PRESTOLITE

DESCRIPTION

Enclosed shift lever type, having an extruded frame, four poles and a compound field. Solenoid is flange mounted onto drive end housing. Shift lever return spring is compression type and is located inside solenoid case.

PERFORMANCE TESTS

Free Running (No Load) Test – Connect an ammeter and carbon pile rheostat in series with battery to solenoid "BAT" terminal, connect other battery terminal to starter frame, connect voltmeter from solenoid "BAT" terminal to ground on starter frame. Energize starter by connecting jumper between solenoid battery and switch terminals on solenoid. Adjust rheostat for specified voltage reading on voltmeter and note ammeter and tachometer readings. Current draw and starter RPM should be as specified. *See Specifications*

Lock Test – With ammeter and voltmeter connected as for Free Running Test, lock armature so it cannot turn. Adjust rheostat for specified voltage. Current draw should be as specified. *See Specifications.*

SPECIFICATIONS

Brush Spring Tension – 35 ozs. minimum.
Rotation – Clockwise at pinion end.
Armature Endplay – .005-.030".
Pinion Clearance – .025-.235" between pinion and pinion stop with pinion in engaged position.

OVERHAUL

DISASSEMBLY

1) Remove link cover boot and disconnect solenoid link from shift lever. Disconnect solenoid by removing motor terminal nut and two solenoid retaining bolts.

2) Remove two through bolts at commutator end head, remove end head and field frame assembly. Take out shift lever pivot pin, remove shift lever and boot. Remove armature and drive assembly from drive housing. Remove thrust washers from end of armature shaft.

3) To remove drive assembly from armature shaft, install suitable tool over armature shaft against pinion stop retainer, tap retainer towards armature to uncover snap ring, remove snap ring from shaft groove and slide retainer and drive assembly off armature shaft.

CLEANING

Clean all parts except drive clutch with soft brush and mineral spirits, wipe with clean cloth. *CAUTION – Do not immerse parts in grease dissolving solvent which would damage insulation and wash out lubricant in clutch.*

PARTS REPLACEMENT & TESTING

Armature – Check armature for shorted coils with a growler. Check for grounded coils with a 110 volt test lamp. Place one test lead on armature core or shaft and other test lead on commutator. If lamp lights, armature is grounded and should be replaced. Inspect commutator. If commutator worn, out-of-round, or has high insulation, turn commutator down in a lathe, undercut insulation 1/32" deep and square across entire width, sand commutator lightly with 00 sandpaper and clean out slots carefully.

Field Coils – Check with 110 volt test lamp. The shunt field coil terminal must be disconnected from ground and lead insulated from frame. Place one test lamp lead on field connector strap, touch other test lead to field frame. If lamp lights, one or more coils are grounded. Check for opens by placing one test lead to field connector strap, touch other test lead to field coil brush connector leads (check series coils and shunt coil seperately at appropriate terminals). If lamp does not light, coils are open.

Brushes & Springs – Replace brushes if oil-soaked or worn more than 1/2 length of new brush. Check brush spring tension with spring scale hooked under brush screw. Replace springs if weak or distorted.

Drive & Pinion Assembly – Pinion should turn freely in overrun direction and should not slip in drive direction. Replace drive assembly if pinion teeth worn or chipped.

Armature Shaft Bushings – Inspect armature shaft bearing surfaces and check for wear, noting sideplay with shaft inserted in bushings. Replace bushings as necessary.

REASSEMBLY

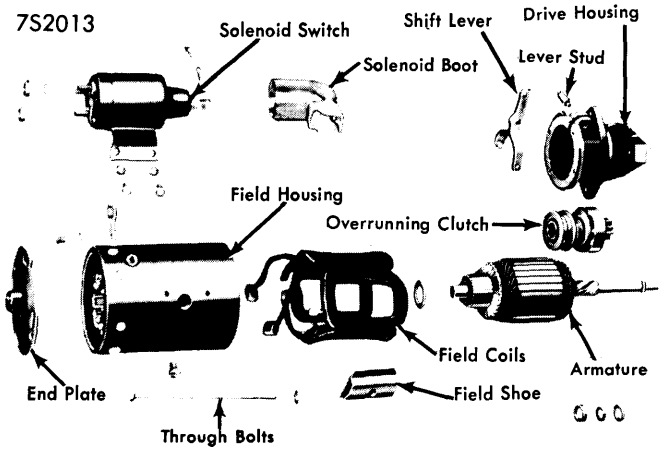
1) Lubricate armature shaft drive end and splines with Lubriplate or equivalent, install drive assembly on shaft. Install snap ring retainer on shaft (cupped side toward end of shaft), install snap ring in shaft groove, install thrust collar on shaft with shoulder toward snap ring. Seat retainer over snap ring by using two pliers at opposite points to squeeze retainer and thrust collar together against snap ring.

2) Apply film of lubricant on drive shift collar and apply 4-5 drops SAE 20 oil to drive housing bushing. Hold shift lever in engagement with drive shift collar and install armature and drive assembly and shift lever in drive end housing. Install shift lever pin.

3) Saturate felt washer in commutator end head with SAE 20 oil (drain excess oil before installing). Make certain thrust washers in place on armature shaft, install commutator end head and through bolts, tighten through bolts securely. Check armature endplay. If not with specifications, add or remove thrust washers on end of armature shaft at commutator end head.

4) Install solenoid on starter field frame, install boot and connect solenoid link to shift lever. Make certain boot fits properly at solenoid and starter frame.

5) Check pinion clearance (see Starter Control section).



PRESTOLITE STARTER ASSEMBLY

PRESTOLITE (Cont.)

STARTER PERFORMANCE SPECIFICATIONS					
Model	No Load Test ①		Lock Test		
	Amps.	RPM	Amps.	Volts	Torque
MDY-6112	4000	80	405	4.0	9.0
MDY-6113	4000	80	405	4.0	9.0
MDY-7021	4200	60	405	4.0	9.0
MDY-8101A	4200	60	405	4.0	9.0
MDY-8102A	4200	60	405	4.0	9.0
MDU-7003	5300	50	295	4.0	6.2
MDU-7004	5300	50	295	4.0	6.2

① — At 10 volts.