



City & Guilds Level 2 Certificate of Competence in Tractor Driving and Related Operations (0014-31)

Version 1.2 (August 2024)

Qualification Handbook

Qualification at a glance

Subject area	Machinery Landbased
City & Guilds number	0014-31
Age group	16+
Entry requirements	Centres must ensure that any pre-requisites stated in the What is this qualification about? section are met.
Endorsements	985 Tractor Driving and Related Operations 986 Tractor Driving and Related Operations (Loader)
Assessment	<p>To gain this qualification, candidates must successfully achieve the following assessments:</p> <p>Practical assessment with oral questioning by a City & Guilds NPTC approved Assessor. The Assessor can be the same individual who carried out the training or could be a different person. The Assessor must be approved and registered with City & Guilds NPTC.</p> <p>The assessment must be a stand-alone process that is separate to the training, and cannot be spread out across the length of the training course i.e. the assessment is conducted at the end of the training course or on a separate day.</p>
Grading	Pass only
Approvals	Full centre approval required Qualification approval required
Support materials	n/a
Registration and certification	Registration and certification of this qualification is through the Online Registration System (ORS) via Walled Garden and is subject to end dates.

Title and level	Size (GLH)	TQT	City & Guilds qualification number	Ofqual accreditation number
City & Guilds Level 2 Certificate of Competence in Tractor Driving and Related Operations	21-28	24-33	0014-31	603/5337/5

Version and date	Change detail	Section
1.0 February 2020	First version	
1.1 July 2020	Addition of certificate claim module	1 Introduction
1.2 August 2024	Update of Quality Assurance Statement	Centre Requirements
	Added “Delivering the qualification”, “Assessment”, “Units”	Throughout
	Changes to Formatting Endorsement numbers added	Throughout

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1 Introduction

This document tells you what you need to do to deliver the City & Guilds Level 2 Certificate of Competence in Tractor Driving and Related Operations (0014-31)

Area	Description
Who is this qualification for?	Individuals who operate tractors and ancillary machinery as part of their work in agriculture, horticulture, forestry, landscaping or other industries. It will provide the individual with the knowledge, understanding and skills required to prepare and operate a tractor and attachments safely and to industry standards in line with current legislation.
What does this qualification cover?	It covers safe driving of a tractor, pre-use maintenance, safety checks and recognition of controls and instruments. The test of covers the use of the tractor in a range of situations: driving safely and correctly around a suitable course (including reversing with a trailer), trailer hitching, attaching 3-point linkage and Power Take Off (PTO) driven attachments. There is an optional unit that covers the use of a tractor fitted with a front-end loader.
Will the qualification lead to employment, and if so, in which job role and at what level?	This qualification will support progression into employment where safe operation of a tractor is part of the role. Safe operational skills are key to efficient use, good working practice and preventing accidents, leading to business benefits in terms of less machinery damage and down time. However, achievement of this qualification does not replace any legal requirement to obtain a driving licence for operation on the highway.
Why choose this qualification over similar qualifications?	This is a specialist qualification demonstrating the individual is able to safely operate a tractor to a recognised level of competency.
Will the qualification lead to further learning?	Individuals who successfully complete this qualification could go on to increase their level of proficiency through consolidation practice within a working environment, or develop skills in safely operating other land-based machinery, e.g., Level 2 Certificate of Competence in the Safe Use of Tractor Mounted Hedge and Verge Cutters
Employer/Higher Education Institutions	The National Farmers Union
Further Information	Please refer to the Qualification Handbook, available on the City & Guilds NPTC website, for more information on the structure of this qualification, the content of the units, and assessment.

Who did we develop the qualification with?	Developed with City & Guilds NPTC Stake holders, associates and industry representatives.
Is it part of an apprenticeship framework or initiative?	No

Assessment Guidance for the Candidate

A list of registered Assessment Centres is available from City & Guilds NPTC. (www.nptc.org.uk)

Assessment is a process by which it is confirmed that the candidate is competent in the unit(s) within the award to which the assessment relates. It is the process of collecting evidence about the candidate's capabilities and judging whether that evidence is sufficient to attribute competence.

The Candidate must be registered through the City & Guilds approved Assessment Centre for this qualification prior to the assessment.

