AVIATION MAINTENANCE REPAIR & OVERHAUL BUSINESS ASSOCIATION, INC

# AMROBA®inc

## ADVOCATE OF THE AVIATION MRO INDUSTRY

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# The ADS-B Mandate

ADS-B mandated times start to kick in on the 12/12/13 and continue until 2/2/17. Basically, if you want to fly IFR, then you must comply.

For mandate times & visual guide for ADS-B coverage in Australia *click* ADS-B Area

CAO 20-18 specify the requirements.

1. The first stage is for aircraft that want to fly at/above FL290 (29,000). These aircraft must be ADS-B capable.

From the 12/12/13, any aircraft undergoing maintenance, where a maintenance release is to be issued, must be ADS-B capable if it can fly at or above FL290.

CAR43(7) states: "*all maintenance in respect of the aircraft required to be carried out to comply with any requirement or condition imposed under these Regulations has been certified, in accordance with regulation 42ZE or 42ZN, to have been completed;*"

*ADS-B capable* is a condition imposed under the regulations. Aircraft that are type certificated to operate at/above FL290 may have a condition on the aircraft's certificate of airworthiness or it may have a FM limitation restricting flight to below FL290. If there is no restriction then it must comply with the ADS-B mandate.

2. Post 6/2/14 all new aircraft registrations will require the aircraft to be ADS-B capable and fitted with GNSS. [ADS-B-out]

Basically, these aircraft will be able to be seen by other ADS-B capable aircraft.

Airservices FAQs state:

*"There are no current mandatory requirements for ADS-B in VFR aircraft. Nevertheless, many aircraft owners are expected to fit ADS-B for safety and efficiency reasons, including many VFR operators. CASA has indicated that it will widely consult with industry before regulations are made that would require ADS-B in VFR aircraft, and there are no active proposed regulations in that respect at this time.*

*ADS-B-OUT is a little like having taillights on your car. They are used by "the other guy". In an environment when most aircraft have ADS-B OUT, aircraft with ADS-B IN will have the ability to "see" other aircraft that are nearby. An ADS-B IN system far exceeds the capabilities of the human eye to detect aircraft and alert you to other aircraft that are a risk. The availability of surveillance information and Flight Following services by ATC for VFR aircraft, and the availability of accurate information for SAR purposes are significant advantages too.*

*There may be other possible benefits for some VFR operators including:*

- *Performance feedback for student training*
- *Aircraft tracking, especially in flying clubs and schools for those waiting to use an aircraft*
- *Co-ordination of arrival support and ground services such as fuel, as savvy vendors use the web to locate inbound aircraft and are ready to offer a range of services. Eventually, these could extend to rental cars and other convenience services for some operations."*

There is no doubt that the future will require all VFR aircraft to have ADS-B-out as a minimum.

The days of "see and avoid" are being overtaken by a safer environment where commercial aircraft operating through VFR airspace will be able to electronically 'see' other aircraft and avoid them.

VFR aircraft will continue to operate with only ADS-B-out until the costs of these units and their displays reduce to a level where, in the interest of safety, all will be ADS-B capable.

All members should review the AirService's link above and CAO 20-18. New avionics are improving reliability and reducing maintenance costs.

# New Avionic Technology

How many non aviation & aviation people use some sort of flight tracker without realising the technology that is fast changing this industry?

Has this technology change, being adopted by governments to improve safety, been badly explained. Is it another reason why around 3,000 VH registered aircraft record nil hours per annum?

Is the pace of change a reason why these owners no longer fly, or, is it that there has been too much hype associated with these changes?

We are concerned that too many aircraft are being 'parked' possibly awaiting changes to settle before enthusiasm for flying will re-emerge. Many blame airspace changes, plus pilot & LAME changes, and increasing red tape.

The youth of today grow up with a "glass" cockpit mentality — look at all the apps for smart phone, ipad, pc, etc and some of these are now becoming part of our business modus operandi.

It is also what the industry needs to present to attract young people to participate in private and aerial work aviation jobs.

Avionics has changed so quickly over the last decade and will change even quicker in the next decade as new digital systems are developed that sell at a competitive price.

