End-point Assessment Plan
Level 2 Engineering Operative

Table of Contents Page

The End-point Assessment (EPA) Overview:

The responsibility for developing and delivering the EPA rests with the end-point Assessment Organisation (EPAO) that are approved to offer their services to employers for the Engineering Operative apprenticeship standard. Only EPAOs that appear on the register of End-point assessment organisations (RoEPAO) can be used. EPAOs must appoint appropriately qualified and experienced assessors to conduct the EPA as defined in this plan.

The EPA will be completed after a minimum of 12 months training has taken place and at a time that accommodates work scheduling and cost effective planning of resources, the End-point assessment must commence within 3 months from confirmation that the apprentice has met the gateway requirements.

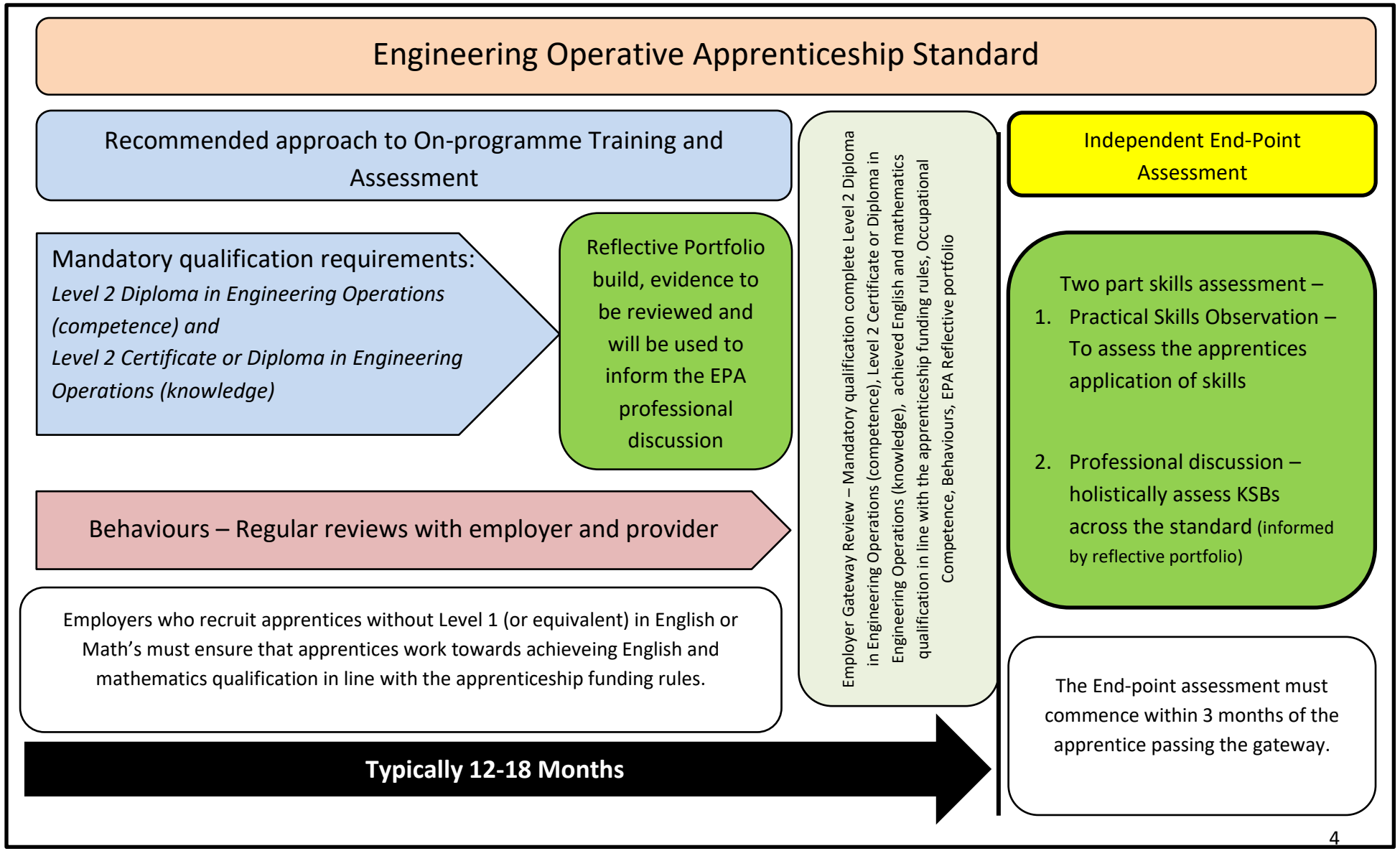
The EPA consists of 2 assessment methods:-

- Practical observation – to assess the apprentice's application of skills within the apprentice's place of work or in a suitable environment away from the workplace (for example In a centre approved by the EPAO)
- Professional discussion – to holistically assess KSBs across the standard and will be informed by reflective portfolio

The EPA satisfies the requirements for the Engineering Operative standard. The practical observation will be carried out by an independent assessor, approved by the EPAO and will take place within the apprentice's workplace, assessing the application of the apprentice's skills in line with the job role requirements. The reflective portfolio will be reviewed by an independent assessor, approved by the EPAO and will be used to inform the professional discussion. The professional discussion will be carried out by an independent assessor (an employer representative may attend if requested to do so by the EPAO). The independent assessor appointed by the EPAO will make the final decision on professional discussion. The performance of the apprentice within the EPA will determine the apprenticeship grade of fail, pass, or distinction.

The final apprenticeship EPA decision will be made by the EPAO; successful achievement of the EPA will lead to formal certification of the apprenticeship and demonstrate that the apprentice is a competent Engineering Operative.

Diagrammatic representation of the assessment requirements:



On-programme Assessment

The employer and training provider will use the mandatory Level 2 Diploma in Engineering Operations (competence) and Level 2 Certificate or Diploma in Engineering Operations (knowledge) within the Engineering Operative Standard to develop a training plan to ensure that the apprentice receives the appropriate level of knowledge and skills to advance to and successfully complete the Independent End-point Assessment.

Employer Gateway Review for Progression to Independent End-point Assessment

Readiness for End-point Assessment (EPA)

Before going forward for the EPA, the employer must be satisfied that the apprentice has:

- satisfactorily completed training covering the skills, knowledge and behaviours as described in the standard
- achieved all Mandatory qualifications – Level 2 Diploma in Engineering Operations (competence) and Level 2 Certificate or Diploma in Engineering Operations (knowledge)
- achieved English and mathematics qualification in line with the apprenticeship funding rules
- apprentices must have completed the required amount of off-the-job training specified by the apprenticeship funding rules.
- .
- sufficient evidence in the form of a reflective portfolio to allow the apprentice to consistently demonstrate knowledge, skills and behaviours as described in the standard. Guidance on what should be included in the reflective portfolio can be found within the professional discussion section.

Who decides if the apprentice is ready for EPA?

Once the apprentice has successfully completed appropriate on programme training and assessment the judgement on whether the apprentice is deemed occupationally competent and ready for the EPA will be made by their employer, on the basis of the knowledge, skills and behaviours attained by the apprentice and taking into consideration the apprentices' work experience, the views from the training provider where applicable and the apprentice, to inform this decision.

When satisfied that the apprentice is ready for EPA, the employer will directly (or via their lead provider) inform their selected EPAO for the EPA requirements to be planned and carried out.

End-point Assessment

End-point assessment must be undertaken by an Independent End-point Assessment Organisation that is on the Register of End-point Assessment Organisations (RoEPAOs).

Successful achievement of the End-point assessment will lead to final certification of the apprenticeship and demonstrate that the apprentice is a fully competent Engineering Operative.

The Practical observation must be completed prior to the Professional discusion.

