Skills England

Standard Draft Preview

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Standard in development
L3: Engineering fitter
Version 2.0

Title of occupation

Engineering fitter

UOS reference number

ST0432

Core and options

No

Level of occupation

Level 3

Occupational maps data

Route: Engineering and manufacturing
Pathway: Engineering, manufacturing, process and control
Cluster: Manufacturing and process operative or technician

Typical duration of apprenticeship

42 months

Minimum hours for compliance

974 hours

Resubmission

No

Would your proposed apprenticeship standard replace and existing framework?

No

Does professional recognition exist for the occupation?

Yes

Regulated occupation

Is this a statutory regulated occupation?

No

Occupational summary

This occupation is found in a wide range of industries, including manufacturing, engineering, construction, aerospace, automotive, energy, defence, rail, and maintenance and repair environments, where equipment, machinery, and engineered systems are assembled, fitted, installed, maintained, and repaired.

The broad purpose of the occupation is to produce, assemble, install, maintain, modify, refurbish and repair complex engineering components, assemblies, equipment and systems to specification. Engineering fitters work across sectors such as manufacturing, energy, transport, utilities, defence and infrastructure, on products and systems including turbines, cranes, gearboxes, production lines, rigs, platforms and electrical, electronic, control, fluid power, pipework and instrumentation systems. They interpret technical information, plan and carry out engineering activities, select and use appropriate tools and equipment, and inspect, test and adjust their work to meet quality, performance and safety requirements. Engineering fitters may work independently or as part of a team in workshops, operational sites or customer premises, preparing equipment and systems for handover and ensuring work areas meet operational requirements.

In their daily work, an engineering fitter typically interacts with supervisors, team leaders, managers and colleagues from a range of engineering and operational functions. They may work independently or as part of a multidisciplinary team, collaborating with engineers, technicians, operators, maintenance teams, quality and health and safety personnel, as well as internal and external customers, contractors and suppliers to support engineering activities and ensure the availability of materials, components, tools and equipment.

An employee in this occupation will be responsible for completing engineering activities safely and effectively to the required specification, quality standards and timescales, while complying with health, safety and environmental requirements, with an appropriate level of autonomy within the scope of their role and authority.

Typical job titles

Controls and systems fitter | **Electrical fitter** | **Electronic fitter**
Engineering fitter | **Installation and commissioning fitter**
Instrumentation fitter | **Maintenance fitter** | **Manufacturing fitter**
Mechanical fitter | **Multi-skilled engineering fitter**

Are there any statutory / regulatory or other typical entry requirements?

No

Occupation duties

DUTY	KSBS
Duty 1 Maintain the work area for health, safety and environmental compliance before, during and after the fitting task.	K1 K2 S1 S2 B1
Duty 2 Liaise with stakeholders involved in fitting and assembly activities. For example, communicate with supervisors, engineers, colleagues, suppliers, and customers to plan work activities, resolve technical issues, and coordinate installation or assembly tasks.	K4 K5 K6 S4 S5 S6 B2 B4 B5 B8
Duty 3 Prepare for engineering fitting and assembly activities. For example, organise tools, equipment, materials, components, drawings, specifications, and documentation required to complete fitting tasks.	K7 K8 S7 S8
Duty 4 Assemble engineering components and sub-assemblies to specification using approved methods and procedures. For example, mechanical, electrical, fluid power, pipework, instrumentation or control system.	K12 K13 S12 S13 S14
Duty 5 Review engineering requirements to undertake fitting and assembly activities. For example, interpret engineering drawings, specifications, and work instructions to assemble, fit, install, align, and test systems and components in accordance with requirements.	K9 K10 K11 S9 S10 S11
Duty 6 Ensure fitting and assembly activities meet quality standards. For example, inspect completed work, verify dimensional accuracy, apply quality control procedures, and ensure compliance with regulatory, industry, and organisational standards.	K3 K14 S3 S15
Duty 7 Complete installation, commissioning, and handover activities. For example, carry out functional tests, rectify defects, complete final checks, and hand over fitted equipment, systems, or assemblies ready for operation.	K17 S18 S19
Duty 8 Complete engineering fitting and assembly documentation and records. For example, maintain	K16 K21 K22

assembly records, inspection reports, quality documentation, job records, and material or component traceability requirements in line with company procedures.	S17 S22
Duty 9 Contribute to continuous improvement and professional development. For example, identify opportunities to improve safety, quality, productivity, reliability, and sustainability; support improvement projects; and undertake continuing professional development to maintain and enhance occupational competence.	K15 K18 K19 K20 S16 S20 S21 S22 B3 B6 B7

KSBs

Knowledge

K1: Health and safety regulations, standards, and guidance including an overview of their purpose, key principles, and implications for their role.. Control of Substances Hazardous to Health (COSHH) Regulations, Dangerous Substances and Explosive Atmospheres Regulations (DSEAR), Display Screen Equipment Regulations (DSE), Health and Safety at Work Act (HASAWA), Lifting Operations and Lifting Equipment Regulations (LOLER), Management of Health and Safety at Work, Manual Handling Operations Regulations, Personal Protective Equipment (PPE) at Work Regulations, Provision and Use of Work Equipment Regulations (PUWER), The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR), Working at Height Regulations, Working in Confined Spaces Regulations, Workplace (health, safety, and welfare) Regulations.

