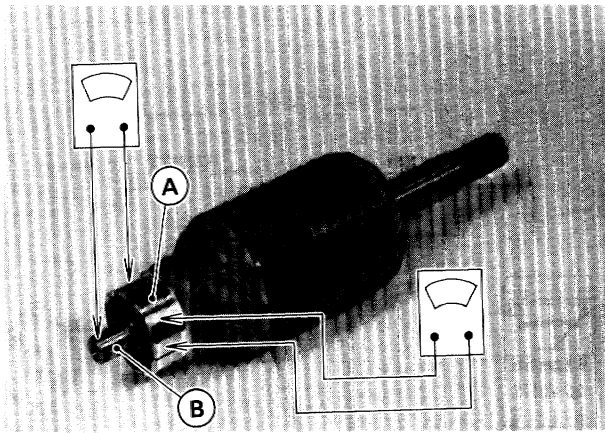


Commutator Diameter

Standard: 28 mm
Service Limit: 27 mm

Armature Inspection

- Using the x 1 Ω ohmmeter range, measure the resistance between any two commutator segments.
- ★ If there is a high resistance or no reading (∞) between any two segments, a winding is open and the starter motor must be replaced.



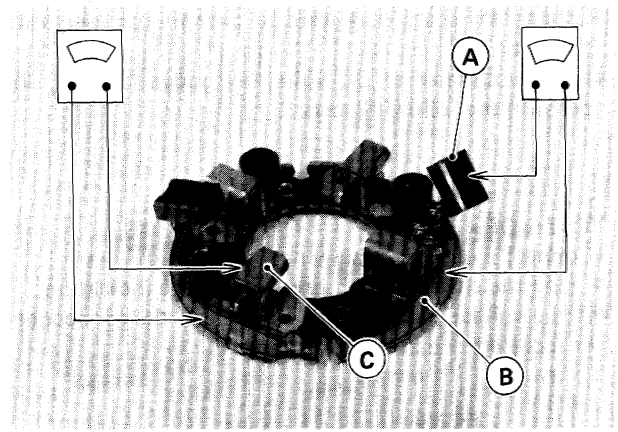
A. Segment B. Shaft

- Using the highest ohmmeter range, measure the resistance between the commutator and the shaft.
- ★ If there is any reading at all, the armature has a short and the starter motor must be replaced.

Even if the foregoing checks show the armature to be good, it may be defective in some manner not readily detectable with an ohmmeter. If all other starter motor and starter motor circuit components check good, but the starter motor still does not turn over or only turns over weakly, replace the starter motor with a new one.

Brush Plate Inspection

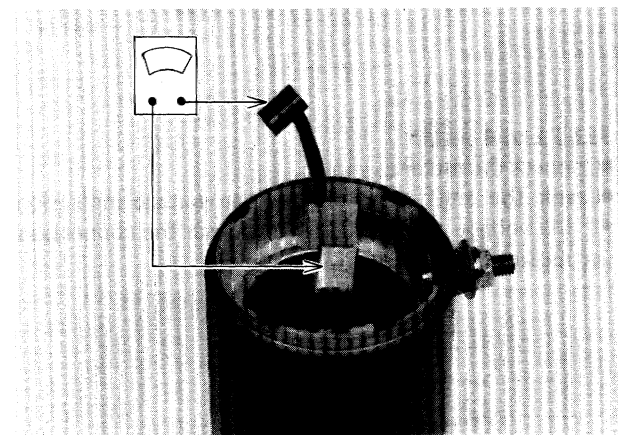
- Using the x 1 Ω ohmmeter range, measure the resistance between the brush and the brush plate.
- ★ If there is not close to zero ohms, the brush plate has an open and the brush plate must be replaced.
- Using the highest ohmmeter range, measure the resistance between the brush plate and the brush holders.
- ★ If there is any reading at all, the brush holder has a short and the brush plate must be replaced.



A. Brush C. Brush Holder
 B. Brush Plate

Brush and Lead Assembly Inspection

- Using the x 1 Ω ohmmeter range, measure the resistance between the brushes.
- ★ If there is a high resistance or no reading (∞), a lead is open and the brush and lead assembly must be replaced.



Starter Circuit Tests



- Do not operate the starter continuously for more than 15 seconds or the starter will overheat.
- After each 15 second operation, allow the starter to cool for 15 seconds.
- Never activate the starter while the engine is running. This will hasten wear.