Assessment method 1 - Practical skills Observation:

The Practical Observation will be carried out at the apprentice's place of work or an in-centre practical assessment in a suitable area away from the work place where it is not feasible to use the employer's premises and will be carried out by an independent assessor, approved by the EPAO. During the process the apprentice will be expected to demonstrate to the assessor the application of the core knowledge, skills and behaviours of specific job related knowledge and skills as outlined in Annex 1. Apprentices will be observed and will be assessed against both the core and their chosen specific job role option KSBs as identified within the standard. Typically this will be covered within one task but may be covered over two separate tasks if required. During the observation the independent assessor may ask between 3-6 open questions to assess the related underpinning knowledge. They may ask follow up questions where clarification is required. Questioning must be completed within the total time allowed for the observation. Questions may be asked both during and upon completion of the observation.

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

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

Observations must be carried out over an assessment time period of 2 hours + or - 10 minutes. There may be breaks during the observation to allow the apprentice to move from one location to another.

Observations must be conducted in a realistic work situation under normal conditions. It is anticipated that assessment organisations will use the apprentice's normal work environment to carry out the observation but if this is not possible a suitable alternative area can be used.

Independent assessors may observe up to a maximum of 3 apprentices at any one time, to allow for cost effective use of resources while maintaining quality and rigour.

The EPAO will be required to supply an observation specification sheet for each of the job roles being assessed and a scorecard which will be used by the independent assessor to identify and record the elements of the Standard and grade for the practical skills observation and give examples of open question types, the observation sheets and scorecards must be reviewed regularly (at least once a year) to ensure they remain fit for purpose. The practical skills observation will be graded either Pass or fail, to achieve a pass for the practical skills observation the apprentice must achieve all of the pass criteria that is laid out in the grading matrix which can be can be found in Annex 2.

Assessment Method 2 - Professional discussion:

On completion of the professional discussion the apprentice will be awarded a grade of Pass, Distinction or Fail.

The purpose of the professional discussion is to enable the apprentice to showcase to the independent assessor how they have carried out the role of an Engineering Operative, integrating the knowledge, skills and behaviours expected and for the independent assessor to be assured the apprentice has achieved the requirements of the Standard. To help ensure that the professional discussion is practicable and cost effective, it can be carried out at the employer's site, an assessment centre approved by the EPAO or via video link appropriate, if a video link is used then appropriate measures must be in place to ensure the EPAO is satisfied that the responses given are those of the candidate for example use of a 360 degree camera to allow the assessor to look around the round the room during the interview.

Reflective portfolio requirements:

At least 2 weeks prior to professional discussion, the apprentice will submit a Reflective Portfolio setting out examples of work they have undertaken. The reflective portfolio will be used to inform the professional discussion through which the apprentice will demonstrate competence of the broad range of knowledge, skills and behaviours set out in the standard. The Employer will be required to confirm that the

reflective portfolio provides an accurate representation of work carried out by the apprentice and is not embellished. The portfolio will not be graded as part of the EPA but will be used to ascertain the level of explanation given during the graded professional discussion.

The reflective portfolio will be reviewed by an independent assessor, approved by the EPAO.

The reflective portfolio should include Samples of work carried out by the apprentice – Demonstration of work carried out over a period of time and must include evidence of work carried out within the last three months of the on programme period, and will include a minimum of 2 and no more than 3 activities carried out by the apprentice that demonstrates the higher order knowledge, skills and behaviours of the standard. Where practicable this should include photographs, images, diagrams, together with on the job observations and witness evidence or testimony. This should also include situations that have been difficult or challenging, and how these have been overcome for example equipment breakdown which has resulted in a change in working practice while still adhering to company procedures. Any employer contributions must focus on direct observation of evidence (for example reviews or witness statements) of competence rather than opinions. The portfolio cannot include any methods of self-assessment or self-appraisal.

The professional discussion will consist of:

A professional discussion – using criteria set by the independent End-point assessor must ask the apprentice 5-7 open questions developed by the EPAO; follow up questions are allowed to seek clarification. The professional discussion must be completed during a 40-minute period + or - 2 minutes. Questions must seek to assess KSBs and can be informed by information within the reflective portfolio, assessing performance against the pass and distinction criteria and enable the independent assessor to explore areas they consider warrants further investigation in order to assure themselves that the apprentice has the competence to work as an Engineering Operative. The apprentice may refer to their reflective portfolio during the professional discussion if required. The EPAO will be required to produce sample questions or a question template as a guide for independent assessors.

The purpose of the professional discussion is to:

- demonstrate the apprentice can apply the broad range of knowledge, skills and behaviours in the Standard, as indicated in Annex 1
- clarify any questions the independent assessor has from their review of the reflective portfolio submitted
- explore aspects of the apprentice's work, including how it was carried out, in more detail

- enable the independent assessor o draw a conclusion on the holistic EPA and the final grade to be awarded on the aggregated achievement of the individual assessments using the grading criteria in Annex 2

The professional discussion will be carried out by an independent assessor (an employer representative may attend if requested to do so by the EPAO) appointed by the EPAO. The employer representative must be occupationally competent. The employer representative will be sourced by the apprentice's own employer and will provide technical support, advice and guidance such as confirming company policies, procedures, processes, providing context on technical information or on emerging technologies. Any information provided by the employer technical expert must only be at the request of the End-point assessor who has the final say over the assessment and grade awarded. The employer technical expert must not provide evidence on behalf of the apprentice.

The independent assessor must be qualified to a minimum of level 3 within the engineering discipline being assessed and have up to date knowledge and understanding of the Engineering sector and be qualified in assessment practice. During the allocation of independent assessors the EPAO will decide if the independent assessor has the relevant skill set within the engineering discipline being assessed.

The independent assessor will review the reflective portfolio and decide how the professional discussion will be conducted and relevant key questions to ask the apprentice to confirm the broad range of knowledge, skills and behaviours have been achieved. At the end of the professional discussion, the independent assessor will make the final judgement on Distinction, Pass, or Fail for this assessment method.

The professional discussion will be graded either fail, Pass or distinction, to achieve a pass for the professional discussion the apprentice must achieve all of the pass criteria that is laid out in the grading matrix which can be can be found in Annexe 2, to achieve a distinction the apprentices must achieve all of the pass criteria and the distinction criteria that is laid out in the grading matrix which can be can be found in Annexe 2.

EPA – Summary of roles and responsibilities

	Role responsibilities
Employer*	• selects EPAO (may be advised by training provider) • confirms all EPA gateway requirements have been met, signs off to this effect and triggers EPA to the EPAO • confirms arrangements with EPAO for the EPA (who, when, where) • ensures apprentice is aware of the EPA, is prepared and ready, and ensures attendance • if requested by the EPAO, provide an appropriately qualified employee or suitable representative to attend the professional discussion to ensure accuracy and veracity of the apprentice's statements and to clarify any issues
Independent Assessment Organisation	• write and provide all required material and resources required for the EPA (for example questions and instruction script, professional discussion guidance, assessment recording documentation) • on receipt of 'trigger' from employer, contact the employer and arrange dates, times and locations for the required EPA • ensure all required material is present at the EPA venue • provide appropriate and qualified staff to enable completion of all aspects of the EPA • confirms result of EPA to apprentice and employer • arranges for certification with the training provider • maintain robust internal quality assurance (IQA) procedures and moderation • conform to the requirements of the nominated external quality assurance body

Re-sit and Re- take information

Apprentices who fail one or more EPA method will be offered the opportunity to take a re-sit or retake. Re-sits or re-takes must not be offered to apprentices wishing to move from pass to distinction. A re-sit does not require further learning, whereas a re-take does.

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

Resits or retakes should be taken once the apprentice receives sufficient training to address the shortfall in the KSB's required for the standard that have been identified within the result of the EPA. The timing of the resit orretake should be agreed with the employer and EPAO and is dependent on the amount of learning required to meet the KSBs.

The maximum grade awarded to a re-sit or re-take for the practical observation will be graded pass or fail and a re-sit or re-take of the professional discussion will be graded pass, fail or distinction and combined to determine the EPA grade.

EPAOs must ensure that apprentices are observed doing different activities within the practical skills observation when taking a re-sit or re-take.

If the apprentice is unsuccessful, their employer will decide when the apprentice should re-apply for the EPA once additional training has taken place.

