**AMROBA®inc**
AVIATION MAINTENANCE REPAIR & OVERHAUL BUSINESS ASSOCIATION, INC
ADVOCATE OF THE AVIATION MRO INDUSTRY

Date Published 27/10/2019 | **NEWSLETTER** | Volume 16 – Issue 10 October — 2019

# No CARs – Just CASRs

Be prepared for some real costly shocks when CASA amends the CASRs to include Private and Charter operations. Since regulatory reform started in the late 1980s, one of the major problems with aviation regulations and standards is the amount of complaints regarding the language used and the interjurisdictional inconsistency of regulations. In the late 1990s, CASA was committed to adopting and using the ICAO definition and meanings of typical aviation wording. Since CASA went down the EASR line, that has been totally ignored. The latest approach is to remove technical identification of AME/LAME. When CAR 30 disappears in the next major change we will have FAR part 43 aspects applied at the same time. CASRs use EASR terminology and FAR based system terminology will increase the interjurisdictional inconsistency of regulations. This will not simplify the regulations for industry to comply with.

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Ken. R. Cannane
Executive Director
amroba@amroba.org.au

# Will VET Training be Attractive?

*CASA's decision to enable self-study and sit CASA provided basic examinations is supported and it places increasing pressure on training providers to provide relevant training that underpin the future aircraft engineer licence pathways. The one problem is that we need the EASR Part 66 B3 and B2L licence as an entry level into aviation. CASA should have made a decision by now to adopt the EASR Part 66 standards for these two licence pathways so training can be developed to support them. In reality, a person employed in aircraft maintenance can self-study or use a training provider, VET course or an international training provider for the EASR Part 66 modules to get the knowledge to pass CASA exams. Maybe an applicant that has self-studied could have used an EU AME training provider on line? The options are increasing.*

Our VET system is based on the EASA Part 66/147 knowledge system that is now under intense review by the European Association of Aviation Training and Education Organisations (EATEO). They have a conference on November 7th this year where major changes are proposed to the Part 66 modules. EATEO's **aim is to reduce the average time for a student to receive a basic license (B1 or B2) in three years.** http://eateo.eu/policy-paper/

EATEO's recommendations include:

(1) Removal of subject Module 1 (Mathematics) and subject Module 2 (Physics). (prerequisite)

(2) Revision of the training material of subject Module 6 (Material and Hardware) and Module 7A (maintenance practices)

(3) Revision and extension of the training material covered in Subject Module 9 (Human Factors).

(4) Significant reduction in training material of Modules 11A and 13.

Plus

(1) Common/Central Curriculum (training material): (NVET controlled)

(2) Common online question bank: (CASA Controlled)

"*The problem lies mostly on the fact the new technicians need to seek for Part-145 organizations to allow them to perform their training and fill their practical training log-books with signatures to become ready for applying in DCAs for the licence. Since Part-145 organizations perform maintenance in functional aeroplanes, they are almost always under the pressure to deliver the aircrafts "released to flight" and they trend to ignore the new candidates especially when they are not employees of their companies. We believe that the major issue with this tactic arises from the fact that* ***Part-145 maintenance organizations are not training organizations*** *and as it is expected they do not have structured method to educate the new candidates.*"

The proposed solution is to perform the practical maintenance experience in EASA Part-147 organization. The idea is to create a "training Part-145 organization", inside the EASA Part-147 organization. This is what it should have been from the start in Australia.

"*Proper use of basic tools like torque wrenches, multimeters, bonding testers, compressed air tools, drilling, riveting tools etc. on the aircraft using the technical publication of the manufacturer and the standard practice manuals. Proper and efficient use of these tools is some of the basic skills that a new engineer should have and needs substantial practice before acquiring these skills. It is obvious that during this practice mistakes may happen, and equipment can be damaged, which is acceptable in a demo aircraft in comparison with a functional aircraft in Part-145 organization.*"

Europe is actively researching the shortage of maintenance personnel and coming up with solutions. The USA is doing the same. Australia is seems to lack a vision for the future.

EATEO's policy paper makes it clear that theoretical & practical training combined will help in the EU but it is what should have been provided under a competency-based system.

