Aviation Engineering Humour – Annex 8.

If it wasn't so important it would be humour. How, after 77 years complying with the Chicago Convention we still cannot get it right? Totally out of step with global harmonisation that is necessary to enable Australian civil aviation manufacturers and maintenance services to be accepted in there own rights. This will require country to country agreements manufacturing and maintenance agreements in the same manner as operations require Air Services Agreements.

Compliance with the Convention Standards will enable adoption of the FAR based system to harmonise with NZ, PNG and many Pacific nations.

Annex 8 item	Australian Differences notified	FAA Difference Notified
Part 1 – Definitions		
Aeroplane	The definition of aeroplane does not include powered sailplane	Nil
Airworthy	The definition currently applies to Part 42 only	Nil
Anticipated Nil operating condition	Australian legislation does not define anticipated operating conditions.	Nil
Appropriate airworthiness requirements	Australian aviation legislation does not include a separate definition of 'appropriate airworthiness requirements' but regulation 21.017 of CASR designates 'applicable airworthiness standards' which are the detailed airworthiness codes for of aircraft, engine and propeller.	Nil
Configuration (as applied to the aeroplane)	Australian aviation legislation does not define configuration (as applied to the aeroplane).	Nil
Continuing airworthiness	Australian aviation legislation does not define 'continuing airworthiness'	Nil
Design landing mass	Australia has adopted US Airworthiness Standards FAR 23-35, which uses the term Design take-off weight	Nil
Design taxiing mass	Australian aviation legislation does not define design taxiing mass	Nil
Discrete source damage		Nil
Final approach and take-off area (FATO)	Australian aviation legislation does not define Final approach and take-off area (FATO)	Nil
Human Factors principles	Australian definition defines human factor principles as those concerned with the minimisation of human error and its consequences by optimising the relationships within systems between people, activities and equipment.	Nil
Human performance	The human performance definition in the MOS relates to maintenance only	Nil
Landing surface	Australian legislation does not define Landing surface but instead, uses 'Landing area'	Nil
Limit loads	Australia has adopted US Airworthiness Standards FAR 23-35, which uses the term Limit loads	Nil
Maintenance	Australian definition is more encompassing as it covers the notion of maintenance on aircraft and associated parts of an aircraft	Nil

Maintenance	Australian definition does not clarify that maintenance is physical performance of tasks on an aircraft or associated parts of an aircraft	Nil
Maintenance organization's procedures manual	The CASR uses the term 'exposition' which has the same meaning as the 'maintenance organization's procedures manual'	Nil
Maintenance records	Maintenance record is defined as the record that contains the information required under CASR 42.395 and 42.400. CASR 42.395 and 42.400 set out the content of the maintenance records which includes the details of maintenance carried out.	Nil
Maintenance CASR Dictionary Part 1 release	CASR does not use the term 'maintenance release' and instead uses the term 'certificate of release to service' which is equivalent to the maintenance release defined in Annex 8.	Nil
Modification	Australian legislation does not define Modification	Nil
Organization responsible for type design	Australian aviation legislation does not define Organization responsible for the type design	Nil
Orphan aircraft type	Australian aviation legislation does not define Organization responsible for the type design.	Nil
Performance Class 1 helicopter	Australian aviation legislation does not define Performance Class 1 helicopter	Nil
Performance Class 2 helicopter	Australian aviation legislation does not define Performance Class 2 helicopter	Nil
Performance Class 3 helicopter	Australian aviation legislation does not define Performance Class 3 helicopter	Nil
Powerplant	Australian aviation legislation does not define Powerplant	Nil
Pressure-altitude	Australian legislation does not define Pressure-altitude	Nil
Repair	Australian aviation legislation does not include the definition repair. Australian legislation relies on the common meaning of the term.	Nil
Satisfactory evidence	Australian aviation legislation does not define satisfactory evidence, however Australian legislation requires CASA to be satisfied that any approval is safe on the basis of evidence as required by the legislation.	Nil
Standard atmosphere	Australia has adopted US Airworthiness Standards FAR 23-35, which uses the term Standard Atmosphere. Additionally, CASR 21.039, which uses the term is modified from FAR 21.039.	Nil
State of Design	Australian legislation does not define 'State of Design	Nil
State of Nil Manufacture	Australian aviation legislation does not define state of manufacture	Nil

