

Level 2/3 NVQ Certificates in Rail Engineering Electrification Maintenance and Construction (7597-06/13/16/18)

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Qualification at a glance

Subject area	Rail Engineering
City & Guilds number	7597-06, 13, 16, 18
Age group approved	16-18, 19+
Entry requirements	None
Assessment	Portfolio
Support materials	Centre handbook
Registration and certification	Consult the Walled Garden/Online Catalogue for last dates

Title and level	City & Guilds number	Accreditation number
Level 2 NVQ Certificate In Rail Engineering Electrification Maintenance (QCF)	7597-06	600/3243/1
Level 2 NVQ Certificate In Rail Engineering Electrification Construction (QCF)	7597-13	600/3242/X
Level 3 NVQ Certificate In Rail Engineering Electrification Maintenance (QCF)	7597-16	600/3244/3
Level 3 NVQ Certificate in Rail Engineering Electrification Construction (QCF)	7597-18	600/3236/4



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1 Introduction

This document tells you what you need to do to deliver the qualifications:

Area	Description
Who are the qualifications for?	They are for anyone working in railways engineering, including those preparing for a specialised role or management responsibility.
What do the qualifications cover?	These qualifications prove competence of industrial performance, knowledge and understanding and recognise the ability of individuals working within the rail sector.
Are the qualifications part of a framework or initiative?	The Level 3 NVQ Certificate In Rail Engineering Electrification Maintenance is part of the Rail Engineering Advanced Apprenticeship Framework.
What opportunities for progression are there?	Candidates who are successful will be able to progress in employment or to a range of further education and professional body qualifications. For example: <ul style="list-style-type: none">• Supervisory or team leader roles• Institute of Leadership and Management qualifications.

Structures

Level 2 NVQ Certificate in Rail Engineering Electrification Maintenance (7597-06)

Learners must achieve a total of **20** credits from the mandatory units listed below, to achieve this qualification.

Learners can also achieve a further 3 credits from the elective unit, but these will **not** count toward the minimum credits required.

Unit accreditation number	City & Guilds unit number	Unit title	Credit value
Mandatory			
F/601/7815	201	Prepare to undertake duties in the rail industry (Level 2)	2
F/502/6505	202	Contribute to safe working practices in the rail engineering industry (Level 2)	3
A/503/4408	357	Assist in preparing resources for railway electrification engineering activities (Level 2)	3
L/503/4414	358	Assist with maintenance on railway electrification equipment and components (Level 2)	12
Elective			
L/602/5934	243	Employment rights and responsibilities in the passenger transport sector (Level 2)	3

Level 2 NVQ Certificate in Rail Engineering Electrification Construction (7597-13)

Learners must achieve a total of **20** credits from the mandatory units listed below to achieve this qualification.

Learners can also achieve a further 3 credits from the elective unit, but these will **not** count toward the minimum credits required.

Unit accreditation number	City & Guilds unit number	Unit title	Credit value
Mandatory			
F/601/7815	201	Prepare to undertake duties in the rail industry (Level 2)	2
F/502/6505	202	Contribute to safe working practices in the rail engineering industry (Level 2)	3
A/503/4408	357	Assist in preparing resources for railway electrification engineering activities (Level 2)	3
R/503/4415	359	Assist with installation of railway electrification equipment and components (Level 2)	12
Elective			
L/602/5934	243	Employment rights and responsibilities in the passenger transport sector (Level 2)	3

Level 3 NVQ Certificate in Rail Engineering Electrification Maintenance (7597-16)

To achieve this qualification, learners must achieve a total minimum of **22** credits, **19** credits from the mandatory units, and a minimum of **3** credits from the optional units.

Learners can also achieve a further 3 credits from the elective unit, but these will **not** count toward the minimum credits required.

Unit accreditation number	City & Guilds unit number	Unit title	Credit value
Mandatory			
F/601/7815	201	Prepare to undertake duties in the rail industry (Level 2)	2
F/503/4443	360	Carry out maintenance on railway electrification equipment and components (Level 3)	9
M/503/4406	361	Plan railway electrification engineering activities (Level 2)	3
A/503/4411	362	Prepare for maintenance/installation of railway electrification equipment and components (Level 3)	5
Optional			
T/503/4410	363	Restore the contact systems to operational condition in the rail engineering industry (Level 4)	8
F/503/4409	364	Allocate and monitor resources for railway electrification engineering activities (Level 3)	3
J/503/4413	365	Isolate and earth contact systems to meet defined isolation requirements in the rail engineering industry (Level 3)	11
Elective			
L/602/5934	243	Employment rights and responsibilities in the passenger transport sector (Level 2)	3

Level 3 NVQ Certificate in Rail Engineering Electrification Construction (7597-18)

To achieve this qualification, learners must achieve a total minimum of **31** credits, **28** credits from the mandatory units, and a minimum of **3** credits from the optional units.

Learners can also achieve a further 3 credits from the elective unit, but these will **not** count toward the minimum credits required.

Unit accreditation number	City & Guilds unit number	Unit title	Credit value
Mandatory			
F/601/7815	201	Prepare to undertake duties in the rail industry (Level 2)	2
M/503/4406	361	Plan railway electrification engineering activities (Level 2)	3
A/503/4411	362	Prepare for maintenance/installation of railway electrification equipment and components (Level 3)	5
K/503/4405	366	Carry out installation of railway electrification equipment and components (Level 2)	10
T/503/4407	367	Transfer responsibility of railway electrification equipment and components (Level 3)	8
Optional			
F/503/4409	364	Allocate and monitor resources for railway electrification engineering activities (Level 3)	3
J/503/4413	365	Isolate and earth contact systems to meet defined isolation requirements in the rail engineering industry (Level 3)	11
Elective			
L/602/5934	243	Employment rights and responsibilities in the passenger transport sector (Level 2)	3



2 Centre requirements

Approval

This section outlines the approval processes for centres to offer these qualifications and any resources that centres will need in place to offer the qualifications including qualification-specific requirements for the staff delivering the qualifications.

Centres already offering City & Guilds qualifications in this subject area

Centres who wish to offer this qualification must use the standard Qualification Approval Process.

Resource requirements

Assessors and internal verifiers

Assessors' and internal verifiers' requirements have been specified by GoSkills in their assessment strategy. The full document is available from our website.

Centre staff may undertake more than one role, assessor and/or internal verifier, but must never internally verify their own assessments.

The primary responsibility of the assessor is to assess candidates to the required quality and consistency against the national occupational standard. It is important that an assessor can recognise occupational competence as specified by the national standard. Assessors therefore need to have a thorough understanding of assessment and quality assurance practices, as well as in depth technical understanding related to the qualifications for which they are assessing candidates.

It will be the responsibility of the approved centre to select and appoint assessors. Potential assessors should:

- hold (or be working towards) an appropriate qualification, as specified by the appropriate regulatory authority, confirming their competence to assess NVQ candidates,
- have the necessary and sufficient experience of the role for which they intend to undertake assessments and actual experience of the functions described by the occupational standards that comprise the qualification.

A primary responsibility of the internal verifier is to assure the quality and consistency of assessments carried out by the assessors for whom they are responsible. Internal verifiers therefore need to have a thorough understanding of quality assurance and assessment practices, as well as sufficient technical understanding related to the qualifications they are internally verifying.

