

**PREPAY COIN TRUNKS
OPERATION TESTS
USING TRUNK TEST SET SD-90469-01 OR
SD-90469-02 (J94710A)
STEP-BY-STEP SYSTEMS**

1. GENERAL

PAGE

- 1.01 This section describes a method of testing the operating features of prepay coin trunks.
- 1.02 This section is reissued for the following reasons:
 - (a) To add Test K to provide a more critical operate test of the RT relay
 - (b) To add 1.08 regarding operation of PI relay
 - (c) To add 1.18 to define the RT relay test
 - (d) To revise the apparatus list to include additional apparatus used in Test K
 - (e) To make minor changes in Tests D, G, and H.

certain types of troubles encountered in this test, it may be necessary to use Test E to locate the cause of failure.

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D. Cut-Through and Ringback: This test checks the metallic cut-through over which the operator controls the coin and also the feature that provides the operator with a means of holding a trunk and ringing back through it.

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E. Stuck Coin Alarm and Coin Trunk Timed Release Circuit: This test checks the function of the coin trunk timed release circuit to release the trunk having a stuck coin after a prescribed time interval.

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This reissue affects the Equipment Test List.

- 1.03 The tests covered are:

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A. BT Relay Operate and Coin Collect:

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B. P1 Relay Release, Trunk Cut-Through, and Reversal—Loop:

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C. Coin Return, BT Relay Nonoperate, and Stuck Coin Alarm—Leak:

This test, in addition to a coin return test, covers pulsing under a leak condition. A delayed stuck coin alarm test is included for use when making routine tests in offices where only one trouble lamp per group of trunks is provided. In clearing

F. Busy Trunk Alarm: This test applies to trunks associated with primary line switches only, and checks the alarm feature of the trunk if an attempt is made to test the trunk while a call is progressing.

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G. Overtime Charge: This test checks the overtime charge feature of the trunk and the ability of the trunk to return a coin if deposited after the 4-1/2 minute collection interval and a disconnect is received before the 5-minute interval has lapsed.

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H. Auxiliary Coin Trunk Test: This test checks the ability of the auxiliary coin trunk circuit to allow a 3-digit service code call to be completed without the insertion of a coin at the coin station.

It also checks the ability of the connecting coin trunk circuit to collect or return a coin.

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I. Dial-Tone-First Using Prepay Coin Trunk SD-32539-01:

This test checks the ability of coin trunk SD-32539-01 to complete calls not requiring coin deposit; to route to an announcement calls requiring a deposit if no coin is deposited; to pass collect and return current applied by 0 operator to the coin station; to automatically collect or return coins for charge or noncharge calls, respectively.

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J. Prepay Coin Trunk SD-32539-01 Dial-Tone-First Arrangement Not Provided:

This test checks the ability of coin trunk SD-32539-01 to pass collect and return current applied by 0 operator to the coin station and to automatically collect or return coins for charge or noncharge calls, respectively.

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K. RT Relay Operate Test: This test uses an external resistance ground to simulate coin deposit and provides a critical operate test of the RT relay.

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1.04 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 tests are being made.

1.05 When testing coin trunks which are reached through secondary line switches, the key which is provided at the trunk relay rack for rotating the secondary master switch associated with the trunk to be tested should be operated momentarily to pick up disengaged plungers.

1.06 For Tests A, B, C, D, G, H, and I, spaces are provided in the ACTION column for entering the test line number or office code to be dialed when specified. These spaces should be filled in where required.

1.07 The methods of testing the P1 relay under

Test B assume that the trunk is equipped with a test jack (TT) through which the outgoing tip and ring conductors are wired and which is arranged to ground the sleeve. Failure of the P1 relay to release would prevent the tip and ring reversal in the coin trunk that should take place under any battery reversal condition, in order that the coin ground will remain on the ground side of the connection. Such a failure is most likely to occur on the open circuit condition which is encountered when the calling party disconnects first and the called party disconnects before the B relay of the connector has released. If this condition occurs, the switch train will be held up from battery at the connector A relay to the coin ground and will simulate a calling party hold condition at the connector.

1.08 The trunk test set is not designed to make an operate test of the P1 relay. This relay should be adjusted in accordance with the Circuit Requirements Table of SD-31592-01 whenever circuit operation indicates a need.

1.09 If necessary the operate value of the P1 relay should be tested in accordance with the Circuit Requirements Table of SD-31592-01, as the trunk test set is not designed to make an operate test of this relay.

1.10 Test B requires the use of a special test cord when using test set SD-90469-01 or SD-90469-02 not equipped with a CL jack. The special test cord is to be made up locally as shown in Fig. 1.

1.11 When performing Test C or E in an office arranged for extending the alarms to another office, the proper persons should be notified before starting and after completing these tests so that any alarms caused by performing these tests can be disregarded.

1.12 When performing Test C or E in an office where only one trouble lamp per group of trunks is provided and the alarms are extended to another office, operate the audible alarm switch to the position that lights the associated red pilot lamp and brings the alarm signals into the office where the tests are being conducted. On alternate routine test periods, the transfer key of the alarm circuit should be operated to test the duplicate equipment.

1.13 When testing coin trunks equipped with coin trunk timed release circuits on a routine basis, test one trunk in each group in accordance with the entire procedure of Test E; then test the remaining trunks, omitting the operation which makes the coin trunk timed release circuit ineffective.

