

AMROBA[®]inc

AVIATION MAINTENANCE REPAIR & OVERHAUL BUSINESS ASSOCIATION, INC

ADVOCATE OF THE AVIATION MRO INDUSTRY

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NEWSLETTER

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The format of the newsletter has been changed to be more compatible to read on line. We hope you enjoy the new format. In this edition, we look back over the last 6 months at the events and promises, proposals, decisions and other matters that will affect the long term viability of aviation. What is concerning is that regulatory reform continues to lose jobs and close avenues to become involved in aviation.

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ICAO Regulatory Oversight Manual, Part A.

2.2.3. Article 37 of the Chicago Convention specifies that States [Australia] must collaborate in securing the highest practical degrees of uniformity in regulations, standards, procedures and organisation in relation to aircraft, personnel, airways and auxiliary services in all matters in which such uniformity will facilitate and improve air navigation. To this end, ICAO has adopted Standards and Recommended Practices (SARPs) dealing with practically all activities concerning the operation of an aircraft. However, it is the integration of such SARPs into the national regulations and practices of Contracting States [Australia] and their timely implementation that will ultimately achieve safety and regularity of aircraft operations worldwide.

* Become a Member *

The adage "there is strength in numbers" is absolutely true when it comes to influencing government regulations and policy. No one company, no matter how big or successful, can keep up on all the regulatory issues directly impacting businesses.

AMROBA is dedicated to serving the businesses that are responsible for the in-service continuing airworthiness of aircraft and aeronautical products, including the manufacture of replacement parts for in-service aircraft. This segment of the industry has never had a dedicated advocate until now.

AMROBA membership form is available from the AMROBA website: amroba.org.au/become_a_member , or amroba.org.au/print_a_form print the membership form

Fees are stated on the application forms — BSB preferred method of payment..

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Safety All Around

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1. CASA Consultation & Attitude

Some members have commented on an improved attitude from local CASA field office staff whilst others state that nothing has changed. There has always been CASA inspectors (operations and airworthiness) that understood safety and would work with industry to improve safety even if a non-compliance was identified. When members of the industry do not trust CASA staff once they are aware of a safety issue that, if known to CASA, would assist others to improve safety, we end up with lower standards brought about by excessively harsh “enforcement action”. ICAO states:

3.9.2. Should the surveillance and inspection programme and related inspection reports reveal that the licence/certificate/approval holder has failed or is unable to meet or maintain the required Standards, the CAA technical expert primarily responsible for the surveillance of the operation must promptly advise the licence/certificate/approval holder of the deficiency observed. Once the cause of the deficiency is determined, the CAA should provide deadline for corrective action to be taken and initiate appropriate follow-up to determine the effectiveness of the corrective action. Additional inspections should be conducted whenever problems in particular areas repeatedly occur.

In other words, enforcement is not considered unless the licence/certificate/approval holder does not meet the deadlines or refuses to take corrective action. Notice ICAO expects the Inspector to work with licence/certificate/approval holder to correct the issues – just like it was once done by CASA’s predecessors who knew how to survey industry and had the right safety outcome attitude.

CASA developed a “dictatorial consultation/attitude” process and an autocratic enforcement approach because they were led by people who did not understand the role of a regulator, even though many of their Inspectors had made similar mistakes when employed in the industry. ICAO “oversight” warns against the approach CASA has followed. Attitude is crucial for a good safety regulator to work together with industry to improve safety without being “captured” by industry just as other mature regulators have been, and are, doing for many decades.

CASA DAS Skidmore has started reforming the consultation process used by the SCC & its committees and the regulatory reform staff in CASA. We have been involved in these consultations and hopefully we will move towards the FAA consultative process. The ‘expertise’ is in industry, not in CASA. CASA’s role should be to facilitate what industry recommends so that the industry can grow – it is not their role to dictate to industry their perceived requirements.

Regulatory requirements are a mess – they are over prescriptive and need to be changed. Performance based regulations will improve safety. It is time to return to the “rule of law”.

A big impact on future regulatory development is the Government’s guide for better regulation, regulation reduction policy and red tape reduction. The first question: What is it we need to regulate? then ‘Do we need the Regulation’? The last one is do we need a Standard? You do not need to regulate what is safely happening.

Basically, industry consultative groups, properly instructed in government policy to reduce regulatory impost and red tape, facilitated by a CASA subject specialist, should be lowering regulatory imposts and costs leading to an increase in jobs in aviation with improved safety outcomes.

