

9. See Figure 5-18. Check for SHORTED ARMATURE with a growler.
 - a. Place armature on growler (1).
 - b. Hold a thin steel strip (2) (hacksaw blade) against armature core and slowly turn armature.
 - c. A shorted armature will cause the steel strip to vibrate and be attracted to the core. Replace shorted armatures.
10. See Figure 5-19. Check for a GROUNDED ARMATURE with an ohmmeter or continuity tester.
 - a. Touch one probe to any commutator segment (1).
 - b. Touch the other probe to the armature core (2).
 - c. There should be no continuity (infinite ohms). If there is continuity, then the armature is grounded. Replace grounded armatures.
11. See Figure 5-20. Check for OPEN ARMATURE with an ohmmeter or continuity tester.
 - a. Check for continuity between all commutator segments (1).
 - b. There should be continuity (0 ohms) at all test points. No continuity at any test point indicates armature is open and must be replaced.

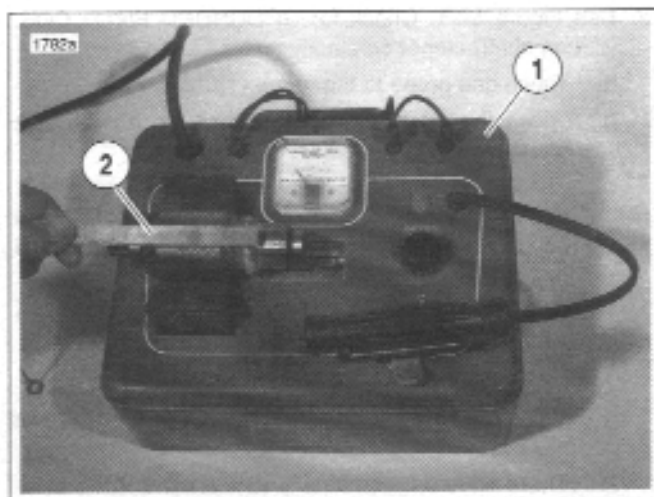


Figure 5-18. Shorted Armature Test Using Growler

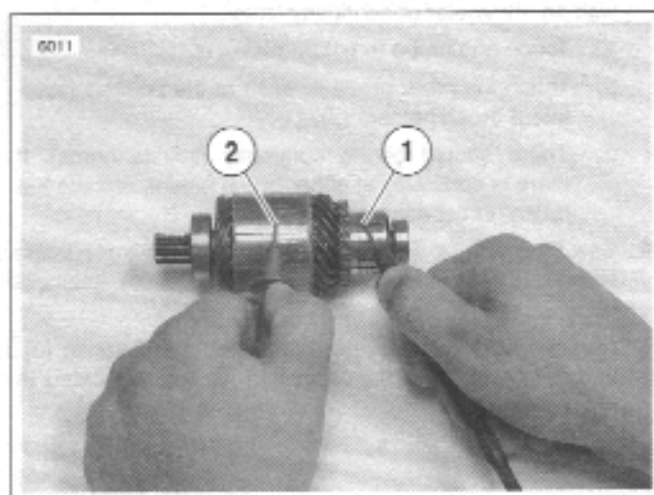


Figure 5-19. Grounded Armature Test

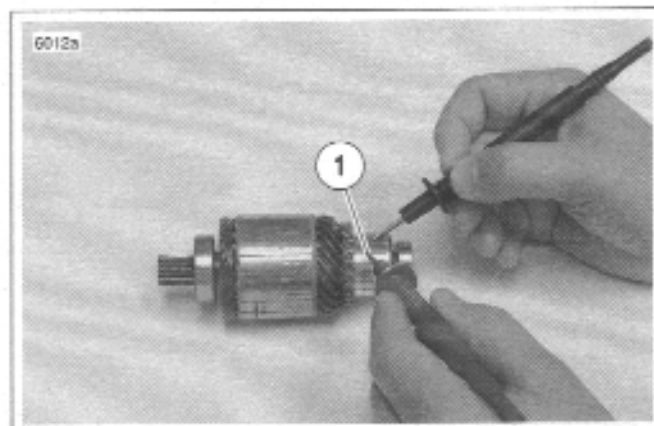


Figure 5-20. Open Armature Test

12. See Figure 5-21. Check for GROUNDING FIELD COIL with an ohmmeter or continuity tester.
 - a. Touch one probe to the frame (1).
 - b. Touch the other probe to each of the brushes (2) attached to the field coil.
