

# AMROBA<sup>®</sup>inc

ADVOCATE OF THE AVIATION MRO INDUSTRY

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## "Should I Stay?"

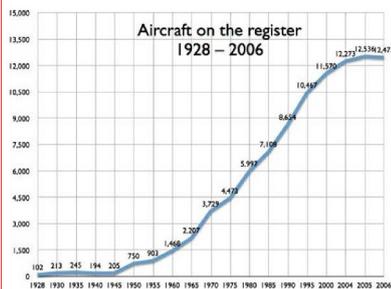
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Some of our members are coming to terms on whether they should stay in this industry because of the uncertainty and increasing struggles confronting them trying to regain impetus. This uncertainty is not conducive for growth or is it?

If we look at statistics being produced by BITRE and statements by CASA, it is apparent that the stats show growth.

Disappointedly, when one looks for stats on the CASA website, much of the data is out of date. CASA stats on the aircraft register seem to stop at 2006 with 12473 aircraft on the register.

BITRE figures from their last report on the GA industry states there are 12564 aircraft in 2010.



This confirms the steady increase has continued.

In 2006, CASA's graph at the left indicated there were 12473 aircraft on their register.

This confirms that less than 100 aircraft were added in 4 years.

However, if we compare some of the data from the start to the end of the BITRE GA report, the real facts become apparent.

Take Yr 2000 and compare to Yr 2010.

### Private flying hours

248,500 hours to 241,900 hours—a decrease.

### Charter flying hours

476,700 hours to 507,300 hours—an increase.  
(2007 high 544,500 hours)

### Aerial Work

296,900 hours to 400,300 hours—an increase.

### Regional Airline

335,700 hours to 228,100 hours—a decrease.

Over a ten year span not much has changed.

### Pilot Training Hours

413,600 hours to 436,300 hours—an increase

This is all done by approved training AOCs.

How much bigger would it be with independent Flight Instructors like they have in the US?

### Agriculture Hours

115,000 hours to 103,800 hours—a decrease

Considering the growth in the country's economy based on mining, one would have thought that there would be larger growth than the stats are showing.

Does it demonstrate that decades of changes to the aviation infrastructure has dampened the aviation entrepreneurs enthusiasm?

From another perspective, the recently released report into a 2nd airport for Sydney also highlighted some interesting facts regarding aviation as a whole.

*"The aviation sector drives employment and economic growth. Nationally, it contributes more than \$6.5 billion per year to the economy, generating direct employment for around 60,000 people across Australia. It also indirectly stimulates a variety of other industries, including tourism (which alone directly contributes more than \$35 billion to the economy.)"*

The report also stated: *"The future operation of GA airports in Sydney and outside Sydney but within reach, including Wollongong, Cessnock, Maitland and Goulburn should be protected."*

AMROBA contends that all airports should be protected including adopting a similar approach to California's Airport Land Use Handbook:

<http://www.dot.ca.gov/hq/planning/aeronaut/landuse.html>

With all global indicators highlighting continual growth in aviation, especially in the Asia/Pacific Region, what is now required in Australia is an infrastructure that will encourage investment and private involvement.

This requires governments to support aviation

The problem with all stats is that they are dated—in the last couple of years, if you can go on the feedback from several sources, there will be changes to these stats when they are next promulgated.

# LAME Privileges Confusion

Does anyone understand the new AME licensing system or what value it has added to aviation?

Once we had a system where persons that undertook broad competency training were asked to provide a Schedule of Experience relevant to the Group or specific aircraft or aircraft avionic system licence rating sought so CASA were assured that the person had sufficient experience prior to issuing the rating.

The Group licence ratings applied to classes of aircraft or avionic systems.

CASA has now changed the licensing system to provide a licence once a person has obtained an academic level, not based on experience on classes of aircraft or aircraft systems.

This is based on accepting the National Vocational Education Training (NVET) competency based training outcomes.

Basically, the Part 66 licence only attests to a person achieving an academic qualification—it does not attest that the person has had experience in a class of aircraft or aircraft system.

This is confirmed by CASA in reply to AMROBA correspondence on this matter.

*CASA: "Moreover, the licensing system does not operate in isolation of other performance rules which are written to ensure that any individual, licensed or un-licensed, is competent to carry out maintenance to the standard required of the maintenance data. Of note is the fact that this obligation extends to AMOs. An AMO is required to ensure that any individual it employs is competent to perform a task before he/she is permitted to do so by the organisation. The AMO is not under any obligation to permit an individual to carry out maintenance unless it can satisfy itself of their competence. AMOs are also to ensure that individuals that are not competent are appropriately supervised by a competent person at all times."*

No mention of being able to accept a person's ability because of the licence rating held.

One must now ask what value is added by CASA issuing a licence if it only provides evidence that a person has achieved a training outcome?

Based on CASA's reply, the only privileges that a LAME has is the privileges that an AMO bestows on its employee.

