# Lift Truck and Construction Category List

| Accessing Equipment | |
|---|---|
| **Category Number** | **Category** |
| N108 | MEWP Boom |
| N109 | MEWP Scissor |
| N111 | Hoist |
| N119 | Mast Climber |
| N706 | Mobile Towers |

| Small Equipment | |
|---|---|
| **Category Number** | **Category** |
| N017 | Abrasive Wheels - Hand Held Petrol Driven Cut off Saw |
| N025 | Concrete Cutting Chainsaw |
| N301 | Abrasive Wheels |
| N304 | Cable Avoidance Tool |
| N602 | Chainsaw – Maintenance and Cross Cutting |

| Street Works | |
|---|---|
| **Category Number** | **Category** |
| N214 | Road Roller |
| N216 | Road Planer |
| N217 | Road Sweeper |
| N220 | Paver |
| N609 | Winching & Recovery |
| N802 | Gritter / Snowplough |

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# Learning Outcomes for N108
# MEWP Boom

| Learning Outcome | Instructor Notes |
|---|---|
| **Have a basic understanding of the industry, the dangers of working in the industry and their responsibilities as a plant operator** | Explain the structure of the course and the need to comply with your instructions at all times • Explain that the industry is very dangerous and that only safe working practices will be adopted throughout the course • Personal safety is not just the absence of physical injury, can be affected by noise, vibration and can lead to lost time, lost income, expense for the employer, etc • Explain Health & Safety at Work Act 1974, Restraining systems in accordance with risk assessment, PUWER Regulations, LOLER Regulations, Work at Height Regulations and other relevant legislation • CPA Guidance • Remind learners that operators have moral obligations, legal obligations and environmental obligations • Explain reporting structures, the importance of good communication on site (colleagues, management, and other workers on site) |
| **Have a working knowledge of the manufacturer's handbook for the particular machine to be used** | Explain the importance of the manufacturer's handbook and that it will be used throughout the course • Stress that it has to be used in alliance with all relevant legislation and codes of practice • Explain PPE • Harnesses • Machine decals • Site plans • Method statements • Certification • Risk assessments • Inspection and reporting forms • Beaufort wind scale |
| **Be able to locate and identify the major components of the machine and explain their functions** | Explain the different types of components • Explain the function of the components and how they all contribute to the safety and operational integrity of the machine • Explain power units • Hydraulic systems • Drive systems • Wheels / tyres • Chassis, host vehicle • Stability / ground pressure • Outriggers • Attachments • Secondary guarding devices • Safety systems etc |
| **Be able to locate and identify steering, driving and braking controls and explain their functions** | Explain the different controls and their functions • Explain how correct and sympathetic use of the controls can ensure safety and stability of the machine and help prolong machine life by reducing wear and tear. Refer to the manufacturer's handbook, codes of practice and decals |
| **Conduct all pre-operational checks in accordance with manufacturer's and legislative requirements** | Explain the importance of pre-operational checks and legal implications of using a machine without having checked it. Go through the sequence of checking. Use manufacturer's handbook, check sheet, defect reporting procedure etc |
| **Check all emergency lowering functions** | Explain different types of emergency lowering devices, the procedures to be adopted, security and hazards |
| **Safely mount and dismount the machine** | Explain the following fully: Correct mounting procedure • Observations • Use of safe hand holds • Correct dismounting procedure • Observations • Use of safe hand holds |

# Learning Outcomes for N108
# MEWP Boom

| Learning Outcome | Instructor Notes |
|---|---|
| **Configure the machine for travel** | Explain steering controls • Travel position • Visibility • Site travel • Attachments • Road Traffic Act (if appropriate) |
| **Configure the machine for travel and manoeuvre it safely on level / rough ground and inclines in open and confined areas** | Explain the following fully:<br>Procedures for travelling over rough terrain and on inclines • Travel routes • Slopes and inclines • Direction of travel • Traction • Hazards • Ground conditions • Visibility • Working area • Ground clearance • Stability • Machine capability • Safety of personnel • Environmental considerations etc |
| **Conduct all necessary safety checks at the work area, including overhead and underground hazards** | Explain how to carry out safety checks including:<br>Vehicles • Ground conditions • Overhead obstructions • Power lines • Buried services • Other workers etc |
| **Manoeuvre the machine to the work area and correctly configure in readiness to carry out accessing tasks** | Explain all safety procedures to be adopted including:<br>Observations to be made prior to and during manoeuvring machine • Correct machine set up • Check ground type • Work specification • Set up work exclusion zone • SWL • Tools and equipment • Number of people • Height • Signalling • Suspension trauma • Reflow syndrome • Emergency plans etc |
| **Carry out accessing tasks, at various points up to full operating height** | Explain procedures to be adopted including:<br>Hazards • Raising and lowering controls • Stability • Underground services • Overhead hazards • Minimum distances and clearances from overhead power lines • Communication • Signals • Emergency plans etc |
| **Travel with platform raised (where applicable)** | Explain procedures to be adopted including:<br>Machine capability • Travel route • Hazards • Surfaces • Inclines • Visibility • Direction of travel • Controls etc |
| **Demonstrate knowledge and understanding of loading and unloading procedures for machine transportation** | Explain procedures to be adopted including: Different types of transport vehicle • Positioning of load on vehicle • Load security • Use of banksman • Environmental conditions |
| **Carry out all end of shift and shut down procedures** | Explain and demonstrate procedures to be adopted including:<br>Safe parking • Shut down procedures and machine security |

***The learning outcomes listed should not be considered in isolation and may be added to in order to accurately reflect the learner's duties and working environment***

# Learning Outcomes for N109 MEWP Scissor

| Learning Outcome | Instructor Notes |
|---|---|
| **Have a basic understanding of the industry, the dangers of working in the industry and their responsibilities as a plant operator** | Explain the structure of the course and the need to comply with your instructions at all times • Explain that the industry is very dangerous and that only safe working practices will be adopted throughout the course • Personal safety is not just the absence of physical injury, can be affected by noise, vibration and can lead to lost time, lost income, expense for the employer, etc • Explain Health & Safety at Work Act 1974, Restraining systems in accordance with risk assessment, PUWER Regulations, LOLER Regulations, Work at Height Regulations and other relevant legislation • CPA Guidance • Remind learners that operators have moral obligations, legal obligations and environmental obligations • Explain reporting structures, the importance of good communication on site (colleagues, management, and other workers on site) |
| **Have a working knowledge of the manufacturer's handbook for the particular machine to be used** | Explain the importance of the manufacturer's handbook and that it will be used throughout the course. Stress that it has to be used in alliance with all relevant legislation and codes of practice. Explain PPE, harnesses, machine decals, site plans, method statements, certification, risk assessments, inspection and reporting forms, beaufort wind scale |
| **Be able to locate and identify the major components of the machine and explain their functions** | Explain the different types of components • Explain the function of the components and how they all contribute to the safety and operational integrity of the machine • Explain, power units • Hydraulic systems • Drive systems • Wheels / tyres, chassis • Stability / ground pressure • Outriggers • Attachments • Secondary guarding devices • Safety systems etc |
| **Be able to locate and identify steering, driving and braking controls and explain their functions** | Explain the different controls and their functions • Explain how correct and sympathetic use of the controls can ensure safety and stability of the machine and help prolong machine life by reducing wear and tear. Refer to the manufacturer's handbook, codes of practice and decals |
| **Conduct all pre-operational checks in accordance with manufacturer's and legislative requirements** | Explain the importance of pre-operational checks and legal implications of using a machine without having checked it. Go through the sequence of checking. Use manufacturer's handbook, check sheet, defect reporting procedure etc |
| **Check all emergency lowering functions** | Explain different types of emergency lowering devices, the procedures to be adopted, security and hazards |
| **Safely mount and dismount the machine** | Explain the following fully: Correct mounting procedure • Observations • Use of safe hand holds • Correct dismounting procedure, observations, use of safe hand holds |
| **Configure the machine for travel** | Explain steering controls • Travel position • Visibility • Site travel • Attachments • Road Traffic Act (if appropriate) |

