AMROBA Foreign LAME Research – March-April 2023

Importing technical skilled LAMEs to address Australia's shortage of LAME

Comparing FAA & EASA maintenance agreements with each other and other nations.

	Australia	EASA	Brazil	Canada	Japan	Korea	NZ	Russia	Singapore	SA	UK
FAA	BASA No Maint	BASA Maint	BASA Maint	BASA Maint	BASA No Maint	BASA Maint	BASA Maint	BASA Maint	BASA Maint	BASA No Maint	BASA Maint
	Australia	**USA**	**Brazil**	**Canada**	**Japan**	**Korea**	**NZ**	**Russia**	**Singapore**	**SA**	**UK**
EASA	—	BASA Maint	BASA Maint	BASA Maint	BASA Maint	—	—	—	BASA Maint	—	—

Research other nations BAAs & BASAs identifies we have a way to go to meet the standards and practices of other nations if the aim of government is still to harmonise so the engineering disciplines of design, manufacture, maintenance and technical training can compete in their own rights in global civil aviation markets.

We used this comparison of how EASA and FAA BASAs were implemented with other nations to see if there were acceptance of the LAME skill levels from within other nations. There is close complicity between the top four manufacturing nations, Brazil, Canada, EU and EASA.

Conclusion: The four major manufacturing countries are more aligned with Convention SARPs with minimal differences between them and it shows in the agreements between each country. Brazil, Canada, EU & USA.

EASA List of Foreign Part 145 organisations

Note: There is no US, Canada or Brazil Part 145 listed because the BASA between EASA, FAA, TCA & ANAC.

There are about 15 Australian Part 145s in the list. The UK has a lot of Part 145 orgs in the EASA List but that is expected as they were a member of the EU. The CAA(UK) is working on a BASA with EASA.

When CASA was focused on harmonisation, it was aiming to have agreements with these nations.

Basically, the top 4 regulatory regimes, Brazil, Canada, EU & USA maintenance personnel standards are the ICAO global standards applied to match their licencing system that Australia should be aiming to implement and join. The CAA(UK) will be the 5th nation, we should be the 6th nation at that level with similar BASAs to theirs.

Engineering Industry Expectation: Australia be the next nation to obtain BASAs with the top four nations.

Australia's NVET system does not have aircraft maintenance engineer avionic and mechanical courses.

We are stuck in the past terminology of Aeroskills qualifications based on the demarcation agreement in the airlines.

We the NVET system to adopt CASA terminology of aircraft maintenance engineer qualification for mechanical aeroplanes and helicopters plus an aircraft maintenance engineer qualification for avionics. These qualifications under the NVET system must be progressively attained from AQF2 to AQF5.

Based on this research, the LAME standards being applied by the four countries that have recognised each other's maintenance organisations system, including the licencing of aircraft maintenance engineers, should be where Australia's training and licencing should harmonise.

In hindsight, the licencing system of Brazil or Canada would have been better options for Australia's NVET system.

1. **US** Aircraft Maintenance Technician plus Repairman.
2. **EU** Aircraft Maintenance Engineer B1, B2, B3 plus L
3. **Canada** Aircraft Maintenance Engineer M1, M2, E, S
4. **Brazil** Aircraft Mechanics GMP (PP), CEL(AF), AVI (Avionics)

All four nations recognise each other's Part 145 & personnel licences.

Requirements for Licence

Formal training is the basis in all nations with the FAA and EU providing options. However, in those 2 nations the far majority are trained under the formal pathway.

What it identifies is CASRs don't actually list a NVET course that they would accept with an option for self-study.

- **"Successfully complete a course approved by CASA"**.

This is different than recognising a Part 147 organisation and clearly identifies which courses for which modules that make up the licence have been approved by CASA.

Brazil's Basic Requirements for the license (paragraph 65.71 of the RBAC 65**)**.
The person must:

- *be at least 18 years old*
- *hold a High School Diploma*
- ***successfully completed a course approved by ANAC (CASA)***
- *passed an ANAC Knowledge test*

FAA's Requirements:
Two options

1. You must be;
** at least 18 years old.*
** able to read, write, speak, and understand English.*
*2. You must have 18 months of practical experience **with either** power plants or airframes, or 30 months of practical experience **working on both** at the same time. **or***
As an alternative to this experience requirement, you can graduate from an FAA-Approved Aviation Maintenance Technician School. [*the far majority of AMTs pathway*]
3. You must pass three types of tests.
** Three written examinations, (General, Powerplant and Airframe).*
** an oral test.*
** a practical test.*

Transport Canada Aviation:
You must:

- *Be at least 21 years of age*
- ***Complete a Transport Canada-approved*** AME basic training program *(or one that is acceptable to Transport Canada),*
- *Get the total amount of applicable civil aviation maintenance experience,*
- *Gain skills by doing a number of specific* maintenance tasks,
- *Successfully complete the* technical (if required) and regulatory exams.

EASA – CASA system should be the same!
Three Options

1. *Basic training (2400 classroom hours) plus 2 years' experience*
2. *Technical Trade School qualification plus 3 years' experience.*
3. *Pass applicable modules examinations plus 5 years' experience.*

Note: The member nation's technical trade school aviation qualifications are common in many member nations.

Addressing the shortage of LAMEs

Australia aviation needs to improve the industry technical skill levels by employing maintenance personnel from one of the top four, or UK, to address the shortage in this country.

Their skill base is where Australia's training standards are yet to achieve.

LAME Experience: Consideration should be given to adopting the FAR experience requirements for AMT that requires a LAME to be supervised when adding capabilities to the AMT certificate besides aircraft type courses.

(refer FAR 65.81 – *"However, he may not supervise the maintenance, preventive maintenance, or alteration of, or approve and return to service, any aircraft or appliance, or part thereof, for which he is rated **unless he has satisfactorily performed the work concerned at an earlier date.** If he **has not so performed** that work at an earlier date, he may show his ability to do it by performing it to the satisfaction of the Administrator or **under the direct supervision of a certificated and appropriately rated mechanic, or a certificated repairman,** who has had previous experience in the specific operation concerned."*

This would allow a LAME B1 or 2 to gain experience prior to certifying maintenance on specific tasks/non-type rated aircraft. Adds to the safety outcomes all are trying to achieve.

Addressing the shortage of LAMEs

Australia aviation needs to improve our own civil aviation maintenance industry technical skill levels by employing maintenance personnel from one of the top four systems, or UK, to address the shortage in this country.

Secondly, Australia's training need to adopt ICAO AME training standards as applied by these 4 regulatory systems.