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# MRO Future Proposals

*With CAR 30 being transitioned into the CASRs in the near future, with little public knowledge of CASA's internal direction, the interjurisdictional inconsistency of regulations will create terminology differences between CASR Parts 21, 42, 43, 66, 145, XXX (CAR 30) and 147. The CASRs, current ad as proposed, will have a mixture of FAR, EASR and unique CASA terminology. In the late 1990s, CASA stated it would apply ICAO terminology and meanings to be consistent across all regulations. What has been developed since changing from FAR based to EASR based and now back to unique Australian terminology will increase the inconsistency of regulations. We need consistency in terminology and meanings across the regulations, standards, guidance and advisory material.*

It is hard to find black and white definitions, policy or vision of the future from CASA or government with regards to the maintenance industry so we will try and put together what we know of the future.

1. CASR Part 145, more red tape than EASR Part 145 and FAR Part 145, will remain as is.
2. Those that want to service Part 121 and Part 135 will need a Part 145 AMO and the operator will need a CAMO.
3. CASR Part XXX, more red tape than CAR 30, will come into existence when CAR30 transitions, to service Parts 133 & 135.
4. An independent maintainer is also being proposed to service Parts 133 & 135 operators.

Is this an indication that they are considering a FAR based system where Parts 121, 135, 133 operators can have their own AMO without Part 145 approval, contract a Part 145 AMO, use a non FBO without FAA approval as long as they employ a Part 66 licence holder or use an independent maintainer. (Is this a LAME?)

Naturally, any independent maintainer should work for their own registered business to cover their liability in our litigious society.

Whatever is decided by CASA and recommended to government will have the same effect as other aviation regulatory reform since the creation of an agency to oversight aviation.

Whatever the outcome, the most important individuals that the industry needs to survive and continue is the number of CASA delegates and authorised persons (AP).

Aviation regulatory reform requires as many aviation regulatory services functions to be devolved to industry delegates and APs. Whether it is a CofA to be issued, a modification or repair, a system of maintenance, a permissible unserviceability, OMEL, etc., the whole industry needs these services to be provided in a timely manner.

What can be guaranteed is a reduction in participation in this sector like all major changes.

CASA really needs to sit down and decide the terminology to be applied across regulations, standards and guidance material.

"*interjurisdictional inconsistency* *suggests that the 'real' cost to business, and the flow-on economic cost, of these inconsistencies is perhaps more significant than currently acknowledged. This is particularly the case as markets become more globalized, more businesses become multi-jurisdictional and the impact of inconsistencies in law and its application increase. The inconsistencies create costs and uncertainty for business which inhibit and discourage inter-jurisdictional investment.*"

The inconsistency within aviation regulations, standards and advisory material is well known.

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# Entry Levels B3 & B2L AE Licences

*CASA no longer refers to an AME or LAME in regulations, they refer to the Aircraft Engineer and Licenced Aircraft Engineer. EASR Part 66 also includes an avionics AE B2L licence and a mechanical AE B3 licence for aircraft 2000Kg and below. The B2L licence enables the licence holder to expand by adding additional knowledge until achieving a full B2 licence. The B3 is a combined mechanical and avionics licence applicable to this class of aircraft. Both licences are seen as providing a pathway into aviation that CASR Part 66 restricted for GA. Terminology needs to be addressed. Australia opted for the AME/LAME terminology from ICAO Annex 1 but CASA adopts the EASR licenced aircraft engineer in various places of the regulations, standards and advisory material.*

**Terminology:** In the 1990s, it was determined to use the ICAO definition and meanings as the FAA and EASA tend to use unique terminology to match their language. Just have a look at the regulations that apply to an aircraft maintenance engineer and licenced aircraft maintenance engineer that can be identified many ways, the latest being proposed, "maintainer". Australia adopted AME from ICAO Annex 1 many decades ago.

ICAO "***Annex 1.*** *4.2.* ***Aircraft maintenance*** *(~~technician~~/**engineer**/~~mechanic~~)*

*Note. – **The terms in brackets** are given as acceptable additions to the title of the licence. Each Contracting State is expected to use in its own regulations **the one it prefers**."*

'~~AMT~~' or 'AME' or '~~AMM~~' are the options – our option, **AME**, should be used in regulations.

