

DRIVE SHAFT ASSEMBLY INSTRUCTIONS FOR 29MT, 38MT & 39MT HD STARTING MOTORS

This kit contains parts to replace the Drive Shaft Assembly on a 29MT, 38MT or 39MT HD Starting Motor.

WARNING!!! ALWAYS USE PROPER EYE PROTECTION WHEN PERFORMING ANY MECHANICAL REPAIRS TO A VEHICLE – INCLUDING, BUT NOT LIMITED TO, ANY INSTALLATION AND OR REPAIRS TO THE DELCO REMY STARTING MOTORS. FAILURE TO USE PROPER EYE PROTECTION CAN LEAD TO SERIOUS AND PERMANENT EYE DAMAGE.

Only perform the mechanical functions that you are properly qualified to perform. Mechanical repairs that are beyond your technical capabilities should be handled by a professional installation specialist.

FOLLOW ENGINE AND/OR VEHICLE MANUFACTURER'S INSTRUCTIONS CAREFULLY WHEN REMOVING AND INSTALLING THE STARTER.

Starters may have a Magnetic Switch (Relay) directly attached, referred to as Integral Magnetic Switch (**IMS**), and the 39MT may also have a Jump Start Protection (**JSP**) Shield over the Solenoid terminals. **If this starter does not have either an IMS or JSP feature, ignore comments or instructions related to them.**

REMOVAL INSTRUCTIONS

DANGER!!! ALWAYS DISCONNECT BATTERY GROUND BEFORE REMOVING OR REPLACING CABLES AT THE STARTER. **FAILURE TO DISCONNECT THE BATTERY GROUND CABLE CAN LEAD TO SERIOUS INJURY.**

1. Remove vehicle leads connected to the Starter, noting their positions for reinstallation of Starter.
2. **39MT** -Remove JSP Shield, if it has this feature.
3. Remove the rest of leads connected to the Solenoid terminals, noting their positions for reassembly.
4. Remove the IMS (Relay), if it has this feature, and Starter Solenoid.
5. Dislodge the Pinion Stop, remove Retainer Ring, Pinion Stop, Pinion and Spring. Dispose of the Retainer Ring.

NOTICE! Cleanliness is extremely important, because any foreign particles getting into the gears or bearings will shorten the intended life of the Starter.

6. Remove the Frame assembly, Commutator End Cap and Armature assembly as a unit.

Important! It is critical to observe orientation of parts for reassembly, especially the Lever and Lever assembly.

7. Remove Frame Alignment Pin, Shield, Damper (38MT & 39MT), Ball Bearing (29MT), Rubber Plug (2 pieces on older starters) and four (4) Planetary Gears. Save only the Alignment Pin and Rubber Plug for reuse.
8. Remove Lever and Drive Shaft Assemblies. Dispose of the Drive Shaft assembly and save Lever assembly for reuse.

INSTALLATION INSTRUCTIONS

1. Replace Drive Shaft assembly and Apply "Aeroshell (R) Grease 7" or equivalent between pinion and output shaft spline, on the sealing lips and the output shaft sliding area.
2. Install Lever and Drive Shaft assemblies, ensuring Drive Shaft and Housing alignment Locators are matched.
3. Apply three (3) grams of "Aeroshell (R) Grease 7" or equivalent in each of the four (4) areas between the planetary gears.
4. Install Damper (38MT & 39MT), Ball Bearing (29MT), four (4) Gears, Rubber Plug, Shield and Alignment Pin.
5. Reinstall Frame assembly, Commutator End Cap and Armature, as removed. Apply Loctite to the Thru-bolts threads, install and torque bolts to **7.7-9.8 Nm (68-87 lb in)**.
6. Reassemble Spring, Pinion, Pinion Stop and new Retainer Ring.
7. Force Pinion Stop over the Retainer Ring. **NOTICE!** Ensure the Stop and Retainer are securely locked together.
8. Reinstall Starter Solenoid and torque the Mounting Bolts to **7.7-9.8 Nm (68-87 lb in)**.
9. Reinstall IMS, if it has this feature, and torque the Mounting Bolts to **7.7-9.8 Nm (68-87 lb in)**.
10. **39MT** -Reconnect lead or leads, as removed, to the Solenoid Ground (-) terminal and torque the nut, or screw, to **2.0-2.5 Nm (18-22 lb in)**. Secure the Solenoid Ground lead to Solenoid with a wire tie, if it has the JSP feature.
11. Reconnect lead, as removed, to Solenoid Switch (+) terminal and torque nut to **2.0-2.5 Nm (18-22 lb in)**.
12. **39MT** -Replace JSP Shield, if it has this feature and torque shield nut to **2.0-2.5 Nm (18-22 lb ft)**.
13. Reconnect Battery Positive (+) cable and other leads, as removed, to Solenoid Battery (+) terminal and torque nut assembly to **24.5-27.5 Nm (18-20 lb ft)**.
14. Reconnect lead to IMS (Relay) Switch terminal, if it has this feature, and torque screw to **1.9-2.4 Nm (17-21 lb in)**.
15. Reattach Battery Negative (-) cable, as removed, to Starter Ground (-) terminal and torque nut assembly to **24.5-27.5 Nm (18-20 lb ft)**.
16. Reconnect the Negative (-) cable at the Battery

CONTENTS: **29MT** 1–Drive Shaft Assembly 4–Gears 1–Ball 1–Shield 1–Pin 1–Ring 1–Instruction Sheet
 38MT & 39MT 1–Drive Shaft Assembly 4–Gears 1–Damper 1–Shield 1–Pin 1–Ring 1–Instruction Sheet

WARNING- Be aware that only licensed Delco Remy product and component parts should be used and the use of other parts or modifications not approved by Delco Remy will void any warranty concerning, but not limited to, product performance or reliability. The failure to carefully follow Installation Package guidelines set forth above will likewise void any and all warranty, **including the implied warranties of merchantability and fitness for a particular purpose.** Delco Remy® is a registered trademark of General Motors Corporation, licensed to Remy Inc., Anderson, IN 46013.