City & Guilds NPTC Level 2 Award in Safe use of a Manually Fed Wood-Chipper (0020-61)

Version 1.1 (June 2025)

Assessment Pack – Candidate Version

Version and date	Change detail	Section
1.0 October 2024	First version	All
1.1 June 2025	Minor formatting	Cover page, headers/footers

Contents

Introduction

This assessment relates to the unit in the Qualification handbook. The assessment can be achieved at pass only. If any task is not yet met the candidate is unsuccessful.

This assessment is for unit 222 Prepare and operate a manually fed woodchipper covering the following learning outcomes:

1. Know the health and safety requirements for operating a wood-chipper
2. Be able to carry out a risk assessment on a site
3. Be able to prepare the equipment and site for wood-chipping operations
4. Be able to operate a wood-chipper
5. Carry out maintenance on a wood-chipper

General guidance on the requirements for assessment can be found in the Assessor Guidance General guidance on the requirements for assessment can be found in the Assessor Guidance document available on the City & Guilds web site **www.nptc.org.uk**

The assessor must complete the Practical Table mark sheet for each candidate which should be kept by the assessor for a minimum period of twelve months.

Record of assessment (ROA)

A prepopulated record of assessment must be completed by the assessor following an assessment. The number of outcomes is listed above, these must be ticked into the relevant met or not met sections of the ROA.

ARAS Forms

An Assessment Result Advice Slip (ARAS form) must be completed by the assessor following an assessment. The ARAS is not a certificate but, based on the evidence of the candidate's performance, is a recommendation to City & Guilds that the candidate is either met or not met the assessment criteria. All feedback is to be recorded by the assessor on the feedback section of the ARAS form.

Assessment Time

The expected assessment time for this qualification is 1.5 – 3 hours.

Site/workshop requirements:

Materials of various diameter up to the maximum for the chipper being used. Enough material must be available for the assessor to observe long roundwood, short roundwood and brash/branches being chipped.

Equipment/Machinery:

Manually fed chipper relevant to the materials being chipped, all fit for purpose and suitably maintained. Any tools which may be needed to carry out any maintenance which may be

required. If the chipper is mounted to a base machine, then the candidate must hold the relevant base COC

Consumables:

Fuels, oils and grease as may be required. PPE required as per site and machine, operator's manual and/or training materials should be available if needed. Spares may need to include – teeth/blades/knives.

This is not an open book assessment, however additional technical information may be sought from the relevant manufacturer's operator manuals or any other appropriate training or safety publication.

Practical observation descriptor table

222 Prepare and operate a manually fed wood-chipper

Activity number and description from check list		Assessment criteria
1.1	State legislation covering wood-chipping operations	• The Management of Health and Safety at Work Regulations 1999 – a risk assessment must be carried for all activities • Personal Protective Equipment Regulations • 1992 – PPE must be supplied and worn • Manual Handling Operations Regulations 1992 – not to manually handle, use safe lifting techniques • The Control of Vibration at Work Regulations 2005 – to reduce the risk to health from vibrations • Provision and Use of Work Equipment Regulations (PUWER) 1998 – requires that regular checks are made • Noise at Work Regulations 2005 – hearing protection must be worn over 85db • COSHH - hazard awareness of toxic vegetation/chemicals • Wildlife and Countryside Act 1981 – operation carried out at times to minimise the impact on wildlife • RIDDOR - reporting of dangerous occurrences and accidents Provision and Use of Work Equipment Regulations (PUWER) 1998 • self propelled machines • roll over protective structure (ROPs) • power take off (PTO) • operator protection at in feed shoots
1.2	Explain the risk assessment process	The risk assessment process may contain the following five steps: • identify the hazards • decide who might be harmed and how • evaluate the risks and decide on precautions • record the findings and implement them

		• review and update the assessment as necessary
1.3	State emergency planning procedures relevant to the work area	Emergency procedures relevant to a work site may include: • location name • grid reference • designated meeting place • site location name • nearest access point • street name/district • type of access (public road/light vehicles, four- wheel drive) • suitable helicopter landing area • phone number of nearest doctor • location of nearest accident and emergency hospital and phone number • works manager contact details • your own contact number/mobile number • other
1.4	State the environmental and public hazard considerations when discharging or storing woodchips	• fire hazard in chip stacks • toxic run-off hazard from chip stacks • physical hazard to public and others from • unstable chip stacks • hazard to road users from unstable chip stacks • risk of blocking drains, watercourses etc from inappropriate discharge / chip stacks • hazard to wildlife, plants and trees from • inappropriate discharge / chip stacks • hazard to property (e.g. fences) from inappropriate discharge / chip stacks
1.5	State precautions to be observed when working adjacent to highways	Precautions observes may include: • wear high visibility clothing warning signs deployed in accordance with department of transport requirements • exclusion zone / barriers set up to protect both operators and public • position machine safely • discharge chips safely • ensure constant awareness of traffic
2.1	Identify hazards and risks associated with the working area and the proposed work	Identify hazards (anything with the potential to cause harm) and risks (who might be harmed and how), relevant to: • The work area • The work to be done
2.2	Identify safety features of the wood chipper	Safety features identified must include: • roller feed safety trip bar

