

RECORDER AND RECORDER-CONNECTOR CIRCUIT

OPERATION TESTS

STEP-BY-STEP OFFICES ARRANGED FOR AMA

AND STEP-BY-STEP INTERTOLL DIALING OFFICES ARRANGED FOR CAMA

1. GENERAL

1.001 This addendum supplements Section 227-430-500, Issue 2. The attached pages must be inserted in the section in accordance with the filing instructions above.

1.002 The addendum is issued to revise Test F to include XO and XR options.

3. METHOD

The following change applies to Part 4 of this section:

Test F revised.

Attached:

Page 23 dated April 1967, reissued
Page 24 dated April 1967, revised
Page 25 dated April 1967, revised
Page 26 dated April 1967, revised
Page 27 dated April 1967, revised
Page 28 dated April 1967, revised
Page 28.1 dated April 1967, added

STEP	ACTION	VERIFICATION
122	Remove blocking tools from AT, ON, PTC relays.	
123	At trouble recorder or trouble ticketer and test frame — Operate TRR-AR or AR key momentarily.	Minor alarm silenced.
124a	At recorder — Remove blocking tools A0, 1, 2; B0, 1, 2, 4, 7; C0, 1, 2, 4, 7; D0, 1, 2, 4, 7; E0, 1, 2, 4, 7; F0, 1, 2, 4, 7 relays.	
125b	At perforator cabinet for recorder under test — Restore perforator plug to its associated jack; then restore perforator cover to its normal position.	
126	At master timing frame — Operate CKL key.	
127	Operate, release S key.	Recorder synchronized with master timer.
128	Operate AR key momentarily.	SSF lamp extinguished.
129	At trouble recorder or trouble ticketer and test frame — Insert make-busy plug into RTST- or R-T jack for recorder under test.	
130	Insert plug of 32A test set into R jack.	
131	Depress white button of 32A test set momentarily. <i>Note:</i> If a trouble is encountered while perforating a test pattern (RIT lamp lighted), clear the trouble (RIT lamp extinguished) and apply a good test pattern before restoring the recorder to service.	At trouble recorder or trouble ticketer and test frame — RUT lamp lights. When master timing circuit completes test of recorder — At trouble recorder or trouble ticketer and test frame — RUT lamp extinguished. Minor alarm sounds.
132	At trouble recorder or trouble ticketer and test frame — Operate TRR-AR or AR key momentarily.	Minor alarm silenced.
133	Remove plugs from RTST-, R-T, R jacks.	
134	Remove plug from RTN- jack for recorder under test.	At emergency recorder frame — EW lamp extinguished. At trouble ticketer frame — R- lamp extinguished. Trouble ticket printed. TT lamp lights.
135	Operate AR key momentarily.	TT lamp extinguished.
136	At master timing frame — Restore CKL key.	

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STEP	ACTION	VERIFICATION
Emergency Recorder		
137	At trouble recorder or trouble ticketer and test frame — Check that emergency recorder is not in service by observing that there is no plug in any RTN- jack.	
138	Insert make-busy plug into RMB-EMG jack.	
139	Proceed as outlined in Step 3a through 128. <i>Note:</i> E' and F' designations referred to in Step 11 of Test E will indicate recorder number tens and units as 4 and 0, respectively, for the emergency recorder.	
140	At trouble recorder or trouble ticketer and test frame — Insert make-busy plug into RTST-EMG or R EMG T jack.	
141	Proceed as outlined in Steps 130, 131.	
142	Remove plugs from RTST-EMG, R EMG T, RMB-EMG, R jacks.	
143	At master timing frame — Restore CKL key.	

F. Splice and Break-in — Tape Feature — Regular and Emergency Recorder

Note: Before starting this test and on completion of testing, mark the associated perforator tape as indicated in 1.14.

Regular Recorder

- 1 At automatic trunk test or trouble ticketer and test frame —
Make busy all trunks associated with recorder to be tested.
- 2 At recorder —
Block nonoperated XT relay.
- 3 Insulate 3B of RD relay.

