

Maintenance Hints for Integral Starter

Job No.

15-3

When any work is done on the electrical part of an integral starter still installed in the engine, there is always the danger of short-circuiting. The ground cable should therefore always be disconnected from the negative pole of the battery before carrying out such work.

Carbon Brushes

The carbon brushes must be carefully examined to make sure of their serviceable condition. After removing the cover cap use a hook to lift the spring which presses the carbon brush onto the commutator (during this operation do not bend the spring sideways and do not lift more than necessary). Then check whether the carbon brushes can be easily moved in their guides in the brush holder (Figure 15-3/1).

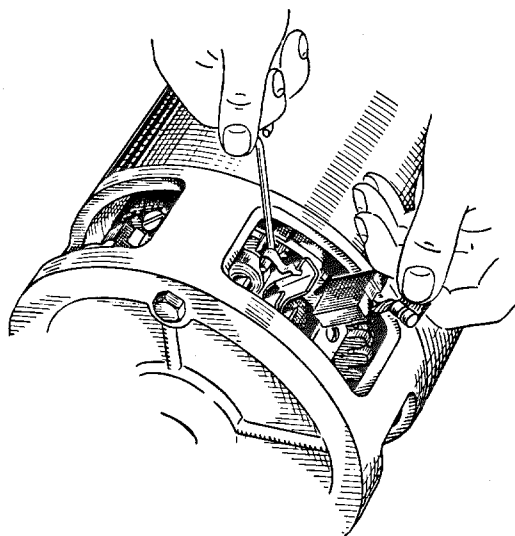


Figure 15-3/1

The carbon brushes and brush holders must be free of dust, oil, and grease. If they are fouled or sticking, they must be cleaned with a clean rag moistened with gasoline (do not use cotton waste which is too fuzzy) and dried thoroughly. Never use emery paper, knife or file on the bright contact surfaces of the carbon brushes. Then carefully blow out brush holders with compressed air. If a carbon brush is broken, has come unsoldered or is worn to the point where either the spring or the strand soldered into the brush is in danger of coming in contact with the brush holder, the brush must be replaced. Always replace the complete set of brushes and use only original carbon brushes! When installing the brushes make sure that the spring does not strike too hard against the brush.

Commutator

The surface of the commutator should be uniformly smooth and grey-black in color and should also be free of dust, oil and grease. Fouled commutators must be cleaned with a clean rag moistened with gasoline (not with cotton wool) and dried thoroughly. Scored and out-of-round commutators must be precision-tooled on a lathe (see Job No. 15-4). Under no circumstances should emery paper or a file be used on the commutator.

Lubrication

The two bearings of the starter are fitted with self-lubricating bushes (Kompo bushes) and must therefore not be lubricated. These bearings should not be treated with grease solvents.

The drive pinion and the starter ring gear should occasionally be cleaned with a brush dipped in fuel and greased again. Remove burrs from ring gear and pinion if necessary (see Job No.15-4).