



**Qualification Specification for:**

**OCN NI Level 2 Diploma in Motor Vehicle Skills**

**➤ Qualification No: 610/2946/4**

## Qualification Regulation Information

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|-------------------------|---|
| Qualification Title:    | <b>OCN NI Level 2 Diploma in Motor Vehicle Skills</b> |
| Qualification Number:   | 610/2946/4  |
| Operational start date: | 15 July 2023  |
| Operational end date:   | 14 July 2028  |
| Certification end date: | 14 July 2030  |

Qualification operational start and end dates indicate the lifecycle of a regulated qualification. The operational end date is the last date by which learners can be registered on a qualification. Learners have up to the certificate end date to complete the qualification and claim their certificate.

All OCN NI regulated qualifications are published to the Register of Regulated Qualifications (<http://register.ofqual.gov.uk/>). This site shows the qualifications and awarding organisations regulated by CCEA Regulation and Ofqual.

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## Foreword

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This document explains OCN NI's requirements for the delivery and assessment of the following regulated qualification:

➤ **OCN NI Level 2 Diploma in Motor Vehicle Skills**

This specification sets out:

- Qualification features
- Centre requirements for delivering and assessing the qualification
- The structure and content of the qualification
- Assessment requirements for the qualification
- OCN NI's quality assurance arrangements for the qualification
- Administration

OCN NI will notify centres in writing of any major changes to this specification. We will also publish changes on our website at [www.ocnni.org.uk](http://www.ocnni.org.uk)

This specification is provided online, so the version available on our website is the most up to date publication. It is important to note that copies of the specification that have been downloaded and printed may be different from this authoritative online version.

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## About Regulation

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### OCN NI

Open College Network Northern Ireland (OCN NI) is a regulated Awarding Organisation based in Northern Ireland. OCN NI is regulated by CCEA Regulation to develop and award professional and technical (vocational) qualifications from Entry Level up to and including Level 5 across all sector areas. In addition, OCN NI is regulated by Ofqual to award similar qualification types in England.

### The Regulated Qualifications Framework: an overview

The Regulated Qualifications Framework (RQF) was introduced on 1<sup>st</sup> October 2015: the RQF provides a single framework for all regulated qualifications.

#### Qualification Level

The level indicates the difficulty and complexity of the knowledge and skills associated with any qualification. There are eight levels (Levels 1-8) supported by three 'entry' levels (Entry 1-3).

#### Qualification Size

Size refers to the estimated total amount of time it could typically take to study and be assessed for a qualification. Size is expressed in terms of Total Qualification Time (TQT), and the part of that time typically spent being taught or supervised, rather than studying alone, is known as Guided Learning Hours (GLH).



## Qualification Summary

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### Sector Subject Area

4.3 Transportation operations and maintenance

### National Occupational Standards

This qualification reflects the following National Occupational Standards:

#### **NOS - Motor Vehicle:**

IMICA02 - [Reduce Risk\(s\) to Health and Safety in the Motor Vehicle Environment \(ukstandards.org.uk\)](https://www.ukstandards.org.uk)

IMICA01 - [Contribute to Housekeeping in Motor Vehicle Environments \(ukstandards.org.uk\)](https://www.ukstandards.org.uk)

IMICY13 - [Safely carry out operations on, near or with light electric vehicles - National Occupational Standards \(ukstandards.org.uk\)](https://www.ukstandards.org.uk)

IMILV13 - [Diagnose and rectify light vehicle transmission and driveline system faults - National Occupational Standards \(ukstandards.org.uk\)](https://www.ukstandards.org.uk)

IMILV06 - [Inspect light vehicles - National Occupational Standards \(ukstandards.org.uk\)](https://www.ukstandards.org.uk)

### Qualification Aim

The aim of the OCN NI Level 2 Diploma in Motor Vehicle Skills is to develop a broad base of motor vehicle skills and practical motor vehicle techniques.

### Qualification Objectives

The objectives of the OCN NI Level 2 Diploma in Motor Vehicle Skills will enable learners to gain a range of motor vehicle knowledge including health and safety, tools, equipment and materials used in motor vehicle maintenance. Learners will also develop skills associated with a range of motor vehicle operations and components.

### Grading

Grading for this qualification is pass/fail.

### Qualification Target Group

The OCN NI Level 2 Diploma in Motor Vehicle Skills is targeted at learners who wish to gain employment within the motor vehicle industry.

### **Entry Requirements**

Learners must be at least 16 years old.

### **Progression**

The OCN NI Level 2 Diploma in Motor Vehicle Skills will enable learners to progress to higher level qualifications including a Level 3 Apprenticeship, Level 3 Further Education or into employment.

### **Qualification Support**

A Qualification Support pack is available for OCN NI centres within the login area of the OCN NI website (<https://www.ocnni.org.uk/my-account/>), which includes additional support for teachers, eg planning and assessment templates, guides to best practice, etc.

### **Delivery Languages**

This qualification is available in English only at this time. If you wish to offer this qualification in Welsh or Irish (Gaeilge) then please contact OCN NI who will review demand and provide as appropriate.

## Centre Requirements for Delivering the Qualification

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### Centre Recognition and Qualification Approval

New and existing OCN NI recognised centres must apply for and be granted approval to deliver the qualification prior to the commencement of delivery.

### Centre Staffing

Centres are required to have the following roles in place as a minimum, although a member of staff may hold more than one role\*:

- Centre contact
- Programme Co-ordinator
- Tutor
- Assessor
- Internal Verifier

\*Note: A person cannot be an internal verifier for their own assessments.

### Tutors

Tutors delivering the qualification should be occupationally competent, qualified to at least one level higher than the qualification, and have a minimum of three years' relevant experience in the motor vehicle industry.

### Assessors

The qualification is assessed within the centre and is subject to OCN NI's quality assurance processes. Units are achieved as outlined within each unit's Assessment Requirements and Assessment Guidance.

#### **Assessors must:**

- be occupationally competent, qualified to at least one level higher than the qualification and have a minimum of three years' relevant experience in the motor vehicle industry
- have direct or related relevant experience in assessment
- assess all assessment tasks and activities



## Internal Verification

OCN NI qualifications must be scrutinised through the centre's internal quality assurance processes as part of the recognised centre agreement with OCN NI. The centre must appoint an experienced and trained centre internal verifier whose responsibility is to act as the internal quality monitor for the verification of the delivery and assessment of the qualifications.

