Western Electric Company, Inc.,
Engineering Dept.,
New York.

METHOD OF OPERATION
TESTING CIRCUIT
Schematic - For Line Finder Starting Test Set - Full Mechanical Power Driven System.

The E1515 shall be changed to read as follows:-

CIRCUIT REQUIREMENTS

	OPERATE	NON-OPERATE	RELEASE
E1515 (TR) Outer Wdg. (700 ohms)	Test requirement of inner winding is proportional to test requirement of outer winding.		
	Readj. .026 amp. Test .037 amp.	Readj. .016 amp. Test .015 amp.	
Inner Wdg.	Test .031 amp.		

ENG.--JLS-VL. CHK'D.--ASP-CWP. APPROVED - C.L. SLUYTER, G.M.L.
7/3/23.

Western Electric Company, Inc.,
Engineering Dept.,
New York.

Issue 1 - BT-501445.
November 3, 1921.

METHOD OF OPERATION
TESTING CIRCUIT

Schematic - For Line Finder Starting Test Set - Full Mechanical Power Driven System.

GENERAL DESCRIPTION

1. This circuit is used for testing the functions of both regular and emergency starting circuits of the panel line finder equipment. The apparatus of this test circuit is mounted in a portable box, and is connected to the starting circuit of the line finder equipment, by means of a plug ended flexible cord. The plug of this cord is inserted in the starting circuit spring jack and replaces the patching plug, which normally connects the trip and the line finder circuits with the starting circuit. Battery and ground are furnished to the test circuit, by means of a patching cord, one end of the cord being inserted in the test box battery jack, and the other end in a battery jack mounted on the line finder frame.

2. When the test circuit is connected to a starting circuit, the STP key is depressed until the A lamp lights, indicating that the test set is prepared to test the STA and GA relays of the start circuit. Upon the release of the STP key, the ST and X lamps light, providing the ST-A relay, the stepper magnet G of the start circuit, and their associated leads function properly. Upon completion of the STA relay test, the GA relay is tested and the GA lamp is lighted and the ST lamp extinguished, providing no trouble is encountered during the test. A short circuit test is now applied similar to the K commutator short in the regular operation of the starting circuit, and if this test is completed satisfactorily the K lamp lights, indicating the completion of the ST-A and GA relays test. The ST-B and GB relays are tested in a similar manner by depressing the STP key for the second time until the B lamp lights.

3. When the K lamp lights upon the completion of the ST-B and GB relays test, the STP key is again depressed and a test is made on the CA and SA relays. If the short around the winding of the CA relay, which exists when the ST-A relay operates is effective, the CA lamp will not light. The circuit is advanced by depressing the REL key upon which the CA lamp lights, and if the SA relay functions in the proper manner, the CA lamp is extinguished and the SA lamp lighted. If the short around the winding of the CA relay is ineffective, the CA lamp lights before depressing the REL key. Under this condition the test circuit is advanced for testing the SA relay by depressing the REL key. When the SA lamp lights the CB and SB relays are tested by depressing the STP key for the fourth time, and the test circuit functions in a similar manner as for the test of the CA and SA relays.

4. When the CB and SB relays test has been completed, a speed test is made by depressing the STP key for the fifth time. As the STP key is depressed, the ST-A and ST-B relays are simultaneously operated, lighting the A and B lamps in a relative speed to the closure of their contacts. When the REL key is depressed, the CA and CB relays are simultaneously operated, extinguishing the A and B lamps in a relative speed to the opening of the

contacts of the CA and CB relays. The speed test may be repeated by depressing the T key in place of the STP key.

5. When the DISC key is depressed, the DISC lamp lights, indicating that the test selector is being restored to its normal position, and when it reaches this position, the DISC lamp is extinguished.

DETAILED DESCRIPTION

ST-A AND GA RELAYS TEST

6. When testing the start circuit of panel line finder equipment, the patching plug which normally patches the trip and line finder circuits to the start circuit, is replaced by the plug of a flexible cord which terminates in a portable box containing the equipment of this circuit. A patching cord is used to furnish battery and ground to the test circuit through the battery jack in the box, from a similar jack located on the line finder frame.