Take-off surface	Australian aviation legislation does not define Take-off surface, but does define runway	Nil
Part II Procedures for Certification and Continuing Airworthiness **Chapter 1. Type Certification**		
1.1 Applicability the Standards of this chapter shall be applicable to all aircraft, and to engines and propellers if type certificated separately, for which the application for certification was submitted to a Contracting State on or after June 1960, except that: a) The provisions of 1.4 of this part shall only be applicable to an aircraft type for which an application for a Type Certificate has been submitted to the State of Design on or after 2 March 2004. b) The provisions of 1.4 of this part shall only be applicable to an engine or propeller type for which an application for a Type Certificate has been submitted to the State of Design on or after 10 November 2016. c) The provisions of 1.2.6 of this part shall only be applicable to an aircraft type for which an application for a Type Certificate has been submitted to the State of Design on or after31 December 2014. d) The provisions of 1.2.6 of this part shall only be applicable to an aircraft type for which an application for a Type Certificate has been submitted to the State of Design on or after 28 November 2024. *Note 1. – Normally, a request for a Type Certificate is submitted by the manufacturer when the aircraft, engine or propeller is intended for serial production.* *Note 2. – For Part VB aeroplanes, guidance material concerning the appropriate airworthiness safety levels commensurate with acceptable risks levels is contained in the Airworthiness Manual (Doc 9760).*	Australia does not comply with sections 1.2.6 and 1.2.7	Nil
		1.2.5. ICAO requires that the design of an aircraft under ICAO Annex 8, Parts IIIB, IVB, and V use alternative fire extinguishing agents to halon in the lavatories, engines, and auxiliary power units. The United States does not have a similar requirement.
1.2.6. The approved design of an aircraft under Parts IIIB, IVB, VA and VB of this Annex shall use extinguishing agents that are not listed in the 1987 *Montreal Protocol on Substances that Deplete the Ozone Layer* as it appears in the Eight Edition of the *Handbook for the Montreal Protocol on Substances that Deplete the Ozone Layer,*	Extinguishing agents that are not listed in the Annex A, Group II of the Montreal Protocol on Substance that Deplete the Ozone Layer, 8th Edition 2009 will continue to be used in the aircraft fire suppression or extinguishing systems in the engines and auxiliary	Nil

Annex A, Group II, in the aircraft fire suppression or extinguishing systems in the lavatories, engines and auxiliary power units.	power unit, until viable alternatives are available in the state of manufacture	
1.2.7. The approved design of an aircraft under Parts IIIB of this Annex shall use extinguishing agents that are not listed in the 1987 *Montreal Protocol on Substances that Deplete the Ozone Layer* as it appears in the Tenth Edition of the *Handbook for the Montreal Protocol on Substances that Deplete the Ozone Layer,* Annex A, Group II, in the aircraft fire suppression or extinguishing systems for the cargo compartment..		Nil
1.5.1 When the State of Design takes action iaw its established procedures to suspend in whole or in part a Type Certificate for an aircraft, engine or propeller type, it shall immediately: a) notify contracting States of the suspension; etc.	No regulation or procedures in place	Nil
1.5.2. A Contracting State that issued a Type Certificate for an aircraft, engine or propeller type under 1.4.2 of this part, on the basis of the Type Certificate issue by the State of Design, shall immediately notify the State of Design of a suspension etc.	No regulation or procedures in place.	Nil
1.5.3 related to above	No regulation or procedures in place.	Nil
1.5.4 related to above	No regulation or procedures in place.	Nil
1.6.1 The State of Design shall establish procedures fro the revocation of a Type Certificate when the organisation responsible for the type design surrenders or abandons the Type Certificate etc.	No regulation or procedures in place.	Nil
1.6.2 relates to above	No regulation or procedures in place.	Nil
1.6.3 relates to above	No regulation or procedures in place.	Nil
1.7.2	No difference	Nil
1.7.3 Where the State of Manufacture of an aircraft, engine or propeller is not the State of Design, there shall be an agreement or arrangement in accordance with 2.4.5 and 4.2.2	For 2.4.5, Australia complies with 2.4.5(a) through CASR 21.133 but does not comply with 2.4.5(b) or (c). For 4.2.2 Australia does not comply	Nil
1.7.4 the State of Design shall notify all contracting States of the transfer and the organisation responsible for the type design for purposes of the continuing airworthiness reporting requirements under Chapter 4 of this part.	No regulation or procedures in place	Nil
Chapter 2. Production		
2.4.5 where the State of Manufacture is not the Sate of Design, there shall be an agreement or arrangement acceptable to both States to: a) ensure that the manufacturing organisation has the right of access to the approved design data relevant for production purposes; b) address the responsibilities of each State with regards to design, manufacture and continuing airworthiness of the aircraft, engine or propeller during the period of the agreement or arrangement, including such period when the State of Design takes action to	a) No Difference. b) Less protective or partially implemented or not implemented. CASA currently does not have procedures that comply with b), c) Less protective or partially implemented or not implemented. CASA currently does not have procedures that comply with c)	Nil

