

Servicing Hints for Starter, Installed in Vehicle

When any work is done on the electrical part of the installed starter, there is always a danger of short-circuits. Therefore, before any work is carried out at all, the ground cable should always be disconnected from the negative terminal of the battery.

Carbon Brushes

The carbon brushes must be carefully examined to ensure that they are in good condition. After removing the cover cap, a hook should be used to raise the spring which presses the carbon brush onto the collector (be careful when doing this not to push the spring to one side and not to raise it more than strictly necessary). Then check whether the carbon brushes can be easily moved in their guides in the brush holders (Fig. 15—3/1).

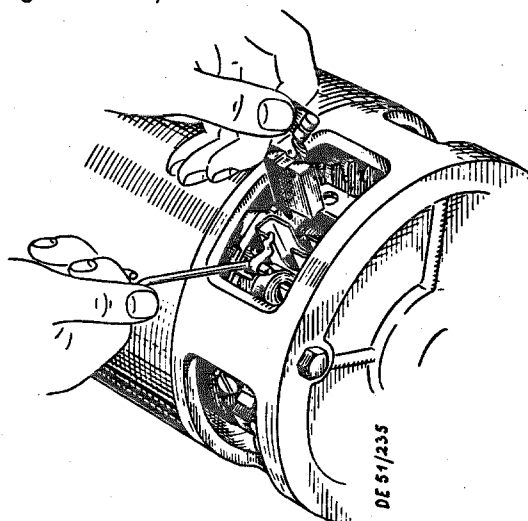


Fig. 15—3/1

The carbon brushes and brush holders must be free from dust, oil, and grease. If they are fouled or sticking, they must be cleaned with a clean gasoline-soaked rag (not with cotton waste which is too fuzzy) and thoroughly dried. Never use emery paper, a knife or a file on the contact surface of the brush. Then carefully blow out the 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 stranded wire soldered into the brush is in danger of touching the brush holder, it must be replaced. Always replace all carbon brushes and only use the specified type for replacement! When inserting the brush, care must be taken to ensure that the spring does not strike hard against the brush.

Collector

The surface of the collector should be uniformly smooth and grey-black in color; it must also be free from dust, oil, and grease. Fouled collectors should be cleaned with a clean gasoline-soaked rag (not with cotton waste) and thoroughly dried. Scored and out-of-round collectors must be re-conditioned by precision-turning (see Job No. 15—4). Under no circumstances must emery paper or a file be used on the collector.

Lubrication

Both bearings of the starter are fitted with self-lubricating bushes (Komo bushes) and therefore do not need to be lubricated. These bearings must not be treated with any cleaning compound containing grease solvent.

The drive pinion and the starter ring gear must be cleaned from time to time with a brush dipped in gasoline and re-greased. Remove any scorings on the ring gear and on the drive pinion (see Job No. 15—4).