

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](http://amroba.org.au/become_a_member) , or [amroba.org.au/print a form](http://amroba.org.au/print_a_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—Industry Short Term Wins

CASA's DAS Skidmore has challenged all associations to provide cost neutral or cost effective proposals that can be implemented so industry can benefit — these proposals would mainly be procedural matters imposed by CASA that don't need regulatory change.

Members should send suggested proposals to amroba@amroba.org.au for collating and submission. AMROBA is dusting of the myriad of previous submissions made over the last decade that were never actioned, mainly because it would diminish the 'empires' that have grown within CASA. The following is some issues that AMROBA is considering submitting, any suggestions appreciated.

- a. **AME licencing**: Most CAR31 LAMEs that had their licences converted to the Part 66 format have exclusions. In Europe, the NAAs provided examinations to address missing elements for the AME licence so the limitations could be removed. CASA could easily create examinations from their exam database to address the subject matters to remove the exclusions. In addition, self-study should be allowed prior to sitting the CASA created examinations. This would advance all LAMEs to the Part 66 levels: B1.1 to B1.4 LWTR and specific aircraft type ratings.
- b. **Delegate's Manual**: Both the FAA and TCA utilise a regulator's promulgated delegate's manual that is used by industry designees (authorised persons) so saving another empire within CASA that makes a living out of approving, auditing, and directing changes to individual manuals. The savings to CASR Part 21.206, 21.206A, 21.207, 21.207A, 21.209, 21.031, 21.095, 21.098, 21.132A, 21.176, 21.181, 21.183, 21.184, 21.185, 21.186, 21.187, 21.189, 21.190, 21.191, 21.195A, 21.195B, 21.197, 21.199, 21.200, 21.201, 21.303, 21.305A, 21.324, 21.331, 21.410, 21.414, 21.430, 21.437, 21.502A, etc, etc. authorised persons, and CASA, would be quite staggering. Airworthiness, engineering, medical are all covered by Authority issued manuals in countries where industry authorised persons are used. CASR Part 21 today looks nothing like the FAR Part 21 from where it was adopted.
- c. **All NAA/Manufacturer Promulgated Data as Approved Data**: The FAA system has both 'approved' and 'acceptable' data that is needed to maintain aircraft. Since 1991, Australia has only had approved maintenance data. This has technically excluded 'acceptable data & general industry practice'. This has caused major issues because the approved maintenance data does not include data acceptable to the NAA (FAA) as approved maintenance data. The industry needs a broad general instrument that accepts data promulgated by the NAA responsible for type design and other information such as basic training manuals that includes methods and procedures used as normal industry practices.

What I need is suggestions from you so I can develop your suggestions into proposals to Skidmore so that we can reduce bureaucracy and red tape. As an example, some have suggested that an AMO should be able to make any necessary changes/amendments to their AMO & manual without prior approval from CASA. What value is added by CASA approving amendments and changes to a business.

Maybe one proposal to CASA will be to return to fully adopting the EASA certificate system, a single page certificate and then have all changes/conditions managed by the business like they do in Europe.

Another suggestion is changing CASA's transitional procedures so that, for example, a CAR 30 AMO can be issued with a Part 145 AMO certificate and be instructed to make the administrative changes over the next 5 years. This is normally the approach taken by the FAA whenever they make regulatory change that affects the way the business operates.

The actual business service provided is not changed by the new CASA regulations, they only add new administrative overheads.

We already have businesses providing maintenance services, design organisations providing design services, pilot training organisation, etc, etc.

CASA re-certification process has been unnecessary, it has not value added to safety. It has, however, added to the costs of transition to a new regulatory system that continues to add costs for no safety benefits.

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2. Cessna SIDs Saga

The Cessna SIDs saga (uncertainty) was created by CASA making an “aviation ruling” instead of giving a CAR 38 maintenance direction to each Cessna registered operator. Is a ruling enforceable?

An aviation ruling is defined by the Commonwealth Attorney General website as:

“**rulings**

Some rulings produced by the Australian Government are classified as [legislative instruments](#), meaning they are routinely published on ComLaw in [authoritative](#) form. However, other types of rulings are not available on ComLaw:

Aviation rulings are not required to be published on ComLaw because they are advisory documents that set out policy on a particular issue, and not a statement of the law. They are available from the [Civil Aviation Safety Authority](#).”

Irrespective how it has come about, the evidence of corrosion being found in some aircraft has been sufficient to require the SIDs to be complied with across the fleet. Of course, some aircraft will have little corrosion but others, even those aircraft residing in dry locations, have been found to have corrosion.

The photo on the right is atypical of what is being found. This is a C182 that resided in Cessna’s so called dry climate area and now needs to have extensive repairs. The maintenance organisation was also surprised at the depth of the corrosion and blamed the “routine inspection” standards annual of Schedule 5 for the depth of the corrosion. The owner also had the right attitude, a new aircraft is totally out of his current financial situation, but getting all the repairs and some updated refurbishing will provide a “new” like aircraft.



The Cessna SIDs has provided evidence that the CASA Maintenance Schedule (Schedule 5) “standards” as promulgated by CASA in CAAP 42B -1 is a causal reason why many aircraft being maintained to this standard have corrosion.

It is not the Schedule 5 checklist that is the problem, it is the low standards promulgated in CAAP42B-1. FAA [AC 43-204](#) provides regulatory visual inspection standards for use that are very different to CASA’s promulgated standards.

Many experienced AMOs do Schedule 5 plus additional tasks but some registered operators have been known to demand no more than Schedule 5, as per the CAAP, be done.

AMROBA has raised the deficiency of Schedule 5 many times and submitted detailed Proposals (2 & 3) to overcome what we saw as deficient CASA standards.

AMROBA’s advice to all C200 & C100 registered operators is to contact their AMO and find out when they can get the SIDs carried out. If the costs are prohibitive, then the registered operator should be talking with CASA about an alternative method. CASA may consider a system of maintenance that will spread the maintenance over a few years. A progressive maintenance program may even provide a better spread of maintenance costs annually. E.g. engine mounts could be linked to engine change.

Sadly, CASA’s continuing airworthiness policy is different to that of the FAA and EASA. The FAA does not support retrospective mandatory requirements being applied by manufacturers. The FAA can apply retrospective mandatory action by issuing an AD. FAA has written to Cessna requiring them to amend their AWLs relating to SIDs.

On February 19, 2015, the FAA’s Small Airplane Directorate sent a letter to Cessna that addressed some of the above issues, and pointed out the non-mandatory nature of the *after-added* ALS for the Model 210 aircraft. The FAA asked Cessna to republish the replacement times and inspections as recommendations that are encouraged, but optional, for those in-service aircraft, unless later mandated by an AD. To date Cessna has not provided a written response outlining its position on this matter.

CASA must stop trying to lead the world and just play its part in a global aviation industry.

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3. Annual Inspection

Ever since 1991, the civil aviation regulations have included an “annual inspection” but it is interpreted as a “routine” inspection in CAAP 42B -1. If you compare the CASA inspections standards with [FAA AC 43-204](#), you will see quite a different approach to “inspection”.

Basically, the FAA defines four basic levels of “visual” inspection relating to their difficulty and degree of effectiveness as follows:

- Walk-around Inspection. (Pilot or LAME)
- General Visual Inspections; (AME/LAME)
- Detailed Visual Inspection; (AME/LAME) and
- Special Detailed Visual Inspection. (AME/LAME)

In addition, the AC states that there is an additional category that may be used when visual inspection is supplemented by specialised NDI equipment. (AME with NDI qualification or NDI specialist)

In addition to FAA AC 43—204, the FAA also promulgate other ACs addressing maintenance:

- [AC 20-37D](#), aircraft propeller maintenance;
- [AC 43-4A](#), Corrosion control for aircraft;
- [AC 43-12A](#), Preventive maintenance;
- [AC 43-13-1](#), Acceptable Methods, Techniques and Practices—Aircraft inspection and repair.

Careful detailed examination of corrosion sites must be accomplished to define the extent of corrosion. This can lead to removal of skin panels or other measures to further define the extent of damage.

In the USA, only an A&P mechanic holding an Inspection Authorisation (IA) may perform the “annual” inspections. The following link is to the IA Guide that explains the responsibility of the IA. The training to provide this knowledge is sadly missing from our national vocational education training system.

[Inspection Authorisation](#) Guide—(training courses are usually 5 days in the USA). CAA NZ has implemented this system. The following is some of the IA responsibilities listed in the Guide and what to look for:

1. **Approving Major Repairs and Major Alterations.** A primary responsibility of the holder of an IA is to determine airworthiness by inspecting repairs or alterations for conformity to approved data, and assuring that the aircraft is in a condition for safe operation. During inspection of major repairs or major alterations, the holder of an IA must also determine that they are compatible with previous repairs and alterations that have been made to the aircraft.

