

National Occupational Standards: Vehicle Fitting

NOS G1 – Contribute to Housekeeping in Motor Vehicle Environments

NOS OVERVIEW

This unit is about the routine maintenance of the workplace, carrying out basic, non-specialist checks of work tools and equipment, cleaning the work area and using resources economically.

SCOPE OF THIS UNIT:

1. **Equipment maintenance** covers
 - a. routine checks on work tools and equipment
 - b. cleaning work tools and equipment
 - c. replacing minor parts
 - d. visual inspection of electrical equipment
2. **Housekeeping activities** cover
 - a. day to day work area cleaning
 - b. clearing away
 - c. dealing with spillages
 - d. disposal of waste, used materials and debris
3. **Work tools and equipment** are
 - a. hand
 - b. electrical
 - c. mechanical
 - d. pneumatic
 - e. hydraulic

ESSENTIAL KNOWLEDGE

You need to understand:

Legislative and organisational requirements and procedures

1. the scope of your job responsibilities for the use and maintenance of hand tools, equipment and your work area.
2. workplace policies and schedules for **housekeeping activities** and **equipment maintenance**.
3. the manufacturer's requirements for the cleaning and general, non-specialist maintenance of the tools and equipment for which you are responsible.

4. the regulations and information sources applicable to workshop cleaning and maintenance activities for which you are responsible.
5. the importance of reporting faults quickly to the relevant person.
6. the importance of reporting anticipated delays to the relevant person(s) promptly.

Equipment maintenance

7. how to select and use equipment used for basic hand tool maintenance activities.
8. how to store hand tools safely and accessibly.
9. how to report faulty or damaged **work tools and equipment**.
10. how to work safely when cleaning and maintaining **work tools and equipment**.

General work area housekeeping

11. how to select and use cleaning equipment
12. how to use resources economically.
13. how to use work area cleaning materials and agents.
14. how to clean and maintain the **work tools and equipment** and work areas for which you are responsible.
15. how to dispose of unused cleaning agents, materials and debris.
16. the properties and hazards associated with the use of cleaning agents and materials.
17. the importance of wearing personal protective equipment.
18. the importance of using resources economically and for their intended purpose only.

PERFORMANCE OBJECTIVES

To be competent you must:

- a. wear suitable personal protective equipment throughout all **housekeeping** and **equipment maintenance activities**.
- b. select and use cleaning equipment which is:
 - of the right type
 - suitable for the task.
- c. use resources economically and for their intended purpose only, following manufacturers' instructions and workplace procedures.
- d. follow workplace policies, schedules and manufacturers' instructions when cleaning and maintaining hand tools and equipment.
- e. clean the work area(s), for which you are responsible, at the specified time and frequency.
- f. carry out **housekeeping activities** safely and in a way which minimises inconvenience to customers and staff.
- g. follow the manufacturer's instructions when using cleaning and sanitising agents.
- h. ensure your **housekeeping activities** keep your work area clean and free from debris and waste materials.
- i. ensure your **equipment maintenance** activities keep your **work tools and equipment** fit for purpose.
- j. dispose of used cleaning agents, materials and debris to comply with legal and workplace requirements.
- k. store your **work tools and equipment** in a safe manner which permits ease of access and identification for use.
- l. report any faulty or damaged tools and equipment to the relevant person(s) clearly and promptly.

- m. report any anticipated delays in completion to the relevant person(s) promptly.

NOS G2 – Reduce Risks to Health and Safety in the Motor Vehicle Environment

NOS OVERVIEW

This unit covers the basic, legally required health and safety duties of everyone in the workplace. It describes the competence required to ensure that:

- your own actions do not create any health and safety risks
- you do not ignore significant risks in your workplace, and
- you take sensible action to put things right, including reporting situations which pose a danger to people in the workplace, and seeking advice from others

This unit does **not** require you to undertake a full Risk Assessment. It is about having an appreciation of significant risks in the workplace and knowing how to identify them and deal with them.

When you have completed this unit, you will have proved you can:

1. Identify hazards and evaluate risks in your workplace
2. Reduce the risks to health and safety in your workplace

SCOPE OF THIS UNIT:

1. Risks resulting from

- a. the use and maintenance of machinery or equipment
- b. the use of materials or substances
- c. working practices which do not conform to laid down policies
- d. unsafe behaviour
- e. accidental breakages and spillages
- f. environmental factors
- g. working at height
- h. lifting operations and manual handling
- i. incorrect use of personal protective equipment

2. Workplace policies covering

- a. the use of safe working methods and equipment
- b. the safe use of hazardous substances
- c. smoking, eating, drinking and drugs
- d. what to do in the event of an emergency
- e. personal presentation
- f. personal protective equipment
- g. lifting operations and manual handling
- h. working at height
- i. mobile phones and personal stereo equipment

ESSENTIAL KNOWLEDGE

You need to understand:

Health and Safety Legislation and Workplace Policies

1. your legal duties for health and safety in the workplace as required by the Health and Safety at Work Act 1974, and any other policies or procedures that govern your working practices.
2. your duties for health and safety as defined by any specific legislation covering your job role
3. **agreed workplace policies relating to controlling risks to health and safety**
4. responsibilities for health and safety in your job description
5. the responsible persons to whom you report health and safety matters

Risks to Health and Safety

6. what hazards may exist in your workplace, (eg. Slips, trips and falls).
7. health and safety risks which may be present in your own job role and the precautions you must take
8. the importance of remaining alert to the presence of hazards in the whole workplace
9. how to deal with and report risks
10. the importance of dealing with or promptly reporting risks
11. the requirements and guidance on the precautions
12. the specific workplace policies covering your job role
13. suppliers' and manufacturers' instructions for the safe use of equipment, materials and products
14. safe working practices for your own job role
15. the importance of personal presentation in maintaining health and safety in the workplace
16. the importance of personal conduct in maintaining the health and safety of yourself and others
17. the importance of personal protective equipment, when and where it should be used and the importance of maintaining it correctly.
18. your scope and responsibility for rectifying risks
19. workplace procedures for handling risks which you are unable to deal with

PERFORMANCE OBJECTIVES

Reduce the risks to health & safety in your workplace:

To be competent you must:

- a carry out your working practices in accordance with legal requirements
- b identify the correct personal and vehicle protective equipment required to correctly carry out your workplace practices
- c carry out your workplace practices using the correct personal protective equipment
- d follow the most recent **workplace policies** for your job role
- e rectify health and safety **risks** that are within your capability and scope of your job responsibilities
- f pass on any suggestions for reducing **risks** to health and safety within your job role to the responsible persons
- g ensure your personal conduct in the workplace does not endanger the health and safety of yourself or other persons

- h follow the **workplace policies** and suppliers' or manufacturers' instructions for the safe use of equipment, materials and products
- i report any differences between **workplace policies** and suppliers' or manufacturers' instructions as appropriate
- j ensure your personal presentation at work:
 - ensures the health and safety of yourself and others,
 - meets any legal duties, and
 - is in accordance with workplace policies

NOS G3 – Maintain Working Relationships in the Motor Vehicle Environment

NOS OVERVIEW

This unit is about maintaining good working relationships with all colleagues in the working environment by using effective communication and support skills.

SCOPE OF THIS UNIT:

1. **Colleagues** are
 - a. immediate work colleagues
 - b. supervisors and managers
2. **Requests for assistance** covering
 - a. technical assistance
 - b. personal assistance

ESSENTIAL KNOWLEDGE

You need to understand:

Your responsibilities and constraints

1. your own and your colleague's job role and limits of responsibility for giving advice and support.
2. the operational constraints which may affect interaction with colleagues.
3. lines of communication within your workplace.

Communication skills and working relationships

4. how to use suitable and effective spoken communication skills when responding to and interacting with others.
5. how to adapt written and spoken communication methods to satisfy the needs of colleagues.
6. how to report problems using written and spoken methods of communication.
7. the importance of developing positive working relationships with colleagues – the effect on morale, productivity, and company image.
8. the importance of accepting other peoples' views and opinions.
9. the importance of making and honouring realistic commitments to colleagues.

PERFORMANCE OBJECTIVES

To be competent you must:

- a. contribute actively to team working by initiating ideas and co-operating with colleagues.

- b. respond promptly and willingly to requests for assistance from **colleagues** which fall within the limits of your own job responsibilities and capabilities.
- c. where requests fall outside your responsibility and capability, refer colleagues to the relevant person(s).
- d. give colleagues sufficient, accurate information and support to meet their work needs.
- e. make **requests for assistance to colleagues** clearly and courteously.
- f. use methods of communication which meet the needs of colleagues.
- g. treat colleagues in a way which shows respect for their views and opinions and promotes goodwill.
- h. make and keep achievable commitments to **colleagues**
- i.. inform colleagues promptly of any problems or information likely to affect their own work.

NOS G6 – Enable Learning through Demonstrations and Instruction (Imported ENTO unit L11)

NOS OVERVIEW

This unit is about demonstrating skills and methods to learners and instructing learners in procedures and processes.

These include; demonstrating how equipment is used, showing a learner how to do something, giving learners instructions on what to do or how to carry out a particular activity, deciding when you should use demonstration or instruction to encourage learning, reviewing the potential use of technology-based learning, checking on the progress of learners and giving feedback to learners.

ESSENTIAL KNOWLEDGE

You need to understand:

The nature and role of demonstrations and instruction

1. the separate areas of demonstrations which encourage learning
2. which types of learning are best achieved and supported through demonstrations
3. how to identify and use different learning opportunities
4. how to structure demonstrations and instruction sessions
5. how to choose from a range of demonstration techniques

Principles and concepts

6. how to put learners at their ease and encourage them to take part
7. how to choose between demonstration and instruction as learning methods
8. how to identify individual learning needs
9. which factors are likely to prevent learning and how to overcome them
10. how to check learners' understanding and progress
11. how to put information in order and decide whether the language you will be using is appropriate
12. how to choose and prepare appropriate materials, including technology based materials
13. the separate areas of instructional techniques which encourage learning
14. which types of learning are best achieved and supported through instruction

External factors influencing human resource development

15. how to make sure everybody acts in line with health, safety and environmental protection legislation and best practice.
16. how to analyse and use developments in learning and new ways of delivery, including technology-based learning.

PERFORMANCE OBJECTIVES

1. Demonstrate skills and methods to learners

To be competent you must:

- a. base the demonstration on an analysis of the skills needed and the order they must be learned in.
- b. ensure that the demonstration is accurate and realistic.
- c. structure the demonstration so the learner can get the most out of it.
- d. encourage learners to ask questions and get explanation at appropriate stages in the demonstration.
- e. give learners the opportunities to practise the skill being demonstrated and give them positive feedback.
- f. give extra demonstrations of the skills being taught to reinforce learning.
- g. ensure that demonstrations take place in a safe environment and allow learners to see the demonstration clearly.
- h. respond to the needs of learners during the demonstration.
- i. reduce distractions and disruptions as much as possible.

1. Instruct learners

To be competent you must:

- a. match instruction to the needs of the learners.
- b. identify which learning outcomes will be achieved through instruction.
- c. ensure that the manner, level and speed of the instruction encourages learners to take part.
- d. regularly check that learners understand and adapt instruction as appropriate.
- e. give learners positive feedback on the learning experience and the outcomes achieved.
- f. identify anything that prevents learning and review this with the learners.

NOS G8 – Identify and Agree the Motor Vehicle Customers Needs

NOS OVERVIEW

This unit is about: gaining information from customers on their perceived needs; giving advice and information and agreeing a course of action; contracting for the agreed work and completing all necessary records and instructions.

ESSENTIAL KNOWLEDGE

You need to understand:

Legislative and organisational requirements and procedures

1. the fundamental legal requirements of current consumer legislation and the consequences of your own actions in respect of this legislation.
2. the content and limitations of company and product warranties for the vehicles dealt with by your company.
3. the limits of your own authority for accepting vehicles.
4. the importance of keeping customers informed of progress.
5. your workplace requirements for the completion of records.
6. how to complete and process all the necessary documentation.

Customer communication and care

7. how to communicate effectively with, and listen to, customers.
8. how to adapt your language when explaining technical matters to non-technical customers.
9. how to use effective questioning techniques.
10. how to care for customers and achieve customer satisfaction.

Company products and services

11. the range of options available to resolve vehicle problems.
12. the range and type of services offered by your company.
13. the effect of resource availability upon the receipt of customer vehicles and the completion work.
14. how to access costing and work completion time information.

PERFORMANCE OBJECTIVES

To be competent you must:

- a. obtain sufficient, relevant information from the customer to make an assessment of their own and perceived vehicle needs.
- b. provide customers with accurate, current and relevant advice and information on:
 - suitable vehicle inspection, repair and/or service procedures
 - potential courses of action
 - the implications of courses of action

- the estimated costs.
- c. provide advice and information clearly and in a form and manner which the customer will understand.
- d. actively encourage customers to ask questions and seek clarification during your conversation.
- e. support the accurate identification and clarification of customer and vehicle needs, by referring to:
- vehicle data
 - operating procedures.
- f. before accepting the vehicle, agree with the customer and record:
- the extent and nature of the work to be undertaken
 - the terms and conditions of acceptance
 - the cost
 - the timescale.
- g. confirm your customer's understanding of the agreement you have made.
- h. ensure your recording systems are complete, accurate, in the format required and signed by the customer where necessary.
- i. pass all completed records to the next person in the process promptly.
- j. gain further customer approval where the contracted agreement is likely to be exceeded.

