



City & Guilds Level 2 Extended Technical Occupational Entry in Engineering (Diploma) – Maintenance pathway (2145-12)

Version 1.0 (November 2024)

Practical Assignment Pack

2145-251

Assessor Pack (Sample)

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1. Assessment overview

This guidance contains assessment documentation for the **City & Guilds Level 2 Extended Technical Occupational Entry in Engineering (Diploma) Maintenance pathway**.

The assessment for this component consists of an assignment that includes an assignment brief and then a number of tasks for the candidate to complete.

Each task is assessed by grading descriptors which detail achievement required for a Fail level and Pass level.

2. Assignment guidance

General task guidance

Please read **all** information carefully before the assessment.

Overarching conditions

The tasks must be completed in order.

Assignment brief and technical information must be released on the day Task 1 commences.

Task 2 can be released upon completion of Task 1.

Task 3 can be released upon completion of Task 2.

Internet access

Where internet access is allowed as part of a task (e.g. for research or report writing purposes) candidates must be advised that this is the case and reminded of the importance of submitting their own work and the seriousness of plagiarism, malpractice and collusion. Candidates should be advised that their browser history can be monitored and checked.

Use of Artificial Intelligence (AI)

Candidates should be reminded that the purpose of this assessment is to reflect their own abilities at responding to and generating evidence for the tasks. AI misuse constitutes malpractice which may result in malpractice sanctions for the candidate involved. Centres should ensure candidates are aware of the guidance on the use/misuse of AI.

What is permitted

AI may be used by a candidate as a source where use of the Internet is allowed for a research task or where production of evidence is allowed outside of controlled/supervised conditions. The candidate must be able to demonstrate that the work is their own. Where candidates use AI, they must acknowledge its use and show clearly how they have used it. How candidates have decided to use it could impact on the overall mark they are allocated.

What is not permitted

AI misuse is where a candidate uses an AI tool in an assessment or fails to appropriately reference it in an assessment where internet use is permitted. Examples include the following:

- Copying sections of AI-generated content so that the work is no longer the candidate's own will be treated as plagiarism.
- Copying whole responses of AI-generated content will be treated as plagiarism.
- Any use of AI which means students have not independently demonstrated their own attainment is likely to be considered malpractice.
- Failing to reference use of AI tools when they have been used as a source of information.
- Incomplete or poor referencing of AI tools.
- Submitting work with intentionally incomplete or misleading references or bibliographies.

AI misuse constitutes malpractice as defined in the JCG Suspected Malpractice: Policies and Procedures (<https://www.jcq.org.uk/exams-office/malpractice/>).

We encourage providers to read and reference this guidance. The malpractice sanctions available for the offences of 'making a false declaration of authenticity' and 'plagiarism' include disqualification.

Time

The total time for completion of this assessment is **14 hours** broken down per task as follows:

- Task 1 – 4 hours
- Task 2 – 6 hours
- Task 3 – 4 hours

These timings for each task must **not** be exceeded.

All allocated task timings include time for candidates to work on and produce the required evidence, as well time for thinking, reflection, and application of prior knowledge from the specification content.

Candidates are not required to have formal reading time for the scenario and brief, this is included within the duration for Task 1.

When working under controlled conditions for longer sessions, breaks can be facilitated outside of the controlled conditions, ensuring the room is locked and all candidates have vacated once the break begins. All materials must be kept securely during the break.

Resources

Candidates must have access to a suitable range of resources to carry out the tasks and, where appropriate, to have the opportunity to choose components, tools and equipment that demonstrate their ability to select from a range of appropriate materials.

Where candidates need access to evidence that has been submitted as part of a previous task, this will be provided as a copy of the original evidence and will be given at the start of the relevant task.

The manufacturer's handbook or comparable guidance must be available along with any drawings, specifications and manufacturers' recommendations.

The candidate should have access to the following to select and carry out each task:

- pump or motor with mechanical moving parts as a minimum:
 - shaft
 - bearings
 - seals
 - drive mechanism (eg gear, chains and belts)
- the pump or motor should need significant cleaning and should have inherent wear and tear or defects as a result of normal use or be simulated.

In addition, the candidate should have access to the following.

Documentation

- Specifications, documentation and information required for the maintenance operation
- Planned preventative maintenance schedules
- Corrective maintenance schedules

Tools and equipment

- Rules
- Tapes
- Internal and external callipers
- Combination sets
- Squares
- Micrometers
- Telescopic gauges
- Vernier callipers, protractors and height gauge
- Protractors
- Socket sets: (metric and imperial) depending on equipment being maintained
- Torque wrench
- Gauges: feeler, plug, gap, ring, radius and thread
- Taps and dies (metric and imperial)
- Hammers and mallets, and wedges
- Files: flat, diamond point and half round
- Cold chisels
- Clamps: G clamps, mole grips, ratchet, carver and sash clamps
- Spanners: open ended, combination, podger and adjustable (metric and imperial)
- Allen keys (metric and imperial)
- Screwdrivers sets: cross and flat head
- Pliers: combination, snipe nose and circlip
- Hacksaws
- Crimping tools/pliers
- De-soldering tools
- Soldering iron
- Battery-operated drills, screwdrivers etc
- Compressed air tools: impact wrench, air screwdriver, air drills, air die grinder and air angle grinder
- Portable tool kit station
- Torch

Consumables

- De-greaser
- Lubrication
- Emery cloth
- Cotton rags

Access to

- Pistol, bench, pillar and radial drills
- Band and circular saws
- Hand and angle grinders
- Surface tables and plates
- 'V' blocks
- Straight edges
- Jacks
- Spirit level
- Laser alignment equipment
- Access to lathes and milling machines
- Welding and cutting equipment

Replacement component/parts

- Nuts and bolts, and gaskets and seals

Task-specific guidance

In this assignment, the centre must provide a pump or motor for the candidate to undertake maintenance activities on.

