

# Telescopic Handler

**A17**

**Learning for CPCS**

## OUTCOMES

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

Roles and responsibilities	<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>
Preparing for work	<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> <li>Explain the need and function of appropriate documentation</li> </ul>
Travelling & manoeuvring	<ul style="list-style-type: none"> <li>Configure and ready for travel (site and highway)</li> <li>Travel over rough, undulating ground, substantial inclines and level surfaces (with and without loads)</li> <li>Manoeuvre in confined spaces (with and without loads)</li> </ul>
Setting up for work	<ul style="list-style-type: none"> <li>Configure and set for lifting and transferring duties</li> <li>Explain actions required for hazards, underground and overhead services</li> </ul>
Working tasks	<ul style="list-style-type: none"> <li>Lift and remove various loads up to full extension and working height of the tele-handler</li> <li>Transfer and place loads accurately at given locations</li> <li>Place and remove loads from a vehicle</li> <li>Maintain safe working situations</li> </ul>
Completing work	<ul style="list-style-type: none"> <li>Maintain safe and tidy working areas</li> </ul>
Shutting down	<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>

### SYLLABUS

	Learning outcomes	Training content	
Roles and responsibilities	<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>
Preparing for work	<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>ROPS / FOPS</li> <li>Chassis / steering / tyres</li> </ul>	<ul style="list-style-type: none"> <li>Stability</li> <li>Booms</li> <li>Forks</li> <li>Safety / stability systems</li> <li>Counterweights</li> <li>Slewing arrangements</li> <li>Attachments</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>Rating plates</li> <li>Codes of Practice</li> <li>Site plans / drawings</li> </ul>	<ul style="list-style-type: none"> <li>Method statements</li> <li>Lifting requirements and limitations</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>Explain need and function of appropriate documentation</li> </ul>	<ul style="list-style-type: none"> <li>Certification</li> </ul>	
Travelling & manoeuvring	<ul style="list-style-type: none"> <li>Configure and ready for travel (site and highway)</li> </ul>	<ul style="list-style-type: none"> <li>Driving controls</li> <li>Attachments</li> <li>Driving position</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Road Traffic Act</li> <li>Security</li> </ul>
	<ul style="list-style-type: none"> <li>Travel over rough, undulating ground, substantial inclines and level surfaces (with and without loads)</li> </ul>	<ul style="list-style-type: none"> <li>Driving controls</li> <li>Ground conditions</li> <li>Traction / aids</li> <li>Inclines and techniques</li> <li>Hazards</li> </ul>	<ul style="list-style-type: none"> <li>Working area / routes</li> <li>Site and road travel</li> <li>Environment protection / minimise damage</li> <li>Load protection</li> </ul>
	<ul style="list-style-type: none"> <li>Manoeuvre in confined spaces (with and without loads)</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Limitations of vision</li> <li>Steering options</li> <li>Hazards</li> </ul>	<ul style="list-style-type: none"> <li>Protection of ground / tight turns</li> <li>Environmental / noise / fumes</li> </ul>

