Training Standard
A09B - Forward Tipping Dumper - Tracked

Title	Forward Tipping Dumper - Tracked
Novice Durations	**Minimum** **17 (2 ½ Day) hours including assessment time:** 1 candidate: 1 trainer: 1 machine 2 candidates: 1 trainer: 2 machine **28 (4 Days) hours including assessment time:** 2 candidates: 1 trainer: 1 machine 3 candidates: 1 trainer: 2 machines 4 candidates: 1 trainer: 2 machines **35 hours (5 Days) including assessment time:** 3 candidates: 1 trainer: 1 machine The maximum number of candidates is four per group, with a maximum number of one machine per group, all learning outcomes **must** be covered by each candidate. Trainers must ensure all candidates get equal and sufficient practical engagement time. *The duration stated in the training standard equals the minimum length of time the course and assessments should take to be completed based on the ratios above. How this is organised is at the discretion of the training provider.*
Experienced Durations	**Minimum** **7 (1 Day) hours including assessment time:** 1 candidate: 1 trainer: 1 machine **14 (2 Days) hours including assessment time:** 2 candidates: 1 trainer: 1 machine 3 candidates: 1 trainer: 2 machines 4 candidates: 1 trainer: 2 machines Candidates **must** cover all learning outcomes of the standard in full, the trainer must decide and be able to demonstrate and document their decisions for choosing the candidates route based on their knowledge and skills through a documented profiling approach. Evidence of the profiling and decisions must be kept and made available on request. **The duration must not be reduced**
Purpose/ Scope	The Purpose and Scope of this standard is to provide the candidate with the skills and knowledge to support the following: • Carrying out all checks and preparation procedures for site operations • Siting the machine safely and efficiently for loading and discharging • Travelling with and without a load on various types of terrain • Understanding the capabilities, purposes, and limitations of the machine

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	• Understanding all safety precautions • Carry out safe working practices
Occupational Relevance	Training delivered against this standard would be relevant to the following occupational group(s): • Operative and craft.
Candidates pre-requisites	**Profiling:** The trainer will demonstrate and document their decisions for choosing either the Novice or Experienced route based on the candidates knowledge and skills through documented profiling. **Novice:** 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. Experience of working on site and a basic knowledge of construction terminology would be beneficial. **Experienced:** The candidate 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 candidates knowledge and skills through a documented profiling approach.
Trainer Requirements	As a minimum, course trainers must be able to demonstrate that, in relation to this standard, they have: Essential: • Either a) A current card issued by one of the CSCS partner plant schemes at trainer/trainer/assessor level bearing the category of telescopic handler. or b) A current card issued by one of the CSCS partner plant schemes at operator level bearing the category of telescopic handler. • Level 3 Award in Education and Training or equivalent qualification listed in Appendix 3 of the Requirements for Approved Training Organisations • Health and safety qualification at or equivalent to construction site management level such as: – Site Safety Plus Site Management Safety Training Scheme (SMSTS) – Site Safety Plus Site Supervision Safety Training Scheme (SSSTS) – IOSH Managing Safely in Construction – IOSH Safety, Health & Environment for Construction Site Managers – 5-day CISRS Managers course – 5-day CCDO Demolition Managers course and end test – 5-day NPORS Construction Site Safety Manager • In addition to the required qualifications, the trainer must be able to demonstrate 'operational' experience of operating the telescopic handler relating to the training they are delivering. This can be demonstrated with a minimum of 2 years' experience. Desirable:

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	• SCQF Level 5/NVQ Level 2 Plant Operations in the specific category being trained • Level 3 Certificate in Assessing Vocational Achievement.
Delivery	Training and assessment may be delivered in an on or off-site environment 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. 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. Welfare facilities must be provided wherever training and assessment takes place, and this should meet relevant legislation. All materials and equipment must be of a suitable quality and quantity for candidates to achieve the learning outcomes delivery and assessment criteria, and must comply with relevant legislation, regulations and industry agreed requirements. The class size and candidate/ trainer ratio must allow training to be delivered in a safe manner and enable learners to achieve the learning outcomes Practical engagement can include seat time, any associated practical checks of the machine e.g. pre-start checks, and observation. Irrespective of the number of candidates, effective learning must be maintained for all candidates. The following training delivery methods may be used in the delivery of this standard: • Face to face learning environment (such as a classroom/workshop/site office) for theoretical learning and assessment • On or off the job site environment for practical learning and assessment • Simulator for practical training. ***Note:*** *If a simulator is used, it can only comprise of a total of 20% of overall practical training and must not be used in any assessment.* This standard is considered to contain 70% or more practical training.
Assessment	For the successful completion of training, candidates must complete an end of course practical test. The test used must be the standard CPCS Theory and Practical Test.
Quality Assurance	CPCS will quality assure against this standard and ensure that all Learning Outcomes have been met. The centre must retain evidence that the learning

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	outcomes are referenced and achieved. This must be held by the training centre for a minimum of six years. 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. 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. Further quality assurance requirements are set out in the Test Centre Scheme Booklet.
Approval Date	*October 2024*
Review Cycle	On request or 5 years from approval date.

