Lift Truck and Construction Category List

Lift Trucks	
Category Number	**Category**
N001	Industrial Counterbalance Lift Truck
N003	Reach Lift Truck
N004	Lorry Mounted Lift Truck
N006	Side Loader
N009	Rough Terrain Lift Truck
N010	Telescopic Handler
N012	Container Handler
N138	Telescopic Handler Suspended Loads

Cranes / Lifting	
Category Number	**Category**
N014	Marine Knuckle Boom Crane
N046	Rigging and Fleeting Loads Lift Planner
N047	Rigging and Fleeting Loads
N100	Excavator as a Crane
N101	Mobile Crane
N102	Tower Crane
N103	Crawler Crane
N104	Overhead Crane
N107	Lorry Loader
N114	Overhead Container Gantry Crane
N115	Remote Control Tower Crane
N140	Compact Crane
N242	Sideboom
N401	Appointed Person
N402	Slinger / Signaller
N405	Crane Supervisor
N722	Materials Re-Handler

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Learning Outcomes for N001
Industrial Counterbalanced Lift Truck

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
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, counterweight, stability, wheels / tyres, mast, carriage, fork arms / attachments, 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, capacity plate, 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
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
Start and stop the engine 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
Configure the machine for travel and manoeuvre it safely laden and unladen, in open and confined areas	Explain and demonstrate the following fully: Safe use of steering, driving and braking controls, travel / park position • Good visibility and observations • Execute 90° turns left and right / pivoting • Lateral stability issues when cornering / pivoting • Longitudinal stability issues when laden

Learning Outcomes for N001
Industrial Counterbalanced Lift Truck

Learning Outcome	Instructor Notes
Conduct all necessary safety checks at the work area	Explain and demonstrate the following fully: Ground conditions – stability issues • Hazards – overhead hazards, power lines etc • Condition of loads – load centres, centre of gravity, bulk stacking etc • Weight of loads – capacity plate, see saw effect etc • Condition of racking – SEMA code
Manoeuvre the machine to the work area and correctly configure in readiness to carry out lifting and load handling tasks	Explain and demonstrate all safety procedures to be adopted including: Observations to be made prior to and during manoeuvring machine • Correct machine configuration • Check ground condition • Work specification – loads to be lifted or transferred • Correct fork spacing to equally support loads
Carry out lifting and load handling tasks	Explain and demonstrate procedures to be adopted including: Correct use of hydraulic controls • Correct use of tilt • Correct stacking procedures • Legislation, ACOP(L117), HSE Guidance, Manufacturer's handbook • Smooth use of hydraulics at height – stability
Lift and transfer loads accurately and safely at different locations	Explain and demonstrate procedures to be adopted including: Clear visibility • Communication system – signals etc • Accurate positioning of machine • Maintaining safety and stability of machine during operations • Safe positioning of loads
Load and unload external transport safely	Explain and demonstrate the following: Different types of vehicle / trailer • Vehicle capacities • Weight distribution • Communication with vehicle driver • Undercutting • Hazards – ground hazards, overhead hazards
Fit, adjust and or remove attachments	Explain the following: Fork arm adjustment to take equal weight • Extension forks • Load centres • Various other attachments if applicable • De-rating – capacity plate, manufacturer's handbook
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

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 N003
Reach Lift Truck

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
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, counterweight, stability, wheels / tyres, mast, carriage, fork arms / attachments, 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, capacity plate, 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
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
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
Configure the machine for travel and manoeuvre it safely laden and unladen, in open and confined areas	Explain and demonstrate the following fully: Safe use of steering, driving and braking controls, travel / park position • Seating position • Good visibility and observations • Execute 90° turns left and right / pivoting • Lateral stability issues when cornering / pivoting • Longitudinal stability issues when laden

Learning Outcomes for N003
Reach Lift Truck

Learning Outcome	Instructor Notes
Conduct all necessary safety checks at the work area	Explain and demonstrate the following fully: Ground conditions – stability issues • Hazards – overhead hazards, power lines etc • Condition of loads – load centres • Centre of gravity • Bulk stacking etc • Weight of loads – capacity plate, see saw effect etc • Condition of racking – SEMA code
Manoeuvre the machine to the work area and correctly configure in readiness to carry out lifting and load handling tasks	Explain and demonstrate all safety procedures to be adopted including: Observations to be made prior to and during manoeuvring machine • Correct machine configuration • Check ground condition • Work specification – loads to be lifted or transferred • Correct fork spacing to equally support loads
Carry out lifting and load handling tasks	Explain and demonstrate procedures to be adopted including: Correct use of hydraulic controls • Correct use of tilt • Correct stacking procedures • Legislation, ACOP (L117), HSE Guidance, Manufacturer's handbook • Smooth use of hydraulics at height – stability
Lift and transfer loads accurately and safely at different locations	Explain and demonstrate procedures to be adopted including: Clear visibility • Communication system – signals etc • Accurate positioning of machine • Maintaining safety and stability of machine during operations • Safe positioning of loads
Load and unload external transport safely	Explain and demonstrate the following: Different types of vehicle / trailer • Vehicle capacities • Weight distribution • Communication with vehicle driver • Undercutting • Hazards – ground hazards, overhead hazards
Fit, adjust and or remove attachments	Explain the following: Fork arm adjustment to take equal weight • Extension forks • Load centres • Various other attachments if applicable • De-rating – capacity plate • Manufacturer's handbook
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

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 N004
Lorry Mounted Lift Truck

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
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, counterweight, stability, wheels / tyres, mast, carriage, fork arms / attachments, 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, capacity plate, 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
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
Start and stop the engine 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
Configure the machine for travel and manoeuvre it safely laden and unladen, in open and confined areas	Explain and demonstrate the following fully: Safe use of steering, driving and braking controls, travel / park position • Good visibility and observations • Execute 90° turns left and right / pivoting • Lateral stability issues when cornering / pivoting • Longitudinal stability issues when laden

Learning Outcomes for N004
Lorry Mounted Lift Truck

Learning Outcome	Instructor Notes
Conduct all necessary safety checks at the work area	Explain and demonstrate the following fully: Ground conditions – stability issues • Hazards – overhead hazards, power lines etc • Condition of loads – load centres, centre of gravity, bulk stacking etc • Weight of loads – capacity plate, see saw effect etc • Condition of racking – SEMA code
Manoeuvre the machine to the work area and correctly configure in readiness to carry out lifting and load handling tasks	Explain and demonstrate all safety procedures to be adopted including: Observations to be made prior to and during manoeuvring machine • Correct machine configuration • Check ground condition • Work specification – loads to be lifted or transferred • Correct fork spacing to equally support loads
Carry out lifting and load handling tasks	Explain and demonstrate procedures to be adopted including: Correct use of hydraulic controls • Correct use of tilt • Correct stacking procedures Legislation, ACOP (L117), HSE Guidance, Manufacturer's handbook • Smooth use of hydraulics at height – stability
Lift and transfer loads accurately and safely at different locations	Explain and demonstrate procedures to be adopted including: Clear visibility • Communication system – signals etc • Accurate positioning of machine • Maintaining safety and stability of machine during operations • Safe positioning of loads
Load and unload external transport safely	Explain and demonstrate the following: Different types of vehicle / trailer • Vehicle capacities • Weight distribution • Communication with vehicle driver • Undercutting • Hazards – ground hazards, overhead hazards
Fit, adjust and or remove attachments	Explain the following: Fork arm adjustment to take equal weight • Extension forks • Load centres • Various other attachments if applicable • De-rating – capacity plate, manufacturer's handbook
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 machine prior to mounting onto carrying vehicle • Fork arm positioning for loading / unloading • Load security • 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 N006
Sideloader Lift Truck

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
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, counterweight, stability, wheels / tyres, mast, carriage, fork arms / attachments, load bed, 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, capacity plate, 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
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
Start and stop the engine 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
Configure the machine for travel and manoeuvre it safely laden and unladen, in open and confined areas	Explain and demonstrate the following fully: Safe use of steering, driving and braking controls, travel / park position • Driving position • Good visibility and observations • Execute turns left and right • Lateral stability issues when cornering • Load secure on load bed

