

UET Mechanical Technician Portfolio and Grading Guidance



ENERGY & UTILITIES
INDEPENDENT
ASSESSMENT SERVICE

| | | | |
|-------------------------|--|-------------------------------|--|
| Full Name of Apprentice | | Full Name of Technical Expert | |
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| To achieve a PASS score the apprentice must achieve ALL of the following: | No distinction criteria or score are allocated to this section |
|---|--|

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|---|--------------------------|-----|
| 6 | <input type="checkbox"/> | N/A |
|---|--------------------------|-----|

Evidence relating to the UET Standard

- K1** Relevant industry health and safety standards and regulations, and environmental and regulatory requirements
- S2** Follow and comply with industry health and safety and environmental working practices and regulations
- S10** Adhere to safe working practices and procedures and carry out risk assessments

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| To achieve a pass the apprentice must have evidence of: | | <ul style="list-style-type: none"> • N/A |
| <ul style="list-style-type: none"> • Knowledge of where to access and how to apply industry Health, Safety & Environmental standards and regulations in relation to company practices and quality procedures. | <input type="checkbox"/> | |
| <ul style="list-style-type: none"> • Conform to risk assessment process in relation to company practices and procedures. | <input type="checkbox"/> | |
| <ul style="list-style-type: none"> • Knowledge of and compliance with company standards and procedures as applicable e.g. COSHH, PPE, confined spaces, working at height, isolation of plant and equipment etc | <input type="checkbox"/> | |
| <ul style="list-style-type: none"> • Compliance with environmental regulations and standards e.g. correct disposal of wastes. | <input type="checkbox"/> | |

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| To achieve a PASS score the apprentice must achieve ALL of the following: | | To achieve a DISTINCTION score the apprentice must achieve ALL of the following: | |
|--|--|--|--|
| 6 | <input type="checkbox"/> | 3 | <input type="checkbox"/> |
| Evidence relating to the UET Standard | | | |
| <p>K2 Maintenance practices, processes and procedures covering a range of waste and water systems, plant and equipment</p> <p>K5 Planned, reactive, and predictive maintenance processes, practices and procedures</p> <p>S4 Carry out maintenance activities on a range of waste and water systems, plant and equipment</p> <p>S6 Carry out and follow planned, reactive, and predictive plant and equipment maintenance procedures</p> | | | |
| <p>To achieve a pass the apprentice must have evidence of:</p> <ul style="list-style-type: none"> • Knowledge of where to access company information on maintenance practices, processes and procedures. • Applying company maintenance practices, policies and procedures when carrying out tasks. • Completion of maintenance tasks in a timely manner across the whole range of work processes, systems and equipment. • Understanding of relevant parameters of equipment and how the equipment works. • Record & report outcomes of maintenance activities | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <p>To achieve distinction the apprentice must achieve the pass criteria and ALL of the following:</p> <ul style="list-style-type: none"> • Able to reflect critically of performance achieved and lessons learnt. • Detailed explanation of the underpinning theories of how the equipment works • Able to prioritise work to ensure that downtime is minimised and give explanations of the rationale for their choice(s). This could be achieved by applying 2 of the following: - <ul style="list-style-type: none"> ○ Solving problems <input type="checkbox"/> ○ Making suggestions <input type="checkbox"/> ○ Dealing with conflict <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

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| To achieve a PASS score the apprentice must achieve ALL of the following: | | To achieve a DISTINCTION score the apprentice must achieve ALL of the following: | |
|---|--|---|--|
| 6 | <input type="checkbox"/> | 3 | <input type="checkbox"/> |
| Evidence relating to the UET Standard | | | |
| K4 Principles and processes that underpin the location, diagnosis and rectification of faults | | | |
| S3 Locate, diagnose and rectify faults on plant and equipment | | | |
| To achieve a pass the apprentice must have evidence of: <ul style="list-style-type: none"> • Knowledge of fault finding techniques. • Locating, identifying and rectifying faults. • Consulting and working with others to investigate, identify and resolve cause of the problem. • Understanding of relevant operating parameters of any equipment and how the equipment works. | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | To achieve distinction the apprentice must achieve the pass criteria plus ALL of the following: <ul style="list-style-type: none"> • Demonstration of independent use of root cause analysis to fault find and rectify diagnosed faults. • Proposing solutions to prevent the reoccurrence of the problem. | <input type="checkbox"/> <input type="checkbox"/> |

