

# AMROBA<sup>®</sup>inc

ADVOCATE OF THE AVIATION MRO INDUSTRY

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## AIRWORTHINESS AND MAINTENANCE LIABILITY RESPONSIBILITY

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### Stop Press

- Recent analysis from Frost and Sullivan of the Asia-Pacific PMA parts market found earned revenues of \$0.95 billion in 2007, with estimates to reach \$1.60 billion in 2013.
- Although the penetration of PMA parts is still low when compared to other regions, such as North America and Europe, rising aircraft operating costs are expected to ignite the penetration of PMA parts in the Asia-Pacific region," said Frost & Sullivan analyst Syahril Shariff
- Asia-Pacific customers are not as receptive to PMA parts as their North American and European counterparts according to Frost and Sullivan.
- Demonstrates the need for acceptance of APMA's.

In our last issue we talked about the myriad of instruments and rulings that CASA has promulgated that are, in themselves, adding to the non standard application of aviation regulatory requirements.

In this issue we intend to focus on how CASA and the legislation places the responsibility on maintenance organisations and LAMEs for the airworthiness of an aircraft.

Instead of requiring the registered operator to maintain their aircraft airworthy, CASA and the legislation places that responsibility on the LAME and maintenance organisation.

The AAT ruled in 2004 that it was the LAME/maintenance organisation responsibility to interpret CAR 2A as not only providing the instructions 'HOW' maintenance is carried out but also 'WHEN' maintenance is carried out, especially aircraft on Schedule 5.

The AAT upheld CASA's action against a LAME/maintenance organisation when they did not change a 500 hr component included in the manufacturer's maintenance schedule even though the aircraft was being maintained to Schedule 5.

The AAT ruled that it was too narrow a view for CAR 2A to mean only "HOW" maintenance is carried out when the manufacturer instructions included "WHEN" an item was required to be changed.

### AMROBA MEMBERSHIP UPDATE

AMROBA continues to grow and participate in appropriate aviation committees.

AMROBA's long term survival depends on the MRO industry support. A minimum of 300 AMROBA members are required make us financially viable but 500 to 1000 members is our aim.

This means that any aircraft being maintained to Schedule 5 are not exempt from the manufacturer's schedule stating "when" maintenance has to be performed.

The AAT linked CAR43(7) to 42ZE & 2A and manufacturer's instructions "WHEN" items were to be changed.

AMROBA has asked CASA to reject the AAT finding since that hearing but no such rebuttal has been forthcoming from CASA.

CAR 43(7) requires "all maintenance required under the regulations" to be completed before signing a maintenance release. CAR 43(7) does not state all maintenance required by the elected maintenance schedules or system of maintenance.

The AAT supported CASA's position that the person signing the maintenance release must ensure that all maintenance, including replacing manufacturer 'recommended' replacement components, is carried out when the manufacturer recommends.

This ruling would make sense if the legislation complied with ICAO Annex standards.

Australia is "unique" in not requiring aircraft to comply with ICAO airworthiness and maintenance standards that place the responsibility clearly on aircraft owner/lessee/operator to maintain their aircraft in an airworthy condition.

ICAO states Australia must *develop or adopt requirements to ensure the continuing airworthiness of the aircraft during its service life, including requirements to ensure that the aircraft:*

*i) continues to comply with the appropriate airworthiness requirements after a modification, a repair or the installation of a replacement part; and*

*ii) is maintained in an airworthy condition and in compliance with the maintenance requirements of Annex 6, and where applicable, Annex 8."*

Australia does not have 'plain English' aviation legislation that complies with ICAO airworthiness & maintenance standards & recommended practices.

ICAO Annex 8 requires the Certificate of Airworthiness (CoA) to be renewed or remain valid under a system of inspection. Basically, the aircraft has to be inspected to confirm the validity of the CoA periodically.

To ensure this happens, Annex 6 requires owners/lessees/operators to ensure each aircraft they operate is maintained in an airworthy condition.

Maybe CASA should direct registered operators to ensure they maintain their aircraft in an airworthy condition instead of having to "elect" applicable maintenance schedules?

If you are not a member access our website [www.amroba.org.au](http://www.amroba.org.au) for details of AMROBA and membership application.

We are registered as a non-profit organisation with a Management Team representing each segment of the aviation industry.

Membership growth continues to grow but many sit on the fence collecting the benefits that AMROBA brings to the MRO industry. It is time for you to join — there is strength in numbers.

**Complete an application and join now.**  
[www.amroba.org.au](http://www.amroba.org.au)

# International Acceptance of Airworthiness Design/Manufacture

Considering that Australia and New Zealand has an open skies policy, why hasn't the Australian and New Zealand governments combined to form an Australasian Aviation Safety Authority?