Under CASR Part 145 we now have a company authorisation system working that really does not need a licensing system. The Part 145 issues a company authorisation approval to employees that specifies the privileges approved whilst in the employ of that company.

ICAO Annex 1 enables a State to empower an approved AMO to authorise non-licensed persons to exercise the ICAO LAME privileges.

It appears that the CASA issued licence no longer has the Annex 1 privileges and adds nothing to safety as the Part 145 AMO still has to implement a system where the AMO can attest to an employee's competency.

Is this the first step to move to a system where the AMO can employ based on academic qualifications and authorise as the employee obtains competency in aircraft or aircraft systems?

The NVET system is a competency based training system, there is no evidence from this system that the person has the experience in tasks that the AMO is required to approve the person to sign for or to supervise another person.

Unlike the CASA CAR31 Schedule of Experience that provided evidence of experience in the classes of aircraft or avionic systems that the person wanted a licence rating for, the current "journey log" only attests that a person has attained a level of competency in the academic training outcomes.

Whether you are a CASR Part 145 or a CAR30 AMO, you now need to develop a process so that the competency (knowledge plus relevant experience) of an employee are appropriate for the aircraft or avionic systems that you are maintaining in your organisation.

CASA's Schedule of Experience related to actual experience whereas a journey log relates to competency of knowledge not experience.

To add further to the confusion, AMROBA, on behalf of some members, asked CASA whether a B1 could sign the "operational inspections" called up by manufacturers or did it need a B1 and B2.

A copy of a Piper Chieftain Operational Checks Schedules were provided with avionic aspects highlighted. The reply:

*"In relation to your question about the specific tasks – I have been advised that the new B1 licence holders have electrical and avionic LRU privileges that will cover the tasks you highlighted. Importantly, converted licence holders are covered by transitional provisions, provided they previously had the privilege."*

*CASA GM: "Avionic Line Replaceable Unit (LRU)" is described as a unit which has no mechanical input or output mechanism, but contains electrical, electronic, instrument or radio parts that provide control, monitor or display functions; where the unit does not require specialist equipment, knowledge or techniques to secure, connect or test.*

The debate will be on what is "specialist equipment". Much of the equipment being used today no longer requires "specialist" training to use. This applies in both the B1 & B2 fields.

Talk to any person and the differing opinions can be heard — more confusion!

# Transitioning AMEs

One of the disappointing aspects with the introduction of the new AME licensing system is the failure to map the differences between the current MEA11 training pathways and those that had training under previous MEA training pathways.

Considering that the new AME licence is not an ICAO licence providing privileges specified in ICAO Annex 1, these are bestowed on the LAME by the AMO, then one can only assume that it is another form of trade certificate.

Unlike past AME licences and most other NAA licence documents, they include a reference to the ICAO Annex 1, Chapter 4.

Our concern is transitioning academically qualified persons under previous MEA training pathways into B1 and/or B2 LAMES.

There is no correlation between the past AME licence and those issued today by CASA.

CASA correspondence has confirmed that there is absolutely no need to have experience in the non specific aircraft "Groups" or the non aircraft specific "Avionic Systems" to exercise the B1 and B2 licence in the GA environment.

*"CASA believes that in combination the performance rules and [AME] licensing system ensures the safe conduct and certification of maintenance. CASA also, for the reasons outlined above [see previous article], considers there is no issue with the transfer of LAMEs between the airline and general aviation industry."*

What is missing is a proper analysis of the training provided under the previous MEA competency based training system, (training that was much broader than the licences and ratings issued by CASA), to identify what bridging training is needed to enable these AMEs to qualify for the B1 and/or B2 licences.

## Bridging Training

One of the risks that has not been properly handled with the introduction of the Part 66 licence is analysis and development of bridging training courses to ensure that all personnel trained to previous MEA training pathways are kept current and competent in aviation.

If Manufacturing Skills Australia (MSA) and the Recognised Training Organisations involved had developed training courses that enabled previous qualified maintenance personnel to be assessed as competent to the new MEA standards then surely we would have a safer workforce.

As this change is government directed why is there no up-skilling funds available from the Federal Government to keep a competent Australian maintenance workforce?

AMROBA has raised these issues in the past with no support from government.

However, AMROBA is now in discussion with MSA and the RTOs to see if bridging courses can be made available, based on a person's previous academic qualifications and not the CASA AME licence.

If we can find a way to provide 'bridging' training with funding assistance from the government to upskill our workforce then we may then see a sudden growth in the number of LAMES.

Many AMEs never applied for a licence but they could be "upskilled" to the new MEA levels and obtain Part 66 B1 or B2 licences based on their academic achievements.

We see this bridging training as essential to remove the exclusions that have confused all that work within the MRO industry. Part of the bridging training will need to be a stringent RPL (recognised prior learning) element.

## Cirrus SF50 Business Jet Aircraft

Cirrus Vision SF50 has 431 orders with the first delivery expected to take place in 2012.

Cirrus Vision SF50 is a seven-seat, single engined light business jet designed and manufactured by the Cirrus Design Corporation (CDC), US.

