

# Training Standard

## A14 – Rough Terrain Masted Forklift



Title	Rough Terrain Masted Forklift
<p><b>Novice Durations</b></p>	<p><b>Total Duration of Training (including assessment time)</b></p> <p>21 – 35 (3 – 5) hours</p> <p><b>Minimum Practical Engagement Time (per person)</b></p> <p>Flexible**</p> <p>3 learners: 1 trainer: 1 machine</p> <p>Delegates must cover all learning outcomes of the standard in full</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• <i>*Duration for novice standards are dependant on number of delegates</i></li> <li>• <i>**Flexible – all routes: The trainer must decide and be able to demonstrate a thorough initial assessment and document their decisions for choosing the experienced route based on the delegates knowledge and skills through a documented profiling approach.</i></li> </ul> <p><i>The total duration must be met along with the minimum seat time per individual, the theory time can be flexed based on the needs of the delegates where some may need more practical time.</i></p>
<p><b>Experienced Durations</b></p>	<p><b>Total Duration of Training (including assessment time)</b></p> <p>Flexible**</p> <p><b>Minimum Practical Engagement Time (per person)</b></p> <p>Flexible**</p> <p>3 learners: 1 trainer: 1 machine</p> <p>Delegates must cover all learning outcomes of the standard in full</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• <i>*Duration for novice standards are dependant on number of delegates</i></li> <li>• <i>**Flexible – all routes: The trainer must decide and be able to demonstrate a thorough initial assessment and document their decisions for choosing the experienced route based on the delegates knowledge and skills through a documented profiling approach.</i></li> </ul> <p><i>The total duration must be met along with the minimum seat time per individual, the theory time can be flexed based on the needs of the delegates where some may need more practical time.</i></p>
<p><b>Purpose/ Scope</b></p>	<p>Roles and responsibilities:</p> <ul style="list-style-type: none"> <li>• Describe the nature of the sector of industry and their role and responsibilities as a plant operator.</li> </ul> <p>Preparing for work:</p> <ul style="list-style-type: none"> <li>• Naming and explaining purpose of principal components, the basic construction, controls and terminology</li> <li>• Conforming with manufacturer’s requirements as per the operator’s handbook, and other types of information source and relevant regulations and legislation</li> <li>• Undertaking all pre-use checks</li> </ul>

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	<ul style="list-style-type: none"> <li>• Explain need and function of appropriate documentation.</li> </ul> <p>Travelling and maneuvering:</p> <ul style="list-style-type: none"> <li>• Configure, ready for travel</li> <li>• Travel over rough, undulating ground, substantial inclines and level surfaces (with and without loads)</li> <li>• Manoeuvre in confined spaces (with and without loads).</li> </ul> <p>Setting up for work:</p> <ul style="list-style-type: none"> <li>• Configure and set for lifting and transferring duties</li> <li>• Explain actions required for hazards.</li> </ul> <p>Working tasks:</p> <ul style="list-style-type: none"> <li>• Lift and remove various loads up to the full working height of the forklift</li> <li>• Transfer and place loads accurately at given locations</li> <li>• Place and remove loads from a vehicle</li> <li>• Maintain safe working situations.</li> </ul> <p>Completing work:</p> <ul style="list-style-type: none"> <li>• Maintain safe and tidy working areas.</li> </ul> <p>Shutting down:</p> <ul style="list-style-type: none"> <li>• Carry out shut down and securing procedures</li> <li>• Explain the loading and unloading procedures for machine transporting.</li> </ul>
<b>Occupational Relevance</b>	<p>Training delivered against this standard would be relevant to the following occupational group(s):</p> <ul style="list-style-type: none"> <li>• Operative</li> </ul>
<b>Candidate's pre-requisites</b>	<p><b>Profiling:</b> The trainer will demonstrate and document their decisions for choosing either the Novice or Experienced route based on the candidate's knowledge and skills through documented profiling.</p> <p><b>Novice:</b> The candidate does not hold a current industry recognised card within the plant category and/or has limited or no demonstrable practical experience of operating the category of plant in a construction environment. However, candidates must have prior experience working on active construction sites and possess transferable skills from operating other earthworks plant machinery.</p> <p><b>Experienced:</b> The learner holds a current industry recognised red card within the plant category or has equivalent experience. The trainer must decide and be able to demonstrate a thorough initial assessment and document their decisions for choosing the experienced route based on the learners knowledge and skills through a documented profiling approach.</p>
<b>Trainer Requirements</b>	<p>As a minimum, course trainers must be able to demonstrate that, in relation to this standard, they have:</p> <p><b>Essential:</b></p> <ul style="list-style-type: none"> <li>• <b>Either</b> <ol style="list-style-type: none"> <li>a) a current card issued by one of the CPCS partner plant schemes at instructor/trainer/assessor level bearing the category or</li> <li>b) a current card issued by one of the CPCS partner plant schemes at operator level bearing the category</li> </ol> </li> <li>• Level 3 Award in Education and Training or equivalent qualification listed in Appendix 3 of the Requirements for Approved Training Organisations</li> <li>• Health and safety qualification at or equivalent to construction site management level such as: <ul style="list-style-type: none"> <li>- <i>Site Safety Plus Site Management Safety Training Scheme (SMSTS)</i></li> <li>- <i>Site Safety Plus Site Supervision Safety Training Scheme (SSSTS)</i></li> <li>- <i>IOSH Managing Safely in Construction</i></li> </ul> </li> </ul>

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	<ul style="list-style-type: none"> <li>- IOSH Safety, Health &amp; Environment for Construction Site Managers</li> <li>- 5-day CISRS Managers course</li> <li>- 5-day CCDO Demolition Manager course and end test</li> <li>- 5-day NPORS Construction Site Safety Manager</li> </ul> <ul style="list-style-type: none"> <li>• Any instructor should exhibit an in-depth practical working knowledge of dozer operations along with effective/efficient instructional techniques</li> <li>• In addition to the required qualifications, the trainer must be able to demonstrate occupational experience of operating the crawler - tractor/dozer relating to the training they are delivering. This can be demonstrated with a valid and in date blue card from a 'Recognised Organisation.' Evidenced and authenticated experience of a minimum of 5 years operating experience of the rough terrain masted forklift.</li> </ul> <p>Desirable:</p> <ul style="list-style-type: none"> <li>• S/NVQ Level 2 Plant Operations in the specific category being trained</li> <li>• Level 3 Certificate in Assessing Vocational Achievement.</li> </ul>
<p><b>Delivery</b></p>	<p>Training and assessment may be delivered in an on or off-site environment.</p> <p>Where training and assessment takes place within a working construction site environment, training must be segregated from productive work within a prescribed training area, which has been risk assessed and has appropriate control measures in place as required by current legislation and regulations.</p> <p>All equipment required for the training must be set aside specifically for the training session and be available for the entire training duration. Equipment is not to be shared with the working construction site. The equipment used for training and assessment must be a Rough terrain masted forklift.</p> <p>Welfare facilities must be provided wherever training and assessment takes place, and this should meet relevant legislation.</p> <p>All materials and equipment must be of a suitable quality and quantity for Learners to achieve learning outcomes delivery and assessment criteria, and must comply with relevant legislation, regulations and industry agreed requirements.</p> <p>The class size and learner/trainer ratio must allow training to be delivered in a safe manner and enable learners to achieve the learning outcomes.</p> <p>Irrespective of the number of candidates, effective learning must be maintained for all candidates. Equal and sufficient practical engagement needs to be considered.</p> <p>The following training methods may be used in the delivery of this standard:</p> <ul style="list-style-type: none"> <li>• Face to face learning environment (such as a classroom/workshop/site office) for theoretical learning &amp; assessment</li> <li>• On or off the job site environment for practical learning and assessment</li> <li>• Simulator for Practical Training.</li> </ul> <p><b>Note</b> – if a simulator is used, it can only comprise of a total of 10% of overall practical training and not used in any assessment</p>
<p><b>Assessment</b></p>	<p>For the successful completion of training, candidates must complete an end of course theory test and practical test that has a clear pass or fail. The test used must be the standard CPCS Theory and Practical Test.</p> <p>The marking criteria must effectively measure every aspect of each learning outcome and additional guidance for training and assessment.</p>