1.14 When testing coin trunks not equipped with coin trunk timed release circuits on a routine basis, perform Test E on only one coin trunk in each group.

1.15 During Test E, the check of the coin trunk timed release circuit register, if provided, will cause the register to advance. The reporting of this register operation should be in accordance with local instructions.

1.16 Test F is based upon the use of a special patching cord to be made up locally as shown in Fig. 2.

1.17 When performing Test D, actions and verifications will be required at the toll switchboard.

1.18 Trunk Test Set SD-90469-02 equipped with ZH and ZK options or SD-90469-01 equipped with ZH option must be used to perform Tests H and I.

1.19 Tests A through E and G provide an operate current of approximately 20 ma through the RT relay to the operated CN key ground. Test K provides an operate current of approximately 17 ma through the RT relay to an external resistance ground. Any RT relay that fails either test should be readjusted in accordance with the Circuit Requirements Table in SD-31592-01.

1.20 *Lettered Steps:* A letter a, b, c, etc, added to a step number in Part 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 a 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.

2. APPARATUS

Tests A Through E, G, H, and K

2.01 Trunk test set J94710A (SD-90469-01 or SD-90469-02).

2.02 Head telephone set associated with test set.

2.03 Patching cord, 3P7A cord, consisting of one P3E cord, 6 feet long, equipped with two 310 plugs.

2.04 Patching cord, 3P15B cord, consisting of one P3K cord, 12 feet long, equipped with two 310 plugs (used when battery and ground jack is used to provide battery and ground to test set).

2.05 Testing cord, 2W12A cord, consisting of one W2M cord, 9 feet long, equipped with one 310 plug and two 59 and two 108 cord tips (used when battery and ground block or spare fuse [not to exceed 5 amperes] and frame ground is used to provide battery and ground to test set).

Test B

2.06 Special test cord, for use with test set SD-90469-01 or SD-90469-02 not equipped with a CL jack, or when test set is not located near coin box trunk, made up locally as shown in Fig. 1. The physical arrangement of the lamp, key, and resistor can be determined locally. In offices where a battery and ground jack is not available, two KS-6780 connecting clips and two 108 cord tips should be used in place of the 310 plug with the black shell.

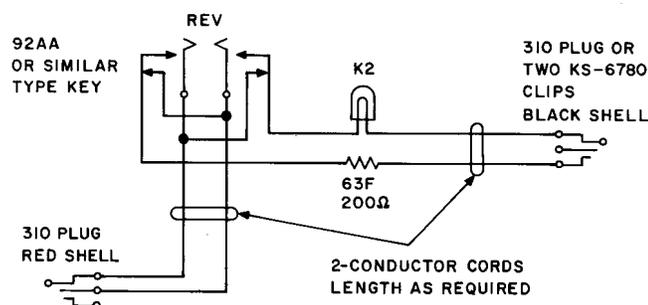


Fig. 1—Test Cord

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2.07 Patching cord, 3P7A cord, consisting of one P3E cord, 6 feet long, equipped with two 310 plugs (for use when performing the P1 relay release test using test set SD-90469-02 equipped with a CL jack).

Test C

2.08 349A plug, for use when dialing the connector test line only if the connector test line is not normally busy.

Test F

2.09 Special patching cord made up locally as shown in Fig. 2.

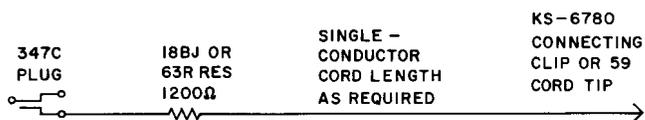


Fig. 2—Patching Cord

Test G

2.10 32A (remote control) test set.

2.11 Patching cord, 3P7A cord, consisting of one P3E cord, 6 feet long, equipped with two 310 plugs (for use where the test line is equipped with a TL jack at the coin trunk frame).

Tests H and I

2.12 Trunk test set J94710, SD-90469-02 equipped with ZH and ZK options or SD-90469-01 equipped with ZH option.

Test K

2.13 Resistor 63L (500 ohms).

2.14 Testing cords, 1W13A cord, 893 cord, 3 feet long, equipped with two 360A tools and two KS-6278 connecting clips (used to connect 63L resistor to ground).

2.15 Testing cords, 2W7A cord, W2F cord, 9 feet 6 inches long, equipped with one 347C plug and two 59 cord tips (used to connect resistance ground to test set).

3. PREPARATION

STEP	ACTION	VERIFICATION
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All Tests Except Test F

1 Connect battery and ground to test set.

Note 1: If 2W12A cord is used, connect white (tip) conductor to battery and red (sleeve) conductor to ground.

Note 2: Connect cord to test set first and disconnect cord from test set last to avoid possible grounding of the battery supply.

2 Connect head telephone set to TEL jacks of test set.

3 Connect a 310 plug of 3P7A cord to T jack of test set.

STEP	ACTION	VERIFICATION
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Test K

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| 4 | Using 893 cord, connect one terminal of 63L resistor to ground. | |
| 5 | Connect red (sleeve) conductor of 2W7A cord to other terminal of 63L resistor. | |

4. METHOD**A. BT Relay Operate and Coin Collect**

Note: When testing coin trunks which are connected directly to primary line switches and the associated alarm bell rings at any time during the progress of the tests, the indication might be that a line switch has plunged on the trunk under test. If the trunk is in a condition to receive dial tone, remove the plug from the test jack immediately in order to avoid interference with service. If no dial tone is heard, request the customer to wait a moment for dial tone before starting a new call. Leave the plug in the test jack, manually restore the line switch, and rotate the master switch to direct the plunger to an idle trunk.

