

# **Level 3 Advanced Technical Extended Diploma in Land-Based Engineering (1080)**

**(0171-38)**

Version 1.0

**Synoptic Assignment Pack**

# Introduction

General information about structure of the assignment pack

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## Candidate section

### Candidate guidance

#### General guidance

This is a formal assessment that you will be marked and graded on. You will be marked on the quality and accuracy of your practical performance and any written work you produce. It is therefore important that you carry your work out to the highest standard you can. You should show how well you know and understand the subject and how you are able to use your knowledge and skills together to complete the tasks.

#### Plagiarism

Plagiarism is the failure to acknowledge sources properly and/or the submission of another person's work as if it were the candidate's own. Plagiarism is not allowed in this assignment. This is an assessment of your abilities, so the work must be all your own work and carried out under the conditions stated. You will be asked to sign a declaration that you have not had any outside help with the assessment.

Your tutor is allowed to give you some help understanding the assignment instructions if necessary, but they will record any other guidance you need and this will be taken into account during marking.

Where research is allowed, your tutor must be able to identify which work you have done yourself, and what you have found from other sources. It is therefore important to make sure you acknowledge all sources and clearly reference any information taken from them.

#### Timings and planning

You should take care when planning to make sure you have divided the time available between tasks appropriately. You should check your plan is appropriate with your tutor.

If you have a good reason for needing more time, you will need to explain the reasons to your tutor and agree a new deadline date. Changes to dates will be at the discretion of the tutor, and they may not mark work that is handed in after the agreed deadlines.

#### Health and Safety

You must always work safely, in particular while you are carrying out practical tasks.

You must always follow any relevant Health and Safety regulations and codes of practice.

If your tutor sees you working in a way that is unsafe for yourself or others, they will ask you to stop immediately, and tell you why. Your tutor will not be able to reassess you until they are sure you are ready for assessment and can work safely.

**Presentation of work**

Presentation of work must be neat and appropriate to the task.

You should make sure that each piece of work is clearly labelled with your name and the assignment reference.

All electronic files must be given a clear file name that allows your tutor to identify it as your work. Written work eg reports may be word processed but this is not a requirement.

All sketches and drawings should be neat and tidy, to scale and annotated.

Calculations should be set out clearly, with all working shown, together with any assumptions made. You should use appropriate units at all times and answers must be expressed to a degree of accuracy, consistent with the requirements of the task.

The use of non-programmable scientific calculators is acceptable.

## Assignment

You have recently taken a new role as a service engineer at a busy machinery dealership. The dealership diagnoses faults and repairs a variety of land-based service machinery.

Over the next few months you will be working in the workshop completing routine tasks assigned by the service manager. You will be inspecting, testing and repairing a range of vehicles. On completion of all tasks you will need to complete any relevant documentation including job cards for each vehicle. You will also feedback verbally to the customer to explain possible causes and recommendations for future action.

The dealership also sells second hand machinery. These are often acquired through trade-ins. The sales manager has asked you to appraise a machine for future resale potential. The sales manager has asked that a detailed report be produced with labelled diagrams and photographs used where appropriate.

## Tasks

### Task 1

Two vehicles have presented at the workshop with engine problems. The service manager has asked you to carry out appropriate tests and report back to the customer.

#### Vehicle A

A customer feels their tractor is under powered.

You must

- carry out routine engine checks
- conduct test to determine the actual power output and characteristics
- evaluate test results
- feedback verbally to the customer, including:
  - evaluation of test results
  - recommendations for further action
  - possible causes of the customer's perception of lack of power.

#### Vehicle B

Using a petrol engine pedestrian machine.

You must

- appraise the condition of the engine
- evaluate the fitness for purpose of components
- feedback verbally to the customer, including:
  - viability of repair options
  - possible causes of engine condition
  - actions to be taken to avoid re-occurrence
  - make recommendations for further action.

#### What must be presented for assessment

- completed job cards
- hard copy of data and observations from tests
- measurements taken from components
- evaluation and interpretation of measurements.

#### Additional records to support your performance

- risk assessment
- professional discussion records
- your feedback notes
- your tutor's notes of your working practice; and the standard and accuracy of the finished work.

## Task 2

A customer reports that their machine has failed to start. The service manager has asked you to undertake a series of tests to diagnose the cause of the fault.

You must

- use wiring diagrams to identify the circuit and components to be tested
- carry out appropriate tests and diagnose the fault
- feedback verbally to the customer, including
  - evaluation of test results
  - recommendations for further action.

### What must be presented for assessment

- wiring diagram with notes indicating process taken
- completed job card
- hard copy of test results.

