

EPA Plan for

Land-based Service Engineering

Level 2

Service Engineer

Summary of Assessment

The apprentice will typically spend between 18 - 24 months on-programme working towards the apprenticeship standard, with a minimum of 20% of this time being spent in off-the-job training.

This document sets out the requirements for end-point assessment (EPA) of the land-based service engineering 'Service Engineer' apprenticeship standard. It will be of interest to employers, apprentices, training providers and end-point assessment organisations.

The EPA cannot be undertaken until the employer has sanctioned that the apprentice has developed all the knowledge, skills and behaviours defined in the land-based service engineering 'Service Engineer' apprenticeship standard. This decision may be taken in conjunction with the training provider but in all cases the employer has the final word.

The EPA will be completed by the apprentice at a time determined between the employer, training provider and the Independent Assessment Organisation (IAO) who between them will consider their respective schedule of commitments, the seasonal demands and geographical locations.

The EPA consists of (3) distinct elements which are equally weighted and to be completed in the sequence below

1. On-line Knowledge EPA
2. Practical Tasks EPA
3. Professional Interview EPA

All three 3 elements of the assessment are to be completed within 6 months of the achievement of the gateway within the apprenticeship.

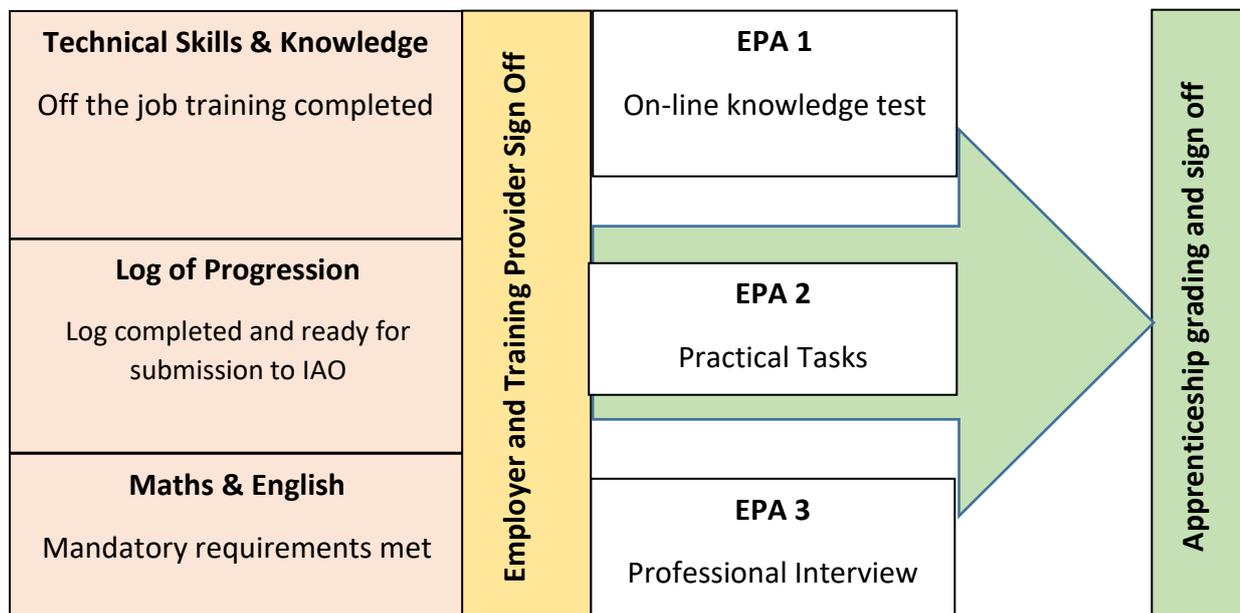
The apprentice's performance in the EPA will be graded using the following grades;

- The On-line Knowledge EPA graded Fail / Pass / Merit / Distinction
- The Practical Tasks EPA graded as Fail / Pass / Merit / Distinction
- Professional interview EPA graded Fail / Pass / Merit / Distinction

The overall grading of the apprenticeship will be determined by the apprentice's performance in all 3 elements of the EPA which are equally weighted and evaluated in line with the Independent Assessment Organisations Quality Assurance policies. With external quality overviews being provided by Ofqual the appointed EQA body for this apprenticeship standard.