2 Qualification structure

For the **City & Guilds Level 2 Certificate of Competence in Tractor Driving and Related Operations**, learners must be trained and assessed in the units listed:

City & Guilds unit number	Unit title	GLH
Mandatory unit		
221	Prepare and operate a tractor and attachments	21
Certification Module Number	Certification Module Title	
985	Tractor driving and related operations	

For the **City & Guilds Level 2 Certificate of Competence in Tractor Driving and Related Operations (Loader)**, learners must be trained and assessed in the units listed:

City & Guilds unit number	Unit title	GLH
Mandatory unit		
221	Prepare and operate a tractor and attachments	21
Elective unit		
222	Operate a loader	7
Certification Module Number	Certification Module Title	
986	Tractor driving and related operations (loader)	

Total Qualification Time (TQT)

Total Qualification Time (TQT) is the number of notional hours which represents an estimate of the total amount of time that could reasonably be expected for a learner to demonstrate the achievement of the level of attainment necessary for the award of a qualification.

TQT consists of the following two elements:

- 1) the number of hours that an awarding organisation has assigned to a qualification for guided learning
- 2) an estimate of the number of hours a learner will reasonably be likely to spend in preparation, study or any other form of participation in education or training, including assessment, which takes place as directed by but, unlike guided learning, not under the immediate guidance or supervision of a lecturer, supervisor, tutor or other appropriate provider of education or training.

Title and level	GLH	TQT
City & Guilds Level 2 Certificate of Competence in Tractor Driving and Related Operations	28	33

3 Centre requirements

Approval

Full approval

To offer this qualification, new centres will need to gain both centre and qualification approval. Please refer to the document Centre Approval process: Quality Standards for further information. Please email qasupport@cityandguilds.com for further information on the approval process.

Centre staffing

Staff delivering these qualifications must be able to demonstrate that they meet the following requirements:

- be technically competent in the areas in which they are delivering
- be able to deliver across the breadth and depth of the content of the qualification being taught
- have recent relevant teaching and assessment experience in the specific area they will be teaching, or be working towards this
- demonstrate continuing CPD.

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

Physical resources

Centres must be able to demonstrate that they have access to the equipment and technical resources required to deliver this qualification and its assessments.

Assessment Guidance for the Assessor

Staff assessing these qualifications must be approved Certificate of Competence City & Guilds NPTC Assessors and must be independent and cannot have been involved with the training of the Candidate. This qualification can only be assessed by an Assessor who is suitably qualified and meets the requirements of the awarding body.

Certificate of Competence City & Guilds NPTC Assessors must meet the following requirements:

- show competence and provide evidence of industry expertise in the qualification/s they wish to assess
- hold the qualification as a candidate and have been technically evaluated as an Assessor
- be up to date with their verification and relevant first aid
- demonstrate continuing technically relevant CPD Compliance with these requirements is a pre-requisite for Assessors remaining on the list of approved Assessors.

Verification is a process of monitoring assessment; it is an essential check to confirm that the assessment procedures are being carried out in the way City & Guilds has laid down. The overall aim of verification is to establish a system of quality assurance that is acceptable in

terms of both credibility and cost effectiveness and approved Assessors will be subject to a regular visit by the Verifier at a time when assessments are being undertaken.

A selection of assessment reports completed by the Assessor will be evaluated by a City & Guilds approved Quality Consultant.

The Candidate may only have a maximum of 3 attempts. Re-assessment cannot take place until further training has been provided.

Safe Practice

Appropriate PPE must be worn at all times. All equipment must be operated in such a way that the Candidate, Assessor, other persons, animals or other equipment are not endangered.

If these conditions are not observed this will result in the Candidate not meeting the required standard.

Validation of Equipment

Any item(s) equipment used for the assessment must comply with current legal requirements.

Additional information may be sought from the relevant manufacturer's instruction book, operators' manual, product label/database or any other Government/Government Agency publication.

Appeals and Equal opportunities

Centres must have their own auditable, appeals procedures. If a Candidate is not satisfied with the examination conditions or a Candidate feels the opportunity for examination is being denied, the Centre Manager should, in the first instance, address the problem. If, however the problem cannot be resolved, City & Guilds will arbitrate and a Principal Verifier may be approached to offer independent advice.