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| 4 | Connect free 310 plug of 3P7A cord to test jack associated with incoming end of coin trunk to be tested. | |
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BSY lamp not lighted.

Note: If BSY lamp lights, remove plug immediately and proceed to next trunk.

Trunks Equipped With BT Relay

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| 5a | If trunk is arranged to hold switch train after BT relay operates—
Operate TP BT, CBT LP keys. | |
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| 6a | Operate, restore DL ST key. | |
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SL lamp lighted.

Dial tone may or may not be heard.

Note: Presence of dial tone depends upon whether trunk is arranged to provide dial tone before or after coin deposit.

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| 7a | Operate CN key. | |
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SL lamp remains lighted.

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| 8a | Dial "0". | |
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Operator not reached.

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| 9a | Restore CN, TP BT keys. | |
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STEP	ACTION	VERIFICATION
10a	Operate FL key.	SL lamp extinguished.
11a	Restore FL key.	
12a	Operate, restore DL ST key.	SL lamp lighted.
13b	If trunk is arranged to release switch train after the BT relay operates— Operate TP BT, CBT LP keys.	
14b	Operate, restore DL ST key.	SL lamp lighted. Dial tone may or may not be heard. <i>Note:</i> Presence of dial tone depends upon whether trunk is arranged to provide dial tone before or after coin deposit.
15b	Operate CN key.	SL lamp extinguished.
16b	Restore CN, TP BT keys.	
17b	Operate, restore DL ST key.	SL lamp lighted.
Trunks Not Equipped With BT Relay		
18	Operate CBT LP key.	
19	Operate, restore DL ST key.	SL lamp lighted. Dial tone may or may not be heard. <i>Note:</i> Presence of dial tone depends upon whether trunk is arranged to provide dial tone before or after coin deposit.
Trunks With or Without BT Relay		
20c	If trunk is arranged to provide dial tone before coin deposit— Dial "0".	Dial tone heard before and after dialing.
21d	If trunk is arranged to provide dial tone after coin deposit— Dial "0".	Dial tone not heard before or after dialing.
22	Operate CN key.	Dial tone heard.
23	Dial connector multiple test line in a reverse battery connector group (). Restore CN key.	If test line ES-241791 or SD-31230-01 is provided— Ringing tripped immediately. Tone heard during test line loop closures. If test lines SD-31263-01, SD-31425-01, SD-31636-01, SD-31642-01, or SD-31932-01 are

STEP	ACTION	VERIFICATION
		<p>provided— Ringing induction heard. Ringing trips. Tone heard during test line loop closures. During period required for at least three loop closures, REV lamp remains extinguished.</p> <p>Note 1: If ringing induction is heard and a customer or operator answers, operate TRS key and advise that a test is being made.</p> <p>Note 2: Flickering may be disregarded but if lamp remains lighted during a full tone or full silent period, improper operation of trunk reversing relay is indicated.</p>
Coin Collect Test Using Test Line SD-31636-01 or SD-31642-01		
24	Operate CN, REV keys.	REV lamp lighted.
25	Operate ID key.	
26e	If trunk is arranged for delay interval before setting coin collect condition (test line SD-31425-01 only)— After first 5-second closed interval— Operate SW key.	SL, REV lamps extinguished. BSY lamp lighted. CC lamp flashes during 2-second open interval; does not flash during 5-second closed interval. Trunk trouble lamp lighted steadily during the following 2-second open interval.
27f	If trunk is arranged for setting coin collect condition without delay interval— Operate SW key.	SL, REV lamps extinguished. BSY lamp lighted. CC lamp flashes during 2-second open interval; does not flash during 5-second closed interval. Trunk trouble lamp lights steadily during the following 2-second open interval.
28	Restore CN key.	CC, BSY lamps extinguished. Trunk trouble lamp extinguished.
29	Restore SW, ID, REV, CBT LP keys.	
Coin Collect Test Using Test Lines ES-241791, SD-31230-01, SD-31263-01, SD-31425-01, or SD-31932-01		
30	Operate CN key.	
31e	If trunk is arranged for delay interval before setting coin collect condition (test line SD-31425-01 only)—	CC lamp flashes. Trunk trouble lamp lighted steadily.

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STEP	ACTION	VERIFICATION
	After first 5-second closed interval— Operate, hold operated FL key.	
32f	If trunk is arranged for setting coin collect condition without delay interval— Operate, hold operated FL key.	CC lamp flashes. Trunk trouble lamp lighted steadily.
33	While holding operated FL key, restore CN key.	CC, SL lamps extinguished. Trunk trouble lamp extinguished.
34	Restore FL, CBT LP keys.	
All Trunks		
35	Unless further tests are to be made— Remove all cords; restore all keys.	
B. P1 Relay Release, Trunk Cut-Through, and Reversal—Loop		
4	Connect free 310 plug of 3P7A cord to test jack associated with incoming end of coin trunk to be tested.	BSY lamp not lighted. <i>Note:</i> If BSY lamp lights, remove plug immediately and proceed to next trunk.
Using Test Set Not Equipped With a CL Jack		
5	Connect black shelled plug of special test cord shown in Fig. 1 to -48V jack. <i>Note:</i> If KS-6780 clips are used, connect tip conductor to battery and sleeve conductor to ground.	
6	Operate, restore DL ST key.	SL lamp lighted.
7	Operate CN key.	Dial tone heard.
8	Dial connector multiple test line ().	Ringling tripped immediately or delayed, depending on test line used. Tone heard during test line loop closures.
9	Operate TP BT key.	
10	On special test cord— Operate REV key to normal position.	
11	During a closed interval of test line— With a quick positive motion, insert 310 plug (red shell) of special test cord into TT jack associated with outgoing end of trunk under test.	On special test cord— Lamp lighted. Interrupted tone no longer heard.

