City & Guild NPTC Level 2 Award in Forest Machine Operations – Forwarder QAN (600/9103/4)

Version 1.0 (March 2024)

Assessment Pack – Centre and Candidate Version

Version and date	Change detail	Section
1.0 March 2024	First version	All

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 209 Prepare, drive and manoeuvre forwarder covering the following learning outcomes:

1. Be able to work safely
2. Be able to prepare, drive and manoeuvre forwarder
3. Be able to operate grapple
4. Know how to prepare forwarder
5. Know how to drive and manoeuvre forwarder
6. Know relevant health and safety legislation and industry good practice

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:

Two loads of timber for loading and unloading on to a loading bay.

Equipment/Machinery:

Maintenance tools for the machine being used.

Consumables:

Fuels and oils, grease and workshop gloves.

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

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Activity number and description from check list		Assessment criteria
1.1	Identify the 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), relevant to: The work area/work to be done Hazards • power lines • terrain • access routes • chain shot • risk zones • struck by timber • other Risks • operator • others on site • public • other machine operators • other The machine Hazards • struck by machine • access and egress • moving parts • hot surfaces • working at heights • high pressure fluids • other Risks • public • operator • environment • other
1.2	Use appropriate tools, equipment and Personal Protective Equipment	• All tools, equipment and Personal Protective Equipment are used in line with industry good practice e.g. AFAG/HSE. • During all on site operations PPE in accordance with industry good practice must be worn. Personal Protective Equipment identified could include:

		• safety helmet (if required) • hearing protection (where needed) • suitable protective gloves • protective boots • non snag outer clothing • high visibility clothing where risk assessment identifies it • hand cleaning materials • first aid kit • other
2.1	Carry out pre and post start checks to test all operating functions of the equipment	Pre and post start checks on machine according to the operators handbook and to include: • machine on level ground • ensure machine services in neutral and lowered where applicable • engine stopped and key removed • check hydraulic oil • importance of cleanliness • seat, steering mechanism • operator seat restraint is functional (where applicable) • check operator protection systems • check relevant access and egress points • check pin bush wear and security • check for cracks/fatigue • check for hydraulic leaks • security of components • check safety decals • LOLER certificate (if required) • hydraulic radiator • grease where and when appropriate Check security of loader to base: • bolts cracks leaks Check security of loader attachment: • bolts cracks Check attachment: • security • condition • hydraulic leaks • pin and bushes • pipe work • guarding Maintenance of forwarder: Chassis/ Frame • cracks

		• pin security • bushes • cylinders • attachment • loose or broken bolts • cables and connections • guarding Hydraulic hoses • leaks • cracks • cuts • abrasions • security • guarding Environmental considerations • disposal • storage of oils on site • Spill kit mats used
2.2 - 2.3	Drive the machine on site in a safe and effective way Manoeuvre the machine on site in a safe and effective way	Candidate to drive or manoeuvre machine • safe access • start in accordance with manufacturers recommendations • appropriate gear selection • smoothness of take off • drive in a straight line • left and right turn • reverse • appropriate speed for conditions • appropriate use of brakes • parking brake applied and effective • stop in accordance with manufacturers recommendations • safe egress

3.1	Use machine to load/feed wood products	All activities must be completed in a way which protects the operator and those around them. Operator to load/unload both shortwood and logs: • safely and efficiently • grapple completely encloses product/s • grapple parked when moving • load and unload when stationary • load to capacity • headboard adjusted to load height

		• load constructed to maintain stability and visibility • timber aligned using headboard and ground or banging plate
3.2	Grade products to facilitate subsequent handling, processing or uplift for onward dispatch	Operator to grade both shortwood and logs to site specification
3.3	Separate products for subsequent handling, processing or uplift for onward dispatch	Operator to grade both shortwood and logs to site specification
3.4	Stack produce flush to a safe and stable height and condition	Candidate to use recognise industry guide lines to complete stacking operation • correct approach to landing • suitability of landing use bearers • correct distance and position from stack • stack constructed in a progressive self supporting manner • efficient use of loader • stack height meets with industry guidance and follows site risk assessment
4.1	State the safety requirements, routine and functional checks required for machine and operator protection	Level ground • all fluid levels can be accurately checked • other Machine Services • security • unauthorised third party operation • other Cleanliness • personal contamination • system contamination • other Adjustment • ergonomics • visibility • other Restraint systems • personal safety • HSE requirement • other Operator protection systems • roll over protective structure (ROPS) • falling object protective structure FOPS) • operator protection structure (OPS) • other Access and Egress • operator safety

		• PUWER • other Environmental considerations: • waste bagged and labelled • licensed disposal • recycle • other

5.1	Describe safe driving techniques that should be used on site	Importance of loader position and machine stability Loader position • maintain the centre of gravity • over reaching • over loading • slope/steep ground • loader parking position Machine stability • use of legs (if fitted) • oscillation lock • ballast of tyres/traction aids • ground condition Safe driving techniques may be applied by • correct gear selection and engine speed • route selection and planning • patching and brash matt repair • appropriate use of difflock (if applicable) • appropriate use of traction aids (if applicable) • appropriate use of steering drawbar (if applicable) • avoid standing crop • avoid overloading • load to match ground conditions • other
5.2	State the implications of terrain, ground conditions, season, weather and tree condition on planning access routes and driving the machine	Route planning may be achieved by assessing: Terrain • roughness, slope • other Ground conditions • load to match ground conditions (ground bearing capacity) • other Seasonal • winter, summer • other