### SYLLABUS (continued)

	Learning outcomes	Training content	
Setting up for work	<ul style="list-style-type: none"> <li>Configure and ready for lifting and transferring duties</li> </ul>	<ul style="list-style-type: none"> <li>Positioning / planning</li> <li>Required configuration</li> <li>Lifting controls</li> <li>Machine capacity</li> <li>De-rating</li> <li>Load Moment indicators</li> <li>Load charts</li> </ul>	<ul style="list-style-type: none"> <li>Load centres / C of G</li> <li>Environmental conditions</li> <li>Levelling</li> <li>Site markings</li> <li>Fork spacing</li> <li>Hazards</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>Types of typical services</li> <li>Warning / identification systems</li> </ul>	<ul style="list-style-type: none"> <li>Reporting procedures for damage to services</li> <li>Minimum distances and clearance</li> </ul>
Working tasks	<ul style="list-style-type: none"> <li>Lift and remove various loads up to full extension and working height of the tele-handler</li> </ul>	<ul style="list-style-type: none"> <li>Signalling procedures</li> <li>Techniques</li> <li>Hazards</li> <li>Types of loads</li> <li>Machine stability</li> </ul>	<ul style="list-style-type: none"> <li>Load stability / security</li> <li>Slewing facility</li> <li>Visibility</li> <li>Environmental conditions</li> </ul>
	<ul style="list-style-type: none"> <li>Transfer and place loads accurately at given locations</li> </ul>	<ul style="list-style-type: none"> <li>Configuration</li> <li>Ground conditions / hazards</li> <li>Visibility</li> <li>Load security / travel position</li> <li>Signalling / following instructions</li> </ul>	<ul style="list-style-type: none"> <li>Stability</li> <li>Loading towers / platforms / racking / stacking</li> <li>Protection of structures / loads</li> </ul>
	<ul style="list-style-type: none"> <li>Place and remove loads from a vehicle</li> </ul>	<ul style="list-style-type: none"> <li>Preparation</li> <li>Types of trailer / transporter</li> <li>Transporter capacities</li> <li>Hazards</li> </ul>	<ul style="list-style-type: none"> <li>Procedures / weight distribution</li> <li>Materials / vehicle protection</li> <li>Undercutting</li> <li>Travel routes</li> </ul>
	<ul style="list-style-type: none"> <li>Maintain safe working situations</li> </ul>	<ul style="list-style-type: none"> <li>Stability</li> <li>Load security</li> </ul>	<ul style="list-style-type: none"> <li>Hazards</li> </ul>
Completing work	<ul style="list-style-type: none"> <li>Maintain safe and tidy working areas</li> </ul>	<ul style="list-style-type: none"> <li>Specification</li> <li>Stacking</li> </ul>	<ul style="list-style-type: none"> <li>Load positioning / storage</li> </ul>
Shutting down	<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>Types of transporter</li> <li>Security</li> </ul>

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

## SAFETY CRITICAL

*Emphasis to be placed on the following topics:*

Topic	Emphasis
<ul style="list-style-type: none"><li>Quick-hitch systems</li></ul>	<ul style="list-style-type: none"><li>Manufacturer's procedures must be strictly adhered to. Security of attachments to be fully checked prior to use</li></ul>
<ul style="list-style-type: none"><li>Stability with raised forks or uneven ground</li></ul>	<ul style="list-style-type: none"><li>Checking ground prior to raising loads. Travelling and manoeuvring with raised loads. Appreciation of centres of gravity</li></ul>
<ul style="list-style-type: none"><li>Manoeuvring and reversing</li></ul>	<ul style="list-style-type: none"><li>Reversing procedures and tele-handlers danger areas of limited or no vision</li></ul>

## 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"><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 (forklift) machine experience</li></ul>	21
<ul style="list-style-type: none"><li>Operators with similar (forklift) 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***

- 2 candidates : 1 machine : 1 instructor

### RESOURCES

Practical equipment	Theory equipment
<ul style="list-style-type: none"><li>• Suitable telescopic handler that meets current legislation</li><li>• Operator's manual for the machine(s)</li><li>• Various sized loads, with and without a pallet base</li><li>• Loading out towers that conform to current legislation</li><li>• Sufficient area of ground for driving</li><li>• Slopes and rough terrain</li><li>• Vehicle / trailer with bed able to accommodate adjacent loads</li><li>• PLUS</li><li>• Suitable PPE</li><li>• Risk assessment for all areas where training is occurring.</li></ul>	<ul style="list-style-type: none"><li>• PUWER 1998 Regulations</li><li>• LOLER 1998 Regulations</li><li>• HSE GS6</li><li>• ACOP</li><li>• Operator's Manual</li><li>• Specifications for types of telescopic handlers</li><li>• Copies of various types of load rating charts</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>

### TRAINING ATTRIBUTES

**\*To help candidates in learning the necessary skills for this category, it would be ideal if they possess one or more of the following:**

- Construction or related experience
- Driving licence or driving experience
- Able to calculate basic formula
- Able to record basic details
- Understand basic written words
- Have received site safety and induction training
- Possess good eye and hand co-ordination
- Have mechanical appreciation
- Medically able to operate machinery (including eyesight).

***\*Please note that lack of any of these attributes does not prevent anyone from being trained for this category***

### TRAINING

#### Overview

A trained operator is an important factor in the safe and efficient use of plant and equipment. Training is defined as the accumulation of skills and knowledge, and forms an integral part of the individual's learning process. Training can be divided into two areas – Basic and Advanced.

Basic training covers theoretical and practical principles detailed in the Learning Outcomes.

Basic training, wherever it occurs, should take place independent of productive work using dedicated equipment and resources.

