	.031												
PRIOR TO AH ISS. 12 RLY. WAS GR-7942-A1.																	
A FIG. 3 GR-6177-B2 D-281909-B #1-700 Ω	NOTE RESID. <table border="1"><tr><td>.004</td><td>.006</td></tr></table>	.004	.006	NO. 1	0	2190	2060	.0173	.0181	3	INS. SPGS. 1 & 2 OF RLY. A. POS. TO LOWER COIL TERM.						
		.004	.006														
		NO. 2	NO	2370	2480	.0163	.0157										
RESID. TO BE MIN. .005", MAX. .008".																	
RESID.		NO. 1															
		NO. 2															
RESID.		NO. 1															
		NO. 2															
RESID.		NO. 1															
		NO. 2															
RESID.		NO. 1															
		NO. 2															

GE AUTOMATIC ELECTRIC
NORTHLAKE, ILLINOIS 60164
INCORPORATED

CIRCUIT OR SWITCH ADJUSTMENT

CKT.: H-58466 3 SHEETS 3

AH-58466

TRACING

WORN

RE-TYPED

12-14-66

IEM: #14

15-AH-58466

EMG. ECO.

5-19-67

ISIR: #15

AH-58466

RELAYS	SPRING GAUGING	TEST FOR	RESIST. AT 50 V		CURRENT		SEE NOTE	TESTING INSTRUCTIONS
			READJ.	TEST	READJ.	TEST		
A FIG. 1		0	2960	2910	.0148	.0151	1	
R-757-A1		NO	3080	3190	.0144	.0139	5	
D-280026-A							7	
#1-200 Ω								
#2-200 Ω								
A FIG. 1A2		0	2960	2910	.0148	.0151	1	THIS RELAY SUPPLIED PRIOR TO ISSUE 13.
R-6177-A3		NO	3080	3190	.0144	.0139	5	INS. V.O.N. SPGS. 3 & 4.
D-280026-A							7	
#1-200 Ω								
#2-200 Ω								
B		0	1920	1700	.0184	.0200	8	THIS RELAY SUPPLIED BEGINNING WITH ISS. 13.
R-8014-A4		NO	2250	2580	.0164	.0148		INS. V.O.N. SPGS. 3 & 4.
D-282137-A								POS. TO SPG. 3 OF RLY. A.
#1-800 Ω								
SR								

NOTE: RELAYS ARRANGED FOR WIRE WRAP CONNECTIONS HAVE PREFIX GR OR GT. COILS HAVE SUFFIX B. THIS ADJUSTMENT APPLIES IN EITHER CASE.

FIELD NOTE: STD. ADJS. A-100, 101, 120, 121, 122, 123, 124, 126, 130, 131, 132, 133, 134, AND 135 ARE NO LONGER SUPPLIED FOR MAINTENANCE. REFER TO "FIELD INSPECTION AND ADJUSTMENT."

EXPLANATION OF TERMS	NOTES	GEN.: SHORT TEST JACKS 3 & 4 WHILE TESTING.	RELAY ADJUSTMENT SHEET TEST CONNECTOR CIRCUIT
#1-INSIDE OR ARMATURE END WINDING. #2-OUTSIDE OR HEEL END WINDING. SA-SLOW TO OPERATE & SLOW TO RELEASE. SR-SLOW TO RELEASE; SO-SLOW TO OPERATE. AC-ALTERNATING CURRENT. O-OPER.; NO-NON-OPER.; H-HOLD.; R-RLSE. RESID.-RESIDUAL ADJUSTMENT VALUE. TEST VALUES ARE FOR INSPECTION ONLY. READJ. VALUES ARE FOR ADJUSTING ONLY. CURRENT IS SHOWN IN AMPERES. POS.-TEST WITH POSITIVE BATTERY THRU RESISTANCE OF TEST SET. NEG.-TEST WITH NEGATIVE BATTERY THRU RESISTANCE OF TEST SET.	1-TEST WITH BOTH WINDINGS IN SERIES. 2-TEST WITH VERTICAL MAGNET IN SERIES. 3-TEST WITH ROTARY MAGNET IN SERIES. 4-NO. 1 WINDING TO OPER. NO. 1 SPRING ONLY. 5-SPRINGS NEED ONLY MAKE CONTACT ON OPERATE TESTS. 6-BOTH TESTS MADE ON NO. 1 WINDING. NO. 1 TEST IS FOR NO. 1 SPRING ONLY. 7-CONNECT RESIST ACROSS TEST JACKS 1 & 2. 8-SHORT LEVER ARM. RESID. MIN. .0015 MAX .004.	STANDARD ADJUSTMENTS 120 121 130 131 100 101 110 132 133 135 140 SEE FIELD NOTE TYPE. MVR ENG. FEH APP'D. VRK OK. AUTOMATIC ELECTRIC COMPANY NORTHLAKE, ILLINOIS, U.S.A.	CKT.-H-58466 2 SHEETS 1 AH-58466

RETYPE
12-14-66 5-19-67
ISS. #14 ISS. #15

AH-58466

RELAYS		SPRING GAUGING		TEST FOR	RESIST. AT 50 V		CURRENT		SEE NOTE	TESTING INSTRUCTIONS	
					READJ.	TEST	READJ.	TEST			
D	FIG. 1	.025	.016	NO	0	490	435	.101	.113	8	POS. TO V.O.N. SPG. 3.
R-7942-A1					NO	540	595	.091	.083		
D-282201-A											
#1-8 Ω											
SR											
D	FIGS. 1 & 2	.012	.008	NO							
R-5030-C2											
D-284314-A											
#1-5 Ω					0	780	660	.039	.043		INS. V.O.N. SPGS. 3 & 4.
#2-500 Ω					NO	970	1100	.034	.031		POS. TO V.O.N. SPG. 4.
SR											THIS RELAY SUPPLIED BEGINNING WITH ISS. 12.

9-5-56
ISSUE NO. 10

C.O. 53300 GL. B
10-4-57
RETRACED. ADDED
ITEMS 156 & 178.
ITEM 108 WAS
99523-A.
MOVED ITEM
189 & D-10913-A

[Handwritten signature]
P. C.
G.P.

C.O. 64100 CL. B
9-58
REMOVED ITEMS
16, 108, 109, 156,
178 & 111 & 2 ITEM
189. ITEMS 102,
103 & 104 WERE
10-46273-A,
10-46274-A, &
10-49534-A
RESP. ADDED
ITEM 84 & IN
TITLE BOX
SEL. & CONN. MTG.

[Handwritten signature]
F.J.B. A.G.

ISS: 12

13-D-235852
REG.
REM'D. ITEM
102. ADDED
1 ITEMS
102 & 114.
I.T.
N.S. C.S.
9-23-59

13

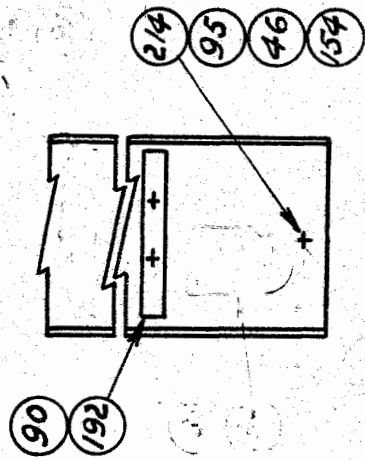
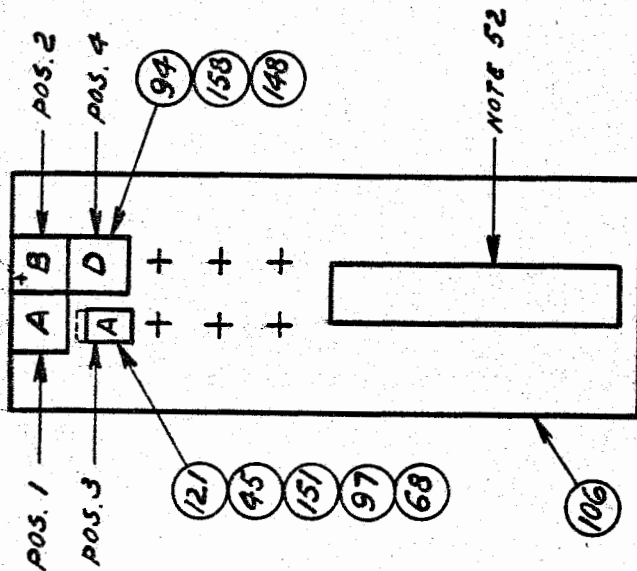


FIG. 1

TEST CONNECTOR
(SEL. & CONN. MTG.)

