

Fig. 4. Assembling end bracket and brushes to generator

**Brushgear (checking with yoke removed)**

1. Lift the brushes up into the brush boxes and secure them in that position by placing the brush springs against the sides of the brushes as shown in Fig. 4(A).
2. Fit the commutator-end bracket over the commutator and release the brushes.
3. Hold back each of the brush springs and move the brush by pulling gently on its flexible connector. If the movement is sluggish, remove the brush from its holder and ease its sides by lightly polishing on a smooth file. Always refit brushes in their original positions. If the brushes are badly worn, new brushes must be fitted and bedded to the commutator. The minimum permissible length of brush is  $\frac{9}{32}$  in. (7 mm.).
4. Test the brush spring pressures by means of a spring scale held radially to the commutator (See Fig. 5).

These pressures should be 30 oz. (.85 kg.) maximum when exerted on a new brush, and 13 oz. (.36 kg.) minimum on a brush worn to  $\frac{9}{32}$  in. (7 mm.). Both pressures should be measured and new springs fitted if the tension is low.

**Commutator (See Fig. 6)**

Whilst the C40 generator was designed to accommodate a commutator of moulded construction, production also includes machines having commutators of the fabricated type. Moulded commutators are recognisable by the exposed end which is quite smooth, unlike that of the fabricated type from which a metal roll-over and an insulating cone protrude.

Clean the commutator with a petrol-moistened cloth and inspect its surface. If the commutator is in good condition, the surface will be smooth and free from pits or burned spots. If pits or burned spots are in evidence, carefully polish with a strip of fine glass-paper while rotating the armature—never use emery paper.

If the foregoing procedure proves ineffective, the commutator should be re-skimmed.

*Moulded commutator*

A moulded commutator can be re-skimmed but not undercut during service. Care must be exercised to ensure that the finished diameter is not less than 1.43 in. (3.64 cm.). The process of re-skimming comprises rough turning and diamond turning—in that order.

Whether or not rough turning is carried out depends upon the severity and unevenness of wear which has taken place. If a moulded commutator cannot be completely cleaned-up without going below the specified diameter, the armature must be renewed.

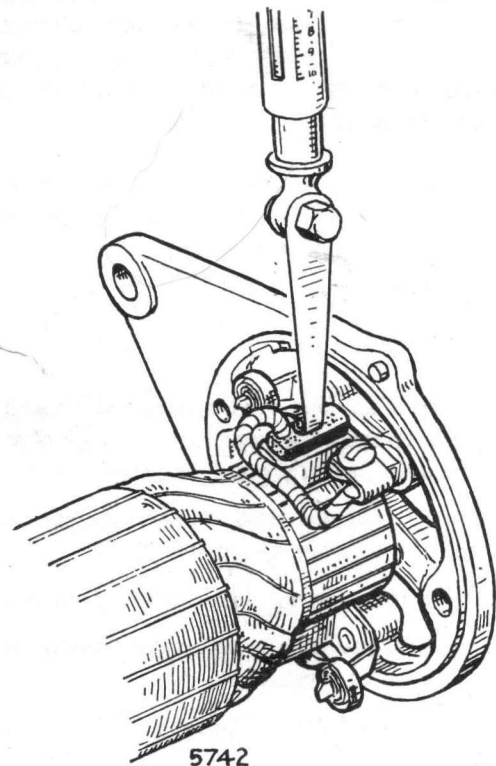


Fig. 5. Testing brush spring tension