

Hoist - A20

Learning for CPCS



Outcomes

Through a combination of targeted training and experience, an individual with the hoist will be able to:

Roles and responsibilities	<ul style="list-style-type: none"> Describe the nature of the sector of industry and their role and responsibilities as an equipment operator
Preparing for work	<ul style="list-style-type: none"> Name the types of hoists, and explain the purpose of the principal components, basic construction, controls and terminology of each Conform with manufacturer's requirements as per the operator's manual, other types of information sources and relevant regulations and guidance Explain hoist working limitations Carry out all pre-use checks Undertake running checks, including gates and safety devices, before placing into service Check the stability, systems and alignment and ensure the hoist is safe to use Check that hoist-way protection is in position before use Check the capacity of the hoist will accommodate expected loads, equipment and/or passengers Carry out full emergency lowering and evacuation procedure (Endorsements B & D) Explain precautions to be taken for overhead services and other proximity hazards
Setting up for work	<ul style="list-style-type: none"> Prepare the hoist for the required load(s) and/or passengers Identify suitability and integrity of loads for transporting and compatibility with the cage Load and unload a range of materials using suitable handling methods for each load type Explain the loading and unloading procedures for varying types of loads Explain the procedures and actions to be taken when transporting people (Endorsements B & D)
Working tasks	<ul style="list-style-type: none"> Operate the hoist to the end of travel and to various landing levels, both loaded and unloaded Comply with signals and instructions
Shutting down	<ul style="list-style-type: none"> Place the hoist in an out-of-service condition, isolate and secure

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Syllabus



Learning outcome	Training content	
<ul style="list-style-type: none"> Describe the nature of the sector of industry and their role and responsibilities as an equipment operator 	<ul style="list-style-type: none"> Industry type Customer / client needs Sector contribution Role Reporting structures Lifelong skills Social responsibilities 	<ul style="list-style-type: none"> Communication with colleagues / management / other trades Health and Safety at Work Act Environmental issues Other trades
<ul style="list-style-type: none"> Name the types of hoists, and explain the purpose of principal components, the basic construction, controls and terminology of each 	<ul style="list-style-type: none"> Differing types Functions and applications Power units Lifting / lowering systems Platforms 	<ul style="list-style-type: none"> Stability / base ground pressure Erection procedures Safety systems Environmental factors Positioning
<ul style="list-style-type: none"> Conform with manufacturer's requirements as per the operator's manual, other types of information source and relevant regulations and guidance 	<ul style="list-style-type: none"> Operator's Manual Machine decals Health and Safety at Work Act PPE Codes of Practice Site plans / drawings 	<ul style="list-style-type: none"> Method statements Harnessing Risk assessments / COSHH Inspection and reporting forms / procedures
<ul style="list-style-type: none"> Explain hoist working limitations 	<ul style="list-style-type: none"> Types Speeds Load capacities 	<ul style="list-style-type: none"> Types of loads Environmental factors High wind speeds
<ul style="list-style-type: none"> Carry out all pre-use checks 	<ul style="list-style-type: none"> Regular and non-scheduled maintenance procedures 	<ul style="list-style-type: none"> Sequence of pre-use checks Defect reporting
<ul style="list-style-type: none"> Undertake running checks, including gates and safety devices, before placing into service 	<ul style="list-style-type: none"> Types and frequency of checks Limits of service Specification Access / visibility 	<ul style="list-style-type: none"> Types of safety devices Methods / procedures Functional operation against specifications Hazards Purpose of all checks
<ul style="list-style-type: none"> Check the stability, systems and alignment and ensure the hoist is safe to use 	<ul style="list-style-type: none"> Specification Hazards Stability / methods Security / segregation Methods of checks e.g. visual, audible, feel etc. 	<ul style="list-style-type: none"> Base / ground / supports Securing methods / mechanisms Tools / equipment

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Syllabus (continued)



