Learning Outcomes for N202 Excavator 360°

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, Restraining systems in accordance with risk assessment, PUWER Regs, LOLER Regs, CDM Regs, Avoiding danger from overhead powerlines, GS6, HSG47, Road Traffic Act, 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, undercarriage, wheels / tracks, booms, dipper arms, buckets, slewing, stability, ground pressures, ROPS, FOPS, attachments and 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, decals
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

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Safely mount and dismount the machine	Explain the following fully: Correct mounting procedure, observations, use of safe hand holds • Working at height awareness, slips trips and falls • Correct dismounting procedure • Observations • Use of safe hand holds
Start and stop the machine and safely move the machine off and stop it safely	Explain and demonstrate the following: Correct starting and stopping procedure in accordance with manufacturer's recommendations • Correct procedure for moving off and stopping and travel position
Configure the machine for travel and manoeuvre it safely across varying terrain in open and confined areas	Explain the following fully: Safe use of steering, driving and braking controls, travel position • Position of drive sprockets and the reasons of importance • Good visibility, slopes / inclines, ground conditions, height restrictions, hill starts • Selection of attachments • Travel around site, possible road travel
Conduct all necessary safety checks at the work area	Explain how to carry out pre excavation safety checks, including: Vehicles • Ground conditions • Overhead obstructions • Power lines • Buried services • Other workers
Manoeuvre the machine to the work area and correctly configure in readiness to carry out excavating tasks	Explain all safety procedures to be adopted including: Observations to be made prior to and during manoeuvring machine • Minimise damage • Correct machine set up • Check ground type work specification • Placement of spoil • Segregation of materials • Positioning of vehicles for loading
Carry out excavating tasks	Explain procedures to be adopted including: Different types of excavations • Method statements, job specifications, risk assessments, permits to dig • Types of buried services and how they are identified • Reporting procedures if services are damaged • Minimum clearance • Placement or disposal of spoil • Segregation of materials • Measuring techniques and devices • Environmental issues

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Load material onto transporting vehicles or into containers	Explain procedures to be adopted including: Clear visibility • Machine positioning • Communication system – signals etc • Vehicle positioning, soil segregation, productive cycles • Maintaining safety and stability of vehicle during loading • Safe positioning of vehicle driver • Load stability and position, clean area
Reinstate excavation, grade and level ground	Explain procedures to be adopted including: The importance of ground compaction and settlement, grading, spreading • Job specification • Measuring levels and centres • Method statements, risk assessments • Attachments etc
Fit and remove attachments	Explain procedures to be adopted including: Prepare machine and attachment • Different bucket types, Manufacturer's handbook • Other types of attachments / Manual handling issues • LOLER • Quick hitch attaching systems – manual, semi-automatic, fully automatic • Security of attachment – checks to be made • 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: Safe parking and positioning • 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