suspend in whole or in part the Type Certificate of the affected aircraft type; and c) terminate the production approval under this part when the State of Design revokes the Type Certificate corresponding to that aircraft type.		
3.2.4 When an aircraft possessing a valid Certificate of Airworthiness issued by a contracting State is entered on the register of another Contracting State, the new State of Registry, when issuing its Certificate of Airworthiness may consider the previous Certificate of Airworthiness as satisfactory evidence, in whole or in part, that the aircraft complies with the applicable Standards of this Annex through compliance with the appropriate airworthiness requirements	Australian legislation requires that the aircraft meets all Australian certification standards, including the airworthiness design standard applied in the state of design. An Export Certificate of Airworthiness or the most recent Certificate of Airworthiness must be supplied	Nil
Chapter 3 – Certificate of Airworthiness		
3.6.4 When the State of Registry considers that the damage sustained is of a nature sustained is of a nature such that the aircraft is still airworthy, the aircraft shall be allowed to resume flight.	Australian legislation requires inspection, assessment and certification by an appropriately rated LAME before permission is granted to resume flight	Nil
Chapter 4 – Continuing Airworthiness		
4.1.6 (b), 4.1.6 (g), 4.1.6 (h), 4.1.6 (i)		The United States does not have similar requirements. The FAA has begun work in an effort to amend the U.S. regulations with the purpose of eventually meeting the intent of these provisions.
4.2.1.2 The State of Design of an engine or a propeller, where it is different from the State of Design of the aircraft shall: a) transmit any continuing airworthiness information to the State of Design of the aircraft and to any other Contracting State upon request: *Note. – While the overall responsibility for the transmission of mandatory continuing airworthiness information rests with the State of Design of the aircraft, it is recognised that some States of Design of the engine or propeller transmit mandatory continuing airworthiness information and processing this information in the normal way iaw 4.2.3.1 d). However, if the State of Design of the aircraft subsequently transmits additional mandatory continuing airworthiness information to that of the State of Design of the engine or propeller, then the mandatory continuing airworthiness information originating from the Sate of Design of the aircraft must take precedence in case of incompatibility.* b) ensure that, in respect of engines and propellers installed in aeroplanes over 5700Kg and helicopters over 3175 Kg max certificated take off mass, there exists a system for: i) receiving information submitted iaw 4.2.3 f); ii) deciding if and when airworthiness action is needed; and	The CASA Airworthiness Directive Manual Section 7.1 does not require CASA to transmit an airworthiness directive for an engine or a propeller to the type certificate holder for the aircraft	Nil