Centres must provide a pump or motor that meets **all** of the following criteria:

- pump or motor with mechanical moving parts as a minimum:
 - shaft
 - bearings
 - seals
 - drive mechanism (eg gear, chains and belts)
- setup of the pump/motor:
 - pump/motor must require cleaning
 - provide manual/handbook/specification for the pump or motor
 - the candidate will need to be able to disassemble and reassemble the pump or motor.

Task 1 – Plan a maintenance activity

- Candidates must carry out the task on their own, under controlled conditions.
- Ratio of candidates to assessor: flexible based on local conditions and support, and it can be up to a maximum of 15:1.
- Resources
 - Candidates must be given the following at the start of the task:
 - assignment brief
 - Appendix 1 – Risk assessment template.
 - Access to devices (tablets, laptops and computers)
 - Software (Microsoft Word and specialised software) to complete the list, maintenance schedule, risk assessment and method statement
 - Technical information for pump/motor (eg manual, handbook, specification) to produce a list of resources, a maintenance schedule, a risk assessment and a method statement
 - Access to the internet, if applicable

Task 2 – Carry out the maintenance activity

- Candidates will perform the maintenance activity in accordance with their method statement, including adjustment, aligning and replacing any component(s), as required, and cleaning of equipment/system and the work area, where required.
- Candidates must carry out the task on their own, under controlled conditions.
- Ratio of candidates to assessor: flexible based on local conditions and support, and there can be up to a maximum of six candidates at any one time.
- This task can take place over multiple sessions/days.
- The pump or motor used in the task must be kept secure.
- Resources
 - Candidates must be given the following at the start of the task:
 - assignment brief
 - copies of their list of requirements and resources, maintenance schedule, risk assessment and method statement from Task 1 (for reference only).
 - Equipment and pump/motor for the maintenance task
 - Inspection and testing equipment for the maintenance task
 - Tools and equipment to complete the maintenance task
 - Appropriate isolation and lock off equipment
 - Personal protective equipment (PPE)
 - Barriers/signage
 - Camera and/or video equipment for taking photos/videos of the finished component

Candidates must make notes of their maintenance activities for writing a maintenance report in Task 3.

Assessor Observation Record Form must take note of the candidate's working practices including accuracy, consistency and quality of finished work.

Task 3 – Produce a report on the maintenance activity

- Candidates must carry out the task on their own, under controlled conditions.
- It is not a requirement to send an email; the email can be written on software such as Word or Outlook and saved.
- Ratio of candidates to assessor: flexible based on local conditions and support, and it can be up to a maximum of 15:1.
- Resources
 - Candidates must be given the following at the start of the task:
 - assignment brief
 - copy of their notes from Task 1 and maintenance notes from Task 2 (for reference only).
 - Access to devices (tablets, laptops and computers)
 - Software (Microsoft Word, Microsoft Outlook or equivalent)

Following the completion of all tasks, candidates and assessors will be required to sign a Declaration of Authenticity to confirm that the work produced is their own.

Resit opportunities

Candidates must achieve a Pass in **all three tasks** to achieve a Pass for the assessment overall.

In cases where candidates fail a task, they will be required to complete a further period of learning before then resitting all tasks within a different version of the assessment.

Candidates can retake a different version of the assignment up to maximum of **three** times before re-registration is required.

3. Assignment brief

You are a maintenance contractor who has won a contract with an organisation to carry out maintenance on a pump or motor.

The pump or motor, including technical information, will be provided by the assessor.

To complete this assignment, you must:

- plan a scheduled maintenance task on the pump/motor
- perform the maintenance tasks
- produce a maintenance report
- produce an email to the organisation whom you have a contract with.

This assignment has a total duration of **14 hours**.

4. Tasks

Task 1 – Plan the maintenance activity

You must read the assignment brief and technical information about the pump/motor provided and then:

- a) Create a list of the requirements and resources, justifying your selections. This should include:
 - all necessary technical documentation and drawings to confirm the type, scope and requirements of the activity
 - tools and equipment
 - materials, components and consumables
 - wastage and disposal requirements
 - scheduling requirements.
- b) Produce a maintenance schedule, including:
 - time needed to carry out the activity
 - service and maintenance activities.
- c) Complete a risk assessment using the template provided (Appendix 1).
- d) Produce a method statement.

Conditions of assessment

- The time allocated for this task is **4 hours**.
- You must carry out the task on your own, under **controlled conditions** while being observed.