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|--|--------------------------|---|--------------------------|
| 4 | <input type="checkbox"/> | 2 | <input type="checkbox"/> |
| Evidence relating to the UET Standard | | | |
| S5 Use workshop machinery and equipment to create, repair and modify component and apparatus | | | |
| <p>To achieve a pass the apprentice must have evidence of:</p> <ul style="list-style-type: none"> • Using workshop machinery to create, repair and modify components. This could include: <ul style="list-style-type: none"> • Drills <input type="checkbox"/> • Grinders <input type="checkbox"/> • Bearing heaters and/or pullers <input type="checkbox"/> • Hydraulic press <input type="checkbox"/> • Test bench <input type="checkbox"/> • Other <input type="checkbox"/> • Understanding of relevant parameters of equipment and how the equipment works. | <input type="checkbox"/> | <p>To achieve distinction the apprentice must achieve the pass criteria plus the following:</p> <ul style="list-style-type: none"> • Provide evidence of a piece of equipment that you have created, repaired and modified and returned to operational condition. This could include but is not limited to: <ul style="list-style-type: none"> • Bearing replacement <input type="checkbox"/> • Shaft/key repairs <input type="checkbox"/> • Support brackets <input type="checkbox"/> • Other <input type="checkbox"/> | <input type="checkbox"/> |

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| To achieve a PASS score the apprentice must achieve ALL of the following: | | To achieve a DISTINCTION score the apprentice must achieve the following: | |
|---|--|--|--------------------------|
| 6 | <input type="checkbox"/> | 3 | <input type="checkbox"/> |
| Evidence relating to the UET Standard | | | |
| S11 Carry out safe isolation of equipment, using permit and lock-off systems as required | | | |
| To achieve a pass the apprentice must have evidence of: <ul style="list-style-type: none"> • Identifying hazards and risks and apply control measures. • Safely isolate equipment from all sources of energy. • Test to confirm equipment has been isolated. • Follow company isolation procedures. | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | To achieve distinction the apprentice must achieve the pass criteria plus the following: <ul style="list-style-type: none"> • Take a leading role in the application of isolations. | <input type="checkbox"/> |

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| To achieve a PASS score the apprentice must achieve ALL of the following: | | No distinction criteria or score are allocated to this section |
| 3 | <input type="checkbox"/> | N/A |
| Evidence relating to the UET Standard | | |
| S12 Drive vehicles equipped with tools and materials to job sites | | |
| <p>To achieve a pass the apprentice must have evidence of:</p> <ul style="list-style-type: none"> • Full driving licence or demonstrate progress to working towards achieving a full driving licence. • Complying with company driving procedures. • Carry out vehicle checks. • Safely load vehicles. | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <ul style="list-style-type: none"> • N/A |

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| To achieve a PASS score the apprentice must achieve ALL of the following: | | To achieve a DISTINCTION score the apprentice must achieve the following: | |
|--|--|--|--------------------------|
| 4 | <input type="checkbox"/> | 2 | <input type="checkbox"/> |
| Evidence relating to the UET Standard | | | |
| <p>S13 Install, maintain, replace and commission equipment and components as required</p> <p>M5 Use mechanical knowledge and skills to install, maintain and dismantle a wide range of complex plant, machinery and components</p> <p>S8 Handover and confirm completion of engineering activities</p> | | | |
| <ul style="list-style-type: none"> • To achieve a pass the apprentice must have evidence of: • Complete dynamic risk assessments (where applicable) • Install, maintain, replace and commission equipment. • Complete engineering activities and handing over equipment. • Follow company completion and handover procedures. • Communicate completion and handover information to colleagues. | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <p>To achieve distinction the apprentice must achieve the pass criteria plus the following:</p> <ul style="list-style-type: none"> • Provide evidence of an action you have applied that improved the performance and reliability of plant and equipment. | <input type="checkbox"/> |

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| To achieve a PASS score the apprentice must achieve ALL of the following: | | To achieve a DISTINCTION score the apprentice must achieve ALL of the following: | |
|--|--|---|--|
| 4 | <input type="checkbox"/> | 2 | <input type="checkbox"/> |
| Evidence relating to the UET Standard | | | |
| M1 Apply mechanical theories and principles in order to carry out diagnostic fault finding procedures | | | |
| To achieve a pass the apprentice must have evidence of: <ul style="list-style-type: none"> • Knowledge of mechanical theories and principles for diagnostic fault-finding. • Understand the capabilities and limitations of test equipment. • Apply knowledge gained to identify faults. • Reinstatement of plant to operational condition. • Use company recording and reporting procedures. | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | To achieve distinction the apprentice must achieve the pass criteria plus evidence of: <ul style="list-style-type: none"> • Demonstrate an understanding of the benefits of analysing past history on faults. • Demonstrate an understanding of the benefits of analysing data over an extended period to obtain more reliable results. | <input type="checkbox"/> <input type="checkbox"/> |