### ***Internal Verifiers must:***

- have at least three years' occupational experience in the area they are internally verifying
- attend OCN NI's internal verifier training if not already completed

Internal verifiers are required to:

- support tutors and assessors
- sample assessments according to the centre's sampling strategy
- ensure tasks are appropriate to the level being assessed
- maintain up-to-date records supporting the verification of assessment and learner achievement

## Structure and Content

### OCN NI Level 2 Diploma in Motor Vehicle Skills

Total Qualification Time (TQT) for this qualification: 600 hours  
 Guided Learning Hours (GLH) for this qualification: 480 hours

The learner must successfully complete all mandatory units – 48 credits, **plus all units from one of the pathways ie, construction plant, land based, heavy vehicle, light vehicle or auto electrical – total of 60 credits.**

| Unit Reference Number            | OCN NI Unit Code | Unit Title  | Credit Value | GLH | Level |
|----------------------------------|------------------|---|--------------|-----|-------|
| <b>Group A – Mandatory units</b> |                  |   |              |     |       |
| <a href="#">F/650/7623</a>       | CBG263           | Health and Safety in the Motor Vehicle Industry                 | 5            | 40  | Two   |
| <a href="#">H/650/7624</a>       | CBG264           | Motor Vehicle Tools, Equipment and Consumable Materials         | 4            | 32  | Two   |
| <a href="#">J/650/7625</a>       | CBG265           | Brake System Operation and Components                           | 6            | 48  | Two   |
| <a href="#">K/650/7626</a>       | CBG266           | Steering System Operation and Components                        | 5            | 40  | Two   |
| <a href="#">L/650/7627</a>       | CBG267           | Electrical Circuit Operation and Components                     | 6            | 48  | Two   |
| <a href="#">M/650/7628</a>       | CBG268           | Engine Operation and Components                                 | 8            | 64  | Two   |
| <a href="#">R/650/7629</a>       | CBG269           | Engine Lubrication and Cooling Systems Operation and Components | 5            | 40  | Two   |
| <a href="#">A/650/7630</a>       | CBG270           | Transmissions System Operation and Components                   | 5            | 40  | Two   |
| <a href="#">D/650/7631</a>       | CBG271           | Practical Motor Vehicle Project                                 | 4            | 32  | Two   |

| Group B – Construction Plant units |        |   |   |    |     |
|------------------------------------|--------|---|---|----|-----|
| <a href="#">F/650/7632</a>         | CBG272 | Hydraulic System, Pneumatic Braking System Operation and Components | 4 | 32 | Two |
| <a href="#">J/650/7634</a>         | CBG273 | Small Plant Equipment, Tracks Operation and Components              | 5 | 40 | Two |
| <a href="#">K/650/7635</a>         | CBG274 | Thermal Joining and Cutting Processes                               | 3 | 24 | Two |
| Group C – Land Based units         |        |   |   |    |     |
| <a href="#">F/650/7632</a>         | CBG272 | Hydraulic System, Pneumatic Braking System Operation and Components | 4 | 32 | Two |
| <a href="#">K/650/7635</a>         | CBG274 | Thermal Joining and Cutting Processes                               | 3 | 24 | Two |
| <a href="#">L/650/7636</a>         | CBG275 | Servicing Cutting and Mowing Equipment                              | 5 | 40 | Two |
| Group D – Heavy Vehicle units      |        |   |   |    |     |
| <a href="#">F/650/7632</a>         | CBG272 | Hydraulic System, Pneumatic Braking System Operation and Components | 4 | 32 | Two |
| <a href="#">H/650/7642</a>         | CBG276 | Suspension System Components and Maintenance                        | 6 | 48 | Two |
| <a href="#">J/650/7643</a>         | CBG277 | Electric and Hybrid Vehicle Safety and Awareness                    | 2 | 16 | Two |
| Group E – Light Vehicle units      |        |   |   |    |     |
| <a href="#">K/650/7644</a>         | CBG278 | Wheel and Tyre Construction and Maintenance                         | 4 | 32 | Two |
| <a href="#">H/650/7642</a>         | CBG276 | Suspension System Components and Maintenance                        | 6 | 48 | Two |
| <a href="#">J/650/7643</a>         | CBG277 | Electric and Hybrid Vehicle Safety and Awareness                    | 2 | 16 | Two |

| Group F – Auto Electric units |        |   |   |    |     |
|-------------------------------|--------|---|---|----|-----|
| <a href="#">L/650/7645</a>    | CBG279 | Locate and Correct Vehicle Electrical Faults                | 6 | 48 | Two |
| <a href="#">M/650/7646</a>    | CBG280 | Remove and Replace Vehicle Electrical Wiring and Components | 6 | 48 | Two |

## Units

|  |   |  |
|--|---|--|
| Title  | Health and Safety in the Motor Vehicle Industry   |  |
| Level  | Two   |  |
| Credit Value   | 5   |  |
| Guided Learning Hours (GLH)  | 40  |  |
| OCN NI Unit Code   | CBG263  |  |
| Unit Reference No  | F/650/7623  |  |
| Learn Direct Code  | XS1   |  |
| <i>Unit purpose and aim(s):</i> This unit will enable the learner to understand relevant health and safety requirements and information when carrying out simple maintenance and repair activities in the motor vehicle trade. |   |  |
| <b>Learning Outcomes</b>   | <b>Assessment Criteria</b>  |  |
| 1. Know health and safety requirements, information and legislation in motor vehicle industry.   | 1.1. Describe health and safety legislation relevant to the motor vehicle industry including: <ol style="list-style-type: none"> <li>employer and employee responsibilities under the Health and Safety at Work (NI) Order 1978</li> <li>roles and responsibilities of the Health and Safety Executive in Northern Ireland</li> <li>Control of Substances Hazardous to Health Regulations (COSHH)</li> <li>Reporting Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR)</li> <li>Personal Protective Equipment regulations (PPE)</li> <li>correct method of disposing waste</li> </ol> 1.2. Identify common hazards and risks when working in the motor vehicle industry.<br>1.3. Identify and locate different signs, safety information and warning notices used in the motor vehicle environment. |  |
| 2. Recognise the appropriate manual handling techniques and the safe use of equipment.   | 2.1. Illustrate safe manual handling techniques and common manual handling equipment used in the motor vehicle industry.  |  |
| 3. Know about fire prevention and emergency procedures.  | 3.1. Identify three elements that produce a fire.<br>3.2. Identify different types of fire extinguisher, fire prevention equipment and their uses.<br>3.3. Describe the procedures to be followed in an emergency and the evacuation of the premises.   |  |
| <b>Assessment Guidance</b>   |   |  |
| The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.   |   |  |
| <b>Assessment Method</b>   | <b>Definition</b>   | <b>Possible Content</b>  |
| Portfolio of evidence  | A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes<br>OR<br>A collection of documents containing work that shows the  | Learner notes/written work<br>Learner log/diary<br>Peer notes<br>Record of observation<br>Record of discussion |

|                                    |  |  |
|------------------------------------|--|--|
|                                    | learner's progression through the course   |  |
| Practical demonstration/assignment | A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge | Record of observation<br>Learner notes/written work<br>Learner log                             |
| Coursework                         | Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course         | Record of observation<br>Learner notes/written work<br>Tutor notes/record<br>Learner log/diary |
| E-assessment                       | The use of information technology to assess learners' work   | Electronic portfolio<br>E-tests  |



|  |   |  |
|--|---|--|
| Title  | Motor Vehicle Tools, Equipment and Consumable Materials   |  |
| Level  | Two   |  |
| Credit Value   | 4   |  |
| Guided Learning Hours (GLH)  | 32  |  |
| OCN NI Unit Code   | CBG264  |  |
| Unit Reference No  | H/650/7624  |  |
| Learn Direct Code  | XS1   |  |
| <i>Unit purpose and aim(s):</i> This unit will enable the learner to understand and develop skills when using motor vehicle tools, equipment and consumable materials. |   |  |
| <b>Learning Outcomes</b>   | <b>Assessment Criteria</b>  |  |
| 1. Know different motor vehicle tools and equipment used in maintenance and repair.  | 1.1. Identify different motor vehicle tools and equipment used in maintenance and repair activities and the use of each.  |  |
| 2. Know different motor vehicle consumable materials used in maintenance and repair.   | 2.1. Identify different consumable materials used in motor vehicle maintenance and repair activities and the use of each.<br>2.2. Locate and interpret appropriate information relating to consumable materials used in motor vehicle maintenance and repair. |  |
| 3. Be able to select, check and use motor vehicle tools and equipment for maintenance and repair.  | 3.1. Select, check and use motor vehicle tools and equipment for maintenance and repair activities.   |  |
| 4. Be able to select and use motor vehicle consumable materials for maintenance and repair.  | 4.1. Select and use motor vehicle consumable materials to maintain and repair vehicles.   |  |
| 5. Be able to interpret vehicle engineer drawings.   | 5.1. Interpret a given vehicle engineer drawing.  |  |
| 6. Be able to cut, file, tap, make external threads and drill materials for motor vehicle maintenance and repair.  | 6.1. Cut, file, tap, make external threads and drill materials for motor vehicle maintenance and repair activities.   |  |
| <b>Assessment Guidance</b>   |   |  |
| The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.   |   |  |
| <b>Assessment Method</b>   | <b>Definition</b>   | <b>Possible Content</b>  |
| Portfolio of evidence  | A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes<br>OR<br>A collection of documents containing work that shows the learner's progression through the course                                   | Learner notes/written work<br>Learner log/diary<br>Peer notes<br>Record of observation<br>Record of discussion |
| Practical demonstration/assignment   | A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge  | Record of observation<br>Learner notes/written work<br>Learner log   |
| Coursework   | Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course  | Record of observation<br>Learner notes/written work<br>Tutor notes/record<br>Learner log/diary                 |

|              |  |                                 |
|--------------|--|---------------------------------|
| E-assessment | The use of information technology to assess learners' work | Electronic portfolio<br>E-tests |
|--------------|--|---------------------------------|

|  |  |  |
|--|--|--|
| Title  | Brake System Operation and Components  |  |
| Level  | Two  |  |
| Credit Value   | 6  |  |
| Guided Learning Hours (GLH)  | 48   |  |
| OCN NI Unit Code   | CBG265   |  |
| Unit Reference No  | J/650/7625   |  |
| Learn Direct Code  | XS1  |  |
| <i>Unit purpose and aim(s):</i> This unit will enable the learner to develop knowledge and skills associated with brake systems operations and components. |  |  |
| <b>Learning Outcomes</b>   | <b>Assessment Criteria</b>   |  |
| 1. Know the construction, function and operation of motor vehicle braking systems and components.  | 1.1. Describe the construction and function of braking systems and components.<br>1.2. Describe how to remove, dismantle, repair and reinstate braking systems and components.<br>1.3. Describe the effects that heat can have on braking efficiency and components.                                     |  |
| 2. Be able to perform service and repair operations on motor vehicle braking systems and components.   | 2.1. Identify braking systems, types and associated components.<br>2.2. Perform tests, remove, dismantle, repair and reinstate braking systems to meet manufacturers, technical and legislative compliance.<br>2.3. Identify and report on braking system condition following tests performed in AC 2.2. |  |
| <b>Assessment Guidance</b>   |  |  |
| The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.                                   |  |  |
| <b>Assessment Method</b>   | <b>Definition</b>  | <b>Possible Content</b>  |
| Portfolio of evidence  | A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes<br>OR<br>A collection of documents containing work that shows the learner's progression through the course  | Learner notes/written work<br>Learner log/diary<br>Peer notes<br>Record of observation<br>Record of discussion |
| Practical demonstration/assignment   | A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge   | Record of observation<br>Learner notes/written work<br>Learner log   |
| Coursework   | Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course   | Record of observation<br>Learner notes/written work<br>Tutor notes/record<br>Learner log/diary                 |
| E-assessment   | The use of information technology to assess learners' work   | Electronic portfolio<br>E-tests  |

|  |   |  |
|--|---|--|
| Title  | Steering System Operation and Components  |  |
| Level  | Two   |  |
| Credit Value   | 5   |  |
| Guided Learning Hours (GLH)  | 40  |  |
| OCN NI Unit Code   | CBG266  |  |
| Unit Reference No  | K/650/7626  |  |
| Learn Direct Code  | XS1   |  |
| <i>Unit purpose and aim(s):</i> This unit will enable the learner to develop knowledge and skills associated with steering system operations and components. |   |  |
| <b>Learning Outcomes</b>   | <b>Assessment Criteria</b>  |  |
| 1. Know the construction, function and operation of motor vehicle steering systems and components.   | 1.1. Describe the working principles of steering systems and their application.<br>1.2. Describe the types, construction and function of steering system components.<br>1.3. Describe the principles and geometry of steering systems.<br>1.4. Describe how to remove, dismantle, reassemble and replace steering system components.<br>1.5. Outline the methods of checking and adjusting steering geometry. |  |
| 2. Be able to perform service operations on motor vehicle steering systems.  | 2.1. Remove, dismantle, reassemble, and reinstate steering systems to meet manufacturer's, technical and legislative compliance.<br>2.2. Using appropriate tools and equipment, check and set steering geometry.<br>2.3. Identify and rectify the cause of steering faults.   |  |
| <b>Assessment Guidance</b>   |   |  |
| The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.                                     |   |  |
| <b>Assessment Method</b>   | <b>Definition</b>   | <b>Possible Content</b>  |
| Portfolio of evidence  | A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes<br>OR<br>A collection of documents containing work that shows the learner's progression through the course   | Learner notes/written work<br>Learner log/diary<br>Peer notes<br>Record of observation<br>Record of discussion |
| Practical demonstration/assignment   | A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge  | Record of observation<br>Learner notes/written work<br>Learner log   |
| Coursework   | Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course  | Record of observation<br>Learner notes/written work<br>Tutor notes/record<br>Learner log/diary                 |
| E-assessment   | The use of information technology to assess learners' work  | Electronic portfolio<br>E-tests  |

|   |   |  |
|---|---|--|
| Title   | Electrical Circuit Operation and Components   |  |
| Level   | Two   |  |
| Credit Value  | 6   |  |
| Guided Learning Hours (GLH)   | 48  |  |
| OCN NI Unit Code  | CBG267  |  |
| Unit Reference No   | L/650/7627  |  |
| Learn Direct Code   | XS1   |  |
| <i>Unit purpose and aim(s):</i> This unit will enable the learner to develop knowledge and skills associated with electrical circuit operations and components. |   |  |
| <b>Learning Outcomes</b>  | <b>Assessment Criteria</b>  |  |
| 1. Know the construction, function and operation of motor vehicle electrical systems, circuits and components.  | 1.1. Identify electrical circuits and components and their function from wiring diagrams and visual recognition.<br>1.2. Summarise Ohm's law, its application and principles.<br>1.3. Compare the specification, safe maintenance and charging of different types of batteries.<br>1.4. Describe the principles, construction and function of electrical circuits and components.<br>1.5. Describe how to remove, dismantle, test, verify, repair and reinstate electrical circuits and components.<br>1.6. Outline possible risks posed to electrical systems and components by other activities or incidents. |  |
| 2. Be able to perform service and repair operations on motor vehicle electrical systems and components.   | 2.1. Perform tests using equipment and practices to measure and verify the correct operation of electrical systems and components.<br>2.2. Identify and rectify faults in electrical systems and components maintaining the integrity of electrical systems.<br>2.3. Remove, dismantle, repair and reinstate electrical components and circuits to manufacturer's specifications and standards.   |  |
| <b>Assessment Guidance</b>  |   |  |
| The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.  |   |  |
| <b>Assessment Method</b>  | <b>Definition</b>   | <b>Possible Content</b>  |
| Portfolio of evidence   | A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes<br>OR<br>A collection of documents containing work that shows the learner's progression through the course   | Learner notes/written work<br>Learner log/diary<br>Peer notes<br>Record of observation<br>Record of discussion |
| Practical demonstration/assignment  | A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge  | Record of observation<br>Learner notes/written work<br>Learner log   |

|              |  |  |
|--------------|--|--|
| Coursework   | Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course | Record of observation<br>Learner notes/written work<br>Tutor notes/record<br>Learner log/diary |
| E-assessment | The use of information technology to assess learners' work   | Electronic portfolio<br>E-tests  |



|   |  |  |
|---|--|--|
| Title   | Engine Operation and Components  |  |
| Level   | Two  |  |
| Credit Value  | 8  |  |
| Guided Learning Hours (GLH)   | 64   |  |
| OCN NI Unit Code  | CBG268   |  |
| Unit Reference No   | M/650/7628   |  |
| Learn Direct Code   | XS1  |  |
| <i>Unit purpose and aim(s):</i> This unit will enable the learner to develop knowledge and skills associated with engine operations and components. |  |  |
| <b>Learning Outcomes</b>  | <b>Assessment Criteria</b>   |  |
| 1. Know the construction, function and operation of two stroke, four stroke spark and compression ignition engines and components.                  | 1.1. Describe the types, construction and operating principles of two stroke, four stroke spark and compression ignition engines.<br>1.2. Describe the function and types of two stroke, four stroke spark and compression ignition engine components.<br>1.3. Describe engine features and purpose.<br>1.4. Describe how to remove, dismantle, repair and reinstate engines and components.<br>1.5. Describe engine starting and stopping procedures.<br>1.6. Identify fuel systems and components used in engines. |  |
| 2. Be able to perform service and repair procedures on engines and their components.  | 2.1. Identify engine types and their components.<br>2.2. Remove, dismantle, repair and reinstate ancillary engine components and sub-assemblies to meet manufacturers' technical and legislative compliance.   |  |
| <b>Assessment Guidance</b>  |  |  |
| The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.                            |  |  |
| <b>Assessment Method</b>  | <b>Definition</b>  | <b>Possible Content</b>  |
| Portfolio of evidence   | A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes<br>OR<br>A collection of documents containing work that shows the learner's progression through the course  | Learner notes/written work<br>Learner log/diary<br>Peer notes<br>Record of observation<br>Record of discussion |
| Practical demonstration/assignment  | A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge   | Record of observation<br>Learner notes/written work<br>Learner log   |
| Coursework  | Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course   | Record of observation<br>Learner notes/written work<br>Tutor notes/record<br>Learner log/diary                 |
| E-assessment  | The use of information technology to assess learners' work   | Electronic portfolio<br>E-tests  |

|  |   |  |
|--|---|--|
| Title  | Engine Lubrication and Cooling Systems Operation and Components   |  |
| Level  | Two   |  |
| Credit Value   | 5   |  |
| Guided Learning Hours (GLH)  | 40  |  |
| OCN NI Unit Code   | CBG269  |  |
| Unit Reference No  | R/650/7629  |  |
| Learn Direct Code  | XS1   |  |
| <i>Unit purpose and aim(s):</i> This unit will enable the learner to develop knowledge and skills associated with engine lubrication and cooling system operations and components. |   |  |
| <b>Learning Outcomes</b>   | <b>Assessment Criteria</b>  |  |
| 1. Know the construction and function of motor vehicle cooling and lubrication systems and components.   | 1.1. Outline the reasons and methods for the control of temperature in vehicle applications.<br>1.2. Describe the causes and symptoms of insufficient cooling and lubrication.<br>1.3. Describe the fundamental operating principles of lubrication and cooling systems in engines.<br>1.4. Outline the reasons for lubrication and cooling systems in engines.<br>1.5. Describe how to drain, dismantle, repair, reinstate and test cooling and lubrication systems. |  |
| 2. Be able to perform service and repair operations on motor vehicle cooling and lubrication systems.  | 2.1. Identify different types of cooling and lubrication systems and components.<br>2.2. Identify different types of coolants and lubricants and select the appropriate product to comply with manufacturers' specifications.<br>2.3. Perform tests, drain, dismantle, repair, and reinstate cooling and lubrication systems to meet manufacturers' technical and legislative compliance.   |  |
| <b>Assessment Guidance</b>   |   |  |
| The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.   |   |  |
| <b>Assessment Method</b>   | <b>Definition</b>   | <b>Possible Content</b>  |
| Portfolio of evidence  | A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes<br>OR<br>A collection of documents containing work that shows the learner's progression through the course   | Learner notes/written work<br>Learner log/diary<br>Peer notes<br>Record of observation<br>Record of discussion |
| Practical demonstration/assignment   | A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge  | Record of observation<br>Learner notes/written work<br>Learner log   |

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|--------------|--|--|
| Coursework   | Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course | Record of observation<br>Learner notes/written work<br>Tutor notes/record<br>Learner log/diary |
| E-assessment | The use of information technology to assess learners' work   | Electronic portfolio<br>E-tests  |

|   |   |  |
|---|---|--|
| Title   | Transmissions System Operation and Components   |  |
| Level   | Two   |  |
| Credit Value  | 5   |  |
| Guided Learning Hours (GLH)   | 40  |  |
| OCN NI Unit Code  | CBG270  |  |
| Unit Reference No   | A/650/7630  |  |
| Learn Direct Code   | XS1   |  |
| <i>Unit purpose and aim(s):</i> This unit will enable the learner to develop knowledge and skills associated with transmissions system operations and components. |   |  |
| <b>Learning Outcomes</b>  | <b>Assessment Criteria</b>  |  |
| 1. Know different transmissions and gearboxes.  | 1.1. Describe the types, construction, characteristics and operating principles of transmissions and gearboxes.<br>1.2. Describe the drive path through a mechanical transmission and components using manufacturer's schematic drawings. |  |
| 2. Know how to remove, repair and reinstate transmissions.  | 2.1. Describe how to remove, dismantle, repair and reinstate transmissions and components.  |  |
| 3. Know how to identify mechanical transmission faults.   | 3.1. Illustrate how to identify mechanical transmission faults.   |  |
| 4. Be able to perform service and repair operations on mechanical transmissions.  | 4.1. Remove, dismantle, repair and reinstate transmission assemblies and components to manufacturers specifications and standards.<br>4.2. Identify and report faults in mechanical transmission assemblies and components.               |  |
| <b>Assessment Guidance</b>  |   |  |
| The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.  |   |  |
| <b>Assessment Method</b>  | <b>Definition</b>   | <b>Possible Content</b>  |
| Portfolio of evidence   | A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes<br>OR<br>A collection of documents containing work that shows the learner's progression through the course               | Learner notes/written work<br>Learner log/diary<br>Peer notes<br>Record of observation<br>Record of discussion |
| Practical demonstration/assignment  | A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge  | Record of observation<br>Learner notes/written work<br>Learner log   |
| Coursework  | Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course  | Record of observation<br>Learner notes/written work<br>Tutor notes/record<br>Learner log/diary                 |
| E-assessment  | The use of information technology to assess learners' work  | Electronic portfolio<br>E-tests  |