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Learning outcomes *Delivery to include and the candidate will be able to:*	Additional guidance to support learning outcome *Training Content to contain the following as a minimum:*	Assessment Criteria
Explain the hazards of working in the construction industry, and their responsibilities as a forward tipping dumper operator		
• Why the industry has many hazards and why safe working practices must be adopted and maintained • Why personal health and safety is not just physical injury and can include the effects of noise and vibration. All of which can lead to lost time, lost income, expense for the employer, fines, custodial sentences etc. • Health & Safety at Work Act 1974, Provision and Use of Work Equipment Regulations (PUWER), Management of Health and Safety of Work (MHSW) Regulations, Construction (Design & Management) Regulations (CDM), Vibration at Work Regulations, Road Traffic Act, HSG144, LOLER, HSG46, L117 etc. in accordance with risk assessments, method statements, codes of practice and other relevant legislation, regulations, and industry good practice • Operators' moral obligations, legal obligations, and environmental obligations • Reporting structures, the importance of good communication on site (colleagues, management, and other workers on site) • Previous incidences involving relevant plant and pedestrians • Working with other related roles e.g., marshallers, supervisors, other plant operatives, other occupations, and support workers	Explain the factors that help maintain a safe working environment in the construction industry, and their role and responsibilities as a plant operator: • Industry type • Sector contribution • Actions required for hazards: **1.** *Noise* **2.** *Vibration* **3.** *Underground and Overhead Services.* • Safe working practices • Effects of hazards: **1.** *Lost time* **2.** *Lost income* **3.** *Expense for the employer* **4.** *Fines* **5.** *Custodial sentences.* • Legislation, Regulations and Guidance: **1.** *Health and Safety at Work Act* **2.** *Provision and Use of Work Equipment Regulations (PUWER)* **3.** *Management of Health and Safety of Work (MHSW) Regulations* **4.** *Construction (Design and Management) Regulations* **5.** *Vibration at Work Regulations* **6.** *Road Traffic Act* **7.** *HSG114* **8.** *HSG46.* • Risk Assessments, Method Statements and Permit to Work	• Identify common hazards on a construction site • Explain safe working practices relevant to the role of the forward tipping dumper operator • Explain personal health and safety relevant to the role of a forward tipping dumper operator • Identify aspects of legislation, regulations, and industry good practice relevant to the role of the forward tipping dumper operator • Describe reporting structures and the importance of good communication on site • Explain the responsibilities of a forward tipping dumper operator.

Learning outcomes *Delivery to include and the candidate will be able to:*	Additional guidance to support learning outcome *Training Content to contain the following as a minimum:*	Assessment Criteria
	• Social Responsibilities • Environmental issues • Reporting structures • Operator Role • Communication with colleagues/ management/ other trades • Customer/ Client needs • Accident Statistics.	
Identify and extract information from the manufacturers' handbook/ operator's manual, and other information sources including digital		
• Use of the operator's manual for the forward tipping dumper during the practical elements of training to identify key preparation, operational and safety aspects of the machine • Types of information sources including machine control systems.	Identify and extract information from the manufacturers' handbook/ operator's manual, and other information sources including digital: • Operator's Manual ***1.*** *Safety Information* ***2.*** *Operation* ***3.*** *Maintenance.* • Codes of practice • Site plans/ drawings • Risk Assessments and Method Statements • COSHH ***1.*** *Safety Data Sheets.* • Load/ tare sheets • Inspection and reporting forms/ procedures.	• Identify and extract key elements for the preparation and safe use of the forward tipping dumper using various sources.
Locate and identify the major components, signs and decals and all controls of the forward tipping dumper and explain their functions		
• The purpose of principal components, the basic construction, controls, and terminology	Locate and identify the major components, signs and decals and all controls of the telescopic handler and explain their functions:	• Identify and explain the function of all controls and warning systems

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Learning outcomes *Delivery to include and the candidate will be able to:*	Additional guidance to support learning outcome *Training Content to contain the following as a minimum:*	Assessment Criteria
• How correct and sympathetic use of the controls can ensure efficiency and safety of the machine and help prolong machine life by reducing wear and tear • Purposes of Roll Over Protection Systems (ROPS) and Falling Objects Protection Systems (FOPS) and other protection systems • Types and use of traction aids	• Differing types of machines • Functions and applications • Power units • Hydraulic systems • Transmissions • Chassis/ steering/ track assembly • Carrying capacities • Type of skips • Side tipping • ROPS • FOPS	• Explain why the correct and sympathetic use of controls aids efficiency, longevity, and safety • State the purposes of ROPS and FOPS and other protection systems • Locate and identify the major components, signs, decals, and controls of the machine • Describe the types and use of traction aids
Conduct all pre-operational checks in accordance with manufacturers and legislative requirements		
• Complete all pre-start and running checks before any activity takes place, including visual checks for damage, functionality, and effectiveness • Checking all componentry systems are fully functional, including mechanical, hydraulic, pneumatic, electrical and electronic etc. • Replenish fuels, fluids and lubricants, and undertake grease-based lubrication activities • Manufacturers periodic checks and operator level maintenance requirements • Defect reporting requirements • Carry out routine adjustments • Safety systems functions including emergency stop • Health and safety requirements when undertaking basic maintenance activities including personal protection equipment (PPE)	Conduct all pre-operational checks in accordance with manufacturers and legislative requirements: • Regular and non-scheduled maintenance procedures: ***1.*** *Axle/ hub oil* ***2.*** *Engine oil level* ***3.*** *Transmission oil* ***4.*** *Coolant level* ***5.*** *Hydraulic oil* ***6.*** *Fuel level* ***7.*** *Grease* ***8.*** *Air cleaner*	• Explain the procedure for defect reporting and why it's important. **The following should be observed during the practical assessment:** • Conduct all pre-operational checks as above in accordance with manufacturer guidance and legislative requirements. ***Note:*** *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.*

