

TEST OF OUTGOING MACHINE RINGING TRUNKS
BY MEANS OF
AUTOMATIC TEST LINE CIRCUITS
NO. 1 OFFICE

1. GENERAL

- 1.01 This section describes the following tests on machine ringing trunks to local offices having automatic test line circuits of the synchronizing type.
- (a) Operation Test.
 - (b) Test for Party Line Ringing.
- 1.02 The test line circuits used in connection with the tests are connected at the terminating office to multiple jacks or final multiple terminals. These multiple numbers should be known before starting the tests in order that the attendant at the "B" position may be advised of the test connections desired by the use of test line numbers.
- 1.03 The tests described apply to call circuit trunks and straightforward trunks arranged for either automatic or key listening operation.
- 1.04 The methods outlined provide for the tests to be made on a two-person basis. One tester is required at the manual office "A" board and an attendant who is usually the operator at the "B" position which is associated with the trunk circuits to be tested.
- 1.05 If this test is performed on a periodic basis by the traffic department, it will not be necessary for the plant department to make the tests except for checking or in case of trouble. However, since the responsibility for maintenance rests with the plant department, the wire chief or chief switchman should cooperate with the traffic department to see that the testing program is properly carried out.
- 1.06 This routine should be made during periods of light traffic and, if made by the traffic department, the tests should be made at hours when operators are available.
- 1.07 Any circuit on which a failure is encountered when making this routine, should be removed from service until the trouble is cleared.

2. APPARATUS

Test (a)

- 2.01 Automatic Test Line Circuit for testing machine ringing trunks. ("B" end.)
- 2.02 Outgoing Trunk Test Circuit for testing supervisory signals of machine ringing trunks. ("A" end.)
- 2.03 Two Operators' Telephone Sets. ("A" and "B" ends.)
- 2.04 No. P3D Cord, if the switchboard is equipped with No. 92 jacks. ("A" end.)
- 2.05 No. P3E Cord, if the switchboard is equipped with No. 49 jacks. ("A" end.)

Test (b)

- 2.06 Ringing Test Line Circuit for testing party line ringing on machine ringing trunks. ("B" end.)
- 2.07 Two Operators' Telephone Sets. ("A" and "B" ends.)

3. PREPARATION

- 3.01 Connect an operator's telephone set to the telephone jacks at the "A" and "B" positions from which the tests are to be made. It is preferable that the "A" position selected for making these tests be in the section of the switchboard with which the last appearance of outgoing trunk multiple is associated.
- 3.02 **Straightforward Operation:** If the trunks to be tested operate on a straightforward basis, the attendant at the originating end should give the "B" operator the test line numbers over each trunk.
- 3.03 **Call Circuit Operation:** When testing trunks operating on a call circuit basis, the test line numbers may be passed to the "B" operator over the call circuit; or special arrangements may be made whereby the "B" operator will not assign certain trunks of a group for regular service, in order that the tests may proceed from trunk to trunk without unnecessary repetition or delay. The lighting of the guard lamp should be checked on these tests.

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- 3.04 It is assumed that the particular plan to be used will be determined before the tests are started, and therefore this operation is not included under "Method."

4. METHOD

(a) Operation Test

"A" End

- 4.01 Insert a calling cord plug, with the listening key operated, into the LIST jack of the outgoing trunk test circuit.
- 4.02 Insert one plug of the No. P3D or No. P3E cord into the TEST jack of the outgoing trunk test circuit. Insert the other plug of the cord into the jack of the trunk circuit to be tested and observe that the cord circuit supervisory lamp does not light. If the "A" position cord circuits are of the machine ringing type, the TRK key should be depressed.
- 4.03 On straightforward trunks, order tone is returned over the circuit under test after it has become associated with an idle "B" operator.
- 4.04 Request the "B" operator to connect the trunk to the test line number of the automatic test line circuit. The proper suffix should also be given when testing trunks to jack-per-line party line offices.
- 4.05 **Audible Ringing Signal Test:** Listen for the audible ringing signal which should be heard during at least one ringing interval.
- 4.06 **Premature Tripping Test:** The premature tripping test will then be automatically applied. If rapidly interrupted low tone is heard it indicates that the trunk circuit trip relay has operated prematurely. Under this condition the automatic test line circuit will not continue further with the test.
- 4.07 **Tripping Test:** The tripping test will next be applied automatically. If the audible ringing signal continues after this test has been applied, it will usually indicate that the trunk circuit trip relay has failed to meet the operate test.
- 4.08 **Supervisory Relay Test:** Following the tripping test, the trunk supervisory relay will be automatically tested, provided the trip relay has functioned properly. If the supervisory relay performs its functions

satisfactorily, the cord circuit supervisory lamp will light. Should the supervisory relay fail on the test, the cord circuit supervisory lamp will not light, but the "tick tock" tone will be heard on the trunk indicating that the automatic test line circuit has completed the cycle of tests.

Caution: When the test of the supervisory relay starts, it would be well to restore the listening key in order to eliminate the interruptions which otherwise would be heard. If the cord circuit lamp does not light, the listening key should be operated to check for the "tick tock" signal.

- 4.09 When the test is completed, disconnect on the trunk by removing the plug from the outgoing trunk jack.

(b) Test for Party Line Ringing

"A" End

- 4.10 Depress the TRK key if the cord circuits are arranged for machine ringing. Insert a calling cord plug, with the listening key operated, into the outgoing trunk jack of the trunk circuit to be tested and observe that the cord circuit supervisory lamp lights.
- 4.11 Request the "B" operator to connect the trunk to the test line number corresponding to a party line condition other than the one associated with the automatic test line.
- 4.12 After the ringing test line circuit has completed the ringing test, the cord circuit supervisory lamp should be extinguished and a steady low tone should be heard on the trunk, indicating that the trunk has responded satisfactorily to the test.
- 4.13 Repeat the operations described in paragraphs 4.11 and 4.12 in connection with each of the other ringing combinations for which the trunk under test is arranged.
- 4.14 After the ringing test is completed, disconnect on the trunk by removing the calling cord plug from the outgoing trunk jack.

5 REPORTS

- 5.01 The required record of this routine should be entered on the proper form.