

Dragline - A05

Learning for CPCS



Outcomes

Through a combination of targeted training and experience, an individual with the Dragline 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 a plant operator
Preparing for work	<ul style="list-style-type: none"> Name and explain the purpose of principal components, the basic construction, controls and terminology Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation Undertake all pre-use checks
Travelling and manoeuvring	<ul style="list-style-type: none"> Configure and set for travel Travel over rough, undulating ground, substantial inclines and level surfaces Manoeuvre in confined spaces
Setting up for work	<ul style="list-style-type: none"> Configure and set for excavating duties Explain actions required for hazards, underground and overhead services
Working tasks	<ul style="list-style-type: none"> Excavate differing types of excavations in various types of ground Place materials into transporting vehicles Adjust the tipping rope for varying materials Explain lifting requirements that affect the operation of a dragline
Shutting down	<ul style="list-style-type: none"> Carry out shut down and securing procedures Explain the loading and unloading procedures for machine transporting

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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 a plant operator 	<ul style="list-style-type: none"> Industry type Customer / client needs Sector contribution Role Reporting structures Social responsibilities Lifelong skills 	<ul style="list-style-type: none"> Communication with colleagues / management / other trades Health and Safety at Work Act Environmental issues Other trades Working practices
<ul style="list-style-type: none"> Name and explain the purpose of principal components, the basic construction, controls and terminology 	<ul style="list-style-type: none"> Differing Types Function and applications Power units Hydraulic systems Undercarriage Tracks 	<ul style="list-style-type: none"> Jibs / buckets Stability / ground pressure Hoisting gear / ropes Slewing arrangements Safety systems ROPS / FOPS
<ul style="list-style-type: none"> Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation 	<ul style="list-style-type: none"> Operator's Manual Machine decals PPE Codes of Practice Site plans / drawings Health and Safety at Work Act Method statements 	<ul style="list-style-type: none"> Lifting requirements and limitations Risk assessments / COSHH Inspection and reporting forms / procedure
<ul style="list-style-type: none"> Undertake 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"> Configure and set for travel 	<ul style="list-style-type: none"> Travel controls Attachments / accessories 	<ul style="list-style-type: none"> Travel position Site travel Visibility
<ul style="list-style-type: none"> Travel over rough, undulating ground, substantial inclines and level surfaces 	<ul style="list-style-type: none"> Travel routes Slopes / inclines Direction of travel Traction / aids Ground conditions 	<ul style="list-style-type: none"> Hazards Working area Environment protection / minimise damage
<ul style="list-style-type: none"> Manoeuvre in confined spaces 	<ul style="list-style-type: none"> Visibility Limitations of vision Protection of ground / tight turns 	<ul style="list-style-type: none"> Environmental / noise / fumes Height restrictions

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Syllabus (continued)



Learning outcome	Training content	
<ul style="list-style-type: none"> • Configure and set for excavating duties 	<ul style="list-style-type: none"> • Type of ground • Required specification • Equipment / bucket size / type • Bucket tipping point • Drag clevis position 	<ul style="list-style-type: none"> • Machine positioning • Spoil placing • Site markings • Loading vehicles positioning • Spoil segregation
<ul style="list-style-type: none"> • Explain actions required for hazards, underground and overhead services 	<ul style="list-style-type: none"> • Types of typical services • Warning / identification systems 	<ul style="list-style-type: none"> • Reporting procedures for damage to services • Minimum distances and clearances
<ul style="list-style-type: none"> • Excavate differing types of excavations in various types of ground 	<ul style="list-style-type: none"> • Non-complex and complex trenches • Disposal of spoil • Line and parallel pulling • Machine positioning 	<ul style="list-style-type: none"> • Segregation of spoil • Environmental factors • Productive cycles of operation • Measuring levels and centres
<ul style="list-style-type: none"> • Place materials into transporting vehicles and hoppers 	<ul style="list-style-type: none"> • Machine positioning • Signals / communication • Loading vehicle stability 	<ul style="list-style-type: none"> • Minimum overspill • Cleaning loading area
<ul style="list-style-type: none"> • Adjust the tipping rope for varying materials 	<ul style="list-style-type: none"> • Preparation • Types of bucket • Security • Manual handling 	<ul style="list-style-type: none"> • Manufacturers' procedures • Clevis positions
<ul style="list-style-type: none"> • Explain lifting requirements that affect the operation of a dragline 	<ul style="list-style-type: none"> • Legislation and regulations • Inspections 	<ul style="list-style-type: none"> • Lifting and load-rating charts
<ul style="list-style-type: none"> • Carry out shut down and securing procedures 	<ul style="list-style-type: none"> • Shut down procedures • Security 	<ul style="list-style-type: none"> • Parking and positioning
<ul style="list-style-type: none"> • Explain the loading and unloading procedures for machine transporting 	<ul style="list-style-type: none"> • Compatibility • Positioning 	<ul style="list-style-type: none"> • Security • Types of transporter

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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Learning for CPCS

Safety critical



Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none">• Manoeuvring	<ul style="list-style-type: none">• Facing the direction of travel and no reversing unless authorised by a nominated vehicle marshaller

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	70
<ul style="list-style-type: none">• Novice operators with industry experience but no machine experience	62
<ul style="list-style-type: none">• Operators with unrelated (earthmoving) machine experience	42
<ul style="list-style-type: none">• Operators with similar (earthmoving) machine experience	28

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 : 2 machines: 1 instructor

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Resources



Practical equipment

- Dragline that meets current legislation
- Operator's manual for the machine(s)
- Measuring equipment to ensure levels and centres
- Sufficient area of ground suitable for excavating
- Slopes, stockpiles of materials
- Rear tipping vehicle or trailer for loading into

PLUS

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

Theory equipment

- PUWER 1998 Regulations
- LOLER 1998 Regulations
- HSE GS6

- Operator's Manual

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.

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

Category features

- Track mounted chassis
- 360 degree rotating upper structure containing the operating position; power, hydraulic and electrical units and winches
- Lattice multi-sectioned jib
- Winch operated lifting metal-stranded hoist rope mounted on pulleys
- Tipping bucket supported by the hoist rope
- Pull rope connected to the bucket and lower section of the jib

Category characteristics

- Able to travel in forward and reverse and change direction during travel
- Can travel and operate on uneven and loose ground and slopes
- Carry out excavation and extraction duties in a linear motion using a bucket within the confines of the operating radius, depth and height
- Can place materials using a combination of slew and linear motions within the confines of the operating radius, depth and height