

197- AND 198-TYPE SWITCHES AND LINE SWITCHES EQUIPMENT INSULATION AND BANK GROUND TEST

1. GENERAL

1.01 This section describes a method of testing the following:

- (a) Line switch uprights for crosses with ground, battery, tone, or ringing current.
- (b) Line switches for crosses with line switch uprights, ground, battery, or ringing current.
- (c) Switch bank metal spacers for proper grounding.
- (d) Switch wipers for crosses with the switch shaft, ground, battery, or ringing current.

1.02 This section is reissued to include tests for the presence of foreign ground on sleeve wipers, add reference to selector-connectors in Test B, include LINE switches in title of section, and present data in tabular form. Since this reissue covers a general revision, arrows ordinarily used to indicate changes have been omitted.

1.03 The tests covered are:

- A. **Line Switches and Plunger Type Out-Trunk Switches:** This test checks that the line switch uprights are free of crosses with battery, ground, tone, or ringing current and also that the line switches are not crossed with the uprights.
- B. **Line Finders, Trunk Finders, Selectors, Connectors, and Selector-Connectors:** This test checks that the metal bank spacers (where provided) are grounded and that the switch wipers are not crossed with the shaft or with tone or ringing current.

1.04 For the purpose of this section, test distributors are considered to be selectors, and plunger type out-trunk switches are treated as line switches.

1.05 **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 a 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.

2. APPARATUS

All Tests

2.01 Test receiver, 716C receiver (or replaced 528 receiver) attached to a W2AB cord equipped with two 360A tools (2W21A cord) or equivalent, one KS-6278 connecting clip, and one 411A (test pick) tool (for use in checking the presence or absence of battery or ground).

2.02 One 240A plug (wired as shown in Fig. 1).

Note: Test receiver cord may be made up locally and connected permanently to 240A plug as shown in Fig. 1.

2.03 Testing cord, W1U cord, 1 foot 8 inches long, equipped with No. 2 test clip per Specification AT6928 and one KS-6780 connecting clip with one 108 cord tip (rubber insulator).

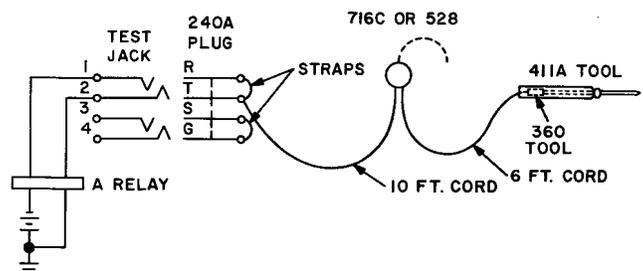


Fig. 1

SECTION 030-705-501

3. PREPARATION

STEP	ACTION	VERIFICATION
All Tests		
	<i>Note:</i> Select the most convenient option listed in Steps 1a through 6c for connecting battery and ground through resistances to test receiver.	
1a	If tests are to be made at or near a secondary line switch or plunger type out-trunk switch — Insert 240A plug into test jack of idle switch and manually plunge switch on an idle trunk.	
2a	Touch test pick momentarily to battery, then to ground (the same source to which 240A plug is connected).	Click heard in each case. If dial tone is heard — Disconnect and reconnect 240A plug to simulate dialing in order to remove dial tone.
3b	If tests are to be made at or near a selector (other than an incoming selector), connector, selector-connector, repeater, or line finder — Insert 240A plug into test jack or monitor jack of idle switch.	
4b	Touch test pick momentarily to battery, then to ground (the same source to which 240A plug is connected).	Click heard in each case. If dial tone is heard — Disconnect and reconnect 240A plug to simulate dialing in order to remove dial tone.
5c	If tests are made near a switchman talking circuit — Invert 240A plug and insert springs designated T and R into R and T (1 and 2) springs of a jack associated with switchman talking circuit.	
6c	Touch test pick momentarily to battery, then to ground (the same source to which 240A plug is connected).	Click heard in each case.

4. METHOD

STEP	ACTION	VERIFICATION
A. Line Switches and Plunger Type Out-Trunk Switches		
7	At line switch or plunger type out-trunk switch to be tested — Touch test pick momentarily to iron-work of each switch upright.	No click, tone, or ringing current heard in receiver.

STEP	ACTION	VERIFICATION
8	Ground line switch upright by means of a W1U cord.	
9	Touch test pick momentarily to switch upright to be tested.	Click heard in receiver.
10	Touch test pick momentarily to plunger armature of each line switch to be tested.	No click, tone, or ringing current heard in receiver.
11d	If no further tests are to be made — Disconnect W1U cord and test receiver.	

B. Line Finders, Trunk Finders, Selectors, Connectors, and Selector-Connectors

7d	If metal spacers are grounded — Raise switch cover on switch sufficiently to clear cover plate.	
8d	Touch test pick momentarily to top metal bank spacer.	Click heard in receiver.
9d	Touch test pick momentarily to tip, ring, and sleeve wiper springs.	No click, tone, or ringing current heard in receiver.
10e	If metal bank spacers are not grounded — Ground left-hand bank collar of switch to be tested by means of a W1U cord.	
11e	Touch test pick momentarily to left bank collar to be tested.	Click heard in receiver.
12e	Touch test pick momentarily to tip, ring, and sleeve wiper springs.	No click, tone, or ringing current heard in receiver.
13f	If no further tests are to be made — Disconnect W1U cord.	
14	At completion of tests — Disconnect test receiver.	