All appeals must be clearly documented by the Centre Manager and made available to the Principal Verifier or City & Guilds if advice is required.

Should occasions arise when Centres are not satisfied with any aspect of the verification process, they should contact the Quality Assurance Manager at City & Guilds NPTC, 5-6 Giltspur Street, London, EC1A 9DE, UK. Access to the qualification is open to all, irrespective of gender, race, creed or special needs. Subject to H&S restrictions the Centre Manager should ensure that no learner is subjected to unfair discrimination on any grounds in relation to access to assessment and to the fairness of the assessment. QCA requires City & Guilds to monitor centres to check whether equal opportunities policies are being adhered to.

Quality assurance

Approved centres must have effective quality assurance systems to ensure optimum delivery and assessment of qualifications. Quality assurance includes initial centre approval, qualification approval and the centre's own internal procedures for monitoring quality. Centres are responsible for internal quality assurance and City & Guilds is responsible for external quality assurance. All external quality assurance processes reflect the minimum requirements

for verified and moderated assessments, as detailed in the Centre Assessment Standards Scrutiny (CASS), section H2 of Ofqual's General Conditions. For more information on both CASS and City and Guilds Quality Assurance processes visit: the **What is CASS?** and **Quality Assurance Standards** documents on the City & Guilds website.

Standards and rigorous quality assurance are maintained by the use of:

- Internal quality assurance
- City & Guilds external quality assurance.

In order to carry out the quality assurance role, Internal Quality Assurers must

- have appropriate teaching and vocational knowledge and expertise
- have experience in quality management/internal quality assurance
- hold or be working towards an appropriate teaching/training/assessing qualification
- be familiar with the occupation and technical content covered within the qualification.

External quality assurance for the qualification will be provided by City & Guilds EQA process. EQAs are appointed by City & Guilds to approve centres, and to monitor the assessment and internal quality assurance carried out by centres. External quality assurance is carried out to ensure that assessment is valid and reliable, and that there is good assessment practice in centres.

The role of the EQA is to:

- provide advice and support to centre staff
- ensure the quality and consistency of assessments and marking/grading within and between centres by the use of systematic sampling
- provide feedback to centres and to City & Guilds.

Learner entry requirements

Candidate must meet minimum age requirements.

Age restrictions

This qualification is approved for learners aged 16 or above.

Access arrangements and reasonable adjustments

Access arrangements are adjustments that allow candidates with disabilities, special educational needs, and temporary injuries to access the assessment and demonstrate their skills and knowledge without changing the demands of the assessment. These arrangements must be made before assessment takes place.

The Equality Act 2010 requires City & Guilds to make reasonable adjustments where a disabled person would be at a substantial disadvantage in undertaking an assessment.

It is the responsibility of the centre to ensure at the start of a programme of learning that candidates will be able to access the requirements of the qualification.

Please refer to the JCQ access arrangements and reasonable adjustments and Access

arrangements - when and how applications need to be made to City & Guilds for more information. Both are available on **the City & Guilds website**.

4 Delivering the qualification

Initial assessment and induction

An initial assessment of each learner should be made before the start of their programme to identify:

- if the learner has any specific training needs
- support and guidance they may need when working towards their qualification.
- any units they have already completed or credit they have accumulated which is relevant to the qualification
- the appropriate type and level of qualification.

We recommend that centres provide an induction programme, so the learner fully understands the requirements of the qualification, their responsibilities as a learner and the responsibilities of the centre. This information can be recorded on a learning contract.

Inclusion and diversity

City & Guilds is committed to improving inclusion and diversity within the way we work and how we deliver our purpose which is to help people and organisations develop the skills they need for growth.

More information and guidance to support centres in supporting inclusion and diversity through the delivery of City & Guilds qualifications can be found here:

Inclusion and diversity | City & Guilds ([cityandguilds.com](https://www.cityandguilds.com))

Sustainability

City & Guilds are committed to net zero. Our ambition is to reduce our carbon emissions by at least 50% before 2030 and develop environmentally responsible operations to achieve net zero by 2040 or sooner if we can. City & Guilds is committed to supporting qualifications that support our customers to consider sustainability and their environmental footprint.

