

Job No.

15-4

## Disassembly and Reassembly of Starter

The carbon brush pressure should be **800–900 g** for all starters.

For the starters of Models 180 D, 180 Db, 190 D, and 190 Db the minimum permissible diameter of the commutator is

**39.5 mm**

and for the starters of all other models

**33.5 mm**

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## Electrical Testing of Starter

The testing procedures for the starter on Models 180 to 220 SE are the same as on Model 190.

### Test Values for Starter

| Model  | Starter<br>Bosch                   | Voltage | Current under<br>load (braked) | Speed     |
|--|------------------------------------|---------|--------------------------------|-----------|
|  |                                    | Volts   | Amp.                           | r.p.m.    |
| 180  | EDG 0.6/6 AR 22                    | 4.5     | 260—280                        | 675—100   |
| 180 D, 180 Db                                    | EJD 1.8/12 R 70                    | 9.0     | 320—340                        | 1100—1350 |
| 190 D, 190 Db                                    | EJD 1.8/12 R 88                    | 9.0     | 320—340                        | 1100—1350 |
| 190 SL   | EED 0.8/12 R 28<br>EED 0.8/12 R 31 | 10.5    | 160—180                        | 1050—1400 |
| 180 a, 180 b,<br>220 a, 219, 220 S<br>and 220 SE | EED 0.8/12 R 30                    | 10.5    | 160—180                        | 1050—1400 |

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## Trouble Shooting Hints for the Starter

The trouble shooting hints for the starter on Models 180 to 220 SE correspond to those described for Model 190.