iii) developing the necessary actions.		
4.2.1.4. Where, for a given aircraft, engine or propeller, the State of Manufacture is not the State of Design, then the State of Design shall ensure that there is an agreement acceptable to both States to ensure that the manufacturing organisation cooperates with the organisation responsible for the type design in assessing information on the design, manufacture and operation of the aircraft, engine or propeller.	No legislation or procedures in place that requires an agreement	Nil
4.2.1.5 The State of Design shall ensure that sensitive aviation security information is not transmitted when distributing mandatory continuing airworthiness information.	Procedures in the manual provides for receipt and distribution of foreign State of Design airworthiness directives containing sensitive aviation security information but does not address distribution of Australian ADs	Nil
4.2.1.6 The State of Design shall ensure that sensitive aviation security information is securely transmitted to the appropriate authority in the State of Registry iaw Annex 17 – *Security – Safeguarding International Civil Aviation against Acts of Unlawful Interference.* *Note. – Guidance material on the secure transmission of sensitive aviation security in Doc 9760.*	The Airworthiness Directive Procedures Manual currently does not include procedures for the transmission of sensitive aviation security information to the authorities in States of Registry.	Nil
4.2.2 The State of Manufacture shall ensure that where it is not the State of Design there is an agreement acceptable to both States to ensure that the manufacturing organisation cooperates with the organisation responsible for the type design in assessing information on the design, manufacture and operation of aircraft, engine or propeller.	No legislation or procedures in place that requires an agreement.	Nil
4.2.3.1 The State of Registry shall: (e) ensure that all mandatory continuing airworthiness information which it, as the State of Registry, originated in respect of that aircraft, is transmitted to the appropriate State of Design, and (f) ensure that, in respect of aeroplanes over 5700 Kg and helicopters over 3175 Kg maximum certificated take-off mass, there exists a system whereby information on faults, malfunctions, defects and other occurrences that cause or might cause adverse effects on the continuing airworthiness of the aircraft is transmitted to the organisation responsible for the type design of that aircraft. Whenever this information relates to an engine or propeller, such information shall be transmitted to both the organisation responsible for engine or propeller type design and the aircraft type design. Where a continuing airworthiness safety issue is associated with a modification, the State of Registry shall ensure that there exists a system whereby the above information is transmitted to the organisation responsible for the design of the modification.	(e) No formal procedure to notify the State of Design of Australian airworthiness directive. (f) For all aircraft to which Part 42 applies - CASR Part 42 currently requires reporting to the organisation responsible for the type design of an aircraft and organisation responsible for the design of a modification. It does not require reporting to the organisation responsible for engine or propeller type design. For all aircraft to which part 42 does not apply - CAR 1988 only requires reporting to CASA and not to the organisation responsible for the type design and organisation responsible for the design of a modification	Nil
4.2.3.2 As of 5 November 2020, when approving a maintenance organisation or accepting the approval of a maintenance organisation issued by another Contracting State, the State of Registry shall inform compliance with Chapter 6 of this part.	Australia yet to establish legislation and associated process for accepting the approval of a maintenance organisation issued by another Contracting State.	Nil

