SELECTORS
ROTARY TESTS
USING TEST SET ES-30068-01 OR SD-31115-01 (J34707A)
STEP-BY-STEP SYSTEMS

1. GENERAL

1.01 This section describes a method of testing the rotary action of local and toll selectors by means of test set ES-30068-01 or SD-31115-01. The tests are as follows:

(A) Rotary Action Test — Maximum Sleeve Resistance

(B) Stop on Idle Trunk Test — Minimum Sleeve Resistance

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 When making these tests on a routine basis a different working level should be used each time the tests are performed, so that eventually every selector will have been tested on the various levels.

Note: All vacant levels and levels to switchboard positions, to desks or to out trunk switches should be omitted when performing these tests.

1.04 When testing a selector arranged to absorb the first digit, it will be necessary to dial an extra digit before each test.

1.05 When testing a first selector in a line switch office the master switch having direct access to it should be rotated to pick up disengaged plungers.

1.06 When a first selector in a line switch office is made busy previous to the performance of the test (see 3.01), the master switch having direct access to it should be rotated to pick up disengaged plungers. Care should be taken to see that a line switch is not held when the selector is made busy.

1.07 When testing incoming selectors the trunks should be made busy in the approved manner during the tests. They should be restored to service when the tests have been completed except those on which "out of service" failures are encountered.

1.08 These tests should be made only during periods of very light traffic since all of the trunks from the selector level used in making the tests are made busy during the tests. In addition, if one or more of the trunks were being used in regular service when making Test (A), the sleeve ground would cancel the testing margin.

1.09 Switches on which "out of service" failures are encountered should be held busy in the approved manner until the trouble is cleared.

1.10 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 Rotary Test Set SD-31115-01 (J34707A or X61311) or ES-30068-01 (X61311).

2.02 One W10A Cord equipped with one No. 240D Plug, one No. 370A Bank Busying Tool and one No. 15 Cord Fastener (for use on 100 point bank).

2.03 One W10A Cord equipped with one No. 240D Plug, one No. 370B Bank Busying Tool and one No. 15 Cord Fastener (for use on 200 point bank).

2.04 One No. 528 Receiver (or equivalent) equipped with one No. 630 Cord and one No. 47A Plug.

2.05 One No. 377A Dialing Tool.

2.06 No. 375A Make-Busy Tools as required.

3. PREPARATION

3.01 Determine the selector level (trunk subgroup) to be used for testing. Select the bank of an unequipped switch position within this trunk subgroup or, if there are no unequipped positions, select the bank of a working selector and make the switch busy. (See 1.06.) Place the bank busying tool on the sleeve contacts of the level to be dialed. Attach the No. 15 cord fastener to the bank rod in order to support the cord and prevent damage to the bank busying tool. It will be necessary to change the position of the bank busying tool as the test progresses from one trunk subgroup to another.

Caution: If the bank busying tool is to be connected to a bank associated with a working selector, failure to first make the selector busy may result in damage to the switch.

3.02 Connect the No. 528 receiver (or equivalent) to the listening jack (A) of the rotary test set.

3.03 Connect the No. 240D plug of the test set cord to the corresponding jacks (B) of the rotary test set.

3.04 Place the No. 377A tool in the dial finger hole corresponding to the level to be dialed.

4. METHOD

4.01 Connect the No. 240A plug of the test set to the test jack of the selector to be tested.

(A) Rotary Action Test — Maximum Sleeve Resistance

4.02 With the test key in the MAX (normal) position, dial the number of the level selected for the test. Note that the selector steps to the level dialed and rotates smoothly to the eleventh rotary position. If the selector stops before reaching the eleventh position, release by removing the test plug from the test jack of the selector.

Note: If both Test (A) and Test (B) are to be conducted, the turn button type key (1-10), operated for Test (B), may be left operated for Test (A), if using test set SD-31115-01. If using test set ES-30068-01, all of the turn button type keys must be in the normal position when conducting Test (A).

4.03 A clicking noise in the receiver during the rotary action of the selector may indicate a weak adjustment of the cam springs.

4.04 Note that busy tone is heard when a local selector reaches the eleventh position or toll busy signal is heard when a toll selector reaches the eleventh position.

4.05 Operate the test key to the RLS position to release the selector. Note that the wipers do not catch on the bank contacts when the selector returns from the eleventh position.

(B) Stop on Idle Trunk Test — Minimum Sleeve Resistance

4.06 Operate the test key to the MIN position and operate the turn button type key (1-10) which will remove ground from the fifth or sixth bank contact of the switch to be tested. It will be necessary to operate different keys (1-10) as the test progresses from one selector shelf to another.

4.07 Dial the number of the level selected for the test. Note that the selector steps to the level dialed and rotates smoothly to the trunk made idle by the operation of the key (1-10) referred to in paragraph 4.06.

4.08 A clicking noise in the receiver during the rotary action of the selector may be an indication of a weak adjustment of the cam springs.

4.09 Release the selector by operating the test key to the RLS position or by removing the test plug from the test jack of the selector.

5. REPORTS

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