### Additional records to support your performance

- risk assessment
- professional discussion records
- your feedback notes
- your tutor's notes of your working practice; and the standard and accuracy of the finished work.

## Task 3

A vehicle is presented with a transmission that allegedly is not functioning correctly. The service manager has asked you to evaluate the operation of the transmission and report your findings and recommendations.

You must

- identify, with the use of manufacturers schematic diagrams, which clutch packs are used in operation for each speed range
- verify the clutch packs operating pressures are within manufacturer's specification
- recalibrate the transmission following manufacturer's procedures.

### What must be presented for assessment

- completed job card
- hard copy showing the manufacturer's test data you have used
- schedule of clutch pack pressures measured and any variance from the manufacturer's reference data
- annotated schematic diagrams
- a verbal report outlining your findings and recommendations .

### Additional records to support your performance

- risk assessment
- your tutor's notes of your working practice; and the standard and accuracy of the finished work.

### Task 5

A customer has reported repeated failure of their tractor's braking system. The tractor has been used for transport applications.

You must

- carry out investigation of failed components parts
- investigate possible causes of repeated premature break failure
- make decision around immediate action
- discuss with customer possible causes of repeated failures and the precautions required to avoid further failures.

#### What must be presented for assessment

- completed job card
- hard copy of data from test.

#### Additional records to support your performance

- risk assessment
- professional discussion records
- your feedback notes
- your tutor's notes of your working practice; and the standard and accuracy of the finished work.

### Task 6

A hydraulic pump is suspected as being faulty. It must be returned to the factory for warranty consideration and a report must be sent with it.

The report could include:

You must

- appraise the condition of the part
- evaluate any potential cause(s) of failure
- compile a detailed report of your inspection, this could include
  - labelled diagrams and photographs
  - details of the warranty claim.

#### Conditions of assessment:

You may carry out research and collect the information you want to use in your report under unsupervised conditions.

Your final report must be completed working alone under supervised conditions. You will have access to the information you have collected to complete your report.

#### What must be presented for assessment

- a written condition report (500-750 words).



## Task 7

The sales manager has asked for a vehicle to be appraised for a potential trade in.

You must

- appraise the vehicle's condition to enable the sales manager to decide if the vehicle is to be retailed or sold to the trade
- evaluate any investment required to prepare the tractor for resale
- compile a detailed report on condition and serviceability of each vehicle
- make recommendations on actions required.

### **Conditions of assessment:**

You may carry out research and collect the information you want to use in your report under unsupervised conditions.

Your final report must be completed working alone under supervised conditions. You will have access to the information you have collected to complete your report.

### **What must be handed in for marking:**

- a written condition report (500-750 words).  
the report could include: labelled diagrams and photographs.

## TUTOR GUIDANCE

This synoptic assessment is designed to require the candidate to make use their knowledge, understanding and skills they have built up over the course of their learning for this qualification to tackle problems/tasks/challenges.

This approach to assessment emphasises to candidates the importance and applicability of the full range of their learning to practice in their industry area, and supports them in learning to take responsibility for transferring their knowledge, understanding and skills to the practical situation, fostering independence, autonomy and confidence.

Candidates are provided with a set of tasks. They then have to draw on the knowledge and skills they have to independently select the correct processes, skills, materials, and approaches to take, from across the qualification, to make good decisions that will achieve an end result that is fit for the specified purpose.

During the learning programme, it is expected that tutors will have taken the opportunity to set shorter, formative tasks that allow candidates to be supported to independently use 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 synoptic assessment.

You should explain to candidates what the Assessment Objectives are and how they are implemented in marking the assignment, so they will understand the level of performance that will achieve them high marks. Assessment specification

The table below indicates the content assessed and evidence required for this synoptic assessment.

The candidate should not be entered for the assessment until the end of the course of learning for the qualification so they are in a position to complete the assignment successfully.

## Guidance on tasks

### Time

The recommended time allocated for the completion of the tasks and production of evidence for this assessment is between **40** and **50** hours. Candidates should be required to plan their work and have their plans confirmed for appropriateness in relation to the time allocated for each task.

It is recommended that tasks 1 and 5 be allocated **8** to **10** hours in a workshop environment.

### Resources

Candidates must have access to a suitable range of resources to complete the tasks and to have the opportunity to choose equipment demonstrating the ability to select from a range of appropriate tools and tests.

Candidates should be provided with access to a faulty hydraulic pump for task 6 and should have access to a large land-based machine for task 7. Candidates should be provided with access to or copies of materials to produce the reports required. They will need access to the Internet for purposes of research.

### Health and safety

Candidates should not be entered for assessment without being clear of the importance of working safely, and practice of doing so. The tutor must immediately stop an assessment if a candidate works unsafely. At the discretion of the tutor, depending on the severity of the incident, the candidate may be given a warning. If they continue to work unsafely however, their assessment must be ended and they must retake the assessment at a later date.

