TRAFFIC REGISTER 100-OPERATION TESTS

USING MESSAGE REGISTER TEST SET SD-30490-01 OR ES-360006

1. GENERAL

1.01 This section describes methods of making a 100-operation test of traffic registers, using message register test set SD-30490-01 or ES-360006.

1.02 This section is reissued principally to include a method of testing traffic registers associated with line finder group busy indicating equipment, to include a method of testing more than one register at a time, to include a method covering traffic registers arranged for connection through patching facilities, and to bring it generally up to date. This reissue covers a general revision and, therefore, arrows used to indicate changes have been omitted.

1.03 This test checks the ability of traffic registers to operate 100 times at a controlled speed and that three number wheels will operate together when the specified test operate current flow value is applied.

1.04 These tests, when conducted on a routine basis, should be made during a period of light traffic and on days other than peg count days.

1.05 Local instructions should be followed with reference to recording the register operations caused by performing this test.

1.06 Operating differences between No. 5 or No. 12-type registers and No. 14-type registers are as follows:

No. 5 or No. 12-type - Number wheel is turned when register is operated.

No. 14-type - Number wheel is turned when register is released.

1.07 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 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.

1.08 Insufficient Registrations: In making the test specified in Part 4, failure of the register to operate a number of times equal to the number of tests applied may indicate a failure of the register. In the event that regular service calls cause registrations while the tests are being performed, precautions should be taken to insure that the registrations observed have all resulted from the test of the circuit.

1.09 The total testing time of this test may be substantially reduced by testing more than one register at the same time. This may be accomplished by connecting from one to ten registers (all of which must have the same current flow requirements) in parallel to the T1 jack of the message register test set and establishing current flow values for the group of registers equal to the current flow requirements for one register multiplied by the number of registers being tested. If the registers being tested have a test operate value of 0.075 ampere or more each, reduce the number of registers tested in parallel so that the total test operate current for the group is less than 0.750 ampere. See Fig. 1.

Example: If testing ten No. 5AD registers in parallel having a test operate requirement of 0.030 ampere each, the test operate value for the group would be 0.030 ampere multiplied by 10 = 0.300 ampere.

1.10 Registers which fail to meet this test due to mechanical failures should be cleaned or readjusted in accordance with Section 030-330-702.

1.11 If a patch cord connected to a register BK jack is removed in performing test, mark by tag or other suitable means, so that at the conclusion of the test the patch cord can be reconnected to the proper BK jack.

2. APPARATUS

2.01 Message Register Test Set ES-360006 or J34706 (SD-30490-01).

2.02 No. 35F Test Set (or equivalent).

2.03 Patching Cord - P2J Cord, 9 feet long, equipped with two No. 310 Plugs (2P9A Cord); for use in connecting 48V or A jack of message register test set to 48V battery and ground supply jack on traffic register rack.

2.04 Testing Cord - W2M Cord, 9 feet long, equipped with one No. 310 Plug and two No. 49 and two No. 90 Cord Tips (2W12A Cord) (for use where battery supply jack is not available). When used, to be connected as follows: Insert No. 310 plug into BAT-G jack of test set, connect white conductor to equipment side of a spare 48V battery fuse, and red conductor to ground. In no case should the capacity of the fuse selected exceed 5 amperes.

2.05 Patching Cord - P2B Cord, 4 feet long, equipped with two No. 310 Plugs (2P4B Cord); for use in connecting TS jack of message register test set to TEST T&R jack of No. 35F test set.

2.06 Testing Cord - W1C Cord, 20 feet long, equipped with one No. 360B Tool, one No. 116 Plug (1W6A Cord) one KS-6278 Connecting Clip and one No. 108 Cord Tip; for use in connecting T1 jack of message register test set to winding terminal of the traffic register under test.

2.07 Testing Cords - ten No. 893 Cords, 3 feet long, each equipped with two No. 360A Tools (1W13A Cord), one 141 Cord Tip, one KS-6278 Connecting Clip, and one No. 108 Cord Tip; to be used when ten traffic registers are to be tested at the same time; when used, connect the No. 141 cord tips of the No. 893 cords to the No. 360A tools of the W12A cord.

2.08 Testing Cord - W12A - approximately 9 inches long, equipped with eleven No. 360A Tools, one No. 360B Tool and one No. 141 Cord Tip; to be used when ten traffic registers are to be tested at the same time; when used, connect the No. 141 cord tip of the W12A cord to the No. 360B tool of the W1C cord and connect the No. 360A tools as specified in Paragraph 2.07.

2.09 Testing Cord - No. 893 Cord, 6 feet long, equipped with two No. 360A Tools (1W13B Cord), one No. 364 Tool and one No. 365 Tool; to be used for connecting ground to the GRD binding post of the No. 35F test set.