It will be the responsibility of the approved centre to select and appoint internal verifiers. Potential internal verifiers should:

- hold (or be working towards) an appropriate qualification, as specified by the appropriate regulatory authority, confirming their competence to internally verify NVQ assessments,
- hold (or be working towards) an appropriate qualification, as specified by the appropriate regulatory authority, confirming their competence to verify NVQ candidates,
- have the necessary and sufficient experience of the role for which they intend to verify assessments. This experience will have provided potential verifiers with detailed knowledge of the functions described by the occupational standards that comprise the qualification.

Trainee assessors and internal verifiers must have a plan, which is overseen by the recognised assessment centre, to achieve the internal verifier qualification within an agreed timescale.

Continuing professional development (CPD)

Centres must support their staff to ensure that they have current knowledge of the occupational area, that delivery, mentoring, training, assessment and verification is in line with best practice, and that it takes account of any national or legislative developments.

Candidate entry requirements

Candidates should not be entered for a qualification of the same type, content and level as that of a qualification they already hold. In addition, centres must ensure that candidates have the potential and opportunity to gain the qualifications successfully.

There are no formal entry requirements for candidates undertaking this qualification.

Age restrictions

These qualifications are **not** approved for use by learners under the age of 16 and City & Guilds cannot accept any registrations for candidates in this age group.



3 Course design and delivery

Initial assessment and induction

Centres will need to make an initial assessment of each candidate prior to the start of their programme to ensure they are entered for an appropriate type and level of qualification.

Recommended delivery strategies

Centre staff should familiarise themselves with the structure, content and assessment requirements of the qualification before designing a course programme.

Centres may design course programmes of study in any way which:

- best meets the needs and capabilities of their candidates
- satisfies the requirements of the qualification.

When designing and delivering the course programme, centres might wish to incorporate other teaching and learning that is not assessed as part of the qualification. This might include the following:

- literacy, language and/or numeracy
- personal learning and thinking skills
- personal and social development
- employment rights and responsibilities

Where applicable, this could involve enabling the candidate to access relevant qualifications covering these skills.



4 Assessment

Summary of assessment methods

Candidates will be required to complete a portfolio of evidence for **each** unit.

Evidence requirements

The evidence requirements have been specified by GoSkills in their assessment strategy. The full document is available from our website. The evidence requirements have been identified for each of the units in section 5 of this handbook.

Evidence of occupational competence must be generated and collected through performance under workplace conditions. The evidence collected under these conditions must also be as naturally occurring as possible.

The optimum method of collecting evidence of a candidate's competence is by direct observation of naturally occurring activity in the workplace. This observation must be carried out by a qualified assessor.

Simulation is **not** permitted for units within this qualification.

Witness testimony can be gathered from a candidate's colleagues, managers, customers, suppliers, etc. They should:

- be specific to the activities or product
- give a brief description of the circumstances of the observation
- give a brief description of the background of the witness and the observed activity
- identify the aspects of the competence demonstrated.

Product evidence must be assessed in order to ensure that:

- the evidence meets the required standard
- the candidate has followed the correct processes to generate the product
- the evidence is authentic.

In regards to the acceptability of knowledge evidence, the optimum method of collecting evidence of a candidate's knowledge is by oral questioning following direct observation in the workplace.

This questioning must be carried out by a qualified assessor.

In section 5 of this handbook we have listed all units and identified for each one of them:

- those performance statements for which evidence must be collected by direct observation of naturally occurring activity in the workplace,
- those performance statements for which evidence may be collected by a range of alternative assessment methods,
- when the use of simulation is allowed.

Recording forms

Candidates and centres may decide to use a paper-based or electronic method of recording evidence.

To support the delivery of vocational qualifications we offer our own e-portfolio, Learning Assistant, an easy-to-use and secure online tool to support and evidence learners' progress towards achieving qualifications.

Further details are available at: www.cityandguilds.com/eportfolios.

Recording forms are available on the City & Guilds website.

Centres may devise or customise alternative forms, which must be approved for use by the External Verifier before they are used by candidates and assessors at the centre.



5 Units

Availability of units

Structure of units

These units each have the following:

- City & Guilds reference number
- unit accreditation number (UAN)
- title
- level
- credit value
- unit aim
- relationship to NOS, other qualifications and frameworks
- endorsement by a sector or other appropriate body
- information on assessment
- learning outcomes which are comprised of a number of assessment criteria
- notes for guidance.

Unit 201

Prepare to undertake duties in the rail industry

UAN:	F/601/7815
Level:	2
Credit value:	2
GLH:	18
Relationship to NOS:	This unit is directly linked to the GoSkills Rail Engineering NOS Unit 1 – Prepare to undertake duties in the rail industry.
Endorsement by a sector or regulatory body:	This unit is endorsed by GoSkills, the Sector Skills Council for passenger transport.
Aim:	This unit is about identifying the rules, regulations, instructions and procedures that the learner must comply with to make sure they are fit for duty. It outlines the requirements that enable commencement of duties in a safe and knowledgeable manner and to ensure safe lines of communication within the working environment.
Assessment requirements:	This unit should be assessed predominantly in the workplace through observation, along with other sources of evidence such as, witness testimony, questioning and professional discussion. Simulation must not be used to assess this unit.

Learning outcome
The learner will: 1 Be able to complete personal preparation
Assessment criteria
The learner can: 1.1 meet organisational standards for appearance and conduct 1.2 comply with organisational procedures relating to fitness for duty 1.3 possess the required documentation and equipment as specified by the organisation.

Learning outcome
The learner will: 2 Know how to complete personal preparation
Assessment criteria
The learner can: 2.1 list the standards of appearance and conduct required by the organisation 2.2 describe the importance of appearance, conduct and fitness in relation to the role 2.3 describe organisational procedures relating to fitness for duty 2.4 list the type of equipment required for duty 2.5 describe how to access and use required equipment 2.6 list the documents required when completing personal preparation 2.7 describe the standards of behaviour required by the organisation.

Learning outcome
The learner will: 3 Be able to prepare for duty
Assessment criteria
The learner can: 3.1 communicate to the relevant person any necessary information relating to personal duties 3.2 access and confirm information relating to the work to be undertaken 3.3 comply with organisational procedures relating to personal safety 3.4 complete preparations for duty within the allocated time 3.5 complete required documents accurately and process them correctly.

Learning outcome
The learner will: 4 Know how to prepare for duty
Assessment criteria
The learner can: 4.1 describe organisational procedures relating to booking on and booking off duty 4.2 list the duties that are to be undertaken and describe organisational procedures relating to them 4.3 describe organisational and legal requirements relevant to personal duties 4.4 list the people within the organisation who are relevant to the work role 4.5 describe the relevant documentation completion requirements within the organisation.