### Observation

Where the tutor is required to carry out observation of performance, detailed notes must be taken of the quality of performance along with any other aspects of performance that will support a judgement of the marks to be awarded (eg measurements to confirm accuracy/tolerances).

The tutor should refer to the marking grid to ensure appropriate aspects of performance are recorded. These notes will be used for marking and moderation purposes and so must be detailed and accurate.

Tutors should ensure that any supporting evidence including eg photographs or video can be easily matched to the correct candidate, are clear, sufficiently well-lit and showing the areas of particular interest for assessment (ie taken at appropriate points in production, showing accuracy of measurements where appropriate).

If candidates are required to work as a team, each candidate's contribution must be noted separately. The tutor may intervene if any individual candidate's contribution is unclear or to ensure fair access (see below).

### Preparation

Candidates should be aware of which aspects of their performance will give them good marks in assessment. This is best carried out through routinely pointing out good or poor performance during the learning period, and through formative assessment. 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. They may not have access to the marking grids.

## Guidance on assessment conditions

The assessment conditions that are in place for this synoptic 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 this summative synoptic assignment. These do not affect any formative assessment work that takes place. Formative assessment will necessarily take a significant role throughout the learning programme where support, guidance and feedback (with the opportunity to show how feedback has been used to improve outcomes and learning) are critical. This approach is not, however, valid for summative assessment. The purpose of summative assessment is to confirm the standard the candidate has achieved as a result of participating in the learning process.

### Authentication of candidate work

Candidates are required to sign declarations of authenticity, as is the tutor. The relevant form is included in this assignment pack.

The completion of the final evidence for the tasks that make up this synoptic assignment must be completed in 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. Any aspect that may be undertaken in unsupervised conditions is specified.

Candidates can rework any evidence that has been produced for this synoptic assignment during the time allowed. However, this must be as a result of their own review and identification of weaknesses and not as a result of tutor feedback. Once the evidence has been submitted for assessment, no further amendments to evidence can be made.

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 tutor 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.

### Accessibility and fairness

Where the candidate has special requirements, tutors should refer to the separate guidance document.

Tutors can provide clarification to any candidate on the requirements of any aspect of this synoptic assignment. Tutors should not provide more guidance than the candidate needs as this may impact on the candidate's grade. Guidance must only support access to the assignment and must not provide feedback for improvement. Any clarification and guidance should be recorded fully and must be taken into account along with the candidate's final evidence during marking and must be made available for moderation. Tutors must not provide feedback on the quality of the performance or how the quality of evidence can be improved. This would be classed as tutor malpractice. Tutors should however provide general reminders to candidates throughout the assessment period that they must check their work thoroughly before submitting it to be sure that they are happy with their final evidence as it may not be worked on further after submission.

It is up to the marker during marking to decide in what area, if any, the guidance provided suggests the candidate is lacking, the severity of the issue, and how to award marks on the basis of this full range of evidence. The marker must record where and how guidance has had an impact on the marks given, so this is available should queries arise at moderation or appeal.

### **Example**

A tutor should intervene 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 tutor has prompted the candidate to check that they have covered all the requirements. Where the tutor 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.

The tutor should do their best to refrain from providing 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 guidance provided, the larger the impact on the marks awarded.

Both prompts and details of the nature of any further guidance must be recorded and reviewed during marking and moderation.

A tutor may 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 marking.

Tutors should ensure that candidates' plans or completion of the tasks distribute the time available appropriately and may guide candidates on where they should be up to at any point in a general way. Any excessive time taken for any task should be recorded and should be taken into account during marking if appropriate

All candidates must be provided with an environment and resources that allows them access to the full range of marks available.

Where candidates have worked in groups to complete one or more tasks for this synoptic assessment, the tutor must ensure that no candidate is disadvantaged as a result of the performance of any other team member. If a team member is distracting or preventing another team member from fully demonstrating their skills or knowledge, the tutor must intervene.

## Guidance on marking

Please see the centre guidance document ***Guidance for assessment of City & Guilds technical qualifications, including grading and use of marking grids*** for detailed guidance on using the following marking grid.