7. The STP key is depressed until the A lamp lights. The STP key depressed, operates the STP magnet. Circuit:- Ground, STP key operated, normal terminal of arc ST, break contact and winding of the STP magnet to battery. As the STP magnet operates, its operating circuit is opened at its break contact and releases. The STP magnet, when releasing, advances the brush assembly of the selector to terminal 1. When the brushes of the selector connect to terminals 1, the A relay operates from ground on arc MC, lighting the A lamp, indicating that the test circuit has moved off normal, and that test is being made on the STA and GA relays of the starting circuit.

8. When the STP key is released, the A relay locks through the contacts of the STP key to ground on the DISC key, and the TR and TR-1 relays operate. Circuit:- Ground, arc ADV, STP key normal, windings of the TR-1 and TR relays, plug 4 to battery on the break contact of the stepper magnet G of the start circuit under test. (If the lead to jack 4 is open, the TR and TR-1 relays will not operate). The TR relay operated, locks through its 600 ohm winding, operating the STA relay in the start circuit. Circuit:- Ground, 600 ohm inner winding and make contact of the TR relay, resistance ST, break contacts of the SW, SW-3 and SW-5 relays normal, plug 15, winding of the ST-A relay in the start circuit to battery. (If the lead to the jack spring 15 is open, the ST-A relay in the start circuit will not operate, and the TR relay in the test circuit is not locked through its inner winding). The function of the ST resistance is to reduce the current through the winding of the ST-A relay to a value equal to the operate test requirements of the ST-A relay at normal voltage. Under severe conditions the ST-A relay may not operate at this time. The ST-A relay in the start circuit operated, (a) opens the circuit through the winding of the TR-1 relay, and the 700 ohm winding of the TR relay, releasing the TR-1 relay (b) operates the STP magnet G in the starting circuit, and (c) connects ground through the jacks 1, 5, 10 and 17.

9. Ground on plug 10 operates the X relay. Circuit:- Ground, plug 10, SW-2 relay, normal contacts, winding of the X relay to battery. Ground on the spring 1, advances the brush assembly of the selector to terminal 2. Circuit:-

Ground, plug 1, SW-1 relay normal contacts, X relay operated, TR-1 relay normal, arc ADV-1, break contact and winding of the STP magnet to battery. The X relay normal, lights the X lamp. Circuit:- Ground, DISC and STP keys normal, RG relay normal, X relay operated, X lamp, resistance E, to battery. When the selector brushes connect to terminal 2, the ST lamp lights. Circuit: Ground, plug 1, SW-1 relay normal, X relay operated, TR-1 relay normal, TR relay operated, arc LP, ST lamp, GLP relay normal, G resistance, to battery.

10. The X lamp lighted, indicates the closure of the make contact of the ST-A relay, and the continuity of the lead connected to jack 10. The ST lamp lighted, indicates the continuity of the leads connected to jack 1, 4 and 15, and that the ST-A relay and the stepper magnet G, have operated satisfactorily. If trouble is encountered during the test of the ST-A relay and its associated leads, the ST lamp will fail to light.

11. With the selector brushes connected to terminal 2, the ADV relay operates to ground on the arc ADV. and locks to ground on the DISC key normal. The ADV relay operated, operates the LP and LP-1 relays. Circuit:- Ground, plug 17, SW-2 and SW-3 relays normal, winding of the LP-1 relay and 1000 ohm winding of the LP relay, ADV relay operated, to battery. (If the lead connected to jack 17 is open, the LP and LP-1 relays will fail to operate). The LP relay operated, locks through its windings in series to ground on the DISC key, and operates the GA relay in the START circuit. Circuit:- Ground, arc MC, LP and LP-1 relays operated, resistance G, LP relay operated, SW-1 relay normal, plug 7 to battery through the winding of the GA relay. The function of the G resistance is to reduce the current through the winding of the GA relay to a value equal to the operate test requirements of that relay at normal voltage. Under severe conditions, the GA relay may not operate at this time.

12. When the GA relay in the START circuit operates, it locks to ground on the ST-A relay of that circuit, operates the stepper magnet A and disconnects ground from plug 17, releasing the LP-1 relay. The LP-1 relay released, operates the GLP relay. Circuit:- Ground, arc MC, LP relay operated, LP-1 relay normal, winding of the GLP relay to battery. (If the lead to jack 7 is open, the LP relay will fail to release). The GLP relay operated locks to ground on arc MC, extinguishes the ST lamp and lights the GA lamp. Circuit:- Ground, plug 1, SW-1 relay normal, X relay operated, TR-1 relay normal, TR relay operated, arc LP, GA lamp, GLP relay operated, resistance G to battery. The GLP relay operated, also advances the brush assembly of the selector to terminals 3: Circuit:- Ground, GLP relay operated, arc ADV-1, break contact and magnet of the STP magnet to battery.

