INTERCEPTING AND VERIFICATION REQUEST TRUNKS FROM CONNECTORS INTERCEPTING HANDLED AT DSA SWITCHBOARD OPERATION TESTS USING DIAL HAND TEST SET STEP-BY-STEP SYSTEMS

1. GENERAL

1.01 This section describes a method of testing the operating features of intercepting and verification request trunks from connectors. This method applies both to trunks concentrated on trunk finders and to trunks not concentrated on trunk finders.

1.02 This section has been reissued to revise completely the present test in order to include trunk circuits not previously covered, to combine Tests (A) and (B) in Test (A) and to add a new Test (B) covering intercepting from toll connectors or the toll side of combination connectors. This reissue of the section covers a general revision and therefore arrows used to indicate changes have been omitted.

1.03 The tests covered are:

(A) Intercepting from Local Connectors or Local Side of Combination Connectors

(B) Intercepting from Toll Connectors or Toll Side of Combination Connectors

1.04 Test (A) is made from the test jacks of local connectors or the local side of combination connectors having access to the intercepting and verification request trunks.

1.05 Test (B) is made from a toll switchboard position. This test is used only when the intercepting trunk circuits are not concentrated on trunk finders.

1.06 These tests cover all of the various arrangements of the trunks and associated switchboard circuits and it will be necessary, in order to perform the proper tests, to review the particular arrangements provided in an office before proceeding with the tests. It is suggested that paragraphs or subparagraphs be cross-hatched where they do not apply.

1.07 These tests when made on a routine basis should preferably be performed during periods of light traffic.

1.08 In making Test (A), it will be necessary to select a made busy connector terminal when testing 2-wire trunks arranged for completion of intercepted calls and the trunks are not concentrated on trunk finders.

1.09 In making Tests (A) and (B), it will be necessary to obtain from the Traffic Department records one vacant connector or verification request terminal number associated with each of the trunks to be tested.

1.10 When making Test (A) on a routine basis, a different switch should be selected in each group on each routine so that eventually a test will have been made from each switch in every group.

1.11 If an "out of service" failure is encountered on a trunk circuit wired to a trunk finder, the cutoff relay in the trunk circuit should be blocked operated and then the trunk should be made busy by grounding the sleeve conductor at the terminal block on the distributing frame until the trouble is cleared. Remove the blocking tool from the cutoff relay after the sleeve is grounded. The cutoff relay should remain operated.

1.12 If an "out of service" failure is encountered on a trunk circuit wired direct to a switchboard position, the trunk should be made busy by grounding the sleeve conductor at the terminal block on the distributing frame until the trouble is cleared.

Note: If the trunk is arranged to signal over the sleeve, the relay which locks to the sleeve should be blocked operated in order to avoid lighting the trunk lamp. Remove the blocking tool after the sleeve has been grounded. The relay should remain operated.

1.13 If an "out of service" failure is encountered on a 2-wire outgoing trunk (not through a trunk finder), the trunk should be made busy by inserting a No. 258C make-busy plug into the test and make-busy jack of the trunk until the trouble is cleared.

1.14 If an "out of service" failure is encountered on a trunk finder or a trunk circuit outgoing from the trunk finder, the trunk finder should be made busy by inserting a No. 258C make-busy plug into the trunk finder test and make-busy jack until the trouble is cleared.

2. APPARATUS

Test (A) Only

2.01 Dial Hand Test Set equipped with a No. 240F Plug with a No. 2T Lamp bridged from the tip to the ground contacts.

2.02 No. 258C (or equivalent) Make-Busy Plugs as required.

Test (B) Only

2.03 Operator's Telephone Set.

3. METHOD

(A) Intercepting from Local Connectors or Local Side of Combination Connectors

3.01 If the switch to be used is normal, insert the No. 240F plug of the dial hand test set into the test jack of the local connector, or the local jack of the combination connector.

3.02 Operate the C button and observe that the test lamp lights dimly. Dial the two digits corresponding to the terminal which is connected to the trunk under test. Observe that the connector selects the proper terminal. Audible ringing should be heard unless the operator answers in less than four seconds.

3.03 When the operator answers, audible ringing should stop. Advise the operator that a test is being made. Observe that the test lamp continues to burn dimly as at the start of the test.

3.04 If the trunks under test or the associated circuits are arranged for toll identification tone, verify with the operator that no tone was heard.

3.05 If the trunks under test or the associated circuits are arranged to distinguish between "regular" intercepting and "trouble" intercepting from plugging-up lines, verify that the call was received through the "regular" intercepting answering jack.