End-point assessment grading

The Practical skills observation and professional discussion will be individually graded – the Practical Skills observation is graded pass or fail and the professional discussion will be graded fail, pass, or distinction. A fail in one or more of the assessment methods will result in a fail in the EPA. Evidence from the reflective portfolio will be used to inform the professional discussion but will not be assessed.

Grading Criteria

The apprenticeship will be graded Fail, Pass, or Distinction. The final grade will be determined by collective performance in the two assessments within the End-point assessment.

The EPAO will combine the grades from the practical skills observation test and professional discussion to determine the overall apprenticeship grade in line with the grading criteria below.

EPA method	Assessment Grade	Assessment Grade	Assessment Grade	Assessment Grade
Practical skills observation	Any*	Fail	Pass	Pass
Professional discussion	Fail	Any*	Pass	Distinction
Apprenticeship Grade Awarded	**Fail**	**Fail**	**Pass**	**Distinction**

*** 'Any' = Pass, or Distinction**

Independence

The EPAO will coordinate the entire EPA process completely and independently of the employer and any training providers. The independent assessor appointed to carry out the EPA will not be from the apprentice's employer or related to the apprentice in any other way.

Regional arrangements will ensure that all apprentices are within reasonable travelling distance of the venue for the professional discussion. Where practicable the professional discussion will be arranged at the employers or their providers' premises, or via video link as appropriate to minimise additional expenditure, travel and time away from the work place.

Internal Quality assurance

The EPAO for the Engineering Operative EPA will be responsible for the internal quality assurance and will have suitable and appropriate quality assurance processes in place so that all aspects of the EPA are carried out in a consistent and fair manner for all Apprentices. The minimum requirements for IQA will include:

- Communication processes for apprentices, employers, providers, and external bodies in relation to the EPA
- Third parties - the management of third parties, including independent review panel members, examiners, assessors
- Information about fees, clarity of invoicing
- Setting and delivering panel assessment - need for confidentiality, reasonable adjustments and special consideration
- Grading and issuing results - grading and moderation, results determination and issuing
- Standardisation and moderation meetings to support and develop independent assessors; monitor and improve the quality of assessment practice; remove and minimise process inconsistencies. The frequency and timing of internal standardisation and moderation activity is decided by the EPAO but must be undertaken at least once a year.

The EPAO will set the assessment against the grading criteria for the practical skills observation, and professional discussion.

Independent Assessors selected by the EPAO must have an in-depth knowledge and understanding of the Engineering sector which they have demonstrated within the past 3 years and have undertaken recognised training in the assessing engineering based knowledge, skills and behaviours using observation and professional discussion assessment methodologies, for grading against occupational competence.

- Independent Assessors selected to carry out the practical skill observation will receive guidance and training from the EPAO with regards to observation techniques
- Independent Assessors selected as Panel Interviewers will receive guidance and training from the EPAO with regards to professional discussion techniques

All EPAOs must be on the Register of End-Point Assessment Organisations (RoEPAOs).

End-point Assessment Organisation must:

- Provide end-point assessment guidance, where required and appropriate, to apprentices and employers in relation to the requirements of the practical skills observation, professional discussion, reflective portfolio and grading of the end-point components
- Provide immediate guidance where end-point assessments need to be halted due to unforeseen circumstances for example system emergency, apprentice illness, so it is clear that an apprentice's grade will not be capped at a pass if they have to re-take or re-sit the End-point assessment for reasons beyond their control
- Ensure independent assessors make consistent and reliable assessment and grade judgements through moderation activity involving observations and examination of assessment records on a risk sampling basis, a minimum of 20% for experienced assessors and 100% for new assessors or where inconsistencies have been identified.
- Facilitate reasonable adjustments when for learners with special requirements to assess the knowledge, skills and competence of the apprentice through alternative assessment techniques. Whilst, these will remove barriers to participation, they must be designed to ensure judgements are not compromised to health and safety and legal requirements and the assessment remains valid.
- Appoint and approve independent assessors for the purposes of conducting the reflective portfolio review and professional discussion and grading, based on a check of knowledge, experience and independence
- Provide training for independent assessors in terms of the requirements of the operation and grading of the assessment tools and grading

- Provide documentation and guidance in relation to the End-point assessment for example making reasonable adjustment, eligibility to enter end-point assessment and conflict of interest
- Hold annual standardisation and moderation events for independent assessors to ensure consistent application of the guidance
- Ensure EPAO moderators are trained in assessment and assurance processes and undertake regular continuing professional development
- Develop and manage a complaints and appeals procedure.
- Coordinate the independent assessors across the regions and ensure their independence.

External Quality Assurance

External quality assurance for this apprenticeship standard will be managed by Ofqual.

Implementation

Affordability

It is the responsibly of the employer to negotiate a 'best price' through negotiation, including potential reductions where multiple candidates require EPA. Flexibility in the scheduling of assessments and the ability to use technology should enable EPAOs to minimise costs and deliver the EPA in the volumes required.

The following factors should ensure the EPA is affordable:

- employers premises should be used for EPA venues where possible
- remote assessment is permissible, reducing travel costs

The cost for End-point assessment includes the following:

- occupational competence validation – Reflective portfolio review
- practical skills observation – Skills, knowledge and Behaviours
- professional discussion – Skills, knowledge and Behaviours
- apprenticeship final sign off

- apprenticeship Certificate

Volumes: It is anticipated that there will be initially 600 starts per annum on this apprenticeship but it is expected that this number will grow substantially within the first three years of delivery, with a minimum number of 1500 starts per annum.

Independent End-point EPAOs who want to carry out the End-point Assessment within this standard must ensure they have sufficient capacity to meet the projected number of apprentices requiring end-point Assessment including when, during the calendar year that the assessment is likely to be required.

Annexes

Annex 1

Assessment Method by element of the Standard – Engineering Operative

	Apprenticeship Standard competencies	Designated method of assessment	
Ref	**Core Skills to be assessed**	**O = Practical Skills Observation**	**D = Professional discussion (informed by reflective portfolio))**
S1	Work safely at all times, complying with health and safety legislation, regulations, environmental compliance procedures and systems and other relevant guidelines	**O**	**D**
S2	Identify and deal appropriately with any risks, hazards, hazardous situations and problems that may occur within the engineering environment within the limits of their responsibility		**D**
S3	Demonstrate effective communication skills which include oral, written, electronic		**D**
S4	Complete appropriate documentation accurately, efficiently and legibly using the correct terminology where required		**D**
S5	Obtain and follow the correct documentation, specifications and work instructions in accordance with time constraints and the roles and responsibilities identified for the engineering activities, extracting the necessary data and information from specification and related documentation	**O**	
S6	Select and use appropriate tools, equipment and materials to carry out the engineering operation	**O**	**D**
S7	Deal appropriately with any problems that may occur within the manufacturing environment within the limits of their responsibility		**D**
S8	Work efficiently and effectively at all times maintaining workplace organisation and minimising waste	**O**	
Specialist job role option 1 - Maintenance role: Additional Skills to be assessed			
S9	Carryout fault location on appropriate equipment using suitable maintenance diagnostic techniques	**O**	**D**
S10	Carryout maintenance activities in line with work instructions	**O**	**D**
S11	Carryout tests on the maintained equipment in accordance with test schedule or defined test procedures		**D**
S12	Follow appropriate completion activities and restore equipment to service by replacing or repairing components		**D**
Specialist job role option 2 - Mechanical Manufacturing engineering role: Additional Skills to be assessed			

