Chapter 40

BUZZER, KLAXON, TYPE BB – S24A

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LIST OF ILLUSTRATIONS

LEADING PARTICULARS

Buzzer, Klaxon, Type BB – S24A	*Ref. No. 5CZ/5346*
Operating voltage	*28 volt d.c.*
Coil Resistance	*8·5 ohm*
Turns	350
SWG	32
Wire covering	*Enamel*
Capacitor	0·1/μf ± 20%
Overall dimensions	$4\frac{3}{8}$ in. dia. × $3\frac{13}{16}$ in.
Weight	2½ lb approx.

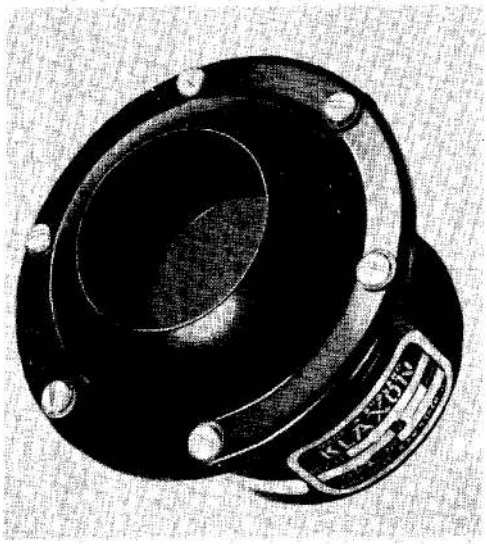

Fig. 1. Buzzer, Klaxon, Type BB

Introduction

1. The Klaxon, Type BB buzzers are used to provide an audible signal in aircraft warning or crew-call systems. The one described and illustrated in this chapter is typical of the range of Type BB buzzers which may have modified mountings, or be provided complete with a connector or connecting cables.

DESCRIPTION

2. The Type BB range of buzzers are vibratory buzzers in which a steel diaphragm is struck by a striker driven by a self-interrupted solenoid. The body of the buzzer is a bowl shaped casting, the bottom of which is formed to accommodate the solenoid and serve as the iron core on which the 8·5 ohm coil is fitted. A $\frac{3}{8}$ in. Whitworth hole in the side of the bowl accommodates the mounting bracket securing screw, and six holes in the front flange accept the screws which secure the diaphragm and tone-cup, three either side of the centre line.

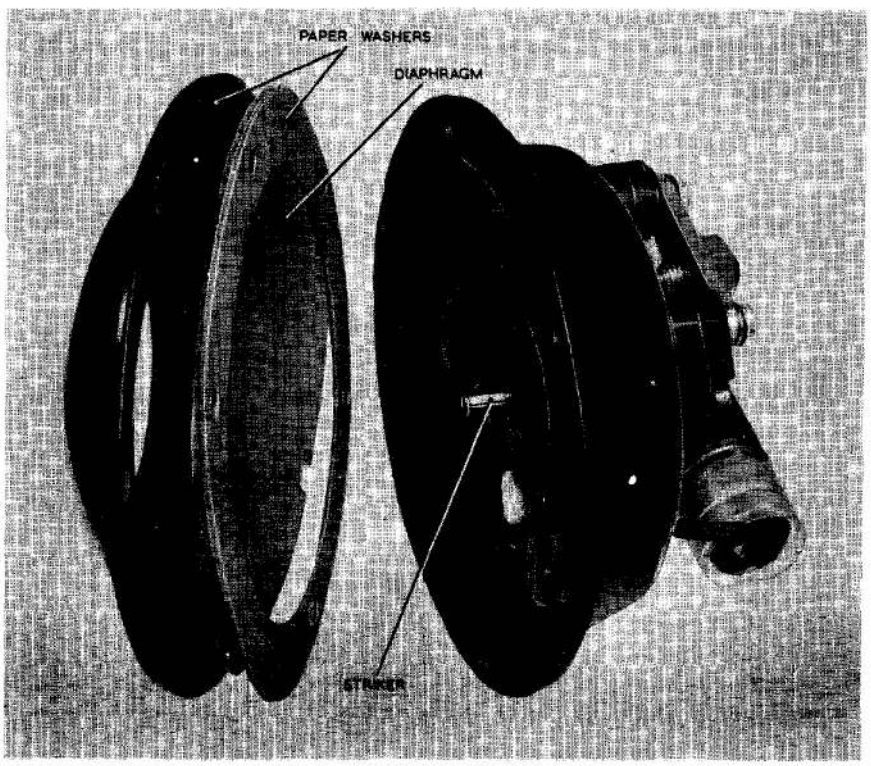

Fig. 2. Buzzer partially dismantled

3. Mounted on the rear of the body are the armature, the contact bridge, and a capacitor which is connected across the contacts. The armature is a circular steel plate to which are riveted the contact arm and the return spring. The contact arm and the return spring are anchored at one end by two 4BA screws and are insulated from each other, and from the armature, by Paxolin spacers. The striker, which screws through the armature, spring and contact-arm junction, is also insulated from the contact arm. The contact bridge is fitted across two moulded insulators, which also serve as terminal blocks to which external connection is made, and carries the stationary contact which is of tungsten-tipped brass and is adjustable through the contact bridge and is locked by a plain nut and a spring washer.

4. The circuit of the solenoid coil is completed through the contacts, and when the coil is energized the armature is attracted and breaks the contacts, thus de-energizing the coil so that the armature returns under the influence of the spring, closing the contacts in a continuously repeating cycle. The oscillating motion of the armature and striker vibrates the diaphragm causing the signal to be emitted.

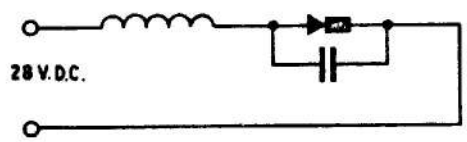

Fig. 3. Circuit diagram

SERVICING

5. The rear cover should be removed and the buzzer inspected for freedom from damage and corrosion. The contacts should be checked for pitting or burning and if necessary cleaned using contact cleaners or emery paper. After cleaning the contacts adjust as follows:-

Adjustment

6. (1) Slacken the locknut on the striker and screw back the striker until it clears the diaphragm. Lock in this position.
   (2) Slacken the locknut on the contact screw. Adjust the contact screw until the contacts meet and the armature vibrates when current is applied. Lock in this position.
   (3) Adjust the striker pin until it strikes the diaphragm and produces the best note when current is applied. Lock in position.
   (4) Re-adjust the contacts to see if the note can be improved still further. Lock in position and apply a small quantity of varnish to both lock-nuts.

Note...

If the note is affected by locking the contact screw (due to slight axial movement of slack in the thread being taken up) the contact screw should be turned slightly clockwise to compensate and re-locked.

Insulation resistance test

7. The insulation resistance of the buzzer should be measured using a 250 volt insulation resistance tester and the reading obtained should be not less than 5 megohm.