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## Overview

This standard is about identifying and fitting suitable supplementary locking and security devices that are permanently fitted to vehicles to deter theft.

## Performance criteria

### *You must be able to:*

P1 select and use appropriate personal and vehicle protection equipment at all times

P2 support the fitting of supplementary locks and security systems by reviewing vehicle:

P2.1 technical data

P2.2 diagnostic test procedures

P3 prepare, connect and check all the required equipment following manufacturers' instructions prior to use

P4 collect sufficient information to enable an accurate fitting of supplementary locking and security devices

P5 use fitting techniques (both electrical and mechanical) which are relevant to the systems presented

P6 use the tools and equipment required, correctly and safely throughout all fitting activities

P7 make cost effective recommendations for the fitting of relevant supplementary locks and security devices according to the customers' needs and vehicle type

P8 carry out all fitting activities following:

P8.1 manufacturers' instructions

P8.2 recognised researched repair methods

P8.3 health, safety and environmental requirements

P9 work in a way which minimises the risk of:

P9.1 damage to other vehicle systems, units and components

P9.2 contact with leakage, hazardous substances and high voltage systems

P9.3 damage to your working environment

P9.4 injury to yourself and others

P10 ensure all components and units conform to the vehicle operating specification and any legal requirements

P11 adjust components and units correctly to ensure that they operate to meet system requirements

P12 ensure the systems fitted perform to the vehicle operating specification and any legal requirements prior to return to the customer

P13 ensure your records are accurate, complete and promptly passed to the relevant person(s) in the format required

P14 complete all activities within the agreed timescale

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P15 promptly report any anticipated delays in completion to the relevant person(s)

## Knowledge and understanding

### *You need to know and understand:*

Legislative and organisational requirements and procedures

K1 the current health and safety legislation and workplace procedures relevant to workshop practices and personal and vehicle protection when fitting supplementary locks and security devices

K2 legal requirements relating to the vehicle and fitment of supplementary locks and security devices (including road safety, MOT, Construction and Use regulations and Type Approval)

K3 your workplace procedures for:

K3.1 fitting supplementary locks and security devices

K3.2 recording information

K3.3 the referral of problems

K3.4 reporting delays to the completion of work

K4 the importance of working to recognised procedures and processes and obtaining the correct information to enable fitting activities to proceed

K5 the importance of documenting information

K6 the importance of working to agreed timescales and keeping others informed of progress

K7 the relationship between time and costs

K8 the importance of promptly reporting anticipated delays to the relevant person(s)

Electrical and electronic principles

K9 electrical and electronic principles, including Ohms Law, voltage, power, current (AC/DC) resistance, magnetism, electromagnetism, electromagnetic induction, EMC, digital and fibre optics principles

K10 electrical symbols, units and terms

K11 electrical safety procedures

K12 how electrical and electronic units and components are constructed, dismantled and reassembled

K13 how electrical and electronic units and components operate, including electrical component function, electrical inputs, outputs, voltage/current variation and patterns

K14 the interaction between electrical, electronic and mechanical components within the systems defined

K15 how vehicle electrical systems interlink and interact with supplementary vehicle locks and additional security devices, including networking protocols

Locking device principles and operations

K16 the operating principle and construction of mechanical locking systems

K17 the operating principle and construction of pneumatic locking systems

K18 how locking systems (electrical, mechanical and pneumatic) can be integrated with Type Approved vehicle latches

Mechanical/electrical competencies and fitting principles

K19 how to identify suitable supplementary locks and security devices for the type/use of vehicle

K20 how to prepare, test and use all the equipment required for the fitting of supplementary locks and security devices

K21 how to use measuring devices in order to measure and mark out vehicles to enable the fitting of supplementary locks and security devices

K22 how to integrate vehicle electrical systems with supplementary locks and security devices (where applicable)

K23 how to apply vehicle body anticorrosion treatment to meet vehicle requirements

K24 how to make suitable adjustments to components and units

K25 how to make cost effective recommendations for rectification

K26 how to work safely avoiding damage to other vehicle systems, components and units and contact with leakage and hazardous substances

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## Scope/range

1. Supplementary locks and security devices include: 1.1. electronic / electro mechanical lock mechanisms 1.2. additional / supplementary mechanical door locks using cylinder type lock 1.3. additional / supplementary mechanical door / aperture locks using external locking systems 1.4. mechanical window protection devices (internal and external) 1.5. replacement security windows / window security films 1.6. pneumatic locking systems 2. Tools and equipment include: 2.1. hand tools 2.2. special purpose tools 2.3. measuring equipment 2.4. general workshop equipment

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## Glossary

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

### Agreed timescales

Examples include: manufacturer's recommended work times, job times set by your company or a job time agreed with a specific customer

### Vehicles

These can be any of the following – light vehicles, heavy goods and passenger service vehicles, motorcycles, mopeds and scooters

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