EASA woke up to the problem of having a regulatory development group within EASA, they become very good at creating more and more regulations. The new Head of EASA has disbanded its dedicated regulatory development division because they developed too many rules. CASA has done worse, instead of compliance with the “rule of law” CASA has returned to the distant past and has created compliance with “standards” approved by CASA in “expositions” and many other documents. The reform that started in the late 1980s by Parliament was to change so industry only had to comply with the Act, Regulations and other “standards” tabled in Parliament.

Why did it generate into the over regulated system that is coming out of CASA today?

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The last ten years has put this industry back 25 years – NZ moved on but we are still languishing in the 70s-80s because of adopting a system not compatible with Australia.

If consultation used the last 30 years of Governments' "Better Guide to Regulation Development", then our regulatory requirements should have been shrinking – the only time regulatory development worked is when CASA's legal was not involved with regulatory drafting.

The ASRR recommended a three tier system but CASA does not understand it yet. What the ASRR was referring to is implementing a "Rule of Law" system where all requirements would be in the Act, Regulations and Standards. That is, "meet requirements specified in regulations and promulgated Standards". Remove "satisfy" CASA and replace with compliance with Standards.

The ASRR also recommended Performance Based Regulations (PBR) such as FAR Part 43. The outcome of PBRs is that there is always a voluntary higher level of safety achieved. This has been proven around the world in more than just aviation. Can consultation achieve this approach?

What AMROBA is lobbying for is proper enforceable requirements in Regulations that are true criminal events. i.e. '*knowingly fit a unapproved part*'; '*fly an aircraft without the right pilot rating*' instead of putting strict liability against technical standards.

Much that has been implemented since the creation of the CAA has to be reversed to get GA back providing the source of entry for the majority of personnel entering the aviation industry. Independent flight instructors based on the FAR Part 61 must be adopted.

AMROBA will support CASA DAS Skidmore and work with his consultation teams in moving back to what should be outcome based regulations such as FAR Part 43:

§ 43.13 Performance rules (general). (a) Each person performing maintenance, alteration, or preventive maintenance on an aircraft, engine, propeller, or appliance shall use the methods, techniques, and practices prescribed in the current manufacturer's maintenance manual or Instructions for Continued Airworthiness prepared by its manufacturer, or other methods, techniques, and practices acceptable to the Administrator, except as noted in § 43.16. **He shall use the tools, equipment, and test apparatus necessary to assure completion of the work in accordance with accepted industry practices.** If special equipment or test apparatus is recommended by the manufacturer involved, he must use that equipment or apparatus or its equivalent acceptable to the Administrator.

(b) Each person maintaining or altering, or performing preventive maintenance, **shall do that work in such a manner and use materials of such a quality, that the condition of the aircraft, airframe, aircraft engine, propeller, or appliance worked on will be at least equal to its original or properly altered condition** (with regard to aerodynamic function, structural strength, resistance to vibration and deterioration, and other qualities affecting airworthiness).

This FAR based performance regulation is over 60 years old and has kept maintenance safe in the US. In fact, if you follow the ASRR three-tier proposal, the regulation would be basically the 'Applicability' clause out of FAR Part 43 and the rest would be in the MoS. If other guidance is needed just reference the FAA AC data base to support the maintenance requirements.

It would replace pages of maintenance regulations in CAR/CASR/MoS. FAR 43 has 12 regulations that underpins maintenance requirements, they are, wherever possible, performance based regulations – they work.

FAR Part 91.409 holds all the regulations that the registered operator/operator has to follow with regards to maintenance. FAR 91 also includes the transponder, etc. requirements.

So why are we writing pages and pages of regulations and standards when the 60 year old FAR system achieves one of the safest aviation systems in the world. We keep hearing CASA state they are adopting world's best practice during consultation – that is an excuse to raise more regulations, standards and advisory material.

It is doubtful whether the mindset in CASA can be changed to meet government directions. After a decade of creating regulations and standards just for the sake of creating regulations and standards, how do you change their minds.

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CASA's DAS Skidmore has one of the biggest challenges to meet the ASRR recommendations as intended by the writers of the ASRR report. That is, minimum regulations as recommended by the ASRR is about giving a head of power to the technical standards.

Having attended a couple of SCC sub-committee meetings since changes have started to happen, it is clear that the project leaders still do not understand what should be happening.

2. Government Scorecard

Though it took some time, we must admit the government has achieved most of what it set out to achieve. It has created a Board with good aviation expertise – how effective the Board will be and how DAS Skidmore, a Director on the Board, works with the Board only time will tell. The Minister's Statement of Expectations has set the criteria for it to be successful.