More information and guidance to support centres in developing sustainable practices through the delivery of City & Guilds qualifications can be found here:

Our Pathway to Net Zero | City & Guilds ([cityandguilds.com](https://www.cityandguilds.com))

Centres should consider their own carbon footprint when delivering this qualification and consider reasonable and practical ways of delivering this qualification with sustainability in mind. This could include:

- reviewing purchasing and procurement processes (such as buying in bulk to reduce the amount of travel time and energy, considering and investing in the use of components that can be reused, instead of the use of disposable or single use consumables)
- reusing components wherever possible
- waste procedures (ensuring that waste is minimised, recycling of components is in place wherever possible)

- minimising water use and considering options for reuse/salvage as part of plumbing activities wherever possible.

Support materials

The following resources are available for this qualification:

Description	How to access
Candidate Handbook	www.nptc.org.uk
Assessment Pack (available only to assessors)	www.nptc.org.uk

5 Assessment

Assessment of the qualification

Assessment types			
Unit	Title	Assessment method	Where to obtain assessment materials
221	Prepare and operate a tractor and attachments	Oral Examination and Practical Observation Centres may use the materials provided by City & Guilds.	www.nptc.org.uk
222	Operate a loader	Oral Examination and Practical Observation Centres may use the materials provided by City & Guilds	www.nptc.org.uk

Assessment strategy

City & Guilds has written the practical observations with oral questioning to use with this qualification, live assessment materials can be downloaded by the assessor via the Assessment Pack from the NPTC website.

Time constraints

The following must be applied to the assessment of this qualification:

- Candidates must finish their assessment within 24 months of date of initial registration.
- Assessments should take no longer than 1.5 – 3 hours.
- Qualification registration is valid for two years.

6 Units

Structure of the units

These units each have the following:

- City & Guilds reference number
- title
- level
- Guided Learning Hours (GLH)
- unit aim
- assessment type
- learning outcomes, which are comprised of a number of assessment criteria.

Guidance for delivery of the units

This qualification comprises a number of **units**. A unit describes what is expected of a competent person in particular aspects of their job.

Each **unit** is divided into **learning outcomes** which describe in further detail the skills and knowledge that a candidate should possess.

Each **learning outcome** has a set of **assessment criteria** (performance and knowledge and understanding) which specify the desired criteria that must be satisfied before an individual can be said to have performed to the agreed standard.

Error! Use the Home tab to apply Lesson-Title-XY to the text that you want to appear here.

Level:	2
GLH:	21
Assessment type:	Practical activities with oral assessment.
Aim:	The aim of this unit is to provide the learner with the knowledge, understanding and skills required to prepare and operate a tractor and attachments safely and to industry standards.

Learning outcome

The learner will:

LO1 Know the requirements of risk assessment, legislation and safety when operating a tractor with attachments (Criteria 1.1-1.4)

Assessment criteria

The learner can:

- AC1.1 Carry out a site-specific hazard and risk assessment
- AC1.2 Describe the relevant health and safety legislation in relation to tractor operations
- AC1.3 Describe the relevant legal and safety considerations when operating a tractor on or near a public highway
- AC1.4 Select and use the appropriate personal protective clothing and equipment (PPE)
- AC1.5 Identify safety issues in relation to the preparation and use of tractors and implements

Topic 1.1

Site specific hazard and risk assessment:

- slopes
- ground conditions
- contact with moving parts
- manual handling
- overhead obstructions
 - Over Head Power Lines (OHPL)
- surface obstructions

- people and/or animals
- ditches/waterways
- hot components
- fuel and oil
- biohazards
- dust/fungal spores.

Verbal report:

- evaluate risks
- implement appropriate control measures
- confirm that the condition of the site is acceptable
- confirm who they would report to if the site condition is unsuitable.

