



NPTC

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**LEVEL 2 AWARD
IN
TRACTOR DRIVING AND RELATED OPERATIONS (QCF)**

ASSESSMENT SCHEDULE

Version 1

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NPTC Level 2 Award in Tractor Driving and Related Operations (QCF)

Candidate Information

Introduction

The scheme will be administered by NPTC.

NPTC will:

- Publish
 - scheme regulations
 - Assessment schedule
 - Assessment material
- Approve centres to co-ordinate and administer the scheme
- Set standards for the training of Verifiers and Assessors
- Recruit, train and deploy Verifiers
- Manage verification
- Issue certificates to successful candidates

The qualification

The qualification will be awarded to candidates who achieve the required level of competence in the units to which their certificate relates.

Instruction

It is a legal requirement to undergo training before using a tractor and potential candidates are strongly advised to ensure that they are up to the standards that will be expected of them when they are assessed. However, NPTC do not prescribe what course should be attended.

NPTC does **not** hold a register of instructors; however instruction will normally be available from recognised training providers and/or centres of further or higher education active in the areas covered by this qualification. Further information on training may be obtained from the local Assessment Centre.

Access to Assessment

Assessment Centres will be responsible for arranging assessment on behalf of a candidate. Assessment may only be carried out by an Assessor approved by NPTC for that qualification. Under no circumstances can either instructors involved in the preparation of candidates, or the candidates work place supervisors, or anyone else who might have a vested interest in the outcome, carry out the assessment.

The minimum age limit for candidates taking this qualification is 16 years. There is no upper age limit.

Assessment

The candidate must be registered through an NPTC approved Vocationally Related Qualification (VRQ) assessment centre prior to assessment.

Assessment is a process by which it is confirmed that the candidate is competent in the units within the award to which the assessment relates. It is a process of collecting evidence about his/her capabilities and judging whether that evidence is sufficient to attribute competence.

The result of the assessment will be recorded on the assessment report form.

The schedule of assessment contains the performance criteria relating to:

- Observation of practical performance
- Assessment of underpinning knowledge

Performance Evaluation

At the Assessment, the Assessor will evaluate each activity against the following criteria:

- 4 = Meets or exceeds the assessment criteria by displaying a level of practical performance and/or underpinning knowledge, with no 'minor' or 'critical' faults. (Competent).
- 3 = Meets the requirements of the assessment criteria for both the practical performance and the underpinning knowledge, with some 'minor' faults but no 'critical' faults. (Competent).
- 2 = Does not fully satisfy the requirements of the assessment criteria, being unable to perform the practical task satisfactorily or being deficient in underpinning knowledge leading to the recording of minor faults. (Not yet competent).
- 1 = Does not satisfy the requirements of the assessment criteria, being unable to perform the practical task satisfactorily or safely or being deficient in underpinning knowledge leading to the recording of a critical fault. (Not yet competent).

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

Verification

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 that NPTC 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.

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 an NPTC approved verifier.

Compliance with the verification requirements is a pre-requisite for Assessors remaining on NPTC's list of approved assessors.

Complaints and Appeals

NPTC and its Assessment Centres have a formal Complaints and Appeals procedure. In the event of a any dissatisfaction with the arrangements and conditions of assessment, the candidate should first contact the Assessment Centre through whom the assessment was arranged and submit the complaint in writing.

For further information on NPTC's Equal Opportunities Policy and Complaints and Appeals Procedures, please refer to www.nptc.org.uk

Qualifications and Credit Framework (QCF) – credit values

The units for the NPTC Level 2 Award in Tractor Driving and Related Operations have the following credit values:

Unit 1 - Prepare and operate a tractor and attachments - 5 credits (**mandatory**) 38 GLH

Unit 2 - Operate a loader – 2 credits (**optional**) – 12 GLH

Guidance Notes for Candidates and Assessors

This unit is appropriate for anyone who has the responsibility to prepare and operate a tractor in the workplace. It is applicable to all sector, but in particular agricultural, horticultural, equine, game keeping and environmental conservation.

