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ADVOCATE OF THE AVIATION MRO INDUSTRY

Newsletter Date
2/11/2012

Approval of EASA AME Courses

Volume 9, Issue 9
November - 2012

Ever wonder why we do not see the same outcome as in Europe and other nations that have adopted the EASA AME licensing system? The answer is quite simple, just look at the EASA regulatory responsibility of each competent authority that are NAAs with the EU. The EASA rules specify how each associated competent authority complies with the EASA rules in relation to the issue of the AME licence, approval of training courses, approval of training organisations — not applied by CASA.

Accepting that CASA decided to adopt the EASA AME licensing system, one would have thought that the government, once they accepted moving to this model, would have also directed CASA to also adopt the EASA rules relating to how CASA would implement this basically unwanted AME licensing system.

The most crucial element is the creation of a conversion (old to new) report that clearly states what has to be achieved to remove Limitations placed on Part 66 licences on transition. CASA never identified what a non airline LAME had to achieve nor did the RIS address this issue.

- a) *The competent authority may only perform the conversion specified in 66.A.70 in accordance with a conversion report prepared pursuant to paragraph PART-66 /JAR-66.B.305 or PART-66 /JAR-66.B.310, as applicable.*
 - b) *The conversion report shall be either developed by the competent authority or approved by the competent authority.*
- The purpose for this rule was to enable transition within a time frame. CASA did this in 2008 when they promulgated CAO 100.66. Pity it was for airline LAMEs only.*

CAA(UK) report extracts

The EASA rule, 66.B.300 General (a) " *The competent authority may only perform the conversion specified in 66.A.70 in accordance with a conversion report prepared pursuant to paragraph 66.B.305 or 66.B.310, as applicable.*"

The CAA(UK) promulgated such report included in their Engineers Guidance Document that identifies in charts exactly the limitations placed on their old licence and a chart explaining modules and/or elements needed to remove limitations.

The duration of EASA AMEL courses are set in regulations and identify the practical training required. Lack of skills from CASA approved courses has been raised by many employers.

The EASA rules for a competent authority, if adopted, would also require the duration of AME licence basic courses to meet the EASA standard stated specified in their regulations.

In addition, EASR 147.A.200 (f) states that the approved basic training course (f) " *The duration of basic training courses shall be in accordance with Appendix I*"

Appendix I (Chart on the right) Basic Training Course Duration. Minimum duration of complete basic courses

CASA approved courses do not meet these duration periods nor do they have knowledge/practical training ratio.

CAA(UK) AMEL	Modules to complete
Aeroplanes 2	3.9 to 3.18, 4, 5, 7.7, 11.5, 11.6, 11.14 & 17
Aeroplanes 1	3.9 to 3.18, 4, 5, 11.5, 11.6 & 11.14
Combined Cat (Inst/Autopilots)	13.1, 13.3 to 13.6, 13.9

Basic Course	Duration (in hours)	Theoretical training ratio
A1	800	30 to 35
A2	650	30 to 35
A3	800	30 to 35
A4	800	30 to 35
B1.1	2400	50 to 60
B1.2	2000	50 to 60
B1.3	2400	50 to 60
B1.4	2400	50 to 60
B2	2400	50 to 60

EASA Part 66 Transition Regulations for Competent Authority

Obviously CASA would not be declared a Competent Authority by EASA when you review how they handled the transition to the EASA Part 66 AME licensing system.

To transition to the EASA A, B, C licensing system, EASA promulgates regulations that all **Competent Authorities** must implement to adopt the EASA AME licensing system. Our research has also shown that all non EU countries that have adopted the EASA AME licensing system also adopted these EASA regulations to implement this licence structure, except CASA.

This is why they have EASA compatible licences and why Australia does not.

The following are extracts from [Consolidated version of Regulation \(EC\) No 2042/2003](#)

EASA REGULATORY PROCEDURES FOR COMPETENT AUTHORITIES (Part 66) SUBPART D

CONVERSION OF NATIONAL QUALIFICATIONS

" This Subpart provides the requirements for converting national qualifications to aircraft maintenance licences.

