

Date Published
8/3/2021

Regulatory News

March — 2021

When will Aviation Apprenticeships be Accepted?

In the late 1990s, the aviation industry lobbied CASA to accept NVET trade certificates, at completion of an aircraft maintenance engineer apprenticeship, as meeting all the trade qualifications of the CASA AME licence.

In other words, no more trade based “Basic Examinations”.

This most sensible and cost-effective proposal was supported by that era of CASA management. This proposal is sensible and is still achievable today.

The proposal is also in line with many other trade apprenticeships systems in Australia.

E.g., Licencing and trade training is available in most States for:

- Plumbers,
- Electricians
- Refrigeration/air-conditioning
- Motor repairers, etc.

These trades are fully integrated into the VET system & accepted by the applicable licencing authorities.

So why isn't the aircraft maintenance engineers' apprenticeship VET system accepted by CASA?

This industry proposal is supported by ICAO and even EASA who state:

EASR 147B.45

“(a) The competent authority **may exempt a State education department school from:**

1. being an organisation as specified in point 147.A.10.
2. having an accountable manager, subject to the limitation that the department appoint a senior person to manage the training organisation and such person has a budget sufficient to operate the organisation to the standard of this [Annex \(Part-147\)](#).
3. having recourse to the independent audit part of a quality system subject to the department operating an independent school's inspectorate to audit the maintenance training organisation at the frequency required by this Part.

(b) All exemptions granted in accordance with Article 14(4) of Regulation (EC) No 216/2008 shall be recorded and retained by the competent authority.”

Australia has an education regulator, **Australian Skills Qualification Authority**, (ASQA) that should be regulatory responsible for providing aviation trade training qualifications that meet the trade knowledge levels promulgated in CASRs or preferably ICAO. It is CASA's job to promulgate standards, but it is ASQA's responsibility to provide the skill qualifications.

If VET qualifications **were accepted in lieu of CASA Basic Examinations**, then all a VET qualified tradesperson would need to do is pass a CASA Module 10 examination to obtain an AME licence.

VET qualifications plus a CASA Module 10 examination = LAME

CASA will still need to include options for other pathways to obtain a licence. For example, CASR Part 147 approvals would still be required if they had a licence outcome. The Part 147 should be able to provide the training and conduct the examination. In the USA, the FAA Part 147 schools can issue students with an interim A&P approval until the FAA formally issues the A&P Certificate.

Employees with allied trade qualifications must also have the option to either sit all applicable Part 66 module examinations provided by CASA or to sit same examinations provided by a Part 147 approved training organisation.

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33 years after industry first proposed the above cost-effective trade training/licencing system and it is still ignored by government.

Trade Training and Licencing.

The above system is harmonised with Australia’s standard trade training system and also complies with Treaty obligations to adopt basic international recognition of the Australian trade and its associated licence. The Chicago Convention treaty Annex 1 provides three (3) terms that may be used:

4.2 Aircraft maintenance (technician/engineer/mechanic)

Note. The terms in brackets are given **as acceptable additions** to the title of the licence. Each Contracting State is expected to use in its own regulations the one it prefers.

Australia, like NZ, adopted the “aircraft maintenance engineer” many decades back.

The Australian New Zealand Standard Classification of Occupations (ANZSCO)
 ANZSCO code:323111 Job Title: Aircraft Maintenance Engineer (Avionics)
 ANZSCO code: 323112 Job Title: Aircraft Maintenance Engineer (Mechanical)~

Globally, the training standards for an aircraft maintenance ~~technician~~, engineer or mechanic, are based on Annex 1, 4.2.1.4 Training. This states an applicant for a licence should have completed a training course. The Note attached to this provision refers to *ICAO Training manual (Doc 7192), Part D1* that provides the training knowledge and practical standards for an *aircraft maintenance engineer* (avionics/mechanical) plus a whole Chapter 3 that specifies the additional training standard for both a Licenced AME and a Management Licenced AME.

Australian New Zealand Standard Classification of Occupations

Job Code – Description (CASR Part 66 Modules 1-9,11-17) ANZSCO code:323111 Job Title (Trade): <i>Aircraft Maintenance Engineer (Avionics)</i>	Licence Plus M10	New (Chapter 3) M10 plus
ANZSCO code: 323112 Job Title (Trade): <i>Aircraft Maintenance Engineer (Mechanical)</i>	LAME	New “Management LAME”

CASR Part 66 licencing standards specifies the AME training standards based on EASR Part 66 modules, except module 10 that is dedicated to LAME requirements.

Why doesn’t the VET system provide “Aircraft Maintenance Engineer” (avionics/mechanical) trade skills based on the CASA promulgated Part 66 trade Modules?

The problem is, the NVET system has never had a dedicated ‘*Aircraft Maintenance Engineer*’ training courses, only “Aeroskills” courses not globally recognised.

CASR Part66 Modules 1-9, 11-17 Trade training	CASR Part 66, Module 10 Licence Training
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ASQA must be made legally responsible to provide AME trade qualifications that meet the ICAO theoretical and practical skill standards.

“The Chicago Convention, drafted 1944, laid the foundation for the standards and procedures for peaceful global air navigation. It set out as its prime objective the development of international civil aviation “...in a safe and orderly manner”, and such that air transport services would be established “on the basis of equality of opportunity and operated soundly and economically.”

The Convention’s Annexes have increased in number and evolved such that they now include more than 12,000 international standards and recommended practices (SARPs), all of which have been agreed by consensus by ICAO’s now 193 Member States.

These SARPs, alongside the tremendous technological progress and contributions in the intervening decades on behalf of air transport operators and manufacturers, have enabled the realization of what can now be recognized the modern international air transport network.”

Global standards include **aircraft maintenance engineer** knowledge and practical skill levels and licencing standards. Why aren’t they fully implemented and harmonised after over 70 years as a member ICAO State? Modules 1-9 & 11-17 are trade modules, Module 10 is licencing.

Qualification on basic subjects for each category or subcategory of trade/licence must be in accordance with the following table. Applicable subjects are indicated by an X.

Subject modules	Mechanical B1 aeroplane with:		Mechanical B1 helicopter with:		Avionics B2
	Turbine engine(s)	Piston engine(s)	Turbine engine(s)	Piston engine(s)	Avionics
1. Mathematics	X	X	X	X	X
2. Physics	X	X	X	X	X
3. Electrical fundamentals	X	X	X	X	X
4. Electronic fundamentals	X	X	X	X	X
5. Digital techniques electronic instrument systems	X	X	X	X	X
6. Materials and hardware	X	X	X	X	X
7. Maintenance practices	X	X	X	X	X
8. Basic aerodynamics	X	X	X	X	X
9. Human factors	X	X	X	X	X
10. Aviation legislation	X	X	X	X	X
11. Aeroplane aerodynamics, structures and systems	X	X			
12. Helicopter aerodynamics, structures and systems			X	X	
13. Aircraft structures and systems					X
14. Propulsion — avionic systems					X
15. Gas turbine engine	X		X		
16. Piston engine		X		X	
17. Propeller	X	X			

ASQA should be responsible for All Modules except CASA’s Module 10 licencing module

The trade skills listed to the left should be the basis of the Australian AME Trade pathway for both the avionic and mechanical trade streams.

Licensing based on Chapter 3 ICAO AME Training Manual

Australian trade skills are being globally questioned because we do not use globally specified terminology to identify trade training.