Qualification Endorsement

The qualification will be endorsed either

a) Tractor Driving Or b) Tractor Driving and Loader

Candidates seeking qualification endorsement 'a)' are required to successfully achieve unit 1

Candidates seeking qualification endorsement 'b)' are required to successfully achieve units 1 and 2

Assessment is by observation of practical performance and questioning of underpinning knowledge.

Safe Practice:

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

Any equipment used must be operated in such a way that the candidate, Assessor, other persons or equipment are not endangered.

All ancillary equipment, when detached must be safely parked.

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

It is recommended that suitable barrier creams or gloves are used when necessary.

Validation of Equipment:

A Manufacturer's instruction book or other operators' manual should be available.

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

Any lifting equipment used must comply with the relevant requirements of the Lifting Operations and Lifting Equipment Regulations (LOLER) 1998*

Vehicles must comply with Department of Transport and Road Traffic Acts where relevant.

Any appropriate tractor (with loader attachment if required) complying with legal requirements is acceptable for the assessment, provided it is suitably equipped for **all** assessment activities to be carried out.

A suitable hydraulically operated tipping trailer, appropriate to the size of tractor must also be available.

- *not applicable to three point linkage equipment if used to lift implements and machines designed to be operated as such on a tractor.*

Candidates who undertake this assessment and are judged 'competent' 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

Additional Information:

May be sought from the relevant manufacturers' operator manuals or any other appropriate training or safety publication.

UNIT 1 Prepare and operate a tractor and attachments	
Assessment Activities	Assessment Criteria
<p>1. Identify any hazards specific to the site, task and machine.</p> <p>Personal safety precautions to be taken when attaching implements/trailers to tractors</p>	<ul style="list-style-type: none"> - Walk the site and remove or mark hazards - Confirm that 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) <ul style="list-style-type: none"> • Advising public of hazards • Exclude public/animals • Implement suitable controls to protect operator - PPE requirements are subject to individual Risk Assessment but must include: <ul style="list-style-type: none"> • Safety boots (free from mud or oil) • 'Non snag' clothing - May also include ear defenders, hard hat, face/eye protection (plus hand protection for maintenance work). <p>For safe lifting and handling:</p> <ul style="list-style-type: none"> - Avoid manual handling where possible - Use mechanical aids - Use safe lifting techniques (bend knees and keep back straight)
<p>2. Identify and explain function of all instruments and controls on the machine</p> <p>Demonstrate knowledge of obtaining economic fuel use whilst maintaining maximum efficiency and work output</p>	<p>All instruments and controls identified and function explained in accordance with the manufacturer's handbook/operators manual. These must include:</p> <ul style="list-style-type: none"> - Starting devices - Engine stop control - PTO lever engagement (and speed range selector where applicable) - Brakes - Function and operation of hydraulic services - Warning light information interpreted <ul style="list-style-type: none"> - Ensure air cleaner is clean - Use of engine speed control - Use of tractor meter and gear selection chart according to work to be done - Use of differential lock to prevent wheel slip - Weight transfer and correct selection and use of hydraulic services - Ensure appropriate tyre pressures for the task
<p>3. Carry out daily pre-use checks to the tractor</p>	<ul style="list-style-type: none"> - Correct pre-use checks to be undertaken as recommended by the Operators manual. - Observe relevant safety and cleanliness precautions <p>Check to ensure safety of operator and tractor:</p> <ul style="list-style-type: none"> - Wheel nuts secure - Tyres (visual inspection for condition and pressure) - Stop Control - Correct function of all lights and direction indicators - Function of seat belts if fitted <p>Ensure:</p> <ul style="list-style-type: none"> - Fuel level is adequate - Engine oil levels are at correct level - Coolant level adequate - Engine air cleaner is clean - Joints adequately lubricated <ul style="list-style-type: none"> - Frequency of checks undertaken - Report findings where appropriate - Act on findings where appropriate <ul style="list-style-type: none"> - All moving parts, belts pulleys and chains must be guarded - PTO Shaft must be fully enclosed when not in use

