

# AMROBA<sup>®</sup>inc

## ADVOCATE OF THE AVIATION MRO INDUSTRY

Newsletter Date  
15/02/2014

### 'Gotcha' Regulations

Volume 11, Issue 02  
February – 2014

Ever since CASA's predecessor, not the government, decided in 1991 to two-tier aviation requirements, aviation has been turned into a criminal activity and many participants feel that is how they are now treated. Until the two-tier system is abandoned, this industry will not realise its true potential.

For example, in 1991, aircraft owners (registered operators (RO)), aircraft maintenance organisations (AMO) and licenced aircraft maintenance engineers (LAME) were placed in a no-win situation with regards to aircraft maintenance. The regulations can be interpreted as CASA/courts determines.

Just look at the RO's [criminal] responsibility. No matter what maintenance schedule or system that they elect to use or have approved, if anything goes wrong, it can be said that the elected schedule or system was **inappropriate or defective**. (CARs 40 & 42). What is "inappropriate and defective"?

If a RO has not included any non mandatory maintenance requirement produced by a manufacturer or promulgated by CASA, then the schedule or system can be deemed **inappropriate and defective**.

Whenever CASA takes enforcement action against an operator regarding maintenance, they quite often state the schedules/system are **inappropriate and defective** if a manufacturer's requirement is not complied with irrespective of the maintenance requirements in the Log Book Statement.

We also know that AAT and courts see manufacturer's requirements, no matter how they are published, as mandatory if the manufacturer state they are mandatory or recommended.

These regulations were written without any minimum maintenance standards specified in legislation. This is purposely designed by legal people so that whatever happens in the future someone can be held responsible, in this case the RO.

- "**inappropriate**" simply means not suitable for a purpose but how does a RO determine what is suitable for his particular aircraft. The RO, CASA and courts all have variable interpretations.
- "**defective**" simply means not perfect or has a flaw in the schedule or system.

Who determines that a schedule or system is suitable or perfect in every sense? Ans: CASA & Courts.

Without minimum standards for aircraft maintenance promulgated by legislation and/or CASA, the RO can elect what he/she thinks is appropriate and effective to keep his/her aircraft airworthy and safe. However, there is a large divide between what is safe and what is seen as compliant by regulators.

Mostly, nothing is an issue until CASA decides to take "enforcement" action against a RO and then they find the maintenance 'schedules' or 'systems' defective and inappropriate because particular manufacturer's requirements have not been complied with or an advisory is not complied with.

For those that have experienced attending an Administrative Appeals Tribunal (AAT), they are aware that a manufacturer's requirement is seen by the AAT as mandatory even if it is only recommended.

For instance, there is a current debate about manufacturers' supplementary inspection documents (SID), continuing airworthiness programs (CAP), service bulletins (SB) and letters (SL), etc. and whether they need to be complied with. In accordance with these regulations, the court will say yes.

Hindsight is a marvellous thing as many ROs, AMOs and LAMEs have found out once a CASA enforcement process has started. Without minimum standards, all must be considered.

*Division II of the 1988 CARs* should have been repealed long ago and replaced with the FARs, mainly FAR Part 43 and FAR 91.409 for all of the non-airline sectors. At least the FARs, like NZ Rules, set minimum maintenance standards for aircraft operating in private, aerialwork and commercial operations.

Without minimum regulatory maintenance standards, all maintenance schedules and systems compliancy are debatable because of the unwinnable terms of "**inappropriate and defective**".

CASA can only apply the "law" created by their predecessor and that law means they have no option but to support mandatory all requirements produced by manufacturers.

Until 'inappropriate and defective' schedules/systems requirements are repealed: "**Gotcha**"

*MOTTO: SAFETY ALL AROUND*

## 'Gotcha' Example

When an approved design organisation or Authorised Person approves a modification or repair they do so to meet design standards but then legislation adds a phrase "unsafe for its intended use". As if a person approving a design of a modification or repair is going to include a "feature" or "characteristic" that will purposely and intentionally make the aircraft or product unsafe. Unlike the FARs that require their DER to find that a design of a major repair or major alteration (refer FAR43 Appendix A for definition of major repairs/alterations) meets the applicable airworthiness requirements of this chapter, before approving the design of the repair or alteration.

In other words, the design meets an airworthiness regulatory standard. The danger of this phrase is in the future as the airworthiness standard used in a design approval maybe found to be flawed and is amended, this does happen from time to time. If the previous airworthiness standard did have a feature or characteristic that in the future could be deemed 'unsafe', then the approver has breached this rule.

