

#### **RECORD OF CHANGE – DASR RELEASE 27 JUL 2023**

- 1. This document records all changes to the Defence Aviation Safety Regulation (DASR) introduced in the 27 July 23 release. An overview of noteworthy changes is available in the <u>Summary of Change</u>.
- 2. An index of all changes, grouped by DASR part, is provided in Table 2 below. Each entry is hyperlinked to an Amendment Record that documents the rationale for the change, previous text and revised text.
- 3. Each change is classified as Major, Minor or Editorial according to its impact. Table 1 below provides classification definitions and identifies the colour coding used in Table 2.
- 4. The DASR Change Proposal (DCP) reference number associated with each change is provided for traceability. A single DCP may introduce several changes having similar effect and may affect multiple DASR parts. Any Notices of Proposed Amendment and associated Comment Response Documents issued by DASA are available on the DASA web site and are identified by the same DCP reference number.
- 5. Any revised text within the Initial and Continuing Airworthiness regulations that is unique to DASR, i.e. different to the base European Military Airworthiness Requirements, is highlighted green.
- 6. This document is intended to be accessed in electronic format using bookmarks and hyperlinks for navigation; the page numbers applied to Amendment Records do not reflect page numbers within this compiled Record of Change.

Major	Introduces significant regulation change with a corresponding change to compliance requirements.
Minor	Improves the regulation but does not change the intent or impose new regulation.
Editorial	Applies changes such as corrections or updates to terminology.

#### Table 1. Change classifications and colour coding





Australian Government Department of Defence Defence Aviation Safety Authority

**Defence Aviation Safety Authority** 

Table 2. Index of changes

Short Title (DCP Reference)	Amendment Record	Change Classification	DASR Clause
General			
Align OpSpec terminology across DASR (DCP 2023-003)		Editorial	Glossary - Military Air Operator Certificate (MAOC) Acronym List - OpSpec GM ARO.100.A.5.C GM ARO.100.A.5.C GM ARO.100.A.6 GM ARO.100.B.2 ARO.100.C AMC ARO.100.C.1.C AMC ARO.100.C.2.E.ii AMC ARO.100.C.2.E.ii AMC ARO.100.C.7.B AMC ARO.100.C.7.C GM ARO.100.C.7.C GM ARO.100.C.4 ORO.30.A.1.i ACD.20.B AMC ACD.20.B GM FT.05.A
Replacement of 'derogation' with 'exception' (DCP 2023-007)		Minor	GR.25 (d) GR.25 (e) GR.80 (b) GM GR.80 (d) 21.1 General (a) 2.



		21.A.14 21.A.14 AMC 21.A.95 21.A.95 21.A. 21.A.101 21.A.112B 21.A.117 21.A.432B 21.A.604 21.A.803 21.A.804 21.A. M.A.201 AMC M.A.708(c) M.A.710 M.A.801 AMC 145.A.30(f) 145.A.30 145.A.42 145.A.50 147.A.105 147.A.145 ORO.30 (AUS) (b) MED.05
MED.05 & ORO.60 – Updated terminology (DCP 2023-012)	Editorial	Acronym List - AVMED, AVMO & SAVMO Glossary MED.05 GM MED.05 AMC MED.05(a) GM MED.05(b)

			AMC MED.05(c) GM MED.05(d) GM MED.05(e) AMC2 MED.05(e)2 AMC1 MED.05(e)2 GM MED.05(e)3 GM MED.05(e)4 GM MED.05(g) GM MED.05(j) GM MED.05(j) GM MED.05(k) GM MED.05(m) AMC ORO 60 A
DASR 21 – Aircraft Design, Production and Certification	J		
DASR 21 Structural Integrity AMC/GM minor updates (DCP 2022-034)		Minor	Glossary – Critical Parts AMC1 21.A.3A(a) AMC 21.A.44(c) AMC1 21.A.97 AMC 21.A.174(b) AMC 21.A.174(b)(3)
DASR 21 Subparts B,D&E updates to AMC/GM to align with EMAR 21 2.0 (DCP 2023-020)		Minor	AMC 21.A.14(b) GM 21.A.14(b) AMC 21.A.14(c) AMC 21.A.14(c) AMC 21.A.15(b) AMC 21.A.15(b) GM 21.A.15(c) GM 21.A.15(c) GM 21.A.15(f) GM 21.A.20 AMC 21.A.20(c)

Page 3 of 5

DASR 145 – Requirements for Maintenance Organisations			GM 21.A.33(d) GM 21.A.35 GM1 21.A.35 GM1 21.A.35 AMC 21.A.44(a) GM 21.A.91 Appendix A to GM 21.A.91 GM 21.A.92 (a) GM 21.A.101 Appendix A to GM 21.A.101 Appendix B to GM 21.A.101 Appendix C to GM 21.A.101 Appendix C to GM 21.A.101 Appendix E to GM 21.A.101 Appendix F to GM 21.A.101 Appendix G to GM 21.A.101 Appendix H to GM 21.A.101 Appendix I to GM 21.A.101 Appendix J to GM 21.A.101 AMC 21.A.112B(c) AMC 21.A.118(a)
	ſ		
Replace the term 'conduct' with 'performance' and improve the clarity of AMC1 145.A.30(f) – Personnel Requirements (AUS) (DCP 2023-013)		Minor	AMC1 M.A.145.A.30(f) GM M.A.145.A.60(a) GM M.A.202(a) AMC M.A.145.A.30(f) AMC2 M.A.145.A.30(f)
Improve the clarity of AMC1 145.A.35(b) - Certifying staff and support staff (AUS) (DCP 2023-014)		Minor	AMC1 145.A.35(b)

Page 4 of 5

DASR Glossary			
Update glossary definition of Airworthiness Directive (DCP 2022-033)		Editorial	Glossary – Airworthiness Directive
Update glossary definition of Delegate of the Safety Authority (DoSA) (DCP 2023-015)		Editorial	Glossary - Delegate of the Safety Authority
DASR M – Continuing Airworthiness Management			
Simplify and Clarify the Issue of CRS (DCP 2021-035)		Minor	New GM1 M.A.708 M.A.708(b) paragraph 4. GM M.A.708(c) M.A.710(a) paragraph 8 M.A.802 New AMC M.A.802(c) AMC M.A.201(g)
DASR MED – Medical			
Replaced 'JBAC' with 'Air Traffic Controllers'.(DCP 2023-006)		Editorial	GM MED.10.A
Reloction of TMUFF guidance from MED.15 to IAM controlled OIP (DCP 2023-023)		Minor	AMC MED.15.A GM MED.15.A

Page 5 of 5



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#### DASR AMENDMENT RECORD DCP 2023 - 003

DASR CLAUSE: VARIOUS

#### **RATIONALE FOR CHANGE**

Align terminology across DASR.

#### REVISION

All variations of 'OpSpec' and 'Operations Specification' will be harmonised as specified in column 4.

Regulation	Sub paragraph	Current text	Proposed text
ARO	GM ARO.100.A.5.C first instance	Operations Specifications	Operations Specification (OpSpec)
	GM ARO.100.A.5.C second instance	Operations Specifications	Operations Specification
	GM ARO.100.A.6	Operations Specifications (OpSpec)	OpSpec
	GM ARO.100.B.2	Operations Specifications (OpSpec)	Operations Specification (OpSpec)
	ARO.100.C	Operational Specifications	Operations Specification (OpSpec)
	AMC ARO.100.C.1.C	Operations Specifications (OpSpec)	Operations Specification (OpSpec)
	AMC ARO.100.C.2.E.ii first instance	OPSPEC	OpSpec
	AMC ARO.100.C.2.E.ii second instance	OPSPEC	OpSpec
	AMC ARO.100.C.7.B	Operations Specifications	Operations Specification
	AMC ARO.100.C.7.C	Operations Specifications	Operations Specification
	GM ARO.100.C.4	operations specifications	OpSpec
ORO	ORO.30.A.1.i	OPSPEC	OpSpec
ACD	ACD.20.B	Operational Specification (OPSPEC)	Operations Specification (OpSpec)
	AMC ACD.20.B [title]	OPSPEC	OpSpec
FT	GM FT.05.A	OpSpecs	OpSpec
Glossary	Military Air Operator Certificate (MAOC)	Operations Specifications (OpSpec)	Operations Specification (OpSpec)
Acronym List	OpSpec	Operations Specifications	Operations Specification



[OFFICIAL]



Australian Government
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#### DASR AMENDMENT RECORD DCP 2023 - 007

DASR CLAUSE: Various DASR

#### **RATIONALE FOR CHANGE**

All instances of 'derogation' in DASR have been replaced with 'exception'. The intended meaning of the term 'derogation' was inconsistent with its dictionary definition. The term 'exception' is considered to be equivalent in meaning while being more readily understood. All instances of 'by derogation' have been replaced with 'by way of exception' in order to ensure clarity.

#### **CURRENT REGULATION TEXT**

See the attached document below

#### **REVISED REGULATION TEXT**

See the attached document below



#### Attachment to DCP 2023-007 Replacement of 'derogation' with 'exception'

#### Introduction

This document describes all changes required in respect of DCP 2023-007 Replacement of 'derogation' with 'exception'. 1.

#### Amendments

2. All amendments are detailed in Table 1 below; changes are identified in red text. All instances of 'derogation' are replaced with 'exception', with minor nearby amendments for grammatical consistency. All instances of 'by derogation' are replaced with 'by way of exception' in order to ensure clarity of intent.

Regulation	Sub paragraph	Current text (excerpt)	Proposed text (excerpt)
Introduction	GR.25 Operation of State Aircraft (d)	By way of derogation from paragraph (b) and (c), an aircraft may be operated where a valid permit to fly has been issued. Any such permit to fly must be issued in accordance with DASR 21 Subpart P <i>Military Permit to Fly</i> .	By way of exception from pa where a valid permit to fly h issued in accordance with D
	GR.25 Operation of State Aircraft (e)	By way of derogation from paragraph (b) and (c), UAS may be operated without a type-certificate or certificate of airworthiness, provided they are compliant with DASR UAS.10.	By way of exception from pa without a type-certificate or compliant with DASR UAS.1
	GR.80 Flexibility provisions (b)	Where an equivalent level of protection to that attained by the application of the DASR can be achieved by other means, DASA may approve derogation from those DASR.	Where an equivalent level of the DASR can be achieved be from those DASR.
	GM GR.80 (d) – Flexibility Provisions 1b	prior Authority approval for a derogation or a reduced level of protection as provided for at GR.80 (b) and GR.80 (c) respectively.	prior Authority approval for provided for at GR.80 (b) an
Initial Airworthiness	Introduction – 21.1 General (a) 2.	Aircraft (d)By way of derogation from paragraph (b) and (c), an aircraft may be operated where a valid permit to fly has been issued. Any such permit to fly must be issued in accordance with DASR 21 Subpart P Military Permit to Fly.Aircraft (e)By way of derogation from paragraph (b) and (c), UAS may be operated without a type-certificate or certificate of airworthiness, provided they are compliant with DASR UAS.10.s (b)Where an equivalent level of protection to that attained by the application of the DASR can be achieved by other means, DASA may approve derogation from those DASR.Provisions 1bprior Authority approval for a derogation or a reduced level of protection as provided for at GR.80 (b) and GR.80 (c) respectively.'al (a) 2.By way of derogation from point 1, an organisation whose principal place of business is in a non-participating Member State, or where a participating Member State (pMS) has not yet transposed EMAR 21 in their national military airworthiness regulations, may demonstrate its capability by holding a certificate or similar approval issued by an authority of that State for the product, part and appliance for which it applies, provided:of capability (b)By way of derogation from paragraph (a), as an alternative procedure to 	By way of exception from per business is in a non-particip Member State (pMS) has no military airworthiness regul a certificate or similar appro product, part and appliance
	21.A.14 – Demonstration of capability (b)	By way of derogation from paragraph (a), as an alternative procedure to demonstrate its capability, an applicant may seek Authority agreement for the use of procedures setting out the specific design practices, resources and sequence of activities necessary to comply with this DASR, under the following:	By way of exception from pa demonstrate its capability, a the use of procedures settir sequence of activities neces following:

Table 1 Changes to be incorporated through DCP 2023-007

aragraph (b) and (c), an aircraft may be operated has been issued. Any such permit to fly must be DASR 21 Subpart P Military Permit to Fly.

aragraph (b) and (c), UAS may be operated r certificate of airworthiness, provided they are 0.

of protection to that attained by the application of by other means, DASA may approve exception

an exception or a reduced level of protection as d GR.80 (c) respectively.

oint 1, an organisation whose principal place of ating Member State, or where a participating ot yet transposed EMAR 21 in their national ations, may demonstrate its capability by holding oval issued by an authority of that State for the for which it applies, provided:

aragraph (a), as an alternative procedure to an applicant may seek Authority agreement for ng out the specific design practices, resources and ssary to comply with this DASR, under the

Regulation	Sub paragraph	Current text (excerpt)	Proposed text (excerpt)
	21.A.14 – Demonstration of capability (c)	By way of derogation from paragraph (a) and (b), any government organisation applying for a type-certificate or restricted type-certificate may demonstrate its capability by having an agreement in place, accepted by the Authority, in accordance with DASR 21.A.2 with a design organisation which has access to the type design data. The agreement shall include detailed statements how the actions and obligations are delegated to enable the government organisation, in cooperation with the contracted organisation, to comply with the requirements of DASR 21 Subpart J, including demonstration of compliance with DASR 21.A.44.	By way of exception from pa organisation applying for a tr demonstrate its capability by Authority, in accordance wit has access to the type design statements how the actions government organisation, in to comply with the requirem demonstration of complianc
	AMC 21.A.95 – Requirements for the approval of a minor change (c)	By derogation from the above, airworthiness requirements that became applicable after those incorporated by reference in the MTC may be used for the approval of a minor change (see the guidance below on airworthiness requirements that became applicable after those 'incorporated by reference in the type certificate').	By way of exception from the became applicable after thos used for the approval of a m airworthiness requirements by reference in the type cert
	Sub paragraph         Current text (except)           21.A.14 - Demonstration of capability (c)         By way of derogation from paragraph (a) and (b), any government organisation applying for a type-critificate or restricted type-critificate may demonstrate its capability by having an agreement in place, accepted by the Authority, in accordance with DASR 21.A.2 with a design organisation which has access to the type design data. The agreement shall include detailed statements how the actoriance with DASR 21.A.24th action organisation, to comput with the contracted organisation, to comput with the requirements of DASR 21.DAPT. Including demonstration of compliance with DASR 21.A.44.           AMC 21.A.95 - Requirements for the approval of a minor change (c)         By derogation from the above, incorporated by reference in the MTC may be used for the approval of a minor change (c)           21.A.95 - Requirements for approval of a minor change (see the guidance below on allworthiness requirements that became applicable after those incorporated by reference in the type-certificate c an be used for approval of a minor change, provided they do not affect the demonstration of compliance.           21.A.101 - Type-certification basis and environmental protection requirements for approval of a minor change, provided they do not affect the demonstration of compliance.           21.A.101 - Type-certification basis and environmental protection requirements (b)         By derogation from (a), an earlier amendment to an airworthiness requirement if proceeding to a type-certificate (b)           21.A.101 - Type-certification basis and environmental protection requirements (c)         By derogation from (a) and to any other airworthines requirement which the corresponding airworthines requirement if pro	By way of exception from (b) applicable after those incorp be used for approval of a min demonstration of complianc	
	21.A.101 – Type-certification basis and environmental protection requirements for a major change to a type-certificate (b)	By derogation from (a), an earlier amendment to an airworthiness requirement referred to in (a), and to any other airworthiness requirement which is directly related may be used in any of the following situations, unless the earlier amendment became applicable before the date at which the corresponding airworthiness requirements incorporated by reference in the type-certificate became applicable:	By way of exception from (a) requirement referred to in (a which is directly related may unless the earlier amendmen the corresponding airworthin the type-certificate became
	21.A.101 – Type-certification basis and environmental protection requirements for a major change to a type-certificate (e)	By derogation from (a) and (b), the change and areas affected by the change may comply with an alternative to an applicable airworthiness requirement if proposed by the applicant, provided that the Authority finds that the alternative provides a level of safety which is:	By way of exception from (a) change may comply with an requirement if proposed by that the alternative provides
	21.A.112B – Demonstration of capability (b)	By way of derogation from paragraph a, as an alternative procedure to demonstrate its capability, an applicant may seek Authority agreement for the use of procedures setting out the specific design practices, resources and sequence of activities necessary to comply with this Subpart.	By way of exception from pa demonstrate its capability, a the use of procedures setting sequence of activities necess
	21.A.112B – Demonstration of capability (c)	By way of derogation from paragraph (a) and (b), any government organisation applying for a supplemental type-certificate may demonstrate its capability by having an agreement in place, accepted by the Authority, in accordance with DASR 21.A.2 with a design organisation which has access to the type design data.	By way of exception from pa organisation applying for a s its capability by having an ag accordance with DASR 21.A. the type design data.
	21.A.117 – Changes to that part of a product covered by a supplemental type-certificate (c)	By way of derogation from paragraph b, a major change to that part of a product covered by a supplemental type-certificate submitted by the supplemental type-certificate holder itself may be approved as a change to the existing supplemental type-certificate.	By way of exception from pa product covered by a supple supplemental type-certificat the existing supplemental ty

aragraph (a) and (b), any government type-certificate or restricted type-certificate may by having an agreement in place, accepted by the th DASR 21.A.2 with a design organisation which gn data. The agreement shall include detailed and obligations are delegated to enable the n cooperation with the contracted organisation, ments of DASR 21 Subpart J, including ce with DASR 21.A.44.

ne above, airworthiness requirements that ose incorporated by reference in the MTC may be ninor change (see the guidance below on s that became applicable after those 'incorporated tificate').

b)(1), airworthiness requirements which became porated by reference in the type-certificate can inor change, provided they do not affect the ce.

a), an earlier amendment to an airworthiness (a), and to any other airworthiness requirement y be used in any of the following situations, ent became applicable before the date at which iness requirements incorporated by reference in applicable:

) and (b), the change and areas affected by the alternative to an applicable airworthiness the applicant, provided that the Authority finds s a level of safety which is:

aragraph a, as an alternative procedure to an applicant may seek Authority agreement for ng out the specific design practices, resources and ssary to comply with this Subpart

aragraph (a) and (b), any government supplemental type-certificate may demonstrate greement in place, accepted by the Authority, in .2 with a design organisation which has access to

aragraph b, a major change to that part of a emental type-certificate submitted by the te holder itself may be approved as a change to ype-certificate.

Regulation	Sub paragraph	Current text (excerpt)	Proposed text (excerpt)
	21.A.432B – Demonstration of capability (b)	By way of derogation from paragraph (a), as an alternative procedure to demonstrate its capability, an applicant may seek Authority agreement for the use of procedures setting out the specific design practices, resources and sequence of activities necessary to comply with this Subpart.	By way of exception from pa demonstrate its capability, a the use of procedures settin sequence of activities neces
	21.A.432B – Demonstration of capability (c)	By way of derogation from paragraph (a) any government organisation applying for a major repair design approval may demonstrate its capability in accordance with DASR 21.A.2 and DASR 21.A.14(c), including demonstration of compliance with DASR 21.A.451.	By way of exception from pa applying for a major repair of accordance with DASR 21.A. of compliance with DASR 21
	21.A.604 – AUSMTSO Authorisation for an Auxiliary Power Unit (a)	DASR 21.A.15, DASR 21.A.16B, DASR 21.A.17A, DASR 21.A.20, DASR 21.A.21, DASR 21.A.31, DASR 21.A.33, and DASR 21.A.44 shall apply by way of derogation from DASR 21.A.603, DASR 21.A.606(c), DASR 21.A.610 and DASR 21.A.615, except that an AUSMTSO authorisation shall be issued in accordance with DASR 21.A.606 instead of the type-certificate;	DASR 21.A.15, DASR 21.A.16 DASR 21.A.31, DASR 21.A.33 exception from DASR 21.A.6 21.A.615, except that an AU accordance with DASR 21.A.
	21.A.604 – AUSMTSO Authorisation for an Auxiliary Power Unit (b)	Subpart D or Subpart E of this DASR is applicable for the approval of design changes by way of derogation from DASR 21.A.611. When Subpart E is used, a separate AUSMTSO authorisation shall be issued instead of a supplemental type-certificate.	Subpart D or Subpart E of th changes by way of exception separate AUSMTSO authoris type-certificate.
	21.A.803 – Handling of identification data (c)	By way of derogation from paragraphs (a) and (b), any organisation performing maintenance work under the applicable associated implementing rules may, in accordance with methods, techniques and practices established by the Authority:	By way of exception from pa performing maintenance we rules may, in accordance wi by the Authority:
	21.A.804 – Identification of parts and appliances (b)	By way of derogation from paragraph a, if the Authority agrees that a part or appliance is too small or that it is otherwise impractical to mark a part or appliance with any of the information required by paragraph a, the authorised release document accompanying the part or appliance or its container shall include the information that could not be marked on the part.	By way of exception from pa appliance is too small or tha appliance with any of the in authorised release documer container shall include the in
	21.A.807 – Identification of AUSMTSO articles (b)	By way of derogation from paragraph a, if the Authority agrees that a part is too small or that it is otherwise impractical to mark a part with any of the information required by paragraph a, the authorised release document accompanying the part or its container shall include the information that could not be marked on the part.	By way of exception from pa too small or that it is otherw information required by par accompanying the part or it could not be marked on the
DASR M – Continuing Airworthiness Management	M.A.201 – Responsibilities (k)	By derogation to paragraph (h)1, an Operating Organisation may contract/task an organisation approved in accordance with DASR M.A. Subpart G, for the management of the continuing airworthiness of the aircraft it operates. In this case, a written contract/arrangement shall be made and the CAMO assumes responsibility for the proper accomplishment of these tasks.	By way of exception to para contract/task an organisatio Subpart G, for the managem aircraft it operates. In this ca made and the CAMO assum of these tasks.