Topic 1.2

The relevant health and safety legislation in relation to tractor operations:

- Health and Safety at Work Etc. Act (HASAWA):
 - duties imposed on the employer/employee/others.
- Provision and Use of Work Equipment Regulations (PUWER):
 - machine must be suitable for the task
 - machine must be properly maintained according to manufacturer's recommendations.
- Management of Health and Safety at Work Regulations (MHSWR):
 - risk assessments must be completed and communicated to all relevant persons.
- Manual Handling Operations Regulations (MHOR):
 - avoid manual handling where possible, use safe lifting techniques.
- Control of Substances Hazardous to Health (COSHH):
 - fuel handling and protection from contaminants.
- Personal Protective Equipment Regulations (PPE):
 - PPE must be provided, maintained and worn.
- The Control of Noise at Work Regulations:
 - hearing protection must be used over 85 decibels (dB).
- Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR):
 - certain categories of injuries must be reported.
- Wildlife and Countryside Act (WCA):
 - operations must be carried out avoiding disturbance to wildlife.
- Health & Safety (First Aid) Regulations:
 - need for an accident book and knowledge of where it is kept.

Topic 1.3

The relevant legal and safety considerations when operating a tractor on or near a public highway:

- be road legal
- appropriate vehicle tax/exemption
- insurance cover
- operator holds valid driving licence
- have an orange flashing beacon when driven on unrestricted dual carriageways (other road types subject to individual risk assessment)
- ensure safe speed appropriate to conditions
- comply with relevant speed limits
- four-wheel drive mode disengaged (if applicable)

- differential lock disengaged
- independent brakes locked together (if applicable).

Topic 1.4

Personal protective clothing and equipment:

- safety boots
- ear defenders
- dust mask
- head protection
- face/eye protection
- hand protection
- non-snag clothing
- any other protection highlighted in the risk assessment.

Topic 1.5

Safety issues in relation to the preparation and use of tractors and implements:

- do not enter danger zones or work under unsupported equipment
- if using a remote linkage control the operator must not be in a position whereby injury may be caused by the tractor or implement
- clear communication is established between driver and assistant
- SAFE STOP procedure explained.

Learning outcome

The learner will:

LO2 Carry out pre-use and pre-start checks to a tractor and attachments (Criteria 2.1-2.3)

Assessment criteria

The learner can:

AC2.1 Identify and explain the function of all instruments and controls

AC2.2 State how to maintain the efficiency of tractor and attachment performance

AC2.3 Carry out checks to the tractor to ensure that it is safe to use

Topic 2.1

Safely mount and dismount from tractor cab using hand and footholds provided (usually facing inwards)

Identify and explain the function of all instruments and controls:

- all internal/external controls and instrumentation applicable to the tractor being used for the assessment
- interpretation of information and warning symbols
- interpretation of decals.

Topic 2.2

How to maintain the efficiency of tractor and attachment performance:

- ensure air filter is clean
- effective use of engine speed control
- appropriate gear selection
- effective use of engine/transmission management systems (if applicable)
- use differential lock to prevent wheel slip
- linkage control systems (e.g. draft control)
- ensure appropriate tyre pressures for the task
- use of economy PTO mode.

Topic 2.3

Checks to the tractor to ensure that it is safe to use:

- horn working
- all lights working
- cab glass undamaged and clean,
- wipers in working order
- mirrors clean and undamaged
- indicators clearly visible and undamaged
- operator presence controls
- wheel nuts tight and secure (visual check only)
- tyre pressures (visual check only)
- tyres free from excessive wear and damage
- lubrication sites identified
- absence/severity of oil leaks
- battery isolation devices working
- all pre-start checks applicable to the tractor being used for the assessment – as specified in the manual.

Explain adjustments made for comfort and safety:

- mirrors adjusted for clear view
- steering wheel adjusted to suit operator
- seat adjusted to suit operator
- condition and function of seatbelt

Carry out safe starting and stopping procedure:

- controls in neutral
- cold starting technique demonstrated or explained
- engine started
- SAFE STOP procedures followed

Guarding requirements:

- the PTO stub shaft is fully enclosed when not in use
- all guards are secure and undamaged as identified in operator's manual
- exhaust heat shield is in place and undamaged

Drive a short distance to check to brakes and steering:

- all round observation before moving off
- brakes checked by driving short distance on level, smooth ground
- SAFE STOP procedures followed.