Learning outcomes *Delivery to include and the candidate will be able to:*	Additional guidance to support learning outcome *Training Content to contain the following as a minimum:*	Assessment Criteria
• Check condition and function of seatbelt and any other restraining equipment • Check condition and function of any lighting and warning systems	***9.*** *Track assembly* ***10.*** *Track tension* ***11.*** *Fan belt* Check the following functions: • Track controls: ***1.*** *Track pedals* ***2.*** *Isolator lever* • Electrics: ***1.*** *Horn sounds* ***2.*** *Reverse alarm sounds* ***3.*** *Beacon flashes* ***4.*** *Lights – side, main, stop, indicators, hazards.* • Tipping Lever: ***1.*** *Raise/ lower skip* ***2.*** *Rotate – right to left/ left to right* • Defect Reporting Requirements: ***1.*** *All checks and inspections to be recorded and reported to relevant person* • Health and Safety Requirements including Personal Protection Equipment (PPE):	

Learning outcomes *Delivery to include and the candidate will be able to:*	Additional guidance to support learning outcome *Training Content to contain the following as a minimum:*	Assessment Criteria
	1. *Head protection* ***2.*** *Foot protection* ***3.*** *High-visibility clothing* ***4.*** *Weather-appropriate clothing* ***5.*** *Hearing protection* ***6.*** *Eye protection* ***7.*** *Gloves.* ***8.*** *Respiratory protective equipment*	
Identify and maintain personal protective equipment (PPE) and appropriate safety control equipment for a forward tipping dumper use		
• What safety control equipment/PPE should be worn/used for machine operations and include the following: suitable safety footwear, ear defenders, face/eye protection, dust mask, suitable gloves, overalls, hard hat, respiratory protective equipment (RPE), protective clothing etc. • Appropriate use of local exhaust ventilation (LEV), for example, in confined spaces • Why weather conditions, including heat and cold, can determine what PPE is worn when using specific machine and the personal effects of incorrect equipment.	Identify and maintain personal protective equipment (PPE) and appropriate safety control equipment for a telescopic handler operator use: • Head protection • Foot protection • High-visibility clothing • Weather-appropriate clothing • Hearing protection • Eye protection • Gloves • Respiratory protective equipment. Local exhaust ventilation (LEV):	• Describe what forms of PPE and RPE must be worn for site operations • Explain why PPE and RPE must be worn for site operations • Give an example of when use of LEV would be appropriate • State how severe weather can affect safety and health with insufficient equipment.

Learning outcomes *Delivery to include and the candidate will be able to:*	Additional guidance to support learning outcome *Training Content to contain the following as a minimum:*	Assessment Criteria
	• Pre-use checks and regular maintenance • Defects in local exhaust ventilation systems must be reported and promptly rectified. Weather conditions including heat and cold: • Supplying suitable PPE: ***1.*** *Appropriate for the risks involved and the conditions of exposure* ***2.*** *It takes account of the ergonomic requirements and state of health of the user* ***3.*** *It can fit the wearer properly* ***4.*** *Effectively prevents or adequately controls exposure to risk* ***5.*** *Complies with any relevant UK or European Regulation or Directive.*	
Safely get on and off the forward tipping dumper		
• Working at height requirements • Safe use of all hand holds and steps • Facing the machine when getting in to and out of the forward tipping dumper for operational and maintenance purposes • Effects of continually getting in to and out of the forward tipping dumper e.g., fatigue, increased risk of falling etc. • Safe areas to get in to/out of the forward tipping dumper e.g., ground location, other vehicle movements etc.	Safely get on and off the forward tipping dumper • Use grabrails and footsteps provided to reach machine seat: ***1.*** *Mount and dismount facing machine.* • Working at height requirements	• Explain the effects of not using correct procedures to get in and out of the machine including when carrying out adjustment and maintenance activities • Explain the areas for safely getting in and out of the forward tipping dumper. **The following should be observed during practical activities:** • Demonstrate the correct procedures as listed above.

Learning outcomes *Delivery to include and the candidate will be able to:*	Additional guidance to support learning outcome *Training Content to contain the following as a minimum:*	Assessment Criteria
• Procedures for accessing the forward tipping dumper when carrying out adjustment and maintenance activities.	• Pedestrian routes should be established and segregated from mobile plant and vehicles • Traffic routes should be planned in order to minimise congestion and risk of collision • Appropriate speed limits • Parking place designated for vehicles • Operators must be informed of proximity hazards • Ground conditions should be stable and sufficiently level for the operations being carried out. • Plant safe zones. Medical Fitness: • Ensure that operators are medically fit to operate • Employee is physically and mentally capable of undertaking the tasks they are required to carry out. Adjustment and maintenance activities: • Working under raised skip: ***1.*** *Lock skip Safety Prop during maintenance* ***2.*** *Never work under an unpropped skip*	

