INTERCEPTING TRUNKS FROM TRUNK FINDERS TO TOLL SWITCHBOARD OR OPERATING ROOM DESK ARRANGED TO TRIP MACHINE RINGING AFTER EXTENDING CALL TO OPERATOR OPERATION TESTS USING TRUNK TEST SET SD-90469-01 OR SD-90469-02 (J94710A) STEP-BY-STEP SYSTEMS

1. GENERAL

1.01 This section describes methods of testing the operating features of 2- and 3-wire intercepting trunks from trunk finders to toll switchboards or operating room desks. These trunks are of the type which are arranged to signal the operator when battery or ringing current is connected to the tip or ring of the trunk and are not arranged to trip the ringing until after the operator answers.

1.02 The tests covered are:

(A) Regular Intercepting

(B) Trouble Intercepting

1.03 These tests cover all of the various arrangements of the trunk 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.

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

1.05 If an "out of service" failure is encountered on the trunk, the associated trunk finder should be made busy in the approved manner until the trouble is cleared. On 2-wire trunks, the trunk finder may be made busy by inserting a No. 258C plug into the T jack of the trunk.

2. APPARATUS

2.01 Trunk Test Set J94710A (SD-90469-01 or SD-90469-02).

2.02 Operator's Telephone Set.

2.03 No. 258C Plug (or equivalent) as required.

2.04 One W2M Cord (or equivalent) equipped with one No. 310 Plug and two No. 59 Cord Tips (2W12A) - for use where a battery supply jack is not available.

2.05 Three P3E Cords equipped with No. 310 Plugs (3P7A) - only two required where a battery supply jack is not available.

2.06 One W3A Cord equipped with three No. 59 and three No. 108 Cord Tips at one end and a No. 310 Plug at the other (3W3A) - for use where test jacks are not provided on the trunk circuit.

3. PREPARATION

3.01 Connect the BAT-G jack of the test set to a 48-volt battery supply jack, using a P3E cord. If a battery supply jack is not available, use the W2M cord and connect the No. 59 cord tip of the white (tip) conductor to a spare 48-volt battery fuse, or to the equipment side of a battery fuse in service, and of the red (sleeve) conductor to ground. In no case should the fuse selected exceed 5 amperes.

Note: To avoid possible grounding of the battery supply lead, connect the cord to the test set first and, when disconnecting, remove the cord from the test set last.

3.02 Connect the plug of the operator's telephone set to the TEL jacks of the test set. Operate the TRS key.

3.03 Connect the GEN jack of the test set to the ringing current supply jack, using a P3E cord - for use when testing 2-wire trunks only.

3.04 Connect together the C and TL jacks of the test set, using a P3E cord - for use on Test (A) only.

4. METHOD

(A) Regular Intercepting

4.01 2-Wire Trunks: Connect the T jack of the test set to the test jack T of the trunk to be tested, using a P3E cord. If the trunk is busy, the BSY lamp will light in which case remove the plug from the test jack in order to prevent interference with the release of the circuit.

4.02 3-Wire Trunks: Insert the plug of the W3A cord into the T jack of the test set. At the trunk finder frame, connect the No. 59 cord tips of the white (tip), blue (ring) and red (sleeve) conductors to the tip, ring and sleeve terminals on the outgoing terminal strip of the trunk finder associated with the trunk under test. If the trunk is busy, the BSY lamp will light in which case remove the test clips from the terminals.

Intercepting from Local

4.03 If the trunk is idle, operate the DL ST key and then operate the T key. The SL lamp should light.

4.04 Operate the CT key and then immediately operate the REV key. When the operator answers, advise her that a test is being made. The C lamp may light when testing trunk circuit SD-31410-01 but will be extinguished in all other cases. Verify with the operator that no tone (toll identification) was heard. If the circuits are arranged to distinguish between "regular" intercepting and "trouble" intercepting from plugging-up lines, verify with the operator that the call was received through the "regular" intercepting answering jack.

Note: If the call is received through the "trouble" intercepting answering jack, or if the C lamp lights momentarily when testing trunks other than SD-31410-01, it may be that the "chain" relays in the incoming sleeve circuit failed to function properly, that the ring-up relay in the ring side of the trunk failed to operate (before the REV key was operated), or that the relay which normally operates from the ring-up relay failed to operate and lock to the sleeve of the trunk.

4.05 When testing trunk circuit SD-31410-01, if the C lamp is lighted, request the operator to operate and restore the flashing key. The C lamp will then be extinguished.

4.06 Request the operator to hold the tone removal or flashing key operated for approximately two seconds.

(a) On trunks arranged for flashing on local calls observe that the C lamp lights for a short interval (approximately one-half second).