STEP	ACTION	VERIFICATION
12	Within 3 seconds after connecting 310 plug to TT jack— Operate SW key.	SL lamp extinguished. BSY lamp lighted. On special test cord— Lamp extinguished.
13	On special test cord— Operate REV key.	On special test cord— Lamp remains extinguished. <i>Note:</i> If lamp on special test cord relights, it is usually an indication that P1 relay failed to release.
14	On special test cord— Restore REV key.	Tone may or may not be heard.
15	At trunk equipment— Remove plug from TT jack.	Coin control current may or may not be heard.
16	Restore CN, TB BT, SW keys.	BSY lamp extinguished.
17	Unless further tests are to be made— Remove all cords; restore all keys.	

Using Test Set Equipped With CL Jack

18	Operate, restore DL ST key.	SL lamp lighted.
19	Operate CBT LP key, then CN key.	Dial tone heard.
20	Dial connector multiple test line ().	Ringling tripped immediately or delayed, depending on test line used. Tone heard during test line loop closures.
21	Operate TP BT key.	
22	Connect a 310 plug of 3P7A cord to CL jack.	
23	During a closed interval of test line— With a quick positive motion, insert free 310 plug of 3P7A cord into TT jack associated with outgoing end of trunk under test.	C lamp lighted. Tone no longer heard.
24	Within 3 seconds after connecting 310 plug to TT jack— Operate C key, then SW key.	SL, C lamps extinguished. BSY lamp lighted.
25	Restore C key.	
26	Operate RR key.	C lamp remains extinguished. <i>Note:</i> If C lamp lights, the indication usually is that P1 relay failed to release.

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STEP	ACTION	VERIFICATION
27	At trunk equipment— Remove plug from TT jack.	Interrupted tone may or may not be heard. Coin current may or may not be heard in receiver.
28	At test set— Restore RR, CN, TP BT, SW keys.	BSY lamp extinguished.
29	Remove test cord from CL jack.	

Using Test Set With or Without CL Jack

- 30 Unless further tests are to be made—
Remove all cords; restore all keys.

**Trunks Associated With Auxiliary Coin Trunks
SD-32538-01**

Note: To connect the T jack of the test set to the TST jack of the auxiliary trunk, the test set must be located near the auxiliary trunk which in some offices makes it impractical to connect the CL jack of the test set to the TT jack of the coin box trunk. In these offices an assistant will be required.

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| 31 | At auxiliary coin trunk—
Operate MB key associated with auxiliary trunk to be tested. | MB lamp lighted. |
| 32a | If MB lamp does not light in Step 31—
Restore MB key and operate MB key of another auxiliary trunk until one can be found which causes MB lamp to light. | |
| | <i>Note:</i> A lighted MB lamp indicates an idle auxiliary coin trunk circuit. | |
| 33 | Connect free end of 3P7A cord (other end connected to T jack of test set) to TST jack of auxiliary trunk circuit. | |
| 34 | At test set—
Operate DL ST key. | |
| 35 | Operate, hold FL key. | |
| 36 | Operate CN, RCK keys. | |
| 37 | Restore FL key. | SL lamp lighted. |

STEP	ACTION	VERIFICATION
38	Dial telephone number assigned to test line for a charge-type call ().	Connector connects to terminating test line number. Ringing heard in head telephone set.
39	After ringing is tripped— Restore DL ST, RCK keys.	
40	Operate TP BT key.	
41b	If test set is not located near coin box trunk under test— Connect black shelled 310 plug of special test cord shown in Fig. 1 to test battery jack. <i>Note:</i> If KS-6780 clips are used instead of black shelled 310 plug, connect tip conductor to battery and sleeve conductor to ground.	
42b	Operate REV key to normal position.	
43b	Have assistant during a closed interval of test line— With a quick positive motion, insert 310 plug (red shell) of special test cord into TT jack associated with outgoing end of trunk under test.	On special test cord— Lamp lighted. Interrupted tone no longer heard.
44b	At test set— Within 3 seconds after connecting 310 plug to TT jack— Operate SW key.	SL lamp extinguished. BSY lamp lighted. On special test cord— Lamp extinguished.
45b	Have assistant on special test cord— Operate REV key.	On special test cord— Lamp remains extinguished. <i>Note:</i> If lamp on special test cord relights, it is usually an indication that P1 relay failed to release.
46b	Have assistant on special test cord— Restore REV key.	At test set— Tone may or may not be heard.
47b	Have assistant at trunk equipment— Remove plug from TT jack.	At test set— Coin control current may or may not be heard.
48b	Restore CN, TB BT, SW keys.	BSY lamp extinguished.
49c	If test set is located near coin box trunk— Operate TP BT key.	
50c	Connect a 310 plug of 3P7A cord to CL jack.	