Learning outcomes *Delivery to include and the candidate will be able to:*	Additional guidance to support learning outcome *Training Content to contain the following as a minimum:*	Assessment Criteria
	3. *When using skip prop engage tipping lever lock (if fitted)* Track adjustment • Tightening the track: ***1.*** *Wipe the fitting before you add grease* ***2.*** *Add grease through grease fitting until the correct track tension is reached* ***3.*** *Operate the machine back and forth in order to equalise the pressure* ***4.*** *Check the amount of sag. Adjust the track, as needed* • Loosening the track: ***1.*** *Loosen relief valve carefully until the track begins to loosen. One turn should be the maximum* ***2.*** *Tighten relief valve when the desired track tension is reached* ***3.*** *Operate the machine back and forth in order to equalise the pressure* ***4.*** *Check the amount of sag. Adjust the track as needed*	

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Prepare the forward tipping dumper for movement – site and public highway travel		
• Use of seatbelts and other restraining equipment • Adjustment of seating position and mirrors • Steering and braking systems checks • Types of visibility aids and what factors can affect clear, all-round vision • Where and why effective vision is extremely important • How and where issues can arise when vision is limited during operation • Warning beacons and other safety systems/lights are operable • Legislative requirements for road travel e.g., licensing for travelling on the public highway • Carrying of passengers/non-authorised personnel.	• Check controls: ***1.*** *Engine cover – secured* ***2.*** *Seat – adjust for comfort/ reach* ***3.*** *Wear seatbelt – adjust* ***4.*** *Check parking brake – on* ***5.*** *Controls – to neutral/ isolator on* ***6.*** *Track levers/ pedals – pressure.* • Seatbelt must be worn when operating machines fitted with a Roll Over Protective Structure • Adjustment of seat and mirrors • Steering and braking systems checks • Visibility aids: ***1.*** *Mirrors* ***2.*** *Proximity warning systems* ***3.*** *Thumbs up procedure.* • Safety zones: ***1.*** *Yellow zone – line of sight of operator and out of danger* ***2.*** *Amber zone – machine immobilised, and personnel must gain permission from the dumper operator* ***3.*** *Red zone – machine must be immobilised, and permission gained from the dumper operator.*	• Identify and select correct PPE and weather-related equipment to be worn during practical activities. • Explain the legal requirements for travelling on the public highway • Type-specific additional requirements • Rotating seat types: – rotating seat system functional and set for intended direction of travel. **The following should be observed during the practical assessment:** • Ensure that the seatbelt is worn correctly prior to any machine movement • Demonstrate how to adjust seating position and mirrors • Demonstrate that functional checks have been completed for all applicable warning lamps, safety systems and visions systems are in place, clear and functional • Conduct all-round visibility checks before moving away and explain why effective vision is extremely important.

Learning outcomes *Delivery to include and the candidate will be able to:*	**Additional guidance to support learning outcome** *Training Content to contain the following as a minimum:*	Assessment Criteria
	• Seat belt wearing indicators: ***1.*** *Rotating green beacon which is activated when the seat belt clasp is engaged* ***2.*** *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.* • Flashing beacon • Travelling on the public highway: ***1.*** *The dumper must be registered and taxed as a "special vehicle"* ***2.*** *The dumper must have vehicle insurance* ***3.*** *If the dumper can exceed 20 mph it must have a horn in good working condition* ***4.*** *If it can exceed 25 mph it must have a speedometer in good working condition* ***5.*** *It must have brakes that enable it to stop within a reasonable distance* ***6.*** *The driver must hold a full car (category H) licence* ***7.*** *Lights and indicators.* • Do not carry passengers.	

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Learning outcomes *Delivery to include and the candidate will be able to:*	Additional guidance to support learning outcome *Training Content to contain the following as a minimum:*	Assessment Criteria
Travel and manoeuvre the forward tipping dumper safely across varying terrain and inclines		
• Travelling over various types of terrain, replicating typical site-type surfaces, in a loaded and unloaded state • How travel speeds and gear selection affect the dumper working efficiency, stability, safety, and emissions • Issues which can occur if departing from designated haul routes • Types of underground services and the effects of travelling loaded machines near to/over services • Effects of travelling close to edges, embankments, and trenches • Travelling on inclines in a loaded and unloaded state • How uncompacted surfaces affect stability • Working on stockpiles, and non-compacted surfaces, authorisation, and requirements • Changes of centre of gravity when in loaded and unloaded state and when on inclines • Procedures in the event of machine roll over.	• Dumper stability: ***1.*** *Ground failure* ***2.*** *Uneven ground* ***3.*** *Travelling on slopes that exceed the limits set by the dumper manufacturer* ***4.*** *Loose track tension* ***5.*** *Inappropriate driving style* ***6.*** *Inappropriate movement of the skip during discharging* • Ground conditions • Ground assessment • Ground related hazards: ***1.*** *Soft ground* ***2.*** *Voids* ***3.*** *Underground services* ***4.*** *Lack of maintenance of running surfaces* ***5.*** *Excavations* ***6.*** *Open or steep sided edges* ***7.*** *Slopes* ***8.*** *Excessive travel speed* ***9.*** *Wet ground* ***10.*** *Environmental constraints such as habitat protection* ***11.*** *Dry and dusty roads – need for eye protection.*	• Describe what issues can occur if departing from designated haul routes • List the types of underground services and explain the effects of travelling loaded machines near to/over services • Describe the effects of travelling close to edges, embankments, and trenches • Explain how uncompacted surfaces affect stability • Explain procedures for working on stockpiles, and non-compacted surfaces, authorisation, and requirements • Explain the changes of centre of gravity when in loaded and unloaded state and when on inclines • Describe the procedures in the event of machine roll over. **The following should be observed during the practical assessment:** • Demonstrate safe travel over rough, undulating ground, steep inclines, level surfaces • Demonstrate safe travel speeds in accordance with terrain and environment • Face the direction of travel • Travel up and down a gradient (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)

