SELECTOR TRUNK TESTS USING
CMC 5687 POLARITY TESTER

1. GENERAL

1.01 This Section presents methods of testing the continuity and polarity of selector trunks by using the CMC 5687 Polarity Tester and a hand test telephone (Type 800, or similar). Refer to the 108-702 series of GSP's for a description of the Polarity Tester.

1.02 These tests may be performed on any selector capable of returning battery or ground from the succeeding switch.

1.03 Tests may be made on all levels except those arranged as 'absorb repeatedly' levels.

1.04 Tests should be made on one selector on each half shelf of ten selectors. When possible, use the switch on the bank multiple farthest from the DTA. Maintenance personnel performing these tests should attempt to use a different switch each time the tests are performed.

1.05 When testing an incoming selector, the distant office having the repeater shall be requested to busy the trunk in the approved manner. When testing with this selector is completed, the distant office shall be instructed to restore the trunk to normal service.

1.06 When testing selectors arranged to absorb digits, dial the extra digits necessary to seize the required level.

1.07 Local instructions should be followed with reference to recording any registrations (peg counts) caused by performing these tests.

1.08 The CMC 5687 test set is marked on the front 'THIS SIDE UP'. The side so designated must be up when used on circuits where the Ring (−) is the upper jack of the test jack assembly.

2. TEST EQUIPMENT

2.01 The following equipment will be needed;
(a) CMC 5687 Polarity Tester (1);
(b) Type 800 Hand Test Telephone, or equivalent (1).

3. TEST PROCEDURES

3.01 Before inserting the Polarity Tester into the selector test jacks, be sure the selector is idle. If the selector is idle, busy it by using the busy key. On selectors not equipped with a busy key, the normal method of using a busy flag will not be possible because of the arrangement of the polarity tester plug.

Seizure

3.02 With the switch of the hand test telephone in the MON position, and the test cord inserted into the polarity tester, plug the polarity tester into the selector test jacks.

3.03 Operate the hand test telephone switch to the TALK position. The white (STR) lamp should light dimly. If the red (REV) lamp lights, the wiring of the selector is reversed between the 'A' relay and the test jacks.

Trunk Testing

3.04 Dial the selector to the first level and observe that the selector cuts through on the first idle trunk without chattering. On an absence of ground searching selector, chattering usually indicates an open tip, ring, or 'C' lead of the trunk. A battery searching selector will chatter only on an open tip or ring. From the shelf DTA, verify that any trunks skipped are actually busy and not in trouble.

3.05 When the selector has seized the first idle trunk, the STR (white) lamp should light dimly. If the REV (red) lamp lights, the trunk polarity is reversed.

3.06 An increased brilliancy in either lamp indicates a grounded tip, battery crossed to ring, or a double connected trunk.

3.07 If the first trunk has been found to have the proper polarity, advance the selector to the next trunk.

NOTE: Different types of selectors will require different methods of wiper advancement. Consult local operating procedures and circuit drawings for the type of selector being used for the test.

3.08 Continue to advance the selector from trunk to trunk. Be certain to allow the selector to pause long enough to establish complete seizure of the succeeding switch train. This is necessary for the polarity tester to give an indication.

3.09 Continue testing each idle trunk on the level until the eleventh position is reached. Check at least one level for eleventh step busy tone in the receiver before releasing from the eleventh position.

3.10 When all idle trunks on all levels have been tested, operate the hand test telephone switch to the MON position and observe that the selector restores properly.

3.11 Remove the polarity tester from the test jack on the selector.

3.12 Remove the busy condition from the selector. If the selector was an incoming trunk, proceed as in Part 1.05 of this practice.