

DC coupling load test.

Example with the engine running and the headlamps and heated rear screen:

2 x headlamps at 60watts 120watts

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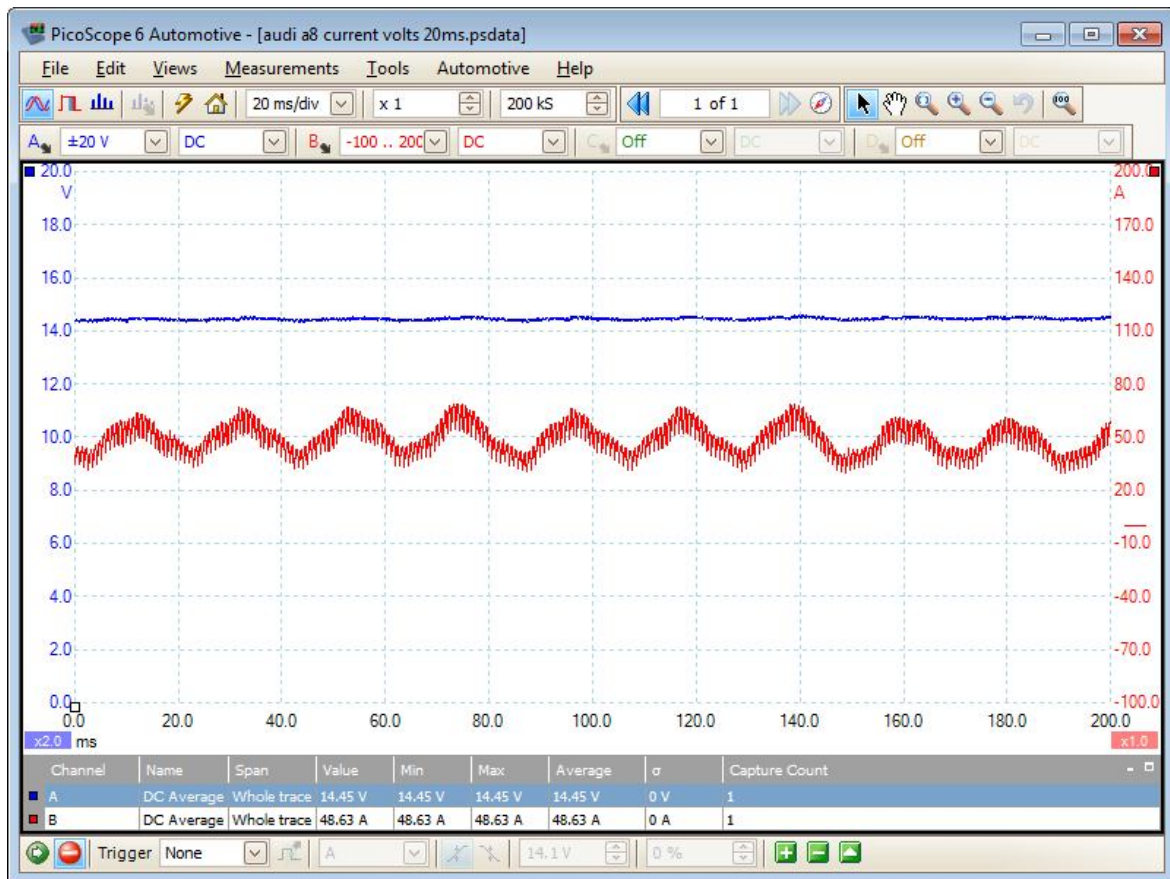
Heated rear screen 120 watts

Total 240 watts

240 watts divided by 12 volts = 20 amps.

Therefore there should be a minimum of 20 amps output from the alternator.

With the example waveform displayed on the screen you can now hit the space bar to start looking at live readings. If the current reading (channel B) is negative, reverse the current clamp and try again.



Waveform Notes

It is important that the alternator is capable of delivering the correct voltage and current output.

The recommended regulated voltage varies slightly between motor manufacturers but for 12

volt vehicles is between 13.5 and 15.0 volts, and for 24 volt vehicles typically between 27 and 29 volts. It is equally important that the system is neither under- or over-charging.

The current available from the alternator also varies depending on the type of alternator fitted. The current depends on the state of charge of the battery and what loads are switched on.

PicoScope can reveal some alternator faults, such as a faulty diode, that cannot be detected by simply checking that the minimum current is above 20 amps or that the regulated voltage is normal.