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| To achieve a PASS score the apprentice must achieve ALL of the following: | | To achieve a DISTINCTION score the apprentice must achieve THREE of the following: | |
|---|--|--|--|
| 5 | <input type="checkbox"/> | 3 | <input type="checkbox"/> |
| Evidence relating to the UET Standard | | | |
| M2 Inspect and monitor mechanical systems, and inspect, monitor, maintain, dismantle and repair mechanical equipment and components M10 Inspect and maintain condition monitoring equipment S1 Apply technical knowledge to carry out inspections, condition monitoring and reporting | | | |
| To achieve a pass the apprentice must have evidence of: <ul style="list-style-type: none"> • Maintenance of mechanical equipment and systems. • Repairing of mechanical equipment. • Identify any defects and their causes. • Ensure equipment is calibrated and in date where identified. • Use company recording and reporting procedures. | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | To achieve distinction the apprentice must achieve the pass criteria plus THREE of the following: <ul style="list-style-type: none"> • Raising appropriate follow on work requests based on data from inspections / data monitoring. • Identify non-compliances and take actions to rectify problems not specified in scope of work. • Identify root cause of a defect and provide recommendations for solutions. • Identification of spares. | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

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| To achieve a PASS score the apprentice must achieve ALL of the following: | | To achieve a DISTINCTION score the apprentice must achieve ALL of the following: | |
|--|--|---|--|
| 5 | <input type="checkbox"/> | 3 | <input type="checkbox"/> |
| Evidence relating to the UET Standard | | | |
| <p>M3 Test mechanical equipment and systems and assist in installing mechanical systems and equipment</p> <p>M8 Test, service and repair mechanical equipment as part of a planned preventative maintenance and / or reactive maintenance programmes</p> <p>M9 Install and maintain mechanical components including motors, pumps and gearboxes, maintaining and replacing lubricants</p> <p>M7 Interpret plans and drawings to install, position or re-locate mechanical equipment and components</p> | | | |
| <p>To achieve a pass the apprentice must have evidence of:</p> <ul style="list-style-type: none"> • Examples of testing, calibration and validation methods. • Identification of correct parts and materials for the task. • Follow installation procedures for installing mechanical equipment. • Install new mechanical equipment and systems to specification. • Refer to technical drawings to confirm specification | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <p>To achieve distinction the apprentice must achieve the pass criteria plus ALL of the following:</p> <ul style="list-style-type: none"> • Understand the impact the unavailability of equipment would have on production. • Analyse and evaluate defects and their causes • Make recommendations to improve reliability | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

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| To achieve a PASS score the apprentice must achieve ALL of the following: | | To achieve a DISTINCTION score the apprentice must achieve ALL of the following: | |
|--|--|--|--|
| 4 | <input type="checkbox"/> | 2 | <input type="checkbox"/> |
| Evidence relating to the UET Standard | | | |
| M4 Basic fabrication and welding of structures and components | | | |
| <p>To achieve a pass the apprentice must have evidence of:</p> <ul style="list-style-type: none"> • Demonstrate basic welding skills to meet specification. • Demonstrate basic fabrication skills to meet specification <p>Evidence could include:</p> <ul style="list-style-type: none"> • Photos <input type="checkbox"/> • Technical specifications <input type="checkbox"/> • Witness testimony <input type="checkbox"/> | <input type="checkbox"/> <input type="checkbox"/> | <p>To achieve distinction the apprentice must achieve the pass criteria plus ALL of the following:</p> <ul style="list-style-type: none"> • Demonstrate higher levels of fabrication skills • Demonstrate skills across a wider range of welding techniques | <input type="checkbox"/> <input type="checkbox"/> |

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| To achieve a PASS score the apprentice must achieve ALL of the following: | | To achieve a DISTINCTION score the apprentice must achieve ALL of the following: | |
|---|--------------------------|---|--------------------------|
| 5 | <input type="checkbox"/> | 3 | <input type="checkbox"/> |
| Evidence relating to the UET Standard | | | |
| S9 Read, understand and interpret computer data and displays, and work to technical specifications and supporting documentation | | | |
| M6 Consult design specifications to analyse and calculate mechanical system parameters and rectification procedures | | | |
| To achieve a pass the apprentice must have evidence of: <ul style="list-style-type: none"> • Select appropriate test equipment. <input type="checkbox"/> • Correctly set up monitoring equipment for testing, inspecting and identifying non compliances to mechanical equipment including 4 of the following: <ul style="list-style-type: none"> ○ Vibration <input type="checkbox"/> ○ Pressure <input type="checkbox"/> ○ Contamination <input type="checkbox"/> ○ Purity <input type="checkbox"/> ○ Level <input type="checkbox"/> ○ Flow <input type="checkbox"/> • On completion of work re-commission equipment into operational service. <input type="checkbox"/> • Use company recording and reporting procedures. <input type="checkbox"/> | | To achieve distinction the apprentice must achieve the pass criteria plus ALL of the following: <ul style="list-style-type: none"> • Research of and recommendation for use of new technology. <input type="checkbox"/> • Analysing past history of faults to establish the root cause of the problem <input type="checkbox"/> | |