(b) On trunks not arranged for flashing on local calls observe that the C lamp does not light.

4.07 2- and 3-Wire Trunks Arranged for Completion of Intercepted Calls - No. 3 or No. 3C Toll Switchboard: Proceed as in 4.10 to 4.20.

4.08 3-Wire Trunks Arranged for Completion of Intercepted Calls - No. 1 Toll Switchboard: Request the operator to momentarily operate the "charge" key associated with the trunk under test. The CT lamp should light. Request the operator to disconnect when she receives the disconnect signal. Restore the CT and T keys. The C lamp should be extinguished. The SL lamp will remain lighted until the operator disconnects. Restore the REV key and proceed as in 4.13 to 4.20.

4.09 2- and 3-Wire Trunks Not Arranged for Completion of Intercepted Calls: Request the operator to disconnect when she receives the disconnect signal. Restore the CT and T keys. The SL lamp will remain lighted until the operator disconnects. Restore the REV key and proceed as in 4.13 to 4.20.

Completion of Intercepted Calls

4.10 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 C lamp does not light.

4.11 Request the operator to disconnect the calling cord, to complete a call to the connector multiple test line terminal ( ) and to hold the circuit until she receives the disconnect signal. When ringing is tripped observe that the C lamp follows the interruptions of the test line, i.e., the lamp should light during the test line closures. The test line tone should be heard during the intervals in which the C lamp is lighted.

4.12 Restore the CT and T keys. The C lamp should be extinguished. The SL lamp will remain lighted until the circuit restores to normal. Restore the REV key.

Intercepting from Toll

4.13 2-Wire Trunks: If the trunk is idle (SL lamp extinguished), operate the RING key. The SL lamp should light. Immediately thereafter, operate the CT key and then immediately restore the RING key. The SL lamp should remain lighted.

Note: It is important that the RING key be operated only long enough to light the SL lamp and to operate the CT key, in order to avoid ringing on the trunk after the operator has answered.

4.14 3-Wire Trunks: If the trunk is idle (SL lamp extinguished), operate the CT key. The SL lamp should light.

4.15 When the operator answers, advise her that a test is being made. The C lamp should light for a short interval to indicate tripping. If testing trunk circuit SD-31410-01, the C lamp may remain lighted. In this case, request the operator to operate and restore the tone removal or flashing key. The C lamp should be extinguished.

4.16 If the trunk is arranged for supervision on toll calls, observe that the C lamp relights and remains lighted.

4.17 If the trunk is arranged to supply toll identification tone, verify with the operator that "high" tone was heard and that the tone was removed when she operated the tone removal or flashing key.

4.18 Request the operator to operate and restore the tone removal or flashing key.

(a) On trunks arranged for flashing on toll calls, observe that the C 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.

(b) On trunks not arranged for flashing on toll calls, observe that the C lamp does not light.

4.19 Request the operator to disconnect when she receives the disconnect signal. Restore the CT key. The SL lamp will remain lighted until the operator disconnects.

4.20 Disconnect the test cord from the test jack, or disconnect the test clips of the test cord from the terminal strip, and restore the DL ST key unless a test of the trouble intercepting feature is to be made in which case proceed as in 4.22 to 4.29.

(B) Trouble Intercepting

4.21 Proceed as in 4.01 or 4.02.

4.22 If the trunk is idle operate the REV key (and the DL ST key if not previously operated) and then operate the CT key. The SL lamp should light.

4.23 When the operator answers, advise her that a test is being made. The C lamp may light when testing trunk circuit SD-31410-01 but should be extinguished in all other cases. Verify with the operator that no tone (toll identification) was heard. If the circuits are arranged to distinguish between "regular" intercepting and "trouble" intercepting from plugging-up lines, verify with the operator that the call was received through the "trouble" intercepting answering jack.

4.24 Request the operator to disconnect when she receives the disconnect signal. Restore the CT key. The SL lamp will remain lighted until the operator disconnects.

4.25 3-Wire Trunks: Disconnect the test cord from the terminal strip and restore the REV and DL ST keys.

4.26 2-Wire Trunks: Proceed as in 4.27 to 4.29.

4.27 If the trunk is idle (SL lamp extinguished), operate the RING key. The SL lamp should light. Immediately thereafter, operate the CT key and then immediately restore the RING key. The SL lamp should remain lighted.

Note: It is important that the RING key be operated only long enough to light the SL lamp and to operate the CT key in order to avoid ringing on the trunk after the operator has answered.

4.28 When the operator answers, request her to disconnect after she receives the disconnect signal. Disregard the C lamp indication. Restore the CT key. The SL lamp will remain lighted until the operator disconnects.

4.29 Disconnect the test cord from the test jack and restore the REV and DL ST keys.

5. REPORTS

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