

## Higher National Unit Specification

### General information for centres

**Unit title:** Aircraft Maintenance Skills

**Unit code:** DP5L 33

**Unit purpose:** This Unit is designed to introduce candidates to Aircraft Maintenance Skills and procedures. It will allow the candidate to gain working practical knowledge of Aircraft Maintenance. In addition candidates will also achieve knowledge of workshop practices and safety procedures.

This Unit also provides partial coverage of EASA 66 Module 7.

On completion of this Unit the candidate should be able to:

- 1 Complete practical maintenance tasks in accordance with appropriate manuals and procedures.
- 2 Adhere to workshop procedures.
- 3 Use precision measuring tools.

**Credit points and level:** 1 HN Credit at SCQF level 6: (8 SCQF credit points at SCQF level 6\*)

*\*SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

**Recommended prior knowledge and skills:** Access to this Unit is at the discretion of the centre. The Unit has no prerequisites; however, it would be beneficial if the candidate has a foundation of aircraft and/or engineering theory. This may be evidenced by possession of the NC Aircraft Engineering certificate and/or appropriate engineering experience.

**Core skills:** There are opportunities for the candidate to gain evidence towards the Core Skills of problem solving and working with others, although there is no automatic certification of Core Skills or Core Skills components in this Unit.

**Context for delivery:** If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

**Assessment:** Evidence of practical performance should be used to verify the candidate's capabilities. A log book and check list for the Outcomes should be used to verify the candidate's knowledge and/or skills items in these Outcomes. The assessor should then sign-off the completed check list.

## **Higher National Unit specification: statement of standards**

**Unit title:** Aircraft Maintenance Skills

**Unit code:** DP5L 33

All sections of this Unit stating the Outcomes, knowledge and/or skills, and evidence requirements are mandatory. The whole of the content listed in knowledge and/or skills section must be taught and available for demonstration, evaluation, and assessment.

### **Outcome 1**

Complete practical maintenance tasks in accordance with appropriate manuals and procedures

#### **Knowledge and/or skills**

- ◆ safety wire common hardware
- ◆ disassembly
- ◆ inspection
- ◆ repair
- ◆ assembly

### **Outcome 2**

Adhere to workshop procedures

#### **Knowledge and/or skills**

- ◆ safety aspects
- ◆ housekeeping
- ◆ common hand tools
- ◆ common power tools
- ◆ lubrication equipment and methods
- ◆ FOD control
- ◆ tool box inventory

### **Outcome 3**

Use precision measuring tools

#### **Knowledge and/or skills**

- ◆ calibration labels
- ◆ vernier height gauge
- ◆ vernier caliper
- ◆ micrometer caliper
- ◆ dividers
- ◆ torque wrench

## **Higher National Unit specification: statement of standards**

**Unit title:** Aircraft Maintenance Skills

### **Evidence requirements for all Outcomes**

These are practical based Outcomes and all of the knowledge and/or skills items above will be assessed. The evidence should be presented in log book response to the knowledge and/or skills requirements contained in this Unit.

The candidates log book should follow a standardised format and include the following aspects for each task performed:

- ◆ task description
- ◆ health and safety
- ◆ reference materials
- ◆ equipment and or tool list
- ◆ drawings or sketches
- ◆ procedures

A candidate's response can be judged to be satisfactory where evidence provided in the candidates log book is sufficient to meet all the requirements of the Unit.

### **Assessment guidelines**

Evidence of practical performance should be used to verify the candidates' capabilities. A log book and check list for these Outcomes should be used to verify candidates' knowledge and/or skills items in these Outcomes. The assessor should then sign-off the completed log book and check list.