Controlled conditions

- You must only work on the task in the allocated time.
- Assessment evidence must be handed in at the end of each session for secure storage which cannot be accessed.
- You must not share or discuss your work with other candidates.
- You are not permitted to bring any additional materials into the assessment session.

What must be produced for grading

- Completed risk assessment (Appendix 1)
- A list of requirements and resources, including justifications for the selections
- Maintenance schedule
- Method statement

Additional evidence for this task

- n/a

Resources

- Access to relevant information sources (digital or hard copy)
- Appropriate ICT equipment and software

Task 2 – Carry out the maintenance activity

You must perform the maintenance activity in accordance with your method statement, including:

- using appropriate Personal Protective Equipment (PPE)
- creating a safe working area
- safe application of isolation techniques
- using appropriate tools and equipment
- disassembling pump/motor to allow access to the components for inspection
- carrying out appropriate maintenance in accordance with the manufacturer's recommendations in the technical information:
 - Clean pump/motor.
 - Check, report on condition, and replace if necessary:
 - shaft
 - bearing(s)
 - seals
 - drive mechanism (for example gear, chains and belts).
 - Reassemble pump/motor making adjustments to realign component(s) as required:
 - gear and pulleys
 - bearing(s), so no movement in the shaft.
 - Lubricate (if required) and adjust tension of the drive mechanism.
- reinstating the work area and dispose of waste.

You must make notes of your maintenance activities for writing a maintenance report in Task 3.

You will be given a copy of documents from Task 1 (for reference only).

Conditions of assessment

- The time allocated for this task is **6 hours**.
- You must carry out the task on your own, under **controlled conditions** while being observed.

Controlled conditions

- You must only work on the task in the allocated time.
- Assessment evidence must be handed in at the end of each session for secure storage which cannot be accessed.
- You must not share or discuss your work with other candidates.
- You are not permitted to bring any additional materials into the assessment session.
- You must be given a copy of your evidence from Task 1 (for reference only):
 - the equipment/system's technical information
 - your list of resources
 - your maintenance schedule
 - your risk assessment
 - your method statement.

What must be produced for grading

- The candidate's notes must be handed in at the end of each session of the maintenance activity.

Additional evidence for this task

- Assessor Observation Record Form
- A **minimum** of **four** photographs or video of the maintenance at key stages, (disassembly, maintenance and reassembly) during the activity

Resources

- A range of tools and equipment for maintenance, servicing and repair activities to select from
- Appropriate PPE

Task 3 – Produce a report on the maintenance activity

You must:

a) Produce a maintenance report for your organisation.

Summary of the maintenance activity carried out including:

- the type of maintenance activity carried out, including the advantages and disadvantages of this type of maintenance
- recommendations of any issues and defects identified that may require attention before the next maintenance activity
- review the risk assessment and method statement identifying any improvements, if appropriate
- records of any waste disposal
- date of next scheduled maintenance.

You will be given a copy of your notes from Task 2 (for reference only).

b) Produce an email to the organisation who contracted you to complete the maintenance work including:

- a summary of findings and recommendations, including risks if defects not rectified that are clear to someone without engineering experience
- the word count is 300 words
- with the maintenance report attached.

You will be given a copy of your notes from Task 2 (for reference only).

Conditions of assessment

- The time allocated for this task is **4 hours**.
- You must carry out the task on your own, under **controlled conditions** while being observed.

Controlled conditions

- You must only work on the task in the allocated time.
- Assessment evidence must be handed in at the end of each session for secure storage which cannot be accessed.
- You must not share or discuss your work with other candidates.
- You are not permitted to bring any materials into the assessment session.
- You must be given a copy of your notes from Task 1 (for reference only).

What must be produced for grading

- Maintenance report
- Email summary of findings and recommendations

Resources

- Access to relevant information sources (digital or hard copy)
- Appropriate ICT equipment and software

5. Grading

Task grading descriptors

Grading descriptors for each task are displayed in the tables below. Each table includes a descriptor of candidate evidence at minimum 'Pass' level and just below Pass level, ie Fail.

Assessors should consider the grading descriptors in each task table and consider whether candidates have met each of the descriptors that define the minimal performance required for a Pass grade. The indicative content is specific for **this version** of the assignment and is provided to supplement the grade descriptors, giving a sense of the intentions of the task evidence and expected parameters of the response for the given assignment version. The indicative content is not, however, exhaustive. The assessor should use the indicative content to support their judgement, but ultimately the judgement should be based on whether the candidate evidence meets the minimal pass requirements as outlined by the grading descriptors. The Fail descriptor may be helpful to support the assessor to confirm that the evidence presented meets the Pass requirement – but note, **all** individual grading descriptors within a grading grid **must** be met at the Pass descriptor in order to confirm a Pass grade for the task.

All tasks must be completed successfully for a Pass grade to be awarded.