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STEP	ACTION	VERIFICATION
51c	During a closed interval of test line— With a quick positive motion, insert free 310 plug of 3P7A cord into TT jack associated with outgoing end of trunk under test.	C lamp lighted. Tone no longer heard.
52c	Within 3 seconds after connecting 310 plug to TT jack— Operate C key, then SW key.	SL, C lamps extinguished. BSY lamp lighted.
53c	Restore C key.	
54c	Operate RR key.	C lamp remains extinguished. <i>Note:</i> If C lamp lights, the indication usually is that P1 relay failed to release.
55c	At trunk equipment— Remove plug from TT jack.	Interrupted tone may or may not be heard. Coin current may or may not be heard in receiver.
56c	At test set— Restore RR, CN, TP BT, SW keys.	BSY lamp extinguished.
57c	Remove test cord from CL jack.	
58	Unless further tests are to be made— Remove all cords; restore all keys.♦	

C. Coin Return, BT Relay Nonoperate, and Stuck Coin Alarm—Leak

4a	If testing in an office arranged for extending alarms— Notify proper persons to disregard alarms until further notice.	
5b	If only one trouble lamp per group of trunks is provided— Operate audible alarm switch.	Red pilot lamp lighted.
6c	If coin trunk is equipped with timed release feature (SD-31592-01, Fig. 3)— Operate CO key to make release circuit ineffective.	CO lamp lighted.
7	Connect free 310 plug of 3P7A cord to test jack associated with incoming end of coin trunk to be tested.	BSY lamp not lighted. <i>Note:</i> If BSY lamp lights, remove plug immediately and proceed to next trunk.
8d	If trunk is equipped with BT relay— Operate ID key.	

STEP	ACTION	VERIFICATION
9	Operate, restore DL ST key.	SL lamp lighted. Dial tone may or may not be heard. <i>Note:</i> Presence of dial tone depends upon whether trunk is arranged to provide dial tone before or after coin deposit.
10	Operate CN key.	Dial tone heard.
11	Operate LK key.	
Trunks Arranged for Setting Coin Collect Condition Immediately When Called Party Answers		
12e	If coin trunk pulsing tests are scheduled in accordance with Section 226-517-500— Dial vacant selector level which provides tone.	Tone heard.
13f	If pulsing tests are not scheduled— If connector test line is not normally busy— Insert 349A plug into No. 4 test jack of connector test line.	
14f	Dial connector test line made busy in Step 13f.	Busy signal heard. If ringing induction is heard and a customer or operator answers— Operate TRS key and advise that a test is being made.
15	Operate SW key.	CR lamp flashes—first flash same duration as succeeding flashes. SL lamp extinguished. BSY lamp lighted. Trunk trouble lamp lighted. In offices where only one trouble lamp per group of trunks is provided— After short interval— Audible stuck coin alarm operated. Pilot lamp lighted. (See 1.10)
16	Operate REV key.	CR lamp continues to flash.
Trunks Arranged for Delayed Interval Before Setting Coin Collect Condition		
17	Dial connector multiple test line in a reverse battery connector group ().	Ringing tripped. Tone heard during test line loop closures. If ringing induction is heard and a customer or operator answers— Operate TRS key and advise that a test is being made.

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STEP	ACTION	VERIFICATION
18	At any time during the three short intervals of tone following the noncharge interval— Operate SW key.	CR lamp flashes. SL lamp extinguished. BSY lamp lighted. Trunk trouble lamp lighted. In offices where only one trouble lamp per group of trunks is provided— After short interval— Audible stuck coin alarm operated. Pilot lamp lighted. (See 1.10.)
19	Operate REV key.	CR lamp continues to flash.

Trunks Arranged for Either Immediate or Delayed Interval Before Setting Coin Collect Condition

20	Restore LK key; then restore CN key.	CR, BSY lamps extinguished. Trunk trouble lamp extinguished. If alarm previously operated— Alarm retired.
21	Restore SW, REV keys.	
22d	If trunk is equipped with BT relay— Restore ID key.	

All Trunks

23g	If Step 13f was performed and Test C is not to be performed on other trunks— Remove plug from No. 4 jack of connector test line.	
24	Unless further tests are to be performed— Remove test cord from test jack of trunk.	
25a	If testing in an office arranged for extending the alarms— Notify proper persons that tests are completed.	
26b	If only one trouble lamp per group of trunks is provided— Restore audible alarm switch.	Red pilot lamp extinguished.
27c	If coin trunk is equipped with timed release feature (SD-31592-01, Fig. 3)— Restore CO key to make timed release circuit effective.	CO lamp extinguished.

STEP	ACTION	VERIFICATION
D. Cut-Through and Ringback		
4	Connect free plug of 3P7A cord to test jack associated with incoming end of coin trunk to be tested.	BSY lamp not lighted. <i>Note:</i> If BSY lamp lights, remove plug immediately and proceed to next trunk.
5	Operate TRS key.	
6	Operate DL ST, CN keys.	SL lamp lighted. Dial tone heard.
7	Restore DL ST key.	
8	Dial operator ().	At switchboard— Call answered. No excessive clicks in receiver. If automatic coin return feature is provided— During coin return period— CR lamp lighted.
9a	If automatic coin return feature is not provided— At switchboard— Return coin.	At test set— During coin return period— CR lamp lighted.
10	At test set— Operate RR key.	
11	Operate, hold operated FL key.	
12	At switchboard— When disconnect signal is received— Ring back on trunk.	At switchboard— No excessive clicks heard. At test set— When ringing applied— RR lamp lighted.
13	Release FL, RR keys.	
14	At switchboard— Disconnect from trunk.	◆If testing into TSPS office— CR lamp momentarily lighted.◆
15	Operate, hold operated FL key.	CC lamp flashes.
16	Restore CN key.	CC, SL lamps extinguished.
17	Restore FL key.	
18	Unless other tests are to be made— Remove all cords; restore all keys.	