66.B.300 General

(a) The competent authority may only perform the conversion specified in 66.A.70 in accordance with a conversion report prepared pursuant to paragraph 66.B.305 or 66.B.310, as applicable.

(b) The conversion report shall be either developed by the competent authority or approved by the competent authority.

66.B.305 Conversion report for national qualifications

The report shall describe the scope of each type of qualification and show to which aircraft maintenance licence it will be converted, which limitation will be added and the Part-66 module/subjects on which examination is needed to ensure conversion to the aircraft maintenance licence without limitation, or to include an additional (sub-) category. The report shall include a copy of the existing regulation defining the licence categories and scopes.

66.B.310 Conversion report for approved maintenance organisations authorisations

For each approved maintenance organisation concerned, the report shall describe the scope of each type of authorisation and show to which aircraft

maintenance licence it will be converted, which limitation will be added and the module/subjects on which examination is needed to convert to the licence, or to include an additional (sub-) category. The report shall include a copy of the relevant approved maintenance organisation's procedures for the qualification of certifying staff, on which the conversion process is based."

Example of how a Competent Authority Transitions:-

A review of the CAA(UK) transition process demonstrates how a "Competent Authority" implement the transition to the EASA Part 66 licences.

The CAA(UK) promulgates an Engineers Licensing Guidance Book that includes their regulatory transition report for all LAMEs. Refer link:

http://www.caa.co.uk/docs/33/ELGDbook_07_webversion.pdf

The transition chart on page one of the Newsletter is part of a much larger chart in this CAA(UK) licensing document.

What the report does is make each Competent Authority identify how each of their AME licence holders, once transitioned to EASA part 66 licences, can remove the Limitations placed on the licence (similar to the exclusion system).

The tables listed in this appendix have been revised in order to simplify and combine the examination requirements both pre and post conversion.

Where part modules are shown, the full part module may not be required and therefore may be sub-divided.

This will be assessed by the CAA examination staff when applying for the exam, to ensure that the correct exam papers are given.

In other words, the CAA(UK) will provide the examinations necessary so that a transition LAME can have their limitations removed so they can exercise the full scope of the Part 66 licence.

So the questions have to be asked:

Why did CASA totally ignore the EASA regulations for a Competent Authority to transition our LAMEs to the EASA Part 66 licence system?

Why didn't CASA continue to provide examination papers to enable current LAMEs to remove the Exclusions that they imposed during this transition period?

Skills & Duration of EASA AME Courses

Why didn't CASA adopt the training standards promulgated by EASA to underpin the EASA part 66 licensing system?

For a number of years maintenance employers from all levels have been complaining about the lack of skills that the AME training system produces. We have heard employers stating it was better to employ LAMEs from other countries than employ what is being produced in Australia.

Within Australia, the NVET system provides for **1280 training hours** to meet an AQFIV level for AMEs. This has been recognised as below world best for some time.

With the scope of the avionic and mechanical categories being modified to align with EASA, it should have meant adoption of the training requirements specified by EASA.

The outcome of the EASA regulations is no different from the promise outcome of the NVET competency based training.

It is very easy to understand how our system is deficient when you read the EASA regulations for Competent Authorities associated with Part 147 organisations.

The “**Log of Experience**” is very different from the EASA Part 147 Practical Training Assessment Form used in Europe. We all know our Log of Experience is only a record of doing or witnessing a specific maintenance task being carried out.

Practical Training Assessment is covered below.

Until the EASA Part 147 training course knowledge/practical training ratio is adopted, then we do not have the same skilled AMEs meeting EASA A or B licensing standards.

The following are extracts from [Consolidated version of Regulation \(EC\) No 2042/2003](#)

SUBPART C

THE APPROVED BASIC TRAINING COURSE

147.A.200 The approved basic training course

(a) The approved basic training course shall consist of knowledge training, knowledge examination, practical training and a practical assessment.

(b) The knowledge training element shall cover the subject matter for a category or subcategory A, B1 or B2 aircraft maintenance licence as specified in Part-66.

(c) The knowledge examination element shall cover a representative cross section of subject matter from the paragraph (b) training element.

(d) The practical training element shall cover the practical use of common tooling/equipment, the disassembly/assembly of a representative selection of aircraft parts and the participation in representative maintenance activities being carried out relevant to the particular Part-66 complete module.

