

**REPEATED DIALING TOLL TRANSMISSION SELECTORS
AND TOLL COIN CONTROL SWITCHES
COIN CONTROL AND OPERATION TESTS
USING TOLL TRAIN AND COIN BOX TRUNK TEST SET ES-241635
STEP-BY-STEP SYSTEMS**

1. GENERAL:

- 1.1 This section describes a method of making an operation test of coin control selectors, together with a test of the coin collect and coin return functions of toll transmission selectors, using the toll train and coin box trunk test set (wagon type). Cords and jacks are provided for connecting the test set to the various switches and test circuits.
- 1.2 Section 226-310-505 should be used when making an operation test of the toll transmission selectors.
- 1.3 Earth potential keys are provided in order to simulate the earth potential conditions which might be encountered in service. A 12 volt positive potential can be inserted into the coin box ground lead by the operation of the EP-12 key. With keys EP-12 and EP-22 both operated, this potential is increased to 22 volts. The earth potential is reversed by operating the EP-REV key. The correct voltage of the test set earth potential battery is essential in the performance of this routine.
- 1.4 Where this routine is applied to four-digit toll train equipment, the transmission selectors should be made busy as the test proceeds, so that at the completion of the routine the coin control functions of all coin transmission selectors and all coin control switches will have been tested. A different toll incoming selector should be used each time the test line is called, so that eventually the coin control leads of every trunk will have been tested.
- 1.5 Where this routine is applied to three-digit toll train equipment, the test set connections should be changed as the test proceeds, so that at the completion of the routine the coin control functions of all coin transmission selectors and all coin control switches will have been tested.
- 1.6 This routine should be performed during the hours of light traffic, since it may involve the busying of toll transmission selectors in groups of ten.
- 1.7 Any circuit on which a failure is encountered when making this routine should be made busy until the trouble is cleared.

2. APPARATUS:

- 2.1 Toll Train and Coin Box Trunk Test Set (ES-241636).
- 2.2 Four No. 728 Cords equipped with No. 110 Plugs.
- 2.3 Two No. 813 Cords equipped with No. 240-A Plugs and No. 110 Plugs.
- 2.4 Operator's Telephone Set.

3. PREPARATION:

- 3.1 In offices provided with coin control selectors per ES-30158-01, the heat coils should be removed from the coin control trunk under test.
- 3.2 Locate the test set near the toll transmission selector bay on which the switches to be tested are mounted.
- 3.3 Before an incoming selector or a coin control switch is connected to the test set, the corresponding trunk should be made busy at the originating office until the test is completed.
- 3.4 With three No. 728 cords, connect test set jacks Nos. 3, 4 and 6 to the correspondingly numbered jacks on the transmission selector bay.
- 3.5 Where this routine is applied to a four-digit toll train, connect jack No. 2 of the test set to jack No. 2 of the test line, by means of one No. 728 cord.
- 3.6 Connect the operator's telephone set to the TEL jacks of the test set.

4. METHOD:

- 4.1 For four-digit toll train equipment, connect the test line jack No. 10 to the test jack of an incoming selector, using a No. 813 cord.
- 4.2 For three-digit toll train equipment, connect jack No. 2 of the test set to the test jack of a transmission selector, by means of one No. 813 cord.
- 4.3 With a No. 813 cord, connect the test jack of the coin control switch to the test line jack No. 11.

- 4.4 After the cords are connected as outlined in paragraphs 4.1 or 4.2, observe that lamps No. 2 and No. 4 light, indicating a closure of the loop and sleeve circuits, respectively.
- 4.5 Operate the CBX-CLD and LIST keys in order to connect the No. 50 coin collector to the test line (99).
- 4.6 Dial the test number to which the test set is connected (use the test set dial). Observe that No. 1 and No. 3 lamps are lighted when dialing is completed, indicating that the connector has seized the test line terminals.

Coin Return Test—Maximum Loop, Minimum Leak:

- 4.7 Operate the EP-12, EP-REV and TALK keys. Observe that lamps No. 1 and No. 2 are extinguished.
- 4.8 Operate the CSW-DIAL key in order to connect the dial circuit to the coin control switch.

Note: When testing coin control switches wired per drawing ES-226541, the CC-CR key should be operated at this time.
- 4.9 Deposit a coin in the coin collector and dial the number of the trunk under test (use the test set dial). The coin control switch should seize the trunk to the transmission selector.
- 4.10 Operate and release the CR key to return the coin. Note that coin return tone (high tone) is heard in the operator's telephone set.

Note: If the CC-CR key was operated before dialing, the coin is returned as soon as the trunk is seized.
- 4.11 Restore the CSW-DIAL key in order to restore the coin control switch to normal.

- 4.12 Restore the EP-REV key.

Coin Collect Test—Minimum Loop, Maximum Leak:

- 4.13 Operate the CSW-DIAL key in order to connect the dial circuit to the coin control switch.

Note: If the local earth potential conditions exceed 12 volts, operate the EP-22 key in addition to the EP-12 key.
 - 4.14 Operate the CSW-LEAK key in order to change the leak and loop conditions of the trunk to the coin control switches.

Note: When testing coin control switches wired per drawing ES-30158-01 or ES-241950, the CCSW-CL key should be operated at this time in addition to the CSW-LEAK key.
 - 4.15 Deposit a coin in the coin collector and dial the number of the trunk under test. The coin control switch should seize the trunk to the transmission selector.
 - 4.16 Operate and release the CC key to collect the coin. Note that coin collect tone (low tone) is heard in the operator's telephone set.

Note: If the CC and CR keys are combined into one, the key should be left in normal position to collect the coin.
 - 4.17 Restore the CSW-DIAL key in order to restore the coin control switch to normal.
 - 4.18 Restore all keys.
 - 4.19 Release the transmission selector by operating the RLS key.
5. **REPORTS:**
- 5.1 The required record of this routine should be entered on the proper form.