

# AMROBA<sup>®</sup>inc

## ADVOCATE OF THE AVIATION MRO INDUSTRY

Newsletter Date 12/3/2013	<b>Manufacturing Skills Australia Proposed Mechatronics Stream</b>	Volume 10, Issue 3 March – 2013
------------------------------	--	------------------------------------

At the NARTOCop Conference 2013 on 4th March, MSA proposed a 'Mechatronics' training stream that opened discussions that at last provided an acceptable trade skilling and CASA licensing 'pathways' that industry can support and RTOs can provide. Trade skill education must be stepped so that there is a natural progression without need for duplication of training. This proposal would remove training levels that have current CAT A LAMEs having to do the same competency but at a higher training level if the Cat A was to advance in their career.

It will also make the mechatronics training package the "Basic" mechanical licence. This will enable additional training modules (old group ratings) to be added so the training can be stepped to match aircraft complexity. It is a way of implementing the old 'groups' based on needs of industry. (CAR31 into Part 66). It can be done.

The following chart shows how modules (based on old groups) can be used to underpin licensing and training.

Industry Skill Needs	RTO AQF Qualifications	CASA AME Licensing	
Management of AMOs/CAMOs controlling aircraft > 8618Kg	Adv Diploma Management of Aircraft Maintenance & Control	CEO or Responsible Managers Full transition will take 10 – 20 years.	
Airworthiness/maintenance control of aircraft <u>above</u> 8618Kg & all MSG aircraft	Diploma of Aircraft Maintenance Management	CEO or Responsible Managers Full transition will take 10 – 20 years.	
Airworthiness/maintenance control of aircraft below 8618Kg	Based on NZ Inspection Authorisation (IA)	LAME IA Rating (Adopt NZ IA Trg.) ( <i>new</i> )	
Mechatronics/Avionics plus additional modules to meet current Diploma level to underpin B1/B2 specific licence rating for aircraft > 8618Kgs.	Current Diploma	B1 with specific rating Aircraft > 8618 Kgs.	B2 with specific rating Aircraft > 8618 Kgs
Mechatronics/Avionic plus system modules needed to underpin licence specific rating for a particular aircraft < 8618 Kgs (1900lbs) or 20 seats > 5700 Kg	Mechatronics/Avionic AQF IV with added modules specific to aircraft systems	B1 specific rating Aircraft < 8618 Kgs & > 5700 Kg	B2 specific rating Aircraft < 8618 Kgs & > 5700 Kg
Mechatronics	AQF IV	B1 Basic	B2 Basic
<i>Mechatronics must be able to change avionic components &amp; instruments &lt;5700Kg</i>			
<p><i>Mechatronics licence must be similar to FAA A&amp;P privileges – exclude complex trouble shooting of integrated Navigation/Communication.</i></p> <p><i>Enable CASA &amp; manufacturer's maintenance schedules and rectification without the need for B2 involvement including normal testing of any avionic/mechanical system. This approach will provide a GA LAME who can be self sufficient in rural Australia. B2 only needed for in-depth trouble shooting rectification adjustment when needed by the B1 – Mechatronics Basic.</i></p>			<p>Enable advanced trouble shooting and in-situ adjustments of avionic components such as transponders.</p>
<b>Common Core Maintenance Tasks</b>			
General – Pilot Maintenance <u>plus tasks to be defined by AMO.</u>	<u>AQF IV Levels</u>	Part 66 Cat A – non Part 121	
Completed 3 <sup>rd</sup> Year of Apprenticeship			
AMO Task Approval	AQF II, III or IV	Company Approvals 'Limited'	
Completed 2 <sup>nd</sup> Year of Apprenticeship or Specialist tasks – welding, sheetmetal, etc.			

This proposal, if accepted and implemented by CASA, would see great benefits for the non airline sectors, especially in rural areas. Adoption and implementation can be done by MoS changes. Re-issuing the AME licences is seen as essential to incorporate a "Basic" B1 or B2 and to also include a reference that the licence is compliant with Annex 1; a reference to the Part MoS for the scope of the licence and adoption of the NZ LAME IA rating.

AMROBA will continue to support the privileges of the LAME to certify conformity with design standards, "coordinate" maintenance so he/her can sign the maintenance release.

## CASR Part 61—Aircrew Licensing

Many of our members have pilot licences, especially in rural Australia. The new pilot licensing regulations are very complex and lack clarity. Maybe when the MoS, etc is promulgated, we may come to understand what the costs will be to this industry.

This CASR Part has a commencement date of December 2013. This approach is sensible as it will enable pilots and training schools time to come to terms with a very complex legislation.

Like the rest of CASRs under this regime, every provision is described as a "strict liability" offence with 50 penalty points to remove the need for CASA to prove guilt and place responsibility and costs on industry participants to prove innocence. Socialist approach to freedom?

Crimes Act 1914 - Sect 4AA Penalty units

(1) In a law of the Commonwealth or a Territory Ordinance, unless the contrary intention appears:

"penalty unit" means \$170.

