



# ACCEPTABLE MEANS OF COMPLIANCE AND GUIDANCE MATERIAL

The background of the cover features a navigation chart with various markings and a scale of 1:1,000,000. Overlaid on the right side is a photograph of hands writing on a document. The design is accented with large orange and blue geometric shapes.

## Continuing Airworthiness - Aircraft Engineer Licences and Ratings

Part 66 of CASR

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<b>Date</b>	October 2021
<b>File ref</b>	D21/287726

*An Acceptable Means of Compliance (AMC) explains how one or more requirements of the Civil Aviation Safety Regulations 1998 (CASR) for the issue of a certificate, licence, approval or other authorisation, can be met by an individual or organisation applying to Civil Aviation Safety Authority (CASA) for the authorisation.*

*Applicants are not required to comply with an AMC but if they do, CASA will issue the authorisation to which the AMC relates.*

*Individuals and operators may, on their own initiative, propose other ways of meeting the requirements of the CASR; however, any such proposal will be subject to separate assessment by CASA to determine whether the authorisation can be issued.*

*Guidance Material (GM) provides explanations and amplification of a CASR's policy intention, rather than a means of complying with it. GM should be read in conjunction with the applicable CASR and AMCs. GM is identified by grey shaded text.*

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## Status

This version of the AMC and GM is approved by the Branch Manager, Airworthiness and Engineering.

**Note:** Changes made in the current version are annotated with change bars.

Version	Date	Details
v7.1	October 2021	<p>Addition of the following two new AMC to regulation 66.025 of CASR, applicable to licence applicants who elect to use the self-study training pathway:</p> <ul style="list-style-type: none"> <li>• AMC 2 66.025 (3) (b) – Grant of Licence <ul style="list-style-type: none"> <li>○ how to demonstrate compliance with English language proficiency requirements.</li> </ul> </li> <li>• AMC 66.025 (3) (c) – Grant of Licence <ul style="list-style-type: none"> <li>○ how to demonstrate compliance with understanding a licensed aircraft maintenance engineer's role, in airworthiness management requirement.</li> </ul> </li> </ul> <p>Addition of the following new GM to section 66.A.30 of the Part 66 Manual of Standards (MOS):</p> <ul style="list-style-type: none"> <li>• GM 66.A.30 (a) – Basic practical experience requirements <ul style="list-style-type: none"> <li>○ Information about what training CASA will accept from a licence applicant as being "<i>relevant training as a skilled worker in a technical trade</i>".</li> </ul> </li> </ul> <p>Minor editorial amendments to the following:</p> <ul style="list-style-type: none"> <li>• AMC 66.A.25 (e)</li> <li>• AMC 66.A.30 (a), and</li> <li>• AMC 66.A.30 (eb).</li> </ul>
v7.0	July 2021	<p>Addition of AMC to the following sections of the 66 MOS, that provides clarity to licence applicants (including applicants who will utilise the Part 66 self-study training pathway), on the meaning of specific terminology used in the provisions relevant to applications:</p> <ul style="list-style-type: none"> <li>• AMC 66.A.25 (e) – Basic knowledge and competency requirements <ul style="list-style-type: none"> <li>○ Information about CASA recognised (EASA compliant) Part 66 textbooks.</li> </ul> </li> <li>• AMC 66.A.30 (a) – Basic practical experience requirements <ul style="list-style-type: none"> <li>○ For category A, B1 and B2 licence applicants – information about what CASA considers is '<i>relevant technical training</i>'.</li> <li>○ For category A, B1 and B2 licence applicants – information about what CASA considers is '<i>relevant training</i>' as a skilled worker in a technical trade.</li> <li>○ For category C licence applicants – information about what CASA considers is '<i>a representative selection of tasks</i>'.</li> </ul> </li> <li>• AMC 66.A.30 (c) – Basic practical experience requirements <ul style="list-style-type: none"> <li>○ For applications to add a category or subcategory to an existing licence – information about what CASA considers is '<i>a representative cross-section of maintenance tasks</i>'.</li> </ul> </li> <li>• AMC 66.A.30 (e) – Basic practical experience requirements <ul style="list-style-type: none"> <li>○ For applications for a licence – information about what CASA considers is '<i>recent experience</i>'.</li> </ul> </li> <li>• AMC 66.A.30 (ea) – Basic practical experience requirements <ul style="list-style-type: none"> <li>○ For applications to add a category or subcategory to an existing</li> </ul> </li> </ul>

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Version	Date	Details
		licence – information about what CASA considers is 'recent experience'.
v6.4	Jun 2017	<p>Appendix II – Practical element of type training:</p> <ul style="list-style-type: none"> <li>• Clarify the percentage requirement of OJT tasks when removing exclusions from an aircraft type rating.</li> </ul>
v6.3	Nov 2016	<ul style="list-style-type: none"> <li>• Amendment to AMC 2 for CASR 66.120 (2) – Requirement for recent qualification or experience</li> <li>• MOS GM 66.A.20 (a) – Privileges for category B1 – removal of some inaccurate information previously provided for updating/transferring of software data</li> <li>• MOS GM 66.A.20 (a) – Privileges, addition of some 'core licence' privileges for the category B1 licence in-line with recent Part 66 MOS amendment</li> <li>• Addition of guidance under MOS GM 66.A.23 – Requalification requirements to assist individuals in meeting the currency/requalification requirements of their LAME licence.</li> </ul>
v6.2	Feb 2016	<ul style="list-style-type: none"> <li>• AMC CASR 66.025 – Grant of a Licence – clarify the minimum testing score requirement for the Test of English for International Communication Secure Program (TOEIC Secure Program/Public Testing Centre) "Reading test"; one of the tests used to measure the everyday English skills of people working in an international environment.</li> <li>• MOS GM 66.A.20 (a) – Privileges – provide an explanation of core licence privileges for both the B1 and B2 licence, a term sometimes used when describing LAME licence privileges.</li> <li>• MOS GM 66.A.45 (c) – Type/task training and ratings – amend information in-line with recent Part 66 MOS amendment.</li> </ul>
v6.1	Aug 2015	<ul style="list-style-type: none"> <li>• MOS GM 66.A.20 (a) – Privileges for category B1 – amend the Note and information in the paragraph that details "exclusions applied to a category B1 licence and/or type rating and their applicability to category A tasks", to clarify a category A licence is a separate endorsement on a licence and not a separate licence document.</li> <li>• Appendix II – Practical element of type training: <ul style="list-style-type: none"> <li>○ Information on gaining a "first unrestricted type rating".</li> <li>○ Addition of Attachment 1 to Appendix II containing Tables outlining the SOE hours requirements (applicable to AMC4 - CASA assessment of SOE) for a category B1 licence holder for removal of E1, E4 &amp; E5 exclusions from an aircraft type rating and/or B1.1 licence.</li> </ul> </li> </ul>
v6.0	Jun 2015	<ul style="list-style-type: none"> <li>• MOS GM 66.A.20 (a) – Privileges for category B1 – additional guidance provided for updating/transferring of software data and specialist test equipment.</li> </ul> <p>Appendix II – Practical element of type training</p> <ul style="list-style-type: none"> <li>• Addition of guidance material (GM) to assist industry in setting up an approved OJT program.</li> <li>• Changes to the percentage requirements for OJT tasks within a Part 145 AMO's/Part 147 MTO's OJT journal. OJT tasks need to be completed by an applicant seeking an initial or additional aircraft type rating or for removal of exclusions from an aircraft type rating. OJT tasks are designated as being mandatory or additional. MPL review of the licence applications that include OJT tasks has confirmed that the</li> </ul>

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		<p>'practical element' requirements of aircraft type rating training will be better served by these OJT settings. The changes are:</p> <ul style="list-style-type: none"> <li>• For gaining a first type rating – either B1 or B2 <ul style="list-style-type: none"> <li>○ if PCT is utilised – increase from 10% to 25% of the additional tasks in OJT journal</li> <li>○ if POC is utilised – decrease from 33% to 25% of the additional tasks in OJT journal</li> <li>○ if OJT alone is utilised – clarification that 100% of mandatory tasks are required plus 25% of the additional tasks in OJT journal.</li> </ul> </li> <li>• For gaining a second type rating in category already held <ul style="list-style-type: none"> <li>○ if OJT alone is utilised – clarification that 100% of OJT journal mandatory tasks are required.</li> </ul> </li> <li>• For gaining a first type rating but in alternate category <ul style="list-style-type: none"> <li>○ practical experience requirement met if PCT is utilised if the rating sought is held in the existing category</li> <li>○ if POC is utilised – decrease from 33% to 25% of the additional tasks in OJT journal.</li> <li>○ If OJT alone is utilised – increase from 50% of mandatory tasks to 100%, plus 25% of the additional tasks in OJT journal.</li> </ul> </li> </ul> <p><b>Note:</b> OJT tasks can be accomplished within existing service familiarisations requirements for PCT.</p>
v5.2	Nov 2014	MOS GM 66.A.21 – Transitional privileges – clarification of avionics system privileges for B1 category licence holders.
v5.1	Oct 2014	Addition of guidance about appropriate levels of supervision for the varying levels of knowledge, experience and skill those personnel being supervised will have.
v5.0	Jul 2014	<ul style="list-style-type: none"> <li>• Provide introductory text for 66.120 (2) – Requirement for recent qualification or experience.</li> <li>• Addition of AMC 2 for CASR 66.120 (2) – Requirement for recent qualification or experience.</li> <li>• Addition of AMC 3 for CASR 66.120 (2) – Requirement for recent qualification or experience.</li> <li>• MOS GM 66.A.20 (a) – Privileges for category B1 – replacement of the definition of avionics line replaceable unit (LRU) with a reference to its definition under paragraph 66.5 (b) of the Part 66 Manual of Standards.</li> <li>• MOS GM 66.A.20 (a) – Privileges for category B1 – clarification that use of data loaders for updating/transferring software data (whether portable or on board) is treated as an avionics LRU.</li> <li>• MOS GM 66.A.20 (a) – Privileges for category B1 – guidance on what is regarded as specialised test equipment.</li> <li>• MOS GM 66.A.20 (a) – Privileges for category B1 – guidance on exclusions applied to a category B1 licence and/or type rating and their applicability to the list of category A licence tasks the B1 can do on type.</li> <li>• MOS GM 66.A.21 – Transitional Privileges – transitional privileges remain in place but are now found in Table 2.</li> <li>• MOS AMC 2 66.A.23 – Requalification requirements – list of methods as acceptable AMC for carrying out maintenance for 100 days for LAMEs seeking requalification of their LAME licence.</li> <li>• MOS GM 66.A.45 (c) – Type/task training and ratings – guidance for B2 LAMEs seeking an avionics rating for an aircraft type that is similar to the aircraft type for which they already hold an avionics rating.</li> </ul>

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		<ul style="list-style-type: none"> <li>• MOS GM 66.A.45 (i) – Type/task training and ratings – guidance for LAMEs seeking their first aircraft type rating in an alternate licence category/subcategory.</li> </ul>
v4.0	Jul 2013	<ul style="list-style-type: none"> <li>• Removal of acronyms from the acronym list relevant to the ‘practical on-course task list’ and the ‘aircraft type practical experience and OJT list of tasks’ information previously contained in Appendix II and now transferred into AC 66-07.</li> <li>• GM CASR 66.025 – Grant of licence - guidance about medically significant conditions considered to be safety relevant to consider on a licence application.</li> <li>• GM CASR 66.120 (2) - Requirement for recent qualification or experience; information to Licensed Aircraft Maintenance Engineers (LAMEs) for recording of evidence of their recent work experience.</li> <li>• Addition of a paragraph at MOS 66.A.20 – Privileges; explaining CASA’s LAME licence conversion methodology.</li> <li>• B1 avionics privileges clarification.</li> <li>• Further clarification of ‘defect rectification’ requiring the use of test equipment.</li> <li>• MOS AMC 66.A.20 (a) – Privileges – clarification that replacement of an avionics LRU includes replacement of wire looms between components within the system.</li> <li>• Further clarification of a ‘simple test’.</li> <li>• MOS AMC 66.A.20 (a) – Privileges – guidance on diesel engine privilege for category B1.2 and B1.4 licence holders.</li> <li>• MOS AMC 66.A.20 (a) – Privileges – guidance for B2 licence practical experience requirement for category A tasks.</li> <li>• MOS AMC 1 for 66.A.23 – Requalification requirement – (Part 147 MTO Report).</li> <li>• Amendment to headings for MOS AMC 66.A.30 and MOS GM 66.A.30 to reflect the amendment made to that heading for section 66.A.30 in the Part 66 MOS.</li> <li>• MOS GM 66.A.30 (c) – Practical maintenance experience – guidance on the use of simulated maintenance for gaining practical maintenance experience.</li> <li>• MOS GM 66.A.50 &amp; 66.A.55 – guidance to location of POC &amp; OJT information.</li> <li>• Addition in the policy at Appendix II for first type rating and second rating in alternate category, mention of the requirement for mandatory tasks from POC and OJT task lists if OJT alone is to be utilised.</li> <li>• Appendix II; Details of the elements of POC and OJT for aircraft type rating training with reference to AC 66-07 for additional information.</li> <li>• Addition of AMC 4 at Appendix II for the Practical element of type training - CASA assessment of SOE.</li> <li>• Removal of the ‘practical on-course task list’ and the ‘aircraft type practical experience and OJT list of tasks’ information contained in Appendix II for transfer into AC 66-07.</li> </ul>
v3.0	Aug 2012	<ul style="list-style-type: none"> <li>• Inclusion of information about the B2 having category A privileges.</li> <li>• More detail about the use of OJT journals.</li> <li>• Guidance about licence privilege/scope conversion.</li> <li>• Guidance about electrical subsystems.</li> <li>• Guidance about composite indicators.</li> <li>• Extra guidance about avionic Line Replaceable Units – particularly software loading by B1 licence holders.</li> </ul>

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Version	Date	Details
		<ul style="list-style-type: none"> <li>• Cross-referencing corrections.</li> </ul>
v2.1	Apr 2012	<ul style="list-style-type: none"> <li>• MOS GM 66.A.20 Table 1 - guidance and clarification on who is more appropriate to provide the maintenance certification for the maintenance of an electrical subsystem of a mechanical system.</li> <li>• Outline the similar structure for maintenance certification privileges for an electrical subsystem of a mechanical system under the old regulation 31 of the <i>Civil Aviation Regulations 1988 (CAR)</i>.</li> <li>• Highlight the transitional privileges of MOS 66.A.20 Table 1 for previous holders of CAR 31 airframe and engine category licences, (and those who qualify for such licences under the transition regulations).</li> </ul>
v2.0	Feb 2012	<ul style="list-style-type: none"> <li>• PCT, Practical on course and OJT information updated with CASA practical experience reduction policy.</li> <li>• MOS GM 66.A.20 (a) – Privileges - provision of CASA policy in regard to the external test equipment that may be utilised during a Simple Test of an Avionic LRU.</li> </ul>
v1.2	Dec 2011	<ul style="list-style-type: none"> <li>• Page 16 incorrectly stated that the <i>Civil Aviation Safety Regulations 1998 (CASR)</i> 42 definitions provided a definition of supervision. The guidance was corrected to state that supervision is actually defined in Clause 30 of Part 3 of the CASR dictionary.</li> <li>• The OJT task list was reordered so that task areas did not fall across pages.</li> </ul>
v1.1	Nov 2011	<ul style="list-style-type: none"> <li>• Duplicated entry for Information Systems page 14/15 removed.</li> <li>• Reference to ticked items in table changed to checked (on page 13).</li> <li>• MOS GM 66.A.45 (d), (e) and (f) – additional guidance re rating training for alternate avionics fits.</li> </ul>
v1.0	Oct 2011	MOS GM 66.A.20 (a) – Privileges – more guidance on avionics LRU provided.



# 1 Reference material

## 1.1 Acronyms

The acronyms and abbreviations used in this AMC and GM are listed in the table below.

<b>Acronym</b>	<b>Description</b>
ALI	Airworthiness Limitations Items
AMC	Acceptable Means of Compliance
AME	Aircraft Maintenance Engineer
ATA	Air Transport Association
BITE	Built In Test Equipment
CAO	Civil Aviation Order
CAR	<i>Civil Aviation Regulations 1988</i>
CASA	Civil Aviation Safety Authority
CASR	<i>Civil Aviation Safety Regulations 1998</i>
CBT	Computer Based Training
CDCCL	Critical Design Configuration Control Limitations
CFR	Code of Federal Regulation (of the USA)
CRS	Certificate of Release to Service
EASA	European Aviation Safety Agency
FAA	Federal Aviation Administration (of the USA)
FAR	Federal Aviation Regulation (of the USA)
FH	Flight Hours
FRS	Flammability Reduction Systems
FTS	Fuel Tank System
GM	Guidance Material
JAA	Joint Aviation Authorities (European equivalent of FAA)
LAME	Licensed Aircraft Maintenance Engineer
LRU	Line Replaceable Unit (avionic)
MEL	Minimum Equipment List
MLG	Main Landing Gear
MOS	Manual of Standards
MTO	Maintenance Training Organisation
OJT	On-the-job Training

Acronym	Description
PCT	Practical Consolidation Training
POC	Practical on Course
PW	Pratt & Whitney
SB	Service Bulletin
SFARs	Special Federal Aviation Regulations (of the USA)
SOE	Schedule of Experience
STC	Supplementary Type Certificate
TOEFL iBT	Test of English as a Foreign Language Internet Based Test
TOEFL PB	Test of English as a Foreign Language Paper Based
TOEIC	Test of English for International Communication

## 1.2 References

### Regulations

Regulations and other legislation are available on the Federal Register of Legislation website  
<https://www.legislation.gov.au/>

Civil Aviation Orders are available on the CASA website <https://www.casa.gov.au/rules-and-regulations/landing-page/current-rules>

Document	Title
Civil Aviation Regulations	Civil Aviation Regulations 1988 (CAR)
Civil Aviation Safety Regulations	Civil Aviation Safety Regulations 1998 (CASR)
Civil Aviation Order (CAO 100.90)	Administration and procedure — aircraft maintenance engineer licences — general requirements
Part 66 of CASR	Continuing airworthiness—aircraft engineer licences and ratings
Part 66 MOS	Part 66 Manual of Standards
Part 145 of CASR	Continuing airworthiness — Part 145 approved maintenance organisations
Part 145 MOS	Part 145 Manual of Standards

**Advisory material**

CASA's advisory circulars are available at <http://www.casa.gov.au/AC>

CASA's Civil Aviation Advisory Publications are available at <http://www.casa.gov.au/CAAP>

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<b>Document</b>	<b>Title</b>
AC 66-07	Practical training options for aircraft type training and recording of recent work experience
AC 66-08	Part 66 aircraft engineer licences – privileges

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## 2 Dictionary Part 3 Definitions for Parts 42, 66, 145 and 147 and their transitionals

Clause 30 of Part 3 of the Civil Aviation Safety Regulations 1998 (CASR) Dictionary provides the meaning of supervising:

*A person (the supervisor) is supervising the carrying out of maintenance done by another person if the supervisor:*

*(a) is physically present at the place that the maintenance is being carried out; and*

*(b) is observing the maintenance being carried out to the extent necessary to enable the supervisor to form an opinion as to whether the maintenance is being carried out properly; and*

*(c) is available to give advice to, and answer questions about the maintenance from, the person carrying it out.*

### **GM on meaning of supervision**

The meaning of supervision of maintenance has 3 components, relating to: physical presence where the maintenance is being carried out; observation of the actual maintenance; and availability to give advice to the person carrying out the maintenance.

Physical presence where the maintenance is being carried out means the supervisor must be present in the same geographical place/location as where the work is being done. This does not mean the supervisor necessarily needs to be in the same specific work area. The supervisor could, for example, be in another work area of the maintenance facility, or in another facility or hangar on the same aerodrome. The supervisor must be available to give advice to the person carrying out the maintenance.

Actual physical observation of the maintenance by the supervisor is required “to the extent necessary to enable the supervisor to form an opinion as to whether the maintenance is being carried out properly”. This means that the level of observation, and the resulting opportunity for the supervisor to intervene, is variable and can take into account the current competence, knowledge, skill sets and maturity of the aircraft maintainer being supervised.

An apprentice/new AME will necessarily work under direct/close supervision and the supervisor would be expected to attentively watch the work being performed. The supervisor would be expected to make sure the apprentice is aware of and is conducting themselves such that they are safe from hazards, undertaking the maintenance correctly, using the correct tools, following the appropriate instructions for continued airworthiness.

As the aircraft maintainer gains experience the Licensed Aircraft Maintenance Engineer (LAME) would only need to intervene in the conduct of maintenance on a more occasional basis and supervision could become more general. The aircraft maintainer working under supervision would have more scope to work without intervention.

As the time in the workplace increases a higher level of technical ability will be enabled via the collective knowledge and experience being applied to the aircraft maintenance requirements. Whilst the level of technical ability will vary between individuals there will come a stage where

the competence of the aircraft maintainer will be such that the supervising LAME will no longer have to intervene to correct the conduct of the maintenance. The aircraft maintainer at this level of competence could carry out the aircraft maintenance without the need to ask questions about how the maintenance is carried out. The broadly supervising LAME would need to check the work at the end of the maintenance task or at a stage of maintenance that will be hidden from observation if that specific task is completed, to ensure the work has been performed correctly and in compliance with the instructions for continued airworthiness.

In all cases the supervisor is still required to be available and present to the extent necessary to ensure the safe performance of the maintenance.

### 3 Part 66 of CASR

#### AMC 1 66.025 (3) (b) – Grant of Licence

An AMC, for the purpose of demonstrating paragraph 66.025 (3) (b) of [CASR](#) English language proficiency requirements, is achievement of the benchmark represented by the following, at and reported by a Part 147 Maintenance Training Organisation (MTO) approved to do so:

International English Language Testing System with an overall grade of six on condition no single test area has a score of less than six on either the academic or general training module:

- Test of English as a Foreign Language Internet Based Test (TOEFL iBT) score of 78;
- Test of English as a Foreign Language Paper Based (TOEFL PB) score of 547; and
- Test of English for International Communication Secure Program (TOEIC Secure Program/Public Testing Centre) score of Listening 350; Reading 330; Speaking 160 and Writing 160.

#### AMC 2 66.025 (3) (b) – Grant of Licence

For a licence applicant who elects to use the Part 66 self-study training pathway, an AMC for the purpose of demonstrating paragraph 66.025 (3) (b) of [CASR](#) — English language proficiency sufficient to safely exercise licence privileges, is the successful completion by the applicant of the Part 66 basic knowledge module multi-choice exams (all of which are provided in English), and completion of the essay exam questions (which require answers to be written in English) — relevant to the category or subcategory of licence they wish to obtain.

**Note:** The answer to an essay question is expected to follow a 'report' style that presents a logical progression from introduction to conclusion. The essay will be marked for content and overall presentation. Content will account for 60% of the marks, while the overall presentation will account for the remaining 40%.

- Content – the answer must cover the key points addressed by the question
- Presentation – the answer must demonstrate correct use of English language, and be legible, coherent and logical. The 40 marks comprise 10 marks each on:
  - Legibility, readability, tidiness
  - Clarity, Grammar, Padding, Repetition
  - Style, Essay or report, not listed answer
  - Coherent, Logical answer

#### AMC 66.025 (3) (c) – Grant of Licence

For a licence applicant who elects to use the Part 66 self-study training pathway, an AMC for the purpose of demonstrating paragraph 66.025 (3) (c) of [CASR](#) — understanding a licensed aircraft maintenance engineer's role, in airworthiness management requirement, is the successful completion by the applicant, of the Part 66 basic knowledge *Module 10 — Aviation Legislation* exam, to the level of knowledge applicable to the category or subcategory of licence they wish to obtain.

### **GM 66.025 – Grant of Licence**

An applicant for a maintenance certification licence must be able to read, write and converse in English to a level that CASA is satisfied is sufficient to enable the applicant to safely exercise the privileges of the licence applied for.

The level of knowledge would be such that the licence holder is able to:

- read and understand the instructions and technical manuals in use within the organisation;
- make written technical entries and any maintenance documentation entries, which can be understood by those with whom they are normally required to communicate;
- read and understand the maintenance organisation procedures; and
- communicate at such a level as to prevent any misunderstanding when exercising certification privileges.

### **GM 66.025 – Grant of Licence**

If an applicant for a Part 66 aircraft engineer licence has at the time of application a *medically significant condition* that they consider to be safety-relevant, the applicant must under paragraph 66.020 (2) (e) of the [CASR](#), specify the medical condition to CASA on the approved licence application form.

A *medically significant* condition includes:

- a. any of the following (no matter how minor):
  - i. any illness or injury;
  - ii. any bodily infirmity, defect or incapacity;
  - iii. any mental infirmity, defect or incapacity;
  - iv. any sequela of an illness, injury, infirmity, defect or incapacity mentioned in subparagraph (i), (ii) or (iii); and
- b. any abnormal psychological state; and
- c. drug addiction and drug dependence; and
- d. for a woman — pregnancy and the physiological and psychological consequences of pregnancy or of termination of pregnancy.

Safety-relevant is defined at regulation 67.015 of the [CASR](#) and means: a medically significant condition is safety-relevant if it reduces, or is likely to reduce, the ability of someone who has it to exercise a privilege conferred or to be conferred, or to perform a duty imposed or to be imposed, by a licence that he or she holds or has applied for.

For example: if an applicant for a category B2 avionics licence knowingly suffers from colour blindness and decides that their ability to perform their work may be affected by this condition, they would be obliged to consult with a medical practitioner and declare that condition, together with a report from the medical practitioner that describes the condition, to CASA at the time of licence application.

### **AMC 66.120 (2) – Requirement for recent qualification or experience - introduction**

A licensed aircraft maintenance engineer may perform maintenance certification or issue a certificate of release to service at a particular time only if; in the 2 years immediately before that time; they were granted their licence, or had at least 6 months experience of exercising the privileges mentioned in the Part 66 Manual of Standards (MOS) for the licence, or for a rating endorsed on the licence; or met a requalification requirement for the licence.

For a category A, B1 or B2 licence holder, the performance of either maintenance certifications or issue of certificates of release to service under any of the licences or aircraft type ratings they hold, is exercising the privileges mentioned in the Part 66 MOS. For a category C licence holder the issue of certificates of release to service under any of the licences or aircraft type ratings held, is exercising the privileges mentioned in the Part 66 MOS.

### **AMC 66.120 (2) – Requirement for recent qualification or experience**

An AMC, for the purpose of demonstrating regulation 66.120 of [CASR](#) currency requirements is to be engaged in aircraft maintenance within an approved maintenance organisation for a period of six months, either continuously within the same organisation or split up into different blocks, within the same or in different organisations.

**Note:** If an individual has only partially met the requirements of regulation 66.120 of CASR and has (for example) five months experience in the previous 1 year 11 months, then it is only necessary to make up the remaining portion of the experience requirement.

### **AMC 66.120 (2) – Requirement for recent qualification or experience**

An AMC for the purpose of demonstrating regulation 66.120 of [CASR](#) currency requirements for a shift worker, is to apply a workplace 'norm' of engagement in aircraft maintenance to the total hours actually spent being engaged in aircraft maintenance.

Example: A person in a business day's employment scenario i.e. a Monday to Friday 7.5 – 8 hour working day; would realistically experience 5.5 to 7.5 hours of time engaged in maintenance.

### Minimum hours calculation

Out of the 182.5 days of a six month period it is realistic to expect 100 days being spent in the workplace. Using 5.5 hours per day (as a minimum) over 100 days, the minimum hours engaged in aircraft maintenance in a six month period approximates to 550 hours. The same workplace 'norm' expectation can be used to cover situations where an individual has multiple employees, intermittent contract work or short work shifts.

### Shift pattern examples

The number of days on shift required to satisfy the minimum requirement of 550 hours in any consecutive 24 month period could further be reduced, depending on the duration of the shift pattern worked by an individual.

Below (as a guide, using approximately 70% of hrs per shift engaged in aircraft maintenance) are some examples of common shift patterns and the approximate number of days on shift engaged in aircraft maintenance that would be required by an individual to meet the minimum 550 hours within a 24 month period.



Shift duration	Days on shift
12 hour shift	65 days
11 hour shift	70 days
10 hour shift	75 days

**Note:** The above examples will not be representative of all work situations; an organisation or individual may use other percentages of hrs per shift engaged in aircraft maintenance that reflect their actual work situation.

### 66.120 (2) – Requirement for recent qualification or experience

An AMC for the purpose of demonstrating the regulation 66.120 of [CASR](#) requirement for recent qualification or experience can include business records of evidence of carrying out maintenance of the kind that would be covered by the privileges of any licence held, for not less than a total of 100 days by any of the following examples:

- a record of carrying out aircraft maintenance and signing for completion of that maintenance as an aircraft maintenance engineer (AME); or
- a summary list of aircraft maintenance work carried out as an AME – (not signing as an AME); or
- a SOE record of 100 days of maintenance; or
- a Log of Industrial Experience; or
- a list of aircraft and servicing that was required (business records for a small AMO) combined with evidence that the individual was employed by the AMO during the periods covered by the business records.

### GM 66.120 (2) – Requirement for recent qualification or experience

The LAME needs to ensure that he/she keeps accurate records of experience to show an employer, customer or a CASA aviation safety regulator that they comply with the recency requirements of this subpart.

The experience can be documented manually in an individual log book, or electronically in a spreadsheet. The record should contain the following data:

- date;
- aircraft type;
- aircraft identification i.e. registration;
- ATA chapter (optional);
- operation performed i.e. 100 FH check, MLG wheel change, engine oil check and complement, SB embodiment, trouble shooting, structural repair, STC embodiment;
- type of maintenance i.e. base, line;
- type of activity i.e. perform, supervise, release; and
- category used - A, B1, B2 or C.

### GM 66.120 (2) – Requirement for recent qualification or experience

### The recording of evidence of recent work experience

An aircraft maintenance engineer licence holder should keep a record of recent maintenance tasks performed as evidence of their recent work experience. This record of completed maintenance tasks could be entered into a logbook and countersigned by a relevant supervisor and retained by the licence holder as evidence of recently exercising the privileges of their licence. A CASA - SOE or a workplace – ‘*Recent Work Experience Record*’ worksheet can be utilised for the logging of recent work experience.

Additional information for the recording of recent work experience can be found in the CASA Advisory Circular (AC) [AC 66-07 Practical training options for aircraft type training and recording of recent work experience](#), with an example of a ‘*Recent Work Experience Record*’ worksheet provided at Appendix C to that AC, which may be printed off and used by an individual LAME to record evidence of their OJT experience or maintenance tasks performed.

## 4 Part 66 Manual of Standards (MOS)

### AMC 66.A.20 (a) – Privileges Category B2

An AMC, for a category B2 licence holder, for the purpose of satisfying the 6 months requirement of documented practical experience for category A maintenance tasks outlined under subparagraph 145.A.35 (o) 2. of the [Part 145 MOS](#), would be met if the B2 licence holder previously held a Line Maintenance Authority (LMA) issued by CASA that covered category A maintenance tasks for a particular type of aircraft type and had actively been carrying out and certifying for the maintenance of those tasks, the LMA could be used as an AMC for the issue of the category A licence authorisation by the Part 145 AMO.

### GM 66.A.20 (a) – Privileges

CASA's licence conversion methodology worked on the basis of determining which of the current regulation 31 of the Civil Aviation Regulations 1988 (CAR) licence privileges (at the time) would be granted as category/subcategory B or aircraft type rating privilege. CASA also stated that existing regulation 31 of CAR privilege, at the time of conversion or subsequently qualified for, would be granted as privilege in the new Part 66 of CASR system. The caveat on that undertaking was that the existing privilege needed to be a legal privilege scope. There have been examples of request for exclusion removal/privilege grant where there has been no legal basis for the request; but rather, a mistaken interpretation of what was a legal privilege under the previous regulation 31 of CAR system.

The following titles shown against each category designator below are intended to provide a readily understandable indication of the job function:

- Category A: Line maintenance certifying mechanic.
- Category B1: Maintenance certifying engineer - mechanical.
- Category B2: Maintenance certifying engineer - avionic.
- Category C: Base maintenance certifying engineer.

Individual aircraft maintenance licence holders are not restricted to a single category. Provided that each qualification requirement is satisfied, any combination of categories may be granted.

### GM 66.A.20 (a) – Privileges

#### Category A

Tasks permitted by subparagraphs 66.A.20 (a) (1) and (2) of the [Part 66 MOS](#) under the category A certification authorisation, as part of minor scheduled maintenance or simple defect rectification, are as specified in Part 145 of [CASR](#) and agreed by CASA.

Subparagraph 3 (p) (Minimum Equipment List (MEL) item), of Appendix II of the [Part 145 MOS](#), is only for minor maintenance MEL tasks. Applications to CASA seeking the addition of simple task MEL for listing as a Part 145 AMC would be assessed against the teaching depth

and scope for the category A. The subject modules, levels of knowledge and competencies for the category A can be seen at Appendices I, III and IV of the [Part 66 MOS](#).

For the purposes of category A, minor scheduled line maintenance means any minor check, up to, but not including the A check where functional tests can be carried out by the aircrew to ensure system serviceability. In the case of an aircraft type not controlled by a maintenance programme based upon the A/B/C/D check principle, minor scheduled line maintenance means any minor check up to and including the weekly check or equivalent.

### Category B1

The category B1 licence includes category A avionics tasks. Such avionics tasks may form part of the scheduled inspections or checks up to and including a weekly check (pre-flight, transit, overnight) and MEL implementation (as per Appendix II of the [Part 145 MOS](#)).

### Core licence privileges

When describing the privileges of a B1 licence the term “*core licence privileges*” may sometimes be used. The term means the licence category privileges prescribed under subparagraph 66.A.20 (a) 4 of the [Part 66 MOS](#) for a B1.1, B1.2, B1.3 or B1.4 licence. Whilst the privileges of the licence are provision of maintenance certification and issue of a certificate of release to service (CRS), in this instance the term has been used generically to describe core licence scope.

For each of the B1 subcategories, these core licence privileges cover the following:

- maintenance on aircraft structural, powerplant, mechanical and electrical systems
- replacement of avionic LRU (in accordance with 66.A.20 (a) 4 (ii) (B)) unless the licence is endorsed with the E6 — excluding avionics LRU exclusion
- updating software in an avionic system (in accordance with 66.A.20 (a) 4 (ii) (BA))
- category A licence tasks (in accordance with 66.A.20 (a) 4 (ii) (C))
- functional checks of avionic systems that can be conducted as a simple test
- troubleshooting of avionics systems that can be conducted as a simple test
- daily or manufacturers’ equivalent inspection (refer to 66.A.20 (a) 4 (ii) (F))
- scheduled routine inspection of fibre-reinforced plastic composite structures (refer to 66.A.20 (a) 4 (ii) (G))
- inspection using an NDT method (refer to 66.A.20 (a) 4 (ii) (H)).

Further, B1 licence core privileges on aircraft structural, powerplant, mechanical and electrical systems are provided by Table 1 of section 66.A.20 of the [Part 66 MOS](#) which designates aircraft systems (and ATA chapter reference) as one of those systems. The table also has a column called Conditions or Limitations, and these are presented as either positive or negative licence conditions as described in the following examples taken from the Table:

- in ATA21 the B2 has a condition that provides the inclusion of mechanical scope for pressurisation control systems i.e. [positive licence condition]
- in ATA25 the B1 has a condition that provides all of ATA25 except ELT & underwater locating beacon = [limitation or negative licence condition]

- in ATA27 the B1 has a condition that limits him/her to mechanical aspects and the B2 is limited to avionics aspects
- in ATA34 the B2 has full scope (as this system is designated as an avionics B2 system) and the B1 has a condition that limits him/her to compass swings, if endorsed on the licence = [so, both a positive and negative licence condition]
- in ATA35 the B1 has the system (as this system is designated as a mechanical B1 system) and so does the B2 if they were converted from having an instrument licence in the old CAR 31 licence scheme = [a positive condition but limited to those who were converted from the old scheme where it was within airframe scope]
- in ATA51 the closing of cowlings and refitment of quick access inspection panels is a positive condition for the B2
- in ATA61 the B1.1 licence holder has propeller system included but only if they have completed the relevant training.

To summarise, the core licence privileges are the privileges listed under subparagraph 66.A.20 (a) 4 read in combination with Table 1 and subject to the last column of the Table which sets limits or provides conditions which may be positive or negative.

#### Avionic Line Replaceable Unit (LRU)

The category B1 licence also permits replacement of an avionic Line Replaceable Unit (LRU) providing the serviceability of the system can be established by a simple self-test facility, other on-board test systems/equipment or by simple ramp test equipment that requires no special training. Special test equipment training is other than that received during category or aircraft type training. Defect rectification which requires the use of test equipment which does not provide a simple go/no-go decision - cannot be certified.

An avionic LRU means an aircraft avionic part which satisfies all of the requirements for an avionics LRU as defined in section 66.5 of the [Part 66 MOS](#).

Replacement of an avionics LRU includes replacement of wiring sections or looms (considered to be a unit) that are supplied prefabricated and terminated between components in an avionics system. The level of testing required for the systems connected via the loom cannot exceed the troubleshooting methods outlined in the approved maintenance data or the methods that describe a simple test.

The process of updating/transferring software data, using data loaders (whether portable or on board), is treated as an Avionic LRU replacement as long as LRU replacement serviceability can be established by using a simple test. Software transfer is not to be treated as an LRU replacement if the software installation does not have a discrete test outcome/result or if affected systems serviceability cannot be verified.

If the software requires operator variation/customisation or is to be managed by instructions for continued airworthiness that require interpretation and application of avionics knowledge (ie other than following maintenance instructions that are a set of steps) then the software update/transfer cannot be treated as an avionic LRU.

Although EASA has defined a simple test in terms of the number of steps taken to accomplish a task – CASA has not adopted this methodology. A 'simple test' means a test

described in approved maintenance data that meets all of the criteria defined in Section 66.5 of the [Part 66 MOS](#). If a Avionic LRU is replaced that requires more than one BITE test because it interfaces with several systems, as long as the outcome of each test is a unique go-no go indication or parameter with no need for interpretation of the test results, it still remains a simple test. A simple test can also involve Avionic LRU's that have BITE testing that requires additional input (for example moving a switch/pushing a button/selecting a lever) whilst following the steps in the test procedure. As long as the outcome of the test is a pass or fail it does not matter that a variety of steps were taken to establish serviceability.

A B1 licence holder has the simple test privilege for establishing avionic system serviceability i.e. a simple test may be carried out even if an Avionic LRU change has not been made.

#### Specialised test equipment

Equipment covered during category training and thus treated as standard (non-specialist) test equipment includes:

- for a B1:
  - multimeters
  - pressure gauges
- for a B2:
  - multimeters
  - pressure gauges
  - pitot static tester
  - altimeter tester
  - TCAS test box
  - ILS test box.

If an aircraft has been type rated and use of the test equipment is covered and practiced in the syllabus for the practical type training; the test equipment is not treated as specialist test equipment. Test equipment now typically taught on modern type courses includes data loading, fibre optic testing post joint repair and use of central maintenance computers.

Where use of a generic brand of test equipment has been taught, the principles of the generic brand means the person may apply those principles to the use of other brands of test equipment.

There will be instances where there is new or novel test equipment that will be initially treated as specialist test equipment, but through subsequent general use of the equipment and increased knowledge will mean that the test equipment will no longer be treated as specialist test equipment.

It should be noted that some test equipment may also have a level of automation in the test equipment, i.e. some equipment may contain automatic test features which meet the criteria of a simple test.

There will also be equipment that will never be found to be other than specialist test equipment. Such equipment relies on the underlying knowledge that level three training provides in the category or type training courses, e.g. a transponder tester that requires

knowledge of radio waves, radio interference, correct coding and interpretation of a range of results.

#### Subcategory B1.2 — diesel engines

Subparagraph 66.A.20 (a) 4 of the [Part 66 MOS](#) outlines the privileges for a person who holds a category B1 licence endorsed with a subcategory of that licence. The holder of a subcategory B1.2 or B1.4 licence may provide a maintenance certification for diesel piston engine maintenance, as the basic knowledge requirement for qualification for the licence includes fundamental knowledge of the operating principles of 2 stroke, 4 stroke, otto and diesel piston engines, as outlined under Module 16 – Piston engines of Part 2 of Appendix I of the [Part 66 MOS](#).

Although the competencies to maintain diesel engines are covered prior to the issue of a category B1.2 or B1.4 licence, holders of licences that were converted at transition from CAR 31 to Part 66 may not have held these competencies. This transition conversion policy recognised that the majority of the knowledge, skill and experience required for diesel engines are similar to that of piston engines powered by other aviation fuel. If a LAME does not believe they have enough knowledge, skill or experience for diesel engine technology prior to certifying for maintenance of diesel engines, these LAMEs should gain the competencies relevant to the diesel engine.

Prior to the introduction of Part 66 these competencies were gained by the successful completion of acceptable manufacturer's training courses.

Whilst manufacturer's training courses are acceptable for the relevant aircraft engines other training may be available that is also suitable. If there is any uncertainty as to whether training will be satisfactory above, verification should be sought from the Maintenance Personnel licensing section of the Industry Permissions Division within CASA as to its suitability prior to attending.

#### Exclusions applied to a category B1 licence and/or type rating and their applicability to the list of category A licence tasks the B1 can do on type.

A category B1 licence holder, licenced on a particular aircraft type may also hold a category A licence. Both licences may cover the same aircraft.

Under sub-sub-subparagraph 66.A.20 (a) 4 (ii) (C) of the [Part 66 MOS](#) an individual who holds a B1 licence with a particular aircraft type rating has the included privilege to perform maintenance certification for the category A licence tasks mentioned in Appendix II of the [Part 145 MOS](#) for the aircraft type rating/or ratings held.

If an exclusion is applied to the B1 licence category e.g. E4 - excluding electrical sub-systems of mechanical, powerplant or structural systems, that exclusion also carries over to the aircraft type rating. As the category A tasks are a privilege under the rating endorsed on the B1 licence, any exclusion applied to the rating would also apply to the category A tasks. If the exclusion is removed from the licence category, it still applies to the rating (and the category A tasks privilege) until removed from the rating. Removal of the exclusion from the rating requires completion of exclusion removal training on the particular aircraft type for the particular aircraft system.

The B1 licensed individual mentioned in the example above who holds a separate category A licence for that same aircraft type; could certify for category A tasks in the electrical sub-systems of mechanical, powerplant or structural systems under the privileges of that category A licence (if type and task trained and authorised by the AMO for such category A tasks).

**Note:** A category A licence is a separate endorsement on a licence document, (i.e. another licence endorsement that may / or may not be held by the holder of a B1 licence).

This category A licence applies to any aircraft type that the individual may be type and tasked trained on and authorised by the AMO, and the licence would have no exclusions. However, for the category A licence tasks that an individual has privileges for under their B1 licence, maintenance of these tasks may only be carried out to the aircraft type rating or ratings endorsed on the licence and is restricted by any exclusions that may exist on that aircraft type rating(s).

### Category B2

If a category B2 licence holder, licenced on a particular aircraft type has been type and task trained by a Part 145 AMO, then the category B2 licence holder may provide maintenance certifications and CRS for category A maintenance.

As outlined under subparagraph 145.A.35 (o) 2. of the [Part 145 MOS](#), a category B2 licence holder, after being task trained for the relevant category A maintenance tasks by the Part 145 AMO, requires 6 months of documented practical experience covering the aircraft type and scope of the tasks for which the authorisation is to be issued, prior to being authorised by the Part 145 AMO.

### Composite Indicators Maintenance Privileges

A question that may arise is due to the fact that avionics personnel have an exclusion annotated on the licence for radio or instrument aspect of an avionics system. This has the potential to cause confusion when a composite indicator displays information from both the instrument and radio systems. Despite the exclusion the B2 licence holder can maintain the composite indicator with the exclusion indicating who should have been involved in the maintenance in the first case, i.e. a B2 LAME with an exclusion for radio aspects of avionics systems would not be able to provide maintenance certifications and CRS for a radio generated system fault, unless the fault could be managed/corrected at the avionic LRU level of maintenance.

### Core licence privileges

When describing the privileges of a B2 licence the term “core licence privileges” may sometimes be used. The term means the licence category privileges prescribed under subparagraph 66.A.20 (a) 6 of the [Part 66 MOS](#) for a B2 licence. Whilst the privileges of the licence are provision of maintenance certification and CRS, in this instance the term has been used generically to describe core licence scope.

For the B2 category licence, these core licence privileges cover the following:

- maintenance on aircraft avionics and electrical systems
- maintenance on instrument and electrical subsystems of structural, powerplant and mechanical systems



- replacement of avionic LRU (in accordance with 66.A.20 (a) 6 (ii) (D)) unless the licence is endorsed with the E6 – excluding avionics LRU exclusion
- category A licence tasks (in accordance with 66.A.20 (a) 6 (ii) (C))
- daily or manufacturer's equivalent inspection (refer to 66.A.20 (a) 6 (ii) (E)).

Further, B2 licence core privileges on aircraft avionics and electrical systems are provided by Table 1 of section 66.A.20 of the [Part 66 MOS](#) which designates aircraft systems (and ATA chapter reference) as one of those systems. The table also has a column called Conditions or Limitations, and these are presented as either positive or negative licence conditions as shown in the examples taken from the Table provided in the core licence privileges for the B1 licence above.

To summarise, the core licence privileges are the privileges listed under subparagraph 66.A.20 (a) 6 read in combination with Table 1 and subject to the last column of the Table which sets limits or provides conditions which may be positive or negative.

### Category C

The category C certification authorisation permits certification of scheduled base maintenance by the issue of a single certificate of release to service for the complete aircraft after the completion of all such maintenance. The basis for this certification is that the maintenance has been carried out by competent mechanics and both category B1 and B2 staff have signed for the maintenance under their respective specialisation. The principal function of the category C certifying staff is to ensure that all required maintenance has been called up and signed off by the category B1 and B2 staff before issue of the certificate of release to service. Category C personnel who also hold category B1 or B2 qualifications may perform both roles in base maintenance.

### **GM 66.A.20 Table 1 – Aircraft systems, designations and conditions for Category B1 and Category B2 licences**

Table 1 makes a clear distinction between aircraft systems, by designating them as mechanical, powerplant, structural, electrical or avionic. Despite that clear distinction, there will be times that there will be an intersection of aircraft systems and it may not be readily apparent as to which licence holder may provide the maintenance certification for the maintenance required. The oxygen system is, for example, a mechanical system but it also contains instruments (avionic system) and hence the question arises as to which licence, B1 or B2, has responsibility for the maintenance.

In such a case either category could maintain the instrument (e.g. pressure indicator) - but it would depend on the nature of the maintenance who should in any particular situation. If the indicator is to be replaced due to failure of a sensor feed - then it would be appropriate for the B2 licence holder to provide the maintenance certification but a B1 licence holder could also carry out the maintenance and provide the maintenance certification. If the indicator was not sensing because an in-line oxygen sensor failure, requiring the oxygen line to be broken, purged and the part needed to be replaced, then category B1 would be the appropriate licence holder to carry out the work and provide the maintenance certification.

### **GM 66.A.20 Table 1 – Maintenance of electrical subsystems within mechanical systems**

The question of which licence holder is more appropriate to provide the maintenance certification for the maintenance of an electrical subsystem of a mechanical system is

dependent on the nature of the maintenance required. As outlined in Table 1, the waste water system (ATA 38), designated as a mechanical (B1) system also contains an electrical subsystem which includes components such as electrical connectors, forming part of this mechanical system. In this case, as in the previous example, either category, B1 or B2, could maintain and certify for this electrical subsystem of a mechanical system.

If replacement of the electrical component or maintenance of the electrical subsystem involves breaking into the mechanical system itself, then it is logical to expect the maintenance of the mechanical system to be certified by the B1 licence holder, in addition to a certification for the replacement of an electrical component within the electrical subsystem of the mechanical system which could be provided by either the B1 or B2 licence holder.

It would be considered that if the dismantling is such that the operation of the mechanical aspects of the system is affected, a B1 licence holder would need to be involved.

#### Maintenance of electrical subsystems of mechanical systems under the old regulation 31 of the CAR system

A very similar concept applied to the replacement of electrical components within the airframe category under the CAR licence system.

Previously, for certification purposes under CAR 31 combustion heaters were listed as a privilege of the electrical category licence holder under Civil Aviation Order - CAO 100.90. Although not explicitly detailed in the Order, this electrical privilege was widely understood to mean the electrical subsystem of the combustion heater.

As combustion heaters typically involve fuel from the aircraft fuel system being ignited and burned to provide cabin heat, maintenance of the overall system was considered to be an airframe privilege (now termed mechanical) with the electrical aspect (electrical wires, ignitor, spark plugs and contact breaker points being catered for by the electrical category).

Similarly, a water heater element would have been classified as an electrical component forming part of an airframe system. As such, provided the connections were of a type permitted by CAO 100.90, either an airframe or electrical category LAME could replace them but the action of breaking into the water or plumbing system was maintenance to be certified by the airframe category licence holder.

#### **GM 66.A.21 – Transitional Privileges**

The transitional privileges section of the [Part 66 MOS](#) at 66.A.21 – Table 2, keep in place the cross category into electrical, instrument or radio certification privileges available to those who held regulation 31 airframe or engine category licences (and those who qualify for such licences under the transition regulations).

#### Avionic System Privileges

For an aircraft approved for VFR operations the B1 category licence holder may provide maintenance certifications and issues certificates of release to service for instrument maintenance on aircraft general instruments (excluding RMI, inertial navigation and multi axis autopilots) and periodic inspections of radio systems.

That is the limit of the transitional avionics system privileges. The periodic inspection of the radio system referred to is the periodic inspection detailed within Schedule 5 of [CAR](#). The periodic radio inspections are limited to checks and inspections (limited to system self-checks) – no repairs or installations.

Receipt of a replacement avionics unit (eg transponder) accompanied by a Form 1 or serviceable tag does not provide the B1 licence holder with a permission for an installation of the transponder. There is no assumption of serviceability provided by the Form 1. The replacement of the transponder by a B1 is only permitted if the replacement actions meet the description of an avionic LRU, ie system serviceability can be confirmed by a simple test. If the instructions for continued airworthiness require any testing beyond a simple test then a B2 licence holder is required to provide the maintenance certification for the avionics system maintenance.

### **AMC 66.A.23 – Requalification requirement – (Part 147 MTO Report)**

An AMC for a theory and practical assessment in the range of maintenance activities that the holder is authorised by their licence and ratings to carry out, is a sampling assessment of contemporary knowledge of:

- the responsibilities of an aircraft maintenance licence holder in air law and airworthiness requirements; rules and regulations relevant to an aircraft maintenance licence holder including applicable airworthiness requirements governing certification and continuing airworthiness of aircraft and approved aircraft maintenance organisation and procedures;
- aircraft engineering: characteristics and applications of the materials of aircraft construction including principles of construction and functioning of aircraft structures, fastening techniques; powerplants and their associated systems; mechanical, fluid, electrical and electronic power sources; aircraft instrument and display systems; aircraft control systems; and airborne navigation and communication systems;
- aircraft maintenance: tasks required to ensure the continuing airworthiness of an aircraft including methods and procedures for the overhaul, repair, inspection, replacement, modification or defect rectification of aircraft structures, components and systems in accordance with the methods prescribed in relevant maintenance manuals and the applicable standards of airworthiness; and
- human performance relevant to aircraft maintenance.

The requalification report needs to include details of the licence holder's demonstration of a continued ability to perform aircraft maintenance.

### **AMC 66.A.23 – Requalification requirement**

An AMC for an A, B1 or B2 LAME seeking requalification for their licence to satisfy the requalification requirements of 66.A.23 (b) 1., is evidence of carrying out maintenance of the kind that would be covered by the privileges of any licence held, for not less than a total of 100 days by any of the following methods:

- a record of carrying out aircraft maintenance and signing for completion of that maintenance as an aircraft maintenance engineer (AME); or
- a summary list of aircraft maintenance work carried out as an AME – (not signing as an AME); or
- a SOE record of 100 days of maintenance; or
- a Log of Industrial Experience; or
- a list of aircraft and servicing that was required (business records for a small AMO) combined with evidence that the individual was employed by the AMO during the periods covered by the business records.

### **GM 66.A.23 – Requalification requirement**

To satisfy the requalification requirements under 66.A.23, it would be reasonable for an individual LAME to be able to include in the preceding 24 month period any combination of one or more of the following items towards a currency/requalification status for their licence:

- evidence that the individual has had at least 6 months experience (or a minimum of 550 hours) of exercising the privileges of their licence (i.e. performing maintenance certifications or issuing CRS's); and/or
- evidence of carrying out maintenance (as an AME) of the kind that would be covered by the privileges of any of the licences held, for no less than a total of 100 days; and/or
- evidence that the individual has been assessed by an AMO, or an organisation holding a certificate of approval to carry out maintenance activities issued under regulation 30 of CAR, to determine that the individual continues to have maintained the required knowledge and skills for their licence held.

### **GM 66.A.25 – Basic knowledge and competency requirements**

The levels of knowledge are directly related to the complexity of certifications appropriate to the particular licence category under section 66.A.1 of the [Part 66 MOS](#), which means that category A should demonstrate a limited but adequate level of knowledge, whereas category B1 and B2 should demonstrate a complete level of knowledge in the appropriate subject modules. Category C certifying staff should meet the relevant level of knowledge for B1 or B2.

### **AMC 66.A.25 (e) – Basic knowledge and competency requirements**

Licence applicants who choose to use the self-study training pathway (in lieu of the MTO pathway) can decide what materials to study, but can gain the basic knowledge required for a category or subcategory of licence, via use Part 66 textbooks that are compliant with EASA Part 66 / 147 (i.e., which align to the Part 66 knowledge syllabus). Electronic and hard-copy publications of EASA Part 66 textbooks are available online from many websites such as:

- EASA Part 66 Academy (bookstore)
  - AVIA EDUCON
  - Sterling Book House
- or
- Aircraft Technical Book Company.

Notes:

1. EASA Module 10 - EASA aviation legislation, does not apply to aircraft maintenance carried out under CASR.
2. CASA will provide the relevant CASR Part 66 Module 10 - Aviation legislation study guide on CASA's website.

### **AMC 66.A.30 (a) – Basic practical experience requirements**

The term '*maintenance experience on operating aircraft*' means the experience of being involved (i.e., individually performing or assisting in performing) in maintenance tasks on aircraft which are being utilised for operations such as regular public transport (RPT) operations, charter operations, aerial work and general aviation operations which cover a wide range of tasks in terms of length, complexity and variety.

The experience should be gained in the real environment of maintenance as opposed to only the training school environment but may be combined with Part 147 approved training so that periods of training can be intermixed with periods of experience, similar to an apprenticeship.

Category A, subcategory B1.2 or B1.4, category B2, or subcategory B1.1 or B1.3 licence applicants

For paragraphs 66.A.30 (a) 1. (i) and 2. (i), licence applicants who have not undertaken any relevant technical training prior to applying for a licence – '*relevant technical training*' means knowledge and practical skills training that would be needed to perform specific tasks commonly related to the modification, repair, overhaul or inspection of mechanical, electrical or electronic equipment. The training would include the use of tools and measuring devices.

For paragraphs 66.A.30 (a) 1. (ii) and 2. (ii), licence applicants who have completed relevant training as a skilled worker in a technical trade prior to applying for a licence – "*completion of relevant training as a skilled worker in a technical trade*" means technical training (acceptable to CASA), that a person has successfully completed, to qualify the person as a skilled worker in a technical trade. Such training must involve the manufacture, repair, overhaul or inspection of mechanical, electrical or electronic equipment (see GM 66.A.30 (a) below for the lists of vocational training and technical trade qualifications acceptable to CASA). The training would include the use of tools and measuring devices.

Category C licence applicant holding an academic degree.

For paragraph 66.A.30 (a) 3. (iii), category C licence applicant holding an academic degree, a *'representative selection of tasks'* must include the observation of hangar maintenance, maintenance planning, quality assurance, record-keeping, approved spare parts control and engineering development.

**GM 66.A.30 (a) – Basic practical experience requirements**

Practical maintenance experience may include simulated maintenance experience using maintenance simulation technology. CASA has always placed a value on simulated maintenance experience because simulated maintenance experience can satisfy practical training in a realistic fashion. CASA also acknowledges that practical experience gained on aeronautical products is similar to that gained when the product has become part of the aircraft through fitment.

CASA recognises that maintenance training via simulation allows troubleshooting and routine maintenance to be gained with greater flexibility and at a fraction of the cost of training on the actual aircraft. Simulation devices that provide feedback and simulate faults will allow the maintenance engineer to recognise and correct various types of faults without the need to gain that experience on an operating aircraft.

The more realistic the simulated maintenance experience becomes, whether via simulated maintenance trainer device or on an aeronautical product, the greater the value of the maintenance training expense in the gaining of competence. CASA does not specify a percentage value – but as a general example, if the simulation has achieved 60% realism then 40% experience remains to be gained in the workplace on operating aircraft (100% realistic training device would allow full competency to be gained in the training environment).

**GM 66.A.30 (a) – Basic practical experience requirements**

Paragraphs 66.A.30 (a) 1. (ii) and 2. (ii), "*relevant training as a skilled worker in a technical trade*".

*Relevant training as a skilled worker in a technical trade*, acceptable to CASA, a licence applicant could provide as evidence to CASA when applying for a licence, could be vocational training and/or qualifications in the following technical trades:

- Automotive. Apprenticeships, traineeships in heavy or commercial vehicle (such as diesel motor mechanic), light vehicles etc.
  - This type of vocational career would include troubleshooting/diagnostic processes when inspecting and testing electrical, mechanical systems, engines and their drive systems, servicing of petrol and diesel vehicles/machinery/equipment. Individuals coming from this automotive sector will possess good work technical skills and hand skills.
- Electrotechnology. Includes design, maintenance, installation and repair for all electrical and electronic equipment, such as a licensed electrician, electrical fitter.

- This would stretch across many sectors including mining, manufacturing, ICT and communications, construction, renewables, domestic and commercial refrigeration and air-conditioning.
- Electrical services industry (a sub-sector within electrotechnology) involves electrical wiring or fittings in buildings and other construction projects, and repair and maintenance of electrical equipment and fixtures.
- Engineering. Apprenticeships, traineeships in an engineering trade specialising in mechanical or fabrication within metal, engineering, manufacturing and associated industries.
- Telecommunications. Apprenticeships, traineeships in the telecommunications stream.
  - This would teach skills and knowledge of the technical functions behind general information and communications technology, including dealing with tasks associated with network administration, open cabling and software applications.
- Aviation – such as military careers.

#### **AMC 66.A.30 (c) – Basic practical experience requirements**

For existing licence holders who apply to CASA to add a category or subcategory to their licence, the sentence "*a representative cross-section of maintenance tasks*" means the person's practical maintenance experience must cover a variety of different tasks carried out on the aircraft and the aircraft systems (such as modifications, inspections, component removal/installation, testing, troubleshooting and rectification). The experience must be representative of the aircraft and aircraft systems relevant to the category or subcategory of licence applied for.

#### **AMC 66.A.30 (e) – Basic practical experience requirements**

To be considered as '*recent experience*'; at least 50% of the 1 year recent experience required for grant of an initial licence, must be gained within the 12-month period prior to the date of application for the licence. The remainder of the recent experience must have been gained within the 7-year period prior to application.

**Note:** The balance of the basic practical maintenance experience required by paragraph 66.A.30 (a), must be obtained within the 10 years prior to the application as required by paragraph 66.A.30 (ec).

Example: A person who has completed relevant training (acceptable to CASA) as a skilled worker in a technical trade is applying to CASA for a category B2 licence. Paragraph 66.A.30 (a) 2. (ii) states – a total of 3 year's practical maintenance experience is required by the applicant. Paragraph 66.A.30 (e) states – at least 1 year of that experience must be '*recent experience*'. At least 50% (i.e. 6 months) of this recent experience must be gained within the 12 months prior to application. The remaining 6 months '*recent experience*' must be gained within the 7 year period prior to application. The balance of practical experience required (i.e. 2 years), must be gained within the 10 year period prior to application, as required by paragraph 66.A.30 (ec).

### **AMC 66.A.30 (ea) – Basic practical experience requirements**

For existing licence holders who apply to CASA to add a category or subcategory to their licence, the minimum maintenance experience required is listed in Table 3 of paragraph (b). Of that total experience, the '*recent experience*' component may be less than 1 year but must be at least 3 months. To be considered as recent experience, this experience must have been gained within the 12-month period prior to the date of application. The remainder of the recent experience must have been gained within the 7-year period prior to application.

**Note:** The balance of the basic practical maintenance experience required by paragraph 66.A.30 (b) must be obtained within the 10 years prior to the application as required by paragraph 66.A.30 (ec).

**Example:** A current subcategory B1.2 licence holder is applying to add a subcategory B1.1 licence to his/her existing licence. Table 3 under 66.A.30 (b) states – a total of 2 year's practical maintenance experience is required by the applicant. A minimum of 3 months of this experience must be 'recent experience' and therefore needs to be gained within the 12 months prior to application. The remaining 9 months of the recent experience must be gained within the 7 year period prior to application. The balance of practical experience required (i.e. 1 year), must be gained within the 10 year period prior to application, as required by paragraph 66.A.30 (ec).

### **AMC 66.A.30 (eb) – Basic practical experience requirements**

While a matter for an MTO, for a category A licence, the additional experience of civil aircraft maintenance CASA would expect is a minimum of 6 months. For a category B1 or B2 licence, the additional experience of civil aircraft maintenance CASA would expect is a minimum of 12 months.

Aircraft maintenance experience gained outside a civil aircraft maintenance environment can include aircraft maintenance experience gained in the military, customs, coast guard - (or equivalent), police or in aircraft manufacturing.

### **GM 66.A.45 (c) – Type/task training and ratings**

Situations may arise where an existing aircraft type is fitted with a new (different) engine resulting in a new (aircraft/engine combination) aircraft type rating being formed. Apart from fitment of the different engine, for the mechanical LAME (B1) and the avionics LAME (B2) the new aircraft is basically the same.

In such a case, where the B1 or the B2 LAME holds an existing rating for one of the aircraft types, he/she may be granted the other rating for the other aircraft type if it is determined through an RPL assessment conducted by CASA, that for the B1 LAME – the engine (powerplant) interface differences, or for the B2 LAME – the avionics systems difference between the two (aircraft/engine combination) aircraft types is such that, further training is not required for the issue of the other type rating.

RPL has the same meaning as in section 147.A.07 of the [Part 147 MOS](#).

### **GM 66.A.45 (d) – Type/task training and ratings**

The training should give adequate detailed theoretical knowledge of the aircraft, its main parts, systems, equipment, interior and applicable components, including training in the



systems in use for technical manuals and maintenance procedures. The course should also take into account the following:

- in service experience on the aircraft type;
- feedback from in-service difficulties/occurrence reporting etc.;
- significant airworthiness directives and/or service bulletins; and
- known human factors issues associated with the particular aircraft type.

Theoretical training should be supported by training aids such as aircraft system parts. Ground simulator time, engine ground running and computer based training (CBT) etc. may also be utilised.

Theoretical and practical training should also take into account critical aspects such as Critical Design Configuration Control Limitations.

Knowledge is also recommended of relevant inspections and limitations as applicable to the effects of environmental factors such as cold and hot climates, wind, moisture, etc.

The required duration of practical training should be accepted on a case by case basis by CASA prior to the type rating endorsement. It is strongly recommended that the agreement on the practical training duration be reached before the training starts.

While it is not feasible to establish a formula giving the required training duration in all cases, the following may be used as a guideline:

- For a first type training course with no recent recorded maintenance experience four months practical training is required.
- Some factors that may lead to a reduction in the maximum duration of four months practical training required are as follows:
  - experience on aircraft type of a similar technology, construction and systems including engines;
  - recency on type;
  - the quantity of the practical experience. For example experience gained will depend upon the environment e.g. line maintenance environment with one aircraft per week would permit limited experience compared with the constant base maintenance check environment; and
  - the quality of the practical experience. The type of tasks carried out. These tasks should reflect, at a minimum, those tasks specified by the practical training needs matrix developed by the organisation approved under Part 147 of CASR.

The minimum two weeks practical training is normally required for all type training courses. This includes the addition of similar type ratings on a CASR Part 66 licence (differences courses). There may be cases where the practical differences training required is less than two weeks for example an engineer with a CASR Part 66 type license in category B2 on an Airbus A330 with PW 4000 engines who takes a differences course to an Airbus A330 with Rolls Royce Trent engines.

Fuel Tank Safety training can be developed against the guidance provided with Appendix I of this document.

**GM 66.A.45 (d) and (e) – Type/task training and ratings**

Appendix III of the [Part 66 MOS](#) type training levels are based upon ATA 104 corresponding type training levels.

**GM - 66.A.45 (f) – Type/task training and ratings**

The examinations in respect of category B1 or B2 or C aircraft type ratings may be conducted by training organisations appropriately approved under CASR Part 147.

**GM 66.A.45 (d), (e) and (f) – Type/task training and ratings – Avionics fit**

For a variety of reasons – historical, type certificate amendment introducing new models, supplemental type certificate and modification, the avionics systems of a different individual aircraft; covered by the one aircraft type rating, may be comprised of different brands and models eg Garmin or Proline.

Under the paragraph 145.A.35 (f) of the [Part 145 MOS](#) it is the responsibility of the AMO to assess all certifying employees for the competence, qualification and capability to carry out their intended certifying duties. Given that obligation, CASA as a matter of policy, does not require the Part 66 licence holder to be taught and assessed on the avionic suite differences, by a Part 147 MTO. Any training required can be provided by the AMO.

**GM 66.A.45 (i) – Type/task training and ratings**

Licence holders seeking their first aircraft type rating in an alternate licence category or subcategory (for example: a B1 licence holder seeking their first rating in the B2 category) not currently held by the LAME, must first complete category or subcategory basic knowledge and competency training for the issue of a licence in the alternate category or subcategory prior to seeking a subsequent rating (second rating) on their existing licence. This ensures that a person does not obtain a rating without first having the basic knowledge and competency for the exercise of that rating.

**AMC 66.A.50 – Aircraft type practical training & 66.A.55 – On-the-Job aircraft type Training & Appendix III - Type training and assessment standards**

AMCs for Practical on Course (POC), Practical Consolidation Training (PCT), On-the-Job Training (OJT) and CASA assessment of a SOE record of practical experience gained in relation to the B1 or B2 aircraft type rating, respectively, are provided in Appendix II.

**GM 66.A.50 – Aircraft type practical training & 66.A.55 – On-the-Job aircraft type Training**

Details of the elements of POC and OJT for aircraft type rating training can be found in [AC 66-07 Practical training options for aircraft type training and recording of recent work experience](#) available on the CASA website at the CASA Current rules page in the Advisory Circular section.

## **Appendix A**

### **Fuel tank safety training**

This appendix includes an AMC and general instructions when providing training on Fuel Tank Safety issues. The level of training required for fuel tank training is level 2.

## **A.1 Level 2 Detailed training objectives**

Know the history and the theoretical and practical elements of the subject and be able to give a detailed description of the concept of Critical Design Configuration Control Limitations, Airworthiness Limitations Items (ALI) and using theoretical fundamentals and specific examples.

Have the capacity to combine and apply the separate elements of knowledge in a logical and comprehensive manner.

Have detailed information on how the above items affect the aircraft in the scope of the activity of the organisation or in the fleet.

Understand and carry out activities with the use of manufacturer and regulatory authority data providing instructions on design and maintenance, such as Service Bulletins, Airworthiness Directives, Aircraft Maintenance Manual, Component Maintenance Manual etc.

Use easily the manufacturer's documentation from various sources and apply corrective action where appropriate.

Identify the appliances or parts or the aircraft subject to fuel tank safety from the manufacturer's documentation, plan the action or apply a Service Bulletin and an Airworthiness Directive.

## **A.2 Continuing training**

The interval between continuing training shall be established by the organisation employing such personnel but should not exceed two years. The continuing training shall include knowledge on evolution of material, tools, documentation and manufacturer's or CASA's directives.

## **A.3 General requirements**

Personnel training would normally be carried out before any airworthiness review certificate is issued or any maintenance task is certified on an aircraft or an aeronautical product.

The training should be made in appropriate facilities containing examples of aeronautical products, systems and parts affected by Fuel Tank Systems (FTS) issues and having access to aircraft or aeronautical product where typical examples of FTS issues can be shown. The use of pictures, films and practical examples of the maintenance on fuel tank system is recommended.

The training shall include a representative number of repair and inspections as required by the maintenance programme showing the necessity of using the manufacturer's data.

## **A.4 Characteristics of the training**

The following characteristics shall be taken into consideration when the level 2 training programmes are being established:

- a. an understanding of the background and concepts of fuel tank safety as developed during the last 10 years;

- b. how in maintenance organisations mechanics can recognise, interpret and handle the improvements that have been made or are being made during fuel tank system maintenance; and
- c. an awareness of any hazards working on the Fuel System, and especially with a Flammability Reduction System using nitrogen.

The characteristics should be introduced in the training programme addressing the following issues:

- a. The theoretical background behind the fuel tank safety: the explosions of mixtures of fuel and air, the behaviour of those mixtures in an aviation environment, the effects of temperature and pressure, energy needed for ignition etc., the 'fire triangle', - Explain 2 concepts to prevent explosions: (1) ignition source prevention and (2) flammability reduction.
- b. The major accidents and accident investigations and their conclusions.
- c. SFARs from 14 CFR SFAR 88 of the FAA and JAA Internal Policy (INT POL) 25/12: reason of these documents, and what was the ultimate goal, margins of fuel system safety improvements (from 10-6 to 10-9, in fact improvement by a factor 100-1000, to identify unsafe conditions and to correct them, to systematically improve fuel tank maintenance).
- d. Explain the concepts that are being used: the results of SFAR 88 of the FAA and JAA INT POL 25/12: modifications, airworthiness limitations and CDCCL.
- e. Where relevant information can be found by the mechanics and how to use and interpret this information (maintenance manuals, aeronautical product maintenance manuals).
- f. Fuel Tank Safety and Maintenance: fuel tank entry and exit procedures, clean working environment, what is meant by configuration control, wire separation, bonding of parts etc.
- g. Flammability reduction systems (FRS): reason for their presence, their effects, the hazards of an FRS using nitrogen for maintenance, safety precautions in maintenance/working with an FRS.
- h. Recording maintenance actions, recording measures and results of inspections.

## **Appendix B**

### **Practical element of type training**

## B.1 AMC 1 - Practical element of type training - PCT

An AMC, for the purpose of delivering the practical element of type training is the use of Practical Consolidation Training (PCT) courses. Additional information for PCT can be found in [AC 147-1 Practical Consolidation Training](#). PCT program assessments need to be conducted by a Part 147 MTO assessor.

## B.2 AMC 2 - Practical element of type training - POC

An AMC is delivery of practical training in conjunction with the theory training course. Practical-On-Course (POC) training is that which is gained in the conduct of the type course. Additional information about POC training can be found in [AC 66-07 Practical training options for aircraft type training and recording of recent work experience](#).

## B.3 AMC 3 - Practical element of type training - OJT

An alternative AMC is the combination of AMC 1 or AMC 2 practical training, combined with completion of On-the-Job Training. OJT may also be utilised as a standalone AMC for gaining practical experience. Additional information about OJT can be found in [AC 66-07 Practical training options for aircraft type training and recording of recent work experience](#).

## B.4 AMC 4 - Practical element of type training - CASA assessment of SOE

(Valid for use until 30 June 2021.)

An AMC is CASA's assessment of a SOE record of practical experience gained in relation to the B1 or B2 aircraft type rating being applied for. The CASA assessment would be to the relevant equivalent standards for the B1 or B2 aircraft type rating as described within the AME Procedures Manual, Aviation Advisory Circular 9 series and SOE front cover guidance for regulation 31 of CAR practical experience requirements. If utilising PCT or POC to gain the practical experience required in relation to the B1 or B2 for a first aircraft type rating, a 25% reduction in SOE would be available.

Additional information on SOE regarding the hours of practical experience required by a B1 licence holder for the cross section of tasks within each ATA chapter representative of the aircraft and aircraft systems can be found in the Attachment 1 to this Appendix.

### B.4.1 Aircraft type practical training programs.

The practical training regimes are:

- Practical Consolidation Training (PCT)
- Practical on Course (POC); and
- On the Job Training (OJT).

The objective of each of these programs is to provide the practical competence required for each aircraft type rating. Each of the programs has a mandatory task list that all Aircraft Engineer Licence (AEL) holders need to complete irrespective of their experience. However, in the case of a first type rating, the **mandatory** tasks alone will not provide the required practical experience



for a licence type rating outcome. To make up for the shortfall in aircraft type experience a percentage of **additional** tasks from an OJT program will also be required.

#### **B.4.2 Policy – gaining an initial or additional aircraft type rating**

The percentages outlined in the policy below represent the proportion of MANDATORY tasks and ADDITIONAL tasks from a Part 145 AMO's/ Part 147 MTO's OJT journal that would need to be completed by an applicant seeking an aircraft type rating. The method of practical training utilised for gaining the practical element of the type training determines the amount of supplementation by OJT that is required.

#### **B.4.3 Gaining the first unrestricted type rating**

An unrestricted type rating has no exclusions endorsed on the rating. Where an individual is seeking their initial issue unrestricted type rating (i.e. for a rating not held on the licence), the individual are subject to initial issue requirements for the rating in relation to the aircraft system that will be granted for the first time.

For example, where the licence has exclusions E1 – excluding electrical systems; E4 – excluding electrical subsystems of mechanical, powerplant or structural systems; and E5 – excluding instrument subsystems of mechanical, powerplant or structural systems endorsed against all ratings on the licence held at the time, an additional 25% practical experience will be required for the E1, E4 and E5 matters on the new rating, in the form of the relevant tasks within an OJT.

#### **First type rating - either B1 or B2**

The first type rating would normally involve the use of PCT or POC combined with OJT, or the use of OJT alone. The percentage of OJT tasks to be completed during the conduct of the OJT program for the alternate practical training regimes are as follows:

- if PCT has been utilised – 25% of the ADDITIONAL tasks in the OJT journal (may be undertaken concurrently with the service familiarisation phase)
- if POC has been utilised – 25% of the ADDITIONAL tasks in the OJT journal
- if OJT alone is to be utilised – 100% of MANDATORY tasks, plus 25% of the ADDITIONAL tasks in the OJT journal.

#### **Second type rating in the category already held**

For a second rating in a category, the percentage of OJT tasks to be completed are as follows:

- if PCT has been utilised – practical experience requirement has been met
- if POC has been utilised – practical experience requirement has been met
- if OJT alone is to be utilised – 100% of the MANDATORY tasks in the OJT journal need to be completed.

#### **First type rating but in alternate category – i.e. into B1 from B2 or vice versa**

For a first rating; but in the alternative category the percentage of OJT tasks to be completed are as follows:

- if PCT has been utilised – practical experience requirement has been met, where the rating sought is held in the existing category
- if POC has been utilised – 25% of the ADDITIONAL tasks in the OJT journal
- if OJT alone is to be utilised – 100% of the MANDATORY tasks, plus 25% of the ADDITIONAL tasks in the OJT journal.

### **OJT program GM**

The following provides guidance in setting up an approved OJT program (AMC 3) in accordance with this Part 66 AMC and GM document.

A Part 145 AMO's/ Part 147 MTO's development of an approved OJT program for a specific aircraft type rating can provide alternative means of practical training requirements for gaining an initial 1st rating in a licence category or gaining a 2nd rating in an alternate licence category. The OJT program can be used either as a standalone means for practical where no other practical experience is required (AMC3) or can be combined with a PCT or POC program (AMC 1 or AMC 2). OJT is performed during line or base maintenance operations and provides recency in category, with competency gained by the signoff/assessment of all appropriate tasks.

The AMO's/ MTO's development of an OJT task list (journal) for an aircraft should cover a cross section of tasks representative of the aircraft and aircraft systems both in complexity and the technical input required to complete the task. The design of the OJT program also needs to consider which aircraft maintenance tasks would be considered to be mandatory irrespective of the experience reductions available by virtue of completing PCT or POC, as there will be aircraft specific tasks that every LAME needs to carry out irrespective of their experience. The AMO should provide applicants with a schedule or plan indicating a list of type rating tasks to be performed under supervision.

An AMO's/MTO's exposition requires inclusion of OJT training procedures approved by CASA.

The OJT program provides three classifications of maintenance tasks:

- a. Mandatory tasks:
  - i. These tasks are determined using a Training Needs Analysis (TNA) or taken from an approved POC or PCT program. A typical POC program has P1/P2 tasks (P1 tasks accomplished on a synthetic trainer if available, and P2 tasks which are accomplished on a live aircraft similar to PCT). For standalone OJT, all P1 and P2, or PCT tasks are mandatory and are accomplished on a live aircraft or aeronautical product.
- b. Additional tasks:
  - i. These tasks are scheduled maintenance tasks drawn from a computerised maintenance program (up to C check) or equivalent Maintenance Manual tasks that are relevant to the scope and depth of a licence privilege, e.g. LRU replacement/simple tests etc, or if necessary tasks paralleling Appendix B of [AC 66-07](#).
  - ii. Tasks are categorised as either COMPLEX or SIMPLE.

- A. COMPLEX tasks may have the following characteristics (within the logbook pages, complex tasks are identified in **BOLD** text):
  1. usually requires the removal and installation of a component from the airframe/engine
  2. involve several comprehensive steps to perform
  3. have multiple decision points in order to complete
  4. may use specialised
  5. test equipment
  6. often requires more than one person to perform.
- B. SIMPLE tasks may have the following characteristics (within the logbook pages, simple tasks are identified by UNBOLD text):
  1. does not necessarily require the removal and installation of a component
  2. does not use specialised test equipment
  3. can be completed by a single person
  4. does not involve decision steps (no troubleshooting)
  5. may involve an onboard maintenance system BITE check to determine serviceability.
- iii. The minimum percentage of COMPLEX and SIMPLE tasks to be carried out will be 25% (as per the policy for the grant of a rating in Section 1 above).
- c. Supplementary tasks:
  - i. These are unscheduled maintenance tasks or those tasks that are considered equivalent to a MANDATORY and ADDITIONAL task – COMPLEX or SIMPLE. These tasks will be evaluated during the Part 145 AMO /Part 147 MTO aircraft type practical assessment process.

#### B.4.4 Policy – removing an exclusion from an aircraft type rating

The policy below represents the MANDATORY tasks and ADDITIONAL tasks from a Part 145 AMO's/ Part 147 MTO's OJT journal that needs to be completed by an applicant seeking to remove exclusions from an aircraft type rating. The method of practical training utilised for gaining the practical element of the type training determines the amount of supplementation by OJT that is required.

**Notes:**

1. All exclusion removal training requires prior CASA approval.
2. The removal of other exclusions from an aircraft type rating may follow the same principles of this policy, with attention given to satisfying the practical experience requirements for the specific aircraft system relating to the particular exclusion or exclusions.

#### Removal of exclusions E1, E4 and E5

An applicant seeking to remove exclusions E1, E4 and E5 from an aircraft type rating will need to complete the following training:

- exclusion removal theory and
- exclusion removal practical, POC or PCT and/or
- exclusion removal OJT.

**Note:** Where a full B1 theory course has been previously completed, the exclusion removal theory element has been met.

**Exclusion removal from an aircraft type rating – B1 with exclusions E1, E4 and E5 on all ratings held**

For the practical requirement, the OJT tasks to be completed during the conduct of an OJT program for the alternate training regimes are as follows:

- if exclusion removal PCT has been utilised – 25% of the ADDITIONAL tasks in the exclusion removal OJT journal (this can be undertaken concurrently with the service familiarisation phase)
- if exclusion removal POC has been utilised – 25% of the ADDITIONAL tasks in the exclusion removal OJT journal
- if exclusion removal OJT alone is to be utilised – 100% of the MANDATORY plus 25% of the ADDITIONAL tasks listed in the exclusion removal OJT journal.

**Exclusion removal from a second and subsequent aircraft type rating – B1 with exclusions E1, E4 and E5 removed off at least one rating held**

The tasks to be completed are as follows:

- if exclusion removal PCT has been utilised – the practical experience requirement has been met
- if exclusion removal POC has been utilised – the practical experience requirement has been met
- if exclusion removal OJT alone is to be utilised – all MANDATORY tasks in the OJT journal.

## **Appendix C**

### **Practical element of type training CASA assessment of SOE - practical hours requirement**

## C.1 Explanatory Information

- a. A Schedule of Experience (SOE) is used to record maintenance experience gained in the work place on type rated aircraft with the objective of documenting evidence of practical experience gained in performing aircraft maintenance.
- b. SOE needs to cover a cross section of tasks representative of the aircraft and systems both in complexity and in the technical input required to complete the task. While relatively simple tasks may be included, other more complex maintenance tasks shall also be incorporated and undertaken as appropriate to the aircraft type. Each task shall be signed off by the AME and the supervising LAME. This is usually peer to peer and shall take place on aircraft or at a work place involving actual work tasks. SOE includes both line and base maintenance tasks. SOE hour's requirements are outlined in the tables below.
- c. CASA Maintenance Personnel Licensing (MPL) section is responsible for the assessment of all AMC 4 SOE applications.
- d. SOE assessments under AMC 4 are available to Category B aircraft engineering licence holders for exclusion removal only (where the aircraft type rating or part thereof has previously been issued). The initial issue of an aircraft type rating (or part thereof) may only be granted utilising Part 66 theoretical and practical, including On the Job Training (OJT) where applicable.
- e. Applicants seeking to utilise AMC4 for exclusion removal from a B1 category and exclusion removal from a first type rating need to have completed CASA basic exams QA, QC, QD, QE, EB, ED, IA & IZ and applicable B1 aircraft theory type training; however, full Category B1 licence holders do not need to undertake the additional CASA basic exams.
- f. Information contained in AAC 9-0 pertaining to SOE compilation is applicable to AMC 4 SOE applications.
- g. For other licence Category and/or aircraft type rating exclusion removals not listed in this document refer to the relevant Airworthiness Advisory Circular (AAC) 9-91, 9-92, 9-93, 9-94 and or 9-95 available on the CASA website.

**CIVIL AVIATION SAFETY AUTHORITY**

**SCHEDULE OF EXPERIENCE**

**CERTIFICATE OF COMPLETION**

I certify that I have completed this Schedule of Experience in accordance with its instructions and associated Airworthiness Advisory Circulars, and that it is true in every respect. In doing so I have physically performed all tasks entered in this Schedule of Experience.

Aircraft Type: \_\_\_\_\_

Name: \_\_\_\_\_

ARN: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## C.2 ATA hourly requirement table

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**Surname:**

**Given Names:**

**ARN:**

**Aircraft Type:**

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**Basis for reduced experience (see notes below):**

**Accepted By (AWI):**

**AWI Signature:**

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## C.3 Notes (applicable to tables below)

- Column 1 represents the B1 licence ATA chapter privileges.
- Column 2 represents the hours required for Category B1 and aircraft type rating exclusion removal.
- Column 3 hours reflect a reduction, where indicated, for aircraft type rating exclusion removal where the applicant already holds a full Category B1 licence with no relevant exclusions (E1, E4 & E5).
- Column 4 is for the recording use of the assessing MPL Airworthiness Inspector (AWI).
- If B1 aircraft type training practical (POC) has been undertaken, a 25% reduction to the hours indicated below is available.
- If utilising AMC 4 for second and subsequent aircraft type rating exclusion removal, an additional 25% reduction to the hours indicated below is available (to a maximum 50% reduction).



Table 1: SOE hours required for aircraft above 30,000kgs

ATA Chapter	Category and aircraft type rating exclusion removal	Aircraft type rating only exclusion removal	Hours Achieved (MPL AWI use only)	ATA Chapter	Category and aircraft type rating exclusion removal	Aircraft type rating only exclusion removal	Hours Achieved (MPL AWI use only)	ATA Chapter	Category and aircraft type rating exclusion removal	Aircraft type rating only exclusion removal	Hours Achieved (MPL AWI use only)
6-10	0	0		34	2	2		52	5	5	
21*	15	10		35	0	0		53, 54 & 57	0	0	
22 (LRU)	2	2		36*	5	5		55	0	0	
23 (LRU)	2	2		37	N/A to > 30000 kg			61	N/A to > 30000 kg		
24	85	70		38	5	5		71 & 72	0	0	
25	5	5		41	N/A to > 30000 kg			73	5	5	
26	5	5		42	2	2		74	0	0	
27*	15	10		44	2**	2**		75	0	0	
28*	15	10		45	2**	2**		76	0	0	
29*	5	5		46	2**	2**		77*	5	5	
30	10	5		47	0	0		78	0	0	
31 (LRU)	2	2		49*	5	5		79	0	0	

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ATA Chapter	Category and aircraft type rating exclusion removal	Aircraft type rating only exclusion removal	Hours Achieved (MPL AWI use only)	ATA Chapter	Category and aircraft type rating exclusion removal	Aircraft type rating only exclusion removal	Hours Achieved (MPL AWI use only)	ATA Chapter	Category and aircraft type rating exclusion removal	Aircraft type rating only exclusion removal	Hours Achieved (MPL AWI use only)
32	15	10		50	0	0		80	0	0	
33	15	10		51	0	0					
<p>*SOE required within these ATA chapters must contain elements of electrical and instrument tasks  ** Only applicable if system fitted to aircraft</p>											

**Table 2: SOE hours required for aircraft below 30,000kgs**

ATA Chapter	Category and aircraft type rating exclusion removal	Aircraft type rating only exclusion removal	Hours Achieved (MPL AWI use only)	ATA Chapter	Category and aircraft type rating exclusion removal	Aircraft type rating only exclusion removal	Hours Achieved (MPL AWI use only)	ATA Chapter	Category and aircraft type rating exclusion removal	Aircraft type rating only exclusion removal	Hours Achieved (MPL AWI use only)
6-10	0	0		34 (LRU)	2	2		52	5	5	
21*	15	10		35	0	0		53, 54 & 57	0	0	
22 (LRU)	2	2		36*	5	5		55	0	0	
23 (LRU)	2	2		37	5**	5**		61	0	0	
24	65	50		38	5**	5**		71 & 72	0	0	
25	5	5		41	0	0		73	5	5	
26	5	5		42 (LRU)	2	2		74	0	0	
27*	10	5		44 (LRU)	2**	2**		75	0	0	
28*	15	10		45 (LRU)	2**	2**		76	0	0	
29*	5	5		46 (LRU)	2**	2**		77*	5	5	
30	10	5		47	0	0		78	0	0	

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ATA Chapter	Category and aircraft type rating exclusion removal	Aircraft type rating only exclusion removal	Hours Achieved (MPL AWI use only)	ATA Chapter	Category and aircraft type rating exclusion removal	Aircraft type rating only exclusion removal	Hours Achieved (MPL AWI use only)	ATA Chapter	Category and aircraft type rating exclusion removal	Aircraft type rating only exclusion removal	Hours Achieved (MPL AWI use only)
31 (LRU)	2	2		49*	5**	5**		79	0	0	
32	10	5		50	0	0		80	0	0	
33	15	10		51	0	0					

\*SOE required within these ATA chapters must contain elements of electrical and instrument tasks

\*\* Only applicable if system fitted to aircraft

**Table 3: SOE hours required for helicopters**

ATA Chapter	Category and aircraft type rating exclusion removal	Aircraft type rating only exclusion removal	Hours Achieved (MPL AWI use only)	ATA Chapter	Category and aircraft type rating exclusion removal	Aircraft type rating only exclusion removal	Hours Achieved (MPL AWI use only)	ATA Chapter	Category and aircraft type rating exclusion removal	Aircraft type rating only exclusion removal	Hours Achieved (MPL AWI use only)
6-10	0	0		32	5**	5**		64 & 65	0	0	
21*	15**	10**		33	15	10		67	5	5	
22 (LRU)	2**	2**		34 (LRU)	2	2		71 & 72	0	0	
23 (LRU)	2	2		42 (LRU)	2	2		73	5	5	
24	60	50		44 (LRU)	2**	2**		74	0	0	
25	5	5		45 (LRU)	2**	2**		75	0	0	
26	5**	5**		46 (LRU)	2**	2**		76	0	0	
28*	5	5		52 & 56	5**	5**		77*	5	5	
29*	5	5		53	0	0		78	0	0	
30	5	5		55	0	0		79	0	0	
31 (LRU)	2	2		62 & 63	0	0		80	0	0	
*SOE required within these ATA chapters must contain elements of electrical and instrument tasks											
** Only applicable if system fitted to aircraft											