Same standards in both countries enabling total recognition of approved operators, organization and personnel.

Aviation is a global industry and it would make sense for government co-operation in creating a single set of regulations, procedures and practices.

In 1998, the Minister introduced changes to aircraft certification and airworthiness requirements based on the FAA Part 21. The supporting documents stated that Australia's aircraft airworthiness requirements are generally harmonised with those of the USA Federal Aviation Regulations (FARs) and subsequent amendments (Light Sport Aircraft) have also been based on the FAA airworthiness requirements.

In July 1996 the government announced that the Civil Aviation Authority, CAA now CASA, would conduct a complete review of the civil aviation legislation in Australia, with the objectives of harmonising it with international standards of safety regulation and **making it shorter, simpler and easier to use and understand.**

Has Part 21 achieved this objective?

The more principle base a regulation becomes the more supporting material is needed to meet the objective of principle based legislation.

In reality, the aircraft design organisations want international recognition of design data. Some of our design organisations already have obtained recognition by foreign manufacturers and operators. Some have had their design data recognised but we still do not see evidence of technical agreements between CASA and other NAAs that benefit our industry.

AMROBA is concerned with the recent loss of expertise within CASA and the effect that this will have on future agreements.

Government & CASA need to create a **small engineering task force** to fast track technical agreements with other NAAs, especially with the FAA, TC & EASA.

A dedicated government/CASA task force consisting of technical experts and experienced trade negotiators is necessary to obtain technical agreements with other NAAs.

AMROBA engineering specialist members with international experience should be members of a supporting industry advisory group.

AMROBA is aware of correspondence from EASA that states that a technical agreement with EASA is not on the future work plan for EASA.

In addition, CASA and the FAA have been in discussion for over a decade and we are no closer to obtaining a technical agreement that has Australian design data accepted or ASTCs or APMA's or ATSO's accepted.

Australia has had many generations supporting its aircraft fleet with very few blemishes based on our own approved design data.

## AMROBA Maintenance Release

### ICAO Standard

#### **Maintenance release means:**

*A document (Logbook or Flight Technical Records) which contains a certification confirming that the maintenance work to which it relates has been completed in a satisfactory manner, either in accordance with the approved data and the procedures described in the maintenance organization's procedures manual or under an equivalent system.*

CASA has approved AMROBA's Maintenance Release document as an alternative to the CASA Maintenance Release.

It is provided free-of-charge to our members in .pdf format. All the organisation has to do is print in a colour laser printer, inkjet printers are not allowed by CASA, in either a booklet format or full size on an A4 sheet.

The booklet size is printed back-to-back on single A4 sheet and then folded—same as CASA form.

It can be printed back-to-back on two sheets of A4 to match A4 folders used by some registered operators.

The approved instruction for the use of the AMROBA Maintenance Release is also provided to members.

Because there are some subtle differences in the instructions we ask all members to read and digest the instructions as well as placing a copy in the Flight Manual or Pilot's Notes.

To gain approval CASA had to raise an instrument so that aircraft can be released in VFR operational status until IFR checks are carried out.

So what are the benefits of using the AMROBA Maintenance Release?

- It is free to members of AMROBA
- You delete VFR or IFR depending on the operational status in the aircraft's flight manual.
- If an IFR aircraft is used in private or aerial work then it can be released to service without doing the IFR maintenance.
- If an IFR aircraft is released to service in VFR then the outstanding IFR maintenance is entered in Part 1. The M/R will include the following statement: *"Aircraft limited to VFR flight until IFR inspections certified."*
- A defect entered in Part 2 that has been subsequently been approved as a permissible unserviceability under CAR 37 can be cleared from Part 2 and transferred to Part 1 as maintenance required.
- So that pilots are aware of CARs applicable to the use of M/Rs the AMROBA M/R includes the references to the applicable regulations.

It was interesting to note that CASA legal did not support the release to service in VFR under the regulations. Our position was that this has been the norm for decades and CASA's own CAR 43 instructions permitted this to happen.

In reality, the document is an airworthiness control document to enable in-service maintenance to be carried out and certified without having to enter the maintenance deficiencies in the aircraft log book.

If the new regulations adopt ICAO and the international standard then this document will be a flight and technical record.

ICAO defines the "maintenance release" as a "certification" in a document for the completion of maintenance.

That document forms part of an aircraft's maintenance records and is commonly known in Australia as the Aircraft's Log Book or Maintenance Release.

AMROBA provides the M/R and instructions by email followed by a personalised CD with the .pdf files.

## Certification of Component Maintenance

Some of our members have complained about the different application of this requirement by some CASA field staff.

It became a concern when component maintenance organisations were being directed to implement a system of certification for component maintenance, as Schedule 6 did not apply to component maintenance.

