AMROBA®inc
AVIATION MAINTENANCE REPAIR & OVERHAUL BUSINESS ASSOCIATION, INC
ADVOCATE OF THE AVIATION MRO INDUSTRY

Date Published 27/11/2019 | **NEWSLETTER** | Volume 16 – Issue 11 November — 2019

Basically, Still no International Harmonisation

Since 1996, each smart aviation MRO nation has created *Harmonisation Teams* to obtain '**Maintenance Agreements**' with other ICAO recognised States. The Civil Aviation Act does not require CASA to obtain "***Maintenance Agreements***" with other countries. Agreements are needed so Australian aviation MRO businesses can trade freely in other countries.

Amazingly, government negotiates Air Service Agreements but totally ignores ***Maintenance Agreements*** that could create thousands of direct MRO and indirect jobs in Australia.

To participate in the global aviation MRO market, Australian businesses have to get a foreign country maintenance approval to trade in that country. What's the use of CASA approvals?

Most obtain FAR Part 145 or EASR Part 145, but other countries also demand their approval – all because Australia **does not obtain Maintenance Agreements** with other countries.

When will government commit to jobs growth in aviation MRO like our Asian neighbours?

Contents

Ken. R. Cannane
Executive Director
amroba@amroba.org.au

1. Asia Pacific Jobs Growth

*AMROBA has made a submission to the Prime Minister, Deputy Prime Minister and copied relevant Ministers to support Australia's aviation MRO industry by immediately removing regulations and standards that prevent harmonisation within the ASIA/Pacific Region. Thousands of jobs will be created in Australia if our regulations and standards are harmonised with the Asia Pacific Region. The Asia Pacific Region is growing at 6.4% for the next decade adding 17,000 new aircraft. The predicted maintenance personnel required in this period is 266,000. There is not the capacity within the Asian countries to provide that number of technicians. If there were "**Maintenance Agreements**" then our aviation MRO industry, including training, would be actively involved.*

If Australia had '***Maintenance Agreements'*** with Asia Pacific countries then jobs would be created in Australia. However, to obtain an agreement, we need harmonised regulations and standards, including harmonised maintenance personnel training standards and qualifications.

Industry has been expecting this to happen since the creation of the Civil Aviation Authority back in 1988. However, the government's Civil Aviation Act does not empower CASA or direct that the regulatory system must be harmonised to enable international '***Maintenance Agreements'*** to be pursued.

Maintenance Agreements between nations have been the norm since the mid-1990s but CASA does not have an international office charged to obtain these trade agreements. Modern Civil Aviation Authorities have ***Harmonisation Teams*** to harmonise regulations and standards so the CAA itself can negotiate ***Maintenance Agreements***. Without these agreements, aviation is restricted to be a domestically focused regulatory system.

The Asia Pacific aviation growth is expanding at a faster rate than any other region and will be roughly 40% of the world's air transport system in a decade or so. It will be the largest air transport needing MRO support.

Predicted Passenger/Freight Regional Growth

"Based on ICAO's long-term traffic forecasts, Asia/Pacific region is expected to be the fastest-growing region in terms of passenger traffic, at an annual rate of 6.4 per cent up to 2032. For freight traffic, the region is projected to grow 5.1 per cent annually for the same period, the second-highest growth rate among all ICAO regions. These positive growth figures, also present some serious challenges for many of the region's governments, including Australia, to manage the rising demand including having to look into new technologies and innovative solutions to improve capacity and efficiency, and ensure that safety continues to be upheld."

Within the Asia Pacific Region ICAO, Airbus and Boeing predict that this region will be the fastest growing aviation region in the world. Thousands of jobs are required. The following figures clearly identifies why we should harmonise. AMROBA has made such a submission to government. Thousands of Australian jobs would eventuate if regulations/standards were harmonised and new government Maintenance Agreements obtained.

Predicted Aircraft Regional Growth

Over the next 20 years, airlines around the world will need 44,000 new airplanes, with more than 17,000, or 39%, of those airplanes delivered to the Asia Pacific region.

Predicted Total Personnel Regional Growth

The region accounts for more than one-third of anticipated global demand, or **816,000** total new commercial aviation personnel **over the next 20 years**.

Potential Job Growth in Australia

17,000 new aeroplanes in the Asia Pacific Region has the potential for thousands of new jobs within Australia if the Australian aviation MRO regulations and standards are harmonised with the Asia Pacific Region.

Predicted Regional AME Shortfall

The region currently does not have the capacity to train this predicted growth of more than **35,000 new technicians per annum**, including natural retirements.

The Asia Pacific region is also expected to lead global demand for maintenance technicians (**266,000, over 35% of global demand**)

Predicted Pilot Regional Growth

The forecast projects that the Asia Pacific region will need **244,000** new commercial pilots, or **38%,** of the pilots needed around the globe.

Asia is not concerned which Part 145 is used as long as it is either FAR Part 145 or EASR Part 145 based. Our industry has indicated they prefer FAR Part 145.

The lack of commitment to change/adopt/adapt is restricting job growth in Australia.

For Australia to benefit from the predicted growth within the Asia Pacific region it must first harmonise its aviation MRO regulations and standards, including maintenance personnel training qualifications, with other Asia Pacific nations.

Australia's aviation MRO industry then needs government to obtain ***Maintenance Agreements*** with each, and all, the Asia Pacific nations where our aviation MRO businesses could trade.

This includes standardising harmonised training standards that would enable Australia's maintenance training providers to also train personnel from this region.

Government must initiate agreements and acceptance of Australia's aviation MRO capability with other Asia Pacific Region nations.

Australia should be the Asia/Pacific region powerhouse of aviation MRO capability in the engineering fields of maintenance, design, parts manufacturing and technician training. Government, CASA and non-harmonised regulations and standards are restricting our MRO capability and capacity to grow.

We are already behind the aviation regulatory changes that the Asian Pacific nations have taken to harmonise with North America and Europe – we have simply failed to keep pace.

Asia Pacific Aviation Jobs Growth.

Australia must prepare and plan for the current and potential growth in MRO jobs predicted for this region. Australia is not prepared for this growth and needs to make urgent changes to aviation MRO regulations and standards to harmonise with the Asia Pacific Region so we can benefit from this growth.

> "In a study commissioned by IATA in 2015, it was found that **by 2035**, air transport is expected to support over 70 million jobs and nearly $1.3 trillion in GDP, compared to over 33 million jobs and over $700 billion in GDP in 2014.
>
> The Asia Pacific region is expected to achieve **unprecedented long-term growth** in aviation. By 2030 it is estimated that air travel in Asia would be greater than the next two markets North America and Europe combined. Given that aviation is a catalyst for economic growth, this spells good news for the region.
>
> However, there is concern that the aviation infrastructure in the Asia Pacific region is not keeping pace with the anticipated traffic growth. The region could lose up to 20% of the expected growth in jobs and GDP if these bottlenecks are not addressed."

Full report: https://www.iata.org/policy/business-freedom/Documents/intervistas-report-aspac-dec2015.pdf

AMROBA's submission to government supports Australia getting up to pace and providing thousands of jobs in engineering (design, maintenance, parts manufacturing and technical training). Additional support jobs will see further growth if government directs change.

AMROBA also recognises the positive direction of the Queensland Government in supporting the aviation industry and our proposal.

Back to the Top

2. GA and Alignment with Asia Pacific

To align with the Asia Pacific region is achievable but we also need to preserve and nurture our own GA system to provide various entry levels for pilots and maintenance engineers. Our regulatory system must return to the vision the Morris Report introduced for CASA to promulgated aviation safety regulations and standards for pilots and engineers. This would open the doors for cost effective processes to attract Y and Z generations into aviation. Adopting Canada's recreational pilot standards & Europe's recreational engineer standards will open the door for entry level pilots and engineers. If aviation regulations and standards provide a modern entry level, we can provide the basic skills for genuine career pathways.

Though we need to harmonise the commercial aspects of aviation and obtain ***Maintenance Agreements*** with our Asia Pacific nations, General Aviation entry levels into aviation need to remove current economic barriers and adopt standards applicable to all sectors. Like any industry, we need to look at variable entry pathways that will enable entrants to map a pathway to commercial aviation if the person wants a commercial future. We need to be conscious that we will be attracting generations 'Y' & 'Z' into what should be a much larger recreational & private air transport system.

Europe, Canada and America are way ahead of Australia but we keep trying to revert to the past instead of looking to provide entry levels from various societal levels.

The Civil Aviation Act enables CASA to meet this challenge by establishing pilot and maintenance engineer standards for all levels of the industry. Canada and Europe have promulgated standards, these should be adopted for pilots and maintenance engineers.

Disappointingly, CASA has returned to economic regulation, something that was removed from their obligations, and industry has struggle to address the shortage of pilots and engineers ever since.

The following chart clearly identifies world's most modern promulgated pilot and maintenance personnel standards. This would fulfil CASA's obligation.

- Canada has developed pilot personnel standards for all level of recreational, private and commercial pilot standards.
- Europe has developed maintenance engineer standards for all level of maintenance engineers from recreational, private and commercial aircraft.

Adopting these standards would lift the standards in Australia and maybe reduce our accident rate, especially in the recreational and private aircraft sectors.

AMROBA has circulated these standards previously and can see all the more reason to adopt these standards as soon as practical. It would mean all licences and/or certificates would be CASA promulgated standard licences and/or certificates even though some recreational certificates (permits) could be issued by Part 149 self-administration organisations. **Adopt**:

- Canadian Pilot Regulation/Standards Part 421.
- European AME Regulation/Standards Part 66/147.

Canadian Pilot Standards Part 421 ⇩ ⇩	European LAME Standards Part 66 ⇩ ⇩
Add to Part 61	**add latest EASR Part 66**
421.19 **Student Pilot Permit** – • **gyroplane,** • **ultra-light aeroplane,** • **glider,** • balloon, • aeroplane and • helicopter.	**B3** Applicable to piston-engine non-pressurised aeroplanes of **2,000 kg MTOW** and below. Meets knowledge requirements for L1C, L1, L2C and L2 ratings. • Wooden structured aeroplanes • Metal tubing structured, fabric covered, aeroplanes, • Metal structured aeroplanes, • Composite structure aeroplanes
	B2L – Avionics (Light) noncomplex aircraft
	L1 – Sailplanes – same scope as B3 above
	L1C – Composite Sailplanes – same scope as B3 above
421.20 **Gyroplane Pilot Permit** - Gyroplane	**L2C** – Composite powered sailplanes & composite ELA1 aeroplanes– same scope as B3 above
421.21 **Ultra-light Aeroplane Pilot Permit**	**L3H** – Hot-air balloons
421.22 **Recreational – Aeroplane Pilot Permit**	**L3G** – Gas Balloons
421.23 **Recreational – Helicopter** (reserved)	**L4H** – Hot-air airships – includes L3H knowledge
421.24 **Gliders – Pilot Permit**	**L4G** – ELA2 gas airships, - includes L3G knowledge
421.25 **Balloons – Pilot Permit**.	**L5** – Gas airships other than ELA2

All pilots and maintenance engineers would hold CASA licences, certificates or permits. This would mean that CASA fulfilled its obligation under Section 9(1)(c) of the Civil Aviation Act. Safety has improved in these sectors in Canada and Europe.

The EASA Light Aircraft are defined as ELA and it has been split into ELA 1 & 2 to identify the difference between 1200Kg and 2000Kg and less aircraft. The next stage up is a B3 licence for 2000Kg and less. These underpin the current B1 & B2 licences.

ELA1 aircraft' means the following manned **European Light Aircraft**:

(i) an **aeroplane** with a Maximum Take-off Mass (MTOM) of **1 200 kg** or less that is not classified as complex motor-powered aircraft;
(ii) a **sailplane** or powered sailplane of **1 200 kg MTOW or less**;
(iii) a **balloon** with a maximum design lifting gas or hot air volume of not more than 3 400 m3 for hot air balloons, 1 050 m3 for gas balloons, 300 m3 for tethered gas balloons;
(iv) an **airship** designed for **not more than 4 occupants** and a maximum design lifting gas or hot air volume of not more than 3 400 m3 for hot air airships and 1 000 m3 for gas airships;

(no helicopters)

'ELA2 aircraft' means the following manned **European Light Aircraft**:

(i) an aeroplane with a Maximum Take-off Mass (MTOM) **of 2 000 kg** or less that is not classified as complex motor-powered aircraft;
(ii) a **sailplane** or powered sailplane of **2 000 kg MTOW** or less;
(iii) a **balloon**;
(iv) a **hot air ship**;
(v) a **gas airship** meeting all of the following elements:

– 3% maximum static heaviness,
– Non-vectored thrust (except reverse thrust),
– Conventional and simple design of:
  – Structure,
  – Control system,
  – Ballonet system,
  – Non-power assisted controls;

(vi) A **Very Light Rotorcraft**.

Part 149 Self Administration Organisations should fully support CASA promulgating these standards as they would still administer the training and provision of CASA examinations and the issue of CASA licences, certificates or permits.

However, the regulations should not create silos of **economic** controlled sectors of aviation as it should be left to the registered operator of the aircraft to decide who will administer.