Learning outcome	Training content	
<ul style="list-style-type: none"> • Check that hoist-way protection is in position before use 	<ul style="list-style-type: none"> • Types • Specification • Access / visibility 	<ul style="list-style-type: none"> • Methods / procedures • Hazards • Purpose of hoist-way checks
<ul style="list-style-type: none"> • Check the capacity of the hoist will accommodate expected loads, equipment and/or passengers 	<ul style="list-style-type: none"> • Specification / load ratings • Estimating loads • Typical loads for each type 	<ul style="list-style-type: none"> • Load charts / documents • Notices / decals • Loading equipment
<ul style="list-style-type: none"> • Carry out full emergency lowering and evacuation procedures (Endorsements B & D) 	<ul style="list-style-type: none"> • Procedures • Planning • Egress and other hazards • Working at height • Communication 	<ul style="list-style-type: none"> • Methods of evacuation • Notification procedures/reporting
<ul style="list-style-type: none"> • Explain precautions to be taken for overhead services and other proximity hazards 	<ul style="list-style-type: none"> • Types of typical services (electrical / electronic etc.) • Minimum distances and clearances 	<ul style="list-style-type: none"> • Reporting procedures for damage to services
<ul style="list-style-type: none"> • Prepare the hoist for the required load(s) and/or passengers 	<ul style="list-style-type: none"> • Load capacity • Destinations • Observation • Loading sequences 	<ul style="list-style-type: none"> • Load distribution • Access / egress • Passenger / load security positioning
<ul style="list-style-type: none"> • Identify suitability and integrity of loads for transporting and compatibility with the cage 	<ul style="list-style-type: none"> • Specifications • Typical types of loads • Load sizes • Nature of load for transporting e.g. fluid, loose etc. • Cage loadings and maximum weights 	<ul style="list-style-type: none"> • Legislation • Hazards • Load storage • Estimating load weights
<ul style="list-style-type: none"> • Load and unload a range of materials using suitable handling methods for each load type 	<ul style="list-style-type: none"> • Handling techniques • Nature of load for handling e.g. weight, shape, size, • Specific/specialist PPE for handling loads • Additional load • Load positioning in platform, • Weight distribution • Sequence of loading multiple loads 	<ul style="list-style-type: none"> • Limitations of manual handling of loads • Types of and using loading devices • Weight of loading devices • Slips, trips and falls

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Syllabus (continued)

Learning outcome	Training content	
<ul style="list-style-type: none">• Explain the loading and unloading procedures for varying types of loads	<ul style="list-style-type: none">• Methods of movement• Lifting equipment/loading devices• Typical types of loads• Fluid loads• Load security	<ul style="list-style-type: none">• Weights, shapes and sizes• Slips trips and falls• Cage load ratings• Weight distribution
<ul style="list-style-type: none">• Explain the procedures and actions to be taken when transporting people (endorsements B & D)	<ul style="list-style-type: none">• Instructions/relaying of information• Entry and exit procedures• Emergency procedures• Mixing of passengers and loads• Slips, trips and falls	<ul style="list-style-type: none">• Positioning of passengers• Checks to ensure passengers comfortable with being at height/in an enclosed area• Cage carrying capability / maximum numbers for transporting
<ul style="list-style-type: none">• Operate the hoist to the end of travel and to various landing levels, both loaded and unloaded	<ul style="list-style-type: none">• Controls• Visibility• Hazards• Observation• Signalling / Communication	<ul style="list-style-type: none">• Emergency procedures• Communication (with passengers)• Environmental considerations
<ul style="list-style-type: none">• Comply with signals and instructions	<ul style="list-style-type: none">• Types• Responding	<ul style="list-style-type: none">• Methods
<ul style="list-style-type: none">• Place the hoist in an out-of-service condition, isolate and secure	<ul style="list-style-type: none">• Shut down procedures• Security	<ul style="list-style-type: none">• Parking and positioning

Note: The listed training content should not be considered exhaustive and subjects may be added to reflect the individuals' working environment.

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Safety critical



Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none"> Stability 	<ul style="list-style-type: none"> Manufacturers' guidance followed with regards to ensuring hoist-way is to specification and clear of hazards
<ul style="list-style-type: none"> Familiarisation 	<ul style="list-style-type: none"> The need to be fully familiarised with each machine make and/or model type before operating any hoist
<ul style="list-style-type: none"> Transporting long objects 	<ul style="list-style-type: none"> Correct procedures for the carrying of long objects in the cage and the potential risks where objects extrude beyond the cage boundary.
<ul style="list-style-type: none"> Carrying of passengers (goods hoists) 	<ul style="list-style-type: none"> That no passengers (including the operator) can travel in the cage of a goods only hoist – entry only for the purposes of loading/ unloading
<ul style="list-style-type: none"> Carrying of passengers (approved types) 	<ul style="list-style-type: none"> Procedures and protocols of carrying passengers including instructions to be given to passengers for positioning and emergencies
<ul style="list-style-type: none"> Overloading 	<ul style="list-style-type: none"> That factors such as additional equipment, loading devices, uneven weight distribution etc. which can easily overload the cage
<ul style="list-style-type: none"> Emergency lowering 	<ul style="list-style-type: none"> That the procedures must be known before placing into service and if enacting an emergency, ensure that the nearest landing level is used (Endorsements B & D only)

Duration / Ratios

To allow effective learning, these training times are recommended for this category. Candidates must be profiled to establish learning needs. Durations should be of a length to ensure the learning outcomes are met.

Experience	Accumulated hours
<ul style="list-style-type: none"> Novice operators with no industry or machine experience 	21
<ul style="list-style-type: none"> Novice operators with industry experience but no machine experience 	14
<ul style="list-style-type: none"> Operators with unrelated (access) machine experience 	14
<ul style="list-style-type: none"> Operators with similar (access) machine experience 	7

All candidates must have received the equivalent to 7 hours of site safety and induction training

To allow effective learning, the listed candidate / machine / instructor ratio is the maximum recommended for this category

4 candidates : 1 machine: 1 instructor

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Resources

Practical equipment

- Hoist that meets current legislation (thorough examination, fit for purpose etc.)
- Operator's manual for the machine(s)
- Various and varying loads

PLUS

- Suitable PPE
- Risk assessment for all areas where training is occurring

Theory equipment

- BS 7212
 - PUWER 1998 Regulations
 - LOLER 1998 Regulations
 - HSE GS6
 - Operator's Manual
 - Specifications for types of hoists
 - Energy utility Networks – Look up, look out
 - EN12158, EN12159 & PR/EN16719
 - Industry-derived guidance (www.cpa.uk.net)
- #### PLUS
- Suitable room for theory training purposes
 - Welfare and rest facilities during training

Category

Category description and types

CPCS defines a category as an item of plant or equipment used within the construction or allied industries and worked in accordance with the manufacturer's basic design. Although this category can have varying uses within industry and used with many attachments, for CPCS training and assessment standards, the descriptions reflect basic core use. Endorsements are sub-categories that reflect the variations for this category by chassis type. This category has four endorsements.

To identify a machine within this category, a typical hoist would normally have the listed features and be used within the described characteristics.

Category features

- Load carrying platform or cage running vertically (or near to) on a pre-constructed temporary mast (hoist-way)
- Platform will be partially or fully enclosed
- The hoist may be free-standing or fixed to a structure

Category characteristics

- A temporary lifting machine serving landing levels on sites of engineering and construction with a platform, cage or other load carrying device, which is guided and operated by a dedicated authorised operator (*source BS 7212*)
- Transports loads and/or passengers vertically or near vertically to one or more landing points adjacent or within a structure (**Note:** *Work cannot be undertaken from the platform*)

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Endorsements



Endorsement characteristics

- **Endorsement A:** Rack and pinion goods – platform contains the power unit with the operating controls located at a ground station, and can only transport goods
- **Endorsement B:** Passenger / goods combined – platform contains the power unit and operating controls and can transport a combination of goods and/or passengers
- **Endorsement C:** Rope operated goods – platform suspended by a hoist rope winched by an external power unit for which can be an inclined unit, and can only transport goods
- **Endorsement D:** Transport platform – usually partially opened platform with overhead fall protection (FOPS) and contains the power unit and operating controls on using a rack and pinion single or twin masts, and can transport a combination of goods and/or passengers

Note: A description of the various types of hoist and their construction are contained within PR/EN16719