

Maintenance and Operations Engineering Technician (MOET)

Apprenticeship Standard Specification - STO154/AP02

This apprenticeship standard covers 7 specialist roles electrical technicians, mechanical technicians, control and instrumentation technicians, wind turbine technician, electrical system and process control technicians, electromechanical technicians and plant operations technicians.

Currently OAL provides end-point assessment for 2 of the specialist roles; electrical and mechanical technicians. Please contact us if you have technicians completing one of the other specialist roles.

1.1 Occupational profile

Maintenance & Operations Engineering Technicians covers 2 roles: Electrical Technicians and Mechanical Technicians. They will maintain the safety, integrity and effective operation of plant and equipment in one or more of the following Industries that are part of or have activities that are part of the broader national infrastructure Engineering Sector: processing and production of human and animal food.

Electrical/Mechanical Technicians will work on various types of plant and equipment commonly found throughout the Engineering Industry sectors and the Technicians can be expected to migrate through these sectors during the course of their careers. Dependent upon the sector that they are employed in there may be subtle differences in terms of the composition and application of the plant and equipment. However, the fundamental principles of operation will be the same regardless of the engineering sector.

1.2 Purpose

This apprenticeship has been designed by a range of employers to ensure that both new entrants and those interested in progressing a career in the sector have an opportunity to develop the right skills, knowledge and behaviours. This apprenticeship is a fantastic way of developing these skills whilst learning and gaining experience at work.

At the end of the programme apprentices will be able to:

- locate, and rectify faults on plant and equipment
- inspect and maintain appropriate plant and equipment to meet operational requirements
- assess and test the performance and condition of plant and equipment
- read, understand and interpret information and work in compliance with technical

specifications and supporting documentation

- communicate, handover and confirm that the appropriate engineering process has been completed to specification.

1.3 Entry requirements

There are no formal entry requirements for apprentices selecting this apprenticeship standard, typically an apprentice might be expected to have achieved 3 GCSEs at grade C or higher including mathematics, English and science, or equivalent and/or relevant experience. Employers and training providers must ensure that learners have the potential and opportunity to achieve the apprenticeship standard successfully. It is an advantage if apprentices have already achieved a Level 1 English and mathematics qualification.

1.4 Gateway requirements

Gateway requirements are stipulated by the apprenticeship standard's assessment plan and end-point assessment organisations must ensure that all apprentices have completed and achieved the requirements.

1.4.1 Apprenticeship duration

MOET apprentices must have exceeded the 12-month Government minimum duration and completed a programme of learning as set by their employer, supported by the appointed training provider. It is expected that for most apprentices it will take two and a half years to complete the apprenticeship.

The programme will develop the skills, knowledge and behaviours detailed in the standard. Many apprentices may achieve a relevant Level 5 Diploma in Leadership and Management during their apprenticeship.

1.4.2 Mandated qualifications

Apprentices are required to achieve the following mandated qualifications for this standard:

- Level 2 English
- Level 2 Mathematics

Evidence of these three qualifications must be submitted to OAL along with a declaration that

the apprentice has met the gateway requirements. Qualification certificates can be submitted at any point once the apprentice has been registered on our Portal. OAL will accept qualification certificates from any awarding organisation.

Apprentices, who have previously achieved their English and/or mathematics as specified above, must submit their qualification certificates to OAL as evidence of achievement and exemption.

In the main OAL expects evidence to be in the form of the qualification certificate. Where the certificate is not available then a formal transcript or notification of results.

Where either a certificate or formal notification of results is not available, but the apprentice has other evidence that may be acceptable, you should contact us directly so we can offer advice on the verification of the evidence.

Apprentices and their employer/training provider should refer to the OAL English and Mathematics Policy for end-point assessment gateway evidence available at <https://www.oawards.co.uk/about-us/> for evidence requirements of English and mathematics achievement.

1.5 End-point Assessment (EPA)

End-point assessment will take place at the end of the programme and is designed to test apprentices' skills, knowledge and behaviours independently of learning and qualifications.

End-point assessment for this standard includes a:

- **Knowledge assessment (Stage 1)**

The test will comprise of 30 multiple-choice questions designed to test the core technical knowledge across the standard. The test will be 45 minutes under controlled examination conditions and invigilated by the independent assessor.

- **Practical observation (Stage 2)**

The practical observation will be based on a set of tasks that relate to the specific role they are working towards. Typically the practical observation will be no longer than a day and the actual time allowed will be based on the comparable time that an industry competent worker would take to carry out the tasks.

Once the apprentice has successfully passed through gateway a planning session will take

place between the employer, training provider and OAL. The outcome of the planning session is to not only ensuring that the EPA runs smoothly on the day but also to allow for the tasks to be mapped to the apprentices duties and activities.

- **Technical interview (Stage 3)**

The technical interview is a structured discussion between the apprentice and two independent assessors. The technical interview will be based on an evidence portfolio complied by the apprentice. The evidence portfolio will contain relevant and best examples of evidence that demonstrate the apprentices application of core and the specialist knowledge, skills and behaviours the apprentice is completing.