Unit 202

Contribute to safe working practices in the rail engineering industry

UAN:	F/502/6505
Level:	2
Credit value:	3
GLH:	10
Relationship to NOS:	This unit is directly linked to the GoSkills Rail Engineering NOS Unit 10 – Contribute to safe working practices in the rail engineering industry.
Endorsement by a sector or regulatory body:	This unit is endorsed by GoSkills, the Sector Skills Council for passenger transport.
Aim:	<p>This unit is about the learner’s responsibilities for health and safety and good housekeeping practices at work. It covers meeting health and safety requirements, maintaining safe practices in the work area and using equipment, tools and substances hazardous to health in a safe manner as well as lifting and handling equipment safely. This unit is also about ensuring that tools and equipment are cleaned, maintained and checked to ensure they are fit for use.</p> <p>The learner will be able to take responsibility for their working practices as well as identifying their responsibilities for the health and safety of others with whom they have contact.</p>
Assessment requirements:	<p>This unit should be assessed predominantly in the workplace through observation, along with other sources of evidence such as, witness testimony, questioning and professional discussion.</p> <p>Simulation must not be used to assess this unit.</p>

Learning outcome
The learner will: 1 Be able to contribute to safe working practices in rail engineering
Assessment criteria
The learner can: 1.1 identify an appropriate safe system of work 1.2 choose appropriate personal protective clothing to wear and relevant equipment to use to carry out the task 1.3 undertake an inspection of the required safety equipment to ensure that it is fit for purpose and is used in accordance with suppliers', manufacturers' and organisational recommendations and instructions 1.4 safely isolate equipment before making any adjustments 1.5 ensure that the work environment is, so far as possible, free from hazards 1.6 use equipment, machinery and materials safely and in accordance with statutory regulations and the manufacturer's and own organisation's recommendations and instructions 1.7 demonstrate how to lift and handle equipment and materials safely 1.8 implement the relevant controls for substances which are hazardous to self, other employees and the general public in accordance with Control Of Substances Harmful to Health (COSHH) regulations and manufacturers' and organisational recommendations and instructions 1.9 undertake safe working practices within limits of own responsibility 1.10 clearly and effectively communicate health and safety issues 1.11 clearly and accurately report potential hazards to the appropriate person 1.12 report any accidents, incidents and emergencies in accordance with organisational policies and procedures 1.13 correctly use emergency equipment within own area of responsibility 1.14 comply with the fire alarm and evacuation systems 1.15 accurately report damaged or out of date safety equipment.

Learning outcome
The learner will: 2 Know and understand how to contribute to safe working practices in rail engineering
Assessment criteria
The learner can: 2.1 describe the relevant safe working procedures when working with equipment, materials and tools 2.2 describe what makes up a safe working environment 2.3 describe warning signs and their meanings appropriate to own role 2.4 describe the different types of personal protective clothing and equipment available for: a. head b. eyes c. ears d. breathing e. skin f. hands g. feet 2.5 list what safety equipment is available to protect individuals, work colleagues and/or the general public 2.6 describe the relevant supplier and manufacturer instructions for the safe use and storage of tools, equipment, materials and products 2.7 describe the correct safe lifting and handling techniques for the size, mass and shape of the load 2.8 explain the importance of removing pollution 2.9 clarify the concept and definition of a hazard and risk 2.10 explain the importance of reporting hazards and risks 2.11 describe the differences between an incident, near miss, accident and emergency 2.12 explain the importance of communicating health and safety matters and the different methods which can be used to do this 2.13 describe where different types of emergency equipment can be located including: a. alarms b. extinguishers c. first aid equipment 2.14 describe the procedures for emergencies and evacuation.

Learning outcome
The learner will: 3 Be able to contribute to safe housekeeping practices
Assessment criteria
The learner can: 3.1 demonstrate how to keep immediate work area in a clean, tidy and hazard free state reporting, where appropriate, any hazards which need to be dealt with 3.2 take action to ensure that all emergency exits and designated walkways in immediate work area are free from obstructions at all times, reporting obstructions where appropriate

- 3.3 demonstrate how to deal with spillages promptly and effectively
- 3.4 take action to store materials, tools and equipment safely in approved locations
- 3.5 assess all tools and equipment to ensure they are fit for purpose
- 3.6 report faults to tools and equipment accurately and promptly in accordance with organisational procedures
- 3.7 isolate machines, equipment and tools from the power source ensuring that moving parts are stopped prior to cleaning operations in line with organisational procedures
- 3.8 using the appropriate cleaning agents, clean equipment in accordance with manufacturers' instructions
- 3.9 dispose of waste material, used cleaning agents and debris safely and in line with relevant legislation and organisational procedures
- 3.10 demonstrate how to store or dispose of substances and discharges which are hazardous to health safely and in accordance with COSHH regulations and organisational procedures
- 3.11 implement housekeeping practices within limits of own responsibility.

Learning outcome
The learner will: 4 Know and understand how to contribute to safe housekeeping practices
Assessment criteria
The learner can: 4.1 explain the importance of cleaning, servicing, storing and maintaining tools and equipment 4.2 illustrate how to detect tool and equipment defects 4.3 explain the importance of storing expensive, fragile and vulnerable tools and equipment safely 4.4 explain why it is important to report defects and discrepancies to tools and equipment 4.5 explain the reporting procedure for tool and equipment defects 4.6 explain why it is important to keep all emergency exits and walkways clear from obstructions 4.7 explain the cleaning schedules and the types of warnings which are appropriate for cleaning operations 4.8 explain why it is important to deal promptly with spillages 4.9 explain the range and limitations of cleaning methods, materials and equipment available 4.10 describe the hazards associated with particular cleaning materials and the reporting procedures associated with them 4.11 explain the procedures for isolating machinery 4.12 explain organisational and statutory requirements for the storage, disposal, discharge or containment of substances 4.13 explain the relevant supplier and manufacturer instructions for the safe cleaning of tools, equipment, materials and products 4.14 explain the limits of own authority in the rail engineering context related to housekeeping.

Unit 243

Employment rights and responsibilities in the passenger transport sector

UAN:	L/602/5934
Level:	2
Credit value:	3
GLH:	18
Endorsement by a sector or regulatory body:	This unit is endorsed by GoSkills, the Sector Skills Council for passenger transport.
Aim:	The purpose of this unit is for learners to demonstrate understanding of employer and employee statutory rights and responsibilities within own organisation and industry under Employment Law.

Learning outcome
The learner will: 1 Know employment rights and responsibilities of the employee and employer
Assessment criteria
The learner can: 1.1 identify the main points of legislation affecting employers and employees and their purpose relevant to own role, organisation and within own industry 1.2 identify where to find information and advice on employment rights and responsibilities both internally in own organisation and externally 1.3 identify sources of information and advice on own industry, occupation, training and own career pathway 1.4 identify sources of information on the different types of representative bodies related to own industry and their main roles and responsibilities 1.5 identify any issues of public concern that may affect own organisation and own industry.

Learning outcome
The learner will: 2 Understand employment rights and responsibilities and how these affect organisations
Assessment criteria
The learner can: 2.1 describe organisational procedures, policies and codes of practice used by own organisation on employment rights and responsibilities 2.2 explain the purpose of following health, safety and other procedures and the affect on own organisation if they are not followed 2.3 describe employer and employee responsibilities for equality and diversity within own organisation 2.4 explain the benefits of making sure equality and diversity procedures are followed 2.5 describe the career pathways available within own organisation and own industry.

Unit 243 Employment rights and responsibilities in the passenger transport sector

Supporting information

Guidance

Employment rights and responsibilities must be explicitly identified and clearly signposted within the Apprenticeship Framework. The learner must understand the role played by their occupation within the organisation and industry. Learners must demonstrate knowledge of current laws relating to health, safety, welfare and discrimination together with the responsibilities and duties of employers.

