
Overview

This NOS covers obtaining and providing information to and from light vehicle and component manufacturers and suppliers for diagnostic activities, warranty activities, repairs and to support product development.

Performance criteria

- You must be able to:*
- P1 be aware of current technical developments and **information** for the vehicles you handle
 - P2 seek assistance from manufacturers/suppliers only when the prescribed diagnostic processes have failed
 - P3 provide **information** at the level of detail necessary and in a form and manner which the recipient will understand and accept
 - P4 report technical problems and quality issues promptly in line with manufacturer's/supplier's requirements
 - P5 collect sufficient, detailed **information** on the vehicle, the problem and action taken prior to contacting the manufacturer/supplier
 - P6 ensure requests for **information** to manufacturers/suppliers are made clearly and promptly
 - P7 respond to requests for **information** from manufacturers/suppliers within the specified timescale
 - P8 ensure all **information** received from manufacturers/suppliers is passed on to the relevant person(s) promptly
 - P9 report any anticipated delays in obtaining or providing **information** to the relevant person(s) promptly
 - P10 ensure your reports and technical **information** are complete, accurate and in the format required
 - P11 suggest possible methods for improving the reporting process to your manager, when necessary
 - P12 carry out your reporting in an effective and efficient manner that is not detrimental to the smooth running of the workshop

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 the environment (including waste disposal)

K1.3 appropriate personal and vehicle protective equipment

K2 legal requirements relating to the vehicle (including road safety requirements)

K3 your workplace procedures for:

K3.1 recording fault location and correction activities

K3.2 reporting the results of tests

K3.3 the referral of problems

K3.4 reporting delays to the completion of work

K3.5 gaining up to date technical **information** and repair methods

K3.6 recording contact with manufacturers and suppliers

K4 the importance of working to recognised diagnostic procedures and processes and obtaining the correct **information** for diagnostic activities to proceed and how to formulate and construct your own diagnostic procedures and processes in order for diagnostic activities to proceed

K5 the importance of documenting diagnostic and rectification **information**

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

K7 the relationship between time, costs and profitability

Electrical and electronic principles

K8 the hazards associated with working on or near high energy electrical vehicle components

K9 electrical and electronic principles including types of sensors and actuators, their application and operation

K10 how electrical and electronic vehicle systems operate, including electrical component function, electrical inputs, outputs, voltages and oscilloscope patterns, digital and fibre optics principles

K11 the interaction between electrical, electronic, mechanical and hydraulic/pneumatic components and systems within a vehicle, including multiplexing

K12 electrical symbols, units and terms

K13 electrical safety procedures

Use of diagnostic and rectification equipment

K14 how to prepare and check the accuracy of diagnostic testing equipment

K15 how to use diagnostic and rectification equipment for mechanical, electrical, electronic, hydraulic/pneumatic and fluid systems, specialist repair tools and general workshop equipment

Vehicle faults, their diagnosis and correction

K16 how vehicle mechanical, electrical, electronic, hydraulic/pneumatic and fluid systems are constructed, dismantled, reassembled and operate

K17 the types and causes of vehicle mechanical, electrical, electronic, hydraulic/pneumatic and fluid system, component and unit faults and failures

K18 vehicle mechanical, electrical, electronic, hydraulic/pneumatic and fluid component and unit replacement procedures, the circumstances which will necessitate replacement and other possible courses of action

K19 how to find, interpret and use sources of **information** on vehicle mechanical, electrical, electronic, hydraulic/pneumatic and fluid system specifications, diagnostic test procedures, repair procedures and legal requirements

K20 how to select the most appropriate diagnostic testing method for the symptoms presented

K21 how to carry out systematic diagnostic testing of vehicle mechanical, electrical, electronic, hydraulic/pneumatic and fluid systems

K22 how to interpret, evaluate and analyse test results and vehicle data in order to identify the location and cause of vehicle system faults

K23 how to carry out the rectification activities in order to correct faults in the vehicle mechanical, electrical, electronic, hydraulic/pneumatic and fluid systems

K24 your workplace procedure and policy for:

K24.1 work carried out under warranty

K24.2 liaising with manufacturers and outside agencies

K25 the relationship between test methodology and the faults repaired – the use of appropriate testing methods

K26 how to make cost effective recommendations for rectification

Personal Skills

K27 how to communicate effectively with manufacturers/suppliers, managers, colleagues and customers

K28 how to access the reporting system

K29 how to process **information** and compile reports

K30 when it is appropriate to contact the manufacturer/supplier

K31 the limits of your authority and that of the designated personnel when liaising with the manufacturer/supplier

Scope/range

1. Information 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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