A fail in any one of the assessment elements will constitute an overall failure to achieve the apprenticeship sign off.

The Gateway to Assessment



Assessment Overview

Assessment Element	What is Assessed during the EPA
On-line Knowledge Test EPA	Knowledge
Practical Tasks EPA	Knowledge, Skills and Behaviours
Professional Interview EPA	Knowledge, Skills and Behaviours

- All EPA Elements are to be assessed by an Independent Assessment Organisation
- Each EPA element is graded with the judgement being Fail / Pass / Merit / Distinction
- All assessments have equal weighting in the overall grading of the apprenticeship

On Programme Requirements

- The Log of Progression

In order to accurately reflect upon development it is required that apprentices compile a log of progression throughout their apprenticeship evidencing their journey. Typically the evidence will detail the development of knowledge, skills and behaviours and include records of regular reviews with the employer and training provider conducted in the workplace.

The reviews conducted by the employer and training providers are to include comment on the following;

- Personal behaviours and attitudes, e.g. appearance, attendance, punctuality, engagement with the learning process, the group, and the quality of work produced

- Strengths and weaknesses highlighting areas of excellence and those requiring attention in both practical and academic areas of learning
 - The progress made in meeting the scope of the apprenticeship standards
 - Recommendations on areas within the apprenticeship learning that need to be addressed
- To fulfil this requirement the training provider will be required to liaise with the employer and visit the apprentice in the workplace. The frequency of these visits to be determined between the employer and training provider upon negotiation of the apprenticeship delivery.

The Professional Interview EPA will be based around the contents of each apprentice's 'log of progression' ***It is essential therefore that arrangements are made to ensure that the log of progression is available to the IAO at least two weeks prior to the Professional Interview EPA***

Recommendations outlining the off the job training requirements for this apprenticeship can be found in the 'Occupation Brief' which may be accessed by visiting www.landbasedengineering.com

Assessment gateway

The EPA may only commence once the employer is confident that the apprentice has developed the knowledge, skills and behaviours defined in the apprenticeship standard and the following criteria is in place.

- Log of progression is completed and ready for submission to IAO
- Achieved Level 1 English and mathematics and taken the test for Level 2

It is advised that land-based engineering employers make this decision in conjunction with the training provider. The employer however has the final decision.

Having achieved the gateway the EPA assessments are to be undertaken in the sequence as detailed below.

- 1) On-line test
- 2) Practical tasks
- 3) Professional interview

All three 3 elements of the assessment are to be undertaken within 6 months of the achievement of the gateway within the apprenticeship.

A minimum of a 'pass' is to be achieved before progressing to the next element of the EPA assessment.

End Point Assessment (EPA)

The parameters of each EPA element will be set by the appropriately registered Independent Assessment Organisation using guidance from this plan

What is to be assessed?

The combination of the 3 forms of EPA are designed to test the knowledge, skills and behaviours detailed in the published standard and Annex A of this document to the extent that the

Independent Assessment Organisation is satisfied that the apprentice is competent in their occupation.

The End Point Assessments are designed to test a cross section of areas of knowledge, skills and behaviours within the standard however it is accepted that EPA's may not cover every aspect of the standards

The Practical Tasks are formulated to test, practical skills, knowledge and the behaviours necessary to safely and effectively carry out physical tasks relative to the job role to a professional standard

The Professional Interview is employed to demonstrate the ability to communicate / express an opinion, reflect upon personal development, evaluate industry knowledge and the personal behaviours listed in the standard.

How will it be assessed?

Apprentices attending the EPA elements will be required to present themselves for assessment equipped with;

- Means to confirm their identity. (All elements of the assessment)
- Overalls and protective footwear (Practical task assessments)
- Writing materials (Practical task assessments)
- Please note that mobile phones are not permitted in any of the assessments and must be handed to the independent assessor or left in a secure place.

Apprentices are not to have prior notification of the specific content of the assessment tasks and tests, these are to be revealed on the day of assessment.