Learning outcomes *Delivery to include and the candidate will be able to:*	Additional guidance to support learning outcome *Training Content to contain the following as a minimum:*	Assessment Criteria
	• Ground improvement • Haul roads and other routes • The use of dumpers on stockpiles: ***1.*** *Risk assessment and method statement* ***2.*** *Classification of the stockpile material* ***3.*** *Compaction and stability of the ground* ***4.*** *Safe access and egress* ***5.*** *Stop blocks and/ or edge berms* ***6.*** *Turning circle or egress ramp to be provided* ***7.*** *Stockpile formed and maintained using an excavator.* • Working on gradients: ***1.*** *Do not exceed maximum stated gradients* ***2.*** *Do not turn across gradients* ***3.*** *Do not brake suddenly in wet, muddy, icy conditions or when operating on loose surfaces* ***4.*** *Do not run downhill with controls in neutral* ***5.*** *Travel straight up, down, or along a gradient* ***6.*** *Keep speed to a minimum and use the track levers/ pedals to reduce speed when travelling down gradients*	• Stop and start procedures on the gradient whilst travelling uphill • Stop and start procedures on the gradient whilst travelling downhill - reverse the dumper (minimum 30 metres) in a straight line and through a restriction (un-laden and laden).

Learning outcomes *Delivery to include and the candidate will be able to:*	Additional guidance to support learning outcome *Training Content to contain the following as a minimum:*	Assessment Criteria
	7. *Always engage parking brake when stopped on sloping ground and in addition chock tracks securely when leaving the machine unattended to prevent movement* ***8.*** *If laden drive uphill* ***9.*** *If laden reverse downhill* ***10.*** *If unladen reverse uphill* ***11.*** *If unladen drive downhill*	
Manoeuvre in areas of restricted space		
• Precautions to be taken when manoeuvring in areas of restricted space • Visual checks of the area for hazards and how to determine if safe to proceed • Check dumper size relevant to working area, including working height, width, and steering angle • Lighting requirements and issues that may occur due to poor light conditions • Communication requirements with marshallers	• Factors to be considered during the planning stage: ***1.*** *Limited manoeuvring room for the dumper to approach the loading machine at correct angles* • A higher risk of the dumper being loaded whilst on an incline: ***1.*** *Limited manoeuvring room to allow the dumper to traverse an incline in the correct direction, either laden or unladen* ***2.*** *Close proximity of the loading machine to the dumper, increasing the risk of striking the machine* ***3.*** *Limited options for the operator to be in a safe place during the loading activity* ***4.*** *Poor environmental conditions such as dust and fumes*	• Describe the precautions to be taken when manoeuvring in areas of restricted space • Explain how to determine if safe to proceed • Describe lighting requirements and issues that may occur due to poor light conditions • Explain communication requirements with marshallers. **The following should be observed during the practical assessment:** • Manoeuvre the forward tipping dumper through a chicane, applying the full steering range in both forward and reverse direction (un-laden and laden) • Maintain full visibility and look at or face direction of travel • Avoid contact with structures and objects.

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	5. *Restricted headroom.* • Lighting and warnings • All-round visibility • Plant safe zones • Recognised hand signals: ***1.*** *The signaller should stand in a secure position, where they are visible to the operator.*	
Conduct all necessary safety checks at the loading and discharging areas		
• Safety checks that must be carried out to ensure the loading area and discharging area are clear of hazards • Actions required for emergency situations • Loading and discharge area segregation from other activities • Sufficient manoeuvring area • Ground conditions to support dumper and load weight and maintains dumper stability • Communication requirements and methods with loading operator • Working in hours of darkness and lighting requirements	Conduct all necessary safety checks at the loading and discharging areas • Types of discharge areas: ***1.*** *Edge, stockpile, or excavation* • Edge and machine protection ***1.*** *Banks (berm)/ spotting logs etc.* • Ground, stability/centres of gravity (raised skips) ***1.*** *Discharge area must be firm and level* ***2.*** *Dumper must be 90° to the tipping point* • Material jams ***1.*** *Cohesive soils can stick to base of skip*	• Explain why safety checks of the loading and discharging area are necessary • Explain the need for sufficient manoeuvring area and what ground conditions are required for dumper stability **The following should be observed during the practical assessment:** • Identify and use designated loading area entry and exit locations • Demonstrate how to ensure the loading area is clear of hazards and explain why this is important • Establish communication methods with loading machine operators and support workers

