

1. Will Regulatory Reform Be Completed In Time?

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The current GA participants are bracing for the expected change to the USA/FAA adoption. Transition must not lose any current participants.

Australia	USA
CASR Part 145 AMO	FAR Part 145 AMO
Nil	Part 121/135 AOC (with own MO)
CAR 30 AMO?	SASO/AMO (May have FAA 145)
Independent LAME	Independent A&P/IA (may be FBO)

CASA needs to adopt the standards for SASO/AMOs and apply it to a Part 145 “Domestic”.

Unlike in the past where many just could not walk away from aviation, younger people are less likely to stay if less stressful jobs become available outside aviation for the same money or more. Reversing the pendulum will not be easy.

Australia must adopt FAR Parts 43, 91 and Part 61 to reverse the pendulum in GA.

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2. EASA GA Part 66 Must Be Adopted.

We are looking at transitioning the AME/LAME training packages into the modular structure that CASA introduced in 2010 under CASR Part 66. However, in August this year, EASA made major changes, after consulting their industry for a few years, to fill the voids that their original Part 66/147 introduced.

We have been reviewing their amendment circulated to members and are in support of full adoption to remain harmonised. The omissions and deficiencies of their Part 66 has been corrected. It now needs to be adopted ASAP so the Aerospace Industry Reference Committee can repackage the MEA training packages into a modular AME training packages that supports this amendment, not the current CASR Part 66 standards.

~EASR Part 66 enables manufacturers’ subgroups or full group ratings to be held. (CAR31 again!!)

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3. FAA defines Airworthiness Limitations?

The FAA was asked for a legal interpretation of “whether replacement times and inspection intervals contained in an Airworthiness Limitations section (ALS) newly added to the maintenance manual or Instructions for Continued Airworthiness (ICA) by a manufacturer are mandatory for operators of an aircraft that was type-certificated and manufactured before the FAA approved the new ALS as a change to type design”.

The FAA’s answer is “NO”.

AMROBA has asked CASA what effect does this FAA legal interpretation have on CAO 100.5 Airworthiness Limitations that are part of the Type Design. The FAA state that they have to vary the Type Design or issue an AD to mandate manufacturers added mandatory limitations. Even if the FAA approves a new Airworthiness Limitations Section it is not retrospective unless the FAA issues an AD.

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The move to adopt the FARs for GA is fraught with safety risks associated with longevity of current participants. Considering the debacle with the adoption of EASR parts 66/147, where we still do not have full adoption, transitioning current AMOs into Part 145, when it is amended to include CAR 30 AMOs, may add unnecessary costs.

The FAA recognises that “repair stations” are not one size fits all. Could Australia safely implement a non-CASA approved USA FBO system, without the FAA regulatory oversight, that may put CASA approved AMOs ^{Safety All Around} out of business? By not implementing the FAA safety oversight and standards of the FBO SASO, will it lower safety standards so our aircraft accident rate will be affected?

The FAA’s Airport Division “regulatory oversights” airports, including the standards airport operators apply to operational & maintenance facilities they permit to operate on airports.

This is an important safety factor applied to the USA aviation system.

The FAA Airports Divisions use the standards included in FAA AC 150-5190.7:

“a. Specialized Aviation Service Operations. *When specialized aviation service operations (SASOs), sometimes known as single-service providers or special FBOs, apply to do business on an airport, “all” provisions of the published minimum standards may not apply. This is not to say that all SASOs providing the same or similar services should not equally comply with all applicable minimum standards. However, an airport should not, without adequate justification, require that a service provider desiring to provide a single service or less than full service also meet the criteria for a full-service FBO. Examples of these specialized services may include aircraft flying clubs, flight training, aircraft airframe and powerplant repair/maintenance, aircraft charter, air taxi or air ambulance, aircraft sales, avionics, instrument or propeller services, or other specialized commercial flight support businesses. Airport sponsors generally do not allow fuel sales alone as a SASO, but usually require that fuel sales be bundled with other services.*

e. Aircraft Engine/Accessory Repair and Maintenance. *The applicant for an on-airport Engine/Accessory repair station is subject to several regulatory requirements under FAR Part 145 Repair Stations. Depending on the type and size of the proposed repair station, the following questions may provide helpful guidelines:*

