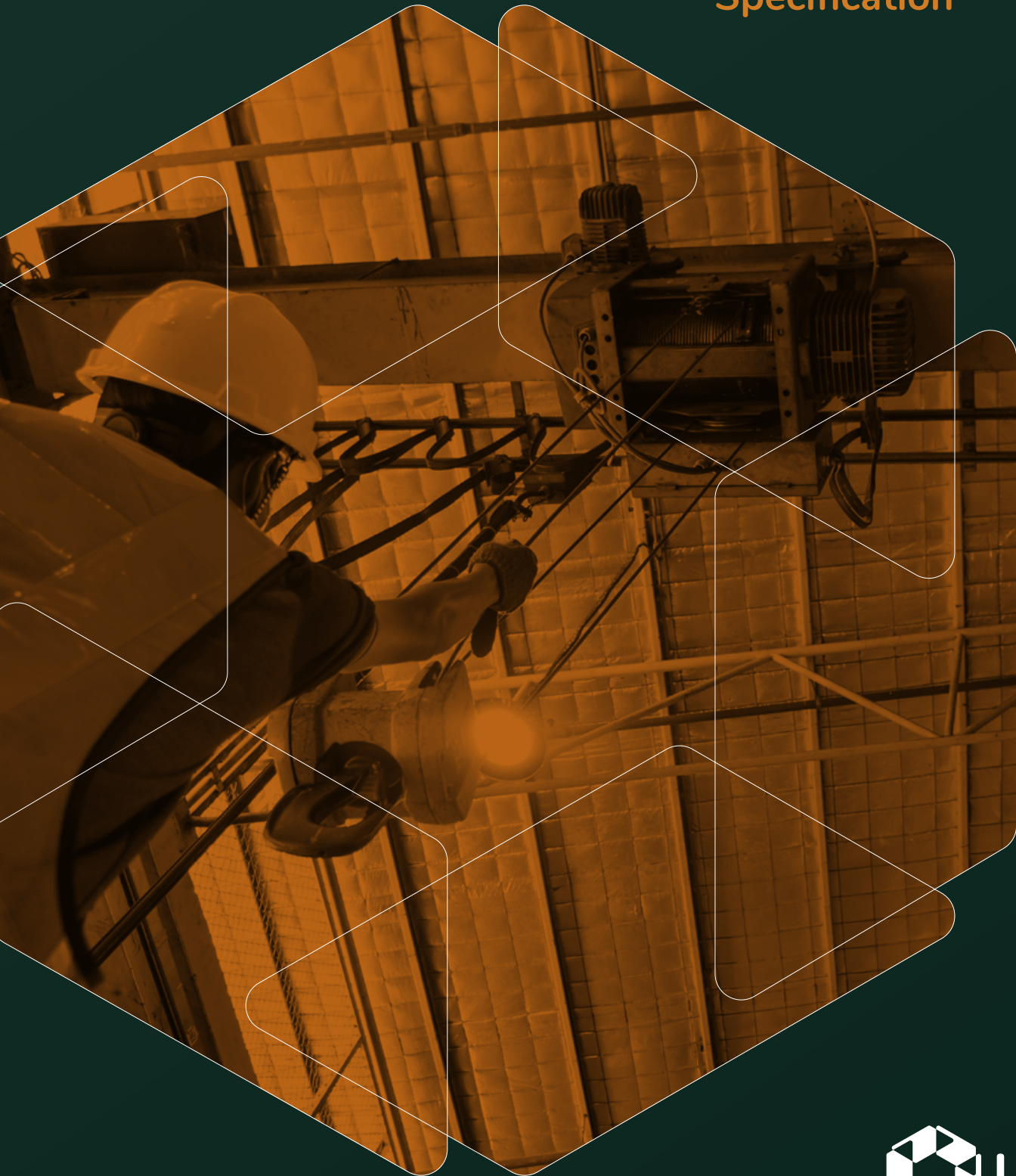

EPA143: ST0872

LEVEL 3

Lifting Equipment
Technician

**End-Point Assessment
Specification**



About the Apprenticeship Standard

Apprenticeship Standard	Lifting Equipment Technician
Standard code (ST0xxx)	ST0872
Level	3
Date apprenticeship standard approved for delivery	12/11/2021
Date apprenticeship standard scheduled for review	From November 2023
Typical Duration of apprenticeship (excluding EPA)	24 months
Pre-entry requirements for apprenticeship	For individual employers to decide

Knowledge, skills and behaviours

The knowledge, skills and behaviours of the apprenticeship standard that must be learnt during the apprenticeship prior to End-Point Assessment.