Unit 357

Assist in preparing resources for railway electrification engineering activities

UAN:	A/503/4408
Level:	2
Credit value:	3
GLH:	10
Relationship to NOS:	This unit is directly linked to the GoSkills Rail Engineering NOS Unit E 10 – Assist in preparing resources for Electrification and Plant engineering activities
Endorsement by a sector or regulatory body:	This unit is endorsed by GoSkills, the Sector Skills Council for passenger transport.
Aim:	The purpose of this unit is for learners to demonstrate occupational competency in assisting in preparing resources for railway electrification engineering activities.
Assessment requirements:	<p>This unit should be assessed predominantly in the workplace through observation, along with other sources of evidence such as, witness testimony, questioning and professional discussion.</p> <p>Simulation must not be used to assess this unit.</p>

Learning outcome
The learner will: 1 Be able to assist in preparing resources for electrification engineering activities
Assessment criteria
The learner can: 1.1 set up a safe system of work and work to the system 1.2 identify the resources to be used 1.3 ensure sufficient resources are available 1.4 prepare resources for engineering activities 1.5 take action when changes to the planned use of resources arise 1.6 take responsibility for the care and use of the resources within the limits of own authority.

Learning outcome

The learner will:

- 2 Know how to assist in preparing resources for electrification engineering activities

Assessment criteria

The learner can:

- 2.1 describe the relevant health and safety working practices appropriate to the activity and organisation
- 2.2 list the types of resources available, including:
 - a. documentation
 - b. tools and equipment
 - c. materials, assets and components
 - d. communications equipment
 - e. personnel
- 2.3 describe how to obtain up-to-date information on engineering activities and the resources required
- 2.4 describe how to obtain up-to-date documentation on the resources to be used
- 2.5 describe own organisation's procedures for the care and use of resources, including:
 - a. tools and equipment identification and calibration
- 2.6 describe how to follow the relevant schedules and instructions
- 2.7 describe how the planned use of resources could alter and the implications that may follow
- 2.8 describe the relevant reporting lines and procedures that are approved by own organisation
- 2.9 explain the limits of own authority and responsibility and those of others involved in the activity.

Unit 357 **Assist in preparing resources for railway electrification engineering activities**

Supporting information

Guidance

The learner will work to a plan and will ensure the required resources are available and fit for purpose, including obtaining all the necessary documentation and reporting to their line manager/supervisor.

Unit 358

Assist with maintenance on railway electrification equipment and components

UAN:	L/503/4414
Level:	2
Credit value:	12
GLH:	84
Relationship to NOS:	This unit is directly linked to the GoSkills Rail Engineering NOS Unit E1 – Carry out maintenance on electrification and plant equipment and components
Endorsement by a sector or regulatory body:	This unit is endorsed by GoSkills, the Sector Skills Council for passenger transport.
Aim:	The purpose of this unit is for learners to demonstrate occupational competency in assisting with maintenance of railway electrification equipment and components.
Assessment requirements:	<p>This unit should be assessed predominantly in the workplace through observation, along with other sources of evidence such as, witness testimony, questioning and professional discussion</p> <p>Simulation must not be used to assess this unit.</p>

Learning outcome
The learner will: 1 Be able to assist with maintenance on electrification equipment and components
Assessment criteria
The learner can: 1.1 set up a safe system of work for the activity and work to the system 1.2 follow the relevant maintenance schedules and instructions 1.3 carry out the maintenance activities within limits of own authority 1.4 report instances where the maintenance activities cannot be fully met or where there are identified defects outside the planned schedule 1.5 dispose of waste materials in line with the organisation's procedures.

Learning outcome
The learner will: 2 Know how to assist with maintenance on electrification equipment and components
Assessment criteria
The learner can: 2.1 describe the relevant health and safety working practices appropriate to the activity and organisation 2.2 describe how to follow the organisation's maintenance schedules and instructions 2.3 describe methods and techniques for carrying out maintenance activities 2.4 describe the importance of carrying out maintenance activities in the specified sequence and agreed timescale 2.5 describe the actions that can be taken when defects arise 2.6 describe the organisation's procedures for waste disposal 2.7 describe the organisation's reporting lines and procedures 2.8 describe the limits of own authority and responsibility and that of those involved in maintaining electrification equipment and components.

Unit 358

Assist with maintenance on railway electrification equipment and components

Supporting information

Guidance

The types of maintenance activities will be both planned and unplanned but will generally be single stage processes. At all times the learner will be working within the limits of their own responsibility and report any instances where the maintenance activities cannot be achieved to the relevant person(s).

The assessments will cover these types of equipment, components and inter-connections and may include:

- conductors (overhead wires and rails)
- support and registration assemblies
- in span equipment such as section insulators and neutral section
- contact and catenary wire
- earthing and bonding cables and connectors
- insulators
- foundations
- support structures such as masts and portals
- droppers.

These may also be in one or more of the following areas:

- structural
- mechanical
- electrical.

The equipment, components and interconnections will be sub-sets of the following assets

- contact systems (overhead line equipment, conductor rails).

Examples of maintenance activities may include:

- lubrication
- cleaning and security of equipment, such as, insulation, signage, guarding.

Examples of replacement techniques may include:

- crimping
- fastening
- rail drilling
- using tensioning rigs.

Unit 359

Assist with installation of railway electrification equipment and components

UAN:	R/503/4415
Level:	2
Credit value:	12
GLH:	84
Relationship to NOS:	This unit is directly linked to the GoSkills Rail Engineering NOS Unit E6 – Carry out installation of electrification and plant equipment and components
Endorsement by a sector or regulatory body:	This unit is endorsed by GoSkills, the Sector Skills Council for passenger transport.
Aim:	The purpose of this unit is for learners to demonstrate occupational competency in assisting with installation of railway electrification equipment and components.
Assessment requirements:	This unit should be assessed predominantly in the workplace through observation, along with other sources of evidence such as, witness testimony, questioning and professional discussion Simulation must not be used to assess this unit.

Learning outcome
The learner will: 1 Be able to assist with installation of electrification equipment and components
Assessment criteria
The learner can: 1.1 set up a safe system of work and work to the system 1.2 follow the relevant installation schedules and instructions to carry out the required activities 1.3 ensure that all equipment and components are free from damage 1.4 assist with the installation activities within the limits of own authority 1.5 assist with the installation activities in the specified sequence and in an agreed timescale 1.6 report any instances where the installation activities cannot be fully met or where there are identified defects outside the planned schedule 1.7 dispose of waste materials in line with own organisation's procedures.

Learning outcome
The learner will: 2 Know how to assist with installation of electrification equipment and components
Assessment criteria
The learner can: 2.1 describe the relevant health and safety working practices appropriate to the activity and organisation 2.2 describe how to follow installation schedules and instructions that are approved by own organisation 2.3 describe the types of defects that could occur in equipment and components 2.4 list own organisation's methods and techniques for carrying out installation activities relevant to own role 2.5 describe the importance of carrying out installation activities in the specified sequence and agreed timescale 2.6 describe own organisation's procedures for waste disposal 2.7 describe the limits of own authority and responsibility and those of others involved in the activity.

Unit 359

Assist with installation of railway electrification equipment and components

Supporting information

Guidance

Generally the learner will be performing single stage processes.

The types of equipment and components may include:

- contact and catenary wire
- insulators
- droppers.

These may also be in one or more of the following areas:

- structural
- mechanical
- electrical.