- (1) *What qualifications will be required of the repair station employees? Typically, the holder of a domestic repair station certificate must provide adequate personnel who can perform, supervise, and inspect the work for which the station is rated.*

- (2) *What repair station ratings does the applicant hold?*
- (3) *What types of services will the repair station offer to the public? These services can vary from repair to maintenance of aircraft and include painting, upholstery, etc.*
- (4) *Can the applicant secure sufficient airport space to provide facilities so work being done is protected from weather elements, dust, and heat? The amount of space required will be directly related to the largest item or aircraft to be serviced under the operator's rating.*
- (5) *Will suitable shop space exist to provide a place for machine tools and equipment in sufficient proximity to where the work is performed?*
- (6) *What amount of space will be necessary for the storage of standard parts, spare parts, raw materials, etc.?*
- (7) *What type of lighting and ventilation will the work areas have? Will the ventilation be adequate to protect the health and efficiency of the workers?*
- (8) *If spray painting, cleaning, or machining is performed, has sufficient distance between the operations performed and the testing operations been provided to prevent adverse effects on testing equipment?"*

Basically, the FARs have many methods and processes that enables multiple pathways as can be seen by looking at the Part 43/91 CD that was circulated to all members.

- For instance, a private owner of an aircraft, even a transport category aircraft, may employ a LAME to look after his/her aircraft under Part 43.
- An Aero Club could employ a LAME to look after their training aircraft in the same manner.
- An agricultural operator or a flight training facility can employ a LAME directly.

Part 43 places a responsibility on all maintenance personnel to have available and use the right data, tooling, equipment, etc. irrespective who provides the data, tooling, equipment, etc.

Liability requirements in Australia, like the USA, virtually compels independents to use a registered business to safeguard their personal assets.

Once you are a registered business complying with Part 43, the next step to Part 145 is not as unbearable as current differences. It is why FAR Part 145 and advisory material is written based on an applicant for Part 145 approval already being a registered business.

The transition to a FAR based system will succeed if enough senior experienced personnel stay in CASA and the industry over the next decade.

CASA regulatory reform now includes "realignment with FAR Part 21", except subpart J that will align with CS Part 21, subpart J; "alignment with FARs for GA maintenance, including airworthiness/maintenance requirements from FAR Part 91". So why doesn't CASA move to adopt the GA operational regulations in FAR Parts 91 & 61?

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It should be welcomed that the latest revision of EASR Part 66 enable aircraft manufacturer subgroup ratings and full group ratings for GA, whilst retaining the specific aircraft rating.

