



End-point assessment plan for Lift Truck and Powered Access Engineering Technician apprenticeship standard

Apprenticeship standard reference number	Level of this end point assessment (EPA)	Integrated
ST0387	3	

Contents

Introduction and overview	2
EPA summary table	3
Length of end-point assessment period:	4
Order of assessment methods	4
Gateway	4
Assessment methods.....	6
Weighting of assessment methods	13
Grading.....	13
Roles and responsibilities	17
Internal Quality Assurance (IQA).....	19
Re-sits and re-takes.....	19
Affordability.....	20
Professional body recognition	20
Reasonable adjustments	20
Mapping of knowledge, skills and behaviours (KSBs)	21

Introduction and overview

This document sets out the requirements for end-point assessment (EPA) for the Lift Truck and Powered Access Engineering Technician apprenticeship standard. It is for end-point assessment organisations (EPAOs) who need to know how EPA for this apprenticeship must operate. It will also be of interest to Lift Truck and Powered Access Engineering Technician apprentices, their employers and training providers.

Full time apprentices will typically spend 36 months on-programme (before the gateway) working towards the occupational standard, with a minimum of 20% off-the-job training. All apprentices will spend a minimum of 12 months on-programme.

The EPA period should only start, and the EPA be arranged, once the employer is satisfied that the apprentice is consistently working at or above the level set out in the occupational standard, all of the pre-requisite gateway requirements for EPA have been met and that they can be evidenced to an EPAO.

All pre-requisites for EPA assessment methods must also be complete and available for the assessor as necessary.

For level 3 apprenticeships and above, apprentices without English and mathematics at level 2 must achieve level 2 prior to taking their EPA.

The EPA must be completed within an EPA period lasting typically 4 months, beginning when the apprentice has passed the EPA gateway.

The EPA consists of 3 discrete assessment methods.

The individual assessment methods will have the following grades:

Assessment method 1: Knowledge Test

- Fail
- Pass

Assessment method 2: Practical Assessment

- Fail
- Pass
- Distinction

Assessment method 3: Professional Discussion (supported by a portfolio of evidence)

- Fail
- Pass
- Distinction

Performance in the EPA will determine the overall apprenticeship standard and grade of:

- Fail
- Pass
- Merit
- Distinction

EPA summary table

On-programme (typically 36 months)	Training to develop the occupation standard's knowledge, skills and behaviours.
End-point Assessment Gateway	<ul style="list-style-type: none"> • Employer is satisfied the apprentice is consistently working at, or above, the level of the occupational standard. • English/Mathematics Level 2 <p>Apprentices must complete:</p> <ul style="list-style-type: none"> • A portfolio of evidence
End Point Assessment (which would typically take 4 months)	<p>Assessment Method 1: Knowledge Test</p> <p>With the following grades:</p> <ul style="list-style-type: none"> • Fail • Pass <p>Assessment Method 2: Practical Assessment with questioning</p> <p>With the following grades:</p> <ul style="list-style-type: none"> • Fail • Pass • Distinction <p>Assessment Method 3: Professional Discussion (supported by a portfolio of evidence)</p> <p>With the following grades:</p> <ul style="list-style-type: none"> • Fail • Pass • Distinction
Professional recognition	<p>Aligns with recognition by:</p> <ul style="list-style-type: none"> • Institute of Mechanical Engineers (IMechE) • Institute of Engineering and Technology (IET) • Institute of the Motor Industry

Length of end-point assessment period:

The EPA must be completed within an EPA period lasting typically 4 month(s), beginning when the apprentice has passed the EPA gateway.

Any supporting material required for the EPA should be submitted at the gateway.

Order of assessment methods

The assessment methods need to be delivered in the following order:

Assessment method 1 must be completed first; Assessment methods 2 and 3 can follow in any order.

The reason for this order is:

Apprentices must pass the knowledge test before they can continue onto the remaining elements of the EPA. This is because this is the least resource intensive method of assessment and a straightforward way for EPAOs and employers to be assured that the apprentice has the underpinning knowledge required to progress onto the observation and professional discussion for this occupation.

Gateway

The EPA period should only start once the employer is satisfied that the apprentice is consistently working at or above the level set out in the occupational standard, that is to say they are deemed to have achieved occupational competence. In making this decision, the employer may take advice from the apprentice's training provider(s), but the decision must ultimately be made solely by the employer.