**The B2L LAME**: EASA's progressive B2L licence for personnel involved in the maintenance of avionics and electrical systems for **aircraft other than those in the group of complex aircraft**. This B2L licence has the adeptness of being created with the concept of **'avionics systems ratings**. An excellent entry level avionics LAME.

A significant amount of the Part 66 B2 syllabus is not applicable to aircraft used in GA. This makes it extremely hard for GA AMEs to pass examinations and get the required experience in those systems typical of "complex" aircraft. As there are no maintenance certification rights until the full B2 is obtained, GA suffers. It is imperative that a system-based licence be introduced as soon as possible. Must be adopted to address our shortage of avionic LAMEs.

**The Systems:** Autoflight, Instruments, Com/nav, Surveillance, Airframe systems.

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**The B3 LAME**: Is a maintenance certifying mechanical/avionic licence applicable to piston-engine non-pressurised aeroplanes up to 2000 MTOW. "The B3 authorisation entitles the holder to issue 'certificates of release to service' and to act as "support staff" (base maintenance quality inspector) for: work on avionic systems requiring only simple tests to prove their serviceability and not requiring troubleshooting."

The EASA B3 is an excellent licence to support CASA's proposal to adopt FAR Part 43. A large portion of the aircraft on the register would be covered by this licence.

Like the B2L, the B3 is a much-needed entry level Part 66 licence to address the shortage, especially in GA.

The possibility of combining the B3 and B2L training syllabi for a broad based AME/LAME would provide a better qualified tradesperson and licences.

The attachment on the next page lays out the latest training pathways as detailed by EASA for each of these licences. If the NVET training is to remain relevant, then it has to be urgently changed to support each of the licence outcome. If it delays, then the option of using a self-study option may become the main pathway to a Part 66 licence.

One hopes that CASA can make a decision and notify the public. No secrecy please.

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Attachment

Training Pathways needed to be identified in the NVET Companion Volume if CASA adopts EASR Part 66 licences. B3 & B2L are needed for GA entry level.

| Subject module | A or B1 aeroplane with: | | A or B1 helicopter with: | | B3 | B2 | B2L |
|---|---|---|---|---|---|---|---|
| | Turbine engine(s) | Piston engine(s) | Turbine engine(s) | Piston engine(s) | Piston engine non-pressurised aeroplanes of 2 000 kg MTOM and below | | |
| 1 | X | X | X | X | X | X | X |
| 2 | X | X | X | X | X | X | X |
| 3 | X | X | X | X | X | X | X |
| 4 | X | X | X | X | X | X | X |
| 5 | X | X | X | X | X | X | X |
| 6 | X | X | X | X | X | X | X |
| 7A | X | X | X | X | | X | X |
| 7B | | | | | X | | |
| 8 | X | X | X | X | X | X | X |
| 9A | X | X | X | X | | X | X |
| 9B | | | | | X | | |
| 10 | X | X | X | X | X | X | X |
| 11A | X | | | | | | |
| 11B | | X | | | | | |
| 11C | | | | | X | | |
| 12 | | | X | X | | | |
| 13.1/2 | | | | | | X | X |
| 13.3(a) | | | | | | X | X (for system rating 'Autoflight' |
| 13.3(b) | | | | | | X | |
| 13.4(a) | | | | | | X | X (for system rating 'Com/Nav') |
| 13.4(b) | | | | | | X | X (for system rating 'Surveillance') |
| 13.4(c) | | | | | | X | |
| 13.5 | | | | | | X | X |
| 13.6 | | | | | | X | |
| 13.7 | | | | | | X | X (for system rating 'Autoflight') |
| 13.8 | | | | | | X | X (for system rating 'Instruments') |
| 13.9 | | | | | | X | X |
| 13.10 | | | | | | X | |
| 13.11-18 | | | | | | X | X (for system rating 'Airframe systems') |
| 13.19.22 | | | | | | X | |
| 14 | | | | | X | X | X (for system ratings 'Instruments' and 'Airframe systems')' |
| 15 | X | | X | | | | |
| 16 | | X | | X | X | | |
| 17A | X | X | | | | | |
| 17B | | | | | X | | |

EASA has clearly identified what the NVET Companion Volume should focus on providing courses for trade levels supporting the 7 different AME licences.