



**SPECIFICATION - LEVEL 3
CONSTRUCTION EQUIPMENT
MAINTENANCE TECHNICIAN v1.1
(ST0671)**



Introduction

The Construction Equipment Maintenance Technician Level 3 apprenticeship develops the skills to maintain, inspect, diagnose, and repair a range of construction and allied-sector plant and equipment, including advanced electronic systems and emerging clean technologies such as hybrid, battery, and hydrogen-powered machinery. Apprentices work across sectors including construction, demolition, and rail-plant, ensuring equipment is safe, efficient, and compliant. The role involves installation, upgrades, and modifications, applying strict health, safety, and environmental standards in high-risk environments.

Key Information	
Name	Construction equipment maintenance technician ST0671
Level	3
Duration	36 months on-programme, 3 months EPA window
Funding Band	£19,000
Prerequisites and Entry Requirements	Before final assessment of the qualification, the Learner must be employed in a relevant role, meet Gateway requirements before taking the End-Point Assessment. have completed a portfolio of evidence and, if applicable, have passed the required Functional Skills. There are no mandatory qualifications required for this this End-Point Assessment.
Methods of Assessment	There are two assessment methods, practical assessment (with questioning, and an interview (underpinned by a portfolio of evidence).
Simulated Assessment	The practical demonstration and questioning will take place in a simulated environment selected by the EPAO. This may include the EPAO's premises, a training provider's premises, an employer's training facility, a test centre, or another suitable simulated environment.
Grading	Apprentices will be assessed across all assessment components and awarded a grade of Fail, Pass, or, where applicable, Distinction. The results from each assessment method will be combined to determine the overall grade of a Fail, Pass or Distinction. Grading combinations and criteria are set out in the End-Point Assessment Plan and associated guidance documents.
Link to assessment plan	Construction equipment maintenance technician / Skills England

End-Point Assessment Objective

The End-Point Assessment (EPA) confirms that the apprentice has achieved the required competence to work independently as a Construction Equipment Maintenance Technician. This includes the ability to carry out inspections, diagnostics, and repairs; interpret and apply technical information from a range of electronic sources; and adapt to new technologies while maintaining compliance with safety and environmental requirements. Apprentices must demonstrate they can work effectively in challenging environments, communicate with internal and external stakeholders, and plan and prioritise work to minimise downtime and operational disruption. They must also show they can ensure all work is carried out to the highest standard, safeguarding both operational efficiency and safety in line with industry best practice.

Programme Structure

Throughout the programme, apprentices will gain practical skills and underpinning knowledge in a variety of settings. They will be employed in a relevant role for typically 36 months, during which they will compile a portfolio of evidence with support from their assessor. The assessor will monitor progress against the standard to ensure the apprentice is fully prepared for the EPA.

Available Support

Sample assessment materials for the practical assessment and the interview are available to approved training providers to support learner preparation and ensure consistency in delivery.

KSB Mapping Table

Knowledge	Assessment Method
K1 Verbal communication techniques. Giving and receiving information. Matching style to audience. Barriers in communication and how to overcome them. Construction engineering terminology.	Interview underpinned by a portfolio of evidence
K2 Non-verbal communication techniques: gestures, facial expressions, tone of voice, eye contact, body language.	Interview underpinned by a portfolio of evidence
K3 Construction equipment maintenance mathematical and scientific principles: calculations, conversions, flow rates.	Interview underpinned by a portfolio of evidence
K4 Construction equipment maintenance mechanical principles: motion and mechanics, storage and transfer of forces and energy in operation, motors and pumps.	Interview underpinned by a portfolio of evidence
K5 Construction equipment maintenance electrical and electronic principles: principles of electricity and electronics, electric circuit theory, motors.	Interview underpinned by a portfolio of evidence
K6 Construction equipment maintenance mechatronics principles: key components of integrated mechanical and electrical systems; their design and operation.	Interview underpinned by a portfolio of evidence
K7 Engineering materials: characteristics, properties and impact on use.	Practical assessment with questioning
K8 Environmental and sustainability regulations and guidance. Environmental hazards that can arise from construction maintenance operations. Environmental protection and management systems, environmental signage and notices. Types of pollution and control measures: noise, smells, spills, and waste. Environmental permits. Waste Electrical and Electronic Equipment Directive (WEEE). Hazardous waste regulations. Data logging to optimise equipment performance. Industry Carbon Reduction initiatives.	Interview underpinned by a portfolio of evidence
K9 Awareness of health and safety regulations, relevance to the occupation and the technician's responsibilities: Health and Safety at Work Act (HASWA), CDM regulations, COSHH, DSE, electrical, WAH, PUWER, LOLER,	Practical assessment with questioning