In addition to the employer's confirmation that the apprentice is working at or above the level in the occupational standard, the apprentice must have completed the following gateway requirements prior to beginning EPA:

English and mathematics at level 2.

For those with an education, health and care plan or a legacy statement, the apprenticeship's English and mathematics minimum requirement is Entry Level 3 and British Sign Language qualification are an alternative to English qualifications for whom this is their primary language.

For Knowledge Test:

- No specific requirements

For Practical Observation with questioning:

- No specific requirements

For Professional Discussion (supported by a portfolio of evidence), the apprentice will be required to submit:

A portfolio of evidence.

- On commencement of the apprenticeship the apprentice must begin to retain a portfolio of evidence which must be finalised before passing through the gateway.
- A completed portfolio of evidence is a compulsory EPA gateway requirement that underpins the EPA Professional Discussion assessment method.
- Employers/training providers are free to devise their own version of the portfolio of evidence, but the portfolio of evidence should typically contain the following information:
 - The name of the apprentice
 - Details of the apprentice's workplace
 - the portfolio of evidence will typically contain ten discrete pieces of evidence
 - To support the knowledge, skills and behaviours of the apprenticeship standard that are mapped to this assessment method. (Evidence can be provided through a range of sources, for example work reviews, and customer feedback and can be in a wide range of formats (e.g. photographs, videos, documents, this list is not exhaustive)
 - Confirmation from the line manager that the tasks were completed to the required standard of the organisation
 - Documents to confirm the off-the-job training that has taken place during the on-programme phase, with at least 20% of their employed time off-the-job
 - Copy of English and mathematics certificates
- It is recommended that the employer and apprentice signs off the portfolio of evidence, thereby authenticating that this is the apprentice's work and confirming the demonstration of competence against the required knowledge, skills and behaviours (KSBs) and that the apprentice is ready to take the EPA.
- The apprentice must submit their portfolio of evidence to their EPAO when applying for the EPA, at the gateway. An independent assessor will review the portfolio to glean personalised information that will assist the professional discussion assessment method. The independent assessor will review the portfolio prior to the EPA assessment in order to prepare questions. The portfolio itself is not assessed.

Assessment methods

Assessment Method 1: Knowledge Test (This Method has 1 component.)

Method 1 Component 1: Knowledge Test

Overview

The rationale for this assessment method is:

To assess the apprentice's depth of understanding in the knowledge elements that may not naturally occur during the observation or professional discussion. The questions must relate to the underpinning knowledge and must be varied. Apprentices must choose one correct answer from a choice of four.

Test Format

The test can be:

- Computer based or paper based

It will consist of 30 questions.

These questions will consist of:

- Closed response questions (i.e. multiple-choice questions)

Test administration

Apprentices must have 60 minutes to complete the test.

The test is closed book which means that the apprentice cannot refer to reference books or materials. Apprentices can have access to paper, pen and a calculator. The calculator is required as some questions will require calculations. The calculator must be provided by the EPAO and must be a non-scientific calculator.

Apprentices must take the test in a suitably controlled environment that is a quiet space, free of distractions and influence, in the presence of an invigilator. The invigilator may be the independent assessor or another external person employed by the EPAO. The EPAO is required to have an invigilation policy that will set out how the test/examination is to be carried out. This will include specifying the most appropriate ratio of apprentices to invigilators to best take into account the setting and security required in administering the test/examination.

The EPAO is responsible for ensuring the security of testing they administer to ensure the test remains valid and reliable (this includes any arrangements made using online tools). The EPAO is responsible for verifying the validity of the identity of the person taking the test.

The EPAO must verify the suitability of the venue for taking the test.

Marking

Tests must be marked by independent assessors or markers employed by the EPAO following a marking guide produced by the EPAO. Alternatively, marking by computer is permissible where questions types allow this, to improve marking reliability. Apprentices must select one correct answer from a choice of 4; each correct answer will be awarded 1 mark.

Any incorrect or missing answers must be assigned 0 marks.

Question and resources development

Questions must be written by EPAOs and must be relevant to the occupation and employer settings. It is recommended that this be done in consultation with employers of this occupation. EPAOs should also maintain the security and confidentiality of their questions when consulting employers. EPAOs must develop 'question banks' of sufficient size to prevent predictability and review them regularly (and at least once a year) to ensure they, and the questions they contain, are fit for purpose. Predictability of questions may also be reduced through an extensive question bank.

Required supporting material

As a minimum, EPAOs will produce the following material to support this method:

- A test specification
- Sample tests and mark schemes
- Live tests and mark schemes
- Analysis reports which show areas of weakness for completed tests/exams and an invigilation policy.