Advanced training can take place during productive work, but following a managed supervision programme after an assessment that ensures that the Learning Outcomes are met.

#### Trainers

CPCS encourages all those involved in training for the learning process to be qualified and experienced with the category of plant and with teaching and learning methods.

##### Category experience

Those involved in the training themselves should ideally have at least 18 months' experience working/operating this category of plant and have attained a wide and thorough knowledge of the types, functions and safe operating procedures. They should be competent and certificated by a reputable certification body. Many reputable bodies, including CPCS, offer a Technical Test to an Instructor standard.

##### Teaching methods

Trainers should be motivated, able to communicate, lead and control. They should have undertaken an Instructional Techniques programme through a reputable organisation, and be experienced and competent in the teaching process. Instructional Techniques programmes attended should be based on the initiatives and standards set by Lifelong Learning UK, and should provide a pathway for progression to competence-based learning qualifications. Full time trainers should work towards achieving learning and development qualifications at level 3. Part time trainers should seek to gain a selection of individual teaching units; for example: Learning units L9, L11, L12 and L13.

Should funding be sought or claimed for a training programme, many funding bodies now require trainers to hold specified teaching certification (for example, The Associated Teacher Learning and Skills (ATLS)), following the requirements of educational teaching regulations.

### TECHNICAL TEST

#### Overview

The Technical Test has been designed to ensure that, through a combination of training and experience, the training outcomes have been met. During the test, candidates undertake a series of practical activities, based on core operating skills and are questioned on machine-related subjects. To be successful candidates need to meet the standard of the test based on manufacturers' requirements, industry best practice and safe operating techniques; underpinned by the appropriate level of knowledge.

Where an individual is claiming prior training and/or experience on this category, their skills should be measured against the training outcomes. This should ensure that they are fully prepared for the test. This is particularly crucial in the case of experienced operators, as bad habits gained through experience may mean the individual being unsuccessful on the test.

Refresher training and/or activity-specific practice is highly recommended by CPCS for all experienced individuals prior to attempting the test.

### NVQ / SVQ

#### Overview

The training outcomes, syllabus and technical test have been mapped against the Plant Operations (Construction) National Occupational Standards (NOS). This ensures a clear pathway to meeting the requirements of National and Scottish Vocational Qualifications (NVQ/SVQ) for Plant Operations, which are also based on the NOS. NOS are industry-derived statements of competence for a given job role or task.

Achievement of the NVQ or SVQ is required to progress to the competence card. Individuals who have met the standards of the Technical Test are advised to retain all documents used in any training and the test, as these documents can form valuable evidence for NVQ/SVQ achievement. Making comprehensive entries in the CPCS Plant Operator Logbook during training and subsequent work experience provides further valuable evidence.

Passing the Technical Test does not necessarily indicate competence, only that an assured level of skill and knowledge has been demonstrated. Applying that skill and knowledge in a wide variety of situations in the workplace, and meet industrial timescales would identify the individual's competence, which the achievement of the NVQ or SVQ authenticates.

The Plant Operations NOS can be viewed and downloaded at [www.ukstandards.co.uk](http://www.ukstandards.co.uk)

### 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 telescopic handler would normally have the listed features and be used within the described characteristics.

Category Features	Category Characteristics
<ul style="list-style-type: none"><li>• Wheel mounted multi axled chassis containing a side-mounted operating position; power, hydraulic and electrical units and counterweight components</li><li>• Extending multi-sectioned boom with fork carriage, all hydraulically operated</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 steering and drive</li><li>• Most types can travel on uneven and loose ground and slopes</li><li>• Can carry out lifting, transfer and placing duties with loads mounted on forks, from ground level to maximum operating height and reach by raising and extending the boom</li></ul>

#### Endorsement characteristics

- **Endorsement A:** Industrial Telescopic – Restricted (mainly) to hard-surface use, with operating heights up to 5 metres
- **Endorsement B:** Up to 9 metres – multi terrain with operating height limited to 9 metres and usually non-stabiliser equipped
- **Endorsement C:** All sizes excluding 360 slew – multi terrain with operating height unlimited (can be to 20 plus metres) and equipped with front-located stabilisers
- **Endorsement D:** All sizes including 360 slew – multi terrain with operating height unlimited (can be to 20 plus metres) with rotating upper structure and equipped with front and rear located stabilisers