S13	Plan the mechanical manufacturing operation before they start		**D**
S14	Mount and set the required work holding devices	**O**	**D**
S15	Produce individual components, sub-assemblies or completed assemblies using mechanical manufacturing techniques	**O**	**D**
S16	Carryout quality checks during and after mechanical manufacturing operations		**D**
Specialist job role option 3 - Electrical and Electronic engineering role: Additional Skills to be assessed			
S17	Wire and terminate different types of cabling for example single core, multi core, screened, fire resistant, armoured, etc.		**D**
S18	Assemble and test a range of electrical components for example component panels, isolator switches, fuses, circuit breakers, contactors, relays, rail mounted terminal blocks, etc.	**O**	**D**
S19	Assemble and test a range of electronic components for example resistors, capacitors, diodes, transistors, etc.	**O**	**D**
S20	Follow appropriate completion activities and restore equipment or system to service after the assembly and testing has been completed		**D**
Specialist job role option 4 - Fabrication role: Additional Skills to be assessed			
S21	Shape the materials using the appropriate methods and techniques		**D**
S22	Join the materials using the appropriate methods and techniques	**O**	**D**
S23	Produce components which meet the specification requirements	**O**	**D**
S24	Carryout quality checks during and after the fabrication activities		**D**
Specialist job role option 5 - Materials, processing, finishing role: Additional Skills to be assessed			
S25	Plan the materials, processing, finishing operation before they start		**D**
S26	Prepare equipment, tooling, materials, etc. and complete set up activities before carrying out the materials, processing, finishing operation	**O**	**D**
S27	Carryout the material, processing, finishing operation in line with specific safe working practices and specification requirements	**O**	**D**
S28	Carryout quality checks during and after the materials, processing, finishing operation		**D**
Specialist job role option 6 - Technical support role: Additional Skills to be assessed			
S29	Plan the technical support operation before they start		**D**
S30	Prepare equipment, tooling, materials, etc. and complete set up activities before carrying out the technical support activity	**O**	**D**

S31	Carry out the technical support operation in line with specific safe working practices and specification requirements	**O**	**D**
S32	Carryout quality checks during and after the technical support operation		**D**

Ref	**Core Knowledge to be assessed**	**O = Practical Skills Observation**	**D = Professional discussion (informed by reflective portfolio))**
K1	How to obtain the necessary job instructions, engineering drawings and specifications and how to interpret them	**O**	
K2	Relevant statutory, quality, environmental compliance procedures and systems, organisational and health and safety regulations relating to engineering operations		**D**
K3	Their individual roles and responsibilities within the organisation and the flexibility required to support the achievement of company targets	**O**	
K4	Engineering operational practices, processes and procedures	**O**	**D**
K5	Potential problems that can occur within the engineering operations and how they can be avoided	**O**	
Maintenance role: Additional Knowledge to be assessed			
K6	Maintenance planning	**O**	**D**
K7	Diagnostic and fault finding techniques		**D**
K8	Specific safe working practices, maintenance procedures and environmental regulations that need to be observed	**O**	

Mechanical manufacturing role: Additional Knowledge to be assessed			
K9	Specific equipment operating parameters	**O**	**D**
K10	Mechanical manufacturing techniques		**D**
K11	Specific quality specifications for mechanical manufacturing operations	**O**	
Electrical and electronic engineering role: Additional Knowledge to be assessed			
K12	Cable types and where they should be used	**O**	**D**
K13	Electrical and electronic assembly and testing techniques		**D**
K14	Specific safe working practices, isolation procedures and safe reinstating of equipment or system that need to be observed	**O**	
Fabrication role: Additional Knowledge to be assessed			
K15	Specific marking out and preparation techniques	**O**	**D**
K16	Different fabrication and joining techniques		**D**
K17	Specific safe working practices, isolation procedures and safe reinstating of equipment orsystem that need to be observed	**O**	
Materials, processing, finishing role: Additional Knowledge to be assessed			
K18	Specific machinery, equipment and tooling required for the materials, processing, finishing operation	**O**	**D**
K19	Different materials, processing, finishing techniques		**D**
K20	Specific quality specifications for materials, processing, finishing operations	**O**	
Technical support role: Additional Knowledge to be assessed			
K21	Specific machinery, equipment and tooling required for the technical support operation	**O**	**D**
K22	Different technical support techniques		**D**
K23	Specific safe working practices, procedures and quality requirements that need to be observed	**O**	

	Core Behaviours to be assessed	**O = Practical Skills Observation**	**D = Professional discussion (informed by reflective portfolio))**
B1	**Personal responsibility and resilience** – Comply with the health and safety guidance and procedures, be disciplined and have a responsible approach to risk, work diligently regardless of how much they are being	**O**	**D**

	supervised, accept responsibility for managing time and workload and stay motivated and committed when facing challenges.		
B2	**Work effectively in teams** – Integrate with the team, support other people, consider implications of their own actions on other people and the business whilst working effectively to get the task completed.		**D**
B3	**Effective communication and interpersonal skills** – An open and honest communicator, communicates clearly using appropriate methods, listen well to others and have a positive and respectful attitude.		**D**
B4	**Focus on quality and problem solving** – Follow instructions and guidance, demonstrate attention to detail, follow a logical approach to problem solving and seek opportunities to improve quality, speed and efficiency.		**D**
B5	**Continuous personal development** – 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.		**D**

Annex 2

Practical Skills Observation Grading Criteria Guidance for the assessment of Knowledge, Skills and Behaviours

Higher Order Skills to be assessed	Lower Order Skills		
Core Skills to be assessed		**Fail Criteria**	**Pass Criteria** To achieve a pass the apprentice must achieve all of the core skills pass criteria and all of the pass criteria for one of the specialist job role options as laid out below
Works safely, efficiently and effectively at all times ensuring that all appropriate legislation, regulation and environmental compliance has been adhered to in-line with company policies, procedures and practice.	**S1** Work safely at all times, complying with health and safety legislation, regulations, environmental compliance procedures and systems and other relevant guidelines **S5** Obtain and follow the correct documentation, specifications and work instructions in accordance with time constraints and the roles and responsibilities identified for the engineering activities, extracting the necessary dataandinformation from specification and related documentation **S6** Select and use appropriate tools, equipment and materials to carry out the engineering operation **S8** Work efficiently and effectively at all times maintaining workplace organisation and minimising waste	Insufficient evidence of demonstrating they have the ability to work safely in an engineering environment and could potentially put self, colleagues, the environment or public at risk by their actions. **Evidence including:** • failure to identify and deal appropriately with any risks, hazards, hazardous situations and problems • failure to use relevant PPE • failure to identify and select the appropriate tools, equipment and materials • fails to identify problems within the engineering environment	Demonstrates their ability to work safely in an engineering environment to approved procedures. **Evidence including:** • can identify, assess and control health and safety risks within work environment as per company procedures and guidelines and record the necessary information appropriately. • can select and use appropriate tools, equipment and materials to carry out the engineering operations • can deal with problems that occur within the engineering environment • can work efficiently and effectively while adhering to appropriate job instructions
Specialist job role option 1 - Maintenance role: Additional Skills to be assessed			
Carries out fault-finding and maintenance activities in-line with company processes, procedures and practice.	**S9** Carry out fault location on appropriate equipment using suitable maintenance diagnostic techniques	Insufficient evidence of demonstrating they can followed relevant work instructions and applying correct procedures. Evidence including:	Demonstrates their ability carry out maintenance activities in line with work instructions. Evidence including: • follows the correct work instructions as part of their work commitments and shows an understanding of any operating rules in place within the instruction