Learning Outcomes for N006
Sideloader Lift Truck

Learning Outcome	Instructor Notes
Conduct all necessary safety checks at the work area	Explain and demonstrate the following fully: Ground conditions – stability issues • Hazards – overhead hazards, power lines etc • Condition of loads – load centres, centre of gravity, bulk stacking etc • Weight of loads – capacity plate • Condition of racking – SEMA code
Manoeuvre the machine to the work area and correctly configure in readiness to carry out lifting and load handling tasks	Explain and demonstrate all safety procedures to be adopted including: Observations to be made prior to and during manoeuvring machine • Correct machine configuration • Check ground condition • Work specification – loads to be lifted or transferred • Correct fork spacing to equally support loads • Use of stabilisers if fitted
Carry out lifting and load handling tasks	Explain and demonstrate procedures to be adopted including: Correct use of hydraulic controls • Correct use of tilt • Correct stacking procedures • Legislation, ACOP, HSE Guidance, Manufacturer's handbook • Smooth use of hydraulics at height – stability
Lift and transfer loads accurately and safely at different locations	Explain and demonstrate procedures to be adopted including: Clear visibility • Communication system – signals etc • Accurate positioning of machine • Maintaining safety and stability of machine during operations • Safe positioning of loads
Load and unload external transport safely	Explain and demonstrate the following: Different types of vehicle / trailer • Vehicle capacities • Weight distribution • Communication with vehicle driver • Undercutting • Hazards – ground hazards, overhead hazards
Fit, adjust and or remove attachments	Explain the following: Fork arm adjustment to take equal weight • Extension forks • Load centres • Various other attachments if applicable • De-rating – capacity plate, manufacturer's handbook
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 N009
Rough Terrain Lift Truck

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
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, counterweight, stability, wheels / tyres, mast, carriage, fork arms / attachments, 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, capacity plate, 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
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
Start and stop the engine 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

Learning Outcomes for N009
Rough Terrain Lift Truck

Learning Outcome	Instructor Notes
Configure the machine for travel and manoeuvre it safely laden and unladen, over varying terrain, rough ground, inclines, in open and confined areas	Explain and demonstrate the following fully: Safe use of steering, driving and braking controls, travel / park position • Good visibility and observations • Execute 90° turns left and right / pivoting • Lateral stability issues when cornering / pivoting • Longitudinal stability issues when laden
Conduct all necessary safety checks at the work area	Explain and demonstrate the following fully: Ground conditions – stability issues • Hazards – overhead hazards, power lines etc • Condition of loads – load centres, centre of gravity, bulk stacking etc • Weight of loads – capacity plate, see saw effect etc • Condition of racking – SEMA code
Manoeuvre the machine to the work area and correctly configure in readiness to carry out lifting and load handling tasks	Explain and demonstrate all safety procedures to be adopted including: Observations to be made prior to and during manoeuvring machine • Correct machine configuration • Check ground condition • Work specification – loads to be lifted or transferred • Correct fork spacing to equally support loads
Carry out lifting and load handling tasks	Explain and demonstrate procedures to be adopted including: Correct use of hydraulic controls • Correct use of tilt • Correct stacking procedures • Legislation, ACOP, HSE Guidance, Manufacturer's handbook • Smooth use of hydraulics at height – stability
Lift and transfer loads accurately and safely at different locations	Explain and demonstrate procedures to be adopted including: Clear visibility • Communication system – signals etc • Accurate positioning of machine • Maintaining safety and stability of machine during operations • Safe positioning of loads
Load and unload external transport safely	Explain and demonstrate the following: Different types of vehicle / trailer • Vehicle capacities • Weight distribution • Communication with vehicle driver • Undercutting • Hazards – ground hazards, overhead hazards

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Learning Outcomes for N010
Telescopic Handler

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
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, counterweight, stability, wheels / tyres, mast, carriage, fork arms / attachments, 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, capacity plate, 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
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
Start and stop the engine 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
Configure the machine for travel and manoeuvre it safely laden and unladen, over varying terrain, rough ground, inclines, in open and confined areas	Explain and demonstrate the following fully: Safe use of steering, driving and braking controls, travel / park position • Gear ratios • Good visibility and observations • Execute turns left and right • Lateral stability issues when cornering • Steering configurations – 2-wheel steer, 4-wheel steer, crab steer

Learning Outcomes for N010
Telescopic Handler

Learning Outcome	Instructor Notes
Conduct all necessary safety checks at the work area	Explain and demonstrate the following fully: Ground conditions – stability issues • Hazards – overhead hazards, power lines etc • Condition of loads – load centres, centre of gravity, bulk stacking etc • Weight of loads – capacity plate, RCI • Condition of racking – SEMA code, Loading tower
Manoeuvre the machine to the work area and correctly configure in readiness to carry out lifting and load handling tasks	Explain and demonstrate all safety procedures to be adopted including: Observations to be made prior to and during manoeuvring machine • Correct machine configuration • Check ground condition • Work specification – loads to be lifted or transferred • Correct fork spacing to equally support loads • Use of stabilisers if fitted
Carry out lifting and load handling tasks	Explain and demonstrate procedures to be adopted including: Correct use of hydraulic controls • Correct use of tilt • Correct stacking procedures • Legislation, ACOP, HSE Guidance, Manufacturer's handbook • Smooth use of hydraulics at height – stability
Lift and transfer loads accurately and safely at different locations	Explain and demonstrate procedures to be adopted including: Clear visibility • Communication system – signals etc • Accurate positioning of machine • Maintaining safety and stability of machine during operations • Safe positioning of loads
Load and unload external transport safely	Explain and demonstrate the following: Different types of vehicle / trailer • Vehicle capacities • Weight distribution • Communication with vehicle driver • Undercutting • Hazards – ground hazards, overhead hazards
Fit, adjust and or remove attachments	Explain the following: Fork arm adjustment to take equal weight • Extension forks • Load centres • Various other attachments if applicable • De-rating – capacity plate, manufacturer's handbook
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

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 N012
Container Handler

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
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, counterweight, stability, wheels / tyres, mast, carriage, fork arms / attachments, 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, capacity plate, 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
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
Start and stop the engine 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
Configure the machine for travel and manoeuvre it safely laden and unladen, over varying terrain, rough ground, inclines, in open and confined areas	Explain and demonstrate the following fully: Safe use of steering, driving and braking controls, travel / park position • Gear ratios • Good visibility and observations • Execute turns left and right • Lateral stability issues when cornering

Learning Outcomes for N012
Container Handler

Learning Outcome	Instructor Notes
Conduct all necessary safety checks at the work area	Explain and demonstrate the following fully: Ground conditions – stability issues • Hazards – overhead hazards, power lines etc • Condition of loads – load centres, centre of gravity, bulk stacking etc • Weight of loads – capacity plate
Manoeuvre the machine to the work area and correctly configure in readiness to carry out lifting and load handling tasks	Explain and demonstrate all safety procedures to be adopted including: Observations to be made prior to and during manoeuvring machine • Correct machine configuration • Check ground condition • Work specification – loads to be lifted or transferred • Correct fork spacing to equally support loads (if fitted) • Use of stabilisers if fitted
Carry out lifting and load handling tasks	Explain and demonstrate procedures to be adopted including: Correct use of hydraulic controls • Correct use of tilt • Correct stacking procedures • Legislation, ACOP, HSE Guidance, Manufacturer's handbook • Smooth use of hydraulics at height – stability
Lift and transfer loads accurately and safely at different locations	Explain and demonstrate procedures to be adopted including: Clear visibility • Communication system – signals etc • Accurate positioning of machine • Maintaining safety and stability of machine during operations • Safe positioning of loads
Load and unload external transport safely	Explain and demonstrate the following: Different types of vehicle / trailer • Vehicle capacities • Weight distribution • Communication with vehicle driver • Hazards – ground hazards, overhead hazards
Fit, adjust and or remove attachments	Explain the following: Fork arm adjustment to take equal weight (if fitted) • Load centres • Various other attachments if applicable • De-rating – capacity plate, manufacturer's handbook
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 N138
Telescopic Handler Suspended Loads

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, LOLER Regulations COSHH, Working at Heights Regulations, BS 7121, ACOP L113, CPA Guidance, risk assessments, method statements, lift plans, 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)
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, lifting requirements and limitations
Be able to locate, identify and explain safe working loads, lifting capacity chart and explain how the manufacturer may reduce the lifting capacity when moving a suspended load, different lifting configurations and working ranges	Explain the different types of safe working loads for telescopic handlers, lifting equipment and accessories • Explain the capacity chart and different configurations that must be considered • Explain and demonstrate the various working ranges of the telescopic handler and how stability will be affected
Identify and explain different lifting procedures, explain what task could fall into each category	Explain how different lifting procedures are categorised under: Basic lifts • Intermediate lifts • Complex lifts
Identify and explain centres of gravity and calculate estimated weights of loads	Explain and demonstrate procedures to be adopted including: • Load density and shapes • Different types of loads • Load integrity, centres of gravity • How to calculate the estimation of a load • The consequence of moisture content • Information tare sheets and load markings
Identify any overhead / proximity hazards	Explain the importance of identifying overhead hazards, also identifying any proximity hazards in the lifting area. Explain the recommended safe distances agreed in the industry and in the Health and safety publication GS6

Learning Outcomes for N138
Telescopic Handler Suspended Loads

Learning Outcome	Instructor Notes
Ensure Telescopic Handler is in a safe condition attachments fitted correctly	Explain and demonstrate procedures to be adopted including: • The importance of placing the telescopic handler in a secure condition, handbrake • neutral when any attachment is being connected to the designated lifting point on the attachment • Explain the use is to prevent any unintentional movement of the machine that could lead to a fatality • explain the importance of verbal communication, the position of the telescopic handler, uneven ground, wet ground, soft ground etc
Checked load integrity and security	Explain and demonstrate procedures to be adopted including: • The reason and importance of a trial lift • Load density and shapes • Different types of loads • Load integrity, centres of gravity • The consequence of moisture content and how it could affect the lift
Be able to lift, move and land a load to a designated position in a safe and controlled manner, ensuring minimum uncontrolled movement	Explain and demonstrate procedures to be adopted including: Tracking / driving the telescopic handler whilst carrying a load • Performing turns in various directions and keeping load / side swings to a minimum • Safe carrying height • Lifting in confined spaces • Travelling over uneven and soft ground conditions and the effect on the load • Tag lines • Visibility etc
Environmental considerations	Explain and demonstrate; • Ground damage • Vibration from the lifting machine • Ground contamination • Debris • Fuel and oil spills etc
Carry out all out-of-service and securing procedures	Explain and demonstrate; Lower all equipment, shut down engine, remove keys and isolate • Damage checking • Ensure all attachments removed before lowering boom • Security of equipment • Release all hydraulic pressure in the system

Please note that these learning outcomes have been developed on the premise that the suspended loads will be slung by a dedicated, qualified, competent and authorised slinger / signaller. Where on occasion the telescopic handler operator may be required to sling the loads they are to transport they too must be qualified, competent and authorised slinger / signallers

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 N014
Marine Knuckle Boom Crane

Learning Outcome	Instructor Notes
Have a basic understanding of offshore lifting operations, 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, MCA LOLER, MCA PUWER, COSHH, The Merchant Shipping (Hatches and Lifting Plant) Regulations, Working at Heights Regulations, BS 7121 parts 1, 2 and 4, ACOP 113, MGN332, 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)
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. Duty charts, lifting requirements • Explain and demonstrate the use of duty charts, lift plans, method statements, risk assessments, and lifting requirements and limitations
Be able to interpret the requirements of the lift plan and risk assessment	Explain and demonstrate the following fully: Explain the importance of the lift plan, how to interpret the information and follow procedures • Read and understand risk assessment
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, the king, pedestal / adapter, crane house, operators cabin, slew systems, hydraulic systems, rams, counterweights, hoisting gear, jib, main boom, knuckle boom, attachments, ropes, main / auxiliary and tugger winches, safety systems and types of RCI and LMI, distance indicators, stability etc

Learning Outcomes for N014
Marine Knuckle Boom Crane

Learning Outcome	Instructor Notes
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, refer to the manufacturer's handbook, codes of practice, decals • Explain test certs and thorough examination reports and safety systems etc
Set up exclusion zone explaining actions required for emergency actions and identify any hazards	Explain and demonstrate procedures to be adopted including: Warning and identification systems • Reporting procedures for damage to equipment • Minimum distances and clearances • Explain exclusion zones for deck crew
Identify and maintain PPE appropriate knuckle boom crane use	Explain that PPE should include the following: Suitable safety boots, ear defenders, face / eye protection, dust mask if appropriate, life jacket, suitable gloves, overalls, hard hat etc
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
Identify and inspect suitability of landing area	Explain and demonstrate procedures to be adopted including: Walk selected landing area, identify any possible hazards, remove any hazards and set up exclusion zone

Learning Outcomes for N014
Marine Knuckle Boom Crane

Learning Outcome	Instructor Notes
Prepare the knuckle boom crane for lifting duties as well as over side lifts. Operate machinery safely and efficiently taking into consideration sea uplift and moving vessel decks	Explain and demonstrate procedures to be adopted including: Mount and dismount crane • Height restrictions, Jib deflection • Program and set RCI / LMI for different load duties • Telescopic jibs, crane positioning, levelling, crane controls, rigging and de-rigging • Environmental and wind conditions / speeds / anemometer, sea uplift • Smooth use of crane lifting / slewing controls, visibility, confined spaces • Establish methods and types of signals e.g. radio protocol, hand signals • Explain load swings, load security, signalling and blind lifts • Lift plans • Explain falls of rope, rope lengths, and lifting accessories • Starting / stopping / set up procedures, minimum distances, • Demonstrate how to counteract load swing • Loads placed at given points around work area • Explain the reason and importance of a trial lift • Protection of lifting accessories, stability factors, slew speeds • Types of hook blocks, extension jibs, storage and stowage
Environmental considerations	Explain and demonstrate procedures to be adopted including: Clear visibility • Communication system – signals etc • Noise • Dust • Vibration • Water contamination • Water damage • Fuel / oil spills etc
Carry out all end of work and shut down procedures	Explain and demonstrate procedures to be adopted including: Shut down procedures and machine security • Stow away boom in correct sequence • Retract extension jibs • 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 N046
Rigging and Fleeting Loads - Lift Planner

Learning Outcome	Instructor Notes
Have a managerial understanding of the industry, the dangers of working in the industry and their roles and responsibilities for performing rigging and fleeting loads tasks	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 only safe working practices will be adopted throughout the course • Explain HASAWA 1974, duties of the employer and employee • Remind learners that they have moral, legal and environmental obligations • Explain reporting structures and the importance of good communication on site (colleagues, management and other workers on site) • Explain differences between Appointed Person, BS7121 and Rigging and Fleeting loads duties and application
Have an underpinning knowledge of the manufacturers handbooks or guidelines for the equipment to be used and have an understanding of P.U.W.E.R, L.O.L.E.R, Working at Height, Manual handling, Risk assessments with a good awareness of British and International standards	Explain the importance of the manufacturers handbook / guidelines and that it will be used throughout the course • Stress that is has to be used along with all relevant legislation • Explain the selection of appropriate PPE • Explain the course includes working at height and the legal requirements • Explain the LOLER Regulation 8 and PUWER regulations applicable to rigging and fleeting loads • Stress the importance of following good manual handling techniques as this course requires physical effort • Explain the generic and task risk assessment process • Make aware of other standards, codes both in UK and internationally applicable to rigging and fleeting loads and inspection
Be able to calculate weights and measures ensuring that the load weight is accurate and all CoG's, angles, tensions are within the manufacturers guidelines for the safe rigging and fleeting of loads	Explain how loads are to be calculated before being moved by mechanical advantage • Explain and demonstrate CoG, angles and tensions • Explain and demonstrate calculations of weights and measures
Prepare risk assessments for rigging and fleeting loads that covers basic, intermediate and complex categories	Explain procedure to communicate task and safety controls with TBT forms • Explain, read and follow Task Risk Assessment formats • Explain and demonstrate hazards, risks and control measures • Explain categorisation of lifting operations using the categorisation format documents from lift plan (basic, intermediate, complex)
Be able to correctly check the certification for lifting equipment appliances and accessories and understand the commonly used definitions of the industry	Explanation of the rigging loft controller's roles and responsibilities in the industry • Explanation of viewing of the rigging equipment register folder • Explanation of colour code system adopted by some companies in industry sectors • Demonstration with certificates and checklists

Learning Outcomes for N046
Rigging and Fleeting Loads - Lift Planner

Learning Outcome	Instructor Notes
Correctly determine lifting equipment for the lift plan rigging and material lists including specific hand tools, access egress items and PPE	Explain terminology within lift plan pack for equipment • Explain how to format information to the lift plan material list • Explain what specific hand tools, access and egress equipment or additional PPE
Prepare a step by step method statement detailing a safe systematic approach including the pickup point, route to be travelled and laydown area	Explain and demonstrate pre use inspection around inspection bench with good equipment utilising a check sheet system • Explain and identify faults in equipment examples around the inspection bench • Explain fit for purpose criteria against manufacturers documentation • Stress that only equipment identified in rigging and material list to be used as planned • Explain formatting and issue blank lift plans to trainees
Allocate team roles and responsibilities for riggers, supervisors and fixed appliance operators that can be utilised for scenarios covering basic, intermediate and complex categories	Explanation of the legal responsibilities and the duties of rigging teams • Explain that categorisation affects the number of persons required • Explain the role of fixed appliance operators • Explain that cranes maybe used in conjunction with rigging and fleeting loads
Prepare a sketch, scaled drawing or have the understanding how to add pictures to lift plans ensuring the lift team understands the location and system of the operation in addition to text information	Explanation and demonstration of rigging and fleeting sketch • Explanation and demonstration of top / plan elevation • Explanation and demonstration of side elevation • Explanation and demonstration of end elevation • Explanation and demonstration of rigging details drawings
Oversee tasks for complex rigging and fleeting operations ensuring the team safely follow the step by step method statement in the lift plan pack	Explanation of the hands off approach to be undertaken by a competent person • Explanation of following lift plan pack and sequence step by step method statement • Communication either verbal, radio or hand signals explanation and clarity • Explanation of procedure to STOP the task should there be any difference from lift plan or circumstances unforeseen arise
Liaise with the management, supervisors and workforce levels of lifting operations by attending meetings, TBT's, PTW meetings, site visits in a responsible competent manner	Explain and imitate scenarios of different levels of a lift team • Explain and imitate scenarios of a TBT, PTW, Stop the job • Explain the reporting procedure should a task need to be elevated for engineer support levels • Explanation and enactment scenarios of bad practices
Participation in debrief meeting with lift team and discuss lessons learned during specific task	Stress the importance of debrief and signing off any task related • Documentation as PTW, lock out Tag out systems, work instructions, lift plans and method statements • Explanation of communicating safety and encourage positive and or negative feedback to teams for completed task

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 N047
Rigging and Fleeting Loads

Learning Outcome	Instructor Notes
Have a basic understanding of the industry, the dangers of working in the industry and their roles and responsibilities for performing rigging and fleeting loads tasks	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 only safe working practices will be adopted throughout the course • Explain HASAWA 1974, duties of the employer and employee • Remind learners that they have moral, legal and environmental obligations • Explain reporting structures and the importance of good communication on site (colleagues, management and other workers on site) • Explain differences between slinger / signaller and rigging and fleeting loads duties and application
Have a working knowledge of the manufacturers handbooks or guidelines for the equipment to be used and have an understanding of P.U.W.E.R, L.O.L.E.R, Working at Height, Manual Handling, Risk assessments and awareness of British and International standards	Explain the importance of the manufacturers handbook / guidelines and that it will be used throughout the course • Stress that is has to be used along with all relevant legislation • Explain the selection of appropriate PPE • Explain the course includes working at height and the legal requirements • Explain the LOLER and PUWER regulations applicable to rigging and fleeting loads • Stress the importance of following good manual handling techniques as this course requires physical effort • Explain the generic and task risk assessment process • Make aware of other standards, codes both in UK and internationally applicable to rigging and fleeting loads and inspection
Operate and supervise rigging and fleeting loads by mechanical advantage over, around, through and under obstacles safely in accordance with a lift plan pack	Explain how low headroom and restrictions affects how loads are to be moved safely by mechanical advantage • Explain and demonstrate loads fleeted over, around, through or under and obstacle without lowering load to deck before laydown • Explain and demonstrate method of skating and jacking, runway beams fitted with beam and geared trolleys, chain hoists, wire rope and lever hoists, swing jib and powered hoists, beam clamps, pad eyes and hand pallet trucks • Explain and demonstrate safe use of accessories • Introduction to trainees of lift plan formats and content explanation
Perform and participate in a tool box talk with team and communicate the control measures written within the risk assessment provided with the lift plan pack for a specific task as a supervisory role for basic and intermediate categories	Explain procedure to communicate task and safety controls with TBT forms • Explain, read and follow Task Risk Assessment • Explain job description and nominate duties of lift team • Explain categorisation of lifting operations using the categorisation format documents from lift plan pack (basic, intermediate) • Explain that complex categorisation shall not be in training course tasks

Learning Outcomes for N047
Rigging and Fleeting Loads

Learning Outcome	Instructor Notes
Be able to correctly utilise a rigging store / loft in a controlled manner and T-card systems for portable appliances and accessories lifting equipment and explain the procedure for quarantine of faulty equipment	Walk round rigging loft/store and explanation and demonstration of safe systems of work control of the T-card system • Identify and demonstrate the quarantine bin process for faulty or damaged equipment • Explanation of the rigging loft controller's roles and responsibilities in the industry • Explanation of viewing of the rigging equipment register folder • Explanation of colour code system adopted by some companies in industry sectors
Locate and select lifting equipment identified within the written lift plan rigging and material lists including specific hand tools, access egress items and PPE	Explain terminology within lift plan pack for equipment • Explain how to extract information from lift plan material list • Identify locate and select equipment stressing manual handling techniques to be adopted • Explain and demonstrate specific hand tools, access and egress equipment or additional PPE
Conduct all pre-operational checks of the equipment, the load, route and laydown area from within the written lift plan in accordance with the manufacturers and legislative requirements	Explain and demonstrate pre use inspection around inspection bench with good equipment utilising a check sheet system • Explain and identify faults in equipment examples around the inspection bench • Explain fit for purpose criteria against manufacturers documentation • Stress that only equipment identified in rigging and material list to be used as planned
Safely assemble rigging and fleeting equipment to certified strong points and load from within the written lift plan rigging method in accordance with the manufacturer guidelines and legislative requirements	Explain and demonstrate assembly process following material rigging method • Explain and demonstrate rigging techniques following lift plan on the load • Explain and demonstrate different forms of packing materials and how to protect load and or rigging • Explain different sling modes in accordance with the manufacturer guidelines and instructions • Explanation of the legal responsibilities and the duties of pre use inspecting equipment by persons using equipment
Operate rigging and fleeting equipment safely and accurately looking out for yourself and others by keeping clear of potentially dangerous zones should equipment failure arise during tasks	Explanation and demonstration of rigging and fleeting methods including angles, and tension • Explanation of fleeting and traversing load movement by mechanical advantage of the equipment • Single appliance and two or more unison fleeting procedures explanation and demonstrations • Stress the importance of keeping clear of pinch points or crush zones when equipment is under tension • Industry best practices demonstrated and explained from the industry and statistics

Learning Outcomes for N047
Rigging and Fleeting Loads

Learning Outcome	Instructor Notes
Supervise basic and intermediate rigging and fleeting operations safely following the step by step method statement in the lift plan pack	Explanation of the hands off approach to be undertaken by a supervisor and responsibilities • Explanation of following lift plan pack and sequence step by step method statement • Communication either verbal, radio or hand signals explanation and clarity • Explanation of procedure to STOP the task should there be any difference from lift plan or circumstances unforeseen arise
Safely remove rigging and fleeting equipment from strong points and load and return to rigging loft in accordance with the manufacturer guidelines and legislative requirements and site procedures	Explain and demonstrate dismantling process • Explain and identify faults in equipment and procedure to report damage caused during task • Explain the reporting procedure and T-card systems for replacing equipment to store • Explanation that task is to be conducted in a timely efficient manner
Conduct all post-operational checks of the load, route and laydown area in accordance with site rules	Explain and demonstrate post use inspection of load for security, stability and dropped objects • Explain the importance of keeping emergency routes and safety critical equipment access clear
Demonstrate good housekeeping procedures removing signs, barriers and obstructions used in the task	Stress the importance of keeping workplaces clean and tidy for others as original state • Explanation on removing signs barriers and obstructions and equipment to dedicated storing area
Participate in debrief meeting with lift team and discuss lessons learned during specific task	Stress the importance of debrief and signing off any task related documentation as PTW, lock out Tag out systems, work instructions, lift plans and method statements • Explanation of communicating safety and encourage positive and or negative feedback to teams for completed task

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 N100
Excavator as a 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, Restraining systems in accordance with risk assessment, PUWER Regulations, LOLER Regulations, COSHH, Working at Height Regulations, BS 7121, ACOP L113, risk assessments, method statements, lift plans, 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)
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, lifting requirements and limitations
Be able to locate, identify and explain Safe Working loads, lifting capacity chart and explain different lifting configurations and working ranges	Explain the different types of safe working loads for excavators, lifting equipment and accessories • Explain the capacity chart and different configurations that must be considered • Explain and demonstrate the various working ranges of the excavator and how stability can be affected
Identify and explain different lifting procedures, explain what task could fall into each category	Explain how different lifting procedures are categorised under: Basic lifts – Intermediate lifts – Complex lifts
Identify and explain centres of gravity and calculate estimated weights of loads	Explain and demonstrate procedures to be adopted including: Load density and shapes • Different types of loads • Load integrity, centres of gravity • How to calculate the estimated weight of a load • The consequence of moisture content • Information / tare sheets and load markings
Identify any overhead / proximity hazards	Explain the importance of Identifying overhead hazards, also identifying any proximity hazards in the lifting area. Explain the recommended safe distances agreed in the industry and in the HSE publication GS6
Be able to agree the signal codes / hand signals, direction of movement, safe working and safe landing, placement zone with the slinger / signaller	Explain the following fully: Signal codes / hand signals, direction of movement and safe landing placement zone • Explain the importance of the slinger / signaller and how the agreed signals must be followed • Explain the importance of the exclusion zone for the direction of travel and landing / securing area

Learning Outcomes for N100
Excavator as a Crane

Learning Outcome	Instructor Notes
Ensure excavator is in a safe condition for attachments to be fitted	Explain and demonstrate procedures to be adopted including: The use of the Safety lock lever or any other safety device when any attachment is being connected to the designated lifting point on the dipper / boom • Explain that this is to prevent any unintentional movement of the machine that could lead to an injury or fatality • Explain the importance of reducing the engine revs so verbal communication can be maintained, the position of the excavator, uneven ground, wet ground, soft ground etc
Checked load integrity and security by carrying out trial lift	Explain and demonstrate procedures to be adopted including: The reason for and importance of a trial lift • Load density and shapes • Different types of loads • Load integrity • Centres of gravity • The consequences of moisture content and how it could affect the lift
Be able to lift, move and land a load to a designated position in a safe and controlled manner, ensuring minimum uncontrolled movement	Explain and demonstrate procedures to be adopted including: Tracking / driving the excavator whilst carrying a load • Performing turns in various directions and keeping load swings to a minimum • Counteracting load swing • Safe carrying height • Lifting in confined spaces • Travelling over uneven and soft ground conditions and the effect on the load • Tag lines etc
Environmental considerations	Explain and demonstrate; Ground damage • Vibration from the lifting machine • Ground contamination • Debris • Fuel and oil spills etc
Carry out all out-of-service and securing procedures	Explain and demonstrate; Lower all equipment, shut down engine, remove keys and isolate • Damage checking • Ensure all attachments removed before lowering boom / dipper • Security of equipment • Release all hydraulic pressure in the system

Please note that these learning outcomes have been developed on the premise that the suspended loads will be slung by a dedicated qualified, competent and authorised slinger / signaller. Where on occasion the excavator operator may be required to sling the loads they are to transport they too must be qualified, competent and authorised slinger / signallers

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 N101
Mobile 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, Restraining systems in accordance with risk assessment, PUWER Regulations, LOLER Regulations, COSHH, Working at Heights Regulations, BS 7121 parts 1 - 3, ACOP 113, risk assessments, method statements, codes of practice, Road Traffic Act 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. Duty charts, ground loading charts, lifting requirements • 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, ROPS,FOPS, transmissions, hydraulic systems, chassis, steering, tyres, outriggers, rams, counterweights, hoisting gear, jib, booms, attachments, ropes, operators cab, safety systems and types of RCI and LMI, distance indicators, stability 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 • Explain test certs and thorough examination reports and safety systems etc
Set up exclusion Zone explaining actions required for emergency actions and identify overhead hazards	Explain and demonstrate procedures to be adopted including: • Warning and identification systems • Reporting procedures for damage to services • Minimum distances and clearances • Explain exclusion zones for pedestrian and vehicles • Ground stability, ground pressures
Identify and maintain PPE appropriate for mobile crane 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

Learning Outcomes for N101
Mobile Crane

Learning Outcome	Instructor Notes
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. Check steering, brakes, tyres, chassis, counterweights, stability, ground pressures etc
Prepare the mobile crane for use and operate machinery safely and efficiently	Explain and demonstrate procedures to be adopted including: • Mount and dismount mobile crane • Height restrictions, Jib deflection • Program and set RCI / LMI for different load duties • Telescopic jibs, crane positioning, levelling, inclines and crane controls, Rigging and de-rigging • Environmental and wind conditions / speeds / anemometer • Smooth use of crane lifting / slewing controls, visibility, confined spaces • Establish methods and types of signals e.g. radio protocol, hand signals • Explain load swings, load security, signalling and blind lifts • Lift plans, types of outriggers, footprint and bearing pressure • Explain falls of rope, rope lengths, and lifting accessories • Starting / stopping / set up procedures, minimum distances, hill starts, Axle loadings, ground conditions, site routes • Demonstrate how to counteract load swing • Loads placed at given points around work area • Explain the reason and importance of a trial lift • Protection of lifting accessories, stability factors, slew speeds • Types of hook blocks, extension jibs, storage and stowage
Environmental considerations	Explain and demonstrate procedures to be adopted including: • Clear visibility • Communication system – signals etc • Noise, dust • Vibration • Ground contamination • Ground damage • Debris around base • Fuel / oil spills etc
Carry out all end of work and shut down procedures	Explain and demonstrate procedures to be adopted including: • Shut down procedures and machine security • Stow away boom in correct sequence • Dismantle extension jibs • 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 N102
Tower 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, Restraining systems in accordance with risk assessment, PUWER Regulations, LOLER Regulations, COSHH, Working at Heights Regulations, BS 7121 part 5, Notification of conventional Tower Crane 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 • 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, electrical systems, connection methods, drive systems, stability / bases / mountings / erecting / dismantling, counterweights, jibs, trolleys, trolley pulley, hoisting gear, jib tie, counter jib, crane runway, tower mast, ropes, operators cab, different types, connection methods, manufacturers and legislative requirements, safety systems and types of RCI and LMI distance indicators 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 tower crane use	Explain that PPE should include the following: Suitable safety boots, ear defenders, face / eye protection, dust mask if appropriate, suitable gloves, overalls, fall restraint systems, hard hats etc

Learning Outcomes for N102 Tower Crane

Learning Outcome	Instructor Notes
Set up exclusion Zone explaining actions required for emergency actions and identify overhead hazards	Explain and demonstrate procedures to be adopted including: Warning and identification systems • Reporting procedures for damage to services • Minimum distances and clearances • Explain exclusion zones for pedestrian and vehicles • Ground stability, ground pressures
Conduct all pre-operational and running checks in accordance with manufacturers and legislative requirements	Explain and demonstrate the following fully: Examine test certs / thorough examination reports, Authority approval, harness security and the procedure that must be taken accessing the Jib for inspection and maintenance • Explain the importance of pre-operational and running checks and legal implications of using a machine without having checked it. Access and egress to the cab. Go through the sequence of checking. Use manufacturer's handbook, check sheet, defect reporting procedure etc
Prepare the tower 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 deflection, inter arcing, and slew speeds • Environmental and wind conditions / speeds / anemometer • Smooth use of crane lifting / slewing controls • Establish methods and types of signals, radio protocol, multiple signalling, types of signals, codes of practice • Explain load swings, load security, load capacity • Lift plans, multiple crane co- ordination • Set programming for different duties • Explain falls of rope, rope lengths • Starting / stopping procedures, anticipation and observation • Demonstrate how to counteract load swing • Loads placed at given points around work area • Explain the reason and importance of a trial lift
Environmental considerations	Explain and demonstrate procedures to be adopted including: Clear visibility • Communication system – signals etc • Noise, dust • Vibration • Ground contamination • Ground damage • Debris around base • Fuel spills etc
Carry out all end of work and shut down procedures	Explain and demonstrate procedures to be adopted including: Shut down procedures and machine security • Jib positioning / free braking • Demonstrate and explain placing crane in free slew mode • 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 N103
Crawler 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, Restraining systems in accordance with risk assessment, PUWER Regulations, LOLER Regulations, COSHH, working at Heights regulations, BS 7121 parts 1 - 3, risk assessments, method statements, ACOP 113, 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. Duty charts, ACOPs, ground loading charts • Explain and demonstrate the use of duty charts, lift plans, method statements, risk assessments, 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, hydraulic systems, chassis, drive systems, steering, tracks, rams, counterweights, hoisting gear, jib, booms, ropes, operators cab, safety systems and types of RCI and LMI distance indicators, stability, attachments 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 crawler crane 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

Learning Outcomes for N103
Crawler Crane

Learning Outcome	Instructor Notes
Set up exclusion zone	Explain and demonstrate procedures to be adopted including: • Warning and identification systems • Reporting procedures for damage to services • Minimum distances and clearances • Explain exclusion zones for pedestrian and vehicles • Ground stability, ground pressures
Conduct all pre-operational and running checks in accordance with manufacturers and legislative requirements	Explain and demonstrate the following fully: 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 crawler crane for use and operate machinery safely and efficiently	Explain and demonstrate procedures to be adopted including: • Mount and dismount crawler crane • Program and set RCI / LMI for different load duties • Jib / boom deflection • Telescopic jibs, minimum distances • Environmental and wind conditions / speeds / anemometer • Smooth use of crane lifting / slewing controls • Establish methods and types of signals e.g. radio protocol, hand signals • Explain load swings, load security, blind lifts, types of rigging • Lift plans, duty charts, ground pressure, testing certs • Explain falls of rope, rope lengths, slew speeds • Starting / stopping / set up procedures, levelling and inclines • Demonstrate how to counteract load swing • Loads placed at given points around work area • Explain the reason and importance of a trial lift • Rigging and de-rigging, types of hook block • Test certs and thorough examination reports
Environmental considerations	Explain and demonstrate procedures to be adopted including: • Clear visibility • Communication system – signals etc • Noise • Dust • Vibration • Ground contamination • Ground damage • Debris around base • Fuel / oil spills etc
Carry out all end of work and shut down procedures	Explain and demonstrate procedures to be adopted including: • Shut down procedures and machine security • Stow away boom in correct sequence • 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 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

Learning Outcomes for N104 Overhead Crane

Learning Outcome	Instructor Notes
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

Learning Outcomes for N107
Lorry Loader

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 and other sources of information, regulations and legislation applicable to 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 duty charts and rating plates • Machine decals • PPE • Codes of Practice • Lift plans • Method statements • Lifting requirements and limitations of lorry loaders • BS 7121 part 4 • Inspection and reporting procedures etc
Be able to locate and identify the major components of the vehicle and loader crane 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 • Chassis / steering / tyres • Stability • Booms / jibs • Slewing • Attachments • Safety systems etc
Be able to locate and identify all 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, 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
Configure the vehicle and loader crane ready for travel	Explain driving controls • Travel configuration • Attachments • Visibility • Loader crane security • Driving position • Road Traffic Act (if applicable)
Configure the machine for travel and manoeuvre it safely across varying terrain in open and confined areas	Explain and demonstrate the following: Driving controls • Ground conditions • Working area • Site routes • Traction • Axle weights • Site hazards • Visibility in confined areas • Tight turns • Height restrictions • Hazards associated with confined areas etc

Learning Outcomes for N107
Lorry Loader

Learning Outcome	Instructor Notes
Conduct all necessary safety checks at the work area	Explain how to carry out all necessary safety checks including: Vehicles • Ground conditions • Overhead obstructions • Power lines • Minimum clearances • Buried services • Other workers etc
Manoeuvre the machine to the work area and correctly configure in readiness to carry out lifting duties	Explain all safety procedures to be adopted including: Positioning of vehicle required configuration in relation to lift plan • Crane controls • Levelling • Working on inclines • Site hazards etc
Correctly deploy the stabilisers according to stated specifications	Explain different types of stabilisers • Ground support • Load bearing pressure • Packing • Load spreading, inclines • Uneven ground etc
Comply with all requirements for Rated Capacity Indicators or Load Moment Indicators	Explain different types of Rated Capacity Indicators (RCI) • Load Moment Indicators (LMI) • Regulations • Functions • Testing and programming • Principles of operation etc
Identify weights and centres of gravity of loads to be used	Explain the checks to be made including: Material types • Weather conditions • Moisture content in loads • Load integrity and security • Centre of gravity • Load shape etc
Carry out lifting operations using the full capabilities of the loader crane	Explain load charts • Lift plans • Use of controls • Observations • Lifting accessories and attachments • Stability of vehicle • Stability of loads • Trial lifts • Signalling • Visibility • Weather conditions • Load swing • Boom deflection • Site hazards etc
Position loads accurately at designated locations including onto and from the vehicle	Explain procedures to be adopted including: Checking ground conditions • Visibility • Weight distribution • Stability of loads and vehicle • Type of lift (basic, intermediate, complex) • Signalling procedures • Requirement for Appointed Person if necessary • Lift plan etc
Identify, fit and remove various attachments and lifting accessories as appropriate	Explain different types of accessory and attachment • Limitations of use • Pre-use checks • Thorough examination and certification • LOLER Regulations • Slinging methods • Slinging training etc
Minimise load swing and ensure load security on the vehicle	Explain techniques • Speed of operation • Slewing • Stability • Observation of loads and machine • Accessories etc
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 N114
Overhead Container Gantry 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, Restraining systems in accordance with risk assessment, PUWER Regulations, LOLER Regulations, COSHH, Working at Heights Regulations, BS 7121, 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 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 container gantry crane use	Explain that PPE should include the following: Suitable safety boots, ear defenders, face / eye protection, dust mask if appropriate, suitable gloves, overalls etc.
Conduct all pre-operational and running checks in accordance with manufacturers 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 N114
Overhead Container Gantry Crane

Learning Outcome	Instructor Notes
Prepare the overhead container gantry 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 deflection • Environmental and wind conditions / speeds / anemometer • Smooth use of crane lifting / moving controls • Establish methods and types of signals e.g. radio protocol • Explain load swings, load security • Lift plans • 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

Learning Outcomes for N115
Remote Control Tower 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, Notification of conventional Tower Crane 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 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 remote power units, counterweights, jibs, trolleys, trolley pulley, hoisting gear, jib tie, counter jib, crane runway, tower mast, ropes, remote control safety systems and types of RCI and LMI distance indicators 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 tower crane use	Explain that PPE should include the following: Suitable safety boots, ear defenders, face / eye protection, dust mask if appropriate, suitable gloves, overalls, fall restraint systems etc

Learning Outcomes for N115
Remote Control Tower Crane

Learning Outcome	Instructor Notes
Conduct all pre-operational and running checks in accordance with manufacturers and legislative requirements	Explain and demonstrate the following fully: 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 tower 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 deflection • Environmental and wind conditions / speeds / anemometer • Smooth use of crane lifting / slewing controls • Establish methods and types of signals e.g. radio protocol • Explain load swings, load security • Lift plans • 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
Environmental considerations	Explain and demonstrate procedures to be adopted including: Clear visibility • Communication system – signals etc • Noise • Vibration • Ground contamination • Ground damage • Debris around base • Fuel spills etc
Carry out all end of work and shut down procedures	Explain and demonstrate procedures to be adopted including: Shut down procedures and machine security • Jib positioning / free braking • Safe storage of remote control device • Demonstrate and explain placing crane in free slew mode • 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
N140 Compact Crane

Learning Outcome	Instructor Notes
Have a basic understanding of the industry, the dangers of working in the industry and their responsibilities as a mini compact crane 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, COSHH, Working at Heights Regulations, BS 7121 parts 1 - 3, ACOP 113, GS6, 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. Duty charts, ground loading charts, lifting requirements • 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, driving controls, remote control systems, transmissions, hydraulic systems, chassis, steering, tracks, outriggers, rams, counterweights, hoisting gear, jib, booms, attachments, ropes, safety systems and types of RCI and LMI, distance indicators, stability 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 • Explain test certs and thorough examination reports and safety systems etc
Set up exclusion zone explaining actions required for emergency actions and identify overhead hazards	Explain and demonstrate procedures to be adopted including: Warning and identification systems • Reporting procedures for damage to services • Minimum distances and clearances • Explain exclusion zones for pedestrian and vehicles • Ground stability, ground pressures

Learning Outcomes
N140 Compact Crane

Learning Outcome	Instructor Notes
Identify and maintain PPE appropriate for mini compact crane 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 manufacturers and legislative requirements	Explain and demonstrate the following fully: 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. Check steering, brakes, tracks, chassis, counterweights, stability, ground pressures etc
Prepare the mini compact crane for use and operate machinery safely and efficiently	Explain and demonstrate procedures to be adopted including: Height / width restrictions, Jib deflection • Program and set RCI / LMI for different load duties • Telescopic jibs, crane positioning, levelling, inclines and crane controls, rigging and de-rigging • Environmental and wind conditions / speeds / anemometer • Smooth use of crane lifting / slewing controls, visibility, confined spaces • Establish methods and types of signals e.g. radio protocol, hand signals • Explain load swings, load security, signalling and blind lifts • Lift plans, types of outriggers, footprint and bearing pressure • Explain falls of rope, rope lengths, and lifting accessories • Starting / stopping / set up procedures, minimum distances, hill starts, ground conditions, site routes • Demonstrate how to counteract load swing • Blind lifts, loads placed at given points around work area • Explain the reason and importance of a trial lift • Protection of lifting accessories, stability factors, slew speeds • Types of hook blocks, extension jibs, storage and stowage
Environmental considerations	Explain and demonstrate procedures to be adopted including: Clear visibility • Communication system – signals etc • Noise • Dust • Vibration • Ground contamination • Ground damage • Debris around base • Fuel / oil spills etc
Carry out all end of work and shut down procedures	Explain and demonstrate procedures to be adopted including: Shut down procedures and machine security • Stow away boom in correct sequence • Dismantle extension jibs • 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 N242
Side Boom

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, COSHH, Working at Heights Regulations, BS 7121 parts 1 - 3, ACOP 113, 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, 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, drive units, transmissions, wheels / tracks, rams, counterweights, hoisting gear, jib, ropes, operators cab, blades, ROPS, FOPS, safety systems and types of RCI and LMI distance indicators, winding gear, stability, ground pressures, attachments 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 side boom 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 manufacturers and legislative requirements	Explain and demonstrate the following fully: 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 N242
Side Boom

Learning Outcome	Instructor Notes
Prepare the side boom for use and operate machinery safely and efficiently	Explain and demonstrate procedures to be adopted including: Mount and dismount side boom • Program and set RCI / LMI for different load duties • Jib deflection • Telescopic jibs • Environmental and wind conditions / speeds / anemometer • Smooth lifting / controls • Establish methods and types of signals e.g. radio protocol, hand signals • Explain load swings, load security • Lift plans • Explain falls of rope, rope lengths • Starting / stopping / set up procedures • Demonstrate how to counteract load swing • Loads placed at given points around work area • Explain the reason and importance of a trial lift
Environmental considerations	Explain and demonstrate procedures to be adopted including: Clear visibility • Communication system – signals etc • Noise • Dust • Vibration • Debris • Fuel / oil spills • Ground contamination / damage
Carry out all end of work and shut down procedures	Explain and demonstrate procedures to be adopted including: Shut down procedures and machine security • Stow away boom in correct sequence • 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 N401
Appointed Person

Learning Outcome	Instructor Notes
Have a basic understanding of the industry, the dangers of working in the industry and their responsibilities as an Appointed Person	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, The Management of H&S Regulations, PUWER Regs, LOLER Regs, COSHH, Working at Height Regulations, BS 7121 part 1 to 5, ACOP 113, BS 7212, CPA Documentation, SFPSG Guidance, Risk assessments, method statements, lift plans, duties, responsibilities, limitations and other relevant legislation. Remind learners that operators have moral obligations, legal obligations and environmental obligations
Explain the duties and responsibilities of; Crane Supervisor, Crane operator, Slinger / Signaller, Crane erector and Maintenance personnel	Explain the importance of knowing the duties of a Crane Supervisor, Crane operator, Slinger / signaller, Crane erector and Maintenance personnel. Discuss their different tasks and the responsibilities they hold • Explain the necessity to know the contents of relevant sections of BS7121 parts 1 to 5, LOLER, PUWER and how they apply to each personnel involved in a lifting operation
Demonstrate and explain how to interpret and extract information on all relevant documentation including legislation, regulations, codes of practice that relate to all lifting operations and duties	Explain Health & Safety at Work Act 1974, The Management of H&S Regulations, PUWER, LOLER, COSHH, Working at Heights Regulations, BS 7121 part 1 to 5, ACOP 113, BS 7212, CPA Documentation, risk assessments, method statements, lift plans, technical improvement notices, duties, responsibilities, limitations 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)
Explain and identify the different requirements to be followed for the lifting of persons, a basic lift, standard lift, complex lift and additional requirements for lifting from height	Explain the requirements of various types of lifts as defined in BS7121 part 3 and explain how to correctly complete lift plans, risk assessments and method statements that relate to each lift. Explain the relevant legislation involved in lifting persons and the additional checks and risk that must be considered • Explain extracts from Working at Height regulations relating to Fall arrest equipment as defined by BS EN 363. BS7121 for requirements of lifting at height – specifically dismantling operations relating to the dangers and implications to crane safety
Explain the notification process and the requirements for reporting procedures to Authorities, Utility bodies, and any other parties if affected by the lifting operation	Explain the following fully: Required notification procedures for Authorities including the Airport Authorities Air Navigation Order, CAP168 Licensing of Aerodromes, BS7121, Environment Agency, Highways Agency, Local and District Councils, Railways and Underground Authorities

Learning Outcomes for N401
Appointed Person

Learning Outcome	Instructor Notes
Identify different types of Cranes, their capabilities and limitations for lifting	Explain fully the different options for selecting the correct and appropriate crane for particular lifting operations • Discuss: Mobile cranes, Rough terrain, Truck type, Truck mounted, All terrain, All purpose, Crawler, Fixed base, Tower, Self-erect, Yard, Low headroom, Pedestrian operated, Gantry, Lorry loader, Knuckle boom, Forklifts, MEWPS, Excavators as cranes, Telehandler with suspended loads, Hoists etc
Explain the maintenance, inspection, thorough examination and testing requirements for lifting equipment and all accessories	Discuss in detail the relevant sections of LOLER and BS 7121 part 2 in relation to maintenance, inspection, testing and thorough examination • Explain and verify current and expired examination reports and test certificates, illustrating the areas of importance when checking all certification as an Appointed Person
Explain setting up, erection, levelling and dismantling requirements for diverse types of lifting equipment and lifts	Explain the importance of correctly erecting / dismantling a crane and the importance of firm level standing for mobile and crawler cranes, fixed base, tower, spider and pedestrian operated cranes • Typical crane widths, sizes, weights, transportation methods, turning circle, site plans, confined spaces Also any other equipment that is used as a crane i.e. Excavator, lorry loader, truck type / mounted, yard, low head room, forklifts, MEWPS, Hoists, excavators as cranes, lorry / loader / knuckle boom etc • Explain the requirements of BS7121, BS 8460, LOLER, PUWER and Working at height regulations
Explain and demonstrate how to calculate point loadings and outrigger loadings, spreader mat types and sizes	Explain and demonstrate procedures to be adopted including: The importance of outrigger, base, foundation and ground bearing pressures and the appropriate formulae • Apply formulae to determine correct information required to calculate outrigger and base loadings sourcing information using various crane manufacturers outrigger loading charts • Calculate the required size of spreader mat that must be used to achieve acceptable limits as required by the main contractor
Explain the function and use of the RCI, LMI and anti-collision systems and utilise the information provided	Explain and demonstrate how to check settings of an RCI using diverse codes obtained from a given load chart including FOSs blocked, swing away, main jib, extensions, fly jib, luffing jib etc • Explain about other types of warning devices and anti-collision systems

Learning Outcomes for N401 Appointed Person

Learning Outcome	Instructor Notes
Demonstrate and explain the selection of the correct cranes for specified lifts including all accessories, ensuring correct duties charts, range diagrams and specification sheets	Demonstrate and explain how to extract and use information from various crane load charts to determine a basic lift, standard lift and a complex lift • Extract and use information from examples of loads to be lifted in order to determine if the list is possible i.e. are there adequate factors of safety and Down-rating, sufficient height, setting of the crane correctly and outrigger loadings and pad sizes etc
List and explain relevant information relating to different types of lifting accessories and explain their applications	Demonstrate different types of lifting accessories, their uses and limitations of use and de-rating as applicable • Explain other types of lifting frames and specialist equipment and demonstrate the limitations of Appointed Persons knowledge and methods of guidance
List and explain relevant information relating to different types of lifting accessories including markings, certificates and thorough examination reports	Explain and demonstrate how to correctly inspect any lifting accessories and extract all information from information tags, test certificates and thorough examination reports • Explain the differences between SWL, WLL and rated capacity
Explain and demonstrate different slinging techniques, calculating sling sizes and angles, balanced and unbalanced, centres of gravity and loose loads etc	Explain and demonstrate; Calculation of sling sizes, angles from at least 30° to 120°, and different computations of slings as required for various load sizes • Demonstrate correct and incorrect slinging techniques using various lifting accessories such as brothers and shortening clutches, nylon and webbing slings and steel and wire ropes for loads with varying centres of gravity • Explain what lifting accessories would be used in various lift scenarios, and what type should be used in carrying out lifts
Identify weights and centres of gravity for various types of loads, and specify appropriate lifting accessories for various types of load	Explain and demonstrate how to correctly: Calculate weights and centres of gravities using known formula • Explain the different weight formula and material conversion dimensions
Demonstrate and Illustrate different types of communication methods for lifting purposes and state	Demonstrate and explain hand signals illustrated in BS 7121, radio use / protocol and all other options of relaying standard signals • Explain the advantages, disadvantages and limitations of different communication methods
Explain the importance of completing a reflective report on a lifting operation	Explain and demonstrate the knowledge of how to compile a report on a given lift scenario highlighting the positive and negative aspects of the lift • Discuss ways to improve lift procedures and the need to revise risk assessments and method statements

Learning Outcomes for N401
Appointed Person

Learning Outcome	Instructor Notes
Identify and demonstrate how to and plan an area with exclusion zones for diverse lifting operations identifying any proximity/underground hazards from supplied plans and drawings	Explain and demonstrate procedures to be adopted including identifying any proximity hazards from existing drawings / plans • Highlight the hazards and the possibility and procedure for overcoming them, and all risks when using a multi-crane lift
Identify and plan an area with exclusion zones for diverse lifting operations identifying safe access and egress before, during and after any lifting operation	Plan a specific lift from the NPORS scenarios including identifying and dealing with exclusion zones traffic management and access / egress points • Develop a lift plan from the scenarios given highlighting all proximity hazards and parts of the lifting operation that will require checking
Explain and identify the requirements for safe site access and egress for different types of lifting equipment	Explain and demonstrate by using known site plans the procedure for examining lifting equipment's weight, size, widths, transportation methods and maximum / minimum turning circles • Explain in detail any working confined areas and access-egress for delivery vehicles with components of the crane
Demonstrate how to construct a safe system of work by producing risk assessments, method statements and lift plans with information supplied	Specify and explain positioning of the crane and load • Identifying limiting factors and immovable obstructions that must be considered • How to devise a lift plan and create a risk assessment / method statement using the details of a successfully completed standard lift
Prepare and explain lift plan information to all personnel involved in lifting operations	Explain and illustrate the designated sections of the lift plan to all personnel involved in the plan • Explain the role of the crane supervisor, crane operator, slinger / signaller etc in relation to lifting
Specify and explain positioning of the crane and load, identifying limiting factors and immovable obstructions that must be considered	Demonstrate and explain positioning of the crane to others involved in the lift including any proximity hazards, boom lengths, radii, boom deflection, how the crane is rigged, lift and lay down area, specific codes selected, outrigger loadings, outrigger pads, stated ground pressures and environmental conditions etc
Identify and explain how environmental factors outside the lift zone but within the surrounding area can affect planned lifting operations and the possible outcomes	Demonstrate and explain the dangers and restrictions imposed on the actual lift plan when near a railway, airport, hospital, city centre, dockside and residential areas

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 N402
Slinger / Signaller

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, LOLER Regs, COSHH, Working at Heights Regulations, BS 7121 part1 & 2, ACOP L113, 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)
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, lifting requirements and limitations
Be able to locate and identify and explain different types of lifting equipment and lifting accessories. Explain their basic construction, uses, applications and their functions	Explain the different types of cranes, lifting equipment and accessories • Explain the function of the components and how they all contribute to the safety and operational integrity of the lifting equipment • Explain their various uses for different types of loads, terminology, and specialist equipment
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, load / tare sheets lifting charts, decals and other relevant paperwork etc
Undertake all pre-use checks on non-specialist lifting accessories and identify non-serviceable items	Explain the importance of examining all lifting accessories and the limitations that are acceptable • Explain types of damage and the implications of using damaged or unsuitable lifting equipment • Sequence of pre-use checks, procedures for in–service and out of service markings
Explain procedures for placing non-serviceable items out of service	Explain the following fully: • The procedure and importance of defect reporting • The secure storage of defective items • Disposing of defective items as stated in LOLER Regulations

Learning Outcomes for N402
Slinger / Signaller

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: • The reason and importance of a trial lift • Load density and shapes • Different types of loads • Load integrity, centres of gravity • How to calculate the estimation of a load • The consequence of moisture content • Information / tare 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: • Warning and identification systems • Reporting procedures for damage to services • Minimum distances and clearances • Explain exclusion zones for pedestrian and vehicles • Ground stability, ground pressures
Identify and maintain PPE appropriate for slinger signaller	PPE should include the following: • Suitable safety boots, ear defenders, face / eye, protection hard hat, dust mask if appropriate, suitable gloves, overalls, etc • Explain the importance of suitable hand protection and the implications of foreign bodies in your hand
Secure various types of loads to a hook using the relevant lifting accessories and procedures ensuring load balance, security and integrity	Explain the importance of: • SWL / WLL of the load • Load lifting points • Protection for lifting accessories • Correct slinging procedures • Load protection • Tag lines • Load characteristics • Loose, bundled • Live loads
Direct and guide the movement of loads to different types of locations using different methods of communication	Explain and demonstrate procedures to be adopted including: • The route of lift • Visibility • Load swings • Tag lines, netting / sheeting • Different forms of communication i.e. hand signals, radio protocol • Verification of desired location for landing the load and security • Landing conditions, landing loads at height, retrieval of accessories, blind lifts, slinging procedures, load protection • Security of loads after landing, ground stability / pressures • Environmental conditions / wind effects etc
Environmental considerations	Explain and demonstrate; • Ground Damage • Vibration from the lifting machine • Ground contamination • Debris • Fuel and oil spills etc
Carry out all out-of-service and securing procedures	Explain and demonstrate; • Cleaning and protecting accessories • Safe manual handling • Damage checking • Security • Storage procedures • Documentation

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Learning Outcomes for N405
Crane / Lift Supervisor

Learning Outcome	Instructor Notes
Have a basic understanding of the industry, the dangers of working in the industry and their responsibilities as a crane / lift supervisor	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 part 1 to 5, ACOP 113, BS 7212 / 8460, risk assessments, method statements, duties, responsibilities, limitations 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)
Explain the importance of conforming 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, lifting requirements and limitations
Explain the importance of locating and identifying different types of lifting equipment and lifting accessories. Explain their basic construction, uses, applications and their functions	Explain the different types of lifting equipment and accessories • Explain the function of the components and how they all contribute to the safety and operational integrity of the lifting equipment • Explain their various uses for different types of loads limitations, de-rating, lifting frames etc
Demonstrate how to interpret and extract information on all relevant documentation	Explain the importance of the ability to extract information form the test certification thorough examination certification, lift plan, method statements, risk assessments, lifting charts, test certs both in and out of dates • amend lift plan procedures and other relevant paperwork etc
Explain and demonstrate diverse types of communication methods used for lifting purposes	Explain the importance of clarification of the signals to be used in the lifting operation with the crane operator and the Slinger Banksman • Explain (manual and radio), radio use and protocol, lift plans and the advantages and limitations of different types of communication

Learning Outcomes for N405
Crane / Lift Supervisor

Learning Outcome	Instructor Notes
Explain procedures for placing non-serviceable items out -of-service	Explain the following fully: • The procedure and importance of defect reporting • The secure storage of defective items and disposing of defective items as stated in LOLER Regulations
Explain the function and use of the RCIs and anti-collision systems and use the information provided	Explain and demonstrate procedures to be adopted including: • Explain how to check the settings of an RCI unit in various codes extracted from the load chart including the main jib extensions, Fly and Luffing Jibs, swing away / stinger, etc • Explain different types of warning devices and anti-collision systems
Explain setting up, erection, levelling and dismantling requirements for diverse types of lifting equipment and lifts	Explain the importance of correctly erecting / dismantling a crane and the importance of firm level standing for mobile and crawler cranes, fixed base, tower, spider and pedestrian operated cranes • Typical crane widths, sizes, weights, transportation methods, turning circle, site plans, confined spaces Also any other equipment that is used as a crane i.e. excavator, lorry loader, forklift trucks, MEWP's, Hoists, etc
Set up exclusion zone explaining actions required for emergency actions and identify overhead hazards	Explain and demonstrate procedures to be adopted including: • Warning and identification systems • Reporting procedures for damage to services, ground pressures • Minimum distances and clearances, stability • Explain exclusion zones for pedestrians and vehicles • Ensure no one enters the danger zone
Identify potential hazards and unsafe lifting practices using different lifting scenarios	Explain procedures to be adopted including: • Identify and explain proximity hazards from examples of different lifts using existing drawings / lift plans, lifting from heights • Highlight the hazards and explain possible solutions, ground pressures
Explain the importance of checking the security of various types of loads and lifting accessories, explain the procedures ensuring load balance and integrity	Explain the importance of SWL / WLL of the load • Load lifting points • protection for lifting accessories • Correct slinging procedures • Load protection • Limitations • De-rating • Lifting frames etc

Learning Outcomes for N405
Crane / Lift Supervisor

Learning Outcome	Instructor Notes
Supervise the movement of loads to different types of locations using different methods of communication	Explain and demonstrate procedures to be adopted including: • The route of lift, lift / lay down area • Visibility, radii, deflection, boom length • Rigging procedures, Load swings • Tag lines • Different forms of communication i.e. Hand signals, radio protocol etc • Verification of desired location for landing the load • Landing conditions, restrictions imposed when lifting near hospitals, railways, airports, dockside and city centre locations • Blind lifts, calculate estimated weight from known formulae • Security of loads after landing • Environmental conditions / wind effects etc
Environmental considerations	Explain and demonstrate; Ground Damage • Vibration from the lifting machine • Ground contamination • Debris, ground pressure damage, Fuel and oil spills etc
Carry out all out-of-service and securing procedures	Explain and demonstrate; • Cleaning and protecting accessories • Safe manual handling • Damage checking • Security • Storage procedures • Documentation

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Learning Outcomes for N722
Material Re-Handler

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 Regs, LOLER Regs 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 • Booms • Dipper arms • Buckets • 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
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
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

Learning Outcomes for N722
Material Re-Handler

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: • Safe use of steering, driving and braking controls, travel position • Good visibility • Selection of attachments • Travel around site, possible road travel
Conduct all necessary safety checks at the work area	Explain how to carry out pre-working 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 processing 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 • Placement of material • Segregation of materials • Positioning of vehicles for loading
Carry out processing tasks	Explain procedures to be adopted including: • Different types of materials for separating and processing • Method statements, job specifications, risk assessments, permits to work • Reporting procedures if any damage • Minimum clearance • Placement or disposal of waste material • Segregation of materials • Environmental issues
Load material onto transporting vehicles, containers or processing plant	Explain procedures to be adopted including: • Clear visibility • Communication system – signals etc • Machine positioning for loading processing plant etc • Maintaining safety and stability of machine during loading • Safe positioning of vehicle driver
Fit and remove attachments	Explain procedures to be adopted including: • Prepare machine and attachment • Different attachment types i.e. grabs, magnet, log grabs, hook etc • LOLER • Security of attachment – checks to be made • Codes of practice and industry best practice • Manufacturer's handbook • Manual handling issues
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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