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<p><b>Quality Assurance</b></p>	<p>CPCS will quality assure against this standard and ensure that all Learning Outcomes have been met. The centre must retain evidence that the learning outcomes are referenced and achieved. This must be held by the training centre for a minimum of six years.</p> <p>CPCS will undertake un-announced or announced quality assurance visits of the training to ensure compliance with the Scheme of Works and the requirements of the Tester and Trainer Scheme Booklet.</p> <p>To ensure that compliance checks are effective, NOCN Group Quality Assurance personnel must be given unrestricted access to all activities associated with the delivery of the Training Standards.</p> <p>Further quality assurance requirements are set out in the Accredited Centre Scheme Booklet.</p>
<p><b>Approval Date</b></p>	<p><b>18<sup>th</sup> March 2026</b></p>
<p><b>Review Cycle</b></p>	<p>On request or 5 years from approval date.</p>

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<b>Learning outcomes</b> <i>Delivery to include and the candidate will be able to:</i>	<b>Additional guidance to support learning outcome</b> <i>Training Content to contain the following as a minimum:</i>	<b>Assessment Criteria</b>
<b>State the reasons for operator training, the risks associated with rough terrain masted forklift operations and the causes of accidents</b>		
<ul style="list-style-type: none"> <li>• State the reasons for operator training, the risks associated with rough terrain masted forklift operations and the causes of accidents.</li> </ul>	<ul style="list-style-type: none"> <li>• Training should be given on all types of forklift and attachments that operators will or could be required to use in their work</li> <li>• Employers should also consider the need for conversion training where the truck type does not change, but the size and weight alters significantly</li> <li>• Operator training should always include three stages:               <ol style="list-style-type: none"> <li>1. <i>Basic Training – the basic skills and knowledge required to operate a lift truck safely and efficiently</i></li> <li>2. <i>Specific Job Training – knowledge and understanding of the operating principles and controls of the lift truck to be used and how it will be used in their workplace</i></li> <li>3. <i>Familiarisation Training – applying what has been learnt, under normal working conditions, on the job</i></li> </ol> </li> <li>• Hazards associated with lift-truck operations:               <ol style="list-style-type: none"> <li>1. <i>Pedestrians</i></li> <li>2. <i>Ground conditions</i></li> <li>3. <i>Other traffic</i></li> <li>4. <i>Lighting</i></li> <li>5. <i>Lift-truck stability</i></li> <li>6. <i>Explosive atmospheres</i></li> <li>7. <i>Refuelling/ recharging</i></li> <li>8. <i>Confined spaces – manoeuvring, exhaust gases</i></li> <li>9. <i>Working platforms</i></li> <li>10. <i>Maintenance</i></li> </ol> </li> <li>• Causes of forklift accidents:               <ol style="list-style-type: none"> <li>1. <i>Pedestrian workers often work in close proximity to forklift trucks</i></li> <li>2. <i>Inadequate training</i></li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>• Explain the importance of training to ensure operators are competent and authorised to operate rough terrain masted forklifts.</li> <li>• Describe how training reduces the risk of accidents, injury, and damage on construction sites.</li> <li>• Identify the risks associated with rough terrain masted forklift operations</li> <li>• Identify the causes of accidents.</li> </ul>

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<b>Learning outcomes</b> <i>Delivery to include and the candidate will be able to:</i>	<b>Additional guidance to support learning outcome</b> <i>Training Content to contain the following as a minimum:</i>	<b>Assessment Criteria</b>
	<ol style="list-style-type: none"> <li>3. Warehouses and factories – narrow aisles, crowded areas and blind spots</li> <li>4. Travel speed of forklift - overturn</li> <li>5. Stability of loads – loading and unloading</li> <li>6. Stability of racking systems.</li> </ol>	
<b>State the responsibilities of operators to themselves and others</b>		
<ul style="list-style-type: none"> <li>• State the responsibilities of operators to themselves and others, including their duties under the Health and Safety at Work etc Act 1974 (HSW Act) to take reasonable care of their own health and safety and that of other people, and co-operate with employers and others to help them comply with their legal duties.</li> </ul>	<ul style="list-style-type: none"> <li>• Legislation, Regulations and Guidance:               <ol style="list-style-type: none"> <li>1. Health and Safety at Work etc Act 1974</li> <li>2. Provision and Use of Work Equipment Regulations (PUWER) 1998</li> <li>3. Lifting Operations and Lifting Equipment Regulations (LOLER) 1998</li> <li>4. Management of Health and Safety of Work (MHSW) Regulations 1999</li> <li>5. Workplace (Health, Safety and Welfare) Regulations 1992</li> <li>6. Control of Substances Hazardous to Health Regulations (COSHH) 2002</li> <li>7. Construction (Design and Management) Regulations (CDM) 2015</li> <li>8. Road Traffic Act</li> <li>9. L117 – Rider-operated lift trucks – Operator training and safe use.</li> </ol> </li> <li>• Risk Assessments, Method Statements and Permit to Work.</li> </ul>	<ul style="list-style-type: none"> <li>• State their responsibility to take reasonable care of their own health and safety while at work, in accordance with the <i>Health and Safety at Work etc. Act 1974</i>.</li> <li>• State their responsibility to take reasonable care for the health and safety of others who may be affected by their acts or omissions.</li> <li>• Explain the duty to co-operate with their employer to enable compliance with statutory health and safety requirements.</li> <li>• Identify the responsibility to follow site rules, safe systems of work, method statements, and risk assessments.</li> </ul>
<b>Identify the basic construction and main components of the forklift</b>		
<ul style="list-style-type: none"> <li>• Identify the basic construction and main components of the forklift, stating its principles of operation and load handling capabilities and capacities.</li> </ul>	<ul style="list-style-type: none"> <li>• Differing types of machines</li> <li>• Functions and applications</li> <li>• Instruments and controls</li> <li>• Braking system</li> <li>• Tyres and wheels</li> <li>• Cooling system</li> <li>• Fuel system</li> <li>• Transmission</li> <li>• Steering system</li> </ul>	<ul style="list-style-type: none"> <li>• Identify and explain the function of all controls and warning systems</li> <li>• State the purposes of ROPS and FOPS and other protection systems</li> <li>• Locate and identify the major components, signs, decals, and controls of the machine</li> <li>• Outline the purpose, types and function of machine control systems and electronic aids.</li> </ul>

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	<ul style="list-style-type: none"> <li>• Hydraulic system</li> <li>• Electrical system</li> <li>• Mast components</li> <li>• ROPS</li> <li>• FOPS</li> <li>• Optional attachments.</li> </ul>	
<b>Identify, as appropriate, handling attachments which may be used with the rough terrain masted forklift</b>		
<ul style="list-style-type: none"> <li>• Identify, as appropriate, handling attachments which may be used with the forklift.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Standard forks</b> – used for lifting and transporting palletised loads and materials.</li> <li>• <b>Side shift attachment</b> – used to move loads laterally without repositioning the forklift.</li> <li>• <b>Fork extension sleeves</b> – used to support longer loads, where approved by the manufacturer.</li> <li>• <b>Load backrest extension</b> – used to prevent loads from falling backwards towards the operator.</li> <li>• <b>Bucket attachment</b> – used for moving loose materials where permitted by the manufacturer.</li> <li>• <b>Jib or hook attachment</b> – used for suspended loads, subject to LOLER requirements and load charts.</li> <li>• <b>Drum handling attachments</b> – used for lifting and transporting drums safely.</li> <li>• <b>Block grab / brick grab</b> – used for handling packs of blocks or bricks.</li> <li>• <b>Pipe or cylindrical load clamps</b> – used for handling round or awkward-shaped materials</li> <li>• <b>Crane arm attachment</b> – used to convert the forklift for lifting loads vertically within rated capacity.</li> </ul>	<ul style="list-style-type: none"> <li>• Identify handling attachments that may be used with a rough terrain masted forklift</li> <li>• State that only manufacturer-approved attachments may be fitted and used.</li> <li>• Explain that the use of attachments affects stability and rated capacity and requires reference to the correct load chart.</li> <li>• State the requirement for additional training or familiarisation when using attachments.</li> <li>• Identify that lifting attachments for suspended loads are subject to LOLER 1998 requirements.</li> </ul>
<b>Conduct all pre-operational checks in accordance with manufacturers and legislative requirements</b>		
<ul style="list-style-type: none"> <li>• Complete all pre-start and running checks before any activity takes place, including visual checks for damage, functionality, and effectiveness</li> <li>• Checking all componentry systems are fully functional, including mechanical, hydraulic, pneumatic, electrical and electronic etc.</li> </ul>	Conduct all pre-operational checks in accordance with manufacturers and legislative requirements: <ul style="list-style-type: none"> <li>• Regular and non-scheduled maintenance procedures:               <ol style="list-style-type: none"> <li>1. <i>Engine oil level</i></li> <li>2. <i>Fuel system</i></li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>• Explain the procedure for defect reporting and why it's important.</li> </ul> <p><b>The following should be observed during the practical assessment:</b></p>