5.3	Outline the implications of extracting long logs, poles or tree length timber to forwarder extraction	Outline the implication of pole length extraction • compatibility of machine to products lengths • consider attachments • damage to centre joints • manoeuvrability • other

5.4	Discuss the capabilities and limitations of the loader when loading and unloading	Machine loader limitations may be assessed by • loader manufacturers guidance • span diagram on loader • lifting at short distances • machine stability • over extending • traction aids/extra weight • other The function and setting of the following controls: • engine speed control • stop control • check function of emergency stop • PTO lever engagement and speed range selector (if applicable) • oscillating lock and remote braking device (if applicable) • hydraulic control decals • height restriction devices (if applicable) • load monitor (if applicable) • other controls provided • external services • lights, horn and any safety warning device (where applicable) Instruments inside the cab • oil pressure gauge and oil filter warning lights • other warning lights (as applicable) Action in event of warning light • refer to operators manual Maintain/check fire fighting system • fire fighting system(s) tested (if fitted) • fire extinguishers maintained, checked and in date • access and egress points in the event of an emergency

5.5	Summarise safe stacking heights, stability of stacks and signing requirements	Safe stacking may be implemented by • warning signs • risk assessment • barrier tape • industry guidance • other
5.6	Describe how to segregate and grade produce to meet required specification	Explain grading process • products stacked appropriate to log specification • planning of loading in relation to stacks at road side • other
6.1	Outline current health and safety legislation, codes of practice and any additional requirements	Outline key points from the legislation listed below: Health and Safety at Work Act (HSWA) (1974) – • general duties for employers and employees • maintain safe places of work • other Provision and Use of Work Equipment Regulations 1998 (PUWER 98) – • record keeping • operators adequately trained • equipment fit for purpose • other Lifting Operations and Lifting Equipment Regulations (1998) (LOLER): • main requirements of the LOLER required by the machine • risk zones • safe working load • inspection by a competent person • operating controls labelled • other Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR): • reporting of accidents • reporting of dangerous occurrences • other Working at Heights • adequate precautions taken for safe working procedures • any height constitutes working at heights • other

		Control of Substances Hazardous to Health (COSHH) Regulations (2002) • correct PPE to be identified • correct storage and application • disposal • other Industry Good Practice • Arboriculture Forestry Advisory Group (AFAG) information • Health and safety in forestry • Forest and water guidelines • Operators manual Lone working • effective communication system • fail to safe system • reporting in times Line contact possible procedures: • where possible, drive away to safe area • if safe, stay in machine and contact power company/supervisor • jump from machine, bunny hop as far as possible Power lines • designated crossing point (goal posts) • liaison with power companies • site maps • AFAG • electricity at work • other
6.2	State why it is important to maintain good communication and team work within the working environment	Importance of communication could include: • health and safety • site planning/co-ordination • other
6.3	Describe the types of records that may be required for management and legislative requirements	Records: • logbook • service logbook • time sheet • maintenance schedule • other

Appendix 1 Practical table

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All criteria must be achieved.

Activity number and description	Achieved
1.1 Identify the hazards and risks associated with the working area and the proposed work	
1.2 Use appropriate tools, equipment and Personal Protective Equipment	
2.1 Carry out pre and post start checks to test all operating functions of the equipment	
2.2 Drive the machine on site in a safe and effective way	
2.3 Manoeuvre the machine on site in a safe and effective way	
3.1 Use machine to load/feed wood products	
3.2 Grade products to facilitate subsequent handling, processing or uplift for onward dispatch	
3.3 Separate products for subsequent handling, processing or uplift for onward dispatch	
3.4 Stack produce flush to a safe and stable height and condition	
4.1 State the safety requirements, routine and functional checks required for machine and operator protection	
5.1 Describe safe driving techniques that should be used on site	
5.2 State the implications of terrain, ground conditions, season, weather and tree condition on planning access routes and driving the machine	
5.3 Outline the implications of extracting long logs, poles or tree length timber to forwarder extraction	
5.4 Discuss the capabilities and limitations of the loader when loading and unloading	
5.5 Summarise safe stacking heights, stability of stacks and signing requirements	
5.6 Describe how to segregate and grade produce to meet required specification	
6.1 Outline current health and safety legislation, codes of practice and any additional requirements	
6.2 State why it is important to maintain good communication and team work within the working environment	
6.3 Describe the types of records that may be required for management and legislative requirements	

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 the ***Centre Document Library*** on ***www.cityandguilds.com*** or click on the links below:

Quality Assurance Standards: Centre Handbook
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.

Quality Assurance Standards: Centre Assessment
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 & Guilds Quality Assurance processes visit: the What is CASS? and Quality Assurance Standards documents on the City & Guilds website.

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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As the UK's leading vocational education organisation, City & Guilds is leading the talent revolution by inspiring people to unlock their potential and develop their skills. We offer over 500 qualifications across 28 industries through 8500 centres worldwide and award around two million certificates every year. City & Guilds is recognised and respected by employers across the world as a sign of quality and exceptional training.

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