Task 1 – Plan the maintenance activity

Fail	Pass
<p>Planning incomplete or missing content required by the brief and/or task resulting in maintenance that does not meet the requirements of the brief and task:</p> <p>Planning</p> <ul style="list-style-type: none"> List of requirements includes some of the required tools, equipment, materials and components for some aspects of the tasks. Omits tools, equipment, materials and components that would result in failure to complete the maintenance task. Maintenance schedule omits activities and/or timescales. Timescales are unrealistic. <p>Safety</p> <ul style="list-style-type: none"> Incomplete/inaccurate Risk assessment template that did not identify main hazards, risks and/or control measures. Risk assessment would not ensure safe working. Method statement omits some stages. Considers some hazards, risk or safety concerns, but omits key points that would cause safety concerns with the work to be carried out. 	<p>Planning would result in maintenance meeting the requirements of the brief and task, within allocated time:</p> <p>Planning</p> <ul style="list-style-type: none"> List of requirements includes appropriate identification and selection of tools, equipment, materials and components for completion of the engineering tasks. Maintenance schedule includes activities in a logical order with realistic timescales. Minor omissions that would not affect the outcome of tasks. <p>Safety</p> <ul style="list-style-type: none"> Complete risk assessment with accurate hazards, risk levels and control measures that would mitigate risks to ensure safe working. Method statement outlines key stages in correct and logical order.

Indicative content (what will be seen for this version of the task)

Plan maintenance of pump/motor provided to requirements of brief and task.

Planning

a) List of the requirements and resources:

- referred to drawings and manufacturer's information when creating the maintenance schedule, method statement etc, for example:
 - maintenance activities
 - specifications
 - recommendations of frequency of component replacement
 - tolerances
- listed appropriate tools and equipment, eg socket sets, spanners, dial test indicators (DTI), cleaning materials
- listed wastage and disposal requirements for the pump/motor maintenance activity, eg oil/grease, cleaning products, used parts.

b) Maintenance schedule:

- breaks down all the stages/tasks needed for the activity, including:
 - time needed to carry out the activity with milestones

Indicative content (what will be seen for this version of the task)

- service and maintenance activities in a logical order.

Safety

c) Risk assessment

- Completed risk assessment template provided:
 - hazards and risks, eg manual handling, moving parts, electricity, cleaning chemicals, lubricants
 - control measures, eg PPE, safe isolation, lifting.

d) Method statement

- Details how to carry out work safely step-by-step, eg sequence of operations to clean, disassemble, inspect and reassemble, making adjustments as required
- There may be crossover with other tasks.

Task 2 – Carrying out planned maintenance

Fail	Pass
<p>Maintenance does not meet requirements of brief and task:</p> <p>Safe working</p> <ul style="list-style-type: none"> • Work area has been set up, but without full consideration of the implications of the space or task, and with concern that some potential health and safety hazards may not be fully considered or mitigated against. • Selected inappropriate/incorrect PPE or used the right PPE incorrectly. • Isolation techniques were not appropriate to the equipment/system and/or were carried out in an unsafe manner. <p>Process/method</p> <ul style="list-style-type: none"> • Began work without visual checks or didn't make note of any potential issues or hazards following their check. • Disassembled systems and subsystems with inaccuracies or no safety considerations. • Inappropriate or inaccurate inspection techniques used prior to carrying out maintenance. • Some or no consideration given to cleaning the equipment/system or work area. • Assembled systems and subsystems with inaccuracies and/or no safety considerations. <p>Quality of work</p> <ul style="list-style-type: none"> • Inaccurate or incomplete adjustment, aligning, repairing and replacing of components. • Some or no consideration given to cleaning the component/system or work area. 	<p>Maintenance carried out to requirements of brief and task within allocated time:</p> <p>Safe working</p> <ul style="list-style-type: none"> • Work area set out safely with consideration of the space to be worked in and requirements of the task, avoiding any potential health and safety hazards. • Selected and used relevant PPE correctly. • Isolation techniques were carried out safely and correctly; any errors were quickly rectified. <p>Process/method</p> <ul style="list-style-type: none"> • Accurately visually checked the system components before beginning any maintenance work, making note of any potential issues or hazards. • Disassembled systems and subsystems safely and accurately. • Correct and appropriate inspection in accordance with manufacturers recommendations. • Used appropriate tools and equipment to disassemble and reassemble the pump/motor, for example socket sets, spanners. • Assembled systems and subsystems accurately and safely. • Disposed of waste, for example oil/grease, cleaning products, used parts. <p>Quality of work</p> <ul style="list-style-type: none"> • Accurate and safe completion of adjustment, aligning, repairing and replacing of components. • Equipment/system and/or work area cleaned after task is complete.

Indicative content (what will be seen for this version of the task)

Carried out planned maintenance of pump/motor to requirements of brief and task.