The development of the SF50 began in 2000 with the requirement of a light personal jet destined for single pilot operation market. The design work began in June 2006.

In December 2007, CDC took on a lease of a 189,000ft<sup>2</sup> Northwest Airlines hangar at Duluth International Airport to utilise it as the production facility for its Vision SF50 project.

The aircraft was initially built under the name 'The Jet', but it was christened Vision SJ50 in July 2008. Renamed as Vision SF50 in March 2009.

The maiden flight of the aircraft took place on 3 July 2008. The aircraft is expected to enter service in 2012.

CDC was acquired by China Aviation Industry General Aircraft (CAIGA), a subsidiary of state-owned Avic, in June 2011.

It features Cirrus airframe parachute system (CAPS), an ice protection system, a large belly section, a dual ventral fin, a vapour cycle air conditioning system, an onboard oxygen generating system, an optional lavatory, a satellite phone, a lightning detection and a ski tube.



# Review of Engineering Approval System

Since CASR Part M now controls the process for engineering approval, it seems a good time to look at the benefits of the change.

If you are the aircraft's registered operator or an AMO requiring these engineering services, it is necessary to understand the changes that this new rule has placed on industry.

In Part M it talks about an "applicant" submitting a design to CASA or an Authorised Person (AP) for approval of a modification or repair and that the "applicant" has also carried out all tests and assessment against applicable airworthiness standards.

The "applicant" is obviously not an aircraft Registered Operator (RO) or AMO unless they are 'qualified' to make all the determinations to attest that the design is safe and compliant.

The 'applicant' then applies to CASA or the Part M AP to approve the design. Who initiated the need is not specified.

Whatever happened to the system where the aircraft's RO or AMO simply contacted a CAR35 AP and asked them to design and approve a repair or modification.

How many design individuals and/or organisations are now available to the industry. Obviously Part M is designed on using an approved design organisation that employs both 'qualified' modification and repair designers and CASA Authorised Persons.

If the designer is the 'applicant' then the approved data becomes the designer's proprietary data.

So how does the aircraft's RO or the AMO obtain permission from the designer (applicant) to use the approval.

This is where one pays for the engineering services contracted by the RO and/or AMO.

This process does go somewhat towards clarifying on-going legal responsibilities in the case of incidents of accidents. It is quite clear in identifying who does what.

The "applicant" has legal responsibilities under Part M, and CASA or the AP will also bear on-going responsibilities for the modification or repair.

This separation of responsibilities in Part M will add costs to approve modifications that do not affect the basic aircraft's flying characteristics. The engineering fraternity will need to keep separate records of what the "applicant" did to justify the modification and what the AP did to "approve" the modification.

Basically, the independent CASA APs servicing the non airline sectors will now need to have two people to approve modifications and repairs.

It is clear that the "applicant" must provide the AP with the design and justification for any modification or repair. From our reading of Part M, it basically eliminates the one-man CAR35 AP.

Do we now have an over officious system that imposes costs that act against aircraft RO from upgrading older aircraft instruments?

Obviously, we have moved away from the FAA delegate system where the DER can 'prepare and/or approve' modification and repair data.

One area of concern we have raised with CASA is that there are many modifications and even some repairs that simply need a proving or evaluation flight to verify the installation of the modification or repair.

The new system does not seem to enable this to happen without issuing the aircraft with an experimental certificate.

Under CAR 35 (2) & (3) temporary approvals were made pending an evaluation/proving flight and then full approval.

We are aware of the issue with an aircraft's insurance that is based on the aircraft being serviceable and maintained airworthy under its certification basis.

If the modification is an avionic upgrade, most APs want an evaluation flight to verify the proper compliance of the modification.

When a system does not make provisions for all aspects, then this is when industry tends to take a look for ways around the issue.



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## The Aircraft Maintenance Engineers/Technician Creed

### Worth Remembering

*"UPON MY HONOR I swear that I shall hold in sacred trust the rights and privileges conferred upon me as a qualified aircraft maintenance engineer/technician. Knowing full well that the safety and lives of others are dependent upon my skill and judgment, I shall never knowingly subject others to risks which I would not be willing to assume for myself, or for those dear to me.*

*IN DISCHARGING this trust, I pledge myself never to undertake work or approve work which I feel to be beyond the limits of my knowledge nor shall I allow any non qualified superior to persuade me to approve aircraft or equipment as airworthy against my better judgment, nor shall I permit my judgment to be influenced by money or other personal gain, nor shall I pass as airworthy aircraft or equipment about which I am in doubt either as a result of direct inspection or uncertainty regarding the ability of others who have worked on it to accomplish their work satisfactorily.*

*I REALIZE the grave responsibility which is mine as a qualified aircraft maintenance engineer/technician, to exercise my judgment on the airworthiness of aircraft and equipment. I, therefore, pledge unyielding adherence to these precepts for the advancement of aviation and for the dignity of my vocation."*