Training Standard

Title	Forward tipping dumper: wheeled (novice)
Duration	**Minimum** **17 hours including assessment time** 1 learner. 1 trainer. 1 machine 2 learners.1 trainer. 2 machines **37 hours including assessment time** 3 learners.1 trainer. 1 machine **28 hours including assessment time** 2 learners. 1 trainer 1 machine 3 learners. 1 trainer. 2 machines 4 learners. 1 trainer. 2 machines The maximum number of learners is four per group, with a maximum number of two machines per group, all learning outcomes **must** be covered by each learner. Trainers must ensure all learners 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.*
Learners pre-requisites	The learners 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.
Purpose/ scope	The purpose and scope of this standard is to provide the learners with the 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 • 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
Instruction/ supervision	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 instructor/trainer/assessor level bearing the category of forward tipping dumper or b) a current card issued by one of the CSCS partner plant schemes at operator level bearing the category of forward tipping dumper • 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, examples of which can be found in Appendix 6 of the Requirements for Approved Training Organisations. • in addition to the required qualifications, the trainer must be able to demonstrate occupational experience of operating the forward tipping dumper relating to the training they are delivering. This can be demonstrated with a valid and in date blue card from a 'Recognised Organisation' and a minimum of 1 year site experience. Desirable: • S/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 learners to achieve learning outcomes delivery and assessment criteria, and must comply with relevant legislation, regulations and industry agreed requirements. 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.

	Practical engagement can include seat time, any associated practical checks of the machine e.g pre-start checks, and observation time. Irrespective of the number of learners, effective learning must be maintained for all learners. Equal and sufficient practical engagement needs to be considered. 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 & 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 not used in any assessment.*
Assessment	For the successful completion of training, learners must complete an end of course practical assessment and knowledge test that has a clear pass or fail criteria as set out by the card scheme. The marking criteria must effectively measure every aspect of each learning outcome and additional guidance for training and assessment. Assessment must adhere to all points on the CITB Requirements for Approved Training Organisations including Appendix 6 which provides further guidance for assessment.
Quality assurance	**Recognised standard** CITB will gain assurance through the Recognised Organisation's quality arrangements. Approved Training Organisation's will be required to supply confirmation of approval (centre approval and scheme approval) with the related Recognised Organisation's awarding organisation or body. In most cases this will be an approval certificate provided by the Recognised Organisation's awarding organisation or body, listing the routes, qualifications and categories they are approved to deliver. In addition, a copy of the most recent external quality assurance monitoring report will be required, relating to the standard that you wish to be approved for. This information will be reviewed by CITB's quality assurance team. Approval will be subject to the required Recognised Organisation's documentation being supplied by you. As part of the quality assurance checks, CITB may confirm the accuracy of documentation with the issuing organisation. Please refer to the Requirements for Approved Training Organisations Appendix 6 for further guidance on quality assurance.

Training Standard

Renewal	Classification
☒ There are no mandatory renewal or recommended refresher requirements for this standard.	☒ Lifetime *(Please note standards using this classification will only be grant aided once per learners)*

Keywords	FTD, Dumper wheeled, Forward tipping dumper
Approval date	October 2024
Review cycle	On request or 5 years from approval date.

Learning outcomes Including additional guidance to support training delivery and final assessment *The learners will be able to:*
explain the hazards of working in the construction industry, and their responsibilities as a forward tipping dumper operator *Delivery to include*: • 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 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, and HSG47 etc. in accordance with risk assessments, method statements, codes of practice and other relevant legislation, regulations, and industry good practice • operators' moral, legal, and environmental obligations • reporting structures, the importance of good communication on site (colleagues, management, and other workers on site) • past incidences involving relevant plant and pedestrians • working with other related roles e.g. marshallers, supervisors, other plant operatives, other occupations *Assessment criteria:* • identify common hazards on a construction site • explain safe working practices relevant to the role of forward tipping dumper operator • explain personal health and safety relevant to the role of forward tipping dumper operator • identify aspects of legislation, regulations, and industry good practice relevant to the role of forward tipping dumper operator • describe reporting structures and the importance of good communication on site • explain the responsibilities of a forward tipping dumper operator

identify and extract information from the manufacturer's handbook/operator's manual, and other information sources including digital

Delivery to include:

- 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

Assessment criteria:

- identify and extract key elements for the preparation and safe use of the 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

Delivery to include:

- the purpose of principal components, the basic construction, controls, and terminology
- 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

Assessment criteria:

- identify and explain the application of all controls and management functions
- 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 and 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

Delivery to include:

- complete all pre-start and running checks before any activity takes place including visual checks for damage, functionality, and effectiveness
- all componentry systems 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)

- check condition and function of seatbelt and any other restraining equipment
- check condition and function of any lighting and warning systems
- requirements for dealing with fluid spills including prevention and clean-up methods

Assessment criteria:

- conduct all pre-operational checks as above in accordance with manufacturer guidance and legislative requirements (note: verbal description to the instructor of specific pre-start checks will be acceptable if the machine is hot where they cannot be done safely e.g. engine fluids) - *this should be observed during practical assessment*
- explain the procedure for defect reporting and why it's important

identify and maintain personal protective equipment (PPE) and appropriate safety control equipment for forward tipping dumper use

Delivery to include:

- 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), i.e. 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

Assessment criteria:

- 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

safely get on and off the forward tipping dumper

Delivery to include:

- working at height requirements
- safe use of all hand holds and steps
- facing the machine when getting on and off the dumper for operational and maintenance purposes
- effects of continually getting on and off the dumper e.g. fatigue, increased risk of falling etc.
- safe areas to get on/off the dumper e.g. ground location, other vehicle movements etc.
- procedures for accessing the dumper when carrying out adjustment and maintenance activities

Assessment criteria:

- explain the effects of not using correct procedures to get on and off the dumper including when carrying out adjustment and maintenance activities

- demonstrate the correct procedures as listed above – *this should be observed during practical assessment*
- explain the areas for safely getting on and off the dumper

prepare the dumper for movement – site and public highway travel

Delivery to include:

- 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. licencing for travelling on the public highway
- carrying of passengers/non-authorised personnel

Assessment criteria:

- ensure that the seatbelt is worn correctly prior to any machine movement - *this should be observed during practical assessment*
- demonstrate how to adjust seating position and mirrors – *this should be observed during practical assessment*
- demonstrate that functional checks have been completed for all applicable warning lamps, safety systems and visions systems are in place, clear and functional - *this should be observed during practical assessment*
- conduct all-round visibility checks before moving away and explain why effective vision is extremely important - *this should be observed during practical assessment*
- 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

travel and manoeuvre the dumper safely across varying terrain and inclines

Delivery to include:

- 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

Assessment criteria:

- demonstrate safe travel over rough, undulating ground, steep inclines, level surfaces – *this should be observed during practical assessment*
- demonstrate safe travel speeds in accordance with terrain and environment – *this should be observed during practical assessment*
- 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
- face the direction of travel – *this should be observed during practical assessment*
- 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) - *this should be observed during practical assessment*
- stop and start procedures on the gradient whilst travelling uphill - *this should be observed during practical assessment*
- stop and start procedures on the gradient whilst travelling downhill - *this should be observed during practical assessment*
- reverse the dumper (minimum 30 metres) in a straight line and through a restriction (un-laden and laden) - *this should be observed during practical assessment*

manoeuvre in areas of restricted space

Delivery to include:

- 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

Assessment criteria:

- 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
- manoeuvre the dumper through a chicane, applying the full steering range in both forward and reverse direction (un-laden and laden) – *this should be observed during practical assessment*
- maintain full visibility and look at or face direction of travel – *this should be observed during practical assessment*
- avoid contact with structures and objects - *this should be observed during practical assessment*

conduct all necessary safety checks at the loading and discharging areas

Delivery to include:

- 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

Assessment criteria:

- 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
- identify and use designated loading area entry and exit locations - *this should be observed during practical assessment*
- demonstrate how to ensure the loading area is clear of hazards and explain why this is important - *this should be observed during practical assessment*
- establish communication methods with loading machine operators and support workers - *this should be observed during practical assessment*

position to receive loads

Delivery to include:

- 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, e.g. conveyers, hoppers etc. and characteristics of each
- why ground conditions and level ground are important for loading purposes
- 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

Assessment criteria:

- position the dumper for loading following loading operator's instructions using appropriate gearing and travel speed - *this should be observed during practical assessment*
- explain why the machine should not be driven towards a raised bucket of a loading excavator
- list various types of loading equipment
- ensure that the dumper is parked on firm level ground for loading and explain why ground conditions and level ground are important for loading purposes - *this should be observed during practical assessment*
- ensure that the machine is braked and isolated prior to loading - *this should be observed during practical assessment*
- receive a minimum of 3 x loads to capacity of the machine - *this should be observed during practical assessment*
- ensure that the dumper operator is within a designated safe area prior to the loading operation - *this should be observed during practical assessment*
- describe machine isolation requirements
- explain factors that may allow the operator to stay seated if within an appropriate-cabbed machine

ensure load integrity and security

Delivery to include:

- 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
- 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

Assessment criteria:

- 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 that 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 it is determined
- ensure that there is effective forward vision for travelling and that the load is secure - *this should be observed during practical assessment*
- explain why load integrity is important to safe operations

transfer loads to different locations

Delivery to include:

- factors that affect safe and effective transportation of loads
- prior confirmation on where each load needs to be transported to
- haul road protocols between loaded and unladen machines

Assessment criteria:

- demonstrate keeping within designated travel routes - *this should be observed during practical assessment*
- maintain full observation - *this should be observed during practical assessment*
- ensure safe travel speeds in accordance with terrain and environment - *this should be observed during practical assessment*
- explain how to stay clear of any route hazards

discharge loads

Delivery to include:

- 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
- 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

Assessment criteria:

- check that the discharge area is clear of hazards - *this should be observed during practical assessment*
- demonstrate entering the discharge area exclusion zone using correct entry point - *this should be observed during practical assessment*
- check that the ground at discharge area is level and firm - *this should be observed during practical assessment*
- explain why pre-discharge checks are important
- demonstrate employment/use of trench overrun devices/berms etc. and explain why it's important to use them - *this should be observed during practical assessment*
- 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) - *this should be observed during practical assessment*

- demonstrate discharging loads to form a stockpile - *this should be observed during practical assessment*
- check to ensure that the load has been fully discharged and the skip is empty before receiving another load or completion of operations - *this should be observed during practical assessment*
- maintain full visibility and stability during the discharging activity - *this should be observed during practical assessment*

explain environmental considerations of machine use

Delivery to include:

- 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
- measures to reduce emissions during operations including alternative/low emission fuels, fuel treatments and particulate filtration systems etc.
- 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

Assessment criteria:

- 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
- describe the need to keep engine speed and load to a minimum whilst maintaining working efficiency

explain loading/unloading procedures for machine transportation

Delivery to include:

- procedures for preparing the 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

Assessment criteria:

- 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

carry out all end of work and shut down procedures

Delivery to include:

- types of safe locations, areas, and ground/terrain types where dumpers may be parked and should not be parked
- reasons for ensuring safe parking and for ensuring unintentional movement
- carrying out parking, shut down and isolation requirements according to manufacturer's instructions
- reasons for dumper isolation including security and non-authorised use by others
- ensure the load has been fully discharged and the skip is empty
- use of anti-vandalism equipment

Assessment criteria:

- demonstrate and explain safe parking of the dumper (dumper is parked in a safe, designated location, clear of hazards on level, firm ground) - *this should be observed during practical assessment*
- apply brake systems effectively - *this should be observed during practical assessment*
- demonstrate how to isolate and secure the dumper to prevent non-authorised use and explain why this is important - *this should be observed during practical assessment*
- describe the use of anti-vandalism equipment
- explain the need for operators to remove debris/packed earth from undercarriage components

Additional information about this standard

The Management of Health and Safety at Work Regulations 1999
https://www.legislation.gov.uk/uksi/1999/3242/contents/made

Health and Safety at Work Act 1974
https://www.hse.gov.uk/legislation/hswa.htm

The Construction (Design and Management) Regulations 2015
https://www.hse.gov.uk/construction/cdm/2015/index.htm

Road Traffic Act 1988
https://www.legislation.gov.uk/ukpga/1988/52/contents

Provision and Use of Work Equipment Regulations 1998 (PUWER)
https://www.hse.gov.uk/pubns/books/puwer.htm

Safe Use of Vehicles on Construction Sites HSG 144 - HSE
https://www.hse.gov.uk/pubns/books/hsg144.htm

Safety signs and signals. The Health and Safety Regulations 1996
https://www.hse.gov.uk/pubns/books/l64.htm

Plant Safety Group – Safe Use of Dumpers
https://www.cpa.uk.net/safety-and-technical-publications/plant-safety-group

CPA Operational Safety Guidance - Staying Safe When Operating Forward Tipping Dumpers
https://www.cpa.uk.net/safety-and-technical-publications/cpa-generic-guidance

Where EU legislation is listed this should be followed unless superseded by updated legislation, as result of (but not limited to) Brexit.

Related standards