# Learning Outcomes for N109 MEWP Scissor

| Learning Outcome | Instructor Notes |
|---|---|
| **Configure the machine for travel and manoeuvre it safely on level ground and inclines in open and confined areas** | Explain the following fully: Procedures for travelling over rough terrain and on inclines • Travel routes • Slopes and inclines • Direction of travel • Traction • Hazards • Ground conditions • Visibility • Working area • Ground clearance • Stability • Machine capability • Safety of personnel • Environmental considerations etc |
| **Conduct all necessary safety checks at the work area, including overhead and underground hazards** | Explain how to carry out safety checks, including: Vehicles • Ground conditions • Overhead obstructions • Power lines • Buried services • Other workers etc |
| **Manoeuvre the machine to the work area and correctly configure in readiness to carry out accessing tasks** | Explain all safety procedures to be adopted including: Observations to be made prior to and during manoeuvring machine • Correct machine set up • Check ground type • Work specification • Set up work exclusion zone • SWL • Tools and equipment • Number of people • Height • Signalling • Suspension trauma • Reflow syndrome • Emergency plans etc |
| **Carry out accessing tasks, at various points up to full operating height** | Explain procedures to be adopted including: Hazards • Raising and lowering controls • Stability • Underground services • Overhead hazards • Minimum distances and clearances from overhead power lines • Communication • Signals • Emergency plans etc |
| **Travel with platform raised (where applicable)** | Explain procedures to be adopted including: Machine capability • Travel route • Hazards • Surfaces • Inclines • Visibility • Direction of travel • Controls etc |
| **Use platform extension section** | Explain different types • Hazards • Manual handling issues • Condition of platform extension • Clearances etc |
| **Demonstrate knowledge and understanding of loading and unloading procedures for machine transportation** | Explain procedures to be adopted including: Different types of transport vehicle • Positioning of load on vehicle • Load security • Use of Banksman • Environmental conditions |
| **Carry out all end of shift and shut down procedures** | Explain and demonstrate procedures to be adopted including: Safe parking • Shut down procedures and machine security |

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# Learning Outcomes for N111 Hoist

| Learning Outcome | Instructor Notes |
|---|---|
| **Have a basic understanding of the industry, the dangers of working in the industry and their responsibilities as a plant operator** | Explain the structure of the course and the need to comply with your instructions at all times • Explain that the industry is very dangerous and that only safe working practices will be adopted throughout the course • Personal safety is not just the absence of physical injury, can be affected by noise, vibration and can lead to lost time, lost income, expense for the employer etc • Explain Health & Safety at Work Act 1974, PUWER Regulations, LOLER Regulations and other relevant legislation • Remind learners that operators have moral obligations, legal obligations and environmental obligations • Explain reporting structures, the importance of good communication on site (colleagues, management, and other workers on site) |
| **Have a working knowledge of the manufacturer's handbook for the particular machine to be used** | Explain the importance of the manufacturer's handbook and that it will be used throughout the course. Stress that it has to be used in alliance with all relevant legislation |
| **Be able to locate and identify the major components of the machine and explain their functions** | Explain the different types of components • Explain the function of the components and how they all contribute to the safety and operational integrity of the machine • Explain, different types, power units, lifting and lowering systems, platforms, stability, erection procedures, positioning, safety systems, applications etc |
| **Be able to locate and identify the operating controls and explain their functions** | Explain the different controls and their functions • Explain how correct and sympathetic use of the controls can ensure safety and stability of the machine and help prolong machine life by reducing wear and tear. Refer to the manufacturer's handbook, codes of practice, capacity plate, decals, method statements, etc |
| **Conduct all pre-operational checks in accordance with manufacturer's and legislative requirements** | Explain the importance of pre-operational checks and legal implications of using a machine without having checked it. Go through the sequence of checking. Use manufacturer's handbook, check sheet, defect reporting procedure etc |
| **Ensure that hoist-way protection is in place prior to use** | Explain the different types, specifications, access, visibility, procedures, and hazards |
| **Check that all gates and safety devices function correctly, according to manufacturer's recommendations** | Explain:<br>Different types • Specifications • Functions • Access • Visibility • Hazards |

# Learning Outcomes for N111 Hoist

| Learning Outcome | Instructor Notes |
|---|---|
| **Check the capacity of the hoist, loads and / or passengers** | Explain:<br>Specifications • Safe working loads • Load charts • Decals etc |
| **Check emergency lowering devices for functionality** | Explain:<br>The different types • Procedures to be adopted • Security of loads and / or passengers • Hazards, etc |
| **Check for overhead hazards and take all necessary precautions** | Explain the types of:<br>Overhead hazards • Minimum distances and clearances etc |
| **Load and unload materials into and out of the hoist safely** | Explain and demonstrate procedures to be adopted including:<br>Types of load • Load sizes • Even weight distribution • Manual handling techniques |
| **Prepare the hoist for goods and / or passengers** | Explain:<br>Safe working load • Loading sequence • Access and egress • Passenger / load security • Weight distribution • Destinations etc |
| **Operate the hoist to the full range of its capabilities, loaded and unloaded** | Explain and demonstrate the following:<br>Controls • Visibility • Hazards • Observation • Signalling • Emergency procedures |
| **Comply with signals** | Explain the following:<br>Types of signals • How to respond to signals or instructions • Methods of signalling |
| **Carry out all end of shift and shut down procedures** | Explain and demonstrate procedures to be adopted including:<br>Safe parking • Shut down procedures and machine security |

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# Learning Outcomes for N119
# Mast Climber

| Learning Outcome | Instructor Notes |
|---|---|
| **Have a basic understanding of the industry, the dangers of working in the industry and their responsibilities as a plant operator** | Explain the structure of the course and the need to comply with your instructions at all times. Explain that the industry is very dangerous and that only safe working practices will be adopted throughout the course • Personal safety is not just the absence of physical injury, can be affected by noise, vibration and can lead to lost time, lost income, expense for the employer, etc. • Explain Health & Safety at Work Act 1974, Restraining systems in accordance with risk assessment, PUWER Regulations, LOLER Regulations and other relevant legislation • Remind learners that operators have moral obligations, legal obligations and environmental obligations • Explain reporting structures, the importance of good communication on site (colleagues, management, and other workers on site) |
| **Have a working knowledge of the manufacturer's handbook for the particular machine to be used** | Explain the importance of the manufacturer's handbook and that it will be used throughout the course. Stress that it has to be used in alliance with all relevant legislation and codes of practice. Explain PPE, harnesses, machine decals, site plans, method statements, certification, risk assessments, inspection and reporting forms |
| **Be able to locate and identify the major components of the machine and explain their functions** | Explain the different types of components • Explain the function of the components and how they all contribute to the safety and operational integrity of the machine • Explain, power units • Drive systems • chassis • Stability / ground pressure • Outriggers • Attachments • Secondary guarding devices • Safety systems etc |
| **Be able to locate and identify lifting, lowering and braking controls and explain their functions** | Explain the different controls and their functions • Explain how correct and sympathetic use of the controls can ensure safety and stability of the machine and help prolong machine life by reducing wear and tear. Refer to the manufacturer's handbook, codes of practice and decals |
| **Conduct all pre-operational checks in accordance with manufacturer's and legislative requirements** | Explain the importance of pre-operational checks and legal implications of using a machine without having checked it. Go through the sequence of checking. Use manufacturer's handbook, check sheet, defect reporting procedure etc |
| **Erect mast climber as per manufacturer's instruction taking into account ground pressures and securing methods** | Explain all safety procedures to be adopted including:<br>Observations to be made prior to and during accessing • Correct machine set up • Outrigger placement • Check ground type • Work specification • Set up work exclusion zone • SWL • Tools and equipment • Number of people • Height • Signalling • Ground pressures • Emergency plans etc |
| **Check all emergency lowering functions** | Explain different types of emergency lowering devices, the procedures to be adopted, security and hazards |

# Learning Outcomes for N119
# Mast Climber

| Learning Outcome | Instructor Notes |
|---|---|
| **Safely mount and dismount the machine** | Explain the following fully:<br>Correct mounting procedure • Observations • Use of safe hand holds • Correct dismounting procedure, observations, use of safe hand holds |
| **Configure the machine for accessing safely on level ground in open and confined areas** | Explain the following fully:<br>Hazards • Ground conditions • Visibility • Working area • Ground clearance • Stability • Machine capability • Safety of personnel • Environmental considerations, SWL etc |
| **Conduct all necessary safety checks at the work area including overhead and underground hazards** | Explain how to carry out safety checks, including: Vehicles • Ground conditions • Overhead obstructions • Power lines • Buried services • Other workers etc. |
| **Carry out accessing tasks, at various points up to full operating height** | Explain procedures to be adopted including:<br>Fall arrest systems, Hazards • Raising and lowering controls • Stability • Underground services • Overhead hazards • Minimum distances and clearances from overhead power lines • Communication • Signals • Emergency plans etc |
| **Use platform extension section** | Explain different types • Hazards • Manual handling issues • Condition of platform extension • Clearances etc |
| **Demonstrate knowledge and understanding of loading and unloading procedures** | Explain procedures to be adopted including:<br>Safe and correct Manual Handling techniques • Positioning of load on platform • Load security • Environmental conditions |
| **Carry out all end of shift and shut down procedures** | Explain and demonstrate procedures to be adopted including:<br>Safe parking • Shut down procedures and machine security |

