

AMROBA[®]inc

ADVOCATE OF THE AVIATION MRO INDUSTRY

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COMPLYING WITH LEGISLATION & OTHER 'HIDDEN' REQUIREMENTS

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Stop Press

- The few instruments and rulings referred to in this issue simply highlights how hard it is for industry to remain current with regulatory requirements.
- There are many other Instruments, rulings and interpretations that CASA has issued.
- Some of these instruments were actually issued to give effect to the Convention.
- In addition to legislation there are a myriad of ADs, CAAPs, ACs, AWBs, AACs, AVRs, Procedures, Instruments and CASA internal policies & interpretations that are applied to industry.

This issue is dedicated to the myriad of instrument & rulings that have been made by CASA that impacts on maintenance of aircraft in Australia.

Aviation legislation continues to become more 'complex' to understand by the aviation maintenance workforce due to the number of legal instruments, pseudo regulations and rulings that make it more confusing for the aviation MRO industry.

Maintenance of aircraft is not a complex industry — the aircraft manufacturer and the certifying NAA determine the maintenance requirements of each aircraft model and type. This concept was eventually accepted by government when CASR Part 21 was made in 1998.

To maintain a foreign certificated aircraft in Australia, a facility capable of housing the aircraft is required, qualified tradespersons to do the work and a LAME rated for the aircraft and aircraft systems to return the aircraft to service.

Current legislation is very complex and experienced MRO personnel are continually being told that global maintenance standards and practices used for years are not acceptable.

CASA, to overcome this problem, issues instruments, rulings and other advice that clearly demonstrates the total uncertainty that current legislation has created in this industry.

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.

Basically, if an aircraft is being maintained in accordance with the airworthiness and maintenance requirements mandated by the certifying NAA and manufacturer then it will be safe to operate. For instance, if the aircraft is manufactured in Canada then the aircraft should be maintained to the requirements of Transport Canada and the manufacturer.

In reality, Australian requirements do not apply the same requirements as the country certifying the aircraft.

CASA has been issuing exemptions and rulings to make the current legislative requirements useable since 1995— why don't they amend requirements to includes the relief in exemptions, ruling, etc.

To make the current aviation legislation work efficiently, CASA is continually being lobbied to issue exemptions to the current requirements even though it may mean that Australian aircraft are not maintained to the same standards as the certifying NAA and manufacturer.

Many of CASA rulings and instruments have become necessary because CASA 'delegated' staff are not 'limited' to applying their delegated authority in accordance with CASA policies and procedures.

CASA publishes most of their rulings and instruments on their webpage.

So why are these instruments and other pseudo legal requirements needed in the first place?

The simple answer is that the Act, Regulations and Orders are in transition from one structure to another.

The Act states:

(4) An owner, operator, hirer (other than the Crown) or pilot of an Australian aircraft must not commence a flight in the aircraft, or permit a flight in the aircraft to commence, if one or more of the following apply:

- (a) there is outstanding a requirement imposed by or under the regulations in relation to the maintenance of the aircraft;*
- (b) the aircraft will require maintenance before the flight can end;*
- (c) there is a defect or damage that may endanger the safety of the aircraft or any person or property;*
- (d) the aircraft is unsafe for flight.*

Penalty: Imprisonment for 2 years.

- (1) A person must not carry out maintenance on:*
- (a) an Australian aircraft; or*
- (b) an aeronautical product in Australian territory; or*
- (c) an aeronautical product for an Australian aircraft;*

if the person is not permitted by or under the regulations to carry out that maintenance. Penalty: Imprisonment for 2 years.

Para (a) is safety conditions prior to flight and para (b) prevents anyone maintaining aircraft unless permitted in the regulations. *Unless permitted...*

ICAO also states in each Annex that:

"Each Contracting State is requested to select one of those [Annex] texts [English] for the purpose of national implementation and for other effects provided for in the Convention, either through direct use or through translation into its own national language, and to notify the Organization accordingly."

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

If you are not a member access our website 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 industry.

Maintenance Release Instruments

ICAO Annex 6

Maintenance release means:

"A document which contains a certification confirming that the maintenance work to which it relates has been completed in a satisfactory manner."

