



Learning Outcomes for N104 Overhead Crane

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 Regulations, LOLER Regulations, COSHH, Working at Heights Regulations, BS 7121, 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 • Explain and demonstrate the use of duty charts, lift plans, method statements, risk assessments and lifting requirements and limitations
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, rail or rails, supporting beams, wheels or runners, uprights, hoist trolleys, trolley pulley, hoisting gear, hoist, ropes, safety systems and types of RCI, limitations, thorough examination certs, test certs, reports 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, safety systems etc
Identify and maintain PPE appropriate for overhead crane use	Explain that PPE should include the following: Suitable safety boots, ear defenders, face / eye protection, hard hat, dust mask if appropriate, suitable gloves, overalls etc



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Conduct all pre-operational and running checks in accordance with manufacturers and legislative requirements	Explain and demonstrate the following fully: 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
Prepare the overhead crane for use and operate machinery safely and efficiently	Explain and demonstrate procedures to be adopted including: Climb and descend crane correctly • Program and set RCI / LMI for different load duties • Jib / boom deflection, motion limiters • Environmental and wind conditions / speeds / anemometer • Smooth use of crane lifting / moving controls, lifting controls • Establish methods and types of signals e.g. radio protocol, blind lifts, and vehicle loading procedures • Explain load swings, load security, visibility • Lift plans, duty charts, thorough examination certs, test certs • Explain falls of rope, rope lengths • Starting / stopping procedures • Demonstrate how to counteract load swing • Loads placed at given points around work area • Explain the reason and importance of a trial lift
Carry out all end of work and shut down procedures	Explain and demonstrate procedures to be adopted including: Shut down procedures and machine security • Hoist trolley positioning / free braking • 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***