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# Learning Outcomes for N706
# Mobile Towers

| Learning Outcome | Instructor Notes |
|---|---|
| **Have a basic understanding of the industry, the dangers of working in the industry and their responsibilities** | Explain the structure of the course and the need to comply with your instructions at all times • Explain that the industry is very dangerous and that only safe working practices will be adopted throughout the course. Personal safety is not just the absence of physical injury, can be affected by noise, vibration and can lead to lost time, lost income, expense for the employer etc • Explain Health & Safety at Work Act 1974, Restraining systems in accordance with risk assessment, PUWER Regs, risk assessments, method statements, ACOP, Working at Height Regulations, PPE Regulations and Manual Handling Regulations • Remind learners that operators have moral obligations, legal obligations and environmental obligations • Explain reporting structures, the importance of good communication on site (colleagues, management, and other workers on site) |
| **Have a working knowledge of the manufacturer's handbook for the particular mobile scaffold to be used** | Explain the importance of the manufacturer's handbook and that it will be used throughout the course. Stress that it has to be used in alliance with all relevant legislation |
| **Be able to locate and identify the major components of the mobile scaffold and explain their functions** | Explain the different types of components of the mobile scaffolding • Explain the function of the components and how they all contribute to the safety and operational integrity of the mobile scaffolding • Explain guards • Toe boards • Safety systems etc |
| **Conduct all safety checks in accordance with manufacturer's and legislative requirements** | Explain the importance of checks and legal implications of using mobile scaffolding without having it checked. Use manufacturer's handbook, check sheet, defect reporting procedure, also check weather conditions, wind speed etc |
| **Select suitable type of mobile scaffolding relative to the work being undertaken** | Explain the different type's mobile scaffolding that are available and may be selected dependant on the type of work being conducted, the location, etc |
| **Identify and maintain PPE appropriate for mobile scaffolding** | Explain that PPE should include the following: Hi-Viz clothing, overalls, suitable safety boots, fall arrest systems, ear defenders, face / eye protection, dust mask if appropriate, suitable gloves, hard hat etc |

# Learning Outcomes for N706
# Mobile Towers

| Learning Outcome | Instructor Notes |
|---|---|
| **Erect dismantle and relocate mobile scaffolding safely and efficiently** | Explain and demonstrate the following fully:<br>• Walk the site and highlight uneven ground, general ground conditions and remove any hazards e.g. works debris • Locate overhead obstructions • Set up and secure exclusion zone and set out warning signs and barriers to warn the workforce and members of the public • Confirm wind speeds and weather conditions are suitable to work safely • Reduce to 4m in height before moving the mobile scaffolding • Report any hazards that cannot be removed • Minimise storage of materials and equipment on the platform • Confirm toe boards are fitted • Demonstrate correct procedure for dismantling mobile scaffolding correctly |
| **Carry out end of work inspections** | Explain and demonstrate procedures to be adopted including:<br>• Place barriers around at ground level to prevent people from walking into the tower work area • Check condition of platform boards, guard rail hooks, guard rails, wheels, brakes, adjustment mechanisms, safety pins etc • Remove or board over access if it is to remain in the same position unattended |
| **Environmental considerations** | Explain and demonstrate procedures to be adopted including:<br>• All round clear visibility • Communication system, signals, radios etc • Noise • Vibration • Ground contamination from work debris • Flying debris • Dust |
| **Storage of mobile scaffolding** | Explain and demonstrate the following:<br>Correct and secure storage of mobile scaffold as per manufactures recommendations |

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# Learning Outcomes for N017
# Petrol Driven Cut Off Saw

| Learning Outcome | Instructor Notes |
|---|---|
| **Have a basic understanding of the industry, the dangers of working in the industry and their responsibilities as an operative** | Explain the structure of the course and the need to comply with your instructions at all times • Explain that the industry is very dangerous and that only safe working practices will be adopted throughout the course • Personal safety is not just the absence of physical injury, can be affected by noise, vibration and can lead to lost time, lost income, expense for the employer etc • Explain Health & Safety at Work Act 1974, MHASAW, PUWER, HSG 17, HSG53, COSHH • Face fitting must be covered by someone competent in Face fitting. • CIS 54 (revision 1), BS EN 166 eyewear markings, crystalline silica etc • Remind learners that operators have moral obligations, legal obligations and environmental obligations • Explain reporting structures, the importance of good communication on site (colleagues, management, and other workers on site) |
| **Have a working knowledge of the manufacturer's handbook and be familiar with other sources of information available including relevant legislation** | Explain the importance of the manufacturer's handbook and that it will be used throughout the course. Stress that it has to be used in alliance with all relevant legislation |
| **Be able to locate and identify the major components of the machine and explain their functions** | Explain the different types of components • Explain the function of the components and how they all contribute to the safety and operational integrity of the machine • Explain the different types of abrasive discs / mounted wheels available and explain their uses |
| **Be able to locate and identify key controls and explain their functions** | Explain the different controls and their functions • Explain how correct and sympathetic use of the controls can ensure safety of the machine and help prolong machine life by reducing wear / tear • Explain and identify the identification plate, information on the plate. Explain the information on different types of cutting wheels • Fuel tank • Primer bowl • Pull cord • Safety locking button / bar • Start / stop switch • Choke • Bolt and flange washer • Disc guard • Spark plug • Air filter • Fuel mixture ratio • Dust suppression system and all other safety systems etc. Refer to the manufacturer's handbook, codes of practice and decals etc |
| **Conduct all pre-operational checks in accordance with manufacturer's and legislative requirements** | Explain the importance of pre-operational checks and legal implications of using a machine without having checked it • Go through the sequence of checking • Explain the importance of pre-operational checks and legal implications of using a cutting disc without having checked it • Go through the sequence of checking the disc • Use manufacturer's handbook, check sheet, defect reporting procedure etc |
| **Identify and maintain PPE appropriate when using a petrol driven cut off saw** | Explain that PPE should include the following: Steel toe cap safety boots • Ear defenders • Face / eye protection BS EN 166 impact rating B • FFP3 dust mask that is certified to the PPE directive • Suitable gloves • Fitted overalls • Training Providers are to ensure learners have had the appropriate face-fit for their RPE |

# Learning Outcomes for N017
# Petrol Driven Cut Off Saw

| Learning Outcome | Instructor Notes |
|---|---|
| **Select suitable type of cutting blade relative to the work being undertaken** | Explain that diamond tipped steel discs and abrasive type cutting discs are available, and may be selected dependant on the type of work being conducted, the location etc |
| **Conduct all necessary safety checks at the work area and set up an exclusion zone** | Explain and demonstrate the following fully: Walk the site and highlight or remove any hazards • Confirm that the ground condition of the site is safe to work on • Report any hazards that cannot be removed • Set out warning signs and barriers to warn members of the public • Set up and manage exclusion zones • Ensure the stability of the device to hold material that has to be cut • Sufficient ventilation if working indoors • Wind directions and weather conditions etc |
| **Prepare the machine for use and operate petrol driven cut off saw safely and efficiently** | Explain and demonstrate all safety procedures to be adopted including: Correct starting procedure • All safety devices i.e. guards etc • Identify and report any defects • Correct use of blotters if applicable • Correct procedure for mounting petrol driven cut off disc • Ensure safe footing while operating the machine • Check fuel level • The importance of using the machine in accordance with the manufacturers recommendations • Explain the safe use of the cutting trolley and its advantages • The importance of using the correct disc for the type of machine being used • Disc RPM compatible with machine being used • Application of dust suppression from the water butt and its advantages • Dangers of using a damaged cutting disc • Placement of guard and direction of steel / stone excess etc |
| **Environmental considerations** | Explain and demonstrate procedures to be adopted including: Clear visibility • Communication system – signals etc • Noise • Vibration • Disposal of waste material • Ground contamination • Fuel spills • Fumes • Flying debris |
| **Storage and transport of cutting / grinding machine** | Explain the following: Correct and recommended storage of cutting wheels • Check condition of wheel • Remove excess fuel into safety container • Remove disc from machine • Ensure cleanliness of blade guard • Refer to manufacturer's handbook |
| **Carry out all end of shift and shut down procedures** | Explain and demonstrate procedures to be adopted including: Shut down procedures and machine security • Clean machine thoroughly after use to avoid corrosion, facilitate maintenance, prevent personal contamination • Inspect machine for signs of wear and damage • Secure machine in transit etc |