Component maintenance organisations had been using worksheets for a long time with no previous RCAs.

AMROBA management disagreed with these CASA interpretations so we requested CASA GA Executive Manager, Greg Vaughan for a ruling.

Thankfully, Mr Greg Vaughan has agreed that Schedule 6 does apply to Component Maintenance.

AMROBA reasoning why Schedule 6 applies is based on CAR (2A) - not to be confused with CAR 2A.

CAR (2A) states: *A reference in these Regulations to maintenance on an aircraft includes a reference to maintenance of aircraft components and aircraft materials.*

CAR 42ZE (1) states: *A person who carries out maintenance on an Australian aircraft [aircraft component and aircraft material] in Australian territory must ensure that completion of the maintenance is certified in accordance with:*

*b) if paragraph (a) does not apply—the CASA system of certification of completion of maintenance.*

Schedule 6 states: *What must be included in a final certification?*

*4.4 If certifications for completion of stages of maintenance are made in the documents kept by the person carrying out the maintenance as a record of the carrying out of the*

*maintenance, a final certification must include a brief description of the type of maintenance carried out;*

and

CAAP 42W-1 states that an ARC is to include “*Details of maintenance work carried out or reference to a document where this is stated.*”

The documents referred to are the same documents referred in Schedule 6 and the ‘details of maintenance work’ is the same as a ‘brief description of the type of maintenance carried out’.

AMROBA is concerned that these isolated changes in interpretation of regulations continue to impose unnecessary costs on an industry without value adding to safety.

Government policy requires CASA to consult when “industry practices” are changed—cost benefit analysis.

*Traceability of components and parts to the original manufacturer or an aircraft, engine or propeller is crucial to aviation safety.*

*Don't risk safety*

## Maintenance Records

Maintenance recording methods are quickly changing with the introduction of new technology.

Paper systems are fast being replaced with electronic medium.

Many aircraft designs now entering the non-airline segment have an electronic recording system inbuilt in the aircraft.

Other system mediums enables a complete aircraft to be kept on pocket commutators with backup on a home computer.

In addition, new ‘tracking devices’ such as Circuitlink International’s Flight Tracker Recorder can also electronically input flight times, etc into the maintenance records.

During the next decade, the electronic flight bag used by modern airline aircraft will, in one form or another, become part of new GA aircraft electronic systems.

Technology is moving so quickly, the concern is whether the regulatory system can keep up with the change.

Once a GA aircraft’s maintenance records consisted of logbooks, past maintenance releases and all documents referred to in the logbooks such as maintenance releases.

Today, the records may be on an electronic medium.

The concern many have is keeping archived electronic records on a medium that a current electronic medium can’t read. Without correct records the airworthiness of an aircraft is uncertain.

*As aviation changes due to technology so do the skills of persons involved in maintenance of aircraft. Until the average age of the aircraft fleet is lowered there will always be paper records.*

## Globalisation of Aviation MRO businesses

Currently there are 13 Australian maintenance organisations with FAA approvals employing 6,868 employees.

Compare this with the 30 China companies employing 15,171, 101 French companies employing 25,972 and 53 German companies employing 30,457 that have FAA approvals.

It is easy to see just how global the aviation MRO industry has become. The FAA has approved 356 foreign repair stations. At the same time, there are close to 1,200 EASA-certificated repair stations in the U.S.

It is fast becoming a NAA core business function. Bilateral agreements and Maintenance Implementation Procedures have become the way that ICAO contracting States recognise each others approved maintenance organisations.

12 Australian MRO businesses also have EASA approvals. Add to the approvals from other NAAs, one has to ask what are the benefit of aviation [safety] trade agreements between countries when the NAA from those countries still approve the MRO

business within the foreign country.

There is no set methodology used and this can be expected because of the slight differences that exists between each country’s regulatory system and the need for a NAA to provide regulatory oversight.

Will the future ever see a single international MRO standard that each country adopts and recognises?

A single global NAA issued MRO certificate and a single organisation manual accepted by other NAAs.

**AVIATION  
MAINTENANCE REPAIR  
& OVERHAUL BUSINESS  
ASSOCIATION, inc**

Postal Address:

**PO Box CP 443  
Condell Park  
NSW 2200**

**Phone:** 61 (0)2 9759 2715

**Fax:** 61 (0)2 9759 2025

**Email:**

amroba@amroba.org.au

inquiries@amroba.org.au

**Website:**

www.amroba.org.au



## EASA Deputy Director Sivel radically changes direction of regulatory development.

AMROBA has been recommending that CASA should be basing new rules on Canadian aviation rules for some time because of the similarity of the two countries cultures and legal systems. Both EASA and FAA recognise the Canadian aviation regulatory system that were completely re-written about a decade ago. They have had a decade to review and amend to remove deficiencies and the rules have their **industry support**.

