



01st February 2023

Ms Pip Spence
CEO/DAS – Civil Aviation Safety Authority
Via email: pip.spence@casa.gov.au

Cc Mr Patrick Murray, Chair ASAP.
Patrick.Murray@aviationaustralia.aero

Dear Pip

Part 66 modular licensing framework for aircraft maintenance engineers (DP 2218MS)

The RAAA welcomes the opportunity to make a submission for the above Discussion Paper (DP) and I include a copy of our submission following this letter, that we have sent through the consultation hub today. I wanted to keep you abreast of our submission as the RAAA is very keen to see this work continued with priority as I believe you do.

As you know in our paper, “LAME Shortages – Crisis and Opportunities”, our proposal for utilising ‘exclusions’ on licences was an efficient way to circumvent some of the overreach that Part 66 has enforced on LAME licencing. The ‘exclusion’ system already exists for pre-Part 66 licence holders transitioning to Part 66 and we believe to extend the ability to have ‘exclusions’ on all licences can be achieved with minor change to the Part 66 Manual of Standards (MOS). There are many benefits with this system, not only for new apprentices but also to foreign licence holders wanting to come and work in Australia, as well as ex-Defence and returning CAR31 LAMEs to our supply chain.

Essentially, the consultation suggestions are in two parts and will be rolled out in two stages, one short term, one long term:

- Stage 1 – Existing exclusions to be used to expedite a licence outcome.
- Stage 2 – A positive description licence that provides modular outcomes to be introduced, replacing the exclusion system from Stage 1.

I would like to provide some comments on the proposals:

1. Permitting the Issuance of an Aircraft Engineer Licence with Exclusions (Stage 1)

Permitting a licence to be issued with exclusions would enable a tailor-made career pathway with flexibility. As an example, if a LAME does not intend to work on complex aircraft and only work on small helicopters or basic fixed wing aircraft, they do not need pressurisation (E16) E13 (hydraulics), E14 (vapour cycle air conditioning), E15 (air conditioning) E16 (pressurisation), E41 (oxygen) and E42 (landing gear retraction systems). Issuing an Aircraft Engineer Licence with exclusions achieves a similar outcome to a modular licence in that a licence that is not a ‘full licence’ however can be implemented with little change to the Part 66 Manual of Standards and therefore expediently.



2. Modular Licencing with Subsets (Stage 2)

The 'modular licence with subsets' concept is reminiscent of our previous CAR31 licence whereby we could breakdown the licencing system into five (5) categories, namely airframe and engine (now grouped as B1) and electrical, instrument and radio (now grouped as B2). To achieve this, legislative change is required which from experience will take time and will be resource intensive.

In summary, the RAAA supports the proposal to utilise "exclusions" on LAME licences to the full extent as outlined in our response. We are concerned of the number of items that have been left off the list for exclusions which we believe will limit the effectiveness of these changes, especially for the General Aviation sector. The RAAA believes that Stage 2 is unnecessary and could lead to further confusion with new terminology and will also tie up valuable resources just so that there is a more "positive" language being used.

In its current form the RAAA could not support this watered-down list of exclusions as it will not have the impact in the short term which is desperately needed. It is our preference that CASA completes Stage 1 with a broader list of exclusions available and holds off on Stage 2 so that further urgent reform can be completed in other areas of Part 66. Once this work is done, CASA could revisit Stage 2 at a later date when they will be in a better position to gauge the need for any further work, which we do not believe will be required.

This DP was highly complex and at times repetitive, but we have done our best to highlight our position as best as possible. Both Sheridan Austin and I would welcome any opportunity to brief yourself and your team on our position and look forward to working collaboratively with CASA on these vital reforms.

Best regards,

Steven Campbell

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Policy Option 1 – Proposed modular structure

CASA Proposed policy

Part 66 of the Civil Aviation Safety Regulations 1998 (CASR) licences will be available in modular form.

Please provide any comments you may have on the proposed policy for the modular licences.

Our Response:

The RAAA believe that introducing a ‘modular licence’ would not be necessary if we permitted Aircraft Engineer Licences to be issued with exclusions as suggested in the in the RAAA Paper ‘LAME Shortages – Crisis and Opportunity’ dated 14/10/2022.

Doing so aligns with the Part 66 licencing framework that the industry is now relatively familiar with and it will reduce the significant implementation, resource and training burden to CASA.

If the modular licence is introduced, we strongly suggest that this licence is referred to this as an ‘Aircraft Engineer Licence with exclusions’ as opposed to ‘modular licence’.

The reasoning behind this is because the target audience (mostly aircraft engineers) are only just now (after 12 years) accepting and understanding the terminology introduced by CASR Part 66. Most still do not understand the terminology and we are concerned that introducing new wording may cause additional confusion, which would potentially undermine Part 66.

CASA Proposed policy

Proposed structure of Part 66 of CASR subsets.

Please provide any comments you may have on the proposed structure for the subsets.

Our Response:

The RAAA believe that introducing ‘subsets’ would not be necessary if we simply allowed Aircraft Engineer Licences to be issued with exclusions - refer to the recommendation made in RAAA Paper ‘LAME Shortages – Crisis and Opportunity’ dated 14/10/2022.

This is aligned with a framework that the industry is already familiar with, and it will reduce the significant implementation, resource and training burden to CASA.

If the subset licence is introduced, we strongly suggest that we refer to this as an ‘Aircraft Engineer Licence with exclusions’ as opposed to ‘a modular licence with subsets’ as the concept is reminiscent of our previous CAR31 licence whereby we could breakdown the licencing system into five (5) categories, namely airframe and engine (now grouped as B1) and electrical, instrument and radio (now grouped as B2).

The reasoning behind this suggestion is that the target audience (mostly aircraft engineers) will find that this is a return to the ‘CAR 31’ framework, which could undermine Part 66 licencing.



CASA Proposed policy

Proposed examinations to be specific to each subset.

Please provide any comments you may have on the proposal for examinations to be specific to each subset.

Our Response:

If we do introduce subsets, we will have to introduce exams commensurately.

Please Note

We do have concerns about examinations in general and, in-line with RAAA Paper 'LAME Shortages – Crisis and Opportunity' dated 14/10/2022, we urge CASA to interpret CASR Part 66 to permit modules to be broken into 'subjects' at the discretion of the Part 147's (breakdown as approved by CASA if necessary) that will permit 'subject' examinations to be conducted as student's progress through the module in lieu of being conducted after the entire module.

This is much the same way as there was for the CASA basic examinations under CAR31 for each of the categories (airframe, engine, electrical, instrument and radio), for example engine core under CAR31 Basic Exams GG (gas turbine engine theory and construction) and GH (gas turbine engine systems) would have been undertaken separately.

An example under Part 66 is Module 12 (helicopter aerodynamics, structures and systems) which has eight subjects. Conceivably it could take approximately two years for each of the subjects in the Module to be delivered during an apprenticeship. Therefore, the apprentice/self-studier is required to retain this technical information for an extended period which is an unreasonable expectation.

Permitting post-subject exams would reduce the rate of failure without the risk of diluting the required theoretical knowledge.

CASA Proposed policy

Proposal is for subsets to be initially available via the self-study training and examination pathway.

Please provide any comments you may have on the proposal for subsets to be initially available via the self-study pathway and mapping for the NVET system.

Our Response:

We believe that this concept is quite complex, particularly around the alignment of the units of competency required for each subset.

CASR Part 66 MOS (Manual of Standards) Appendix IV (units of competency required for a category or subcategory of licence) would need to be clearly defined for each of the subsets.

Additionally, Appendix IV and Appendix VIII (units of competency required for removal of an exclusion from a category or sub-category of a licence) of the Part 66 MOS must be aligned so that the Units of Competency



that make up a licence (Appendix IV) are also the same as the Units of Competency that are defined for individual exclusions (Appendix VIII).

This will enable the Part 147 MTO to build a pathway utilising the current Australian Qualification Framework (AQF) for a qualification that will allow individuals to access federal and state funding under an apprenticeship.

CASA Proposed policy

Proposal to use exclusions framework to allow accelerated implementation.

Please provide any comments you may have on the proposal to use exclusions framework to allow accelerated implementation.

Our Response:

As recommended in the RAAA Paper 'LAME Shortages – Crisis and Opportunity' dated 14/10/2022, we fully support the option to issue an Aircraft Engineer Licence with exclusions however, we fervently believe that we should not limit the 'exclusions' that can be excluded. If we do limit the exclusions to those recommended in Discussion Paper Table 2 (Exclusion That Would Apply to B1 Subsets), we believe that the intention of allowing an Aircraft Engineer Licence with exclusions would be diluted and, in some cases, not value adding.

The current proposed exclusions do not allow for E13 (hydraulics), E14 (vapour cycle air conditioning), E15 (air conditioning) E16 (pressurisation), E41 (oxygen) and E42 (landing gear retraction systems). Not allowing these exclusions would not benefit the "general aviation sector", which is where many of the major airline LAMEs originate.

Permitting a licence to be issued with all exclusions would enable a tailor-made career pathway with flexibility. As an example, if a LAME does not intend to work on complex aircraft and only work on small helicopters or basic fixed wing aircraft, they do not need the above-mentioned capabilities. If they choose to work on a more complex aircraft later in their career, they will study to have that exclusion removed.

Policy option 2 – Examination requirements tailored to each module

CASA Proposed policy

Proposed B1 knowledge requirements

Table 3 sets out the proposed knowledge module requirements applicable to each B1 subset.

Please provide any comments you may have on the proposed B1 subset knowledge requirements.

Our Response:

We believe that Discussion Paper Table 3 (Proposed B1 Subset Knowledge Requirements) would work in reality.

We do however suggest that because Physics (Module 2) and electrical fundamentals (Module 3) provide unpinning knowledge for the core subjects, that they are made as core subjects.

Additionally, whilst it is acknowledged that not everyone is content with having to gain 'B2 knowledge', the main point is that all categories of aircraft are continuing to develop into more complex systems with greater electro-mechanical integration and evolving technologies such as will come with Advanced Air Mobility (AAM). As such the core function of a mechanical aircraft maintenance engineer is also changing.

Therefore, we believe that it there is more benefit to be had by teaching these modules.

CASA Proposed policy

Proposed B2 EIR knowledge modules

Table 6 sets out the proposed knowledge module requirements applicable to each B2 subset.

Please provide any comments you may have on the proposed B2 EIR knowledge modules.

Our Response:

We support in principle the ability to apply the exclusions against subsets as defined at Table 5 (Proposed B2 Subsets).

The question arises on the benefits to an organisation with limited resources of a B2 that is unable to release to service work across all subsets on an aircraft.

A B2 Aircraft Engineer Licence under the current Part 66 licencing system with the ability to apply E27 Excluding autopilots and E28 Excluding Multi Axis autopilots would appear more practical.

Policy option 3 – Experience requirements tailored to each subset

CASA Proposed policy

Proposed B1 experience requirements

Table 4 sets out the proposed experience requirements.

B2 experience requirements will be based on the self-study basic experience logbook - these requirements are to be developed as part of the next stage of the proposed project.

When the manufacturing and engineering assessment competency units are available, the experience components of the competency units will be accepted.

Please provide any comments you may have on the proposed B1 experience requirements.

Our Response:

Table 4 of the Discussion Paper (Proposed B1 Subset Experience Requirements) is very detailed and we believe could work in practice.

Experience Requirements

We support this in principle, noting that there is a quite a reduction in the experience requirements from current requirements.

Anyone working for a Part 145 AMO would still need to be deemed competent by their Quality Manager however those working in a CAR30 organisation would be able to exercise the privileges of their licence without this additional quality measure.

It is unclear in Table 4 of the Discussion Paper (Proposed B1 Subset Experience Requirements) what experience is required if someone is undertaking more than one subset concurrently?

Associated Trade

We do support the recognition of an 'associated trade' however further clarification around this concept is required to make meaningful feedback.

Policy option 4 – Initially available via self-study pathway provisions

CASA Proposed policy

Self-study training and examination pathway

The self-study training and examination pathway is framed around the existing knowledge modules and is naturally aligned with the proposed modular approach. Some minor administrative adjustments would be required to accommodate the proposed modular approach.

Part 147 of the Civil Aviation Safety Regulations 1998 (CASR) self-study pathway uses the units of competency developed in the National Vocational Education and Training system.

The National Vocational Education and Training (NVET) Aeroskills training standards would need to be mapped to provide modular licences via the manufacturing and engineering assessment units of competency structure.

It is understood that some work has been done in this area by some MTOs. This would need to be formalised to provide the proposed modular licence outcomes. We envisage Part 147 of CASR MTOs developing mappings that would be supported by acceptable means of compliance/guidance material.

Associated trades would continue to be an option that would provide earlier licensing outcomes, similar to section 66.A.30 of the Part 66 Manual of Standards ('skilled worker in a technical trade').

Please provide any comments you may have on the proposed self-study pathway and mapping by MTOs for the NVET system.

Our Response:

We agree that if we do introduce these changes, mapping will need to be completed.

Policy option 5 – Initial introduction via existing Part 66 exclusions

CASA Proposed policy

Exclusions to be used in the short term

Some legislative amendments would be required to achieve the intended outcomes:

Stage 1 implementation using exclusions would require some minor amendments of the Part 66 Manual of Standards to enable licences to be issued subject to exclusions.

exclusions can be used to facilitate sensible variations; particularly where practical experience can't be gained - for example, B1 pressurisation or B2 multi generator systems

exclusions could be used to provide for greater flexibility when assessing foreign licences for Australian acceptance.

Please provide any comments you may have on the use of exclusions.

Our Response:

As previously stated in other responses, we fervently believe that we should not limit the 'exclusions' that can be excluded as proposed by CASA. If we do limit the exclusions to those recommended in Discussion Paper Table 2 (Exclusion That Would Apply to B1 Subsets), we believe that the intention of allowing an Aircraft Engineer Licence with exclusions would be diluted and, in some cases, not value adding.

The current proposed exclusions do not allow for E13 (hydraulics), E14 (vapour cycle air conditioning), E15 (air conditioning) E16 (pressurisation), E41 (oxygen) and E42 (landing gear retraction systems). Not allowing these exclusions would not benefit the "general aviation sector", which is where many of the major airline LAMEs originate.

Permitting a licence to be issued with all exclusions would enable a tailor-made career pathway with flexibility. As an example, if a LAME does not intend to work on complex aircraft and only work on small helicopters or basic fixed wing aircraft, they do not need to the above-mentioned capabilities. If they choose to work on a more complex aircraft later in their career, they will study to have that exclusion removed.

If done correctly (Stage 1), it is our position that Stage 2 would not be required and would free up valuable resources to work on further Part 66 reform.