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<ul style="list-style-type: none"> <li>• Replenish fuels, fluids and lubricants, and undertake grease-based lubrication activities</li> <li>• Manufacturers periodic checks and operator level maintenance requirements</li> <li>• Defect reporting requirements</li> <li>• Carry out routine adjustments</li> <li>• Safety systems functions including emergency stop</li> <li>• Health and safety requirements when undertaking basic maintenance activities including personal protection equipment (PPE)</li> <li>• Check condition and function of seatbelt and any other restraining equipment</li> <li>• Check condition and function of any lighting and warning systems</li> <li>• Requirements for dealing with fluid spills including prevention and clean-up methods.</li> </ul>	<ol style="list-style-type: none"> <li>3. <i>Coolant level</i></li> <li>4. <i>Transmission oil level</i></li> <li>5. <i>Tyre pressures/ condition</i></li> <li>6. <i>Brake system</i></li> <li>7. <i>Mirrors condition and security</i></li> <li>8. <i>ROPS/ FOPS structure</i></li> <li>9. <i>Windscreen washer fluid level.</i></li> </ol> <p>Check the following functions: Brakes:</p> <ol style="list-style-type: none"> <li>1. Foot brake pedal for firm feel</li> <li>2. Parking brake.</li> </ol> <ul style="list-style-type: none"> <li>• Steering:             <ol style="list-style-type: none"> <li>1. <i>Rotate steering wheel left to right – right to left.</i></li> </ol> </li> <li>• Electrics:             <ol style="list-style-type: none"> <li>1. <i>Horn sounds</i></li> <li>2. <i>Reverse alarm sounds</i></li> <li>3. <i>Beacon flashes</i></li> <li>4. <i>Lights – side, main, stop, indicators, hazards.</i></li> </ol> </li> <li>• Hydraulics             <ol style="list-style-type: none"> <li>1. <i>Operation of all services</i></li> </ol> </li> <li>• Defect Reporting Requirements:             <ol style="list-style-type: none"> <li>1. <i>All checks and inspections to be recorded and reported to relevant person</i></li> </ol> </li> <li>• Health and Safety Requirements including Personal Protection Equipment (PPE):             <ol style="list-style-type: none"> <li>1. <i>Head protection</i></li> <li>2. <i>Foot protection</i></li> <li>3. <i>High-visibility clothing</i></li> <li>4. <i>Weather-appropriate clothing</i></li> <li>5. <i>Hearing protection</i></li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>• Conduct all pre-operational checks as above in accordance with manufacturer guidance and legislative requirements.</li> </ul> <p><b>Note:</b> <i>verbal description to the trainer of specific pre-start checks will be acceptable if the machine is hot where they cannot be done safely e.g., engine fluids.</i></p>

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	6. Eye protection 7. Gloves.	
<b>Safely get into and out of the Rough Terrain Masted Forklift</b>		
<ul style="list-style-type: none"> <li>Working at height requirements</li> <li>Safe use of all hand holds and steps</li> <li>Facing the machine when getting into and out of the rough terrain masted forklift for operational and maintenance purposes</li> <li>Effects of continually getting into and out of the rough terrain masted forklift e.g., fatigue, increased risk of falling etc.</li> <li>Safe areas to get into/ out of the rough terrain masted forklift e.g., ground location, other vehicle movements etc.</li> <li>Procedures for accessing the rough terrain masted forklift when carrying out adjustment and maintenance activities.</li> </ul>	<p><b>Safely get into and out of the Rough Terrain Masted Forklift</b></p> <ul style="list-style-type: none"> <li>Use grabrails and footsteps provided to reach machine seat:               <ol style="list-style-type: none"> <li>Mount and dismount facing machine.</li> </ol> </li> <li>Working at height requirements</li> <li>Pedestrian routes should be established and segregated from mobile plant and vehicles</li> <li>Traffic routes should be planned in order to minimise congestion and risk of collision</li> <li>Appropriate speed limits</li> <li>Parking place designated for vehicles</li> <li>Operators must be informed of proximity hazards</li> <li>Ground conditions should be stable and sufficiently level for the operations being carried out.</li> <li>Plant safe zones.</li> </ul> <p><b>Medical Fitness:</b></p> <ul style="list-style-type: none"> <li>Ensure that operators are medically fit to operate</li> <li>Employee is physically and mentally capable of undertaking the tasks they are required to carry out.</li> </ul> <p><b>Adjustment and maintenance activities:</b>            Working around mast:</p> <ol style="list-style-type: none"> <li>Stop engine, make sure the parking brake is engaged and the transmission is in neutral</li> <li>Remove the starter key</li> <li>Isolate as required.</li> </ol>	<ul style="list-style-type: none"> <li>Explain the effects of not using correct procedures to get in and out of the machine including when carrying out adjustment and maintenance activities</li> <li>Explain the areas for safely getting in and out of the rough terrain masted forklift.</li> </ul> <p><b>The following should be observed during practical activities:</b></p> <ul style="list-style-type: none"> <li>Demonstrate the correct procedures as listed above.</li> </ul>
<b>Locate and state the purpose of all controls and instruments and how to use them</b>		
<ul style="list-style-type: none"> <li>Locate and state the purpose of all controls and instruments and how to use them.</li> </ul>	<ul style="list-style-type: none"> <li>Starting and stopping controls, including ignition and emergency stop systems where fitted.</li> </ul>	<ul style="list-style-type: none"> <li>Locate all relevant controls and instruments on a rough terrain masted forklift.</li> </ul>

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	<ul style="list-style-type: none"> <li>Steering controls, including any selectable steering modes and their correct application.</li> <li>Travel controls, such as accelerator, service brake, inching pedal, parking brake, and gear selection (forward, neutral, reverse).</li> <li>Hydraulic operating controls, including mast raise and lower, mast tilt, and side shift functions.</li> <li>Attachment controls, where additional handling attachments are fitted.</li> <li>Warning and signalling devices, including horn, reversing alarm, flashing beacon, and lights.</li> <li>Dashboard instruments and indicators, including fuel level, engine temperature, oil pressure, battery/charging systems, hour meter, and warning lights.</li> <li>Safety devices, such as seat belts, operator presence systems, load backrest extensions, and cab safety features.</li> <li>The importance of operating controls smoothly and progressively to maintain stability.</li> <li>How incorrect use of controls can affect load security and machine stability.</li> <li>The requirement to carry out operations in accordance with site rules, risk assessments, and method statements.</li> <li>The need to refer to the manufacturer's operating manual for specific control layouts and limitations.</li> <li>The importance of reporting faulty controls or warning indicators immediately and not operating unsafe equipment.</li> </ul>	<ul style="list-style-type: none"> <li>Correctly identify each control and instrument by name.</li> <li>State the purpose and function of each control and instrument.</li> <li>Explain the correct and safe use of starting and stopping controls.</li> <li>Explain correct use of steering and travel controls, including forward, reverse, braking, and parking</li> <li>Explain correct use of hydraulic controls, including mast raise/lower and mast tilt</li> <li>Explain correct use of attachment controls, where applicable</li> </ul> <p><b>The following should be observed during the practical assessment:</b></p> <ul style="list-style-type: none"> <li>Correctly operate warning and signalling devices, including horn and visual warnings</li> <li>Correctly interpret dashboard instruments and warning indicators</li> <li>Demonstrate use of safety devices, including seat belts and operator presence systems</li> <li>Operate all controls smoothly and progressively to maintain machine stability</li> <li>Use controls in accordance with the manufacturer's instructions</li> <li>Comply with site rules, risk assessments, and method statements while operating controls</li> <li>Identify and report defective controls or warning indicators in line with site procedures</li> <li>Confirm the requirement to stop operations if controls or instruments are unsafe or malfunctioning.</li> </ul>
<b>Prepare the Rough Terrain Masted Forklift for movement</b>		
<ul style="list-style-type: none"> <li>Use of seatbelts and other restraining equipment</li> <li>Adjustment of seating position and mirrors</li> </ul>	<p><b>Prepare the rough terrain masted forklift for movement</b></p> <ul style="list-style-type: none"> <li>Check controls:</li> </ul>	<ul style="list-style-type: none"> <li>Describe why the seat belt should be worn at all times</li> </ul>

