BUZZERS

NOS. 12092 AND 12093

REQUIREMENTS AND ADJUSTING PROCEDURES

1. GENERAL

1.01 **This section covers Nos. 12092 and 12093 buzzers and replaces X-70341-01, Issue 1.**

1.02 Reference shall be made to Section 020-010-711 covering General Requirements and Definitions for additional information necessary for the proper application of the requirements listed herein.

1.03 **Part 1, "General" and Part 2, "Requirements" form part of the Western Electric Co. Inc. Installation Department handbook.**

1.04 **Requirements are marked with an asterisk (*) when to check for them would necessitate the dismantling or dismounting of apparatus, or would affect the adjustment involved or other adjustments. No check need be made for these requirements unless the apparatus or part is made accessible for other reasons or its performance indicates that such a check is advisable.**

2. REQUIREMENTS

2.01 Cleaning The buzzer shall be cleaned in accordance with the section covering cleaning of relay contacts and parts.

2.02 Freedom of Movement of Armature - Figs. 1 (A) and 2 (A) - The armature shall be free from bind in its bearings. Gauge by eye and by feel.

2.03 Armature Gap - Figs. 1 (B) and 2 (B) - With the armature in the non-operated position, the gap between the non-freezing disc on the armature and the pole face farther from the fulcrum shall be:

Min. .006"

Gauge by eye.

2.04 Armature Pressure - Figs. 1 (C) and 2 (C) - With the armature in the non-operated position, the pressure of the armature against the armature adjusting screw measured at the end of the armature farther from the fulcrum shall be:

Min. 15 grams

Use the No. 70-D gauge.

*2.05 Tightness of Adjusting Screws and Lock Nuts - Figs. 1 (D) and 2 (D) - The adjusting screws and lock nuts shall be sufficiently tight to maintain their adjusted position. Gauge by feel.

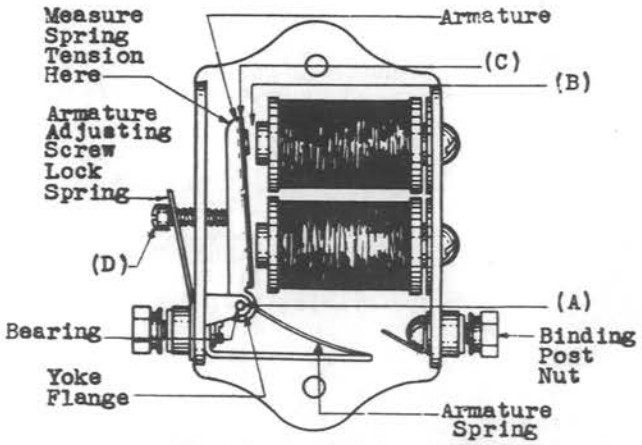

Fig. 1 - 12092 Buzzer

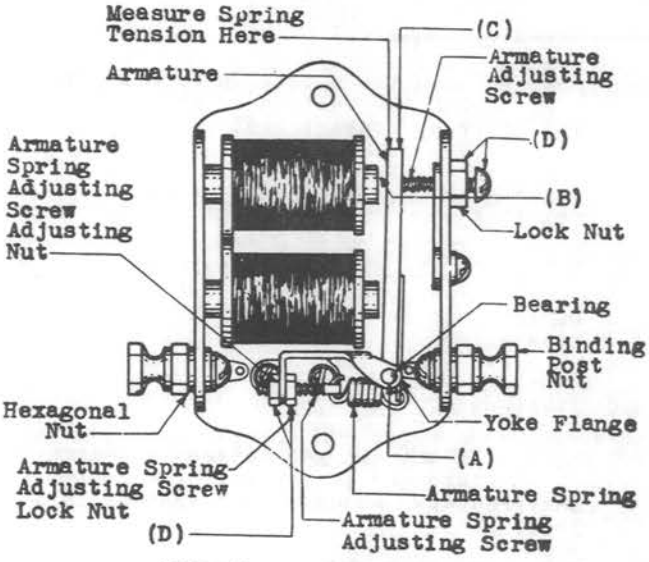

Fig. 2 - 12093 Buzzer

2.06 Operation **The buzzer shall give a clear signal when the circuit in which it is used is closed. It is designed to give a clear signal on 20 to 28 volts, inclusive, D.C.**

REASON FOR ISSUE - CHANGES IN REQUIREMENTS

1. To add the requirement covering "Cleaning" (2.01).

3. ADJUSTING PROCEDURES

Tools

Code No.	Description
102	Wrench - 3/8" Hex. Socket
206	Screw-driver - 30° Offset
207	Screw-driver - 90° Offset
209	Wrench - 5/16" Hex. Open-end Offset
388-A	Wrench - 3/16" and 1/4" Hex. Open Double End Offset
-	Bell System Cabinet Screw-driver - 3-1/2" per A.T.&T. Co. Drawing 46-X-40
-	Bell System P-Long Nose Pliers - 6 1/2" per A.T.&T Co. Drawing 46-X-56

Gauges

70-D (or the replaced 70)	50-0-50 Gram Gauge

3.01 Cleaning (Rq.2.01)

M-1 Clean the buzzer in accordance with the section covering cleaning of relay contacts and parts.

