



INTEROFFICE TRUNKS
OPERATION TESTS
USING TEST SET SD-31859-01 (J34722B)
STEP-BY-STEP SYSTEMS

1. GENERAL

This addendum does not affect the Equipment Test List.

1.001 This addendum supplements Section 226-508-503, Issue 2. The attached pages must be inserted in the section in accordance with the filing instructions above.

The following changes apply to Part 1 of the section.

1.002 The addendum is issued to revise Test D for trunks arranged for dial tone first.

(a) Description of Test D is changed to include + and - battery supply fuses.

Attached:

Page 1 dated November 1971—revised
Page 2 dated November 1971—revised
Page 11 dated November 1971—reissued
Page 12 dated November 1971—revised

INTEROFFICE TRUNKS
OPERATION TESTS
USING TEST SET SD-31859-01 (J34722B)
STEP-BY-STEP SYSTEMS

1. GENERAL

1.01 This section describes tests of outgoing trunks from 355A, 356A and 35-E-97 community dial offices to other step-by-step, panel, or crossbar offices or to manual offices, local or toll, using test set SD-31859-01.

1.02 This section is reissued to include tests to panel and crossbar offices in Test A; to change Test C to Test D, and to add a new Test C covering dial back operation features of trunks used between dial offices and local or toll operator offices, and to add 35-E-97 offices to the title. Since this reissue covers a general revision, arrows ordinarily used to indicate changes have been omitted.

1.03 The tests covered are:

A. *Outgoing Trunks to Step-by-Step, Panel or Crossbar Offices:* This test checks pulsing, supervision, and continuity of outgoing trunks, including outgoing end of 2-way trunk.

B. *Outgoing Trunks to Manual Offices, Local or Toll:* This test checks signaling, supervision, and continuity of outgoing trunks to an operator office. It also tests class of service tones, where provided.

C. *Trunks to Step-by-Step or Manual Offices, Local or Toll, Arranged for Dial Back Operation—SD-30889-01 and SD-30890-01:* This test checks signaling, supervision, and continuity of outgoing trunks to step-by-step or manual offices, local or toll, which are arranged for dial back operation. It also tests class-of-service tones, when provided.

D. *Fuse Failure Make-Busy Test:* This test checks the self-busy feature of the trunk

on the operation of the + or - battery supply fuse.

1.04 Test A will require actions and verifications in the distant office if connector multiple test line, final multiple test line, or incoming trunk test line is not provided.

1.05 Test B will require actions and verifications at the switchboard.

1.06 Test C will require actions and verifications at the switchboard and also at the distant office if connector test line is not provided.

1.07 Parts of Test C are made with all trunks of a group made busy.

1.08 Before performing Test A it will be necessary to determine the type of verification (ringing induction, if any, tone, and supervision) provided by the test line in the distant office.

1.09 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.

1.10 *Lettered Steps:* A letter a, b, c, etc, added to a step number in Parts 3 and 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 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.

SECTION 226-508-503

2. APPARATUS

Tests A, B, and C

- 2.01** Test Set J34722B (SD-31859-01)
- 2.02** #1014A hand set (or equivalent) connected to a W2CL cord 4 feet long, equipped with one 471A Jack and one 240A plug (2W39A). The cord is equipped with a KS-8010 switch which when operated to the OFF position cuts in a 1200-ohm resistance.
- 2.03** P3E cord 6 feet long, equipped with two 310 plugs (3P7A cord) (for use when the trunk test jack is a 458A jack or equivalent). An additional cord is required for use where a battery supply jack is available.
- 2.04** W2M cord, 9 feet long, equipped with one 310 plug and two 59 cord tips (2W12A cord) (for use where a battery supply jack is not available).
- 2.05** P3H cord, 10 feet long, equipped with one 310 plug and one 240A plug (3P2A cord) (for use when the trunk test jack is 328 jack, or

equivalent. This 240A plug will also be used for connecting to the selector test jack where a trunk test jack is not provided or where the sleeve of the trunk test jack is not connected to the S lead of the trunk circuit).