ICAO maintenance release has no period of validity

Maintenance release becomes invalid when maintenance is required that affects the safety of a particular flight.

Instrument number CASA 127/95

- Appointment of persons to issue maintenance releases - Regulation 43

Instrument number CASA 128/95

- Appointment of persons to endorse, and to cancel endorsements on Maintenance Releases

In 1992, the maintenance rules were changed and, in hindsight, there are many 'black holes' that have required CASA to continually promulgate additional requirements many that are pseudo instruments. Instead of including an Instrument that had existed prior to 1992 in the legislation like other countries, a reissue of the Instrument was needed.

Australian regulatory requirements for maintenance release is out of step with ICAO and just about every other regulatory system—i.e. issued with a period of validity.

The reason for these Instruments is to give effect to the Convention and they must be read in conjunction with the CAR50A instructions for completing logbooks.

Inst 128 states who may sign for regulatory requirements in CARs 47 (1) and (3), 48(2) and 49.

CAR 47 is only used for specific purposes and only if there is a possibility that the aircraft may be flown—states aircraft 'unairworthy'.

Inst 127 states who may issue a maintenance release and who may sign the maintenance release.

Who may issue includes CASA approved maintenance organisations and foreign NAA approved maintenance organisations who are included within an Australian Class A aircraft AOC's MCM.

This is a general instrument that

does not, has not, and should not stopp CASA issuing Instruments under specific conditions so individuals and other entities to issue a maintenance release. These are normally one-off Instruments.

One of the reasons for the complexity is that CARs state that CASA may deem that a maintenance release is issued for a period of time instead of the internationally and ICAO standard that states the maintenance release is a document which contains a certification confirming that the maintenance work to which it relates has been completed in a satisfactory manner, either iaw the approved data & procedures described in an organisation's manual or under an equivalent system. i.e. A CASA promulgated procedure to sign a maintenance release — i.e. no period of validity.

Experimental, amateur built and kit built aircraft

Maintenance release issue by others for experimental, amateur built and kit built aircraft and who may maintain and sign these maintenance releases.

Two Instruments have been issued by CASA; Inst 71/08 & 451/07.

Inst 71/08 has been issued by CASA to specify who may issue and sign the maintenance releases for these kinds of aircraft.

This segment of aviation is full of enthusiasts who either have built or at least participated in building their own aircraft. Many of these aircraft have a certificated aircraft engine installed so many owners also use the services of a LAME to service the certificated engine.

The Instrument permits specified 'authorised persons' to issue and maintain these aircraft.

- The first 'authorised person' that this instrument relates to is the person that has built more than 50% of an amateur built or kit built aircraft that has an experimental certificate. This person may also, under CAR 42ZE(4)(e), maintain the aircraft.

- The second 'authorised person' that the instrument relates to is the person that contributed to the fabrication and assembly of an amateur-built aircraft that also has an experimental certificate. This person may also perform maintenance, limited to maintenance of the elements that person fabricated and assembled.

- The third 'authorised person' that the instrument relates to is the person that contributed to the assembly of the aircraft that also has an experimental certificate. This person may also perform maintenance, limited to maintenance of the elements that person assembled.

- The last 'authorised person' that the instrument identifies is a LAME who may also maintain the aircraft, issue and sign the maintenance release.

It is assumed that the maintenance release that is referred to in Inst 71/08 is the CASA maintenance release and the instructions for its use because the instrument is issued under CAR 43(1).

Inst 451/07 has also been issued by CASA to specify who can issue a maintenance release and maintain ABAA aircraft holding special certificate of airworthiness under 21.190.

This instrument also 'authorises' persons that have been trained by Sports Aviation Operations Group, to maintain the aircraft and issue a maintenance release after completion of a Schedule 5 periodic inspection.

There are a number of conditions associated with this instrument that are intended to ensure that the aircraft is maintained in accordance with regulatory requirements.

None of the above aircraft have a manufacturer responsible for the continuing airworthiness so the owner/operator takes full responsibility to maintain the aircraft in a fit state for flight (airworthy).