13. The GA lamp lighted, indicates that the GA relay has operated, and the continuity of the leads connected to jacks 7 and 17. If trouble is encountered during the test of the GA relay, the GA lamp fails to light and the ST lamp remains lighted.

14. With the brushes of the selector connected to terminals 3, the STA relay of the start circuit is held operated from ground, arc ADV., SW relay normal, plug 6 to battery through the winding of the ST-A relay and the ground on plug 6 through the break contact of the SA relay in the Start circuit is

connected to plug 15, short circuiting the 600 ohm winding of the TR relay, which releases. This test is similar in operation to the K commutator of the line finder circuit, which connects ground over jack 6 and short circuits the winding of the TR relay in the trip circuit in the regular operation of the line finder equipment. The TR relay released, advances the brushes of the selector to terminals 4. Circuit:- Ground, TR relay normal, arc ADV-1, break contact and magnet of the STP magnet, to battery. As the selector advances from terminals 3, the GA lamp is extinguished, ground is disconnected at the arc MC from the winding of the GLP relay, which releases, and the holding ground for the ST-A relay in the start circuit is disconnected at arc ADV, releasing the ST-A relay which in turn releases the GA relay. The ST-A relay released also disconnects ground from jack 10, releasing the X relay of this circuit. The X relay released, extinguishes the X lamp.

15. With the brushes of the selector connected to terminal 4, and the GLP relay released, the K lamp lights from ground on arc MC, indicating that the ST-A and GA relays operate, and their associated leads function satisfactorily. (If the leads connected to jacks 6 or 15 are open, the K lamp fails to light and the GA lamp will remain lighted).

ST-B AND GB RELAYS TEST

16. The STP key is again depressed, until the B lamp lights. As the STP key is depressed, ground is disconnected at the contacts of the STP key, from the windings of the A, ADV and LP relays, which release, and the brush assembly of the test selector is advanced to terminals 5. Circuit:- Ground, STP key operated, arc ST and terminal 4, break contact and winding of the STP magnet, to battery. When the brushes of the test selector connect to terminals 5, the SW, SW-1 and SW-2 relays operate. Circuit:- Ground, arc MC, windings of the SW, SW-1 and SW-2 relays to battery. The SW relay operated, lights the B lamp, indicating that tests are now being made on the ST-B and the GB relays of the start circuit.

17. When the B lamp lights, the STP key is released, which closes locking ground from the DISC key, through the contacts of the STP key, to the windings of the SW, SW-1 and SW-2 relays. The STP key released, also causes the TR and TR-1 relays to operate over the same circuit and function in a similar manner to that described in paragraph 8. From this point on, the circuit functions as previously described for the ST-A and GA relays test, with the following exceptions. Reference made to the ST-A and GA relays, STP magnet A, should be read as the ST-B and GB relays, and the STP magnet B, and references made to the jacks or plugs 1, 6, 7, 10, 15 and 17 should be read as 5, 12, 13, 14, 16 and 18 respectively. The circuits for this test are traced through the make contacts of the SW, SW-1, SW-2 relays, instead of the break contacts as in the description of the test for the ST-A and GA relays. The selector terminals 1, 2, 3 and 4 of the previous test, correspond to terminals 5, 6, 7 and 8 respectively of this test. With the selector brushes connected to terminals 8, the K lamp lights, providing a test of the ST-B and GB relays prove satisfactory, as described in paragraph 15.

CA AND SA RELAYS TEST

18. The STP key is again operated until the A-BB lamp lights, disconnecting the locking ground from the SW, SW-1, SW-2, LP and ADV relays, which release, advancing the brush assembly of the selector to terminal 9, as described in paragraph 7. When the brushes of the selector connect to terminals 9, the SW-2 and SW-3 relays operate from ground on the arcs ADV and MC respectively. The SW-3 relay operated, lights the A-BB lamp. Circuit:- Ground, SW-3 relay operated, SW-4 relay normal, A-BB lamp, resistance D, to battery. The SW-3 relay operated, also connects ground to plug 15, operating the ST-A relay in the START circuit. Circuit:- Ground, REL key normal, resistance S, SW-3 relay operated, SW-5 relay normal, plug 15, winding of the ST-A relay, to battery. The STA relay operated, operates the C relay of the test circuit. Circuit:- Ground, plug 10, SW-5 relay normal, SW-3 relay operated, winding of the C relay, to battery. The ST-A relay operated, also short circuits the 500 ohm winding of the CA relay in the START circuit.