Safe working

- Created adequate space to complete task safely
- Ensured area was clean and tidy
- Put up barriers and signage, as required
 - Used appropriate PPE, eg safety boots, gloves, eye protection
 - Safely applied isolation techniques, as required, eg isolation from power source

Process/method

- Visually checked the system components, for example for signs of wear, the condition
- Used appropriate tools and equipment to disassemble and reassemble the pump/motor, eg socket sets, spanners
- Disassembled pump/motor safely
- Carried out appropriate inspection in accordance with the manufacturer's recommendations in the technical information
 - Check, report on condition and replace if necessary:
 - shaft
 - bearing(s)
 - seals
 - drive mechanism (eg gear, chains and belts).
 - Reassemble pump/motor, making adjustments to realign component(s) as required:
 - gear and pulleys
 - bearing(s), so no movement in the shaft.
 - Lubricate (if required) and adjust tension of the drive mechanism.
- Reinstated work area on completion, cleaning tools and equipment, returning to store, disposing of waste, eg oil/grease, cleaning products, used parts

Quality of work

- Completed adjustment to realign drive mechanism, replace parts as required and tension drive mechanism to manufacturer's specification
- Reassembled systems and subsystems accurately and safely
- Photographs of maintenance taken by assessor show activities

Task 3 – Produce a report on the maintenance activity

Fail	Pass
<p>Report does not meet requirements of brief and task:</p> <p>Maintenance report</p> <ul style="list-style-type: none"> Maintenance report has key omissions or inaccuracies including type of activity carried out, no reference to manufacturer's information, advantages and disadvantages, recommendations, identifying improvements, no reference to risk assessment or method statement, waste disposal records and date of scheduled maintenance. Maintenance report uses inappropriate or inaccurate language and terminology. <p>Communication</p> <ul style="list-style-type: none"> Email uses inappropriate and inaccurate language and terminology. Email omits findings and recommendations. 	<p>Report completed to requirements of brief and task within allocated time:</p> <p>Maintenance report</p> <ul style="list-style-type: none"> Maintenance report is accurate, including type of maintenance, reference to manufacturer's information, advantages and disadvantages, recommendations of work that needs to be carried out before next scheduled maintenance, identifying improvements from risk assessment and method statements, accurate records of waste disposal and correct date for next scheduled maintenance (annual). Maintenance report uses correct technical language and terminology appropriate to the reader. <p>Communication</p> <ul style="list-style-type: none"> Email uses correct non-technical language and terminology appropriate to the reader. Email includes clear findings and recommendations in non-technical language.

Indicative content (what will be seen for this version of the task)

Produced maintenance report and email to organisation as required in the task

a) Maintenance report

Candidates must complete maintenance that includes:

- type of maintenance activity carried out with reference to manufacturer's information: planned maintenance
- advantages and disadvantages of this type of maintenance: for example costs, downtime, lifespan of the machine components, planning and scheduling, disruption
- recommendations of any issues and defects identified that may require attention before the next maintenance activity: monitor condition of bearings, replace seals
- identified improvements, if appropriate, referring to risk assessment and method statement: more efficient order of work, additional safety control measures, frequency of maintenance, revised timescales for activities
- correct and appropriate use of technical language and terminology
- records of any waste disposal appropriate to the type of waste
- date of next scheduled maintenance based on the technical information supplied.

b) Email to the organisation:

- email in non-technical language aimed at a customer who doesn't have engineering experience or expertise
- makes reference to and sums up the attached maintenance report.

6. Centre guidance

Guidance provided in this document supports the administration of this assessment.

This assessment is designed to require the candidate to make use of the knowledge, understanding and the practical skills they have developed over the course of their learning to complete tasks/problems/challenges.

This approach to assessment emphasises to candidates the importance of applying the full range of their learning into practice in their chosen industry area.

Candidates are provided with an assignment brief. They must draw on their knowledge and skills and independently select and apply the correct processes, tools, equipment, materials and approaches to take, to complete the brief.

During the learning programme, it is expected that tutors will have taken the opportunity to set shorter, formative tasks that uses the learning they have so far covered, drawing this together in a similar way, so they are familiar with the format, conditions and expectations of the assessment.

Candidates should be made aware during the learning programme what the assessment will be measuring, and how the assessment will be marked. Candidates should understand the level of performance that will be required as a minimum to demonstrate the level of competence required.

Candidates should not be entered for the assessment until the end of the course of learning for the qualification, so they are prepared to complete the assignment successfully.

Health and safety

Candidates must not be entered for assessment without being clear on the importance of working safely and having attended sufficient practical training to be able to work safely. The assessor must immediately stop an assessment if a candidate works unsafely. At the discretion of the assessor, depending on the severity of the incident, the candidate may be given a warning. If they continue to work unsafely, risking the safety of themselves or others, the assessment must be ended, and they must retake the assessment in a future series after significant further training has taken place. Any warnings issued to a candidate must be considered as part of the grading process and recorded on the Assessor Observation Record Form. Any actions that have led to that warning must be detailed on the Assessor Observation Record Form so they can be considered along with the other evidence when applying the grading descriptors.

Compliance with timings

Due to the nature of this assessment, the maximum time allowances provided for each task must be adhered to. They refer directly to assessment time, not any additional setting up times the centre needs to create an appropriate assessment environment.

Word counts

Typical word counts, where indicated, are to be used as approximates for guidance to support the production of sufficient evidence. The grading will relate to the quality of the evidence produced and not whether the word count has been met.