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# Learning Outcomes for N025
# Concrete Cutting Chainsaw

| Learning Outcome | Instructor Notes |
|---|---|
| **Have a basic understanding of the industry, the dangers of working in the industry and their responsibilities as a plant operator** | Explain the structure of the course and the need to comply with your instructions at all times • Explain that the industry is very dangerous and that only safe working practices will be adopted throughout the course • Personal safety is not just the absence of physical injury, can be affected by noise, vibration, dust and can lead to serious illness, death, lost time, lost income, expense for the employer, etc. • Explain Health & Safety at Work Act 1974, PUWER Regs, NRSWA, CDM Regs, risk assessment, method statement, Codes of Practice and other relevant legislation • CPA Guidance Documents • Remind learners that operators have moral obligations, legal obligations and environmental obligations • Explain reporting structures, the importance of good communication on site (colleagues, management, and other workers on site) |
| **Have a working knowledge of the manufacturer's handbook for the particular machine to be used** | Explain the importance of the manufacturer's handbook and that it will be used throughout the course. Stress that it has to be used in alliance with all relevant legislation |
| **Be able to locate and identify the major components of the machine and explain their functions** | Explain the different types of components • Explain the function of the components and how they all contribute to the safety and operational integrity of the machine • Explain, power units, hydraulic systems, attachments and safety systems etc |
| **Identify and maintain PPE appropriate for use** | Explain that PPE should include the following: Suitable safety boots, ear defenders, face / eye protection, dust mask if appropriate, suitable gloves, overalls, hard hat etc |
| **Conduct all pre-operational checks in accordance with manufacturer's and legislative requirements** | Explain the importance of pre-operational checks and legal implications of using a machine without having checked it. Go through the sequence of checking, use manufacturer's handbook, check sheet, defect reporting procedure etc |
| **Start and stop the machine and safely carry the machine** | Explain and demonstrate the following:<br>Correct starting and stopping procedure in accordance with manufacturer's recommendations • Correct manual handling procedure for carrying the machine |
| **Conduct all necessary safety checks at the work area** | Explain how to carry out pre-cutting safety checks, including:<br>Vehicles • Ground conditions • Overhead obstructions • Buried services • materials types permit to work • Other workers • Public etc |

# Learning Outcomes for N025
# Concrete Cutting Chainsaw

| Learning Outcome | Instructor Notes |
|---|---|
| **Carry the machine to the work area and correctly configure in readiness to carry out cutting tasks** | Explain all safety procedures to be adopted including:<br>Observations to be made prior to and during carrying the machine TILE assessment • Water supply • Correct machine set up • Access and egress • Excavation safety • identify correct service • Positioning of vehicle/power pack for power |
| **Carry out cutting tasks** | Explain procedures to be adopted including:<br>Different types of cuts • Method statements, job specifications, risk assessments, permits to work • Types of buried services and how they are identified • Reporting procedures if services are damaged • Plunge cutting • Using a pipe cradle • Supporting cut sections • Measuring techniques and devices • Environmental issues |
| **Clear cuttings and maintain clear working area** | Explain procedures to be adopted including:<br>Maintain clear footing • Move any cutting spoil • Maintain water levels • Method statements, risk assessments • Attachments etc |
| **Clean and dismantle the machine** | Explain procedures to be adopted including:<br>Dismantle the machine and attachments • Clean as per manufacturer's handbook • Manual handling issues • Codes of practice and industry best practice |
| **Carry out all end of shift and shut down procedures** | Explain and demonstrate procedures to be adopted including:<br>Shut down procedures and machine security |

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# Learning Outcomes for N301 Abrasive Wheels

| Learning Outcome | Instructor Notes |
|---|---|
| **Have a basic understanding of the industry, the dangers of working in the industry and their responsibilities as an operative** | Explain the structure of the course and the need to comply with your instructions at all times • Explain that the industry is very dangerous and that only safe working practices will be adopted throughout the course • Personal safety is not just the absence of physical injury, can be affected by noise, vibration and can lead to lost time, lost income, expense for the employer etc • Explain Health & Safety at Work Act 1974, MHASAW, PUWER Regs, HSG 47, Electricity at Work Regulations, HSG 17, HSG53, COSHH, crystalline silica etc. Remind learners that operators have moral obligations, legal obligations and environmental obligations • Explain reporting structures, the importance of good communication on site (colleagues, management, and other workers on site) |
| **Have a working knowledge of the manufacturer's handbook and be familiar with other sources of information available including relevant legislation** | Explain the importance of the manufacturer's handbook and that it will be used throughout the course. Stress that it has to be used in alliance with all relevant legislation |
| **Be able to locate and identify the major components of the machine and explain their functions** | Explain the different types of components • Explain the function of the components and how they all contribute to the safety and operational integrity of the machine • Explain the different types of abrasive discs and mounted wheels available, and explain their uses |
| **Be able to locate and identify key controls and explain their functions** | Explain the different controls and their functions • Explain how correct and sympathetic use of the controls can ensure safety of the machine and help prolong machine life by reducing wear and tear • Explain and identify the identification plate, information on the plate. Explain the information on different types of abrasive discs and mounted wheels • Fuel tank • Safety locking button • Start / stop switch • Disc bolt • Protection hood • Spark plug • Air filter • Dust suppression hoses and all other safety systems etc. Refer to the manufacturer's handbook, codes of practice and decals etc |
| **Conduct all pre-operational checks in accordance with manufacturer's and legislative requirements** | Explain the importance of pre-operational checks and legal implications of using a machine without having checked it. Go through the sequence of checking • Explain the importance of pre-operational checks and legal implications of using an abrasive disc / mounted wheel without having checked it. Go through the sequence of checking, use manufacturer's handbook, check sheet, defect reporting procedure etc |
| **Identify and maintain PPE appropriate when using a cutting machine or grinding** | Explain that PPE should include the following: Suitable safety boots, ear defenders, face / eye protection, dust mask, suitable gloves, overalls • Explain the importance of using the recommended standard i.e. BS EN 166 impact rating B for eye protection etc |

# Learning Outcomes for N301 Abrasive Wheels

| Learning Outcome | Instructor Notes |
|---|---|
| **Select suitable type of machine relative to the work being undertaken** | Explain that petrol / electric driven machines are available, and may be selected dependant on the type of work being conducted, the location etc |
| **Conduct all necessary safety checks at the work area and set up an exclusion zone** | Explain and demonstrate the following fully: Walk the site and highlight or remove any hazards • Confirm that the condition of the site is safe to work in • Report any hazards that cannot be removed • Set out warning signs and barriers to warn members of the public and to exclude animals • Ensure the stability of the device to hold material that has to be cut |
| **Prepare the machine for use and operate machinery safely and efficiently** | Explain and demonstrate all safety procedures to be adopted including: Correct starting procedure • All safety devices i.e. guards etc • Identify and report any defects • Correct spacing on mounted machine rests • Correct use of blotters • Correct procedure for mounting wheel / abrasive disc • Ensure safe footing while operating the machine • Check fuel level • The importance of using the machine in accordance with the manufacturers recommendations • The importance of using the correct disk / wheel for the type of machine being used • Disc / wheel RPM compatible with machine being used • Dangers of overnighting the disc / wheel • Dangers of using a damages of out of date disc / wheel etc |
| **Environmental considerations** | Explain and demonstrate procedures to be adopted including: Clear visibility • Communication system – signals etc • Noise • Vibration • Disposal of waste material • Ground contamination • Fuel spills • Fumes • Flying debris |
| **Storage and transport of cutting / grinding machine** | Explain the following: Correct and recommended storage of abrasive discs / mounted wheels • Check condition of abrasive wheel • Remove excess fuel into safety container • Ensure cleanliness of blade guard • Refer to manufacturer's handbook |
| **Storage and transport of cutting / grinding machine** | Explain the following:<br>• Correct and recommended storage of abrasive discs / mounted wheels • Check condition of abrasive wheel • Remove excess fuel into safety container • Ensure cleanliness of blade guard • Refer to manufacturer's handbook |
| **Carry out all end of shift and shut down procedures** | Explain and demonstrate procedures to be adopted including:<br>• Shut down procedures and machine security • Clean machine thoroughly after use to avoid corrosion, facilitate maintenance, prevent personal contamination • Inspect machine for signs of wear and damage |

***The learning outcomes listed should not be considered in isolation and may be added to in order to accurately reflect the learner's duties and working environment***