19. If the short around the winding of the CA relay is ineffective, the CA relay will operate to ground on the contact of the C relay of the test circuit. Circuit:- Ground, C relay operated, resistance C, arc LP, SW-4 relay normal, plug 11, through the winding of the CA relay, 600 ohm resistance of the start circuit, to battery. The CA relay operated, locks through its 1000 ohm winding and operates the CL relay in the test circuit. Circuit:- Ground, winding of the CL relay, SW-3 and SW-2 relays operated, plug 18, 1000 ohm winding of the CA relay operated to battery. The CL relay operated, operates the CL-1 relay in local circuit, which locks through the contacts of the RG relay normal, to ground on the arc MC. The CL-1 relay operated, lights the CA lamp and connects ground through arc ADV-1 advancing the brush assembly of the selector to terminals 10.

20. The CA relay in the START circuit operated, also operates the SA relay in that circuit to ground on plug 15 and opens the circuit through the ST-A relay which releases. The ST-A relay released, disconnects ground from jack 10, releasing the C relay. The SA relay in the START circuit operated, operates the ST-B relay. The ST-B relay in the START circuit operated, connects ground to jacks 14 and 18, operating the X relay and releasing the CL relay by short circuiting it, and holds the CA relay in the START circuit locked. (The CL-1 relay does not release as it is locked to ground on arc MC). The X relay operated, lights the X lamp. The X and the CA lamps lighted, indicates that the short around the windings of the CA relay has been ineffective and that the CA and SA relays have operated. In this case the test circuit is advanced to further testing, by depressing the REL key. The REL key operated, operates the RG relay in local circuit, and operates the C relay. Circuit:- Ground, REL. key operated, SW-3 relay operated, winding of the C relay to battery. The C relay operated, performs no useful function at this time. The RG relay operated, locks to ground under control of the DISC key, extinguishes the X lamp, and opens the locking circuit through the CL-1 relay which releases, extinguishing the CA lamp, and advancing the selector to terminals 11.

21. If the CL lamp does not light, the short around the winding of the CA relay in the START circuit is effective. In this case, the CA relay cannot operate. The C relay operates as previously described in paragraph 18. When the REL key is depressed, ground is disconnected from jack 15, releasing the ST-A relay in the START circuit. When the ST-A relay releases, the short around the winding of the CA relay is opened, allowing the CA relay to operate, to ground on the contact of the C relay and ground is disconnected from plug 10, but the C relay is held operated from ground on the contacts of the REL key. (The C relay will not release during the operation of the key, due to its slow release characteristics preventing the CA relay in the START circuit from releasing, by the disconnection of ground from jack 11). The REL key operated, also operates the RG relay in local circuit, which locks to ground on the DISC key. The RG relay operated opens the circuit through the X lamp. The function of the 3 resistance is to reduce the current through the inner winding of the CA relay to a value equal to the operate test requirements of that relay, at normal voltage. Under severe conditions the CA relay may not operate at this time.

22. When the CA relay of the START circuit operates, it locks through its 1000 ohm winding, in series with the CL relay, which operates. The CL relay operated, in turn operates the CL-1 relay, lighting the CA lamp, and advancing the selector to terminals 10. (If the lead associated with jack 11 is open the CL relay would not operate, and the CA lamp would not light). When the REL key is released, ground is again connected to plug 15, operating the SA relay. Circuit:- Ground, REL key normal, S resistance, SW-3 relay operated, SW-5 relay normal, plug 15, winding of the SA relay to battery. The function of the S resistance is to reduce the current through the winding of the SA relay to a value equal to the operate test requirements of that relay, at normal voltage. Under severe conditions the SA relay may not operate at this time. The SA relay operated, in turn operates the ST-B relay in local circuit. The ST-B relay operated, connects ground to jacks 14 and 18, operating the X relay, and releasing the CL relay and holding the CA relay of the start circuit operated. The X relay operated, performs no useful function at this time. The CL relay released, releases the CL-1 relay. The CL-1 relay released, extinguishes the CA lamp and advances the brush assembly of the selector to terminals 11.

