

# Loader compressor – A41

## Learning for CPCS



### Outcomes

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

|                                   |   |
|-----------------------------------|---|
| <b>Roles and responsibilities</b> | <ul style="list-style-type: none"><li>• Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li></ul>   |
| <b>Preparing for work</b>         | <ul style="list-style-type: none"><li>• Name and explain the purpose of principal components, the basic construction, controls and terminology</li><li>• Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li><li>• Undertake all pre-use checks</li></ul> |
| <b>Travelling and manoeuvring</b> | <ul style="list-style-type: none"><li>• Configure and set for site and highway travel</li><li>• Travel over rough, undulating ground and level surfaces; laden and unladen</li><li>• Manoeuvre in confined spaces</li></ul>   |
| <b>Setting up for work</b>        | <ul style="list-style-type: none"><li>• Configure and set for loading operations</li><li>• Configure and set for pneumatic tool operations</li><li>• Explain actions required for hazards, underground and overhead services</li></ul>  |
| <b>Working tasks</b>              | <ul style="list-style-type: none"><li>• Sort and place materials into transporting vehicles and/or hoppers</li><li>• Clear spread materials</li></ul>   |
| <b>Completing work</b>            | <ul style="list-style-type: none"><li>• Carry out compressor shut-down procedures and tool/equipment storing</li></ul>  |
| <b>Shutting down</b>              | <ul style="list-style-type: none"><li>• Carry out shut down and securing procedures</li><li>• Explain the loading and unloading procedures for machine transporting</li></ul>   |

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## Learning for CPCS

### Syllabus

| Learning outcome  | Training content   |  |
|---|--|--|
| <ul style="list-style-type: none"> <li>Describe the nature of the sector of industry and their role and responsibilities as a plant operator</li> </ul>   | <ul style="list-style-type: none"> <li>Industry type</li> <li>Customer / client needs</li> <li>Sector contribution</li> <li>Role</li> <li>Reporting structures</li> <li>Lifelong skills</li> <li>Working practices</li> <li>Social responsibilities</li> </ul> | <ul style="list-style-type: none"> <li>Communication with colleagues / management / other trades</li> <li>Health and Safety at Work Act</li> <li>Environmental issues</li> <li>Other trades</li> </ul> |
| <ul style="list-style-type: none"> <li>Name and explain the purpose of principal components, the basic construction, controls and terminology</li> </ul>  | <ul style="list-style-type: none"> <li>Differing types</li> <li>Functions and applications</li> <li>Power units</li> <li>Hydraulic systems</li> <li>Transmissions</li> <li>Chassis / steering / brakes</li> </ul>  | <ul style="list-style-type: none"> <li>Stability / ground pressure</li> <li>Buckets</li> <li>Compressor types and functions</li> <li>Safety systems</li> <li>ROPS / FOPS</li> </ul>                    |
| <ul style="list-style-type: none"> <li>Conform with manufacturer's requirements as per the operator's handbook, other types of information source and relevant regulations and legislation</li> </ul> | <ul style="list-style-type: none"> <li>Operator's Manual</li> <li>Machine decals</li> <li>Health and Safety at Work Act</li> <li>PPE</li> <li>Codes of Practice</li> </ul>   | <ul style="list-style-type: none"> <li>Site plans / drawings</li> <li>Method statements</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting forms / procedures</li> </ul>              |
| <ul style="list-style-type: none"> <li>Undertake all pre-use checks</li> </ul>  | <ul style="list-style-type: none"> <li>Regular and non-scheduled maintenance procedures</li> </ul>   | <ul style="list-style-type: none"> <li>Sequence of pre-use checks</li> <li>Defect reporting</li> </ul>   |
| <ul style="list-style-type: none"> <li>Configure and set for site and highway travel</li> </ul>   | <ul style="list-style-type: none"> <li>Driving controls</li> <li>Attachments / accessories</li> <li>Travel position</li> </ul>   | <ul style="list-style-type: none"> <li>Site travel</li> <li>Visibility</li> <li>Road travel / Road Traffic Act</li> </ul>  |
| <ul style="list-style-type: none"> <li>Travel over rough, undulating ground and level surfaces; laden and unladen</li> </ul>  | <ul style="list-style-type: none"> <li>Travel routes</li> <li>Direction of travel</li> <li>Traction / aids</li> <li>Ground conditions</li> <li>Hazards</li> </ul>  | <ul style="list-style-type: none"> <li>Working area</li> <li>Load integrity</li> <li>Environment protection / minimise damage</li> </ul>   |
| <ul style="list-style-type: none"> <li>Manoeuvre in confined spaces</li> </ul>  | <ul style="list-style-type: none"> <li>Visibility</li> <li>Limitations of vision</li> <li>Hazards</li> <li>Height restrictions</li> </ul>  | <ul style="list-style-type: none"> <li>Protection of ground / tight turns</li> <li>Environmental / noise / fumes</li> </ul>  |