Trunks Concentrated on Trunk Finders

3.06 Request the operator to disconnect when the cord circuit supervisory lamp lights. Remove the No. 240F plug from the test jack and observe that the switch releases.

3.07 Proceed as in 3.01 to 3.06 using a connector having access to the next trunk to be tested and repeat this sequence of operations until all scheduled trunks have been tested.

Trunks Not Concentrated on Trunk Finders - Intercepting Handled at a No. 14C or No. 14D Switchboard

3.08 When testing 2-wire trunks, request the operator to operate and restore the flashing key.

(a) On circuits arranged for flashing on local calls, observe that the test lamp lights brilliantly while the flashing key is operated.

(b) On circuits not arranged for flashing on local calls, observe that the test lamp continues to burn dimly.

3.09 When testing 3-wire trunks wired direct to an answering jack, request the operator to remove and reinsert the plug and to observe that the trunk lamp does not relight.

3.10 Request the operator to leave the plug in the trunk jack, to observe the cord supervisory lamp and the trunk lamp and to remove and reinsert the plug when the trunk lamp lights.

3.11 Release the C button of the hand test set. Observe that the switch releases and that the test lamp is extinguished. The cord circuit supervisory lamp should light.

3.12 Operate the C button and observe that the test lamp lights dimly. Again dial the two digits of the terminal used for test. Observe that the connector selects the proper terminal. The trunk lamp at the switchboard should relight. Audible ringing should be heard unless the operator answers in less than four seconds.

3.13 When the operator answers, audible ringing should stop. The test lamp should continue to burn dimly. Verify with the operator that the proper cord circuit supervisory signal was received and that the trunk lamp remained extinguished for a short interval until the new call was originated.

3.14 When testing 2-wire trunks arranged for completion of intercepted calls, proceed as in 3.15 to 3.18. Otherwise, request the operator to disconnect the cord from the trunk jack and proceed as in 3.17 and 3.18.

3.15 Request the operator to remain on the connection and to complete a call to a made busy connector terminal ( ). Busy tone should be heard. Observe that the test lamp continues to burn dimly.

3.16 Request the operator to disconnect the calling cord and to complete a call to the connector multiple test line terminal ( ). Observe that, when the test line is reached and ringing is tripped, the test lamp lights brilliantly during the interruptions of the test line. The test line tone should be heard during the intervals in which the test lamp is lighted brilliantly.

3.17 Remove the No. 240F plug from the test jack. Observe that the switch releases.

3.18 Proceed as in 3.01 to 3.05 and 3.08 to 3.16, using a connector having access to the next trunk to be tested. Repeat this

sequence of operations until all scheduled trunks have been tested.

Trunks Not Concentrated on Trunk Finders - Intercepting Handled at a No. 15C Switchboard

3.19 When testing 2-wire trunks, proceed as in 3.20 to 3.24 if the trunks are arranged for completion of intercepted calls or as in 3.20, 3.23 and 3.24 if not so arranged. When testing 3-wire trunks proceed as in 3.25 to 3.32.

3.20 Request the operator to operate and restore the flashing key.

(a) On circuits arranged for flashing on local calls, observe that the test lamp lights brilliantly for a short interval (approximately one-half second) after the flashing key is restored.

(b) On circuits not arranged for flashing on local calls, observe that the test lamp continues to burn dimly.

3.21 Request the operator to remain on the connection and to complete a call to a made busy connector terminal ( ). Busy tone should be heard. Observe that the test lamp continues to burn dimly.

3.22 Request the operator to disconnect the calling cord and to complete a call to the connector multiple test line terminal ( ). Observe that, when the test line is reached and ringing is tripped, the test lamp lights brilliantly during the interruptions of the test line. The test line tone should be heard during the intervals in which the test lamp is lighted brilliantly.

3.23 Remove the No. 240F plug from the test jack. Observe that the switch releases.

3.24 Proceed as in 3.01 to 3.05 and 3.20 to 3.23, using a connector having access to the next trunk to be tested. Repeat this sequence of operations until all scheduled trunks have been tested.

3.25 Request the operator to remove and reinsert the plug and to observe that the trunk lamp does not relight.

3.26 Request the operator to hold the circuit even though a disconnect signal is received.

3.27 Release the C button of the hand test set. Observe that the connector releases and that the test lamp is extinguished.

3.28 Reoperate the C button. Observe that the test lamp lights dimly. Again dial the two digits of the terminal used for test. Observe that the connector selects the proper terminal and that busy tone is heard in the receiver as soon as the terminal is seized.

Caution: If the connector stops on any other terminal, immediately release the C button of the hand test set so as to avoid ringing on a subscriber line.