23. When the brush assembly of the test selector advances from terminals 10, the SW-2 and SW-3 relays release, and when the brushes connect to terminals 11, the SA lamp lights from ground on the arc MC. The SW-3 relay released, extinguishes the A-BB lamp.

CB and SB RELAYS TEST

24. When the SA lamp lights, indicating that the CA and SA relays have functioned, or that the selector has been advanced, the STP key is again operated, until the B-AB lamp lights, indicating that the test of the CB and SB relays of the START circuit is now being made. The STP key operated, opens the locking circuit of the RG relay which releases, and advances the selector to terminals 12. With the brushes of the selector connected to terminals 12, the SW-3 relay operates from ground on arc MC, and the SW-4 and SW-5 relays operate from ground on arc ADV. The SW-4 relay operated, lights the B-AB lamp.

Circuit:- Ground, SW-3 and SW-4 relays operated, B-AB lamp, resistance D to battery. When the lamp lights the STP relay is released, closing ground through the windings of the SW-4 and SW-5 relays, which lock. From this point the circuit functions in a similar manner to the test of the CA and SA relays, with the following exceptions. Reference made to the CA and SA relays, should be read as the CB and SB relays respectively, and reference to the plugs or jacks 10, 11, 14, 15 and 18 should be read as 4, 8, 10, 16 and 17, respectively. The circuits for this test are traced through the make contacts of the SW-4 and SW-5 relays, instead of the break contacts, and through the break contacts of the SW-2 instead of the make contacts as described for the test of the CA and SA relays. The test selector terminals 9, 10 and 11 of the previous test correspond to the terminals 12, 13 and 14 of this test.

RELATIVE SPEED TESTS

(a) ST-A AND ST-B RELAYS

25. When the SA lamp lights, indicating that the CB and SB relays have functioned or that the test circuit has been advanced, the STP key is again depressed. The STP key depressed, advances the selector to terminals 15. When the brushes of the selector connect to terminals 15, the T relay operates from ground on the arc MC, under the control of the T key. The T relay operated, operates the ST-A and ST-B relays simultaneously. Circuit:- Ground, T relay operated, resistance N, SW-3, and SW-5 relays normal, plug 15, winding of the ST-A relay to battery and ground, T relay operated, resistance O, plug 16, winding of the ST-B relay, to battery. The ST-A and ST-B relays operated, connect ground to the plugs 17 and 18, under the control of the GA and GB relays respectively. Ground on jack 17 lights the A lamp, and ground on jack 18, lights the B lamp, through the contacts of the T relay. Ground is also connected to jack 10, operating the X relay and lighting the X lamp, but this does not indicate anything at this time. The relative operating speed of the ST-A to the ST-B relays is determined by the speed of the lighting of the A to the B lamp.

(b) GA AND GB RELAYS

26. The relative operating speed of the GA to the GB relay, is determined by depressing the REL key, which extinguishes the A and B lamps at the speed the GA and GB relays operate. When the REL key is operated, the T-1 relay operates. Circuit:- Ground, arc ADV, REL key operated, winding of the T-1 relay to battery. The REL key operated also operates the X relay, which lights the X lamp but performs no useful functions at this time, and the RG relay, which locks to ground on the DISC key. The RG relay operated, also disconnects the X lamp lead, preventing the further lighting of the X lamp. The T-1 relay operated connects ground to jacks 7 and 13, operating the GA and GB relays respectively. The operation of the GA and GB relays disconnects the ground from plugs 17 and 18, extinguishing the A and B lamps at the speed that the GA and GB relays operate. The GA and GB relays operated, lock to ground on the ST-A and ST-B relays. When the REL key is released, the T-1 relay releases.

27. To repeat the speed test of the ST-A, ST-B, GA and GB relays, the T key is depressed, releasing the T relay. The T relay released, disconnected ground from plugs 15 and 16, releasing the ST-A and ST-B relays, which in turn release the GA and GB relays. When the T key is released, the T relay is again operated, and the speed test is repeated as described in paragraphs 25 and 26.