aragraph (a), as an alternative procedure to an applicant may seek Authority agreement for ng out the specific design practices, resources and ssary to comply with this Subpart.

aragraph (a) any government organisation design approval may demonstrate its capability in ..2 and DASR 21.A.14(c), including demonstration 1.A.451

6B, DASR 21.A.17A, DASR 21.A.20, DASR 21.A.21, 3, and DASR 21.A.44 shall apply by way of 603, DASR 21.A.606(c), DASR 21.A.610 and DASR JSMTSO authorisation shall be issued in ..606 instead of the type-certificate;

nis DASR is applicable for the approval of design n from DASR 21.A.611. When Subpart E is used, a sation shall be issued instead of a supplemental

aragraphs (a) and (b), any organisation ork under the applicable associated implementing ith methods, techniques and practices established

aragraph a, if the Authority agrees that a part or at it is otherwise impractical to mark a part or iformation required by paragraph a, the nt accompanying the part or appliance or its information that could not be marked on the part

aragraph a, if the Authority agrees that a part is wise impractical to mark a part with any of the ragraph a, the authorised release document ts container shall include the information that e part.

agraph (h)1, an Operating Organisation may on approved in accordance with DASR M.A. nent of the continuing airworthiness of the case, a written contract/arrangement shall be nes responsibility for the proper accomplishment

Regulation	Sub paragraph	Current text (excerpt)	Proposed text (excerpt)
	AMC M.A.708(c) - Continuing airworthiness management* para 6	Such a maintenance arrangement does not absolve the Operating Organisation from its overall continuing airworthiness responsibility unless derogation clause DASR M.A.201(k) is enacted. Specifically, in order to accept the maintenance arrangement, the NMAA should be satisfied that such an arrangement allows the Operating Organisation to ensure full compliance with responsibilities pursuant to DASR M.A.201—Responsibilities.	Such a maintenance arrange Organisation from its overall exception clause DASR M.A. the maintenance arrangement arrangement allows the Ope with responsibilities pursuar
	AMC M.A.708(c) - Continuing airworthiness management* para 7	Personnel requirements, continuing airworthiness management group of persons and staff unless derogation clause DASR M.A.201(k) is enacted	Personnel requirements, cor persons and staff unless ex
	M.A.710 – Airworthiness review (d)	By derogation to DASR M.A.901(a), the airworthiness review can be anticipated by a maximum period of 90 days without loss of continuity of the airworthiness review pattern, to allow the physical survey to take place during a maintenance check.	By way of exception to DASF anticipated by a maximum p airworthiness review pattern during a maintenance check
	M.A.801 – Aircraft certificate of release to service (AUS) (g)	By derogation from paragraph (b) and notwithstanding the provisions of paragraph (h), when the maintenance prescribed cannot be completed, a certificate of release to service may be issued within the approved aircraft limitations.	By way of exception from pa of paragraph (h), when the r certificate of release to servi limitations.
egulationSub paragraphCurrentAMC M.A.708(c) - Continuing airworthiness management* para 6Such a m Organis derogati the main arranger with resAMC M.A.708(c) - Continuing airworthiness management* para 7Personn personsAMC M.A.708(c) - Continuing airworthiness management* para 7Personn personsAMC M.A.708(c) - Continuing airworthiness review (d)By derog anticipat airworth during a By derog paragraj certificaASR 145 - Requirements or Maintenance reganisationsAMC 145.A.30(f) - Personnel Requirements 4.a.By derog examina paragraj certifica limitatioASR 145 - Requirements or Maintenance reganisationsAMC 145.A.30(f) - Personnel Requirements 4.a.By derog examina paragraj certifica limitatioASR 145 - Requirements or Maintenance reganisationsAMC 145.A.30 - Personnel requirements (f) 1.By derog examina ertifica lin aci ocomply comply comply comply comply comply such con transfer organisBy derog ertification of maintenance (e)145.A.50 - Certification of maintenance (e)By derog ertification of maintenance (f) By derog comply comply comply comply comply such con transfer organisASR 147 - Aircraft Aintenance Training organisation147.A.105 - Personnel requirements (d)By derog practica nominal maintenance fragmanistion	By derogation to paragraph 4, the conduct and/or oversight of NDT examinations can be performed by an Authority approved (DASR Form 4) NDT Responsible Level 3 appointment holder, without being under the general control of a national aerospace NDT board.	By way of exception to paraget examinations can be perform NDT Responsible Level 3 app general control of a national	
	145.A.30 – Personnel requirements (f) 1.	By derogation to paragraph (f), a maintenance organisation may authorise those personnel specified in paragraphs (g) and (h)(1), qualified in Category B1 in accordance with DASR 66 or national equivalent qualification, to carry out and/or control colour contrast dye penetrant inspections/visible dye penetrant inspections which are to be detailed in the MOE.	By way of exception to parag authorise those personnel sp Category B1 in accordance w to carry out and/or control of dye penetrant inspections w
	145.A.30 – Personnel requirements (j)	By derogation to paragraphs (g) and (h), in relation to the obligation to comply with DASR 66 or equivalent the maintenance organisation may use certifying staff qualified in accordance with the following provisions:	By way of exception to parage comply with DASR 66 or equ certifying staff qualified in a
	145.A.42 – Acceptance of components 3 ii.	arrange for the components to be mutilated in a manner that ensures they are beyond economic salvage or repair before relinquishing responsibility for such components. By derogation, a CAMO/Operating Organisation may transfer responsibility of components classified as unsalvageable to an organisation for training or research without mutilation.	arrange for the components are beyond economic salvag such components. By way of transfer responsibility of cor organisation for training or r
	145.A.50 – Certification of maintenance (e)	By derogation to paragraph (a), when the AMO is unable to complete all maintenance ordered/tasked, it may issue a CRS within the approved aircraft limitations.	By way of exception to paraget all maintenance ordered/taset aircraft limitations.
	145.A.50 – Certification of maintenance (f)	By derogation to paragraphs (a) and DASR 145.A.42 when an aircraft is grounded at a location other than the Main Operation Base (MOB) due to the non-availability of a component with an appropriate release certificate, it is permissible to temporarily fit a component with another release certificate,	By way of exception to paraget grounded at a location other non-availability of a compon permissible to temporarily fi
DASR 147 – Aircraft Maintenance Training Organisation	147.A.105 – Personnel requirements (d)	By derogation to paragraph (c), when another organisation is used to provide practical training and assessments, such other organisation's staff may be nominated to carry out practical training and assessments.	By way of exception to paraget provide practical training and may be nominated to carry of

ement does not absolve the Operating Il continuing airworthiness responsibility unless .201 (k) is enacted. Specifically, in order to accept ent, the NMAA should be satisfied that such an erating Organisation to ensure full compliance nt to DASR M.A.201—Responsibilities.

ntinuing airworthiness management group of ception clause DASR M.A.201(k) is enacted

R M.A.901(a), the airworthiness review can be period of 90 days without loss of continuity of the rn, to allow the physical survey to take place

aragraph (b) and notwithstanding the provisions maintenance prescribed cannot be completed, a vice may be issued within the approved aircraft

graph 4, the conduct and/or oversight of NDT med by an Authority approved (DASR Form 4) pointment holder, without being under the Il aerospace NDT board.

ngraph (f), a maintenance organisation may specified in paragraphs (g) and (h)(1), qualified in with DASR 66 or national equivalent qualification, colour contrast dye penetrant inspections/visible which are to be detailed in the MOE

graphs (g) and (h), in relation to the obligation to uivalent the maintenance organisation may use accordance with the following provisions:

s to be mutilated in a manner that ensures they ge or repair before relinquishing responsibility for of exception, a CAMO/Operating Organisation may mponents classified as unsalvageable to an research without mutilation.

graph (a), when the AMO is unable to complete sked, it may issue a CRS within the approved

graphs (a) and DASR 145.A.42 when an aircraft is er than the Main Operation Base (MOB) due to the nent with an appropriate release certificate, it is fit a component with another release certificate,

graph (c), when another organisation is used to nd assessments, such other organisation's staff out practical training and assessments.

Regulation	Sub paragraph	Current text (excerpt)	Proposed text (excerpt)
	147.A.145 – Privileges of the Maintenance Training Organisation (c)	By derogation to paragraph (b), the MTO may only conduct training, knowledge examinations and practical assessments in locations different from the paragraph (b) locations in accordance with a control procedure specified in the MTOE. Such locations need not be listed in the MTOE.	By way of exception to para knowledge examinations an from the paragraph (b) loca specified in the MTOE. Such
DASR ORO – Organisation Requirements for Air	ORO.30 – Flight Authorisation (AUS) 3 ii.	by derogation from ORO.30(a)3(i), self-authorisation provisions may apply as follows:	by way of exception from O apply as follows:
Operations	ORO.30 – Flight Authorisation (AUS) 3 iv.	by derogation from ORO.30(a)3(iii):	by way of exception from O
	ORO.30 – Flight Authorisation (AUS) 3 vi.	by derogation from ORO.30(a)3(v), FLTAUTH or changes to FLTAUTH may be given verbally or via electronic means. However:	by way of exception from O may be given verbally or via
	ORO.30 – Flight Authorisation (AUS) (b)	<b>Non-Defence Registered Aircraft (NDRA).</b> By derogation from ORO.30(a), for NDRA Flights that are solely conducted by non-Defence Flight Crew, the requirements of ORO.30(a) do not apply.	Non-Defence Registered Ai ORO.30(a), for NDRA Flights Crew, the requirements of (
DASR MED - Medical	MED.05 – Aviation Medicine (AvMed) Training (AUS) (b)	By derogation from DASR MED.05(a), Aircrew who have completed initial AvMed training conducted by Air Force Interoperability Council (AFIC) member nations are exempt from the requirement to complete initial AvMed training.	By way of exception from D initial AvMed training condu member nations are exemp training.
	MED.05 – Aviation Medicine (AvMed) Training (AUS) (e) 4.	by derogation from DASR MED.05(e)3, in consultation with CO IAM, and risk managed IAW DASR.SMS, the MAO or Sponsor may grant a currency extension	by way of exception from D and risk managed IAW DASI extension
	MED.05 – Aviation Medicine (AvMed) Training (AUS) (f)	By derogation from DASR MED.05(e), Aircrew that hold AvMed training Currency conducted by AFIC member nations are exempt from the requirement to complete AvMed training, while that Currency remains in effect.	By way of exception from D Currency conducted by AFIC requirement to complete Av effect.

agraph (b), the MTO may only conduct training, nd practical assessments in locations different ations in accordance with a control procedure n locations need not be listed in the MTOE.

ORO.30(a)3(i), self-authorisation provisions may

ORO.30(a)3(iii):

RO.30(a)3(v), FLTAUTH or changes to FLTAUTH a electronic means. However:

ircraft (NDRA). By way of exception from s that are solely conducted by non-Defence Flight ORO.30(a) do not apply.

DASR MED.05(a), Aircrew who have completed ucted by Air Force Interoperability Council (AFIC) of from the requirement to complete initial AvMed

DASR MED.05(e)3, in consultation with CO IAM, R.SMS, the MAO or Sponsor may grant a currency

ASR MED.05(e), Aircrew that hold AvMed training C member nations are exempt from the vMed training, while that Currency remains in [OFFICIAL]



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#### DASR AMENDMENT RECORD DCP 2023 - 012

DASR CLAUSE: MED.05, ORO.60

#### **RATIONALE FOR CHANGE**

Update DASR terms and abbreviations in accordance with DHM and IAM PERS 04-03.

#### **CURRENT REGULATION TEXT**

See the attached document BP32928453

#### **REVISED REGULATION TEXT**

See the attached document BP32928453



### DASR MED and DASR ORO.60 - Editorial changes for DASR Jul 23 Release

#### **DASR Glossary Of Terms Updates**

#### **Aviation Medical Certificate\***

A document provided by an AvMO AVMO attesting to the medical fitness of a person to conduct flying related duties.

#### Aviation Medical Officer (AvMO) (AVMO)\*

(no change to definition)

#### Aviation Medicine (AvMED) (AVMED)\*

(no change to definition)

#### Periodic Health Examination (PHE) \*

A more comprehensive assessment that periodically replaces the Specialist Employment Stream Annual Health Assessment (SESAHA) in accordance with Defence policy. Also considered an aviation medical certificate assessment when conducted by an AvMO AVMO.

#### Single Service Aviation Medical Advisor (SSAMA) \*

An Aviation Medical Officer (AvMO) (AVMO) who represents a single Service, is recognised by the Surgeon General–ADF as being qualified to provide authoritative aviation medical advice and is responsible for the implementation of aviation medicine policies.

#### DASP Acronym List Updates

Avmed Avmed	Aviation Medicine
AVMO	Aviation Medical Officer
SAVMO <mark>(new)</mark>	Senior Aviation Medical Officer

#### MED.05 – AVIATION MEDICINE <mark>(AvMed)</mark> (AVMED) TRAINING (AUS)

#### GM MED.05 –<mark>AvMed</mark> AVMED training (AUS)

**Purpose. (Context)** Crew, and High Altitude Parachute Operations (HAPO) personnel, can be subject to AvMed AVMED related effects during Operations. Normally these effects can be controlled using combinations of ground and aircraft systems; Crew, HAPO personnel and Aircraft Controller knowledge, skills and behaviours, and adherence to approved procedures. (Hazard) Suitability For Flight can be compromised when undesired Crew, HAPO personnel or Aircraft Controller knowledge, skills and behaviours result in a failure of Crew, HAPO personnel or Aircraft Controllers to either recognise adverse AvMed AVMED related effects, or to employ appropriate corrective actions. (Defence) This regulation requires Accountable Managers and Sponsors to ensure Crew, HAPO personnel and Aircraft Controllers have prior awareness of the Hazards that are present when humans operate Aircraft in military roles, and receive training in the knowledge and application of AvMed AVMED . This will enhance human performance and contribute effective controls to ensuring Suitability For Flight.

(a) The MAO or Sponsor (Sponsor only applicable under <u>DASR NDR.05</u> or <u>DASR NDR.10</u>) must ensure Aircrew complete initial AvMed AVMED training IAW the learning requirements approved by Commanding Officer (CO) Institute of Aviation Medicine (IAM), prior to conducting flight operations in a military Configuration Role and Environment (CRE).

#### AMC MED.05(a) – Initial AvMed AVMED training (AUS)

- a. The MAO or Sponsor may meet initial AvMed AVMED training requirements by ensuring that Aircrew complete AvMed AVMED training:
- b. Initial AvMed AVMED training scope at IAM should:

iii. regardless of Service, ensure that Aircrew are provided an appropriate level of AvMed AVMED training for the specific Aircraft Type.

c. Initial AvMed AVMED training topics at IAM should include:

i. lectures in AvMed AVMED appropriate to CRE of Aircraft Type to be operated

(b) By derogation way of exception from DASR MED.05(a), Aircrew who have completed initial AvMed AVMED training conducted by Air Force Interoperability Council (AFIC) member nations are exempt from the requirement to complete initial AvMed AVMED training.

#### GM MED.05(b) – Recognition of prior AvMed AVMED training (AUS)

Air Force Interoperability Council (AFIC) Air Standards detail the requirements for AvMed-AVMED training of each AFIC member nation. AvMed-AVMED training that meets the AFIC requirements is acceptable to other AFIC member nations allowing Aircrew to perform flying related duties with any AFIC member nation. The MAO or Sponsor may refer instances of AvMed-AVMED training conducted by non-AFIC member nations to Commanding Officer commanding officer (CO) Institute of Aviation Medicine (IAM) for advice regarding recognition of learning.

(c) The MAO, ANSP, HAPO personnel or Sponsor must ensure all AvMed AVMED related training results are recorded for all relevant personnel.

#### AMC MED.05(c) – Documentation (AUS)

Acceptable means for recording AvMed AVMED related training include: certificates, an enterprise personnel management database, or annotation in flying logbooks.

(d) Where an MAO, ANSP or Sponsor identifies a requirement for additional AvMed AVMED -related training to that provided by IAM, this training is to be co-ordinated and approved under the authority of CO IAM.

#### GM MED.05(d) – Other specific AvMed AVMED training needs (AUS)

For example, Aircrew Instructors may require training specific to the AvMed AVMED aspects of the instructional flight environment.

(e) The MAO or Sponsor must ensure Aircrew maintain AvMed AVMED Currency, as follows:

#### GM MED.05(e) – Supplemental Aviation Medicine <del>(SAvMed)</del> (SAVMED) training (AUS)

- a. **SAvMed SAVMED training** (as defined IAW IAM SI (PERS) 03-04 Aviation Medicine Instructor Standardisation).
  - i. The five-year Currency period for Aircrew <mark>AvMed</mark> AVMED training, benchmarked on AFIC standards, presents a Hazard that knowledge and skills may fade throughout the Currency period.
  - ii. SAVMed SAVMED training provides a control to the Hazard of Aircrew knowledge and skill fade. Additionally, SAVMed SAVMED training provides a means for the MAO and Sponsors to provide tailored AVMED average AVMED related training pertinent to contemporary or emergent AvMed AVMED issues affecting operations within the organisation.

- iii. -SAvMed SAVMED differs from AvMed AVMED training in that it is conducted by a Squadron Aviation Medicine Liaison Officer (SAMLO), Single Service Aviation Medicine Adviser (SSAMA) or an IAM representative and has no defined practical elements. Commanders may schedule SAVMed SAVMED training pertinent to their capability at any time and any location—providing significant flexibility to ensure Aircrew SAVMED currencies are met.
- b. Single Service Aviation Medicine Advisor (SSAMA) (As described in the Defence Health Manual). The SSAMA is responsible for AvMed AVMED advice to the relevant Service; and to ensure AvMed AVMED training meets COMAUSFLT, COMD AVNCOMD, or ACAUST requirements (as applicable to the relevant Service).

1. overall AvMed AVMED Currency is dependent on maintaining both AvMed AVMED Currency and Supplemental Aviation Medicine (SAVMed) (SAVMED) Currency

2. SAVMed SAVMED training Currency is initially set through completion of initial AvMed AVMED training, and reset through either AvMed AVMED refresher training, or SAVMed SAVMED training

#### AMC2 MED.05(e)2 – SAvMed SAVMED training (AUS)

- a. While the minimum Currency requirement for SAVMED SAVMED training is three years, IAM recommends the MAO or Sponsor provides annual SAVMED SAVMED training.
- b. SAVMED training may include:

iii. AvMed AVMED aspects of Occurrence Reporting, as well as accident and incident reports from other global operators relevant to the Aircraft Type being flown.

#### AMC1 MED.05(e)2 – AvMed AVMED refresher training (AUS)

- a. AvMed AVMED refresher training to renew AvMed AVMED Currency is conducted by IAM or, for Navy and Army, a Single Service Aviation Medicine Adviser (SSAMA), as agreed with Commanding Officer (CO) IAM.
- b. <u>AvMed</u> AVMED refresher training should include scope and topics as defined by CO IAM.
- 3. five years is the maximum Currency period for AvMed AVMED training

#### GM MED.05(e)3 - <mark>AvMed</mark> AVMED Currency (AUS)

A five year AvMed AVMED Currency period allows the MAO or Sponsor to set appropriate compliance periods and aligns with the AFIC Air Standard. The MAO or Sponsor may impose more stringent Currency requirements.

4. by derogation way of exception from DASR MED.05(e)3, in consultation with CO IAM, and risk managed IAW <u>DASR.SMS</u>, the MAO or Sponsor may grant a currency extension

#### GM MED.05(e)<mark>4 – <del>AvMed</del> AVMED Currency extension (AUS)</mark>

- 5. three years is the maximum Currency period for SAVMED training.
- (f) By derogation way of exception from DASR MED.05(e), Aircrew that hold AvMed AVMED training Currency conducted by AFIC member nations are exempt from the requirement to complete AvMed AVMED training, while that Currency remains in effect.
- (g) The MAO or Sponsor must obtain endorsement from CO IAM prior to the conduct of Squadron Aviation Medicine Liaison Officer (SAMLO)-provided SAVMED training

#### GM MED.05(g) – Squadron Aviation Medicine Liaison Officer (SAMLO) (AUS)

- a. A SAMLO (as defined IAW IAM SI (PERS) 03-04 *Aviation Medicine Instructor Standardisation*) is an Aircrew member who has received additional AvMed AVMED training to assist in the ongoing provision of SAVMED SAVMED training in conjunction with IAM, the Regional Senior Aviation Medicine Officer (RSAVMO) (RSAVMO) (As defined IAW Defence Health Manual Vol 2 Part 17 Chap 3) or Senior Aviation Medicine Officer (SAVMO) (SAVMO).
- b. SAMLOs are a link between units and IAM on all AvMed AVMED related matters. SAMLO is a secondary duty for Aircrew assigned by their unit.
  - 1. initial and ongoing training requirements (defined by CO IAM) before exercising the privilege of conducting SAVMed SAVMED training
- (i) The MAO or Sponsor must ensure that persons who authorise or operate Uncrewed Aircraft Systems (UAS) in the following categories of UAS, meet the AvMed AVMED training and Currency requirements defined by CO IAM:

#### GM MED.05(i) – UAS Crew (AUS)

Although Remote Pilots and other UAS Crew are normally employed in ground roles, there may be a requirement for tailored AvMed AVMED training relevant to their CRE. For Crew, this is only where there is a Non-Technical Skills (NTS) relationship with the Remote Pilot, critical to flight safety.

(j) Aircraft Controllers within an Air Navigation Service Provider (ANSP) must meet the AvMed AVMED training and Currency requirements defined by CO IAM.