| Title  | Practical Motor Vehicle Project   |
|--|---|
| Level  | Two   |
| Credit Value   | 4   |
| Guided Learning Hours (GLH)  | 32  |
| OCN NI Unit Code   | CBG271  |
| Unit Reference No  | D/650/7631  |
| Learn Direct Code  | XS1   |
| <i>Unit purpose and aim(s):</i> This unit will enable the learner to undertake a motor vehicle project demonstrating appropriate industry skills and knowledge.  |   |
| Learning Outcomes  | Assessment Criteria   |
| 1. Be able to research, develop and present solutions for a motor vehicle project.   | 1.1. Research and develop a minimum of two solutions for a given motor vehicle project considering:<br>a) suitable sources of technical information<br>b) inspection procedures<br>c) health and safety requirements<br>d) legal requirements<br>e) skills required<br>1.2. Present, evaluate and justify the solutions identified in AC 1.1 including costs, timeframe and resources required. |
| 2. Be able to carry out a motor vehicle project.   | 2.1. Carry out the motor vehicle solution justified in AC1.2 to include the following:<br>a) completion of a risk assessment ensuring conformity to operating specification and legal requirements<br>b) completion of a project plan including timeframes<br>c) appropriate use of tools and equipment required for testing<br>d) Personal Protective Equipment (PPE) required                 |
| 3. Be able to assess completed motor vehicle project.  | 3.1. Assess own motor vehicle project carried out in AC2.1 considering:<br>a) possible areas for improvement<br>b) accurately complete appropriate work records<br>c) recommend suitable and justifiable cost effective repairs<br>d) record and report any additional faults identified during inspection  |
| Delivery Guidance  |   |
| <p>This unit must be delivered last and will simulate or be an 'on the job activity'. Learners will be given an opportunity to research the appropriate materials, tools and layouts to be submitted through a pre-assessment report. You must be observed by your assessor successfully carrying out at least one of the tasks listed below:</p> <ul style="list-style-type: none"> <li>a) Pre-MOT/PSV test inspection</li> <li>b) Safety inspection on equipment/machinery</li> <li>c) Post repair inspection</li> </ul> |   |

### Assessment Guidance

The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.

| Assessment Method                  | Definition  | Possible Content   |
|------------------------------------|---|--|
| Portfolio of evidence              | A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes<br>OR<br>A collection of documents containing work that shows the learner's progression through the course | Learner notes/written work<br>Learner log/diary<br>Peer notes<br>Record of observation<br>Record of discussion |
| Practical demonstration/assignment | A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge  | Record of observation<br>Learner notes/written work<br>Learner log   |
| Coursework                         | Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course  | Record of observation<br>Learner notes/written work<br>Tutor notes/record<br>Learner log/diary                 |
| E-assessment                       | The use of information technology to assess learners' work  | Electronic portfolio<br>E-tests  |



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|--|--|--|
| Title  | Wheel and Tyre Construction and Maintenance  |  |
| Level  | Two  |  |
| Credit Value   | 4  |  |
| Guided Learning Hours (GLH)  | 32   |  |
| OCN NI Unit Code   | CBG278   |  |
| Unit Reference No  | K/650/7644   |  |
| Learn Direct Code  | XS1  |  |
| <i>Unit purpose and aim(s):</i> This unit will enable the learner to develop knowledge and skills associated with wheel and tyre construction and maintenance. |  |  |
| <b>Learning Outcomes</b>   | <b>Assessment Criteria</b>   |  |
| 1. Know how wheels and tyres are constructed.  | 1.1. Identify the types of tyres and wheels used on common vehicles.<br>1.2. Identify the construction of radial and cross ply tyres.  |  |
| 2. Know wheel and tyre terminology.  | 2.1. Describe with examples the different markings and terminology associated with vehicle wheels and tyres.   |  |
| 3. Know how to carry out routine maintenance and replacement of wheels and tyres.  | 3.1. Describe how to remove, inspect and replace wheel and tyre system components.   |  |
| 4. Be able to carry out routine maintenance on wheel and tyre systems.   | 4.1. Carry out routine maintenance on wheel and tyre systems to include:<br>a) selection and use of the correct technical data, tools and equipment for wheel and tyre system maintenance<br>b) safe removal and replacement of a wheel on a vehicle<br>c) safe removal, inspection and replacement of a tyre<br>d) balance of a wheel and tyre as appropriate<br>e) safe removal and repair of a tyre |  |
| <b>Assessment Guidance</b>   |  |  |
| The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.                                       |  |  |
| <b>Assessment Method</b>   | <b>Definition</b>  | <b>Possible Content</b>  |
| Portfolio of evidence  | A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes<br>OR<br>A collection of documents containing work that shows the learner's progression through the course  | Learner notes/written work<br>Learner log/diary<br>Peer notes<br>Record of observation<br>Record of discussion |
| Practical demonstration/assignment   | A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge   | Record of observation<br>Learner notes/written work<br>Learner log   |
| Coursework   | Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course   | Record of observation<br>Learner notes/written work<br>Tutor notes/record<br>Learner log/diary                 |

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| E-assessment | The use of information technology to assess learners' work | Electronic portfolio<br>E-tests |
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|---|---|--|
| Title   | Electric and Hybrid Vehicle Safety and Awareness  |  |
| Level   | Two   |  |
| Credit Value  | 2   |  |
| Guided Learning Hours (GLH)   | 16  |  |
| OCN NI Unit Code  | CBG277  |  |
| Unit Reference No   | J/650/7643  |  |
| Learn Direct Code   | XS1   |  |
| <i>Unit purpose and aim(s):</i> This unit will enable the learner to develop an awareness of electric and hybrid vehicles including safety precautions. |   |  |
| <b>Learning Outcomes</b>  | <b>Assessment Criteria</b>  |  |
| 1. Know about the types of electric and hybrid vehicles available.  | 1.1. Outline how to identify electric and hybrid vehicles and give examples of current models.<br>1.2. Identify with examples alternative fuel source vehicles.   |  |
| 2. Be aware of the hazards around motor vehicle high energy electrical systems.   | 2.1. Describe the hazards associated with high energy electricity.<br>2.2. Identify hazards that may occur when connecting and charging electric and hybrid vehicles.   |  |
| 3. Know how to work safely around electric and hybrid vehicles.   | 3.1. Describe safety precautions to be taken before approaching and working with electric and hybrid vehicles.<br>3.2. Outline how to identify motor vehicles with high energy cabling and associated components.<br>3.3. Describe how an electric and hybrid vehicle may be safely charged using an external source. |  |
| <b>Assessment Guidance</b>  |   |  |
| The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.                                |   |  |
| <b>Assessment Method</b>  | <b>Definition</b>   | <b>Possible Content</b>  |
| Portfolio of evidence   | A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes<br>OR<br>A collection of documents containing work that shows the learner's progression through the course   | Learner notes/written work<br>Learner log/diary<br>Peer notes<br>Record of observation<br>Record of discussion |
| Practical demonstration/assignment  | A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge  | Record of observation<br>Learner notes/written work<br>Learner log   |
| Coursework  | Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course  | Record of observation<br>Learner notes/written work<br>Tutor notes/record<br>Learner log/diary                 |
| E-assessment  | The use of information technology to assess learners' work  | Electronic portfolio<br>E-tests  |

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|---|--|--|
| Title   | Suspension System Components and Maintenance   |  |
| Level   | Two  |  |
| Credit Value  | 6  |  |
| Guided Learning Hours (GLH)   | 48   |  |
| OCN NI Unit Code  | CBG276   |  |
| Unit Reference No   | H/650/7642   |  |
| Learn Direct Code   | XS1  |  |
| <i>Unit purpose and aim(s):</i> This unit will enable the learner to develop knowledge and skills associated with suspension system components and maintenance. |  |  |
| <b>Learning Outcomes</b>  | <b>Assessment Criteria</b>   |  |
| 1. Know suspension systems and components.  | 1.1. Identify and describe the purpose and function of the main components used in suspension systems.<br>1.2. Describe the operating principles of suspension systems.  |  |
| 2. Know how to carry out routine maintenance of suspension systems.   | 2.1. Describe how to remove, inspect, test, and replace suspension systems and components.   |  |
| 3. Be able to carry out routine maintenance on suspension systems.  | 3.1. Carry out routine maintenance on suspension systems to include:<br>a) selection and use of the correct technical data, tools and equipment for suspension system maintenance<br>b) safely inspect, remove and replace suspension system component |  |
| <b>Assessment Guidance</b>  |  |  |
| The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.  |  |  |
| <b>Assessment Method</b>  | <b>Definition</b>  | <b>Possible Content</b>  |
| Portfolio of evidence   | A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes<br>OR<br>A collection of documents containing work that shows the learner's progression through the course                            | Learner notes/written work<br>Learner log/diary<br>Peer notes<br>Record of observation<br>Record of discussion |
| Practical demonstration/assignment  | A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge   | Record of observation<br>Learner notes/written work<br>Learner log   |
| Coursework  | Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course   | Record of observation<br>Learner notes/written work<br>Tutor notes/record<br>Learner log/diary                 |
| E-assessment  | The use of information technology to assess learners' work   | Electronic portfolio<br>E-tests  |

| Title  | Hydraulic System, Pneumatic Braking System Operation and Components   |
|--|---|
| Level  | Two   |
| Credit Value   | 4   |
| Guided Learning Hours (GLH)  | 32  |
| OCN NI Unit Code   | CBG272  |
| Unit Reference No  | F/650/7632  |
| Learn Direct Code  | XS1   |
| <i>Unit purpose and aim(s):</i> This unit will enable the learner to develop knowledge and skills associated with hydraulic systems, pneumatic braking system operations and components. |   |
| Learning Outcomes  | Assessment Criteria   |
| 1. Know the construction, function, and operation of pneumatic braking systems.  | 1.1. Describe the construction and function of pneumatic braking systems and components.<br>1.2. Describe how to remove, dismantle, repair, and reinstate pneumatic braking systems and components.<br>1.3. Describe the effects that heat may have on pneumatic braking system efficiency and brake components.<br>1.4. Describe how the pressure in the pneumatic braking system is produced, stored, controlled, and distributed.<br>1.5. Describe common faults found on a pneumatic braking system.  |
| 2. Be able to perform service and maintenance operations on pneumatic braking systems and components.  | 2.1. Identify and locate pneumatic braking systems and components.<br>2.2. Perform tests, remove, dismantle, repair, and reinstate pneumatic braking systems to meet manufacturers, technical and legislative compliance in a safe and controlled manner.<br>2.3. Identify and report on pneumatic braking systems condition.   |
| 3. Know the construction, function, and operation of pneumatic suspension systems.   | 3.1. Describe the construction and function of pneumatic suspension systems and components.<br>3.2. Describe how to remove, dismantle, repair, and reinstate pneumatic suspension systems and components.<br>3.3. Describe the safety precautions that must be adhered to when working on a heavy vehicle that is fitted with pneumatic suspension.<br>3.4. Describe how the pressure in the pneumatic suspension system is produced, stored, controlled, and distributed.<br>3.5. Describe common faults found on a pneumatic suspension system. |
| 4. Be able to perform service and maintenance operations on pneumatic suspension systems and components.   | 4.1. Identify and locate pneumatic suspension systems and components.<br>4.2. Perform tests, remove, dismantle, repair, and reinstate pneumatic suspension systems to meet manufacturers, technical and legislative compliance in a safe and controlled manner.<br>4.3. Identify and report on pneumatic suspension systems condition.  |

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| 5. Be able to perform service and maintenance operations on hydraulic systems and components. | 5.1. Identify and locate hydraulic systems and components.<br>5.2. Remove dismantle, repair and reinstate hydraulic systems and components to manufacturer's specifications and factory settings. |
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#### Assessment Guidance

The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.

| Assessment Method                  | Definition  | Possible Content   |
|------------------------------------|---|--|
| Portfolio of evidence              | A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes<br>OR<br>A collection of documents containing work that shows the learner's progression through the course | Learner notes/written work<br>Learner log/diary<br>Peer notes<br>Record of observation<br>Record of discussion |
| Practical demonstration/assignment | A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge  | Record of observation<br>Learner notes/written work<br>Learner log   |
| Coursework                         | Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course  | Record of observation<br>Learner notes/written work<br>Tutor notes/record<br>Learner log/diary                 |
| E-assessment                       | The use of information technology to assess learners' work  | Electronic portfolio<br>E-tests  |

| Title   | Locate and Correct Vehicle Electrical Faults   |
|---|--|
| Level   | Two  |
| Credit Value  | 6  |
| Guided Learning Hours (GLH)   | 48   |
| OCN NI Unit Code  | CBG279   |
| Unit Reference No   | L/650/7645   |
| Learn Direct Code   | XS1  |
| <i>Unit purpose and aim(s):</i> This unit will enable the learner to develop knowledge and skills associated with locating and repairing vehicle electrical faults. |  |
| Learning Outcomes   | Assessment Criteria  |
| 1. Know different vehicle electrical testing equipment.   | 1.1. Identify commonly used vehicle electrical test equipment.<br>1.2. Describe how to use and operate vehicle electrical test equipment.<br>1.3. Outline the safety checks required on tools and equipment prior to use.<br>1.4. Outline how to measure voltage, resistance, current, and their correlation when diagnosing simple circuit faults.<br>1.5. Outline when and where you would use voltage, ohm, amps when diagnosing simple circuit faults.<br>1.6. Describe the operation of motors, capacitors, resistors, semi-conductors, transistors, actuators and sensors including active or self-generating and passive or modulating.   |
| 2. Know how to carry out testing methods on vehicle electrical components.  | 2.1. Describe common types of testing methods used to check the operation of vehicle electrical/electronic circuits and components.<br>2.2. Use readings and calculations to determine a component's condition.<br>2.3. Carry out tests following electrical safety operating procedures.<br>2.4. Interpret the test results carried out in AC 2.3 to diagnose simple electrical circuit faults against vehicle manufacturer specifications.<br>2.5. Make recommendations for rectification based upon the diagnosis of results gathered from testing procedures carried out in AC 2.4.<br>2.6. Illustrate how to identify common faults and causes found in electrical systems and components.<br>2.7. Explain the importance of evaluating the performance of an electrical component that has been replaced against vehicle specification.<br>2.8. Follow procedures for the disposal of electrical components. |
| 3. Be able to use appropriate tools and equipment.  | 3.1. Select and use the appropriate tools and equipment necessary, according to manufacturers' requirements for carrying out vehicle electrical testing techniques and rectification activities.<br>3.2. Calibrate equipment to meet manufacturers and legal requirements.   |



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| <p>4. Be able to carry out vehicle electrical testing techniques and rectification activities.</p> | <p>4.1. Carry out a functionality test for given electrical systems and components.<br/>         4.2. Use electrical testing methods for assessing the performance of the electrical system and components identified in AC4.1.<br/>         4.3. Carry out diagnostic and rectification activities following:<br/>         a) manufacturers' instructions<br/>         b) recognised researched repair methods<br/>         c) workplace operating procedures<br/>         d) health and safety requirements<br/>         4.4. Identify the cause of faults and seek appropriate assistance as required. Ensure all repaired and replaced electrical components are secure and functioning as specified by the manufacturer or relevant legal requirements.</p> |
| <p>5. Be able to record information and make suitable recommendations.</p>                         | <p>5.1. Produce work records that are accurate and complete.<br/>         5.2. Make justifiable recommendations for cost effective repairs.<br/>         5.3. Record and report any additional faults found during testing.</p>  |

#### Assessment Guidance

The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.

| Assessment Method                  | Definition  | Possible Content   |
|------------------------------------|---|--|
| Portfolio of evidence              | A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes<br>OR<br>A collection of documents containing work that shows the learner's progression through the course | Learner notes/written work<br>Learner log/diary<br>Peer notes<br>Record of observation<br>Record of discussion |
| Practical demonstration/assignment | A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge  | Record of observation<br>Learner notes/written work<br>Learner log   |
| Coursework                         | Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course  | Record of observation<br>Learner notes/written work<br>Tutor notes/record<br>Learner log/diary                 |
| E-assessment                       | The use of information technology to assess learners' work  | Electronic portfolio<br>E-tests  |

|  |   |  |
|--|---|--|
| Title  | Remove and Replace Vehicle Electrical Wiring and Components   |  |
| Level  | Two   |  |
| Credit Value   | 6   |  |
| Guided Learning Hours (GLH)  | 48  |  |
| OCN NI Unit Code   | CBG280  |  |
| Unit Reference No  | M/650/7646  |  |
| Learn Direct Code  | XS1   |  |
| <i>Unit purpose and aim(s):</i> This unit will enable the learner to develop knowledge and skills associated with the removal and replacement of vehicle electrical wiring and components. |   |  |
| <b>Learning Outcomes</b>   | <b>Assessment Criteria</b>  |  |
| 1. Know the components and their function within a vehicle electrical system.  | 1.1. Identify and describe the purpose and function of the main electrical components used in vehicle electrical systems.   |  |
| 2. Know how to locate and test components within a vehicle electrical system.  | 2.1. Identify the location of the electrical components to be repaired or replaced.<br>2.2. Describe how to construct and test various vehicle components.<br>2.3. Identify the wiring circuit for various vehicle electrical components.                     |  |
| 3. Be able to carry out electrical tests on vehicle components.  | 3.1. Carry out electrical tests on vehicle components to include:<br>a) selection and use of correct technical data, tools and equipment<br>b) locate and safely test components using wiring diagrams<br>c) safely repair or replace components as necessary |  |
| <b>Assessment Guidance</b>   |   |  |
| The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.   |   |  |
| <b>Assessment Method</b>   | <b>Definition</b>   | <b>Possible Content</b>  |
| Portfolio of evidence  | A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes<br>OR<br>A collection of documents containing work that shows the learner's progression through the course                                   | Learner notes/written work<br>Learner log/diary<br>Peer notes<br>Record of observation<br>Record of discussion |
| Practical demonstration/assignment   | A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge  | Record of observation<br>Learner notes/written work<br>Learner log   |
| Coursework   | Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course  | Record of observation<br>Learner notes/written work<br>Tutor notes/record<br>Learner log/diary                 |
| E-assessment   | The use of information technology to assess learners' work  | Electronic portfolio<br>E-tests  |

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|--|--|--|
| Title  | Thermal Joining and Cutting Processes  |  |
| Level  | Two  |  |
| Credit Value   | 3  |  |
| Guided Learning Hours (GLH)  | 24   |  |
| OCN NI Unit Code   | CBG274   |  |
| Unit Reference No  | K/650/7635   |  |
| Learn Direct Code  | XS1  |  |
| <i>Unit purpose and aim(s):</i> This unit will enable the learner to develop knowledge and skills associated with thermal joining and cutting processes. |  |  |
| <b>Learning Outcomes</b>   | <b>Assessment Criteria</b>   |  |
| 1. Know how to perform thermal joining and cutting techniques.   | 1.1. Describe how to identify ferrous and non-ferrous materials and associated joining characteristics.<br>1.2. Describe material preparation and joining procedures.<br>1.3. Describe the techniques for joining ferrous and nonferrous materials using gas and electric welding and soldering methods.<br>1.4. Describe how to select, prepare and set the relevant equipment to carry out welding and joining tasks.<br>1.5. Describe how to detect and correctly identify faults and their causes in welded joints.<br>1.6. Describe the precautions required when engaging in a thermal joining and cutting process.<br>1.7. Describe how to safely set up equipment and use the correct techniques for oxy-acetylene gas heating, cutting and joining. |  |
| 2. Be able to perform thermal joining and cutting.   | 2.1. Identify welding and thermal joining equipment.<br>2.2. Identify ferrous and non-ferrous materials and their suitability.<br>2.3. Prepare workplace, materials and equipment to safely carry out thermal joining processes.<br>2.4. Use the correct techniques to carry out the thermal joining tasks identified in AC 2.3.<br>2.5. Join ferrous or non-ferrous materials to the required quality and dimensions.<br>2.6. Identify faults in welded, bronze welded and soldered joints.<br>2.7. Inspect and maintain equipment and change consumables used in joining processes.<br>2.8. Safely set up and shut down equipment for oxy-acetylene gas heating, cutting and joining.  |  |
| <b>Assessment Guidance</b>   |  |  |
| The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.                                 |  |  |
| <b>Assessment Method</b>   | <b>Definition</b>  | <b>Possible Content</b>  |
| Portfolio of evidence  | A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes<br>OR   | Learner notes/written work<br>Learner log/diary<br>Peer notes<br>Record of observation<br>Record of discussion |

|                                    |  |  |
|------------------------------------|--|--|
|                                    | A collection of documents containing work that shows the learner's progression through the course  |  |
| Practical demonstration/assignment | A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge | Record of observation<br>Learner notes/written work<br>Learner log                             |
| Coursework                         | Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course         | Record of observation<br>Learner notes/written work<br>Tutor notes/record<br>Learner log/diary |
| E-assessment                       | The use of information technology to assess learners' work   | Electronic portfolio<br>E-tests  |

