

Crawler – tractor/dozer – A34

Learning for CPCS



Outcomes

Through a combination of targeted training and experience, an individual with the crawler dozer 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 site 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 Construct ramps and form and shape stockpiles Grade, spread and level ground and materials
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 Lifelong skills Working practices 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 and explain the purpose of principal components, the basic construction, controls and terminology 	<ul style="list-style-type: none"> Differing types Functions and applications Power units Hydraulic systems Transmissions Chassis / tracks 	<ul style="list-style-type: none"> Stability / ground pressure Blades Attachments 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 Health and Safety at Work Act PPE Codes of Practice 	<ul style="list-style-type: none"> Site plans / drawings Method statements Risk assessments / COSHH Inspection and reporting forms / procedures
<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 site travel 	<ul style="list-style-type: none"> Steering controls Attachments / accessories Travel position 	<ul style="list-style-type: none"> Site travel Visibility Road travel / Road Traffic Act
<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 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 Hazards

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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 Blade size / type Machine positioning 	<ul style="list-style-type: none"> Spoil placing Site markings Spoil segregation
<ul style="list-style-type: none"> Explain actions required for hazards, underground and overhead services 	<ul style="list-style-type: none"> Reporting procedures for damage to services Warning / identification systems 	<ul style="list-style-type: none"> Types of typical 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"> Types of excavations Disposal / storing of spoil Feathering Blade angles Working speeds Machine positioning 	<ul style="list-style-type: none"> Segregation of spoil Environmental factors Angles of repose Productive cycles of operation Measuring levels and centres
<ul style="list-style-type: none"> Construct ramps and form and shape stockpiles 	<ul style="list-style-type: none"> Types of materials Spoil placing Angles of repose Working on inclines Blade angles 	<ul style="list-style-type: none"> Cleaning working area Stability Ramp incline Ramp integrity and consolidation
<ul style="list-style-type: none"> Grade, spread and level ground and materials 	<ul style="list-style-type: none"> Specification Attachments Working speeds Side-casting, spreading and windrow techniques 	<ul style="list-style-type: none"> Productive cycles of operation Environmental factors
<ul style="list-style-type: none"> Carry out shut down and securing procedures 	<ul style="list-style-type: none"> Shut down procedures Parking and positioning 	<ul style="list-style-type: none"> Security
<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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Safety critical

Emphasis to be placed on the following topics:

Topic	Emphasis
<ul style="list-style-type: none">• Visibility prior to and during reversing	<ul style="list-style-type: none">• Constant and full visibility before and during manoeuvring and types of visibility aids and their limitations and weaknesses

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	Theory equipment
<ul style="list-style-type: none"> • Crawler dozer that meets current legislation • Operator’s manual for the machine(s) • Sufficient area of ground suitable for excavating • Slopes, stockpiles of materials <p>PLUS</p> <ul style="list-style-type: none"> • Suitable PPE • Risk assessment for all areas where training is occurring 	<ul style="list-style-type: none"> • PUWER 1998 Regulations • HSE GS6 • Operator’s Manual • Specifications for types of crawler dozers <p>PLUS</p> <ul style="list-style-type: none"> • 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, for CPCS training and assessment standards, the descriptions reflect basic core use.

To identify a machine within this category, a typical crawler-tractor/dozer would normally have the listed features and be used within the described characteristics.

Category features	Category characteristics
<ul style="list-style-type: none"> • Chassis containing a centrally mounted operating position, power, transmission, hydraulic and electrical units • Linked undercarriage with tracked drive system • Side-mounted arms located on the undercarriage with a raisable and removable multi-positional (in most cases) front blade, hydraulically operated 	<ul style="list-style-type: none"> • Able to travel in forward and reverse and change direction during travel by track speed differential • Can travel and operate on uneven and loose ground and slopes • Carry out excavation and extraction duties in a linear motion using the front blade within the confines of the operating depth and height • Carry out forming duties in a linear motion using the front blade within the confines of the operating depth and height