Knowledge

K1: The types, applications and unique characteristics of lifting equipment, including static and manually operated equipment, derivatives and the associated technology and the characteristics and physical mechanical properties of materials used in the manufacturing of lifting equipment.

K2: Diagnostic and assessment principles required to maintain, repair and modify the mechanical aspects of lifting equipment to meet manufacturer specifications.

K3: Current legislation and Standards for lifting equipment, components, tools and equipment.

K4: Legislation and required compliance within the lifting equipment industry, including lifting equipment regulations (for example Lifting Operations Lifting Equipment Regulations (LOLER), Machinery Directive, Provision and Use of Work Equipment Regulations (PUWER), Supply of Machinery (Safety) Regulations, Health and Safety at Work Act, Control of Substances Hazardous to Health (COSHH), Working at Height, Confined space working, manufacturer's instructions and industry standards.

K5: Workshop and onsite operations which may include ordering, stock control and correct use of documentation such as order forms, repair forms, quarantine forms and reports of thorough examination.

K6: Types of customer interaction and customer service techniques including when to contact the customer, the tone that should be adopted, how to time and follow up communication – both verbally and in writing, and how to adjust the approach to take account of customers'/clients' needs.

Knowledge, skills and behaviours (cont.)

Knowledge

K7: Commercial practices, products and services.

K8: How to ensure the safety of self, colleagues and anyone in the working area (risk/hazard identification); manual handling, correct selection and use of Personal Protective Equipment (PPE), Risk Assessment and Method Statements.

K9: Safe disposal and recycling of associated waste (including waste oils, cleaning fluids, batteries, tyres, etc.). Environmental policies.

K10: The rights and responsibilities of an employee and employer, including the importance of respecting people from diverse backgrounds and treating people fairly.

K11: Assessment of equipment for continued safe use, such as how to identify the repair required, component compatibility, time and materials required to fix.

K12: Knowledge of manufacturer specifications and industry working practices - understanding pre-use checks, storage of equipment, when and where to use them, assembly, maintenance and safe use instructions, knowing the importance of following manufacturers' specifications and organisations' procedures when making repairs and installing lifting equipment.

K13: Principles of handling hazardous equipment, materials and substances, their safe handling, preservation, storage & shipping of damaged items, emergency procedures, knowing when to ask for third party advice and guidance.

K14: Standard operating functions of lifting equipment in normal use.

K15: Pass or fail inspection criteria for equipment when failed or is not fit for purpose, such as identification of common defects and parts that regularly break or go missing and need to be replaced, including chain wear features, missing or broken latches in hooks.

K16: Operation of manual or IT applications used in the workshop and on-site environment, such as excel, search engines and company reporting systems.

K17: Scheduling and project management techniques; planning and the importance of meeting project deadlines (how to manage oneself to meet company targets).

K18: Causes of defects and maintenance issues and problem solving. How to identify likely causes of damage, for example, manufacturing fault, wear, misuse or overloading.

K19: How to prepare a complete report according to legislative requirements and who to contact about defects and how to address them, including when to notify statutory bodies.

K20: How to calculate in use operational safe working loads considering working conditions, method of use for the equipment and operating environment, such as how to work out a percentage, mode factors, uniform load method, trigonometric method calculations, algebra and Pythagoras theorem, Units of measure, including imperial and metric systems and how to convert them.

Knowledge, skills and behaviours (cont.)

Knowledge

K21: Manufacturing techniques and resulting impact on safe and correct operational use of equipment.

K22: Heat treatment, principles and processes - including critical ranges and the implications of not achieving correct temperature ranges.

K23: Stress and strain and their impact on material behaviour.

