

Overview

This **standard** is about providing a range of technical support to other colleagues working in roadside situations. It includes ensuring technical information is up to date and giving technical advice, instruction and briefings to colleagues.

Important Note: This does not include working on any high energy system or component.

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Performance criteria

- You must be able to:
- P1 check vehicle technical information is up to date and accessible to roadside colleagues
 - P2 check colleagues have the correct technical resources to carry out their work
 - P3 identify any additional resources required correctly and promptly
 - P4 report any problems affecting the operation at the roadside to your manager promptly
 - P5 respond to requests for technical help and advice promptly and positively
 - P6 provide colleagues with clear instruction on:
 - P6.1 product updates
 - P6.2 technical tasks
 - P6.3 what the results should be
 - P6.4 how they should perform tasks
 - P6.5 the standard that must be achieved
 - P7 deliver technical instruction and demonstrations in a manner and at a speed that is appropriate to the individual(s) concerned
 - P8 give on-going technical support and advice to colleagues
 - P9 ensure your support and advice is technically accurate and in line with manufacturer's instructions and your organisation's requirements
 - P10 choose the most effective situation for giving support and advice to colleagues
 - P11 give colleagues time to consider your response and give further explanation when appropriate, checking they have fully understood
 - P12 identify and correct mistakes in a way that supports your colleagues' self confidence and praise them when they perform tasks correctly
 - P13 check the work of colleagues at regular intervals and take prompt action to resolve problems
 - P14 suggest possible methods for improving the work of colleagues to your manager, when necessary
 - P15 carry out your checks in a cost effective and efficient manner that is not detrimental to the smooth running of the business

Knowledge and understanding

You need to know and understand:

Legislative and organisational requirements and procedures

- K1 the legislation and workplace procedures relevant to:
 - K1.1 health and safety
 - K1.2 employee rights and responsibilities
 - K1.3 the environment including disposal of waste
 - K1.4 appropriate personal and vehicle protective equipment
 - K1.5 road safety requirements
 - K1.6 the type of vehicle being worked on
- K2 your workplace procedures for:
 - K2.1 recording fault location and correction activities
 - K2.2 reporting the results of tests
 - K2.3 the referral of problems
 - K2.4 reporting delays to the completion of work
 - K2.5 gaining up to date technical information and repair methods
- K3 the importance of working to recognised diagnostic procedures and processes and obtaining the correct information for diagnostic activities
- K4 the importance of documenting diagnostic and rectification information
- K5 the importance of working to agreed timescales and keeping others informed of any delays

Electrical and electronic principles

- K6 electrical and electronic principles including types of sensors and actuators, their application and operation
- K7 how electrical and electronic vehicle systems operate, including electrical component function, electrical inputs, outputs, voltages and oscilloscope patterns, digital and fibre optics principles
- K8 the interaction between electrical, electronic, mechanical and hydraulic components within a vehicle
- K9 electrical symbols, units and terms
- K10 electrical safety procedures
- K11 the hazards associated with high energy electrical vehicle components

Use of diagnostic and rectification equipment

- K12 how to prepare and test the accuracy of diagnostic testing equipment
- K13 how to use diagnostic and rectification equipment for mechanical, electrical, hydraulic and fluid systems

Vehicle system faults, their diagnosis and correction

- K14 how vehicle mechanical, electrical, electronic, hydraulic and fluid systems are constructed, operate and how to adjust them to manufacturer's specifications
- K15 the types and causes of vehicle mechanical, electrical, electronic, hydraulic and fluid system, component and unit faults and failures
- K16 how to find, interpret and use sources of information on vehicle mechanical, electrical, electronic, hydraulic and fluid system specifications, diagnostic test procedures, repair procedures and legal requirements
- K17 how to carry out systematic diagnostic testing of vehicle mechanical, electrical, electronic, hydraulic and fluid systems using the most appropriate testing methods and evaluate your results
- K18 your workplace policy and procedure for liaising with manufacturers and outside agencies
- K19 the use of appropriate testing methods to make cost effective recommendations for rectification

Personal skills

- K20 how to give straightforward presentations on technical matters
- K21 how to file and store technical information
- K22 how to instruct colleagues and demonstrate tasks clearly and correctly
- K23 how to conduct effective checks of your colleague's work
- K24 how to choose the best action to take when work is not in line with requirements
- K25 how to discuss colleague's work with them in a way that will encourage them to be positive and not lead to conflict
- K26 how to give advice and guidance in a way that is appropriate to the colleague you are supporting
- K27 how to recognise a training need

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- K28 what might happen if you undermine colleague's self-confidence when correcting mistakes
 - K29 the importance of liaising with your manager when evaluating others' work and giving feedback
 - K30 the importance of continuous development and learning

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Scope/range

1. Information, advice and guidance may be about any of the following:

- 1.1. mechanical fault finding
- 1.2. electrical fault finding
- 1.3. electronic fault finding
- 1.4. hydraulic fault finding
- 1.5. customer handling
- 1.6. road testing
- 1.7. time
- 1.8. tools
- 1.9. equipment
- 1.10. materials
- 1.11. technical information

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**Additional
Information****Glossary**

This section contains examples and explanations of some of the terms used but does not form part of the standard.

Manufacturers

Examples include vehicle and original equipment manufacturers

Methods for improving the work of colleagues

Examples include further training, on-the-job coaching, giving people more appropriate responsibilities.

Problems

Examples include equipment, tool and material shortfalls and faults; requirements for new resources; lack of technical information; staffing or workload problems; training needs etc.

Situation for giving support and advice

Examples include one-to-one during a work activity, one-to-one away from a work activity or to the whole team.

Support and advice

Examples include demonstrations, instruction and briefings.

Technical information

This could be hard copy, electronic information or verbal advice.

Vehicles

This can be any vehicle being worked on at the roadside. Examples could include light vehicles, commercial vehicles, motorcycles.

VEHICLE AREAS COVERED BY THIS NOS:**Engine Area**

Engines, cooling systems, electronic ignition, petrol fuel injection, diesel fuel injection, engine management systems

Transmission and Driveline Area

Clutch assemblies, clutch operating systems, manual gear boxes, automatic gear boxes (including electronic control), drivelines and hubs and final drive assemblies

Chassis or Frame Area

Suspension systems, assisted steering systems, non-assisted steering systems, braking systems, ABS/traction control, wheels and tyres, stability systems, bodywork and related areas

Electrical Area

Starting systems, charging system, body electrical systems (including wiring harnesses, lighting systems, auxiliaries, CANBUS systems, fibre optics, vehicle condition and monitoring, comfort and convenience, alarm systems), supplementary restraint systems (SRS), heating and air conditioning systems, climate control, communication equipment, navigation systems and entertainment equipment

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