#### GM MED.05(j) – Aircraft Controllers (AUS)

Although Aircraft Controllers are normally employed in ground roles, there may be a requirement for tailored AvMed AVMED training relevant to their CRE. AvMed AVMED subjects of relevance to Aircraft Controllers may include information, but are not necessarily limited to:

- i. enabling Aircraft Controllers to support Crew suffering the effects of AvMed AVMED related issues
- (k) Personnel conducting High Altitude Parachute Operations (HAPO) must meet the AvMed AVMED training and Currency requirements defined by CO IAM.

#### GM MED.05(k) – Personnel conducting High Altitude Parachute Operations (HAPO) (AUS)

- a. There may be a requirement for tailored AvMed AVMED training for personnel conducting HAPO. AvMed AVMED subjects of relevance may include information, but are not necessarily limited to:
  - i. enabling HAPO personnel to recognise and recover from the effects of AvMed AVMED related issues

(I) CO IAM must define UAS Crew, HAPO personnel and Aircraft Controller AvMed-AVMED training and Currency requirements:

#### GM MED.05(m) – AvMed AVMED related Hazards to Aircraft Passengers (AUS)

The control for AvMed AVMED related Hazards to Aircraft Passengers is captured in DASR AMC ORO.70(a) Pre-Flight Briefings.

#### AMC ORO.60.A – Oxygen Management System (AUS)

#### HIGH ALTITUDE EXPOSURE MANAGEMENT

- 5. Controls for aircrew and passengers (to include parachutists) that may reduce the risk of DCI for planned flight above 21 000 ft CA include:
  - c. Time at altitude. After pre-oxygenation, time limits above 21 000 ft CA are applied as specified in Table–1. The time above 21 000 ft CA is based on the highest cabin altitude reached during the sortie. Pilots should descend to or below 10 000 ft CA before the Table–1 time limit is reached. Any breach of Table–1 limits requires an AVMO AVMO assessment before conducting further flight, and requires appropriate safety reporting.

#### VERY HIGH ALTITUDE EXPOSURE MANAGEMENT PROCEDURES

- 9. IAM advice will consider controls for aircrew and passengers (to include parachutists) that may reduce the risk of DCI for planned flight above 25 000 to 38 000 ft CA, which may include:
  - c. Time at altitude. After pre-oxygenation, time limits above 25 000 ft CA are applied as specified in Table–2. The time above 25 000 ft CA is based on the highest cabin altitude reached during the sortie. Pilots should descend to or below 10 000 ft CA before the Table–2 time limit is reached. Any breach of Table–2 limits requires an AVMO AVMO assessment before conducting further flight and appropriate safety reporting.



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#### DASR AMENDMENT RECORD DCP 2022-034

## DASR CLAUSE: AMC1 21.A.3A(a) System for collection, investigation and analysis of data for structure and propulsion systems (AUS).

#### **RATIONALE FOR CHANGE**

New wording addressing the importance of longer-term trending and analysis of occurrences. The wording removes an incorrect sentence regarding the timing of occurrence investigations.

#### **CURRENT REGULATION TEXT**



Investigation and analysis of occurrences for the aircraft structure and propulsion system each require specific expertise and techniques that are different to those typically required for other aircraft systems. Furthermore, occurrences for other aircraft systems are often not investigated or analysed at the time, but entered into a database for later reliability analysis and trend monitoring—this is inadequate for the aircraft structure and propulsion system.

Holders of a type certificate, restricted type certificate, supplemental type certificate or any other relevant approval deemed to have been issued under DASR 21 should ensure that:

- a. each occurrence related to aircraft structure and propulsion systems is promptly collected, investigated and analysed, and
- b. trending and analysis of all occurrences related to aircraft structure and propulsion systems is conducted through the Aircraft Structural Integrity Program (ASIP) and Propulsion System Integrity Program (PSIP) for each aircraft.

Investigation and analysis should compare occurrences with the design and certification assumptions to ensure that the type design continues to comply with the applicable Type Certification Basis and that the risk of failure has been eliminated or otherwise minimised SFARP. This may identify the need to change the type design, including identifying new critical parts and new/amended airworthiness limitations (see <u>DASR AMC 21.A.41</u>), or revising the Instructions for Continuing Airworthiness furnished to operators (see <u>DASR 21.A.61</u>, <u>DASR 21.A.107</u>, <u>DASR 21.A.120</u> and <u>DASR 21.A.449</u>).

**REVISED REGULATION TEXT** 



Some risks and hazards associated with the type design may only become evident from a longer-term view of relevant data. The system for collecting, investigating and analysing reports of, and information related to, failures, malfunctions, defects or other occurrences should therefore include longer-term aggregation, trending and analysis of such reports and information.

Investigation and analysis should compare failures, malfunctions, defects and other occurrences with the design and certification assumptions to ensure that the type certificate continues to comply with the applicable Type Certification Basis and that the risk of failure has been eliminated or otherwise minimised SFARP. This may identify the need to change the type certificate, including new/amended operating limitations or new/amended airworthiness limitations (see <u>DASR AMC 21.A.41</u>), or revise the Instructions for Continuing Airworthiness furnished to operators (see <u>DASR 21.A.61</u>, <u>DASR 21.A.61</u>, <u>DASR 21.A.120</u> and <u>DASR 21.A.449</u>).

For aircraft structure and propulsions systems, longer-term aggregation, trending and analysis of relevant failures, malfunctions, defects and other occurrences should be conducted through the Aircraft Structural Integrity Program (ASIP) and Propulsion System Integrity Program (PSIP) for each aircraft (see <u>DASR 21.A.44(c)</u>). Investigation and analysis of failures, malfunctions, defects and other occurrences for aircraft structure and propulsion systems also often requires specific skills due to the complex nature of these systems and their associated failure modes, and the specialised design methods and tools typically employed. Each failure, malfunction, defect or other occurrence related to aircraft structure and propulsion systems should therefore be promptly collected, investigated and analysed using the expertise available within the ASIP, PSIP and / or the responsible design organisation (if separate).

#### DASR CLAUSE: AMC 21.A.44(c) Continued integrity of the Aircraft Structural and Propulsion System (AUS). RATIONALE FOR CHANGE

A sentence is removed which incorrectly implies that the ADRM provides all the in service requirements to satisfy DASR 21.A.44(c).

#### **CURRENT REGULATION TEXT**

In order to demonstrate compliance with product integrity requirements in the Type Certification Basis (TCB), assumptions are made by OEMs during design regarding factors such as operational usage, loads and environment; material performance; and manufacturing and assembly processes.

The periodic assessments undertaken by the MTC holder should ensure that the assumptions made during design and certification that could affect the integrity of structural and propulsion system critical parts (see DASR AMC 21.A.41) remain valid for the Defence Configuration Role and Environment (CRE). Periodic assessments should identify whether there is a need to update the type design



(including Airworthiness Limitations (AwL)), Instructions for Continuing Airworthiness or monitoring provisions (e.g. life tracking or health monitoring) in order to ensure continued compliance with the TCB. These subsequent updates are separate to the periodic assessment process and should be conducted in accordance with the relevant DASR.

The MTC holder should undertake ongoing monitoring of service experience throughout the operational life of the fleet in order to determine the periodicity of assessments, and collect the data required for the assessments. Relevant service experience data should include, but is not limited to: operational usage; failures, malfunctions, defects and other occurrences (see <u>DASR 21.A.3A(a)</u>), and other unserviceabilities; maintenance findings, results of inspections and repair data; health monitoring data; and detailed inspection or testing of parts with service history. Where available, service experience from other operators should also be considered. The MTC holder should define the data required and establish a relationship with the operator(s) to collect this data.

The detailed requirements for ongoing monitoring and periodic assessment are defined in the Airworthiness Design Requirements Manual (ADRM).

For aircraft structures these include usage monitoring, structural condition monitoring and periodic structural integrity assessments.

For propulsion systems, these include usage monitoring and periodic integrity assessment (mission analysis). Mission analysis for propulsion systems should be undertaken by the respective Original Equipment Manufacturer (OEM) or a suitably experienced organisation with access to necessary type design data. This requirement is satisfied by receipt of written formal confirmation from the OEM/organisation that the propulsion system critical part AwLs (defined in <u>DASR</u> <u>AMC 21.A.41</u>) account for the Defence aircraft CRE.

The MTC holder obligations under DASR 21.A.44(c) should be implemented as part of the Aircraft Structural Integrity Program (ASIP) and Propulsion System Integrity Program (PSIP) for each aircraft. The Aircraft Structural / Propulsion System Integrity Management Plan (ASIMP/PSIMP) for each platform should detail the systems, processes and responsibilities for ongoing monitoring and periodic assessment.

#### **REVISED REGULATION TEXT**

In order to demonstrate compliance with product integrity requirements in the Type Certification Basis (TCB), assumptions are made by OEMs during design regarding factors such as operational usage, loads and environment; material performance; and manufacturing and assembly processes.

The periodic assessments undertaken by the MTC holder should ensure that the assumptions made during design and certification that could affect the integrity of structural and propulsion system critical parts (see DASR AMC 21.A.41) remain valid for the Defence Configuration Role and Environment (CRE). Periodic assessments should identify whether there is a need to update the type certificate (including Airworthiness Limitations (AwL)), Instructions for



Continuing Airworthiness or monitoring provisions (e.g. life tracking or health monitoring) in order to ensure continued compliance with the TCB. These subsequent updates are separate to the periodic assessment process and should be conducted in accordance with the relevant DASR.

The MTC holder should undertake ongoing monitoring of service experience throughout the operational life of the fleet in order to determine the periodicity of assessments, and collect the data required for the assessments. Relevant service experience data should include, but is not limited to: operational usage; failures, malfunctions, defects and other occurrences (see <u>DASR 21.A.3A(a)</u>), and other unserviceabilities; maintenance findings, results of inspections and repair data; health monitoring data; and detailed inspection or testing of parts with service history. Where available, service experience from other operators should also be considered. The MTC holder should define the data required and establish a relationship with the operator(s) to collect this data.

Ongoing monitoring and periodic assessment for aircraft structures should include capture and routine evaluation of data through usage monitoring and structural condition monitoring, as well as periodic structural integrity assessments.

Ongoing monitoring and periodic assessment for propulsion systems should be achieved through the periodic conduct of a mission analysis. The mission analysis should be undertaken by the respective Original Equipment Manufacturer (OEM) or a suitably experienced organisation with access to necessary type design data. The mission analysis should explicitly confirm (through formal written correspondence from the OEM/organisation) that the propulsion system critical part AwLs (defined in <u>DASR AMC 21.A.41</u>) remain valid for the Defence CRE.

The <u>Airworthiness Design Requirements Manual (ADRM)</u> includes essential design requirements related to ongoing monitoring and periodic assessment for aircraft structures and propulsion systems. Compliance with these ADRM essential design requirements ensures that the relevant system and process requirements are clearly defined up-front as part of type certification.

The MTC holder obligations under DASR 21.A.44(c) should be implemented as part of the Aircraft Structural Integrity Program (ASIP) and Propulsion System Integrity Program (PSIP) for each aircraft. The Aircraft Structural / Propulsion System Integrity Management Plan (ASIMP/PSIMP) for each platform should detail the systems, processes and responsibilities for ongoing monitoring and periodic assessment.

#### DASR CLAUSE: AMC1 21.A.97 Structural and Propulsion System Critical Parts and Airworthiness Limitations (AUS). RATIONALE FOR CHANGE

Reworded to clarify applicability.

#### **CURRENT REGULATION TEXT**



Applicants for major changes should identify and submit to the Authority a list of critical parts and airworthiness limitations as described at <u>DASR AMC</u> <u>21.A.41</u>.

#### **REVISED REGULATION TEXT**

Where critical parts or airworthiness limitations are affected by a major change, the applicant should refer to <u>DASR AMC 21.A.41</u> and submit the necessary data to the Authority.

#### DASR CLAUSE: AMC 21.A.174(b) – Application (AUS).

#### **RATIONALE FOR CHANGE**

AMC pertains to used aircraft and is incorrectly placed within AMC 21.A.174(b), AMC is removed and merged into AMC 21.A.174(b)(3).

#### **CURRENT REGULATION TEXT**

The applicant should obtain the following data (as a minimum) as part of the acquisition of used aircraft, particularly if originating from another State:

a. A statement by an authorised person under NAA delegations that each subject aircraft conforms to the provided NAA Certificate of Airworthiness or would otherwise be eligible for a Certificate of Airworthiness.

- b. Records of the total hours and landings accrued by each airframe.
- c. Records of the number of cabin pressurisation cycles and the pressure differential to which each cabin has been subjected during its life (if available).
- d. Records showing the total life consumed by each installed life-limited aircraft, engine and propeller component.

e. Documentation describing the past operational usage of the aircraft, including any non-standard mission roles (particularly any use as a flight or ground test vehicle) and the approximate times spent in each role.



f. Records of all major structural and life-limited component changes made to items such as wings, rotors blades, and tailplane, and the individual histories of such components unless new when fitted.

g. Records of all major structural repairs and details of salvage schemes, including the nature and cause of the damage in each case, eg corrosion, cracking, lightning strikes, accidental damage.

#### **REVISED REGULATION TEXT**

Deleted.

#### DASR CLAUSE: AMC 21.A.174(b)(3) – Inspections (AUS). RATIONALE FOR CHANGE

Content AMC 21.A.174(b) merged and consolidated. A new opening paragraph explains why specific data and inspections are required for used aircraft.

#### **CURRENT REGULATION TEXT**

Used aircraft require a more stringent inspection requirement than new build aircraft. The inspecting organisation should provide an Airworthiness Inspection Plan (AIP). Airworthiness inspections are to be performed by an appropriately qualified, independent and experienced third party organisation. A comprehensive review of the aircraft design, maintenance and operational documentation is to be conducted and verified by a physical inspection of the airframe structure, engines and other systems.

The inspecting organisation is to provide inspection reports detailing the airworthiness inspection result. As a minimum, reports should include the following:

a. details of the aircraft inspected, including civil registration number, manufacturer, serial number, model designation, and NAA Certificate of Airworthiness number;

b. last known inspected configuration of the aircraft;

c. a summary of the usage and maintenance history of the aircraft, engines and propellers, including current maintenance, weight and balance, and lifed component status;



d. details of any major structural and life-limited component changes made to items such as wings and tailplane, and a summary of the individual histories of such components, unless new when fitted;

- e. details of any accidents or incidents in which the aircraft has been involved;
- f. details of any major repairs or modifications performed on the aircraft, engines and propellers and verification that they have been properly approved and incorporated;
- g. details of any applicable aircraft-general, type-specific, engine or equipment airworthiness directives or service bulletins and verification that the aircraft complies;
- h. a condition assessment of flight safety critical components and fatigue-sensitive structure;
- i. recommendations for the resolution of any airworthiness deficiencies or concerns arising as a result of the airworthiness inspection; and
- j. flight manuals and any other manuals.

#### **REVISED REGULATION TEXT**

1. For used aircraft, specific data should be obtained, and inspections performed, to ensure that the records, maintenance and aircraft condition are to the standard normally required by Defence.

The applicant should obtain the following data (as a minimum) as part of the acquisition of used aircraft, particularly if originating from another State:

a. Records of the total hours and landings accrued by each airframe.

b. For pressurised aircraft, records of the number of cabin pressurisation cycles and the pressure differential to which each cabin has been subjected during its life (if available).

c. Records showing the total life consumed by each installed life-limited aircraft, engine and propeller component.

OFFICIAL Page 8 of 10



d. Data describing the past operational usage of the aircraft, especially any non-standard roles (particularly any use as a flight or ground test vehicle	e)
and the time spent in each role.	

e. Records of all major structural and life-limited component changes made to items such as wings, rotors blades and tailplane, and the individual histories of such components unless new when fitted.

f. Records of all major structural repairs and details of salvage schemes, including the nature and cause of the damage in each case, eg corrosion, cracking, lightning strikes, accidental damage.

2. The applicant should arrange for airworthiness inspection(s) to be performed by an appropriately qualified, independent and experienced third party organisation. The inspecting organisation should provide an Airworthiness Inspection Plan (AIP). A comprehensive review of the aircraft design, maintenance and operational documentation is to be conducted and verified by a physical inspection of the airframe structure, engines and other systems. The inspecting organisation is to provide inspection reports detailing the airworthiness inspection result. As a minimum, reports should include the following:

a. details of the aircraft inspected, including civil registration number, manufacturer, serial number, model designation, and NAA Certificate of Airworthiness number;

b. last known inspected configuration of the aircraft;

c. a summary of the usage and maintenance history of the aircraft, engines and propellers, including current maintenance, weight and balance, and life-limited component status;

d. details of any accidents or incidents in which the aircraft has been involved;

e. details of any major repairs or modifications performed on the aircraft, engines and propellers and verification that they have been properly approved and incorporated;

f. details of any applicable aircraft-general, type-specific, engine or equipment airworthiness directives or service bulletins and verification that the aircraft complies;

g. a condition assessment of critical parts and primary structure; and



h. recommendations for the resolution of any airworthiness deficiencies or concerns arising as a result of the airworthiness inspection.

#### DASR CLAUSE: Glossary – Critical Parts. RATIONALE FOR CHANGE

Existing list of airworthiness code clauses are not exhaustive. A new paragraph generalises the definition and then provides a non-exhaustive list.

#### **CURRENT REGULATION TEXT**

Critical parts are those parts required to be identified by, and meet the following airworthiness code clauses:

FAR 27.602 FAR 29.602 CS 27.602 CS 29.602 FAR 33.70 (termed engine life-limited parts) CS-E 515

#### **REVISED REGULATION TEXT**

Critical parts are identified by the design approval holder in accordance with the applicable Type Certification Basis requirements. Critical parts include, but are not limited to, those parts required to be identified by the following airworthiness code clauses: FAR / CS 27.602, FAR / CS 29.602, FAR 33.70 (termed engine life-limited parts), CS-E 515, FAR 35.16, CS-P 150 and CS-APU 210.





Australian Government
 Department of Defence
 Defence Aviation Safety Authority

**Defence Aviation Safety Authority** 

#### DASR AMENDMENT RECORD DCP 2023 - 020

## Update to AMC and GM to DASR 21 Subparts B, D, and E proposed to align the DASRs with EMAR 21 2.0 AMC and GM.

#### RATIONALE FOR CHANGE

In March 2021 the European Defence Agency released Edition 2.0 of EMAR 21 ((Regulations) which incorporated updates originating from several EASA Part-21 releases. Due to the scope of changes introduced in Edition 2.0 (Regulations), DASA took a phased approach to updating DASR 21 for alignment.

In April 2022 the first phase was implemented with NPA 2021-048: Amendments to DASR 21 Certification (SUBPARTS B, D and E).

In October 2022 the European Defence Agency released Edition 2.0 of EMAR 21 (AMC and GM).

This change will bring AMC and GM to DASR 21 (SUBPARTS B, D and E) into line with the recently released Edition 2.0 of EMAR 21 (AMC and GM).

A substantial amount of guidance material has been added, there is no change in the intent of regulation or increased regulatory burden from the changes.

#### **CURRENT REGULATION TEXT**

See below the included word document that highlights current and revised regulation text

#### **REVISED REGULATION TEXT**

See below the included word document that highlights current and revised regulation text



#### DCP 2023-020

#### **PROPOSED CHANGES TO DASR21**

#### Notes to readers:

This document shows the proposed changes to the AMC and GM wording as follows:

- a. Highlighted text marks an addition
- b. Strikethrough formatting marks removal
- c. Green text marks Australian-specific text.

This document does not contain Subparts B, D, and E in their entirety and only contains sections that contain proposed changes. The changed sections have been marked by their header AMC/GM number and split using

to represent unchanged text.

Where unchanged text spans across AMC/GMs, the delineation is further spaced by additional blank lines to denote a more significant gap between the changed sections.

#### DASR 21 SUBPART B - MILITARY TYPE-CERTIFICATES AND MILITARY RESTRICTED TYPE-CERTIFICATES

#### AMC 21.A.14(b) - Alternative procedures

Alternative procedures are an acceptable means to demonstrate design capability in the cases described in DASR 21.A.14, DASR 21.A.112B, or DASR 21.A.432B. This concept is the implementation, in In the context of specific projects, the implementation of procedures required infor a design organisation approval in accordance with DASR 21 Subpart J MDOA, to will ensure that the applicant will perform performs the relevant activities as expected by the Authority, but without the requirements on the organisation itself that can be found in Subpart J MDOA. The establishment of these alternative procedures may be seen as a starting phase for a Subpart J MDOA, allowing at a later stage, at the discretion of the applicant, to move towards a full Subpart J MDOA by the addition of the missing elements.

#### 2. Management of the (supplemental) type-certification process

**2.1 Certification programme:** See DASR AMC 21.A.15(b) for type -certification and DASR AMC 21.A.93(b) for supplemental type -certification.

- 2.2 Compliance demonstration: see DASR GM 21.A.20
- 2.3 Reporting: see DASR GM 21.A.20(b)
- **2.4 Compliance documentation:** see DASR AMC 21.A.20(c).

2.5 Declaration of compliance: see GM 21.A.20(d)

3. Management of changes to type certificates, repair designs and production deviations

# **3.1** Management of changes to a type certificate or supplemental type certificate (hereinafter referred to as 'changes'), repairs repair designs and production deviations from the approved design data

The applicant should provide procedures that are acceptable to the Authority for classification and approval of changes (see paragraphs 3.2 and 3.3), and repair designs and production deviations from the approved design data (see paragraph 3.4).
### **3.2** Classification

### 3.2.1 Content

The procedure should address the following points:

• the identification of the changes; product configuration(s) to which the change is to be made,

### airworthiness classification;

- the identification of the areas of the product that are changed or affected by the change,
- the identification of any reinvestigations that are necessary (see DASR 21.A.93(b)(2)), including the identification of the applicable airworthiness requirements, or environmental protection requirements and means of compliance,
- changes initiated by subcontractors;
- documents to justify the classification;
- authorised signatories.