3.02 Freedom of Movement of Armature (Rq.2.02)

M-1 If the armature does not move freely, adjust the outer flange of the yoke as required with the long nose pliers.

3.03 Armature Gap (Rq.2.03)

M-1 If the air gap between the armature and the magnet core is not satisfactory, adjust the buzzer as follows:

M-2 No. 12092 Buzzer Turn the armature adjusting screw in a counter-clockwise direction to increase the gap. To decrease it turn the screw in a clockwise direction with either the 3-1/2" cabinet screw-driver or the Nos. 206 and 207 offset screw-drivers.

M-3 No. 12093 Buzzer Loosen the armature adjusting screw lock nut with the No. 209 wrench and then adjust the armature adjusting screw as outlined above. After the correct adjustment has been obtained, hold the adjusting screw in place with the screw-driver and securely tighten the lock nut in place.

3.04 Armature Pressure (Rq.2.04)

M-1 If the pressure of the armature against the armature adjusting screw is not satisfactory adjust it as follows:

M-2 No. 12092 Buzzer Place the long nose pliers on the armature spring about 1/4" from the fulcrum and adjust it toward the armature arm until the armature rests against the adjusting screw with a satisfactory pressure.

M-3 No. 12093 Buzzer Loosen the armature spring adjusting screw lock nut with the No. 388-A wrench or the long nose pliers and adjust the armature spring tension by turning the armature spring adjusting screw adjusting nut with either the wrench or the pliers. After the correct adjustment is obtained, hold the armature spring adjusting screw adjusting nut in place and securely tighten the armature spring adjusting screw lock nut in place.

3.05 Tightness of Adjusting Screws and Lock Nuts (Rq.2.05)

3.06 Operation (Rq.2.06)

M-1 General Failure of the buzzer to give a clear signal when the operating circuit is closed is usually due either to loose connections, broken leads, loose lock nuts or adjusting screws, excessive spring tension or insufficient or excessive armature gap. In checking for any of the above, remove the cover and proceed as follows:

M-2 Wiring Examine the buzzer to determine whether the leads from the windings and armature to the binding posts, the lead from the winding to the back contact or the wires connecting the two windings are broken and whether or not there are any loose connections.

M-3 Remove the binding post nuts and see whether or not the hexagonal nuts are tightened securely against the insulators. If necessary securely tighten the nuts with the No.102 wrench.

M-4 Loose Armature Adjusting Nut Failure of the armature adjusting screw to be held firmly in place may result in a poor signal. To remedy this condition, proceed as follows: On the No. 12092 buzzer back off the adjusting screw and adjust the lock spring away from the frame so as to increase the pressure against the head of the adjusting screw. Replace the adjusting screw and adjust for the proper armature gap as outlined in procedure 3.03. On the No. 12093 buzzer securely tighten the

3.05,3.06 (Continued)

lock nut with the No. 209 wrench.

M-5 Failure to Operate If no leads are broken and all connections are tight, but the armature fails to show any tendency to move toward the cores when the circuit is closed, it is an indication that the armature travel or the armature spring tension is excessive.

M-6 If the armature travel is excessive reduce it by proceeding as outlined in procedure 3.03, M-2 or M-3 until the travel is such that the buzzer operates satisfactorily when the circuit is closed.

M-7 If the armature spring tension is excessive reduce it by proceeding as outlined in procedure 3.04, M-2 or M-3.

M-8 If the armature travel is insufficient, increase it by proceeding as outlined in procedure 3.03, M-2 or M-3.

M-9 The buzzer may fail to release due to insufficient armature spring tension. To overcome this difficulty adjust the spring tension as outlined in procedure 3.04, M-2 and M-3. If the spring tension is changed, make sure that it is not less than the minimum limit.

REASON FOR ISSUE - CHANGES IN ADJUSTING PROCEDURES

1. To add adjusting procedures for "Cleaning" (3.01).