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Filing Instructions:
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ADDENDUM 226-200-501
Issue 1, October 1969
AT&TCo Standard

LINE FINDERS—WITHOUT CONTROL CIRCUIT
OPERATION TESTS
USING TRUNK TEST SET SD-90469-02 (J94710A)
AND AUXILIARY TEST SET SD-32173-01 (J34726)
STEP-BY-STEP SYSTEMS

1. GENERAL

1.001 This addendum supplements Section 226-200-501, Issue 5. The attached pages must be inserted in the section in accordance with the filing instructions above.

1.002 This addendum is issued to add requirement to step in Test D. This addendum does not affect the equipment test list.

Attached:
Page 9 dated October, revised
Page 10 dated October, reissued

4. METHOD

The following change applies to Part 4 of the section:

(a) Test D—Step 24, revised.

LINE FINDERS — WITHOUT CONTROL CIRCUIT OPERATION TESTS USING TRUNK TEST SET SD-90469-02 (J94710A) AND AUXILIARY TEST SET SD-32173-01 (J34726) STEP-BY-STEP SYSTEMS

1. GENERAL

1.01 This section describes a method of testing the operating features of 50-, 100-, and 200-point, 3-wire and 4-wire line finders in step-by-step offices. It also covers line finder tests in those offices where the line finders are the newer type with the test jack located on the switch. It also describes the use of the auxiliary test set in conjunction with the trunk test set. This section is intended for use in offices where the line finder operation test set and the rapid operation test set are not available.

1.02 This section is reissued to change the title to show test set SD-32173-01, which is required for Test E; to revise the test procedures in Test E to cover the changes in test set SD-32173-01; to include in Test E finders modified to operate with a maximum sleeve potential of 4.3 volts negative; to revise the titles of Tests D and E; and to bring the section generally up to date. Since this is a general revision, arrows ordinarily used to indicate changes have been omitted.

1.03 The tests covered are:

A. Line Finder Operation Test — Coin and Noncoin: This test checks operating features of the line finder and continuity and polarity of trunks to the selector or the trunk circuit beyond.

B. Rapid Operation Test — Coin and Noncoin: This test checks the fundamental operating features of the line finder and, where desired, may be used at frequent intervals in place of the complete operation Tests A, D, and E.

C. Make Busy from Circuit Beyond: This test checks the sleeve circuit through the line finder in the normal position to the line finder D relay.

D. Line Finder Operation — B, C, and F Relay Test—Coin and Noncoin—Line Finders Arranged for Maximum Sleeve Potential 2.4 Volts Negative: This test checks operating features of the line finder and continuity and polarity of trunks to the selector or the trunk circuit beyond. It also checks the B and F line finder relays for nonoperate requirements and C relays for hold and release requirements.

E. Line Finder Operation — B, C, and F Relay Test—Coin and Noncoin—Line Finders Arranged for Maximum Sleeve Potential of 4.3 Volts Negative or 7 Volts Negative: This test checks operating features of the line finder and continuity and polarity of trunks to the selector or the trunk circuit beyond. It also checks the B and F line finder relays for nonoperate requirements, and C relay for hold and release requirements, and requires use of the auxiliary test set, SD-32173-01. This test is intended for use in those offices where the line finders are equipped with a simplex battery network on the C relay to increase the maximum allowable sleeve potential to 7 volts negative and where the line finders are modified to operate with maximum sleeve potential of 4.3 volts negative.

F. Test of E Relay of Line Finders in Position 2, 12, or 22: This test checks the operation of the E relay of line finders in position 2, 12, or 22 on a marginal basis, and is intended as a supplement to Tests A, D, and E. This test is necessary because of the test line appearing on the tenth level of these line find-

ers; this level being permanently connected to solid ground. Therefore, some level other than the tenth level is used for applying the resistance ground to the commutator segment for marginally checking the E relay on these finders.

1.04 Tests D and E require a spare or nonbusy line circuit, which will be called the "marked line," on the same level and bank as the test line terminal.

