

Issue No.	Date of Issue	Approved	
		B.T.L.	D.& R.
1-D	3-22-28	WHM	GWK
A. T. & T. CO. STANDARD			

REQUIREMENTS AND ADJUSTING PROCEDURES FOR CENTRAL OFFICE AND PBX-APPARATUS

87 TYPE RELAYS

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
Department of Development and Research
Bell Telephone Laboratories, Inc.

REASON FOR ISSUE

These Requirements and Adjusting Procedures (R.A.P.) are issued to replace specification X-70059, issue 1 for the following reasons:

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| <p><u>1.</u> To bring the information up-to-date and to issue it as an R.A.P.</p> | <p><u>2.</u> To add a list of tools, materials and test apparatus (1.003).</p> |
| <p><u>1.</u> To bring the information up-to-date and to issue it as an R.A.P.</p> | <p><u>3.</u> To change and add Adjusting Procedures.</p> |
| <p><u>1.</u> To bring the information up-to-date and to issue it as an R.A.P.</p> | <p><u>4.</u> To add requirements as covered on Sheet 1 attached hereto.</p> |

CHANGES IN ADJUSTING PROCEDURES FROM X-70059, ISSUE 1

<u>Paragraph No.</u>	<u>Change</u>	<u>Paragraph No.</u>	<u>Change</u>
1.001	Was 1.1 and 1.2 Reworded.	2.02	Added.
1.002 and) 1.003)	Added.	2.03, 2.04,) 2.05 and 2.06)	Were 3.2, 3.3, 3.6 and 3.7. Added methods.
-	1.3, 1.4, 1.5 and 1.6 to 1.621 of X-70059, issue 1 omitted.	2.07	Added.
2.01	Was 3.1. Added method for tightening pole-piece screw.	2.08	Was 3.4. Added method.
		2.09	Added.
		2.10	Was 3.5. Reworded.

CHANGES IN REQUIREMENTS FROM X-70059, ISSUE 1

<u>Paragraph No.</u>	<u>Change</u>	<u>Paragraph No.</u>	<u>Change</u>
3.001	Was 1.711 and 1.712. Reworded.	3.003 to 3.005	Added.
3.002	Was 1.713. Reworded.	3.07 and 3.09	Added.
		-	Other paragraphs renumbered and reworded as required.

SECTION 1 - GENERAL

1.001 The Requirements and Adjusting Procedures specified herein cover 87 type relays and replace specification X-70059, issue 1.

1.002 Reference shall be made to R.A.P. X-70000-01, covering General Requirements, Definitions and Information for additional information necessary for the proper application of this R.A.P.

1.003 List of Tools, Materials and Test Apparatus required for the apparatus covered by this R.A.P.

Tools (Cont.)

<u>Code No.</u>	<u>Description</u>
349	Wrench - 3/16" and 7/32" Hex. Closed - Double-end Offset
363	Spring Adjuster
-	Bell System - Cabinet Screw-driver - 3-1/2"
-	Bell System - P-Long-Nose Pliers - 6-1/2"

Tools

<u>Code No.</u>	<u>Description</u>
35	Screw-driver - 3-1/2"
72	Wrench - 5/32" and 3/16" Hex. socket Double-end and screw-driver
206	Screw-driver - 30° Offset
207	Screw-driver - 90° Offset

Test Apparatus

Current Flow Test Set

Materials

C.P. carbon tetrachloride
Toothpicks - hardwood - flat at one end and pointed at the other

REQUIREMENTS (CONT.)

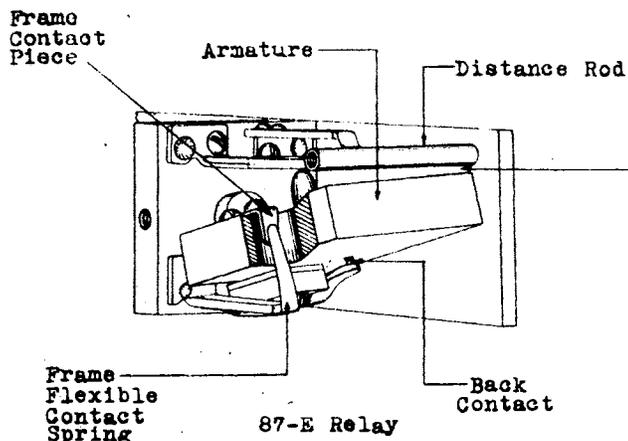
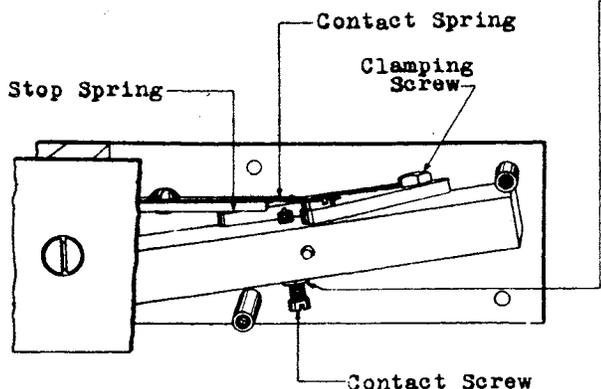


Fig. 4

3.07 Armature and Distance Rod Clearance On relays having a back contact there shall be a perceptible clearance (approximately .005") between the armature and the distance rod when the relay is unoperated. Gauge by eye and feel.



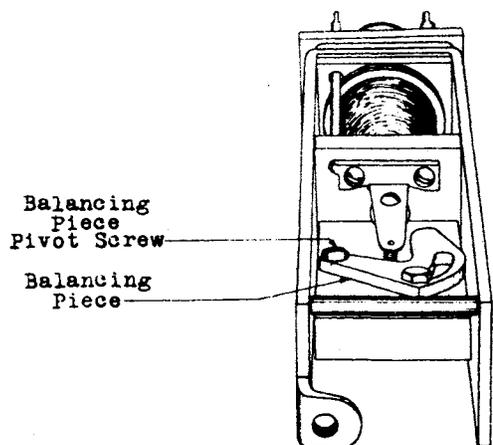
87-K Relay

Fig. 5

3.08 Tightness of Lock Nut The lock nut on the contact screw shall be sufficiently tight to hold the screw in any adjusted position. Gauge by feel.

3.09 Electrical Requirements A relay shall meet the electrical requirements specified on the "Circuit Requirement Table"

3.10 Cleaning
 (a) The contacts shall be cleaned when necessary in accordance with the "X" specification covering "Cleaning of Relay Contacts and Parts".
 (b) Other parts shall be cleaned when necessary in accordance with approved methods.



87-K Relay

Fig. 6

REQUIREMENTS
 FOR
 87 TYPE RELAYS