

**Qualification title:**

Level 3 Diploma in Aircraft Maintenance (Civil Aircraft Mechanical)

**Qualification number:**

2675-03

**Guidance relating to all centre devised units for this qualification**

The following guidance applies to all of the centre devised units listed. Where individual units require specific guidance, this is provided in the next section; Unit specific guidance.

**Generic guidance for units: 204-207, 216-217****Task Setting:**

Each task will consist of:

- planning and preparation
- execution of the activity
- inspection of the finished work
- recording and reporting on the completed task.

Specific guidance for each unit is given below.

In order to ensure all the knowledge requirements are covered, additional questions may need to be completed by the candidate. These should be treated as a separate assessment task and the standard forms used (ie fronted by GF2/3 if written or GF1 or alternative if oral)

**Forms of Evidence:**

It is expected that the following forms of evidence will be produced for these units:

- candidate reports (fronted by GF2/3) and discussions with assessor (recorded on GF1)
- inspection report forms including marked up diagrams (centre devised form or GF1)
- written reports to include planning of the tasks, annotated illustrations of the process (e.g. drawings, photographs). (Any illustrations must clearly state what the candidate is doing/did) and completed job cards and/or inspection report (fronted by GF2/3)
- photographic evidence or actual work pieces (fronted by GF2/3).

All candidate produced material should be fronted by GF2/3 and any evidence recorded by the assessor should be on GF1 or where appropriate a centre devised alternative, or media recording. Audio or video recordings must be securely saved as evidence, clearly identified as relating to the candidate in question and accessible to the I&EV)

**Conditions:****Practical tasks**

The practical tasks must take place in an appropriately equipped area in the centre, this may be an on site aircraft hangar if available or other similar area.

**Underpinning knowledge questions**

If short answer underpinning knowledge questions are to be used, these must be taken under supervised conditions as closed-book tests and must not be completed as homework.

This means that all the activities will be completed with the assessor, or other designated supervisor, present. Strict exam regulations (eg JCQ ICE) do not apply; it is envisaged that most candidates will take the short answer questions in their normal learning environment with their own tutor present. Alternatively, assessors may ask the questions orally and record individual candidate's responses on the assignment evidence recording form.

**Marking and grading****Grading criteria to be applied to these units:**

Please refer to the Generic Grading Criteria (GM2) for the detailed descriptors for pass, merit and distinction. The following descriptors apply to these units.

**PT** (Performance of techniques, methods/skills) – these descriptors will apply to any tasks where candidates are carrying out practical activities

**AKU** (Practical application of knowledge and understanding) – these will apply where candidates may be demonstrating some of the knowledge and understanding outcomes through practical activities or planning to carry out practical activities.

**U** (Understanding): these will apply where candidates are being asked specific questions to show their understanding eg through oral or short answer questions.

**K** (Knowledge): these will apply where candidates are being asked specific questions to show their understanding eg through oral or short answer questions.

**The assessment grading criteria grid (AD2) must be completed in all cases. All tasks should be weighted equally.**



**Unit specific guidance**

This guidance relates to the individual unit only and is in addition to any generic guidance specified for it above.

Unit	Unit details		
204	<b>Title: Structural Materials and Components in Aircraft</b>	<b>Graded:</b> Pass/Merit/Distinction	<b>Sample assessment:</b> N/A
	<p><b>Task Setting:</b> The equipment to be worked on during the assignment must include one item from each of the following:</p> <ul style="list-style-type: none"> <li>• an actual or simulated airframe structure</li> <li>• representative aircraft material of sufficient size to demonstrate the techniques of using a range of aircraft fasteners and locking devices.</li> </ul> <p>Appropriate practical tasks to cover learning outcomes 4 and 7 will include:</p> <ul style="list-style-type: none"> <li>• assessing defects including corrosion in ferrous and non-ferrous structures</li> <li>• repairing a corroded structure</li> <li>• using a range of aircraft fasteners and locking devices to assemble and secure components.</li> </ul> <p>Learning outcomes 1, 2, 3, 5, 6 and 8 contain knowledge and understanding assessment criteria. It must be clear in the assignment composition grid and the evidence, that the candidate has covered all of the knowledge requirements. Some of these assessment criteria will be covered naturally through candidate reports etc, however it may be necessary to ask the candidate additional questions.</p>		



Unit	Unit details		
205	<b>Title: Maintaining Aircraft Structures</b>	<b>Graded:</b> Pass/Merit/Distinction	<b>Sample assessment:</b> Yes.
<p><b>Task Setting:</b>                      The equipment to be worked on during the assignment must include the following:</p> <ul style="list-style-type: none"> <li>• an actual or simulated airframe structure</li> <li>• representative aircraft material of sufficient size to demonstrate the techniques of structural maintenance</li> <li>• tools and equipment suitable for the given task.</li> </ul> <p>Appropriate tasks will include:</p> <ul style="list-style-type: none"> <li>• producing a report on the emergency procedures in the aircraft maintenance environment. Assessors will need to ensure that candidates are given the opportunity to show their understanding of health and safety legislation that applies to their working environment. This task could take place at any point during the learning of this unit. Candidates may produce a written report or give their assessor a ‘walk through’ of the procedures.</li> <li>• classifying and carrying out routine inspections of airframe structures (three to be classified including at least one damaged structure eg. corrosion)</li> <li>• removing and fitting typical airframe components. Typical components to be repaired at this level will include a control surface or an engine cowling</li> <li>• repairing a section of an airframe structure e.g. Control surface trailing edge, small section of fuselage (this task must include at least two items of structure and skin or a significantly curved skin surface with a patch or insert repair).</li> </ul> <p>Learning outcomes 1, 2, 3, 4, 5 and 8 contain knowledge and understanding assessment criteria. It must be clear in the assignment composition grid and the evidence, that the candidate has covered all of the knowledge requirements. Some of these assessment criteria will be covered naturally through candidate reports etc, however it may be necessary to ask the candidate additional questions.</p> <p>A sample assignment has been produced for this unit.</p>			



