KS-13882 LISTS 1 AND 2 PERFORATORS USING THE PERFORATOR AND READER TEST CIRCUIT SD-95497-01 TESTS

1. GENERAL

1.01 This section covers tests of the KS-13882 Lists 1 and 2 perforators using the perforator and reader test circuit per SD-95497-01.

1.02 The facilities provided by the SD-95497-01 test circuit are necessary in checking certain perforator requirements specified in Section 034-306-701. Any adjustment on the apparatus required as a result of failure to meet the tests covered in this section shall be made in accordance with procedures covered in Section 034-306-701.

2. APPARATUS

2.01 List of Test Apparatus

Code or Spec. No.	Description
*32C	Test Set
35C	Test Set
*258C	Dummy Plug (black)
604B or 604C	Tape Splicer (Part of splicer dolly used in accounting center.) Tape Splicer (Part of a splicer dolly used in central offices.)
-	Blank Tape (Form SN-880 oiled perforator tape)
-	Test Pattern Test Tape (See Section A790.109)
* - (2 required)	2-foot Green Patching Cord per SD-95497-01, Fig. 12
* - (2 required)	4-foot Green Patching Cord per SD-95497-01, Fig. 13
KS-13835 L2	Test Reader (for testing accounting center perforator)
KS-13835 L3	Test Reader (for testing central office perforator)

* Part of J49803 Perforator and Reader Test Unit.

3. REQUIREMENTS

3.01 The perforator shall meet the requirements covered in Section 034-306-701.

4. PREPARATION

4.01 Restore any operated keys and switches to normal.

4.02 Operate the PWR switch (at top of relay cabinet) to the ON position and at the completion of all tests, operate the switch to the OFF position.

4.03 When the RECT lamp lights, operate the VM key and rotate the VOLT ADJ potentiometer to provide a reading of 50 volts on the VOLTS meter. Restore the VM key.

4.04 Plug the perforator to be tested into the PERF jack and latch the perforator in place as follows. Lift the cradle lock pin and rotate the cradle to a position which places the jack at the rear. Slide the perforator into place and lock it with the fastener.

4.05 Plug the test reader KS-13835, List 2 or List 3 into the RDR jack and patch the reader motor to the RDR power outlet using the reader motor cord.

4.06 Operate the RDR switch to the ON position.

5. TESTING PROCEDURES

Check of Perforator Operation

5.01 Rotate the perforator 90° clockwise from the position described in 4.04.

5.02 Operate the PERF BAT key.

5.03 Operate the ADV LPS key.

5.04 Place blank tape in the perforator as follows. Check that the SP lamp is lighted. Carry the leading end of the tape from the supply bin over and under the tape twister, located beneath the table top, thence vertically upward to the entrance of the perforator chute. Insert the end of the tape into the chute and slide it gently along the chute until the end appears below the drum. The SP lamp should be extinguished.

Note: If the SP lamp fails to function, check the cause and correct the condition, before proceeding with the test.

5.05 Insert the test pattern test tape into the reader as follows. Operate the reader motor switch to the ON position. Insert the leading end of the tape (accounting center or central office end, as required) vertically upward through the small hole in the table top and into the tape chute of the reader, with the embossed side down. Advance the tape along the chute up to the drum, with the fingers, so that the leading line of perforations meshes in the holes in the drum. Apply a light force on the tape in the direction of travel and depress the tape feed key (located at the top side of the reader control contact housing) until the tape is engaged and moves with the drum. Hold the tape feed key depressed until the end of the leading splice pattern is within two inches of the drum.

5.06 Operate the RLP switch and check that the READING lamps display 081010.

5.07 Operate the 2/5 CHECK key.

5.08 Depress the REP key and observe that the perforator operates and advances the tape.

5.09 After at least 2 feet of splice pattern have been perforated, depress the STOP key.

Note: If the perforations in the tape are not in engagement with the holes in the reader drum, the 2-in-5 check will not be satisfied and automatic stoppage will occur.

5.10 Restore the 2/5 CHECK key to normal.

5.11 Depress the START key and allow the perforator to perforate a complete test tape. Again observe the voltage and adjust to 50 volts during passage of the test pattern. Observe that the KA lamp flashes during the passage of one transverse pair of squares of the test pattern and the KB lamp flashes during passage of the following pair of transverse squares. When testing the KS-13882, List 2 perforator, the PAC lamp should flash in synchronism with either the G1 or G2 lamp.

Note: Failure of the KA or KB lamps to flash uniformly, may indicate shorted turns in the winding of one of the series check relays KA0 to KF7.

5.12 When the trailing end of the test tape is within 4 inches of the reader drum, depress the STOP key to prevent simultaneous operation of all 28 perforating magnets.

Caution: Never allow the perforator to operate without tape in the reader and in the perforator.

5.13 Depress the tape feed key of the reader and hold it depressed until the trailing end of the tape is free of the drum. Remove the tape.

5.14 Examine as much of the perforated tape as can be seen without removing it from the perforator, for defective or missing perforations, as covered in Section 034-306-701. At the leading end, cut off and discard all but one foot of splice pattern preceding the test pattern and insert this end into the reader, as described in 5.05, preparatory to making a feed-back test.

5.15 Depress the START key and allow the reader and perforator to operate on this feed-back basis for 5 minutes.

5.16 At the end of the 5-minute period when the end of a section of splice pattern is being perforated, depress the STOP key. Operate the REP key and after 10 seconds operate the STOP key.

5.17 If the perforator is not equipped with a CUT magnet, cut the tape beneath the table approximately one foot from the output tape chute using the shears. If the perforator is equipped with a CUT magnet, depress the TAPE CUTTER key.