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<b>Learning outcomes</b> <i>Delivery to include and the candidate will be able to:</i>	<b>Additional guidance to support learning outcome</b> <i>Training Content to contain the following as a minimum:</i>	<b>Assessment Criteria</b>
<ul style="list-style-type: none"> <li>• Checks on steering, braking, transmission, mast components</li> <li>• Lateral and longitudinal stability aids check e.g., inclinometer (if fitted), rated capacity indicator/ load moment indicator (LMI)/ load moment control (LMC)/ limiters etc. and how this information is supplied</li> <li>• Starting procedures inc. cold starting procedures and isolation devices</li> <li>• Types of visibility aids and what factors can affect clear, all-round vision</li> <li>• Where and why effective vision, including mirror positioning is extremely important</li> <li>• How and where issues can arise when vision is limited during operation</li> <li>• Warning beacons and other safety systems/ lights are operable</li> <li>• Legislative requirements for travelling on the public highway</li> <li>• Carrying of passengers/ non-authorized personnel</li> <li>• How tyre condition, pressures, sizes, ratings and repairs etc. can affect machine stability and safety.</li> </ul>	<ol style="list-style-type: none"> <li>1. <i>Seat – adjust for comfort/ reach</i></li> <li>2. <i>Wear seatbelt – adjust</i></li> <li>3. <i>Steering</i></li> <li>4. <i>Braking</i></li> <li>5. <i>Transmission</i></li> </ol> <ul style="list-style-type: none"> <li>• Stability aids check: <ol style="list-style-type: none"> <li>1. <i>Rated capacity indicator (RCI)</i></li> <li>2. <i>Load movement indicator (LMI)</i></li> <li>3. <i>Load movement control (LMC).</i></li> </ol> </li> </ul> <p><b>Starting procedures</b></p> <ul style="list-style-type: none"> <li>• Visibility aids: <ol style="list-style-type: none"> <li>1. <i>Mirrors</i></li> <li>2. <i>Proximity warning systems.</i></li> </ol> </li> <li>• Safety zones <ol style="list-style-type: none"> <li>1. <i>Yellow zone – line of sight of operator and out of danger</i></li> <li>2. <i>Amber zone – machine immobilised, and personnel must gain permission from the rough terrain masted forklift operator</i></li> <li>3. <i>Red zone – machine must be immobilised, and permission gained from the rough terrain masted forklift operator.</i></li> </ol> </li> <li>• Seat belt wearing indicators: <ol style="list-style-type: none"> <li>1. <i>Rotating green beacon which is activated when the seat belt clasp is engaged</i></li> <li>2. <i>Road Vehicle Lighting Regulations specifies that green lights are reserved for medical emergency vehicles – green beacon not to be illuminated when travelling on public highway.</i></li> </ol> </li> <li>• Flashing beacon</li> <li>• Travelling on the public highway: <ol style="list-style-type: none"> <li>1. <i>Lower forks (approx. 100 – 150 mm above the ground), tilt carriage back</i></li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>• Describe why effective vision is extremely important</li> <li>• Give an example of how and where issues can arise when vision is limited during operation</li> <li>• Describe function and information of inclinometer (if fitted), rated capacity indicator (RCI), load moment indicator (LMI)/ load moment control (LMC)/ limiters etc.</li> <li>• Describe the requirements and limitations for travelling on the public highway</li> <li>• Explain how tyre condition, pressures, sizes, ratings and repairs etc. can affect machine stability.</li> </ul> <p><b>The following should be observed during the practical assessment:</b></p> <ul style="list-style-type: none"> <li>• Demonstrate that the seatbelt is worn correctly, and seating position and mirrors are adjusted correctly prior to any machine movement</li> <li>• Check all applicable warning lamps, safety and stability systems and visions systems are in place, clear and functional</li> <li>• Conduct all-round visibility checks before moving away.</li> <li>• Wear the correct PPE.</li> </ul>

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	<p>2. The driver must hold a full car (category B) licence.</p> <ul style="list-style-type: none"> <li>Do not carry passengers.</li> </ul>	
<b>Place the forks or other handling attachment in predetermined positions using the appropriate controls</b>		
<ul style="list-style-type: none"> <li>Place the forks or other handling attachment in predetermined positions using the appropriate controls.</li> </ul>	<ul style="list-style-type: none"> <li><b>Travelling:</b> When travelling, the mast should be tilted slightly rearwards to maintain load stability, with the forks carried low at approximately 200 mm (8 in) above ground level, taking account of uneven or rough terrain commonly found on construction sites.</li> <li><b>Stopping and parking:</b> Before leaving the rough terrain forklift, apply the parking brake, return the mast to the upright position, fully lower the forks so they are flat on the ground, place any controls in neutral, and switch off the engine and remove the key.</li> </ul>	<p><b>The following should be demonstrated during the practical assessment:</b></p> <ul style="list-style-type: none"> <li>Travel the rough terrain masted forklift in a safe and controlled manner, maintaining awareness of site conditions, pedestrians, and other plant.</li> <li>Position the mast correctly while travelling by tilting it slightly rearwards to maintain stability.</li> <li>Carry the forks at a safe travelling height of approximately 200 mm (8 inches) above ground level, adjusting for uneven or changing ground conditions.</li> <li>Control speed and steering to suit ground conditions, gradients, and site traffic management arrangements</li> <li>Select a suitable and safe location to stop and park the rough terrain masted forklift, in line with site rules and risk assessments.</li> <li>Bring the forklift to a controlled stop and apply the parking brake fully.</li> <li>Return the mast to the upright position before dismounting.</li> <li>Fully lower the forks so they are resting flat on the ground to prevent unintended movement.</li> <li>Place all operating controls in neutral and shut down the engine.</li> <li>Remove the ignition key and secure the machine where required by site procedures.</li> </ul>
<b>Identify various loads, and state the procedures for their stacking</b>		
<ul style="list-style-type: none"> <li>Identify various forms of load, and state the procedures for their stacking</li> <li>De-stacking and separation</li> </ul>	<p>Various forms of loads:</p> <ul style="list-style-type: none"> <li>Palletised loads:</li> </ul>	<ul style="list-style-type: none"> <li>Correctly identify common construction loads, including but not limited to palletised materials,</li> </ul>