		• warning / information symbols identified and interpreted • in-feed and discharge chutes secured • machine safety guards secured • machine controls identified • machine breaking/stabilising equipment
2.3	State factors to consider when manoeuvring a wood chipper to the work position	Machine moved to work position in safe manner may include: • awareness of slopes and obstacles on the ground • use of banksman if required when reversing / moving wood chipper where visibility impaired • machine moved at safe speed • appropriate use of operator controls for self propelled machines • appropriate use of hitching attachment/ three point linkage when manoeuvring a tractor- mounted machine • appropriate control of trailed wood chipper when manoeuvring on site • machines have high centre of gravity therefore tendency to tip over • chocking of wheels/tracks on slopes • avoid turning on slopes / ramps with tracked machine • operator must be on upper side when ascending or descending slopes • extreme care when climbing over an obstacle (e.g. roots, holes, steps) or change of angle at top of ramp as machine can rear up / slew violently • hydraulic fluid must be warm before negotiating uphill slope • ensure ramps / bridging to support weight of machine are strong enough Check that, prior to operation: • feed hopper and discharge chute are correctly set
2.4	Carry out site inspection	Site inspection to include: • walk the site and remove or mark hazards • confirm the condition of the site as acceptable for the operation to take place • report to the appropriate person if the site condition is unsuitable • set out warning signs and barriers (if appropriate) to advise or exclude public/animals • implement suitable controls to protect the operator

3.1	Carry out pre start checks on the wood chipper	For trailed wood chippers: • jockey wheel lowered or hitch attachment on vehicle secure • brakes, chocks, stabiliser(s) applied as appropriate • turn-table (if fitted) is locked in position For 3-point linkage machines: • attachment of lift arms, top link and stabilisers is secure • machine is correctly aligned • engagement of PTO shaft or other drive mechanisms is secure and safe • all PTO guards are secure and in good condition For tracked wood chippers: • tracks, rollers, sprockets etc are in safe condition and tensioned / aligned correctly • hydraulic levelling / widening is employed as appropriate (if fitted)
3.2	Carry out safe starting and post operational checks	Ensure that: • safe starting zone selected • all bystanders at an appropriate safety distance • visual pre start checks carried out • wood chipper started in accordance with • manufacturers recommendations • throttle control adjusted to achieve full working speed • operator protection and restart mechanism checked for correct operation (if fitted) • emergency stop control checked for effectiveness • roller speed control is adjusted correctly (if applicable) • wood chipper stopped safely and correctly, key removed
3.3	Prepare the material for chipping	• material for chipping stacked appropriately • timber (etc.) free from foreign objects • hazardous materials not to be chipped identified • dead and / or brittle material can shatter and pieces can hit operator • bent material can move violently and injure the operator • material can catch on clothing and drag operator or cause physical damage to operator Hazardous material that requires particular PPE:

		• dry / fungus infested material produces dust; breathing and eye protection may be required • thorny material can cause injury; additional hand, arm and face protection may be required • toxic material; additional face, arm, hand and breathing protection may be required • contamination by other harmful material e.g. sewage / waste; face, body and breathing protection may be required
3.4	Use Personal Protective Equipment (PPE) and machine safety features for wood chipper operations	As per manufacturers recommendations, PPE should include appropriate: • safety helmet • eye protection • ear defenders • gloves • non snag clothing • safety boots with protective toecaps • personal first aid kits should be available • additional PPE as required by the risk assessment
4.1	State different types of cutting mechanisms	Mechanism may include • flywheel • drum • spiral • other
4.2	Carry out the chipping operation	Material to be chipped must include: • brushwood / light branch wood • long round wood • short round wood • up to diameter capacity of the chipper Ensure that: • safe procedures are observed throughout operation • timber feeding area is clear of other persons • engine speed set to obtain optimum output • stress control is set if applicable • safe manual handling procedures are used to lift and feed material into chipper • operator is to one side of in-feed chute • no part of the body enters the in-feed chute • push stick is used as appropriate • discharge area checked during operations