Canadian Pilot System Example:

e.g. Gyro Aventure Canada is an authorized Transport Canada "agent" for the licensing of gyroplane pilots. http://www.gyroaventure.com/gyroplane-pilot.php

This approach can be applied to other Part 149 organisations who should be "agents" of CASA for the purpose of training, examination and licencing using CASA promulgated standards and examinations.

There should be no restriction on the number of Part 149 organisations in each sector.

Organisations trying to control a sector of aviation should not exist in a country with freedom of choice.

For example, Part 149 should also allow a number of aero clubs to band together and become a Part 149 to provide ultralight, recreational and/or private pilot training without the need to hold a Part 141 pilot training school. Such an organisation would need pilots with instructor ratings to provide the training.

Back to the Top

1. Where are all the New Pilots?

Past regulatory changes virtually killed off a viable pilot training sector that was providing sufficient number of pilots that commercial and airline operators could call on to upgrade to commercial and airline operations. We are a sparsely populated country outside major coastal cities so the process of teaching students to fly must be cost effective like it was pre-CAA days. The FAR Part 61 system enables a stand-alone Part 61 instructor rated pilot to teach individuals to the FAR pilot training standards. The more Part 61 independent instructor pilots in the system the more pilot training schools will exist. Re-introduction of an independent instructor rated pilot will see jobs created in the maintenance sectors.

Without pilots we don't have a viable industry. Rex Aviation is already sourcing pilots and maintenance engineers from off-shore simply because the current regulations and standards are not providing the pilots and engineers needed in this industry.

Good regulatory development will be supported by industry but many public servants reject. This is a fact of life that progressive aviation NAAs have to deal with.

Basically, the GA industry ranges from a 'cottage industry' supporting some sectors of private owners and a more commercially orientated MRO industry supporting the complex private and recreational aircraft and commercial aviation.

This requires provisions to be made based on FAR or EASR, and leave it with the registered operator to decide who will maintain their aircraft.

FAR Part 43 should be adopted by changing the reference to FAR Part 65, maintenance personnel licencing, to CASR Part 66, maintenance personnel licencing.

What is important is the adoption of FAR Part 91 airworthiness and maintenance control provisions for GA.

Recommendation: Adopt the USA FAR Part 61 independent flight instructor ASAP & adoption of FAR Parts 43, *change reference to CASR Part 66 only change*, & Part 91 maintenance requirements.

- FAR 91.409 Inspections – this provision sets the inspection standards for all aircraft ranging from an annual inspection for private aircraft, when 100 hourly inspections apply, progressive inspections up to commercially operated aircraft.
- FAR 91.411 Altimeter/altitude tests and inspections – to be done by a LAME or AMO within preceding 12 month if being used in controlled airspace.
- FAR 91.413 Transponder tests and inspections – to be done by an AMO within preceding 12 month is being used in controlled airspace.
- FAR 91.213 Inoperable instruments and equipment – specifies use of MEL and/or inoperative instruments under a special flight permit. Also enables day VFR certain private operations with instruments removed for maintenance.
- FAR 91.417 Maintenance Records – which and what maintenance records are to maintained.
- FAR 91 excludes aircraft operated under FAR Parts 103 & 107.

In addition, the GA industry needs the adoption of FAR Part 91 independent flight instructor to resurrect GA pilot and engineer growth.

- FAR 61.3 Requirement for certificates, ratings, and authorizations
  - Flight Instructor certificate.
    - (1) A person who holds a flight instructor certificate issued under this part must have that certificate, or other documentation acceptable to the Administrator, in that person's physical possession or readily accessible in the aircraft when exercising the privileges of that flight instructor certificate.
- §61.403 What are the age, language, and pilot certificate requirements for a flight instructor certificate with a sport pilot rating?
  - To be eligible for a flight instructor certificate with a sport pilot rating you must:
    - (a) Be at least 18 years old.
    - (b) Be able to read, speak, write, and understand English. If you cannot read, speak, write, and understand English because of medical reasons, the FAA may place limits on your certificate as are necessary for the safe operation of light-sport aircraft.
    - (c) Hold at least a sport pilot certificate with category and class ratings or privileges, as applicable, that are appropriate to the flight instructor privileges sought.

Australia needs many more independent flight instructors around Australia introducing generations Y and Z to flying to grow the maintenance industry.

The size of the MRO is proportional to the Australian fleet flight/hours being flown each year.

Back to the Top