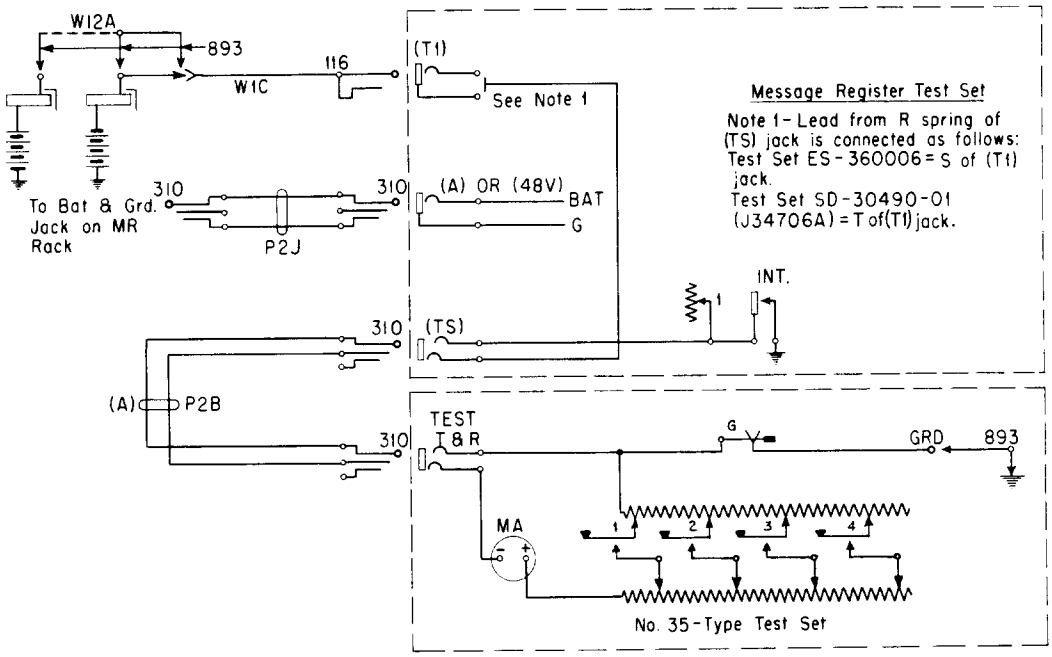

Fig. 1

3. PREPARATION

STEP	ACTION	VERIFICATION
1	Locate test sets near traffic register rack so that operation of traffic registers may be observed while operating test sets.	
2	Set all resistance slides of No. 35-type test set to extreme right and place all keys in normal position.	
3	Set all resistance slides in message register test set at zero and place all keys in normal position.	
4	Operate BATT and GRD C.O. key and close GRD switch of No. 35-type test set.	
5	Connect TS jack of message register test set to TEST T&R jack of No. 35-type test set using P2B cord.	
6	Connect 48V or A jack of message register test set to 48V battery and ground, using P2J or W2M cord.	
	Note: To avoid grounding of battery supply lead, connect battery cord to test set first and disconnect battery cord from test set last.	
7	Connect ground to GRD binding post of No. 35-type test set, using No. 893 cord, 6 feet long.	
8	Insert No. 116 plug of W1C cord into T1 jack of message register test set.	
9a	If testing registers with battery or ground normally on lead to register winding - Open lead at register winding terminal or remove patch cord from BK jack.	
10b	If testing register associated with line finder groups arranged for group busy indicating equipment - Remove G (E1) lamp at line load control cabinet.	
11c	If testing one register at a time - Connect KS-6278 connecting clip of W1C cord to winding terminal or register under test.	
12d	If testing two to ten registers at same time - Connect No. 360A tools of W12A cord to winding terminals of registers under test, using No. 893 cords and No. 141 cord tips as required.	

STEP	ACTION	VERIFICATION
13d	Connect No. 360B tool of W1C cord to No. 360B tool of W12A cord, using No. 141 cord tip.	
14e	If battery supply for registers under test is controlled by a key at traffic register rack - Operate key to furnish battery to register.	
15f	If battery supply for registers under test is supplied through patch cords - Connect battery to RED jacks of registers under test, as required.	
16	Record reading of register or registers under test.	

4. METHOD

STEP	ACTION	VERIFICATION
17	Depress key 1 of No. 35-type test set and move No. 1 resistance slides until specified test "operate" current flow value of register or registers under test is observed on milliammeter of test set. Release key 1.	
18	Depress key 2 of No. 35-type test set and move No. 2 resistance slides until specified test "nonoperate" current flow value is observed on milliammeter of test set. Release key 2.	
19	Depress and release key 1 of No. 35-type test set three times.	Register or registers under test will advance three digits.
20	Depress and release key 2 of No. 35-type test set three times.	Register or registers under test will not advance.
21	Open GRD switch of No. 35-type test set.	
22	Close locking lever of key 1 of No. 35-type test set.	
23	Operate interrupter lever of message register test set.	Register or registers under test will advance 100 digits during time interrupter lever is restoring to normal.
24	Record readings of register or registers under test and forward according to local instructions.	
25a	If testing registers with battery or ground normally on lead to register winding - Replace lead at register winding terminal, or replace patch cord in BK jack.	

STEP	ACTION	VERIFICATION
26b	If testing register associated with line finder groups arranged for group busy indicating equipment - Replace G (E1) lamp at line load control cabinet.	
27e	If battery supply for registers under test is controlled by a key at traffic register rack - At traffic register rack, restore key supplying battery to register or registers under test.	
28f	If battery supply for registers under test is supplied through patch cords - Remove patch cords from RED jacks of registers under test.	
29g	If no further tests are to be made - Remove all test connections.	