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<p><b>Learning outcomes</b></p> <p><i>Delivery to include and the candidate will be able to:</i></p>	<p><b>Additional guidance to support learning outcome</b></p> <p><i>Training Content to contain the following as a minimum:</i></p>	<p><b>Assessment Criteria</b></p>
<ul style="list-style-type: none"> <li>• Assess the weight, and, where relevant, the load centre of a load, and decide if the load with its known weight and load centre is within the rough terrain masted forklifts actual capacity (safe working load).</li> </ul>	<ol style="list-style-type: none"> <li>1. <i>Pallets should be of sound construction, and be of adequate strength for the loads</i></li> <li>2. <i>Where pallets loads are stacked, the lower pallets should be of suitable strength and in good condition to be able to support the weight above</i></li> <li>3. <i>The stability of the stacked pallets should be maintained, avoiding excessive stack heights</i></li> <li>4. <i>Pallets or other supports used for forming loads should be regularly inspected for damage.</i></li> </ol> <ul style="list-style-type: none"> <li>• Bales: <ol style="list-style-type: none"> <li>1. <i>Bales should be stacked with care to ensure their stability</i></li> <li>2. <i>If possible stacks should lean into their centre</i></li> <li>3. <i>Extra care should be taken with synthetic bales, which have a tendency to slip when new.</i></li> </ol> </li> <li>• Coiled Wire: <ol style="list-style-type: none"> <li>1. <i>Coiled wire may be stacked horizontally or vertically. Wedges or other supports must be used to prevent the stack from spreading.</i></li> </ol> </li> <li>• Drums, casks and cylinders: <ol style="list-style-type: none"> <li>1. <i>Drums, casks and cylinders may be stacked on their sides and ends unless specifically required to stand upright on instructions from their manufacturer or supplier</i></li> <li>2. <i>If stacked on their sides, wedges should be fixed at the ends of each row to prevent movement</i></li> <li>3. <i>If gas cylinders are stored on end, restraining chains should be fitted to prevent them toppling. The values of gas cylinders under pressure must be always be protected</i></li> <li>4. <i>Power-operated clamps enable cylindrical objects such as cable drums or pipes to be stacked on end, allowing greater economy of space and greater stability.</i></li> </ol> </li> <li>• Sheet materials:</li> </ul>	<p>banded packs, stillages, loose materials, and irregular or long loads.</p> <ul style="list-style-type: none"> <li>• Recognise hazards associated with different load types, such as instability, uneven weight distribution, overhanging loads, and damaged packaging.</li> <li>• Explain and apply safe procedures for stacking loads, ensuring stable, square, and evenly supported stacks in accordance with site requirements and manufacturer's guidance.</li> <li>• Explain safe de-stacking techniques, removing loads in the correct sequence to prevent collapse or load shift.</li> <li>• Explain out load separation safety, ensuring loads are fully supported before withdrawing the forks and maintaining control at all times.</li> <li>• Maintain clear communication and exclusion zones where required during stacking, de-stacking, or separation activities.</li> <li>• Assess the weight of a load using available information such as delivery notes, load markings, supplier data, or site instructions.</li> <li>• Where applicable, identify and assess the load centre of the load and understand how changes in load centre affect forklift stability</li> <li>• Accurately interpret the forklift's rated capacity plate, load chart, or manufacturer's data.</li> <li>• Determine whether the load, taking into account its weight, load centre, attachments, and lift height, is within the truck's actual safe working load.</li> <li>• Refuse to lift or reposition any load that exceeds the forklift's rated capacity or is deemed unsafe, and report the issue in line with site procedures.</li> </ul> <p><b>The following should be observed during the practical assessment:</b></p>

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	<ol style="list-style-type: none"> <li>1. <i>Sheet materials, including glass, may be stacked flat or on edge</i></li> <li>2. <i>Sharp edges should be protected to prevent injury to workers and passers-by</i></li> <li>3. <i>The supports used in edge-on stacking must be of adequate strength to bear the side loading of the vertical sheets</i></li> <li>4. <i>Owing to the weight of metal and glass sheet in bulk, care should be taken not to overload racks and the floor.</i></li> </ol> <ul style="list-style-type: none"> <li>• Pipes:               <ol style="list-style-type: none"> <li>1. <i>Suitable racks should be provided for pipes and similar materials</i></li> <li>2. <i>Large-diameter pipes can be stacked on their sides</i></li> <li>3. <i>Wedge, chocks or other means should be used to restrain the bottom tier which are stacked and which could cause the stack to collapse by rolling or moving</i></li> <li>4. <i>Where the collapse of a stack could cause damage or injury, material to be removed should always to be taken from the top of the stack or from the top tier first.</i></li> </ol> </li> </ul> <p>De-stacking:</p> <ul style="list-style-type: none"> <li>• Most accidents involving the collapse of stacked materials occur during de-stacking.</li> <li>• The stack should be taken down tier by tier, so that no parts is in danger</li> <li>• As there is a high tripping hazard in the working area of a stack, tidiness and systematic work methods are essential</li> <li>• Care should be taken to ensure when working on stacks to avoid overhead obstructions</li> <li>• Proper signalling arrangements should be made and a marshaller should be in position</li> </ul>	<ul style="list-style-type: none"> <li>• Align and enter accurately to prevent damage to a load</li> <li>• Ensure travel speeds do not exceed terrain type, load type, and clear of any route hazards</li> <li>• Stack 3 x loads of equal dimensions that are suitable for stacking</li> <li>• De-stack 3 x stacked loads and place them next to each other on the ground</li> <li>• Lift a load weighing less than the machine lift capacity at full horizontal reach and place the load at ground level using the full horizontal reach of the machine</li> <li>• Follow given signals and instructions</li> <li>• Maintain machine stability and ensure safe parameters are not exceeded on a lift.</li> </ul> <p><b>Assessment requirement:</b></p> <ul style="list-style-type: none"> <li>• When de-stacking 3 x loads, there must be no more than 75mm clearance between them.</li> </ul>

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	<ul style="list-style-type: none"> <li>All stacking and de-stacking should be carried out under competent supervision.</li> </ul> <p>Segregation:</p> <ul style="list-style-type: none"> <li>Flammable liquids, gas cylinders, aerosols, materials liable to combustion and hazardous chemicals should not be stored in the same area as other goods</li> <li>Chemicals liable to react with each other or other materials should not be stored together unless adequately protected from contacting each other, either directly or by spillage</li> <li>The storage area or building should be signposted to indicate that it contains flammable or hazardous chemical materials and that smoking and naked flames are prohibited</li> <li>Liquefied and compressed gas cylinders should be stored in well ventilated areas.</li> </ul>	
<b>State the factors which affect machine stability</b>		
<ul style="list-style-type: none"> <li>State the factors which affect machine stability, including turning, especially the speed and sharpness of turn</li> <li>Load security and integrity</li> <li>Rated capacity and rated load centres and centres of gravity, ground conditions and speed and smoothness of operation.</li> </ul>	<p>Machine stability:</p> <ul style="list-style-type: none"> <li>Turning:               <ol style="list-style-type: none"> <li><i>The smaller the radius of a turn to be made, the lower the speed of the lift truck should be</i></li> <li><i>When making a sharp turn, always drive the truck at low speed.</i></li> </ol> </li> <li>Loading:               <ol style="list-style-type: none"> <li><i>Adjust distance between the forks symmetric to the centre line of the lift truck. The wider the interval between forks, the better the balance. Be sure to apply the fork stoppers after setting the forks</i></li> <li><i>Confirm that the load is stable and tilt it backward.</i></li> </ol> </li> <li>Transportation:</li> </ul>	<ul style="list-style-type: none"> <li>State the factors that affect the stability of a rough terrain masted forklift, including load weight, load height, ground conditions, speed, steering angle, and machine configuration</li> <li>Explain how excessive speed increases the risk of instability, particularly when turning or operating on uneven or sloping ground</li> <li>Describe how sharp or sudden turns can cause centrifugal force to move the centre of gravity outside the stability triangle, increasing the risk of overturning</li> <li>Identify the effects of gradients, side slopes, cambers, and poor ground conditions on machine stability</li> <li>State the importance of maintaining appropriate speed and controlled steering to preserve stability during travel and manoeuvring</li> </ul>

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	<ol style="list-style-type: none"> <li>1. <i>When transporting loads, the lift truck should be driven carefully at slow speed with the load kept low and tilted back.</i></li> <li>2. <i>When the load is big enough to block forward visibility, drive the truck backward.</i></li> </ol> <ul style="list-style-type: none"> <li>• <b>Stability</b> <ol style="list-style-type: none"> <li>1. <i>Masted forklifts overturn when they become unstable for a wide range of reasons, and operators need to understand the conditions that can cause instability, both longitudinally (front and rear) and laterally (sideways)</i></li> <li>2. <i>Before any load is carried, the operator must check the manufacturer's maximum rated capacity for the machine, the load centre that applies and where any de-rating must be undertaken</i></li> <li>3. <i>Where a large load is to be carried and the centre of gravity of that load exceeds the machine's load centre, then the carrying capacity must be reduced</i></li> <li>4. <i>Longitudinal stability of a forklift is maintained by the counterbalance effect, which is when the weight towards the rear of the machine overcomes the weight of the load on the forks. Increasing the load on the forks reduces the counterbalance effect, making the machine less stable</i></li> <li>5. <i>Raising a load can further affect stability. If a load is raised to full height with full back tilt of the masted applied, the machine's centre of gravity moves both upwards and backwards</i></li> <li>6. <i>If a load is lifted and the forklift is leaning sideways, the machine is less stable</i></li> <li>7. <i>No loads should be lifted unless the forklift is level and the ground firm and stable enough to support the weight</i></li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>• State the importance of ensuring loads are secure, stable, and suitable for lifting before operation</li> <li>• Identify the need to check load condition, including damage, loose components, or uneven distribution</li> <li>• Explain how incorrect positioning of a load on the forks can affect balance and stability</li> <li>• Describe the correct method of carrying loads, including keeping the load low during travel and tilting the mast appropriately</li> <li>• State the need to use suitable pallets, stillages, or attachments that are compatible with the load and machine</li> <li>• Explain the risks associated with insecure or unstable loads, including load shift, falling objects, and loss of control</li> <li>• State the meaning of rated capacity and confirm that it must not be exceeded under any circumstances</li> <li>• Explain how rated load centres affect lifting capacity and how increased load centre distance reduces safe working capacity</li> <li>• Describe how the combined centre of gravity of the machine and load must remain within the stability triangle to maintain stability</li> <li>• Identify how ground conditions such as soft, wet, uneven, or compacted surfaces can affect machine stability and safe operation</li> <li>• State the importance of adjusting speed to suit load weight, site conditions, and visibility</li> <li>• Explain why smooth operation, including controlled acceleration, braking, lifting, and steering, reduces the risk of instability and load movement</li> <li>• <b>The following should be observed during the practical assessment:</b></li> </ul>