RIDDOR and near miss reporting, confined spaces, noise, management systems of occupational health and safety, emergency evacuation procedures, isolation and emergency stop procedures, lone working, manual handling, risk assessments and safe systems of work, accident and incident management and mitigation methods. safety equipment: PPE, guards, signage, fire extinguishers, situational awareness, slips, trips and falls, types of hazards.	
K10 Principles of digital devices and construction machine performance aids and monitoring, application of digital technologies and information systems: connected technologies, virtual and augmented reality.	Interview underpinned by a portfolio of evidence
K11 Construction equipment removal and decommissioning practices and techniques.	Interview underpinned by a portfolio of evidence
K12 Construction equipment commissioning and installation practices and techniques.	Interview underpinned by a portfolio of evidence
K13 Construction equipment maintenance practices and techniques: planned, preventative, predictive and reactive methods and their frequency.	Interview underpinned by a portfolio of evidence
K14 Construction equipment repair practices and techniques.	Interview underpinned by a portfolio of evidence
K15 Fault finding and problem-solving techniques.	Practical assessment with questioning
K16 Construction equipment manufacturers' instructions: what they are and how to use them. Warranties: what they are and impact on engineering work.	Interview underpinned by a portfolio of evidence
K17 Construction plant equipment and tools: types, application and operation. Maintenance, commissioning, repair, carriage and storage requirements. Calibrated equipment requirements.	Practical assessment with questioning
K18 Principles of restoring the work area.	Practical assessment with questioning
K19 Business operation considerations: efficiency, customer satisfaction, competitiveness, minimising risks to operation, ethical issues.	Practical assessment with questioning
K20 The construction equipment maintenance sector and industry. Types of organisations, types of products and equipment. Supply chain. Customers. Customer requirements. Impacts on product demand. Customer specifications: purpose and consequences of non-compliance.	Interview underpinned by a portfolio of evidence
K21 Work planning, prioritising, work scheduling, work costings and evaluations, work and time management techniques. Work management systems. Work categorisation systems.	Practical assessment with questioning
K22 Continuous improvement techniques.	Interview underpinned by a portfolio of evidence

K23 Documentation: methods and requirements - electronic and paper.	Practical assessment with questioning
K24 Team working principles.	Interview underpinned by a portfolio of evidence
K25 Workplace training and development techniques.	Interview underpinned by a portfolio of evidence
K26 Equality Act. Equality, diversity and inclusion in the workplace. Unconscious bias.	Interview underpinned by a portfolio of evidence
K27 Written communication techniques. Written communication techniques. Plain English principles. Report writing.	Interview underpinned by a portfolio of evidence
K28 Principles of reading and interpreting construction equipment engineering drawings and documentation.	Practical assessment with questioning
K29 How to pass on knowledge and provide guidance to customers or stakeholders.	Interview underpinned by a portfolio of evidence
K30 Quality management standards. Quality assurance principles and practice. Record keeping.	Interview underpinned by a portfolio of evidence
K31 Principles of organisational checks, inspections and examinations for compliance with legal and regulatory requirements.	Interview underpinned by a portfolio of evidence
Skill	Assessment Method
S1 Communicate with others verbally for example, colleagues and stakeholders.	Interview underpinned by a portfolio of evidence
S2 Negotiate with colleagues or stakeholders. For example, to access equipment or work areas.	Interview underpinned by a portfolio of evidence
S3 Provide information, advice, guidance or instruction to colleagues or stakeholders.	Interview underpinned by a portfolio of evidence
S4 Create, maintain and enhance productive working relationships.	Interview underpinned by a portfolio of evidence
S5 Prepare and write technical reports, for example incident reports, technical investigations or outcomes, equipment appraisals and specifications, improvement suggestions.	Interview underpinned by a portfolio of evidence
S6 Identify and agree work goals. Plan work.	Practical assessment with questioning
S7 Use information and digital technology. Comply with GDPR and cyber security regulations and policies.	Interview underpinned by a portfolio of evidence
S8 Record or enter information - paper based or electronic, for example job sheets, risk assessments, method statements, equipment service records, test results, handover documents and manufacturers' documentation, asset	Practical assessment with questioning