Assessor student ratios

The number of candidates an assessor will be able to observe at one time will vary depending on local conditions relating to:

- monitoring and maintaining safety during assessment
 - any specific hazards related to the task that pose a risk of harm in relation to the competence of the learners
 - availability of supervisory staff to support the assessor
- the practicalities of collecting evidence
 - the complexity of evidence collection for the task
 - whether there are any peak times where there is a lot of evidence to collect that will need additional support or any that are quieter which may be eased through staggered starts etc
 - local conditions e.g.
 - layout of the assessment environment and sufficient assessor line of sight to task activity throughout the assessment period
 - amount of additional support available (e.g. to capture image/video evidence)
 - availability of suitable workspaces/bays or of shared resources and equipment.

Centres are advised to trial the planned arrangements during formative assessment, reviewing the quality of evidence captured and manageability. It is expected that for straight forward observations, with favourable local conditions and support, (and unless otherwise specified) no more than six candidates will be observed by a single assessor at one time, and the number will usually be fewer than this maximum. The key factors to consider are the logistics of collecting sufficient evidence and ability to remain working safely in the assessment environment. A timetable of assessments and layout of the workspaces, detailing:

- the students being assessed at each workstation
- the assessor(s)
- support staff present

must be available for verification.

Observation evidence

Observation notes form part of the candidate's evidence and must capture evidence of student performance during the practical tasks describing how well the activity has been carried out, rather than stating the steps/actions, the candidate has taken. The notes must be very descriptive and focus on the quality of the performance that are notable in relation to the quality indicators in the grading descriptors. They must provide sufficient, appropriate evidence that can be used by the assessor and for verification to assess the performance against the grade descriptors.

Identifying what it is about the performances that is different between candidates can clarify the qualities that are important to record. Each candidate is likely to carry out the same steps, so a checklist of this information would not help differentiate between them. However, qualitative comments on how well they do it, and quantitative records of accuracy and tolerances would.

The assessor should refer to the grading descriptors to ensure appropriate aspects of performance are recorded. These notes will be used for grading and verification purposes and so must be detailed, accurate and differentiating.

Assessors should ensure that any required additional supporting evidence including e.g. photographs or video can be easily matched to the correct candidate, are clear, well-lit and

showing the areas of particular interest in sufficient detail and clarity for assessment (ie taken at appropriate points in production, showing accuracy of measurements where appropriate).

Assessor grading and justification is completed on a separate form (Candidate Record Form).

As far as possible candidates must not be distracted, or their performance affected by the process of observation and evidence collection.

Video and photograph evidence

The assessment materials for each assignment identify the minimum candidate and assessor evidence requirements to support grading and verification. Where ephemeral evidence (e.g. areas of candidate performance that may be hard to capture with photographs and assessor notes alone) plays a significant part in the practical assessment. If this is the case City & Guilds will prescribe the type/capture where the use of video is necessary for practical assessment components (e.g. specifying exactly which elements of the practical must be videoed, or photographed), and any technical specifications for these forms of evidence e.g. length of videos, maximum file sizes etc will also be supplied. Photographic and video evidence will be submitted along with the written candidate evidence and assessor evidence as described in the additional evidence section of the task.

Please note that centres must ensure that video evidence and photo evidence is clear and meets the minimum requirements. The ability of the External Quality Assurer (EQA) to take this evidence into account may be impaired and delay the verification process if the requirements are not met.

Minimum evidence requirements for grading

These sections in the assignment list the minimum requirements of evidence to be submitted for grading and the external quality assurance (EQA) sample:

- ***What must be produced for grading***
- ***Additional evidence for this task.***

Evidence produced during assessment above and beyond this may be submitted, as long as it provides useful information for grading and verification and has been produced under appropriate conditions.

Preparation of candidates

Candidates should be aware of which aspects of their performance will support them achieving a Pass in assessment. This is best carried out through routinely pointing out good or poor performance during the learning period, and through formative assessment. Although candidates will not have access to the grading descriptors during the assessment.

During the learning programme, direct tutor instruction in how to approach tasks through modelling, support, guidance and feedback are critical. However, gradual removal of this support is necessary in preparation for summative assessment. This supported approach is not valid for summative assessment.

The purpose of summative assessment is to confirm the standard the candidate has reached as a result of participating in the learning process. Candidates should be encouraged to do the best they can and be made aware of the difference between these summative assessments and any formative assessments they have been subject to.

Guidance on assessment conditions

The assessment conditions that are in place for this assignment are to:

- ensure the rigour of the assessment process
- provide fairness for candidates
- give confidence in the outcome.

They can be thought of as the rules that ensure that all candidates who take an assessment are being treated fairly, equally and in a manner that ensures their result reflects their true ability.

The conditions outlined below relate to the tasks within this assignment. These do not affect any formative assessment work that takes place, although it is advised that candidates are prepared for the conditions they will need to work under during summative assessment.

The evidence for the tasks that make up this assignment must be completed under the specified conditions. This is to ensure authenticity and prevent malpractice as well as to assess and record candidate performance for assessment in the practical tasks. It is the centre's responsibility to ensure that local administration and oversight gives the assessor sufficient confidence to be able to confirm the authenticity of the candidate's work.

Security and authentication of candidate work

Candidate evidence must be kept secure to prevent unsupervised access by the candidate or others. Where evidence is produced over a number of sessions, the assessor must ensure learners and others cannot access the evidence without supervision. This might include storing written work or artefacts in locked cupboards and collecting memory sticks of evidence produced electronically at the end of each session.