(a) In the case of 200-point line finders, the "mate line" is also required; for example, the "mate line" is 15 if 115 is used as the "marked line", or vice versa.

(b) Test D assumes that the test set is equipped with a "J" option so that the tip of the C jack can be connected through to the C lamp, with the T key normal, to make a busy test of the "mate line."

1.05 When Test D or E is made, it is not necessary to make Test A on the same testing cycle.

1.06 In Tests A, D, or E, reference is made to dialing a succeeding switch to remove dial tone. If this switch is of the digit-absorbing or blocking-type, dial the particular digit(s) which will be effective in removing the dial tone.

1.07 In Tests A, B, D, E, or F, provision is made for use of a 2-conductor battery cord with clips (W2M cord). The use of this cord should be limited to older offices where the test jacks are located in a jack panel. In newer offices, where the test jacks are located in the line finders and the AB lead is run through the 48-volt jack, the P3K cord should be used.

1.08 ***Lettered Steps:*** A letter a, b, c, etc, added to a step number in Part 3 or 4 of this section indicates an action which may or may not be required depending on local conditions. The condition under which a lettered step or series of lettered steps should be made is given in the ACTION column, and all steps governed by the same condition are designated by the same letter within a test. Where a condition does not apply, all steps designated by that letter should be omitted.

1.09 The test equipment specified in this section is designed to apply proper marginal tests (simulated critical circuit conditions) when the circuit under test and the test equipment have an applied voltage of 48.5 to 50. In those offices where power plants are normally operated at more than 50 volts, the battery voltage should be reduced and maintained within the required limits while the tests are being made.

2. APPARATUS

2.01 The apparatus required for each test is shown in the following list. The details for each item are covered in the indicated paragraphs.

APPARATUS	NO. REQUIRED FOR TESTS A	B	C	D	E	F
Trunk test set (2.02)	1	1		1	1	1
Head telephone set (2.03)	1			1	1	
Auxiliary test set (2.04)					1	
Patching Cord (2.05)	1	1		1	1	1
Testing cord (2.06)	1	1		1	1	1
Patching cord (2.07)	1	1		1	1	
Patching cord (2.08)	*	*		*	*	
Patching cord (2.09)	1			1	1	
Testing cord (2.10)				1	1	
Patching cord (2.11)		1				
Make-busy tool (2.12)			1			
Testing cord (2.13)					1	
Test cord assembly (2.14)						1
Testing cord (2.15)						1

* As required, see 2.08 and Table A.

TABLE A

P3E CORDS REQUIRED FOR TESTING VARIOUS TYPES OF LINE FINDERS

TEST JACK LOCATION	50- OR 100-POINT LINE FINDERS		200-POINT LINE FINDERS	
	3-WIRE	4-WIRE	3-WIRE	4-WIRE
Not on Line Finder	2	3	3	1
On Line Finder	1	2	2	–

2.02 J94710A (SD-90469-02).

2.03 Head telephone set (associated with test set).

2.04 Auxiliary test set, J34726 (SD-32173-01).

2.05 P3K cord, 12 feet long, equipped with two 310 plugs (3P15B cord) (for use where battery supply jack is used to supply battery and ground to test set).

2.06 W2M cord, 9 feet long, equipped with one 310 plug and two 59 cord tips (2W12A cord) (for use where battery and ground block, or spare fuse (not to exceed 5 amperes) and frame ground is used to supply battery and ground to test set).

2.07 P3AA cord, 10 feet long, equipped with a 310 plug and a 240A plug (3P30A cord). The cord is modified by removing the red lead from terminal 3 and by transferring the black lead from terminal 1 to terminal 3 (for use when connecting test set to line finder test jack when the test jack is located on the line finder).

2.08 P3E cord, 10 feet long, equipped with two 310 plugs (3P6F cords) (for use when connecting the test set to the test line jacks. Also used for connecting the test set to the line finder test jack when the test jack is not located on the line finder).

2.09 P6B cord, 11 feet long, equipped with a 310 red shell plug, a 310 black shell plug, and two 240B plugs (6P6A cord) (for use when connecting the test set to the test line jacks associated with 200-point, 4-wire line finders).