The criteria used for classification should be in compliance with DASR 21.A.91 and corresponding interpretations.

### 3.3 Approval of changes

### 3.3.1-Content

The procedure should address the following points:

- compliance documentation;
- approval process;
- authorised signatories.

### 3.3.2 Compliance documentation

For major changes and those minor changes where additional work to demonstrate compliance with the applicable airworthiness requirements type-certification basis and environmental protection requirements (hereinafter referred to as the 'certification basis') is necessary, compliance documentation should be established in accordance with DASR AMC 21.A.20(c).

### 3.3.3 Approval process

**A.** For the approval of major changes, a certification programme as defined in DASR AMC 21.A.93(b) shouldmust be established.

**B.** For major changes and those minor changes where additional work to show compliance with the applicable <del>airworthiness requirements</del>certification basis is necessary, the procedure should define a document to support the approval process.

This document should include at least:

- identification and brief description of the change and its classification;
- references to the applicable requirements certification basis;
- references to the compliance documents;
- effects, if any, on limitations and on the approved documentation design data;
- the name of the authorised signatory.

**C.** For the other minor changes, the procedure should define a means:

- to identify the change;
- to present the change to the Authority for approval.

### 3.3.4 Authorised signatories

The procedure should identify the persons authorised to sign the change before release to the Authority for approval.

### 3.4 Repairs Repair designs and production deviations from the approved design data

A procedure following the principles of paragraphs 3.2 and 3.3 should be established for the classification and approval of repairs repair designs and unintentional deviations from the approved design data occurring in production (concessions or non-conformance's). For repairs repair designs, the procedure should be established in accordance with DASR 21 Section A Subpart M and associated acceptable means of compliance (AMC) or guidance material (GM).

# 4. Issue of data and information <del>and</del>(including instructions) to owners, operating organisations and others required to use the data and information

### 4.1 General

### (Reserved).

### 4.2 Data related to changes

The data and information or (including instructions) issued by a the holder of a (military) design approval (a MTC, MSTC, approval of a change, approval of repair design holder) are intended to provide the owners of a product with all necessary data to implementembody a change or repair on the product, or a repair, or to inspect it.

The data and information or (including instructions) may be issued in a format of a Service Bulletin as defined in S1000D Chapters, or in Structural Repair Manuals, Maintenance Manuals, Engine and Propeller Manuals, etc.

The preparation of this data involves design, production and inspection. The three aspects should be properly addressed and a procedure should exist.

### 4.3 Procedure

The procedure should address the following points:

- preparation;
- verification of technical consistency with corresponding approved change(s), repair design(s) or approved data, including effectivity, description, effects on airworthiness or operational suitability, especially when limitations are changed;
- verification of the feasibility in practical applications;
- approval for the release of the data and information.

The procedure should include the information or instructions prepared by subcontractors or vendors, and declared applicable to its products by the holder of the MTC, MSTC, approval of changes to type design or approval of repair design.

### 4.4 Statement

The data and information (including instructions) should contain a statement showing Authority approval.

# 5. Obligations addressed in DASR 21.A.44 (MTC holder), DASR 21.A.118A (HSTC holder) or DASR 21.A.451 (major repair design approval holder)

The applicant for alternative procedures to demonstrate their design capabilities should establish the necessary procedures to show to the Authority how it will fulfil the obligations required under DASR 21.A.44, DASR 21.A.118A or DASR 21.A.451, as appropriate.

### 6. Control of design subcontractors

The applicant for alternative procedures to demonstrate their design capabilities should establish the necessary procedures to show to the Authority how it will control design subcontractors- and ensure the acceptability of the parts or appliances that are designed, or the design tasks that are performed.

### GM 21.A.14(b) - Eligibility for alternative procedures

Design organisations approved under DASR 21 Section A Subpart J (("Subpart J MDOA)") is to be the normal approach for military type -certification, military supplemental type -certification, approval of major changes to type design or approval of major repair design, except when agreed otherwise by the Authority in accordance with DASR 21.A.14, DASR 21.A.112B and DASR 21.A.432B.

The acceptance of alternative procedures, as defined in DASR AMC 21.A.14(b), is to be limited where the Authority finds it more appropriate for the conduct of military type -certification, military supplemental type -certification, approval of changes to type design, approval of repair design.

### Products with simple or limited scope of design

As the complexity of a product grows, so does the size of a design organisation, along with an increasing degree of specialisation of various parts of the organisation to meet the growing demands of different disciplines. This creates complex communication relationships and workflows.

'Simple or limited scope of design' should therefore be understood as the opposite of 'complex', see also DASR AMC 21.A.15(b)(6) Level of involvement (LoI).

When determining the complexity of the scope of design, the complexity of the product as well as the structure of the design organisation and relationships with suppliers should be considered.

### AMC 21.A.14(c) - Alternative Demonstration

In specific cases, governmental organisations might be required to act as the holder of military typecertificates or restricted type-certificates. Often, these entities do not meet the qualification requirement of 21.A.14(a) by own means. In such cases, 21.A.2 is usually considered being sufficient to discharge actions and obligations to another person or organisation. However, some legal arrangements still require the accountability to remain with the government owned entity, in which case the qualification requirement of 21.A.14(a) can only be met jointly. In such cases, the agreement required by 21.A.2 should also provide sufficient detail on the processes and procedures governing the cooperation, including allocation of tasks, rights, obligations, and privileges among the entities involved.

To undertake actions and obligations on behalf of the holder of a military certificate, the contracted organisation shall

- ensure the necessary access to the data related to the type design
- establish sufficient cooperation with the Authority to ensure oversight

In the case that alternative procedures (refer to DASR 21.A.14(b)) for establishing a Design Assurance System are used, such procedures shall be acceptable to the Authority in fulfilling the obligations required under DASR 21.A.44 - Obligations of the Holder.

### AMC1 21.A.14(c) - Alternative Demonstration (AUS)

In some countries a government organisation is approved by the Authority to execute the Military Type-certificate holder responsibilities. This government organisation may apply for a typecertificate or restricted type-certificate, without being the original design organisation. In this case, the government organisation should, in accordance with DASR 21.A.2, enter an agreement with a design organisation which has access to the Type Design data to ensure the undertaking of specific actions and obligations. Any alternative procedures for establishing a Design Assurance System or Safety Management System should be acceptable to the Authority in fulfilling the obligations required under DASR 21.A.44 - Obligations of the Holder.

### MTC holder demonstration of capability

Government organisations seeking to become an MTC holder shall submit a Type Continued Airworthiness Exposition (TCAE) to the Authority. The TCAE should justify the arrangements for management of the MTC and be capable of expanding for subsequent changes to type design, MSTC and major repairs.

Government organisations seeking to become a MTC holder are required to identify an individual (a senior Defence engineer) responsible for managing the in-house and contracted holder obligations. The individual shall comply with the following qualifications and experience requirements:

### **Qualifications:**

- 1. Bachelor of Engineering degree in Mechanical, Mechatronics, Aerospace, Aeronautical, Electronics, Software or Electrical Engineering.
- 2. Qualifications must be Australian accredited or assessed to be equivalent to Australian qualification by Engineers Australia, the Australian Computer Society or the Australian Institute of Project Management.

### **Experience:**

- 1. Chartered Professional Engineer (CPEng) in the Institute of Engineers Australia or an equivalent professional body recognised by the IEAust.
- 2. Ten years of Aviation experience. The experience must comprise of at least two years' combined experience as staff of DASA or an organisation holding a Design Organisation Approval under EASA, CASA, EMAR or DASR 21 Section A Subpart J.

### The TCAE should contain the following:

- a. Information regarding the eligibility of the organisation to hold the Type Certificate (and subsequent changes to type design, MSTC and major repairs) in accordance with the requirements of DASR 21.A.14 (and / or DASR 21.A.92(a) and / or DASR 21.A.112B and / or DASR 21.A.117(c) and / or DASR 21.A.432B if applicable). This includes demonstration against the recognition framework criteria (see below) where external design organisations have been engaged via DASR 21.A.2 to provide DASR 21 Subpart J, or holder functions.
- b. An overview of the Product's Type Design and Certification including subsequent modifications (and / or Supplementary Certificates and major repairs if applicable). Access arrangements to type design data for the life of type should be included here.
- c. ADF configuration, Role and Environment (including a link to the SOIU).
- d. ADF Capabilities to support the Product including specialist support.
- e. Key organisations involved in the management of the product's design, including their contractual relationships with Defence; their maturity, experience, capabilities, limitations, responsiveness, quality of product, impartiality, past performance, and future viability; and any gaps in overall coverage. Information related to DASR 21 subpart J approval held by the organisation or equivalent approvals held under recognised authorities should be included.

- f. An assessment of the likelihood of leveraging other military and civil operator's programs to support the Defence product's design, including Defence's ability to influence those programs, and the type of data that will be accessible.
- g. Information related to the performance of holder obligations under DASR 21.A.44 (and / or DASR 21.A.118A and / or DASR 21.A.451 if applicable), including systems, processes and procedures used.
- h. Information related to how the organisation, or the design organisation(s) with which they have an agreement, will perform its function as an applicant for and holder of any subsequent major changes to type design after the issue of the MTC. This information should include a methodology for major or minor classification of recognised design certifications.
- i. Information related to how the requirements of DASR 21.A.42 for integration of Products, Weapons and other Systems onto the aircraft will be conducted.
- j. Information about the nominated individual responsible for managing the in-house and contracted holder obligations and QTE compliance information.
- k. System of managing changes to the TCAE including frequency of review and notifying the Authority of any changes.
- I. How the organisation conducts internal governance including over their supporting design organisation(s)/network.
- m. A compliance matrix describing how the organisation shall comply with each DASR applicable to fulfil the MTC Holder obligations.
- Information related to how the requirements of DASR 21.A.3A for reporting failures, malfunction, defects and the rectification of unsafe conditions to the type design will be conducted.

### **Project Office demonstration of capability**

Government organisations (e.g. an Acquisition Project Office (PO)) seeking to apply for MTC / MRTC or MSTC also attain eligibility via DASR 21.A.14(c). PO<sup>2</sup>'s should engage DASA to obtain DASA acceptance on the arrangements for:

- a. establishing procedures for a Design Assurance System that:
  - 1. complies with the requirements of DASR 21 Subpart J, or
  - 2. where the PO expects to exclusively base their application upon an aircraft typedesign that has been certified by a recognised NAA / MAA, is sufficient to conduct the required certification programme activities (includes developing the Defence TCB and CPP, conduct applicability assessment against Defence CRE and context, and provide a declaration of compliance).
- b. when engaging an external design organisation, include demonstration against the recognition criteria as described below.

The agreed arrangements should be formalised within relevant project or acquisition documents (such as the Acquisition Airworthiness Management Plan).

### DASA recognition of other NAA / MAA

Where possible the engaged design organisation(s) should be approved under DASR 21 Subpart J (Military Design Organisation Approval). If the government organisation engages an external design organisation the DASA recognition framework should be used to support the eligibility assessment. Certificates for each recognised authority are available through the DASA website.

Requirements applicable to all applicants are:

a. the external design organisation (DO) is an approved design organisation within a recognised NAA / MAA or develops designs for certification by a recognised NAA / MAA,

- b. the DO has appropriate technical scope and expertise for the ADF design,
- c. the DO's systems, processes and personnel used in developing other designs for certification by the parent NAA / MAA will be used in the design development or holder activities associated with the ADF design,
- d. the DO will provide an attestation of compliance against the Type Certification Basis for any provided design product,
- e. any oversight by the DO's parent NAA / MAA is appropriate, and
- f. where applicable, arrangements for DASA oversight are in place.

The government organisation should monitor the external DO to ensure continued adherence to requirements during the design development activities or provision of holder duties.

### AMC 21.A.15(b) Content of the certification programme

# DASR 21.A.15(b)(1) 'a detailed description of the type design, including all the configurations to be certified'

An overview of the:

- 5. architecture, functions, systems;
- 6. dimensions, design weights, payloads, design speeds;
- 7. engines and power/thrust rating;
- 8. materials and technologies;
- 9. maximum passenger seating capacity, minimum flight and cabin/mission crew;
- 10. cabin configuration aspects;
- 11. options (e.g. weight variants, power/thrust rating variants, optional avionics equipment items, auxiliary power unit (APU) choices, brake options, tire options, floats, skids);
- 12. mission (role) configuration options (other than cabin configuration), including aircraft level provisions for external stores, pods, tanks, or other similar equipment options,
- 13. noise/emissions level; and-
- 14. other items, if considered to be more appropriate, that address the specific aeronautical product.

### DASR 21.A.15(b)(2) 'proposed operating characteristics and limitations'

- 15. Operating speed limitations.
- <del>16.</del> Service ceiling, maximum airfield elevation.
- 17. Cabin pressure.
- 18. Limit load factors.
- 19. Number of passengers, minimum crew, payload, range.
- 20. Weight and centre-of-gravity (CG) envelope and fuel loading.
- 21. Performance.
- 22. Environmental envelope.
- 23. Runway surface conditions.
- 24. Other items, if considered to be more appropriate, that address the specific aeronautical product.

# DASR 21.A.15(b)(3) 'the intended use of the product and the kind of operations for which certification is requested'

- 25. Category of aircraft (for example the civil categories defined under the FARs/CSs or the kind of military aircraft such as small fast jet, heavy airlift rotary wing, etc.), ditching, take-off and landing on water, emergency floatation equipment.
- <del>26.</del> Extended overwater operation, high-altitude operation (above 41 000 ft).

- 27. High-airfield operation, steep approach, short take-off and landing, Defence Long Range Operations (DLRO), all-weather operations (AWO), visual flight rules (VFR)/instrument flight rules (IFR), reduced vertical separation minimum (RVSM), performance based navigation (PBN) type, increased bank angles, single-pilot operation, flight into known icing conditions, air to air refuelling.
- 28. Flight in ice crystal icing.
- <del>29.</del> Engine operations in ice-forming conditions, helicopter hoist operations, operation on unpaved runway, operation on narrow runway.
- <del>30.</del> Take-off and landing in tailwind.
- **31.** Volcanic-ash operation (for example operations of the type covered by EASA CS 25.1593).
- 32. Design service goal (DSG)/limit of validity targets.
- 33. Fatigue missions (general description of assumptions for flight durations, main phases, and parameters, as appropriate).
- 34. Military kind of operations (e.g. Air to Air refuelling, Low Level Flight, Ship-Based-Operations and Landing, carriage or release of weapons and stores)
- **35.** Other items, if considered to be more appropriate, that address the specific aeronautical product.

# DASR 21.A.15(b)(4) 'a proposal for the initial type-certification basis and environmental protection requirements, considering the requirements and options specified in DASR 21.A.17A and DASR 21.A.18'

The proposed certification basis should include applicable airworthiness codes, proposed special conditions, proposed equivalent safety findings, as well as a proposed 'elect to comply' and proposed exceptions, as applicable. When the certification basis is established (refer to AMC 21.A.17A), the justification for the de-selection of criteria (tailoring) as well as justification for the mapping of specific requirements to each selected criteria shall be documented.

### DASR 21.A.15(b)(6) on information relevant for the determination of the level of involvement (LoI)

The applicant should provide sufficient detailed information about the novelty, complexity, and criticality aspects of each proposed CDI.

It is recommended to provide this information at the level of each technology discipline(s) affected by a proposed CDI. Further interpretative material on the necessary level of details is provided in DASR AMC 21.A.15(b)(6).

The applicant should provide detailed information about the proposed means of compliance with the applicable requirements identified under DASR 21.A.15(b)(4). The information provided should be sufficient for the Authority to determine its (initial) LoI. This should include the following, as far as this information is available at the time of submission to the Authority:

### AMC 21.A.15(b)(6) - Level of Involvement (AUS)

The proposed assessment shall take into account at least the following elements: 1. Definitions

Risk: the combination of the likelihood and the potential impact of a non-compliance with part of the certification basis.

Likelihood: a prediction of how likely an occurrence of non-compliance with part of the certification basis is, based on a combination of the novelty and complexity of the proposed design and its related compliance demonstration activities, as well as on the performance of the design organisation.

Criticality: a measure of the potential impact of a non-compliance with part of the certification basis on product safety or on the environment.

Compliance demonstration item (CDI): a meaningful group of compliance demonstration activities and data of the certification programme, which can be considered in isolation for the purpose of performing a risk assessment.

Technology discipline(s): The Authority's certification team may be structured in sub-groups (like EASA panels) covering dedicated areas of expertise and being composed of one or more experts who are responsible for a particular technical area.

Discipline: a discipline is a technical subarea of a certification panel.

Level of involvement (LoI): the compliance demonstration activities and data that the Authority retains for verification during the certification process, as well as the depth of the verification.

### 2. Background

The applicant has to submit a certification programme for their compliance demonstrations in accordance with DASR 21.A.15(b). The applicant has to break down the certification programme into meaningful groups of compliance demonstration activities and data, hereinafter referred as 'CDIs', and provide their proposal for the Authority's LoI.

The applicant should also indicate the technology discipline(s) that is (are) affected by each CDI.

This AMC explains:

- a. how to propose the Authority's LoI for each CDI as per DASR 21.A.15(b)(6), DASR 21.A.93(b)(3)(iii), DASR 21.A.432C(b)(6) as well as DASR 21.A.113(b); and
- b. how the Authority will determine its LoI.

The Authority will review the proposal and determine its LoI. Both parties, in mutual trust, should ensure that the certification project is not delayed through the LoI proposal and determination.

In determining LoI, the Authority will take into account any part of the certification programme for which 'Prior Certification from another NAA/MAA' will be leveraged to demonstrate compliance against the Type Certification Basis. In such cases, the corresponding means and methods of compliance, as well as the corresponding certification activities may not be available to the Authority. To support the use of prior certification, the certification programme should also include how the criteria in DASR AMC 21.A.20 will be, or have been assessed.

Additionally, in accordance with DASR 21.A.20, the applicant has the obligation to update the certification programme, as necessary, during the certification process, and report to the Authority any difficulty or event encountered during the compliance demonstration process which may require a change to the LoI that was previously notified to the applicant.

In such a case, or when the Authority has other information that affects the assumptions on which the LoI was based, the Authority will revisit its LoI determination.

In accordance with DASR 21.A.33, DASR 21.A.447 and DASR 21.A.615, irrespective of the LoI, the Authority has the right to review any data and information related to compliance demonstration.

Note: This AMC should not be considered to be interpretative material for the classification of changes or repairs.

### 3. Principles and generic criteria for the Lol determination

The Authority determines its LoI based on the applicant's proposal in view of the risk (the combination of the likelihood of an unidentified non-compliance and its potential impact). This is performed after proper familiarisation with the certification project in three steps:

- Step 1: identification of the likelihood of an unidentified non-compliance,
- Step 2: identification of the risk class, and
- Step 3: determination of the Authority's Lol.

This AMC contains criteria, common to all technology discipline(s), for the determination of:

- 1. any novel or unusual features of the certification project, including operational, organisational and knowledge management aspects;
- 2. the complexity of the design and/or compliance demonstration of compliance;
- 4. the performance and experience of the design organisation of the applicant in the domain concerned;
- 3-the criticality of the design or technology and the related safety and environmental risks, including those identified on similar designs; and
- the data and activities to be retained by the Authority.

Note: EASA provides additional information on the criteria for the determination of the LoI in product certification, e.g. as contained in EASA Certification Memorandum (CM) 21.A/21.B-001, which may be used for reference but should not be considered to be AMC.

### 3.1. LoI determination at CDI level

The determination of the Authoriy's LoI may be performed at the level of the CDI (please refer to AMC 21.A.15(b)(5)).

The applicant should demonstrate that all affected elements of the type-certification basis as specified in DASR 21.A.17A and of the environmental protection requirements as specified in DASR 21.A.18, the corresponding means and methods of compliance, as well as the corresponding certification activities and data, are fully covered by the proposed CDIs. If the provided data does not clearly show that this is the case, the applicant should clearly state to the Authority that all the above-mentioned elements are fully covered.

Note: There could be different ways to 'clearly show' that all the elements of the certification basis are included in at least one CDI. For instance, this could be achieved by means of a 'CDI reference' column added in the table that lists all the elements of the certification basis.

### 3.2. Method for determining the likelihood of an unidentified non-compliance

### 3.2.1. Principle

The likelihood of an unidentified non-compliance is assessed on the basis of the following criteria:

- novelty,
- complexity, and
- the performance of the design organisation.

### 3.2.2. Novelty

For the purpose of risk class determination, the following simplification has been made: a CDI may be either novel or non-novel.

Whether or not a CDI is novel is based on the extent to which the respective elements of the certification project, as well as the related requirement or means of compliance, are new/novel to either the industry as a whole, or to the applicant, including their subcontractors, or from a technology discipline(s) perspective.

The determination that a CDI is novel may be driven by the use of new technology, new operations, new kind of installations, the use of new requirements or the use of new means of compliance.

When an applicant utilises a type of technology for the first time, or when that applicant is relatively unfamiliar with the technology, this technology is considered to be 'novel', even if other applicants may be already familiar with it. This also means that a type of technology may no longer be novel for one applicant, while it may still be novel for other applicants.

The following list includes some examples:

- new materials or combinations of materials;
- a new application of materials or combinations of materials;
- new manufacturing processes;
- a new or unusual aircraft configuration and/or system architecture;
- a novel reconfiguration of systems;
- a new interface or interaction with other parts or systems;
- the unusual location of a part or a system, or an unusual construction;
- a new or unusual use;
- new functions;
- new kinds of operations;
- the potential for new failure modes;
- the introduction of a new threat (e.g. new threats regarding fire, fuel, hydrogen, energy storage devices, etc.) or a new prevention/detection/mitigation method;
- new maintenance techniques;
- novel operating conditions or limitations;
- a new human-machine interface (HMI); or
- new flight or cabin crew tasks.

Note: Flight crew may also consist of additional crew members, such as load master or jump master, hoist operator etc., as applicable.

Another consideration is the extent to which the requirements, means of compliance or guidance have changed or need to be adapted due to particular novel features of the design. The following list includes some examples:

- recently issued or amended airworthiness codes with which the applicant has little or no experience;
- new or adapted special conditions;
- new or adapted equivalent safety findings;
- new or adapted exceptions;
- new or adapted guidance or interpretative material;
- new or adapted means of compliance (i.e. other than those previously applied by the applicant) or unusual means of compliance (different from the existing guidance material and/or different from industry standard practices), e.g. the replacing of tests by simulation, numerical models or analytical methods;
- the use of new or adapted industry standards or in-house methods, as well as the Authority's familiarity with these standards and methods;
- a change in methodology, tools or assumptions (compared with those previously applied by the applicant), including changes in software tools/programs; or

 novelty in the interpretation of the results of the compliance demonstration, e.g. due to inservice occurrences (compliance demonstration results are interpreted differently from the past).

Additional new guidance/interpretative material, e.g. in the form of new EASA certification memoranda (EASA CM) or new essential requirements from the ADRM, may be considered for the determination of novelty if its incorrect application/use may lead to an unidentified non-compliance. In the context of novelty, the time between the last similar project and the current project of the applicant should also be considered.

Regardless of the extent of an organisation's previous experience in similar projects, a CDI may be classified as novel if there are specific discontinuities in the process for transferring information and know-how within the organisation.

### 3.2.3. Complexity

For the purpose of risk class determination, the following simplification has been made: a CDI may be either complex or non-complex. For each CDI, the determination of whether it is complex or not may vary based on factors such as the design, technology, associated manufacturing process, compliance demonstration (including test set-ups or analysis), interpretation of the results of the compliance demonstration, interfaces with other technical disciplines/CDIs, and the requirements. The compliance demonstration may be considered to be 'complex' for a complex (or highly integrated) system, which typically requires more effort from the applicant. The following list includes some examples:

- Compliance demonstration in which challenging assessments are required, e.g.:
  - for requirements of a subjective nature, i.e. they require a qualitative assessment, and do not have an explicit description of the means of compliance with that requirement, or the means of compliance are not a common and accepted practice; this is typically the case where the requirement uses terms such as 'subjective', 'qualitative', 'assessment' or 'suitable'/'unsuitable'
  - in contrast, engineering judgement for a very simple compliance demonstration should not be classified as 'complex';
  - a test for which extensive interpretation of the results may be anticipated;
  - an analysis that is sensitive to assumptions and could potentially result in a small margin of safety;
  - the classification of structures, depending on the conservatism of the method;
  - an advanced analysis of dynamic behaviour;
  - a multidisciplinary compliance demonstration in which several panels are involved and interface areas need to be managed (e.g. sustained engine imbalance, extended-range twin-engine operation performance standards (ETOPS), 2X.1309 assessment, flight in known icing conditions, full authority digital engine control (FADEC)-controlled engines, etc.);
  - when the representativeness of a test specimen is questionable, e.g. due to its complexity;
- the introduction of complex work-sharing scheme with system or equipment suppliers.

For major changes, the complexity of the change should be taken into account, rather than the complexity of the original system.

Whether or not a CDI is complex should be determined in a conservative manner if this cannot be determined at an early stage of the certification project. When greater clarity has been achieved, the complexity may be re-evaluated and the LoI adapted accordingly.

### 3.2.4. Performance of the design organisation

The assessment of the level of performance of the design organisation takes into account the applicant's experience with the applicable certification processes, including their performance on previous projects and their degree of familiarity with the applicable certification requirements.

For approved design organisations, the Authority uses relevant data to consider the design organisation's expected performance at an organisational, panel or discipline level, depending on the availability of data.

This data stems from design organisation audits, the applicant's measured level of performance on previous projects, and their performance during the development of certification programmes. The Authority shares the data with the respective design organisation in an appropriate manner.

Note: The ultimate objective is to define the organisation's performance at the discipline level.

For each CDI proposed by the applicant, the design organisation's performance associated with the affected disciplines or panels is to be considered.

If one CDI affects more panels or disciplines than the others, a conservative approach should be followed in selecting the lower performance level. As an alternative, that CDI may be assessed separately for each affected technology discipline(s).

If, for a well-established organisation, there is no shared performance data available at the panel level, it may be acceptable to propose the overall design organisation's performance. If the organisation or its scope are fundamentally new, the 'unknown' level of performance should be conservatively proposed by the applicant.

The determination of the performance of the design organisation may also take into consideration information that is more specific or more recent, e.g. experience gained during technical familiarisation with the current certification project, the performance of compliance verification engineers and of the affected technical areas, as well as the performance of the design organisation in overseeing subcontractors and suppliers.

The performance of some applicants' organisations is not known if:

 the Authority has agreed in accordance with DASR 21.A.14(b) that the applicants may use procedures that set out specific design practices, as an alternative means to demonstrate their capability (excluding military technical standard order (AUSMTSO) applicants for other than APU, covered by DASR AMC 21.A.15(b)(6))

In these cases, the assumed level of performance is 'unknown'.

Exceptionally, the Authority may consider a higher level of performance for a specific CDI if that is proposed and properly justified by the applicant.

The following list includes some examples:

- a CDI with which the Authority is fully familiar and satisfied (from previous similar projects) regarding the demonstration of compliance proposed by the applicant;
- if the applicant fully delegates the demonstration of compliance to a supplier that holds an MDOA, the performance level of the supplier may be proposed.

### 3.2.5. Likelihood of an unidentified non-compliance

Assessing the likelihood of an unidentified non-compliance is the first step that is necessary to determine the risk class.

The likelihood of an unidentified non-compliance should not be confused with the likelihood of occurrence of an unsafe condition as per AMC to DASR 21.A.3B(b). In fact, that AMC provides the Authority's confidence level that the design organisation addresses all the details of the certification basis for the CDI concerned, and that a non-compliance will not occur.

The likelihood of an unidentified non-compliance is established as being in one of four categories (very low, low, medium, high), depending on the level of performance of the design organisation as assessed by the Authority, and on whether the CDI is novel or complex, as follows:

Step 1 — Likelihood of an unidentified non-compliance								
CDI Performance level of the DOAH	No novel aspects, no complex aspects	No novel aspects, but complex ones; Novel aspects, but no complex ones	Novel and complex aspects					
High	Very low	Low	Medium					
Medium	Low	Medium	High					
Low or unknown	Medium	High	High					

### 3.3. Criticality

The second step that is necessary to determine the risk class is the assessment of the potential impact of a non-compliance on part of the certification basis regarding the airworthiness or the environmental protection of the product. For the purpose of risk class determination, the following simplification has been made: the impact of a non-compliance can be either critical or non-critical.

Some of the guidance below has been derived from DASR GM 21.A.91, not due to a major/minor change classification, but because the same considerations may be applied to determine the effect of a non-compliance on the airworthiness or environmental protection at the CDI level. It is therefore normal that some of the CDIs of a major change that consists of several CDIs may be critical, and others may be non-critical.

The potential impact of a non-compliance within a CDI should be classified as critical if, for example:

- a function, component or system is introduced or affected where the failure of that function, component or system may contribute to a failure condition that is classified as hazardous or catastrophic at the aircraft level, for instance for 'equipment, systems and installations', e.g. where applicable as defined in EASA CS.2X.1309;
- a CDI has an appreciable effect on the human–machine interface (HMI) (displays, approved procedures, controls or alerts);
- airworthiness limitations or operating limitations are established or potentially affected;
- a CDI is affected by an existing airworthiness directive (AD), or affected by an occurrence (or occurrences) potentially subject to an AD, a known in-service issue or by a safety information bulletin (SIB); or
- a CDI affects parts that are classified as critical, e.g. as per EASA CS 27.602/29.602, CS-E 515, or that have a hazardous or catastrophic failure consequence (e.g. a principal structural element as per EASA CS 25.571).

If the classification of the potential impact of a non-compliance within a CDI as critical is based on the criterion that the CDI is affected by an AD, then the impact of a non-compliance within that CDI may be reclassified by the Authority as non-critical due to the involvement of the Authority in the continued-airworthiness process. During the early stages of a project, the criticality in terms of the potential safety consequence of a failure may not always be known, but should be conservatively estimated and the LoI should be subsequently re-evaluated, if appropriate.

### 3.4. Method for the determination of risk classes

The risk is determined as a combination of the potential impact of an unidentified non-compliance with part of the certification basis (vertical axis) and of the likelihood of the unidentified noncompliance (horizontal axis) using the following matrix. As a consequence, four qualitative risk classes are established at the CDI level.

Step 2 — Risk classes									
Likelihood (see Section 3.2.5) Criticality (see Section 3.3)	Very low	Low	Medium	High					
Non-critical	Class 1	Class 1	Class 2	Class 3					
Critical	Class 1	Class 2	Class 3	Class 4					

The various inputs and the resulting risk class determination are of a continuous nature, rather than consisting of discrete steps. The selected risk class provides the order of magnitude of the Authority's involvement and is used as a qualitative indicator for the determination of the Authority's involvement described in Section 3.5 below.

Under specific circumstances, the risk class that is determined on the basis of the above criteria may be reduced or increased on the basis of justified and recorded arguments. For a reused and well-proven item of compliance demonstration for which:

- the CDI is independent of the affected product type or model; and
- the design, operation, qualification, and installation of the product are basically the same; and
- the certification process is identical to one that was used in a modification already approved by the Authority,

the CDI may be accepted as being similar, resulting in reduced LoI, as the likelihood of an unidentified non-compliance is low. Furthermore, when an identical CDI is reused for the compliance demonstration in a new project, there is no involvement in the compliance demonstration verification, as the likelihood of an unidentified non-compliance is very low.

### 3.5. Determination of the Authority's Lol

The Authority's LoI in the verification of compliance demonstration is proposed by the applicant and determined by the Authority in Step 3 on the basis of the qualitative risk class identified per CDI in Step 2, as well as by applying sound engineering judgement.

The Authority's LoI is reflected in a list of activities and data, in which the Authority retains the verification of compliance demonstration (e.g. review and acceptance of compliance data, witnessing of tests, etc.), as well as the depth of the verification. The depth of the verification for individual compliance reports, data, test witnessing, etc., may range from spot checks to extensive reviews. The Authority always responds to those retained compliance demonstration activities and data with corresponding comments or a 'statement of no objection'.

In addition, some data that is not retained for verification may be requested for information. In this case, no 'statement of no objection' will be provided.

It is recommended that an LoI should be proposed for each of the technical areas (see technology disciplines) involved. Depending on the risk classes determined in Section 3.4 above, the Authority's LoI in:

- a. compliance demonstration verification data; and
- b. compliance demonstration activities (witnessing of tests, audits, etc.),

may be as follows:

- risk Class 1: there is no Authority involvement in verifying the compliance data/activities performed by the applicant to demonstrate compliance at the CDI level;
- risk Class 2: the Authority's LoI is typically limited to the review of a small portion of the compliance data; there is either no participation in the compliance activities, or the Authority participates in a small number of compliance activities (witnessing of tests, audits, etc.);
- risk Class 3: in addition to the LoI defined for Class 2, the Authority's LoI typically comprises the review of a large amount of compliance data, as well as the participation in some compliance activities (witnessing of tests, audits, etc.); and
- risk Class 4: in addition to the LoI defined for Class 3, the Authority's LoI typically comprises the review of a large amount of compliance data, the detailed interpretation of test results, and the participation in a large number of compliance activities (witnessing of tests, audits, etc.).

The following activities may require the Authority's involvement:

- initial issues of, and changes to, a flight manual (for those parts that require approval by the Authority and that do not fall under the MDOA holder's privilege);
- classification of failure cases that affect the handling qualities and performance, when:
  - performed through test (in flight or in a simulator); and
    - initial issues of, and non-editorial changes to, airworthiness limitations.

If the risk assessment (Steps 1 and 2 above) is made on the level of a compliance demonstration activity or on the level of a document, the risk class provides an indication for the depth of the involvement, i.e. the verification may take place only for certain compliance data within a compliance document.

### 4. Documentation of the Lol

The LoI proposal in the certification programme should include the applicant's proposal regarding the compliance demonstration verification activities and data that would be retained by the Authority, as well as the data on which the LoI proposal has been based. For this purpose, the applicant should appropriately document the analysis per CDI, considering the above criteria. In cases where the rationale for the assessment is obvious, it is considered to be sufficient for the applicant to indicate whether or not a CDI is novel or complex, and whether or not the impact is critical.

The Authority documents the LoI determination by accepting the certification programme or, if it deviates from the proposal, by recording its analysis regarding the deviations from the proposal, and notifies the applicant accordingly.

5. Sampling during surveillance of the applicant

It should be noted that all the previously defined risk classes may be complemented by the sampling of project files during surveillance of the applicant, independently from the ongoing certification

project. This is necessary in order to maintain confidence in the system and to constantly monitor its performance.

Based on this assessment, the application shall include a proposal for the involvement of the Authority in the verification of the compliance demonstration activities and data.

### GM 21.A.15(c) - Updates to the certification programme

DASR 21.A.15(b) recognises that the initial submission of the certification programme may not be fully complete, e.g. due to schedule constraints of the design, analysis and testing activities.

Furthermore, even if the initial submission of the certification programme is complete, it may be necessary to amend it throughout the duration of the project.

The certification programme should be updated and resubmitted to the Authority as required,. In particular when there are, updates to the following elements should be provided:

10. any changes to the schedule that impact on the LoI of the Authority-LoI.

Following each update to the certification programme as submitted by the applicant, the Authority may update the determination of its Lol- in accordance with AMC to DASR 21.A.15(b)(6).

# GM 21.A.15(e) and (f) - Period of validity for the application for a Military Type Certificate (MTC) or Military Restricted Type Certificate (MRTC)

DASR 21.A.15(e) establishes a maximum period of validity for an application for an MTC or an MRTC. During this period, the type-certification basis and the environmental protection requirements (hereinafter referred to as the 'certification basis'), established in accordance with DASR 21.A.17A and DASR 21.A.18, remain effective. However, the period of validity of the certification basis is limited so that the standards established as part of the certification basis at the time of application do not become outdated.

For various reasons (e.g. development, business, commercial, etc.), the applicant may not be able to complete the certification within the established time limit. In this case, the applicant has the following two options can apply for an extension of the initial application (see DASR 21.A.15(f)(1) and (2)):

In this case, the applicant proposes a 'new target date' to the Authority for the issuance of the certificate. Respecting the time limits established under 21.A.15(e), the Authority may then use that date to notify airworthiness codes and standards that will become the reference for a revised certification basis.

### 1. Submit a new application.

In this case, a new certification basis is established in accordance with DASR 21.A.17A, and 21.A.18, considering the standards that are available at the date of the new application.

In accordance with DASR 21.A.15(e), the new application has a maximum period of validity that is equal to the first one, corresponding to the product category. Beyond this period of validity, the applicant may need to choose again between the two options of either submitting a new application or applying for an extension of the initial application.

2. Apply for an extension of the initial application

In this case, the applicant proposes a 'new target date' to the Authority for the issuance of the certificate, and selects a date that becomes the reference date for the establishment of the certification basis. For the purposes of this GM, the selected reference date is referred to as the 'new effectivity date' of the initial application.

The 'new effectivity date' of the initial application may be any date in the past between the following time limits:

the 'new target date' for a TC proposed by the applicant minus the time limit used under 21.A.15(e) (e.g. 5 years); and

the date on which the applicant applies for the extension of the initial application.

Range of acceptable 'new effectivity dates' Initial application oplication for an Initial MTC New MTC date extension date target date target date 1.A.15(e) period of validity 21.A.15(e) period of validity Figure

This calculation is visualised in Figure 1 below:

### Figure 1

This ensures that the standards used to establish the certification basis are never older than the ones available at the start of the period of validity required by DASR 21.A.15(e).

If the applicant is not able to complete the product certification by the new target date, the applicant may choose again between the two options of either submitting a new application or applying for a new extension of the initial application.

### GM 21.A.20 - Compliance demonstration process

DASR 21.A.20 also applies to major changes to an MTC or an MSTC approved by military design organisation approval (MDOA) holders under their privilege as per DASR 21.A.263(c)(8) or (9) (see also DASR 21.A.97(b)(3) and DASR 21.A.115(b)(4)). As in this case there is no application and no involvement of the Authority, DASR 21.A.20 should be applied with the following adaptions:

- the certification programme to be followed, including the certification basis and the detailed means of compliance, should be almost identical to the one accepted by the Authority for a major change or an MSTC when approved for the scope of the privilege as per DASR 21.A.263(c)(8) or (9); it may differ in some aspects (e.g. the detailed description of the changes), but it should be shown to remain in the frame of the corresponding justification document; and
- the means by which such compliance has been demonstrated (see DASR 21.A.20(a)) and the final declaration of compliance (see DASR 21.A.20(e)) should be kept on record and submitted to the Authority only if requested during its DOA continued surveillance process.

### AMC 21.A.20(c) - Compliance documentation

1. Compliance documentation comprises one or more test or inspection programmes/plans, reports, drawings, design data, specifications, calculations, analyses, etc., and provides a record of the means by which compliance with the applicable type-certification basis and environmental protection requirements is demonstrated.

2. Each compliance document should normally contain:

- The reference of the elements of airworthiness requirements prescribed in the certification specifications basis, special conditions or environmental protection requirements addressed by the document;
- Substantiation data demonstrating compliance (except test or inspection programmes/plans);
- A statement by the applicant declaring that the document provides the proof of compliance for which it has been created; and
- The appropriate authorised signature.

3. Each compliance document should be unequivocally identified by its reference and issue date. The various issues of a document should be controlled and comply with DASR 21.A.55.

### GM 21.A.33(d) - Inspections and tests

The applicant should inform the Authority sufficiently in advance about the execution of inspections and tests that are used for compliance demonstration purposes unless the Authority has explicitly excluded these inspections and tests from its involvement.

Additionally, the applicant may propose to the Authority to perform or witness flight or other tests of particular aspects of the product during its development and before the type design is fully defined. However, before the Authority performs or witnesses any flight test, the applicant should have performed these tests already before the Authority and should ensure by appropriate means that the design is mature enough so that no features of the product preclude the safe conduct of the evaluation requested.

The Authority may require any such tests to be repeated once the type design is fully defined to ensure that subsequent changes have not adversely affected the conclusions from any earlier evaluation.

### GM 21.A.35(a) Flight Tests

Detailed material on flight testing is included in the applicable certification criteria and GM.

### GM1 21.A.35 Flight Tests (AUS)

In-service flight test activities are covered under Subpart P – Military Permit to Fly, and DASR GM 21.A.35 establishes the approval arrangements for MPTFs according to category, see **Categories of Flight Tests**.

### AMC 21.A.44(a) Continue to meet the qualification requirements for eligibility

To ensure that the holder of a type certificate or restricted type certificate remains capable to undertake the required actions and obligations, DASR 21.A.44 (a) also requires the holder to continue to meet the requirements of DASR 21.A.14.

To comply with this requirement, the holder of a type-certificate or restricted type-certificate shall inform the Authority without undue delay of any circumstances that significantly affect the ability of the holder to effectively discharge its obligations.

If the actions and obligations of the holder of a type-certificate or restricted type-certificate are undertaken on its behalf by another person or organisation in accordance with DASR 21.A.2, these circumstances shall include any changes to the relevant arrangements with the other organisation or findings regarding its safety performance.

### DASR 21 SUBPART D - CHANGES TO MILITARY TYPE-CERTIFICATES AND MILITARY RESTRICTED TYPE-CERTIFICATES

### GM 21.A.91 - Classification of changes to a Military Type Certificate (MTC)

### 3.6 Complementary guidance for the classification of changes to aircraft flight manuals (AFMs)

- b. revisions to the AFM that are not associated with changes to the type design (also identified as stand-alone revisions) which fall into one of the following categories:
  - 1. changes to limitations or procedures that remain within already certified limits (e.g. weight, structural data, noise, etc.);
  - 2. consolidation of two or more previously approved and compatible AFMs into one, or the compilation of different parts taken from previously approved and compatible AFMs that are directly applicable to the individual aircraft (customisation); and
  - 3. the introduction into a given AFM of compatible and previously approved AFM amendments, revisions, appendices or supplements; and

The information below is intended to provide a few major change examples per discipline, resulting from application of DASR 21.A.91 and GM 21.A.91 paragraph 3.4 conditions. It is not intended to present a comprehensive list of all major changes. Examples are categorised per discipline and are applicable to all products (aircraft, engines and propellers). However a particular change may involve more than one discipline, e.g., a change to engine controls may be covered in engines and systems (software).

Those involved with classification should are to always be aware of the interaction between disciplines and the consequences this will have when assessing the effects of a change (i.e. operations and structures, systems and structures, systems and systems, etc.; see example in paragraph 2.b).

Specific rules may exist which override the guidance of these examples.

### 8. Environment (where applicable)

A change that introduces an increase in noise or emissions. Where a change is made to an aircraft or aircraft engine for which compliance with ICAO Standards and Recommended Practices for environmental protection (ICAO Annex 16) is required or stated, the effect of the change on the product's environmental characteristics should be taken into account. Examples of changes that might have an appreciable effect on the product's environmental characteristics, and might therefore be classified as major changes, can be found in Appendix A to EASA GM 21.A.91. The examples are not exhaustive and will not, in every case, result in an appreciable change to the product's environmental characteristics, and therefore, will not always result in a 'major change' classification.

### 10. Operational capabilities

Integration or modification of mission equipment that could adversely affect safety of third parties include, but are not limited to:

- a) installation of in-flight refuelling capabilities;
- b) installation of new external stores and tanks, including jettison devices;
- c) installation of new weapons and stores; armament, including high power laser;
- d) installation of new equipment that may affect Electromagnetic Environmental Effects (E3) integrity, (e.g. new radar);
- e) installation of aerial delivery systems;
- f) installation of flare and chaff system;
  - f) installation of systems integrating a high power laser;

g) modification to the release device of a jettisoning tank.

A classification process would be:

### GM 21.A.92 Eligibility (AUS)

A design organisation that has been engaged to provide holder functions and assist in meeting DASR 21 Subpart J requirements to satisfy the type-certificate holder demonstration of capability under DASR 21.A.14(c), may act as the applicant where:

- a) the agreement between the government organisation and design organisation required by DASR 21.A.14(c) permits,
- b) the TCAE reflects the agreement and arrangements under which such applications may occur, and
- c) the proposed design change is within the scope of the design organisation's approval.

### GM 21.A.92 (a) - Eligibility to apply for approval of a major change to a type-certificate

The expression "Only the type-certificate holder may apply for approval of a major change to a typecertificate under this Subpart" includes any person or organisation acting on behalf of the typecertificate holder in accordance with DASR 21.A.2, subject to the arrangements with the Holder.

### GM 21.A.101 - Establishing the certification basis of changed aeronautical products

### 1.4. GM Content.

This GM contains 5 chapters and 10 appendices.

1.4.1 This chapter clarifies the purpose of this GM, describes its content, specifies the intended audience affected by this GM, clarifies which changes are within the scope of this GM, and references the definitions and terminology used in this GM.

1.4.2 Chapter 2 provides a general overview of DASR 21.A.101 and DASR 21.A.19, clarifies the main principles and safety objectives, and directs an applicant to the applicable guidance contained in subsequent chapters of this GM.

1.4.6 Appendix A lists the definitions and terminology applicable for the application of the changed product rulecontains a reference to examples of typical type design changes for products (small aeroplanes, large aeroplanes, rotorcraft, engines, and propellers), as categorised by the European Union Aviation Safety Agency (EASA) into individual tables according to the classifications of design change: 'substantial', 'significant', and 'not significant'.

1.4.7 Appendix B contains the application chart for applying the DASR 21.A.101 process.

1.4.8 Appendix C contains a reference to the method proposed by the European Union Aviation Safety Agency (EASA) for determining the changed and affected areas of a product.

1.4.9 Appendix D contains additional guidance on affected areas that is not discussed in other parts of this GM.

 1.4.10 Appendix E provides reference and military specific considerations for evaluating the 'impracticality' exception in the requirement.is Reserved.

1.4.11 Appendix F provides guidance and reference to examples on the use of relevant service experience in the certification process as one way to demonstrate that a later amendment may not contribute materially to the level of safety, allowing the use of earlier airworthiness codes or specifications.

1.4.12 Appendix G provides guidance on the structure of a CPR decision record.

1.4.13 Appendix H provides a reference to examples of documenting a proposed certification basis list.

1.4.14 Appendix I lists DASR 21 requirements related to this GM.

**1.4.15** Appendix J lists the definitions and terminology applicable for the application of the changed product rule.

### 1.5. Terms Used in this GM.

1.5.1 The following terms are used interchangeably and have the same meaning: 'specifications', 'standards', 'airworthiness requirements', 'requirements', 'airworthiness codes' and 'certification standards'. They refer to the elements of the type-certification basis for airworthiness. Examples of

such elements are EASA CS, FAA FAR, Mil Hdbk, JSSG, STANAG, Def-STAN, etc., as declared applicable by the Authority. See the Airworthiness Design Requirements Manual (ADRM) Section 1 Chapter 1 for discussion on the differences between requirements and standards.

1.5.2 The term 'certification basis' refers to the type-certification basis for airworthiness provided for in DASR 21.A.17A.

For more terms, consult Appendix AJ.

2. Overview of DASR 21.A.19 and DASR 21.A.101

### 2.1. DASR 21.A.19.

2.1.1 DASR 21.A.19 requires an applicant to apply for a new MTC for a changed product if the Authority finds that the change to the design, power, thrust, or weight is so extensive that a substantially complete investigation of compliance with the applicable type-certification basis is required.

2.1.2 Changes that require a substantial re-evaluation of the compliance findings of the product are referred to as 'substantial changes'. For guidance, see paragraph 3.3 in Chapter 3 of this GM. Appendix A of this GM provides a reference to examples of changes that will require a new TC for aircraft classes used in civil aviation.

2.1.3 If the Authority determines through DASR 21.A.19 that a proposed change does not require a new MTC, see DASR 21.A.101 for the applicable requirements to develop the certification basis for the proposed change. For guidance, see Chapter 3 and the examples referred to in Appendix A of this GM.

### 2.2.1 DASR 21.A.101(a).

DASR 21.A.101(a) requires a change to an MTC, and the areas affected by the change to comply with the airworthiness requirements that are applicable to the changed product and that are in effect on the date of application for the change (i.e. the latest airworthiness requirements in effect at the time of application), unless the change meets the criteria for the exceptions identified in DASR 21.A.101(b), or unless an applicant chooses to comply with amendments of the airworthiness requirements of later effective amendments\* that became effective after the date of application in accordance with DASR 21.A.101(f). The intent of DASR 21.A.101 is to enhance safety by incorporating the latest requirements into the certification basis for the changed product to the greatest extent practicable.

\*NOTE: Airworthiness requirements that were amended after the date of application.

### 2.2.2 DASR 21.A.101(b).

An applicant is able to complyCompliance with the earlier amendments of the airworthiness requirements consistent may be considered in accordance with DASR 21.A.101(b), when:

- a. a change is not significant (see DASR 21.A.101(b)(1));
- b. an area, system, part or appliance is not affected by the change (see DASR 21.A.101(b)(2));
- c. compliance with a later amendment for a significant change does not contribute materially to the level of safety (see DASR 21.A.101(b)(3)); or

d. compliance with the latest amendment would be impractical (see DASR 21.A.101(b)(3)).

Earlier amendments may not precede the amendment level of the certification basis of the identified baseline product.

DASR 21.A.101(b)(1)(i) and DASR 21.A.101(b)(ii) pertain to changes that meet the automatic criteria where the change is significant.

### 2.2.4 DASR 21.A.101(d).

DASR 21.A.101(d) provides for the use of special conditions, under DASR 21.A.16B, when the proposed certification basis and any later airworthiness requirements do not provide adequate standards for the proposed change because of a novel or unusual design feature.

### 2.2.5 DASR 21.A.101(e).

DASR 21.A.101(e) provides the basis under which an applicant may propose to certify a change and the areas affected by the change against alternative requirements to those established under 21.A.101(a) and 21.A.101(b).

### 3.1.2 (Reserved)

3.1.2 The tables referred to in appendix A of this GM are examples of classifications of typical type design changes. See paragraph 3.6.3 of this chapter for instructions on how to use those tables.

3.1.3 The following steps in conjunction with the flow chart in Figure 3-1 of this GM can be used to develop the appropriate certification basis for the change. For clarification, the change discussed in the flow chart also includes areas affected by the change. See paragraph 3.9.1 of this GM for guidance about affected areas.

3.3.3 A substantial change requires an application for a new MTC. See DASR 21.A.17A, DASR 21.A.18 and DASR 21.A.19. If the change is not substantial, proceed to step 3. If it is not initially clear that a new MTC is required, appendix A of this GM provides references to examples of substantial changes to aid in this classification.

3.6.2 The above criteria are used to determine whether each change grouping and each stand-alone change is significant. These three criteria are assessed at the product level. In applying the automatic criteria an applicant should focus on the change and how it impacts the existing product (including its performance, operating envelope, etc.). A change cannot be classified or reclassified as a significant change on the basis of the importance of a later amendment.

**3.6.3** One or more of the automatic criteria in DASR 21.A.101(b)(1) apply for each case where the changes are identified as significant. Experience has shown the concept of having only the three automatic criteria seems to fit most projects. Additional guidance regarding significant / non-significant, including example modifications, can be found in Appendix A to EASA GM 21.A.101.

Appendix A of this GM includes references to tables of typical changes (examples) for various product classes (e.g. small aeroplanes, transport aeroplanes, rotorcraft, engines, and propellers) that would meet the criteria for a significant design change. These references also include tables of typical design changes that would not be classified as significant. The tables can be used in one of two ways:

3.6.3.1 To identify the classification of a proposed design change listed in the table, or

3.6.3.2 In conjunction with the three automatic criteria, to help classify a proposed design change not listed in the table by comparison to determinations made for changes with similar type and magnitude.

### In any case, the final classification should be accepted by the Authority.

3.6.6 A new model designation to a changed product is not necessarily indicative that the change is significant under DASR 21.A.101. Conversely, retaining the existing model designation does not mean that the change is not significant. Significance is determined by the magnitude of the change.

3.6.7 The Authority determines the final classification of whether a change is significant or not significant. To assist an applicant in its assessment, the Authority may predetermine the classification of several typical changes that an applicant could use for reference. Such examples are referred to in appendix A of this GM.

3.6.8 At this point, the determination of significant or not significant for each of the groupings of related changes and each stand-alone change is completed. For significant changes, an applicant that proposes to comply with an earlier amendment of a requirement should use the procedure outlined in paragraph 3.7 below. For changes identified as not significant, see paragraph 3.8 below.

### 3.10.1 Do the latest standards contribute materially to the level of safety?

Applicants could consider compliance with the latest standards to 'not contribute materially to the level of safety' if the existing type design and/or relevant experience demonstrates a level of safety comparable to that provided by the latest standards. In cases where design features provide a level of safety greater than the existing certification basis, applicants may use acceptable data, such as service experience, to establish the effectiveness of those design features in mitigating the specific hazards addressed by a later amendment. Applicants must provide sufficient justification to allow the Authority to make this determination. This exception could be applicable in the situations described in the paragraphs below.

Note: Compliance with later standards is not required where the amendment is of an administrative nature and made only to correct inconsequential errors or omissions, consolidate text, or to clarify an existing requirement.

### 3.10.2.3 (Reserved) 3.10.2.3 (Reserved)

3.10.2.3.1 The exception of impracticality is a qualitative and quantitative cost–safety benefit assessment for which it is difficult to specify clear criteria. Experience to date with applicants has shown that a justification of impracticality is more feasible when both the applicant and the Authority agree during a discussion at an early stage that the effort (in terms of cost, changes to manufacturing, etc.) required to comply would not be commensurate with a small incremental safety gain. This would be clear even without the need to perform any detailed cost–safety benefit analysis (although an applicant could always use cost analysis to support an appropriate amendment level). However, there should be enough detail in the applicant's rationale to justify the exception.

Note: An applicant should not base an exception due to impracticality on the size of the applicant's company or their financial resources. The applicant must evaluate the costs to comply with a later amendment against the safety benefit of complying with the later amendment.

### Appendix A to GM 21.A.101 Classification of design changes

This appendix refers to Appendix A to EASA GM 21.A.101 Classification of design changes, as per ED Decision 2017/024/R, which contains tables of 'substantial', 'significant', and 'not significant' changes, that are adopted by the FAA, Agência Nacional de Aviação Civil (ANAC), the European Aviation Safety Agency (EASA), and Transport Canada Civil Aviation (TCCA) through international collaboration. These tables should be used as a reference for the classification of design changes to

military aircraft. In any case, the aircraft category to be used should be confirmed by the Authority and the final classification may change due to cumulative effects and/or combinations of individual changes.

### Appendix B to GM 21.A.101 Application charts for changed product rule

This appendix contains the application chart for applying the DASR 21.A.101 process.

Substantial (21.A.19)	Significant (21.4.101(a) and (b))			Not Significant (21.A.101)(b)(1))				
Substantially changed product Compliance with all latest airworthiness codes and standards required for product certification. Previously approved type design and compliance data may be allowed if valid for the changed product.	Affected area (Changed and/or affected areas) New demonstration of compliance is required Previously approved type design and compliance data may be allowed if valid for the changed product.		Unaffected area No new demonstration	Affected area (Changed and/or affected areas) New demonstration of compliance is required. The	Unaffected area No new demonstration			
	materially co	compliance with the latest amendment materially contributes to safety		of compliance is required.	applicant may propose a	of compliance is required.		
	Practical —	Impractical The applicant may propose a certification basis using earlier airworthiness codes and standards, but not earlier than the existing TC basis.	The applicant may propose a certification basis using earlier airworthiness codes and standards, but not earlier than the existing TC basis.	Unaffected area continues to comply with the existing certification basis.	certification basis using an earlier amendment but not earlier than in the existing TC basis. Previously approved type design and compliance data may be allowed if valid for the changed product.	unaffected area continues to comply with the existing certification basis.		
		Certificat	ion Basis Proposed by the	Applicant				
New certification basis using latest Airworthiness codes ar airworthiness codes and standards. amendments with su		nd standards at earlier upporting rationale.	Existing certification basis.	Existing certification basis including 'elects to comply'.	Existing certification basis.			
Resultant Type-Certification Basis, subject to acceptance by the Authority								
New certification basis using the latest airworthiness codes and standards, and special conditions if required. New certification basis u codes and standards amendments, and specia		using the airworthiness : at earlier approved al conditions if required.	Existing certification basis.	Existing certification basis (if adequate); if not, first appropriate later amendment(s) and/or special conditions including 'elects to comply'.	Existing certification basis.			

### Appendix C to GM 21.A.101 A method to determine the changed and affected areas

When a product is changed, some areas may change physically, while others may change functionally. GM to DASR 21.A.101 refers to this combination as changed and affected areas. Appendix C to EASA GM 21.A.101 as per ED Decision 2017/024/R contains a process to determine physical and functional changes, including affected areas, and to develop the combined list of physical and functional changes with applicable requirements of airworthiness codes. In principle, this process may also be applied where airworthiness codes and standards other than EASA Certification Specifications (CS) are used.

NOTE: The referenced process is provided as guidance only.

### Appendix D to GM 21.A.101 Other guidance for affected areas

D.1 Sample Questions in Determining Affected Areas.

Below are sample questions to assist in determining whether an area is affected by the change. If the answer to any of these questions is yes, then the area is considered to be affected.

- 1. Is the area changed from the identified baseline product?
- 2. Is the area impacted by a significant product-level change?
- 3. Is there a functional effect on the unchanged area by a change to the system or system function that it is a part of?
- 4. Does the unchanged area need to comply with a system or product-level airworthiness requirement that is part of the change?
- 5. Are the product-level characteristics affected by the change?
- 6. Is the existing compliance for the area invalidated?

### D.2 Sub-Areas within an Affected Area.

Within areas affected by a change, there may be 'sub-areas' of the area that are not affected. For those sub-areas, the amendment levels at the existing certification basis remain valid, along with the previous compliance findings.

For example, if a passenger seat fitting is changed as part of a significant change, then the structure of the seat is affected. Thus, the amendment level for all applicable structural requirements (e.g. EASA CS 25.561 and EASA CS 25.562) would be at the amendment level on the date of application (unless an exception is granted). However, the seat fabric is not affected, so the amendment level of flammability requirements (e.g. EASA CS 25.853) may remain at the existing certification basis, and a new compliance finding would not be required.

### Appendix E to GM 21.A.101

(Reserved)

### Appendix F to GM 21.A.101 The use of service experience in the exception process

### F.1 Introduction.

Service experience may support the application of an earlier airworthiness codes or standards pursuant to EMAR 21.A.101(b)(3) if, in conjunction with the applicable service experience and other compliance measures, the earlier airworthiness code or standard provides a level of safety comparable to that provided by the latest airworthiness codes or standards. The applicant must provide sufficient substantiation to allow the Authority to make this determination. A statistical approach may be used, subject to the availability and relevance of data, but sound engineering judgment must be used. For service history to be acceptable, the data must be both sufficient and pertinent. The essentials of the process involve:

 A clear understanding of the change of the airworthiness code or standard, and the purpose for the change,

- A determination based on detailed knowledge of the proposed design feature,

- The availability of pertinent and sufficient service experience data, and

- A comprehensive review of that service experience data.

In case that civil service experience is used in the process, military specific kinds of operations and operational conditions must be sufficiently addressed and factored in. Similarly, it needs to be ensured that service experience from different operating organisations is relevant or representative for the intended use.

### F.2 Guidelines.

The substantiation by the applicant and the determination by the Authority should be documented together with the type-certification basis.

Note: Special conditions (SCs), equivalent safety findings (ESFs) / equivalent level of safety (ELOSs), deviations, reversions, and most elects to comply (ETC) are formally part of the type-certification basis (TCB). A process like the Certification Review Item (CRI) process of the European Union Aviation Safety Agency (EASA) may be used to keep record of the applicant's substantiation and the Authority's determination, either as a stand-alone CRI or included in the type-certification basis CRI A-01.

### The documentation provided by the applicant should support the following:

F.2.1 The identification of the differences between the airworthiness codes or standards in the existing basis and the airworthiness codes or standards as amended, and the effect of the change to the requirements.

F.2.2 A description as to what aspect(s) of the latest airworthiness codes or standards the proposed changed product would not meet.

F.2.3 Evidence showing that the proposed certification basis for the changed product, together with applicable service experience, relative to the hazard, provides a level of safety that approaches the latest airworthiness codes or standards, yet is not fully compliant with the latest airworthiness codes.

### F.2.4 A description of the design feature and its intended function.

F.2.5 Data for the product pertinent to the requirement.

F.2.5.1 Service experience from such data sources, such as:

Accident reports,

Incident reports,

- Service bulletins,

- Airworthiness directives,

– Repairs,

Modifications,

- Flight hours/cycles for fleet leader and total fleet,

- World airline / operating organisation accident summary data,

- Service difficulty reports,

Accident Investigation Board reports, and

Warranty, repair, and parts usage data.

F.2.5.2 Show that the data presented represent all relevant service experience for the product, including the results of any operator surveys, and is comprehensive enough to be representative.

F.2.5.3 Show that the service experience is relevant to the hazard.

F.2.5.4 Identification and evaluation of each of the main areas of concern with regard to:

Recurring and/or common failure modes,

– Cause,

Probability by qualitative reasoning, and

 Measures already taken and their effects. F.2.5.5 Relevant data pertaining to aircraft of similar design and construction may be included.

F.2.5.6 Evaluation of failure modes and consequences through analytical processes. The analytical processes should be supported by:

A review of previous test results,

Additional detailed testing as required, or

 A review of aircraft functional hazard assessments (FHA) and any applicable system safety assessments (SSA) as required.

F.2.6 A conclusion that draws together the data and the rationale.

F.2.7 These guidelines are not intended to be limiting, either in setting the required minimum elements or in precluding alternative forms of submission. Each case may be different, based on the particulars of the system being examined and the requirement to be addressed.

F.3 Example: EASA CS/FAA FAR.25.1141(f) for Transport Category Aeroplanes. NOTE: This example is taken from the certification experience of the Federal Aviation Administration (FAA), so references to FAR sections and amendments are kept.

F.3.1 The following example, for transport category aeroplanes (§ 25.1141(f), APU Fuel Valve Position Indication System), illustrates the typical process an applicant follows. The process will be the same for all product types.

F.3.2 This example comes from a derived model transport aeroplane where significant changes were made to the main airframe components, engines and systems, and APU. The baseline aeroplane has an extensive service history. The example shows how the use of service experience supports a finding that compliance with the latest certification specifications would not contribute materially to the level of safety and that application of the existing certification basis (or earlier amendment) would be appropriate. The example is for significant derived models of transport aeroplanes with extensive service history. It illustrates the process, following the guidelines in this Appendix, but does not include the level of detail normally required.

F.3.2.1 Determine the differences between the certification specifications applied in the original certification basis and the latest certification specification, and the effect of the change to the certification specifications. The original certification basis of the aeroplane that is being changed is the initial release of Part 25. Amendment 25-40 added requirement § 25.1141(f), which mandates that power-assisted valves must have a means to indicate to the flight crew when the valve is in the fully open or closed position, or is moving between these positions. The addressed hazard would be risk of APU fire due to fuel accumulation caused by excessive unsuccessful APU start attempts.

F.3.2.2 What aspect of the proposed changed product would not meet the latest certification specifications? The proposed APU fuel valve position indication system does not provide the flight crew with fuel valve position or transition indication and, therefore, does not comply with the requirements of § 25.1141(f).

F.3.2.3 The applicant provides evidence that the proposed certification basis for the changed product, together with applicable service experience of the existing design, provide a level of safety that approaches, yet is not fully compliant with, the latest certification specifications. The APU fuel shut-off valve and actuator are unchanged from those used on the current family of aeroplanes, and have been found to comply with the earlier Amendment 25-11 of § 25.1141. The existing fleet has achieved approximately (#) flights during which service experience of the existing design has been found to be acceptable. If one assumes a complete APU cycle, i.e. start-up and shutdown for each flight, the number of APU fuel shut-off valve operations would be over 108 cycles, which demonstrates that the valve successfully meets its intended function and complies with the intent of the certification specification.

F.3.2.4 The applicant provides a description of the design feature and its intended function. The fuel shut-off valve, actuator design, and operation is essentially unchanged with the system design ensuring that the valve is monitored for proper cycling from closed to open at start. If the valve is not in the appropriate position (i.e. closed), then the APU start is terminated, an indication is displayed on the flight deck, and any further APU starts are prevented. Design improvements using the capability of the APU electronic control unit (ECU) have been incorporated in this proposed product change. These design changes ensure that the fuel valve indication system will indicate failure of proper valve operation to the flight crew, and these features increase the level of functionality and safety, but the system does not indicate valve position as required by § 25.1141(f).

F.3.2.5 The FAA and the applicant record this in an issue paper. The FAA can use the G-1 or a technical issue paper for this purpose. An issue paper was coordinated, included data, or referenced reports documenting relevant service experience compiled from incident reports, fleet flight hour/cycle data, and maintenance records. The issue paper also discussed existing and proposed design details, failure modes, and analyses showing to what extent the proposed aeroplane complies with the latest amendment of § 25.1141. Information is presented to support the applicant's argument that compliance with the latest amendment would not materially increase the level of safety. Comparative data pertaining to aircraft of similar design and construction are also presented.

F.3.2.6 The conclusion, drawing together the data and rationale, is documented in the G-1 issue paper. The additional features incorporated in the APU fuel shut-off valve will provide a significant increase in safety to an existing design with satisfactory service experience. The applicant proposes that compliance with the latest amendment would not materially increase the level of safety and that compliance with § 25.1141 at Amendment 25-11 would provide an acceptable level of safety for the proposed product change.

### Appendix G to GM 21.A.101 Changed product rule (CPR) decision record

The changed product rule (CPR) decision should be recorded as part of the certification programme plan. Appendix G to EASA GM 21.A.101 as per ED Decision 2017/024/R may be used to determine the general structure and information that is expected for a changed product rule (CPR) decision record. Generally, the decision sheet should

- identify the project,
- identify the related MTC/MSTC No,
- document each step of the process outlined in GM to DASR 21.A.101 with appropriate justification and decision (YES/NO),
- detail the reference to the proposed certification basis to be accepted by the Authority.

### Appendix H to GM 21.A.101 Examples of documenting the proposed certification basis list

Appendix H to EASA GM 21.A.101 as per ED Decision 2017/024/R provides examples for establishing the applicable airworthiness codes or standards that will become part of the type-certification basis for airworthiness as well as for documenting a proposed certification basis.

### Appendix I to GM 21.A.101 Related documents

I.1 Related DASR 21 requirements.

- 21.A.15, Application
- 21.A.16A, Airworthiness Codes
- 21.A.16B, Special Conditions

- 21.A.17A, Type-certification basis for a type-certificate or restricted type-certificate

- 21.A.19, Changes requiring a new type certificate
- 21.A.31, Type design
- 21.A.41, Type certificate
- 21.A.91, Classification of changes to a type certificate
- 21.A.93, Application
- 21.A.97, Requirements for approval of a major change

 - 21.A.101, Type-certification basis, operational suitability data certification basis and environmental protection requirements for a major change to a type-certificate

- 21.A.113, Application for a supplemental type-certificate

 - 21.A.115, Requirements for approval of major changes in the form of a supplemental typecertificate

### Appendix J to GM 21.A.101 - Definitions and terminology (AUS)

### AJ.1 Aeronautical product.

The terms 'aeronautical product' or 'product' used in this guidance material include type-certified aircraft, engines, or propellers and, for the purpose of this GM, an AUSMTSO approved APU.

### AJ.2 Assumptions used for certification.

The assumptions used for certification are the evaluations and decisions that led to the approval of the baseline product's characteristics. Examples of the product's baseline characteristics include but are not limited to the following:

- Design methodologies, methods of compliance, and standards used to achieve compliance with the airworthiness requirements making up the certification basis;
- Structural, mechanical, electrical, propulsion, aerodynamic, performance, operational, and maintenance characteristics;
- Operational and flight envelopes defining the product performance and capabilities at specified weights, speeds, altitudes, load factors, and centres of gravity;
- Crashworthiness;
- Role or mission;
- Airworthiness and operational limitations; or
- Pilot training, if necessary.

### AJ.3 Baseline product.

It is an aeronautical product with a specific, defined approved configuration and certification basis that the applicant proposes to change.

### AJ.4 Certification basis.

The combination of the:

- airworthiness requirements as provided for in DASR 21.A.17A;
- environmental protection requirements, as provided for in DASR 21.A.18, as established for the change according to DASR 21.A.101, as well as the:
- special conditions;
- equivalent safety findings;
- elects to comply; and
- exceptions

applicable to the product to be certified.

### AJ.5 Certification requirements.

Refers to each requirement of the type-certification basis based on recognised airworthiness codes and/or standards, eg EASA CS, FAA FAR, MIL HDBK/MIL STD, JSSG, STANAG, DEF-STAN, etc.

### AJ.65 Change.

The term 'change' refers to a change to a product type certificate (as defined in DASR 21.A.41) approved or to be approved under Subpart D or Subpart E (as a military supplemental type certificate) of Part 21, including a change to an MSTC or a change to the AUSMTSO approval for auxiliary power units (APUs) under Subpart O. A change may consist of a single stand-alone change to one MTC component or several interrelated changes to different MTC components (e.g. the type design, operating characteristics, environmental protection characteristics, etc. (see DASR 21.A.41 and GM to 21.A.90A)).

### AJ.7-6 Design change.

The term 'design change' refers to a change to the type design (as defined in DASR 21.A.31) of an aeronautical product. In the context of this document, the terms 'change to the type design', 'modification', 'design change', and 'type design change' are synonymous.

### AJ.8-7 Earlier standards.

The airworthiness requirements or previous standards in effect prior to the date of application for the change, but not prior to the existing certification basis.

### AJ.9-8 Existing certification basis.

The airworthiness requirements or previous standards incorporated by reference in the type certificate of the baseline product to be changed.

### AJ. 10-9 Latest standards.

The airworthiness requirements in effect on the date of application for the change.

### AJ.11-10 Previous relevant design changes.

Previous design changes, the cumulative effect of which could result in a product significantly or substantially different from the original product or model, when considered from the last time the latest standards were applied.

### AJ.12-11 Product-level change.

A change or combination of changes that makes the product distinct from other models of the product (e.g. range, payload, speed, design philosophy). Product-level change is defined at the aircraft, aircraft engine, or propeller level of change.

### AJ.13-12 Secondary change.

A change that is part of a significant physical change that does not contribute materially to the level of safety. Guidance is contained in paragraph 3.10.1.4 of this GM.

### AJ.14-13 Significant change.

A change to the type certificate to the extent that it changes one or more of the following, but not to the extent to be considered a substantial change: the general configuration, principles of construction, or the assumptions used for certification. The significance of the change is considered in the context of all previous relevant design changes and all related revisions to the applicable standards. Not all product-level changes are significant.

### J.14 Significant change to area.

### Not used in the context of DASR 21

### AJ.15 Substantial change.

A change that is so extensive that a substantially complete investigation of compliance with the applicable certification basis is required, and consequently a new military type certificate is required pursuant to DASR 21.A.19.

### SUBPART E - MILITARY SUPPLEMENTAL TYPE-CERTIFICATES

### AMC 21.A.112B(c) - Alternative Demonstration

In some countries a government organisation is approved by the Authority to execute the Military Supplemental Type Certificate (MSTC) holder responsibilities. This government organisation may apply for a military supplemental type-certificate, without being the original design organisation. In this case the government organisation should, in accordance with DASR 21.A.2, enter an agreement

with a design organisation which has access to the Type Design data to ensure the undertaking of specific actions and obligations. Any Alternative procedures (refer to DASR 21.A.14(b)) for establishing a Design Assurance System and Safety Management System should be acceptable to the Authority in fulfilling to fulfil the obligations required under DASR 21.A.118A must be acceptable to the Authority.

Where an MTC holder or Project Office applies under these provisions, the DASR AMC 21.A.14(c) requirements for 'DASA recognition of NAA / NMAA' and 'Project Office demonstration of capability' also apply.

### AMC 21.A.118(a) Continue to meet the criteria of DASR 21.A.112B

To ensure that the holder of a supplemental type-certificate remains capable to undertake the required actions and obligations, DASR 21.A.118(a) also requires the holder to continue to meet the criteria of DASR 21.A.112B.

To comply with this requirement, the holder of a supplemental type-certificate shall inform the Authority without undue delay of any circumstances that significantly affect the ability of the holder to effectively discharge its obligations.

If the actions and obligations of the holder of a supplemental type-certificate are undertaken on its behalf by another person or organisation in accordance with DASR 21.A.2, these circumstances shall include any changes to the relevant arrangements with the other organisation or findings regarding its safety performance.

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Defence Aviation Safety Authority

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### DCP AMENDMENT RECORD DCP 2023 - 013

### DASR CLAUSE: AMC1 M.A.145.A.30(f)

### **RATIONALE FOR CHANGE**

Wording of AMC1 to DASR 145.A.30(f) has led to the understanding that an AltMoC is not possible - particularly that it identifies that SAE AIR4938 is the accepted standard. Discussions with DAVENG have confirmed that maintenance organisations can apply for alternate standards in the context of their composite repairs. Reworded AMC1 is proposed with additional guidance materiel to be entered into DASP manual volume 3

### **CURRENT REGULATION TEXT**

For conduct of composite repairs, SAE AIR4938 is the accepted standard for training and certification of personnel.

### **REVISED REGULATION TEXT**

For the performance of composite repairs, SAE AIR4938 is an accepted standard for qualifying personnel to carry out repairs.



[OFFICIAL]

### DCA Fast Track Task Review DASR CLAUSE: GM M.A.145.A.60(a)

### **RATIONALE FOR CHANGE**

To maintain consistent language throughout DASR all instances of conduct of maintenance will be amended to performance of maintenance.

### **CURRENT REGULATION TEXT**

Occurrences are likely to be identified as failures, malfunctions or defect identified during the operation of the aircraft or conduct of maintenance.

### **REVISED REGULATION TEXT**

Occurrences are likely to be identified as failures, malfunctions or defect identified during the operation of the aircraft or performance of maintenance.





[OFFICIAL]

**DCA Fast Track Task Review** 

# DASR CLAUSE: GM M.A.202(a) RATIONALE FOR CHANGE To maintain consistent language throughout DASR all instances of conduct of maintenance will be amended to performance of maintenance. CURRENT REGULATION TEXT Occurrences are likely to be identified as failures, malfunctions or defect identified during the operation of the aircraft or conduct of maintenance. REVISED REGULATION TEXT

Occurrences are likely to be identified as failures, malfunctions or defect identified during the operation of the aircraft or performance of maintenance.




BP33124844

### DCA Fast Track Task Review DASR CLAUSE: AMC M.A.145.A.30(f)

### **RATIONALE FOR CHANGE**

To maintain consistent language throughout DASR all instances of conduct of NDT activities will be amended to performance of NDT activities.

### **CURRENT REGULATION TEXT**

**NOTE:** Although EN4179 is the primary standard referenced for NDT qualification and certification, NAS410 is also an accepted standard for the conduct of NDT activities.

### **REVISED REGULATION TEXT**

**NOTE:** Although EN4179 is the primary standard referenced for NDT qualification and certification, NAS410 is also an accepted standard for the performance of NDT activities.



**DCA Fast Track Task Review** 

BP33124844

# DASR CLAUSE: AMC2 M.A.145.A.30(f) RATIONALE FOR CHANGE To maintain consistent language throughout DASR all instances of conduct of manual welding will be amended to performance of manual welding. CURRENT REGULATION TEXT For conduct of aircraft manual welding repairs, a CASA welding authority granted in accordance with CAAP 33-1(1) is an appropriate qualification. REVISED REGULATION TEXT For the performance of aircraft manual welding repairs, a CASA welding authority granted in accordance with CAAP 33-1(1) is an appropriate qualification.







Australian Government
 Department of Defence
 Defence Aviation Safety Authority

**Defence Aviation Safety Authority** 

# DASR AMENDMENT RECORD DCP 2023 - 014

### DASR CLAUSE: AMC1 145.A.35(b)

### **RATIONALE FOR CHANGE**

A recent DCA finding on the authorisation of certifying staff in a DASA 145 MO highlighted that AMC1 to 145.A.35(b) could be improved - specifically to clarify that the ability for Maintenance Organisations to temporarily amend authorisations of certifying staff, following submission of a DASR Form 19/19a, is only available for licence upgrades and not for the initial issue of a licence.

### **CURRENT REGULATION TEXT**

DASR 145 maintenance organisations may temporarily amend authorisations of certifying staff, immediately following submission to DASA of a Form 19/19a associated with the completion of additional training that qualify the individual to have their licence amended by DASA (e.g. a new licence category, a new type rating, or a licence exclusion to be removed/licence extension to be added).

In such cases, the DASR 145 maintenance organisation is to report certifying staff authorisation changes to their relevant DASA desk officer within two working days.

### **REVISED REGULATION TEXT**

A Maintenance Organisation, approved in accordance with DASR 145, may temporarily amend authorisations of certifying or support staff providing:

- A DASR Form 19 or DASR Form 19a, seeking an amendment to an existing licence, has been submitted to DASA (e.g. a new licence category, a new type rating, or a licence exclusion to be removed/licence extension to be added); and
- The Maintenance Organisation reports the temporary certifying or support staff authorisation changes to their relevant DASA desk officer within two working days.

Temporary amendment of authorisations is not to occur prior to the initial issue of a licence by DASA.





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### DASR AMENDMENT RECORD DCP 2022-033

### DASR CLAUSE: Glossary – Airworthiness Directive

### **RATIONALE FOR CHANGE**

Terminology change to align the DASR Glossary definition of an Airworthiness Directive with EMAD 1 definition, as well as providing language consistent with that currently in DASR 21.A.3B.

### **CURRENT REGULATION TEXT**

Current DASR Glossary definition of an Airworthiness Directive:

"A document issued or adopted by the Authority which mandates actions to be performed on an aircraft to restore airworthiness when evidence shows that the safety level of the aircraft may otherwise be compromised."

### **REVISED REGULATION TEXT**

Proposed DASR Glossary definition of an Airworthiness Directive:

"A document issued or adopted by the Authority which mandates actions to be performed on an aircraft to restore an acceptable level of safety, when evidence shows that the safety level of this aircraft may otherwise be compromised."

[OFFICIAL] Page 1 of 1





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### DASR AMENDMENT RECORD DCP 2023 - 015

### DASR CLAUSE: DASR Glossary definition of Delegate Of The Safety Authority (DoSA)

### **RATIONALE FOR CHANGE**

DoSA definition reworded to clarify that DoSA are external to DASA and may be external to Defence. This rewording is to align the definition with other DASP content, and remove elements from the definition which restrict use of DoSAs to allow future flexibility.

### **CURRENT REGULATION TEXT**

### Delegate Of The Safety Authority (DoSA) \*

An individual who has been formally assigned an Authority responsibility and is considered an agent of the Authority when exercising that delegation. The individual may be within or external to the Defence Aviation Safety Authority, but always internal to Defence.

### **REVISED REGULATION TEXT**

### Delegate Of The Safety Authority (DoSA) \*

An individual, external to the Defence Aviation Safety Authority, who has been formally assigned an Authority responsibility and is considered an agent of the Authority when exercising that delegation. The individual may be external to Defence.





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### DASR AMENDMENT RECORD DCP 2021 - 035

DASR CLAUSE: New GM1 M.A.708

### **RATIONALE FOR CHANGE**

GM M.A.708(c) text to be moved to new GM1 M.A.708 as the text is applicable to all of M.A.708. Minor change for language consistency.

### **CURRENT REGULATION TEXT**

N/A this is new GM

### **REVISED REGULATION TEXT**

### GM1 M.A.708 - Continuing airworthiness management AUS)

In the context of this regulation, a DASR 145 AMO also includes another maintenance organisation accepted by DASA in accordance with DASR M.A.201(g).



# **DASR AMENDMENT RECORD** DCP 2021-035 DASR CLAUSE: DASR M.A.708(b) paragraph 4. **RATIONALE FOR CHANGE** This change aligns DASR with EMAR by including the text DASR 145 and retaining the flexibility of DASR M Subpart H. **CURRENT REGULATION TEXT** 4. ensure that all maintenance is carried out in accordance with the AMP and released in accordance with DASR M.A. Subpart H-Certificate of Release to Service (CRS) (AUS); **REVISED REGULATION TEXT** 4. ensure that all maintenance is carried out in accordance with the AMP and released in accordance with DASR 145 or DASR M.A. Subpart H;



BP32258170

DASR AMENDMENT RECORD			
DCP 2021- 035			
DASR CLAUSE: GM M.A.708(c)			
RATIONALE FOR CHANGE			
GM M.A.708(c) to be deleted as the text will be moved to new GM1 M.A.708.			
CURRENT REGULATION TEXT			
In the context of this regulation, a DASR 145 AMO also includes one assessed to be equivalent at DASR M.A.201(g).			
REVISED REGULATION TEXT			
N/A GM M.A.708(c) - Continuing airworthiness management (AUS) to be deleted.			



BP32258170

DASR AMENDMENT RECORD				
DCD 2021 - 035				
DCF 2021 - 055				
DASR CLAUSE: M.A.710(a) paragraph 8				
RATIONALE FOR CHANGE				
This change promotes clarity in the DASR and more closely aligns with EMAR, that maintenance is released IAW DASR 145 and retaining the flexibility of DASR M Subpart H.				
CURRENT REGULATION TEXT				
8. all maintenance has been released in accordance with DASR M.A.Subpart H; and				
REVISED REGULATION TEXT				
8. all maintenance has been released in accordance with DASR 145 or DASR M.A. Subpart H; and				



### DASR AMENDMENT RECORD DCP 2021 - 035

### DASR CLAUSE: M.A.802

### **RATIONALE FOR CHANGE**

The proposed amendment is to clarify this regulation regarding the issue of a component certificate of release to service by an organisation that does not hold a DASR 145 maintenance organisation approval or DASR 21 production approval.

### **CURRENT REGULATION TEXT**

A certificate of release to service shall be issued at the completion of any maintenance carried out on an aircraft component by a maintenance organisation approved in accordance with DASR 145, or equivalent in accordance with DASR M.A.201(g).

The authorised release certificate identified as DASR Form 1, constitutes the component certificate of release to service, except when such maintenance on aircraft components has been performed in accordance with DASR M.A.201(g) in which case the maintenance is subject to aircraft release procedures in accordance with DASR M.A.801.

### **REVISED REGULATION TEXT**

(a) Except for aircraft components released to service in accordance with DASR 21 or DASR 145, the certificate of release to service / authorised release certificate shall be issued according to this Subpart.

(b) A component certificate of release to service may be issued by a maintenance organisation accepted by DASA in accordance with DASR M.A.201(g).

(c) A component certificate of release to service may be issued by a production organisation accepted by DASA.



# DASR AMENDMENT RECORD

DCP 2021 - 035

### DASR CLAUSE: New AMC M.A.802(c)

### **RATIONALE FOR CHANGE**

This change will provide AMC for the acceptability of parts manufactured in accordance with DASR 21. This change will support the application of the provisions of DASA recognition certificates with respect to the production of aviation parts not accompanied with a DASR Form 1 nor a recognised equivalent artefact.

### **CURRENT REGULATION TEXT**

N/A this is new AMC



### **REVISED REGULATION TEXT**

### AMC M.A.802(c) - Component certificate of release to service (AUS)

- 1. A production organisation is accepted by DASA if:
  - a. the organisation is oversighted by a recognised aviation authority; and
  - b. prior to accessing the services of an organisation through Recognition, the consumer ensures the organisation's suitability in accordance with the scope, conditions and caveats set out in the applicable Recognition certificate (see DASA Recognition web page).
- 2. In cases where a production organisation is unable to provide the recognised equivalent artefact to Defence under existing oversight arrangements, DASA may agree that the CAMO can consume an alternate artefact where the CAMO can demonstrate to the satisfaction of DASA that:
  - a. it is not feasible for the production organisation to become a DASR 21 Subpart G production organisation or produce components in accordance with DASR 21 Subpart F,
  - b. the production organisation is unable to provide the alternate artefact under an existing DASR 21 Subpart G production organisation approval using the sub-contractor provisions of DASR 21.A.139 Quality System,
  - c. the production is carried out, and the alternate artefact is issued, through the same processes by which the organisation provides a similar service under the oversight of a recognised aviation authority,
  - d. the organisation is a suitable provider of the required service, and
  - e. appropriate controls are in place to ensure safety.



### DASR AMENDMENT RECORD DCP 2021- 035

### AMC M.A.201(g) - Responsibilities (AUS)

### **RATIONALE FOR CHANGE**

The term 'required artefact' is ambiguous therefore replacing 'required artefact' with 'recognised equivalent artefact' would clarify the AMC requirements. Also, replaces two instances of 'airworthiness authority' with 'aviation authority'

### **CURRENT REGULATION TEXT**

- 1. A maintenance organisation is accepted by DASA if:
  - a. the organisation is oversighted by a recognised airworthiness authority; and
  - b. prior to accessing the services of an organisation through Recognition, the consumer ensures the organisation's suitability in accordance with the scope, conditions and caveats set out in the applicable Recognition certificate (see DASA Recognition web page).
- 2. In cases where a maintenance organisation is unable to provide the required artefact to an ADF consumer under existing oversight arrangements, DASA may agree that the CAMO can consume an alternate artefact where the CAMO can demonstrate to the satisfaction of DASA that:
  - a. it is not feasible for the maintenance organisation to become a DASR 145 maintenance organisation
  - b. the maintenance organisation is unable to carry out maintenance under an existing DASR 145 organisation approval using the sub-contractor provisions of DASR 145.A.75—Privileges of the organisation
  - c. the maintenance is carried out, and the alternate artefact is issued, through the same processes by which the organisation provides a similar service under the oversight of a recognised airworthiness authority
  - d. the organisation is a suitable provider of the required service, and
  - e. appropriate controls are in place to ensure safety.



### **REVISED REGULATION TEXT**

- 1. A maintenance organisation is accepted by DASA if:
  - a. the organisation is oversighted by a recognised aviation authority; and
  - b. prior to accessing the services of an organisation through Recognition, the consumer ensures the organisation's suitability in accordance with the scope, conditions and caveats set out in the applicable Recognition certificate (see DASA Recognition web page).
- 2. In cases where a maintenance organisation is unable to provide the recognised equivalent artefact to an ADF consumer under existing oversight arrangements, DASA may agree that the CAMO can consume an alternate artefact where the CAMO can demonstrate to the satisfaction of DASA that:
  - a. it is not feasible for the maintenance organisation to become a DASR 145 maintenance organisation
  - b. the maintenance organisation is unable to carry out maintenance under an existing DASR 145 organisation approval using the sub-contractor provisions of DASR 145.A.75—Privileges of the organisation
  - c. the maintenance is carried out, and the alternate artefact is issued, through the same processes by which the organisation provides a similar service under the oversight of a recognised aviation authority
  - d. the organisation is a suitable provider of the required service, and
  - e. appropriate controls are in place to ensure safety.





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## DASR AMENDMENT RECORD DCP 2023 - 006

DASR CLAUSE: GM MED.10.A

### **RATIONALE FOR CHANGE**

JBAC is outdated terminology.

DASA replaced 'JBAC' with 'Air Traffic Controllers'.

### **CURRENT REGULATION TEXT**

5. CASA medical certificates issued to Reserve members may not be used to support any deployed operations, either within or outside of Australia. In such cases, a Defence medical is required as Defence has special needs that are not covered under CASA requirements. Detailed advice may be sought from the relevant SSAMA. Reserve JBAC performing flying related duties at an airbase are not deemed as deployed.

### **REVISED REGULATION TEXT**

5. CASA medical certificates issued to Reserve members may not be used to support any deployed operations, either within or outside of Australia. In such cases, a Defence medical is required as Defence has special needs that are not covered under CASA requirements. Detailed advice may be sought from the relevant SSAMA. Reserve Air Traffic Controllers performing flying related duties at an airbase are not deemed as deployed.





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# DASR AMENDMENT RECORD DCP 2023 - 023

DASR CLAUSE: AMC MED.15.A

### **RATIONALE FOR CHANGE**

TMUFF guidance content has been relocated to IAM controlled OIP.

### **CURRENT REGULATION TEXT**

- Aviation-related duties should not be performed when a medical or dental condition exists that may compromise suitability for those duties. Table 1 – TMUFF Rules provides minimum self-cancelling TMUFF periods for many conditions. If symptoms persist longer than the minimum self-cancelling TMUFF periods, an AVMO consult is required.
- 2. Documentation. A TMUFF recommendation, including all restrictions, should be documented contemporaneously in writing.
- 3. **Medical certificate.** TMUFF does not affect medical certificate validity unless the condition persists into the next medical certificate currency period. In such cases, a flexibility provision under DASR MED.10.A may be used if the Accountable Manager (AM) deems this suitable and required.



Activity, condition or factor	Minimum TMUFF period
Alcohol: Ingestion of alcohol	<ul> <li>Blood alcohol content level (BAL) of zero and appropriate recovery time that ensures any effects of alcohol consumption, such as hang over symptoms, are eliminated.</li> <li>Table 2 provides minimum abstinence period guidance.</li> </ul>
Blood donation: Whole blood or partial blood products	<ul> <li>72 hours for aircrew</li> <li>24 hours for aircraft controllers and remote pilots</li> </ul>
Diving (Aircrew only) There is no restriction placed on flying following snorkelling, breathhold diving or diving on pure oxygen. <b>Note:</b> These restrictions should be considered guidance for other personnel carried on Defence aircraft	<ul> <li>Flying at or below 8,000 ft Cabin Altitude (CA):</li> <li>12 hours after dive of less than 10 metres, with no decompression stops.</li> <li>24 hours after a dive of greater than 10 metres, and/or decompression stops.</li> <li>48 hours after Heliox decompression dive of greater than 2 hours, or a Saturation dive.</li> <li>9 hours after use of compressed air device, during Emergency Breathing System (EBS) training. This may be reduced to two hours if cabin altitude remains at or below 3,280 feet.</li> <li>Flying above 8,000 ft CA:</li> <li>48 hours after a dive to any depth.</li> <li>Seven days after a Heliox decompression dive of greater than 2 hours, or a Saturation dive.</li> <li>9 hours after use of compressed air device, during Emergency Breater than 2 hours, or a Saturation dive.</li> <li>Seven days after a Heliox decompression dive of greater than 2 hours, or a Saturation dive.</li> <li>9 hours after use of compressed air device, during Emergency Breater than 2 hours, or a Saturation dive.</li> </ul>
Eye examinations (routine) Eye examination for clinical reasons is not to be considered under this	<ul> <li>Cyclopentolate HCL 1% is to be utilised.</li> <li>TMUFF for 24 hours is required, with return of normal vision, with no blurring, glare or sensitivity to lights.</li> <li>Aircrew and controllers are to ensure that they can adequately</li> </ul>
regulation – all must be reviewed by	read the checklists and instruments, and can transition effortlessly between near and far vision.

BO4376500 - Template V4.0



an AVMO prior to return t	to flying or	
controlling duties.		
Fluid/meal not consumed	within the • TMUFF pending fluid/meal consumption	
previous six hours		
Hypoxia Training:	<ul> <li>12 hours or as directed by an AVMO</li> </ul>	
HRRT, ROBD, CADO, other	r	
normobaric hypoxia traini	ing	
Excludes other hypobaric	chamber	
runs conducted at IAM. IA	AM will	
advise individuals of TMU	FF periods	
for non-standard hypoxia	training	
and hypobaric chamber e	xposure.	
Immunisations	• 12 hours or as directed by extant health policy or an AVMO	
Medical / dental procedur	res Where local anaesthetic (including eye drops) is used:	
	• 8 hours.	
	For general, spinal, epidural anaesthesia or IV sedation:	
	• 48 hours.	
Madication		
IVIEGICATION:	• The period specified by the prescribing AVIVIO or Aviation	
Administration of medical		
Viental Health:	INUFF pending AVINO consultation	
Critical incident iviental H	eaith	
Support (CIVIHS)	• TMUEE up to 2 days for minor colf limiting mysoular services	
	• INOFF up to 3 days for minor self-limiting muscular soreness.	
Conditioning Program (eq	uivalent)	
back and pack musculosk		
Physiological conditions:	TMUEE duration if imposed after involvement in a	
Following a physiological	enisode /	
incident / accident		

BO4376500 - Template V4.0

[OFFICIAL] Page 3 of 11



	to the episode / incident / accident and / or the extent of
	physical and / or psychological effects sustained.
Pressurisation:	Individual exposure to be limited to a maximum of four aircraft
Aircraft Pressurisation Check /	pressurisation checks, lasting no longer than 30 minutes, to be a
Aircraft Wash	maximum of 0.5 atmospheres above ambient pressure in any 24-
	hour period.
	Flying at or below 8,000 ft Cabin Altitude (CA):
	• 24 hours
	Flying above 8,000 ft CA
	• 48 hours
	For aircraft pressurisation associated with washing the aircraft or
	transitory functional checks:
Deres dertier	NII IMUFF period required.
Pressurisation:	INIUFF until the subsequent day, with return to flying
CA (aircraw only)	permitted if the individual has been and continues to be
CA (ancrew only)	Aircrow may only conduct subsequent serties providing CA
	• All crew findy only conduct subsequent softles providing CA
	24 hour period
Psychosocial conditions	<ul> <li>If there is a significant risk to aviation safety, a mental health</li> </ul>
	practitioner or AVMO may recommend TMUFF
Self-imposed TMUFF, includes	Limited to 48 hour period
fatigue issues	Notified to Flight Authorising Officer / Supervision
	<ul> <li>Return to duty must be approved by Flight Authorising Officer /</li> </ul>
	Supervisor
Simulator:	TMUFF is to be imposed IAW extant FEG or unit policy
Flying after Flight Simulator Training	
Device	



### **TMUFF Considerations**

- 4. Administration of medication. There is potential for almost any medication to generate unwanted side effects. Effects are individual, and may be subtle. Caution should be exercised, and understanding obtained, regarding the risks in taking any drug, including over-the-counter and herbal preparations. Medications and their effects may be incompatible with flight safety. The use of agents to aid in sleep/wake cycle regulation is to be conducted in accordance with extant health policy.
- 5. **Prescribed medicine is administered under AVMO or AVDO instruction**. Over the counter, herbal and other 'alternative' medications may only be taken as permitted in extant health policy; refer to Table 1.
- 6. **Aircraft Pressurisation Checks / Aircraft Wash.** Aircraft pressurisation checks involve post maintenance checks of an aircraft's pressurisation system, where personnel working within the pressurised section of an aircraft are exposed to atmospheric pressures greater than ambient; refer to Table 1 for pressurisation types and frequency and TMUFF durations.
- 7. **Blood Donation (whole blood or partial blood products).** AVMO review post blood donation (whole blood or partial blood products) is not required unless the member has other health concerns. TMUFF for whole blood or partial blood product donation is 72 hours for aircrew and 24 hours for aircraft controllers and remote pilots; refer to Table 1. For operational reasons, a desire to donate blood should consider TMUFF restrictions and plan accordingly.
- 8. **Critical Incident Mental Health Support (CIMHS).** The psychological response to a crisis, regardless of aetiology, should be correctly managed in order to ensure quick return to normal activities, including the work environment. After undergoing CIMHS debriefing, an AVMO recommendation regarding fitness to return to aviation-related duties should be obtained; refer to Table 1.
- 9. **Diving (Aircrew only).** Diving using self-contained underwater breathing apparatus (SCUBA) using compressed gas carries a significant DCI risk, with risk increased by exposure to altitude soon after diving; refer to Table 1 for dive types and TMUFF durations.
- 10. **Eye examinations (routine).** For routine eye examinations with completion of PM 086 Aviation Eye Examination, Cyclopentolate HCL 1% is to be utilised. TMUFF for 24 hours is required, with return of normal vision, with no blurring, glare or sensitivity to lights. Aircrew and controllers are to ensure that they can adequately read the checklists and instruments, and can transition effortlessly between near and far vision; refer to Table 1.

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- 11. An eye examination for clinical reasons (examination other than routine eye examination) is not to be considered under this regulation. Use of dilating eye drops for clinical reasons must be reviewed by an AVMO prior to return to flying or controlling duties.
- 12. **Fatigue.** Fatigue is a well-recognised cause of impaired motor and cognitive performance. The effects of fatigue are insidious; the person may be unaware of the extent of performance degradation. Fatigue may exacerbate the effects of coexisting operational stresses such as noise and heat, and may be worsened by numerous other factors such as illness, domestic stress, alcohol and ingestion of medications. It is vital that the relevant policy on crew-rest and duty limitations be followed; however, maintenance of appropriate 'by the book' crew rest hours does not guarantee absence of fatigue. Commanders, supervisors and health personnel should be watchful for symptoms, particularly where irregular duty/rest hours are undertaken. Where fatigue is still suspected despite appropriate provision of crew-rest, TMUFF should be imposed until a cause and solution to the fatigue can be identified.
- 13. FIGHTER FIT / Aircrew Exercise Conditioning Program (equivalent) back and neck musculoskeletal soreness. Minor self-limiting back and neck pain post flying is to be considered within the normal response to the physical rigors of military aviation. TMUFF is permitted up to 3 days to allow resolution; refer to Table 1.
- 14. **Fluids and meals.** Failure to eat an adequate nutritionally balanced meal prior to performing aviation-related duties, or not being properly hydrated, may reduce tolerance to flight stresses and impair performance. An adequate nutritionally balanced meal and fluids are required within six hours of aviation related duties; refer to Table 1. Meal and/or fluid consumption immediately prior to flying should avoid food and drink known to produce intestinal gas as this can result in abdominal discomfort and even incapacitation during flight.
- 15. To avoid food poisoning be cautious and selective when eating, especially when in remote areas or overseas. In-flight meals should be handled hygienically at all times, and transit times outside of cold storage should not exceed four hours. After frozen meals are heated, they should be eaten immediately and not refrozen for future use. Where two pilots are part of one flight crew, they should eat different meals at least one hour apart. In-flight rations provided for consumption in aircraft without a refrigerator should be supplied in an insulated bag with a cooling block, or be supplied in a collective cooling facility such as an esky. All perishable foodstuffs should be removed from the aircraft at the end of each flight and either consumed or destroyed in keeping with local quarantine rules. Perishable foodstuffs should not to be reused for subsequent flights.
- 16. In the event of actual or suspected food poisoning, samples of suspect food or water should be retained for investigation and arrangements made for investigation of the possible source of contamination to be investigated as soon as possible.
- 17. Flying after Flight Simulation Training Device (FSTD). Use of FSTD carries the risk of 'simulator sickness', a form of motion sickness relating to the disparities between the visual and motor components of the trainer. TMUFF is to be imposed IAW extant FEG or unit policy. Aircrew who

BO4376500 - Template V4.0

[OFFICIAL] Page 6 of 11

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experience symptoms including postural instability, nausea, headache, eyestrain, or excessive fatigue following FSTD exposure, should seek AVMO review prior to flying; refer to Table 1.

- 18. **Following a Physiological Episode / Incident / Accident**. AVMO review following a physiological episode may not be required if the episode was considered trivial and inconsequential, and / or the individual was asymptomatic or their symptoms were minor and short-lived. Aircrew who experienced significant symptoms, or who are concerned about the exposure, should seek AVMO advice; refer to Table 1. TMUFF duration, if imposed, after involvement in a physiological episode / incident / accident will vary according to the episode / incident / accident and / or the extent of physical and / or psychological effects sustained.
- 19. Symptoms that were of moderate severity or greater are to be reviewed by an AVMO, where moderate severity implies any difficulty or impediment to completing their tasks during the exposure.
- 20. Possible symptoms include but are not limited to confusion, cognitive slowing, drowsiness, headache, dizziness, nausea, vomiting, abdominal pain, eye dryness / watering / redness / pain / discomfort with lights / gritty sensation / blurred vision, sore throat, cough, shortness of breath, sneezing, runny nose, burning-like discomfort, and joint pain.
- 21. **Hypoxia Training.** For routine hypoxia training including Hypoxia Recognition and Recovery Training (HRRT), Reduced Oxygen Breathing Device (ROBD), Combined Altitude and Depleted Oxygen (CADO) in the hypobaric chamber, and any other normobaric hypoxia training, a TMUFF of 12 hours is required; refer to Table 1. This TMUFF does not apply to other forms of hypobaric chamber runs conducted at IAM. IAM will advise individuals of TMUFF periods for non-standard hypoxia training and hypobaric chamber exposure.
- 22. **Immunisations.** TMUFF is imposed for 12 hours or as directed by extant health policy or an AVMO; refer to Table 1.
- 23. **Ingestion of alcohol.** Alcohol is a well-recognised cause of impaired motor and cognitive performance. BAL will vary with the amount, timing and rate of consumption of alcohol, and with large individual variations. The following guidance for the calculation of BAL may assist:
- a. A standard drink contains 10 grams of alcohol. This is equivalent to 285 ml of full strength beer, 100 ml of table wine, 60 ml of fortified wine or 30 ml of distilled proof spirit
- b. The average rate of elimination is one standard drink per hour. There is wide variability between individuals in this rate of elimination



- c. Peak BAL occurs between 30 minutes and two hours after the last drink is consumed.
- 24. A BAL of zero and free from the physical or physiological effects (such as hangover) of alcohol consumption is the requirement to perform aviationrelated duties. The physiological effects of a hangover may continue many hours after reaching BAL zero.
- 25. A person with a suspected BAL greater than zero or with the presence of any after-effects of alcohol consumption (such as hangover) may not perform any aviation-related duties, to include any functions preparatory to commencing aviation-related duties. TMUFF should either be self-imposed or directed by medical staff or supervisors until BAL has returned to zero and all physical or physiological effects (such as hangover) have resolved; refer to Table 1.
- 26. AMC for abstinence from aviation-related duties after consumption of alcohol is outlined in Table 2.

Table 2 – Minimum Abstinence Period prior to Aviation-Related Duties According to Drinks Consumed				
Number of standard drinks consumed	Minimum period of abstinence from the last drink to commencement of aviation-related duties (hours)			
1-4	8			
5 – 6	12			
7 – 10	18			

- 27. **Medical / dental procedures.** Anaesthetic agents have the potential for causing both short duration effects and long duration effects, which could be anticipated or unanticipated; refer to Table 1 for the types of anaesthetic utilised and TMUFF durations.
- 28. **Psychosocial conditions.** Psychological health is as important as physical wellbeing in determining the aviation medicine fitness to undertake aviation-related duties. It is vital that personnel, their commanders, and medical staff are vigilant in ensuring that subtle or overt expression of symptoms indicative of psychosocial pressure are carefully assessed and appropriate specialist management is provided. Early self-referral for mental health assistance is encouraged and does not always require TMUFF. If there is a risk to aviation safety, a mental health practitioner or AVMO may recommend TMUFF, with appropriate therapy instituted in accordance with extant health policy, and Command communication; refer to Table 1.



- 29. Self-imposed TMUFF. Aircrew and controllers are to conduct an IMSAFE check prior to performing aviation-related duties. Illness, medication, stress, alcohol, fatigue, enough (food, water, other). This TMUFF is to be limited to a 48 hour period, and notified to the Flight Authorising Officer / Supervisor. Return to duty must be approved by the Flight Authorising Officer / Supervisor; refer to Table 1. Self-imposed TMUFF greater than 48 hours requires AVMO review. Regular self-imposed TMUFF of greater than once per week may alert to a broader issue that requires AVMO consideration.
- 30. Unplanned flight above 21 000 ft CA. In the absence of other DCI risk factors, the risk of DCI is considered very low at or below 21 000 ft CA without the need for 100% oxygen or flight restrictions. 100% oxygen should be applied and time spent above that level should be kept to a minimum.

### TMUFF Reversal

- 31. **TMUFF reversal.** The AM, or a delegated command authority including Flight Authorising Officer / Supervisor, has final authority regarding authorisation of personnel to perform aviation-related duties including TMUFF reversal. TMUFF reversal is dependent on mission essential requirements and written AVMO advice, to inform a risk assessment. Some TMUFF issues may be managed administratively rather than seeking or returning for additional AVMO consultation. In such situations, the person may be TMUFF for a specified period and return to duty without AVMO review. Such circumstances include the following:
- a. defined time limits prescribed in Table 1 Minimum Self-Cancelling TMUFF Periods; and
- b. where the AVMO has set a defined time limit or conditions-based return to aviation-related duties for uncomplicated, self-limiting conditions, e.g. gastric problems, cold, flu or similar, not prescribed in Table 1 Minimum Self-Cancelling TMUFF Periods.
- 32. **Remote AVMO consultation.** Direct consultation with an AVMO may not always be possible. Verbal advice can be given by an AVMO. In the absence of the member's usual AVMO, the Institute of Aviation Medicine duty SAVMO can be contacted for acute / operational SAVMO advice. Phone 0408 234 044.
- 33. Use of a Designated Aviation Medical Examiner (DAME). For Defence personnel who operate under oversight of a CASA medical certificate, a CASA DAME consultation may replace the AVMO consultation.



### **REVISED REGULATION TEXT**

- Aviation-related duties should not be performed when a medical or dental condition exists that may compromise suitability for those duties. <u>IAM</u> <u>TMUFF Guidance</u> provides minimum self-cancelling TMUFF periods for many conditions. If symptoms persist longer than the minimum selfcancelling TMUFF periods, an AVMO or Aviation Dental Officer (AVDO) consult is required.
- b. Documentation. A TMUFF recommendation, including all restrictions, should be documented contemporaneously in writing.
- c. **Medical certificate.** TMUFF does not affect medical certificate validity unless the condition persists into the next medical certificate currency period. In such cases, a flexibility provision under DASR MED.10.A may be used if the Accountable Manager (AM) deems this suitable and required.

### **TMUFF** Reversal

- d. **TMUFF reversal.** The AM, or a delegated command authority including Flight Authorising Officer / Supervisor, has final authority regarding authorisation of personnel to perform aviation-related duties including TMUFF reversal. TMUFF reversal is dependent on mission essential requirements and written AVMO advice, to inform a risk assessment. Some TMUFF issues may be managed administratively rather than seeking or returning for additional AVMO consultation. In such situations, the person may be TMUFF for a specified period and return to duty without AVMO review. Such circumstances include the following:
  - i. defined time limits prescribed in <u>IAM TMUFF Guidance</u>; and
  - ii. where the AVMO has set a defined time limit or conditions–based return to aviation-related duties for uncomplicated, self-limiting conditions, e.g. gastric problems, cold, flu or similar, not prescribed in <u>IAM TMUFF Guidance</u>.
- e. **Remote AVMO consultation.** Direct consultation with an AVMO may not always be possible. Verbal advice can be given by an AVMO. In the absence of the member's usual AVMO, the Institute of Aviation Medicine duty SAVMO can be contacted for acute / operational SAVMO advice. Phone 0408 234 044.
- f. Use of a Designated Aviation Medical Examiner (DAME). For Defence personnel who operate under oversight of a CASA medical certificate, a CASA DAME consultation may replace the AVMO consultation.

BO4376500 - Template V4.0

[OFFICIAL] Page 10 of 11



# DASR AMENDMENT RECORD DCP 2023 - 023 **DASR CLAUSE: GM MED.15.A RATIONALE FOR CHANGE** Correction to DASR reference. Correct typographical error. **CURRENT REGULATION TEXT Applicability** - Remote Pilot (RP): DASR.15.A is applicable for all UAS operations under the Certified UAS category. DASR.15.A is applicable to UAS operations under a UASOP (Specifed Type A) category if the UASOP specifies requirement for the RP to hold a current aviation medical certificate. DASR.15.A is not applicable to UAS operations under Standard Scenario (Specific Type B) or Open category. **REVISED REGULATION TEXT** Applicability - Remote Pilot (RP): DASR MED.15(a) is applicable for all UAS operations under the Certified UAS category. DASR MED.15(a) is applicable to UAS operations under a UASOP (Specific Type A) category if the UASOP specifies requirement for the RP to hold a current aviation medical certificate. DASR MED.15(a) is not applicable to UAS operations under Standard Scenario (Specific Type B) or Open category.

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