

## RINGERS—D1-TYPE MAINTENANCE

### 1. GENERAL

1.01 This section is reissued to add D1C and D1D ringers as replacements for D1A and D1B.

### 2. MAINTENANCE

2.01 Fig. 1 and 2 show typical D1-Type ringers and their component parts.

2.02 The armature must restore to nonoperate side of airgap when manually operated and the biasing spring is in the low notch.

2.03 Clearance between clapper and gong should be a minimum of 1/64 inch.

2.04 Volume-control lever should operate smoothly over entire range.

2.05 When ringer fails to operate properly, check first that customer is familiar with volume control operation. If volume control is set correctly and ringer still fails, proceed as follows:

- (1) Check airgap at armature for dirt or foreign material and clean if necessary.
- (2) Be sure all connections are tight and correct.
- (3) Check that leads do not interfere with operation of the ringer.
- (4) Check mechanical requirements and bias spring position.

2.06 Replace ringer if requirements are not met. Do not disassemble, adjust, or replace armature, coil, or permanent magnet, since these are factory aligned.

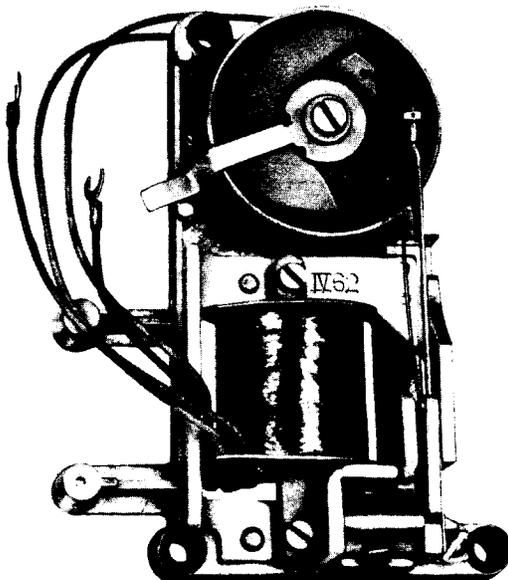


Fig. 1—D1C Ringer

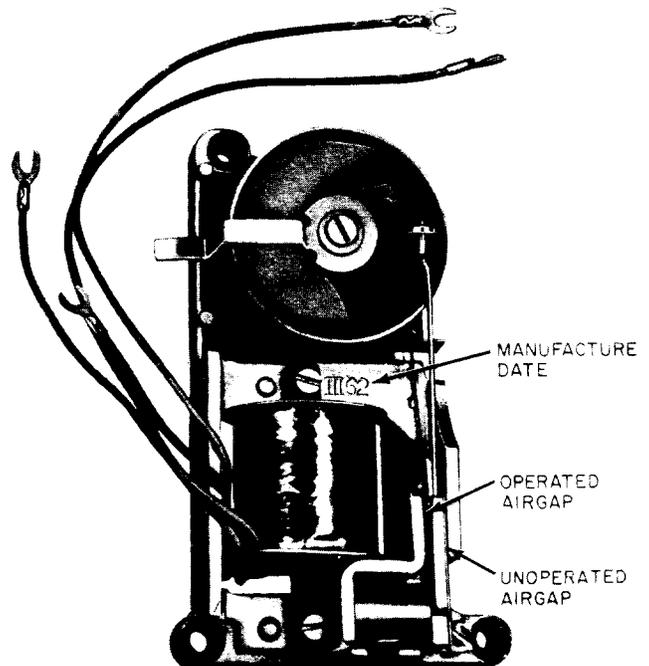


Fig. 2—D1D Ringer

**Bias Spring Position**

**2.07** The ringer is shipped with bias spring in the high (outside) notch. Table A indicates proper position for various classes of service.



*Do not bend bias spring. Correct bias spring tension has been set at factory. Do not use tools when relocating bias spring.*

**2.08** Obtain a ringing test after completing work. Check for bell taps while dialing.

**2.09** If bell taps with bias spring in low notch and with ringer properly connected, move bias spring to high notch. Repeat ringing test. If ringer still fails to operate properly, replace ringer.

**TABLE A**  
**BIAS SPRING POSITION**

CLASS OF SERVICE		BIAS SPRING NOTCH	REMARKS
Bridged Ringing Service	Individual Line and PBX Stations	High	If three or more ringers are bridged across line and operation is not satisfactory, place bias spring in low notch on all ringers. If condition still exists, replace ringer.
	Nonselective Party Lines	Low	
Grounded Ringing Service	2-party Flat and Message Rate	High	
	4-party Semiselective	High	If five ringers are connected between same side of line and ground, and operation is not satisfactory, place bias spring in low notch on all ringers on that side of line. If condition still exists, replace ringer.
	4-party Selective 8-party Semiselective Divided Code	Low	If ringer buzzes on short-loop installations when the party of opposite polarity on some side of line is being called, place bias spring in high-tension notch. If ringer still buzzes or fails to ring, replace ringer.