

### Outcomes

Through a combination of targeted training and experience, an individual with the telescopic handler 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> <li>Explain the need and function of appropriate documentation</li> </ul>
<b>Travelling and manoeuvring</b>	<ul style="list-style-type: none"> <li>Configure and ready for travel (site and highway)</li> <li>Travel over level surfaces with and without loads and, where applicable, on rough, undulating ground and inclines. (excluding suspended loads)</li> <li>Manoeuvre in confined spaces with and without loads (including suspended loads for endorsement E)</li> <li>Follow given signals and instructions when travelling and manoeuvring with and without loads (including suspended loads for endorsement E)</li> </ul>
<b>Setting up for work</b>	<ul style="list-style-type: none"> <li>Configure and set for all lifting, loading and transferring duties</li> <li>Attach and remove attachments, including forks, for the movement of units loads</li> <li>Attach and remove attachments and accessories for the movement of suspended loads</li> <li>Explain actions required for proximity hazards Inc. underground and overhead services</li> <li>Follow given signals and instructions during work activities</li> </ul>
<b>Working tasks (Fork use)</b>	<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>

### Outcomes (Continued)

<p><b>Working tasks (Suspended Loads)</b></p>	<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> <li>• Determine the requirements for the lifting and transferring of suspended loads</li> <li>• Establish and comply with given signals and instructions</li> <li>• Lift various suspended loads from given locations inc. vehicle bed and at height</li> <li>• Travel with and place various suspended loads at given locations inc. a vehicle bed and at height</li> <li>• Minimise the swinging of loads during travel</li> <li>• List different types of lifting accessories and attachments compatible with telescopic handlers and suspended loads</li> <li>• Explain the correct and incorrect methods for attaching suspended loads to the machine</li> <li>• Explain how stability is affected by travelling with a raised boom and a suspended load (both regular and irregular)</li> <li>• Explain visibility issues and restrictions and with suspended loads</li> <li>• Place loads out of sight of the operator</li> <li>• Maintain safe working situations</li> </ul>
<p><b>Completing work</b></p>	<ul style="list-style-type: none"> <li>• Maintain safe and tidy working areas</li> </ul>
<p><b>Shutting down</b></p>	<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>

**Note:** Due to a level of incidents involving telescopic handlers, particularly with the movement of suspended loads, the Strategic Forum for Construction Plant Safety Group have produced a document titled 'Good Practice Guide to the Safe Use of Telehandlers in Construction' and a supplementary 'Good Practice Guide for the Lifting and Travelling with Suspended Loads using Telehandlers'.

It is essential that those both planning and conducting training and assessment activities are conversant with the content of each document and that training activities reflect all good practices contained therein.

Both documents are free to download from [www.cpa.uk.net/sfpsg/](http://www.cpa.uk.net/sfpsg/)

# Telescopic handler - A17A/B

## 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>ROPS / FOPS</li> <li>Chassis / steering / tyres Inc. pressures / ply rating and importance of replacement with same</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>Attachments and accessories</li> <li>Access systems</li> <li>Safe load indicator equipment</li> <li></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>PUWER/LOLER</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>Lift plans</li> <li>Lifting requirements and limitations</li> <li>Risk assessments / COSHH</li> <li>Inspection and reporting requirements, daily weekly though examination, both for equipment and accessories</li> <li>Duty charts/Load charts</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> <li>Thorough examination (machine and accessories)</li> </ul>	<ul style="list-style-type: none"> <li>Relevant site-related documentation</li> <li>Pre- use checks/inspections</li> </ul>
<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 of attachments</li> </ul>

### Syllabus (continued)

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Travel over level surfaces with and without loads and, where applicable, on rough, undulating ground and inclines.</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> <li>Travel speeds</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> <li>Stability/centres of gravity</li> <li>Load swing and impact on equipment</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>Proximity hazards</li> </ul>	<ul style="list-style-type: none"> <li>Protection of ground / tight turns</li> <li>Environmental / noise / fumes</li> </ul>
<ul style="list-style-type: none"> <li>Follow given signals and instructions when travelling and manoeuvring with and without loads</li> </ul>	<ul style="list-style-type: none"> <li>Code of signals (hand)</li> <li>Signaller location</li> <li>Visibility</li> </ul>	<ul style="list-style-type: none"> <li>Communication types and limitations</li> <li>Radio set-up</li> <li>Radio protocols</li> </ul>
<ul style="list-style-type: none"> <li>Configure and ready for all lifting, loading and transferring duties</li> </ul>	<ul style="list-style-type: none"> <li>Best method for safe load movement</li> <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> <li>Load weights</li> </ul>
<ul style="list-style-type: none"> <li>Attach and remove attachments, including forks, for the movement of unit loads</li> </ul>	<ul style="list-style-type: none"> <li>Attachment types and Function</li> <li>Preparation procedures</li> <li>Attaching and removal procedures</li> <li>Storage requirements</li> <li>Machine configuration and positioning</li> </ul>	<ul style="list-style-type: none"> <li>Manual handling</li> <li>Using assistance</li> <li>Securing requirements and essential pre-use checks</li> <li>Post-fitting checks</li> </ul>