## Marking grid

For any category, 0 marks may be awarded where there is no evidence of worthy achievement

%	Assessment Objective	Band 1 descriptor Poor to limited	Band 2 descriptor Fair to good	Band 3 descriptor Strong to excellent
10	<b>AO1 Recall of knowledge relating to the qualification LOs</b> <ul style="list-style-type: none"> <li>Does the candidate seem to have the full breadth and depth of taught knowledge across the qualification to hand?</li> <li>How accurate is their knowledge? Are there any gaps or misunderstandings evident?</li> <li>How confident and secure does their knowledge seem?</li> </ul>	<p style="text-align: center;"><b>(1-2 marks)</b></p> <p><b>Recall shows some weaknesses in breadth and/or accuracy.</b> Hesitant, gaps, inaccuracy</p>	<p style="text-align: center;"><b>(3-4 marks)</b></p> <p><b>Recall is generally accurate and shows reasonable breadth. Inaccuracy and misunderstandings are infrequent and usually minor.</b> Sound, minimal gaps</p>	<p style="text-align: center;"><b>(5-6 marks)</b></p> <p><b>Consistently strong evidence of accurate and confident recall from the breadth of knowledge.</b> Accurate, confident, complete, fluent</p>
		<p><b>Examples of types of knowledge expected:</b> Legislation and regulations, health and safety, risk assessment protocols, the types of businesses and career paths within the land-based engineering industry and the roles and responsibilities of those within the workplace, how to access technical data, technical terminology, workshop processes, land-based machinery and equipment component location, identification and functionality, routine service actions, tools and equipment relevant to carrying out diagnostic inspections, verification of performance, repairs and maintenance, knowledge of power units, transmissions, hydraulics, electrics and electronics</p>		

%	Assessment Objective	Band 1 descriptor Poor to limited	Band 2 descriptor Fair to good	Band 3 descriptor Strong to excellent
		<p>The candidate has shown a limited range of knowledge from across the qualification with insecurity in areas.</p> <p>The candidate shows very limited knowledge of legislation, safety requirements, business types and job role responsibilities, machinery and equipment service procedures, repair and diagnostics techniques, verification checks and repair procedures for power units, transmissions, hydraulics, electrics and electronic systems but is unable to carry them out.</p>	<p>The candidate has shown an appropriate range of knowledge from across the qualification which is sound and often detailed.</p> <p>The candidate shows some knowledge of legislation, safety requirements, business types and job role responsibilities, machinery and equipment service procedures, repair and diagnostics techniques, verification checks and repair procedures for power units, transmissions, hydraulics, electrics and electronic systems and carries them out but with little confidence.</p>	<p>The candidate has shown in-depth and detailed knowledge across the whole qualification range, showing a high degree of confidence and accuracy.</p> <p>The candidate shows a good knowledge of legislation, safety requirements, business types and job role responsibilities, machinery and equipment service procedures, repair and diagnostics techniques, verification checks and repair procedures for power units, transmissions, hydraulics, electrics and electronic systems and is able to carry them out.</p>
20	<p><b>AO2 Understanding of concepts theories and processes relating to the LOs</b></p> <ul style="list-style-type: none"> <li>Does the candidate make connections and show causal links and explain why?</li> <li>How well theories and concepts are applied to new situations/the assignment?</li> <li>How well chosen are exemplars – how well do they illustrate the concept?</li> </ul>	<p><b>(1-4 marks)</b></p> <p><b>Some evidence of being able to give explanations of concepts and theories. Explanations appear to be recalled, simplistic or incomplete.</b></p> <p>Misunderstanding, illogical connections, guessing</p>	<p><b>(5-8 marks)</b></p> <p><b>Explanations are logical. Showing comprehension and generally free from misunderstanding, but may lack depth or connections are incompletely explored.</b></p> <p>Logical, slightly disjointed, plausible</p>	<p><b>(9-12 marks)</b></p> <p><b>Consistently strong evidence of clear causal links in explanations generated by the candidate. Candidate uses concepts and theories confidently in explaining decisions taken and application to new situations.</b></p> <p>Logical reasoning, thoughtful decisions, causal links, justified</p>
		<p><b>Examples of understanding expected:</b> Workplace risks assessments, servicing procedures and safety requirements good working practices, interpretation of diagnostic test results, understanding of machinery and equipment systems and the function of their components. Types of businesses within land-based engineering and the career paths within them, how to use technical data, interpretation of schematic diagrams</p>		



