



Fig. 10. Pole-shoe screwdriver

2. Unsolder the terminal blade and earthing eyelet.
3. Remove the insulation piece which is provided to prevent the junction of the field coils from contacting the yoke.
4. Mark the yoke and pole shoes so that the latter can be fitted in their original positions.
5. Unscrew the two pole shoe retaining screws by means of a pole-shoe screwdriver as shown in Fig. 10.
6. Draw the pole shoes and coils out of the yoke and lift off the coils.
7. Fit the new field coils over the pole shoes and place them in position inside the yoke. Take care to ensure that the taping of the field coils is not trapped between the pole shoes and the yoke.
8. Locate the pole shoes and field coils by lightly tightening the fixing screws.
9. Fully tighten the screws by means of the pole-shoe screwdriver.

10. Solder the terminal blade and earthing eyelet to the appropriate coil ends.
11. Refit the insulating sleeve and re-rivet the terminal assembly to the yoke.
12. Refit the insulation piece behind the junction of the two coils.

Bearings

Bearings which are worn to such an extent that they will allow side movement of the armature shaft must be renewed.

To renew the bearing bush in the commutator-end bracket, proceed as follows:—

1. Remove the old bearing bush from the end bracket. The bush can be withdrawn with a suitable extractor.
2. Withdraw and clean the felt retainer and the felt ring.
3. Insert the felt ring and felt ring retainer in the bearing housing, then press the new bearing bush into the end bracket, using a self extracting tool of the type and in the manner illustrated in Fig. 11, the fitting or mandrel portion being of .5924 in. (15.046 mm.) diameter and highly polished.

To withdraw the pin after pressing the bush fully home, turn the nut against the sleeve whilst gripping the squared end of the fitting pin.

Porous bronze bushes must not be reamed after fitting, or the porosity of the bush may be impaired.

Before fitting the new bearing bush, it should be allowed to stand for 24 hours completely immersed in engine oil; this will allow the pores of the bush to be filled with lubricant.

The procedure for renewing the ball bearing at the driving end is as follows:—

1. Drill out the rivets which secure the bearing retaining plate to the end bracket, and remove the plate (See Fig. 3).