- A. The reform of CASA's structure is underway. May help!!
- B. The Minister's Aviation Industry Consultative Council has been formed and is looking at things the government can influence. e.g. AME training, General Aviation Action Agenda. AMROBA is a member of sub-committees of the AICC.
- C. The ASRR has completed its review and the Minister has supported the recommendations in Parliament. Statement of Expectations issued to Board/CASA also support.
- D. New Board starts as of July 1 so their influence should help—it is an aviation Board.
- E. Enhancing aviation personnel skills is under review to align with ICAO.

The Minister has met just about all of the commitments that he gave when elected. The only outstanding policy is determining how future AME training is to be provided. This is a project within government that will determine how future training will be provided.

3. Certification & Manufacturing

Both these areas need drastic reform and reversal of the direction being taken by CASA over the last decade. From our position, these two areas are essential to trade and commerce and have a massive impact on the survival of aviation manufacturing and design services in Australia.

The growth in paperwork created by CASA has demonstrated total lack of business management experience and demonstrates micro management mentality of those within CASA.

It has nothing to do with safety, in fact, it is detrimental to safety.

What does industry need?

It needs what it had – that is, individual authorised persons, either working as an individual or employed by an operator or maintenance facility and a design organisation system. Individual authorised persons are needed to cost effectively support the wide geographical spread of aviation in this country. Design organisations needed for commercial expediency and to hold additional delegated powers such as ability to issue APMA, ASTC and ATSO limited by delegation.

Australia has demonstrated in the past that it is innovative and safe with its designs. We have small GA manufacturers that have matured and are now raising the bar and will increase their potential to sell aircraft and products into other markets. The markets where the best potential for sales of aircraft and aeronautical products is North & South America.

The challenge is, how does CASA & industry work together to reduce administrative costs without any loss in safety? The over prescriptive regulations and red tape is stifling these sectors.

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Single certificates, manuals, reduction in unnecessary paperwork, transfer of proper administrative controls to businesses, less reporting, etc.

Australia is a large country and CASA's predecessors were aware that they just cannot provide 'certification' services to such a wide geographically spread manufacturing and maintenance industry. To support such an industry, CASA needs to follow the past practices based on the FAR system and continue to authorise individual design professionals (21M AP) and also provide for approved design organisations like CAR30 under the CASRs but with more delegated powers.

What is being proposed will not enhance design and manufacturing in Australia.

The ASRR also recognised this as an issue and recommended the government continue to support industry individuals providing these professional services. The system was based on the FAA system of designees, it worked and we had growth.

CASR Part 21 J is a typical approach by CASA – dictatorial consultation. It will increase costs so CASA must have lied to the OBPR to get an exemption from providing a RIS and it was submitted to Parliament as no added costs to industry. If that is the case, then CASA will need to drastically amend the regulation and the administrative processes they have created to get it cost neutral.

It basically proves that the architects of this Subpart have no understanding of this sector of aviation if they did not realise the damage it will do to the industry.

It has become so badly managed that there is a financial case that should be put to the government to dump the Australian aviation regulatory system and fully align with the NZ regulatory requirements.

The only purpose for a Subpart J design organisation is to enable CASA to devolve regulatory functions to the organisation that they have not given to a Subpart M authorised person. Such as issue an APMA, ASTC that doesn't change the performance of a type certificated aircraft, etc. If CASA is not devolving these functions, then it is questionable why they need a Subpart J design organisation.

Manufacturing is another area where CASA has to change their approach. We should be encouraging as many businesses as we can to be involved with manufacturing. We can see the success of current manufacturers like Gippsland and Seabird but the potential is enormous. At the end of the day, it is the manufacturer that is responsible for their products.

Another issue that demonstrates how bad the regulatory development has been handled is that CASR Part 21 was made in 1998 and we still have not seen the associated FARs that enables manufacturers the same privileges under the FARs.

It is simply pig-headedness that FAR Part 43 was not adopted within a few years of making CASR Part 21. FAR Part 43 enables a manufacturer to maintain products they manufacture. 17 wasted years that created another government review and CASA has not yet accepted they are accountable for the review.

It will happen again unless there is a major change in direction within CASA. The ASRR Report clearly identified that CASA was heading in the wrong direction and had the wrong attitude.

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4. AME Training

What a mess AME training has become. Instead of a nationally recognised AME trade certificate we are struggling to keep the doors of dedicated RTOs open.

The CAA/CASA has implemented anything over the last 25 years to arrested the declining & ageing numbers of AMEs/LAMEs, especially in GA. The ICAO two stream AME training must replace the three streams (avionic, mechanical, structures) in the AQF training packages. The two stream (avionic/mechanical) ICAO multi-skilling approach, used by GA, has almost collapsed.