### Syllabus (continued)

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Attach and remove attachments and accessories for the movement of suspended loads</li> </ul>	<ul style="list-style-type: none"> <li>• Attachment types</li> <li>• Preparation procedures</li> <li>• Attaching and removal procedures</li> <li>• Storage requirements</li> <li>• Machine configuration and positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Manual handling</li> <li>• Using assistance</li> <li>• Securing requirements and essential checks that need to be made</li> <li>• Post-fitting checks</li> </ul>
<ul style="list-style-type: none"> <li>• Explain actions required for proximity hazards, including 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>
<ul style="list-style-type: none"> <li>• Follow given signals and instructions during work activities</li> </ul>	<ul style="list-style-type: none"> <li>• Code of signals (hand)</li> <li>• Signaller location</li> <li>• visibility</li> </ul>	<ul style="list-style-type: none"> <li>• Communication types and limitations</li> <li>• Radio set-up</li> <li>• Radio protocols</li> </ul>
<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> <li>• Following instructions</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> <li>• Overhead obstructions</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>

# Telescopic handler - A17A/B

## Learning for CPCS



### Syllabus (continued)

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>Determine the requirements for the lifting and transferring of suspended loads</li> </ul>	<ul style="list-style-type: none"> <li>Best method for safe load movement</li> <li>Lift plans</li> <li>Required authority</li> <li>Guidance and regulations</li> <li>Load charts</li> <li>Environmental conditions</li> <li>Machine suitability</li> <li>Codes of practice</li> </ul>	<ul style="list-style-type: none"> <li>Load types</li> <li>Attachments/accessories Inc. limitations and design use</li> <li>Working area</li> <li>Identification of proximity hazards</li> <li>RCI/LMI settings</li> </ul>
<ul style="list-style-type: none"> <li>Establish and comply with given signals and instructions</li> </ul>	<ul style="list-style-type: none"> <li>Signalling methods</li> <li>Types of hand signals</li> <li>Hand signal compatibility</li> <li>Verbal instructions</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Multiple signalling</li> <li>Radio protocol</li> <li>Codes of practice</li> </ul>
<ul style="list-style-type: none"> <li>Lift various suspended loads from given locations</li> </ul>	<ul style="list-style-type: none"> <li>Load charts</li> <li>Stability</li> <li>Trial lifts</li> <li>Ground conditions</li> <li>Lifting controls</li> <li>RCI/LMI information</li> </ul>	<ul style="list-style-type: none"> <li>Visibility</li> <li>Environmental conditions</li> <li>Load stability/security</li> <li>De-rating requirements</li> <li>Following instructions</li> </ul>
<ul style="list-style-type: none"> <li>Travel with and place various suspended loads at given locations</li> </ul>	<ul style="list-style-type: none"> <li>Effects of swinging loads</li> <li>De-rating of slung loads</li> <li>Condition of travel routes</li> <li>Load size</li> </ul>	<ul style="list-style-type: none"> <li>Travel configuration</li> <li>Proximity hazards</li> <li>Regulations/guidance</li> <li>Environmental conditions</li> </ul>
<ul style="list-style-type: none"> <li>Minimise the swinging of loads during travel</li> </ul>	<ul style="list-style-type: none"> <li>Travel routes</li> <li>Accessory types</li> <li>Poor/uneven ground</li> <li>Slopes/inclines</li> <li>Effects of swinging loads</li> </ul>	<ul style="list-style-type: none"> <li>Travel speeds</li> <li>Stability</li> <li>Observation/anticipation</li> <li>Load characteristics</li> </ul>
<ul style="list-style-type: none"> <li>List different types of lifting accessories and attachments compatible with suspended loads and telescopic handlers</li> </ul>	<ul style="list-style-type: none"> <li>Function</li> <li>Application</li> <li>Load weight</li> <li>SWL/WLL</li> <li>De-rating</li> </ul>	<ul style="list-style-type: none"> <li>Load characteristics (loose/bundled/fluid etc.)</li> <li>Accessory compatibility</li> <li>Slinging angles</li> </ul>

### Syllabus (continued)

Learning outcome	Training content	
<ul style="list-style-type: none"> <li>• Explain the correct and incorrect methods for attaching suspended loads to the machine</li> </ul>	<ul style="list-style-type: none"> <li>• Accessory types</li> <li>• Accessory characteristics</li> <li>• Function of accessory components</li> <li>• Load and lifting accessory protection</li> <li>• Load lifting points</li> <li>• Out-of-balance loads</li> </ul>	<ul style="list-style-type: none"> <li>• Requirements of regulations and guidance</li> <li>• SWL/WLL</li> <li>• Correct attaching and slinging methods</li> <li>• Incorrect attaching and slinging methods</li> <li>• Effects of incorrect methods of attachments</li> </ul>
<ul style="list-style-type: none"> <li>• Explain how stability is affected by travelling with both a raised boom and a suspended load</li> </ul>	<ul style="list-style-type: none"> <li>• Centres of gravity</li> <li>• Swinging loads</li> <li>• Environmental factors</li> </ul>	<ul style="list-style-type: none"> <li>• Ground conditions</li> <li>• Slopes/inclines</li> <li>• Travel speeds</li> </ul>
<ul style="list-style-type: none"> <li>• Explain visibility issues and restrictions with suspended loads</li> </ul>	<ul style="list-style-type: none"> <li>• Load size</li> <li>• Load swing</li> <li>• Carrying height of load</li> <li>• Maintaining vision with slinger/signallers</li> </ul>	<ul style="list-style-type: none"> <li>• Direction of travel</li> <li>• Assistance for travelling</li> <li>• Typical proximity hazards</li> <li>• Ground type/terrain</li> </ul>
<ul style="list-style-type: none"> <li>• Place loads out of sight of the operator</li> </ul>	<ul style="list-style-type: none"> <li>• Communication/signalling</li> <li>• Signaller positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Stability</li> <li>• Proximity hazards</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>
<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>
<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.