AME Licence	Rating	Scope	
A	A 1	Aeroplanes Turbine – no rating, subject to compliance with the requirements of Part 145.A.35	
	A 2	Aeroplanes Piston – no rating, subject to compliance with the requirements of point 145.A.35	
	A 3	Helicopter Turbine – no rating, subject to compliance with the requirements of point 145.A.35	
	A 4	Helicopter Piston – no rating, subject to compliance with the requirements of point 145.A.35	
B	B1.1	Aeroplanes Turbine – specific aircraft type rating	
	B1.2	Aeroplanes Piston – deemed to meet L1C, L1, L2C & L2 knowledge requirements. Can be full subgroup and group ratings.	
	B1.3	Helicopter Turbine – can be full subgroup rating.	
	B1.4	Helicopter Piston – can be full subgroup rating	
	B2	Applicable to all aircraft. Applicable Aircraft rating, Group 1. Can be full subgroup rating.	
	B2 L (new)	Applicable to all aircraft other than those in Group 1 (type rating) with at least one ‘system ratings’ <ul style="list-style-type: none"> • Communication/navigation (com/nav), • Instruments, • Autoflight, • Surveillance, • Airframe systems. Appropriate manufacturers or full subgroup rating.	
L (new)	B3 (new)	Applicable to piston-engine non-pressurised aeroplanes of 2,000 kg MTOW and below. Deemed to meet knowledge requirements for L1C, L1, L2C and L2 ratings. <ul style="list-style-type: none"> • Wooden structured aeroplanes • Metal tubing structured, fabric covered, aeroplanes, • Metal structured aeroplanes, • Composite structure aeroplanes. 	
	L1C	Composite Sailplanes	
	L1	Sailplanes – same scope as B3 above	
	L2C	Composite powered sailplanes & composite ELA1 aeroplanes – same scope as B3 above	
	L3H	Hot-air balloons	
	L3G	Gas Balloons	
	L4H	Hot-air airships – includes L3H knowledge requirements	
	L4G	ELA2 gas airships, - includes L3G knowledge requirements	
L5	Gas airships other than ELA2		
Groups [2, 3 & 4 subject to 66.A.45 subgroup and full group ratings]	1	Aircraft with type ratings	
	2	2a	single turboprop engine aeroplanes & turbojet and multiple-turboprop aeroplanes deemed low complexity by CASA
		2b	single turbine engine helicopter & multiple-turbine engine helicopters deemed low complexity by CASA
		2c	single piston engine helicopters & multiple piston engine helicopters deemed low complexity by CASA
	3	Piston engine aeroplanes other than those in Group 1.	
4	Sailplanes, powered sailplanes, balloons and airships, other than those in Group 1		

A close look at the “**group**” ratings in the latest EASR Part 66 revision is a return to broader CAR 31 group ratings. For instance, a B 1.2. licence could have a full group rating if the LAME has worked on 3 different aircraft types. CASA needs to adopt this revision as soon as possible so training packages can be developed in time.

EASR latest 66.A.45 - Endorsement with aircraft ratings

- (a) In order to be entitled to exercise certification privileges on a specific aircraft type, the holder of an aircraft maintenance [engineer](#) licence needs to have their licence endorsed with the relevant aircraft ratings:
- For **category B1, B2 or C**, the relevant aircraft ratings are the following:
 - (i) for **Group 1** aircraft, the **appropriate aircraft type rating**;
 - (ii) for **Group 2** aircraft, the appropriate aircraft type rating, manufacturer subgroup rating or **full subgroup rating**;
 - (iii) for **Group 3** aircraft, the appropriate aircraft type rating or **full group rating**;
 - (iv) for **Group 4** aircraft, for the category B2 licence, the **full group rating**.
 - For **category B2L**, the relevant aircraft ratings are the following:
 - (i) for Group 2 aircraft, the appropriate manufacturer subgroup rating or **full subgroup rating**;
 - (ii) for **Group 3 aircraft**, the **full group rating**;
 - (iii) for **Group 4 aircraft**, the **full group rating**.
 - For **category B3**, the relevant rating is ‘piston-engine non-pressurised aeroplanes of 2,000 kg MTOM and below’.
 - For **category L**, the relevant aircraft ratings are the following:
 - (i) for subcategory **L1C**, the rating ‘**composite sailplanes**’;
 - (ii) for subcategory **L1**, the rating ‘**sailplanes**’;
 - (iii) for subcategory **L2C**, the rating ‘**composite powered sailplanes and composite ELA1 aeroplanes**’;
 - (iv) for subcategory **L2**, the rating ‘**powered sailplanes and ELA1 aeroplanes**’;
 - (v) for subcategory **L3H**, the rating ‘**hot-air balloons**’;
 - (vi) for subcategory **L3G**, the rating ‘**gas balloons**’;
 - (vii) for subcategory **L4H**, the rating ‘**hot airships**’;
 - (viii) for subcategory **L4G**, the rating ‘**ELA2 gas airships**’;
 - (ix) for subcategory **L5**, the **appropriate airship type rating**

EASA has come to the same conclusion as DCA did some 40 years ago when they introduced “group” rating. This is a case of ‘what goes around comes around” and a total failure of listening to those with corporate history so mistakes are repeated.