%	Assessment Objective	Band 1 descriptor Poor to limited	Band 2 descriptor Fair to good	Band 3 descriptor Strong to excellent
		<p><b>Bottom of band:</b> Very limited understanding of workplace safety, risk assessments and materials not always used, handled or disposed of in the safest manner. Very few elements of service activities and safety checks understood. Limited understanding of fault diagnosis, knows the basic procedures but is unable to interpret results. Shows little awareness of good working practices and unable to explain the points requested.</p> <p><b>Top of band:</b> A basic understanding of workplace safety and risk assessments but materials not used, handled or disposed of in the safest manner. Shows some understanding of the elements of service activities and safety checks. Limited understanding of fault diagnosis, knows the basic procedures but can only interpret very basic results.</p>	<p><b>Bottom of band:</b> There is a compliance with workplace safety, risk assessments and an awareness of correct handling and disposal procedures. Shows a basic knowledge of the requirements for servicing and safety checks. Shows a limited understanding of fault diagnosis, knows the basic procedures but is unsure about interpreting results Shows an awareness of good working practices but unable to explain several of the points requested. Some advantages given but not understood.</p> <p><b>Top of band:</b> There is a broad compliance with workplace safety and risk assessments and an awareness of correct handling and disposal procedures. Shows a broad knowledge of the requirements for servicing and safety checks. Shows an understanding of fault diagnosis, knows the basic procedures but lacks the logic to interpret results.</p>	<p><b>Bottom of band:</b> Full compliance with safety, risk assessments in the majority of situations shows a good understanding of the correct handling and disposal, but on occasion unsure. Good understanding of service activities but unsure of some of the correct procedures. A good understanding of fault diagnosis, knows the basic procedures but is not consistent in interpreting the results Good understanding of good working practices but does not show a full understanding of every point requested.</p> <p><b>Top of band:</b> Full compliance with safety and risk assessments. Materials are consistently used, handled and disposed of correctly. Full understanding of service activities Excellent understanding of fault diagnosis, knows the procedures and is consistent in interpreting correct the results Full understanding of hybrid power systems with all three of the points covered.</p>

%	Assessment Objective	Band 1 descriptor Poor to limited	Band 2 descriptor Fair to good	Band 3 descriptor Strong to excellent
30	<b>AO3 Application of practical/ technical skills</b> <ul style="list-style-type: none"> <li>• How practiced/fluid does hand eye coordination and dexterity seem?</li> <li>• How confidently does the candidate use the breadth of practical skills open to them?</li> <li>• How accurately/ successfully has the candidate been able to use</li> </ul>	<p style="text-align: center;"><b>(1-6 marks)</b></p> <p><b>Some evidence of familiarity with practical skills. Some awkwardness in implementation, may show frustration out of inability rather than lack of care.</b></p> <p>Unable to adapt, frustrated, flaws, out of tolerance, imperfect, clumsy</p>	<p style="text-align: center;"><b>(7-12 marks)</b></p> <p><b>Generally successful application of skills, although areas of complexity may present a challenge. Skills are not yet second nature.</b></p> <p>Somewhat successful, some inconsistencies, fairly adept/ capable</p>	<p style="text-align: center;"><b>(13-18 marks)</b></p> <p><b>Consistently high levels of skill and/or dexterity, showing ability to successfully make adjustments to practice; able to deal successfully with complexity.</b></p> <p>Dextrous, fluid, comes naturally, skilled, practiced</p>
		<p><b>Examples of skills expected:</b> Working in a safe manner, carrying out machinery and equipment servicing, safety checks and repairs to appropriate specifications and standards, using hand and power tools, special tools, test equipment, and verification tools, use and application of tools and equipment relevant to carrying out diagnostic inspections</p>		

%	Assessment Objective	Band 1 descriptor Poor to limited	Band 2 descriptor Fair to good	Band 3 descriptor Strong to excellent
	skills/achieve practical outcomes?	<p><b>Bottom of band:</b> Little compliance with risk assessment. Unsure of how to, handle and dispose of materials in the correct manner. Generally working in an untidy, but safe manner. Poor ability to use tools often uses the wrong tool for the job. Unsure of fault diagnosis and rectification procedures. Unable to obtain the required test results. Limited ability to carry out servicing in any logical manner. Unsure what documentation is required.</p> <p><b>Top of band:</b> Limited compliance with risk assessments. Materials not always used, handled and disposed of in the correct manner. Generally working in a tidy manner. Limited ability to use tools and equipment but techniques are correct. Limited elements of fault diagnosis carried out. Unable to interpret test results. Limited ability to carry out vehicle servicing but uses a logical sequence.</p>	<p><b>Bottom of band:</b> Good compliance with risk assessment. In most cases material handled and disposed of correctly. Mostly good use of tools and equipment hesitations in selecting correct tool and technique. Some elements of fault diagnosis carried out but unable to identify and carryout correct rectification action. Majority of the elements of the service and safety check carried out but not always in a logical sequence. Not all documentation completed and with some inaccuracies.</p> <p><b>Top of band:</b> Broad compliance with risk assessment. Materials generally used, handled and disposed of in the correct manner. Good use of tools and equipment and in most cases showing the correct techniques. Some elements of fault diagnosis carried out and rectification action identified but unable to carry it out. Majority of the elements of the service and safety check carried out in a logical sequence.</p>	<p><b>Bottom of band:</b> Good compliance with risk assessment. Materials always used, handled but not always disposed of correctly. Strong use of tools and equipment always selecting the correct tool but not always using the correct technique. Sufficient elements of fault diagnosis carried out and rectification action identified and carried out. All elements of the service and safety check carried out but not always in a logical sequence. Full documentation completed with very minor inaccuracies.</p> <p><b>Top of band:</b> Full compliance with workplace risk assessment. Materials always used, handled and disposed of correctly. Excellent use of tools and equipment always selecting the correct tool and using the correct technique. All elements of fault diagnosis carried out and rectification action identified and carried out. All elements of the service and safety checks carried out in a logical sequence.</p>