(e) The practical assessment element shall cover the practical training and determine whether the student is competent at using tools and equipment and working in accordance with maintenance manuals.

(f) The duration of basic training courses shall be in accordance with Appendix I. [refer page 1]

(g) The duration of conversion courses between (sub)categories shall be determined through an assessment of the basic training syllabus and the related practical training needs.

Which CASA Part 147 RTO has a 2400 hour B course approved in Australia?

Europe Standards not Australian Standards

Atypical EASA NAA, and other NAAs that have adopted EASA Part 66, approved ‘B’ courses have a total duration of 400 training days, including 160 days of practical training totalling 2400 hours. A further EASA Part-66 requirement of 2 years of civil aircraft maintenance experience on the appropriate sub-category is required for the license issuance.

They produce competent AMEs/LAMEs.

Compare our NVET AME 1280 training hours (some States add some hours) or at the most 1400 hours. This is, at a minimum, 1000 hours short of meeting EASA standards.

Maybe we can give some hours based on the Log of Industrial Experience but this is not the Part 147 controlled practical training assessment as required under the EASA system.

Adopting the EASA system would have added **1180** hours to the current training and either the government funding needed to be increased or the individual would need to pay the difference.

Module 10, aviation law/requirements, if discounted from the NVET system, would remove around 80 hours of training. Still 1100 hours short.

To meet EASA standards, somebody would need to fund the excess. The RIS did not address.

MEA Training Modules

When CASA decided to move to the EASA AME licensing system many in the industry rightly pointed out the incompatibility with general aviation.

AMROBA has compared the CASA Part 66/147 modules against the EASA modules and once again we find that they added elements to both the B1 & B2 licence modules that adds additional time to training without increasing the training time.

http://amroba.org.au/index.php/download_file/141/

CASA added to the modules:

11.4.1 Air Supply,

11.4.2 Air Conditioning,

11.4.3 Pressurisation &

11.4.4 Safety & Warning Devices

11.19 Integrated Modular Avionics (ATA 42)

11.20 Cabin Systems (ATA 44)

11.21 Information Systems (ATA 46)

12.17 Integrated Modular Avionics (ATA 42)

12.18 On-board maintenance systems (ATA 45)

12.19 Information Systems (ATA 46)

13.11 Air-conditioning and cabin pressurisation (ATA21)

13.12 Fire Protection (ATA26)

13.13 Fuel Systems (ATA28)

13.14 Hydraulic power (ATA29)

13.15 Ice & rain Protection (ATA30)

13.16 Landing Gear (ATA32)

13.17 Oxygen (ATA 35)

13.18 Pneumatic/vacuum (ATA36)

13.19 Water/waste (ATA38)

13.20 Integrated Modular Avionics (ATA 42)

13.21 Cabin Systems (ATA44)

13.22 Information Systems (ATA 46)

14.3 Starting and ignition system

One would have thought that adding additional elements, the training would have increased and additional examination questions would also have increased.

Even with these added elements, the number of questions for each of these module did not change from the EASA standard.

Under EASA, a Competent Authority must follow EASA regulations relating to the conduct of examinations under Parts 66/147.

The following are extracts from [Consolidated version of Regulation \(EC\) No 2042/2003](#)

SUBPART C EXAMINATIONS

"This Subpart provides the procedure for examinations conducted by the competent authority.

66.B.200 Examination by the competent authority

(a) *All examination questions shall be kept in a secure manner etc.*

(b) *The competent authority shall appoint examiners who shall be present during all examinations to ensure the integrity of the examination.*

(c) *Basic examinations shall follow the standard specified in Appendix I and II to this Part.*

(d) *Type examinations must follow the standard specified in Appendix III to this Part.*

(e) *New essay questions shall be raised at least every six months and used questions withdrawn or rested from use. A record of the questions used shall be retained in the records for reference.*

(f) *All examination papers shall be handed out at the start of the examination etc."*

One of the reasons why the EASA AME licensing system has been a success in most of our Asian neighbours is because the Asian NAAs adopted EASA regulations to implement the system without unique changes that CASA has imposed.



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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."