|   |   |  |
|---|---|--|
| Title   | Servicing Cutting and Mowing Equipment  |  |
| Level   | Two   |  |
| Credit Value  | 5   |  |
| Guided Learning Hours (GLH)   | 40  |  |
| OCN NI Unit Code  | CBG275  |  |
| Unit Reference No   | L/650/7636  |  |
| Learn Direct Code   | XS1   |  |
| <i>Unit purpose and aim(s):</i> This unit will enable the learner to develop knowledge and skills associated with servicing cutting and mowing equipment. |   |  |
| <b>Learning Outcomes</b>  | <b>Assessment Criteria</b>  |  |
| 1. Know the construction, function and operation of cutting and mowing equipment.   | 1.1. Describe the working principles of cutting and mowing equipment and components.<br>1.2. Describe how to dismantle, repair and reinstate cutting and mowing equipment.<br>1.3. Describe the methods of sharpening and setting cutting mechanisms and components.  |  |
| 2. Know how the performance of cutting and mowing equipment is affected by crop or product type and conditions.   | 2.1. Describe the effect of crop or product type and conditions on the cutting and mowing process.<br>2.2. Outline how adjustments and settings effect the performance of cutting and mowing equipment.   |  |
| 3. Be able to service cutting and mowing equipment.   | 3.1. Identify different cutting and mowing equipment.<br>3.2. Dismantle, repair and reinstate cutting and mowing machinery and tools to manufacturers' specifications.<br>3.3. Sharpen and adjust cutting mechanisms to conform with manufacturers' specifications.<br>3.4. Identify faults effecting cutting performance and rectify to perform within the manufacturers' specification. |  |
| <b>Assessment Guidance</b>  |   |  |
| The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.                                  |   |  |
| <b>Assessment Method</b>  | <b>Definition</b>   | <b>Possible Content</b>  |
| Portfolio of evidence   | A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes<br>OR<br>A collection of documents containing work that shows the learner's progression through the course   | Learner notes/written work<br>Learner log/diary<br>Peer notes<br>Record of observation<br>Record of discussion |
| Practical demonstration/assignment  | A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge  | Record of observation<br>Learner notes/written work<br>Learner log   |

|              |  |  |
|--------------|--|--|
| Coursework   | Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course | Record of observation<br>Learner notes/written work<br>Tutor notes/record<br>Learner log/diary |
| E-assessment | The use of information technology to assess learners' work   | Electronic portfolio<br>E-tests  |

| Title  | Small Plant Equipment, Tracks Operation and Components  |
|--|---|
| Level  | Two   |
| Credit Value   | 5   |
| Guided Learning Hours (GLH)  | 40  |
| OCN NI Unit Code   | CBG273  |
| Unit Reference No  | J/650/7634  |
| Learn Direct Code  | XS1   |
| <i>Unit purpose and aim(s):</i> This unit will enable the learner to develop knowledge and skills associated with small plant equipment and tracks operation and components. |   |
| Learning Outcomes  | Assessment Criteria   |
| 1. Know the construction, function and operation of small plant equipment and components.  | 1.1. Describe different layouts of small plant, tools and equipment.<br>1.2. Describe how different small plant, tools and equipment operate including:<br>a) generators<br>b) pneumatic and electric tools<br>c) cleaning equipment<br>1.3. Outline the uses of different types of ancillary equipment including:<br>a) connections<br>b) extension leads<br>c) transformers<br>d) water pipes   |
| 2. Be able to perform service and maintenance operations on small plant equipment and components.  | 2.1. Identify and locate small plant equipment and components.<br>2.2. Remove dismantle, repair and reinstate small plant equipment and components to manufacturer's specifications and factory settings.   |
| 3. Know the types, construction and operating principles of tracks and components.   | 3.1. Outline the types, construction and operating principles of tracks and associated running gear and components.<br>3.2. Describe the types, construction and applications of tracks and tractive aids.<br>3.3. Outline the implications of weight distribution and transfer on tractive performance and stability.<br>3.4. Describe the methods of removing dismantling, repairing and reinstatement of tyres and wheel assemblies, tracks, and associated running gear and components. |
| 4. Be able to perform service and repair operations on tracks and components.  | 4.1. Remove, dismantle, repair and reinstate tracks, associated running gear and components to manufacturer's specifications.<br>4.2. Attach, adjust and remove stability and tractive aids.<br>4.3. Identify and rectify faults relating to tracks and components.   |

### Assessment Guidance

The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.

| Assessment Method                  | Definition  | Possible Content   |
|------------------------------------|---|--|
| Portfolio of evidence              | A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes<br>OR<br>A collection of documents containing work that shows the learner's progression through the course | Learner notes/written work<br>Learner log/diary<br>Peer notes<br>Record of observation<br>Record of discussion |
| Practical demonstration/assignment | A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge  | Record of observation<br>Learner notes/written work<br>Learner log   |
| Coursework                         | Research or projects that count towards a learner's final outcome and demonstrate the skills and/or knowledge gained throughout the course  | Record of observation<br>Learner notes/written work<br>Tutor notes/record<br>Learner log/diary                 |
| E-assessment                       | The use of information technology to assess learners' work  | Electronic portfolio<br>E-tests  |



## Quality Assurance of Centre Performance

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### External Verification

All OCN NI recognised centres are subject to External Verification. External verification visits and monitoring activities will be conducted annually to confirm continued compliance with the conditions of recognition, review the centre's risk rating for the qualification and to assure OCN NI of the maintenance of the integrity of the qualification.

The External Verifier will review the delivery and assessment of this qualification. This will include the review of a sample of assessment evidence and evidence of the internal verification of assessment and assessment decisions. This will form the basis of the EV report and will inform OCN NI's annual assessment of centre compliance and risk. The External Verifier is appointed by OCN NI.

### Standardisation

As a process, standardisation is designed to ensure consistency and promote good practice in understanding and application of standards. Standardisation events:

- make qualified statements about the level of consistency in assessment across centres delivering a qualification
- make statements on the standard of evidence that is required to meet the assessment criteria for units in a qualification
- make recommendations on assessment practice
- produce advice and guidance for the assessment of units
- identify good practice in assessment and internal verification

Centres offering units of an OCN NI qualification must attend and contribute assessment materials and learner evidence for standardisation events if requested.

OCN NI will notify centres of the nature of sample evidence required for standardisation events (this will include assessment materials, learner evidence and relevant assessor and internal verifier documentation). OCN NI will make standardisation summary reports available and correspond directly with centres regarding event outcomes.

## Administration

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### Registration

A centre must register learners within 90 working days of commencement of a qualification.

### Certification

Certificates will be issued to centres within 20 working days of receipt of correctly completed results marksheets. It is the responsibility of the centre to ensure that certificates received from OCN NI are held securely and distributed to learners promptly and securely.

### Charges

OCN NI publishes all up to date qualification fees in its Fees and Invoicing Policy document. Further information can be found on the centre login area of the OCN NI website.

### Equality, Fairness and Inclusion

OCN NI has considered the requirements of equalities legislation in developing the specification for these qualifications. For further information and guidance relating to access to fair assessment and the OCN NI Reasonable Adjustments and Special Considerations policies, centres should refer to the OCN NI website.

### Retention of Evidence

OCN NI has published guidance for centres on the retention of evidence. Details are provided in the OCN NI Centre Handbook and can be accessed via the OCN NI website.

**OCN NI Level 2 Diploma in Motor Vehicle Skills**  
**Qualification Number: 610/2946/4**

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Operational start date: 15 July 2023  
Operational end date: 14 July 2028  
Certification end date: 14 July 2030

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