At last EASA has recognised that their regulatory development process was not the best even though they sold CASA on their model. EASA's Deputy Director, Operations, has revealed their 'radical change in direction' and has stated that they (EASA) will be adopting the Canadian simplified regulatory system.

### Article from Flight International.

"Meanwhile, EASA Deputy Director Sivel says, there will be a **radical change in the way EU Ops is framed compared with JAR Ops**. JAR Ops was divided into self-contained sections for fixed and rotary wing, for example, whereas EU Ops will have a base set of rules that apply to everything that gets airborne, from balloons and gliders to the Airbus A380 - like the rules of the air.

In effect, he says, these are the rules that the light aircraft general aviation sector has to follow. But beyond that, there will be additional, scaled rules applying specifically to com-

mercial operators. **This, says Sivel, is the way Canada framed its rules, and EASA was impressed by the system's simplicity.** Sivel puts it this way: "The hymn book has changed, but the hymns are the same."

This is nevertheless a change in format, if not in the rules, and it has led some sectors of industry to call for delayed publication of the NPAs."

The Canadian rules cover an aircraft fleet similar to Australia including sport aviation aircraft and owner maintenance philosophies.

The *Canadian Aviation Regulations* are a compilation of regulatory requirements designed to enhance safety and the competitiveness of the Canadian aviation industry, exactly what Australia needs.

### **Canadian Regulations website**

[www.tc.gc.ca/CivilAviation/Regserv/Affairs/cars/menu.htm](http://www.tc.gc.ca/CivilAviation/Regserv/Affairs/cars/menu.htm)

#### **Part I : General Provisions**

Definitions, general administrative and compliance provisions, regulatory authorities and fees for services provided by the Department.

#### **Part II : Identification, Registration and Leasing of Aircraft**

Regulates registration, marking and leasing of aircraft and identification of aeronautical products.

#### **Part III : Aerodrome and Airports**

Regulations respecting aerodromes and airports, and requirements for certification of airports.

#### **Part IV : Personnel Licensing and Training**

Regulations governing the training and licensing of flight crew, aircraft maintenance engineers and air traffic controllers.

#### **Part V : Airworthiness**

Regulates airworthiness of aircraft from the design and type certification stage to the maintenance of aircraft in use. Includes requirements respecting export, manufacture, and distribution of aircraft and aeronautical products, and requirements respecting continuing airworthiness.

#### **Part VI : General Operating and Flight Rules**

General rules applicable to all aircraft operations, including regulations respecting special types of operations such as air shows, parachuting and balloon operations.

#### **Part VII : Commercial Air Services**

Rules governing the use of airplanes and helicopters in commercial air services, including airworthiness rules relating specifically to commercial operations. Reflects the evolution of the aviation industry in Canada with respect to operations such as aerial work, air taxi and commuter operations. Also takes into account the way commercial air service regulations are structured internationally.

#### **Part VIII : Air Navigation Services**

Regulations respecting the provision of air navigation services.

#### **What about standards?**

Where applicable, standards are included.

It is not too late in Australia to change tact and follow the new direction of EASA and copy the methodology and simplicity of the Canadian aviation regulations.

The FAA format is the current structure that Australian aviation safety rules are following.

The Canadian laws are structured similarly to normal Australian laws — Regulations, Parts, Divisions, etc.

## Asia Pacific MRO Congress 28 & 29 July [www.capitigroup.com](http://www.capitigroup.com)

AMROBA has endorsed a MRO Conference being organised by the Sydney based Capitus Group.

AMROBA and Capitus has come to an agreement that members receive a 25% discount to attend the event. In fact, some early participants may receive additional benefits

Like it or not, the global aviation industry grows smaller every day

**The Asia Pacific MRO Congress** is looking to attract participants of highly senior profiles. The

conference audience of Aircraft Operators, Aero-Engine Manufacturers, Aircraft Manufacturers, MROs - Engine & Airframe, Aircraft and Engine Lessors, Parts Manufacturers & Dealers, Aviation Software Companies, Aviation Consultants, Aviation Regulatory Authorities, Third Party Logistic Suppliers, Banks & Financial Institutions, most of who will find the event to be a truly rewarding experience.

The South East Asia Pacific region is the fastest growing air transport region in the World.

Many of our members will be part of the regional expansion and should be planning for the future growth.

Our Executive Director, Ken Cannane, has been invited to be part of a panel of distinguished speakers on the subject of the impact that new aircraft will have on the MRO industry.

To register, click on the following link and don't forget to register.

[www.capitigroup.com/v2/display.asp?sid=33&cid=285](http://www.capitigroup.com/v2/display.asp?sid=33&cid=285)