Unit	Unit details		
206	<b>Title: Maintaining Aircraft Mechanical Systems</b>	<b>Graded:</b> Pass/Merit/Distinction	<b>Sample assessment:</b> N/A
<p><b>Task Setting:</b>            The equipment to be worked on in each task during the assignment will include one item from group A and one item from group B:</p> <p>a. Mechanical systems for example:</p> <ol style="list-style-type: none"> <li>i. Main/nose wheel assembly</li> <li>ii. Brake pack</li> <li>iii. Nose wheel steering components</li> <li>iv. Retraction jack</li> <li>v. Locking mechanism</li> <li>vi. Torque link</li> <li>vii. Fixed-wing flying controls</li> <li>viii. Hydraulic system components</li> <li>ix. Oxygen and air system components</li> <li>x. Fuel system components</li> </ol> <p>b. Equipment and furnishings for example:</p> <ol style="list-style-type: none"> <li>i. Seats</li> <li>ii. Harness assemblies</li> <li>iii. Galley unit</li> <li>iv. Toilet unit</li> <li>v. Cabin partitions</li> <li>vi. Cabin trim</li> <li>vii. Entertainment modules</li> <li>viii. Aircraft role equipment</li> </ol> <p>Appropriate tasks will include:            For Outcome 10.1</p> <ul style="list-style-type: none"> <li>• lubrication</li> <li>• replenishment</li> <li>• inspection</li> </ul>			



- measurement of parameters such as range of movement, rigging etc.

For Outcome 10.2

- removing and fitting typical mechanical system components
- inspecting and fitting typical equipment and furnishings

Learning outcomes 1 - 9 contain knowledge and understanding assessment criteria. It must be clear in the assignment composition grid and the evidence, that the candidate has covered all of the knowledge requirements. Some of these assessment criteria will be covered naturally through candidate reports etc, however it may be necessary to ask the candidate additional questions.



Unit	Unit details		
207	<b>Title: Maintaining Gas Turbine Engines and Propellers</b>	<b>Graded:</b> Pass/Merit/Distinction	<b>Sample assessment:</b>
<p><b>Task Setting:</b></p> <p>The equipment to be worked on during the assignment must include one item from each of the following:</p> <ul style="list-style-type: none"> <li>• An aircraft gas turbine engine - on or off the aircraft</li> <li>• Auxiliary items such as gearboxes, pumps etc.</li> </ul> <p>Appropriate tasks will include:</p> <ul style="list-style-type: none"> <li>• routine maintenance activities such as replenishment, lubrication and filter changes</li> <li>• removing and fitting components</li> <li>• inspection and reporting of component condition (e.g. a borescope inspection of turbine blades)</li> </ul> <p>Learning outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9.1-3 and 9.5-7 contain knowledge and understanding assessment criteria. It must be clear in the assignment composition grid and the evidence, that the candidate has covered all of the knowledge requirements. Some of these assessment criteria will be covered naturally through candidate reports etc, however it may be necessary to ask the candidate additional questions.</p>			



Unit	Unit details		
216	<b>Title: Maintaining Gas Turbine Engines and Rotors</b>	<b>Graded:</b> Pass/Merit/Distinction	<b>Sample assessment:</b>
<p><b>Task Setting:</b></p> <p>The equipment to be worked on during the assignment must include one item from each of the following:</p> <ul style="list-style-type: none"> <li>• An aircraft gas turbine engine - on or off the aircraft</li> <li>• Auxiliary items such as gearboxes, pumps etc</li> <li>• Rotor head and blade(s) or tail rotor - on or off the aircraft.</li> </ul> <p>Appropriate tasks will include:</p> <ul style="list-style-type: none"> <li>• Routine maintenance activities such as replenishment, lubrication and filter changes</li> <li>• Removing and fitting components</li> <li>• Inspection and reporting of component condition (eg: borescope inspection of turbine blades, condition report on rotor blades)</li> </ul> <p>Learning outcomes 1, 2, 3, 4, 5, 6, 7, 8, 9.1-3 and 9.5-7 contain knowledge and understanding assessment criteria. It must be clear in the assignment composition grid and the evidence, that the candidate has covered all of the knowledge requirements. Some of these assessment criteria will be covered naturally through candidate reports etc, however it may be necessary to ask the candidate additional questions.</p>			





Unit	Unit details		
217	<b>Title: Maintaining Rotary Wing Mechanical Systems</b>	<b>Graded:</b> Pass/Merit/Distinction	<b>Sample assessment:</b>
<p><b>Task Setting:</b></p> <p>The equipment to be worked on during the assignment must include one item from each of the following:</p> <ul style="list-style-type: none"> <li>• An aircraft undercarriage (on or off the aircraft)</li> <li>• Items of aircraft fixtures, trim, seats etc. (on or off the aircraft).</li> </ul> <p>Appropriate tasks will include:</p> <ul style="list-style-type: none"> <li>• typical maintenance activities such as removing and fitting undercarriage components</li> <li>• inspection and reporting condition of items of aircraft furnishings and trim</li> <li>• removing or fitting of items of furnishings and trim.</li> </ul> <p>Learning outcomes 1, 2, 3, 4, 6, 7, 8 and 9.1-5 contain knowledge and understanding assessment criteria. It must be clear in the assignment composition grid and the evidence, that the candidate has covered all of the knowledge requirements. Some of these assessment criteria will be covered naturally through candidate reports etc, however it may be necessary to ask the candidate additional questions.</p>			