Based on this 'gotcha' provision, a designer approving a repair to an airworthiness code that is updated could unwittingly have committed an offence as the previous code could now be deemed "unsafe".

Are we asking those that approve designs to be able to predict the future?

### 21.435 Grant of modification/repair design approvals — grant by CASA

(4) For paragraphs (2) (a) and (3) (a), the requirements are that:

- (a) the applicant has complied with regulations 21.420 and 21.425; and
- (b) if CASA has given notice to the applicant under subregulation 21.430 (1) — the applicant has complied with subregulations 21.430 (2), (3) and (4); and
- (c) the technical data submitted under regulation 21.420 for the design has been approved under regulation 21.009; and
- (d) no feature or characteristic of the design makes the relevant aircraft, aircraft engine, propeller or appliance unsafe for its intended use.

### 21.437 Grant of modification/repair design approvals — grant by authorised person

(4) For paragraphs (2) (a) and (3) (a), the requirements are that:

- (a) the applicant has complied with regulations 21.420 and 21.425; and
- (b) if the authorised person has given notice to the applicant under subregulation 21.430 (1) — the applicant has complied with subregulations 21.430 (2), (3) and (4); and
- (c) the technical data submitted under regulation 21.420 for the design has been approved under regulation 21.009; and
- (d) no feature or characteristic of the design makes the relevant aircraft, aircraft engine, propeller or appliance unsafe for its intended use.

Aeronautical design engineers are taught to develop products that meet globally acceptable airworthiness codes and our legislation specifies those airworthiness codes. A modification and/or repair must ensure the airworthiness code identified for the aircraft and/or product is maintained, or approval is to a more recent airworthiness code that is safer than the original airworthiness code the aircraft and/or product was certified against. So, despite taking all reasonable steps to comply with the applicable airworthiness code, you may not be able to avoid committing an offence in the future.

## FAA's Disservice to Small Aviation Businesses

It's no secret that FAA resources are in short supply, just as they are in every other government agency. That is why GAMA is urging FAA leadership to make more consistent use of the Designated Engineering Representative (DER) program, which allows the agency to leverage the expertise of companies, such as Aspen, on certification of tasks. It would also help advance aviation safety, drive innovation, and improve certification efficiency.

*"You would think the FAA itself would be aggressively promoting and employing DER, if for no other reason than its own self-interests. Who enjoys having to work in a resource-constrained environment, especially one this severe, compliments of the dysfunctional U.S. Congress?"*

Submitted by CEO of Aspen Avionics, Inc to the US Senate Transport Committee.

AMROBA sees the same anomaly with CASA. Though CASA was positively moving to empowering persons in industry to handle much of their regulatory services, regulatory changes and 'red tape' introduced in the last decade is seriously handicapping the aviation industry.

Until the CEO of CASA openly states that airworthiness engineering and maintenance of non major airline operations will be based on the FAR system then nothing will change.

In addition, development of regulations must be more orientated to business and remove totally unnecessary "red tape" created by internal policies and proposed new regulations.

Australian aviation is suffering because of failure to recognise the importance and successes that small businesses can bring to any environment.

Time for radical change.

# Industry Raising Cost Concerns

It is not just aviation that is over regulated to the point that it affecting employment across all business groups. If the criteria for what constitutes 'employed' was changed to reflect Bureau of Statistics figures for those in permanent work (34%) or part-time work (15%) then would have an unemployment figure close to 51%. This is off-set by classifying anyone that works for one hour a week with or without pay as being employed thus we see the 6% figure bandied around. This does not include those that have been classified as 'economically inactive' by the Bureau of Statistics, i.e. those that don't want to work or need to look for work. These are unwritten "overheads" that business and permanent employees are supporting. Businesses receiving government support has been underwriting these overheads.

Overcoming the above is for the government to address. So what can be addressed in aviation related regulatory requirements that relate to businesses. The first issue is to understand small business and the effects of "direct supervision" by the small business owner/manager.

The 'direct supervisor' is the business 'accountable' manager + 'responsible' manager + 'quality' manager + 'safety' manager + 'financial' manager + OH&S manager +, you get the picture.

Pre 1991, aviation requirements recognised this factor and the requirements were written to match the small businesses that formed the backbone of general aviation. They only had to comply with minimum requirements promulgated in orders without the need for costly manuals — it was safe and assisted growth in the non airline sector. There is no reason why this system could not be resurrected—it would remove the need to create additional repetitive paperwork within these small businesses. The USA go one step further in that the FAA does not approve these small businesses but they specify the criteria that the small registered business has to meet. Resurrecting direct supervision would reduce costs to small business.

