



Level 2 NVO Diploma in **Aerospace and Aviation Engineering** (Foundation Competence)

ENGINEERING

Qualification Specification

Overview

This qualification involves the skills and knowledge needed for occupations in aerospace and aviation engineering.

Typical Job

Aerospace fitter.

Qualification code:	601/7289/7
Level:	2
Total qualification time:	439 Hours
Guided learning hours:	439
Minimum age	16

Purpose of the qualification

This qualification is a competency qualification has been approved by the aerospace and aviation engineering sector employer group which is made up a range of employers, training providers and professional institutions.

The qualification focuses on the skills, knowledge and behaviours required to achieve the development phase requirements of the relevant apprenticeship standards. This arrangement ensures that when the apprentice completes the qualification they will have gained knowledge and practical experience of some of the situations that they could face within the occupational sector in which it is being delivered.

The qualification covers the specific skills, knowledge and behaviours of a range of aerospace and aviation engineering disciplines which have been developed in consultation with engineering industry specialists and training providers to ensure that it meets the needs of industry employers and learners.

The content and structure of the qualification has been developed to provide the appropriate level of skills, knowledge and behaviours required to be achieved and assessed to demonstrate full occupational competence in the development phase of the apprenticeship. It is for apprentices working towards the relevant apprenticeship standard

Who supports this qualification?

Supported by Semta and by the aerospace and aviation engineering sector.

What could this qualification lead to?

Progression onto a range of engineering based qualifications - including the level 3 aerospace manufacturing diploma, and career progression.

Entry Requirements

Learners must have the potential to achieve the assessment criteria set out in the units.

How is the qualification achieved?

The learner must pass all the assessments of their chosen units to achieve the qualification.

What will be assessed?

All evidence submitted by the learner against the assessment criteria.

How will it be assessed?

The assessment of this qualification involves the compilation of a portfolio to demonstrate evidence against the assessment criteria.

Structure

The apprentice is required to complete the required number of mandatory units, followed by the required number of optional units.

Group A: Mandatory units: *the apprentice must complete four units:*

EAL code		Unit title	GL (Hrs)	Ofqual code
AAEF2-001	<input type="checkbox"/>	Complying with statutory regulations and organisational safety requirements (Aerospace and Aviation)	18	R/507/7071
AAEF2-002	<input type="checkbox"/>	Working efficiently and effectively in an engineering environment (Aerospace and Aviation)	18	Y/507/7072
AAEF2-003	<input type="checkbox"/>	Using and communicating technical information (Aerospace and Aviation)	18	D/507/7073
Plus:				
AAEF2-004A	<input type="checkbox"/>	Conducting business improvement activities (Aerospace and Aviation)	70	H/507/7074
Or:				
AAEF2-004B	<input type="checkbox"/>	Demonstrating personal accountability in an aircraft maintenance environment (Aerospace and Aviation)	70	D/507/7123

Continued



Group B: Optional units: *the apprentice must complete four of the following units:*

AAEF2-005	<input type="checkbox"/>	Producing mechanical engineering drawings using a CAD system (Aerospace and Aviation)	140	H/507/7124
AAEF2-006	<input type="checkbox"/>	Producing components using hand fitting techniques (Aerospace and Aviation)	175	M/507/7126
AAEF2-007	<input type="checkbox"/>	Producing mechanical assemblies (Aerospace and Aviation)	140	A/507/7128
AAEF2-008	<input type="checkbox"/>	Forming and assembling pipework systems (Aerospace and Aviation)	140	F/507/7129
AAEF2-009	<input type="checkbox"/>	Carrying out aircraft detail fitting activities (Aerospace and Aviation)	175	T/507/7130
AAEF2-010	<input type="checkbox"/>	Installing aircraft mechanical fasteners (Aerospace and Aviation)	105	A/507/7131
AAEF2-011	<input type="checkbox"/>	Producing aircraft detail assemblies (Aerospace and Aviation)	140	L/507/7134
AAEF2-012	<input type="checkbox"/>	Preparing and using lathes for turning operations (Aerospace and Aviation)	140	R/507/7135
AAEF2-013	<input type="checkbox"/>	Preparing and using milling machines (Aerospace and Aviation)	140	D/507/7137
AAEF2-014	<input type="checkbox"/>	Preparing and proving CNC machine tool programs (Aerospace and Aviation)	140	H/507/7138
AAEF2-015	<input type="checkbox"/>	Preparing and using CNC turning machines (Aerospace and Aviation)	140	D/507/7140
AAEF2-016	<input type="checkbox"/>	Preparing and using CNC milling machines (Aerospace and Aviation)	140	H/507/7141
AAEF2-017	<input type="checkbox"/>	Maintaining mechanical devices and equipment (Aerospace and Aviation)	175	K/507/7142
AAEF2-018	<input type="checkbox"/>	Assembling and testing fluid power systems (Aerospace and Aviation)	105	M/507/7143
AAEF2-019	<input type="checkbox"/>	Producing sheet metal components and assemblies (Aerospace and Aviation)	140	T/507/7144
AAEF2-020	<input type="checkbox"/>	Preparing and using manual TIG or Plasma-arc welding equipment (Aerospace and Aviation)	140	J/507/7147
AAEF2-021	<input type="checkbox"/>	Preparing and using semi-automatic MIG, MAG and flux cored arc welding equipment (Aerospace and Aviation)	140	R/507/7149
AAEF2-022	<input type="checkbox"/>	Producing composite mouldings using Wet Lay-up techniques (Aerospace and Aviation)	140	R/507/7152
AAEF2-023	<input type="checkbox"/>	Producing composite mouldings using Pre-Preg techniques (Aerospace and Aviation)	140	Y/507/7153