50 penalty units = \$8500 per breach

Every offence has the same level of punishment.

The purpose of the Crimes Act Chapter 2, Division 2 is to codify the general principles of criminal responsibility under laws of the Commonwealth. It contains all the general principles of criminal responsibility that apply to any offence, irrespective of how the offence is created.

Aviation will have more criminal provisions in Federal legislation than organised crime under the current aviation regulatory development.

Lets look at one provision of Part 61 that imposes criminal responsibility on a pilot.

### 61.370 Provision of photograph

(1) The holder of a flight crew licence commits an offence if:

- (a) the holder exercises the privileges of the licence after the end of 10 years beginning:
  - (i) when the licence was granted; or
  - (ii) if the holder holds more than one flight crew licence—when the holder's most recent licence was granted; and
- (b) the holder has not, before the exercise of the privileges, given CASA a photograph of the holder:
  - (i) showing the holder's full face and his or her head and shoulders; and
  - (ii) taken not earlier than 6 months before the end of the period mentioned in paragraph (a).

Penalty: 50 penalty units.

(2) An offence against this regulation is an offence of strict liability.

Just imagine if you are an ag pilot in the middle of the season and you inadvertently forget to submit a new photograph at the end of the 10 year period.

Number of flights/day X number of days at potentially \$8500 per flight.

Government and CASA must think we are real criminals that will corrupt society or bring harm to the general public.

Crimes Act — 6.1. Strict Liability

(1) If a law that creates an offence provides that the offence is an offence of strict liability:

- (a) there are no fault elements for any of the physical elements of the offence; and
- (b) the defence of mistake of fact under section 9.2 is available.

(2) If a law that creates an offence provides that strict liability applies to a particular physical element of the offence:

- (a) there are no fault elements for that physical element; and
- (b) the defence of mistake of fact under section 9.2 is available in relation to that physical element.

(3) The existence of strict liability does not make any other defence unavailable.

9.2 Mistake of fact (strict liability)

(1) A person is not criminally responsible for an offence that has a physical element for which there is no fault element if:

- (a) at or before the time of the conduct constituting the physical element, the person considered whether or not facts existed, and is under a mistaken but reasonable belief about those facts; and
- (b) had those facts existed, the conduct would not have constituted an offence.

(2) A person may be regarded as having considered whether or not facts existed if:

- (a) he or she had considered, on a previous occasion, whether those facts existed in the circumstances surrounding that occasion; and
- (b) he or she honestly and reasonably believed that the circumstances surrounding the present occasion were the same, or substantially the same, as those surrounding the previous occasion.

So everyone participating in aviation will need some form of legal training to understand how they can legally operate under these criminal provisions.

Why is aviation airworthiness, operational, etc requirements being subjected to criminal code?

EASRs, FARs, etc are not part of a country's criminal code. Singapore promulgates these requirements in the same manner as CASA produces CAOs.

We don't need this kind of regulatory development, we need CASA to take up their responsibility to promulgate standards based on ICAO.

## Aviation & Criminal Law Excerpts

There is a very good article in the following link that will make aviation participants think before talking with CASA. <http://aviatormag.com.au/wp/who-needs-enemies-when-you-have-friends-like-these/> The final paragraph in this article by a legal person is of importance when corresponding with CASA.

*"This case was a prime example of how an unguarded explanation of events can expose one to potential criminal charges and I now advise clients that they should never speak or write to an aviation authority without legal advice beforehand."*

*"As an observer and a legal practitioner, it was obvious that the court had little or no idea of the plethora of certificates, approvals, authorizations, permits. Log books, maintenance releases, permits to fly and the like that are grist to the aviation mill as far as CASA."*

There are many other articles from different jurisdictions that have similar outcomes. It is becoming a concern for those that work in this industry that comments intended to assist with improvements in safety could incriminate them if criminal action is also taken. The trend to prosecute is increasing.

*"There has been substantial concern that the increased involvement of criminality may be detrimental to aviation safety, since aviation professionals fear that routine business decisions could now become the basis for criminal prosecutions. As a result of increased involvement of criminal 'investigations', these witnesses could become more guarded when dealing with accident and safety investigators. This, in turn, could lead to less-information, at the expense of aviation safety. For these reasons, further inquiry and analysis of this problem is suggested. For example, what effect will a climate of fear have on the ability of ATSB or CASA to interview witnesses? Will the reluctance of witnesses to disclose critical facts thwart the fact-finding process?"*

*"Remember the announcement from Greece that a licensed aircraft maintenance engineer has received a ten-year sentence for allegedly not re-setting a cockpit switch on a Helios Airways 737-300 which crashed in 2005 after its oxygen supply ran out and the pilots and many passengers fell unconscious. The criminal sentence is made even more troubling since apparently there was no direct evidence of the improper positioning of the switch. The conviction was based, apparently, on supposition and theory. There was even some evidence that the switch was in the correct (auto) position. It further brings into question the responsibility of the cockpit crew for failing to notice switch positions. But this criminal conviction, and too many others that proceeded it in a variety of jurisdictions, sends shivers down the spines of all who care about aviation safety."*