Learning outcome

The learner will:

LO3 Operate a tractor and attachments (Criteria 3.1-3.5)

Assessment criteria

The learner can:

AC3.1 Describe the potential hazards that could arise when using a tractor and the correct procedures/precautions to be observed when driving

AC3.2 Operate a tractor with a trailer

AC3.3 Attach and detach three-point linkage mounted implement to the tractor

AC3.4 Attach and detach PTO shafts

AC3.5 Describe post-operational checks

Topic 3.1

Potential risks when driving at speed:

- loss of control
- braking distance is increased

Control measures for driving at speed:

- avoid excessive speed
- be aware of increased stopping distances and the need to brake earlier
- using engine braking to slow the machine.

Risks when turning:

- overturning
- mounted implements colliding with objects
- trailed implements come into contact with the tractor or other objects.

Control measures for turning:

- avoid sharp turns
- turns need to be taken slowly
- make wider turns.

Control measures for turning:

- avoid sharp turns
- turns need to be taken slowly
- make wider turns.

Potential risks when driving up or down slopes:

- tractor could stall or run away
- loss of traction
- 'jack-knifing'.

Control measures for driving up or down slopes:

- appropriate low gear should be selected before encountering the slope
- do not de-clutch when descending the slope
- use auxiliary braking system.

Potential risks when driving over rough terrain:

- load shifting
- implement/trailer could become detached from tractor
- weight of attachment could lead to excessive 'bouncing'
- operator injury.

Control measures for driving over rough terrain:

- maintain low speed to reduce 'bouncing'
- try to avoid potholes and bumps
- load should be secured to prevent movement.

Potential risks when driving across slopes:

- load shifting
- trailer will tend to slide/pull downhill
- overturning.

Controls measures when driving across slopes:

- maintain slow speed when driving across slopes
- maintain a low centre of gravity
- use wide wheel track setting to improve stability of the tractor.

Factors taken into account when turning on slopes:

- severity of the slope
- stability of the tractor
- direction of turn
- type of attachment (ie Mounted trailed, full or empty)
- ground conditions.

Topic 3.2

Hitch a trailer to the tractor and connect the hydraulic couplings:

- visual inspection of trailer
- reverse tractor to align with trailer drawbar
- parking brake applied
- tractor gears put in neutral

- hydraulic levers are in disengaged position and the system is de-pressurised
- trailer is hitched properly and that the catches/pins are properly secured
- weight not carried on hydraulics
- the hydraulic couplings are cleaned
- correct length of hydraulic pipe and condition
- correct drawbar length to ensure adequate weight transference
- hydraulic/pneumatic/electrical couplings correctly connected
- trailer parking brake is released/wheel chocks removed.

Drive the tractor and trailer:

- select appropriate gear
- ensure take off is smooth
- drive at appropriate, safe speed for conditions
- brake safely
- manoeuvre safely with awareness of surroundings at all times.

Safe tipping:

- the area is checked for hazards
- reverse the trailer to the specified position for tipping
- tip the trailer
- lower the trailer.

Park and unhitch trailer:

- drive the trailer to the parking area, reverse into designated position
- tractor parking brake is applied
- tractor is put into neutral gear
- hydraulic levers are in disengaged position and the system is de-pressurised
- the wheels are chocked/trailer parking brake applied (if applicable)
- hydraulic/pneumatic pipes and electrics are disconnected and stored correctly
- trailer is unhitched
- tractor auto hitch correctly raised and locked
- SAFE STOP procedures followed.

Topic 3.3

Factors to consider when using linkage category conversions:

- compatibility of categories between tractor and implement
- linkage balls changed
- bushes/sleeves are used
- stepped pins are used.

Attach a three-point linkage mounted implement to the tractor:

- attach the three-point linkage using any safe method
- linkage adjusted to level implement (as appropriate)
- eliminate undue side play
- SAFE STOP procedures followed.

Detach a three-point linkage mounted implement to the tractor:

- position implement on suitable site
- ensure parking brake is applied before leaving cab

- the implement is detached using any safe method.

Topic 3.4

Statutory guarding requirements for PTO shafts:

- fully enclosed when attached
- secured to tractor and implement to prevent rotation.

Factors to consider when using PTO shafts:

- tractor and PTO machine are compatible
- correct speed stated for implement
- correct drawbar length to ensure adequate PTO shaft length/overlap/angle
- correct overlap of sliding shaft and the guards
- shaft is adequately lubricated
- use of 'economy mode' explained
- tractor stub shaft is fully enclosed when no implement is attached.

