

IMIHV01 SQA Unit Code (HA68 04)

Carry out routine commercial vehicle maintenance



Overview

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

Performance criteria

- You must be able to:
- P1 use suitable personal protective equipment and vehicle coverings (where applicable) throughout all vehicle maintenance activities
 - P2 use suitable **sources of technical and legal information** to support all your vehicle maintenance activities
 - P3 prepare the vehicle, vehicle systems and the work area for safe working procedures (where appropriate)
 - P4 use the correct specifications and tolerances for the vehicle when making **assessments** of system and component performance
 - P5 record details accurately and use this adapted specification as the basis for your examination and assessment where the commercial vehicle falls outside the manufacturer's original specification
 - P6 examine the vehicle's systems and components following:
 - P6.1 the manufacturer's approved **examination methods**
 - P6.2 your workplace procedures
 - P6.3 health and safety requirements
 - P6.4 environmental requirements
 - P6.5 any prescribed documentation (where appropriate)
 - P7 ensure your **examination methods** identify accurately any vehicle system and component problems falling outside the servicing schedule specified
 - P8 carry out adjustments, replacement of vehicle components and replenishment of consumable materials following the manufacturer's current specification for:
 - P8.1 the particular service interval
 - P8.2 working methods and procedures
 - P8.3 use of equipment
 - P8.4 the tolerances for the vehicle
 - P9 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
 - P10 work in a way which minimises the risk of damage to the vehicle and its systems
 - P11 use suitable testing methods to evaluate the performance of all replaced and

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- adjusted components and systems accurately, prior to returning the vehicle to the customer/driver
 - P12 confirm all systems and components inspected function correctly following manufacturer's specifications
 - P13 report any problems or issues relating to the vehicle's condition or conformity to the relevant person(s) promptly
 - P14 ensure your maintenance records are accurate, complete and passed to the relevant person(s) promptly in the format required
 - P15 complete all vehicle maintenance activities within the agreed timescale
 - P16 report any anticipated delays in completion to the relevant persons(s) promptly

Knowledge and understanding

Legislative and organisational requirements and procedures

You need to know and understand:

- K1 the manufacturer's and legal requirements, including Operator Licence criteria, relating to routine maintenance activities for vehicle systems and components
- K2 the implications on an Operators Licence of not carrying out repairs and inspections correctly
- K3 the legal requirements relating to the vehicle maintenance and auxiliary equipment (including road safety requirements)
- K4 the legislation and workplace procedures relevant to
 - K4.1 health and safety
 - K4.2 the environment (including waste disposal)
 - K4.3 appropriate personal and vehicle protective equipment
- K5 your workplace procedures for
 - K5.1 recording vehicle maintenance work and any variations from the original vehicle specification
 - K5.2 the referral of problems
 - K5.3 reporting delays to the completion of work
- K6 the importance of documenting vehicle maintenance information
- K7 the importance of working to agreed timescales and keeping others informed of progress
- K8 the relationship between time and costs
- K9 the importance of reporting anticipated delays to the relevant person(s) promptly

Use of technical information

You need to know and understand:

- K10 how to find, interpret and use **sources of technical information** for scheduled maintenance activities, including on-board diagnostic displays
- K11 the importance of using the correct **sources of technical information**
- K12 the purpose of and how to use identification codes

Vehicle system operation

You need to know
and understand:

- K13 how engines, cooling systems, air supply and exhaust systems, fuel systems and ignition systems operate for the type(s) of vehicle on which you are working
- K14 how clutch assemblies, clutch operating systems, manual gear boxes, automatic gear boxes, drivelines and hubs (if appropriate) and final drive assemblies operate for the type of vehicle on which you are working
- K15 how suspension systems, steering systems, braking systems, non-electrical body systems, wheels and tyres operate for the type of vehicle on which you are working
- K16 how batteries, starting systems, charging systems, lighting systems and ancillary equipment operate for the type of vehicle on which you are working
- K17 the operating specifications and tolerances for the type(s) of vehicles on which you are working.

Routine maintenance requirements

You need to know
and understand:

- K18 how to conduct scheduled, systematic, routine **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, gaps, settings, alignment, pressures, tension, speeds and levels relevant to the engine area, transmission area, chassis area, electrical area and body (including adjustments to valves, ignition, fuel and emissions, brakes, transmission, lights, tyres, steering and body fittings)
- K20 how to replenish and replace routine service components and materials, including filters, drive belts, wiper blades, brake linings and pads, lubricants and fluids
- K21 how to recognise cosmetic damage to vehicle components and units outside normal service items
- K22 how to identify codes and grades of lubricants
- K23 how to compare test and inspection results against vehicle specifications and legal requirements
- K24 how to work safely avoiding damage to the vehicle and its systems

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- K25 the importance of inspecting the vehicle following any repairs
 - K26 the implications of failing to carry out inspection activities correctly
 - K27 the implications of signing workplace documentation and vehicle records

Additional information

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)
 - 3.10. corrosion

Glossary

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, gaps, settings, alignment pressures, tensions, speeds and levels, and adjustments to valves, ignition, fuel and emissions, brakes, transmission, lights, tyres, steering and body fittings.

Commercial Vehicles:

These are medium and large goods vehicles of 3500kgs gross vehicle mass (GVM) and above.

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

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customer job cards.

Major service:

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

Routine vehicle maintenance:

Examples include: conducting scheduled examinations, 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

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