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STEP	ACTION	VERIFICATION
E. Stuck Coin Alarm and Coin Trunk Timed Release Circuit		
4a	If testing in an office arranged for extending alarms— Notify proper persons to disregard alarms until further notice.	
5b	If only one trouble lamp per group of trunks is provided— Operate audible alarm switch.	Red pilot lamp lighted.
6c	If coin trunk is equipped with timed release feature (SD-31592-01, Fig. 3)— Operate CO key to make release circuit ineffective.	CO lamp lighted.
7d	If additional trunks in the same group are to be tested— Omit Step 6c.	
8	Connect free plug of 3P7A cord to test jack associated with incoming end of coin trunk to be tested.	BSY lamp not lighted. Note: If BSY lamp lights, remove plug immediately and proceed to next trunk.
9	Operate SW key.	BSY lamp extinguished.
10	Operate CN, DL ST keys.	BSY lamp lighted. Dial tone heard.
11	Restore DL ST key.	BSY lamp remains lighted. CR lamp flashes. Trunk trouble lamp lighted. Audible stuck coin alarm operated. After an interval of not more than 48 seconds— Associated pilot lamp lighted. Note 1: When making this test in an office where only one trouble lamp per group of trunks is provided, operation of stuck coin alarm and lighting of pilot and trunk trouble lamps will be delayed. Note 2: When additional trunks in same group are tested, audible stuck coin alarm does not operate. CR lamp does not flash more than three or four times.
12e	If a coin trunk timed release circuit is provided and circuit register is provided— Note reading on register.	

STEP	ACTION	VERIFICATION
	<i>Note:</i> When testing additional trunks in the same group, omit Step 12e.	
13e	If coin trunk is equipped with timed release feature (SD-31592-01, Fig. 3)— Restore CO key to make timed release circuit effective.	CO lamp extinguished. CR lamp does not flash more than three or four times. BSY, coin pilot lamps extinguished. Trunk trouble lamp extinguished. Audible alarm retired.
14f	If no additional trunks in group are to be tested and circuit register is provided— Note reading on register.	Register advanced one digit from reading of Step 12e.
15	Restore CN key.	If Step 13e was not performed— CR, BSY, coin pilot lamps extinguished. Trunk trouble lamp extinguished. Audible alarm retired.
16	Unless Test E is to be performed on additional trunks— Restore SW key.	
17	Remove test cord from test jack.	
18a	If testing in an office arranged for extending the alarms— Notify proper persons that tests are completed.	
19b	If only one trouble lamp per group of trunks is provided— Restore audible alarm switch.	Red pilot lamp extinguished.

F. Busy Trunk Alarm

Trunks Associated With Primary Line Switches Only

1	Connect clip of special test cord, shown in Fig. 2, to battery.	
2	Insert 347C plug of special test cord into test jack of coin trunk just far enough to operate ring spring combination without operating tip spring combination.	Audible alarm sounds.
3	Remove plug from test jack.	Audible alarm retired.
4	Disconnect special test cord.	

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STEP	ACTION	VERIFICATION
G. Overtime Charge		
4	Connect free plug of P3E cord to test jack associated with incoming end of coin trunk to be tested.	BSY lamp not lighted. <i>Note:</i> BSY lamp lighted; remove plug immediately and proceed to next trunk.
5	Connect 32A (remote control) test set to OT jack of trunk under test.	
6a	If test line is equipped with TL jack at the coin trunk frame— Insert a 310 plug of 3P7A cord into TL jack of test set.	
7a	Insert free 310 plug of 3P7A cord into TL jack associated with test line on coin trunk frame.	
8	Operate CBT LP key.	
9	Operate CN key.	
10	Operate, restore DL ST key.	SL lamp lighted. Dial tone heard.
11	Dial the connector multiple test line in a reverse battery group ().	Test line seized. Ringing tripped. Tone heard during test line loop closures.
12b	If test line is arranged for control from trunk— On trunk equipment— Operate LP key (associated with test line).	
13c	If test line is arranged for control from test set— On test set— Operate T key.	
14	Operate, hold operated white button of 32A test set until trunk finder connects to trunk.	CC lamp momentarily lighted. Tone heard while CC lamp is lighted.
15	Momentarily operate red button of 32A test set.	Operator not summoned. Trunk finder released.
16	Operate, hold operated white button of 32A test set until trunk finder connects to trunk.	CC lamp momentarily lighted. Tone heard while CC lamp is lighted.
17	Operate, hold operated FL key.	CR lamp flashes.
18	Restore CN key.	CR, SL lamps extinguished.