Training has become very costly as the Australian skilling system was totally ignored with the introduction of one element of the EASA system into the trade training system. The EASA system is much more flexible than what has been implemented. In the EASA system there are multiple ways of attaining an AME licence. **Cat A/B1.2 & B1.4 (piston)** require three (3) years of practical experience OR two (2) years of practical experience and training considered appropriate as a skilled worker or one (1) year of practical experience and completion of a basic training course. **B2 and B1.1 and B1.3** varies the above practical experience to five (5), three (3) 7 two (2) years. Why wasn't this flexibility adopted?

The Australian AME licensing system was, before experimental changes, based on the trade training system in Australia. It was also flexible enough to allow a tradesperson from an associated trade to, after obtaining practical experience, to also become a LAME. It had the flexibility of the EASA system that was rejected by CASA. In the EASA system, both the NAAs and the Part 147 provide examinations so that a person can obtain a licence.

The current system needs a complete overhaul and be more business sensitive to costs.

## Government Advisory Councils

Minister Joyce unveils *Ag Industry Advisory Council* appointments. Federal agriculture minister Barnaby Joyce has announced the make-up of a new 10 person council that he will draw upon for advice on issues, challenges and opportunities facing Australia's agricultural sector.

Just what aviation requires.

e.g. Ministerial Advisory Council on Skilled Migration. The Ministerial Advisory Council on Skilled Migration (MACSM) first convened on 2 July 2012. Its term will end on 30 June 2014. This government policy will mean it ends this year.

There are many advisory councils/committees/boards that can be found on the the governments advisory website: [committees](#)

The Federal Government has announced an end to a number of advisory groups, such as three of the superannuation advisory bodies put in place by the former Labor Government.

COAG's '*Standing Council on Transport and Infrastructure (SCOTT)*' does not include aviation.

However, the following [proposed committees](#) are those to be established and includes an [Australian] aviation advisory council (AAAC).

AMROBA's recommendation is that there needs to be a new Civil Aviation Act modelled on the NZ Civil Aviation Act and the Act needs to include reference to an Aviation Advisory Council and its responsibilities. This is the only way stable aviation policy will be achieved in the future.

## \* 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: <http://amroba.org.au/become-a-member/>

print the membership form <http://amroba.org.au/index.php/download/file/view/15/>



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## Airworthiness Limitations

Are Australian requirements providing the same outcomes as those of aircraft certifying countries? The FAA system is very different to the Australian system and US type certificated aircraft maintenance requirements are written within their regulatory system.

### **FAR 43.16 Airworthiness limitations.**

Each person performing an inspection or other maintenance specified in an Airworthiness Limitations section of a manufacturer's maintenance manual or Instructions for Continued Airworthiness shall perform the inspection or other maintenance in accordance with that section, or in accordance with operations specifications approved by the Administrator under part 121 or 135, or an inspection program approved under 91.409(e).

'Operation Specifications' or ADs is how the FAA includes SIDs, etc.

However, if we look at TCA we find a different approach for Canadian certificated aircraft and imported aircraft. **Airworthiness Notice - B055 states:**

On occasion the communication of airworthiness limitations, such as component life limits or maintenance requirements is accomplished by referring to service bulletins or equivalent notices. When used in this manner the content of the bulletin is a condition of the type certificate; and, except where Transport Canada has granted approval to deviate, compliance is mandatory.

### **625.84 Aircraft Maintenance - General**

(iii) Airworthiness Limitations may be in the form of:

- (A) life-limited parts;
- (B) an inspection task required by any supplemental inspection document (SID) which has been published by the manufacturer for that aircraft;
- (C) Certification Maintenance Requirements (CMRs), either issued by the manufacturer, or by a person holding the design certification for a modification that has been embodied into an aircraft; and
- (D) any other limitation issued by a manufacturer when set out in the instructions for continued airworthiness, issued pursuant to the basis of certification basis.

CAA(NZ) has also mandated SIDs refer [Continuing Airworthiness Notice 05-003](#) that requires completion by 31/12/2013 for 200 series and 30/6/2014 for 100 series.

This, and many other issues relating to the CARs, is what has held GA back in this country. Moving to an adapted FAR system will not only clarify these type of issues but provide a workable and sustainable regulatory system where non airline segments can grow.

At least these other regulatory systems state the requirements in plain English, instead of legislation that provides debatable outcomes. FAA certificated aircraft should be maintained to the same airworthiness standards as exists in the USA.

The FAA GA system is highly dependent on the A&P mechanic and the Inspection Authorisation (IA). An IA, to certify and annual, would still use the SIDs as reference and many items in the SIDs would be complied with during the annual inspection.

## 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."