The equipment and components will be sub-sets of the following assets:

- contact systems (overhead line equipment, conductor rails).

Types of installation activities may include:

- replacing insulators
- replacing droppers.

Unit 360

Carry out maintenance on railway electrification equipment and components

UAN:	F/503/4443
Level:	3
Credit value:	9
GLH:	68
Relationship to NOS:	This unit is directly linked to the GoSkills Rail Engineering NOS Unit E1 – Carry out maintenance on electrification and plant equipment and components.
Endorsement by a sector or regulatory body:	This unit is endorsed by GoSkills, the Sector Skills Council for passenger transport.
Aim:	The purpose of this unit is for learners to demonstrate occupational competency in carrying out maintenance on railway electrification equipment and components.
Assessment requirements:	<p>This unit should be assessed predominantly in the workplace through observation, along with other sources of evidence such as, witness testimony, questioning and professional discussion.</p> <p>Simulation must not be used to assess this unit.</p>

Learning outcome
The learner will: 1 Be able to carry out maintenance on electrification equipment and components
Assessment criteria
The learner can: 1.1 set up a safe system of work for the activity and work to the system 1.2 follow the relevant maintenance schedules and instructions 1.3 carry out the maintenance activities within limits of own authority 1.4 identify instances where the maintenance activities cannot be fully met or where there are identified defects outside the planned schedule 1.5 take the relevant action where defects arise 1.6 report instances where the maintenance activities cannot be fully met or where there are identified defects outside the planned schedule 1.7 complete relevant maintenance records and pass to the appropriate person(s) 1.8 dispose of waste materials in line with the organisation's procedures.

Learning outcome
The learner will: 2 Know how to carry out maintenance on electrification equipment and components
Assessment criteria
The learner can: 2.1 describe the relevant health and safety working practices appropriate to the activity and organisation 2.2 explain how to follow the organisation's maintenance schedules and instructions 2.3 explain methods and techniques for carrying out maintenance activities 2.4 explain the importance of carrying out maintenance activities in the specified sequence and agreed timescale 2.5 explain the actions that can be taken when defects arise 2.6 explain the organisation's procedures for waste disposal 2.7 explain the organisation's reporting lines and procedures 2.8 explain the limits of own authority.

Unit 360

Carry out maintenance on railway electrification equipment and components

Supporting information

Guidance

The types of maintenance activities will be both planned and unplanned but will generally be single stage processes. At all times the learner will be working within the limits of their own responsibility and report any instances where the maintenance activities cannot be achieved to the relevant person(s).

The assessments will cover these types of equipment, components and inter-connections and may include:

- conductors (overhead wires and rails)
- support and registration assemblies
- in span equipment such as section insulators and neutral section
- contact and catenary wire
- earthing and bonding cables and connectors
- insulators
- foundations
- support structures such as masts and portals
- droppers.

These may also be in one or more of the following areas:

- structural
- mechanical
- electrical.

The equipment, components and interconnections will be sub-sets of the following assets:

- contact systems (overhead line equipment, conductor rails).

Examples of maintenance activities may include:

- lubrication
- cleaning and security of equipment such as, insulation, signage, guarding.

Examples of replacement techniques may include:

- crimping
- fastening
- rail drilling
- using tensioning rigs.

Unit 361

Plan railway electrification engineering activities

UAN:	M/503/4406
Level:	2
Credit value:	3
GLH:	22
Relationship to NOS:	This unit is directly linked to the GoSkills Rail Engineering NOS Unit E8 – Plan electrification and plant engineering activities.
Endorsement by a sector or regulatory body:	This unit is endorsed by GoSkills, the Sector Skills Council for passenger transport.
Aim:	The purpose of this unit is for learners to demonstrate occupational competency in planning railway electrification engineering activities.
Assessment requirements:	This unit should be assessed predominantly in the workplace through observation, along with other sources of evidence such as, witness testimony, questioning and professional discussion. Simulation must not be used to assess this unit.

Learning outcome
The learner will: 1 Be able to plan electrification engineering activities
Assessment criteria
The learner can: 1.1 source and interpret information required for the activity 1.2 identify health and safety issues and safe working practices and procedures that must be followed 1.3 identify the activities to be carried out and determine their sequence 1.4 establish what resources are required 1.5 identify any special requirements and incorporate them in the plan 1.6 identify where technical documentation, equipment, tools, materials, components and/or personnel are not available and deal with the deficiency in line with own organisation's procedures 1.7 estimate the timescales required 1.8 prepare and record the plan 1.9 ensure all required documentation is complete, accurate, formatted and processed in accordance own organisation's procedures 1.10 deal effectively with problems within the limits of own authority and report those that cannot be resolved 1.11 discuss and agree with the relevant person(s) effective and efficient alternatives where planned activities cannot be achieved.

Learning outcome
The learner will: 2 Know how to plan electrification engineering activities
Assessment criteria
The learner can: 2.1 describe the relevant health and safety legislation, regulations and safe working practices and procedures as appropriate to the activity 2.2 describe how to source and interpret the types of information required for the activity 2.3 explain the importance of planning the activities in the specified sequence and agreed timescale 2.4 describe the types of resources required 2.5 explain how to estimate the timescales required 2.6 describe how to prepare and record the plan 2.7 describe how to deal with a deficiency of technical documentation, equipment, tools, materials, components and/or personnel 2.8 describe how to identify, evaluate and respond to activities that cannot be achieved 2.9 describe the relevant reporting lines and procedures that are approved by own organisation 2.10 explain the limits of own authority and responsibility and those of others involved in the activity.

Unit 361 **Plan railway electrification engineering activities**

Supporting information

Guidance

The learner should consider the availability of:

- technical documentation
- equipment
- tools
- materials
- components
- personnel.

The type of activities to be planned may relate to:

- contact systems (overhead line equipment, conductor rails).

Unit 362

Prepare for maintenance /installation of railway electrification equipment and components

UAN:	A/503/4411
Level:	3
Credit value:	5
GLH:	34
Relationship to NOS:	This unit is directly linked to the GoSkills Rail Engineering NOS Unit E13 – Carry out technical assessment of electrification and plant.
Endorsement by a sector or regulatory body:	This unit is endorsed by GoSkills, the Sector Skills Council for passenger transport.
Aim:	The purpose of this unit is for learners to demonstrate occupational competency in carrying out technical assessment of railway electrification systems in the rail industry.
Assessment requirements:	This unit should be assessed predominantly in the workplace through observation, along with other sources of evidence such as, witness testimony, questioning and professional discussion. Simulation must not be used to assess this unit.

Learning outcome
The learner will: 1 Be able to prepare for maintenance/installation of electrification equipment and components
Assessment criteria
The learner can: 1.1 set up a safe system of work and work to the system 1.2 source and interpret the relevant specifications for the system, product or asset being assessed, including any previous assessment information, if applicable 1.3 identify, analyse and determine the sequence of the assessment activities to be undertaken 1.4 identify the components and/or equipment to be assessed 1.5 carry out assessment activities in a manner that minimises the interference with other systems and equipment, within the limits of own authority 1.6 carry out the assessment activities in the specified sequence and in an agreed timescale

1.7	establish the operational condition of the equipment
1.8	identify and assess any defects or variations from the specification and take appropriate action
1.9	complete relevant documentation accurately and pass it on to the appropriate person(s), if applicable
1.10	report any instances where the assessment activities cannot be fully met or where there are identified defects outside the planned activities
1.11	identify where the operational condition of the contact system may affect the functional integrity and safety of the operational system.