STEP	ACTION	VERIFICATION
19	Restore FL key.	
20b	If test line is arranged for control from trunk— On trunk equipment— Restore LP key.	
21c	If test line is arranged for control from test set— On test set— Restore T key.	
22d	If no further tests are to be made on this trunk— Disconnect test sets; restore all keys.	
H. Auxiliary Coin Trunk Test		
4	At auxiliary coin trunk— Operate MB key associated with auxiliary trunk to be tested.	MB lamp lighted.
5a	If MB lamp does not light in Step 4— Restore MB key and operate MB key of another auxiliary trunk until one can be found which causes MB lamp to light.	
	Note: A lighted MB lamp indicates an idle auxiliary coin trunk circuit.	
6	Connect free end of 3P7A cord (other end connected to T jack of test set) to TST jack of auxiliary trunk circuit.	
7	At test set— Operate DL ST key.	
8	Operate, hold FL key.	
9	Operate CN, RCK keys.	
10	Restore FL key.	SL lamp lighted.
11	Dial first three digits assigned to test line in a reverse battery connector group ().	After third digit has been dialed— CTCK lamp momentarily lighted.
12	Continue to dial last four digits assigned to test line number.	Connector connects to terminating test line number. Ringing heard in head telephone set.
	Note: If a wrong number is reached and it is necessary to talk to the called party, restore the RCK key to normal and operate the TRS	

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STEP	ACTION	VERIFICATION
	key. When the conversation is complete, restore the TRS key and reoperate the RCK key.	
13	◆Immediately◆ after ringing is tripped— Operate ◆and hold◆ FL key.	◆CC lamp momentarily lighted. Switch train released.◆
14	Restore DL ST, FL, RCK, CN keys.	SL lamp extinguished.
15	Operate DL ST key.	
16	Operate, hold FL key.	
17	Operate CN, RCK keys.	
18	Restore FL key.	SL lamp lighted.
19	Dial telephone number assigned to test line in a nonreversing connector group ().	Connector connects to terminating test line number. Ringing heard in head telephone set.
20	◆Immediately◆ after ringing is tripped— Operate ◆and hold◆ FL key.	CR, CTCK lamps momentarily lighted. ◆Switch train released.◆
21	Restore DL ST, FL, RCK, CN keys.	◆SL lamp extinguished.◆
22	Operate DL ST key.	
23	Operate, hold FL key.	
24	Operate CN, RCK keys.	
25	Restore FL key.	SL lamp lighted.
26	Dial 0 (operator).	Audible ringing heard. After operator answers, CR lamp momentarily lighted. REV lamp lighted.
27	Operate TRS key and restore RCK key.	
28	Advise operator of test being made.	
29	Restore DL ST, CN keys.	◆REV, SL lamps extinguished.◆
30	Operate DL ST key.	
31	Operate, hold FL key.	
32	Operate CN, RCK keys.	
33	Restore FL key.	SL lamp lighted.

STEP	ACTION	VERIFICATION
34	Dial digits assigned to 3-digit service code (such as 411).	After third digit is dialed— CTCK lamp not lighted. Ringing heard in head telephone set.
35	After ringing is tripped— Operate TRS key and restore RCK key.	Operator answers call.
36	Inform operator of test call being made.	
37	Operate FL key.	CTCK, CR lamps momentarily lighted.
38	Restore all keys; remove cord from TST jack of auxiliary trunk under test.	
39	Repeat Steps 1 through 38 for other auxiliary coin trunk circuits to be tested.	
40	Remove all cords; restore all keys.	
I. Dial-Tone-First Using Prepay Coin Trunk SD-32539-01		
4	Operate MB key of trunk to be tested.	MB lamp lighted. <i>Note:</i> Lighted MB lamp indicates an idle trunk. If trunk is busy and MB key is left operated, trunk will be removed from service and MB lamp lighted when it becomes idle.
5	Connect free end of 3P7A cord to TJJ jack of idle trunk.	At test set— All lamps extinguished.
6	Operate DL ST, CBT LP keys.	Dial tone heard in head set. SL lamp lighted.
7	Operate SW key.	SL lamp extinguished. BSY lamp lighted.
8	Dial a free code other than zero (). <i>Note:</i> If necessary to talk on connection, operate TRS key. When conversation is completed, the TRS key should be restored.	Call completed. If terminating trunk returns initial deposit— CR lamp lighted momentarily. If answer supervision returned— REV lamp lighted.
9	Restore DL ST key.	Switch train released. At test set— If terminating trunk returned initial deposit, or if answer supervision returned— CC lamp lighted momentarily. Otherwise, CR lamp lighted momentarily. At coin trunk— CND lamp lighted momentarily. Coin trunk released.

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STEP	ACTION	VERIFICATION
		At test set— BSY lamp extinguished.
10	Operate DL ST key.	Dial tone heard in head telephone set. At test set— BSY lamp lighted.
11	Dial test line number requiring coin deposit ().	After third digit, call routed to announcement indicating coin deposit is required.
12	Restore DL ST key.	Switch train released. At test set— CR lamp lighted momentarily. At coin trunk— CND lamp lighted momentarily.
13	Operate DL ST, CN keys.	Dial tone heard in head telephone set.
14	Dial test line number requiring coin deposit ().	Ringing tripped— Test tone heard in head telephone set. At coin trunk— REV relay follows line reversals. At test set— REV lamp remains extinguished.
15	Restore DL ST, SL keys.	Switch train released. At coin trunk— CND lamp lighted. At test set— CC lamp flashes at 60 IPM.
16	Restore CN key.	CC lamp extinguished. At coin trunk— CND lamp extinguished. Coin trunk released.
	<i>Note 1:</i> Coin trunk will attempt to dispose of coin as long as CN key is operated, or until coin trunk timed release circuit, if provided, disconnects coin trunk.	
	<i>Note 2:</i> On at least one trunk, the CN key should be left operated long enough to bring in a coin trunk alarm or to allow the coin trunk timed release circuit, if provided, to disconnect the coin trunk.	
17	Operate DL ST key.	Dial tone heard in head telephone set.
18	Dial 0 operator.	Audible ringing heard unless operator answers in less than 4 seconds. Operator answers. REV lamp lighted. CR lamp momentarily lighted.