2.10 W3AJ cord, 12 feet long, equipped with a 310 red-shell plug and a 620A tool (3W13A cord). A modified Frankel clip attached to a cord is provided to clip on bank rod when the 620A tool is inserted in the bank.

2.11 P3H cord, 10 feet long, equipped with a 310 plug and a 240B plug (3P33A cord) (for use when connecting the test set to the test line jack associated with 200-point, 4-wire line finders).

2.12 477A (make busy) tool.

2.13 W1H cord, 10 feet long, equipped with a 347B plug (tip conductor) and a 360A tool (1W8A cord). In addition, a KS-6278 clip equipped with a 108 cord tip or a 141 cord tip is required (for use when connecting 48-volt battery to the auxiliary test set).

2.14 Test cord assembly shown in Fig. 1, consisting of a W3M cord, 6 feet long, equipped with a 310 plug and three 360 tools (3W4A cord); a W2W cord, 6 feet long, equipped with a 310 plug and two 360 tools (2W17A cord); an 893 cord, 6 feet long, with 360 tools at each end (1W13B cord); a 419A tool and three 141 cord tips (for use when connecting test set to line finder commutator and test jack when test jack is not located on line finder).

2.15 W3M cord, 15 feet long, equipped with a 310 plug and three 360 tools (3W4B cord). In addition, two 419A tools are required, one connected to the red (sleeve) cord conductor and the other to the black (ring) cord conductor. No connection is made to the white (tip) conductor (for use when connecting test set to line finder commutator and test jack when test jack is located on line finder).

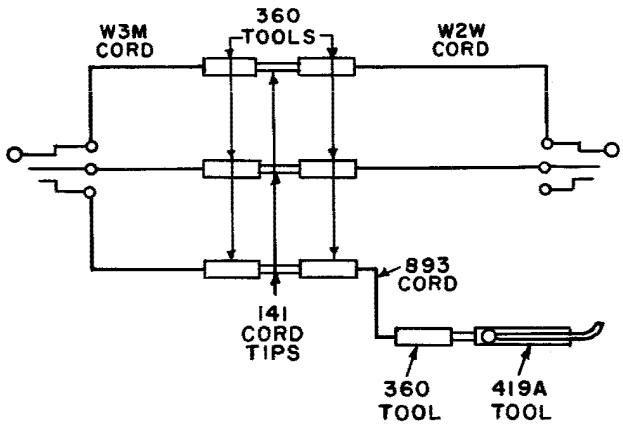

Fig. 1 – Test Cord Assembly

3. PREPARATION

STEP	ACTION	VERIFICATION
Tests A, B, D, E, and F		
1	Connect test set BAT G jack to 48-volt battery supply. *Note 1:* To avoid possible grounding of battery supply lead, connect cord to test set first and, when disconnecting, remove from test set last. *Note 2:* When using W2M cord, connect red (sleeve) conductor of cord to frame ground and white (tip) conductor to battery (see Note 1) .	
Tests A, B, and E		
2a	If test jack is not located on line finder, insert plug of P3E cord into LF jack.	
3b	If test jack is located on line finder, insert 310 plug of P3AA cord into LF jack.	
Tests A, D, and E		
4	Connect head telephone set to TEL jacks. *Note:* The TRS key shall be left in normal position except when necessary to talk on a connection.	
For 50-Point or 100-Point 3-Wire Line Finders		
5	Connect T jack to test line A jack, using a P3E cord.	
For 50-Point or 100-Point 4-Wire Line Finders		
6	Connect T and TL jacks to test line A and B jacks, respectively, using P3E cords.	
For 200-Point 3-Wire Line Finders		
7	Connect T and TL jacks to test line A and B jacks, respectively, using P3E cords.	
For 200-Point 4-Wire Line Finders		
8	Connect red- and black-shell plugs of P6B cord to the T and TL jacks, respectively; connect the 240B plugs of the red and black cords to the test line A and B jacks, respectively. *Note:* In Tests A and E for 200-point, 3- or 4-wire line finders, the connections to test line A and B jacks shall be reversed on each alternate testing cycle, unless otherwise specified, in order to make a complete test of the B and F line finder relays.	