%	Assessment Objective	Band 1 descriptor Poor to limited	Band 2 descriptor Fair to good	Band 3 descriptor Strong to excellent
		Partial completion of documentation with a number of inaccuracies. Tasks are not completed within reasonable time, rushed throughout, limited quality.	Full documentation completed with some inaccuracies. Tasks are completed within reasonable time using appropriate skills to meet task brief, showing adequate levels of skills, demonstrating some confidence in practical tasks.	Full documentation completed with no inaccuracies, to industry standard. Tasks are completed within commercial timescales using appropriate skills to meet task brief. Quality of skills are consistent and to industry standard, demonstrating consistent confidence in practical tasks.
20	<b>AO4 Bringing it all together - coherence of the whole subject</b> <ul style="list-style-type: none"> <li>Does the candidate draw from the breadth of their knowledge and skills?</li> <li>Does the candidate remember to reflect on theory when solving practical problems?</li> <li>How well can the candidate work out solutions to new contexts/problems on their own?</li> </ul>	<p style="text-align: center;"><b>(1-4 marks)</b></p> <p><b>Some evidence of consideration of theory when attempting tasks. Tends to attend to single aspects at a time without considering implication of contextual information.</b></p> <p>Some random trial and error, new situations are challenging, expects guidance, narrow. May need prompting</p>	<p style="text-align: center;"><b>(5-8 marks)</b></p> <p><b>Shows good application of theory to practice and new context, some inconsistencies.</b></p> <p>Remembers to apply theory, somewhat successful at achieving fitness for purpose. Some consolidation of theory and practice</p>	<p style="text-align: center;"><b>(9-12 marks)</b></p> <p><b>Strong evidence of thorough consideration of the context and use of theory and skills to achieve fitness for purpose.</b></p> <p>Purposeful experimentation, plausible ideas, guided by theory and experience, fit for purpose, integrated, uses whole toolkit of theory and skills</p>
		<p><b>Examples of bringing it all together:</b> Applying knowledge and understanding to a particular scenario/problem – justifying decisions/approaches taken e.g. planning process, contingencies, completion of reports, reflection and evaluation</p>		

%	Assessment Objective	Band 1 descriptor Poor to limited	Band 2 descriptor Fair to good	Band 3 descriptor Strong to excellent
		<p><b>Bottom of band:</b> There is some evidence of the candidate using their knowledge and understanding to makes straightforward links between limited topics across the qualification.</p> <p><b>Top of band:</b> The candidate shows evidence of using their knowledge and understanding to makes key links between limited topics across the qualification.</p> <p>Unsure of correct and safe working procedures. Shows little understanding of the need to work logically with the correct tools and equipment. Shows little understanding of servicing and safety checks when carrying these out in a practical manner. Fails to put into practice basic fault diagnostic theory when carrying out identification of faults.</p>	<p><b>Bottom of band:</b> The candidate consistently brings together their knowledge, understanding and skills when carrying out assessments and evaluations throughout tasks. Candidate makes key links between a range topics across the qualifications.</p> <p><b>Top of band:</b> Utilises a range of knowledge from across the qualification when carrying out assessments and evaluations throughout tasks. Shows some application of safe working procedures. Shows an understanding of the need to work in a logical sequence, uses correct tools and equipment, but does not always apply this knowledge. Shows an understanding of the requirements for carrying out servicing and safety checks. Shows an understanding of basic fault diagnosis procedures but unable to put them into practice.</p>	<p><b>Bottom of band:</b> Utilises a wide range of knowledge from across the qualification to skills when carrying out assessments and evaluations throughout tasks. Integration of knowledge, understanding and skills to inform the fault diagnosis procedure.</p> <p><b>Top of band:</b> Utilises a wide range of knowledge from across the qualification when carrying out assessments and evaluations creatively and holistically.</p> <p>Always works in a safe manner showing a full awareness of health and safety requirements. Always works in a logical manner using the correct tools and equipment. Fully aware of the requirements for carrying out vehicle servicing and safety checking. Integration of knowledge, understanding and skills to inform the fault diagnosis procedure. Candidate is able to carry out fault diagnosis procedure in a confident manner.</p>