H-58466	18	D-235852-B	PC. NO.
RL-58466	1A	D-235852-A	
H-58466	FIG.		
RL-58466			
CMT. & RL			

EE					3	TOTAL SHEETS
AUTOMATIC ELECTRIC COMPANY		G.M.E.		DR. P.H.	CHK. H.W.	D-235852
NORTH LAKE, ILL. U.S.A.		66.12-9-35		SHEET 1		

10/13

S T O C K L I S T					S T O C K L I S T (CONT'D)				
EE	AMT	DRG NO	DESCRIPTION	ITEM	AMT	DRG NO	DESCRIPTION	ITEM	
AUTOMATIC ELECTRIC COMPANY NORTHLAKE, ILL., U. S. A. APPD. DR. SHEET 2 CHK. 3 TOTAL SHEETS D-235852	1	D-21970-GRP.5	COMMON PARTS STOCKLIST	⊗ 1	1	D-77358-A	4-36 NUT-TEST JACK	155	
	1	D-1742-A	8 WASHER-CAP	45	1	D-760780-A	6-32 FHIMS TERM COVER	156	
	2	D-1745-A	10 WASHER-SW FRAME	46	6	D-760642-A	8-32 WHIMS-RLY	158	
	1	D-281410-A	RES-200-CAP	68	1	D-78453-A	LOWER COVER PLATE	159	
	4	D-281530-A	ROT & VERT MAGNET	72	1	D-65361-A	RETAINING RING-TERM COVER	178	
	1	D-30016-A	SWITCH FRAME	75	1	D-109119-A	CHOCK SPRING		
	1	D-31588-A	FANNING STRIP	76	1	D-3690-A	GUIDE POST-RIGHT RLY		
	1	D-320252-A	BUSY KEY	77	1	D-3691-A	GUIDE POST-LEFT RLY		
	1	D-3689-A	NORMAL POST	82	2	D-41473-A	COLLAR	84	
	2	D-41097-A	BANK ROD	85	3/8oz				
	2	D-41149-A	BANK ROD COLLARS	87					
	1	D-42103-A	20 PT SW JACK	90			R C SOLDER		
	1	D-42325-A	TEST JACK	92					
	3	D-44469-A	INSULATOR-RLY	94					
	2	D-44480-A	INSULATOR-SW FRAME	95					
	1	D-44864-A	INSULATOR-CAP	97					
	1	D-46621-A	PRIVATE WIPER	102					
	2	D-46622-A	LINE WIPER	103					
	1	D-46218-A	SWITCH SHAFT	⊕ 105					
	1	D-47598-A	BASE	106					
	1	D-490025-F	FRONT COVER	107					
	1	D-49980-C	TERM COVER	108					
	1	D-49411-A	ADJ SCR COVER	109					
	1	D-541077-A	NO PLT HOLDER	111					
	2	D-542680-A	WIPER CORD	114					
	2	D-542281-A	WIPER CORD	116					
	1	D-68563-A	CAP-1 MF	121					
1	D-71166-A	RLS ARMATURE	⊗ 133						
1	D-71169-A	ROT ARMATURE	⊗ 134						
1	D-71343-A	VERT ARMATURE	⊗ 135						
1	D-730208-A	RLS MAGNET	⊗ 136						
1	D-735036-A	OFF NORM SPGS	147						
6	D-75321-A	BUSHING-RLY	148						
1	D-7700-A	8-32 NUT-CAP	151						
2	D-7708-A	1/4-20 NUT-BANK ROD	152						
4	D-77055-A	10-32 NUT-SW FRAME	154						
		BANK ROD- INCL. IN ITEM 85	86						

SCREWS		RELAYS-1 PER POS				
AMT	SIZE	WHERE USED	ITEM	POS	REALAYS	MD DRG
3	4-36X1/8 RHIM	TEST JACK & BUSY KEY	180	1*	R-757-A1	MD-81 ⊗
1	6-32X1/8 BDG. HIM	ADJ SCR COVER & NO PLT. HOLDER	184	2*	R-8014-A4	MD-82 ⊗
2	6-32X3/16 RHIM	LOWER COVER PLATE	185	4	R-7942-A1	MD-82 ⊗
2	6-32X1/4 RHIM	OFF NORM SPGS	187			
2	6-32X1/2 RHIM	FANNING STRIP	191			
2	6-32X11/16 RHIM	SW JACK	192			
2	10-32X3/4 RHIM	SW FRAME	214			
SWITCH WIRE				1-GUIDE POSTS TO BE LOCATED ON RELAYS MARKED*.		
671-0	W-5001-1	K-G-28	2-FOR MFG INF SEE SPEC.5296.			
41-0	W-5001-3	A-R-60	3-WIPERS TO BE MTD & WIRED PER H-50666 FIG.2			
61-0	W-5001-4	W-W-69	4-STAMP FUNCT DESIG PER H-43286 FIG.1& 48			
ENGINEER'S NOTES:						
51- ⊗ DENOTES DETAILS ON MD DRGS.						
52-FOR MASTER DRGS SEE MD-176						

AUTOMATIC ELECTRIC COMPANY
NORTHLAKE, ILL., U.S.A.

APP'D.

DR.
SHEET 3

CHK.

3

TOTAL SHEETS

D-235852