The holder of an IA cannot approve the data for major repairs or major alterations. He or she may, however, inspect to see that alterations conform to data previously approved by the Administrator (14 CFR part 65, § 65.95). This means the holder of an IA ensures that approved data is available and is used as the basis for the approval. This availability determination should be made prior to beginning the repair or alteration.

2. **Annual and Progressive Inspections.** The procedures and scope for annual inspections are set forth in 14 CFR part 43, appendix D, and should be followed in detail. The scope and detail for a progressive inspection is established by the owner or operator in accordance with 14 CFR part 91, § 91.409(d).
3. **Configuration.** The aircraft should conform to the aircraft specification or type certificate data sheet, any changes by supplemental type certificates, and/or its properly altered condition.

When the holder of an IA approves an aircraft for return to service, he or she will be held responsible for the condition of the aircraft as of the time of approval.

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4. **Minimum Equipment List.** The minimum equipment list (MEL) is intended to permit operations with certain inoperative items of equipment for the minimum period of time necessary until repairs can be accomplished. It is important that repairs are accomplished at the earliest opportunity in order to return the aircraft to its design level of safety and reliability.
5. **Airworthiness Directives.** The holder of an IA is required by 14 CFR part 43, § 43.13, to determine that all applicable ADs for aircraft, powerplants, propellers, instruments, and appliances have been accomplished.
6. **Paperwork Review.** The owner or operator is responsible for maintaining the equipment list, CG and weight distribution computations, and loading schedules, if necessary. The following items must be considered:
7. **Aircraft With Discrepancies or Unairworthy Conditions** If the aircraft is not approved for return to service after a required inspection, use the procedures specified in 14 CFR part 43, § 43.11. This will permit an owner to assume responsibility for having the discrepancies corrected prior to operating the aircraft.
8. **FAA Form 337.** Major Repair and Alteration (Airframe, Powerplant, Propeller, or Appliance), serves two purpose. It provides: 1. Owners and operators with a record of major repairs and major alterations, indicating details and approval. 2. The FAA with a copy for the aircraft records.
9. **Weight & Balance.** Weight and balance data is not required on the FAA Form 337. However, it is imperative that weight and balance checks be made very carefully. Since aircraft manufacturers use varying methods of weight and balance control, it not feasible to provide a universally adaptable method.

As can be seen, the IA does what most GA C/Es do when assessing an aircraft, especially if they have not previously maintained the aircraft. The benefit of the IA Guideline Handbook is that it clearly explains the responsibility of the coordinating LAME that we refer to in the CARs. Many in industry believe that the TAFE system should provide this training and every new C/E should complete the training.

Why isn't there an on-line training capability for such training, should this be the question prior to ever adopting this approach?

There is a lot of support for the FAA/CAA NZ system to be adopted and the IA is part of that system as is the Form 337. CASA needs to consider the FAA/NZ system and add CASR Part 43 and FAR Part 91.409 (aircraft maintenance requirements) to the regulatory framework as it once was predicated.

AMROBA cautiously supports the FA/NZ system for all but the major airline sector but with some caution. We are currently not structured for the USA Department of Transport/State government approved Fixed Based Operator at this stage.

To implement as NZ did, many small AMOs would not need to hold CASA AMO approval and some AMOs would be challenged by independent LAMEs. Independent LAMEs cannot employ apprentices which we need desperately to underpin the maintenance industry.

AMROBA supports the use of an independent LAME by CASA approved flying school/aero club/private aircraft owner as long as the LAME only maintains their own aircraft and excludes major modifications and structural repairs. An AMO is there to commercially provide a service for multiple customers. This is not to say that other benefits of the FAA FBO system should also be considered especially with relation to pilot training by FBOs (no CASA approval) and other services.

The annual inspection in Australia has been a causal element of issues in the ageing aircraft program but nothing has been done for two decades. It is time to fix the GA issues and to plan for a brighter future by deregulating.

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4. Ageing Aircraft opens a new possibility

Australia has an ageing aircraft population with many aircraft that are nearing the end of their life. This has opened the door in the USA for smart entrepreneurs to set up businesses in competition to aircraft manufacturers and the costly new models.

There are now quite a few businesses buying cheap aged aircraft and completely rebuilding, updated avionic packages, and refurbishing these aircraft putting an as -new aircraft back into the market.