On-line Knowledge EPA

Number of multiple choice questions to be completed		45	
Maximum duration of the on-line test		1 Hour 30 minutes	
Grading			
Fail below 64%	Pass 65 – 74%	Merit 75 – 89%	Distinction 90%

The Online Knowledge Test will be taken under controlled conditions defined by the Independent Assessment Organisation. The test will consist of **45** multiple choice questions all of which are to be answered. Each multi-choice question is to offer a choice of 4 responses with only one answer being correct

- On-line knowledge assessments are to be conducted using a closed book policy
- The (IAO) question bank is to contain a minimum of 150 multiple choice questions relating to the land-based engineering 'Service Engineer' standards
- The question bank is to cover the scope of the apprenticeship standard however it is accepted that individual tests may not cover every assessment criteria within the standard.
- The questions presented in each On-line Knowledge EPA are to be randomised and drawn

from the question bank ensuring that each apprentice's test is unique

- Question banks are to be reviewed every 3 years.

Grading of the on-line knowledge EPA will be established by a calculation of the percentage of questions answered correctly and grading awarded as detailed in the matrix above.

It is expected that the (IAO) will make the results of the on-line test available on the day of the test.

Examples of multiple choice questions types and knowledge levels might be;

What unit of measurement is used to measure electrical resistance?

- a) Amps b) Volts c) Ohms d) Watts

Which type of bearing is designed to be preloaded?

- a) Taper roller bearing
b) Needle bearing
c) Self-aligning ball bearing
d) Cylindrical roller bearing

What colour coding is applied to a powder fire extinguishers?

- a) Red with red panel
b) Red with cream panel
c) Red with blue panel
d) Red with black panel

Practical Tasks EPA

Duration of the complete Practical Task EPA		1 x 6 Hour Day	
Number of tasks contained within the Practical Task EPA		3	
Maximum duration of each of the practical tasks		1 Hour 45 Minutes	
Grading			
Fail	Pass	Merit	Distinction

The Practical Task EPA is to be conducted by:

- An *assessor qualified to the level of the standard with relevant experience and expertise associated with the roles in the standard.
- The EPA will be undertaken in controlled conditions meeting IAO's quality assurance measures.

*Assessor(s) conducting the assessment may be called upon to;

- undertake the customer's role in tasks e.g. explaining symptoms, or giving verbal instructions as detailed in the IAO documentation
- Ask the apprentice standardised questions developed by the assessment organisation relating to the task being undertaken to gain an insight into the apprentices reasoning and

knowledge.

What an EPA Practical Task scenario may look like

A walk round inspection and report on the service requirements of a self-propelled machine relevant to the sector the apprentice works within. Identification of visual service requirements, and simple faults set into the machine, compilation of a list of service materials and fluids requirement to service the machine, written report recording the machine details and observations regarding future service work required.

Or

Demonstrate how to hand over the control of a machine or piece of equipment to the control and use of others in the workplace

Examples of questions an assessor may ask the apprentice during the course of a practical task EPA;

- Name five reasons an engine may overheat when in use?
- What information should be recorded when carrying out a service on a customer's machine?
- What type of fire extinguisher should be used on an electrical fire and how would you identify it?
- What causes an electrical connection to become warm?
- Name the precautions to be taken when disconnecting a fully charged battery from a charger

It is recommended that the Practical Task Assessment Facility is equipped with;

Exhaust extraction equipment, First Aid Kit, Fire extinguishers	
Diagnostic equipment	Electrical and pressure testing equipment, Generic diagnostic platform,
PPE equipment,	Safety glasses, gloves, respiratory masks etc
Comprehensive set(s) of hand tools	Hand tools commensurate with the tasks to be undertaken
A range of internal and external measuring equipment	Vernier, micrometre, dial test indicator
Lifting & jacking equipment	Trolley and bottle jacks, Axle stands, engine / wheel crane, lifting slings and chains
Oil drain tins	Measuring jugs, funnels
Sundry workshop tools	Workshop equipment and special tooling to facilitate the tasks being undertaken
Degreasing / cleaning facilities	Parts wash
Access to reference data relevant to the tasks	Technical reference documentation

Cleaning materials	Cleaning cloths /tissues, broom, shovel, spillage materials, waste bin
Screening to separate workshop areas	Separate work stations with work bench and access to a writing area
Workshop sundries	Insulation tape, sealants, electrical wire and wiring connectors split pins, washers sundry fasteners etc

It is recommended that the assessment is conducted within a training provider's facility away from the apprentice's workplace to avoid distractions. The Independent Assessment Organisation may sanction the use of other facilities which meet their quality assurance requirements

During the course of each practical task apprentices will be assessed on their skills, knowledge and behaviours as appropriate to the task. Refer to Annex 1

The Independent Assessment Organisation will supply the guidance documentation required to support the EPA together with a marking matrix for the assessor to apply

Professional Interview EPA

Duration of the Professional Interview			*60 minutes
Grading			
Fail	Pass	Merit	Distinction

The Professional Interview is an in depth discussion structured appropriately to draw out the best of the apprentice's energy, enthusiasm, competence and excellence.

The interview is to be conducted by the Independent Assessment Organisation in controlled conditions affording an appropriate environment.

- At the discretion of the Independent Assessment Organisation they may conduct the Professional Interview either through physical attendance or by employing technology to enable a remote interview to be conducted.
- In both cases mentioned above the Independent Assessment Organisation will specify the procedures required to satisfy their quality assurance responsibilities
- The Professional Interview will be based on the Log of Progression described in the '**On programme requirements**' section located on page 4 of this document.

Examples of the types of question that may be asked within the Professional Interview;

- Within the context of the apprenticeship standards what do you consider your strengths and weaknesses to be, and in the case of the weaknesses what action do you propose to take?

- Can you identify who your customers are and explain why customer care is important?
- How many items can you name that contain stored energy which might present a hazard when servicing a machine or equipment?
- What motivated you to become a service engineer and what aspirations do you have?
- Why is it important to have job cards and time sheets?

Wherever possible the Independent Assessment Organisation assessor should be the same person who conducted the Practical Tasks EPA.

The Independent Assessment Organisation may elect to use a single assessor to carry out the Professional Interview or at their discretion use an assessor together with one or more independent persons with professional competence within the scope of the Land-based Service Engineering 'Service Engineer' standards.

In all Professional Interview scenarios the Independent Assessment Organisations appointed assessor has the casting vote on the outcome of the Professional Interview and grading awarded to the apprentice.

The Independent Assessment Organisation will supply all documentation required to support the EPA together with guidance of the grading descriptors and a grading matrix for the assessor to apply

Who Will Carry Out the EPA Assessments?

The EPA may only be conducted by an Independent Assessment Organisation approved to deliver the end-point assessment for this apprenticeship standard selected from the Education and Skills Funding Agency's Register of Apprentice Assessment Organisations. (RoAAO)

The Independent Assessment Organisation is to be registered with Ofqual, this stipulation being made because Ofqual deliver the External Quality Assurance for this apprenticeship standard.

Independent assessors are required to display the following attributes;

- Experience and professional competence in the role of assessment with occupational expertise associated with the roles in the standard being assessed.
- Proof of attendance at the Independent Assessment Organisation standardization and update workshops as specified by the Independent Assessment Organisation. The training workshops are to be specific to the land-based engineering apprenticeship(s)
- Have a commitment to CPD evidenced by a portfolio illustrating personal development and knowledge of land-based engineering and or the areas of assessment being undertaken.

Independent Assessment Organisations may engage or call upon the services of those occupationally competent to act in conjunction with an (IAO) qualified assessor

Occupational competence being judged by a proven track record of service in land-based engineering with a documented CPD record. This being qualified by the rationale that this equates to a relevant apprenticeship period + 5 years of industry experience

- Those employed as Group Service managers or Depot Service Managers engaged in the employment, management and utilisation of apprentices
- Senior technicians, supervisors who mentor apprentices in the workplace
- Industry training professionals engaged by a manufacturer's training academy
- Personnel recently retired from industry meeting the above criteria with the eligibility cut off point being 5 years from the retirement date.

This list has been drawn up taking into account the likely volumes and locations of apprentices to ensure that sufficient suitable assessors are available

End Point Assessment Final Judgement

In all EPA elements of this apprenticeship the final judgements will be made by an assessor from an independent assessment organisation selected from the Education and Skills Funding Agency's Register of Apprentice Assessment Organisations. (RoAAO)

Independence

The Independent Assessment Organisation is to have no direct involvement with apprentices undergoing the EPA and must be completely impartial as to the result of the apprenticeship

The Independent Assessment Organisation is responsible for ensuring the independence and impartiality of the EPA and the judgements made by those engaged to carry out any EPA activities.

It is envisaged that the EPAs will be deliverable to employers of all sizes and that there will be no disadvantage to niche employer's apprentices undergoing the EPA elements. The proposal to utilise training suppliers facilities to accommodate the EPA supports the thinking that if apprentices can access the off the job training they can also access the EPA elements.

In the cases of remote employers, the Independent Assessment Organisation can at their discretion and in keeping with their quality assurance policy use technology to conduct and record remote Professional Interviews

End Point Grading

The Independent Assessment Organisation will have a grading matrix which they will apply to each element of the three EPA elements used within this apprenticeship. Each element will be graded separately and the overall apprenticeship grading will be calculated using an aggregate of the grading achieved in each of the three EPA elements.

The final grading matrix is contained on page 14 of this document.

- **The On-Line Knowledge EPA**

The grading is achieved by a straight forward calculation of the questions answered correctly expressed as a percentage of the total questions presented in the test.

- **The Practical Task EPA**

Consists of 3 separately assessed tasks all of which must be completed and a minimum of a pass achieved in each.

Failure to achieve a pass in any one (1) task will represent a fail of the practical EPA, necessitating the organisation of a retake of the practical assessment.

The overall grading for the practical assessments will be calculated using the methodology in the grading matrix on page 14 of this document.

Apprentices committing serious breaches of Health and Safety compliance will be asked to leave the assessment and receive a fail grading in the practical task EPA

Serious breaches may include but are not limited to;

- Any unsafe work activities which may result in injury to themselves or others
- The use of alcohol or other stimulus affecting personal performance on the day of the assessments.

What is Assesseed in the Practical Tasks EPA
Knowledge Skills Behaviours

Annex A Contains a selection of the Knowledge Skills and Behaviours contained within the Land-based Service Engineering Service Engineer standards which are to be assessed. This list is to be referenced to ensure that the Practical Tasks assessments include elements of the KSB's listed.

Grading Descriptors for Practical Tasks

Fail	<p>The apprentice has;</p> <ul style="list-style-type: none"> • failed to interpret the task brief, and has not asked for guidance or clarification • failed to complete the tasks within the allotted time • Used the wrong tools or used them inappropriately • fail to use the appropriate PPE equipment throughout the tasks • Completed the task but omitted parts, left fixtures loose or assembled incorrectly
Pass	<p>The apprentice has</p> <ul style="list-style-type: none"> • Completed the tasks within the time allocated • Selected and applied the right tools for the task in-hand • Demonstrated dexterity

	<ul style="list-style-type: none"> • Asked for guidance and clarification • Displayed the underpinning knowledge required to function in the role. • Can explain what they are trying to achieve and why they are using the approach selected
Merit	<p>The apprentice has met the pass criteria and in addition has</p> <ul style="list-style-type: none"> • Demonstrated a logical ordered approach to the tasks • Displayed logical thinking and appropriate working practices and processes • Gets things right first time • Pays attention to detail • Demonstrates a strong quality focus • Asks questions and seeks clarification when necessary • Reports their findings
Distinction	<p>The apprentice has met the merit criteria and in addition has</p> <ul style="list-style-type: none"> • Utilises time efficiently completed the task in 10% less time than the allotted time • Works to an ordered standard in all areas of the task, cleaning and reinstating the work area, putting tools away, checking tasks completed for conformity and against the brief • Produces clear concise documentation and repair recommendations where this is called for • Displays a confident assertive professional approach to the tasks undertaken and those assessing them

- **The Professional Interview EPA**

The Independent Assessment Organisation conducting the Professional Interview will develop a matrix together with grading descriptors to be used by the assessor to determine the grading awarded

The Independent Assessment Organisations assessor(s) objective will be to confirm that the apprentice has achieved the knowledge, skills and behaviours and how well the apprentice can demonstrate this. This will be achieved by;

- Interrogation of the apprentice's 'Log of Progression' as described in the On Programme Requirements outlined on page 4 of this document.
- Verbal questioning to draw out the apprentices knowledge and understanding of the apprenticeship standards, their aspirations and the industry sector they work within

What is Assesseed in the Professional Interview EPA
Knowledge
Skills
Behaviours

Grading Descriptors for Professional Interview

Fail	<p>The apprentice has;</p> <ul style="list-style-type: none"> • Failed to communicate or caused confusion by using technical vocabulary inappropriate to the audience • Demonstrates no logical thought process when responding to questions raised within the professional interview • Cannot supply basic answers when asked questions in the interview based upon the standards • Displays little or no customer care awareness knowledge and skills • Cannot identify the limits of personal responsibility in their job role • Failed to demonstrate knowledge of safe working practices
Pass	<p>The apprentice has;</p> <ul style="list-style-type: none"> • Communicated a comprehensive overview of their own progression detailing the stages of development throughout the apprenticeship • Can answer questions using concise language to articulate the reply • Can identify the limits of personal responsibility in their job role and the actions to take in this situation • Can outline the principles of customer care • Can demonstrate their knowledge of Health & Safety compliance
Merit	<p>Demonstrates all the pass criteria and in addition</p> <ul style="list-style-type: none"> • Can communicate a broad understanding of the principles, themes and technologies within the Service Engineer apprenticeship standard • Can explain why a random selection of 4 behaviours listed in the standard are required • Displays a clear understanding of company procedures • Displays a positive attitude
Distinction	<p>Demonstrates all the merit criteria and in addition</p> <ul style="list-style-type: none"> • Presents a well thought out articulated reasoned discussion in the professional interview • Critically provides self-analysis of personal development through the apprenticeship process • Demonstrates clearly how they have learnt from the learning experience and has clear aspirations towards Continual Professional Development and career advancement • Demonstrates a deep understanding of the occupation, industry and the role played within the business

Practical Task and Overall Apprenticeship Grading

The Independent Assessment Organisation will determine the overall grading of the apprenticeship, by considering the grading achieved in each of the 3 EPA's and the accumulated total of points associated with the grading as detailed in the matrix overleaf

Individual EPA Grade achieved	Points Awarded	Apprenticeship Grading	Accumulated Points Range
Pass	1	Pass	3 - 5
Merit	2	Merit	6 - 7
Distinction	3	Distinction	8 - 9

Examples of the how apprenticeship grading is calculated

Practical Tasks EPA	Online Knowledge Test EPA	Professional Interview EPA	Points Total	Overall Grading Awarded
Pass 1 Point	Pass 1 Point	Merit 2 Points	4	Pass
Distinction 3 Points	Merit 2 Points	Pass 1 Points	6	Merit
Distinction 3 Points	Distinction 3 Points	Merit 2 points	8	Distinction

EPA Retake Policies

Should an apprentice fail the EPA it will be possible to retake the failed EPA element.

The grading of the apprenticeship will be determined using the result achieved in the retake

In the case of the assessment being failed for a second time a further period of study will be required with a retake not being possible within 6 months of the second failure.

In the case of retakes of the On-line Knowledge Tests these are to be comprised of a different randomised set of knowledge questions and for the Practical Tasks a different selection of tasks to those used in the original EPA.

End-point – summary of roles and responsibilities

Employer	<ul style="list-style-type: none"> • Negotiates the provision of the off the job training and signs the contract with the training provider • Mentors the apprentice in the workplace observing and authenticating the workplace learning evidence required by the apprenticeship standard • Liaises with the training provider to ensure that the apprentice's development is on track and agrees remedial actions if required • Carries out regular apprentice performance reviews to be included in the apprentice's log of progression • Decides on the timing and makes arrangements for the End Point Assessment • Ensures that the apprentice has the necessary documentation required to complete the End Point Assessment
Training Provider	<ul style="list-style-type: none"> • Provides and manages the 'off the job' learning elements of the apprenticeship standards

	<ul style="list-style-type: none"> • Provides assessors to implement the on-programme assessment requirements • Carries out workplace visits with the apprentice and employer to establish that the apprentice's workplace learning and off the job learning is aligned and on track with the standards • Carries out regular apprentice performance reviews to be included in the apprentice's log of progression • Advises the employer of remedial actions to be taken to ensure that the skills and knowledge are in place. • Supports the employer in deciding the timing and arrangement of the End Point Assessment process
Assessment Organisation	<ul style="list-style-type: none"> • Liaises with employer representatives / bodies to ensure that the End Point Assessment contents and parameters are current and fit for purpose • Compiles and administers the on-line knowledge EPA question bank, Practical Task EPA tasks and Professional Interview administration together with all documentation and procedures. • Provides standardised grading matrixes and grading descriptors to the assessors • Approves a network of assessment centres • Advises assessment centres of the tooling, machinery and resources required to conduct the assessments • Collates the information to facilitate the provision of assessments relevant to the sector specific requirements of those undertaking the Land-based Service Engineering Standards • Appoints and supplies independent assessors having had no previous contact with the delivery of the apprenticeship to make an impartial judgement of the apprentice's competence • Ensures that said assessors have experience and professional competence in the role of assessment with relevant the expertise associated with the roles in the standard being assessed • Provides Land-based Service Engineering standardisation events and assessor training workshops to ensure uniform judgements across assessors and assessment centres • Provides notification of the EPA results and confirms apprentices competence and awarded grading to the relevant people
Assessor	<ul style="list-style-type: none"> • Participates in standardisation events and assessor training workshops and maintains a record of continual professional development relevant to Land-based Service Engineering standards • Declares to the Independent Assessment Organisation any factors that might compromise impartiality • Makes impartial decisions on the apprentice's competence and awards grading of the individual EPA elements. • Is responsible for the final decision on assessment judgement

Internal Quality Assurance

Quality assurance of End Point Assessment is provided by the Independent Assessment Organisation who will;

- Enforce criteria for approved assessment centres by defining staff, resources, processes and procedures required to undertake the On-line Knowledge, Practical Task and Professional Interview EPAs
- Provide and manage a network of independent assessors to undertake marking and scoring of the Practical Task and Professional Interview EPA
- Organise meetings of independent assessors to undertake moderation of the assessment practices and processes. The frequency of the meetings to be a minimum of once per year.
- Develop manage and maintain an on-line knowledge test based on a question bank that facilitates random examinations to test the knowledge of apprentices
- Develop assessment procedures for learners with special requirements to remove barriers to participation and ensuring reasonable adjustments are made in line with the Equality Act where appropriate.,

The Assessment Organisations Independent verifiers will annually organise a moderation event where a random sample of assessments made by assessors employed by the Independent Assessment Organisation will be analysed. The objective being to establish standardisation of judgement between both assessors and assessment centres.

External Quality Assurance EQA

The external quality assurance of the Land-based Service Engineering Apprenticeship standards will be undertaken by Ofqual on a non-profit making basis.

To ensure that all quality is assured between Independent Assessment Organisations they will be required to register with Ofqual thereby ensuring they meet their quality standards.

Implementation

- Affordability.

The cost of assessment will be within the maximum 20% of the funding band allocated to the apprenticeship. The individual assessment cost being variable depending on the geographical location of both the employer's business and that of the suitably qualified assessor. It should be noted that Land-based Engineering by its very nature is practiced mainly in rural locations.

When setting the criteria for assessors, consideration was given to the availability and location of assessors and taken into account to ensure there were sufficient to deliver the requirements of the plan.

Furthermore, the Professional Interview lends itself to the use of technology facilitating 'one off' assessment possibilities as an alternative to face to face interviews.

The Practical Task EPA must be carried out in an assessment centre. With this in mind the assessment tasks have been designed to accommodate 3 people per assessor day with apprentices rotating between 3 separate task work stations.

- Consistency

Small and large employers have been included in the employer working group and stipulations put into the assessment plan these being;

- That the assessors used by the Assessment Organisations have relevant sector experience. This ensures all have a good understanding of the sector when questioning apprentices
- That the Independent Assessment Organisation should liaise with employers and or their representative body's
- That the assessments should contain generic and sector specific assessments to avoid any apprentice being disadvantaged

The Land-based Engineering group is confident that this assessment plan has been compiled to offer consistency of delivery without disadvantaging any one sector or employers no matter the size of their business.