		• assistant (if present) is in a safe position and employed appropriately Shutdown machine as per manufacturers recommendations • remove key • no further working on machine until all moving parts stationery Site checked and tidied • site is safe and secure • debris cleared according to site specification • breakdown the site

4.3	State how to clear machine blockages	Clearing blockages may include:
		• stop machine using “safe stop” procedures
		• ensure safe operating methods to gain access to blockage
		• check and clear:
		  • feed hopper
		  • discharge chute
		  • cutting mechanism

5.1	Explain the maintenance and checks of the cutting system	• wear appropriate PPE • ensure that machine is made safe • key removed • debris around blades removed • remove knives / blades as appropriate • replace, set & secure sharp, balanced set with correct torque settings • set & secure anvil / counter knife • check clearances are correct • hazards and results of incorrect fitting and clearance of the blades / anvil commented on • characteristics required of new or sharpened replacement blades commented on (Balanced etc) Possible causes of damage to blade/knife may include: • anvil /counter-knife & blade / knife contact • loose mountings / bolts / nuts • over-tightened bolts / nuts • soil damage • damage from metal / stone / hard objects Possible consequences of poorly maintained blades/ knives could include: • machine not working efficiently • cutting mechanism overheats/ warps • increased likelihood of jamming • other

5.2	State post operational checks to be carried out on the wood chipper	• wood chipper inspected and cleaned to establish any wear, damaged and/or missing components through use • ensures any defects can be rectified before it is next used • other operators / supervisor etc. can be informed through a reporting procedure that defects are present
5.3	Carry out maintenance on the wood chipper	Maintenance tasks carried out as outlined in manufacturer's or operators instruction book, including; • wear appropriate PPE • ensure that machine is made safe • key removed • **oil level** sufficient • **air filter** inspected and cleaned • **cooling system** inspected & cleaned & coolant level checked (if appropriate) • **fuel** system and level checked • **electrical** system checked for damage • **greasing** and lubricating points • **pulleys, clutches, shafts** etc. inspected (if accessible) • **drive belts** in good condition and tensioned correctly (if fitted) • **hydraulic system** checked for leaks or damage (hoses, pump, motors, spool valves, filters etc.) • **linkages, pivots, springs** etc. inspected and lubricated • **feed rollers** in safe condition Inspect blades/knives • **safety trip bar** and reset mechanism in safe condition • **stress control components** intact and free of debris / dirt (if accessible) • **hydraulic oil level** correct Cutting system checks may include: • **blades / knives** and anvil / counter-knife are secure • **blades / knives** and anvil / counter-knife (etc.) checked for wear or damage • **blade / anvil** clearance correct (if appropriate) • **flywheel, drum, bearings, paddles** etc. checked (as appropriate to machine) • **bearings** in good order • **mechanism** free of debris, string, wire etc
5.4	Reassemble the wood chipper to a functional and operational standard	Reassembled according to manufacturers recommendations Convert to transport position:

		• isolate power source as per manufacturer's recommendations • secure in-feed and out-feed chutes for transport • raise stabilisers, lock turntable etc. as appropriate to machine

Appendix 1 Practical table

222 - Prepare and operate a manually fed woodchipper

All criteria must be achieved.

Activity number and description	Achieved
1.1 State legislation covering wood-chipping operations	
1.2 Explain the risk assessment process	
1.3 State emergency planning procedures relevant to the work area	
1.4 State the environmental and public hazard considerations when discharging or storing woodchips	
1.5 State precautions to be observed when working adjacent to highways	
2.1 Identify hazards and risks associated with the working area and the proposed work	
2.2 Identify safety features of the wood chipper	
2.3 State factors to consider when manoeuvring a wood chipper to the work position	
2.4 Carry out site inspection	
3.1 Carry out pre start checks on the wood chipper	
3.2 Carry out safe starting and post operational checks	
3.3 Prepare the material for chipping	
3.4 Use Personal Protective Equipment (PPE) and machine safety features for wood chipper operations	
4.1 State different types of cutting mechanisms	
4.2 Carry out the chipping operation	
4.3 State how to clear machine blockages	
5.1 Explain the maintenance and checks of the cutting system	
5.2 State post operational checks to be carried out on the wood chipper	
5.3 Carry out maintenance on the wood chipper	
5.4 Reassemble the wood chipper to a functional and operational standard	

Appendix 2 Sources of general information

The following documents contain essential information for centres delivering City & Guilds qualifications. To download the documents and to find other useful documents, go to **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 assessment: 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.**

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