Learning outcomes *Delivery to include and the candidate will be able to:*	Additional guidance to support learning outcome *Training Content to contain the following as a minimum:*	Assessment Criteria
	• Discharging on inclines ***1.*** *Do not discharge load when working on sloping ground* • Discharging whilst moving ***1.*** *Discharging whilst moving is not good practice* • Side discharging • Signalling/following instructions ***1.*** *Communication with loading operator* • Fully emptying skips • Visibility ***1.*** *Hours of darkness and lighting requirements* • Hazards.	
Position to receive loads		
• Gearing and travel speed selection when approaching loading position • Why the machine should not be driven towards the raised bucket of a loading excavator • Various types of loading equipment, for example conveyers, hoppers and characteristics of each • Why ground conditions and level ground are important for loading purposes	Position to receive loads Factors to consider when preparing the area for loading: • The terrain for loading should be level and of firm ground • Other plant should be clear of the loading area	• Explain why the machine should not be driven towards a raised bucket of a loading excavator • List various types of loading equipment • Describe machine isolation requirements • Explain the factors that may allow the operator to seated if within an appropriate cabbed machine

Learning outcomes *Delivery to include and the candidate will be able to:*	Additional guidance to support learning outcome *Training Content to contain the following as a minimum:*	Assessment Criteria
• Procedures to be followed to ensure no unintentional movement of the machine during loading • Machine isolation requirements • Factors that ensure operative personal safety during the loading process including designated safe areas • Factors that may allow the operator to stay seated if within an appropriate-cabbed machine	• An effective exclusion zone should be in place to prevent workers entering the loading area • The operator of the loading machine should have good visibility of the skip • A safe location for the operator to stand so that the loading machine operator is visible to the dumper operator Loading procedures using an Excavator • Approach the loading machine in line with excavator's discharge point 1. *Travel speed selection* 2. *Do not approach raised bucket of loading machine* • Sufficient distance between the stopping point of the dumper and excavator • Control levers to neutral and engine stopped, and operator (for non-FOPS cabbed versions) dismount the machine • Operator must be in a safe place prior to loading • Loaded material should not be above the top of the skip • Once loaded to capacity, loading machine operator signals dumper operator that machine can be moved Loading machine considerations: • 360° Excavator	**The following should be observed during the practical assessment:** • Position the dumper for loading following loading operator's instructions using appropriate gearing and travel speed • Ensure the dumper is parked on firm level ground for loading and explain why ground conditions and level ground are important for loading purposes • Ensure that the machine is braked and isolated prior to loading • Receive a minimum of 3 x loads to capacity of the machine • Ensure that the dumper operator is within a designated safe area prior to the loading operation

Learning outcomes *Delivery to include and the candidate will be able to:*	Additional guidance to support learning outcome *Training Content to contain the following as a minimum:*	Assessment Criteria
	1. *360° slew ability and sufficient reach and height to efficiently load the dumper* • 180° Excavator 1. *The rear backhoe is normally used for loading dumpers* • Loading shovel/ 180° Excavator front loader 1. *Front bucket should not be used for loading purposes unless the width of the bucket does not exceed that of the dumper skip* • Conveyers 1. *Transports materials in a linear motion and the discharge point cannot normally be adjusted*	
Ensure load integrity and security		
• How different material properties will affect the weight/volume of materials to be carried • Causes of overloading • What can and cannot be carried in the skip • What the manufacturers requirements are for transporting loads and load height • How to ensure that the skip is not overloaded	Ensure load integrity and security • The level of the load placed within the skip should not be above the top of the skip (struck load): 1. *Risk of collision with structures, people, plant*	• Explain how to check that the skip is not overloaded with material • Explain where to find the manufacturers requirements for load height limits and securely transporting loads, check all loose material is removed before travel and explain why this is important • Explain what is meant by the maximum utilisation of a dumper and how this is determined

Learning outcomes *Delivery to include and the candidate will be able to:*	Additional guidance to support learning outcome *Training Content to contain the following as a minimum:*	Assessment Criteria
• How an overloaded skip or offset load can affect stability and safety • Factors with loads that project beyond the skip • What is meant by maximum utilisation of the machine to transport loads • Why load integrity is important to safe operations	• Excess materials add weight which places extra strain on the dumper's component • Additional weight could overload the dumper's hydraulic system • Load binds together during discharging, moving the centre of gravity forward causing potential overturn in a forward direction • Dumper's centre of gravity has been raised which will make it more unstable, particularly on inclines • Excess weight creates higher ground pressure through the track assembly • Excess weight can excessively compact the ground, potentially damaging underground services and haul routes • Excessive speed when cornering or harsh braking can cause material to move • Material properties: ***1.*** *Solid, Semi – fluid, fluid*	• Explain why load integrity is important to safe operations **The following should be observed during the practical assessment:** • Ensure that there is effective forward vision for travelling and that the load is secure
Transfer loads to different locations		
• Factors that affect safe and effective transportation of loads • Prior confirmation on where each load needs to be transported to	Transfer loads to different locations: • Haul roads, routes between loading and discharge points and access ramps should be of sufficient size, strength, and well maintained	• Explain how to stay clear of any route hazards **The following should be observed during the practical assessment:** • Demonstrate keeping within designated travel routes

