

Carry out routine light vehicle maintenance

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**Overview**

This NOS is about conducting routine maintenance, adjustment and replacement activities as part of the periodic servicing of light vehicles.

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### Performance criteria

- You must be able to:*
- P1 use suitable personal and vehicle protective equipment throughout all vehicle maintenance activities
  - P2 prepare the vehicle systems and work area for safe working procedures as appropriate to the vehicle
  - P3 work in a way which minimises the risk of damage to the vehicle and its systems and the surrounding area
  - P4 use suitable **sources of technical information** to support all your vehicle maintenance activities
  - P5 adhere to the correct specifications and tolerances for the vehicle when making **assessments** of system and component performance
  - P6 where the customer's vehicle falls outside the manufacturer's original specification, record details accurately and use these details as the basis for your assessment of system and component performance
  - P7 examine the vehicle's systems and components following:
    - P7.1 the manufacturer's approved **methods**
    - P7.2 recognised repair methods
    - P7.3 your workplace procedures
    - P7.4 health, safety and environmental requirements
  - P8 ensure your **examination methods** identify accurately any vehicle system and component problems falling outside the maintenance schedule specified
  - P9 carry out adjustments, replacement of vehicle components and replenishment of consumable materials following the manufacturer's current specification for:
    - P9.1 the particular maintenance interval
    - P9.2 working methods and procedures
    - P9.3 use of equipment
    - P9.4 the tolerances for the vehicle
  - P10 record the details accurately and take action which complies with the customer's instructions where system adjustments cannot be made within the manufacturer's specification
  - P11 use suitable testing methods to evaluate the performance of all replaced and adjusted components and systems
  - P12 report any problems or issues relating to the vehicle's condition or conformity to the relevant person(s) promptly
  - P13 ensure your maintenance records are accurate, complete and passed to the relevant person(s) within the agreed timescale in the format required
  - P14 complete all vehicle maintenance activities within the agreed timescale

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

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## Knowledge and understanding

*You need to know and understand:*

### **Legislative and organisational requirements and procedures**

K1 the manufacturer's and warranty requirements relating to routine maintenance activities for vehicle systems and components

K2 the legal requirements relating to the vehicle maintenance activities for vehicle systems and components

K3 the legislation and workplace procedures relevant to:

K3.1 health and safety

K3.2 the environment (including waste disposal)

K3.3 appropriate personal and vehicle protection

K4 your workplace procedures for:

K4.1 recording vehicle maintenance work and any variations from the original vehicle specification

K4.2 the referral of problems

K4.3 reporting delays to the completion of work

K5 the importance of recording vehicle maintenance 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 reporting anticipated delays to the relevant person(s) promptly

### **Use of technical information**

K9 how to find, interpret and use **sources of technical information** for scheduled maintenance activities, including on-board vehicle displays

K10 the importance of using the correct **sources of technical information**

K11 the purpose of and how to use identification codes

### **Vehicle system operation**

K12 how power unit systems work (including hybrid vehicles and alternative fuel vehicles)

K13 how transmission systems work (including hybrid / alternative fuel and electric vehicles)

K14 how chassis systems work (including regenerative braking systems and other energy recuperation systems used on hybrid / electric and

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alternative fuel vehicles)

K15 how electrical – including Advanced Driver Assistance – systems work (including hybrid / alternative fuel and electric vehicles)

K16 the operating specifications and tolerances for the type(s) of vehicles on which you are working (including hybrid / alternative fuel and electric vehicles)

K17 the hazards associated with working on or near high energy electrical vehicle components

### **Routine maintenance requirements**

K18 how to conduct scheduled, routine light vehicle maintenance activities using prescribed **examination methods** and **assessments** against vehicle specifications to identify damage, corrosion, inadequate fluid levels, leaks, wear, security problems and general condition and serviceability

K19 how to check and make adjustments to clearances, settings, alignment, pressures, tension, speeds and levels relevant to the engine area, transmission area, chassis area, electrical area and body

K20 how to replenish and replace routine service components and materials

K21 how to recognise and report cosmetic damage to vehicle components and units outside normal service items

K22 how to identify codes and grades of lubricants

K23 the consequence of using incorrect lubricants, fluids and components

K24 how to work safely avoiding damage to the vehicle and its systems (including special precautions that may be required when working on hybrid/electric and alternative fuel vehicles)

K25 how to recognise the consequences of adjustments on other systems (for example, tyre pressure adjustment) may affect Advanced Driver Assistance Systems (ADAS)

K26 the implications of signing workplace documentation and vehicle records

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**Scope/range****1. Sources of technical information** are:

- 1.1. vehicle technical data
- 1.2. schedules of inspection
- 1.3. regulations

**2. Examination methods** are:

- 2.1. aural
- 2.2. visual
- 2.3. functional
- 2.4. measurements

**3. Assessments** are for:

- 3.1. malfunction
- 3.2. damage
- 3.3. fluid levels
- 3.4. leaks
- 3.5. wear
- 3.6. security
- 3.7. condition and serviceability
- 3.8. conformity
- 3.9. necessity for adjustment(s) and calibration(s)

## 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.

### **Adjustments:**

Examples include: adjustments to clearances, settings, alignment pressures, tensions, speeds and levels, ignition, fuel and emissions, brakes, transmission, lights, tyres, steering and body fittings.

### **Ancillary equipment**

Examples include: tyre pressure monitoring, ADAS, cameras and radar units or navigation.

### **Components:**

Examples include: filters, drive belts, wiper blades, brake linings and pads, lubricants and fluids.

### **Conformity:**

Examples include conformity to manufacturer's specifications, UK and European legal requirements where applicable.

### **Systems testing equipment:**

Examples include: test instruments, emission test equipment, wheel alignment equipment, tyre tread depth gauges.

### **Maintenance records:**

Examples include: records of vehicle inspection, manufacturers', fleet, company or customer job cards.

### **Major service:**

As defined by manufacturers' specifications appropriate to the vehicle being working upon.

### **Vehicles:**

These can be any of the following types of light vehicle: SI, CI, Hybrid, Electric or Alternative fuel vehicles.

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**Alternative fuel:**

This is defined as any type of fuel that may be used to power an internal combustion engine, examples would include LPG, bio ethanol etc.

**Routine vehicle maintenance:**

Examples include: conducting scheduled maintenance, adjustments, replacements and replenishment of, or to, components and systems in accordance with manufacturer's instructions for the period and/or mileage interval.

**Vehicle technical data:**

Examples include: hard copy manuals, data on computer and data obtained from on- board diagnostic displays.



## Carry out routine light vehicle maintenance

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