View **USA Pristine Aircraft**link: [refurbished aircraft](#)

The cost of a complete structural inspection and repairs, new avionic package and engine overhaul enables the aircraft to be sold competitively against new models.

We even see the ex CEO of Cessna, Jack Pelton at **Aviation Alliance** doing similar refurbishing with the C421 and adding turbo engines. The [Excalibur](#) offers a remanufactured, modernized turbine-powered aircraft to the aviation and defence industries.

Another company in the US is **Nextant Aerospace** that are looking to expand its remanufacturing activities into a new market segment. The company is focusing on “just one aircraft type” in the super-midsize to large category. The [Nextant 400XTi](#) – the world’s only remanufactured business jet.

A new Beech Baron is over \$1.3 million, a Cirrus SR22 is over \$700,000 and even the everyman Cessna 172 pushes \$300,000. For pilots of a generation ago — not to mention the glory days of the 1970s—these prices look outrageous. But as any aircraft salesman will tell you, these high prices aren’t leading to big profits. The Baron may cost a lot of money, but Beechcraft only recently emerged from bankruptcy. Likewise, Cessna has cut its staff by over 50% and is a shadow of its former self. Manufacturers are selling airplanes at higher prices than ever, but making less money than ever.

Because used aeroplanes are such a good value, you can buy one, completely overhaul it, update & modify it and still save 50% over a new aeroplane.

The huge number of aeroplanes that were delivered in the 1970s and 1980s helps too, offering a large pool of airframes that are candidates for remanufacture. With nearly 2,000 Cessna 421s delivered, the **Aviation Alliance** could sell 200 Excalibur 421s (surely a home run at that number) and still only use 10% of the fleet. Cessna shipped over 40,000 copies of the 172 over the years—just imagine what could be done with those.

General aviation isn’t dying, it’s just changing, and our view of what a “new aeroplane” is, needs to change too. It’s time to stop looking at used airplanes as fading relics, and start looking at them as a path forward to more affordable airplane ownership.

Diesel and turbo engines are the future and some have been STC’d to fit GA aircraft.

[Rolls Royce Turbo](#) is typical of what is now available.

Australia has a fleet of aircraft with many aircraft that can be purchased very cheaply at this stage. There is a market for modernised aircraft in the Asia Pacific region.

If the refurbishment industry does eventuate, many airframes won’t end up in the spare parts markets and new/current owners may opt for a modernised aircraft with the latest equipment fitted which just might become the latest “new” aircraft.

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5. AME Training — Future is Positive

After 2 decades of CASA regulatory involvement, we still do not have a proper education qualification system that will provide a skilled workforce for the AMO industry. Why?

The answer is simple, our industry and the regulator have not engaged other government department and agencies that have an input into training, especially training that attracts government subsidies. The CASA AME licencing structure is actually well designed for a progressive training system that should also link into the aeronautical professional degrees.

What has been missing from the Part 147 training is a complete disconnect with the Australian Standards Qualification Authority (ASQA).

Starting in 2016, the Education Department will introduce Industry Reference Groups (IRG) to replace Skill Councils. The aviation IRG must provide training courses that will meet:

- 1) Trade training standards;
- 2) International Standards;
- 3) CASA licencing (A, B1, B2);
- 4) ASQA endorsement;
- 5) Flexible delivery (full/part time/on-line);
- 6) International recognition.

AQF Level 1	Secondary/Tertiary School	ICAO Trg manual Natural Science & general principles of aircraft
Level 2	Pilot maintenance level	ICAO Trg manual Knowledge/skills for
Level 3	LAME CAT A level	ICAO Trg manual Knowledge/skills for
Level 4	Avionic & mechanical AME Trade levels	ICAO trg manual 2 stream training packages — appren-
Level 5	B1 & B2 Level 4 plus aviation specific requirements	ICAO trg manual Chapter 3 Civil aviation standards and requirements
Level 6	Professional Engineer	University Level

Trade recognition domestically and internationally is not CASA’s responsibility, it is the Education Department’s Trade Recognition Authority. 5 full training packages are required.

- Aeroplane AME trade training would not need the piston/propeller training modules.
- Aeroplane AME trade training would not need the turbine/high speed flight training modules
- Helicopter AME trade training would not need the piston/propeller training modules.
- Helicopter AME trade training would not need the turbine/high speed flight training modules
- Avionic AME avionic trade training

Each package could be geared for the Cat A licence level & the full B level. Once established, specific training courses for pilots, owner maintainers, etc. can be produced.

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