K24: Verification methods and how and when to use them. This includes destructive and non-destructive testing, which could be visual examination, operational / functional testing, load testing, proof load testing, Magnetic Particle Inspection (MPI), dye penetrant, bend testing, Eddy current testing, X-ray testing, ultrasound testing, Izod testing and Charpy testing.

K25: Marking requirements and techniques.

K26: How to use measuring equipment and calibrated tools including digital verniers, torqueing tools, dial gauges, load cells, compression tools and micrometers.

Skills

S1: Use knowledge, experience and judgement to undertake inspections/examinations in accordance with manufacturer's instructions and guidelines and industry standards.

S2: Estimate time required to complete a task.

S3: Identify components that require repair, replacement or discard and diagnose faults.

S4: Repair or replace component parts in accordance with manufacturer's guidelines and industry standards.

S5: Assemble, dismantle and reassemble new and used lifting equipment.

S6: Complete routine maintenance on items of lifting equipment in accordance with manufacturer's instructions, guidelines and industry standards.

S7: Manufacture/assemble steel wire rope sling in accordance with the applicable and current EN, BS, or ISO manufacturing standards (or other standard specified by the client) and techniques or specifications.

S8: Measure and assess wear tolerances and deformation in line with manufacturer instructions/guidance and industry standard.

S9: Read and interpret technical drawings, schematic parts diagrams, load charts and technical specifications.

S10: Research information using hard copy and digital formats, e.g. referring to LOLER, manufacturers specifications, standards.

Knowledge, skills and behaviours (cont.)

Skills

S11: Log and record work activities and prepare reports, such as a Report of Thorough Examination, Examination Defect Report, timesheets.

S12: Identify and use tools and measuring devices required for a task, for example verniers, load cells, tape measure, steel rule.

S13: Maintain a clean, tidy and safe working area.

S14: Apply company quality control measures.

S15: Apply knowledge of lifting equipment to appropriately guide customers in the selection of lifting equipment for the task.

S16: Work in accordance with Safe Systems of Work and apply control measures as required (such as Health and Safety at Work Act, Working at Height, Risk Assessment and Method Statements).

S17: Apply safe manual handling techniques.

S18: Effectively communicate both verbally and in writing.

S19: Identify and use Personal Protective Equipment (PPE).

S20: Develop safe systems of work, including risk assessments and method statements, Specifying manpower required, Specifying qualifications, training and experience requirements, Identifying safe methods of access and transportation, Identifying correct PPE for the task, Specifying work location and environment, plant, machinery, tools and equipment, Identifying the applicable statutory and customer safety standards that must be complied with.

S21: Identify toxic and hazardous substances and environments and apply control measures.

S22: Dispose of equipment, components and substances in accordance with environmental regulations, industry standards and company policy.

S23: Control and manage spills.

S24: Perform different types of tests to verify lifting equipment, eg light load test, proof load, function test.

S25: Use lifting equipment safely.

S26: Install lifting equipment in accordance with manufacturers' specification and industry working practices.

S27: Mark lifting equipment in accordance with industrial standards.

Knowledge, skills and behaviours (cont.)

Behaviours
B1: Safety Conscious - Puts safety first. Always uses safety equipment and PPE and has customers' safety in mind.
B2: Collaborative - For example, works well with others. supports other people (colleagues and/or clients), considers the implications of their actions on other people and the business, listens to others and has a positive and respectful attitude.
B3: Professional Values - Behaves in a manner that aligns with the company ethos, including prompt timekeeping, smart presentation of self and working area, acts as a responsible ambassador for the business, by working efficiently, treating all clients, employees and co-workers respectfully and meeting customer and employer expectations.
B4: Honesty and Integrity - Acts with integrity, giving honest and accurate guidance to customers.
B5: Results Driven - Completes tasks in accordance with the specific job requirements, within the agreed timescale, demonstrating acceptable workmanship and completing the required documentation correctly.
B6: Quality Focus - Shows attention to detail and uses a logical approach to problem solving. Seeks opportunities to improve quality, speed and efficiency. Stays motivated and committed when facing challenges.
B7: Continuous Personal Development - Receptive to constructive feedback from peers and management and proactive in giving feedback to others. Reflects on own knowledge, skills and behaviours and seeks opportunities to develop.
B8: Assertive and Confident - Is confident and communicates with conviction.
B9: Self-Motivation - Takes responsibility for completion of own work.
B10: Adaptability - Able to adjust to changes to work instructions and tasks.