STEP	ACTION	VERIFICATION
Γ 4	Connect ground to terminal 97 of terminal strip MA.	Perforator operates. At recorder — NP lamp lights. Major alarm sounds. MTR, MB, MBR relays operate. Ground present on 8B of TN1 relay. If U127 is used as MTR relay — Ground present on 5T of MTR relay. If U224 is used as MTR relay — Ground present on 5B of MTR relay. At trouble recorder or trouble ticketer and test frame — R- lamp lights.
5a	If XN option is provided — At recorder frame — Operate AR key momentarily.	NP lamp extinguished. Major alarm silenced. MTR relay releases.
6a	At recorder — Disconnect ground from terminal 97 of terminal strip MA.	At recorder — MB, MBR relays released. At trouble recorder or trouble ticketer and test frame — R- lamp extinguished.
L 7b	If XO or XR option is provided — Disconnect ground from terminal 97 of terminal strip MA.	Major alarm silenced. At recorder frame — NP lamp extinguished. MTR, MB, MBR relays released. At trouble recorder or trouble ticketer and test frame — R- lamp extinguished.
8	At recorder — Remove insulator from 3B of RD relay.	
9	Remove blocking tool from XT relay.	
10	Block operated NS relay.	
11	At perforator — Raise reel clutch release arm; hook it over catch.	
12	Pull back some slack in tape; if necessary to obtain access, disengage tape from tape guides.	

STEP	ACTION	VERIFICATION
13	Fold tape, make two cuts in unperforated section of tape, as close to paper feed drum as possible, beginning 1/4 inch on each side of center of fold at angle to intersect center line of tape, minimum 1/2 inch in from fold. See Fig. 2.	

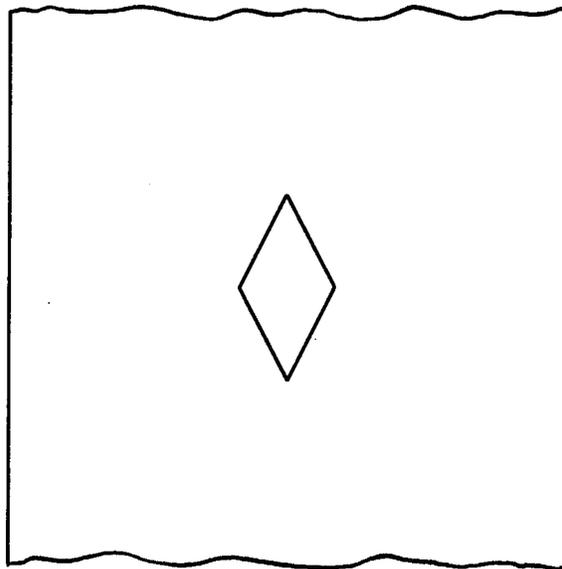


Fig. 2 — Splice Window

14	Replace tape in tape guides, wind tape back on reel, lower reel clutch release arm.	
15	At recorder — Operate, release AT key until splice window is above splice indicator contact.	Perforator functions to perforate tape identity and approximately 40 lines of splice pattern to advance splice window beyond drum assembly.
16	Remove blocking tool from NS relay.	
17	At trouble recorder or trouble ticketer and test frame — Insert make-busy plug into RMB- jack for recorder under test.	
18	Insert make-busy plug into RTST- or R-T jack for recorder under test.	