Learning outcome	
The learner will:	
2	Know how to prepare for maintenance/installation of electrification equipment and components
Assessment criteria	
The learner can:	
2.1	describe the relevant health and safety working practices appropriate to the activity and organisation
2.2	describe how to source and interpret specifications and instructions that are approved by own organisation*
2.3	explain how to identify discrepancies in specifications and instructions
2.4	describe how to identify and analyse the assessment activities to be undertaken
2.5	describe how to identify the components, systems and/or equipment to be assessed
2.6	describe own organisation's methods and techniques for carrying out assessment activities relevant to own role
2.7	explain the importance of carrying out activities in the specified sequence and agreed timescale and in a manner that minimises the interference with other systems and equipment
2.8	describe how to establish the operational condition of the contact system
2.9	describe the types of defects or variations that could occur and how to compare these to the specification
2.10	describe how and when assessment activities cannot be completed
2.11	describe the implications of when assessment activities cannot be completed
2.12	describe the types of conditions that would impact on the functional integrity and safety of the operational system
2.13	describe the relevant reporting lines and procedures that are approved by own organisation
2.14	explain the limits of own authority and responsibility and those of others involved in the activity.

* see guidance

Unit 362 Prepare for maintenance /installation of railway electrification equipment and components

Supporting information

Guidance

The learner will be carrying out technical assessment of contact systems (overhead line equipment, conductor rails) in the rail industry to ensure that the system is fit for purpose and complies with specifications.

This could include intrusive or non-intrusive inspection or other methods such as testing and monitoring, appropriate for the asset type.

The contact systems could include all aspects of overhead line electrification equipment and conductor rails.

The assets are mainly electrical but the activity could include one or more structural and/or mechanical components.

The types of activities could vary and will generally be multi stage processes. At all times the learner will be working within the limits of their own responsibility and will report any instances where the activities cannot be achieved to the relevant person(s). This may include following reporting, recording and escalating procedures.

* For **assessment 2.2** any previous appropriate assessment data should be highlighted by the learner.

Unit 363

Restore the contact systems to operational condition in the rail engineering industry

UAN:	T/503/4410
Level:	4
Credit value:	8
GLH:	70
Relationship to NOS:	This unit is directly linked to the GoSkills Rail Engineering NOS Unit E 12 – Restore the contact systems to operational condition in the rail engineering industry.
Endorsement by a sector or regulatory body:	This unit is endorsed by GoSkills, the Sector Skills Council for passenger transport.
Aim:	The purpose of this unit is for learners to demonstrate occupational competency in restoring the contact systems to operational condition in the rail engineering industry.
Assessment requirements:	This unit should be assessed predominantly in the workplace through observation, along with other sources of evidence such as, witness testimony, questioning and professional discussion. Simulation must not be used to assess this unit.

Learning outcome
The learner will: 1 Be able to restore the contact systems to operational condition in the rail engineering industry
Assessment criteria
The learner can: 1.1 set up a safe system of work and work to the system 1.2 source and interpret the relevant specifications 1.3 identify, analyse and determine the sequence of the restoration activities to be undertaken 1.4 identify the components and/or equipment to be restored 1.5 carry out the restoration activities within the limits of own authority 1.6 carry out the restoration activities in the specified sequence and in an agreed timescale 1.7 establish the operational condition of the contact system 1.8 complete relevant documentation accurately and pass them on to the appropriate person(s), if applicable 1.9 identify where the operational condition of the contact system may affect the functional integrity and safety of the operational system 1.10 report any instances where the restoration activities cannot be fully met.

Learning outcome
The learner will: 2 Know how to restore the contact systems to operational condition in the rail engineering industry
Assessment criteria
The learner can: 2.1 describe the relevant health and safety working practices appropriate to the activity and organisation 2.2 describe how to source and interpret specifications and instructions that are approved by own organisation 2.3 describe how to identify discrepancies in specifications and instructions, including version control 2.4 explain how to identify and analyse the restoration activities to be undertaken 2.5 describe how to identify the components and/or equipment to be restored 2.6 describe own organisation's methods and techniques for carrying out restoration activities relevant to own role 2.7 describe the importance of carrying out activities in the specified sequence and agreed timescale 2.8 explain how to establish the operational condition of the contact system 2.9 explain the implications of when restoration activities cannot be completed 2.10 describe the types of conditions that would impact on the functional integrity and safety of the operational system 2.11 describe the relevant reporting lines and procedures that are approved by own organisation 2.12 explain the limits of own authority and responsibility and those of others involved in the activity.

Unit 363

Restore the contact systems to operational condition in the rail engineering industry

Supporting information

Guidance

The learner will demonstrate assessing, determining the cause and re-constructing the contact system assets to full operational capacity.

The contact systems could include all aspects of overhead line electrification equipment and conductor rails.

The assets are mainly electrical but the restoration activity could include one or more structural and/or mechanical components.

The types of activities could vary and will generally be multi stage processes.

Unit 364

Allocate and monitor resources for railway electrification engineering activities

UAN:	F/503/4409
Level:	3
Credit value:	3
GLH:	22
Relationship to NOS:	This unit is directly linked to the GoSkills Rail Engineering NOS Unit E 11 – Allocate and monitor resources for electrification and plant engineering activities.
Endorsement by a sector or regulatory body:	This unit is endorsed by GoSkills, the Sector Skills Council for passenger transport.
Aim:	The purpose of this unit is for learners to demonstrate occupational competency in allocating and monitoring resources for railway electrification engineering activities.
Assessment requirements:	This unit should be assessed predominantly in the workplace through observation, along with other sources of evidence such as, witness testimony, questioning and professional discussion. Simulation must not be used to assess this unit.

Learning outcome
The learner will: 1 Be able to allocate and monitor resources for electrification engineering activities
Assessment criteria
The learner can: 1.1 set up a safe system of work and work to the system 1.2 confirm the resources required 1.3 ensure sufficient resources are available 1.4 ensure resource information and documentation is up-to-date and in line with own organisation's procedures 1.5 allocate resources effectively 1.6 monitor the use of resources 1.7 identify when changes to the planned use of resources may occur 1.8 deal with actual and predicted changes to the planned use of resources promptly and effectively 1.9 advise the appropriate person(s) where changes to resources have occurred or are likely to occur and the implications involved

- | | |
|------|---|
| 1.10 | ensure that those using resources are aware of their responsibilities for the care and use of the resources |
| 1.11 | record details on the use of resources including where appropriate any changes that have occurred. |

Learning outcome	
The learner will:	
2	Know how to allocate and monitor resources for electrification engineering activities
Assessment criteria	
The learner can:	
2.1	describe the relevant health and safety working practices appropriate to the activity and organisation
2.2	list the types of resources available
2.3	describe own organisation's methods and techniques for ensuring sufficient resources
2.4	describe own organisation's methods and techniques for allocating resources
2.5	describe how to source and interpret information and document systems relating to the engineering activity
2.6	describe how to source and interpret the required documentation on resources
2.7	explain the types of problems that can occur when allocating resources and how these problems can be overcome
2.8	explain how the planned use of resources could alter and the implications that may follow
2.9	describe own organisation's methods and techniques for effective monitoring of resources
2.10	describe own organisation's procedures for the care and use of resources
2.11	describe own organisation's methods and techniques for communicating a change to resource allocation
2.12	describe the relevant reporting lines and procedures that are approved by own organisation
2.13	explain the limits of own authority and responsibility and those of others involved in the activity.