Assessment Method 2: Practical Assessment with questioning

(This Method has 1 component.)

Method 2 Component 1: Practical Assessment with questioning

Overview

Apprentices must be observed by an independent assessor completing a Practical Assessment made up of two tasks (See Annex A) in which they will demonstrate the KSBs assigned to this assessment method. The end-point assessment organisation will arrange for the practical assessment to take place, in consultation with the employer. The Practical assessments must be carried out over an assessment time of 3 hours 45 minutes and this includes the time for questioning. The assessor has the discretion to increase the time of the practical assessment by up to 10% to allow the apprentice to complete the last task that is part of this element of the EPA.

Assessors must observe one apprentice at any one time, to allow for quality and rigour.

The rationale for this assessment method is:

The occupation involves practical activity best assessed through practical assessment; it would be difficult to replicate the working environment in a valid way without seeing the apprentice carrying out tasks and employers would doubt the occupational competence of an individual not assessed in this way.

- this is a practical role, best demonstrated through completing tasks in a realistic work setting
- it makes use of existing test facilities, which will be familiar to the apprentice and thus allow them to perform at their best
- practical assessment allows for consistency of activities to be completed and efficiency in scheduling
- questioning allows for the testing of related underpinning knowledge
- it is a holistic assessment method

Delivery

Apprentices must be provided with both written and verbal instructions on the tasks they must complete, including the timescales they are working to.

The practical assessment should be conducted in the following way to take account of the occupational context in which the apprentice operates:

The following activities **MUST** be observed during the practical assessment, that is a practical demonstration without these tasks would seriously hamper the opportunity for the apprentice to demonstrate occupational competence in the KSBs assigned to this assessment method.

Apprentices will complete 2 practical assessment tasks, 1 x 45 minute +10% practical assessment and 1 x 3 hours +10% practical assessment. This timing includes the questioning component of the tasks.

Task Description:

Task 1 and 2 must be carried out on the same vehicle.

Task 1 Practical Assessment: Vehicle inspection

This task will last 45 minutes, +10% at the assessor's discretion, and the apprentice will replicate a vehicle inspection. They must check the following sections:

- i. General machine safety
- ii. Basic mechanical systems
- iii. Basic electrical systems
- iv. Basic chassis systems
- v. Basic hydraulic systems

Task 2 Practical Assessment: Diagnose and repair faults

The vehicle should be prepared for the task with 5 to 8 faults as defined in advance by the EPAO, which must include items that require immediate attention and items that are reaching the end-of-life and will require attention in the near future. The EPAO must ensure one of the below areas covers diagnostic and repair. Each item must be a component within the different machine areas listed below, and all 5 machine areas must have faults. The candidate must record their fault findings on an inspection sheet (provided by the EPAO).

Apprentices must be observed by an independent assessor completing diagnostics and repair on 5 key machine areas, as this will ensure they are competent in assessing all machine parts. They must also carry out repairs. This must provide an opportunity for the apprentice to demonstrate all of the KSBs assigned to this assessment method. The key machine areas are:

- Chassis
- Driveline/Transmission
- Electrical
- Engine
- Lifting Structure

Knowledge Skills and Behaviours observed and answers to questions must be documented by the independent assessor. EPAOs will provide a standard template for independent assessors to record assessment outcomes.

This task will have a time frame of 3 hours, +10% at the assessor's discretion to allow the task to be completed, which includes a maximum of 5 minutes briefing of the individual task before the task commences. Apprentices should be encouraged to ask questions and confirm understanding of what is required of them during the assessment. The practical assessment tasks reflect frequent scenarios from the apprentice's normal work activities. The structure of the practical assessment should require the apprentice to demonstrate they can work safely whilst conducting inspection, fault finding, removal & replacement, set-up and repair activities.

At the end of the inspection, the apprentice must correctly declare whether the machine is safe, highlighting to the assessor any findings which would render the machine dangerous or 'developing issues' which may lead to further problems in the future.

The purpose of the practical assessment is to allow the apprentice opportunity to demonstrate their professional competence by demonstrating all of the KSBs mapped to this assessment method.

The visual inspection and explanation (tasks 1 and 2) will last 3 hours and 45 minutes in total +10 %.

These tasks must take place on the same day in order to make the EPA cost effective, but there can be breaks between tasks to enable the apprentice and assessor to move from one location to another and to allow for comfort breaks. During these breaks, the clock must be stopped to ensure that the practical assessment with questioning assessment duration is not reduced.