The FAA is targeting UAS aircraft operating in the National Airspace System around 2015—2 years away. Remote pilot operated aircraft in the NAS.

Australia has many UAS aircraft operating in our own airspace today doing specialised tasks like power line inspections.

On the other side, glass cockpit displays can present more information in the space required for conventional instruments, but the increase in information also places greater demands on pilot attention and creates a risk of overloading pilots with more information than they can effectively monitor and process.

The complexity of the integrated computerized systems that drive glass cockpit displays may also limit pilots' understanding of the functionality of the underlying systems.

For instance, avionics company Rockwell Collins is developing the first touchscreen primary flight display (PFD) for business jets and turboprop planes. These displays will make it easy for pilots to change flight parameters and even the flight plan with a few taps and a couple of gestures.

Besides a modern interface, these new touchscreens will also be safer for pilots. Pilots won't have to look down and fiddle with their instrumentation. The PFD will be installed in a location that allows pilots to keep their eyes upward and forward while flying, similar to a properly mounted GPS device in a car.

The overall cost to maintain digital equipment is less than the older analogue technology. Improved reliability—OEM maintenance restrictions requiring return to OEM for some maintenance is lowering field maintenance.

These changes will impact on future viability of some avionic businesses. Glass cockpits in old airframes are now becoming more common.

# The Truth About Training

Are we treating our apprentices fairly by sending them to non CASR Part 147 MTOs?

Ever since CASR Parts 66/147 were made and the continuation of the old training system to obtain a CAR31 licence, we have continued to produce many AMEs that will be subject to additional training to remove exclusions.

Some RTOs have reverted to training to meet the AQF IV trade training. These qualifications are not doing the creditability of this industry any good—they do not lead to a Part 66 licence.

After the 4 year apprenticeship/traineeship we are left with very disillusioned trade qualified AMEs who are looking at additional training at their own cost to remove the exclusions they have obtained with their CAR31 licence.

Those that have not obtained their CAR31 licence are now asking why they were directed this way.

The government has committed itself to undertake a study into the state of the aviation workforce. This will be undertaken by the Department of Infrastructure and Transport and conducted within existing resources.

The reality is that there is only a limited number of CASR Part 147 MTOs that are not providing the level of training required by the industry.

We are at the stage where CASA has imposed a costly training system on this industry that is not attracting career minded applicants.

We think the government is on the right track when it associated skill needs to a similar review that was carried out into the maritime industry.

*Recently a study into the state of workforce planning, skills and training into the maritime industry has been conducted to inform future policy decisions and direction.* Now it is aviation's turn.

# ICAO Regulatory Oversight Concerns

The need for a regional (Asia/Pacific) aviation regulatory oversight will be unachievable until unique systems are in the past. Even ICAO identifies the danger of adopting rules.

The ICAO Regulatory Oversight Manual identifies 4 obligations of special concern:

"2.1.4. (a) *Primary aviation legislation, regulations and operational procedures*. Several Contracting States assessed or audited by ICAO either have not promulgated basic laws or their existing aviation legislation is out of date and therefore fails to provide the necessary legal foundation for civil aviation to function in the intended way. Safety of aircraft operation requires that national regulations or requirements emanating from primary aviation legislation, and providing for standardised operational equipment and infrastructures (including management and training systems), should conform to the requirements of the Chicago Convention and comply with ICAO Annex provisions. It has been noted that some States have implemented regulations and operational procedures by using poor translations of regulations from States that have bigger aviation industries. **As a result, civil aviation authorities often find it very difficult to interpret correctly the meaning of certain rules and usually then incorrectly, with serious consequences to the industry and to operational safety.**

(b) *Institutional structures.* In many Contracting States, the organisations responsible for regulating and supervising aviation safety do not have the authority and the independence required to fulfil their regulatory obligations effectively. Experience shows that civil aviation authorities are more successful when they are more successful when they are more autonomous. This occurs when the civil aviation authority is able to administer and manage its own budget, which is in turn made possible by an internal accounting system funded through the recovery of fees for the provision of licensing, certification and inspection, air navigation and other services to the aviation industry. In some States such income may need to be augmented by government funding.