The greatest failure of CASA & government is to provide the modular training packages that CASA promulgated in CASR Part 66 and Part 66 MoS. **18 year wait for adoption of EASA standards** Since 2010, the part 66 modular skill standards specified in regulation has not been provided by Government and CASA.

CASA created the system but has yet to work with other governments to have the training packaged into the modules they regulatory created.

All CASA has done is adopt the EASA modules, without the EASA course durations, and expect industry to work with industry reference committees and argue for this to happen.

This should have been agreed between Ministers and government departments before introducing this EASA system.

The current VET system is totally broken and can't be fixed until CASA promulgates all the EASA standards associated with CASR Parts 66/147. Half adoption created the failures today. The chart opposite is from the latest EASA revision of Part 147.

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Basic Course	Duration (in hours)	Theoretical Training Ratio (in %)
A1	800	30-35
A2	650	30-35
A3	800	30-35
A4	800	30-35
B1.1	2400	50-60
B1.2	2000	50-60
B1.3	2400	50-60
B1.4	2400	50-60
B2	2400	50-60
B2L	1500	50-60
B3	1000	50-60

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AMROBA has asked CASA what effect does this FAA legal interpretation have on CAO 100.5 Airworthiness Limitations that are part of the Type Design. The FAA state that they have to vary the Type Design or issue an AD to mandate manufacturers added mandatory airworthiness limitations. Even if the FAA approves a new Airworthiness Limitations Section it is not retrospective unless the FAA also issues an AD.

“FAA legal counsel has confirmed that compliance with a manufacturer’s inspection or other maintenance specified in an ALS section of a maintenance manual pursuant to 14 CFR 43.16 or inspection program approved under 14 CFR 91.403(c) does not mean compliance with the DAH’s latest ALS. The only version of an ALS that is mandatory is the version that was included in the particular aircraft’s type design when the aircraft was manufactured, or as amended by an AD.”

“If operational regulations were interpreted as imposing an obligation on operators and maintenance providers to comply with the latest revision of a manufacturer's document, manufacturers could unilaterally impose regulatory burdens on operators of existing aircraft. This would be legally objectionable in that the FAA does not have legal authority to delegate its rulemaking authority to manufacturers.”

FAA Response: “First and foremost, if a TBO is specified as a mandatory replacement time in an FAA-approved ALS of a maintenance manual or ICA, it would be mandatory by virtue of §§ 43.16 and 91.403(c). Also, if the TBO was specified in the manufacturer's current maintenance program for the aircraft engine, propeller, rotor, or item of emergency equipment for a part 135 operator who is utilizing the manufacturer's program, or if the TBO is included as a requirement in a part 135 maintenance program approved by the FAA for that operator, the TBO would be mandatory. Finally, if a TBO is required by an AD or other FAA rule, it would be mandatory. If a TBO is referenced in a Note in a type certificate data sheet (TCDS), whether the TBO would be mandatory depends on whether that reference was supported by a reference to a rule (such as an ALS). **The mere fact that a TBO is included in a manufacturer's maintenance manual or ICA does not make it mandatory, unless one of the above situations applies that would make it so. Future changes, whether they be FAA-approved ALS or otherwise, cannot be retroactively enforced against owners/operators or maintenance providers of earlier model aircraft unless the FAA mandates their retroactive application by an AD or other properly adopted rule.**

The FAA have asked manufacturers to republish their mandatory replacement times and inspections as recommendations that are encouraged, but optional, for those in-service aircraft, unless later mandated by an AD.”

We await CASA’s interpretation and how this applies to CAO 100.50.

Summary: Airworthiness Limitations are mandatory as part of the type design data and any additional Airworthiness Limitations, post the issue of the type certificate, is by an amendment to the type design or mandated by an AD. Additional Airworthiness Limitations promulgated as mandatory are not retrospective unless by FAA AD.

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