# Telescopic handler - A17A/B

## Learning for CPCS



### 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 a raised boom on uneven ground</li> </ul>	<ul style="list-style-type: none"> <li>Checking ground suitability 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 Inc. blind spots and vision aids</li> </ul>
<ul style="list-style-type: none"> <li>Lift plans / Method statements</li> </ul>	<ul style="list-style-type: none"> <li>Lift plan types and requirements and the need for lift planning, particularly where suspended loads are involved. Adherence to the lift plan as constructed by a competent person</li> </ul>
<ul style="list-style-type: none"> <li>Suspended loads during travel</li> </ul>	<ul style="list-style-type: none"> <li>The effects and consequences of load swing when travelling with a suspended load, particularly on inclines and windy weather Inc. knowledge of wind speed limits</li> </ul>
<ul style="list-style-type: none"> <li>Suspended loads and proximity hazards</li> </ul>	<ul style="list-style-type: none"> <li>Issues relating to travelling with raised boom and operator's limitation of vision when travelling with raised boom and suspended large area loads</li> </ul>
<ul style="list-style-type: none"> <li>Proximity of the slinger/signaller</li> </ul>	<ul style="list-style-type: none"> <li>Ensuring that the slinger/signaller is clear of the machine's path during travel at all times, maintaining full vision of the s/s and stopping immediately if sight of them is lost</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 (49*)
<ul style="list-style-type: none"> <li>Novice operators with industry experience but no machine experience</li> </ul>	28 (42*)
<ul style="list-style-type: none"> <li>Operators with unrelated (forklift) machine experience</li> </ul>	21 (27*)
<ul style="list-style-type: none"> <li>Operators with similar (forklift) machine experience</li> </ul>	14 (21*)
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



# Telescopic handler - A17A/B

## Learning for CPCS



\* Includes training for endorsement E.

### Resources

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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>• Suitable lifting attachments for operation with suspended loads</li></ul>	<ul style="list-style-type: none"><li>• PUWER 1998 Regulations</li><li>• LOLER 1998 Regulations</li><li>• HSE GS6</li> <li>• ACOP L117</li> <li>• Operator's Manual</li><li>• Specifications for types of telescopic handlers</li><li>• Copies of various types of load rating charts</li> <li>• Strategic Forum Construction Plant Safety Group – Safe use of Telehandlers (<a href="http://www.cpa.uk.net">www.cpa.uk.net</a>)</li></ul>
<b>PLUS</b>	<b>PLUS</b>
<ul style="list-style-type: none"><li>• Suitable PPE</li><li>• Risk assessment for all areas where training is occurring</li></ul>	<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

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Practical equipment	Theory equipment
<ul style="list-style-type: none"><li>• Construction or related experience</li> <li>• Driving licence or driving experience</li><li>• Able to calculate basic formula</li><li>• Able to record basic details</li><li>• Understand basic written words</li></ul>	<ul style="list-style-type: none"><li>• Have received site safety and induction training</li> <li>• Possess good eye and hand co-ordination</li><li>• Have mechanical appreciation</li></ul>

### Fitness for work

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The Strategic Forum for Construction Plant Safety Group has been working in conjunction with the Health and Safety Executive, UK Contractors Group, Constructing Better Health, occupational health providers and others to draw up new guidance aimed specifically at the management of medical fitness issues for persons operating plant. The Good Practice Guide is downloadable free of charge from [www.cpa.uk.net/sfpsg/#medicalfitness](http://www.cpa.uk.net/sfpsg/#medicalfitness)

# Telescopic handler - A17A/B

## Learning for CPCS



### Category

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#### 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 five 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

- Multi axled wheeled chassis containing a side-mounted operating position; power, hydraulic and electrical units, and counterweight components
- Extending multi-sectioned boom with a tilting carriage allowing attachments to be fitted, all hydraulically operated

#### Category characteristics

- Able to travel in forward and reverse and change direction during travel with most types having all-wheel steering and drive
- Most types can travel on uneven and loose ground and slopes
- 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
- Can carry out lifting, transfer and placing duties with loads suspended from the carriage and connected to the machine using a lifting accessory

### Endorsements

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#### 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 E:** Suspended Loads (non-rough terrain) - the carrying of loads suspended from a variety of lifting accessories or suitable attachment, on level and even surfaces