## **Administrative Information**

<b>Unit code:</b>	DP5L 33
<b>Unit title:</b>	Aircraft Maintenance Skills
<b>Superclass category:</b>	XP
<b>Date of publication:</b>	August 2005
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## **Higher National Unit specification: support notes**

### **Unit title: Aircraft Maintenance Skills**

This part of the Unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

### **Guidance on the content and context for this Unit**

This Unit has been written in order to allow candidates to develop knowledge, understanding and Aircraft Maintenance Skills:

On completion of this Unit the candidate should be able to:

- ◆ complete practical maintenance tasks in accordance with appropriate manuals and procedures
- ◆ adhere to workshop procedures
- ◆ use precision measuring tools

This Unit is at level 6 and has been incorporated within the first year of the new HNC/D Aircraft Engineering Group Award (effectively the HNC award) as an optional Unit and is the natural predecessor for the Practical Aircraft Skills Unit.

The candidate should complete typical aircraft maintenance tasks in accordance with appropriate manuals and procedures. Upon completing these tasks the candidate will demonstrate their ability to adhere to workshop procedures, use precision measuring tools, and properly complete aircraft maintenance.

An example of this may be the completion of the Light Aircraft Maintenance Schedule 50 hour check. Where the candidate will be required to identify, complete and sign-off tasks I.A.W. the schedule, manuals and procedures.

A more detailed task may be the overhaul of a brake or even engine assembly where the candidate will be required to:

- ◆ safety wire common hardware
- ◆ disassembly
- ◆ inspection
- ◆ repair
- ◆ assembly

While doing these tasks the candidate will demonstrate their ability to adhere to workshop procedures, use precision measuring tools as well as the proper completion of aircraft maintenance.

The above tasks are only a guide and any aircraft related task could be completed as long as the candidate has the opportunity to demonstrate each Outcome and all of the Knowledge and/or skills for this Unit.

## **Higher National Unit specification: support notes (cont)**

**Unit title:** Aircraft Maintenance Skills

### **Guidance on the delivery and assessment of this Unit**

This part of the Unit specification is offered as guidance. The support notes are not mandatory.

Candidates should be assessed by demonstration, evaluation and observation of practical tasks. A log book and check list should be used and signed off by assessor encompassing all of the Knowledge and/or skills for each Outcome. A 100% completion for each knowledge and/or skill in the 3 Outcomes is necessary to achieve the Unit.

With the complexity of this Unit and facility logistics the candidate will be required to complete more than one task. It is recommended that a series of tasks be established and students work in groups to complete each task then rotated onto the next task.

As the candidates rotates the log books should be completed and check sheet signed-off by assessor. Notes could be made to identify any short comings while monitoring progress by candidate and assessor.

### **Open learning**

As most of this Unit is verified with performance evidence open learning would be difficult. However, the assessments could be made available on demand for a suitably experienced candidate.

### **Candidates with additional support needs**

This Unit specification is intended to ensure that there are no artificial barriers to learning or assessment. The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering alternative Outcomes for Units. For information on these, please refer to the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs*, which is available on the SQA website [www.sqa.org.uk](http://www.sqa.org.uk).

## General information for candidates

### Unit title: Aircraft Maintenance Skills

This Unit is designed to introduce you to Aircraft Maintenance Skills and procedures. It will allow you to gain working practical knowledge of Aircraft Maintenance. In addition you will also achieve knowledge of workshop practices and safety procedures.

On completion of this Unit you should be able to:

- ◆ complete practical maintenance tasks in accordance with appropriate manuals and procedures
- ◆ adhere to workshop procedures
- ◆ use precision measuring tools

You will be assessed by demonstrating a series of Aircraft Maintenance tasks. A log book and check list will be used and signed off by your assessor encompassing all knowledge and/or skills aspects for each Outcome. A 100% completion for each knowledge and/or skills item in the three Outcomes is necessary to complete this Unit.

The Unit may be of particular interest to candidates who are interested in pursuing a career in aircraft maintenance engineering as it partially covers the knowledge requirements for module 7 (*Maintenance Practices*) of EASA IR part 66 aircraft licensing requirements for both mechanical and avionics engineers.

This Unit is at level 6 and has been incorporated within the first year of the new HNC/D Aircraft Engineering Group Award (effectively the HNC award) as an optional Unit and is the natural predecessor for the Practical Aircraft Skills Unit.