This one day practical assessment will usually take place in an external controlled environment reflective of their normal workplace, such as a training provider or EPAO's premises. This will ensure the faults on machines are consistent and comparable but not predictable.

Practical assessment specifications must be determined and standardised by end-point assessment organisations, in consultation with representative employers. This is to help ensure that different sets of faults in different practical assessments are of an overall comparable difficulty.

EPAOs will provide a standard template for IAs to record assessment outcomes.

EPAOs must also have a process in place to ensure that an apprentice is not disadvantaged due to equipment failure and ensure that a technician is available to resolve any technical issues.

EPAOs will create and set open questions to assess related underpinning knowledge. The questions are to be asked during the practical demonstration. Assessors must take care to be as unobtrusive as possible during the practical assessment and take care when asking questions not to distract the apprentice from the immediate task. The independent assessor must ask a minimum of 5 questions over the course of the whole practical assessment and follow-up questions are allowed to seek clarification and to make an assessment against the grading descriptors. Questioning must be completed within the total time allowed for the practical demonstration.

The independent assessor must ask open questions to check the apprentice's understanding. Each of the two tasks must have a different set of questions. The independent assessor may also ask follow up questions where clarification of the answers or clarification of the action being carried out is required. EPAOs will provide a standard template for IAs to record questions and assessment outcomes.

KSBs observed and answers to questions must be documented by the independent assessor.

The independent assessor will make all grading decisions.

Questions and resources development

EPAOs will create and set open questions to assess related underpinning knowledge, skills and behaviours.

EPAOs will produce specifications to outline in detail how the practical demonstrations will operate, what it will cover and what should be looked for. It is recommended that this be done in consultation with employers. EPAOs should put measures and procedures in place to maintain the security and confidentiality of their specifications if employers are consulted. Specifications must be standardised by the EPAO.

EPAOs must develop 'practical specification banks' of sufficient size to prevent predictability and review them regularly (and at least once a year) to ensure they, and the specifications they contain, are fit for purpose. The specifications, including questions relating to underpinning knowledge, skills and behaviours must be varied, yet allow assessment of the relevant KSBs.

Venue

Practical demonstrations must be conducted in one of the following locations:

A suitable venue selected by the EPAO (e.g. a training provider's premises)

The venue must:

Be a fully equipped specialist lift trucks and powered access workshop environment.

Support material

EPAOs will produce the following material to support this assessment method:

- Lift truck and powered access workshop scaling list
- Outline of the practical demonstration's requirements
- Marking materials

Assessment Method 3: Professional Discussion (supported by a portfolio of evidence) (This Method has 1 components.)

Method 3 Component 1: Professional Discussion

Overview

This assessment will take the form of a professional discussion, which must be appropriately structured to draw out the best of the apprentice's competence and excellence and cover the KSBs assigned to this assessment method. It will involve questions that will focus on coverage of prior learning and/or activity.

The professional discussion can take place in any of the following:

- A suitable venue selected by the EPAO (e.g. apprentice's workplace, a training provider's premises)

The rationale for this assessment method is:

This will allow some KSBs which may not naturally occur in every workplace or may take too long to observe to be assessed and the assessment of a disparate set of KSBs.

Delivery

The independent assessors will conduct and assess the professional discussion.

The professional discussion must last for 60 minutes +10% at the assessor's discretion. Further time may be granted for apprentices with appropriate needs, for example where signing services are required.

During this method, the independent assessor must use the EPAO's question bank but follow up questions are allowed.

The professional discussion will be conducted as set out here:

This will be a one-to-one discussion between the apprentice and the independent assessor

- It lasts for 60 minutes (+10% at the assessor's discretion)
- Apprentices should be given at least one week's notice of the assessment date.
- The independent assessor must ask the apprentice a minimum of 10 open questions; follow up questions are allowed to seek clarification. The EPAO must produce a bank of sample questions to assist the independent assessor, but these are for illustration only and the independent assessor should adapt their questions to the apprentice's individual circumstances following a review of their portfolio of evidence.
- Apprentices may refer to their portfolio when answering the questions.
- The apprentice must bring a copy of the portfolio with them.

The independent assessor must use the assessment tools and procedures that are set by the EPAO to record the professional discussion.

The independent assessor will make all grading decisions.