There is no ICAO Annex 8 aircraft certification standard so issuing and signing the maintenance release is based on standard maintenance practices and methods being used to inspect and maintain.

This instrument specifies the CAR 43 CASA Maintenance Release and its instructions.

For type certificated aircraft maintenance, ICAO states that when the maintenance release is not issued by an approved maintenance organisation, the person signing the maintenance release shall be licensed in accordance with Annex 1. (LAME)

So a maintenance release is a certification issued by the maintenance organisation or it could be a certification in the aircraft logbook.

AVIATION RULING – Manufacture In The Course Of Maintenance (MITCOM)

This term was introduced in 1998 when CASR Part 21 was made and is still causing concern even though CASA issued an Aviation Ruling in May 2004 to try and clarify the confusion that 21.303 has caused.

MITCOM has been part of maintenance since aviation began. Today, more and more parts have to be made in the course of maintenance due the lack of supply of manufacturer's spare parts.

One of the reasons for confusion is that CASA, when adopting FAR Part 21 in 1998, modified FAR 21.303.

FAR21.303(2) Parts produced by an owner or operator for maintaining or altering his own product.

By changing the intent of the FAR, CASA introduced total confusion to the CAR maintenance rules. Pre Part 21 there were no safety problems.

CASR 21.303(2) This regulation does not apply to the following:

(a) parts manufactured in the course of maintenance by a maintenance organisation having approval to manufacture the parts;

This aviation ruling is also based on the wrong definition of maintenance. The Act defines maintenance as:

maintenance means any task required to ensure, or that could affect, the continuing airworthiness of an aircraft or aeronautical product, including any one or combination of overhaul, repair, inspection, replacement of an aeronautical product, modification or defect rectification.

MITCOM relates to repairs, defect rectification and modifications. ICAO defines repairs to aeronautical products (including aircraft) as:

Repair. The restoration of an aeronautical product to an airworthy condition as defined by the appropriate airworthiness requirements.

The Aviation Ruling states:

A COA authorising specified maintenance activities will ordinarily include an implied approval to engage in activities incidental to the maintenance, eg MITCOM. Whether MITCOM will be incidental to a COA will depend on the circumstances of the COA.

In CASA's view CASR 21.303(1) in any case only applies in relation to production of 'a modification or replacement part for sale for installation ...' (emphasis added). The limitations in CASR 21.303(1) do not apply to parts produced for use by the person producing the part, for example as part of maintenance.

This ruling basically accepts MITCOM as part of maintenance and also infers that CASA may place a condition on a CAR 30 certificate in the interest of aviation safety.

Aircraft and aircraft component repairs and other tasks related to defect rectification may need parts to be assembled (cables & hoses) or fabricated from manufactured items.

Cessna SIDS

Documents

CASA EX43/2004

exemption expired

November 2007

CASA EX44/2004

exemption expired

November 2007

SIDS now apply to all

Cessna aircraft

Person manufacturing parts for sale exemption.

CASA EX50/07 was promulgated in October 2007 that exempted a person (manufacturer) that is not otherwise permitted under 21.303(1) (APMA) to produce the modification or replacement part to produce modification or replacement parts for sale.

One reason why CASA has raised this instrument is to authorise persons that CASA has approved parts, materials, processes and/or appliances under CAR305(e). If the item is approved then it can be manufacture.

This means that any person that has a 21.305(e) approval can obtain an approved manufacturing process to manufacture the item.

The condition attached to this instrument is that the person must have a relevant process approved by CASA under 21.305(e).

The instrument does not prevent a person that does not hold an APMA to apply for an approved manufacturing process to manufacture parts for sale.

This exemption has not limited who the person is that is manufacturing the part for sale only that the person needs a 21.305(e) approved manufacturing process.

Depending how hard it is to obtain a CASR 21-305(e) [manufacturing] process approval, this exemption will enable maintenance organisations to obtain processes for manufacture of in-service part replacements.

Instrument available on CASA website

Is the maintenance release certification

required by ICAO

actually the final

"coordination"

certification

currently required by

CARs?

