

# Starters

## DUCELLIER & PARIS RHONE

Peugeot  
Renault

### DESCRIPTION

Starter is a 12-volt, four-pole unit of conventional design. Solenoid assembly is mounted on starter case. Starters have a overrunning clutch (pinion-free wheel assembly) connected by a shift lever to the solenoid plunger.

### APPLICATION

Application <sup>①</sup>	Ducillier No.	Paris Rhone No.
Peugeot 604		
LHD .....	6237 .....	D9 E14
RHD .....	6238 .....	D9 E15
Renault		
R-5 .....		D8 E121
R-12 .....		D10 E64
R17 GTL .....		D10 E64
R-17 Gordini .....		D10 E65

① - Specifications for Peugeot 504 and Diesel are not available at this time.

### TESTING

#### PERFORMANCE TEST

**Lock Test** - To perform lock test, follow instructions and procedures outlined in instruction manual furnished with tester. Use a fully charged battery and carry out the test at a temperature of 77°F. Ammeter reading and starter torque should be within limits (see specifications).

#### LOCK TEST SPECIFICATIONS

Starter No.①	Amps.	Torque (Ft. Lbs.)
6237, 6238 .....	440 .....	10.8
D9 E14, D9 E15 .....	450 .....	11.6
D8 E121 .....	400 .....	9

① - Specifications not available for part numbers not shown.

### OVERHAUL

#### DISASSEMBLY

- 1) Remove two nuts on through bolts. Remove the rear shield.
- 2) Lift out brushes and retaining shaft for connecting fork between the solenoid and pinion. Remove bolts securing solenoid and remove solenoid.
- 3) Remove the body and armature.

#### PARTS REPLACEMENT & TESTING

**Brushes** - Inspect brush length and if less than  $\frac{5}{16}$ " on Paris Rhone models or  $\frac{1}{4}$ " on Ducellier models, replace the brushes.

**Commutator** - If commutator surface is scored, rough or burnt, dress with a lathe just enough to remove defective area and polish with a strip of fine emery paper. Check insulation undercut depth and it must be .02" deep.

**Armature** - Check armature for open, shorted or grounded circuits. Inspect armature shaft for bend; if bend is excessive replace armature. **NOTE** - Do not attempt to straighten a bent shaft.

**Bearings** - Inspect bearings for excessive wear and clearance between armature shaft and bearing. Replace as necessary.

**Pinion-Free Wheel Assembly** - If it is necessary to change the pinion assembly, remove the stop collar, slide assembly off and replace with a new pinion assembly. Reinstall stop collar and snap ring.

#### REASSEMBLY

Clean all parts and coat the sliding surface of armature shaft, splines, and bushings with multipurpose grease. Reassemble in the reverse order of disassembly while noting the following:

- 1) After completing reassembly, disconnect the field terminal from solenoid. Connect solenoid to battery and measure clearance of pinion gear to stop collar. Clearance should be .02-.099".
- 2) If clearance is not within limits, adjust by screwing the plunger fork or adjusting screw in or out to change clearance. Solenoid must be removed to adjust plunger fork (if equipped).

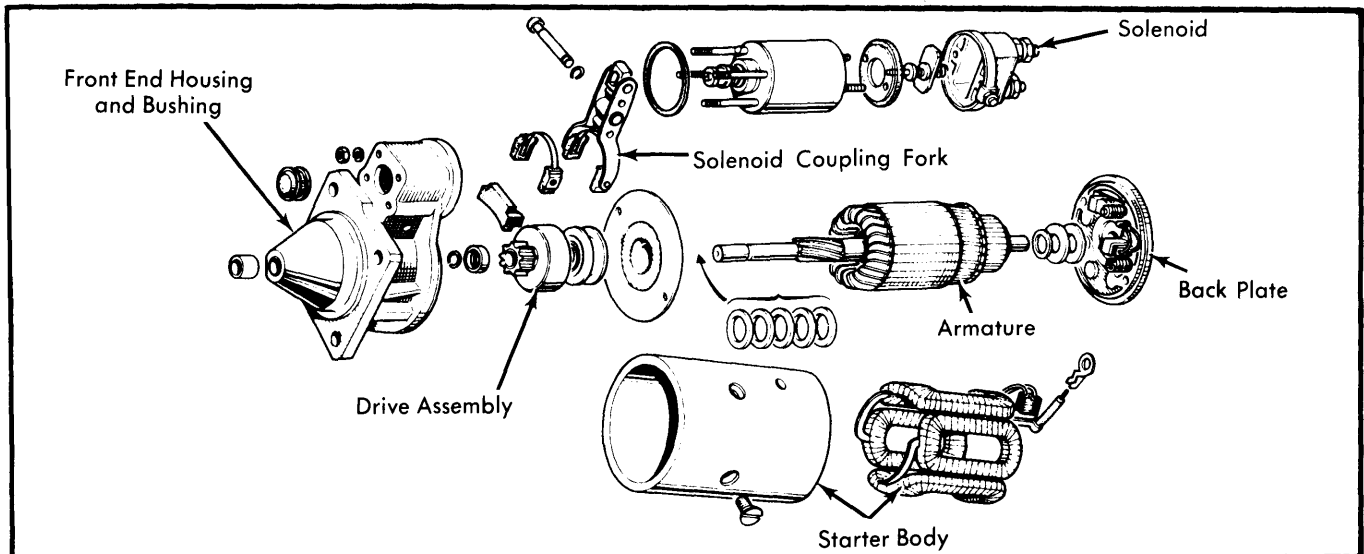


Fig. 1 Disassembled View of Paris Rhone Starter