Venue

The professional discussion may be conducted face-to-face or via an online platform for example video-conferencing or an electronic test. EPAOs must ensure appropriate measures are in place to prevent misrepresentation, for example, screen share and 360-degree camera function with assessors when the assessments are undertaken remotely.

Other relevant information

A 'question bank' must be developed by EPAOs. The 'question bank' must be of sufficient size to prevent predictability and the EPAO must review it regularly (at least once a year) to ensure that it, and its content, are fit for purpose. The questions relating to the underpinning KSBs must be varied yet allow assessment of the relevant KSBs. Independent assessors must use the question bank as a source for questioning and are expected to use their professional judgement to tailor those questions appropriately. Assessors are responsible for generating suitable questions in-line with the EPAO's training and standardisation process.

EPAOs must ensure that apprentices have a different set of questions in the case of re-sits/re-takes.

Independent assessors must be developed and trained by the EPAO in the conduct of professional discussion and reaching consistent judgement.

EPAOs will produce the following material to support this assessment method:

- Outline of the assessment method's requirements
- Marking materials including marking sheet

Weighting of assessment methods

All assessment methods are weighted equally in their contribution to the overall EPA grade.

Grading

Assessment method 1: Knowledge Test

KSBs	Fail	Pass
K2 K3 K4 K5 K8 K10 K11	Does not meet the pass criteria 0-23 out of 30 marks	Must score a minimum of 24 marks 24-30 marks out of 30 marks

Assessment method 2: Practical Assessment

Fail: Does not meet the pass criteria

KSBs	Pass – All of the Pass criteria must be met	Distinction – In addition to the Pass criteria, all of the Distinction criteria must be met
Safe working practices (S1, S2, B1)	Demonstrates correct safety working practices, including safe lifting and working at height procedures, recognising potential hazards and following correct procedures. Overall, is complying with appropriate legislation. E.G. wearing safety shoes/boots, correctly jacking and blocking.	
Preventive maintenance (K4, S4)	Correctly and safely performs preventative maintenance in line with manufacturer's manual/specification.	Explains why preventative maintenance is important when questioned and describes the health and safety implications of failing to follow the manufacturer's specification.
Methodical approach (K6)	Explains how to safely identify the faults, and correctly diagnose them in a logical order demonstrating understanding of the cause.	Able to explain why they are carrying out each diagnostic step and provides logical rationale for why the order was selected. Explains how they will clarify they have identified correct fault.
Diagnose and repair faults (S5, S6, S7, S9)	Safely identifies the faults, correctly diagnosing them in a logical order demonstrating understanding of the cause. Correctly rectifying the fault found.	

Control Area Network diagnosis (S8)	Tests and interprets Control Area Network (CAN Bus) diagnosis correctly.	
Machine Telematics (S10)	Demonstrates that they can maintain machine telematics, installing and repairing when needed.	
Check, diagnose and repair of hydraulic components (S11)	Safely identifies the faults within hydraulic components, correctly diagnosing them in a logical order demonstrating understanding of the cause. Correctly rectifying the fault found. Demonstrates abilities using schematics, pressure gauges, flow meter and on-board computers/ laptop.	
Hydraulic electrical control valve maintenance and calibration (S12)	Correctly diagnoses and repairs faults in hydraulic/electrical proportional control valves and undertakes correct breakout calibration of individual valves.	
Calibration and adjustment (K8, S13, S14)	Correctly calibrates in line with manufacturer's specification and compliance requirements, ensuring safe practice and legislation and correct parameter adjustments.	Explains the importance of making correct parameter adjustments and the risks if not done correctly with reference to appropriate health and safety regulation.

Assessment method 3: Professional Discussion (supported by a portfolio of evidence)