	S10 Carry out maintenance activities in line with work instructions	• Failure to carry out fault location and does not use suitable diagnostic techniques • Failure to follow work instructions while carrying out maintenance activities	• carries out fault location using suitable diagnostic techniques • Followed the correct work instructions while carrying out the maintenance activities
Specialist job role option 2 - Mechanical Manufacturing engineering role: Additional Skills to be assessed			
Produces parts to the required specification.	**S14** Mount and set the required work holding devices **S15** Produce individual components, sub-assemblies or completed assemblies using mechanical manufacturing techniques	Insufficient evidence of demonstrating they can produce components sub-assemblies or completed assemblies to the required specification. Evidence including: • failure to produce individual components, sub-assemblies or completed assemblies using mechanical manufacturing techniques • failure to mount and set the required work holding devices	Demonstrates their ability to produce components sub-assemblies or completed assemblies to the required specification. Evidence including: • follows the appropriate mechanical manufacturing techniques to produce individual components, sub-assemblies or completed assemblies, showing an understanding of the techniques used • mounts and sets the required work holding devices
Specialist job role option 3 - Electrical and Electronic engineering role: Additional Skills to be assessed			
Tests and assembles parts to the required specification.	**S18** Assemble and test a range of electrical components for example component panels, isolator switches, fuses, circuit breakers, contactors, relays, rail mounted terminal blocks, etc. **S19** Assemble and test a range of electronic components for example resistors, capacitors, diodes, transistors, etc.	Insufficient evidence of demonstrating they can assemble and test a range of electrical and electronic components. Evidence including: • failure to assemble and test a range of electrical components • failure to Assemble and test a range of electronic components	Demonstrates their ability to assemble and test a range of electrical and electronic components. Evidence including: • follows the appropriate electrical assembly and testing, showing an understanding of the techniques used • follows the appropriate electronic assembly and testing, showing an understanding of the techniques used
Specialist job role option 4 - Fabrication role: Additional Skills to be assessed			
Produces parts to the required specification.	**S22** Join the materials using the appropriate methods and techniques	Insufficient evidence of demonstrating they can produce components which meet the specification requirements .	Demonstrates their ability to produce components which meet the specification requirements. Evidence including:

	S23 Produce components which meet the specification requirements	Evidence including: • failure to produce components which meet the specification requirements • failure join the materials in line with work instructions and required specification	• follows the correct work instructions to produce components as part of their work commitments and shows an understanding of any operating rules in place within the instruction • can produce components which meet the specification requirements • can join the materials using the appropriate methods and techniques
Specialist job role option 5 - Materials, processing, finishing role: Additional Skills to be assessed			
Prepare for and carryout material processing finishing operations to the required specification efficiently.	**S26** Prepare equipment, tooling, materials, etc. and complete set up activities before carrying out the materials, processing, finishing operation **S27** Carry out the material, processing, finishing operation in line with specific safe working practices and specification requirements	Insufficient evidence of demonstrating they can carry out material, processing, finishing operations in line with specification requirements . Evidence including: • failure to Carry out the material, processing, finishing operation in line with specific safe working practices and specification requirements • failure to prepare equipment, tooling, materials and complete appropriate set up activities	Demonstrates their ability to carry out material, processing, finishing operations which meet the specification requirements. Evidence including: • follows the correct work instructions to carry out material, processing, finishing operation as part of their work commitments and shows an understanding of any operating rules in place within the instruction • can prepare equipment, tooling, materials and complete appropriate set up activities
Specialist job role option 6 - Technical support role: Additional Skills to be assessed			
Prepare and carryout the technical support activities in line with company procedures, processes and practices	**S30** Prepare equipment, tooling, materials, etc. and complete set up activities before carrying out the technical support activity **S31** Carry out the technical support operation in line with specific safe working practices and specification requirements	Insufficient evidence of demonstrating they can carry out technical support operations in line with specification requirements . Evidence including: • failure to Carry out the technical support operation in line with specific safe working practices and specification requirements • failure to prepare equipment, tooling, materials and complete appropriate set up activities	Demonstrates their ability to carry out technical support role which meet the specification requirements. Evidence including: • follows the correct work instructions to carry out technical support operation as part of their work commitments and shows an understanding of any operating rules in place within the instruction • can prepare equipment, tooling, materials and complete appropriate set up activities

Higher Order Core Knowledge to be assessed	**Lower Order Core Knowledge to be assessed**	**Fail**	**Pass** To achieve a pass the apprentice must achieve all of the core knowledge pass criteria and all of the pass criteria for one of the specialist job role options as laid out below

Knows how to complete tasks, solve problems and implement preventive measures in-line with company procedures, practices and processes.	**K1** How to obtain the necessary job instructions, engineering drawings and specifications and how to interpret them **K4** Engineering operational practices, processes and procedures **K5** Potential problems that can occur within the engineering operations and how they can be avoided	Insufficient knowledge of how to obtain the necessary job instructions, engineering drawings and specifications and how to interpret them Evidence including: • cannot explain where to obtain the obtain the necessary job instructions, engineering drawings and specifications when questioned • cannot interpret necessary job instructions, engineering drawings and specifications when questioned • cannot outline the operational practices, processes and procedures when questioned • cannot outline the potential problems that can occur within the engineering operations when questioned • cannot explain the actions that can be taken to avoid problems from occurring when questioned	Demonstrates their knowledge of how to obtain the necessary job instructions, engineering drawings and specifications and how to interpret them Evidence including: • can explain where to obtain the obtain the necessary job instructions, engineering drawings and specifications when questioned • can interpret necessary job instructions, engineering drawings and specifications when questioned • can outline the specific operational practices, processes and procedures relevant to their work activities when questioned • can outline the potential problems that can occur within the engineering operations when questioned • can explain the actions that can be taken to avoid problems from occurring when questioned
Knows how to work towards company targets flexibly	**K3** Their individual roles and responsibilities within the organisation and the flexibility required to support the achievement of company targets	Insufficient knowledge of their individual roles and responsibilities and the flexibility required to support the achievement of company targets Evidence including: • cannot explain their individual roles and responsibilities when questioned • cannot explain the importance of flexibility required to support the achievement of company targets when questioned	Demonstrates their knowledge of their individual roles and responsibilities and the flexibility required to support the achievement of company targets Evidence including: • can explain their individual roles and responsibilities when questioned • can explain the importance of flexibility required to support the achievement of company targets when questioned
Maintenance role: Additional Knowledge to be assessed			
Knows how to plan and carry out tasks in-line with appropriate legislation, regulation and environmental requirements and in-line with company	**K6** Maintenance planning **K8** Specific safe working practices, maintenance procedures and environmental regulations that need to be observed	Insufficient knowledge of maintenance operations Evidence including: • cannot describe the maintenance planning operation in sufficient detail when questioned	Demonstrates their understanding of a maintenance operations Evidence including: • can use of technical language and detail covering the key elements of the knowledge relating to the maintenance activities they have been involved in when questioned • can describe the planning carried out prior to the start of the maintenance operation when questioned

procedures and practice.		• cannot describe the specific safe working practices, maintenance procedures and environmental regulations that need to be observed when questioned	• cannot describe the specific safe working practices, maintenance procedures and environmental regulations that need to be observed when questioned
Mechanical manufacturing role: Additional Knowledge to be assessed			
Knows the uses of a range of manufacturing equipment and the associated quality outputs of that equipment.	**K9** Specific equipment operating parameters **K11** Specific quality specifications for mechanical manufacturing operations	Insufficient knowledge of mechanical manufacturing operations Evidence including: • cannot describe the equipment operating parameters when questioned • cannot describe the specific quality specifications for mechanical manufacturing operations	Demonstrates their understanding of a mechanical manufacturing operations Evidence including: • can use of technical language and detail covering the key elements of the knowledge relating to the mechanical manufacturing activities they have been involved in when questioned • can describe the specific equipment operating parameters when questioned • can describe the specific quality specifications for mechanical manufacturing operations
Electrical and electronic engineering role: Additional Knowledge to be assessed			
Knows the correct uses cables for a wide range of tasks in-line with safe working practices and procedures.	K12 Cable types and where they should be used K14 Specific safe working practices, isolation procedures and safe reinstating of equipment or system that need to be observed	Insufficient knowledge of electrical and electronic engineering operations Evidence including: • cannot describe the different cable types and where they have used them when questioned • cannot describe the specific safe working practices, isolation procedures and safe reinstating of equipment or system that need to be observed	Demonstrates their understanding of electrical and electronic engineering operations Evidence including: • can use of technical language and detail covering the key elements of the knowledge relating to the electrical and electronic engineering activities they have been involved in when questioned • can describe the different cable types and where they have used them when questioned • can describe the specific safe working practices, isolation procedures and safe reinstating of equipment or system that need to be observed
Fabrication role: Additional Knowledge to be assessed			
Knows how to prepare appropriately for tasks in-line with safe working practices and procedures.	**K15** Specific marking out and preparation techniques **K17** Specific safe working practices, isolation procedures and safe	Insufficient knowledge of fabrication operations Evidence including: • cannot describe the marking out and preparation techniques when questioned • cannot describe the specific safe working practices, isolation procedures and safe	Demonstrates their understanding of fabrication operations Evidence including: • can use of technical language and detail covering the key elements of the knowledge relating to the fabrication activities they have been involved in when questioned

