NPORS

C214

LEARNING OUTCOMES

RIDE ON ROLLER

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LEARNING OUTCOMES

Explain the hazards of working in the construction industry, and their responsibilities as a ride on roller operator	• Why the industry has many hazards and why safe working practices must be adopted and maintained • Why personal health and safety is not just physical injury and can include the effects of noise and vibration. All of which can lead to lost time, lost income, expense for the employer, fines, custodial sentences etc. • Health & Safety at Work Act 1974, Provision and Use of Work Equipment Regulations (PUWER), Management of Health and Safety of Work (MHSW) Regulations, Construction (Design & Management) Regulations (CDM), Vibration at Work Regulations, Road Traffic Act, HSG144, HSG47 etc. in accordance with risk assessments, method statements, codes of practice and other relevant legislation, regulations, and industry good practice • Operators' moral, legal, and environmental obligations • Reporting structures, the importance of good communication on site (colleagues, management, and other workers on site) • Past incidences involving relevant plant and pedestrians • Working with other related roles e.g. marshallers, supervisors, other plant operatives, other occupations
Identify and extract information from the manufacturer's handbook/operator's manual, and other information sources including digital	• Use of the operator's manual (for the specific machine) during the practical elements of training to identify key preparation, operational and safety aspects of the machine • Types of information sources including machine control systems • Interpreting compaction specifications
Locate and identify the major components, signs and decals and all controls of the ride on roller and explain their functions	• The purpose of principal components, the basic construction, controls, and terminology • How correct and sympathetic use of the controls can ensure efficiency and safety of the machine and help prolong machine life by reducing wear and tear • Purposes of Roll Over Protection Systems (ROPS) and Falling Objects Protection Systems (FOPS) and other protection systems • Machine control systems – efficiencies, GPS
Conduct all pre-operational checks in accordance with manufacturers and legislative requirements	• Complete all pre-start and running checks before any activity takes place including vibratory system set up, visual checks for damage, functionality, and effectiveness • All componentry systems fully functional including mechanical, hydraulic, pneumatic, electrical and electronic etc. • Replenish fuels, fluids and lubricants and undertake grease-based lubrication activities • Manufacturers periodic checks and operator level maintenance requirements

continued

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Conduct all pre-operational checks in accordance with manufacturers and legislative requirements (cont.)	• Defect reporting requirements • Carry out routine adjustments on ancillaries including scraper bar settings • Safety systems functions including emergency stop • Health and safety requirements when undertaking basic maintenance activities including Personal Protection Equipment (PPE) and sprinkler systems function • Check condition and function of seatbelt and any other restraining equipment • Check condition and function of any lighting and warning systems • Requirements for dealing with fluid spills including prevention and clean-up methods
Identify and maintain personal protective equipment (PPE) and appropriate safety control equipment for ride on roller use	• What safety control equipment/PPE should be worn / use for ride on roller operations and include the following: suitable safety footwear, ear defenders, face/eye protection, dust mask, suitable gloves, overalls, hard hat, respiratory protective equipment (RPE), protective clothing etc. • Appropriate use of local exhaust ventilation (LEV), i.e. in confined spaces • Why weather conditions, including heat and cold, can determine what PPE is worn when using the ride on roller and the personal effects of incorrect equipment
Safely get on and off the machine	• Working at height requirements • Safe use of all hand holds and steps • Facing the machine when getting on and off the roller for operational and maintenance purposes • Effects of continually getting on and off the roller e.g. fatigue, increased risk of falling etc. • Safe areas to get on and off the roller e.g. ground location, other vehicle movements etc. • Procedures for accessing the roller when carrying out adjustment and maintenance activities
Prepare the roller for movement by checking and adjusting the machine for operation	• Use of seatbelts and other restraining equipment • Adjustment of seating position and mirrors • Steering and transmission systems checks • Types of visibility aids and what factors can affect clear, all-round vision • Where and why effective vision is extremely important • How and where issues can arise when vision is limited during operation

continued

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Prepare the roller for movement by checking and adjusting the machine for operation (cont.)	• Warning beacons and other safety systems/lights are operable • Reversing warning aids function • Legislative requirements for road travel e.g. licencing for travelling on the public highway • Carrying of passengers / non-authorised personnel where additional seating is fitted, in line with manufacturers recommendations • Traction aids (single drum types)
Travel and manoeuvre the roller safely across varying terrain and inclines	• Travelling over undulating ground, on inclines, smooth level surfaces, uncompacted ground • How travel speeds affect roller stability, safety, and emissions • Issues which can occur if departing from designated travel routes to / from the compaction area • Types of underground services and the effects of travelling near to / over services • Effects of travelling close to edges, embankments and trenches • How uncompacted surfaces and inclines affect stability • How certain types of surfaces can affect traction, particularly on inclines • How use of the roller can affect other works
Conduct all necessary safety checks at the work area	• Safety checks that must be carried out to ensure that the area to be compacted is clear of hazards • Actions required for emergency situations • Communication requirements and methods with other machine operators and support workers • Requirements for sufficient manoeuvring area for manoeuvring between compacted and non-compacted areas • Ground conditions to support the ride on roller and maintain stability • Procedures for mounting / dismounting raised kerbed area • Working in hours of darkness and lighting requirements
Compact a range of materials to specification	• Typical hazards within a compaction area and reasons for exclusion zones • Checks which need to be carried out at the compaction area •Types of granular, cohesive and bituminous type materials that can be compacted • Compacting procedures for cambers, crossfalls, radius, straight runs, edges, kerbing and raised ironwork • Examples of poor compacting techniques including scuffing, turning on a pass, too close to edges etc. *continued*

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Compact a range of materials to specification (cont.)	• Applying overlaps, passes and correct travel speeds • Compacting a range of compatible materials according to a given specification including straight runs, against kerbs and edges, around radius or various angles and around raised ironwork • Use of vibration modes and settings including frequency and amplitude • Use of water • How to interpret compaction specifications • Effects of not following the compaction specification including applying too many or insufficient number of passes, incorrect vibration setting, speeds etc. • Dangers of working near to edges or on cambers when using vibration mode
Explain environmental considerations of ride on roller use	• Health and social reasons to reduce machine emissions • Government industry zero emission initiatives • What 'tailpipe' emissions are caused by compression ignition (CI) diesel engines during internal combustion • Air quality and the component gases of air • How engine emissions, including particulate matter affect air quality and the effects on human and environmental wellbeing • Measures to reduce emissions during operations including alternative / low emission fuels, fuel treatments and particulate filtration systems etc. • Efficient use of the machine and when and how minimising engine use can aid air quality and fuel savings • Eco-friendly oils, fluids and lubricants • Fuel-saving techniques for specific item of plant • Appropriate disposal of waste • Spillage procedures
Explain loading / unloading procedures for machine transportation	• Procedures for preparing the ride on roller for loading onto a transporter • Traction and surface preparation requirements • Understanding of agreed methods of communication between the plant operator and others • Working at height requirements when driving onto or off a transporter bed

LEARNING OUTCOMES

Carry out all end of shift and shut down procedures

- Types of safe locations, areas, and ground / terrain types where rollers may be parked and should not be parked
- Reasons for ensuring safe parking and unintentional movement and ground support requirement
- Carrying out parking, shut down and isolation requirements according to manufacturer's instructions
- Reasons for roller isolation including security and non-authorised use by others
- Use of anti-vandalism equipment
- Water tank draining procedures
- Scraper bar release

**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*

SUPPORT AND STANDARDS
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