%	Assessment Objective	Band 1 descriptor Poor to limited	Band 2 descriptor Fair to good	Band 3 descriptor Strong to excellent
10	<b>AO5 Attending to detail/perfecting</b> <ul style="list-style-type: none"> <li>Does the candidate routinely check on quality, finish etc and attend to imperfections/ omissions</li> <li>How much is accuracy a result of persistent care and attention (eg measure twice cut once)?</li> <li>Would you describe the candidate as a perfectionist and wholly engaged in the subject?</li> </ul>	<p align="center"><b>(1-2 marks)</b></p> <p><b>Easily distracted or lack of checking. Insufficiently concerned by poor result; little attempt to improve. Gives up too early; focus may be on completion rather than quality of outcome.</b></p> <p>Careless, imprecise, flawed, uncaring, unfocussed, unobservant, unmotivated</p>	<p align="center"><b>(3-4 marks)</b></p> <p><b>Aims for satisfactory result but may not persist beyond this. Uses feedback methods but perhaps not fully or consistently.</b></p> <p>Variable/intermittent attention, reasonably conscientious, some imperfections, unremarkable</p>	<p align="center"><b>(5-6 marks)</b></p> <p><b>Alert, focussed on task. Attentive and persistently pursuing excellence. Using feedback to identify problems for correction.</b></p> <p>Noticing, checking, persistent, perfecting, refining, accurate, focus on quality, precision, refinement, faultless, meticulous</p>
		<p><b>Examples of attending to detail:</b> Working in a safe manner, verifying work before handing machinery and equipment back to the customer, ensuring machinery and equipment is handing to the customer in a clean and safe condition, checking details of presentation/assignment, checking the results of diagnostic/servicing tests, re-checking findings</p>		
		<p>Few checks carried out at the end of each task. Some attempts are made regarding presentation but are not thorough. Not all documentation is correctly completed and with a number of minor inaccuracies.</p>	<p>Adequate attention to detail. Application of skills demonstrated generally accurate with no gaps. Some checks carried out but at the end of the tasks. Reasonable attempt is made regarding presentation but not all 'marks' are removed. Not all documentation is correctly completed and there are a small number of minor inaccuracies.</p>	<p>Highly focused on the tasks brief achieving an outcome based on performance objectives, showing extreme care and accuracy with consistent attention to detail in application. Frequent checks are carried out during and at the end each task. Machinery and equipment is presented ready for the customer in an excellent condition. All documentation is correctly completed with no inaccuracies.</p>

%	Assessment Objective	Band 1 descriptor Poor to limited	Band 2 descriptor Fair to good	Band 3 descriptor Strong to excellent
0	<b>AO6 Identify and use knowledge from other sources – research</b> <ul style="list-style-type: none"> <li>• Does the candidate identify and use a wide range of appropriate sources effectively?</li> <li>• How critically is information appraised, for plausibility, suitability and relevance?</li> <li>• How purposefully is information used?</li> </ul>	<p style="text-align: center;"><b>(0-0 marks)</b></p> <p><b>Uncritical use of a few basic sources. Referencing lacking or inappropriate. Lack of interpretation/ consideration in use, referencing minimal.</b></p> <p>Limited, uncritical, unfocussed, no clear purpose, cut and paste</p>	<p style="text-align: center;"><b>(0-0 marks)</b></p> <p><b>Use of sources is generally good, possibly inconsistent or critical appraisal is somewhat under-developed. Evidence of generally consistent referencing.</b></p> <p>Fitful, unexceptional, partially considered, reasonably reliable, sometimes straying from the aim</p>	<p style="text-align: center;"><b>(0-0 marks)</b></p> <p><b>Broad and appropriate use of sources. Clear referencing and acknowledgement where appropriate. Information gathered is appropriate and used effectively.</b></p> <p>Broad/deep, relevant, considered, well chosen, purposeful, interpreted</p>
<i>Examples of research: Not applicable</i>				
0	<b>AO7 Originality and creativity</b> <ul style="list-style-type: none"> <li>• Does the candidate respond to the brief in an original way?</li> <li>• Are ideas/ materials etc used in a creative novel, experimental way?</li> <li>• Are creative, unconventional approaches taken in applying skills/ processes to meet a challenge?</li> </ul>	<p style="text-align: center;"><b>(0-0 marks)</b></p> <p><b>Designs and solutions to problems follow conventional routes. Some evidence of experimentation or novel thought.</b></p> <p>Unimaginative, uses existing/ conventional ideas, safe</p>	<p style="text-align: center;"><b>(0-0 marks)</b></p> <p><b>Evidence of creativity/ originality/ experimentation, but may be incompletely developed or lacking in clear intention.</b></p> <p>Somewhat original, beginnings of an idea, partially developed, lacking in confidence; avoiding risk, falling back on convention</p>	<p style="text-align: center;"><b>(0-0 marks)</b></p> <p><b>Opportunities for creativity are identified and tackled with originality and imagination. Takes risks/ experimental</b></p> <p>Original, creative, unique, unconventional, risky, fully developed, inspired</p>
<i>Examples of creativity: Not applicable</i>				

