

Welcome to Vehicle Electrical Fault Finding Techniques by AK Training

Introduction

The complexities of modern vehicle electronic systems present challenges for even the most experienced technicians.

Many electrical systems are now operated through multi function electronic control modules (ECM's). Systems have become de centralised with functions distributed between several modules. Increased levels of functionality and programmable options have been made possible through the use of data bus networks and fibre optics.

Often, there may be several voltage distribution boxes located around a vehicle, each responsible for the electrical systems in its zone. Even basic electrical equipment such as lights, horns, wipers, signalling and driver instrumentation are controlled in this way.

Such developments place further demands upon the knowledge and expertise of technicians, requiring them to be familiar with a wider range of diagnostic tools and fault finding techniques. Test lamps, power probes and LED's are no longer adequate since accurate test measurements cannot be made and may in fact do damage to sensitive electrical circuits if used incorrectly.

It is understandable then for technicians to be put off by the prospect of dealing with an electrical fault because it is perceived to be more complex than it actually is. However, basic principles still apply and many faults result from loose or poor connections, or even straight forward component failure.

With this in mind, the most important things that a technician really needs to diagnose a fault are a sound understanding of electricity, competency with use of test equipment and technical information, the ability to read wiring diagrams and adopt a methodical, logical approach.

The aim of this course is to present a practical approach to vehicle electrical fault finding and diagnostic techniques. During the course, participants will gain the essential knowledge and skills required for carrying out cost effective diagnosis of modern vehicle electrical systems.

By the end of this course, participants will have gained a detailed understanding of modern vehicle electrical systems and be able to carry out effective circuit testing and diagnosis using appropriate test tools and diagnostic equipment in conjunction with wiring diagrams and available technical information.



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