Consequences of operating a PTO machine at incorrect speeds:

- excess wear on implement
- excess vibration in cab
- increased risk of stones/debris being thrown up
- implement may not achieve desired result.

Attach PTO drive to tractor:

- SAFE STOP procedure followed prior to attaching PTO shaft
- fit power take off shaft to tractor
- secure power take off shaft guards
- ensure guards comply with current regulations
- PTO engagement/ disengagement and speed (appropriate to implement).

Detach the PTO from the tractor:

- SAFE STOP procedure followed prior to detaching PTO shaft
- tractor stub shaft is fully enclosed.

Park and secure the machine:

- move to secure site
- SAFE STOP procedure followed
- dismount from the tractor safely using correct hand and footholds
- lock cab (if applicable)
- isolate battery (if applicable).

Topic 3.5

Regularly cleaning the tractor and equipment:

- prevents personal contamination
- prevents corrosion
- prevents soiling of roads
- makes visual inspection for damage possible
- facilitates maintenance and adjustments.

Methods of cleaning the machine and attachments:

- a brush
- compressed/blown air
- water/pressure washer.

PPE required for cleaning operations:

- eye/face protection
- safety footwear
- overall/coverall
- hand protection
- dust mask.

Reasons for inspecting the machine after use:

- inspect for wear and damage
- faults can be identified prior to being used again
- could prevent another operator from using it if in a potentially dangerous condition.

Unit 222 Operate a loader

Level:	2
GLH:	7
Assessment type:	Practical activities with oral assessment.
Aim:	The aim of this unit is to provide the learner with the knowledge, understanding and skills required to carry out the required pre-start checks and operate a loader attached to a tractor.

Learning outcome

The learner will:

LO1 Know the legal requirements and pre-start checks for operating a loader attached to a tractor (Criteria 1.1-1.4)

Assessment criteria

The learner can:

AC1.1 Describe the relevant legal and safety requirements in relation to loader operations

AC1.2 Carry out inspection of loader prior to use

AC1.3 State the factors to consider when removing and refitting a loader attachment

AC1.4 Carry out daily maintenance and pre-use checks

Topic 1.1

Legal and safety requirements in relation to loader operations:

- all loaders and loader attachments should be regularly inspected
- information on lifting capacity and safe working load should be available
- awareness of overhead hazards
- safe loader position when moving/operating loader – to maximize visibility, minimize projection and ensure stability
- awareness of live loads
- loader should not travel on public highway while carrying a load.

Topic 1.2

Inspecting the loader prior to use to establish that it is safe to use:

- loader attachment pins
- hydraulic pipes
- couplings
- steelwork for signs of wear/fatigue/cracking
- lubrication points
- attachment pins
- loader controls.

Reason for regularly checking the attachment of the loader to the tractor:

- sub-frame attachment bolts and securing devices can work loose and break as they are subject to movement and fatigue.

Precaution to consider when using a loader to lift a heavy load:

- use of rear ballast
- safe working capacity of loader.

Topic 1.3

Factors to consider when removing and refitting a loader attachment:

- clear communication is established between operator and assistant
- loader attachment is changed using methods as specified by the manufacturer
- adopt safe methods at all times
- safe and accurate use of the hydraulic controls
- ensure that the attachment is secured safely
- comply with manual handling regulations during activity.

Topic 1.4

Daily maintenance and pre-start checks:

- daily maintenance and pre-use checks carried out as specified in Unit 201.
- visual inspections that tyre pressures are appropriate for loader work.

Learning outcome

The learner will:

LO2 Operate a loader attached to a tractor (Criteria 2.1)

Assessment criteria

The learner can:

AC2.1 Operate the loader to place material in a trailer or suitable alternative

Topic 2.1

Operation of the loader:

- follow safe starting procedures
- fit and secure attachment
- terrain negotiated safely
- reversing is carried out safely
- identify and avoid hazards including overhead power lines
- trailer positioned to give minimum travel and turning
- avoid excessive material spillage
- manoeuvre machine safely
- ensure all-round observation
- work within optimum capacity of loader
- ensure even loading of trailer
- trailer not overloaded
- ensure minimum wheel slip/tyre wear
- avoid contact between loader and trailer
- clean and tidy work area after loading as necessary
- remove attachment.