# Learning Outcomes for N304
# Cable Avoidance Tool

| Learning Outcome | Instructor Notes |
|---|---|
| **Have a basic understanding of the industry, the dangers of working in the industry and their responsibilities as an operative** | Explain the structure of the course and the need to comply with your instructions at all times • Explain that the industry is very dangerous and that only safe working practices will be adopted throughout the course • Personal safety is not just the absence of physical injury, can be affected by noise, vibration and can lead to lost time, lost income, expense for the employer etc • Explain Health & Safety at Work Act 1974, MHASAW Regs, PUWER Regs, HSG 47, Electricity at Work Regulations, The Pipeline Safety Regulations, HSG150 and other relevant legislation • Remind learners that operators have moral obligations, legal obligations and environmental obligations • Explain reporting structures, the importance of good communication on site (colleagues, management, and other workers on site) |
| **Have a working knowledge of the manufacturer's handbook for the particular equipment to be used and be familiar with other sources of information and relevant legislation** | Explain the importance of the manufacturer's handbook and that it will be used throughout the course. Stress that it has to be used in alliance with all relevant legislation |
| **Be able to locate and identify the controls of the equipment and explain their functions** | Explain the different types of components • Explain the function of the components and how they all contribute to the safety and operational integrity of the tool • Explain different modes and the selector • The genny • Signal clamp • Live cable connectors • Sonde or mouse loud speaker • Depth Indicator • Sensitivity Control • Batteries and the compartment • Display Screen and all other safety systems etc |
| **Conduct all pre-operational checks in accordance with manufacturer's and legislative requirements** | Explain the importance of pre-operational checks and legal implications of using equipment without having checked it. Go through the sequence of checking. Use manufacturer's handbook, check sheet, defect reporting procedure etc |
| **Define underground services** | Explain that underground services are those that are installed and transported below ground level. These will include, water, gas, electricity and telecommunications. They are placed below ground level for safety reasons, for visual reasons and to protect services from damage from the weather or by vandalism. Emphasise that the term underground services includes the carrying method such as pipes, cables etc. and any associated equipment such as junction boxes, branches, valves etc |

# Learning Outcomes for N304
# Cable Avoidance Tool

| Learning Outcome | Instructor Notes |
|---|---|
| **Know how to identify the different types of underground services** | Explain that to help with identification of underground services a colour coding system is in operation, and that older services may differ. Emphasise the colour coding system as follows: • Gas = Yellow ducts or pipes • Electricity = Black or red ducts and cables • Water = Blue or grey ducts, blue pipes • Sewer pipes = Black ducts with various colour pipes • Telecommunications = Grey, white, green, black or purple ducts, light grey or black cable • Street Lighting = Black or orange ducts, black cables in England and Wales, Purple ducts and cables in Scotland, Orange ducts, black or orange cables in Northern Ireland |
| **Identify risks that underground services can present and how people may be affected by them** | Explain that different services present different risks to workers. E.g. • Electricity – electric shock, explosion from arcing current, fire etc. • Gas – Asphyxiation, fire, explosion, escape of gas along channels • Water – Injury from high pressure water jet or stones etc. being displaced by high pressure water jet, flooding, secondary risk from water contact with electricity etc |
| **Causes of accidents from underground services** | Explain that in addition to the risks already identified, accidents can be caused by physical contact being made with one of the services by a digging bucket or a pick axe etc. Services can also become damaged if they are not bedded correctly and therefore may move under their own weight and possibly fracture. Also some services may be buried in concrete which can move if supporting ground around the concrete is disturbed • Explain that some services may be incorrectly marked and the main risk may not be realised until too late. Remind learners that older services may not be marked with the marking system already outlined |
| **Conduct all necessary safety checks at the work area** | Explain procedures to be adopted including: • Planning the work, risk assessments, safe work procedures in place, permit to work • Preparation of site • Location plans • Workplace features • Local knowledge • Site visits if necessary • Confirmation of exact location of services using service location equipment, cable avoidance tool, digging trial holes etc |

# Learning Outcomes for N304
# Cable Avoidance Tool

| Learning Outcome | Instructor Notes |
|---|---|
| **Carry out detection tasks** | Explain and demonstrate the search pattern and the importance of following it, how the genny can be used in relation with the cable detection tool and the advantages of a tandem search • How to perform direct signal connections and signal inductions • Explain the different attachments that come with the genny and how to use them • Explain ghost signals and the possible reasons loss of signal, signal strength and cable depth • Explain how lifting and looking into inspection chambers could assist in locating the direction of cables or pipes |
| **Identify the risks of excavating near to underground services, and the safe digging practices that should be adopted** | Explain the potential risks to health when excavating near to live cables or pipes • Identify the potential of penetrating cables or pipes and the likelihood of electric shock, burns, explosions, high pressure water jets and the stones carried by the force • Explain HSG 47 and safe digging practices including trial holes |
| **Carry out all end of shift and safe storage procedures** | Explain and demonstrate procedures to be adopted including: • Clean machine thoroughly after use to avoid damage , facilitate maintenance, prevent personal contamination • Inspect machine for signs of wear and damage • Lock in a secure dry and safe environment |

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# Learning Outcomes for N602
# Chainsaw – Maintenance & Cross Cutting

| Learning Outcome | Instructor Notes |
|---|---|
| **Have a basic understanding of the industry, the dangers of working in the industry and their responsibilities as an operator** | Explain the structure of the course and the need to comply with your instructions at all times • Explain that the industry is very dangerous and that only safe working practices will be adopted throughout the course • Personal safety is not just the absence of physical injury, can be affected by noise, vibration and can lead to lost time, lost income, expense for the employer etc • Explain Health & Safety at Work Act 1974, PUWER Regs, Vibration at Work Regulations, INGD 317, EN 381, EN 383, EN 385, EN 387, EN 389 • Remind learners that operators have moral obligations, legal obligations and environmental obligations • Explain reporting structures, the importance of good communication on site (colleagues, management, and other workers on site) |
| **Have a working knowledge of the manufacturer's handbook for the particular machine to be used** | Explain the importance of the manufacturer's handbook and that it will be used throughout the course. Stress that it has to be used in alliance with all relevant legislation |
| **Be able to locate and identify the major components of the machine and explain their functions** | Explain the different types of components • Explain the function of the components and how they all contribute to the safety and operational integrity of the machine • Explain power units, cutting system, fuel tank, guards, safety systems etc |
| **Be able to locate and identify key controls and explain their functions** | Explain the different controls and their functions • Explain how correct and sympathetic use of the controls can ensure safety of the machine and help prolong machine life by reducing wear and tear, Refer to the manufacturer's handbook, codes of practice decals etc |
| **Conduct all pre-operational checks in accordance with manufacturer's and legislative requirements** | Explain the importance of pre-operational checks and legal implications of using a machine without having checked it. Go through the sequence of checking. Use manufacturer's handbook, check sheet, defect reporting procedure etc |
| **Select suitable type of machine relative to the work being undertaken** | Explain that petrol / electric driven chain saw – maintenance & cross cutting are available and may be selected dependant on the type of work being conducted, the location etc |
| **Identify and maintain PPE appropriate for chainsaw - maintenance & cross cutting use** | Explain that PPE should include the following: Suitable safety boots, ear defenders, face / eye protection, dust mask if appropriate, suitable gloves, leg protection, non-snag outer clothing etc |

# Learning Outcomes for N602
# Chainsaw – Maintenance & Cross Cutting

| Learning Outcome | Instructor Notes |
|---|---|
| **Conduct all necessary safety checks at the work area** | Explain and demonstrate the following fully:<br>• Walk the site and highlight or remove any hazards e.g. stones, metal debris • Set up and secure exclusion zone • Confirm chainsaw is fitted with reduced kickback chain. Confirm first aid box required conforming with INDG214 • Confirm that the condition of the site is safe to work in • Report any hazards that cannot be removed • Set out warning signs and barriers to warn members of the public and to exclude animals • Check for any poisonous plants |
| **Prepare for use and operate machinery safely and efficiently** | Explain and demonstrate all safety procedures to be adopted including:<br>• Correct starting procedure • Correct operating procedure on slopes / banks • Identify and report any defects • Correct procedure for adjusting / changing different chains • Follow all safe working procedures • Adhere to road traffic act where applicable • Check electrical safety, overhead / underground services • Check fluid levels |
| **Environmental considerations** | Explain and demonstrate procedures to be adopted including:<br>• Clear visibility • Communication system, signals etc • Noise • Vibration • Ground contamination • Fuel spills • Fumes • Flying debris |
| **Storage and transport of chainsaw – maintenance & cross cutting** | Explain and Demonstrate the following:<br>• Allow chainsaw to cool sufficiently • Check condition of electrical cables and stow away safely • Remove excess fuel into safety container • Correct / secure storage of fuels • Replace chain guard • Refer to manufacturer's handbook |
| **Disposal of cut materials** | Explain procedures to be adopted including:<br>• Job specification • Leave work area clean and tidy • Wear correct PPE when handling cuttings |
| **Carry out all end of shift and shut down procedures** | Explain and demonstrate procedures to be adopted including:<br>• Shut down procedures and machine security • Clean machine thoroughly after use to avoid corrosion, facilitate maintenance, prevent personal contamination • Inspect machine for signs of wear and damage |