The biggest error was imposing licencing training on to RTOs that had been providing AME trade training. What should have been done, is to add licencing requirements to top up the AME trade training to licencing levels as had been proposed by CASA pre EASA. Secondly, why did CASA not exempt the Education Department's dedicated RTOs from Part 147??

The European regulations include the following provision not used by CASA:

147.B.25 Exemptions

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

- 1. being an organisation as specified in 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 Part-147.*
- 3. having recourse to the independent audit part of a quality system subject to the department operating an independent schools inspectorate to audit the maintenance training organisation at the frequency required by this Part.*

(b) *All exemptions granted in accordance with Article 10(3) of the basic Regulation shall be recorded and retained by the competent authority.*

AME Apprenticeship training is in a state of contraction across Australia because of Part 147. To what national standard do we train AMEs today?

The core reason was that CASA went alone, as a government agency, over the last decade and imposed their Part 66/147 licencing system that has almost collapsed trade training. CASA should have been in constant contact, and collaboratively working with the *Australian Standards Qualification Authority, Trades Recognition Australia, State & Federal Education Departments*, as was done in the past. The LAME requirements are a gap above the tradesperson they should not have removed the tradesperson entirely from the system. ICAO clearly state that there is no Annex 1 [LAME privileges] requirements for tradespersons.

*ICAO AME Training Manual: 1.11 Since their initial adoption in the Second Edition of Annex 1 (1948), Annex 1 Standards for the AME Licence have been intended for persons who sign a maintenance release after routine maintenance or who certify an aircraft or an aircraft component airworthy after repair, overhaul or modification. **There are no Annex 1 requirements for the personnel who perform the actual maintenance or repair work to be licensed.** The review of the Annex 1 AME licensing provisions confirmed that this approach is still valid, and Amendment 161 continues to provide only for inspection and certification privileges.*

Previous AME trade training was based on the avionic and mechanical practical skills and knowledge standards from the ICAO training manual that were promulgated by CASA's predecessors. The manual also provides excellent training standards and guidance identifying when a person under training should be able to exercise their skills on an aircraft or in the workshop.

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ICAO. 10.1.3 For future aircraft hangar and workshop technicians, their basic workshop training should commence with Phase Two — Skills and should be completed before the students begin working on airworthy aircraft, engines or equipment in Phase Three — Experience.

ICAO states that students should have basic workshop skills before the student works on an aircraft, engines or equipment. This is the opposite to what CASA approved. In some States, this practical workshop skills are being taught in secondary schools. If the ICAO AME training manual is used for trade training as it did some years back when trade training was seen as a career, then sections of the manual are only needed for the gap training relating to LAME responsibilities. It is not hard to create avionic and mechanical trade training based on ICAO Standards

Secondary School
Basic Skill Training

Trade Training Centres
Avionic/mechanical
Basic Skills

Trade Training
Avionic/mechanical
knowledge

Licence Training
Aviation Legislation
Airworthiness Standards

Next year, *Manufacturing Skills Australia* is being replaced with [aviation] “*Industry Reference Groups*” and, after discussions with some educators, they predict that it will take 3 to 4 years to put back in place appropriate trade training courses that lead to, with additional [gap] knowledge, becoming a LAME and hopefully holding “education credits” for aeronautical engineering university courses.

AQF 3
Basic Trade Skilled

AQF 4
Trade Certificate

AQF 5
LAME

AQF 6
Bachelors

It is time to integrate aviation training so that there is a natural career path based on qualifications earned in the Australia’s education system.

The government is also looking at how the training will be presented. There is no longer enough apprentices to set up multiple RTOs. One option is a centre of excellence but, to be successful, it would need several campuses around Australia. Next year, the “*Industry Reference Group*” will have a huge task to address rebuilding AME trade training in Australia.

5. CASA LAME PROPOSAL

Everyone in GA knows that CASA has created an unworkable licensing system because of their inability to communicate and understand the role of the LAME. As stated above, the LAME is not in the system to be an AME, he/she provides quality control of maintenance and really serves two masters. One is his/her employer and the other one is their regulatory responsibility under the legislation.

The current system is very complicated & nigh on impossible to be compliant with.

The LAME will never be able to perform their regulatory responsibility iaw ICAO until the maintenance rules adopt performance based rules such as FAR Part 43.

What CASA never took into account is the reason why GA had “Group” ratings in the first place. It was simply because of the availability to obtain experience, something CASA seems to ignore these days.