STEP	ACTION	VERIFICATION
Test B		
9	Connect T jack to test line A jack on line finder frame in the particular group to be tested, using P3E cord or P3H cord in the case of 200-point 4-wire finders. *Note:* For 200-point, 3- or 4-wire finders, connect T jack to test line B jack on alternating testing cycles, unless otherwise specified, in order to make a complete test of the B and F line finder relays.	
Test D		
10	Insert 310 plug of W3AJ cord into C jack.	
11	The J-NO, J-O, H-O, (552E) key shall be in the J-O (normal) position.	
Test E		
12	Insert plug of W1H cord into auxiliary test set B jack and connect the clip to the equipment end of a 48-volt fuse, or if trunk test set is so arranged, insert the 141 cord tip into battery pin jack of trunk test set.	
13	Insert 310 plug of W3AJ cord into auxiliary test set TST jack.	
Test F		
14c	If test jack is not located on line finder, insert plug of 6-foot W3M cord, Fig. 1, into LF jack.	
15d	If test jack is located on line finder, insert plug of 15-foot W3M cord into LF jack.	

4. METHOD

STEP	ACTION	VERIFICATION
	A. Line Finder Operation Test — Coin and Noncoin	
9	At test set — Operate DL ST, T, ID, and REV keys.	
For Flat-Rate Line Groups		
10	Insert free end of P3E or P3AA cord into line finder test jack.	Line finder operates smoothly, stops on test line terminals. Dial tone heard. REV lamp lighted.
11	Remove cord from line finder test jack.	

STEP	ACTION	VERIFICATION
12	Restore T and ID keys.	
13	Operate TP BT key.	
For Coin Line Groups		
14	Operate CBT LP key.	
15	Insert free end of P3E or P3AA cord into line finder test jack.	Line finder operates smoothly, stops on test line terminals.
16	Remove cord from line finder test jack.	
17	Restore T and ID keys.	
18	Operate CN key momentarily.	Dial tone heard. REV lamp lighted. ***Note:*** Dial tone will be heard before depressing CN key if coin trunks are arranged for dial tone before coin deposit or when dial coin long line circuits are assigned to lines which appear on the test levels.
For Finders Used for Concentrating Manual Lines		
19	Insert free end of P3E or P3AA cord into line finder test jack.	Line finder operates smoothly, stops on test line terminals. Ringing induction heard. At switchboard — Call answered.
20	Remove cord from line finder test jack.	
21	Restore T, ID keys.	
22	Operate TP BT key.	
23	At switchboard — Disconnect when disconnect signal is received.	
For Flat Rate and Coin Groups		
24c	If testing 3-wire line finders — Dial digit ( ) leading to succeeding switch.	Dial tone removed.
25d	If testing 4-wire line finders in which the fourth lead is used for operating a message register — Dial digit ( ) leading to succeeding switch.	Dial tone removed.
26e	If testing 4-wire line finders in which the fourth lead is used for class-of-service indication, identification, or restriction — Dial code ( ) which will direct selector or selectors to proper level or trunk which will simulate service condition.	Proper indication received. ***Note:*** When necessary, check with called position as indication is not always received by tester.

STEP	ACTION	VERIFICATION
For All Groups of Lines		
27	Restore REV key, operate it momentarily to FL position.	REV lamp extinguished. Line finder releases.
28	Unless other tests are to be made — Remove remaining cords, restore all keys.	

B. Rapid Operation Test — Coin and Noncoin

For Noncoin Groups		
10	Operate LK, REV keys.	
11	Insert free end of P3E cord or P3AA cord into line finder test jack.	Line finder operates smoothly, stops on test line terminals for short time then releases. REV lamp lights when test line is seized, extinguishes when line finder releases.
12	Remove cord from line finder test jack.	
For Coin Groups		
13	Operate DL ST, REV keys.	
14	With finder under test normal — Insert free end of P3E or P3AA cord into line finder test jack.	Line finder operates smoothly, stops on test line terminals. REV lamp lighted.
15	Remove cord from line finder test jack.	
For All Groups		
16	Remove plug from test line A (or B) jack.	REV lamp extinguished. Line finder releases after short interval.
17	Disconnect P3K cord from 48-volt battery supply jack.	
18	Unless other tests are to be made — Remove remaining cords, restore all keys.	