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# Learning Outcomes for N214
# Road Roller

| Learning Outcome | Instructor Notes |
|---|---|
| **Have a basic understanding of the industry, the dangers of working in the industry and their responsibilities as an operator** | Explain the structure of the course and the need to comply with your instructions at all times • Explain that the industry is very dangerous and that only safe working practices will be adopted throughout the course • Personal safety is not just the absence of physical injury, can be affected by noise, vibration and can lead to lost time, lost income, expense for the employer, etc • Explain Health & Safety at Work Act 1974, Restraining systems in accordance with risk assessment, PUWER Regulations and other relevant legislation • Remind learners that operators have moral obligations, legal obligations and environmental obligations, Explain reporting structures, the importance of good communication on site (colleagues, management, and other workers on site) |
| **Have a working knowledge of the manufacturer's handbook for the particular machine to be used** | Explain the importance of the manufacturer's handbook and that it will be used throughout the course. Stress that it has to be used in alliance with all relevant legislation |
| **Be able to locate and identify the major components of the machine and explain their functions** | Explain the different types of components • Explain the function of the components and how they all contribute to the safety and operational integrity of the machine • Explain power units, vibration unit, ROPS, drums, wheels, hydraulic system, fuel tank, guards, safety systems etc |
| **Be able to locate and identify key controls and explain their functions** | Explain the different controls and their functions. Explain how correct and sympathetic use of the controls can ensure safety of the machine and help prolong machine life by reducing wear and tear. Refer to the manufacturer's handbook, codes of practice, decals etc |
| **Conduct all pre-operational checks in accordance with manufacturer's and legislative requirements** | Explain the importance of pre-operational checks and legal implications of using a machine without having checked it. Go through the sequence of checking. Use manufacturer's handbook, check sheet, defect reporting procedure etc |
| **Identify and maintain PPE appropriate for roller use** | Explain that PPE should include the following: Suitable safety boots, ear defenders, face/eye protection, dust mask if appropriate, suitable gloves, overalls, etc |
| **Prepare road roller for use** | Explain and demonstrate all safety procedures to be adopted including:<br>Correct starting procedure • Correct compacting procedure on slopes / banks • Follow all safe working procedures – direction of compaction etc • Check electrical safety, overhead cables / underground cables • Check fuel level |

# Learning Outcomes for N214
# Road Roller

| Learning Outcome | Instructor Notes |
|---|---|
| **Conduct all necessary safety checks at the work area** | Explain and demonstrate the following fully:<br>Walk the site and highlight or remove any hazards • Confirm that the condition of the site is safe to work in • Report any hazards that cannot be removed • Set out warning signs |
| **Operate machinery safely and efficiently** | Explain and demonstrate all safety procedures to be adopted including:<br>Correct starting procedure • Mount and dismount the machine • Correct operating procedure on slopes / banks • Identify and report any defects • Correct procedure for adjusting amplitude settings • Follow all safe working procedures • Check electrical safety, overhead / underground services • Check fluid levels |
| **Environmental considerations** | Explain and demonstrate procedures to be adopted including:<br>Clear visibility • Communication system – signals etc • Noise • Vibration • Ground contamination • Fuel spills • Fumes |
| **Demonstrate knowledge of loading and unloading procedures for machine transportation** | Explain and demonstrate the following:<br>Different types of transport vehicle • Positioning of load on vehicle • Load security • Use of Banksman • Environmental conditions |
| **Carry out all end of shift and shut down procedures** | Explain and demonstrate procedures to be adopted including:<br>Shut down procedures and machine security • Clean machine thoroughly after use to avoid corrosion, Facilitate maintenance, Prevent personal contamination • Inspect machine for signs of wear and damage |

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# Learning Outcomes for N216
# Road Planer

| Learning Outcome | Instructor Notes |
|---|---|
| **Have a basic understanding of the industry, the dangers of working in the industry and their responsibilities as a plant operator** | Explain the structure of the course and the need to comply with your instructions at all times • Explain that the industry is very dangerous and that only safe working practices will be adopted throughout the course • Personal safety is not just the absence of physical injury, can be affected by noise, vibration and can lead to lost time, lost income, expense for the employer, etc • Explain Health & Safety at Work Act 1974, Restraining systems in accordance with risk assessment, PUWER Regulations, LOLER Regulations, risk assessments, method statements, ACOPs and other relevant legislation • Remind learners that operators have moral obligations, legal obligations and environmental obligations • Explain reporting structures, the importance of good communication on site (colleagues, management, and other workers on site) |
| **Have a working knowledge of the manufacturer's handbook for the particular machine to be used** | Explain the importance of the manufacturer's handbook and that it will be used throughout the course. Stress that it has to be used in alliance with all relevant legislation |
| **Be able to locate and identify the major components of the machine and explain their functions** | Explain the different types of components • Explain the function of the components and how they all contribute to the safety and operational integrity of the machine • Explain, power units, hydraulic systems, undercarriage, wheels / tracks, heating and cooling systems, water spray systems, rotor milling drum, depth skis, milling tools, mouldboard blade, steering, hopper, conveyor systems, ROPS, FOPS and all safety systems etc |
| **Be able to locate and identify steering, driving and braking controls and explain their functions** | Explain the different controls and their functions • Explain how correct and sympathetic use of the controls can ensure safety and stability of the machine and help prolong machine life by reducing wear and tear. Refer to the manufacturer's handbook, codes of practice and decals |
| **Identify and maintain PPE appropriate for planer use** | Explain that PPE should include the following: Suitable safety boots, ear defenders, face / eye protection, dust mask if appropriate, suitable gloves, overalls, hard hat etc |
| **Conduct all pre-operational and running checks in accordance with manufacturer's and legislative requirements** | Explain the importance of pre-operational and running checks and legal implications of using a machine without having checked it • Go through the sequence of checking. Use manufacturer's handbook, check sheet, defect reporting procedure etc |

# Learning Outcomes for N216
# Road Planer

| Learning Outcome | Instructor Notes |
|---|---|
| **Safely mount and dismount the machine** | Explain the following fully:<br>Correct mounting procedure • Observations • Use of safe hand holds • Correct dismounting procedure • Observations • Use of safe hand hold |
| **Configure the machine for travel and manoeuvre it safely across varying terrain in open and confined areas** | Explain the following fully:<br>Safe use of steering • Driving and braking controls, travel position • Good visibility • Selection of attachments • Travel around site and road travel |
| **Conduct all necessary safety checks at the work area** | Explain how to carry out pre paving safety checks, including:<br>Vehicles • Ground conditions • Drains • Manholes • Overhead obstructions • Power lines • Buried services • Other workers |
| **Manoeuvre the machine to the work area and correctly configure in readiness to carry out planing tasks** | Explain all safety procedures to be adopted including:<br>Observations to be made prior to and during manoeuvring machine • Correct machine set up • Check ground type, work specification, placement of material, mat thickness for milling etc |
| **Carry out planing tasks and load material into transporting vehicles or containers** | Explain procedures to be adopted including:<br>Different types of planning methods • Job specifications, method statements, risk assessments, permits • Types of buried services and how they are identified • Reporting procedures if services are damaged • Minimum clearance • Placement of milled material • Loading procedures • milling depth, length, width • Measuring techniques and devices etc |
| **Demonstrate knowledge and understanding of loading and unloading procedures for machine transportation** | Explain procedures to be adopted including:<br>Different types of transport vehicle • Positioning of load on vehicle • Load security • Use of banksman • Environmental conditions |
| **Environmental considerations** | Explain and demonstrate procedures to be adopted including:<br>Clear visibility • Communication system – signals etc • Noise • Vibration • Disposal of waste material • Ground contamination • Fuel spills • Fumes |
| **Carry out all end of shift and shut down procedures** | Explain and demonstrate procedures to be adopted including:<br>Safe parking • Shut down procedures and machine security |