- Professional Body Recognition

The Land-based Service Engineering 'Service Engineer' is designated as a level 2 apprenticeship and as such does not automatically qualify the apprentice for registration with a professional body. It does however provide the underpinning knowledge for the apprentice to build a career upon and to advance to the Level 3 Land-based Service Engineering Technician which meets the registration requirements of the professional bodies involved with the industry.

- Volumes

In the first year of the apprenticeship launch the expected take up of the apprenticeship is estimated at 150 – 200 depending on the take up from the Construction and Plant industry

This volume has the potential to grow to figures of 750 as other sectors such as Plant and Construction choose to take up the Land-based Service Engineering 'Service Engineer' standards.

Annex A

EPA Knowledge Skills & Behaviours Assessment Method Table

KNOWLEDGE From The Standard Knowledge Test (KT), Practical Task (PT), Professional Interview (PI)	Method used to assess:
How to comply with the Health & Safety at Work Act, Manual Handling regulations, The Abrasive Wheel Regulations and the legislation relevant to the role of Service Engineer.	KT, PT, PI

The company staff handbook, the chain of command, workplace procedures e.g. Daily time sheets, job cards, parts requisitions processes, use of pre-delivery procedures and maintenance schedules	PT, KT, PI
How to record information, maintain accurate customer service records and communicate with customers and colleagues using verbal and handwritten whilst observing customer care practices	PI, PT
Workshop practices, the identification and application of tools and equipment used in service and maintenance operations. This will typically include knowledge of care and storage of tools and equipment.	KT, PT
Methods of thermally and chemically joining metals and components. This knowledge will be used in the context of performing repairs to machinery and equipment	KT
The operating principles of machinery, plant and equipment within the chosen land-based engineering sector.	KT
Underpinning service, maintenance and repair principles and practices, typically including machinery and component conformity procedures, tolerances, pre-load, end float, backlash, component sealing, system bleeding, alignment, balance, calibration, removal of corroded components	KT, PT
How to access and interpret technical data relating to machinery and equipment repair and maintenance	PT
How to handover machinery, plant and equipment to the control and use of others in the workplace.	KT, PT
Emergency First Aid.	KT

SKILLS From the Standard	
Knowledge Test (KT), Practical Task (PT), Professional Interview (PI)	
Select and apply appropriate tools and equipment, demonstrate manual dexterity, resourcefulness, and a professional approach to service engineering practice.	PT
Maintain and conduct basic repairs and maintenance activities on power units, and power trains, mechanical equipment, plant and machinery and their associated systems and components either under supervision or following procedures and service schedules prepared by the manufacturer or	PT
Thermally and chemically join metals and materials	PT
Access and interpret technical data related to service and maintenance operations in accordance with the manufacturer's documentation	PT, PI
Communicate with customers and colleagues expressing technical information in clear concise terms whilst demonstrating customer care principles. Apply their skills in a logical and systematic manner.	PT
Work efficiently both under supervision, individually and as a team member.	PT
Demonstrate a logical safe and systematic to work practices	PT
Carry out diagnostic tasks on low technology plant, equipment and machinery.	PT
Communicate using a range of methods. This will include using giving oral and written reports to colleagues and customers regarding the work carried out on equipment	PT, PI

BEHAVIOURS	
Knowledge Test (KT), Practical Task (PT), Professional Interview (PI)	
Safety Orientation: A disciplined approach to compliance with Health and Safety guidance with a responsible attitude to risk regardless of the level of supervision. Risk adverse attitude to matters concerning the environment, property, personal safety and the safety of others	KT PT, PI
Quality Focused: Follows instructions and guidance, demonstrates attention to detail and applies approved checks throughout work activities to ensure compliance, employs a logical approach to problem solving and seeks opportunities to improve quality speed and efficiency.	PT
Communicator: An open and honest communicator who recognises the need to use appropriate communication methods to express and receive information accurately in a timely positive and respectful manner.	PI
Team Player: Can work on their own initiative but also interacts and communicates effectively within a team applying a respectful professional manner and considering the implications of their own actions on other people and the business.	PI
Willingness to Learn: Can reflect on skills, knowledge and behaviours and seek opportunities to develop, adapt to different situations, environments or technologies and have a positive attitude to feedback and advice. Pays attention asks questions when supervisory instructions are not understood and recognises the limitations of personal responsibility	PI