C. Make Busy From Circuit Beyond

1	Insert make-busy tool into line finder monitor jack or test jack springs 1 and 2 (where test jack is located on switch) in slow succession two or three times. ***Caution: Do not insert tool into jack of any line finder that is off-normal. If line finder starts to operate at the instant tool is inserted, remove tool immediately.***	Note by sound that D relay operates and releases on each insertion and removal of 477A tool.

STEP	ACTION	VERIFICATION
	D. Line Finder Operation — B, C, and F Relay Test — Coin and Noncoin — Line Finders Arranged for Maximum Sleeve Potential 2.4 Volts Negative	
12	Select idle finder other than one under test and make busy or select bank with cleaned terminals not equipped with a line finder.	
13	Insert 620A tool into sleeve bank on same level in which test line appear, as indicated in the following steps.	
	For 50-Point and 100-Point 3-Wire Finders and 200-Point Line Finders (B Relay)	
14	Insert 620A tool from left side of sleeve bank. Select bank where test line is in a level between 4 and 9, inclusive, to avoid interference between tool and commutator or designation card.	
	For 50-Point and 100-Point 4-Wire Line Finders	
15	Insert 620A tool from right side of sleeve bank.	
	For 3- and 4-Wire Line Finders	
16	Select an idle line near middle of bank by moving tool until an idle line is found. This becomes the "marked line" (see 1.04).	BSY lamp not lighted. *Note:* With 200-point line finders note that the C lamp is not lighted. If C lamp lights it indicates that "mate line" is busy and another pair of lines must be selected. The second line becomes the "mate line" (see 1.04).
17	Operate BF NO, LP keys.	
18	Operate DL ST, T, REV, and ID keys.	
19	Note that line finder to be tested is normal.	
20a	If test jack is not located on line finder — Insert 310 plug of P3E cord into LF jack.	
21b	If test jack is located on line finder — Insert 310 plug of P3AA cord into LF jack.	

STEP	ACTION	VERIFICATION
For Flat Rate Line Groups		
22	Insert free end of P3E or P3AA cord into line finder test jack.	Line finder operates smoothly, stops on terminal to which 620A tool is connected. ***Note:*** Failure of line finder to stop indicates C relay failed to meet hold requirements or that "marked" or "mate line" became busy before being seized by line finder under test. In this event, disconnect cord from test set LF jack and restore all keys to normal. The BSY lamp will light if "marked line" is busy. With 200-point line finders, if the BSY lamp is not lighted, observe the C lamp. If lighted, it indicates that "mate line" is busy. If either line is busy, it will be necessary to select another pair of lines repeating Steps 16 through 22.
23	Momentarily operate C key.	Line finder resumes rotary stepping, stops on test line terminals. Dial tone head. REV lamp lighted.
24	▶Restore BF NO, ID, LP, and T keys.◀	
25	Operate TP BT key.	
26	Remove cord from line finder test jack.	
For Coin Line Groups		
27	Operate CBT LP key.	
28	Insert free end of P3E or P3AA cord into line finder test jack.	Line finder operates smoothly, stops on terminal to which 620A tool is connected. (See Note, Step 22).
29	Momentarily operate C key.	Line finder resumes rotary stepping, stops on test line terminals. REV lamp lighted.
30	Restore REV key.	REV lamp extinguished.
31	Restore BF NO, ID, and T keys.	
32	Remove cord from line finder test jack.	
33	Momentarily operate CN key.	Dial tone heard. REV lamp lighted. ***Note:*** Dial tone will be heard before depressing CN key if coin trunks are arranged for dial tone before coin deposit, or when dial coin long line circuits are assigned to lines which appear on the test erminals.