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	<p>8. <i>Travelling with a raised mast is hazardous, and greatly increases instability</i></p> <p>9. <i>Where a load needs to be placed at height, the forklift must be on firm level ground and facing the placing point.</i></p>	<ul style="list-style-type: none"> <li>• Demonstrate safe travel over rough, undulating ground, steep inclines and level surfaces</li> <li>• Looking at the direction of travel and effective use of mirrors</li> <li>• Demonstrate how to travel up and down a gradient</li> <li>• Demonstrate how to stop and start on the gradient whilst travelling uphill</li> <li>• Demonstrate how to stop and start on the gradient whilst travelling downhill</li> <li>• Demonstrate how to reverse the rough terrain masted forklift in a straight line and through a restriction, both un-laden and laden.</li> <li>• <b>Assessment requirement:</b></li> <li>• The slope must have an incline of 18% (1:5.5) with sufficient manoeuvring area at the top, or a straight ramp with an up and down route with a flat area at the summit</li> <li>• The reversing exercise must be for a minimum 20 metres</li> <li>• The restriction clearance for the reversing exercise must not be more than 300mm or 10% of the machine width (whichever is the greater) between the machine and the restriction sides.</li> </ul>
<b>Follow correct procedures when loading and unloading vehicles</b>		
<ul style="list-style-type: none"> <li>• Follow correct procedures when loading and unloading vehicles</li> </ul>	<p><b>Loading and unloading procedures:</b></p> <p>Loading:</p> <ol style="list-style-type: none"> <li>1. <i>Adjust distance between the forks symmetric to the centre line of the lift truck. The wider the interval between forks, the better the balance. Be sure to apply the fork stoppers after setting the forks</i></li> <li>2. <i>Approach slowly, straight toward the load, and stop just in front of it. Adjust the mast to vertical</i></li> </ol>	<ul style="list-style-type: none"> <li>• Outline the different types of vehicle / trailers used to deliver loads to site</li> <li>• State how vehicle capacities are established and the importance of weight distribution for vehicle stability.</li> </ul> <p><b>The following should be observed during the practical assessment:</b></p> <ul style="list-style-type: none"> <li>• Establish communication with vehicle driver</li> </ul>

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	<p><i>position, matching the height of the forks to the position of the pallet.</i></p> <ol style="list-style-type: none"> <li><i>3. Advance slowly and completely insert forks beneath the load. Set the forward-reverse lever to Neutral and apply the handbrake</i></li> <li><i>4. Then raise the load. Confirm that the load is stable and tilt it backward. Release the handbrake and back the lift truck slowly.</i></li> </ol> <p><i>Transportation:</i></p> <ol style="list-style-type: none"> <li><i>1. When transporting loads, the lift truck should be driven carefully at slow speed with the load kept low and tilted back</i></li> <li><i>2. When the load is big enough to block forward visibility, drive the lift truck backward.</i></li> </ol> <p><i>Unloading:</i></p> <ol style="list-style-type: none"> <li><i>1. Slowly approach the unloading site and stop facing straight ahead</i></li> <li><i>2. Move the forward-reverse lever into Neutral and apply the handbrake</i></li> <li><i>3. After adjusting the mast to the vertical position, raise the load above the stack on which it is to be placed</i></li> <li><i>4. Release the handbrake and advance slowly into the proper position</i></li> <li><i>5. Apply the handbrake and place the forward-reverse lever in Neutral</i></li> <li><i>6. Slowly lower the forks to set down the load</i></li> <li><i>7. After moving the forward-reverse lever to reverse, release the handbrake and back the lift truck up until the forks separate completely from the load.</i></li> </ol> <p><i>Trailers:</i></p> <ol style="list-style-type: none"> <li><i>1. Trailers of articulated lorries are less stable when they have been disconnected from their towing units</i></li> <li><i>2. They should always be braked when parked</i></li> </ol>	<ul style="list-style-type: none"> <li>• Demonstrate undercut of loads when lifting and placing loads</li> <li>• Check for proximity hazards including ground hazards, overhead hazards and those on the transporting vehicle due to the condition of the vehicle bed</li> <li>• Place 3 x loads of equal dimensions on to a vehicle bed that has a headboard, following required sequence</li> <li>• Demonstrate loading tight up to the headboard</li> <li>• Retrieve 3 pre-placed loads from a vehicle bed following the required sequence.</li> <li>• Load damage minimised when retrieving and placing loads.</li> </ul>

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	<ol style="list-style-type: none"> <li>3. <i>Make sure the trailer deck is strong enough to support the lift truck and load</i></li> <li>4. <i>If the lift truck has to drive onto the trailer for loading or unloading, provide and securely fix bridge plates, strong enough to support the lift truck and its load</i></li> <li>5. <i>You should also ensure the landing legs at the front of the trailer can support the additional weight of a lift truck</i></li> <li>6. <i>Where ramps are used to provide access into the rear of trailers, make sure they are properly secured to the rear of the trailer so that one cannot move relative to the other</i></li> <li>7. <i>The ramps should be marked with the maximum load they are designed to carry and they should be regularly inspected</i></li> <li>8. <i>Take extra care when loading and unloading from curtain-siders as they have no edge protection, so you should carry out a risk assessment and consider what may happen if the lift truck goes out of control.</i></li> </ol>	
<b>Make visual checks to ascertain the safety, soundness and rating of structures</b>		
<ul style="list-style-type: none"> <li>• Make visual checks to ascertain the safety, soundness, and rating of structures designed to receive loads</li> <li>• Place and remove loads on and from those structures at various heights.</li> </ul>	<p>Loading platforms:</p> <ul style="list-style-type: none"> <li>• Permanent loading platforms, as used in warehouses or in factories, should be constructed and designed to carry the foreseeable maximum load safely</li> <li>• Temporary loading platforms, for example on building sites, should be clearly marked with the maximum load they are designed to carry, and lift truck operators should be advised of this</li> <li>• When manoeuvring, ensure the lift truck does not damage the platform or its supporting structure.</li> <li>• Racking system failure:               <ol style="list-style-type: none"> <li>1. <i>Design fault i.e. rack is inherently unsafe</i></li> <li>2. <i>Installation fault</i></li> <li>3. <i>Materials handling equipment fault</i></li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>• Explain the process for the lifting of unit-type loads including palletted and un-palletted</li> <li>• Explain the undercutting when lifting and placing loads</li> <li>• Describe the reasons for smooth use of all hydraulic controls, particularly at height</li> <li>• Explain the factors that can affect the safe and effective transportation of loads</li> <li>• Explain the factors to be taken into account when handling irregular shaped loads</li> <li>• Explain loading-out tower/ structure requirements</li> <li>• Explain the factors and give examples that determine where loads can and cannot be placed</li> </ul>

