

STARTER - BOSCH

Article Text

1987 Volkswagen Quantum/Quantum Syncro

For Volkswagen Technical Site

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Sunday, March 19, 2000 01:52AM

ARTICLE BEGINNING

1987 Starters

BOSCH

Volkswagen

DESCRIPTION

Starter is a brush type, series wound electric motor with an overrunning clutch. Field frame is enclosed by commutator end frame and drive bushing and carries pole shoes and field coils. A spline armature shaft drive end carries drive assembly. Armature shaft is supported at both ends by sintered bronze bushings.

TROUBLE SHOOTING

STARTER DOES NOT CRANK ENGINE

1) Ensure battery is fully charged. Make sure electrical and ground connections are clean and tight. With ignition switch in crank position, measure voltage at spade terminal of starter solenoid. If reading is at least 8 volts (9.5 on Fox), go to step 3).

2) If not, measure voltage at ignition switch. If reading is at least 8 (9.5 on Fox) volts, check wiring between ignition switch and starter solenoid. If not, replace ignition switch.

3) Measure voltage at field (starter) terminal of starter solenoid. If reading is at least 8 volts, repair or replace starter. If not, replace starter solenoid.

NOTE: On vehicles with automatic transmissions, also check park/neutral switch.

STARTER TURNS TOO SLOWLY

Ensure engine crankcase is filled with recommended viscosity oil. Check charging system to ensure battery is fully charged. Make sure electrical and ground connections are clean and tight. If starter still turns slowly, repair or replace starter.

TESTING

STARTER LOAD (LOCK) TEST

With starter on test bench, lock starter drive pinion. Voltmeter and ammeter readings should be within specification.

STARTER NO LOAD TEST

With starter on test bench, operate starter and check ammeter, voltage, and RPM. Readings should be within specification.

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REMOVAL & INSTALLATION

NOTE: Only difficult starter removal and installation procedures are covered in this article.

VOLKSWAGEN

Fox

Disconnect negative battery cable. Support engine/transmission assembly with Support Beam (VW 10-222). Remove engine mount bolts, nut, and clamp screw (next to exhaust manifold flange). Remove engine mount. Disconnect wiring and remove starter. To install, reverse removal procedure.

OVERHAUL

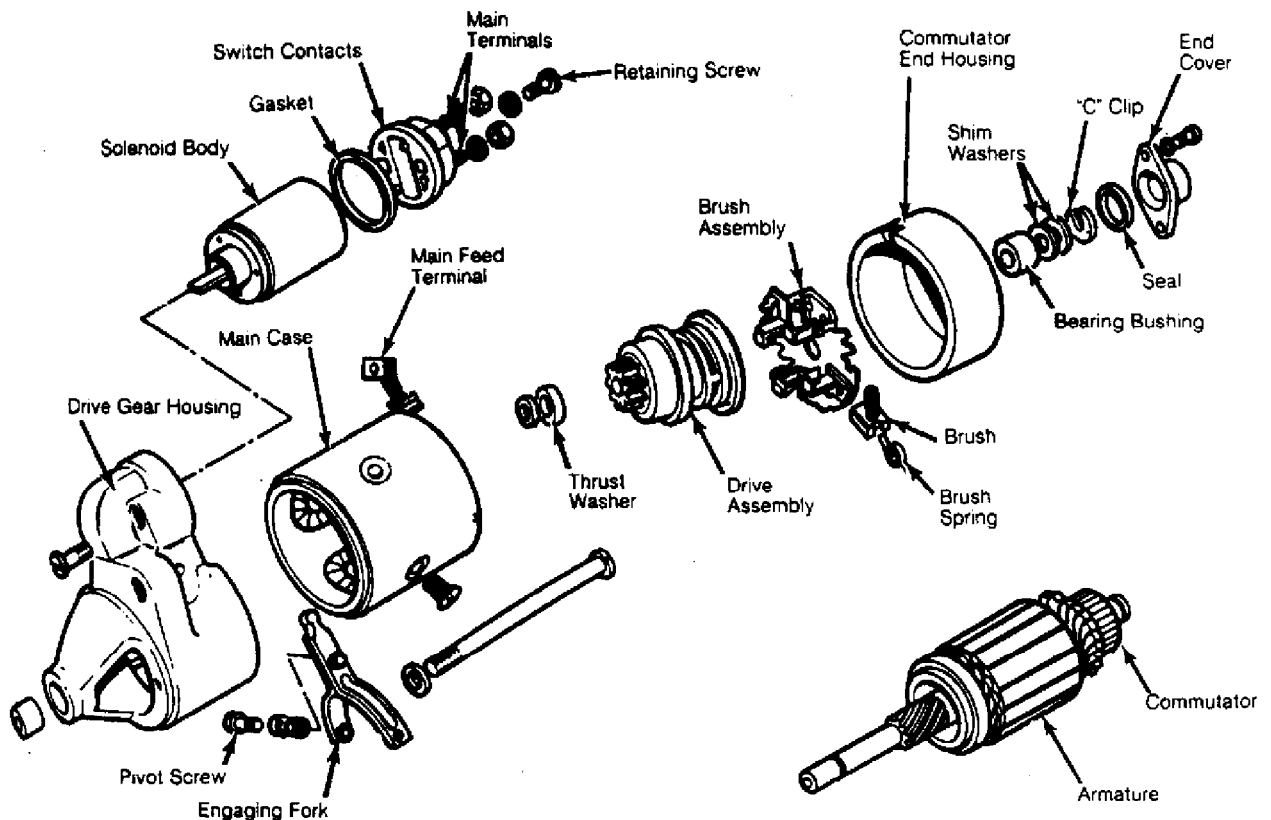


Fig. 1: Exploded View of Typical Bosch Starter

END OF ARTICLE