



Electrical components testing techniques

This is a two day course covering electrical component fault finding techniques. The course follows on from vehicle electrical principles and circuit testing techniques and includes the following main subjects:

- Working with oscilloscopes
- Test instruments
- Diagnostic equipment
- Technical information systems
- Sensors and sensor circuits
- Actuators and actuator control circuits
- Workshop sessions: sensors and actuators testing techniques
- Diagnostic tasks: component fault finding
- Course assessment



Course aims are to explain the function and operation of electrical components and how to test them effectively using appropriate diagnostic equipment and technical information. The course comprises of workshop sessions and technical presentations.

During the course, delegates learn how to test sensors and actuators using oscilloscopes in conjunction with wiring diagrams and technical data. They will compare test results with live data and carry out actuator tests using diagnostic scan tools in conjunction with test equipment. In the afternoon of day two of the course, they will put into practice what they have learnt to diagnose component faults.

By the end of the course, delegates will understand the operation of electrical components. They will be able to test the electrical and mechanical functions of components and understand what to look for.

Those attending this course should be competent using a digital multi meter, be able to read wiring diagrams and have a thorough understanding of electrical principles and circuit testing techniques.

The course features the following tools, equipment and technical information systems:

- Fluke 123 scope meter.
- PicoScope.
- Carman Scan VG+ diagnostic scan tool.
- Tech II diagnostic scan tool.
- Autodata CD3.



After successfully completing this course, candidates may like to progress to the following courses:

- Oscilloscope diagnostics.
- Petrol engine management diagnostics.
- Common rail diesel fuels systems.

Electrical components testing techniques makes up part of a three day programme along with vehicle body electrical systems. The combined courses have QAA level 3 accreditation from IMI Awards Ltd.



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