UNIT 1 Prepare and operate a tractor and attachments	
Assessment Activities	Assessment Criteria
<p>4. Demonstrate knowledge of potential hazards that could arise when using a tractor and the correct procedure/precautions to be observed when driving with heavily loaded trailers and implements under the following conditions:</p> <p>Driving at speed</p> <p>Up and down slope</p> <p>Over rough ground</p>	<ul style="list-style-type: none"> - Driving at high speed increases risk of losing control of vehicle - Braking distance is increased - Avoid excessive speed - Avoid sharp turns - tractor could stall or runaway - Loss of traction - Harsh braking during descent could result in "jack-knifing" - Appropriate low gear should be selected before encountering slope - Clutch should not be disengaged during descent - Trailers with heavy loads should have additional auxiliary braking system. - Increased risk of load shifting - Implement/trailer could become detached from tractor if it jumps around too much - Weight of attachment could lead to excess "bouncing" of tractor cab and possibly driver injury - Maintain low speed to reduce "bouncing" - Try to avoid larger bumps and potholes - Loads should be secured to prevent movement
<p>Across a slope</p> <p>Demonstrate knowledge of factors to be taken into account when turning on slopes</p>	<ul style="list-style-type: none"> - Increased risk of load shifting - Trailer will tend to pull down hill - Increased risk of vehicle rolling - Observe correct in cab procedure in the event of overturning - Maintain slow speed when driving across slopes - Maintain low centre of gravity if possible (e.g. loaded shovel should be kept close to the ground) - Using wide wheel track settings increases stability of vehicle - Severity of slope - Stability of tractor - Type of attachment (i.e. mounted or trailed, full or empty) - Ground conditions

UNIT 1 Prepare and operate a tractor and attachments	
Assessment Activities	Assessment Criteria
<p>5. Mount vehicle, carry out safety checks and start engine.</p> <p>Demonstrate knowledge of the correct cold starting procedure</p> <p>Check that brakes operate and the vehicle is safe to use</p> <p>Check parking brake, park and stop engine</p> <p>Demonstrate knowledge of parking on steep slopes</p>	<p>Candidates must safely mount and dismount from vehicle cab using the hand and foot holds provided</p> <ul style="list-style-type: none"> - Ensure engine is not under load before starting <ul style="list-style-type: none"> • Gears in neutral position • Power take off shaft disengaged • Hydraulic services in neutral - Engine started using correct procedure for engine condition (warm or cold) as stated in manufacturer's handbook. - Manufacturer's recommended procedure for cold starting relevant to the vehicle explained (if not demonstrated) <p>Check:</p> <ul style="list-style-type: none"> - Brake operation in accordance with the manufacturer's instruction book - With brakes locked together, at a suitably safe speed on a hard uniform surface - Stopping efficiency - Check parking brake is operating effectively - Stop engine - Remove ignition key - Use wheel chocks - Park across steep slopes ensuring wheels are turned up hill - Apply the handbrake
<p>6. Demonstrate knowledge of the use of a tractor on or near the public highway or other areas to which the public has access</p>	<p>Any self propelled machine driven on the public highway must:</p> <ul style="list-style-type: none"> - Be road legal - Have a current road fund licence (vehicle excise duty) - Have a minimum of third party insurance cover (to conform to Road Traffic Act requirements) - Be driven by somebody holding a suitable, valid drivers licence. - Have an orange flashing beacon when driven on dual carriageways (other road types subject to individual Risk Assessment). - Comply with speed limits appropriate to type of tractor - Warning signs should be erected <p>Police informed if there is going to be a lot of road use that may cause hold ups</p>
<p>7. Hitch tractor to trailer and connect hydraulic coupling(s) (a pick up hitch or clevis drawbar may be used)</p> <p>Demonstrate knowledge of the dangers of:</p> <ul style="list-style-type: none"> • Coupling two clevis hitches together • Incorrect length of hydraulic pipe <p>Demonstrate knowledge of factors to consider when lengthening draw bar from short to long reach positions</p>	<ul style="list-style-type: none"> - Reverse tractor to align with trailer drawbar - Ensure trailer is hitched properly and relevant safety catches/pins are securely in place - Apply handbrake and put tractor into neutral gear and switch off engine before leaving the cab - Ensure hydraulic levers are in neutral position and system is depressurised - Check the hydraulic coupling(s) for cleanliness - Connect the hydraulic couplings (including trailer braking pipe if fitted) - Release the trailer parking brake - The clevis could become bent - The drawbar pin could become bent or broken - Pipes could drag on the floor and be damaged - Pipes could catch on the rear wheel or link arms of the tractor during cornering and be pulled out - Could be pinched when a tipped trailer is dropped back down onto its bed. - When the drawbar is lengthened, the relative load carrying capacity is decreased - Recommended load carrying capacity of trailer and tractor should be observed, as stated in the manufacturer's handbook/operators manual - Recommended length for when a PTO is being used

