

REPEATED DIALING TOLL TRANSMISSION SELECTORS  
OPERATION TESTS USING TOLL TRAIN AND  
COIN BOX TRUNK TEST SET ES-241636  
STEP-BY-STEP SYSTEMS

1. GENERAL

1.01 This section describes a method of performing operation tests on toll transmission selectors in repeated dialing toll trains by means of wagon-type toll train and coin box trunk test set ES-241636.

1.02 This section is reissued to incorporate material from the addendum in its proper location. In this process marginal arrows have been omitted.

1.03 The tests and the features tested are:

(A) Busy Line Test - Loop: This test checks the stepping features of a toll transmission selector and its ability to advance the toll train to the circuits ahead, to properly indicate a busy line condition, and to release.

(B) Idle Line Test - Leak: This test checks the stepping features of a toll transmission selector and its ability to advance the toll train to the circuits ahead; also the ringing, transmission, supervision, rering, and release features.

(C) All Paths Busy Test: This test checks the ability of a toll transmission selector to return an all paths busy indication.

1.04 Tests (A) and (B) are based upon the use of a connector test line terminal 99 (or 90).

1.05 This section does not include tests to levels serving level hunting connectors.

1.06 Lettered Steps: The letters a, b, c, etc, are added to a step to indicate that the step covers an action which may or may not be required, depending upon local conditions. The conditions under which a lettered step or series of steps should be made are given in the

ACTION column and all steps governed by the same condition are designated by the same letter. When a condition does not apply, the associated step should be omitted.

1.07 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

ALL TESTS

2.01 Toll Train and Coin Box Trunk Test Set ES-241636.

2.02 Operator Telephone Set.

2.03 Three P3E Cords, 6 feet long, each equipped with two No. 310 Plugs (3P7A).

2.04 P3H Cord, 10 feet long, equipped with No. 310 Plug and No. 240A Plug (3P2A).

TEST (B)

2.05 Timed Ringing Circuit per SD-32196-01.

2.06 P3E Cord, 6 feet long, equipped with two No. 310 Plugs (3P7A); to be used where Timed Ringing Circuit is provided.

2.07 W2AS Cord equipped with No. 522A Key and No. 310 Plug (2W22A Cord); to be used where Timed Ringing Circuit is provided.

TEST (C)

2.08 WLAF Cord equipped with two No. 360A Tools, and two No. 365 Tools (or equivalent).

## SECTION 226-310-505

### 3. PREPARATION

#### ALL TESTS

<u>STEP</u>	<u>ACTION</u>	<u>VERIFICATION</u>
1	Connect test set jacks 1, 3, and 4 to the correspondingly numbered test line jacks mounted on selector frame, using P3E cords.  <u>Note:</u> When more than one set of jacks is available, use the set which is multiplied to the connector frame in which the test line number to be dialed appears.	
2	Connect operator telephone set to test set jacks TEL.	

#### TEST (A) AND TEST (C)

3	Connect test set jack 2 to toll transmission selector test jack, using P3H cord.	Lamps 2 and 4 light.
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#### TEST (B)

3a	If timed ringing circuit is not provided - Connect test set jack 2 to toll transmission selector test jack, using P3H cord.	Lamps 2 and 4 light.
4b	If timed ringing circuit is provided - Connect test set jack 2 to T jack of timed ringing circuit, using P3E cord.	
5b	Connect SEL jack of timed ringing circuit to toll transmission selector test jack, using P3H cord.	Lamps 2 and 4 light.
6b	Connect No. 522A key to TL jack of timed ringing circuit, using W2AS cord.	

#### TEST (C)

4	Connect No. 365 tool of WLAF cord to ground.	
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### 4. METHOD

<u>STEP</u>	<u>ACTION</u>	<u>VERIFICATION</u>
<u>(A) Busy Line Test - Loop</u>		
4	Operate BY key.	Lamp 3 lights.
5	Dial test line number associated with test line jack to which test set is connected.	Lamp 2 extinguished while dial is off normal. Lamp 1 does not light.
	<u>Note:</u> If the test number dialed is in a 10-party terminal per line group arranged for busy test of the called line following the completion of code selector pulsing, dial an extra digit following the test number.	

<u>STEP</u>	<u>ACTION</u>	<u>VERIFICATION</u>
6	Operate RLS key momentarily.	Lamps 2 and 4 extinguished momentarily. Selector releases.
7	Restore BY key.	Lamp 3 extinguished.
8c	Remove plug from test jack of toll transmission selector unless other tests are to be made on this switch.	
<u>(B) Idle Line Test - Leak</u>		
7	Operate TRK-LEAK key.	
8	Dial test line number associated with test line jack to which test set is connected.  <u>Note:</u> If the test number dialed is in a 10-party terminal per line code ringing group, dial an extra digit following test number to set the ringing code.	Lamp 2 extinguished while dial is off normal. Lamps 1 and 3 light upon completion of dialing.
9a	If timed ringing circuit is not provided - Operate RING key momentarily.	Test set bell rings.  <u>Note:</u> Lamps 1 and 2 extinguished while RING key is operated.
10b	If timed ringing circuit is provided - Operate No. 552A key approximately 2 seconds.	Test set bell rings.
11	Operate TALK key.	Lamps 1 and 2 extinguished. Audible ring heard in receiver.
12	Restore TALK key.	Lamps 1 and 2 lighted.
13	Operate TRIP HIGH key.	Lamps 1 and 2 extinguished. Test set bell silenced.
14	Operate TALK key.	
15	Operate and restore TRS-TST key several times.	Clicks heard in receiver.
16	Operate RR key.	
17	Operate RING key.	Lamp 5 lighted. Test set bell rings.
18	Restore RR, RING, TALK, and TRIP HIGH keys.	Lamp 5 extinguished. Lamps 1 and 2 lighted. Test set bell silenced.
19	Operate and restore TRIP HIGH key several times.	Lamps 1 and 2 flash.
20	Operate RLS key.	Selector releases. Lamps 1, 2, 3, and 4 extinguished.

**SECTION 226-310-505**

<u>STEP</u>	<u>ACTION</u>	<u>VERIFICATION</u>
21	Restore RLS key.	Lamps 2 and 4 lighted.
22	Restore TRK-LEAK key.	
23c	Remove plug from test jack of toll transmission selector unless other tests are to be made on this switch.	Lamps 2 and 4 extinguished.
<u>(C) All Paths Busy Test</u>		
5	Connect No. 365 tool of WLAF cord to sleeve wiper.  <u>Note:</u> It is permissible to span the two wiper springs with the clip in order to make this connection.	
6	Dial level selected for this test.	Lamp 2 extinguished while dial is off normal. Selector steps smoothly to level dialed and rotates smoothly to 11th rotary position. Lamps 2 and 4 extinguished.
7d	If toll transmission selector is arranged to provide all paths busy tone -  <u>Note:</u> Remove No. 365 tool from sleeve wiper to prevent excessive vibration of rotary magnet.	Selector does not release.
8d	Operate TALK key.	All paths busy tone heard in receiver.
9d	Restore TALK key.	
10d	Operate and restore RLS key.	Selector releases. Lamps 2 and 4 lighted.
11e	If toll transmission selector is not arranged to provide all paths busy tone -	Selector releases. Lamps 2 and 4 lighted.
12e	Remove No. 365 tool from sleeve wiper.	
13c	Remove plug from test jack of toll transmission selector unless other tests are to be made on this switch.	Lamps 2 and 4 extinguished.