DISCONNECTION

28. The test circuit is restored to normal, by depressing the DISC key. The DISC key operated, opens the locking ground, releasing any relays that are locked to that ground, and operates the DISC relay in local circuit. The DISC relay operated, locks to ground on the arc RN and lights the DISC lamp. Ground is also connected from the arc RN through the contacts of the DISC relay, to the break contact and winding of the STP magnet, advancing the selector to its normal position. When the test selector is in its normal position the locking circuit of the DISC relay is opened at arc RN and the relay releases, when the DISC key is released. With the DISC relay normal, the DISC lamp is extinguished, restoring the circuit to normal.

CIRCUIT REQUIREMENTS

THE READJUST REQUIREMENTS SHOWN BELOW ARE FOR MAINTENANCE USE ONLY

	OPERATE	NON-OPERATE	RELEASE
E65 (SW-2)	Readj. .013 amp. Test .021 amp. W.C.C. .029 amp.	Readj. .009 amp. Test .0085 amp.	
E65 (SW-5)	Readj. .013 amp. Test .017 amp. W.C.C. .021 amp.	Readj. .009 amp. Test .0085 amp.	
E228 (SW-1)	Readj. .020 amp. Test .024 amp. W.C.C. .029 amp.	Readj. .013 amp. Test .012 amp.	
E311 (CL)	Readj. .023 amp. Test .032 amp. W.C.C. .041 amp.		Readj. .003 amp. Test .0015 amp.
E458 (A) (X) (T-1) (ADV)	Readj. .011 amp. Test .027 amp. W.C.C. .043 amp.		Readj. .0015 amp. Test .0008 amp.
E463 (RC)	Readj. .012 amp. Test .028 amp. W.C.C. .043 amp.	Readj. .008 amp. Test .0076 amp.	
E528 (T)	Readj. .021 amp. Test .032 amp. W.C.C. .043 amp.	Readj. .011 amp. Test .010 amp.	
E561	Readj. .021 amp. Test .025 amp. W.C.C. .029 amp.	Readj. .014 amp. Test .013 amp.	
E596 (CL-1)	Readj. .016 amp. Test .030 amp. W.C.C. .043 amp.	Readj. .009 amp. Test .0085 amp.	
E600 (SW-4)	Readj. .017 amp. Test .019 amp. W.C.C. .021 amp.	Readj. .010 amp. Test .0095 amp.	
E748 (LP)	Readj. .025 amp. Test .027 amp. W.C.C. .0286 amp. Hold: W.C.C. .026 amp.	Readj. .016 amp. Test .015 amp.	

CIRCUIT REQUIREMENTS

THE READJUST REQUIREMENTS SHOWN BELOW ARE FOR MAINTENANCE USE ONLY

	OPERATE	NON-OPERATE	RELEASE
E935 (C)	Special requirements to insure slow release. Readj. .020 amp. Test .021 amp. W.C.C. .050 amp.		Readj. .001 amp. Test .0009 amp.
E1119 (TR-1)	Readj. .038 amp. Test .043 amp. W.C.C. .047 amp.	Readj. .026 amp. Test .024 amp.	
E1201 (SW-3)	Readj. .015 amp. Test .029 amp. W.C.C. .043 amp.	Readj. .009 amp. Test .0085 amp.	
E1230 (GLP)	Readj. .016 amp. Test .019 amp. W.C.C. .021 amp.	Readj. .009 amp. Test .0085 amp.	
E1311 (DISC) Inner Wdg. 1400 ohms	Special requirements to meet hold circuit through the outer winding. Readj. .015 amp. Test .0165 amp. W.C.C. .031 amp.		Readj. .0025 amp. Test .0015 amp.
Outer Wdg. (1000 ohm)	Hold: Test .042 amp. Hold: W.C.C. .0429 amp.		
E1325 (LP-1)	Readj. .0095 amp. Test .018 amp. W.C.C. .029 amp. Hold: W.C.C. .016 amp.	Readj. .0064 amp. Test .006 amp.	
E1515 (TR) Outer Wdg. (700 ohms)	Test requirement of outer winding is proportional to test requirement of inner winding. Readj. .026 amp. Test .031 amp. W.C.C. .047 amp.	Readj. .016 amp. Test .015 amp.	
Inner Wdg. (600 ohms)	Test .026 amp. Hold: W.C.C. .026 amp.		

ENG.--ACLH-VL. 7/5/23. CHK'D.--CHW-CWP. APPROVED - C.L.SLUYTER, G.M.L.