management records, work sheets, checklists, organisational reporting requirements.	
S9 Identify and document hazards and risks in the workplace. Apply control measures.	Practical assessment with questioning
S10 Apply health and safety procedures and safe systems of work in compliance with regulations and standards.	Practical assessment with questioning
S11 Apply environmental and sustainability procedures in compliance with regulations and standards for example, segregate resources for reuse, recycling and disposal.	Interview underpinned by a portfolio of evidence
S12 Investigate problems using fault-finding and diagnostic techniques to identify underlying causes. Identify solutions to problems.	Practical assessment with questioning
S13 Read and interpret information, for example text, data, engineering drawings, job card, work instructions, risk assessments, method statements, operation manuals, permits to work, instructions.	Practical assessment with questioning
S14 Select techniques, procedures and methods to undertake tasks.	Practical assessment with questioning
S15 Select and check construction plant equipment and hand tools including calibration and diagnostic equipment.	Practical assessment with questioning
S16 Identify, organise and use resources to complete tasks, with consideration for cost, time, quality, safety, security and environmental impact.	Practical assessment with questioning
S17 Perform maintenance tasks on construction equipment.	Interview underpinned by a portfolio of evidence
S18 Perform repair tasks on construction equipment.	Interview underpinned by a portfolio of evidence
S19 Carry out de-commissioning, removal and disassembly of components and equipment from construction plant.	Interview underpinned by a portfolio of evidence
S20 Assess condition of components and equipment. Test and check equipment or systems. Identify actions required.	Practical assessment with questioning
S21 Carry out assembly and installation of components and equipment from construction equipment including alterations through design and fabrication activities.	Interview underpinned by a portfolio of evidence
S22 Apply contamination control techniques.	Interview underpinned by a portfolio of evidence
S23 Complete commissioning checks following maintenance and repair activities.	Interview underpinned by a portfolio of evidence
S24 Restore the work area on completion of the activity.	Practical assessment with questioning

S25 Apply continuous improvement techniques. Devise suggestions for improvement.	Interview underpinned by a portfolio of evidence
S26 Apply quality assurance procedures.	Interview underpinned by a portfolio of evidence
S27 Follow equality, diversity and inclusion procedures.	Interview underpinned by a portfolio of evidence
S28 Carry out and record planned and unplanned learning and development activities.	Interview underpinned by a portfolio of evidence
S29 Perform legal, regulatory and organisational checks, inspections and examinations.	Interview underpinned by a portfolio of evidence
Behaviours	Assessment Method
B1 Committed to CPD to maintain and enhance competence in their own area of practice.	Interview underpinned by a portfolio of evidence
B2 Take personal responsibility for their own sustainable working practices.	Interview underpinned by a portfolio of evidence
B3 Prioritise health and safety.	Practical assessment with questioning
B4 Act in a professional manner.	Practical assessment with questioning
B5 Take responsibility for completing work.	Practical assessment with questioning
B6 Take account of diversity and inclusion requirements.	Interview underpinned by a portfolio of evidence