%	Assessment Objective	Band 1 descriptor Poor to limited	Band 2 descriptor Fair to good	Band 3 descriptor Strong to excellent
10	<b>AO8 Communication/ Presentation/ Documentation</b> <ul style="list-style-type: none"> <li>How well are formally produced pieces of work (writing, drawings, posters etc) structured, laid out, presented, communicated?</li> <li>Does the candidate use logical and well structured writing that is coherent and easy to follow?</li> <li>How appropriate and well presented are the chosen</li> </ul>	<p style="text-align: center;"><b>(1-2 marks)</b></p> <p><b>Format choices are limited to a basic 'tool kit' and sometimes inappropriate. Some evidence of attempts to use structure and layout to aid communication.</b></p> <p>Somewhat disorganised/ unstructured, informal, basic</p>	<p style="text-align: center;"><b>(3-4 marks)</b></p> <p><b>Some successful use of conventional formats, but some content may be lacking, eg in logical/coherent approach.</b></p> <p>Reasonably successful, conveys message quite well</p>	<p style="text-align: center;"><b>(5-6 marks)</b></p> <p><b>Appropriate choice of methods, layout, styles and conventions maximise communication. Written style and structure/composition is coherent and logical.</b></p> <p>Professional, organised, well structured, easy to follow, even complex ideas</p>
<p><b>Examples of communication:</b> use of appropriate communication methods for recording and reporting, planning documents and portfolio, logical layout and presentation to ease communication and clarity of documents.</p>				



%	Assessment Objective	Band 1 descriptor Poor to limited	Band 2 descriptor Fair to good	Band 3 descriptor Strong to excellent
	communication methods and formats?	<p>Candidates provide basic responses to assessment tasks. Work contains grammatical and spelling errors. Written and verbal explanation sometimes enables the candidate to address topics.</p> <p>Responses to assessment tasks lack structure. Communication methods, language and terminology are generally appropriate to assessment task.</p> <p>Limited considerations when communicated professionally.</p> <p>Job cards not fully completed with important information and detail missing and a number of inaccuracies. Documentation, such as service records not fully completed, lacking detail with inaccuracies. Risks assessments poorly completed with information missing or inaccurate. Little or no detail on diagnostic reports regarding observations and recommendations. Limited detail provided in verbal and written reports and presentations.</p>	<p>Candidates provide generally consistent responses to assessment tasks. Some grammatical and spelling errors.</p> <p>Written and verbal explanation generally enables the candidate to address discussion topics.</p> <p>Responses to assessment tasks are structured. Communication methods, language and terminology are consistently appropriate to assessment task.</p> <p>Some considerations when communicated professionally.</p> <p>Job cards completed with some details missing and some inaccuracies. Documentation, such as service record, fully completed, with detail but with minor inaccuracies. Risks assessments completed but with minor inaccuracies. Limited detail on diagnostic reports regarding observations and recommendations and no conclusion. Good detail provided in verbal and written reports and presentations.</p>	<p>Candidates provide clear and consistent responses to assessment tasks. Few grammatical and spelling errors.</p> <p>Written and verbal explanation enables the candidate to show depth and breadth of discussion topics.</p> <p>Responses to assessment tasks have clear and cohesive structure. Communication methods, language and terminology are always appropriate to assessment task.</p> <p>Sound consideration when communicating professionally.</p> <p>Job cards fully completed with all information. Documentation, such as service record, fully completed with no inaccuracies. Risks assessments completed with no inaccuracies. Clear and accurate diagnostic reports with observations, recommendations and conclusion Excellent detail provided in verbal and written reports and presentations.</p>

## Declaration of Authenticity

Candidate name

Candidate number

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Centre name

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Centre number

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### **Candidate:**

**I confirm that all work submitted for this synoptic assignment is my own, and that I have acknowledged all sources I have used.**

Candidate signature

Date

### **Tutor:**

**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.**

---

Tutor signature

Date

## Assessment feedback form

Candidate name

Candidate number

Tutor name

Date of assessment

Task / AO	Feedback

Tutor signature and date: