

RELAYS				SPRING GAUGING				TESTING INSTRUCTIONS			

RELAYS		SPRING GAUGING										TESTING INSTRUCTIONS				
												RESIST. AT 50 V		CURRENT		SEE NOTE
												TEST		TEST		
												READJ.		READJ.		
												TEST		TEST		
												TEST FOR		TEST		
												NO. 1		NO. 2		
CC	FIGS. 1, 1, 2, 3	FIGS. 1, 4 & 5										0	2500	.0143	POS. TO SPG. 8 OF RLY. CB.	
RT-18552	-A13	SHORT														
D-283242	-A	LEVER														
#1-1000	Ω	ARM.														
RT-16552	-A13															
SR																
TS												0	600	.0263	INS. SPGS. 1 & 2 OF RLY. CHO.	
RT-20671	-A12											NO	1350	.0188	POS. TO SPG. 8 OF RLY. PF.	
D-280431	-A															
#1-1300	Ω															
RT-21671	-A12															
SO																

RELAYS		SPRING GAUGING				TESTING INSTRUCTIONS					
		RESID.		TEST FOR		RESIST. AT 50 V		CURRENT		TEST	
						READJ.		READJ.		TEST	

RELAYS	SPRING GAUGING					TEST FOR		RESIST. AT 50 V		CURRENT		MORE	TESTING INSTRUCTIONS
	FIGS. 1, 4 & 5	FIGS. 1, 4 & 5	FIGS. 1, 4 & 5	FIGS. 1, 4 & 5	FIGS. 1, 4 & 5	NO. 1	NO. 2	READJ.	TEST	READJ.	TEST		
CH1 FIGS. 1, 4 & 5	.030	.018	.012	.012	.012	0		400		.0625			INS. SPGS. 3 & 4 OF RLY. CH1. POS. TO SPG. 1 OF RLY. CHB.
RT-25530-B12													
D-283680-A													
#1-400 Ω													
500-2000 Ω NI													
RT-26530-B12													
CH2 TO CH9													
RT-25523-B11	.024	.012	.012	.012	.012	0		650	760	.0400	.0430		RLYS. CH3, CH5, CH6, CH8, & CH9: POS. TO SPG. 4 RLYS. CH2, CH4, CH5, CH7 & CH8 RESE.
D-283680-A						NO		1160	1280	.0320	.0297		RLY. CH2: POS. TO SPG. 6 OF RLY. CH1. RLY. CH4: POS. TO SPG. 2 OF RLY. CH3. RLY. CH7: POS. TO SPG. 8 OF RLY. CH6.
#1-400 Ω													
500-2000 Ω NI													
RT-26523-B11													
CH0													
RT-25508-B12	.030	.018	.012	.012	.012	0		1000	900	.0368	.0385		INS. SPGS. 4 & 5 OF RLY. CHC. POS. TO SPG. 8 OF RLY. CH9.
D-283680-A						NO		1350	1500	.0285	.0264		
#1-400 Ω													
500-2000 Ω NI													
RT-26508-B12													
TA FIG. 1													
RT-25519-B11	.020	.012	.012	.012	.012	0		1580		.018			INS. SPGS. 4 & 5 OF RLY. TA. POS. TO SPG. 5 OF RLY. TC.
D-283640-A													
#1-1200 Ω													
RT-26519-B11													
TB													
RT-25521-B11A	.022	.012	.012	.012	.012	0		3300	2900	.0111	.0122		INS. SPGS. 4 & 5 OF RLY. A. INS. SPGS. 3 & 4 OF RLY. TB. POS. TO SPG. 7 OF RLY. TC.
D-283648-A						NO		4200	4750	.0093	.0084		
#1-1200 Ω													
RT-26521-B11A													
TS FIGS. 2 & 3													
RT-18502-A16	.016	.008	.008	.008	.008	0		3000		.0125			INS. SPGS. 7 & 8 OF RLY. BA. POS. TO LOWER SPG. 1 OF RLY. BT.
D-283242-A													
#1-1000 Ω													
RT-16502-A16													
SR													

EXPLANATION OF TERMS		NOTES		RELAY ADJUSTMENT SHEET	
11-INSIDE OR ARMATURE END WINDING. 12-OUTSIDE OR HEEL END WINDING. SA-SLOW TO OPERATE & SLOW TO RELEASE. SR-SLOW TO RELEASE, SO-SLOW TO OPERATE. SC-ALTERNATING CURRENT. OC-OPENING, NON-OPER. H-HOLD, R-RLSE. RESID.= RESIDUAL ADJUSTMENT VALUE. TEST VALUES ARE FOR INSPECTION ONLY. CURRENT VALUES ARE FOR ADJUSTING ONLY. POSITIVE BATTERY THROUGH RESISTANCE OF TEST SET. NEG. BATTERY THROUGH 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	
				TYPE-MVR ENG. FEH/APP'D.-REK/OK.	
				AUTOMATIC ELECTRIC COMPANY NORTH LAKE, ILLINOIS, U.S.A.	
				CKT.-H-85175	
				11SHEETS	
				AH-85175	

RELAYS	SPRING GAUGING										TESTING INSTRUCTIONS			
	RESID.	RESID.	RESID.	RESID.	RESID.	RESID.	RESID.	RESID.	RESID.	RESID.	TEST FOR	RESIST. AT 60 V	CURRENT	TEST
LT FIGS. 2 & 3											0	9000	.0044	.0049
RT-18503-AL3											NO	10600	.0039	.0037
D-280591-A														
#1-2200 Ω														
RT-16503-AL3														
BT														
RT-23519-ALL														
D-282137-A														
#1-800 Ω														
RT-24519-ALL														
SR														
DT														
RT-20546-B12														
D-260028-A														
#1-1300 Ω														
RT-21546-B12														

SPRING GAUGING										TESTING INSTRUCTIONS			
RELAYS	RESID.	RESID.	RESID.	RESID.	RESID.	RESID.	RESID.	RESID.	RESID.	TEST FOR	RESIST. AT 60 V	CURRENT	TEST
LT FIGS. 2 & 3										0	9000	.0044	.0049
RT-18503-AL3										NO	10600	.0039	.0037
D-280591-A													
#1-2200 Ω													
RT-16503-AL3													
BT													
RT-23519-ALL													
D-282137-A													
#1-800 Ω													
RT-24519-ALL													
SR													
DT													
RT-20546-B12													
D-260028-A													
#1-1300 Ω													
RT-21546-B12													

10: DECREASE RESIS. AS NECESSARY

TO HOLD OPER. IN SERIES WITH

20,000 Ω.

STANDARD ADJUSTMENTS

TYPE-MVR ENG. FEB APP'D. RBK

AUTOMATIC ELECTRIC COMPANY

NORTH LAKE, ILLINOIS U.S.A.

CKT.-E-85175

11 SHEETS 15

NOTES

- 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.
- 7—NO. 1 TEST IS FOR NO. 1 SPRING ONLY.
- 8—CONNECT RESIST ACROSS TEST JACKS 1 & 2.
- 9—SHORT LEVER ARM. RESID MIN. .0015 MAX. .004.

EXPLANATION OF TERMS

- 11—INSIDE OR ARMATURE END WINDING.
- 12—OUTSIDE OR REEL END WINDING.
- SA—SLOW TO OPERATE & SLOW TO RELEASE.
- SR—SLOW TO RELEASE & SLOW TO OPERATE.
- AC—ALTERNATING CURRENT.
- OP—OPER.; NO—NON-OPER.; H—HOLD.; R—RELEASE.
- RESID.—RESIDUAL ADJUSTMENT VALUE. TEST VALUES ARE FOR INSPECTING 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.

ISS. #20	RELAYS	SPRING GAUGING	TEST FOR	RESIST. AT 50 V	CURRENT	SEE NOTE	TESTING INSTRUCTIONS
			READJ.	TEST	READJ.	TEST	
LS FIGS. 2 & 3	RT-23520-A11	SHORT LEVER ARM.	0	500	.0334		INS. SPGS. 1 & 2 OF RLY. LT. POS. TO SPG. 1 OF RLY. TS.
D-282378-A	#1-600 Ω						
#2-1000 Ω	RT-24520-A11						DOUBLE ARM. RELAY
AL	RT-20060-F11	CHROME PLATED ARM.	0	1750	.0204	.0209	TEST IN SERIES WITH 300 Ω.
D-283736-A	#1-400 Ω	NIC. - IRON CHROM. PL. CORE	NO	1850	.0196	.0192	INS. SPGS. 5 & 6 OF RLY. BA. POS. TO SPG. 2 OF RLY. ON.
#2-1000 Ω	RT-21060-F11	NICKEL-IRON HEELPC.					
							DOUBLE ARM. RELAY
BA	RT-18500-A13	SHORT LEVER ARM.	0	2400	.0167		INS. SPGS. 5 & 6 OF RLY. BA. POS. TO UPPER SPG. 3 OF RLY. AL.
D-282349-A	#1-600 Ω						
RT-16500-A13	SR						
CAA	RT-18503-A14	SHORT LEVER ARM.	0	1010	.0455		REMOVE LEADS FROM UPPER COIL TERM. POS. TO SPG. 8 OF RLY. BA.
D-282224-A	#1-231 Ω						
(300-1000 Ω NI)	SR	RT-16503-A14					
							RELAY ADJUSTMENT SHEET
EXPLANATION OF TERMS			NOTES				
11-INSIDE OR ARMATURE END WINDING. 12-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 - RELEASE. RESID. - RESIDUAL ADJUSTMENT VALUE. TEST VALUES ARE FOR ADJUSTING ONLY. CURRENT 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-TIME WITH BOTH WINDINGS IN SERIES. 2-TIME WITH VERTICAL MAGNET IN SERIES. 3-TIME 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				
			TYPE-MVR ENG.-FEB APP'D.-RBE				CKT.-H-85175 11 SHEETS 6
			AUTOMATIC ELECTRIC COMPANY NORTH LAKE, ILLINOIS, U. S. A.				AH-85175

EN-1461 (Rev. 4/5)
REVIEWED
5-4-62
ISS. #20

RELAYS		SPRING GAUGING				TEST FOR		RESIST. AT 50 V		CURRENT		SEE NOTE	TESTING INSTRUCTIONS	
								READJ.	TEST	READJ.	TEST			
CBB FIGS. 2 & 3						0	NO. 1	5200		.0081			POS. TO SPG. 3 OF RLY. CAA.	
RT-18503-A15														
D-280337-A														
#1-1000 Ω														
RT-16503-A15														
SR														
ON						0	NO. 1	1600		.0179			POS. TO MINOR SW. OFF NORMAL SPG. 1.	
RT-25501-B13														
D-283648-A														
#1-1200 Ω														
RT-26501-B13														
SC						0	NO. 1	3450		.0107			FIG. 2: POS. TO SPG. 4 OF RLY. S1. FIG. 3: POS. TO SPG. 4 OF RLY. S3.	
RT-25546-B11														
D-283648-A														
#1-1200 Ω														
RT-26546-B11														
S1						0	NO. 1	1200	1070	.0310	.0340		INS. SPGS. 1 & 2 OF RLY. S1. POS. TO SPG. 1 OF RLY. L2.	
RT-25538-B12						NO	NO. 1	1450	1600	.0270	.0250			
D-283630-A														
#1-400 Ω														
500-2000 Ω NI														
RT-26538-B12														
S2						0	NO. 1	1300	1150	.0294	.0320		INS. SPGS. 1 & 2 OF RLY. S2. POS. TO SPG. 4 OF RLY. L4.	
RT-25539-B12						NO	NO. 1	1550	1750	.0256	.0232			
D-283680-A														
#1-400 Ω														
500-2000 Ω NI														
RT-26539-B12														
S3						0	NO. 1	1030	900	.0350	.0385		INS. SPGS. 1 & 2 OF RLY. S3. POS. TO SPG. 6 OF RLY. L4.	
RT-25540-B12						NO	NO. 1	1250	1400	.0305	.0278			
D-283680-A														
#1-400 Ω														
500-2000 Ω NI														
RT-26540-B12														

EXPLANATION OF TERMS

11-INSIDE OR ARMATURE END WINDING.
12-OUTSIDE OR REEL END WINDING.
SR-SLOW TO OPERATE & SLOW TO RELEASE.
SA-SLOW TO RELEASE & SLOW TO OPERATE.
AC-ALTERNATING CURRENT.
O-OPER. NO-NON-OPER. HOLD. R-RELEASE.
RESID.-RESIDUAL ADJUSTMENT VALUE TEST.
VALUES ARE FOR ADJUSTING ONLY. CURRENT VALUES ARE FOR ADJUSTING ONLY. CURRENT VALUES ARE FOR ADJUSTING ONLY. POS. WITH POSITIVE BATTERY THRU RESISTANCE OF TEST SET. NEG. BATTERY THRU NEGATIVE BATTERY THRU RESISTANCE OF TEST SET.

NOTES

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.
7-CONNECT RESIST ACROSS TEST JACKS 1 & 2.
8-SHORT LEVER ARM. RESID MIN. .0015 MAX. .004.

STANDARD ADJUSTMENTS

RELAY ADJUSTMENT SHEET

CKT.-H-85175

PLSHEETS 7

TYPE-MVR

ENG.-FEB

APP'D.-HBK

ATK.

AUTOMATIC ELECTRIC COMPANY

NORTH LAKE, ILLINOIS, U.S.A.

AE-85175

RELAYS		SPRING GAUGING										TEST FOR		RESIST. AT 50 V		CURRENT		TEST	SEE NOTE	TESTING INSTRUCTIONS
L1 & L3 FIG. 2												0		1600		.0250				INS. SPGS. 1 & 2 OF RLY. BEING TESTED.
RT-25513-B11																				RLY. L1: POS. TO SPG. 4 OF RLY. L2.
D-283680-A																				RLY. L3: POS. TO SPG. 1 OF RLY. L4.
#1-400 Ω																				
(500-2000 Ω NI)																				
RT-26513-B11																				
L2 & L4												0		2800		.0152				INS. UPPER SPGS. 2 & 3 OF RLY. A2.
RT-25502-B13																				INS. UPPER SPGS. 3 & 4 OF RLY. L5.
D-283649-A																				GRD. TO SPG. 1 OF RLY. S3.
#1-500 Ω																				RLY. L2: NEG. TO SPG. 1 OF RLY. L1.
																				RLY. L4: NEG. TO SPG. 1 OF RLY. L3.
RT-26502-B13												0		760		.051				TEST WITH WIPERS AT NORMAL.
MS1 FIG. 1 ETC												NO		900		.045				POS. TO MINOR SW. OFF NORMAL SPG. 2.
D-555000-CKE																				
D-282254-A																				
#1-211 Ω																				
(275-900 Ω NI)																				
#2-900 Ω NI																				
D-281580-A												0		180		.188				TEST WITH WIPERS ON 10TH CONTACT.
#1-155 Ω												NO		210		.166				TEST IN MULT. WITH 280 Ω.
																				INS. SPGS. 8 & 9 OF RLY. CA.
																				POS. TO SPG. 7 OF RLY. CA.
MS2 FIGS. 2&3												0		760		.051				TEST WITH WIPERS AT NORMAL.
D-555000-AKL												NO		900		.045				POS. TO SPG. 5 OF RLY. ON.
D-282254-A																				
#1-211 Ω																				
(275-900 Ω NI)																				
#2-900 Ω NI																				
D-281580-A												0		170		.200				TEST WITH WIPERS ON 10TH CONTACT.
#1-155 Ω												NO		200		.180				TEST IN MULT. WITH 225 Ω.
																				POS. TO SPG. 8 OF RLY. BA.
																				AT NORMAL CONTACT PRESSURE OF LEVER SPGS.
																				AGAINST BREAK SPG. SHALL BE 40 TO 60 GRAMS.
																				GAUGE BETWEEN ARM. AND COIL CORE.

RELAYS	SPRING GAUGING	TEST FOR	RESIST. AT 50 V		CURRENT		TESTING INSTRUCTIONS
			READJ.	TEST	READJ.	TEST	
A2 Figs. 2&3	</						

SPECIAL ADJUSTMENT INFORMATION FOR RELAY A2

1. MINIMUM NORMAL CLEARANCE, JUDGED VISUALLY, BETWEEN THE ARMATURE ARM AND THE FIXED HEELPIECE RESIDUAL - .005".
2. MINIMUM NORMAL CLEARANCE BETWEEN ARMATURE AND THIRD POLEPIECE - .010".
3. ALL TESTS TO BE MADE WITH #2 WDG. ENERGIZED ON DIRECT 50 VOLTS TO AID #1 WDG. WHEN IT IS ENERGIZED FOR "0" & "NO" TESTS.
4. #1 "0" TESTS ARE TO BE MADE AFTER A REVERSE SOAK SPECIFIED IN #3 "S2" TEST. #1 "NO" TESTS ARE TO BE MADE AFTER A REVERSE SOAK SPECIFIED IN #3 "S2" TEST. #2 "0" TESTS ARE TO BE MADE AFTER A REVERSE SOAK SPECIFIED IN #3 "S3" TESTS. THE RELAY MAY RELEASE ON THE REVERSE SOAK BUT IF NOT IT SHOULD BE RESTORED MANUALLY.
5. #1 TESTS TO BE MADE WITH DAMPER SPRING TENSION RELIEVED.
6. DAMPER SPRING TENSION AGAINST ARMATURE TO BE 15 TO 35 GRAMS MEASURED AT THE TIP OF THE SPRING.
7. #2 TEST TO BE MADE WITH DAMPER SPRING EXERTING PRESSURE AGAINST THE ARMATURE.
8. INSTALLATION AND MAINTENANCE - NOTE.

AFTER INSTALLING, THIS RELAY SHALL BE TESTED FOR SPOTTER PULSING AS FOLLOWS:

- (1) 0 OHM LOOP WITH ONE PARTY LINE; IN THIS CASE, IF THE RELAY ATTEMPTS TO FOLLOW LOOP PULSES THE DAMPER SPRING TENSION SHOULD BE INCREASED.
- (2) 1000 OHM LOOP WITH MAXIMUM NUMBER OF PARTIES ON LINE; WITH THIS CONDITION THE RELAY MAY NOT FOLLOW SPOTTER PULSES IN WHICH CASE DAMPER SPRING TENSION SHOULD BE REDUCED.

BOTH OF THESE FAULT CONDITIONS MAY BE CHECKED BY OBSERVING THE CALLING PARTY RECORD GIVEN BY THE CALL RECORDER.

EXPLANATION OF TERMS	NOTES
11—INSIDE OR ARMATURE END WINDING.	1—TEST WITH BOTH WINDINGS IN SERIES.
12—OUTSIDE OR HELL END WINDING.	2—TEST WITH VERTICAL MAGNET IN SERIES.
SA—SLOW TO OPERATE & SLOW TO RELEASE.	3—TEST WITH ROTARY MAGNET IN SERIES.
SR—SLOW TO RELEASE; SO—SLOW TO OPERATE.	4—NO. 1 WINDING TO OPER. NO. 1 SPRING ONLY.
AC—ALTERNATING CURRENT.	5—SPRINGS NEED ONLY MAKE CONTACT ON OPERATE TESTS.
O—OPER.; NO—NON-OPER.; H—HOLD; R—RLSE.	6—BOTH TESTS MADE ON NO. 1 WINDING.
RESID.—RESIDUAL ADJUSTMENT VALUE. TEST VALUES ARE FOR INSPECTING ONLY. READJ. VALUES ARE FOR ADJUSTING ONLY. CURRENT IS SHOWN IN AMPERES. POS.—TEST WITH POSITIVE BATTERY THRU RESISTANCE OF TEST SET.	7—CONNECT RESIST ACROSS TEST JACKS 1 & 2.
NEG.—TEST WITH NEGATIVE BATTERY THRU RESISTANCE OF TEST SET.	8—SHORT LEVER ARM. RESID MIN. .0016 MAX .004.

RELAY ADJUSTMENT SHEET
11; SPOTTER BATTERY PER H-85008
FIG. 2 MUST BE CONNECTED TO TERM. 8B DURING THIS TEST.
STANDARD ADJUSTMENTS
CMT. H-85175 DISHEETS 19
TYPE-MVR ENG. FEB APPD. RBK OK.
AUTOMATIC ELECTRIC COMPANY
AB-85175