Fail: Does not meet the pass criteria

KSBs	Pass – All of the pass criteria must be met	In addition to the Pass criteria, all of the distinction criteria must be met.
Equipment specifications and customer requirements (K7, K9)	Explains how machines can be altered to a customer's requirements, and how to ensure this is within the manufacturer's parameters.	Explains the importance of manufacturer specifications and the risks of altering machines beyond them.
Stock control (K12, S16)	Efficiently plans and monitors stock, ensuring correct parts are used and re-ordered.	Explains the risks and benefits of maintaining surplus stock and the risks and benefits of just in time ordering.
Record keeping (K13, S15)	Describes importance of maintaining accurate records in accordance with company and manufacturer's requirements and the safety benefits; provides an example to illustrate how they have done this.	
Interpreting diagrams and information (S3)	Explains how they have verified system functionality by interpreting manufacturers' technical data, supporting this with evidence from their portfolio.	
Industry and company procedures (K1,B3)	Explains the importance of complying with company and industry procedures and values and provides an example of when they have done so with a positive outcome.	
Customer care (S17)	Provides an example of updating a customer on progress and difficulties and explains how they identified the customer's level of technical expertise and how that influenced the way they explained this.	Explains how they built rapport with the customer and how they used this to check the customer's understanding, providing examples from their portfolio of when they have shown a commitment to delivering a quality service to exceed organisational requirements e.g. making follow up checks and ensuring customer satisfaction.
Personal responsibility (B4, B5, B7)	Provides an example of how they have pro-actively undertaken CPD and set themselves targets and goals to achieve this.	Explains the benefits of CPD to themselves and the organisation.

Industry values and change (B2, B6)	Explains how they have kept their knowledge up-to-date and adapted to changing situations, technologies and working environments, while meeting company and industry values and requirements with reference to evidence in the portfolio of evidence. Explains how they have demonstrated a positive work ethic and worked reliably, flexibly, diligently and in a trustworthy way, supported by evidence.	
Representing company (B8)	Provides an example of acting as a company ambassador and provides evidence to confirm they are clean, tidy and polite when on site (this could include photographs and/or feedback from customers). Explains the importance of, politeness and personal presentation when dealing with customers.	

Overall EPA grading

All EPA methods must be passed for the EPA to be passed overall.

In order to achieve an overall distinction, the apprentice must achieve a distinction in assessment methods 2 and 3.

Where apprentices achieve 2 passes and 1 distinction, they will be awarded an overall merit.

Grades from individual assessment methods should be combined in the following way to determine the grade of the EPA as a whole:

Assessment method 1 – Knowledge Test	Assessment method 2 – Practical Assessment	Assessment method 3 – Professional Discussion	Overall grading
Fail	Any grade	Any grade	Fail
Any grade	Fail	Any grade	Fail
Any grade	Any grade	Fail	Fail
Pass	Pass	Pass	Pass
Pass	Pass	Distinction	Merit
Pass	Distinction	Pass	Merit
Pass	Distinction	Distinction	Distinction

Roles and responsibilities

Role	Responsibility
Apprentice	<ul style="list-style-type: none"> • Participate in development opportunities to improve their knowledge skills and behaviours as outlined in the standard • Meet all gateway requirements when advised by the employer • Understand the purpose and importance of EPA and undertake EPA
Employer	<ul style="list-style-type: none"> • Support the apprentice to achieve the KSBs outlined in the standard to their best ability • Determines when the apprentice is working at or above the level outlined in the standard and is ready for EPA • Select the EPAO • Confirm all EPA gateway requirements have been met • Confirm arrangements with EPAO for the EPA (who, when, where) in a timely manner • Ensure apprentice is well prepared for the EPA
EPAO	<ul style="list-style-type: none"> • Understand the occupational role • Appoint administrators/invigilators and markers to administer/invigilate and mark the EPA • Provide training and CPD to the independent assessors they employ to undertake the EPA • Provide adequate information, advice and guidance documentation to enable apprentices, employers and providers to prepare for the EPA • Deliver the end-point assessment outlined in this EPA plan in a timely manner • Prepare and provide all required material and resources required for delivery of the EPA in-line with best practices • Use appropriate assessment recording documentation to ensure a clear and auditable mechanism for providing assessment decision feedback to the apprentice • Have no direct connection with the apprentice, their employer or training provider i.e. there must be no conflict of interest • Maintain robust internal quality assurance (IQA) procedures and processes, and conducts these on a regular basis • Conform to the requirements of the nominated external quality assurance body • Organise standardisation events and activities in accordance with this plan's IQA section • Organise and conduct moderation of independent assessors' marking in accordance with this plan • Have, and operate, an appeals process • Arrange for certification with the relevant training provider