Unit 364 **Allocate and monitor resources for railway electrification engineering activities**

Supporting information

Guidance

The learner will be allocating and monitoring resources for electrification engineering activities which may be routine and the range could include installing, adjusting, replacing and dismantling electrification assets.

Examples of the types of resources may include:

- documentation – current and appropriate
- tools, plant and test equipment- calibrated and serviceable
- materials, replacement equipment and consumables
- communications equipment
- personnel - total required and their competence.

The learner will:

- demonstrate that they are aware of their own responsibility for the care and use of resources and will be able to advise team members accordingly
- take into account the time the system will be available for the task when considering resources and also any influencing factors such as, environmental, site conditions and the additional requirements for working on operational railway equipment
- identify inaccuracies and the non-availability of resources and take appropriate remedial action.

Unit 365

Isolate and earth contact systems to meet defined isolation requirements in the rail engineering industry

UAN:	J/503/4413
Level:	3
Credit value:	11
GLH:	76
Relationship to NOS:	This unit is directly linked to the GoSkills Rail Engineering NOS Unit E 15 – Isolate and earth contact systems to meet defined isolation requirements in the rail engineering industry.
Endorsement by a sector or regulatory body:	This unit is endorsed by GoSkills, the Sector Skills Council for passenger transport.
Aim:	The purpose of this unit is for learners to demonstrate occupational competency in isolating and earthing contact systems to meet defined isolation requirements in the rail engineering industry.
Assessment requirements:	This unit should be assessed predominantly in the workplace through observation, along with other sources of evidence such as, witness testimony, questioning and professional discussion. Simulation must not be used to assess this unit.

Learning outcome
The learner will: 1 Be able to isolate and earth contact systems to meet defined isolation requirements in the rail engineering industry
Assessment criteria
The learner can: 1.1 set up a safe system of work and work to the system 1.2 source and interpret the relevant information relating to the contact system and the location of the isolation and earthing activity 1.3 identify and determine the sequence of the isolation and earthing activities to be undertaken 1.4 identify and confirm the required isolation and earthing methods and procedures 1.5 carry out the required isolation and earthing activities in the specified sequence and in agreed timescales

- | | |
|-----|--|
| 1.6 | confirm the isolating and earthing activities have been completed within the limits of own authority |
| 1.7 | report any instances where the activities cannot be fully met or where there are identified defects outside the planned activities |
| 1.8 | complete relevant documentation accurately and pass them on to the appropriate person(s), if applicable. |

Learning outcome

The learner will:

- | | |
|---|---|
| 2 | Know how to isolate and earth contact systems to meet defined isolation requirements in the rail engineering industry |
|---|---|

Assessment criteria

The learner can:

- | | |
|------|--|
| 2.1 | describe the relevant health and safety working practices appropriate to the activity and organisation |
| 2.2 | describe how to source and interpret information relating to the contact system, including operational activity as appropriate |
| 2.3 | describe how to identify the sequence of testing and earthing activities to be undertaken |
| 2.4 | describe own organisation's methods and procedures for carrying out isolation activities |
| 2.5 | describe own organisation's methods and procedures for carrying out testing and earthing activities |
| 2.6 | describe the importance of carrying out activities in the specified sequence and agreed timescale |
| 2.7 | describe why and when activities cannot be completed |
| 2.8 | describe the implications of not reporting instances of where the activities cannot be fully completed |
| 2.9 | describe the relevant reporting lines and procedures that are approved by own organisation |
| 2.10 | explain the limits of own authority and responsibility and those of others involved in the activity. |

Unit 365 Isolate and earth contact systems to meet defined isolation requirements in the rail engineering industry

Supporting information

Guidance

The learner will be involved in isolating and earthing contact systems (overhead line equipment and conductor rails). This includes confirming the requirements for isolating and earthing, carrying out isolation procedures prior to undertaking the activity.

The types of isolations may include:

- pre-arranged
- urgent
- short notice

Unit 366

Carry out installation of railway electrification equipment and components

UAN:	K/503/4405
Level:	2
Credit value:	10
GLH:	68
Relationship to NOS:	This unit is directly linked to the GoSkills Rail Engineering NOS Unit E6 – Carry out installation of electrification and plant equipment and components.
Endorsement by a sector or regulatory body:	This unit is endorsed by GoSkills, the Sector Skills Council for passenger transport.
Aim:	The purpose of this unit is for learners to demonstrate occupational competency in carrying out installation of railway electrification equipment and components.
Assessment requirements:	This unit should be assessed predominantly in the workplace through observation, along with other sources of evidence such as, witness testimony, questioning and professional discussion. Simulation must not be used to assess this unit.

Learning outcome
The learner will: 1 Be able to carry out installation of electrification equipment and components
Assessment criteria
The learner can: 1.1 set up a safe system of work and work to the system 1.2 follow the relevant installation schedules and instructions to carry out the required activities 1.3 ensure that all equipment and components are free from damage 1.4 carry out the installation activities within the limits of own authority 1.5 carry out the installation activities in the specified sequence and in an agreed timescale 1.6 report any instances where the installation activities cannot be fully met or where there are identified defects outside the planned schedule 1.7 complete relevant records accurately and pass them on to the appropriate person(s) 1.8 dispose of waste materials in line with own organisation's procedures.

Learning outcome
The learner will: 2 Know how to carry out installation of electrification equipment and components
Assessment criteria
The learner can: 2.1 describe the relevant health and safety working practices appropriate to the activity and organisation 2.2 describe how to follow installation schedules and instructions that are approved by own organisation 2.3 describe the types of defects that could occur in equipment and components 2.4 list own organisation's methods and techniques for carrying out installation activities relevant to own role 2.5 describe the importance of carrying out installation activities in the specified sequence and agreed timescale 2.6 describe own organisation's procedures for waste disposal 2.7 describe the relevant reporting lines and procedures that are approved by own organisation 2.8 explain the limits of own authority and responsibility and those of others involved in the activity.

Unit 366 **Carry out installation of railway electrification equipment and components**

Supporting information

Guidance

Generally the learner will be performing single stage processes.

The types of equipment and components may include:

- contact and catenary wire
- insulators
- droppers.

These may also be in one or more of the following areas:

- structural
- mechanical
- electrical.

The equipment and components will be sub-sets of the following assets:

- contact systems (overhead line equipment, conductor rails).

Types of installation activities may include:

- replacing insulators
- replacing droppers.

Unit 367

Transfer responsibility of railway electrification equipment and components

UAN:	T/503/4407
Level:	3
Credit value:	8
GLH:	38
Relationship to NOS:	This unit is directly linked to the GoSkills Rail Engineering NOS Unit E9 – Transfer responsibility of Electrification and Plant equipment and components.
Endorsement by a sector or regulatory body:	This unit is endorsed by GoSkills, the Sector Skills Council for passenger transport.
Aim:	The purpose of this unit is for learners to demonstrate occupational competency in transferring responsibility of railway electrification equipment and components.
Assessment requirements:	<p>This unit should be assessed predominantly in the workplace through observation, along with other sources of evidence such as, witness testimony, questioning and professional discussion.</p> <p>Simulation must not be used to assess this unit.</p>

Learning outcome
The learner will: 1 Be able to transfer responsibility of electrification equipment and components
Assessment criteria
The learner can: 1.1 set up a safe system of work and work to the system 1.2 confirm and define the condition of the engineering equipment and/or components in accordance with the specification 1.3 ensure that all tasks, tests and checks have been completed in accordance with own organisation's procedures 1.4 confirm that everyone involved accepts the equipment and/or component is in a satisfactory condition for transfer of responsibility to take place 1.5 identify any unusual features, defects or discrepancies relating to the condition of the equipment and/or component 1.6 make the transfer of responsibility and obtain agreement between everyone involved on the precise moment that transfer of responsibility occurs 1.7 make sure that clear, accurate and complete records of the transfer are made.

Learning outcome
The learner will: 2 Know how to transfer responsibility of electrification equipment and components
Assessment criteria
The learner can: 2.1 describe the relevant health and safety working practices appropriate to the activity and organisation 2.2 describe own organisation's procedures for transfer of responsibility of equipment and/or components 2.3 describe how to determine the condition of the equipment and/or components prior to transfer of responsibility 2.4 describe own organisation's requirements for the completion of work and testing activities prior to returning equipment to operational service 2.5 explain what constitutes an unacceptable equipment or component condition 2.6 describe the implications of when transfer of responsibility activities cannot be completed 2.7 describe the relevant reporting lines and procedures that are approved by own organisation 2.8 explain the limits of own authority and how to deal with situations that go beyond such authority.

Unit 367 Transfer responsibility of railway electrification equipment and components

Supporting information

Guidance

The learner will be able to provide suitable and sufficient evidence to confirm the operational status of the equipment and/or components including recommending whether the:

- system is fit for entry into service
- system is fit for entry into restricted service
- system is not fit for entry into service.

The learner will ensure that the equipment and/or components are transferred back only after sufficient evidence exists to ensure safe working and the information supplied accurately and clearly identifies the operational status of the equipment and/or components.

Evidence requirements for the units of assessment in the qualifications listed below are detailed at unit level. The list below indicates which units can be assessed through simulation:

Unit Name	Unit Number	Simulation allowed
Prepare to undertake duties in the rail engineering industry	201	N
Contribute to safe working practices in the rail engineering industry	202	N
Employment rights and responsibilities in the passenger transport sector	243	N
Assist in preparing resources for railway electrification engineering activities	357	N
Assist with maintenance on railway electrification equipment and components	358	N
Assist with installation of railway electrification equipment and components	359	N
Carry out maintenance on railway electrification equipment and components	360	N
Plan railway electrification engineering activities	361	N
Prepare for maintenance/installation of railway electrification equipment and components	362	N
Restore the contact systems to operational condition in the rail engineering industry	363	N
Allocate and monitor resources for railway electrification engineering activities	364	N
Isolate and earth contact systems to meet defined isolation requirements in the rail engineering industry	365	N
Carry out installation of railway electrification equipment and components	366	N
Transfer responsibility of railway electrification equipment and components	367	N



Appendix 1 qualifications

Relationships to other

Literacy, language, numeracy and ICT skills development

These qualifications can develop skills that can be used in the following qualifications:

- Functional Skills (England) – see www.cityandguilds.com/functionalskills
- Essential Skills (Northern Ireland) – see www.cityandguilds.com/essentialskillsni
- Essential Skills Wales – see www.cityandguilds.com/esw



Appendix 2 Sources of general information

The following documents contain essential information for centres delivering City & Guilds qualifications. They should be referred to in conjunction with this handbook. To download the documents and to find other useful documents, go to the **Centres and Training Providers homepage** on www.cityandguilds.com.

Centre Manual - Supporting Customer Excellence contains detailed information about the processes which must be followed and requirements which must be met for a centre to achieve 'approved centre' status, or to offer a particular qualification, as well as updates and good practice exemplars for City & Guilds assessment and policy issues. Specifically, the document includes sections on:

- The centre and qualification approval process
- Assessment, internal quality assurance and examination roles at the centre
- Registration and certification of candidates
- Non-compliance
- Complaints and appeals
- Equal opportunities
- Data protection
- Management systems
- Maintaining records
- Assessment
- Internal quality assurance
- External quality assurance.

Our Quality Assurance Requirements encompasses all of the relevant requirements of key regulatory documents such as:

- Regulatory Arrangements for the Qualifications and Credit Framework (2008)
- SQA Awarding Body Criteria (2007)
- NVQ Code of Practice (2006)

and sets out the criteria that centres should adhere to pre and post centre and qualification approval.

Access to Assessment & Qualifications provides full details of the arrangements that may be made to facilitate access to assessments and qualifications for candidates who are eligible for adjustments in assessment.

The **centre homepage** section of the City & Guilds website also contains useful information such on such things as:

- **Walled Garden:** how to register and certificate candidates on line

- **Qualifications and Credit Framework (QCF):** general guidance about the QCF and how qualifications will change, as well as information on the IT systems needed and FAQs
- **Events:** dates and information on the latest Centre events
- **Online assessment:** how to register for e-assessments.

Centre Guide – Delivering International Qualifications contains detailed information about the processes which must be followed and requirements which must be met for a centre to achieve ‘approved centre’ status, or to offer a particular qualification. Specifically, the document includes sections on:

- The centre and qualification approval process and forms
- Assessment, verification and examination roles at the centre
- Registration and certification of candidates
- Non-compliance
- Complaints and appeals
- Equal opportunities
- Data protection
- Frequently asked questions.

Useful contacts

UK learners

General qualification information

T: +44 (0)844 543 0033

E: learnersupport@cityandguilds.com

International learners

General qualification information

T: +44 (0)844 543 0033

F: +44 (0)20 7294 2413

E: intcg@cityandguilds.com

Centres

Exam entries, Certificates,
Registrations/enrolment, Invoices,
Missing or late exam materials,
Nominal roll reports, Results

T: +44 (0)844 543 0000

F: +44 (0)20 7294 2413

E: centresupport@cityandguilds.com

Single subject qualifications

Exam entries, Results, Certification,
Missing or late exam materials,
Incorrect exam papers, Forms
request (BB, results entry), Exam
date and time change

T: +44 (0)844 543 0000

F: +44 (0)20 7294 2413

F: +44 (0)20 7294 2404 (BB forms)

E: singlesubjects@cityandguilds.com

International awards

Results, Entries, Enrolments,
Invoices, Missing or late exam
materials, Nominal roll reports

T: +44 (0)844 543 0000

F: +44 (0)20 7294 2413

E: intops@cityandguilds.com

Walled Garden

Re-issue of password or username,
Technical problems, Entries,
Results, e-assessment, Navigation,
User/menu option, Problems

T: +44 (0)844 543 0000

F: +44 (0)20 7294 2413

E: walledgarden@cityandguilds.com

Employer

Employer solutions, Mapping,
Accreditation, Development Skills,
Consultancy

T: +44 (0)121 503 8993

E: business@cityandguilds.com

Publications

Logbooks, Centre documents,
Forms, Free literature

T: +44 (0)844 543 0000

F: +44 (0)20 7294 2413

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City & Guilds Group

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