	reinstating of equipment or system that need to be observed	reinstating of equipment or system that need to be observed	• can describe the marking out and preparation techniques and where they have used them when questioned • can describe the specific safe working practices, isolation procedures and safe reinstating of equipment or system that need to be observed
Materials, processing, finishing role: Additional Knowledge to be assessed			
Knows the uses of a range of equipment and the associated quality outputs of that equipment.	**K18** Specific machinery, equipment and tooling required for the materials, processing, finishing operation **K20** Specific quality specifications for materials, processing, finishing operations	Insufficient knowledge of materials, processing, finishing operations Evidence including: • cannot describe the machinery, equipment and tooling required for the materials, processing, finishing operation when questioned • cannot describe the specific quality specifications for materials, processing, finishing operations	Demonstrates their understanding of materials, processing, finishing operations Evidence including: • can use of technical language and detail covering the key elements of the knowledge relating to the materials, processing, finishing activities they have been involved in when questioned • can describe the machinery, equipment and tooling required for the materials, processing, finishing operation and where they have used them when questioned • can describe the specific quality specifications for materials, processing, finishing operations
Technical support role: Additional Knowledge to be assessed			
Knows the uses of a range of manufacturing equipment, the quality requirements of their tasks and the safe working practices.	**K21** Specific machinery, equipment and tooling required for the technical support operation **K23** Specific safe working practices, procedures and quality requirements that need to be observed	Insufficient knowledge technical support operations Evidence including: • cannot describe the machinery, equipment and tooling required for the technical support operation when questioned • cannot describe the specific safe working practices, procedures and quality requirements that need to be observed	Demonstrates their understanding of technical support operations Evidence including: • can use of technical language and detail covering the key elements of the knowledge relating to the technical support activities they have been involved in when questioned • can describe the machinery, equipment and tooling required for the technical support operation and where they have used them when questioned • can describe the specific safe working practices, procedures and quality requirements that need to be observed

Core Behaviours to be assessed	Fail	Pass To achieve a pass the apprentice must achieve all of the behaviours pass criteria as laid out below
B1 Personal responsibility and resilience Comply with the health and safety guidance and procedures, be disciplined and have a responsible approach to risk, work diligently regardless of how much they are being supervised, accept responsibility for managing time and workload and stay motivated and committed when facing challenges.	Cannot demonstrate safe working practices	Demonstrates they comply with Hand S guidance and procedures Evidence including: • Always demonstrates understanding and importance of Hand S requirements • Dynamically assesses and controls risk in current environment

Professional discussion Grading Criteria Guidance for the assessment of Knowledge, Skills and Behaviours

Higher Order Skills to be assessed	**Lower Order Skills**			
Core Skills to be assessed		**Fail Criteria**	**Pass Criteria** To achieve a pass the apprentice must achieve all of the core skills pass criteria and all of the pass criteria for one of the specialist job role options as laid out below	**Distinction Criteria** To achieve a distinction the apprentices must be able to achieve all of the pass criteria and at least 2 of the 3 core skills distinction criteria as laid out below and the distinction criteria for the specialist job role they are working towards
Works safely at all times ensuring that all appropriate legislation, regulation and environmental compliance requirements have been adhered to in-line with company policies, procedures and practice.	**S1** Work safely at all times, complying with health and safety legislation, regulations, environmental compliance procedures and systems and other relevant guidelines **S2** Identify and deal appropriately with any risks, hazards, hazardous situations and problems that may occur within the engineering environment within the limits of their responsibility **S6** Select and use appropriate tools, equipment and materials to carry out the engineering operation **S7** Deal appropriately with any problems that may occur within the manufacturing environment within the limits of their responsibility	Insufficient evidence of demonstrating they have the ability to work safely in an engineering environment and could potentially put self, colleagues, the environment or public at risk by their actions. **Evidence including:** • failure to identify and deal appropriately with any risks, hazards, hazardous situations and problems • failure to use relevant PPE • failure to identify and select the appropriate tools, equipment and materials • fails to identify problems within the engineering environment	Demonstrates their ability to work safely in an engineering environment to approved procedures. **Evidence including:** • can identify, assesses and controls risk within work environment • can use effective communication using a range of techniques • can complete documentation accurately, efficiently and legibly using the correct terminology • can select and use appropriate tools, equipment and materials to carry out the engineering operations • can deal with problems that occur within the engineering environment • can plan and Prepare prior to starting engineering activity • can work efficiently and effectively while adhering to appropriate job instructions	Demonstrates they have the ability to take on additional safety responsibilities, over and above the expectation of an engineering environment. **Evidence including:** • challenges other people on Hand S compliance, where appropriate • can dynamically assesses and controls risk at all times regardless of environment • can suggest ideas for improvement along with possible solutions
Communicates effectively using a wide range of methods.	**S3** Demonstrate effective communication skills which include oral, written, electronic **S4** Complete appropriate documentation accurately,	Insufficient evidence of demonstrating they have the ability to work safely in an engineering environment and could potentially put self, colleagues, the environment or public at risk by their actions. **Evidence including:**	Demonstrates their ability to work safely in an engineering environment to approved procedures. **Evidence including:** • can use effective communication using a range of techniques	

	efficiently and legibly using the correct terminology where required	• does not use effective communication using a range of techniques • does not complete documentation accurately, efficiently and legibly using the correct terminology	• can complete documentation accurately, efficiently and legibly using the correct terminology	
Specialist job role option 1 - Maintenance role: Additional Skills to be assessed				
Carries out fault-finding and maintenance activities including corrective action in-line with company processes, procedures and practice.	**S9** Carry out fault location on appropriate equipment using suitable maintenance diagnostic techniques **S10** Carry out maintenance activities in line with work instructions **S11** Carry out tests on the maintained equipment in accordance with test schedule or defined test procedures **S12** Follow appropriate completion activities and restore equipment to service by replacing or repairing components	Insufficient evidence of demonstrating they can follow relevant work instructions and applying correct procedures. Evidence including: • failure to carry out fault location and does not use suitable diagnostic techniques • failure to carry out sufficient tests on the maintained equipment • failure to follow completion activities and fails to restore equipment to a serviceable condition	Demonstrates their ability carry out maintenance activities in line with work instructions. Evidence including: • provides evidence of having followed the correct work instructions as part of their work commitments and shows an understanding of any operating rules in place within the instruction • carries out fault location using suitable diagnostic techniques • carries out sufficient tests on the maintained equipment • carries out correct completion activities and restores equipment to a serviceable condition	Demonstrates that they can consistently carryout fault finding and maintenance efficiently and can overcome problems.
Specialist job role option 2 - Mechanical Manufacturing engineering role: Additional Skills to be assessed				
Produces parts to the required specification.	**S13** Plan the mechanical manufacturing operation before they start **S14** Mount and set the required work holding devices **S15** Produce individual components, sub-assemblies or completed assemblies using mechanical manufacturing techniques	Insufficient evidence of demonstrating they can produce components sub-assemblies or completed assemblies to the required specification. Evidence including: • failure to plan mechanical manufacturing operation before they start • failure to mount and set the required work holding devices • failure to carry out quality checks during and after mechanical manufacturing operation	Demonstrates their ability to produce components sub-assemblies or completed assemblies to the required specification. Evidence including: • provides evidence of having used appropriate mechanical manufacturing techniques to produce individual components, sub-assemblies or completed assemblies, showing an understanding of the techniques used • mounts and sets the required work holding devices • can plan mechanical manufacturing operation before they start	Demonstrates that they can consistently produce high quality parts efficiently and can overcome problems.