Independent assessor	<ul style="list-style-type: none"> • Understand the standard and assessment plan • Deliver the end-point assessment in-line with the EPA plan • Comply to the IQA requirements of the EPAO • Be independent of the apprentice, their employer and training provider(s) i.e. there must be no conflict of interest • Satisfy the criteria outlined in this EPA plan • Hold or be working towards an independent assessor qualification e.g. A1 and have had training from their EPAO in terms of good assessment practice, operating the assessment tools and grading • Have the capability to assess the apprentice at this level • Attend the required number of EPAOs standardisation and training events per year (as defined in the IQA section)
Training provider	<ul style="list-style-type: none"> • Work with the employer to ensure that the apprentice is given the opportunities to develop the KSBs outlined in the standard and monitor their progress during the on-programme period • Advise the employer, upon request, on the apprentice's readiness for EPA prior to the gateway • Plays no part in the EPA itself
Invigilator	<ul style="list-style-type: none"> • Supports the Independent Assessor by invigilating practical assessment tasks, preparing assessment tasks, monitoring health & safety in the workshop and ensuring no collaboration between candidates. • Does not make any judgements on the outcome of the practical assessment. The invigilator must not have been involved in the on-programme learning or assessment of the apprentice(s) taking part in the End-Point assessment. They must be approved by the EPAO.

Internal Quality Assurance (IQA)

Internal quality assurance refers to the requirements that EPA organisations must have in place to ensure consistent (reliable) and accurate (valid) assessment decisions. EPA organisations for this EPA must:

- Appoint independent assessors who are competent to deliver the end-point assessment and:
 - Demonstrate evidence of excellent knowledge and understanding of the apprenticeship standard
 - Demonstrate having been trained in independent end-point assessment to the standard required by the assessment organisation
 - Demonstrate relevant occupational expertise and knowledge, at the relevant level of the occupational area(s) they are assessing, which has been gained through ‘hands on’ experience in the industry
 - Practice standardised assessment principles
 - Demonstrate sufficient resources to carry out the role of independent end-point assessor i.e. time and budget
 - Hold qualifications, or have undertaken training, that has legislative and technical relevance to the lift truck and powered access engineering technician standard
 - Update their occupational expertise and industry knowledge in the areas being assessed through planned Continuous Professional Development
- Provide training for independent assessors in terms of good assessment practice, operating the assessment tools and grading
- Have robust quality assurance systems and procedures that support fair, reliable and consistent assessment across the organisation and over time.
- Operate induction training and standardisation events for independent assessors when they begin working for the EPAO on this standard and before they deliver an updated assessment method for the first time

Re-sits and re-takes

Apprentices who fail one or more assessment method will be offered the opportunity to take a re-sit or a re-take. A re-sit does not require further learning, whereas a re-take does.

Apprentices should have a supportive action plan to prepare for the re-sit or a re-take. The apprentice’s employer will need to agree that either a re-sit or re-take is an appropriate course of action.

An apprentice who fails an assessment method, and therefore the EPA in the first instance, will be required to re-sit/re-take any failed assessment methods only.

Any assessment method re-sit or re-take must be taken within three months of the fail notification, otherwise the entire EPA must be taken again, unless in the opinion of the EPAO exceptional circumstances apply outside the control of the apprentice or their employer.

Re-sits and re-takes are not offered to apprentices wishing to move from pass to merit/distinction or merit to distinction.

Where any assessment method has to be re-sat or re-taken, the apprentice will be awarded a maximum EPA grade of pass, unless the EPAO determines there are exceptional circumstances requiring a re-sit or re-take.

Affordability

Affordability of the EPA will be aided by using at least some of the following practice:

- Online assessment
- Assessing multiple apprentices simultaneously

Professional body recognition

This apprenticeship is designed to prepare successful apprentices to meet the requirements for registration as Lift Truck and Powered Access Engineering Technician with

Institute of Mechanical Engineers (IMechE)

Institute of Engineering and Technology (IET)

Institute of the Motor Industry

Reasonable adjustments

The EPAO must have in place clear and fair arrangements for making reasonable adjustments for this apprenticeship standard. This should include how an apprentice qualifies for reasonable adjustment and what reasonable adjustments will be made. The adjustments must maintain the validity, reliability and integrity of the assessment methods outlined in this assessment plan.

Mapping of Knowledge, Skills and Behaviours (KSBs)

