

# 15.1

## Testing the Starting Motor

M 117

### Test Values of Starting Motor

Bosch Designation GF 12 V 1.4 HP

Test (starting motor removed)	Current (Amps.)	Voltage (Volt)	Speed (rpm)
Idling speed test	50–70	12	9,000–11,000
Load test	290–330	9	1,600–1,800
Short circuit test	600–650	6	—
Minimum draw-in voltage on solenoid switch at 20°	—	8	—

The electrical test values depend on the capacity and the state of charge of the battery. In addition, the duration of the test is of some importance (heating of starting motor, discharging of battery).

For this reason, the test period should be as short as possible. The batteries installed in the test bench should be in perfect condition and charged well (battery capacity 135 Ah). Test at ambient temperature (approx. 20°C.)

On a faulty starting motor the measured electrical values deviate considerably from the test values.

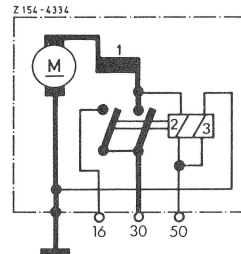


Fig. 1

Wiring diagram 1.4 HP starting motor with terminal 16

- 1 Field winding
- 2 Draw-in winding
- 3 Holding winding