



Learning Outcomes for N209 Loading Shovel

| Learning Outcome | Instructor Notes |
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| 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, LOLER Regulations, MHSAWA, CDM Regulations, Vibration at Work Regulations, Road Traffic Act, HSG150, ROPS – FOPS, Edge Protection, Quarries Regulations, risk assessments, method statements, 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 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, transmissions, oscillating chassis, steering, brakes, safety locking devices, fuel tank, guards, buckets, ROPS, FOPS, attachments, stability, ground pressure 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, check sheet, defect reporting procedure etc |
| Identify and maintain PPE appropriate for loading shovel 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 |



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| Conduct all necessary safety checks at the work area | Explain and demonstrate the following fully: Walk the site and highlight or remove any hazards • Edge protection appropriate size • Overhead cables, confined spaces • Ground condition – tipping edge cracks • 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, exclusion zones to warn members of the public and to exclude animals |
| Prepare the loading shovel for use and operate machinery safely and efficiently | Explain and demonstrate all safety procedures to be adopted including: Correct starting procedure • Mount and dismount the machine • Correct operating procedure on slopes / inclines, load integrity, hill starts, travel routes etc • Identify and report any defects, types of services • Face extraction methods, productive cycles, face / stockpile integrity, angles of repose • Correct loading procedure and traction aids • Correct procedure for adjusting / changing different attachments • Follow all safe working procedures, spoil segregation / placing • Adhere to Road Traffic Act where applicable • Check electrical safety, overhead / underground services • Ramp integrity, consolidation and incline • Material densities, ground condition, stability with raised attachments, quick hitch systems, visibility when reversing • Load documentation, different attachments • Centre of gravity |
| Environmental considerations | Explain and demonstrate procedures to be adopted including: Clear visibility • Communication system – signals etc • Noise • Vibration • Ground contamination • Ground damage • Fuel / oil spills • Fumes • Flying debris • Dust |
| Storage and transport of loading shovel attachments | Explain and demonstrate the following: Allow power driven implements to slow down • Check condition of hydraulic hoses – attachments etc • Correct / secure storage of attachments • Refer to manufacturer's handbook |
| Demonstrate knowledge and understanding of loading and unloading procedures for machine transportation | Explain and demonstrate the following: Different types of transport vehicle • Positioning of load on vehicle • Load security • Use of banksman • Environmental conditions |
| Carry out all end of work 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 |

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