We believe that it is.

Maintenance release exemption – IFR maintenance

Inst EX 60/07 enables maintenance releases to be issued, in private and aerial work operations, without completing IFR maintenance tasks.

This enables this class of aircraft to have the periodic inspection carried out, excluding IFR maintenance, and a maintenance release to be issued.

Prior to operating the aircraft in IFR the outstanding maintenance will be required to be carried out and certified by an appropriately authorised organisation and LAME.

This capability has been available under aviation legislation one way or another for many decades.

It is hoped that new regulations will include this capability instead of having to continue to operate under exemptions or some other form of instrument/ruling.

The instrument requires the maintenance release to be endorsed that the aircraft is restricted to VFR operations only until IFR maintenance has been carried out.

The registered operator is held responsible to ensure that the aircraft is only operated to VFR until the IFR maintenance has been carried out.

This is a practical instrument that enables aircraft to continue to operate with an operational limitation — VFR instead of IFR.

It continues a standard practice that has existed for many years whereby a well equipped aircraft only has to be maintained, and operated, to VFR requirements.

May never need IFR maintenance.

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



Any LAME, Group 1 & Group 2 Airframe, are permitted to do Pilot Maintenance

Instrument CASA 519/04 has authorised holders of a current AME licence endorsed with a Group 1 rating in any category or a Group 2 rating in the airframe category to carry out on Class B aircraft maintenance specified in Schedule 8 of CARs.

This Instrument accepts that a LAME has the basic skills to perform those tasks commonly known as 'pilot maintenance' and listed in Schedule 8.

The concern that the MRO industry has is CASA's leniency towards pilot training with relations to this kind of 'preventive maintenance'.

Considering that pilot's once needed their logbook endorsed by an Airworthiness Surveyor to state the pilot could do pilot maintenance, not being 'qualified' in this day of liability and duty-of-care responsibility leaves many pilots vulnerable.

The need for Airworthiness Surveyors endorsing pilot logbooks ceased when pilot training included 'pilot maintenance' tasks. However, this training was then dropped.

OTHER RELATED ISSUES

There are many other rulings and instruments that CASA has issued over time.

Even AMROBA has instruments CASA/ 481/07, 482/07 and uses CASA EX60/07 just so that our alternative maintenance can be used.

It is possible to obtain an instrument so that aircraft logbook records can be completed post signing the maintenance release.

Of course pilots will state that they don't need training and they have been doing it for years.

However, many aircraft records do not support pilot's claims that they do Schedule 8 pilot maintenance; or is it that they do not record that they do maintenance so that the LAME issuing the maintenance release will be held responsible if something goes wrong.

There are some interesting cases on the AAT website that supports that this is the case — no records so CASA wants to blame the LAME signing the M/R.

FAR AC43.12A is one document that should be used as a guide when pilots consider doing Schedule 8 maintenance.

Some tasks listed may seem simple, and on the majority of private Class B aircraft they are, but on some aircraft the same task is complex. This has always been recognised.

It is also recognised that many people that learn to fly only want to 'service' their aircraft and not 'maintain' the aircraft.

Until CASA removes the period of validity from the maintenance release, the LAME signing and the maintenance organisation issuing the maintenance release have reason to be concerned with pilot maintenance especially the lack of records.

Maybe the move to EASA requirements will benefit the MRO industry. EASA states that a pilot may do Schedule 8 tasks **after the pilot has demonstrated the competence to carry out such maintenance tasks**. What is critical is the need to maintain proper records of all pilot maintenance.

EASA states that Appendix VIII was based on FAR Part 43, Appendix A, part (c).

CASA's Schedule 8 was also based on the same FAR Appendix.

However, EASA has added to the tasks and created different classes of aircraft that can be pilot maintained.

What CASA proposes is the EASA system hedged by statements saying that Schedule 8 will be retained.

other "common law duties of care may require operators to ensure that pilots are appropriately instructed in relation to those of their activities which are maintenance."

AMROBA believes that common law duties of care requires anyone doing aircraft servicing and maintenance at any level to be appropriately instructed, i.e. qualified to do the work.