NOS G14 – Monitor Procedures to Control Risks to Health and Safety (Imported ENTO Unit B)

NOS OVERVIEW

This unit covers making sure that statutory and workplace procedures for controlling risks to health and safety are being carried out. It describes the competences required to ensure that:

- health and safety procedures are being followed with work areas
- appropriate action is undertaken to deal with risks that arise from workplace hazards

When you have completed this unit you will have proved you can:

1. check that health and safety procedures are followed
2. ensure that risks are controlled safely and effectively.

KEY WORDS AND PHRASES

The Health and Safety Executive (HSE) is the body appointed to support and enforce health and safety law. They have defined two important concepts as follows:

Hazard:

A hazard is something with potential to cause harm. Consideration of hazards should also include aspects of workplace security (e.g. theft, assault, insecure premises, etc.).

Risk:

A risk is the likelihood of the hazard's potential being realised.

Note:

Almost anything may be a hazard, but may or may not become a risk. For example:

- A trailing extension lead from a piece of equipment is a hazard. If it is trailing across a passageway, there is a high risk of someone tripping over it, but if it lies along a wall out of the way, the risk is much less.
- Toxic or flammable chemicals stored in a building are a hazard and by their nature may present a high risk. However, if they are kept in a properly designed secure store, and handled by properly trained and equipped people, the risk is much less than if they are left about in a busy workshop for anyone to use - or misuse.

- A failed light bulb is a hazard. If it is just one bulb out of many in a room, it presents very little risk, but if it is the only light on a stairwell, it is a very high risk. Changing the bulb may be a high risk, if it is high up, or if the power has been left on, or low risk if it is in a table lamp which has been unplugged.
- A box of heavy material is a hazard. It presents a higher risk to someone who lifts it manually than if a mechanical handling device is properly used.

Workplace:

This word is used to describe the single or multiple areas in which you carry out your work.

Working practices:

Any activities, procedures, use of materials or equipment and working techniques used in carrying out your job. In this unit it also covers any omissions in good working practice which may pose a threat to health and safety.

Workplace policies:

This covers the documentation prepared by the employer on the procedures to be followed regarding health and safety matters. It could be the employer's safety policy statement or general health and safety statements and written safety procedures covering aspects of the workplace that should be drawn to the employees' (and 'other persons') attention.

Other persons:

This phrase refers to everyone covered by the Health and Safety at Work Act, including visitors, members of the public, colleagues, contractors, customers, patients, students, pupils.

Personal presentation:

This includes personal hygiene, use of personal protective equipment, clothing and accessories suitable to the particular workplace.

Responsible persons:

The person or persons at work to whom you should report any health and safety issues or hazards. This could be a supervisor, line manager or your employer.

Key Points Regarding Health and Safety Legislation and Regulations**Health and Safety At Work Act 1974**

The Health and Safety at Work Act 1974 is the main piece of legislation under which nearly all the other regulations are made. It is for this reason that only this piece of legislation is specifically referred to in this unit.

Employers have a legal duty under this Act to ensure, so far as is reasonably practicable, the health, safety and welfare at work of the people for whom they are

responsible and the people who may be affected by the work they do.

Under this Act it is also important to be aware that all people at work, not just employers, have a duty to take reasonable care to avoid harming themselves or others through the work they do.

Risks should be reduced 'so far as is reasonably practicable'. This term means the duty-holder (in most instances the employer) can balance the cost against the degree of risk although obviously, any Health and Safety Inspectors would expect that relevant good practice is followed.

According to the Act:

Employers must safeguard so far as is reasonably practicable, the health, safety and welfare at work of all the people who work for them and 'other persons'. This applies, in particular, to the provision and maintenance of safe plant and systems of work, and covers all machinery, equipment and substances used.

People at work also have a duty under the Act to take reasonable care to avoid harm to themselves or to others by their working practices, and to co-operate with employers and others in meeting statutory requirements. The Act also requires employees not to interfere with or misuse anything provided to protect their health, safety or welfare in compliance with the Act.

Other legislation

There is an array of health and safety regulations and codes of practice which affect people at work. There are regulations for those who, for example, work with electricity, or work on construction projects, as well as regulations covering noise at work, manual handling, working with VDUs, or dealing with substances hazardous to health, etc. The specific requirements for all or any of these can be obtained from HSE local offices.

As many of the regulations are only relevant to certain workplaces or working practices, no specific reference has been made in the 'What you must know' section to any of these regulations. The phrase 'your responsibilities for health and safety as required by any specific legislation covering your job role' is intended to relate to those specific pieces of legislation important to your workplace and or working practices which you should be able to find out about.

SCOPE OF THIS UNIT:

1. **Information sources** are
 - a. internal Health and Safety experts
 - b. HSE offices
 - c. relevant industry publications
 - d. external organizations

2. **Workplace Health and Safety Procedures** covering
 - a. the use of safe working methods and equipment
 - b. the safe use of hazardous substances
 - c. smoking, eating, drinking and drugs
 - d. what to do in the event of an emergency

3. **Risks** resulting from these hazards:
 - a. the use of hazardous substances
 - b. the use and maintenance of plant, equipment and materials
 - c. poor working practices
 - d. unsafe behaviour
 - e. accidental breakages and spillages
 - f. obstructions
 - g. ill-health issues
 - h. condition of workplace

4. **Reports** are
 - a. written
 - b. oral

ESSENTIAL KNOWLEDGE

You need to understand:

Health and Safety Legislation and Workplace Policies

1. employers' and employees' legal duties for health and safety in the workplace as required by the Health and Safety at Work Act 1974.
2. your responsibilities for health and safety as defined by any specific legislation covering your job role.

Risks to Health and Safety

3. the difference between a hazard and a risk
4. what hazards may exist in your workplace
5. the particular health and safety risks which may be present in your own job role and the precautions to take
6. the importance of remaining alert to the presence of hazards in the whole work place

Health and Safety Monitoring and Control

7. how to keep health and safety records
8. effective communication methods
9. effective methods of monitoring the activities and understanding of other people with respect to health and safety matters
10. the importance of promptly dealing with or reporting significant risks in the workplace
11. the work areas and people for whom you are responsible
12. the scope of your job and your own capabilities with respect to health and safety matters
13. the specific organisational health and safety arrangements covering your job role
14. agreed health and safety policies and their procedures at your workplace
15. agreed intervals for monitoring health and safety compliance
16. workplace policies relating to resolving hazards
17. workplace procedures for record keeping

PERFORMANCE OBJECTIVES

1. Check that health and safety procedures are followed

To be competent you must:

- a. confirm that all the information available to you on statutory health and safety regulations is up-to-date and from recognised and reliable **information sources**
- b. conduct your monitoring of workplace procedures at agreed intervals and in accordance with workplace requirements
- c. check regularly that other persons possess
 - up-to-date information about health and safety hazards, and
 - instructions on how to deal with risks which can arise
- d. confirm other persons have received relevant training on how to deal with health and safety hazards
- e. brief and obtain feedback from other persons concerning **workplace procedures**
- f. respond promptly to any breaches of health and safety procedures in a way which meets workplace and legal requirements
- g. make any recommendations for changes to **workplace procedures** clearly, to the responsible person
- h. check regularly that you records relating to health and safety matters
 - comply with legal and workplace requirements, and
 - are accessible to those who are authorised to use them

2. Ensure that risks are controlled safely and effectively

To be competent you must:

- i. keep accurate and legible records of workplace risks identified or reported to you
- j. report the existence of hazards with high risks in accordance with workplace health and safety procedures
- k. confirm that appropriate precautions to control these **risks** have been agreed with the persons responsible for health and safety
- l. confirm that the precautions are in accordance with legal and workplace health and safety procedures
- m. check that other persons are

- aware of the **risks**, and
- understand the action to be taken to reduce the **risks** which can arise
- n. review the precautions to ensure those **risks** are minimised and are no longer significant
- o. **report** promptly and accurately any conflicts which still exist between workplace and statutory requirements to the persons responsible for health and safety
- p. ensure you reports contain accurate details about the cause of hazards with high risks and make suitable recommendations to minimise their reoccur

NOS G15 – Work with Others to Improve Customer Service (Imported ICS Unit 3)

UNIT OVERVIEW

This unit is all about how you develop a relationship with others to improve your customer service performance

KEY WORDS AND PHRASES

Products and services

These can be any product, part or service connected with the retail motor industry.

SCOPE OF THIS UNIT:

All of the items listed below form part of this National Occupational Standard

1. **Others** can be
 - a. team members
 - b. colleagues
 - c. suppliers
 - d. supervisors/managers/team members
 - e. service partners
 - f. manufacturers
 - g. individuals from other departments
 - h. individuals from other sites
 - i. individuals from other organizations

2. **Agree roles and responsibilities** which
 - a. are part of your own job
 - b. have been agreed with others as part of their job

ESSENTIAL KNOWLEDGE

You need to understand:

Legislative and organisational requirements and procedures

1. the specific aspects of
 - i. health & safety
 - ii. data protection
 - iii. equal opportunities
 - iv. disability discrimination
 - v. legislation and regulations
- which affect the way products or services can be delivered to your customers

2. industry, organisational and professional codes of practice and ethical standards that affect the way in which products or services can be delivered to your customers
3. the guidelines laid down by your organisation which limit what you can do within your job
4. the limits of your own authority and when you need to seek agreement with or permission from others
5. any organisational targets relevant to your job, your role in meeting them and the implications for your organisation if those targets are not met

Customer Rights

6. what your customers' rights are and how these rights limit what you are able to do for your customer

Products and or Services and responsibilities

7. the products or services of your organisation relevant to your customer service role
8. who else is involved either directly or indirectly with your ability to offer your organisation's products or services
9. the roles and responsibilities of others in your organisation
10. the roles of others outside your organisation who have an impact on the products or services you provide
11. what the goals or targets of your organisation are in relation to customer service and how these are set

Communication and Customer Service

12. how to communicate in a clear, polite, confident way and why this is important.

PERFORMANCE OBJECTIVES

Work with others to follow plans for improving customer service

To be competent you must:

- a. contribute to constructive ideas to plans for improving customer service
- b. identify what you have to do to follow plans to improve customer service and confirm this with others
- c. co-operate with others to follow plans to improve customer service
- d. keep your commitments made to others
- e. keep others advised of situations that may affect plans to improve customer service

Monitor your own performance against plans to improve customer service

To be competent you must:

- a. discuss with others how what you do affects their customer service performance
- b. identify how the way you work with others contributes towards meeting plans to improve customer service
- c. continuously review your own performance with others against plans to improve customer service

Monitor joint performance against plans to improve customer service

To be competent you must:

- a. discuss the others joint performance measured against aims to improve customer service
- b. identify with others how joint efforts to follow plans and achieve aims could be improved
- c. take action with others to improve joint customer service performance
- d. identify how the way in which you work with others improved customer service for your organisation and for your customers

NOS VF01 – Inspect, Repair and Replace Standard Light Vehicle Tyres

UNIT OVERVIEW

This unit is about inspecting standard light vehicle tyres to assess their condition and suitability for repair and carrying out necessary repair, replacement or refitting activities.

KEY WORDS AND PHRASES

Agreed time scales

Examples include job times set by your company or agreed with a specific customer

Light vehicle tyres

These can be from light vehicles and trailers.

Sources of information

Examples include: tyre manufacturer's publications, Government publications, company documentation, BSI publications.

SCOPE OF THIS UNIT:

1. **Tyres** are
 - a. radial
 - b. cross ply
 - c. bias belted

2. **Tools and equipment** are
 - a. lifting and supporting equipment
 - b. wheel removal and refitting tools
 - c. tyre removal and refitting equipment
 - d. measuring equipment
 - e. tyre inflation equipment
 - f. wheel balancing equipment
 - g. specialist equipment for tyre removal
 - h. tyre repair tools

3. **Inspection** covers
 - a. wheel rim and fixings
 - b. tyres
 - c. valves

4. **Inspection techniques** are
- a. visual
 - b. measurements of tread depth
 - c. tyre pressures
 - d. balance

ESSENTIAL KNOWLEDGE

You need to understand:

Legislative and organisational requirements and procedures

1. the health and safety legislation and workplace procedures relevant to workshop practices and personal and vehicle protection
2. the legal requirements for light vehicle tyres, and the relevant parts of the prevailing British and or European standard for the repair of light vehicle tyres
3. how to isolate scrapped tyres and dispose of waste materials in your workplace
4. the importance of disposing of waste safely and the consequences of not doing so to others and the environment.
5. the importance of selecting, using and maintaining the appropriate personal protective equipment when inspecting, repairing and replacing light vehicle tyres.
6. the agreed work specification.
7. your workplace procedures for
 - the referral of problems
 - reporting of delays to the completion of work
 - personal protection
8. the requirements for protecting the vehicle and contents from damage before, during and after removing and replacing wheels.
9. the importance of working to agreed timescales and keeping others informed of progress.
10. the relationship between time and cost.
11. the importance of reporting anticipated delays to the relevant person(s) promptly

Tools and equipment

12. how to select, prepare and use the **tools and equipment** necessary for inspecting, repairing, replacing and refitting light vehicle tyres.

Materials

13. the types of tyre repair materials available (i.e. rubber only plug patch unit and rubber only patch and filler material)
14. the repair material manufacturer's instructions for the type(s) of tyres on which you are working.

Tyre inspection, removal, repair and replacement

15. how to find and use suitable sources of information on standard light vehicle **tyres**.
16. the purpose, function and construction of standard light vehicle **tyres**
17. the common faults associated with standard light vehicle **tyres** and their causes.
18. what a tyre **inspection** should cover
19. the **inspection techniques** associated with light vehicle **tyres** and how to carry them out

20. the importance of taking accurate measurements and ensuring any adjustments are within acceptable tolerances for the vehicle
21. the importance of basing your decision to replace or repair tyres upon the results of your inspection
22. how to remove, repair, replace and refit light vehicle **tyres**, replace valves and remove and replace road wheels
23. the importance of checking the safety and operation of equipment prior to use.
24. how to work safely avoiding injury to yourself, others and damage to **tyres** and wheels

PERFORMANCE OBJECTIVES

To be competent you must:

- a. use suitable personal protective equipment and vehicle coverings throughout all **tyre inspection**, repair and replacement activities.
- b. use suitable sources of technical information to support your **inspection**, repair and replacement of **tyres**
- c. work in a way which minimises the risk of damage to the vehicle and its systems.
- d. confirm that all the **tools and equipment** required are safe prior to use.
- e. ensure your **inspection techniques** are sufficiently in depth to identify the severity of all tyre and wheel defects.
- f. conduct all **inspection**, repair and replacement activities following:
 - manufacturers' instructions
 - your workplace procedures
 - health and safety requirements
 - the current industry standard for tyre repair
- g. carry out all **inspection**, repair and replacement activities using:
 - suitable **tools and equipment**
 - the correct **inspection techniques**
 - the correct type and size of component
- h. clearly identify and record the cause of any tyre, valve or wheel faults following your normal workplace procedures
- i. make clear and accurate recommendations for further action to the relevant person(s), when necessary
- j. ensure that replaced and refitted **tyres** and valves are correctly fitted and balanced and conform to legal requirements prior to releasing the vehicle to the customer.
- k. dispose of removed components safely to meet legal and your workplace requirements.
- l. complete all activities within the agreed timescale.
- m. report any anticipated delays in completion and any additional faults identified to the relevant person(s) promptly.

NOS VF02 – Inspect, Repair and Replace High Performance Light Vehicle Tyres

UNIT OVERVIEW

This unit is about inspecting high performance light vehicle tyres to assess their condition and suitability for repair and carrying out necessary repair, replacement or refitting activities.

KEY WORDS AND PHRASES

Agreed time scales

Examples include job times set by your company or agreed with a specific customer

Sources of information

Examples include: tyre manufacturer's publications, Government publications, company documentation, BSI publications.

SCOPE OF THIS UNIT:

1. **High performance light vehicle tyres** are
 - a. those with a V, W, Y or ZR rating
 - b. those having an aspect ratio of 55% or below
 - c. with flat run capability
 - d. directional, asymmetric and composite tread patterns

2. **Tools and equipment** are
 - a. lifting and supporting equipment
 - b. wheel removal and refitting tools
 - c. tyre removal and refitting equipment
 - d. measuring equipment
 - e. tyre inflation equipment
 - f. wheel balancing equipment
 - g. specialist equipment for tyre removal
 - h. tyre repair tools

3. **Inspection** covers
 - a. wheel rim and fixings
 - b. tyres
 - c. valves

4. **Inspection techniques** are
 - a. visual
 - b. measurements of tread depth

- c. tyre pressures
- d. balance

ESSENTIAL KNOWLEDGE

You need to understand:

Legislative and organisational requirements and procedures

1. the health and safety legislation and workplace procedures relevant to workshop practices and personal and vehicle protection.
2. the legal requirements for light vehicle tyres, and the relevant parts of the prevailing British and or European standard for the repair of **high performance light vehicle tyres**
3. how to isolate scrapped tyres and dispose of waste materials in your workplace
4. the importance of disposing of waste safely and the consequences of not doing so to others and the environment.
5. the importance of selecting, using and maintaining the appropriate personal protective equipment when inspecting, repairing and replacing **high performance light vehicle tyres**.
6. the agreed work specification.
7. your workplace procedures for
 - the referral of problems
 - reporting of delays to the completion of work
 - personal protection
8. the requirements for protecting the vehicle and contents from damage before, during and after removing and replacing wheels.
9. the importance of working to agreed timescales and keeping others informed of progress.
10. the relationship between time and cost.
11. the importance of reporting anticipated delays to the relevant person(s) promptly

Tools and equipment

12. how to select, prepare and use the **tools and equipment** necessary for inspecting, repairing, replacing and refitting **high performance light vehicle tyres**.

Materials

13. the types of tyre repair materials available (i.e. rubber only plug patch unit and rubber only patch and filler material)
14. the repair material manufacturer's instructions for the application of repair materials for the type(s) of tyres on which you are working.

Tyre inspection, removal, repair and replacement

15. how to find and use suitable sources of information on **high performance light vehicle tyres**.
16. the purpose, function and construction of **high performance light vehicle tyres**
17. the types and functions of pressure monitoring systems
18. the types of valves used in **high performance light vehicle tyres** and their installation techniques.
19. how run flat tyres function
20. the common faults associated with **high performance light vehicle tyres** and their causes.

21. the manufacturer's recommendations on the 'repairability' of their tyres
22. what a tyre **inspection** should cover
23. the **inspection techniques** associated with **high performance light vehicle tyres** and how to conduct them
24. the importance of taking accurate measurements and ensuring any adjustments are within acceptable tolerances for the vehicle
25. the importance of basing your decision to replace or repair tyres upon the results of your inspection
26. how to remove, repair, replace and refit **high performance light vehicle tyres**, wheels and valves.
27. the characteristics of composite tyres and how they are fitted.
28. the importance of checking the safety and operation of equipment prior to use
29. how to work safely avoiding injury to yourself, others and damage to wheels when removing and refitting **high performance light vehicle tyres**

PERFORMANCE OBJECTIVES

To be competent you must:

- a. use suitable personal protective equipment throughout all **high performance light vehicle tyre inspection**, repair and replacement activities.
- b. use suitable sources of technical information to support your **inspection**, repair and replacement of **high performance light vehicle tyres**
- c. work in a way which minimizes the risk of damage to the vehicle and its systems.
- d. confirm that all the **tools and equipment** required are safe prior to use.
- e. ensure your **inspection techniques** are sufficiently in depth to identify the severity of all tyre and wheel defects.
- f. conduct all **inspection**, repair and replacement activities following:
 - manufacturers' instructions
 - your workplace procedures
 - health and safety requirements
 - the current industry standard for tyre repair
- g. carry out all **inspection**, repair and replacement activities using:
 - suitable **tools and equipment**
 - the correct **inspection techniques**
 - the correct type and size of component
- h. clearly identify and record the cause of any tyre, valve or wheel faults following your normal workplace procedures
- i. make clear and accurate recommendations for further action to the relevant person(s), when necessary
- j. ensure that replaced and refitted **high performance light vehicle tyres** and valves are correctly fitted and balanced and conform to legal requirements prior to releasing the vehicle to the customer.
- k. dispose of removed components safely to meet legal and your workplace requirements.
- l. complete all activities within the agreed timescale.
- m. report any anticipated delays in completion and any additional faults identified to the relevant person(s) promptly.

NOS VF03 – Inspect, Repair and Replace Commercial Vehicle Tyres

UNIT OVERVIEW

This unit is about inspecting commercial vehicle tyres to assess their condition and suitability for repair and carrying out necessary repair, replacement or refitting activities.

KEY WORDS AND PHRASES

Agreed time scales

Examples include job times set by your company or agreed with a specific customer

Commercial vehicles

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

Common tyre faults

Examples include: normal wear; abnormal wear due to misalignment; incorrect inflation, adjustment, installation and application; damage.

Sources of information

Examples include: tyre manufacturer's publications, Government publications, company documentation, BSI publications.

Tyre safety inflation equipment

Examples include: tyre safety cages, portal 'H' cages, and 'bag-it' type inflation devices.

SCOPE OF THIS UNIT:

1. **Commercial vehicle tyres** are fitted to
 - a. 17.5, 19.5 and 22.5 diameter code rims
 - b. external valve aperture or hole (EVA/EVH) rims
 - c. split rims
 - d. wide single rims

2. **Tools and equipment** are
 - a. lifting and supporting equipment
 - b. wheel removal and refitting tools
 - c. tyre removal and refitting hand tools
 - d. measuring
 - e. tyre safety inflation equipment
 - f. tyre re-grooving equipment

g. tyre repair tools

3. Inspection covers

- a. wheel rim components and fixings
- b. tyres
- c. valves
- d. tubes

4. Inspection techniques are

- a. visual
- b. measurements of tread depth
- c. tyre pressures

ESSENTIAL KNOWLEDGE

You need to understand:

1. **Legislative and organisational requirements and procedures**
the health and safety legislation and workplace procedures relevant to workshop practices and personal and vehicle protection.
2. the legal requirements for **commercial vehicle tyres**, and the relevant parts of the prevailing British and or European standard for the repair of **commercial vehicle tyres**
3. how to isolate scrapped tyres and dispose of waste materials in your workplace
4. the importance of disposing of waste safely and the consequences of not doing so to others and the environment.
5. the importance of selecting, using and maintaining the appropriate personal protective equipment when inspecting, repairing and replacing **commercial vehicle tyres**.
6. the agreed work specification.
7. your workplace procedures for
 - the referral of problems
 - reporting of delays to the completion of work
 - personal protection
8. the requirements for protecting the vehicle and contents from damage before, during and after removing and replacing wheels.
9. the importance of working to agreed timescales and keeping others informed of progress.
10. the relationship between time and cost.
11. the importance of reporting anticipated delays to the relevant person(s) promptly

Tools and equipment

12. how to select, prepare and use the **tools and equipment** necessary for inspecting, repairing, replacing and refitting **commercial vehicle tyres**, including the use of specialist bead unseating tools for EVA/AVH rims.

Materials

13. the types of tyre repair materials available (i.e. rubber only plug patch unit and rubber only patch and filler material)

14. the repair material manufacturer's instructions for the application of repair materials for the type(s) of tyres on which you are working.

Tyre inspection, removal, repair and replacement

15. how to find and use suitable sources of information on **commercial vehicle tyres**.
16. the purpose, function and construction of **commercial vehicle tyres**
17. the types of commercial vehicle wheel rims and how to inspect them and their components for compatibility and serviceability
18. the types of valves used in **commercial vehicle tyres** and their installation techniques.
19. the types of commercial vehicle wheel fixings and how to inspect them for compatibility and serviceability
20. the common faults associated with **commercial vehicle tyres** and their causes (e.g. normal wear, abnormal wear due to misalignment; incorrect inflation, adjustment, installation and application; damage)
21. the manufacturer's recommendations on the 'repairability' of their tyres
22. what a tyre **inspection** should cover
23. the **inspection techniques** associated with **commercial vehicle tyres** and how to conduct them
24. the importance of taking accurate measurements and ensuring any adjustments are within acceptable tolerances for the vehicle
25. the importance of basing your decision to replace or repair tyres upon the results of your inspection
26. how to remove, repair, replace and refit **commercial vehicle tyres**, wheels and valves.
27. how to identify the regroovability of commercial vehicle tyres
28. how to regroove commercial vehicle tyres
29. the importance of checking the safety and operation of equipment prior to use.
30. how to work safely avoiding injury to yourself, others and damage to wheels when removing and refitting **commercial vehicle tyres**

PERFORMANCE OBJECTIVES

To be competent you must:

- a. use suitable personal protective equipment throughout all **commercial vehicle tyre inspection**, repair and replacement activities.
- b. use suitable sources of technical information to support your **inspection**, repair and replacement of **commercial vehicle tyres**
- c. work in a way which minimises the risk of damage to the vehicle and its systems.
- d. confirm that all the **tools and equipment** required are safe prior to use.
- e. ensure your **inspection techniques** are sufficiently in depth to identify the severity of all tyre and wheel defects.
- f. conduct all **inspection**, repair and replacement activities following:
 - manufacturers' instructions
 - your workplace procedures
 - health and safety requirements
 - the current industry standard for tyre repair
- g. carry out all **inspection**, repair and replacement activities using:
 - suitable **tools and equipment**
 - the correct **inspection techniques**
 - the correct type and size of component

- h. clearly identify and record the cause of any tyre, valve or wheel faults following your normal workplace procedures
- i. make clear and accurate recommendations for further action to the relevant person(s), when necessary
- j. ensure that replaced and refitted **commercial vehicle tyres** and valves are correctly fitted and conform to legal requirements prior to releasing the vehicle to the customer
- k. ensure regrooved tyres meet manufacturer's and legal requirements prior to release to the customer
- l. dispose of removed components and debris safely to meet legal and your workplace requirements.
- m. complete all activities within the agreed timescale.
- n. report any anticipated delays in completion and any additional faults identified to the relevant person(s) promptly.

NOS VF04 – Inspect, Repair and Replace Motorcycle Tyres

UNIT OVERVIEW

This unit is about inspecting motorcycle tyres to assess their condition and suitability for repair and carrying out necessary repair, replacement or refitting activities.

KEY WORDS AND PHRASES

Agreed time scales

Examples include job times set by your company or agreed with a specific customer

Common tyre faults

Examples include: normal wear; abnormal wear due to misalignment; incorrect inflation, adjustment, installation and application; damage.

Motorcycle

Use of this term will also include quads, tricycles, scooters, mopeds and sidecar combinations.

Sources of information

Examples include: tyre manufacturer's publications, Government publications, company documentation, BSI publications.

SCOPE OF THIS UNIT:

1. **Motorcycle tyres** are
 - a. tube
 - b. tubeless

2. **Tools and equipment** are
 - a. lifting and supporting equipment
 - c. tyre removal and refitting tools and equipment
 - d. measuring equipment
 - e. tyre inflation equipment
 - f. wheel balancing equipment
 - g. tyre repair tools

3. **Inspection** covers
 - a. wheel rim and fixings
 - b. tyres
 - c. valves
 - d. inner tubes

4. **Inspection techniques** are
- a. visual
 - b. measurements of tread depth
 - c. tyre pressures
 - d. balance

ESSENTIAL KNOWLEDGE

You need to understand:

Legislative and organisational requirements and procedures

1. the health and safety legislation and workplace procedures relevant to workshop practices and personal and motorcycle protection.
2. the legal requirements for motorcycle tyres, and the relevant parts of the prevailing British and or European standard for the repair of **motorcycle tyres**
3. how to isolate scrapped tyres and dispose of waste materials in your workplace
4. the importance of disposing of waste safely and the consequences of not doing so to others and the environment.
5. the importance of selecting, using and maintaining the appropriate personal protective equipment when inspecting, repairing and replacing **motorcycle tyres**.
6. the agreed work specification.
7. your workplace procedures for
 - the referral of problems
 - reporting of delays to the completion of work
 - personal protection
8. the requirements for protecting the motorcycle and contents from damage before, during and after removing and replacing wheels.
9. the importance of working to agreed timescales and keeping others informed of progress.
10. the relationship between time and cost.
11. the importance of reporting anticipated delays to the relevant person(s) promptly

Tools and equipment

12. how to select, prepare and use the **tools and equipment** necessary for inspecting, repairing, replacing and refitting **motorcycle tyres**.

Materials

13. the types of tyre repair materials available (i.e. rubber only plug patch unit and rubber only patch and filler material)
14. the repair material manufacturer's instructions for the application of repair materials for the type(s) of tyres on which you are working.

Tyre inspection, removal, repair and replacement

15. how to find and use suitable sources of information on **motorcycle tyres**.
16. the purpose, function and construction of **motorcycle tyres**
17. the types of valves used in **motorcycle tyres** and their installation techniques.

18. the common faults associated with **motorcycle tyres** and their causes (e.g. normal wear; abnormal wear due to misalignment; incorrect inflation, adjustment, installation and application; damage)
19. the manufacturer's recommendations on the 'repairability' of their tyres
20. what a tyre **inspection** should cover
21. the **inspection techniques** associated with **motorcycle tyres** and how to conduct them
22. the importance of taking accurate measurements and ensuring any adjustments are within acceptable tolerances for the motorcycle
23. the importance of basing your decision to replace or repair tyres upon the results of your inspection
24. how to remove, repair, replace and refit **motorcycle tyres**, wheels, tubes and valves.
25. the importance of checking the safety and operation of equipment prior to use.
26. how to work safely avoiding injury to yourself, others and damage to wheels when removing and refitting **motorcycle tyre**

PERFORMANCE OBJECTIVES

To be competent you must:

- a. use suitable personal protective equipment throughout all **motorcycle tyre inspection**, repair and replacement activities.
- b. use suitable sources of technical information to support your **inspection**, repair and replacement of **motorcycle tyres**
- c. work in a way which minimizes the risk of damage to the motorcycle and its systems.
- d. confirm that all the **tools and equipment** required are safe prior to use.
- e. ensure your **inspection techniques** are sufficiently in depth to identify the severity of all tyre, valve, inner tube and wheel defects.
- f. conduct all **inspection**, repair and replacement activities following:
 - manufacturers' instructions
 - your workplace procedures
 - health and safety requirements
 - the current industry standard for tyre repair
- g. carry out all **inspection**, repair and replacement activities using:
 - suitable **tools and equipment**
 - the correct **inspection techniques**
 - the correct type and size of component
- h. clearly identify and record the cause of any tyre, valve, inner tube or wheel faults following your normal workplace procedures
- i. make clear and accurate recommendations for further action to the relevant person(s), when necessary
- j. ensure that replaced and refitted **motorcycle tyres**, valves and any inner tubes are correctly fitted and balanced and conform to legal requirements prior to releasing motorcycle to the customer.
- k. dispose of removed components safely to meet legal and your workplace requirements.
- l. complete all activities within the agreed timescale.
- m. report any anticipated delays in completion and any additional faults identified to the relevant person(s) promptly.

NOS VF05 – Inspect, Repair and Replace Plant Equipment Tyres

UNIT OVERVIEW

This unit is about inspecting plant equipment tyres to assess their condition and suitability for repair and carrying out necessary repair, replacement or refitting activities

KEY WORDS AND PHRASES

Agreed time scales

Examples include job times set by your company or agreed with a specific customer

Plant equipment

Examples include agricultural, horticultural and construction plant equipment.

Common tyre faults

Examples include: normal wear; abnormal wear due to misalignment; incorrect inflation, adjustment, installation and application; damage.

Sources of information

Examples include: tyre manufacturer's publications, Government publications, company documentation, BSI publications.

Workplace

Examples include: workshops, an outdoor plant environment, customer's premises and wherever you would normally work when dealing with plant equipment.

SCOPE OF THIS UNIT:

1. **Plant tyres** are
 - a. tube
 - b. tubeless

2. **Tools and equipment** are
 - a. lifting and supporting equipment
 - b. wheel removal and refitting tools
 - c. tyre and refitting hand tools
 - d. measuring equipment
 - e. tyre repair tools

3. Inspection covers

- a. wheel rim and fixings
- b. tyres
- c. valves
- d. inner tubes

4. Inspection techniques are

- a. visual
- b. tyre pressures

ESSENTIAL KNOWLEDGE

You need to understand:

Legislative and organisational requirements and procedures

1. the health and safety legislation and workplace procedures relevant to workshop practices and personal and vehicle protection.
2. the legal requirements relating to plant tyres and the movement of vehicles on a plant site.
3. the hazards and risks associated with working in plant environments.
4. how to isolate scrapped tyres and dispose of waste materials in your workplace
5. the importance of disposing of waste safely and the consequences of not doing so to others and the environment.
6. the importance of selecting, using and maintaining the appropriate personal protective equipment when inspecting, repairing and replacing **plant tyres**.
7. the agreed work specification.
8. your workplace procedures for
9. the referral of problems
10. reporting of delays to the completion of work
11. personal protection
12. the requirements for protecting the vehicle and contents from damage before, during and after removing and replacing wheels.
13. the importance of :
 - working to agreed timescales and keeping others informed of progress.
 - the relationship between time and cost.
 - the importance of reporting anticipated delays to the relevant person(s) promptly

Tools and equipment

14. how to select, prepare and use the **tools and equipment** necessary for inspecting, repairing, replacing and refitting **plant tyres**, including the use of specialist bead unseating tools

Materials

15. the types of tyre repair materials available (i.e. rubber only plug patch unit and rubber only patch and filler material)
16. the repair material manufacturer's instructions for the application of repair materials for the type(s) of tyres on which you are working.

Tyre inspection, removal, repair and replacement

17. how to find and use suitable sources of information on **plant tyres**.
18. the purpose, function and construction of **plant tyres**
19. the difference between well base (WB) and double well base (DWB) and divided type wheel rims
20. the types of valves used in **plant tyres** and their installation techniques.
21. how to calculate dynamic rolling radius in order to select the correct replacement tyres
22. how to adjust wheel track to widen or reduce wheel positioning
23. how to improve traction by the use of ballast (i.e. water ballasting, wheel weights, chassis weights)
24. the common faults associated with **plant tyres** and their causes (e.g. normal wear; abnormal wear due to misalignment; incorrect inflation, adjustment, installation and application; damage)
25. the manufacturer's recommendations on the 'repairability' of their tyres
26. what a tyre **inspection** should cover
27. the **inspection techniques** associated with **plant tyres** and how to conduct them
28. the importance of taking accurate measurements and ensuring any adjustments are within acceptable tolerances for the vehicle
29. the importance of basing your decision to replace or repair tyres upon the results of your inspection
30. how to remove, repair, replace and refit **plant tyres**, wheels, valves and tubes
31. how to make the vehicle safe in an outdoor plant environment
32. any biological hazards associated with working in your working environment
33. the importance of checking the safety and operation of equipment prior to use.
34. how to work safely avoiding injury to yourself, others and damage to heels when removing and refitting **plant tyres**

PERFORMANCE OBJECTIVES

To be competent you must:

- a. use suitable personal protective equipment throughout all **plant tyre inspection**, repair and replacement activities.
- b. use suitable sources of technical information to support your **inspection**, repair and replacement of **plant tyres**
- c. work in a way which minimises the risk of damage to the vehicle and its systems.
- d. confirm that all the **tools and equipment** required are safe prior to use.
- e. ensure your **inspection techniques** are sufficiently in depth to identify the severity of all tyre, inner tube, valve and wheel defects.
- f. conduct all **inspection**, repair and replacement activities following:
 - manufacturers' instructions
 - your workplace procedures
 - health and safety requirements
- g. carry out all **inspection**, repair and replacement activities using:
 - suitable **tools and equipment**
 - the correct **inspection techniques**
 - the correct type and size of component
- h. clearly identify and record the cause of any tyre, valve, inner tube or wheel faults following your normal workplace procedures
- i. make clear and accurate recommendations for further action to the relevant person(s), when necessary

- j. ensure that replaced and refitted **plant tyres** and valves are correctly fitted and conform to legal requirements prior to releasing the vehicle to the customer.
- k. dispose of removed components safely to meet legal and your workplace requirements.
- l. complete all activities within the agreed timescale.
- m. report any anticipated delays in completion and any additional faults identified to the relevant person(s) promptly.

NOS VF06 – Inspect, Repair and Replace Industrial Equipment Tyres

UNIT OVERVIEW

This unit is about inspecting industrial equipment tyres to assess their condition and suitability for repair and carrying out necessary repair, replacement or refitting activities

KEY WORDS AND PHRASES

Agreed time scales

Examples include job times set by your company or agreed with a specific customer

Common tyre faults

Examples include: normal wear; abnormal wear due to misalignment; incorrect inflation, adjustment, installation and application; damage.

Industrial equipment

Examples include: fork lift trucks, cranes and load moving equipment, etc.

Tyre safety inflation equipment

Examples include: tyre safety cages, portal 'H' cages, and 'bag-it' type inflation devices.

Sources of information

Examples include: tyre manufacturer's publications, Government publications, company documentation, BSI publications.

Workplace

Examples include: workshops, an industrial environment such as a factory or warehouse, customer's premises and wherever you would normally work when dealing with industrial equipment.

SCOPE OF THIS UNIT:

All of the items listed below form part of this National Occupational Standard

1. **Industrial tyres are**
 - a. pneumatic
 - b. resilient
 - c. press on band
 - d. direct band

2. **Tools and equipment** are
 - a. lifting and supporting equipment
 - b. wheel removal and refitting tools
 - c. tyre removal and refitting equipment
 - d. measuring
 - e. tyre safety inflation equipment
 - f. tyre repair tools

3. **Inspection** covers
 - a. wheel rim and fixings
 - b. tyres
 - c. valves

4. **Inspection techniques** are
 - a. visual
 - b. tyre pressure

ESSENTIAL KNOWLEDGE

You need to understand:

Legislative and organisational requirements and procedures

1. the health and safety legislation and workplace procedures relevant to workshop practices and personal and vehicle protection.
2. the legal requirements relating to **industrial tyres**
3. the specific health and safety requirements for the industrial environment(s) in which you are working
4. how to isolate scrapped tyres and dispose of waste materials in your workplace
5. the importance of disposing of waste safely and the consequences of not doing so to others and the environment.
6. the importance of selecting, using and maintaining the appropriate personal protective equipment when inspecting, repairing and replacing **industrial tyres**.
7. the agreed work specification.
8. your workplace procedures for
 - the referral of problems
 - reporting of delays to the completion of work
 - personal protection

9. the requirements for protecting the vehicle and contents from damage before, during and after removing and replacing wheels.
10. the importance of working to agreed timescales and keeping others informed of progress.
11. the relationship between time and cost.
12. the importance of reporting anticipated delays to the relevant person(s) promptly

Tools and equipment

13. how to select, prepare and use the **tools and equipment** necessary for inspecting, repairing, replacing and refitting **industrial tyres**, including the use of specialist bead unseating tools

Materials

14. the types of tyre repair materials available (i.e. rubber only plug patch unit and rubber only patch and filler material and externally applied repair materials)
15. the repair material manufacturer's instructions for the application of repair materials for the type(s) of tyres on which you are working.

Tyre inspection, removal, repair and replacement

16. how to find and use suitable sources of information on **industrial tyres**.
17. the purpose, function and construction of **industrial tyres**
18. the difference between well base (WB) and double well base (DWB) and divided type wheel rims and *multi piece wheels*.
19. the types of valves used in **industrial tyres** and their installation techniques.
22. how to improve traction by the use of ballast (i.e. water ballasting, wheel weights, chassis weights)
23. the common faults associated with **industrial tyres** and their causes (e.g. normal wear; abnormal wear due to misalignment; incorrect inflation, adjustment, installation and application; damage)
24. the manufacturer's recommendations on the 'repairability' of their tyres
25. what a tyre **inspection** should cover
26. the **inspection techniques** associated with **industrial tyres** and how to conduct them
27. the importance of taking accurate measurements and ensuring any adjustments are within acceptable tolerances for the vehicle
28. the importance of basing your decision to replace or repair tyres upon the results of your inspection
29. how to remove, repair, replace and refit **industrial tyres**, wheels and valves
30. how to make the vehicle safe in an outdoor industrial environment
31. the biological and environmental hazards associated with working in the industrial environment
32. the importance of checking the safety and operation of equipment prior to use.
33. how to work safely avoiding injury to yourself, others and damage to wheels when removing and refitting **industrial tyres**

PERFORMANCE OBJECTIVES

To be competent you must:

- a. use suitable personal protective equipment throughout all **industrial tyre inspection**, repair and replacement activities.
- b. use suitable sources of technical information to support your **inspection**, repair and replacement of **industrial tyres**
- c. work in a way which minimises the risk of damage to the vehicle and its systems.
- d. confirm that all the **tools and equipment** required are safe prior to use.
- e. ensure your **inspection techniques** are sufficiently in depth to identify the severity of all tyre, valve and wheel defects.

- f. conduct all **inspection**, repair and replacement activities following:
- manufacturers' instructions
 - your workplace procedures
 - health and safety requirements
- g. carry out all **inspection**, repair and replacement activities using:
- suitable **tools and equipment**
 - the correct **inspection techniques**
 - the correct type and size of component
- h. clearly identify and record the cause of any tyre, valve or wheel faults following your normal workplace procedures
- i. make clear and accurate recommendations for further action to the relevant person(s), when necessary
- j. ensure that replaced and refitted **industrial tyres** and valves are correctly fitted and conform to legal requirements prior to releasing the vehicle to the customer.
- k. dispose of removed components safely to meet legal and your workplace requirements.
- l. complete all activities within the agreed timescale.
- m. report any anticipated delays in completion and any additional faults identified to the relevant person(s) promptly.

NOS VF07 – Carry Out Light Vehicle Four Wheel Alignment

UNIT OVERVIEW

This unit is about testing and adjusting four wheel alignment to meet required tolerances.

KEY WORDS AND PHRASES

Agreed time scales

Examples include job times set by your company or agreed with a specific customer

SCOPE OF THIS UNIT:

All of the items listed below form part of this National Occupational Standard

1. **Four wheel alignment pre-checks** cover
 - a. tyre pressures
 - b. wheel bearing and ball joint condition
 - c. suspension condition and ride height

2. **Four wheel alignment** covers
 - a. individual toe
 - b. combined toe
 - c. steering wheel position
 - d. thrust angle

3. **Tools and equipment** are
 - a. hand tools
 - b. lifting and supporting equipment
 - c. specialist alignment measuring equipment
 - d. turn plates
 - e. steering clamp

ESSENTIAL KNOWLEDGE

You need to understand:

Legislative and organisational procedures and requirements

1. health and safety legislation and workplace procedures relevant to workshop practices, checking equipment and personal and vehicle protection
 2. your workplace procedures for
- the referral of problems

- reporting of delays to the completion of work
 - personal protection
3. the importance of working to agreed timescales and keeping others informed of progress
 4. the relationship between time and costs
 5. your workplace requirements for recording measurements taken and adjustments made
 6. the importance of reporting anticipated delays to the relevant person(s) promptly

Tools and equipment

7. the **tools and equipment** used for the measurement and adjustment of four wheel alignment and how to select and use them
8. the importance of checking - for safety and accuracy
9. how to confirm that measuring and adjustment equipment is safe and, where necessary, calibrated, prior to use

Four wheel alignment

10. the Ackerman principle
11. the principles of caster, camber, KPI/SAI, toe out on turns, thrust angle set back, wheel run out and their effects on tyre wear and vehicle handling
12. the purpose, function and location of steering and suspension system components and how wear can affect wheel alignment
13. the abnormal tyre wear associated with misalignment
14. the importance of taking accurate measurements
15. how to find and use vehicle data relating to working tolerances
16. how to carry out **four wheel alignment pre checks**
17. **four wheel alignment** and adjustment techniques, including the use of weights, how to apply them and record adjustments
18. the importance of ensuring any adjustments are within acceptable tolerances for the vehicle
19. the possible consequences of inaccurate adjustments and the effect on other items
20. how to take and record accurate measurements
21. the importance of checking the operation of adjusted items prior to return to the customer – the implications for safety and customer satisfaction
22. how to check that the adjusted items function correctly
23. how to work safely avoiding injury to yourself, others and damage to vehicles
24. impact of adjustment on electronic systems, for example, tpms, steering wheel angle sensor, esp.

PERFORMANCE OBJECTIVES

To be competent you must:

- a. use suitable personal protective equipment and vehicle coverings throughout all **four wheel alignment** activities
- b. work in a way which minimises the risk of damage to the vehicle and its systems
- c. ensure that your measuring and adjustment equipment is safe, in good working order and, where necessary, calibrated, prior to use
- d. conduct all **four wheel alignment pre checks** and **four wheel alignment** activities following:

- the correct technical data
 - the manufacturers' instructions
 - your workplace procedures
 - health and safety requirements
- e. carry out all **four wheel alignment** activities using suitable **tools and equipment** and the correct techniques
- f. ensure your final adjustments and settings are within the tolerances allowed for the vehicle and meet legal requirements
- g. inform the relevant person(s) when adjustments to within the tolerances allowed are not possible
- h. make clear and suitable recommendations for any further action to the relevant person(s) clearly and accurately
- i. complete all **four wheel alignment** activities within the agreed timescale
- j. report any anticipated delays in completion to the relevant person(s) promptly
- k. ensure your records of measurements taken and adjustments made are clear and accurate

NOS VF08 – Inspect and Replace Light Vehicle Clutches

UNIT OVERVIEW

This unit is about inspecting and replacing light vehicle clutch components.

KEY WORDS AND PHRASES

Agreed time scales

Examples include job times set by your company or agreed with a specific customer

Clutch assembly

This consists of the drive plate, pressure plate and release bearing.

Drive plate

This is also known as the friction plate.

Pressure plate

This is also known as the clutch cover.

Types of clutches and operating systems

Examples include: single/multi-plate, centrifugal, spring and diaphragm types, cable, hydraulic and electronic.

SCOPE OF THIS UNIT:

All of the items listed below form part of this National Occupational Standard

1. Clutch components are

- a. clutch assembly
- b. spigot bearing
- c. flywheel
- d. operating cable
- e. hydraulic clutch components
- f. automatic and manual adjusters
- g. clutch fork
- h. oil seals
- i. input shaft
- j. inspection cover
- k. clutch pedal
- l. bell housing
- m. gear box
- n. driveshaft
- o. propshaft

2. **Tools and equipment** are
 - a. hand tools
 - b. special purpose tools
 - c. lifting and supporting equipment
 - d. general workshop equipment
3. **Inspection** covers
 - a. clutch operating systems
 - b. clutch assembly
 - c. flywheel
 - d. oil leaks
4. **Inspection techniques** are
 - a. visual
 - b. aural
 - c. measurement
 - d. functional tests

ESSENTIAL KNOWLEDGE

You need to understand:

Legislative and organisational procedures and requirements

1. health and safety legislation and workplace procedures relevant to workshop practices, checking equipment and personal and vehicle protection
2. your workplace procedures for
 - the referral of problems
 - reporting of delays to the completion of work
 - personal protection
3. the importance of working to agreed timescales and keeping others informed of progress
4. the relationship between time and costs
5. your workplace requirements for recording measurements taken and adjustments made
6. the importance of reporting anticipated delays to the relevant person(s) promptly

Tools and equipment

7. the types, function and use of clutch removal, alignment and replacement **tools and equipment**
8. the importance of checking the safety and operation of equipment prior to use.

Inspection and replacement of clutches

9. the different types of clutches and operating systems and how they and their associated components operate
10. the different types of **inspection techniques** and how to carry them out

11. the common faults associated with clutch systems (e.g. slip, drag, judder and noise), their cause, how to identify and rectify them
12. the purpose, function and layout of different types of manual transmission
13. the removal and replacement procedures associated with clutch systems, including the effective sequence of working
14. how to make checks and adjustments to clutch operating systems.
15. the importance of taking accurate measurements
16. how to find and use data relating to clutch working tolerances
17. the importance of ensuring any adjustments are within acceptable tolerances for the vehicle
18. how to work safely avoiding injury to yourself, others and damage to wheels when inspecting and replacing clutches

PERFORMANCE OBJECTIVES

To be competent you must:

- a. use suitable personal protective equipment throughout all clutch **inspection** and replacement activities.
- b. use suitable sources of technical information to support your **inspection** and replacement of **clutch components**
- c. work in a way which minimises the risk of damage to the vehicle and its systems.
- d. confirm that all the **tools and equipment** required are safe prior to use.
- e. ensure your **inspection techniques** are sufficiently in depth to identify the severity of all **clutch component** defects.
- f. conduct all **inspection** and replacement activities following:
 - manufacturers' instructions
 - your workplace procedures
 - health and safety requirements
- g. carry out all **inspection**, repair and replacement activities using:
 - suitable **tools and equipment**
 - the correct **inspection techniques**
 - the correct type and size of component
- h. clearly identify and record the cause of any **clutch component** faults following your normal workplace procedures
- i. make clear and accurate recommendations for further action to the relevant person(s), when necessary
- j. ensure that replaced and refitted **clutch components** are correctly fitted and conform to requirements prior to releasing the vehicle to the customer.
- k. dispose of removed components safely to meet legal and your workplace requirements.
- l. complete all activities within the agreed timescale.
- m. report any anticipated delays in completion and any additional faults identified to the relevant person(s) promptly.

NOS VF09 – Inspect and Replace Light Vehicle Exhaust Components

UNIT OVERVIEW

This unit is about inspecting exhaust components for replacement or continued serviceability and removing and replacing components identified as being faulty, damaged, deteriorated or where the customer has requested replacement.

KEY WORDS AND PHRASES

Agreed time scales

Examples include job times set by your company or agreed with a specific customer.

Complete exhaust system

This is a system from front to rear, excluding the manifold.

Manufacturers

This term can include product and vehicle manufacturers.

Special purpose tools

Examples include exhaust chain cutter, exhaust flaring dolly, thread cutting taps and dies, stud removal tools.

SCOPE OF THIS UNIT:

All of the items listed below form part of this National Occupational Standard

1. **Exhaust system components** are
 - a. complete exhaust system (separately or as complete unit)
 - b. individual component, e.g. silencer, link pipe, tail pipe etc.
 - c. catalytic converters
 - d. lambda sensor

2. **Tools and equipment** are
 - a. hand tools
 - b. special purpose tools
 - c. lifting and supporting equipment
 - d. oxy-acetylene cutting equipment

ESSENTIAL KNOWLEDGE

You need to understand:

Legislative and organisational requirements and procedures

1. the health and safety legislation and workplace procedures relevant to workshop practices and personal and vehicle protection.
2. the legal requirements relating to vehicle exhaust systems.
3. your workplace procedures for:
 - the referral of problems
 - reporting of delays to the completion of work
 - personal protection
4. how to dispose of removed components in line with health and safety and legal requirements.
5. the importance of working to agreed timescales and keeping others informed of progress.
6. the importance of reporting anticipated delays to the relevant person(s) promptly.
7. the relationship between time and costs.

Tools and equipment

8. the **tools and equipment** used for the removal and replacement of exhausts and how to select and use them.
9. how to perform safety and operational checks on **tools and equipment**.
10. how to use oxy-acetylene cutting equipment to make straight through section cuts, female from male and male from female cuts.

Exhaust inspection, removal and replacement operations

11. the purpose, function and layout of vehicle exhaust systems and their associated components.
12. the common faults associated with vehicle **exhaust system components**.
13. the fault identification methods and procedures associated with vehicle **exhaust system components**.
14. the removal and replacement procedures associated with vehicle exhaust systems, including health and safety requirements.
15. the construction of vehicle **exhaust system components**.
16. when and how to use heat to remove seized components.
17. how to check that replacement components are of the correct type and quality for the vehicle and conform to legal requirements where relevant.
18. how to make adjustments to **exhaust system components**
19. how to check **exhaust system components** are functioning correctly after refitting and or replacement and the importance of doing so before release to the customer.
20. the importance of ensuring customers are advised of the running in procedures for new exhausts prior to leaving your premises.
21. how to work safely avoiding injury to yourself and damage to vehicles.
22. exhaust related emissions control systems.
23. how to remove, replace and clean or rethread broken, damaged or seized exhaust fixings.

PERFORMANCE OBJECTIVES

To be competent you must:

- a. wear suitable personal protective equipment throughout all **exhaust system component** inspection and replacement activities.
- b. seek confirmation that all equipment is safe prior to use.
- c. carry out inspections on **exhaust system components** relevant to the faults reported.
- d. conduct all inspection and replacement activities following:
 - manufacturers' instructions
 - your workplace procedures
 - health and safety requirements
- e. ensure your inspection clearly identifies the serviceability of the **exhaust system component** and the cause of any faults identified.
- f. make clear and suitable recommendations for further action based upon the results of your inspection to the relevant person(s).
- g. carry out removal and replacement activities using:
 - suitable **tools and equipment**
 - the correct techniques
 - suitable exhaust components and fixings
- h. ensure that the replacement **exhaust system components** are correctly fitted and aligned prior to releasing the vehicle to the customer.
- i. dispose of removed **exhaust system components** safely to comply with legal requirements and your workplace procedures.
- j. complete all inspection and replacement activities within the agreed timescale.
- k. report any anticipated delays in completion to the relevant person(s) promptly.

NOS VF10 – Inspect, Test and Replace Motor Vehicle Batteries and Related Components

UNIT OVERVIEW

This unit is about carrying out tests to identify faulty batteries, then removal and replacement of them.

KEY WORDS AND PHRASES

Agreed time scales

Examples include job times set by your company or agreed with a specific customer.

Automotive batteries

Examples include standard, low maintenance, maintenance free and gel filled.

Commercial Vehicles

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

Diagnostic equipment

Examples include voltmeter, multimeter, battery test equipment and hydrometer.

Generators

These can be alternators, dynamos, magnetos.

Simple faults

Examples include internal battery faults; lack of charge; damaged, worn or missing drive belt; poor condition of wiring and or connections; corroded or damaged battery mountings; terminal corrosion and cracked battery casing.

Vehicles

These can be light vehicles, commercial vehicles and motorcycles, mopeds and scooters.

SCOPE OF THIS UNIT:

All of the items listed below form part of this National Occupational Standard

- 1. Batteries and components are**
 - a. automotive batteries
 - b. battery connections
 - c. battery supports

- d. battery hold down device
- e. generators
- f. drive belt

2. Testing techniques are

- a. visual
- b. aural
- c. functional

3. Tools and equipment

- a. hand tools
- b. diagnostic equipment

ESSENTIAL KNOWLEDGE

You need to understand:

1. the health and safety legislation and workplace procedures relevant to workshop practices and personal and vehicle protection.
2. the legal requirements relating to vehicle **batteries and components**.
3. your workplace procedures for:
 - the referral of problems
 - reporting of delays to the completion of work
 - personal protection
 - storage and maintenance of battery stock
4. how to dispose of removed components in line with health and safety and legal requirements.
5. the importance of working to agreed timescales and keeping others informed of progress.
6. the importance of reporting anticipated delays to the relevant person(s) promptly.
7. the relationship between time and costs.

Tools and equipment

8. the function and use of battery testing equipment (e.g. voltmeter, multimeter, hydrometer).
9. the **tools and equipment** used for replacing batteries and how to select and use them
10. how to perform safety and operational checks on **tools and equipment**.
11. code saving devices and how and when to use them

Battery fault finding and replacement

12. the purpose, function and layout of automotive batteries and charging system, including smart charging.
13. battery ratings and the circumstances in which differently rated batteries should be fitted.
14. the common faults associated with batteries and charging systems (eg. internal battery faults; lack of charge; damaged, worn or missing drive belt; poor condition of wiring and or

- connections; corroded or damaged battery mountings; terminal corrosion and cracked battery casing.)
15. the fault identification methods and procedures and **testing techniques** associated with **batteries and components** (e.g. visual, use of hand held diagnostic equipment, use of battery manufacturer's battery testing equipment).
 16. how to interpret test results.
 17. the removal and replacement procedures associated with **batteries and components**, including electrolyte filling and health and safety requirements.
 18. how to check that replacement **batteries and components** are of the correct type and quality for the vehicle.
 19. how to check and adjust drive belt tension.
 20. how to check that **batteries and components** are functioning correctly and the importance of doing so before release to the customer.
 21. how to work safely avoiding injury to yourself and damage to vehicles.

PERFORMANCE OBJECTIVES

To be competent you must:

- a. use suitable personal protective equipment and vehicle coverings throughout all **battery and component** testing and replacement activities.
- b. work in a way which minimises the risk of damage to the vehicle and its systems.
- c. carry out tests on **batteries and components** relevant to the faults reported.
- d. conduct all testing and replacement activities following:
 - manufacturers' instructions
 - your workplace procedures
 - health and safety requirements.
- e. ensure your **testing techniques** clearly identify the type of battery or charging system fault(s).
- f. make clear and suitable recommendations for further action based upon the results of your inspection to the relevant person(s).
- g. carry out removal and replacement activities using:
 - suitable **tools and equipment**
 - the correct techniques
 - suitable replacement **batteries and components**
- h. ensure that the replacement battery and charging system function correctly prior to releasing the vehicle to the customer.
- i. dispose of removed batteries safely to comply with legal requirements and your workplace procedures.
- j. complete all testing, inspection and replacement activities within the agreed timescale.
- k. report any anticipated delays in completion to the relevant person(s) promptly.

NOS VF11 –Inspect and Replace Light Vehicle Suspension Dampers and Springs

UNIT OVERVIEW

This unit is about inspecting and replacing suspension dampers and springs using a variety of equipment and testing techniques.

KEY WORDS AND PHRASES

Agreed time scales

Examples include job times set by your company or agreed with a specific customer.

Specialist tools

Examples include spring compressors, strut guide, strut insert retainer tools, ball joint separators.

SCOPE OF THIS UNIT:

All of the items listed below form part of this National Occupational Standard

1. **Suspension dampers** are
 - a. telescopic
 - b. semi-strut/MacPherson strut
 - c. gas assisted

2. **Tools and equipment** are
 - a. hand tools
 - b. lifting and supporting equipment
 - c. specialist tools

3. **Testing techniques** are
 - a. damper operation (bounce test)
 - b. visual
 - c. aural

ESSENTIAL KNOWLEDGE

You need to understand:

Legislative and organisational requirements and procedures

1. the health and safety legislation and workplace procedures relevant to workshop practices and personal and vehicle protection.
2. your workplace procedures for:

- the referral of problems
 - reporting of delays to the completion of work
 - personal protection
3. how to dispose of removed components in line with health and safety requirements.
 4. the importance of working to agreed timescales and keeping others informed of progress.
 5. the importance of reporting anticipated delays to the relevant person(s) promptly.
 6. the relationship between time and costs.

Tools and equipment

7. the tools used for the replacement of **suspension dampers** and how to select and use them
8. how to perform safety and operational checks on **tools and equipment**.

Inspection and replacement of suspension dampers

9. the types, purpose, function and location of **suspension dampers and springs**.
10. the common faults associated with **suspension dampers** and springs (e.g. wear, leakage, damage, corrosion, deterioration of rubber components).
11. the **testing techniques** and procedures associated with **suspension dampers and springs**.
12. the removal and refitting procedures associated with **suspension dampers and springs**, including health and safety requirements.
13. the dangers of and precautions to be taken when using spring compressors.
14. how to check that replacement components are of the correct type and quality for the vehicle and conform to legal requirements where relevant.
15. how to check that components are functioning and adjusted correctly and the importance of doing so before release to the customer.
16. how to check camber setting and wheel alignment
17. how to work safely avoiding injury to yourself and damage to vehicles.

PERFORMANCE OBJECTIVES

To be competent you must:

- a. use suitable personal protective equipment and vehicle coverings throughout all **suspension damper** testing and replacement activities.
- b. work in a way which minimises the risk of damage to the vehicle and its systems.
- c. carry out tests on **suspension dampers** and springs relevant to the faults reported.
- d. conduct all testing and replacement activities following:
 - manufacturers' instructions
 - your workplace procedures
 - health and safety requirements.
- e. ensure your **testing techniques** clearly identify the type of **suspension damper** fault(s).
- f. make clear and suitable recommendations for further action based upon the results of your inspection to the relevant person(s).
- g. carry out removal and replacement activities using:

- suitable **tools and equipment**
 - the correct techniques
 - a suitable **suspension damper** or springs for the vehicle
- h. ensure that wheel alignment is checked and adjusted as appropriate before release to the customer.
- i. ensure that the replacement **suspension dampers and springs** functions correctly prior to releasing the vehicle to the customer.
- j. dispose of removed **suspension dampers** and springs safely to comply with your workplace procedures.
- k. complete all testing, inspection and replacement activities within the agreed timescale.
- l. report any anticipated delays in completion to the relevant person(s) promptly.

NOS VF12 – Inspect, Adjust and Replace Light Vehicle Braking Systems and Components

UNIT OVERVIEW

This unit is about inspecting light vehicle braking systems and replacing and adjusting braking system components.

KEY WORDS AND PHRASES

Adjustments

Examples include handbrake freeplay, topping up brake fluid level, brake shoe adjustment, pad to disc resetting.

Agreed time scales

Examples include job times set by your company or agreed with a specific customer.

Hydraulic components

Examples include wheel cylinders, callipers, brake pipes, brakes hoses, master cylinder, load proportioning and load sensing valves.

Measuring equipment

Examples include micrometers, Vernier calipers, dial test indicators and manufacturers' specialist measuring equipment.

Simple faults

Examples include brake pad wear, brake shoe wear, hydraulic cylinder faults, brake pipe and hose faults, brake fluid faults, brake disc and drum faults.

Special purpose tools

Examples include piston retracting tools, wind back tools, brake shoe horn/lifter, brake shoe clip remover and brake fluid testers.

Testing equipment

Examples include brake roller tester, brake decelerometer, brake fluid tester, precision measuring equipment.

SCOPE OF THIS UNIT:

All of the items listed below form part of this National Occupational Standard

1. Braking system components are

- a. brake discs
- b. brake pads
- c. brake shoes
- d. hydraulic parking brake

2. Testing techniques are

- a. visual
- b. aural
- c. measurement
- d. functional

3. Tools and equipment are

- a. hand tools
- b. lifting and supporting equipment
- c. special purpose tools
- d. brake bleeding equipment
- e. measuring

ESSENTIAL KNOWLEDGE

You need to understand:

Legislative and organisational requirements and procedures

1. the health and safety legislation and workplace procedures relevant to workshop practices and personal and vehicle protection.
2. the legal requirements relating to vehicle **braking systems**.
3. your workplace procedures for:
 - the referral of problems
 - reporting of delays to the completion of work
 - personal protection
4. how to dispose of removed components in line with health and safety and legal requirements.
5. the importance of working to agreed timescales and keeping others informed of progress.
6. the importance of reporting anticipated delays to the relevant person(s) promptly.
7. the relationship between time and costs.

Tools and equipment

8. the **tools and equipment** used for inspection, testing and replacing **braking system** components and how to select and use them.
9. how to perform safety and operational checks on tools and equipment

Inspection, adjustment and replacement of braking systems and components

10. the purpose, function and layout of typical braking systems (i.e. single line systems; multi line systems; including diagonal, triangular and HI systems; disc and drum braking systems; transmission brakes; systems with load sensing valves; parking brake arrangements (including electronic systems); hydraulic fluids)
11. the **testing techniques** and procedures associated with **braking systems**.
12. the removal and replacement procedures associated with brake components, including health and safety requirements.
13. how to identify electronic braking systems, for example ABS, EBD.
14. how to check that replacement components are of the correct type and quality for the vehicle and conform to legal requirements where relevant.
15. how to make adjustments to **braking systems**
16. how to check that components are functioning correctly and the importance of doing so before release to the customer.
17. how to work safely avoiding injury to yourself and damage to vehicles.

PERFORMANCE OBJECTIVES

To be competent you must:

- a. use suitable personal protective equipment and vehicle coverings throughout all **braking system** testing and replacement activities.
- b. work in a way which minimises the risk of damage to the vehicle and its systems.
- c. carry out tests on **braking systems** relevant to the faults reported.
- d. conduct all testing and replacement activities following:
 - manufacturers' instructions
 - your workplace procedures
 - health and safety requirements.
- e. ensure your **testing techniques** clearly identify the cause of the **braking system** fault(s).
- f. make clear and suitable recommendations for further action based upon the results of your inspection to the relevant person(s).
- g. carry out removal and replacement activities using:
 - suitable **tools and equipment**
 - the correct techniques
 - the correct brake components for the vehicle
- h. ensure that the replacement **braking system** operates correctly and safely prior to releasing the vehicle to the customer.
- i. ensure customers are advised of the bedding in procedures for new brakes prior to leaving your premises.
- j. dispose of removed brake components safely to comply with your workplace procedures.

- k. complete all brake inspection, adjustment and replacement activities within the agreed timescale.
- l. report any anticipated delays in completion to the relevant person(s) promptly.

NOS VF13 – Safe use of Oxyacetylene in Automotive Applications

UNIT OVERVIEW

This unit is about the safe setting up, testing and use of oxyacetylene in automotive applications.

SCOPE OF THIS UNIT:

All of the items listed below form part of this National Occupational Standard

The numbers of scope items specified (below) indicate the minimum requirements for this occupational standard.

You must:

- 1 Confirm that the equipment is safe and fit for purpose by carrying out all of the following checks:
 - regulators, hoses and valves are securely connected and free from leaks and damage
 - the correct gas nozzle is fitted to the cutting torch
 - that a flashback arrestor is fitted to gas equipment
 - gas pressures are set and maintained as instructed
 - the correct procedure is used for lighting, adjusting and extinguishing the cutting flame
 - hoses are safely routed and protected at all times
 - gas cylinders are handled and stored safely and correctly

- 2 Use the following thermal cutting methods:
 - hand held oxy-fuel gas cutting equipment

- 3 Perform thermal cutting operations to produce **two** of the following features:
 - cut pipe sections straight through
 - female from male pipe cuts
 - male from female pipe cuts

ESSENTIAL KNOWLEDGE

You need to understand:

Legislative and organisational requirements and procedures

1. The specific safety precautions to be taken when working with thermal cutting equipment in a fabrication environment (general workshop and site safety, fire and explosion prevention, protecting other workers, safety in enclosed/confined spaces; fume control; accident procedure; statutory requirements, risk assessment procedures and relevant requirements of HASAWA, COSHH and Work Equipment Regulations; safe disposal of waste materials).
2. The personal protective clothing and equipment that needs to be worn when working with fabrications and thermal cutting equipment (leather aprons and gloves, eye protection, safety helmets, etc).
3. The correct methods of moving or lifting heavy materials and components.

4. The hazards associated with thermal cutting (naked flames, fumes and gases, explosive gas mixtures, oxygen enrichment, spatter, hot metal, elevated working, enclosed spaces), and how they can be minimized.
5. Safe working practices and procedures for using thermal equipment in line with British Compressed Gas Association (BCGA) codes of practice, to include setting up procedures, permit-to-work procedures and emergency shutdown procedures.
6. The thermal cutting process (basic principles of thermal cutting and related equipment; the various techniques and their limitation; care of the equipment to ensure that it is safe and ready to use).
7. The gases used in thermal cutting; gas identification and colour codes; their particular characteristics and safety procedures.
8. How to set up the thermal cutting equipment (connection of hoses, regulators and flashback arrestors, selection of cutting torch and nozzle size in relationship to material thickness and operations performed).
9. Preparations prior to cutting (checking connections for leaks, setting gas pressures, setting up the material/workpiece, checking cleanliness of materials used).
10. Setting of operating conditions (flame control and the effects of mixtures and pressures associated with thermal cutting).
11. The correct procedure for lighting and extinguishing the flame, and the importance of following the procedure.
12. Procedures to be followed for cutting specific materials, and why these procedures must always be adhered to.
13. The problems that can occur with thermal cutting, and how they can be avoided; causes of distortion during thermal cutting and methods of controlling distortion.
14. The effects of oil, grease, scale or dirt on the cutting process.
15. The causes of cutting defects, how to recognise them, and methods of correction and prevention.
16. The extent of your own authority and whom you should report to if you have problems that you cannot resolve.

PERFORMANCE OBJECTIVES

To be competent you must:

- a. Work safely at all times, complying with health and safety, and other relevant regulations and guidelines.
- b. Confirm that the oxy-fuel assembly is correctly set up prior to use and ready for the heating activities to be carried out.
- c. Manipulate the heating equipment safely and correctly in line with operational procedures.
- d. Safely replace empty bottles observing the necessary health and safety requirements.
- e. Carry out the necessary checks to the vehicle and surrounding area to ensure correct operation and safety.
- f. Deal promptly and effectively with problems within your control and report those that cannot be solved to an appropriate person.
- g. Safely light, and shut down the equipment to a safe condition on conclusion of the heating activities.

NOS VF44 – Receive and Store Automotive Stock

UNIT OVERVIEW

This unit is about receiving parts into storage, putting them into the required location, updating stock control systems and completing necessary documentation in a dealership, fast fit centre, parts distribution centre or similar situation.

KEY WORDS AND PHRASES

Discrepancies:

Examples include shortfalls, order omissions, damages, colour variations, and wrong type of part, etc.

Handling and moving of parts:

This is manual and or mechanically assisted lifting and carrying work, depending on the size and type of parts being handled. It should be noted that individuals who operate fork lift trucks must:

- have completed successfully an approved basic training course in fork lift truck operation, and
- hold a certificate of basic training issued by an approved organisation.

Parts:

These are vehicle parts, any accessories and consumables.

Personal Protective Equipment:

Examples include overalls, safety shoes, gloves, goggles and barrier cream.

SCOPE OF THIS UNIT:

None specified for this unit

ESSENTIAL KNOWLEDGE

You need to understand:

Legislative and organisational procedures and requirements

1. your organisation's systems and procedures for:
 - the receipt and storage of goods (including those for 'special order' parts)
 - parts storage, rotation and management
 - update of stock records
 - completion of parts receipt and storage documentation

2. the person to whom discrepancies and storage problems should be reported
3. the differing security, safety (e.g. COSHH) and environmental conditions required for parts storage, including the storage and handling of replacement air bags, and the reasons for these.
4. the requirements for and the importance of, wearing personal protective equipment when handling and moving parts.
5. the costs associated with damaged parts and why it is important that damaged parts are reported promptly.

Parts handling and storage

6. how to perform visual and physical quality checks at the time of receipt of parts.
7. how to locate where parts are stored using the parts information system in operation in your organisation.
8. how to handle and move parts safely
9. how to use the mechanical handling equipment available in your parts operation.
10. how to store parts to make best use of available space.
11. how to store parts to conform with any stock rotation requirements.
12. good housekeeping practices and the consequences of not carrying them out
13. when and where handling equipment should be used

Stock records and stock control

14. how to access and interpret information to determine what parts deliveries are expected.
15. how to update stock records on the receipt of goods.
16. how to complete relevant parts receipt and storage documentation.
17. the parts numbering system for the makes and types of parts you deal with
18. the storage requirements for special and or easily damaged parts (e.g. body panels)
19. how the parts stock control system works

PERFORMANCE OBJECTIVES

To be competent you must:

- a. wear suitable personal protective equipment throughout all parts receipt and storage activities.
- b. make sure the parts receiving area is clean, tidy and free from obstructions and hazards prior to deliveries of expected orders.
- c. accept deliveries after checking they confirm to the type, quality and quantity of parts expected.
- d. report any discrepancies in deliveries and storage problems to the relevant person promptly.
- e. access available information systems to identify the location for parts correctly.
- f. place parts in the correct locations in the time allowed.
- g. put parts into storage in a way that makes best use of the space available.
- h. put parts into storage in such a way that they can be accessed at the right time according to stock rotation requirements, where applicable.
- i. work in a way which minimises the risk of:
 - accidents and or injury to yourself and others
 - damage to the received parts
 - damage to parts already in stock
 - damage to facilities
- j. enter details of the stock received into the stock control system in a timely and accurate way.
- k. receipt and storage documentation is accurate, complete and passed to the relevant person(s) promptly in the required format.

NOS VF45 – Co-ordinate the Receipt and Storage of Automotive Parts

UNIT OVERVIEW

This unit is about taking responsibility for ensuring incoming parts are checked, handled and stored effectively. It includes organising storage facilities, allocating work roles, keeping reliable stock records and monitoring the quality of parts and the way they are stored.

KEY WORDS AND PHRASES

Criteria for evaluating ideas:

Examples include safety, cost effectiveness, use of personnel, contribution to improving productivity and effectiveness of working, potential to improve customer service, etc.

Legal requirements:

These are any current, relevant health and safety and care of substances hazardous to health (COSHH) legislation applicable to the storage of parts.

Parts:

These are vehicle parts, any accessories and consumables.

Relevant people:

Examples include your line manager and other senior colleagues.

Stock Records and Documentation:

Manual or computer based systems, depending on what is in use within your organisation.

Suppliers:

Examples are manufacturers, factors and other motor vehicle parts suppliers.

SCOPE OF THIS UNIT:

1. Requirements relate to:

- type of goods
- quantity of goods
- delivery time

2. Abnormal situations are:

- heavy parts
- large orders

- unscheduled deliveries

ESSENTIAL KNOWLEDGE

You need to understand:

Legislative and organisational requirements and procedures

1. how to use the stock recording and controlling systems in use in your organisation effectively.
2. your organisation's systems and procedures for:
 - receiving and accepting parts
 - storing and moving parts stock, including maintaining the quality of stock susceptible to damage and or deterioration
 - dealing with discrepancies and late deliveries
 - recording, documentation and parts stock control
 - health, safety and security when receiving and moving parts
 - checking stock condition and the storage of stock
 - removing out of date stock
3. legal requirements applicable to the storage of parts (e.g. air bags)

Organisation and storage of stock

4. how to prepare for the receipt and handling of different types of parts.
5. how to assess and determine storage needs for parts.
6. how to protect vehicle parts from damage and deterioration.
7. how to determine appropriate storage layouts for the storage of parts.
8. how to monitor parts stock storage and movements of stock.
9. the importance of checking incoming parts against requirements promptly after unloading.

Dealing with stock related problems

10. how to solve storage problems efficiently, safely and securely.
11. the causes of parts stock deterioration and how this can be minimised.

Communicating and working with others

12. how to evaluate the profitability of ideas for improving the procedures for moving and storing stock.
13. how to organise and communicate work roles and responsibilities accurately and clearly.
14. who may be called upon to assist with parts deliveries and storage
15. the information staff need in order to receive, move and store parts received efficiently and safely.
16. the criteria necessary for evaluating ideas.

PERFORMANCE OBJECTIVES

To be competent you must:

- a. when necessary, assemble sufficient competent staff to handle incoming orders before the deliveries are received.

- b. allocate and clearly explain roles and responsibilities to all staff involved in storing and moving parts received.
- c. ensure that the parts receiving area is clear and that sufficient storage space is prepared before the expected delivery.
- d. check that deliveries are unloaded safely and securely.
- e. ensure the parts received are checked against **requirements** promptly.
- f. ensure that delivery documentation is complete, accurate and processed promptly.
- g. check delivery records promptly to see if your organisation's **requirements** have been met by your individual suppliers.
- h. when necessary, organise storage facilities to take account of known operational needs, safety requirements and the need to preserve the condition of parts.
- i. develop and update contingency plans to cope with **abnormal situations**.
- j. maintain a routine for checking stock condition and storage and carry out spot checks at regular intervals.
- k. maintain a routine for checking the movement of stock to ensure health and safety and other organisational requirements are being met.
- l. take prompt remedial action in line with both legal and organisational requirements to resolve any parts receipt and storage problems.
- m. actively encourage individuals to make suggestions for improving the movement and storage of stock.
- n. when necessary, implement workable improvements promptly and effectively following approval from the relevant person.
- o. keep complete, accurate and up-to-date stock records that can be accessed by everyone who needs them.
- p. when requested to do so, provide accurate, up-to-date parts receipt and storage information to relevant people promptly.

NOS VF49 – Process Payment Transactions in the Automotive Retail Environment

UNIT OVERVIEW

This unit is about calculating the cost of parts and services and processing not only cash payments but other forms of payment too, including account payments. You are expected to be able to use the relevant point of sale equipment and be aware of and able to deal with, instances of potential fraud.

KEY WORDS AND PHRASES

Legislation:

Current, relevant legal requirements governing the sale of goods, trade descriptions and consumer protection.

Non-cash Payments:

Examples include cheques, account payments, credit and debit card payments.

Parts and services:

These are vehicle parts, any accessories and consumables. Services can be any associated with the retail motor industry.

Sources of information:

Examples include parts and services pricing information, other colleagues and your line manager.

SCOPE OF THIS UNIT:

1. **Payments** are:
 - cash
 - non-cash

2. **Payment documentation** covers:
 - receipts and records
 - credit and charge card slips
 - credit account slips
 - cheques

ESSENTIAL KNOWLEDGE

You need to understand:

Legislative and organisational requirements and procedures

1. your organisation's systems and procedures for:
 - authorising non-cash and credit account transactions

- verifying account holders
 - calculating and taking payments
 - booking purchases to customer accounts
 - dealing with suspected fraud
2. the relevant rights, duties and responsibilities contained within current versions of consumer legislation.
 3. the features of any current parts and or services campaigns and promotions.
 4. the limits of your authority for processing payments

Pricing

5. how to identify and check prices in your own parts and services operation.
6. how to get information and advice to deal with pricing problems.
7. how to identify current discounts and special offers (e.g. campaigns and promotions).

Handling payments and payment problems

8. how to keep cash and other payments safe and secure.
9. how to check for and identify counterfeit payments.
10. how to check for stolen cheques, credit cards, charge cards or debit cards.
11. how to deal with customers offering suspect tender or non-cash payments.
12. common methods of calculating payments, including the use of point of sale equipment and manual calculations.
13. the types of payment you are able to receive and accept.
14. the types of transactions errors that can occur and the consequences of failure to report errors.

Customer Care

15. how to balance giving the correct amount of attention to individual customers whilst maintaining a responsibility towards other customers in busy trading periods.
16. the value and importance of customer service to effective trading operations.

PERFORMANCE OBJECTIVES

To be competent you must:

- a. identify the price of items accurately.
- b. resolve any problems in pricing parts and services promptly by using the sources of information at your disposal.
- c. calculate the total price of the transaction correctly.
- d. inform customers of the amount due clearly and accurately.
- e. confirm the cash amount given by your customer and the change you give them.
- f. verify the identity of account holders following your organisation's procedures prior to debiting their account.
- g. gain authorisation for accepting non-cash **payments** and processing account debits when the value of the order exceeds the limit you are able to authorise.
- h. inform the customer tactfully when authorisation for payment cannot be obtained for non-cash transactions.
- i. complete and process **payment documentation** accurately.
- j. store payments securely and protect them from theft.
- k. be courteous to customers at all times.
- l. balance the need to give attention to individual customers whilst ensuring that others are not left without attention.

NOS VF57 – Help Customers to Choose Products in the Automotive Retail Environment

UNIT OVERVIEW

This unit is about selling products and services to customers, including providing information to help them select and purchase those which are most suitable for their needs.

KEY WORDS AND PHRASES

Products and services:

This term is used to cover vehicle parts, accessories, consumables and services offered by a vehicle fitting depot, retail parts operation, etc.

Reference materials:

These will include the products and services identification system in use in your organisation and any other materials used to source information about products and services and their availability.

SCOPE OF THIS UNIT:

1. **Customers** are those:
 - a. with a clear idea of their needs
 - b. with a general idea of their needs

2. **Information** about:
 - a. the features required of the part
 - b. the uses of the products and services
 - c. price

3. **Alternatives** are:
 - a. alternative products and services to meet needs
 - b. alternative versions of the same part
 - c. alternative sources of the products and services

4. **Depot operation** during:
 - a. busy trading periods
 - b. normal trading periods

5. **Opportunities given to the customer** are:
 - a. to inspect the part
 - b. to ask questions and read any literature on products and services

6. **Associated or additional products and services** which:
- a. extend the life of the main purchase
 - b. extend the uses of the main purchase
 - c. link to the function of the main purchase
 - provide extended warranty agreements

ESSENTIAL KNOWLEDGE

You need to understand:

Legislative and organisational requirements and procedures

1. legal rights and obligations of retailers and customers, including The Sale of Goods Act.

Selling technique

2. how to talk to different types of customers and help them to understand the information you provide.
3. how to recognise buying signals from customers
4. how to handle objections and queries effectively
5. the difference between the features of a part and the benefits of a part.
6. the features, advantages and benefits of different products and services.
7. the methods for comparing and contrasting the features, advantages and benefits of products and services to help customers make decisions about which products and services to buy
8. questioning techniques used in order to clarify and confirm customer's buying needs.
9. techniques for closing the sale.
10. the importance of customer confidence and loyalty to the organisation and how you contribute towards them.

Products and services

11. how to identify the features of products and services, including the use of reference materials.
12. what product information is available.
13. identifying the different options that are available and how to access information about those options.

Payment methods

14. acceptable methods of payment and the payment process including customer credit checks.

PERFORMANCE OBJECTIVES

Identify customer's product requirements

To be competent you must:

- a. ensure you are courteous to **customers** and promote sales and goodwill through the way you talk with them.

- b. find out accurately what the **customer** is looking for from the **information** they give you.
- c. give clear explanations and suggestions about **alternatives** if you decide the customer's requirements are unrealistic.
- d. check whether the products and services most likely to meet the customer's requirements are available.
- e. give accurate advice on other courses of action when the customer's preferred part is not available.
- f. promote the **alternatives** that give the best match between the customer's requirements and the need to make sales.

Provide information about the features and benefits of products

- g. make sure you help each customer to understand the features and benefits of the products and services you tell them about.
- h. explain accurately the features and benefits of products and services and how they meet the customer's requirements
- i. demonstrate the features of products and services where it is necessary
- j. spend enough time with customers whilst making sure that the **depot operation** is not ignored.

Confirm the customers' preferences and buying decisions

- k. give **opportunities** to customers to find out enough about products and services in order to make a buying decision.
- l. provide customers with enough time to ask questions, seek clarification and make buying decisions.
- m. handle objections and queries in a way that promotes sales and keeps the customer's confidence.
- n. identify and take opportunities for selling **associated or additional products and services**.
- o. clearly acknowledge the customer's buying decisions.
- p. clearly explain any after sales service and customer rights that apply.
- q. process payments promptly and, where it is applicable, offer facilities for packing and transporting purchases.

NOS VF62 – Plan, Monitor and Adjust Staffing Levels and Schedules in the Automotive Retail Environment

UNIT OVERVIEW

This unit is about preparing staffing plans and schedules so that work objectives and targets can be met. It includes assessing the staffing situation and making recommendations for changes in parts operation staffing where you feel these are justified.

KEY WORDS AND PHRASES

Assessments

These are about looking at the staffing level situation and how staff have coped to meet the workload, **not** formal assessments or appraisals of individual's performance at work.

SCOPE OF THIS UNIT:

1. **Operational needs** relating to
 - a. work objectives
 - b. work targets
2. **Operational constraints** are
 - a. financial
 - b. people
 - c. security and safety
3. **Adjust** staffing in relation to
 - a. the allocation of responsibility and tasks
 - b. the hours of work
 - c. staff levels

ESSENTIAL KNOWLEDGE

You need to understand:

Staff planning

1. the objectives which staffing plans are designed to achieve
2. the relationship between staffing plans and work objectives and targets
3. how staffing levels and the way in which staff are deployed can affect work objectives and targets
4. how to calculate staffing requirements
5. how to produce and present staffing plans in a form suitable for the needs of the relevant people

6. how to schedule work

Staff monitoring and adjustment

7. how to collect, collate and evaluate information on staffing
8. how to adjust staffing levels and schedules
9. how to justify assessments of effectiveness
10. the type of factors, other than staffing, that may affect progress towards work objectives, targets and the type of impact these are likely to have
11. how your manner and behaviour when presenting the results of assessments is likely to influence staff's response to them

PERFORMANCE OBJECTIVES

Plan staffing levels and prepare work schedules

- a. produce staffing plans and schedules which cover all **operational needs** and take into account **operational constraints**
- b. produce staffing plans and schedules which include accurate numbers and realistic skill levels, work allocation, locations and start and finish times
- c. produce plans that are easy for the relevant people to understand and use
- d. include contingency plans to cope with abnormal situations

Monitor staffing levels and schedules against work objectives and targets

To be competent you must:

- e. collect and organise information about the staff available and the work they are doing
- f. assess whether existing staff numbers and responsibilities are adequate for the targets you need to achieve
- g. find out what progress is being made towards achieving your work targets
- h. use the information about staffing and progress towards targets to make realistic and justifiable assessments of staff effectiveness
- i. **adjust** staffing levels and schedules so that targets can be met
- j. recommend changes in staffing clearly and promptly to your manager
- k. pass on the results of assessments to the people who need them
- l. use the results of assessment to encourage staff to reach their targets

NOS LV01 – Carry Out Routine Light Vehicle Maintenance

NOS OVERVIEW

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

KEY WORDS AND PHRASES

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 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 – light vehicles.
Additionally these vehicles may be Si, Ci, Hybrid, Electric or Alternative fuelled vehicles.

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

SCOPE OF THIS NOS:

1. Sources of technical information are:

- a. vehicle technical data
- b. schedules of inspection
- c. regulations

2. Examination methods are:

- a. aural
- b. visual
- c. functional
- d. measurements

3. Assessments are for:

- a. malfunction
- b. damage
- c. fluid levels
- d. leaks
- e. wear
- f. security
- g. condition and serviceability
- h. conformity
- i. necessity for adjustment(s)

ESSENTIAL KNOWLEDGE

You need to understand:

Legislative and organisational requirements and procedures

1. the manufacturer's and legal requirements relating to routine maintenance activities for vehicle systems and components.
2. the legal requirements relating to the vehicle
3. the health and safety legislation and workplace procedures relevant to vehicle maintenance activities including PPE
4. your workplace procedures for:
 - recording vehicle maintenance work and any variations from the original vehicle specification
 - the referral of problems
 - reporting delays to the completion of work
5. the importance of documenting vehicle maintenance information
6. the importance of working to agreed timescales and keeping others informed of progress.
7. the relationship between time and costs.
8. the importance of reporting anticipated delays to the relevant person(s) promptly.

Use of technical information

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

Vehicle system operation

12. 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 (including hybrid vehicles and alternative fuel vehicles).
13. 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 (including hybrid / alternative fuel and electric vehicles).
14. 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 (including regenerative braking systems and other energy recuperation systems used on hybrid / electric and alternative fuel vehicles).
15. the purpose, operating principles and location of power storage systems (including batteries), power generating systems, (including vehicle charging systems), starting systems, lighting systems and ancillary equipment for the type of vehicle on which you are working (including hybrid / alternative fuel and electric vehicles).
16. the operating specifications and tolerances for the type(s) of vehicles on which you are working (including hybrid / alternative fuel and electric vehicles).

Routine maintenance requirements

17. how to conduct scheduled, routine **examination methods** and **assessments** against vehicle specifications to identify damage, corrosion, inadequate fluid levels, leaks, wear, security problems and general condition and serviceability.
18. 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 to valves, ignition, fuel and emissions, brakes, transmission, lights, tyres, steering and body fittings).
19. how to replenish and replace routine service components and materials, including filters, drive, belts, wiper blades, brake linings and pads, lubricants and fluids.
20. how to recognise and report cosmetic damage to vehicle components and units outside normal service items.
21. how to identify codes and grades of lubricants.
22. how to work safely avoiding damage to the vehicle and its systems (including special precautions that may be required when working on hybrid / alternative fuel and electric vehicles).

PERFORMANCE OBJECTIVES

To be competent you must:

- a. use suitable personal protective equipment and vehicle coverings throughout all vehicle maintenance activities.
- b. use suitable **sources of technical information** to support all your vehicle maintenance activities.
- c. adhere to the correct specifications and tolerances for the vehicle when making **assessments** of system and component performance.
- d. where the customer's vehicle falls outside the manufacturer's original specification, record details accurately and use this adapted specification as the basis for your examination and assessment.
- e. examine the vehicle's systems and components following:
 - the manufacturer's approved **examination methods**
 - Recognised researched repair methods v(see guidance document)
 - health and safety requirements.
- f. ensure your **examination methods** identify accurately any vehicle system and component problems falling outside the maintenance schedule specified.
- g. carry out adjustments, replacement of vehicle components and replenishment of consumable materials following the manufacturer's current specification for:
 - the particular maintenance interval
 - working methods and procedures
 - use of equipment
 - the tolerances for the vehicle.
- h. where system adjustments cannot be made within the manufacturer's specification, record the details accurately and take action which complies with the customer's instructions.
- i. work in a way which minimises the risk of damage to the vehicle and its systems and the surrounding area.

- j. use suitable testing methods to evaluate the performance of all replaced and adjusted components and systems accurately, prior to returning the vehicle to the customer.
- k. report any problems or issues relating to the vehicle's condition or conformity to the relevant person(s) promptly.
- l. ensure your maintenance records are accurate, complete and passed to the relevant person(s) promptly in the format required.
- m. complete all vehicle maintenance activities within the agreed timescale.
- n. report any anticipated delays in completion to the relevant persons(s) promptly.

NOS RR03 - Assess and Secure the Roadside Situation

UNIT OVERVIEW

This unit is about securing and making an initial assessment of the site and vehicle in order to make decisions for further action. Providing information to, and seeking guidance from, relevant specialist authorities where hazardous substances or situations may be involved.

PERFORMANCE OBJECTIVES

To be competent you must:

- a. wear suitable personal protective equipment throughout all roadside assessment and security activities
- b. secure and protect the incident site to comply with legal requirements, current industry codes of practice, prevailing weather conditions and the roadside situation.
- c. secure the immediate safety of the driver and passengers effectively.
- d. ensure your initial assessment of the incident identifies accurately:
 - the existence of any hazardous and potentially hazardous substances
 - any real and potential fire risks
 - the need for any specialist assistance
- e. provide accurate information promptly and clearly to all relevant authorities and your control centre covering:
 - the existence of any injured persons
 - the prevailing weather conditions
 - the location and roadside situation
 - the nature of the incident
 - real and potential hazards
- f. seek assistance and guidance promptly from the relevant authorities when you believe that hazardous substances are present.
- g. ensure your initial assessment of the vehicle establishes:
 - the nature and extent of any vehicle damage and or breakdown
 - the feasibility of roadside repair
- h. make justifiable decisions for a course of action based upon the information gained from your initial assessment of the situation.
- i. ensure your records are accurate and complete and passed to the relevant person(s) promptly.

ESSENTIAL KNOWLEDGE

You need to understand:

Legal and organisational requirements and procedures

1. the legal requirements and industry codes of practice governing site protection and recovery operations.
2. the range of services and resources available within your organization.
3. your organisation's operating, reporting and recording procedures.
4. how to complete records and the importance of doing so.

Assessing and securing the site

5. the difference in requirements for securing and protecting a breakdown site and an accident site.
6. the sources of specialist advice and guidance.
7. how weather conditions affect the assessment and security of the roadside situation.
8. how to assess the immediate roadside situation surrounding an incident.
9. the circumstances in which to call for specialist assistance.
10. how to secure and protect incident sites in line with current industry codes of practice.
11. how to take steps to secure the safety of yourself and others.
12. how to use electronic and radio communication methods.
13. how to communicate with customers and relevant authorities
14. how to make an initial assessment of the extent of vehicle damage and or faults.
15. how to identify vehicles carrying hazardous substances.
16. how to interpret the results of your initial assessment and make justifiable decisions for a course of action.
17. the possible consequences of inaccurate roadside assessment.
18. the importance of wearing personal protective equipment.

NOS Unit 32 – Monitor and Solve Customer Service Problems (Imported ICS Unit 32)

UNIT OVERVIEW

This unit is about solving immediate customer service problems effectively and about changing systems to avoid repeated customer service problems.

KEY WORDS AND PHRASES

Relevant person:

Examples include your line manager, customer service manager, and business manager.

SCOPE OF THIS UNIT:

1. Problems resulting from:

- a. difference between customer expectations and the products or services of your organisation
- b. system or procedures failure
- c. shortage of resources or human error

2. Problems identified:

- a. by you and or your colleague
- b. by your customer

3. Options are:

- a. using formal organisational procedures
- b. involving agreed and or authorised exceptions to usual practice

4. Advantages and disadvantages:

- a. from the customer's point of view
- b. from your organisation's point of view

5. Systems:

- a. company systems or
- b. systems you have set up

ESSENTIAL KNOWLEDGE

You need to understand:

Legislative and organisational requirements and procedures

13. the specific aspects of
 - i. health & safety
 - ii. data protection
 - iii. equal opportunities
 - iiii. disability discrimination
 - v. legislation and regulations
14. which affect the way products or services can be delivered to your customers
15. industry, organisational and professional codes of practice and ethical standards that affect the way in which products or services can be delivered to your customers
16. the guidelines laid down by your organisation which limit what you can do within your job
17. the limits of your own authority and when you need to seek agreement with or permission from others
18. any organisational targets relevant to your job, your role in meeting them and the implications for your organisation if those targets are not met
19. organisational procedures and systems for dealing with customer service problems.

Customer Rights

20. what your customers' rights are and how these rights limit what you are able to do for your customer

Products and or Services

21. the products or services of your organisation relevant to your customer service role

Communication and Customer Service

22. how to communicate in a clear, polite, confident way and why this is important
23. how to negotiate with and reassure customers whilst their problems are being solved.
24. how the successful resolution of customer service problems contributes to customer loyalty and with the external customer and improved working relationships with the internal customer.

PERFORMANCE OBJECTIVES

Solve immediate customer service problems

To be competent you must

- a. respond positively to customers' problems according to organisational guidelines.
- b. solve customer problems when it is within you own area of authority.
- c. work with other to solve customer's problems.
- d. keep customers informed of the action being taken.
- e. check with customers that they are satisfied with the action taken,
- f. solve problems within service systems and procedures which might affect customers before they come aware of them.

- g. inform the relevant person and colleagues of the steps taken to solve specific problems.

Identify repeated customer service problems and options for solving them

- h. work individually or with colleagues to identify repeated customer service problems.
- i. identify the options for dealing with repeated problems and consider the advantages and disadvantages of each option.
- j. work with others to determine an agreed way forward for solving repeated problems.
- k. select the best option for both your customers and your organisation.

Take action to avoid the repetition of customer service problems

- l. negotiate with the relevant person changes to customer service systems and procedures that will reduce the change of problems being repeated.
- m. action your agreed solution.
- n. keep your customers informed in a positive and clear manner of steps being taken to solve any service problems.
- o. monitor the solutions you have implemented and make any suitable changes to ensure that no further problems occur.
- p. action changes to customer service systems and procedures brought in by your organisation.