

in vehicle

M 117

Test Values

Alternator

Bosch Designation	Load current Amps.	at	Alternator speed rpm
K1 (RL) 14 V 55 A 20	10		1,200
	36		2,000
	55		6,000

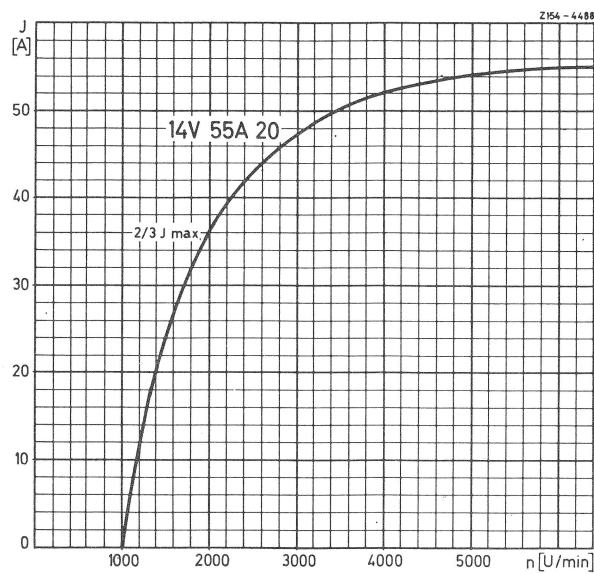


Fig. 1

Current characteristic

Ratio i	Crankshaft	: Alternator shaft
	1	: 2.2

Single Element Voltage Regulator for Alternator

Bosch-Designation	Regulating Voltage Volt	Load current Amps.
RS/AD 1/14 V (suppressed)	13.9–14.8	28–30
RS/AD 1/14 V (not suppressed)	13.9–14.8	28–30

15.1 Testing of Alternator and Regulator

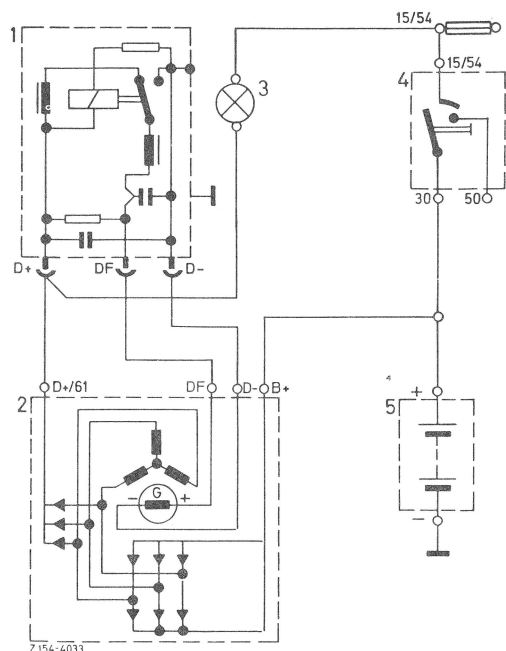


Fig. 2

Wiring diagram

- | | |
|-------------------------|---------------------------|
| 1 Voltage regulator | 4 Ignition starter switch |
| 2 Alternator | 5 Battery |
| 3 Charging control lamp | |

Notes

In energized condition, the alternator may be operated only with the regulator switch and the battery connected.

As long as the motor is running, neither the pole terminals of the battery, the supply cable on the alternator, nor the plug of the regulator may be removed to avoid the risk of destroying the diodes by inductive voltage peaks.

Initial excitation is assured, when the 2-Watt-charging control lamp in the instrument cluster lights up.

The voltage test used on vehicles with DC generator which consists of quickly holding the line against mass (ground connection) is not permitted on vehicles provided with an alternator.

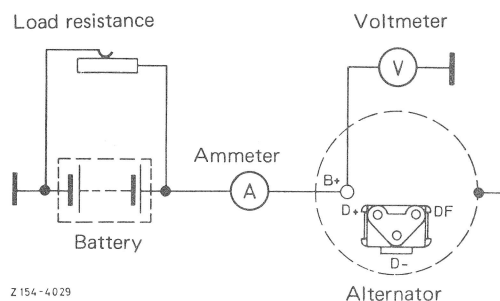


Fig. 3

Testing the Voltage Regulator

Disconnect ground connection on battery.

Connect voltmeter with a measuring range up to 16 Volt to terminal B + and to ground connection of alternator.

Disconnect red cable on connection B + of alternator and connect an ammeter with a measuring range up to 60 Amps. to charging line.

Connect ground cable of battery and a controllable resistance which permits a load up to 55 Amps. (for example SUN VAT 28 or Bosch EFAW 107 A) to plus and minus connection of battery.

Start engine, increase speed to 2,000 to 3,000 rpm and keep constant.

Adjust current on load resistance while simultaneously reading regulating voltage on voltmeter.