Gateway to End-Point Assessment (pre-entry requirements to End-Point Assessment)

Mandated qualifications during apprenticeship	None
Minimum time in learning prior to undertaking End-Point Assessment	12 months (24 months recommended)
Maths (level)	2
English (level)	2
Any other gateway requirements	No
The process for Reasonable adjustments	Application at least 3 months prior to EPA via Reasonable Adjustments and Special Considerations Policy (EPA21)

End-Point Assessment (EPA)

Name of End-Point Assessment organisation		LEIA
End-Point organisation code		EPA0269
About LEIA		Trade association for the Lift and Escalator industry
Contracting, planning and scheduling end-point assessment		Email epa@leia.co.uk
Duration of EPA		3 months
Assessment Plan version number that LEIA is operating to		Version 1.2
Objective of the End-Point Assessment		To complete the apprenticeship
End-Point Assessment methods	Assessment method 1:	Knowledge Test
	Assessment method 2:	Practical Assessment
	Assessment method 3:	Professional Discussion
Language of the End-Point Assessment		All components of the EPA will be conducted in English. The apprentice may be assessed in British Sign Language where it is permitted for the purpose of reasonable adjustment.
Mock materials provided		Knowledge Test / Professional Discussion Questions

End-Point Assessment methods

Assessment method 1: Knowledge Test	
KSBs to be assessed	See assessment plan
Duration	60 minutes
Delivery methods (face to face / remote)	Remote assessment or face to face
Location	Employer's premises or agreed suitable location
Equipment or resources required	Computer with webcam and microphone, stable internet connection
Assessor apprentice ratio	10:1 face to face, 1:1 remote
Number of questions (if applicable)	30
Grading	Fail, Pass, Distinction

Assessment method 2: Practical Assessment	
KSBs to be assessed	See assessment plan
Duration	5 hours
Delivery methods (face to face / remote)	Face to face
Location	Simulated environment – agreed training centre / employer's premises
Equipment or resources required	<p>Specialist equipment related to lifting equipment (see below)</p> <ul style="list-style-type: none"> • An inspection checklist for all of the tasks. • The manufacturer's specification / manual (which is in accordance with usual business practice). • Technical drawings, schematic parts diagrams, load charts and technical specifications relevant to the equipment to be worked on. • A selection of spares to conduct the repair. This must include more spares than are actually required in order to prevent predictability of the damage/fault. • Tools and measuring equipment, test weights for verification, lifting media. • A well-lit, clean work area free from distraction • A robust and sturdy workbench which must have a vice • Means of bolting down items (such as a hand operated winch) and a rated suspension point suitable of sustaining 150kg.
Assessor apprentice ratio	1:1 remote
Number of questions (if applicable)	10 throughout duration of assessment
Grading	Fail / Pass

End-Point Assessment methods (cont.)

Assessment method 3: Professional Discussion	
KSBs to be assessed	See assessment plan
Duration	70 minutes
Delivery methods (face to face / remote)	Face to face / Remote
Location	Apprentice should be at the employer's premises
Equipment or resources required	Quiet room, computer with camera, microphone and stable internet connection
Assessor apprentice ratio	1:1
Number of questions (if applicable)	12
Grading	Fail, Pass, Distinction

Results and grading

The process for Special Considerations	Application after assessment within 48 hours as per Reasonable Adjustments and Special Considerations Policy (EPA21)
End-Point assessment final grading	Pass, Distinction
Re-sits and retakes	Within the EPA 8 months
Complaints and appeals	Formal request via Complaints and Appeals Policy (EPA06)
Certification process	Certificate claimed directly from the Education Skills Funding Agency



LEIA Assessment

Lift and Escalator Industry Association
Rotherwick House, 3 Thomas More St,
St Katherine's & Wapping, London E1W 1YZ

www.leia-assessment.co.uk