What did underpin the CAR31 licencing was a robust apprentice training system in all States of Australia. Though there were slight difference between States, it was not enough to be concerned with. This was a two stream trade training, avionic and mechanical that existed for many decades.

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What worked for Australia was totally ignored by CASA's EASA mindset and has done as much damage to replenishing the AME/LAME careers as did the deletion of the independent flight instructor caused a pilot shortage.

CASA predecessors understood what the roles were and how they worked.

1. **Final coordination** – LAME who signs the maintenance release.
2. **Coordination** – LAME who signs completion of maintenance
3. **Stage maintenance** – LAME who signs as airworthy post modifications, repairs, replacement of components, independent certifications, etc.

Our system was nurtured from years of Australian experience, not European short term experience that is not relevant to Australia. The system worked and was safe.

AME LICENCE	CATEGORY	BROAD RATINGS	SPECIFIC RATINGS
B1.1	Aeroplane A/F + Turbine Engine	Group ratings	Aircraft Specific Type ratings
B1.2	Aeroplane A/F + Piston Engine	Group ratings	Aircraft Specific Type ratings
B1.3	Rotorcraft A/F + Turbine Engine	Group ratings	Aircraft Specific Type ratings
B1.4	Rotorcraft A/F + Piston Engine	Group ratings	Aircraft Specific Type ratings
B2	Avionics	Group ratings	Aircraft Specific Type ratings

CASA now proposes to have a B1 and B2 licence group ratings and specific type ratings which is exactly what we once had. This has created the most confusing "standards", guidance materials and regulations simply to approve a LAME.

The anomalies we had in the CAO 90 series are nothing compared to what has been created under Part 66 & 147. It is time to stop and think before a further unworkable system is generated.

In AMROBA's opinion, CASA has implemented a totally complicated system that is designed to catch people out because not even CASA is *au-fait* with their system.

AMROBA will continue to push for a return to the ICAO LAME responsibilities and let AMEs be able to take responsibility for what they are trained to perform.

6. Performance Based Regulations

There is a big difference between performance based regulations and prescriptive regulations. Performance based regulation outcomes mean safety outcomes are well above the standards that are applied in prescriptive regulations.

AMROBA has been lobbying for the amendment of the changes to the regulations to remove the performance of maintenance iaw approved maintenance data. This may sound feasible to airlines but it does not work when manufacturers rely on the "*good judgement*" of the LAME when performing maintenance.

How does a LAME use "*good judgement*" when CAR 42V states all maintenance must be done iaw approved maintenance data. CASA refuses to recognise "*good judgement*". You even find this clause in the Cessna SIDs requirements.

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CAR/CASR do not provide for the regulatory responsibility of the LAME that the manufacturers places on them. US manufacturers do not override FAR Part 43.

Cessna SIDS “NOTE: The inspection guidelines contained in this section are not intended to be all-inclusive, for no such charts can replace the good judgment of certified airframe and power plant mechanics in performance of their duties.”

The Turbo Thrush has a similar clause. “This manual contains information on aircraft systems and operating procedures required for safe and effective maintenance. It shall not be used as a substitute for sound judgement.”

Hawker Beechcraft Bonanza: “This inspection guide is not intended to be all-inclusive, for no such guide can replace the good judgment of a certified airframe and power plant mechanic in the performance of his duties.”

These provisions places the responsibility on the LAME to do the inspections in compliance with the performance rules in FAR Part 43.

- FAR Part 43.15 (a)(1) covers Part 91 - no reference to approved data, just airworthiness requirements when inspecting.
- FAR Part 43.15 (a)(2) provides for airline where the Operator/AMO are given this responsibility thus alleviating the LAME from the get out of jail clauses.

§ 43.15 Additional performance rules for inspections.

(a) *General.* Each person performing an inspection required by part 91, 125, or 135 of this chapter, shall—

- (1) Perform the inspection so as to determine whether the aircraft, or portion(s) thereof under inspection, meets all applicable airworthiness requirements; and
- (2) If the inspection is one provided for in part 125, 135, or § 91.409(e) of this chapter, perform the inspection in accordance with the instructions and procedures set forth in the inspection program for the aircraft being inspected.

Also refer FAR Part 43.13 on page 3—another foundation block.

Until the foundation blocks are back in the aviation regulations for the LAME to inspect an aircraft, or part of an aircraft as meeting all applicable airworthiness requirements, then Australian aviation will continue to fail its own LAMEs. FAR 43.13 places the responsibility on the AME and LAME to do maintenance using an industry practice that does not impair the aircraft’s airworthiness requirements.

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.”

Safety All Around