*"As we discuss in this brief article, criminalizing non-intentional careless conduct—ordinary negligence or even gross negligence—does not improve aviation safety nor does it help to compensate the victims for their loss."*

*"The comprehensive collection of cases that we have included shows that there were 27 cases of aviation accidents which were criminally investigated from 1956–1999 and 28 cases from 2000–2009," the authors say. "There were 27 cases spanning 43 years and over 28 cases in the last decade. Our research into cases where aviation professionals have faced criminal charges subsequent to an aviation accident has led us to believe that there will be a significant increase in cases where aviation accidents will be followed by criminal prosecutions." Such prosecutions, they say, are "based on the public's expectation that criminal prosecution will ensure aviation safety, and perhaps judicial authorities believe that prosecution will be the only way to increase safety and protect the public."*

*Two worlds are colliding. The first is traditional, technical accident investigation, which is best served by full disclosure of all relevant facts by everyone involved, in addition to physical evidence. The goal is to determine causal factors and offer recommendations for reducing the likelihood of accidents with similar causal factors. The second is law enforcement, with its own codes and traditions, and based on administering justice against individuals, including corporate "persons," who commit acts that cause harm."*

*"Summing up, we need to support the ICAO efforts internationally, and we think state legislatures—and maybe even Congress—needs to address the issue. We agree that in some cases of clear criminal activity (sabotage, terrorism, fraud, falsification of records, drunk or drugged flight crews, e.g.), criminal charges are warranted and we support prosecution. But negligence or even gross negligence should not be criminally prosecuted, even though the results can be tragic and catastrophic. Those matters belong in our civil courts."*

Australia's occupational health and safety legislation creates strict liability for OHS offences. Also, certain other industrial offences such as pollution tend to be enacted in terms of strict liability. We know most aviation safety regulations in regards to operators of aircraft and un-manned rockets are enacted as strict liability offences. This all shows that government and CASA are of the impression that you can prosecute to improve safety — sadly it will turn people away from the industry. Well done government.

# CASR 21.470—Foreign Designs

CASR 21.470

## 21.470 Foreign modification/repair designs

*A design for a modification of, or repair to, an aircraft, aircraft engine, propeller or appliance is taken to have been approved for the purpose of these Regulations if the design is:*

- (a) approved by the NAA of a recognised country; **or**
- (b) for a design of a modification or repair that relates to an aircraft, aircraft engine or propeller designed in a recognised country — published or issued by the foreign type certificate holder of the aircraft, aircraft engine or propeller under a system approved by the NAA of that country; **or**
- (c) for a design of a modification or repair that relates to an appliance designed in a recognised country — published or issued by the manufacturer of the appliance under a system approved by the NAA of that country; **or**
- (d) accepted by CASA under an agreement (however described) between CASA and the NAA of a Contracting State regarding approvals of designs for modifications and repairs.

This regulation reduces the need for duplication of designs of modifications or repairs that have been approved under four different scenarios.

1. "Approved by a recognised NAA" enables the use of NAA designs that are applicable to an aircraft or aircraft component as described in the 'approved data'.
  - This clarifies the use of approved data from these NAAs—there is no need for further approval.
  - It is very important that the data limitations are followed.
  - If the data refers to the NAA for any notifications, it should be read as notification to CASA.
2. The second method in this regulation clarifies that a type certificate holder of an aircraft, engine or propeller may issue modification and repair data.
  - Though this is normally done so in a manual or bulletin, it also allows other methods to be used.
  - Quite often, TC holders issue approvals based on local NAA acceptance—this rule removes the need for CASA acceptance.
  - Once TC holders become aware of this regulatory provision, the provision of approved data in the same manner as they provide that data in their own country can be used in Australia.
3. The third method applies the same approach to manufacturers of appliances.
  - The same provisions as above can be applied to manufacturers of appliances.

4. The last method is what is covered under a CASA & NAA agreement for the acceptance of each others approved data.

- A good example is the FAA/CASA IPA under the BASA.

Under the BASA/IPA, CASA has agreed that the following data is acceptable without further approval.

2.3.1. Australia shall accept, without further investigation, the following FAA Design Approvals:

- (a) Supplemental Type Certificates for all products, regardless of the State of Design;
- (b) Approved design data used in support of repairs for products, parts, and appliances regardless of State of Design;
- (c) Parts Manufacturer Approval; and
- (d) All other minor design changes.

Under the FAA system, representatives of the FAA may also approve data for the design of modifications and repairs on behalf of the Administrator, so DER approved data is FAA approved data.

This regulation clarifies what has been accepted as 'approved data' for the purpose of designs of modifications and repairs for many decades.

It enables maintenance organisations to obtain clarification of manufacturer's modifications and request written instructions. Written instructions are "issued" by the manufacturer.

CASA needs to start being more an educator than a policeman.

This industry has no way of keeping up with regulatory changes that have become very confusing. How can this industry understand the complexities without some sort of legal training?



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

## 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."*