STEP	ACTION	VERIFICATION
19	Operate TRS key.	
20	Advise operator that this is a test call.	
21	Operate CN key.	
22	Request operator to return coin.	CR lamp lighted while coin return current is applied. REV lamp remains extinguished.
23	Request operator to collect coin.	CC lamp lighted while coin collect current is applied. REV lamp may light momentarily.
24	Restore CN, DL ST keys.	Switch train released. At test set— CC lamp lighted momentarily. At coin trunk— CND lamp lighted momentarily. Coin trunk released.
25	Remove 3P7A cord from TJF jack.	
26	Restore MB key.	
27	Repeat Steps 4 through 26 for other trunks to be tested.	
28a	If no further tests are to be performed— Remove all cords; restore all keys.	
J. Prepay Coin Trunk SD-32539-01, Dial-Tone-First Arrangement Not Provided		
4	Operate MB key of trunk to be tested.	MB lamp lighted. <i>Note:</i> Lighted MB lamp indicates an idle trunk. If trunk is busy and MB key is left operated, trunk will be removed from service and MB lamp lighted when it becomes idle.
5	Connect free end of 3P7A cord to TJF jack of idle trunk.	At test set— All lamps extinguished.
6	Operate DL ST, CBT LP keys.	Dial tone heard in head set. SL lamp lighted.
7	Operate SW key.	SL lamp extinguished. BSY lamp lighted.
8	Restore DL ST key.	Switch train released. At test set—

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STEP	ACTION	VERIFICATION
		CR lamp lighted momentarily. At coin trunk— CND lamp lighted momentarily. Coin trunk released. At test set— BSY lamp extinguished.
9	Operate DL ST, CN keys.	Dial tone heard in head telephone set.
10	Dial test line number in a reverse battery connector group ().	Ringling tripped. Test tone heard in head telephone set. At coin trunk— REV relay follows line reversals. At test set— REV lamp remains extinguished.
11	Restore DL ST, SL keys.	Switch train released. At coin trunk— CND lamp lighted. At test set— CC lamp flashes at 60 IPM.
12	Restore CN key. <i>Note 1:</i> Coin trunk will attempt to dispose of coin as long as CN key is operated, or until coin trunk timed release circuit, if provided, disconnects coin trunk. <i>Note 2:</i> On at least one trunk, the CN key should be left operated long enough to bring in a coin trunk alarm or to allow the coin trunk timed release circuit, if provided, to disconnect the coin trunk.	CC lamp extinguished. At coin trunk— CND lamp extinguished. Coin trunk released.
13	Operate DL ST key.	Dial tone heard in head telephone set.
14	Dial 0 operator.	Audible ringing heard unless operator answers in less than 4 seconds. Operator answers. REV lamp remains extinguished. CR lamp momentarily lighted.
15	Operate TRS key.	
16	Advise operator that this is a test call.	
17	Operate CN key.	
18	Request operator to return coin.	CR lamp lighted while coin return current is applied. REV lamp remains extinguished.

STEP	ACTION	VERIFICATION
19	Request operator to collect coin.	CC lamp lighted while coin collect current is applied. REV lamp may light momentarily.
20	Restore CN, DL ST keys.	Switch train released. At test set— CC lamp lighted momentarily. At coin trunk— CND lamp lighted momentarily. Coin trunk released.
21	Remove 3P7A cord from TJF jack.	
22	Restore MB key.	
23	Repeat Steps 4 through 22 for other trunks to be tested.	
24a	If no further tests are to be performed— Remove all cords; restore all keys.	
K. CRT Relay Operate Test		
6	Patch free end of P3E cord to T jack of coin trunk under test.	BSY lamp not lighted. <i>Note:</i> If lamp is lighted, remove plug immediately and make test later when trunk is idle.
7	Operate TRS, TP BT, CBT LP keys.	
8	Operate, restore DL ST key.	SL lamp lighted. Dial tone may or may not be heard (dial tone before or after coin deposit).
9	Connect 347C plug of 2W7A cord to left half of test set TT jack.	SL lamp remains lighted. Dial tone heard in receiver.
10	Dial code () to reach recording completing trunks. <i>Note:</i> If trunks are not provided, dial operator office code ().	Dial tone silenced. Operator answers. CR lamp lighted when automatic coin return feature functions. No excessive clicks heard in receiver.
11	Advise operator that test call is being made.	
12a	If automatic coin return feature is not provided— Request operator to return coin.	CR lamp lighted while coin return current is applied. No excessive clicks heard in receiver.
13	Remove 347C plug from TT jack.	

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STEP	ACTION	VERIFICATION
14	Operate, hold FL key.	SL lamp extinguished. If testing into TSPS office— CR lamp momentarily lighted.
15	Release FL key.	
16	Remove test cord from trunk test jack unless other tests are to be made on trunk.	
17	Disconnect 63L resistor from ground.◆	