 - c. There should be no continuity (infinite ohms). If there is any continuity at either brush, then the field coil(s) are grounded and the field frame must be replaced.
13. See Figure 5-22. Check for OPEN FIELD COILS with an ohmmeter or continuity tester.
 - a. Touch one probe to the field wire (1).
 - b. Touch the other probe to each of the brushes attached to the field coil(s) (2).
 - c. There should be continuity (0 ohms). If there is no continuity at either brush, then the field coil(s) are open and the field frame must be replaced.
14. See Figure 5-23. Test BRUSH HOLDER INSULATION with an ohmmeter or continuity tester.
 - a. Touch one probe to holder plate (1).
 - b. Touch the other probe to each of the positive (insulated) brush holders (2).
 - c. There should be no continuity (infinite ohms). If there is continuity at either brush holder, replace the brush holder assembly.
15. See Figure 5-24. Remove two drive housing mounting screws (6). Remove drive housing (5) from solenoid housing.
16. Remove drive (1), idler gear (2), idler gear bearing (3), and O-ring (4) from drive housing (O-ring is located in drive housing groove).

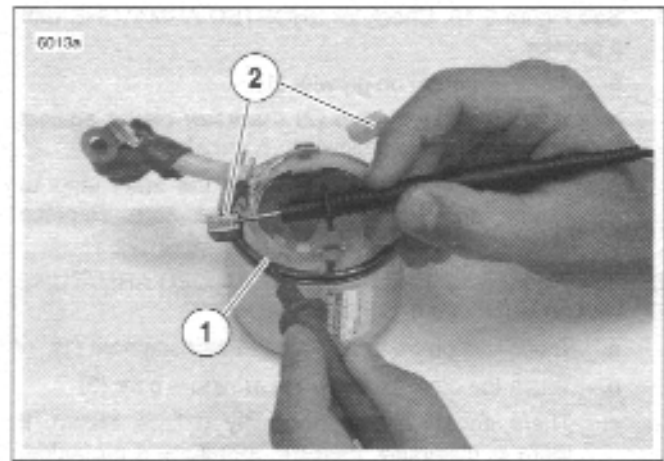


Figure 5-21. Grounded Field Test

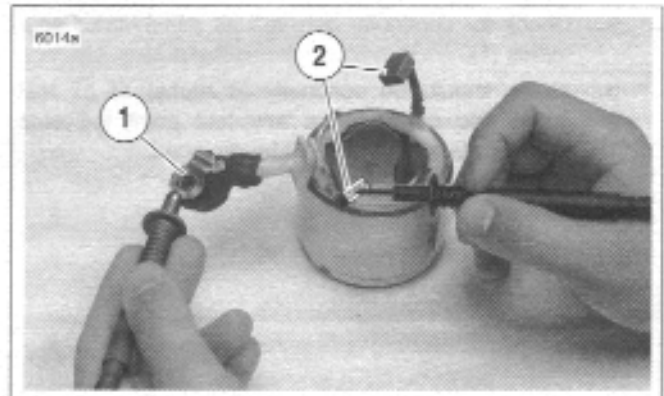


Figure 5-22. Open Field Test

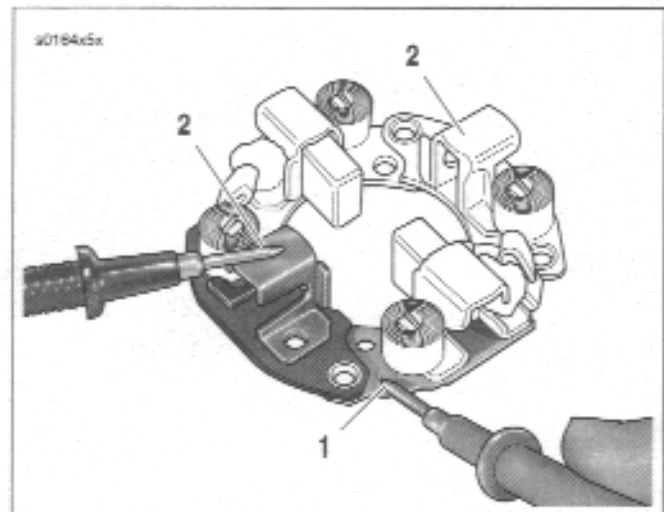


Figure 5-23. Brush Holder Insulation Test