STEP	ACTION	VERIFICATION
	For Finders Arranged for Concentrating Manual Lines	
34	Insert free plug of P3E or P3AA cord into line finder test jack.	Line finder operates smoothly, stops on terminal to which 620A tool is connected (see Note, Step 22).
35	Momentarily operate C key.	Line finder resuems rotary stepping stops on test line terminals. Ringing induction heard. Call answered.
36	Restore FB NO, ID, and T keys.	
37	Operate TP BT key.	
38	Remove cord from line finder test jack.	
39	At switchboard— Disconnect when disconnect signal is received.	
	For Flat Rate and Coin Line Groups	
40	If testing 3-wire line finders— Dial digit ( ) leading to succeeding switch.	Dial tone removed.
41d	If testing 4-wire line finders in which the fourth lead is used for operating a message register— Dial digit( ) leading to succeeding switch.	Dial Tone removed.
42e	If testing 4-wire line finders in which the fourth lead is used for class-of-service indication, identification, or restriction— Dial code which will direct selector or selectors to proper level or trunk which will simulate service condition.	Proper indication received. ***Note:*** When necessary, check with called position as indication is not always received by tester.
43	Restore REV key, if operated, then momentarily operate it to the FL position.	REV lamp extinguished, if lighted. Line finder releases.
44f	If testing 200-point line finders— Remove 620A tool from line finder bank and reinsert it from the right side of bank (F relay).	
45	Reverse cords in test line A and B jacks and proceed as in Steps 16 through 39 then Step 43.	
46	Remove 620A tool from line finder bank.	
47	Unless other tests are to be made— Remove remaining cords, restore all keys.	

STEP	ACTION	VERIFICATION
	E. Line Finder Operation — B, C, and F Relay Test — Coin and Noncoin — Line Finders Arranged for Maximum Sleeve Potential of 4.3 Volts or 7 Volts Negative	
	Note: The auxiliary test set modified and equipped with CH-CR key, must be used when testing finders arranged for operation with 4.3-volt negative sleeve potential.	
14	Select idle line finder, other than one under test, and make busy or select bank with cleaned terminals not equipped with a line finder.	
15	Insert 620A tool from right side of bank into sleeve bank on same level in which test line appears.	
16	Operate auxiliary test set BY key and select idle pair of lines near middle of bank of moving 620A tool until pair of lines is found ("marked" and "mate lines," see 1.04).	T, B lamps not lighted. *Note:* When either lamp is lighted, it indicates that one of the lines is busy and another pair of lines must be selected.
17	Restore auxiliary test set BY key, operate it to TST position.	
18	Operate trunk test set DL ST, T, REV, and ID keys.	
	For Flat Rate Line Groups	
20	Insert free plug of P3E or P3AA cord into finder test jack.	Line finder operates smoothly, stops on terminal to which 620A tool is connected. *Note:* If finder stops, then releases, the indication is that the B or F line finder relay failed to meet its nonoperate test. Failure of the finder to stop indicates that the "marked" or "mate line" became busy before being seized by line finder under test. In this event, disconnect the cord from the test set LF jack and restore all keys of the line finder test set. Restore auxiliary test set TST key and then momentarily operate it to the BY position. If the "marked line" or its "mate" is busy, the T or B lamp will light. If either of the lamps light it will be necessary to select another pair of lines, repeating Steps 16 through 20.
21c	If auxiliary test set is equipped with C key — Operate C key momentarily.	Line finder resumes rotary stepping, stops on test line terminals. Dial tone heard. REV lamp lighted.