Learning outcomes *Delivery to include and the candidate will be able to:*	Additional guidance to support learning outcome *Training Content to contain the following as a minimum:*	Assessment Criteria
• Haul road protocols between loaded and unladen machines	• Gradients and inclines are a particular hazard to dumper operations • Travel on or across inclines is minimised • Sharp changes of gradient should be avoided • Haul routes may need to zig-zag up the slope to minimise the driving gradient • Site speed limits should be set and enforced to reduce the risk of collisions and overturns • Suitable and sufficient measures must be taken to prevent a vehicle from falling into any excavation or pit, or into water, or overturning the edge of any embarkment or earthwork	• Maintain full observation • Ensure travel speeds in accordance with terrain and environment
Discharge loads		
• Typical hazards within a discharge area and reasons for exclusion zones • What checks need to be carried out at the discharge area • Typical hazards of discharging loads into trenches including over edges, to include overrun prevention, substantial edge protection and ground stability • Ground conditions to prevent instability • Vision requirements to avoid overrun • Factors that can affect machine stability when raising a loaded skip including stuck loads	Discharge loads: The location for load discharging should be planned and controlled so that risks are minimised during the discharging process, which may be hazardous due to several factors including: • The dumper could be approaching an edge or an excavation	• Explain why pre-discharge checks are important **The following should be observed during the practical assessment:** • Check that the discharge area is clear of hazards • Demonstrate entering the discharge area exclusion zone using correct entry point • Check that the ground at discharge area is level and firm

Learning outcomes *Delivery to include and the candidate will be able to:*	Additional guidance to support learning outcome *Training Content to contain the following as a minimum:*	Assessment Criteria
• Procedures for discharging loads including preventing unintentional machine movement • Requirements for side-discharge or elevating skip types • Procedures for ensuring full discharge of the skip and clearing the discharge area • How to form stockpiles	• Continual discharge at a tipping point can cause changes in the ground and affect stability • As a skip is raised to discharge a load, the centre of gravity is both raised and moves towards the front of the machine, making it less stable • Cohesive soils can stick to the base of the skip and cause the dumper to overturn • The discharge area must be level and firm • The dumper must be at 90° to the tipping point prior to discharging • Discharge of material over an edge or within a trench: ***1.*** *Physical barrier such as an earth berm or 'stop-block'* ***2.*** *Ratio of the track assembly to barrier height should be sufficient to prevent overrun* • When a stockpile is being formed, the deposited material should be placed at the foot of the heap only, so that the dumper remains level and on firm ground • Prior to discharge, the operator should place control levers to neutral and place the transmission into neutral before raising the skip • Operate all controls smoothly	• Demonstrate employment/ use of trench overrun devices/ berms or similar and explain why it's important to use them • Demonstrate the discharge of a minimum of 2 x loads over an edge or into an excavation using substantial edge protection (the trench or an edge must be at least 1 x metre deep and a minimum of 2 x the machine's width) • Demonstrate discharging loads to form a stockpile • Check to ensure that the load has been fully discharged and the skip is empty before receiving another load or completion of operations • Maintain full visibility and stability during the discharging activity

Learning outcomes *Delivery to include and the candidate will be able to:*	Additional guidance to support learning outcome *Training Content to contain the following as a minimum:*	Assessment Criteria
	• Discharging must not begin until all personnel are clear of the discharging area • Extreme care to be taken when discharging high lift dumpers • Dumpers fitted with rotating, or swivel skip allows load to be discharged up to 90° from the dumper's centre line ***1.*** *On raising the skip, the machine's centre of gravity moves towards the discharge side and increases the ground bearing pressure under the corresponding tracks* • The stockpile should be formed and maintained using an excavator	
Explain environmental considerations of machine use		
• Health and social reasons to reduce machine emissions • Government industry zero emission initiatives • What 'tailpipe' emissions are caused by compression ignition (CI) diesel engines during internal combustion • Air quality and the component gases of air • How engine emissions, including particulate matter affect air quality and the effects on human and environmental wellbeing	Explain environmental consideration of machine use Air Pollution: • Common construction activities that contribute to air pollution include: ***1.*** *Use of plant and vehicles on site* ***2.*** *Land clearing and demolition* ***3.*** *Chemicals.* • Consequences of air pollution:	• Explain the health and social reasons for reducing machine emissions • Discuss government industry zero emission initiatives • List two or more effects on human and environmental wellbeing as a result of engine emissions • Identify measures to reduce emissions on site • Explain appropriate disposal of waste • Explain spillage procedures

Learning outcomes *Delivery to include and the candidate will be able to:*	**Additional guidance to support learning outcome** *Training Content to contain the following as a minimum:*	Assessment Criteria
• Measures to reduce emissions during operations including alternative/low emission fuels, fuel treatments and particulate filtration systems • Efficient use of the machine and when and how minimising engine use can aid air quality and fuel savings • Eco-friendly oils, fluids and lubricants • Fuel-saving techniques for specific item of plant • Appropriate disposal of waste • Spillage procedures	1. *Employees* 2. *Local Residents* 3. *Environmental.* Water Pollution: • Common construction sources that contribute to air pollution include: 1. *Diesel and oil* 2. *Cement* 3. *Other toxic chemicals.* • Consequences of water pollution: 1. *People* 2. *Environmental – water contamination.* Noise Pollution: • Effects of noise pollution: 1. *Potential hearing loss.* Pollution Prevention Strategies: • Air pollution: 1. *Adopt hybrid technology* 2. *Use low sulphur diesel* 3. *Improve existing equipment* 4. *Wear appropriate PPE.*	• Describe the need to keep engine speed and load to a minimum whilst maintaining working efficiency

