REVERTING CALL SELECTORS
2-PARTY SELECTIVE AND 4-PARTY SEMISELECTIVE
OPERATION TESTS
USING TEST SET SD-31858-01 (J34701A) AND TEST LINE SD-31857-01
STEP-BY-STEP SYSTEMS

1. GENERAL

1.01 This section describes a method of testing the operating features of 2-party selective and 4-party semiselective reverting call selectors using test set SD-31858-01 and test line SD-31857-01. It also indicates the key operation and patching cord arrangements required in order to apply the test line readjust values of resistance to the ring-trip relays.

1.02 This section is reissued to incorporate material from the addendum in its proper location. In this process marginal arrows have been omitted.

1.03 The tests cover selector operation under loop and leak conditions, correctness of ringing codes, test requirements of trip relays, and release on vacant codes.

1.04 Lettered Steps: The letters a, b, c, etc, are added to a step to indicate that the steps cover an action which may or may not be required, depending upon local conditions. The conditions under which a lettered step or series of steps should be made are given in the action column and all steps governed by the same condition are designated by the same letter. When a condition does not apply, the associated steps should be omitted.

1.05 When testing reverting call selectors arranged for 1400-ohm or 1500-ohm maximum external subscriber loop, any ring-trip relay which fails on test shall be readjusted mechanically and electrically to meet the requirements specified in Section 040-236-701 and in the circuit requirement table. Repeat the tests. If the relay continues to fail, connect the TL jack to the ADJ jack of test line to apply readjust resistance values and repeat the tests, changing the tension of No. 1 spring as required.

1.06 Local instructions should be followed with reference to recording any register operations caused by performing these tests.

1.07 These tests should preferably be made during periods of light traffic.

1.08 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.

2. APPARATUS

2.01 Test Set J34701A (SD-31858-01).

2.02 P3H Cord (or equivalent) equipped with a No. 310 Plug and a No. 240A Plug (3P2A Cord).

2.03 P3E Cord, 6 feet long, equipped with two No. 310 Plugs (3P7A Cord).

2.04 P3E Cord, one foot long, equipped with two No. 310 Plugs (3P6A Cord). For use when test set is provided with PTR key.

2.05 P3E Cord, 6 feet long, equipped with two No. 310 Plugs (3P7A Cord). For use when test set is provided with NTR key.

3. PREPARATION

ALL TESTS

STEP	ACTION	VERIFICATION
1	Connect BAT-G jack of test set to 48-volt battery supply jack using 6-foot P3E cord. Note: To avoid possible grounding of the battery supply lead, connect cord to the test set first, and when disconnecting, remove the cord from the test set last.	
2	Insert the No. 310 plug of P3H cord into T jack of test set.	
3a	If test set is provided with PTR key - Connect the TL jack of test set to TR-4 jack of test set using 1-foot P3E cord.	
4a	Operate S key.	
5b	If test set is provided with NTR key - Connect the TL jack of test set to TST jack of test line using 6-foot P3E cord.	
6c	When testing selectors arranged for 1400-ohm or 1500-ohm maximum external subscriber loop - Operate AC-DC key of test line circuit.	
7	Insert No. 240A plug of P3H cord into test jack of a normal selector to be tested.	BSY (busy) lamp does not light.

4. METHOD

STEP	ACTION	VERIFICATION

TABLE A

Test codes and corresponding ringing codes.

Test Code	Number of Rings	
	Ring	Tip
*1	1	1
3	2	1
4	1	2
6	2	2
*7	1	-
*8	-	1
9	2	-
0	-	2

* These are the only codes used in 2-party offices.

Note: Test each switch using codes 7 and 8 to test the ring-trip relay, 9 and 0 to check the pickup feature and 2 and 5 to check vacant code release. On each successive switch use one of the codes 1 or 6 and one of the codes 3 or 4 until all codes have been checked. When only one or two switches are available repeat tests for all codes on one switch.

STEP	ACTION	VERIFICATION
8	Operate LP (loop) key.	
9	Operate and restore DL-ST (dial start) key.	SL (sleeve) lamp lights.
10	Dial digit 7.	
11	Operate RC (reverting call) key.	Buzzer relay sounds code 7 (one ring) on ring side.
12	Operate PTR (pretrip) or NTR (nontrip) key at start of a ringing interval and release before end of that interval.	Buzzer relay stops while key is operated.
13	Operate TR (trip) key at start of a ringing interval and release before end of that interval.	Buzzer relay stops. Selector releases. SL lamp extinguished.
14	Restore RC key.	
15	Operate REV-L (reverse line) key.	
16	Operate and restore DL-ST key.	SL lamp lighted.
17	Dial digit 8.	
18	Operate RC key.	Buzzer relay sounds code 8 (one ring) on tip side.
19	Operate PTR or NTR key at start of ringing interval and restore before end of this interval.	Buzzer relay stops while key is operated.
20	Operate TR key at start of ringing interval and restore before end of this interval.	Buzzer relay stops. Selector releases. SL lamp extinguished.
21	Restore LP and operate LK (leak) key.	
22	Restore RC key.	
23	Operate and restore DL-ST key.	SL lamp lighted.
24	Dial digit 0.	
25	Operate RC key.	Buzzer relay sounds code 0 (two rings on tip side). Note: Check that first ring is full two rings indicating proper operation of pickup feature.
26	Restore and reoperate REV-L key during ringing cycle.	Buzzer relay stops while REV-L key is restored.
27	Operate and restore TR key during silent interval.	Buzzer relay stops. Selector releases. SL lamp extinguished.
28	Restore REV-L key.	
29	Restore RC key.	

STEP	ACTION	VERIFICATION
30	Operate and restore DL-ST key.	SL lamp lighted.
31	Dial digit 9.	
32	Operate RC key.	Buzzer relay sounds code 9 (two rings on ring side). Note: Check that first ring is full two rings indicating proper operation of pickup feature.
33	Operate and restore REV-L key during ringing interval.	Buzzer relay stops while REV-L key is operated.
34	Operate and restore TR key.	Buzzer relay stops. Selector releases. SL lamp extinguished.
35	Restore RC key.	
36	Operate and restore DL-ST key.	SL lamp lighted.
37	Dial digit 2.	Selector steps in response to dial pulses.
38	Operate RC key.	Selector releases when switch is operated. SL lamp extinguished.
39	Restore RC key.	
40	Operate and restore DL-ST key.	SL lamp lighted.
41	Dial digit 5.	Selector steps in response to dial pulses.
42	Operate RC key.	Selector releases when key is operated. SL lamp extinguished.
43	Restore RC key. Refer to "Note" under TABLE A.	
44	Operate and restore DL-ST key.	SL lamp lighted.
45	Dial digit 1, 3, 4, or 6.	
46	Operate RC key.	Buzzer relay sounds code on ring side dialed. (See Table A).
47	Operate REV-L key.	Buzzer relay sounds code on tip dialed.
48	Restore REV-L key.	Buzzer relay sounds code dialed on ring.
49	Operate and restore TR key.	Buzzer relay stops. Selector releases. SL lamp extinguished.
50	Remove all test connections and restore all keys to normal unless other tests are to be made.	