RETYPE
5-4-62

ISS. #20

AB-85175

RELAYS		SPRING GAUGING										RESIST. AT 50 V		CURRENT		TEST FOR	TESTING INSTRUCTIONS	SEE NOTE	
												READJ.	TEST	READJ.	TEST				
SB & SE FIG. 3		.012										0	2750	2450	.0154	.0170	0	INS. SPGS. 5 & 6 OF RLY. UNDER TEST.	
RT-26531-B13		.012										NO	3200	3600	.0135	.0122	NO	POS. TO SPG. 5 OF RLY. UNDER TEST.	
D-283649-A		.018																	
#1-500 Ω		.032																	
SCA & SF		.012										0	1100		.0332		0	INS. UPPER SPGS. 2 & 3 OF RLY. A2.	
RT-26517-B12		.018																INS. UPPER SPGS. 3 & 4 OF RLY. IS.	
D-283630-A		.030																GRD. TO SPG. 1 OF RLY. SG.	
#1-400 Ω		.018																SCA: NEG. TO SPG. 6 OF RLY. SB.	
500-2000 Ω NI		.034																SF: NEG. TO SPG. 6 OF RLY. SE.	
SG		.024										0	850		.0468		0	INS. SPGS. 1 & 2 OF RLY. SG.	
RT-26608-B12		.018																POS. TO SPG. 6 OF RLY. SG.	
D-283991-A		.012																	
#1-240 Ω		.018																	
#2-500 Ω NI		.012																	
SA & SD		.012										0	760		.050		0	SA: INS. SPGS. 1 & 2 OF RLY. SA.	
RT-26618-B11		.034																POS. TO SPG. 3 OF RLY. SA.	
D-283991-A		.024																SD: INS. SPGS. 1 & 2 OF RLY. SD.	
#1-240 Ω		.018																POS. TO SPG. 3 OF RLY. SD.	
#2-500 Ω NI		.012																	
SS FIG. 4 & 5		.008										0	2200		.0143		0	POS. TO SPG. 10 OF RLY. SS.	
RT-12542-B14		.012																	
D-280028-A		.008																	
#1-1300 Ω		.008																	
TA		.008										0	2600		.0128		0	INS. SPGS. 4 & 5 OF RLY. A.	
RT-12502-B17		.016																POS. TO SPG. 7 OF RLY. TC.	
D-280028-A		.008																	
#1-1300 Ω		.008																	

EXPLANATION OF TERMS

- 1-INSIDE OR ARMATURE END WINDING.
- 2-OUTSIDE OR REEL END WINDING.
- SR = SLOW TO OPERATE & SLOW TO RELEASE.
- AC = ALTERNATING CURRENT.
- O = OPER.; NO = NON-OPER.
- RESID. = RESIDUAL ADJUSTMENT VALUE. TEST VALUES ARE FOR INSPECTING ONLY. CURRENT VALUES ARE FOR ADJUSTING ONLY. POS. TEST WITH POSITIVE BATTERY THRU RESISTANCE OF TEST SET. NEG. TEST WITH NEGATIVE BATTERY THRU RESISTANCE OF TEST SET.
- H = HOLD; R = RELEASE.
- RESID. = RESIDUAL ADJUSTMENT VALUE. TEST VALUES ARE FOR INSPECTING ONLY. CURRENT VALUES ARE FOR ADJUSTING ONLY. POS. TEST WITH POSITIVE BATTERY THRU RESISTANCE OF TEST SET. NEG. TEST WITH NEGATIVE BATTERY THRU RESISTANCE OF TEST SET.

NOTES

- 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.

RELAY ADJUSTMENT SHEET

STANDARD ADJUSTMENTS

TYPE: MVR ENG. - WO APP'D. - RBK
AUTOMATIC ELECTRIC COMPANY
NORTH AVE. ILLINOIS U.S.A.

CNT. H-85175

11 SHEETS 10

AB-85175

RELAYS

TB FIG8.4&5
RT-12058-B25
D-282196-A
#1-1200 B

SPRING GAUGING

014	008	008	008
008	008	008	008
008	008	008	008
008	008	008	008

TESTING INSTRUCTIONS

INS. SPGS. 4 & 5 OF RLY. A.
INS. SPGS. 3 & 4 OF RLY. TB.
POS. TO SPG. 7 OF RLY. TC.

[illegible]

EXPLANATION OF TERMS

11—INSIDE OR ARMATURE END WINDING.
 12—OUTSIDE OR HEE 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 INSPECTING ONLY. READY
 VALUES ARE FOR ADJUSTING ONLY. CURRENT
 IS SHOWN IN AMPERES. POS.—TEST WITH POSI-
 TIVE BATTERY THRU RESISTANCE OF TEST SET.
 NEG.—TEST WITH NEGATIVE BATTERY THRU
 RESISTANCE OF TEST SET.

NOTES

- 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 4 & 2.
- 8—SHORT LEVER ARM BEING RUN.
- 9—NO. 1 SPRING TO OPER. NO. 1 SPRING ONLY.

[illegible]

RELAY ADJUSTMENT SHEET

CKT.-H-85175 11 SHEETS 11 AH-85175