Learning outcomes *Delivery to include and the candidate will be able to:*	**Additional guidance to support learning outcome** *Training Content to contain the following as a minimum:*	Assessment Criteria
	• Water pollution: ***1.*** *Monitor and improve your management and disposal of site waste* ***2.*** *Keep materials secure* ***3.*** *Cover up all drains* ***4.*** *Keep the road and footpath to the site clean* ***5.*** *Properly treat any chemical spillages* ***6.*** *Ensure plant and equipment is properly maintained and operated.* • Noise pollution: ***1.*** *Use quiet equipment* ***2.*** *Schedule work during sociable hours* ***3.*** *Put acoustic (movable noise) barriers in place* ***4.*** *Ensure plant and equipment is properly maintained and operated* ***5.*** *Switch off plant when it's not in use* ***6.*** *Ensure employees wear the correct PPE.*	
Explain loading/ unloading procedures for machine transportation		

Training Standard
A09B - Forward Tipping Dumper - Tracked

Learning outcomes *Delivery to include and the candidate will be able to:*	Additional guidance to support learning outcome *Training Content to contain the following as a minimum:*	Assessment Criteria
• Procedures for preparing the forward tipping dumper for loading onto a transporter • Traction and surface preparation requirements • Understanding of agreed methods of communication between the plant operator and others • Working at height requirements when driving onto or off a transporter bed.	Explain loading/ unloading procedures for machine transportation Loading and unloading areas should be: • Clear of other traffic, pedestrians, and people • Clear of overhead electric cables • Level, to maintain stability, trailers should be parked on firm level ground • Ensure the vehicle or trailer has its brakes applied and all stabilisers are used • Working at height to be considered • Always check the floor or deck of the transportation. Loading Procedure: ***1.*** *Reverse machine slowly onto a suitable trailer* ***2.*** *Control levers to neutral* ***3.*** *Stop engine* ***4.*** *Chock tracks (to prevent movement)* ***5.*** *Secure the trailer* ***6.*** *Ensure legal load (height/ weight)*	• Describe the preparation required of both dumper and transporter for loading and unloading of the dumper • Explain the precautions to be taken when driving the dumper onto and off the transporter bed • State the methods of communication between the dumper operator and others • Describe the dangers of and requirements for working at height when on the vehicle bed.

Training Standard
A09B - Forward Tipping Dumper - Tracked

Learning outcomes *Delivery to include and the candidate will be able to:*	Additional guidance to support learning outcome *Training Content to contain the following as a minimum:*	Assessment Criteria
Carry out all end of work and shut down procedures		
• Types of safe locations, areas, and ground/terrain types where machine may be parked and should not be parked • Reasons for ensuring safe parking and unintentional movement and ground support requirements • Carrying out parking, shut down and isolation requirements according to manufacturer's instructions • Reasons for machine isolation including security and non-authorised use by others • Use of anti-vandalism equipment.	Carry out all end of work and shut down procedures • Shut down procedures: **1.** *If turbo is fitted, you must run down the engine, failing to do this will result in shortening the life of the turbo* **2.** *Control levers to neutral* **3.** *Key removed* **4.** *Door locked (if cab fitted)* • Security: **1.** *Ensure that all vehicles are securely immobilised whenever the site is unoccupied* **2.** *Anti – vandalism equipment fitted (if required).* • When parking the machine at the end of the shift ensure the machine is not parked: **1.** *Site roads* **2.** *Pedestrian routes* **3.** *Soft/ wet/ steep ground* **4.** *Access/ egress routes from buildings.*	• Describe the use of anti-vandalism equipment • Explain the need for operators to remove debris/ packed earth from undercarriage components **The following should be observed during the practical assessment:** • Demonstrate and explain safe parking of the dumper - dumper is parked in a safe, designated location, clear of hazards on level, firm ground • Apply brake systems effectively • Demonstrate how to isolate and secure the machine to prevent non-authorised use and explain why this is important.

Additional information About this Standard

Emphasis to be placed on the following topics:

- Travelling on inclines – travelling and steering up, down and across inclines
- Stability with raised skips or uneven ground – checking ground prior to tipping – tipping slowly (weight transfer) – procedure for tipping on inclines, changing centres of gravity
- Excessive 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, knowledge of cab and conventional machine manufacturers driving requirements particularly whilst being loaded, travelling on inclines and discharging loads

Note: *The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.*

To identify a machine within this category, a typical telescopic handler would normally have the listed features and be used within the described characteristics:

Category features:

- Chassis with the body, power unit, hydraulic and electrical units
- Forward tipping sided body to carry materials

Category characteristics:

- Able to travel in forward and reverse and change direction during travel by the track drive differential
- Can travel on uneven and loose ground and slopes
- Receives loads by external means and transport up to long distances
- Deposits the load (in most cases) by raising the body

Theory Resource:

- PUWER 1998 Regulations
- HSE GS6
- Codes of Practice
- Operator's manual
- Specifications for types of Forward Tipping Dumpers
- Site traffic management requirements
- Industry Guidance

Measure of this training standard

The candidate is required to pass the following tests:

CPCS Theory Test: Forward Tipping Dumper (All endorsements)

- 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: Forward Tipping Dumper (Specific Endorsement)

- 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.