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EQUIPMENT

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WORKSHOP INSTRUCTIONS

ELECTRIC HORNS

MODELS HF1234 AND HF1235

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ELECTRIC HORNS

MODELS HF1234 AND HF1235

1. GENERAL

These horns are of the "high-frequency" type and give a high-pitched and penetrating note. The only difference between the two models lies in the finish : model HF 1234 has a chromium-plated front cover and model HF 1235 is all black. Horns are available for use on 6 volt, 12 volt and 24 volt systems.

The construction and method of operation of a high-frequency horn can be seen from Fig. 1. The vibrating armature is coupled to a flexible diaphragm and to a rigid tone disc. The impact of the armature on the pole face sets the diaphragm and tone disc into vibration, the diaphragm at a relatively low frequency (300 — 400 c/s) and the tone disc at a high frequency determined by its size and the rigidity of its material. These two sets of vibrations combine, together with their various "overtones", to give the horn its characteristic note.

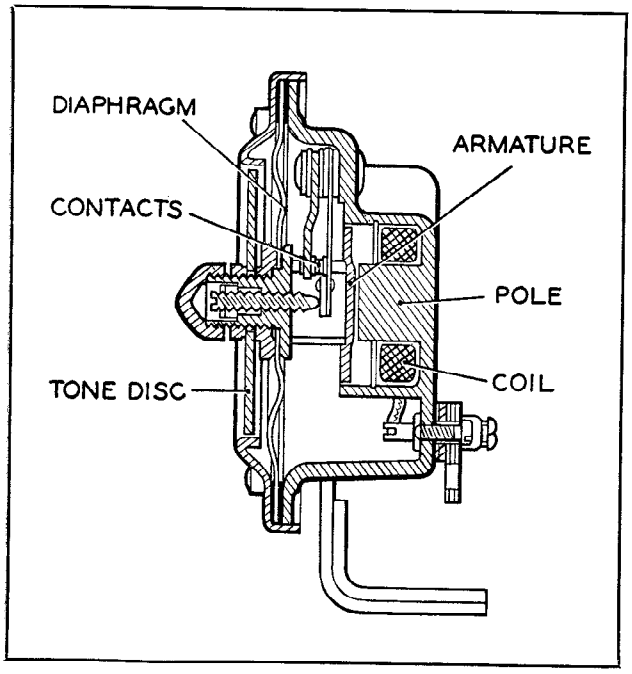

Fig. 1
Section of high frequency horn, to show construction

2. SERVICING

Note: Do not attempt to dismantle the horn. If, after carrying out the various tests given below, the horn still fails to operate satisfactorily, a new horn must be fitted.

(a) NOTE OF HORN UNSATISFACTORY, OR OPERATION INTERMITTENT

Check that the bolts securing the horn bracket are tight and that the body of the horn does not foul any other fixture. See that any units fitted near the horn are rigidly mounted and do not vibrate when the horn is blown.

Examine the cables of the horn circuit, renewing any that are badly worn or chafed. Ensure that all connections are tight, and that the connecting eyelets or nipples are firmly soldered to the cables.

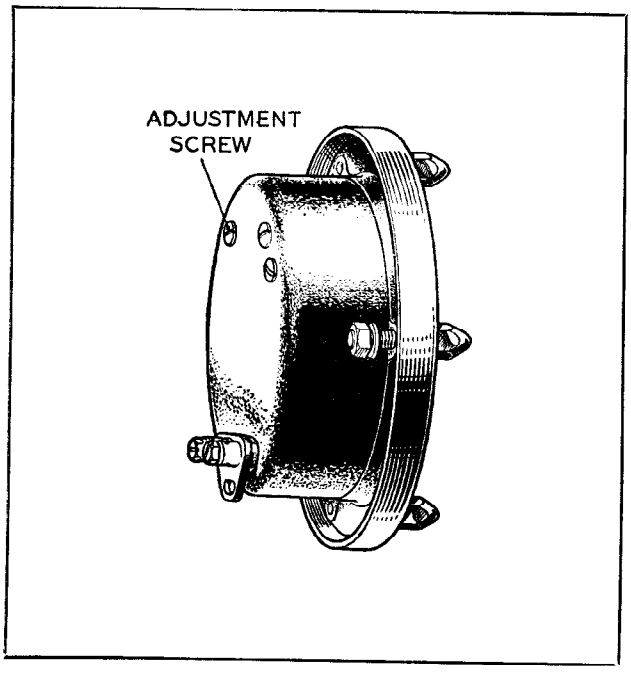

Fig. 2
Horn with adjustment screw

ADJUSTMENT

Certain horns are fitted with an adjustment screw at the back of the body, as shown in Fig. 2. The purpose of this adjustment is not to alter the note of the horn but to take up any wear of the moving parts: adjustment should not however be necessary during the normal life of the horn.

To make the adjustment break the horn circuit at some convenient point and connect an ammeter, 0 — 10 amps., in series with the horn. (The ammeter in the instrument panel, although it will show whether the horn is taking current, is not normally calibrated with the degree of accuracy required). The current consumption of the horn, in correct adjustment, is as follows :

6 volt horns : 2.5 — 3.5 amperes.

12 volt horns : 1.5 — 2.5 amperes.

24 volt horns : 1.2 — 1.8 amperes.

If the current consumption lies outside the quoted limits, it is necessary to adjust the horn. To do this turn the adjustment screw for not more than 3 notches, in a clockwise direction to increase the current and anticlockwise to decrease it. Check the current consumption again and if necessary repeat the adjustment.

(b) HORN FAILS TO OPERATE

Examine the fuse protecting the horn circuit. If it has blown, examine the wiring and horns for evidence of a short circuit. Check in the same way the wiring of any other circuit protected by the fuse. Renew any damaged leads, covering them with protective sleeving if necessary.

A blown fuse may also be caused by a horn which is badly out of adjustment and taking a greatly excessive current, or by an internal fault in the horn.

If the fuse is intact, check the wiring of the horn circuit for broken cables or loose connections.