

MAINTENANCE

Check the starter fixing bolts for tightness.

Check the cleanliness and tightness of the terminal on the starter, the terminals on the starter solenoid, and the bolts securing the battery earth cable to the body and engine.

At major engine overhaul the starter motor should be dismantled for examination, and the brushes and bushes renewed.

TESTING THE STARTER MOTOR AND CIRCUIT

If a fault is found at any stage it must be corrected before going on with the tests.

1. Battery voltage

Connect a voltmeter to the battery terminals. Fig. 48. Disconnect the wire from the negative (-) terminal of the ignition coil.

Operate the starter control for about six seconds and note the voltmeter reading.

If it is less than 9.0 volts check the specific gravity of the electrolyte in the battery cells (see Section N, Battery) and recharge if necessary.

If the battery is proved serviceable the starter motor is taking too much current.

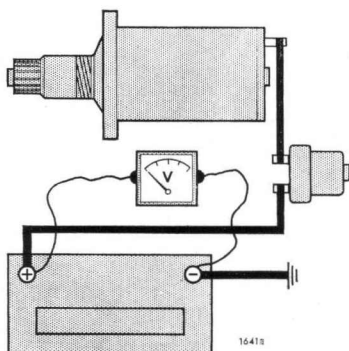


Fig. 48. Connections for battery voltage check

Check that the starter drive is not jammed into the flywheel by turning the squared end of the starter shaft clockwise with a spanner.

If the starter drive has jammed remove the starter to examine the drive mechanism, shaft and pinion.

Check that the engine is free to turn, and has the correct grade of oil. If this is in order remove the starter motor for bench test.

2. Starter motor voltage

If the battery voltage is 9.0 volts or more in test 1, connect the voltmeter to the terminal on the starter and to the starter commutator end bracket. Fig. 49.

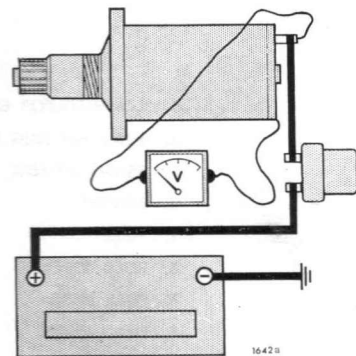


Fig. 49. Connections for starter motor voltage check

Operate the starter control for about six seconds and note the voltmeter reading. The difference between the reading on this test and the reading on test 1 should not be more than 0.5 volt.

If the readings of tests 1 and 2 are above 9.0 volts, and within 0.5 volt difference, but the starter is not turning the engine at the correct speed, the starter is faulty and should be removed for bench test or overhaul.

If the difference in readings exceeds 0.5 volt there is excessive resistance in the starter circuit terminals, switch or cables that can be located by the voltage drop tests 3 and 4.