	S16 Carry out quality checks during and after mechanical manufacturing operations		• carries out appropriate quality checks during and after mechanical manufacturing operation to confirm components sub-assemblies or completed assemblies meet the required specification	
Specialist job role option 3 - Electrical and Electronic engineering role: Additional Skills to be assessed				
Assemble and test a range of electrical and electronic equipment.	**S17** Wire and terminate different types of cabling for example single core, multi core, screened, fire resistant, armoured, etc. **S18** Assemble and test a range of electrical components for example component panels, isolator switches, fuses, circuit breakers, contactors, relays, rail mounted terminal blocks, etc. S19 Assemble and test a range of electronic components for example resistors, capacitors, diodes, transistors, etc. **S20** Follow appropriate completion activities and restore equipment or system to service after the assembly and testing has been completed	Insufficient evidence of demonstrating they can assemble and test a range of electrical and electronic components. Evidence including: • failure to wire and terminate cables in line with work instructions • failure to follow completion activities and fails to restore equipment to a serviceable condition • failure to carry out quality checks during and after the assembly of components	Demonstrates their ability to assemble and test a range of electrical and electronic components. Evidence including: • provides evidence of having used appropriate assembly and testing, showing an understanding of the techniques used • can wire and terminate different types of cabling • can follow completion activities and restores equipment to a serviceable condition • carries out appropriate quality checks during and after the assembly and testing operation to confirm required specification requirements are met	Demonstrates that they can consistently assemble and test electrical and electronic equipment efficiently and can overcome problems.
Specialist job role option 4 - Fabrication role: Additional Skills to be assessed				
Produces parts to the required specification.	**S21** Shape the materials using the appropriate methods and techniques **S22** Join the materials using the appropriate methods and techniques **S23** Produce components which meet the specification requirements	Insufficient evidence of demonstrating they can produce components which meet the specification requirements Evidence including: • failure shape the materials in line with work instructions and required specification • failure join the materials in line with work instructions and required specification	Demonstrates their ability to produce components which meet the specification requirements. Evidence including: • provides evidence of having used appropriate work instructions to produce components as part of their work commitments and shows an understanding of any operating rules in place within the instruction • can shape the materials using the appropriate methods and techniques	Demonstrates that they can consistently produce high quality parts efficiently and can overcome problems.

	S24 Carry out quality checks during and after the fabrication activities	• failure to carry out quality checks during and after the fabrication activity	• can join the materials using the appropriate methods and techniques • carries out appropriate quality checks during and after the fabrication operation to confirm required specification requirements are met	
Specialist job role option 5 - Materials, processing, finishing role: Additional Skills to be assessed				
Prepare for and carryout material processing finishing operations to the required specification efficiently.	**S25** Plan the materials, processing, finishing operation before they start **S27** Carry out the material, processing, finishing operation in line with specific safe working practices and specification requirements **S26** Prepare equipment, tooling, materials, etc. and complete set up activities before carrying out the materials, processing, finishing operation **S28** Carry out quality checks during and after the materials, processing, finishing operation	Insufficient evidence of demonstrating they can carry out material, processing, finishing operations in line with specification requirements . Evidence including: • failure to plan materials, processing, finishing operation before they start • failure to prepare equipment, tooling, materials and complete appropriate set up activities • failure to carry out quality checks during and after materials, processing, finishing operation	Demonstrates their ability to carry out material, processing, finishing operations which meet the specification requirements. Evidence including: • provides evidence of having used appropriate work instructions to carry out material, processing, finishing operation as part of their work commitments and shows an understanding of any operating rules in place within the instruction • can plan material, processing, finishing operation before they start • can prepare equipment, tooling, materials and complete appropriate set up activities • carries out appropriate quality checks during and after the material, processing, finishing operation to confirm required specification requirements are met	Demonstrates that they can consistently carryout material processing finishing operations efficiently and can overcome problems.
Specialist job role option 6 - Technical support role: Additional Skills to be assessed				
Prepare and carryout the technical support activities in line with company procedures, processes and practices	**S29** Plan the technical support operation before they start **S30** Prepare equipment, tooling, materials, etc. and complete set up activities before carrying out the technical support activity **S31** Carry out the technical support operation in line with specific safe working practices and specification requirements	Insufficient evidence of demonstrating they can carry out technical support operations in line with specification requirements . Evidence including: • failure to plan technical support operation before they start • failure to prepare equipment, tooling, materials and complete appropriate set up activities • failure to carry out quality checks during and after technical support operation	Demonstrates their ability to carry out material, processing, finishing operations which meet the specification requirements. Evidence including: • provides evidence of having used appropriate work instructions to carry out technical support operation as part of their work commitments and shows an understanding of any operating rules in place within the instruction • can plan technical support operation before they start • can prepare equipment, tooling, materials and complete appropriate set up activities	Demonstrates that they can consistently carryout technical support activities efficiently and can overcome problems.

	S32 Carry out quality checks during and after the technical support operation		• Carries out appropriate quality checks during and after the technical support operation to confirm required specification requirements are met	

Higher Order Core Knowledge to be assessed	**Lower Order Core Knowledge to be assessed**	**Fail**	**Pass Criteria** To achieve a pass the apprentice must achieve all of the core knowledge pass criteria and all of the pass criteria for one of the specialist job role options as laid out below	**Distinction Criteria** To achieve a distinction the apprentices must be able to achieve all of the pass criteria and the distinction criteria for the specialist job role they are working towards
Knows how to complete tasks, solve problems and implement preventive measures in-line with appropriate legislation, regulation and environmental compliance and company policies, procedures and practices.	**K2** Relevant statutory, quality, environmental compliance procedures and systems, organisational and health and safety regulations relating to engineering operations	Insufficient knowledge of the statutory, quality, environmental compliance procedures, systems, organisational and health and safety regulations Evidence including: • cannot outline the specific statutory, quality, environmental compliance procedures and systems, organisational and health and safety regulations	Demonstrates their understanding of statutory, quality, environmental compliance procedures, systems, organisational and health and safety regulations Evidence including: • able to outline the specific statutory, quality, environmental compliance procedures and systems, organisational and health and safety regulations relevant to their work activities	N/A
	K4 Engineering operational practices, processes and procedures	Insufficient knowledge of improvement techniques Evidence including: • cannot outline the operational practices, processes and procedures	Demonstrates their understanding of improvement techniques Evidence including: • able to outline the specific operational practices, processes and procedures relevant to their work activities	N/A
Maintenance role: Additional Knowledge to be assessed				

Knows how to carryout maintenance activities and a range of fault finding techniques	**K6** Maintenance planning **K7** Diagnostic and fault finding techniques	Insufficient knowledge of maintenance operations Evidence including: • cannot describe the maintenance planning operation in sufficient detail • cannot describe the diagnostic and fault finding techniques they have used	Demonstrates their understanding of a maintenance operations Evidence including: • use of technical language and detail covering the key elements of the knowledge relating to the maintenance activities they have been involved in • can describe the planning carried out prior to the start of the maintenance operation • can describe the diagnostic and fault finding techniques they used and the reason for using them	Use of technical language and detail to give an in-depth* explanation the key elements of the knowledge relating to the to the maintenance activities they have been involved in In-depth* = explanation includes detail of key aspects of the work they have carried out and can answer questions using relevant detail for example processes, equipment, materials used and the reason behind their use
Mechanical manufacturing role: Additional Knowledge to be assessed				
Knows how to carryout manufacturing activities using a range of techniques and equipment	**K9** Specific equipment operating parameters **K10** Mechanical manufacturing techniques	Insufficient knowledge of mechanical manufacturing operations Evidence including: • cannot describe the equipment operating parameters • cannot describe the mechanical manufacturing techniques they have used	Demonstrates their understanding of a mechanical manufacturing operations Evidence including: • use of technical language and detail covering the key elements of the knowledge relating to the mechanical manufacturing activities they have been involved in • can describe the specific equipment operating parameters • can describe the mechanical manufacturing techniques they have used	Use of technical language and detail to give an in-depth* explanation the key elements of the knowledge relating to the to the mechanical manufacturing activities they have been involved in In-depth* = explanation includes detail of key aspects of the work they have carried out and can answer questions using relevant detail for example processes, equipment, materials used and the reason behind their use
Electrical and electronic engineering role: Additional Knowledge to be assessed				
Knows the uses for different cable types for a range of tasks and the techniques used	**K12** Cable types and where they should be used **K13** Electrical and electronic assembly and testing techniques	Insufficient knowledge of electrical and electronic engineering operations Evidence including: • cannot describe the different cable types and where they have used them • cannot describe the electrical and electronic assembly and testing techniques they have used	Demonstrates their understanding of electrical and electronic engineering operations Evidence including: • use of technical language and detail covering the key elements of the knowledge relating to the electrical and electronic engineering activities they have been involved in • can describe the different cable types and where they have used them • can describe the electrical and electronic assembly and testing techniques they have used	Use of technical language and detail to give an in-depth* explanation the key elements of the knowledge relating to the to the electrical and electronic engineering activities they have been involved in In-depth* = explanation includes detail of key aspects of the work they have carried out and can answer questions using relevant detail for example processes, equipment, materials used and the reason behind their use
Fabrication role: Additional Knowledge to be assessed				