UNIT 1 prepare to operate a tractor and attachments	
Assessment Activity	Assessment Criteria:
8. Drive tractor and trailer around a designated course as outlined by the assessor, to include negotiating corners, gear changing and reversing in a confined space (at least one right angle turn).	<ul style="list-style-type: none"> - Select appropriate gear - Ensure that take off is smooth - Drive at appropriate, safe speed for conditions - Slow down at corners - Change gear smoothly - Brake safely - Manoeuvre tractor safely, with awareness of surroundings at all times
9. Tip trailer, uncouple and park tractor safely	<ul style="list-style-type: none"> - Drive tractor and trailer to specified area - Reverse trailer safely to tipping position - Check that: <ul style="list-style-type: none"> • There are no overhead hazards • Vertical jack-knifing cannot occur • Ground conditions are appropriate • Slope is not excessive - Tip up the trailer and lower it back down - - Drive tractor and trailer to parking area - Apply brakes to tractor and trailer - Chock wheels (if applicable) - Disconnect and store all hydraulic pipes and other connections safely - Unhitch trailer
10. Attach a three-point linkage implement to the tractor, observing safe practice at all times. Demonstrate knowledge of factors to consider when ensuring safety of others and operator position for this task Demonstrate knowledge of factors to consider when using linkage category conversions	<ul style="list-style-type: none"> - Align tractor with implement - Ensure tractor handbrake applied before leaving cab - Attach the links using any safe method - Eliminate undue side play. - Adjust height and level of implement as required - Ensure automatic hitching attachments are secured - - No other person must be between the tractor and machine when the Candidate is manoeuvring and coupling to the machine. - Awareness of the hazard of standing between the tractor and the implement - If a remote linkage control is used, the operator must not be in a position whereby injury may be caused by the tractor or implement - Ensure a raised machine is supported before working on it <p>Ensure:</p> <ul style="list-style-type: none"> - Compatibility of link categories between tractor and implement - Linkage balls changed according to manufacturers instructions - Bushes/sleeves used if appropriate - Stepped pins used if appropriate
11. Attach a PTO driven machine to the tractor and fit PTO shaft	<ul style="list-style-type: none"> - Align tractor to implement - Apply handbrake before leaving cab - Attach implement to tractor using safe, appropriate method - Eliminate undue side play on the drawbar or linkage - Secure attachment, height, level and length (where appropriate) of drawbar or linkage - Stop engine and isolate prior to attaching PTO shaft - Fit power take off shaft to tractor - Secure power take off shaft guards - Ensure guards comply with current regulations
12. Demonstrate knowledge of factors to consider when using PTO shaft Demonstrate knowledge of consequences of operating a 540 rev/min PTO machine too fast by using 1000 rev/min PTO shaft	<ul style="list-style-type: none"> - Identify correct PTO shaft (6 or 21 spline) - Correct overlap of sliding shaft and the guards - Shaft is adequately lubricated - Tractor and PTO machine are compatible - Use 'economy mode' where applicable - Shaft is fully enclosed when no implement is attached - - Excess wear on implement - Excess vibration in cab - Increased risk of stones/debris being thrown up - Implement may not achieve desired result