STEP	ACTION	VERIFICATION
19	Insert plug of 32A test set into R jack.	
20	Depress white button of 32A test set momentarily. <i>Note:</i> If a trouble is encountered while perforating a test pattern (RIT lamp lighted), clear the trouble (RIT lamp extinguished) and apply a good test pattern before restoring the recorder to service.	At trouble recorder or trouble ticketer and test frame — RUT lamp lights. When master timing circuit completes test of recorder — At trouble recorder or trouble ticketer and test frame — RUT lamp extinguished.
21	Remove plugs from RMB-, R-T, RTST-, R jacks.	
22	At automatic trunk test or trouble ticketer and test frame — Restore to service trunks made busy for this test.	
23	Using an ordinary shipping tag — Make a record that Test F was performed, listing recorder number and notation that splice patterns and diamond patterns specially marked with red crosses were placed on tape, both before and after performing test.	
24	Attach this tag to associated reel support bar. <i>Note:</i> This tag or its information is to accompany tape when it is shipped to accounting center.	
Emergency Recorder		
25	At trouble recorder or trouble ticketer and test frame — Check that emergency recorder is not in service by observing that there is no plug in any RTN- jack.	
→ 26	At emergency recorder — Connect ground to terminal 97 of terminal strip MA.	Major alarm sounds. At emergency recorder — NP lamp lights. MTR, MB, MBR relays operate. If U127 is used as MTR relay — Ground present on 5T of MTR relay. If U224 is used as MTR relay — Ground present on 5B of MTR relay. At trouble recorder or trouble ticketer and test frame — R-EMG lamp lights.

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STEP	ACTION	VERIFICATION
↗ 27a	If XN option is provided — At recorder frame — Operate AR key momentarily.	NP lamp extinguished. Major alarm silenced. MTR relay releases.
28a	At emergency recorder — Disconnect ground from terminal 97 of terminal strip MA.	At any regular recorder — Ground absent on 7B of TN8 relay, 7B of TN1 relay. At emergency recorder — MB, MBR relays released. At trouble recorder or trouble ticketer and test frame — R-E MB lamp extinguished.
↘ 29b	If XO option is provided — At emergency recorder — Disconnect ground from terminal 97 of terminal strip MA.	Major alarm silenced. At emergency recorder — NP lamp extinguished. MTR, MB, MBR relays released. At any regular recorder — Ground absent on 7B of TN8 relay, 7B of TN1 relay. At trouble recorder or trouble ticketer and test frame — R-EMB lamp extinguished.
30	At emergency recorder — Proceed as outlined for perforator associated with regular recorder in Steps 9 through 15.	
31	At trouble recorder or trouble ticketer and test frame — Insert make-busy plug into RMB-EMG jack.	
32	Insert make-busy plug into RTST-EMG or R EMG T jack.	
33	Insert plug of 32A test set into R jack.	
34	Depress white button of 32A test set momentarily. <i>Note:</i> If a trouble is encountered while perforating a test pattern (RIT lamp lighted), clear the trouble (RIT lamp extinguished) and apply a good test pattern before restoring the recorder to service.	At trouble recorder or trouble ticketer and test frame — RUT lamp lights. When master timing circuit completes test of recorder — At trouble recorder or trouble ticketer and test frame — RUT lamp extinguished.
35	Remove plugs from RTST-EMG, R EMG T, R, RMB-EMG jacks.	

STEP	ACTION	VERIFICATION
36	Using an ordinary shipping tag — Make a record that Test F was performed on emergency recorder and notation that splice patterns and diamond patterns specially marked with red crosses were placed on tape both before and after performing test.	
37	Attach this tag to associated reel support bar. <i>Note:</i> This tag or its information is to accompany the tape when it is shipped to accounting center.	
G. Troubling Timing Features — Regular and Emergency Recorder		
<i>Note:</i> Before starting this test and on completion of testing, mark the associated perforator tape as indicated in 1.14.		
1	At trouble recorder or trouble ticketer and test frame — Observe that there is no plug in any RTN-jack.	
2	Insert make-busy plug into RTN- jack for recorder to be tested.	At emergency recorder frame — EW lamp lights.
3	At recorder frame — Insulate 3T of TTIB relay.	
4	Block operated ON relay.	TA, TF relays operate immediately. TB, TC, TD, TE relays operate in sequence. Within 4 seconds after operation of TA relay — RD relay operates. Minor alarm sounds. TA, TF relays release. At trouble recorder or trouble ticketer and test frame — TRR or TT lamp lights.
5	Remove blocking tool from ON relay.	TB, TC, TD, TE, RD relays release.
6	At trouble recorder or trouble ticketer and test frame — Operate TRR-AR or AR key momentarily.	TRR or TT lamp extinguished. Minor alarm silenced.
7	Remove insulator from 3T of TTIB relay.	
8	Block operated TTIB relay.	