STEP	ACTION	VERIFICATION
22d	If auxiliary test set is equipped with CH-CR key — Operate key to CH position.	Line finder does not step. *Note:* If finder resumes stepping, it indicates C relay failed to meet hold requirements.
23d	Operate key to CR position.	Line finder resumes rotary stepping, stops on test line terminals. Dial tone heard. *Note:* If finder does not step, it indicates the C relay failed to release.
24	Restore ID, T keys, then operate TP BT key.	
25	Remove plug of P3E or P3AA cord from line finder test jack.	
For Coin Line Groups		
26	Operate CBT LP key.	
27	Insert free plug of P3E or P3AA cord into line finder test jack.	Line finder operates smoothly, stops on terminal to which 620A tool is connected (see Note, Step 20).
28c	If auxiliary test set is equipped with C key — Operate C key momentarily.	Line finder resumes rotary stepping, stops on test line terminal. REV lamp lighted.
29d	If auxiliary test set is equipped with CH-CR key — Operate key to CH position.	Line finder does not step. *Note:* If finder resumes stepping, it indicates C relay failed to meet hold requirements.
30d	Operate key to CR position.	Line finder resumes rotary stepping, stops on test line terminals. REV lamp lighted. *Note:* If finder does not step, it indicates C relay failed to release.
31	Restore ID, T keys.	
32	Remove plug of P3E or P3AA cord from line finder test jack.	
33	Restore REV key.	REV lamp extinguished.
34	Operate trunk test set CN key momentarily.	Dial tone heard. REV lamp lighted. *Note:* Dial tone will be heard before depressing CN key if coin trunks are arranged for dial tone before coin deposit or when dial coin long line circuits are assigned to lines which appear on the test levels.

STEP	ACTION	VERIFICATION
For Finders Arranged to Concentrate Manual Lines		
35	Insert free plug of P3E or P3AA cord into line finder test jack.	Line finder operates smoothly, stops on terminal to which 620A tool is connected (see Note, Step 20).
36c	If auxiliary test set is equipped with C key — Operate C key momentarily.	Line finder resumes rotary stepping, stops on test line terminal. Ringing induction heard. At switchboard — Call answered.
37d	If auxiliary test set is equipped with CH-CR key — Operate key to CH position.	Line finder does not step. ***Note:*** If finder resumes stepping, it indicates C relay failed to meet hold requirements.
38d	Operate key to CR position.	Line finder resumes rotary stepping, stops on test line terminal. Ringing induction heard. At switchboard — Call answered.
39	Restore ID and T keys.	
40	Operate TP BT key.	
41	Remove plug of P3E or P3AA cord from line finder test jack.	
42	At switchboard — Disconnect when disconnect signal is received.	
Flat Rate and Coin Line Groups		
43e	If testing 3-wire line finders — Dial digit ( ) leading to succeeding switch.	Dial tone removed.
44f	If testing 4-wire line finders in which the fourth lead is used for operating a message register — Dial digit ( ) leading to succeeding switch.	Dial tone removed.
45g	If testing 4-wire line finder where fourth lead is used for class-of-service indication, identification, or restriction — Dial code ( ) which will direct selector or selectors to proper level or trunk which will simulate service condition.	Proper indication received. ***Note:*** When necessary, check with called position as indication is not always received by tester.
For All Groups		
46	Restore auxiliary test set TST key.	
47	Restore trunk test set REV key, if operated, then momentarily operate it to FL position.	REV lamp extinguished. Line finder releases.

STEP	ACTION	VERIFICATION
48	Remove 620A tool from line finder bank.	
49	Unless other tests are to be made — Remove all remaining cords, restore all keys.	

F. Test of E Relay of Line Finders in Position 2, 12, or 22

16c	If test jack is not located on line finder, connect 419A tool of 893 cord, Fig. 1, to a commutator segment of line finder under test, on some level other than the tenth.	
17c	Insert 310 plug of W2W cord (Fig. 1) into test jack of line finder under test.	Line finder steps to level marked by 419A tool, cuts in, rotates to eleventh rotary step, then releases.
18d	If test jack is located on line finder, clip 419A tool of red (sleeve) conductor of 15-foot W3M cord to a commutator segment of the line finder under test on some level other than the tenth.	
19d	Clip other 419A tool (black ring conductor) to contact spring No. 3 of test jack of line finder under test.	Line finder steps to level marked by 419A tool, cuts in, rotates to eleventh rotary step, then releases.
20	Remove 419A tool from commutator segment.	
21	Remove connections from line finder test jacks.	
22	Unless other tests are to be made — Remove all remaining cords, restore all keys.	