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AAEF2-024	<input type="checkbox"/>	General electrical and electronic engineering applications (Aerospace and Aviation)	140	H/507/7155
AAEF2-025	<input type="checkbox"/>	Dressing aircraft engines (Aerospace and Aviation)	105	M/507/7157
AAEF2-026	<input type="checkbox"/>	Maintaining aircraft mechanical devices and equipment (Aerospace and Aviation)	175	T/507/7158
AAEF2-027	<input type="checkbox"/>	Maintaining fluid power equipment (Aerospace and Aviation)	105	A/507/7159
AAEF2-028	<input type="checkbox"/>	General turning, milling and welding applications (Aerospace and Aviation)	140	T/507/7161
AAEF2-029	<input type="checkbox"/>	Identifying defects in composite mouldings (Aerospace and Aviation)	35	F/507/7163
AAEF2-030	<input type="checkbox"/>	Carrying out repair on composite mouldings (Aerospace and Aviation)	105	L/507/7165
AAEF2-031	<input type="checkbox"/>	Lifting and trestling/shoring aircraft for maintenance and repair activities (Aerospace and Aviation)	70	R/507/7166
AAEF2-032	<input type="checkbox"/>	General electrical and avionic engineering applications (Aerospace and Aviation)	140	D/508/1110
AAEF2-033	<input type="checkbox"/>	Producing electrical or electronic engineering drawings using a CAD system (Aerospace and Aviation)	140	M/508/1113
AAEF2-034	<input type="checkbox"/>	Wiring and testing electrical equipment and circuits (Aerospace and Aviation)	140	T/508/1114
AAEF2-035	<input type="checkbox"/>	Assembling, wiring and testing electrical panels/components mounted in enclosures (Aerospace and Aviation)	140	F/508/1116
AAEF2-036	<input type="checkbox"/>	Assembling and testing electronic circuits (Aerospace and Aviation)	140	J/508/1117
AAEF2-037	<input type="checkbox"/>	Maintaining electrical equipment/systems (Aerospace and Aviation)	175	L/508/1118
AAEF2-038	<input type="checkbox"/>	Maintaining electronic equipment/systems (Aerospace and Aviation)	140	R/508/1119
AAEF2-046	<input type="checkbox"/>	Producing composite assemblies (Aerospace and Aviation)	105	J/508/1120

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Barred/unit combinations:

- a) Only **one** unit from the following pairs of units maybe selected as the part apprentice's choice of four optional units to be completed. However they can be undertaken as additional units if required by the employer.

AAEF2-007: Producing mechanical assemblies (Aerospace and Aviation)

AAEF2-025: Dressing aircraft engines (Aerospace and Aviation)

AAEF2-017: Maintaining mechanical devices and equipment (Aerospace and Aviation)

AAEF2-026: Maintaining aircraft mechanical devices and equipment (Aerospace and Aviation)

AAEF2-024: General electrical and electronic engineering applications (Aerospace and Aviation)

AAEF2-032: General aircraft electrical and electronic engineering applications (Aerospace and Aviation)

AAEF2-009: Carrying out aircraft detail fitting activities (Aerospace and Aviation)

AAEF2-019: Producing sheet metal components and assemblies (Aerospace and Aviation)

AAEF2-005: Producing mechanical engineering drawings using a CAD system (Aerospace and Aviation)

AAEF2-033: Producing electrical or electronic engineering drawings using a CAD system (Aerospace and Aviation)

- b) If any of the following units listed below are selected as the apprentice's choice of four optional units then unit AAEF2-028: General turning, milling and welding applications (Aerospace and Aviation) **cannot** be undertaken.

AAEF2-012: Preparing and using lathes for turning operations (Aerospace and Aviation)

AAEF2- 013: Preparing and using milling machines (Aerospace and Aviation)

AAEF2- 015: Preparing and using CNC turning machines (Aerospace and Aviation)

AAEF2- 016: Preparing and using CNC milling machines (Aerospace and Aviation)

AAEF2- 021: Preparing and using semi-automatic MIG, MAG and flux cored arc welding equipment (Aerospace and Aviation)