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## Learning for CPCS Syllabus (continued)

| Learning outcome  | Training content  |  |
|---|---|--|
| <ul style="list-style-type: none"> <li>• Configure and set for loading operations</li> </ul>                                | <ul style="list-style-type: none"> <li>• Types of material</li> <li>• Required specification</li> <li>• Equipment / bucket size / type</li> <li>• Machine positioning</li> </ul>  | <ul style="list-style-type: none"> <li>• Spoil placing</li> <li>• Site markings</li> <li>• Loading vehicles positioning</li> <li>• Material segregation</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Configure and set for pneumatic tool operations</li> </ul>                         | <ul style="list-style-type: none"> <li>• Machine positioning</li> <li>• Compressor pre-use checks</li> <li>• Tool / compressor compatibility</li> <li>• Machine security</li> <li>• Hose lengths, types and securing methods</li> </ul> | <ul style="list-style-type: none"> <li>• Working area</li> <li>• Starting procedures</li> <li>• Safety checks</li> <li>• Environmental / noise / fumes</li> <li>• Compressed air hazards</li> <li>• Tool pre-use and running checks</li> </ul> |
| <ul style="list-style-type: none"> <li>• Explain actions required for hazards, underground and overhead services</li> </ul> | <ul style="list-style-type: none"> <li>• Warning / identification systems</li> <li>• Reporting procedures for damage to services</li> </ul>   | <ul style="list-style-type: none"> <li>• Types of typical services</li> <li>• Minimum distances and clearances</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Sort and place materials into transporting vehicles and/or hoppers</li> </ul>      | <ul style="list-style-type: none"> <li>• Types of materials</li> <li>• Machine positioning</li> <li>• Signals / communication</li> <li>• Load / material documentation</li> <li>• Material densities</li> <li>• Stability</li> </ul>    | <ul style="list-style-type: none"> <li>• Loading vehicle stability and compatibility</li> <li>• Minimum overspill</li> <li>• Cleaning loading area</li> <li>• Productive cycles of operation</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Clear spread materials</li> </ul>  | <ul style="list-style-type: none"> <li>• Types of materials</li> <li>• Material cleaning techniques</li> <li>• Hazards</li> </ul>   | <ul style="list-style-type: none"> <li>• Productive cycles of operation</li> <li>• Cleaning working area</li> <li>• Stability</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Carry out compressor shut-down procedures and tool/equipment storing</li> </ul>    | <ul style="list-style-type: none"> <li>• De-pressuring methods</li> <li>• Tool de-coupling</li> </ul>   | <ul style="list-style-type: none"> <li>• Tool and hose storage</li> <li>• Hazards</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Carry out shut down and securing procedures</li> </ul>                             | <ul style="list-style-type: none"> <li>• Shut down procedures</li> <li>• Security</li> </ul>  | <ul style="list-style-type: none"> <li>• Parking and positioning</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Explain the loading and unloading procedures for machine transporting</li> </ul>   | <ul style="list-style-type: none"> <li>• Compatibility</li> <li>• Positioning</li> </ul>  | <ul style="list-style-type: none"> <li>• Security</li> <li>• Types of transporter</li> </ul>   |

**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

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Emphasis to be placed on the following topics:

| Topic  | Emphasis   |
|--|--|
| <ul style="list-style-type: none"><li>• Visibility prior to and during reversing</li></ul> | <ul style="list-style-type: none"><li>• Constant and full visibility before and during manoeuvring and types of visibility aids and their limitations and weaknesses</li></ul> |
| <ul style="list-style-type: none"><li>• Stability of the machine</li></ul>                 | <ul style="list-style-type: none"><li>• High centre of gravity with loaded buckets – buckets to be kept low at all times (except for working)</li></ul>                        |

### Duration / Ratios

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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"><li>• Novice operators with no industry or machine experience</li></ul>             | 35                |
| <ul style="list-style-type: none"><li>• Novice operators with industry experience but no machine experience</li></ul> | 28                |
| <ul style="list-style-type: none"><li>• Operators with unrelated (earthmoving) machine experience</li></ul>           | 21                |
| <ul style="list-style-type: none"><li>• Operators with similar (earthmoving) machine experience</li></ul>             | 14                |

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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## Learning for CPCS

### Resources



| Practical equipment   | Theory equipment  |
|---|---|
| <ul style="list-style-type: none"><li>• Loader compressor that meets current legislation</li><li>• Operator’s manual for the machine(s)</li><li>• Uneven rough terrain and smooth surfaces for working within</li><li>• Stockpile of material</li><li>• Vehicle or trailer for loading into</li></ul> | <ul style="list-style-type: none"><li>• PUWER 1998 Regulations</li><li>• HSE GS6</li><li>• Operator’s Manual</li><li>• Specifications for types of loader compressors</li></ul> |
| <p><b>PLUS</b></p> <ul style="list-style-type: none"><li>• Suitable PPE</li><li>• Risk assessment for all areas where training is occurring</li></ul>   | <p><b>PLUS</b></p> <ul style="list-style-type: none"><li>• Suitable room for theory training purposes</li><li>• Welfare and rest facilities during training.</li></ul>          |

### 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 some attachments, for CPCS training and assessment standards, the descriptions reflect basic core use. To identify a machine within this category, a typical loader compressor would normally have the listed features and be used within the described characteristics.

| Category features   | Category characteristics   |
|---|--|
| <ul style="list-style-type: none"><li>• Multi-axled wheeled chassis containing a centrally mounted operating position, power, transmission, hydraulic and electrical units</li><li>• Front loader arms with a rotating and removable front loader bucket, all hydraulically operated</li><li>• Rear-mounted PTO driven compressor</li></ul> | <ul style="list-style-type: none"><li>• Able to travel in forward and reverse and change direction during travel with most types having all-wheel drive and steer</li><li>• Can travel and operate on uneven and loose ground and slopes</li><li>• Carry out extraction duties in a linear motion using the front bucket within the confines of the operating depth and height</li><li>• Can place materials by manoeuvring the machine within the confines of the operating depth and height</li><li>• Allows pneumatically operated external tools to be used using compressed air from the compressor</li></ul> |