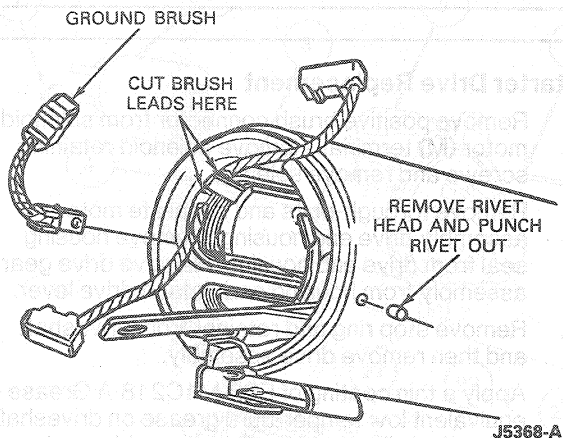
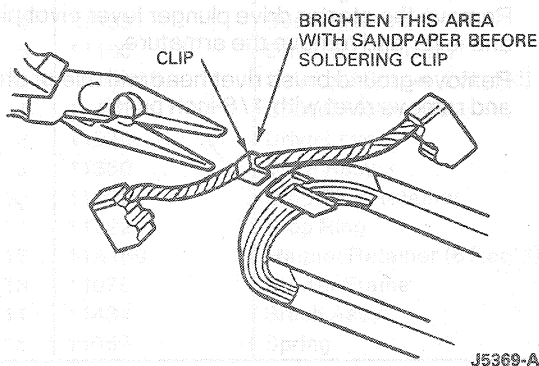


DISASSEMBLY AND ASSEMBLY (Continued)

9. Cut the brush leads from the field coils as close to the field connection point as possible.



10. Clean and inspect the starter motor.
11. Position the new field brush lead on the field coil connection. Position and crimp the clip provided with the brushes to hold the brush lead to the connection. Solder the lead clip and connection together using rosin core solder. Use a 300 watt iron.
12. Rivet the ground brush leads to the frame with rivets provided in the brush kit.
13. Clean the commutator with 00 or 000 sandpaper.
14. Install the armature in the starter frame.
15. Install the starter drive gear plunger lever to the frame and starter drive assembly and install the pivot pin.
16. Install brush holder and insert brushes in holder and install brush springs.
17. Install the brush end plate.
18. Install the two through bolts to the starter frame.
19. Install starter drive plunger lever cover and tighten retainer screw.
20. Connect the starter to a battery to check operation.



Armature Replacement

1. Remove positive brush connector from solenoid motor (M) terminal.
2. Remove through-bolts and separate motor from gear assembly and drive end housing.
3. Remove brush end plate screws, brush end plate and brush assembly from starter frame. Remove armature from frame.
4. Install new armature in frame. Apply a thin coating of ESF-M1C218-A Grease or equivalent low temperature grease on both ends of armature shaft and pinion.
5. Install brush assembly. Using tool, make sure that brushes fit over commutator. Push black grommet onto frame. Apply grease to bearing bore in brush end plate and attach to starter frame.
6. Position starter frame to gear assembly and drive end housing and install through-bolts. Tighten to 5-10 N·m (45-89 lb-in).
7. Attach positive brush connector to solenoid (bottom terminal). Tighten nut to 9-14 N·m (80-124 lb-in).
8. Check that starter no-load current draw is within specification. Refer to Bench Testing under Diagnosis and Testing.

Cleaning and Inspection

CAUTION: Do not wash the drive because the solvent will wash out the lubricant causing drive to slip. Use a brush or compressed air to clean the drive, armature, brush, and gear assemblies, drive end housing, pole pieces and planet gears. Wash all other parts in solvent and dry.

1. Inspect armature windings for broken or burned insulation and unwelded or open connections.
2. Check armature for open circuits, shorts and grounds. Check for pole rub or rub on magnetic shunts.