

## FIAT

**Brava  
Spider 2000**

**NOTE** — Other Fiat models use Bosch starters.

### DESCRIPTION

Fiat starter is a 12 volt, brush type, 4-pole system with field windings in series. Integral solenoid is mounted on starter housing and causes starter pinion to engage flywheel ring gear when starter is energized. Overrunning clutch pinion drive is mounted directly on drive end of armature shaft.

### APPLICATION

Model	Fiat No.
Brava & Spider 2000 .....	E 100-1.3/12

### TESTING

#### PERFORMANCE TESTS

Mount starter in test stand and perform running test, no load test and stall (lock) test. Starter should develop 31.7-35.1 INCH lbs. (3.6-4.0 N.m) torque while drawing 280 amps and 9.5 volts at 1500-1700 RPM. At 12 volts and 28 amps under no load conditions, armature speed should be 4700-5700 RPM. Stall torque test should produce 143-159 INCH lbs. (16.15-18.05 N.m) torque at 12 volts and 28 or less amps.

### OVERHAUL

#### DISASSEMBLY

1) With metal band (dust cover) removed from commutator end frame, disconnect solenoid terminal lead and remove nuts from solenoid mounting bolts. Remove solenoid. Remove nuts from through bolts and slide off end frame while holding brushes off of commutator.

2) Remove pinion end frame while disengaging shifter fork from overrunning clutch. If pinion drive assembly is to be removed, slide back stop ring and remove lock ring from armature shaft. Remove overrunning clutch/pinion drive assembly.

### CLEANING

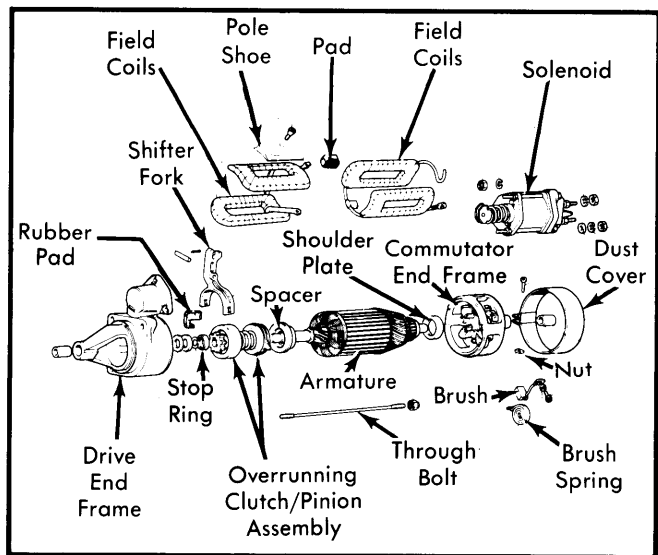
Use dry compressed air to blow dirt and worn brush dust from starter. Do not immerse starter components in solvent. Use brush dipped in cleaning solvent to clean drive unit, then blow dry with air.

### PARTS REPLACEMENT

To replace field coils, mount starter frame in press-type screwdriver stand and remove pole piece attaching screws. Remove pole pieces and field coils. Heat replacement field coils to about 128°F in order to obtain added flexibility and ease in installation. Install pole shoes and tighten screws. Inner diameter of pole shoes should be 2.675-2.677" (67.95-68.00 mm) to assure proper air gap between armature and shoes.

### REASSEMBLY

Lubricate inner splined face of drive assembly with SAE 10 motor oil before installing drive on armature shaft. Reverse disassembly procedure to complete overhaul.



**Fig. 1 Disassembled View of Fiat Starter Motor**