The technical interview will be a maximum of 150 minutes under controlled conditions and will focus on three scenario questions to cover the knowledge, skills and behaviours of the core and specialist area the apprentice is undertaking.

Apprentices will be given access to the OAL Apprentice End-point Assessment Handbook once they have been enrolled onto the standard. The EPA Handbook sets out the assessment requirements of EPA and the criteria on which the apprentice will be graded.

1.6 Order of end-point assessment

The assessment plan for this standard stipulates that the EPA is taken in the following order:

1. Knowledge assessment
2. Practical observation
3. Technical interview.

1.7 Assessment personnel

Independent Assessors appointed by OAL must invigilate and assess all components of the end-point assessment. The technical interview will involve two assessors.

1.8 Apprenticeship grading

The apprenticeship is graded: Fail, Pass, Merit or Distinction. Apprentices must achieve a minimum of a pass in each of the 3 components.

Results are subject to moderation and will be issued every 10 working days to the named training provider. OAL will send results to the Education and Skills Funding Agency in line with guidelines for certification.

An apprentice can retake a component of their EPA if they fail. It is expected that a period of further learning will need to be undertaken if the apprentice has to re-take any part of the end-point assessment. OAL can make exemptions to this ruling should reasons for the fail are deemed to be outside the control of the apprentice.

1.9 EPA fees

OAL typically charges 15% of the total funding for this standard. However fees are worked out on an individual basis to ensure that employers and apprentices get the best value for money. For approved centres our fees can be found in the online Portal. Non-approved centres should contact us directly for a bespoke quote.

At OAL there are no hidden fees. Our fees are inclusive of all support, documentation and materials. This includes access to our team of experts to support the induction of apprentices, preparation for EPA, handbooks and assessment specifications and materials.

1.10 Standard SKB criteria

A Technician must have the core requirements below and demonstrate the specialist requirements in one role.

Maintenance and Operations Engineering Technician Apprenticeship Standard	
Knowledge statements	Assessed by:
first principles relating to the operation and maintenance of appropriate plant and equipment	KT/TI
relevant industry health and safety standards, regulations, and environmental and regulatory requirements	KT/TI
maintenance and operational practices, processes and procedures covering a range of plant and equipment	KT/TI
the relevant engineering theories and principles relative to their occupation	KT/TI
Skills statements	Assessed by:
comply with industry health, safety and environmental working practices and regulations	PO
locate, and rectify faults on plant and equipment	PO/TI
communicate with and provide information to stakeholders in line with personal role and responsibilities	PO
read, understand and interpret information and work in compliance with technical specifications and supporting documentation	PO/TI
prepare work areas to undertake work related activities and reinstate those areas after the completion of the work related activities	PO
inspect and maintain appropriate plant and equipment to meet operational requirements	PO/TI
assess and test the performance and condition of plant and equipment	PO
communicate, handover and confirm that the appropriate engineering process has been completed to specification	PO/TI

Behaviour statements	Assessed by:
Health & Safety – follows health & safety policies and procedures and be prepared to challenge unsafe behaviour using appropriate techniques to ensure the protection of people and property when working alone and/or with appropriate supervision	PO
Quality focused – ensures that work achieves quality standard both occupationally and personally	PO
Working with others – works well with people from different disciplines, backgrounds and expertise to accomplish an activity safely and on time	PO
Interpersonal skills – gets along well with others and takes into account their needs and concerns	PO
Critical reasoning – uses resources, techniques and obtained facts to develop sound solutions while recognising and defining problems	TI
Sustainability and ethical behaviour – behaves ethically and undertakes work in a way that contributes to sustainable development	PO
Risk awareness – demonstrates high concentration, the desire to reduce risks, ability to be compliant and awareness of change, through regular monitoring and checking of information	PO

Specialist roles

Electrical technician statements	Assessed by:
position, assemble, install and dismantle electrical plant and equipment, which will include motors, switchgear, cables & conductors, to agreed specifications	PO/TI
carry out planned, unplanned and preventative maintenance procedures on electrical plant and equipment.	PO/TI
replace, repair and/or remove components in electrical plant and equipment and ensure its return to operational condition.	PO/TI
diagnose and determine the cause of faults in electrical plant and equipment	PO/TI

Mechanical technician statements	Assessed by:
position, assemble, install and dismantle mechanical plant and equipment which will include pumps, valves, gearboxes, pipework, to agreed specifications	PO/TI
carry out planned, unplanned and preventative maintenance procedures on mechanical plant and equipment.	PO/TI
replace, repair and/or remove components in mechanical plant and equipment and ensure its return to operational condition.	PO/TI
diagnose and determine the cause of faults in mechanical plant and equipment	PO/TI

Key:

- KT Knowledge test
- PO Practical observation
- TI Technical interview