K2: Awareness of environment and sustainability regulations, standards and guidance and impact on role. Recycling, reuse, and safe disposal of waste.

K3: Quality Management systems, including quality assurance requirements and monitoring processes.

K4: Individual engineering fitter's roles, responsibilities and escalation procedures.

K5: Verbal communication methods and techniques.

K6: Written communication methods and techniques.

K7: Planning, prioritisation, organisation, and time management techniques.

K8: Fitting and assembly tools, measurement and test equipment application, operation, care and calibration requirements.

K9: Engineering specifications, representations, sketches, drawings, and graphical information conventions.

K10: Engineering, mathematical and scientific principles and formulae.

K11: Characteristics and properties of materials used in engineering fitting activities.

K12: Principles and methods of measuring and marking out materials and components.

K13: Engineering fitting and assembly principles and techniques.

K14: Engineering fitting inspecting and testing principles and techniques.

K15: Engineering fitting problem solving and rectification principles and techniques.

K16: Engineering fitting documentation requirements and procedures.

K17: Handover requirements for engineering fitting activities.

K18: Continuous improvement (CI) systems and techniques.

K19: Business operation considerations: quality, cost, delivery, and ethical practices.

K20: The principles of learning and development activities, including recording their completion.

K21: Digital and information technology to support engineering fitting activities.

K22: General data protection regulations (GDPR) and principles of cyber security.

Skills

S1: Apply health, safety, and environmental procedures in compliance with regulations, standards, and guidance. For example, signage and barriers, working at height, confined spaces, and COSHH, wearing the correct PPE.

S2: Follow procedures in compliance with environmental and sustainability regulations, standards, and guidance. Identify and segregate resources for reuse, recycling and disposal.

S3: Comply with quality management system requirements including assurance requirements and monitoring processes, for example, sign off processes in alignment with ISO9001 or equivalent requirements, completion of non-conformance reports.

S4: Manage and prioritise own workload, making decisions within the limits of own authority and using the correct reporting and escalation channels when additional support or authorisation is required.

S5: Communicate with others verbally to give and receive information.

S6: Communicate with others in written format to give and receive information.

S7: Use planning, prioritising, organising, and time management techniques to plan and complete tasks.

S8: Select, check, and use fitting and assembly tools, measurement and test equipment.

S9: Read, interpret and apply engineering specifications, representations, sketches, drawings and graphical information as part of engineering fitting activities.

S10: Use engineering, mathematical and scientific principles and formulae as part of engineering fitting activities.

S11: Use appropriate materials for engineering fitting activities in line with specification.

S12: Measure and mark out materials or components as part of engineering fitting activities in line with requirements.

S13: Use tools, equipment and processes to complete engineering fitting and assembly activities, for example, filing, sawing, scraping, drilling, soldering, fastening, wire cutting, threading.

S14: Position, fit, align, connect and secure components to produce complete or partial assemblies.

S15: Inspect and test components, partial, or complete assemblies to ensure requirements are met, for example, component inspection and test, final acceptance testing, functional testing.

S16: Apply problem solving and rectification techniques to components, partial or complete assemblies, for example, fault finding.

S17: Complete documentation in line with organisational procedures, for example, inspection reports, handover documents, test results.

S18: Complete handover activities in line with requirements, for example, send to quality function, send to stores.

S19: Restore the work area following the completion of engineering fitting activities.

S20: Apply continuous improvement techniques to identify and record improvement opportunities.

S21: Complete and record learning and development activities.

S22: Use digital and information technology. For example, databases, data sharing platforms, email, management information systems, and word processing.

Behaviours

B1: Puts health and safety first.

B2: Acts responsibly and professionally, taking ownership of work and demonstrating integrity and accountability.

B3: Demonstrates resilience and adaptability, remaining focused and effective when faced with challenges, changing circumstances or setbacks.

B4: Works collaboratively and inclusively, valuing diversity and supporting colleagues to achieve shared objectives.

B5: Communicates effectively, adapting communication methods to suit different audiences and situations.

B6: Committed to continuous improvement and makes suggestions for improvements.

B7: Seek learning and development opportunities.

B8: Adhere to company values and principles.

Qualifications

English and maths

English and maths qualifications must be completed in line with the apprenticeship funding rules.

Does the apprenticeship need to include any mandated qualifications in addition to the above-mentioned English and maths qualifications?

Yes

Other mandatory qualifications

Diploma in Advanced Manufacturing Engineering (Development Knowledge) OR Extended Diploma in Advanced Manufacturing Engineering (Development Knowledge) Level: 3

Level: 3

Professional recognition

This standard aligns with the following professional recognition:

- IET for Eng Tech

Consultation

Consultation undertaken with varied range of employers and other external stakeholders. Wider public consultation also completed.

Progression routes

ST0841 Engineering manufacturing technician v1.4 L4

ST0999 Lead engineering maintenance technician-1.2 L4

ST0695 Process leader v1.1 L4

Supporting uploads

Mandatory qualification uploads

Mandated degree evidence uploads

Professional body confirmation uploads

Subject sector area

4.1 Engineering