3.29 Remove the No. 240F plug from the test jack and observe that the switch releases.

3.30 Using a connector having access to the next trunk to be tested, proceed as in 3.01 to 3.05. Verify that a disconnect signal is being received on the trunk just tested and request the operator to take down that connection.

3.31 Proceed as in 3.25 to 3.30 until all scheduled trunks have been tested. When testing the last trunk, establish the talking connection required in 3.30 over a trunk previously tested.

3.32 Advise the operator that the testing has been completed and verify that all connections used in the test have been taken down. Request the operator to disconnect when the cord circuit supervisory lamp lights. Remove the No. 240F plug from the test jack and observe that the switch releases.

(B) Intercepting from Toll Connectors or Toll Side of Combination Connectors

3.33 Connect an operator's telephone set to a toll switchboard position which is to be used in making the tests.

3.34 Make a busy test on the toll switching trunk to be used for the test to avoid connecting to a busy trunk. Proceed as follows:

(a) Dialing Trunks No. 3 or 3C Toll Switchboard - Connect a toll cord to the trunk to be used for testing, with the talking key operated. Operate the position dialing key to the front or back position, depending upon whether the front or back cord is being used. The dial pilot lamp should light (except in the case of some earlier installations of repeated dialing trunks) indicating that the dial is associated with the cord circuit used for test. Dial the number of the connector terminal associated with the trunk under test and restore the position dialing key to normal. The dial pilot lamp should be extinguished.

(b) Straightforward Trunks No. 3 or 3C Toll Switchboard - Connect a toll cord to the trunk to be used for testing, with the talking key operated, and listen for order tone. Upon hearing order tone, give the operator the number of the connector terminal associated with the trunk under test.

(c) Key Pulsing Trunks No. 3 or 3C Toll Switchboard - Connect a toll cord to the trunk to be tested, with the talking key operated. Depress the front or back position key pulsing key, depending upon whether a front or back cord is being used. When the key pulsing and sender lamps light, indicating that the keyset has been associated with the cord used and that a sender has been selected, set up the number of the connector terminal associated with the trunk under test on the keyset. As soon as the last digit is set up, the key pulsing and sender pilot lamps should be extinguished.

(d) Dialing Trunks No. 1 Toll Switchboard - Connect a trunk cord to the trunk to be tested and operate the monitoring key or the position dial key as required. Dial the number of the connector terminal associated with the trunk under test and then operate the talking key.

(e) Cordless "B" Trunks No. 1 Toll Switchboard - Connect a trunk cord to the trunk to be tested, with the talking key operated, and listen for order tone. Upon hearing the order tone, give the operator the number of the connector terminal associated with the trunk under test.

3.35 If manual ringing is required to signal the intercepting operator, operate the ringing key.

3.36 The intercepting operator should answer unless the intercepting trunk is busy in which case the cord supervisory lamp should flash at the busy-back rate.

3.37 When the intercepting operator answers, advise her that a test is being made.

(a) On intercepting trunk circuits arranged for supervision on toll calls, observe that the cord circuit supervisory lamp is extinguished.

(b) On intercepting trunk circuits not arranged for supervision on toll calls, observe that the cord circuit supervisory lamp remains lighted.

3.38 If the intercepting trunk circuits are arranged for toll identification tone, verify with the operator that "high" tone was heard until she operated the tone removal or flashing key.

3.39 If the intercepting trunk circuits are arranged to distinguish between "regular" intercepting and "trouble" intercepting from plugging-up lines, verify that the call was received through the regular intercepting answering jack.

3.40 Request the operator to operate and restore the flashing key.

(a) Intercepting Handled at a No. 14C or No. 14D Switchboard - On intercepting trunk circuits arranged for flashing on toll calls, observe that the cord supervisory lamp lights, if previously extinguished, or that it is extinguished, if previously lighted, while the flashing key is operated.

(b) Intercepting Handled at a No. 15C Switchboard - On intercepting trunks arranged for flashing on toll calls, observe that the cord circuit supervisory lamp lights for a short interval (approximately one-half second), if previously extinguished, or that it is extinguished for a short interval (approximately one-half second), if previously lighted after the flashing key is restored to normal.

(c) Intercepting Handled at a No. 14C, No. 14D or No. 15C Switchboard - On intercepting trunk circuits not arranged for flashing on toll calls, observe that the cord supervisory lamp remains lighted.

3.41 Request the operator to disconnect from the trunk jack. Remove the cord from the trunk jack.

4. REPORTS

4.01 The required record of these tests should be entered on the proper form.