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<b>Learning outcomes</b> <i>Delivery to include and the candidate will be able to:</i>	<b>Additional guidance to support learning outcome</b> <i>Training Content to contain the following as a minimum:</i>	<b>Assessment Criteria</b>
	<ol style="list-style-type: none"> <li>4. <i>Materials handling equipment operator fault</i></li> <li>5. <i>Supervision and control fault</i></li> <li>6. <i>Store or warehouse structural fault.</i></li> </ol>	<ul style="list-style-type: none"> <li>• Explain methods of communication, radio protocol, hand signals etc for unit loads</li> <li>• Explain how large surface area loads can affect clear vision and what procedures should be followed</li> <li>• Explain lateral stability issues when cornering with a load.</li> </ul> <p><b>The following should be observed during the practical assessment:</b></p> <ul style="list-style-type: none"> <li>• Align and enter accurately to prevent damage to a load</li> <li>• Ensure travel speeds do not exceed terrain type, load type and clear of any route hazards</li> <li>• Lift 1 x load that is not less than 50% of machine rated capacity onto a loading-out tower/ structure</li> <li>• Retrieve a load at height (not less than 50% of machine rated capacity from a loading-out tower/ structure) and lower to ground level</li> <li>• Lift a load for travel and reverse with the load for a minimum of 20 metres</li> <li>• Place all loads accurately at given predetermined points</li> </ul> <p><b>Assessment requirement:</b></p> <ul style="list-style-type: none"> <li>• The loading-out tower/ structure must be at least 75% of the machine maximum working height for the load weight.</li> </ul>
<b>Pick-up and place loads</b>		
<ul style="list-style-type: none"> <li>• Pick-up and place loads, and drive and manoeuvre the machine forward and in reverse, laden and unladen, on inclines, in restricted spaces and on level ground (including rough terrain as applicable), following correct procedures and precautions</li> </ul>	<p><b>Rough Terrain Masted Forklift operating areas:</b></p> <ul style="list-style-type: none"> <li>• All lift-truck operating areas should be suitably designed and properly maintained</li> <li>• Make sure the surfaces used by lift trucks are as level and firm as possible, and preferably surfaced with concrete or other suitable material</li> <li>• Some lift trucks, however, are designed to operate on rough or uneven surfaces</li> </ul>	<ul style="list-style-type: none"> <li>• Explain the importance of maintaining good visibility</li> <li>• State the need for a lift plan and what typical information is contained within the plan</li> <li>• Explain the use of load charts and what information they provide</li> </ul>

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## A14 – Rough Terrain Masted Forklift



<b>Learning outcomes</b> <i>Delivery to include and the candidate will be able to:</i>	<b>Additional guidance to support learning outcome</b> <i>Training Content to contain the following as a minimum:</i>	<b>Assessment Criteria</b>
	<ul style="list-style-type: none"> <li>• Repair potholes and remove accumulations of loose material on the ground as they are particularly hazardous to small-wheeled lift trucks</li> <li>• Road humps are unsuitable for lift trucks. If they are used to reduce the speed of other traffic, provide a bypass for lift trucks</li> <li>• Try to eliminate gradients where possible. Never allow lift trucks to be driven up or down gradients that exceed the maximum specified by the manufacturer or authorised supplier</li> <li>• Make sure roads, gangways and aisles have sufficient width and overhead clearance for the largest lift truck using them to do so safely, whether loaded or unloaded</li> <li>• Use one-way traffic systems to reduce the risk of collisions</li> <li>• When travelling on gradients with a load, always drive forward on upward slopes and in reverse on downwards slopes</li> <li>• Drive slowly on slopes</li> <li>• Drive in the reverse direction on upward slopes when without a load, and drive forward on downward slopes</li> <li>• Use the brake pedal and engine brake together when driving downhill so as to maximise the effectiveness of the engine brake</li> <li>• Do not use lift trucks with internal combustion engines in confined spaces or where there is inadequate.</li> </ul>	<ul style="list-style-type: none"> <li>• Explain the need to know the load centre and the centre of gravity of a load and the effect on safe lifting capacities</li> <li>• Explain methods of establishing weight of loads</li> <li>• Explain the factors that can impact the lateral and longitudinal stability.</li> </ul> <p><b>The following should be observed during the practical assessment:</b></p> <ul style="list-style-type: none"> <li>• Demonstrate the correct use and application of steering, transmission and braking controls</li> <li>• Demonstrate the correct machine configuration for different load types</li> <li>• Demonstrate the correct fork spacing to equally support loads</li> <li>• Travel to various locations for placing of pre-set loads</li> <li>• Demonstrate how to configure, set and prepare the machine to lift a range of loads including palleted, non-palleted, wide, heavy, large surface area and those that can be stacked</li> <li>• Demonstrate that full visibility is maintained during manoeuvring activities</li> <li>• Check that ground conditions can support the machine's total weight for the working height</li> <li>• Establish the weight of load against rated capacity charts for intended height.</li> </ul>
<b>Park the machine, following correct procedures and precautions</b>		
<ul style="list-style-type: none"> <li>• Park the machine, following correct procedures and precautions</li> </ul>	<p>When you have finished working:</p> <ul style="list-style-type: none"> <li>• Park the forklift in a safe place, on level ground, never on a slope</li> <li>• Leave the forklift with the mast tilted forwards and the forks fully lowered, with the tips on the floor</li> </ul>	<p><b>The following should be observed during the practical assessment:</b></p> <ul style="list-style-type: none"> <li>• Control speed and steering to suit ground conditions, gradients, and site traffic management arrangements</li> </ul>

# Training Standard

## A14 – Rough Terrain Masted Forklift



<b>Learning outcomes</b> <i>Delivery to include and the candidate will be able to:</i>	<b>Additional guidance to support learning outcome</b> <i>Training Content to contain the following as a minimum:</i>	<b>Assessment Criteria</b>
	<ul style="list-style-type: none"> <li>Apply the parking brake, select neutral, switch off the engine and remove the key</li> <li>Return keys or other activating devices to their place of safe-keeping</li> <li>Report any malfunctions or defects immediately to a supervisor</li> <li>Wherever possible, suitable areas for recharging or maintenance.</li> </ul>	<ul style="list-style-type: none"> <li>Select a suitable and safe location to stop and park the rough terrain masted forklift, in line with site rules and risk assessments.</li> <li>Bring the forklift to a controlled stop and apply the parking brake fully.</li> <li>Return the mast to the upright position before dismounting.</li> <li>Fully lower the forks so they are resting flat on the ground to prevent unintended movement.</li> <li>Place all operating controls in neutral and shut down the engine.</li> <li>Remove the ignition key and secure the machine where required by site procedures.</li> </ul>
<b>Explain environmental considerations of machine use</b>		
<ul style="list-style-type: none"> <li>Health and social reasons to reduce machine emissions</li> <li>Government industry zero emission initiatives relative to this standard</li> <li>The environmental impact of different earthmoving equipment engine types and the importance of sustainable practices</li> <li>What 'tailpipe' emissions are caused by diesel engines</li> <li>Air quality and the component gases of air</li> <li>How engine emissions, including particulate matter, affect air quality and the effects on human and environmental wellbeing</li> <li>Measures to reduce emissions during operations including alternative/low emission fuels, fuel treatments and particulate filtration systems</li> <li>Efficient use of the machine and when and how minimising engine use can aid air quality and fuel savings</li> <li>Eco-friendly oils, fluids, and lubricants</li> <li>Fuel-saving techniques for specific item of plant</li> </ul>	<ul style="list-style-type: none"> <li>Common construction activities that contribute to air pollution include:               <ol style="list-style-type: none"> <li>Use of plant and vehicles on site</li> <li>Land clearing and demolition</li> <li>Chemicals.</li> </ol> </li> <li><b>Government and Industry Zero-Emission Initiatives</b> <ul style="list-style-type: none"> <li>Net Zero Strategy</li> <li>Non-Road Mobile Machinery (NRMM) Emission Standards</li> <li>Increased use of electric, hybrid, or hydrogen-powered plant</li> </ul> </li> <li><b>Environmental impact of different earthmoving equipment engine types</b> <ul style="list-style-type: none"> <li>Diesel engines – most common, produce harmful pollutants</li> <li>Electric – zero tailpipe emissions, reduced noise, limited battery range</li> <li>Hybrid – reduced fuel consumption and emissions</li> <li>Hydrogen/ alternative fuels – very low or zero emissions, limited availability</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Explain the health and social reasons for reducing machine emissions</li> <li>Discuss government industry zero emission initiatives</li> <li>List two or more effects on human and environmental wellbeing as a result of engine emissions</li> <li>Explain the environmental impact of different earthmoving equipment engine types and the importance of sustainable practices</li> <li>Identify measures to reduce emissions on site</li> <li>Explain appropriate disposal of waste</li> <li>Explain spillage procedures</li> <li>Describe the need to keep engine speed and load to a minimum whilst maintaining working efficiency.</li> </ul>