Candidates are required to sign declarations of authenticity, as is the assessor. The relevant form is included in this assignment pack and must be signed after the production of all evidence.

Where the candidate or assessor is unable to or does not confirm authenticity through signing the declaration form, the work cannot be accepted, and a grade of Fail will be given. If any question of authenticity arises eg at verification, the Centre may be contacted for justification of authentication.

Accessibility and fairness

Where a candidate has special requirements, assessors should refer to the *Access arrangements and reasonable adjustments* section of the City & Guilds website.

Assessors can support access where necessary by providing clarification to any candidate on the requirements or timings of any aspect of this assignment. Assessors should not provide more guidance than the candidate needs as this may impact on the candidate's grade, see the guidance and feedback section below.

All candidates must be provided with an environment, time frame and resources that allow them reasonable access to a Pass grade.

Guidance and feedback

To support centre file management, assessors may specify a suitable file format and referencing format for evidence (unless otherwise specified e.g. if file naming is an assessment point for the assignment). Guidance must only support access to the assignment brief and must not provide feedback for improvement. The level and frequency of clarification and guidance must be

- recorded fully on the Assessor Observation Record Form
- taken into account along with the candidate's final evidence during grading
- made available for verification.

Assessors must not provide feedback on the quality of the performance or how the quality of evidence can be improved. This would be classed as malpractice. However, this does not apply if the assessor asks questions as part of the assessment process. Such requirements will be specifically stated within task centre guidance.

Assessors should, however, provide general reminders to candidates throughout the assessment period to check their work thoroughly before submitting it, and to be sure that they are happy with their final evidence as it may not be worked on further after submission.

Candidates can rework any evidence that has been produced for each task during the time allowed.

Assessors should check and be aware of the candidates' plans and designs to ensure management of time and resources is appropriate, and so any allowed intervention can take place at an appropriate time.

The information on the guidance given and captured on the Assessor Observation Record Form is part of the evidence that must be taken into account along with the other evidence for the task when grading. It is up to the assessor to decide if the guidance the candidate has required suggests they are lacking in any performance outcome and consider the severity of the issue when applying the grading criteria. The assessor must record where and how guidance has had an impact on the grade given, so this is available should queries arise at verification or appeal.

What is, and is not, an appropriate level of guidance

- An assessor should intervene with caution if a candidate has taken a course of action that will result in them not being able to submit the full range of evidence for assessment. However, this should only take place once the assessor has prompted the candidate to check that they have covered all the requirements. Where the assessor has to be explicit as to what the issue is, this is likely to demonstrate a lack of understanding on the part of the candidate rather than a simple error, and full details should be recorded on the Candidate Record Form.
- The assessor should not provide guidance if the candidate is thought to be able to correct the issue without it, and a prompt would suffice. In other words, only the minimum support the candidate actually needs should be given, since the more assessor guidance provided, the less of the candidate's own performance is being demonstrated and therefore the larger the impact on the grade awarded.
- The assessor must not provide guidance that the candidate's work is not at the required standard or how to improve their work. In this way, candidates are given the chance to identify and correct any errors on their own, providing valid evidence of knowledge and skills that will be credited during grading.
- The assessor must not produce any templates, pro-formas, work logs etc. If templates are provided by City & Guilds as part of the assignment, these should not be adapted but can be provided to candidates either electronically or as paper based. Compliance of this requirement may be checked as part of the verification process.

All specific prompts and details of the nature of any further guidance must be recorded on the relevant form and reviewed during grading and verification.

Submission of/ retention of evidence

In order to fully support candidates, centres are required to retain candidates' evidence until the next External Quality Assurer sampling activity. However, where this is not practical, the centre must keep all the relevant assessment records in place to show progress of the candidate throughout their qualification. Candidate assessment records must be retained for three years after certification.

See Appendix 3 Centre Handbook: Quality Assurance Standards for details.

7. Assessor Observation Record Form

Task	Qualification number
	2145-12
Candidate name	Candidate number
Centre name	

Complete the tables below referring to the relevant grading grid/grade descriptors, found in the assessment pack.

Assessor observation	Notes – capture detailed, accurate and differentiating notes which identify how the evidence meets the requirements of the grading descriptors. Also capture any other information relevant to the assessment of this task/assessment, eg any support/feedback/warnings provided.

Assessor signature	Date

8. Candidate Record Form

Assessment ID	Qualification number
2145-251	2145-12
Candidate name	Candidate number
Centre name	Centre number

Marker Notes – Please always refer to the relevant grading grid for guidance on criteria and make notes which describe the quality of the evidence and justification of how the grading descriptors have been met. Expand boxes as required

Task	Notes and justification	Outcome
Task 1		Pass/Fail
Task 2		Pass/Fail
Task 3		Pass/Fail
Overall outcome		Pass/Fail

Assessor signature	Date

9. Declaration of Authenticity

Assessment ID	Qualification number
2145-251	2145-12
Candidate name	Candidate number
Centre name	Centre number

Additional Support

Has the candidate received any additional support in the production of this work?

No Yes (Please tick appropriate)

If yes, give details below (and on a separate sheet if necessary).