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# Learning Outcomes for N217
# Road Sweeper

| Learning Outcome | Instructor Notes |
|---|---|
| **Have a basic understanding of the industry, the dangers of working in the industry and their responsibilities as a road sweeper operator** | Explain the structure of the course and the need to comply with your instructions at all times • Explain that the industry is very dangerous and that only safe working practices will be adopted throughout the course • Personal safety is not just the absence of physical injury, can be affected by noise, vibration and can lead to lost time, lost income, expense for the employer, etc • Explain Health & Safety at Work Act 1974, Restraining systems in accordance with risk assessment, PUWER, LOLER, RIDDOR, Road Traffic Act, risk assessments, method statements, ACOPs and other relevant legislation • Remind learners that operators have moral obligations, legal obligations and environmental obligations • Explain reporting structures, the importance of good communication on site (colleagues, management, and other workers on site) |
| **Have a working knowledge of the manufacturer's handbook for the particular machine to be used** | Explain the importance of the manufacturer's handbook and that it will be used throughout the course. Stress that it has to be used in alliance with all relevant legislation |
| **Be able to locate and identify the major components of the machine and explain their functions** | Explain the different types of components • Explain the function of the components and how they all contribute to the safety and operational integrity of the machine • Explain, power units, hydraulic systems, undercarriage, wheels, suction systems, water spray systems, blanking plate, hopper, brushes, intake suction pipe, hoses, compressor, steering, flashing light, PTO, Pump, Jets and all safety signs and systems etc |
| **Be able to locate and identify steering, driving and braking controls and explain their functions** | Explain the different controls and their functions • Explain how correct and sympathetic use of the controls can ensure safety and stability of the machine and help prolong machine life by reducing wear and tear. Refer to the manufacturer's handbook, codes of practice and decals |
| **Identify and maintain PPE appropriate for sweeper use** | Explain that PPE should include the following: Suitable safety boots, ear defenders, face / eye protection, dust mask if appropriate, suitable gloves, overalls, hard hat etc |
| **Conduct all pre-operational and running checks in accordance with manufacturer's and legislative requirements** | Explain the importance of pre-operational and running checks and legal implications of using a machine without having checked it • Go through the sequence of checking. Use manufacturer's handbook, check sheet, defect reporting procedure etc |
| **Safely mount and dismount the machine** | Explain the following fully:<br>• Correct mounting procedure • Observations • Use of safe hand holds • Correct dismounting procedure • Observations • Use of safe hand hold |

# Learning Outcomes for N217
# Road Sweeper

| Learning Outcome | Instructor Notes |
|---|---|
| **Configure the machine for travel and manoeuvre it safely across varying terrain in open and confined areas** | Explain the following fully:<br>• Safe use of steering • Driving and braking controls, travel position • Good visibility • Selection of attachments • Travel around site / road |
| **Conduct all necessary safety checks at the work area** | Explain how to carry out pre sweeping safety checks, including:<br>• Vehicles • Ground conditions • Drains • Manholes • Overhead obstructions • Power lines • Other workers • Types of waste • Traffic etc |
| **Manoeuvre the machine to the work area and correctly configure in readiness to carry out sweeping tasks** | Explain all safety procedures to be adopted including:<br>• Observations to be made prior to and during manoeuvring machine • Correct sweeper direction on roads • Check ground type, work specification • Correct signage etc |
| **Carry out sweeper tasks safely and efficiently** | Explain procedures to be adopted including:<br>• Different types of sweeping methods • Job specifications, method statements, risk assessments, permits • Traffic control • Signage • Road closures • Different cleaning methods e.g. high-pressure water, suction etc • Reasons for blockage and solutions etc |
| **Demonstrate knowledge and understanding tipping procedures, diverse waste, types of hazardous and toxic waste and waste landfill codes** | Explain procedures to be adopted including:<br>• Different types and classes of waste • Inert waste • Positioning / safety of vehicle when tipping • Hazardous waste • Cleaning techniques • Codes from European Waste Catalogue e.g. EWC 20-03-03 etc |
| **Environmental considerations** | Explain and demonstrate procedures to be adopted including:<br>• Clear visibility • Communication system – signals etc • Noise • Vibration • Disposal of waste material • Ground contamination • Fuel spills • Fumes • Hazardous and non-hazardous waste • Dangers of contacting different diseases from waste e.g. Legionnaire's, Weil's, Hepatitis or Tetanus etc |
| **Carry out all end of shift and shut down procedures** | Explain and demonstrate procedures to be adopted including:<br>• Safe parking • Shut down procedures • Post stop checks • Machine security |

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# Learning Outcomes for N220 Paver

| Learning Outcome | Instructor Notes |
|---|---|
| **Have a basic understanding of the industry, the dangers of working in the industry and their responsibilities as a plant operator** | Explain the structure of the course and the need to comply with your instructions at all times • Explain that the industry is very dangerous and that only safe working practices will be adopted throughout the course • Personal safety is not just the absence of physical injury, can be affected by noise, vibration and can lead to lost time, lost income, expense for the employer, etc • Explain Health & Safety at Work Act 1974, Restraining systems in accordance with risk assessment, PUWER Regulations, LOLER Regulations, risk assessments, method statements, ACOPs and other relevant legislation • Remind learners that operators have moral obligations, legal obligations and environmental obligations • Explain reporting structures, the importance of good communication on site (colleagues, management, and other workers on site) |
| **Have a working knowledge of the manufacturer's handbook for the particular machine to be used** | Explain the importance of the manufacturer's handbook and that it will be used throughout the course. Stress that it has to be used in alliance with all relevant legislation |
| **Be able to locate and identify the major components of the machine and explain their functions** | Explain the different types of components • Explain the function of the components and how they all contribute to the safety and operational integrity of the machine • Explain, power units, hydraulic systems, undercarriage, wheels / tracks, heating and cooling systems, screed burner, gas level indicators, paddle box, steering, flow gates, hopper, conveyor systems, ROPS, FOPS and all safety systems etc |
| **Be able to locate and identify steering, driving and braking controls and explain their functions** | Explain the different controls and their functions • Explain how correct and sympathetic use of the controls can ensure safety and stability of the machine and help prolong machine life by reducing wear and tear. Refer to the manufacturer's handbook, codes of practice and decals |
| **Identify and maintain PPE appropriate for paver use** | Explain that PPE should include the following: Suitable safety boots, ear defenders, face / eye protection, dust mask if appropriate, suitable gloves, overalls, hard hat etc |
| **Conduct all pre-operational and running checks in accordance with manufacturer's and legislative requirements** | Explain the importance of pre-operational and running checks and legal implications of using a machine without having checked it • Go through the sequence of checking. Use manufacturer's handbook, check sheet, defect reporting procedure etc |
| **Safely mount and dismount the machine** | Explain the following fully:<br>Correct mounting procedure • Observations • Use of safe hand holds • Correct dismounting procedure • Observations • Use of safe hand hold |

# Learning Outcomes for N220 Paver

| Learning Outcome | Instructor Notes |
|---|---|
| **Configure the machine for travel and manoeuvre it safely across varying terrain in open and confined areas** | Explain the following fully:<br>Safe use of steering • Driving and braking controls, travel position • Good visibility • Selection of attachments • Travel around site and road travel |
| **Conduct all necessary safety checks at the work area** | Explain how to carry out pre-Paving safety checks, including:<br>Vehicles • Ground conditions • Drains • Manholes • Overhead obstructions • Power lines • Buried services • Other workers |
| **Manoeuvre the machine to the work area and correctly configure in readiness to carry out paving tasks** | Explain all safety procedures to be adopted including:<br>Observations to be made prior to and during manoeuvring machine • Correct machine set up • Check ground type, work specification, placement of material, mat thickness etc |
| **Carry out paving tasks** | Explain procedures to be adopted including:<br>Different types of paving methods • Job specifications, method statements, risk assessments, permits • Types of buried services and how they are identified • Reporting procedures if services are damaged • Minimum clearance • Placement of screed, length – width - thickness of mat • Segregation of materials • Measuring techniques and devices etc |
| **Receive material from transporting vehicles** | Explain procedures to be adopted including:<br>Clear visibility • Communication system – signals etc • Vehicle positioning • Maintaining safety and stability of vehicle during loading |
| **Demonstrate knowledge and understanding of loading and unloading procedures for machine transportation** | Explain procedures to be adopted including:<br>Different types of transport vehicle • Positioning of load on vehicle • Load security • Use of banksman • Environmental conditions |
| **Environmental considerations** | Explain and demonstrate procedures to be adopted including:<br>Clear visibility • Communication system – signals etc • Noise • Vibration • Disposal of waste material • Ground contamination • Fuel spills • Fumes |
| **Carry out all end of shift and shut down procedures** | Explain and demonstrate procedures to be adopted including:<br>Safe parking • Shut down procedures and machine security |

***The learning outcomes listed should not be considered in isolation and may be added to in order to accurately reflect the learner's duties and working environment***