UNIT 1 Prepare and operate a tractor and attachments	
Assessment Activity	Assessment Criteria:
13. Detach implement or machine and park tractor	<ul style="list-style-type: none"> - Move to selected site - Position implement - Use jacks and stands as appropriate - Switch off tractor engine before touching PTO shaft - Detach PTO shaft - Detach implement - Park tractor in selected position - Apply hand brake - Stop engine - Remove ignition key
14. Demonstrate knowledge of factors to consider when cleaning and inspecting the tractor	<p>Tractor and implement is cleaned to:</p> <ul style="list-style-type: none"> - Prevent corrosion - Facilitate maintenance and adjustments - Prevent personal contamination - Prevent hazardous operating conditions - Prevent soiling of roads <p>Identify PPE to be used</p> <ul style="list-style-type: none"> - Identify a suitable site - Remove any unwanted debris safely using appropriate method <ul style="list-style-type: none"> • Compressed air • Water • Brush - Dispose of waste material according to company policy and legislation <p>Demonstrate knowledge of the need to inspect tractor after use</p> <ul style="list-style-type: none"> - Tractor inspected for: <ul style="list-style-type: none"> • Wear • Damaged and/or missing components - Use operator's instruction book as appropriate - Report findings to appropriate person to ensure defects are rectified before tractor is next used

UNIT 2 Operate a loader	
Assessment Activity	Assessment Criteria:
1. Demonstrate knowledge of additional legal and safety requirements relating to using a loader	<ul style="list-style-type: none"> - LOLER '98 requirements: - All lifting equipment should be subject to a regular, thorough inspection - Ensure lifting equipment has adequate strength for proposed use - Information on lifting capacity and safe working load should be available to operators - Awareness of overhead hazards such as low bridges/buildings and cables - Safe loader position according to risk assessment when moving - Loader should be kept close to ground if moving when carrying a load - Loader should not travel on public highway while carrying a load - Safe position when operating loader
<p>2. Carry out daily maintenance and pre-use checks to loader</p> <p>Ensure tyre pressures are appropriate for loader work</p> <p>Demonstrate knowledge of reasons for checking loader attachment to prime mover and need for awareness of safe working loads</p>	<ul style="list-style-type: none"> - Check: - Loader attachment pins - Hydraulic pipes - Couplings - Teeth security - Steelwork (for signs of fatigue/cracking) - Lubricate as appropriate: - Attachment pins - Pivots - Controls - Tyre pressures checked and adjusted if necessary in accordance with manufacturer's guidance - Sub-frame attachment bolts and securing devices work loose as they are subject to much movement and forces. - Use of rear weights to counterbalance - Safe Working Load of loader.
3. Demonstrate knowledge of factors to consider when removing and refitting a handling attachment (e.g. bucket)	<ul style="list-style-type: none"> - Clear communication established between driver and fitter assistant - Loader attachment changed using method prescribed by manufacturer - Adopt safe methods at all times - Safe use of hydraulic controls - Ensure that attachment is secured safely - Comply with manual handling regulations
<p>4. Operate the loader</p> <p>Start tractor and move to work site</p> <p>Ensure trailer is in suitable position for loading material from ground level</p> <p>Load material from the ground into the trailer</p> <p>Park loader</p>	<ul style="list-style-type: none"> - Follow safe starting procedure - Position loader boom for transporting - Hazard warning beacon used if required is switched on - Negotiate terrain safely - Reverse safely - Clear communication established between loader operator and trailer operator - Trailer positioned to give minimum travel and turning, so far as is reasonably practicable - Avoid site hazards including overhead power lines - Avoid excessive material spillage - Identify and avoid hazards including overhead power lines - Manoeuvre machine safely when loaded - 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 - Clear and tidy work area as necessary - Move vehicle to safe site - Lower loader to ground - Position loader safely (no risk of injury to others) - Apply handbrake - Switch engine off - Remove ignition key