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AVIATION MAINTENANCE REPAIR & OVERHAUL BUSINESS ASSOCIATION. INC
ADVOCATE OF THE AVIATION MRO INDUSTRY

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Over the last 20 plus years, many regulations have been applied with little risk analysis used prior to making regulations. Though industry raised concerns, the drive to align with the European system has ended up with a system that has major issues and non-compatible with Australia's competency based education system and basic international training standards.

This has done damage to Australia's aviation creditability and really effected domestic aviation.

CASA has, at last, accepted that past changes have had a negative effect on civil aviation.

The current Part 66 review has the potential to not only correct past mistakes but end up with a better maintenance personnel training and a licencing system that will once again provide career pathways.

The biggest risk is not CASA, it is sectors protecting their own backyards. In the past, CASA project managers have been captured by some sectors – it is why we are in this mess.

We must acknowledge that this regime of CASA, under the stewardship of Pip Spence, has slowly changed its approach and are now more focussed industry wide instead of being captured by certain sectors.

Having reviewed what CASA is considering with the Part 66 TWG, if CASA opts for the options that are part of the 5 different proposals in review, we could end up with an education and industry compatible system that would correct regulatory changes over the last 40 years that have had a negative effect on the training and licencing system.

AMROBA will continue to work with CASA as we see the potential for a return to an Australian licencing workable system. Our initial talks with the new government is also very positive. Between government and possible changes, there is a chance we can return to the "Groups" that served the non-airline sectors well.

Note: Because ICAO has a global education system, we should harmonise globally.

Trans-Tasman Mutual Recognition Arrangement – (Ignored)

Once, our maintenance personnel skills were closely aligned.

Trade Recognition Authority (Ignored)

TSS Skills Assessment Program

For applicants applying for a Temporary Skill Shortage (TSS) visa who work in a nominated occupation and hold a passport from a nominated country.

Offshore Skills Assessment Program

For applicants applying for skilled migration visa (excluding 485 or TSS), who work in a nominated occupation and hold a passport from a nominated country. It is also available for applicants choosing to undertake a skills assessment in a nominated occupation who can travel to Australia or a nominated country for a skills assessment.

TRA Migration Skills Assessment

For eligible applicants with trade skills who are seeking permanent migration to Australia.

Department of Education & Workplace Relations.

Australian Skills Qualification Authority - trade qualifications

Other Subjects

1. LAME – what are their privileges

The current AME licence ratings do not explain, with real clarity, what they can do. What most LAMEs would like to see is clarity on what the licence rating enables you to carry out and certify.

To explain, let us recall what a LAME privilege was when our regulatory system was ICAO compliant pre the change to the EU system. These privileges & responsibilities were promulgated in a DCA document that detailed what LAME privileges were. They made sense – globally accepted.

The DCA words provided clarity of what a LAME could certify for. Should be re-stated – this is what a LAME privileges should enable.

DCA Pub No.35. (needs to be re-printed).

"4. The privileges which may be exercised by a Licenced Aircraft Maintenance Engineer includes

- *certification of safety for flight of an aircraft;*
- *certification of documents for issue or renewal of a Certificate of Airworthiness;*
- *approval of subsequent flight tests;*
- *certification for issue of an aircraft maintenance release;*
- *certification of work carried out under regular maintenance schedules,*
- *certification after replacement of components,*
- *rectification of defects; and*
- *maintenance inspections."*

[Amplification: Certification is an 'airworthiness' certification and not signing for individual maintenance tasks that can be carried out by qualified maintenance persons.]

"5. The exercise of these privileges involves the acceptance of responsibilities and briefly stated they are as follows:

When certifying work and inspections the Licenced Aircraft Maintenance Engineer must ensure that he/she has adequately supervised the work, that established standards have been maintained and the resulting conditions is satisfactorily in all respects.

This means that he/she must satisfy himself/herself that all work and processes leading up to the end result and that which is the product of other approved persons or all organisations, have been properly certified.

6. All aircraft work must of course be authorised by ~~the Director General~~ CASA in one way or another thus it may be authorised by an Air Navigation Order, Regulations, MoSs, ADs, an approved Maintenance Manual, an approved Engineering Change Order, an approved drawing or a specific letter of approval."

[Amplification: ADs were in ANOs.]

"7. In performing or supervising work the Licenced Aircraft Maintenance Engineer is responsible for ensuring that the work is performed in accordance with the requirements of authorising documents, and that the following conditions have also been fulfilled:

(a) Adequate technical data was available and applied;

(b) Specialist advice was sort when required;

(c) Appropriate equipment was employed;

(d) Properly released (certified) components and materials were used throughout."

[Amplification: The past LAME held both privileges specified in Annex 1, Chapter 4.]

Only the LAME can certify the aircraft or system, or part of an aircraft or system, as airworthy. It aligns with the AQF training levels: AQF 4 aligns with trade level, the AQF 5 level aligns with the LAME level and AQF 6 aligns with LAME/manager level.

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2. Certifying as 'Airworthy'.

The difference between signing for maintenance and certifying maintenance.

Do we all understand the difference?

We all know that an aircraft and its system, when manufactured, is certified as complying with its design standards.

When an AME/AMT signs for maintenance they are stating that they carried out the maintenance whereas, when a LAME signs for maintenance they also certify the maintenance meets the aircraft certification design standards.

That is why the definition for certifying as airworthy includes "or any added modification."

Certification for completion of maintenance means that maintenance has left the aircraft in an airworthy condition. A continual inspection process included in most nations' regulatory system to maintain the certificate of airworthiness at the design levels of initial certification or additional modification design levels, exists.

Training Requirements to Certify as Airworthy.

Training an AME to do maintenance is mainly about providing the AME with the hand skills to perform the various maintenance tasks related to aircraft, most are applicable to both aeroplanes and helicopters.

To certify as airworthy requires additional knowledge is required. This additional training is explained in ICAO's promulgated LAME training guidance.

"**Aircraft certification, documents and maintenance (LAME Knowledge)**

Aircraft, propeller & engine Type Certification

- *Certification rules (e.g. FAR/JAR 23, 25, 27 and 29)*
- *Type Certification (TC), TC issue, and associated TC Data Sheet*
- *Supplemental Type Certification or major modification*

Individual aircraft certification (LAME Knowledge)

- *Approval of design or production organizations*
- *Issue of Certificate of Airworthiness (CofA) and Certificate of Registration (CofR)*
- *Documents to be carried on-board the aircraft: CofA, CofR, Noise Certificate, Weight and Balance Reports, and Radio Station Licence and Approval*

Requirements for continuing airworthiness (LAME Knowledge)

- *Understanding of the concept that continuing airworthiness is the process of ensuring that at any time in its operating life, the aircraft should comply with airworthiness requirements and should be in a condition for safe operation*
- *Renewal or continued validity of the CofA."*

This is some of the training that is needed for the licence – e.g. understanding the applicable design standards for an aeroplane or helicopter is crucial to certifying as airworthy.

Australia's obligation under the Convention.

Not only is it Australia's responsibility under the Convention to train competent maintenance personnel but they also need to add to the trade skills of the AME, the knowledge detailed in ICAO guidance material specific to the role the LAME requires.

This should not be "consulted", it is a global training standard that government should adopt and provide:

What should be consulted is not the education training, but the licence ratings.

To certifying as airworthy Part 23, 25, 27 & 29 aircraft is a major privilege of a LAME.

Parts 23/27 are normal category aeroplane/helicopter that could include advanced systems.

Parts 25/29 are transport aeroplane/helicopter with advanced structures and systems.

Licence ratings cover both avionics and mechanical streams based on certification basis.

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3. *Licence ratings "re-explored".*

Maintenance personnel licence ratings are critical to the success and viability of the AME licencing system in every country. What works in one country, may not work in another.

We have witnessed that with the adoption of the 20 year old EASA Part 66 system that has been amended a number of times to enable it to work in Europe, which is highly populated per area compared to Australia. CASA hasn't adopted the changes.

The EU covers an area over 4 million square kms and has 447.7 million inhabitants.
112 inhabitants/Km^2.

Australia covers an area over 7.6 million square kms and has 25.69 million inhabitants.
0.003 inhabitants/Km^2.

Adoption of the EASA Part 66 AME licence ratings obviously does not work because it is hard to obtain the experience in a sparsely populated country like Australia.

British statesman Winston Churchill wrote:
"Those that fail to learn from history are doomed to repeat it."

The past Department of Civil Aviation addressed this issue back in the 1980s when they expanded the original narrow Group rating system, like EASA B licencing ratings, to add the CAR31 group ratings based on those that had passed their basic examinations were finding it hard to obtain all the experience necessary to obtain the wider rating – not all the groups were implemented at one time. Groups 19 were added after they expanded the groups.

This was all done based on recognising an AME's experience to obtain a licence rating.

The "groups" were introduced so experience within the group could be obtained. A rating could be obtained for the kinds of aircraft being maintained and serviced.

This was a progressive licence; as experience was obtained within another group, that rating could be added to the licence. It also enabled cross stream ratings to be obtained. E.g. mechanical stream adding basic electrical and instrument group ratings or the avionic stream adding mechanical group ratings.

CASA today, is in the same situation that DCA was in before they created the AME group ratings that actually worked in Australia.

Underpinning Group Rating Education

Education training is, and should not be, associated with licence group ratings. The Education Department should be responsible for education of trade training qualifications should be a progressive trade qualification system.

Set up properly, it would provide all the practical skills to work in this industry at an AQF level 3. This is the basic trade level. Training pathways should enable a basic trades person to add training package electives to specialise in either avionics, aeroplane, helicopter, component (e.g. engine/avionic overhaul) or other specialised systems like NDT, welding, plating, etc. This is the AQF level 4.

Aeroplane and helicopter pathways also need to be progressive depending if you are working in the transport category or non-transport category area. A tradesperson at this level should be able to add electives depending on job requirements.

For example, pressurisation, aeroplane structures, RVSM and some other subjects are not applicable to helicopter maintenance, nor are they applicable to many kinds of aeroplanes.

The structures of non-pressurised aeroplanes are different from pressurised aeroplanes. The difference between pressurised aeroplane basic structures and fail-safe structures is also very different. Inspection programs associated with these different structures are also different.

The difference between basic avionics to fly VFR is very different to avionics for flying IFR. The difference in navigational equipment also supports group ratings for avionics. Re CAR31.

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