5.18 Hold the tape feed key of the reader depressed until the test pattern is beneath the reading pins.

5.19 If the perforator being tested is a KS-13882 List 1 perforator, depress the START key and after approximately 2 seconds, depress the STOP key. Depress the TAPE CUTTER key. Repeat this sequence of events four times. Examine the cut pieces of tape to ascertain if the cut is clean.

5.20 Restore the PERF BAT key and depress the START key. When the splice pattern at the trailing end reaches the reading pins, depress the STOP key and reoperate the PERF BAT key. Operate the reader motor switch to OFF.

5.21 Rotate the perforator to place the tape chute at the front. Remove the tape from the perforator as follows. Operate the PERF TEST BAT key and PERF BAT key. Depress the REP key and as soon as the tape loses traction, depress the STOP key. Cut the tape at the entrance to the tape chute and then reach under the table top and pull the tape out of the perforator.

Caution: When removing tape from the perforator, avoid having the hands come in contact with the sharp points on the static drain pins.

5.22 Cut off a length of blank tape containing two folds, each being approximately one foot from a tape end. Make a third fold midway between the first two folds. Cut a window in each of the three folds using the window cutter, which is part of the 604-type tool, on the splicer dolly.

Note: If the 604-type tool is not available, use shears to cut a rectangular window approximately 1/2-inch wide and 1-1/2-inch long in each of the three folds at the center of the tape.

5.23 Slide the tape into the chute until the fold at the first window is at the chute entrance.

5.24 Patch test jack H5 to jack SPLIT-TR using a 2-foot green patching cord. Patch one end of a second 2-foot green patching cord into jack SPLIT T/R.

5.25 Operate the PERF BAT key. Operate the reader motor switch to ON.

5.26 Depress the REP key. The perforator will stop and the red lamp SP will light when window contact SP makes.

5.27 If the KS-13882, List 1 perforator is being tested, proceed as covered in 5.28 to 5.35.

5.28 Patch the free end of the second green patching cord into the DO test jack.

5.29 Insert a dummy plug into the SP CO jack.

5.30 Depress the REP key and when the SP lamp is extinguished, depress the STOP key.

5.31 Remove the patching cord plug from the DO test jack.

5.32 Remove the dummy plug from the SP CO jack.

5.33 Repeat the procedures covered in 5.26 to 5.32 for the second window and again for the third window.

5.34 Remove the tape from the perforator as described in 5.21.

5.35 Check to determine if a minimum of twelve complete perforations were made by the DO perforating magnet ahead of each window.

5.36 Restore the PERF BAT key and depress the START key. When the tape runs out of the reader, depress the STOP key.

5.37 Restore all operated keys and switches and disconnect all patching cords.

5.38 Examine the tape in accordance with Section 034-306-701 to determine if there are any unsatisfactory perforations.

5.39 Cut off and store for subsequent test, a perfect section of test tape with one foot of splice pattern at the leading and trailing ends. Also cut off and store for subsequent tests two one-foot lengths of splice pattern. Discard the remainder of the tape.

Control of Perforating Magnets During Check of Drum Advance Mechanism Requirements.

5.40 Place the perforator in the position described in 4.04. Grasp with both hands the top rails of the perforator and tilt it forward until the subbase is vertical and then push it to the rear against the stop. Rotate the perforator 90° clockwise to facilitate check of the drum advance mechanism.

5.41 Insert a one-foot long tape with the splice pattern into the test reader as follows. Operate the reader motor switch to position ON. Insert the leading end of the tape into the tape chute of the reader, with the embossed side down. Advance the tape along the chute up to the drum, with the fingers, so that the leading line of perforations meshes in the holes in the drum. Apply a light force on the tape in the direction of travel; depress the tape feed key (located at top side of the reader control contact housing) and hold it until the end of the leading splice pattern is within two inches of the drum. Operate the reader motor switch to the OFF position.

5.42 Patch the PERF CI test jack to the GRD R1 (or GRD R) jack using a 2-foot green patching cord.

5.43 Insert the gray and red plugs of the No. 32C test set into the PAM and PAC jacks respectively.

5.44 Operate the PERF TEST BAT key.

5.45 Operate and release the eleven perforating magnets corresponding to the splice entry 081010 by rotating the reader dial by hand, in a clockwise direction.

Caution: Do not leave current connected to any magnet continuously longer than three minutes.

5.46 Operate the PAM and PAC magnets by depressing the white and red buttons on the No. 32C test set. (The buttons may be locked by rotating them.)

5.47 Upon completion of any adjustments found necessary, release the perforating magnets and restore the PERF TEST BAT key. Disconnect the patching cord and

test set. Place the perforator on its base in normal operating position (plug at right). Remove the tape from the reader.

Method of Checking Electrical Requirements of Magnets

5.48 Patch the TEST BAT & GRD jack of the 35-type test set to the GRD-T jack using a 4-foot green patching cord.

5.49 Patch the TEST T&R jack of the 35-type test set to the SPLIT R/T jack using a second 4-foot green patching cord.

5.50 Insert one end of a 2-foot green patching cord into the SPLIT TR jack.

5.51 Operate the BATT & GRD key and the REV key and close the GRD switch of the 35-type test set.

5.52 Operate the PERF TEST BAT key.

5.53 Insert the other end of the 2-foot green patching cord into the test jack corresponding in designation to the magnet to be tested. Check the electrical requirements as covered in Section A438.981.

5.54 Upon completion of the test, restore the PERF TEST BAT key and disconnect all patching cords.