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## A14 – Rough Terrain Masted Forklift



<b>Learning outcomes</b> <i>Delivery to include and the candidate will be able to:</i>	<b>Additional guidance to support learning outcome</b> <i>Training Content to contain the following as a minimum:</i>	<b>Assessment Criteria</b>
<ul style="list-style-type: none"> <li>• Appropriate disposal of waste</li> <li>• Spillage procedures.</li> </ul>	<ul style="list-style-type: none"> <li>• Consequences of air pollution:               <ol style="list-style-type: none"> <li>1. Employees</li> <li>2. Local Residents</li> <li>3. Environmental.</li> </ol> </li> <li><b>Water Pollution:</b> <ul style="list-style-type: none"> <li>• Common construction sources that contribute to air pollution include:                   <ol style="list-style-type: none"> <li>1. Diesel and oil</li> <li>2. Cement</li> <li>3. Other toxic chemicals.</li> </ol> </li> <li>• Consequences of water pollution:                   <ol style="list-style-type: none"> <li>1. People</li> <li>2. Environmental – water contamination.</li> </ol> </li> </ul> </li> <li><b>Noise Pollution:</b> <ul style="list-style-type: none"> <li>• Effects of noise pollution:                   <ol style="list-style-type: none"> <li>1. Potential hearing loss.</li> </ol> </li> </ul> </li> <li><b>Pollution Prevention Strategies:</b> <ul style="list-style-type: none"> <li>• Air pollution:                   <ol style="list-style-type: none"> <li>1. Adopt hybrid technology</li> <li>2. Use low sulphur diesel</li> <li>3. Improve existing equipment</li> <li>4. Wear appropriate PPE.</li> </ol> </li> <li>• Water pollution                   <ol style="list-style-type: none"> <li>1. Monitor and improve your management and disposal of site waste</li> <li>2. Keep materials secure</li> <li>3. Cover up all drains</li> <li>4. Keep the road and footpath to the site clean</li> <li>5. Properly treat any chemical spillages</li> <li>6. Ensure plant and equipment is properly maintained and operated.</li> </ol> </li> </ul> </li> </ul>	
<b>Explain loading/ unloading procedures for machine transportation</b>		

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## A14 – Rough Terrain Masted Forklift



<b>Learning outcomes</b> <i>Delivery to include and the candidate will be able to:</i>	<b>Additional guidance to support learning outcome</b> <i>Training Content to contain the following as a minimum:</i>	<b>Assessment Criteria</b>
<ul style="list-style-type: none"> <li>Procedures for preparing the machine for loading onto a transporter</li> <li>Traction and surface preparation requirements</li> <li>Understanding of agreed methods of communication between the plant operator and others</li> <li>Working at height requirements when driving onto or off a transporter bed.</li> </ul>	<p><b>Explain loading/ unloading procedures for machine transportation</b></p> <p>Loading and unloading areas should be:</p> <ul style="list-style-type: none"> <li>Clear of other traffic, pedestrians, and people</li> <li>Clear of overhead electric cables</li> <li>Level, to maintain stability, trailers should be parked on firm level ground</li> <li>Ensure the vehicle or trailer has its brakes applied and all stabilisers are used</li> <li>Working at height to be considered</li> <li>Always check the floor or deck of the transportation.</li> </ul> <p>Loading Procedure:</p> <ol style="list-style-type: none"> <li>1. Make sure the ramps are correctly in place and secure</li> <li>2. Carefully drive the machine onto the trailer</li> <li>3. When the machine is safely in position, engage the parking brake and set the drive to neutral</li> <li>4. Lower the carriage onto the trailer</li> <li>5. Switch off the engine and remove starter key. Secure the cab</li> <li>6. Ensure legal load (height/ weight)</li> <li>7. Anchor the machine to the trailer with chains as per manufacturer guidelines.</li> </ol>	<ul style="list-style-type: none"> <li>Describe the preparation required of both machine and transporter for loading and unloading of the machine</li> <li>Explain the precautions to be taken when driving the machine onto and off the transporter bed</li> <li>State the methods of communication between the plant operator and others</li> <li>Describe the dangers of and requirements for working at height when on the vehicle bed</li> </ul>
<b>Carry out all end of work and shut down procedures</b>		
<ul style="list-style-type: none"> <li>Types of safe locations, areas, and ground/terrain types where a loading shovel may be parked and should not be parked</li> <li>Reasons for ensuring safe parking and unintentional movement and ground support requirements</li> <li>Carrying out parking, shut down and isolation requirements according to manufacturer's instructions</li> <li>Reasons for machine isolation including security and non-authorized use by others</li> </ul>	<ul style="list-style-type: none"> <li>Security:             <ol style="list-style-type: none"> <li>1. Ensure that all vehicles are securely immobilised whenever the site is unoccupied</li> <li>2. Anti – vandalism equipment fitted (if required).</li> </ol> </li> <li>When parking the machine at the end of the shift ensure the machine is not parked:             <ol style="list-style-type: none"> <li>1. Site roads</li> <li>2. Pedestrian routes</li> <li>3. Soft/ wet/ steep ground</li> <li>4. Access/ egress routes from buildings.</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>Apply brake systems effectively</li> <li>Describe the use of anti-vandalism equipment.</li> </ul> <p><b>The following should be observed during the practical assessment:</b></p> <ul style="list-style-type: none"> <li>Demonstrate and explain safe parking of the machine - machine is parked in a safe, designated location, clear of hazards on level, firm ground</li> </ul>

# Training Standard

## A14 – Rough Terrain Masted Forklift



<b>Learning outcomes</b> <i>Delivery to include and the candidate will be able to:</i>	<b>Additional guidance to support learning outcome</b> <i>Training Content to contain the following as a minimum:</i>	<b>Assessment Criteria</b>
<ul style="list-style-type: none"> <li>• Use of anti-vandalism equipment.</li> </ul>	<ul style="list-style-type: none"> <li>• Parking:               <ol style="list-style-type: none"> <li>1. <i>Park on a level surface. If the machine must be parked on a grade, chock the wheels securely</i></li> <li>2. <i>Reduce engine speed</i></li> <li>3. <i>Set the forward/ reverse lever to neutral</i></li> <li>4. <i>Handbrake applied</i></li> <li>5. <i>While the machine is stopped, run the engine at low idle.</i></li> <li>6. <i>Turn the engine start switch to the off position and remove the key</i></li> <li>7. <i>Use the steps and the hand holds when you dismount. When you dismount, face the machine and use both hands</i></li> <li>8. <i>Lock all compartments and all vandalism covers (if equipped).</i></li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate how to isolate and secure the rough terrain masted forklift to prevent unauthorised use and explain why this is important.</li> </ul>

# Training Standard

## A14 – Rough Terrain Masted Forklift



### Additional information about this standard

Emphasis to be placed on the following topics:

- Stability with raised forks or uneven ground, checking ground prior to raising loads, travelling and manoeuvring with raised loads
- Travel speeds, appropriate speed in proportion to the conditions, particularly when carrying a load, travel speeds around corners and on uneven ground, appreciation of centres of gravity, mandatory wearing of seat belts
- Travelling on inclines, travelling and steering up, down and across inclines
- Weight transfer, reduced carrying capacity with extending masts

### Measure of this training standard

The candidate is required to pass the following tests:

#### CPCS Theory Test:

- Course Trainers can use the published CPCS Theory Questions during training to confirm that the candidate is able to demonstrate the required knowledge understanding and retention to undertake the CPCS Standard Technical Theory Test.

#### CPCS Practical Test:

- Course Trainers can use the published CPCS Practical Test criteria during training to confirm that the candidate is able to demonstrate the required practical ability and understanding to undertake the CPCS Standard Technical Practical Test.

**Note** - Course Trainers can find the current versions of the CPCS Technical Test Theory Questions and CPCS Technical Practical Test NOCN Group website and are subject to review, ensure you are using the most current version as printed versions are uncontrolled.