Park and secure the machine:

- move to secure site
- SAFE STOP procedure followed
- dismount from the tractor safely using correct hand and footholds
- lock cab (if applicable)
- isolate battery (if applicable).

Supporting information

Evidence requirements

One to one practical assessment with oral questioning by an NPTC City & Guilds approved assessor.

Unit guidance

Candidates must successfully achieve all assessment activities in their chosen unit(s).

Validation of Equipment

A Manufacturer's instruction book or other operator's manual should be available for the Candidate to use during the assessment if required.

All equipment being used for this assessment must comply with the relevant requirements of the Provision and Use of Work Equipment Regulations (PUWER) 1998.

Vehicles must comply with department of Transport and road Traffic acts where relevant.

Any appropriate item of machinery complying with current legal requirements is acceptable for the assessment, provided it is suitably equipped for all assessment activities to be carried out.

Safe Practice

Appropriate Personal Protective Equipment (PPE) must be worn at all times.

The Assessor must ensure that a site-specific risk assessment is carried out.

All equipment must be operated in such a way that the Candidate, Assessor, other persons, or other equipment are not endangered.

All ancillary equipment, when detached, must be safely parked.

Failure to operate safely and comply with Failure to operate safely and comply with these requirements will result in the Candidate not meeting the required standard.

Warning signs stating that an assessment is in progress should be available.

The Assessor may stop the assessment on the grounds of safety at any time at his/her discretion.

Before any assessments take place, Assessor & Candidate should be aware of any local or national issues to prevent breach of security, safety and any cross contamination or damage to the local environment.

A breach of Health and Safety that puts any person at risk during the assessment process will result in the assessment being terminated and the Candidate not meeting the required standard.

Candidates who undertake this assessment and have met the requirements are reminded of their legal obligation to receive/undertake appropriate additional training in the use of any equipment that differs from that used during the assessment, but which they are nevertheless qualified to use.

Suggested learning resources

Additional information may be sought from the relevant manufacturer's operator manuals or any other appropriate training or safety publication.

Appendix 1 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 **Centre document library** on www.cityandguilds.com or click on the links below:

Centre Handbook: Quality Assurance Standards

This document is for all approved centres and provides guidance to support their delivery of our qualifications. It includes information on:

- centre quality assurance criteria and monitoring activities
- administration and assessment systems
- centre-facing support teams at City & Guilds/ILM
- centre quality assurance roles and responsibilities.

The Centre Handbook should be used to ensure compliance with the terms and conditions of the centre contract.

Centre Handbook: Quality Assurance Standards

This document sets out the minimum common quality assurance requirements for our regulated and non-regulated qualifications that feature centre-assessed components. Specific guidance will also be included in relevant qualification handbooks and/or assessment documentation.

It incorporates our expectations for centre internal quality assurance and the external quality assurance methods we use to ensure that assessment standards are met and upheld. It also details the range of sanctions that may be put in place when centres do not comply with our requirements or actions that will be taken to align centre marking/assessment to required standards. Additionally, it provides detailed guidance on the secure and valid administration of centre assessments.

Access arrangements: When and how applications need to be made to City & Guilds

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 document library** also contains useful information on such things as:

- conducting examinations
- registering learners
- appeals and malpractice.

Useful contacts

Please visit the Contact us section of the City & Guilds website, **Contact us**.

City & Guilds

For over 140 years, we have worked with people, organisations and economies to help them identify and develop the skills they need to thrive. We understand the life-changing link between skills development, social mobility, prosperity and success. Everything we do is focused on developing and delivering high-quality training, qualifications, assessments and credentials that lead to jobs and meet the changing needs of industry.

We partner with our customers to deliver work-based learning programmes that build competency to support better prospects for people, organisations and wider society. We create flexible learning pathways that support lifelong employability because we believe that people deserve the opportunity to (re)train and (re)learn again and again – gaining new skills at every stage of life, regardless of where they start.

The City & Guilds community of brands includes Gen2, ILM, Intertrain, Kineo and The Oxford Group.

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