

INCOMING LOOP DIALING PULSE CORRECTING REPEATERS
OPERATION TESTS
STEP-BY-STEP OFFICES

1. GENERAL

1.01 This section describes methods of applying operation tests to incoming loop dialing pulse correcting repeaters in step-by-step offices.

1.02 The tests covered are:

- (A) Loop Test.
- (B) Leak Test.

1.03 These tests are based upon the use of connector multiple test line SD-31425-01, SD-31263-01, SD-31230-01 or ES-241791 in step-by-step offices.

1.04 The trunk test SD-90469-02 and the 35 type current flow test set are used to provide a marginal operation test of the repeater by dialing the local office test number and observing that the test number is reached by the presence of interrupted tone. The supervisory features are tested by observing the flashing of the REV lamp in the test set.

1.05 Before making the test described, the trunk to be tested shall be made busy at the originating end in the approved manner.

1.06 When tests are being made on a routine basis, they should preferably be made during periods of light traffic.

1.07 Circuits on which out-of-service failures are encountered shall be held busy until the trouble is cleared.

2. APPARATUS

- 2.01 Trunk test set SD-90469-02 (J94710A).
- 2.02 35 type current flow test set.
- 2.03 One 3P2A (P3H) cord equipped with one No. 310 Plug and a 240-A Plug.
- 2.04 One 3P7A (P3E) cord equipped with two No. 310 Plugs.

2.05 One P2J cord, equipped with two No. 310 plugs (2P9A) used where a battery supply jack is available.

2.06 One W2M cord, equipped with a No. 310 plug and two No. 59 cord tips (2W12A), and two No. 108 cord tips used where a battery supply jack is not available.

2.07 No. 52A head telephone set, or equivalent.

3. PREPARATION

3.01 By means of a P2J cord connect the BAT-G jack of the test set to a 48-volt battery supply jack.

NOTE: If a battery supply jack is not available, insert the plug of the W2M cord into the BAT-G jack of the test set and connect the white conductor of this cord to a spare 48-volt battery fuse or to the equipment side of a battery fuse in service, and the red conductor to ground. In no case should the fuse selected exceed 5 amperes.

3.02 Connect the operator's telephone sets to the TEL jacks of the test set.

3.03 Connect one end of the P3E cord to the test batt. and grd. jack of the current flow test set and short the tip and ring of the 310 plug at the other end.

3.04 All sliders of the current flow test set shall be to the extreme right and all keys unoperated.

3.05 Connect the 310 plug of the P3H cord to the T and R jack of the current flow test set and insert the 240A plug in the test jack of the equipment under test.

NOTE: When testing SD-31542-01 insert the 240A plug in the talk jack of the repeater.

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4. METHOD

(A) Loop Test

- 4.01 Operate key No. 1 of the current flow test set.
- 4.02 Refer to Table A to obtain milliamperere current flow required for equipment under test.
- 4.03 Move the No. 1 sliders of the current flow test set to the left to obtain the current flow requirement shown in Table A.
- 4.04 Remove the short from the tip and ring of the 310 plug and insert the plug in the T jack of the trunk test set.
- 4.05 The resistance keys of the trunk test set should be in the unoperated position.
- 4.06 Operate the REV of the current flow test set.
- 4.07 Operate the DL ST key of the trunk test set. The DL ST key will remain operated during this test.
- 4.08 Dial the connector multiple test line in a reverse battery connector group. After ringing is tripped the REV lamp should light and steady tone should be heard in the receiver for a short interval, after which the REV lamp should flash and interrupted tone should be heard the tone being applied during the interval that the lamp is lighted.

NOTE 1: When test line SD-31230-01, ES-241791, is dialed, the ringing should be tripped immediately upon connection to the test line and there should be no delay in receiving the test line tone. If ringing induction is heard, remain on the connection for a short time and if a subscriber or an operator answers, operate the TRS key and advise that a test is being made.

NOTE 2: When test line SD-31425-01 or SD-31263-01 is dialed, the tripping is delayed and ringing induction should be heard. If tripping does not occur during the first or second ringing interval, the indication is that the connector is ringing on another terminal. In this case remain on the connection for a short time and if a subscriber or an operator answers, operate the TRS key and advise that a test is being made.

NOTE 3: When test line SD-31425-01 is dialed, the flashing of the REV lamp should be at the rate of 120 1PM initially after which the lighted interval will be increased to approximately 5 seconds followed by a short interval during which the lamp is extinguished. It is not necessary, however, to wait until the flashing condition is changed.

- 4.09 Operate and hold the FL key of the trunk test set and note that the REV lamp is extinguished.
- 4.10 Release the FL key and remove the plug from the test jack of the repeater unless other tests are to be conducted on this circuit.
- 4.11 If no trouble is encountered request the originating office to restore the equipment to service.

(B) Leak Test

- 4.12 Proceed as outlined in Paragraph 4.01 to Paragraph 4.11 except operate the LK key of the trunk test set.

5. REPORTS

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

| TABLE A | | | |
|--|---------------------------|-----------------|------------------------|
| Circuit | Relay and Option | Type of Pulsing | Electrical Requirement |
| ES-30484-01 ES-30527-01 ES-30537-01 ES-30549-01 | | Loop | 17.5 MA |
| SD-31542-01 | | Loop | 9.5 MA |
| SD-31453-01 SD-31648-01 | | Loop | 17.5 MA |
| SD-31929-01 | (A) 221 FAE "D" Option | Loop | 63 MA |
| | | Batt. and Grd. | 27.5 MA |
| | (A) 221 FAF "E" Option | Loop | 27.5 MA |
| | | Batt. and Grd. | 21.9 MA |