(c) *Qualified personnel*. There are often not enough qualified experts available for States to fulfil their safety oversight responsibilities. In addition, resources are often not available for the necessary training of experts, and even when they are, trained staff often leave for better paying jobs in the aviation industry. Since the entities in charge of safety oversight or air traffic services are generally government departments, salaries are often fixed to a common civil service rate that may not be competitive enough to attract, recruit and retain qualified personnel. Changing this may also be impossible without disrupting the government pay structure. In addition, in States with small aviation industries, the only source of qualified personnel is the same air operator that is being certified and inspected. This could affect the objectivity of the inspector who has to supervise former peers or potential employers.

(d) *Financial resources*. Many entities in charge of civil aviation safety are not provided with the necessary financial resources to carry out their obligations. The improvement of air safety is not a high priority on the political agenda when compared to other issues such as health and poverty. Moreover, when a system has been put in place to recover costs from users, all too often these resources are not re-allocated to the operation of these resources are not re-allocated to the operation of these entities and cannot therefore contribute to the improvement of aviation safety."

In conclusion, to properly implement ICAO SARPs, a sound legislative base, adequate staffing and sufficient funds are essential prerequisites."

# Certification Compliance Plan

One of the real reasons for adopting the FAR definitions of major modifications is to determine when a modification requires a full ICAO "Certification Compliance Plan". The ICAO Airworthiness Manual provides the guidance and contents of such a plan.

**ICAO A/W Manual, 8.7.5.3 Certification compliance pla**

**"8.7.5.3.1** *The certification compliance plan is the prin document in the modification approval process that ser both as a checklist and official record of compliance. The applicant should prepare a certification compliance plan and establish its contents with the agreement of the AED. The certific tion compliance plan should, as a minimum, contain the f lowing information*

*a) itemized breakdown of the certification basis*

*b) proposed means of compliance for each item (test, analyses, inspection, or combination of these, or findi equivalent level of safety);*

*c) lists of tests to be conducted;*

*d) identification of substantiation reports to be submitted (as proof of compliance);*

*e) identification of persons responsible for making finc ings of compliance;*

*f) the level of involvement of the AED, the applicant, or a delegate of the AED in the findings of compliance or witnessing of tests; and*

*g) modification project schedule, including the established milestones and when final approval is expected.*

***8.7.5.3.2*** *The activities involving demonstration of compliance should not begin until after a certification complianc has been agreed to between the applicant and the AED."*

"AED" Airworthiness Engineering Division.

If such a process is not undertaken then the saleability of aircraft modified in Australia will be affected if sold back overseas.

## *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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# Government Starts

Evidence that the new government is serious about implementing their aviation policy became evident this week. Already members are being contacted to discuss what works and what does not work.

One of the first issues is to get airport ownership policy worked out so all owners, whether it is one of the independents or local government, know that the reason for an airport is to support aviation.

A successful airport operator should see growth in aviation at the airport. What we don't want to see is airport master plans with non aviation commercial growth, otherwise we will see airports like this.

Look at the latest Moorabbin Master Plan and you will see great growth but not in aviation. Plenty of shopping centres, hotels, etc.

This approach has to be reversed and the government is not letting any grass grow under their feet.

We are well informed that the government is setting up meetings with the aviation industry starting in FNQ.

We recommend that all members read closely the Government's Policy for Aviation.

*The Coalition reaffirms our commitment that airports must be dedicated to providing aviation services and other developments on site should not be approved if they compromise the current or future aviation operations of the airport.*

*The Coalition recognises the essential role of our airports, from our major gateway airports and small regional airports, to those that support flight training and general aviation.*

*Our vision for aviation in Australia is to help the industry grow in an environment that is safe, competitive and productive.*

There are many supported statements throughout the Government's Policy for Aviation that aviation participants will support.

It is a responsibility for all of us to push them to implement the changes, replace the bureaucrats that created such a mess and let industry take responsibility to provide a safe industry. Done correctly, innovation will grow our industry.

# 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."*