Assessment method 1: Knowledge Test

Knowledge
K2 Tools and equipment required for each application within the Lift Truck and Powered Access profession. e.g. jacks and blocks, spanners, socket sets, hammer, screwdrivers (various), pliers, multi-meter, oscilloscope, chain gauge, soldering iron, hacksaw, files, taps, vernier, allen keys, torx bits, straps, torque wrench, oil and lubricants, crimps, stanley knife, drill, goggles, ear protectors, safety boots, gloves and overalls.
K3 Fabrication techniques: Soldering / electric & gas welding, electrical, mechanical hydraulic connections & fixings, metal composition, filing, hacksawing, drilling, thread tapping, grinding, and crack detection techniques.
K4 The safety aspects of mechanical, electric, and pneumatic tools, lubricants, and specialist equipment.
K5 The maintenance, testing and maneuvering purposes of Lift Truck and Powered Access machines for operational purposes
K8 The relevant Health and Safety legislation and regulations relating to diagnostics, repair, maintenance and operation of Lift Truck and Powered Access machinery and equipment.
K10 Principles of electrical, electronic, mechanical, and hydraulic engineering and components and how to apply them to the operation, repair and diagnostics procedures on all types of complex Lift Truck and Powered Access machines.
K11 Methods of communication and when and how to apply them appropriately, including customer care techniques.

Assessment method 2: Practical Assessment

Knowledge
K4 The safety aspects of mechanical, electric, and pneumatic tools, lubricants, and specialist equipment.
K6 Methodical and systematic techniques for logical fault-finding diagnosis and the verification of functionality and performances of complex Lift Truck and Powered Access machines.
K8 The relevant Health and Safety legislation and regulations relating to diagnostics, repair, maintenance and operation of Lift Truck and Powered Access machinery and equipment.

Skills
S1 Carry out safe jacking and blocking procedures; correctly selecting and using lifting and blocking equipment (toe / hydraulic jacks & blocks).
S2 Use correct lifting equipment when removing heavy Lift Truck and Powered Access machine components (chains, slings, shackles) and follow working at height procedures in compliance with appropriate health & safety legislation.
S4 Perform detailed preventative maintenance activities on complex Lift Truck and Powered Access machines in compliance with manufactures' specifications.
S5 Check, diagnose and repair electrical/electronic, mechanical, and hydraulic systems, including: 12/24/48/-volt lead acid and lithium-ion batteries.
S6 Diagnose and rectify machine charging systems, electrical / electronic wiring / safety circuits.
S7 Diagnose and rectify motor control circuits, drive circuits, lift and steer circuits.
S8 Test and interpret Control Area Network (CAN Bus) diagnosis.
S9 Check diagnose and repair braking and steering systems.
S10 Maintain, install & repair machine telematics.
S11 Check, repair and diagnose hydraulics components using schematics, pressure gauges, flow meters and on-board computer / laptop programmes.
S12 Diagnose and repair hydraulic/electrical proportional control valves and perform breakout calibration of individual valves.
S13 Calibrate electronic controllers and recognise the importance of safety devices and systems.
S14 Make the required parameter adjustments in compliance with manufactures' specifications, customer requirements, industry directives and relevant health & safety legislation.

Behaviours
B1 Safety Culture Conscious: Recognises this is a hazardous industry and adheres to a disciplined approach in maintaining a safe environment.

Assessment method 3: Professional Discussion (supported by a portfolio of evidence)

Knowledge
K1 Company and customer policies, rules, and safe working procedures when working in different environments.
K7 Lift Truck and Powered Access machines on-board diagnostics and communication systems and how to set the machine characteristics to meet customer specific requirements within the machines working parameters.

K9 Manufacturers' specifications and customers' requirements and the process to access, interpret and apply the information gained from them.

K12 Principles of stock control.

K13 How to maintain clear and accurate records, and why this is important.

Skills

S3 Interpret Lift Truck and Powered Access machine electrical, mechanical, and hydraulic schematic diagrams, flow charts and manufacturers' technical data to verify correct systems functionality.

S15 Prepare and maintain accurate records of all work undertaken in accordance with company and manufacturer's requirements.

S16 Check and maintain stock to there are no shortages of parts and equipment and no surplus causing undue cost to the business.

S17 Politely, keep customers and colleagues informed of progress and any difficulties in relation to work on hand, using the level of technical language appropriate to the audience, offering alternative solutions where required.

Behaviours

B2 Work Ethic: Positive work principles, reliable, flexible, diligent, and trustworthy.

B3 Commitment to industry values: Committed to complying with employer and industry standards.

B4 Willingness to learn: Actively involved in undertaking continuous professional development (CPD).

B5 Motivation: Thrives on challenges, uses own initiative, sets targets and achieves goals.

B6 Adaptability: Positive to changing situations, technologies and working environments.

B7 Personal Responsibility: Driven to succeed, motivated to complete a task.

B8 Adheres to Codes of Conduct: Company ambassador, polite; wears corporate work clothing; good personal hygiene; maintains company property; keeps vehicle clean; leads by example, demonstrates "can do!" attitude.