

## SELECTORS

### ROTARY TEST USING DIAL HAND TEST SET

### STEP-BY-STEP SYSTEMS

#### 1. GENERAL

1.01 This section describes a method of testing the rotary action of local and toll selectors, under marginal conditions, using a dial hand test set arranged to apply a resistance ground to the selector sleeve wiper.

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 This test checks the ability of the selector to pass a busy trunk, applying an operate test to the E relay and a non-operate test to the D relay. Also, this test checks for faulty adjustment of the cam springs, and D relay back contact pressure.

1.04 A different level should be used each time the test is performed, so that eventually every selector will have been tested on each working level.

1.05 Vacant levels, levels to out-trunk switches, levels on which a digit is blocked or repeatedly absorbed, and restricted service levels should be omitted when performing this test.

1.06 When testing a first selector in a line switch office, the master switch having direct access to it shall be rotated to pick up any disengaged plungers.

1.07 While conducting this test on switches directly connected to trunks, the trunks shall be made busy in the approved manner.

1.08 This test, when conducted on a routine basis, should preferably be made on days other than peg count days and, since the testing margin provided in this test is cancelled by the sleeve ground present on any trunks being used in regular service, should be made during a period of light traffic.

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

1.10 Lettered Steps: The letters a, b, c, etc., are added to a step to indicate that the step covers an action which may or may not be required, depending on local conditions. The conditions upon 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.

1.11 The rotary action in this test is usually slower than is normally experienced in service, due to the use of the No. 63G resistance in the sleeve circuit, but if the action is positive, smooth and uniform, the slow speed is not an indication of trouble.

1.12 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 No. 1011G Dial Hand Test Set, equipped with cord assembly consisting of one W2CL Cord, one No. 471A Jack, one No. 24OH Plug (2W40A Cord) (or equivalent) and one No. 63G (250-ohm non-inductive) Resistance (or equivalent).

Note: Modify the No. 24OH plug by mounting the No. 63G resistance on the under side of the fibre handle of the No. 24OH plug. Connect one side of the resistance to the sleeve terminal and the other side to the adjustable spring terminal of the plug.

2.02 Testing Cord - No. 893 Cord, 3 feet long, equipped with two No. 360A Tools (1W13A Cord), KS-6278 Connecting Clip and No. 108 Cord Tip attached to one of the No. 360A Tools; for use in connecting resistance ground to the sleeve wiper, where the wiper cords do not terminate at the test jack assembly.

SECTION 226-300-501

3. METHOD

<u>STEP</u>	<u>ACTION</u>	<u>VERIFICATION</u>
1	If selector to be tested is normal, insert No. 240H plug of hand test set, with switch in MON position, into test jack of selector, and monitor.	If there is an indication that selector has been seized by another call, remove No. 240H plug, otherwise proceed with test.
2	Operate switch of hand test set to TALK position.	
3a	If testing selectors arranged to absorb initial digit on level under test, position adjustable spring of No. 240H plug so that it does not make contact with sleeve wiper cord terminal and dial absorbed digit.	Selector steps to level dialed and releases. (Some selectors arranged for digit absorbing may not step vertically on absorbed digit.)
4b	If testing selectors arranged for wiper cord termination at test jack assembly, position adjustable spring of No. 240H plug so that it makes firm contact with sleeve wiper cord terminal.	
5c	If testing selectors not arranged for wiper cord termination at test jack assembly, connect No. 30 Cord Tip of No. 240H plug to sleeve wiper, using No. 893 cord.	
6	Dial number of level used for test.	Selector steps to level dialed and rotates with positive and smooth action at uniform speed to eleventh rotary position.  <u>Note:</u> Listen in the receiver during the rotary action of the selector and note that no clicking noise is heard.
7	As soon as selector reaches eleventh rotary position, operate switch of hand test set to MON position to avoid excessive vibration of rotary magnets.	Selector releases.
8	Disconnect hand test set from selector.	
9c	If no further tests are to be made, disconnect No. 893 cord.	