Knows how to prepare appropriately for tasks in-line with safe working practices and procedures.	**K15** Specific marking out and preparation techniques **K16** Different fabrication and joining techniques	Insufficient knowledge of fabrication operations Evidence including: • cannot describe the marking out and preparation techniques • cannot describe the different fabrication and joining techniques they have used	Demonstrates their understanding of fabrication operations Evidence including: • use of technical language and detail covering the key elements of the knowledge relating to the fabrication activities they have been involved in • can describe the marking out and preparation techniques and where they have used them • can describe the different fabrication and joining techniques they have used	Use of technical language and detail to give an in-depth* explanation the key elements of the knowledge relating to the to the fabrication activities they have been involved in In-depth* = explanation includes detail of key aspects of the work they have carried out and can answer questions using relevant detail for example processes, equipment, materials used and the reason behind their use
Materials, processing, finishing role: Additional Knowledge to be assessed				
Knows the uses of a range of equipment and the associated quality outputs of that equipment.	**K18** Specific machinery, equipment and tooling required for the materials, processing, finishing operation **K19** Different materials, processing, finishing techniques	Insufficient knowledge of materials, processing, finishing operations Evidence including: • cannot describe the machinery, equipment and tooling required for the materials, processing, finishing operation • cannot describe the different materials, processing, finishing techniques	Demonstrates their understanding of materials, processing, finishing operations Evidence including: • use of technical language and detail covering the key elements of the knowledge relating to the materials, processing, finishing activities they have been involved in • can describe the machinery, equipment and tooling required for the materials, processing, finishing operation and where they have used them • can describe the different materials, processing, finishing techniques	Use of technical language and detail to give an in-depth* explanation the key elements of the knowledge relating to the to the materials, processing, finishing activities they have been involved in In-depth* = explanation includes detail of key aspects of the work they have carried out and can answer questions using relevant detail for example processes, equipment, materials used and the reason behind their use
Technical support role: Additional Knowledge to be assessed				

Knows the uses of a range of equipment, the quality requirements of their tasks and the safe working practices.	**K21** Specific machinery, equipment and tooling required for the technical support operation **K22** Different technical support techniques	Insufficient knowledge technical support operations Evidence including: • cannot describe the machinery, equipment and tooling required for the technical support operation • cannot describe the different technical support techniques	Demonstrates their understanding of technical support operations Evidence including: • use of technical language and detail covering the key elements of the knowledge relating to the technical support activities they have been involved in • can describe the machinery, equipment and tooling required for the technical support operation and where they have used them • can describe the different technical support techniques	Use of technical language and detail to give an in-depth* explanation the key elements of the knowledge relating to the to the technical support activities they have been involved in In-depth* = explanation includes detail of key aspects of the work they have carried out and can answer questions using relevant detail for example processes, equipment, materials used and the reason behind their use

Core Behaviours to be assessed	**Fail** **Apprentice fails to demonstrate an acceptable level of behaviour.**	**Pass** **Apprentice demonstrated an acceptable level of behaviour and meets the minimum level of behaviour expected.** To achieve a pass the apprentice must achieve all of the behaviours pass criteria as laid out below	**Distinction** **Apprentice demonstrated consistent and positive behaviours.** To achieve a distinction the apprentices must be able to achieve all of the pass criteria and all of the distinction as laid out below
B1 Personal responsibility and resilience Comply with the health and safety guidance and procedures, be disciplined and have a responsible approach to risk, work diligently regardless of how much they are being supervised, accept responsibility for managing time and workload and stay motivated and committed when facing challenges.	Does not comply with health and safety guidance and procedures	Demonstrate they comply with Hand S guidance and procedures Evidence including: • Always demonstrates understanding and importance of Hand S requirements • Assesses and controls risk in current environment • Can be trusted to work on own when appropriate, knowing who and where to seek help from if needed • Can manage own time and workload • Stays motivated and committed, when facing small challenges	• Can challenge others on Hand S compliance • Can proactively assesses and controls risk without the need to be prompted • Sets an example to others by always working hard even when on own • Can reflect on how to do things more effectively
B2 Work effectively in teams Integrate with the team, support other people, consider implications of their own actions on other people and the business whilst working effectively to get the task completed.	Does not work well within a team	Demonstrate they can work well within a team Evidence including: • Makes effort to integrate within a team • Will help and support when asked	• Proactively and regularly supports others • Seeks support and advice and will share learning

		• Considers impact of own actions on other people or activities • Contributes positively to team deliverables	• Provides encouragement as appropriate to keep the team on track
B3 Effective communication and interpersonal skills An open and honest communicator; communicates clearly using appropriate methods, listen well to others and have a positive and respectful attitude.	Does not communicate in an efficient and effective way	Demonstrate they can communicate in an efficient and effective way Evidence including: • Can communicate open and honestly • Communicates clearly using appropriate methods • Pays attention and asks relevant questions to clarify understanding • Has a positive and respectful attitude	• Proactively shares information, openly and honestly • Checks understanding of others by asking open questions
B4 Focus on quality and problem solving Follow instructions and guidance, demonstrate attention to detail, follow a logical approach to problem solving and seek opportunities to improve quality, speed and efficiency.	Does not follow instructions and guidance Does not follow a logical approach to problem solving	Demonstrate they can follow instructions and guidance and can follow a logical approach to problem solving Evidence including: • Understands and can follow instructions and processes • Demonstrates attention to detail • Follows a logical and right approach to problem solving • Identifies opportunities to improve, but may need prompting for ideas	• Can make suggestions to improve instructions • Can escalate issues as appropriate • Applies the most appropriate technique for problem solving • Can reflect upon lessons learnt after problem solving activity
B5 Continuous personal development 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.	Does not take ownership of their personal development Does not seek opportunities to develop	Demonstrate they can take ownership of their personal development and will seek opportunities to develop Evidence including: • Can reflect on Knowledge and seeks opportunities to develop • Can reflect on skills and seeks opportunities to develop • Can reflect on behaviours and seeks opportunities to develop • Can adapt to different Situations, Environments or Technologies • Has a positive attitude to feedback and advice	• Recognises needs and continually seeks learning opportunities • Can transfer learning, applying it to different situations • Can adapts quickly and effectively to new Situations, Environments or Technologies • Proactively seeks feedback and acts upon it

To achieve an **overall pass** for the apprenticeship, the apprentice must achieve a **minimum of a pass** in **both** the practical skills observation and the professional discussion in all of:

- the higher order core skills grading descriptors

- the higher order core knowledge grading descriptors
- the core behaviours grading descriptors
- the higher order specialist skills grading descriptors for their job role
- the higher order specialist knowledge grading descriptors for their job role

To achieve an **overall distinction** for the apprenticeship, the apprentice must **meet the criteria for a pass**;

Plus for the **professional discussion**, the apprentice must achieve a **distinction** grade in:

- the higher order core skills grading descriptor
- the higher order specialist skills grading descriptor for their job role
- the higher order specialist knowledge grading descriptor for their job role
- all of the core behaviours grading descriptors