Tests B and C

- 2.06** One W1W cord 12 feet long, equipped with one 310 plug and one 59 cord tip (1W7A cord) (or equivalent).

Test D

- 2.07** Test receiver 716C receiver attached to a W2AB cord, 6 feet long, equipped with two 360A tools (2W21A cord), one 365 tool and one 411A (test pick) tool.
- 2.08** 258C (make-busy) plugs or 477A (make-busy) tools, as required.
- 2.09** W1U cord, 1 foot 8 inches long, equipped with one No. 2 Test Clip and one KS-6780 connecting clip. (For use when trunk test jacks are not provided.)

3. PREPARATION

STEP	ACTION	VERIFICATION
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Tests A, B, AND C

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

- 1a If battery supply jack is available—
Using P3E cord, patch BAT G jack of test set to 48-volt battery supply jack.
- 2b If battery supply jack is not available—
Using W2M cord, insert 310 plug into BAT G jack of test set and connect red (sleeve) conductor to frame ground and white (tip) conductor to equipment side of a convenient fuse not over 3 amperes.

STEP	ACTION	VERIFICATION
Test of Trunks from an Outlying Office Connecting to Dial Back Trunks		
54	In outlying office— Dial proper digit to connect to dial back trunk, using dial hand test set.	Audible ringing heard. Trunk signal lights on switchboard.
55	At switchboard— Answer trunk signal.	Audible ringing ceases. Transmission satisfactory.
56	At switchboard— Observe supervision.	
57	Operate and restore TALK key of hand test set slowly.	At switchboard— Switchboard cord lamp flashes in unison with handset key.
58s	If connector multiple test is provided in community dial office. At switchboard— Dial a preliminary digit (3) and then dial connector multiple test line in community dial office over trunk being tested.	When test line is seized— Ringing induction, if provided, is heard for at least one ringing interval. Ringing tripped. Tone heard in handset according to type test line called. At switchboard— Switchboard cord lamp flashes according to type test line called.
59s	At switchboard— Disconnect from trunk.	Tone still heard in handset in accordance with test line called.
60t	If connector multiple test line is not provided in community dial office— At switchboard— Dial preliminary digit (3) and then dial office telephone number in community dial office over trunk being tested.	At switchboard— Cord lamp lighted.
61t	At called telephone— Answer telephone.	Audible ringing ceases. Transmission satisfactory. At switchboard— Switchboard cord lamp extinguished.
62t	At switchboard— Disconnect from trunk.	Transmission to called telephone still satisfactory.
63t	At called telephone— Replace receiver on switchhook.	
64	Disconnect from trunk.	

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STEP	ACTION	VERIFICATION
D. Fuse Failure Make-Busy Test		
1	Connect KS-6780 connecting clip of W1U cord associated with test receiver to equipment side of a spare battery fuse.	
2	Momentarily connect test pick attached to test receiver to sleeve of trunk to be tested.	No click is heard. Note: If click is heard, trunk is busy. Delay test until trunk is idle, or proceed to another trunk.
3	Ground sleeve of trunk selected by inserting make-busy plug in trunk jack.	
4	◆Remove -48V battery fuse of trunk under test.◆	
5	Remove make-busy plug placed in Step 3	
6	Momentarily touch test pick to sleeve of trunk.	Click heard in test receiver. Caution: ◆If no click is heard, immediately replace make busy plug in trunk jack.◆
7h	◆If trunk is arranged to work with dial tone first prepay coin service— Remove +48V battery fuse.	
8	Replace -48V battery fuse.	
9h	Momentarily touch test pick to sleeve of trunk.	Click heard in test receiver. Caution: ◆If no click is heard immediately replace make-busy plug in trunk jack.◆
10h	Replace +48V battery fuse.◆	