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| To achieve a PASS score the apprentice must achieve ALL of the following: | | To achieve a DISTINCTION score the apprentice must achieve the following: | |
|---|--|--|--------------------------|
| 3 | <input type="checkbox"/> | 1 | <input type="checkbox"/> |
| Evidence relating to the UET Standard | | | |
| S7 Communicate with and provide information and guidance to contractors, suppliers and colleagues in line with personal role and responsibilities | | | |
| <p>To achieve a pass the apprentice must have evidence of:</p> <ul style="list-style-type: none"> • Communicating and providing information and guidance to end users. • Deliver a polite and courteous service to relevant people. • Provision of accurate verbal and written reports in line with company policy and procedures. | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <p>To achieve distinction the apprentice must achieve the pass criteria plus the following:</p> <ul style="list-style-type: none"> • Evidence of explaining to others complex issues in simple terms and language appropriate to the third parties. | <input type="checkbox"/> |

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| To achieve a PASS score the apprentice must achieve ALL of the following: | | No distinction criteria or score are allocated to this section |
| 3 | <input type="checkbox"/> | N/A |
| Evidence relating to the UET Standard | | |
| S14 As required, undertake standby duties to provide 24 hour cover to remedy fault situations requiring diagnostic testing procedures | | |
| To achieve a pass the apprentice must have evidence of: <ul style="list-style-type: none"> • If required, demonstrates a willingness to undertake priority out of hours work activities • Provide an explanation of the hazards of working alone out of hours in line with the company procedures | <input type="checkbox"/> <input type="checkbox"/> | <ul style="list-style-type: none"> • N/A |

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|--|--|---|--|
| 6 | <input type="checkbox"/> | 3 | <input type="checkbox"/> |
| Evidence relating to the UET Standard | | | |
| <p>The 12 behaviors from the UET standard are:</p> <ul style="list-style-type: none"> • Display a self-disciplined, self-motivated approach whilst recognising personal limitations and seeking advice from fact holders and specialists when required • Accept responsibility for work of self or others • Deliver a polite, courteous professional service to customers and members of the public • Work effectively and safely when undertaking tasks to approved standards and safe working practices as part of a team, working alone or with appropriate supervision • Undertake and complete work in a way that contributes to sustainable development • Be risk aware and minimise risks to life, property and the environment when undertaking work activities • Be quality focussed and professional in work and in personal standards • Identify, organise and use resources effectively to complete tasks, with consideration for cost, quality, safety, security and environmental impact • Accept, allocate and supervise technical and other tasks • Be aware of the needs and concerns of others, especially where related to diversity and equality • Carry out and record CPD necessary to maintain and enhance competence • Exercise responsibilities in an ethical manner | | | |
| <p>To achieve a PASS the apprentice must have evidence of:</p> <ul style="list-style-type: none"> • Achieving tasks within personal area of responsibility • Willingly accepting ownership and responsibility for own work and that of others | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <p>To achieve DISTINCTION the apprentice must achieve the pass criteria plus evidence of the following:</p> <ul style="list-style-type: none"> • Establishing and continuously maintaining effective working relationship • Effectively adapting communication style and methods to suit the situation | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

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| <ul style="list-style-type: none">• Responding to all customer requests promptly and interacting with them in a courteous and co-operative manner• Consistently following policies and procedures, taking personal responsibility for their own health, safety & security and that of anyone who may be affected by their actions• Appreciating how the role can impact the environment• Complying with standard operating practices and being aware of the impact of changing circumstances on an activity• Taking responsibility for own performance achieving required standards• Ensuring tasks are understood and the outline plan is clear to follow• Establishing and maintaining rapport with others• Understanding the importance of maintaining personal competence and recording progress• Acting in a fair and honest manner and trying 'to do the right thing' most of the time | <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <ul style="list-style-type: none">• Always being tactful, considerate, fair and respectful in dealing with others | |
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| Total Points (maximum 100) | Minimum points score required to achieve a Pass | Minimum points score required to achieve Distinction |
|----------------------------|---|--|
| 100 | 70 | 85 |

| Total Points (maximum 100) | Actual points achieve for a Pass | Actual points achieve for Distinction |
|----------------------------|----------------------------------|---------------------------------------|
| | | |

You are required to provide details of how you arrived at the assessment decision recorded above based on the evidence provided by the apprentice in the Portfolio / Work Log.

| | | | | | |
|------|--------------------------|------|--------------------------|-------------|--------------------------|
| Fail | <input type="checkbox"/> | Pass | <input type="checkbox"/> | Distinction | <input type="checkbox"/> |
| | | | | | |

| | | |
|-------------------------------|-------------------------------|------|
| Full Name of Technical Expert | Signature of Technical Expert | Date |
| | | |