# Learning Outcomes for N609
# Winching & Recovery

| Learning Outcome | Instructor Notes |
|---|---|
| **Have a basic understanding of the industry, the dangers of working in the industry and their responsibilities when winching and recovering** | Explain the structure of the course and the need to comply with your instructions at all times • Explain that the industry is very dangerous and that only safe working practices will be adopted throughout the course • Personal safety is not just the absence of physical injury, can be affected by noise, vibration and can lead to lost time, lost income, expense for the employer, etc • Explain Health & Safety at Work Act 1974, PUWER, LOLER, COSHH, Working at Heights Regulations, BS 7121, ACOP L74, Health and Safety (first Aid) regulations, Risk assessments, Method Statements and other relevant legislation • Remind learners that operators have moral obligations, legal obligations and environmental obligations • Explain reporting structures, the importance of good communication on site (colleagues, management, and other workers on site) |
| **Be able to conform to manufacturers requirements as per technical data, conform to relevant regulations and legislation** | Explain the importance of the manufacturer's requirements and that it will be used throughout the course. Stress that it has to be used in alliance with all relevant legislation • Explain and demonstrate the use of duty charts, lift plans, method statements, risk assessments, winching / lifting requirements and limitations |
| **Be able to locate and identify and explain different types of winching and recovery equipment and lifting accessories. Explain their basic construction, uses, applications and their functions** | Explain the different types of Winching equipment and accessories • Explain the function of the components and how they all contribute to the safety and operational integrity of the winching equipment • Explain their various uses for different types of loads |
| **Be able to interpret and extract information on all relevant documentation** | Explain the importance of the ability to extract information from the test certification • Thorough examination of certification • Lift plan, method statements, risk assessments • Lifting charts and other relevant paperwork etc |
| **Undertake all pre-use checks on winching and recovery accessories and identify non-serviceable items** | Explain the importance of examining all lifting accessories and the limitations that are acceptable • Explain types of damage • Sequence of pre-use checks • Procedures for in–service and out-of service markings • The implications of using damaged or unsuitable winching / lifting equipment |
| **Explain procedures for placing non-serviceable items out -of-service** | Explain the following fully:<br>• The procedure and importance of defect reporting • The secure storage of defective items • Disposing of defective items as stated in LOLER |

# Learning Outcomes for N609
# Winching & Recovery

| Learning Outcome | Instructor Notes |
|---|---|
| **Identify and explain centres of gravity and calculate the estimated weight of loads** | Explain and demonstrate procedures to be adopted including:<br>• The reason and importance of a trial lift • Load density and shapes • Different types of loads • Load integrity / security • How to calculate the estimation of a load • The consequence of moisture content • Information sheets and load markings |
| **Set up exclusion zone explaining actions required for emergency actions and identify overhead hazards** | Explain and demonstrate procedures to be adopted including:<br>• Warning and identification systems • Reporting procedures for damage to services • Minimum distances and clearances • Explain exclusion zones for pedestrians and vehicles |
| **Identify and maintain PPE appropriate for winching and recovery** | Explain procedures to be adopted including:<br>PPE should include the following • Suitable safety boots • Ear defenders • Face / eye protection • Dust mask if appropriate • Suitable gloves • Overalls • Hard hat etc • Explain the importance of suitable hand protection and the implications of foreign bodies in your hands |
| **Secure various types of loads to the winch using the relevant Winching accessories and procedures ensuring load balance, security and integrity** | Explain and demonstrate procedures to be adopted including:<br>• The importance of SWL / WLL of the load • Size • Load winching points • Protection for winching accessories • Correct slinging procedures • Load protection • Anchor points • Pulleys • Ropes • Line speeds • calculations • Fulcrum • Sheaves • Pulling angles • Load distribution • Fleet angles • Reeving • Indirect pulls • Ratings • Bearings • Shackle box • Hook block • Shims • Eye bolts • Snatch block • Wire rope construction |
| **Winch, recover and guide the movement of loads from various locations using different methods of communication** | Explain and demonstrate procedures to be adopted including:<br>• The route of winching recovery • Visibility • Load swings • Different forms of communication i.e. Hand signals, radio protocol etc. • Verification of desired location for landing the load • Landing conditions • Security of loads after recovery • Environmental conditions / wind effects etc |
| **Environmental considerations** | Explain and demonstrate;<br>• Ground damage • Vibration from the Winching and recovery machine • Ground contamination • Debris • Fuel and oil spills etc |
| **Carry out all out-of –service and securing procedures** | Explain and demonstrate;<br>• Cleaning and protecting accessories • Safe manual handling • Damage checking • Security • Storage procedures • Documentation |

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# Learning Outcomes for N802
# Gritter & Snowplough

| Learning Outcome | Instructor Notes |
|---|---|
| **Have a basic understanding of the industry, the dangers of working in the industry and their responsibilities as an operator** | Explain the structure of the course and the need to comply with your instructions at all times • Explain that the industry is very dangerous and that only safe working practices will be adopted throughout the course • Personal safety is not just the absence of physical injury, can be affected by noise, vibration and can lead to lost time, lost income, expense for the employer etc • Explain Health & Safety at Work Act 1974, Restraining systems in accordance with risk assessment, PUWER, LOLER, Vibration at Work Regulations, Road Traffic Act, risk assessment, method statement, codes of practice and other relevant legislation • Remind learners that operators have moral obligations, legal obligations and environmental obligations • Explain reporting structures, the importance of good communication on site (colleagues, management, and other workers on site) |
| **Have a working knowledge of the manufacturer's handbook for the particular machine to be used** | Explain the importance of the manufacturer's handbook and that it will be used throughout the course. Stress that it has to be used in alliance with all relevant legislation |
| **Be able to locate and identify the major components of the machine and explain their functions** | Explain the different types of component • Explain the function of the components and how they all contribute to the safety and operational integrity of the machine • Explain power units, hydraulic systems, transmissions, PTO, chassis, steering, braking, fuel tank, guards, ROPS, FOPS, stability, ground pressure, plough rubber-float, castor wheels, attachments and safety systems etc |
| **Be able to locate and identify key controls and explain their functions** | Explain the different controls and their functions • Explain how correct and sympathetic use of the controls can ensure safety of the machine and help prolong machine life by reducing wear and tear. Refer to the manufacturer's handbook, codes of practice, decals etc |
| **Conduct all pre-operational and running checks in accordance with manufacturer's and legislative requirements** | Explain the importance of pre-operational and running checks and legal implications of using a machine without having checked it. Go through the sequence of checking, use manufacturer's handbook, spread rates, check sheet, defect reporting procedure etc |

# Learning Outcomes for N802
# Gritter & Snowplough

| Learning Outcome | Instructor Notes |
|---|---|
| **Identify and maintain PPE appropriate for gritter / snow plough use** | Explain that PPE should include the following: Suitable safety boots, ear defenders, face / eye protection, dust mask if appropriate, suitable gloves, overalls, hard hat etc |
| **Conduct all necessary safety checks at the work area** | Explain and demonstrate the following fully:<br>• Walk the site and highlight or remove any hazards • Confirm that the condition of the site is safe to work in • Height restrictions, confined spaces, visibility • Report any hazards that cannot be removed • Direction of travel, routes, slopes, inclines, hill starts • Set out warning signs and barriers, exclusion zones to warn members of the public and to exclude animals |
| **Prepare the gritter / snowplough for use and operate machinery safely and efficiently** | Explain and demonstrate all safety procedures to be adopted including:<br>• Correct starting procedure • Mount and dismount the machine • Correct operating procedure on slopes and inclines • Identify and report any defects • Correct procedure for adjusting and changing different attachments<br>• Follow all safe working procedures • Adhere to Road Traffic Act where applicable • Check electrical safety, overhead and underground services • Check fluid levels • Load and unload positions, spoil location / segregation • Working procedures and efficiency |
| **Attach and set trailed, mounted and power take off drives ready for work** | Explain and demonstrate procedures to be adopted including:<br>• Connecting procedures • Securing process • Implement / tractor compatibility • Hitch controls, lift arm controls • Implement stability and security • Levelling / securing procedures • Hitch types, pins, clips,<br>• PTO controls, speeds, compatibility • Guarding • Spreading speeds starting / stopping procedures • Hazards associated with all implements<br>• Remove and secure implements |

# Learning Outcomes for N802
# Gritter & Snowplough

| Learning Outcome | Instructor Notes |
|---|---|
| **Environmental considerations** | Explain and demonstrate procedures to be adopted including:<br>• Clear visibility • Communication system – signals etc. • Noise • Dust • Vibration • Ground contamination • Ground damage • Fuel spills • Fumes • Flying debris |
| **Storage and transport of attachments** | Explain and demonstrate the following:<br>• Allow power driven implements to slow down • Check condition of hydraulic hoses, linkages – attachments etc. • Correct / secure storage of attachments • Refer to manufacturer's handbook • Attachment protection, stability and security |
| **Demonstrate knowledge and understanding of loading and unloading procedures for machine transportation** | Explain / demonstrate the following:<br>• Correct / secure position • Banksman • All hydraulic pressure released • Cleanliness and security • Refer to manufacturer's handbook |
| **Carry out all end of work and shut down procedures** | Explain and demonstrate procedures to be adopted including:<br>• Shut down procedures and machine security • Clean machine thoroughly after use to avoid corrosion, facilitate maintenance, prevent personal contamination • Inspect machine for signs of wear and damage |

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