--

Candidate:

I confirm that all work submitted is my own, and that I have acknowledged all sources I have used.

Candidate signature	Date

Assessor:

I confirm that all work was conducted under conditions designed to assure the authenticity of the candidate's work, and am satisfied that, to the best of my knowledge, the work produced is solely that of the candidate.

Assessor signature	Date

Note: Where the candidate and/or assessor is unable to or does not confirm authenticity through signing this declaration form, the work will be returned to the centre and this will delay the verification process. If any question of authenticity arises, the assessor may be contacted for justification of authentication.

Appendix 1 – Risk assessment template (Task 1)

Task	Qualification number
Task 1 – Plan the maintenance activity	2145-12
Candidate name	Candidate number
Centre name	Centre number

Name (Competent person carrying out the risk assessment)		Role (Job title/company)	
Maintenance work being carried out (Type of machine)			
Date (DD/MM/YYYY)		Latest date for review (DD/MM/YYYY)	
Site details (Enter details of the site that the risk assessment is being carried out on, including site information if multiple sites)			
People at risk		Workers	0
		Adjacent workers	0
		Site wide workers	0
		Visitors	0
		Members of the public	0

Hazards identified (Consider the hazards specific to the type of activities being assessed)	Level of risk (High, medium, low)	Control measures currently in place (Enter details of all control measures that are currently in place)	Additional control measures required (Enter details of any new actions that need to be taken to reduce, control or eliminate the risks of each hazard)	Name (Person responsible for implementing controls)	Date controls must be actioned by (DD/MM/YYYY)

Assessor signature	Date

Appendix 2 – Mapping of tasks to transferrable employability skills

The following transferable employability skills underpin the content of this qualification. The grid below provides an overview of where the employability skills map to and are best demonstrated within this practical assessment.

Transferrable employability skills	Task 1	Task 2	Task 3
Communication in the workplace			
Selects appropriate formats for written communication for different purposes and audiences, in line with workplace conventions or procedures, where appropriate (CSW1)	Y		Y
Produces documents of different types that are appropriate (e.g., in terms of length, style and language use) for the purpose and intended audience (CSW2)	Y		Y
Accurately and appropriately uses terminology associated with a particular workplace or sector in written communication (CSW5)	Y		Y
Problem solving			
Gathers appropriate information or advice from different sources to help solve a specific work-related problem (PSW1)	Y	Y	Y
Assesses a range of potential solutions, applying appropriate problem-solving strategies (PSW2)	Y	Y	Y
Time management skills			
Plans work: <ul style="list-style-type: none"> • according to priority • taking into account length of time needed to complete tasks • in order to meet deadlines • including appropriate breaks (TMS1) 	Y	Y	Y
Works at an appropriate pace to carry out tasks in accordance with plan (TMS2)	Y	Y	Y
Self-management skills			
Plans and manages own time effectively to achieve a balance between personal and work/training-related demands (SMS1)	Y	Y	
Plans and manages resources effectively (SMS2)	Y	Y	Y

Appendix 3 – Sources of general information

The following documents contain essential information for centres delivering City & Guilds qualifications. They should be referred to in conjunction with this handbook. To download the documents and to find other useful documents, go to the Centre document library on www.cityandguilds.com or click on the links below:

Centre Handbook: Quality Assurance Standards

This document is for all approved centres and provides guidance to support their delivery of our qualifications. It includes information on:

- centre quality assurance criteria and monitoring activities
- administration and assessment systems
- centre-facing support teams at City & Guilds/ILM
- centre quality assurance roles and responsibilities.

The Centre Handbook should be used to ensure compliance with the terms and conditions of the centre contract.

Centre Assessment: Quality Assurance Standards

This document sets out the minimum common quality assurance requirements for our regulated and non-regulated qualifications that feature centre-assessed components. Specific guidance will also be included in relevant qualification handbooks and/or assessment documentation.

It incorporates our expectations for centre internal quality assurance and the external quality assurance methods we use to ensure that assessment standards are met and upheld. It also details the range of sanctions that may be put in place when centres do not comply with our requirements or actions that will be taken to align centre grading/assessment to required standards. Additionally, it provides detailed guidance on the secure and valid administration of centre assessments.

Access arrangements: When and how applications need to be made to City & Guilds provides full details of the arrangements that may be made to facilitate access to assessments and qualifications for candidates who are eligible for adjustments in assessment.

The Centre document library also contains useful information on such things as:

- conducting examinations
- registering learners
- appeals and malpractice.

Useful contacts

Please visit the Contact us section of the City & Guilds website, [Contact us](#)

City & Guilds

For over 140 years, we have worked with people, organisations and economies to help them identify and develop the skills they need to thrive. We understand the life-changing link between skills development, social mobility, prosperity and success. Everything we do is focused on developing and delivering high-quality training, qualifications, assessments and credentials that lead to jobs and meet the changing needs of industry.

We partner with our customers to deliver work-based learning programmes that builds competency to support better prospects for people, organisations and wider society. We create flexible learning pathways that support lifelong employability because we believe that people deserve the opportunity to (re)train and (re)learn again and again – gaining new skills at every stage of life, regardless of where they start.

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