Note: Chapter 6 provides requirements for accepting the approval of a maintenance organisation issued by another Contracting State		
4.2.3.4 The State of Registry shall ensure that sensitive aviation security information is securely transmitted to the appropriate authority in the State of Design in accordance with Annex 17.	Currently there is no legislation or procedure that require CASA as the State of Registry to transmit sensitive aviation security information to the authorities in States of Design.	Nil
4.2.4 All Contracting States Each Contracting State shall establish, in respect of aeroplanes over 5700 Kg and helicopters over 3175 Kg maximum take-off mass, the type of information that is to be reported to its airworthiness authority by operators, organisations responsible for type design and maintenance organisations. Procedure for reporting this information shall also be established	Australian legislation requires defect information to be submitted for all aircraft regardless of maximum certificated take-off mass of the aircraft. Service difficulty reports can be lodged on-line	Nil
Chapter 6 – Maintenance Organisation Approval		
6.2.3 the approval certificate shall contain at least the following information: a) the issuing authority and the name, title and signature of the person issuing the certificate; b) the maintenance organisation's name and registered address; c) the maintenance organisation approval reference number; d) the date of current issue; e) in the case of certificates of limited approval, the expiration date f) the scope of the approval, in relation to aircraft, component and/or specialised maintenance, and to the type of aircraft and components covered by the approval; and g) the locations of the maintenance facilities, unless the information is included in a separate document referred to in the approval certificate. *Note. – Guidance material on the content of the approval certificate is contained in Doc 9760.*	Certificate issued by CASA from the centralised database includes all the information required by this standards. However, Australian legislation does not require all the information required under the standards to be included in the certificate	Nil
6.2.3.1 **Recommendation**. – The approval certificate should follow the template in the Appendix and contain the date of the original issue if different from the date of current issue.	Certificate issued by CASA from the centralised database includes all the information required by the template except telephone, email contact details for the organisation and the date of original issue of the certificate. Also, the format is slightly different and varies certificate to certificate.	Nil
6.2.6 where a Contracting State accepts, in whole or in part, a maintenance organisation approval issued by another Contracting State, it shall establish a process for the recognition of such approval and successive changes. In such a case, the recognising Contracting State shall build an adequate liaison with the Contracting State that initially issued the maintenance organisation approval	Australia yet to establish legislation and associated process for recognition of the approval of a maintenance organisation issued by another Contracting State.	Nil
6.3.3 the maintenance organisation shall make copies of all amendments to the procedures manual promptly to all organisations or persons to whom the manual has been issued.	The regulation does not specifically require provision of copies of the amendment to all parties as the intent of regulation is that the up-to-date exposition (procedures manual) be always made available to parties that need access to the exposition	Nil

Note. – Guidance material on the content of the maintenance organisation's procedures manual is contained in Doc 9760.		
Part III – Large Aeroplanes **Part IIIA. Aeroplanes over 5,700Kg for which Application for Certification was submitted on or after 13 June 1960 but before 2 March 2004** **Chapter 1. General**		
1.1.3 Except for those Standards and Recommended Practices which specify a different applicability, the Standards and Recommended Practices of this part shall apply to aeroplanes with a maximum certificated take-off mass greater than 5700 kg and intended for the carriage of passengers or cargo or mail in international air navigation.	The adopted US FARs claim difference in character or other means of compliance. The adopted CS claims no difference	Nil
1.2 – Number of Engines The aeroplane shall have not less than two engines.	FAR 25 implies that the aeroplane shall have not less than two engines.	Nil
1.3.1 Limiting conditions shall be established for the aeroplane, its powerplant and its equipment (see 9.2). Compliance with the Stanfdards of this part shall be established assuming that the aeroplane is operated within the limitations specified. The limitations shall be sufficiently removed from any condition(s) prejudicial to the safety of the aeroplane to render the likelihood of accidents arising therefrom extremely remote. *Note. – Guidance material concerning the expression "extremely remote" is contained in Doc 9760*	The adopted FAR 25 claim a Difference in character or other means of compliance. The adopted EASA CS-25 claims no difference. This ICAO provision requires that operating limitations be established that include a margin of safety to render the likelihood of accidents arising therefrom to be extremely remote. The United States requires operating limitations to be established for safe operation, but does not require a specific assessment that these limitations provide a safety margin that ensures the likelihood of an accident arising there from is extremely remote.	Nil
Chapter 2. Flight		
2.2.3 Scheduling of performance Performance data shall be determined and scheduled in the flight manual so that its application by means of the operating rules to which the aeroplane is to be operated iaw 5.2 of Annex 6, Part 1, will provide a safe relationships between the performance of the aeroplane and the aerodromes and routes on which it is capable of being operated. Performance data shall be determined and scheduled for the following stages for the ranges of mass, altitude or pressure-altitude, wind velocity, gradient of the take-off and landing surface for landplanes; water surface conditions, density of water and strength of current for seaplanes; and for any other operational variables for which the aeroplanes is to be certificated.	When using EASA CS standard: Scheduling of landing distance with runway slope is not required. Performance is not scheduled for variations in water surface conditions, density of water and strength of current. CS-23 complies except that performance is not scheduled for variations in water surface conditions, density of water and strength of current. CS/JAR 23.237 requires that the allowable water surface conditions and any necessary water handling procedures for seaplanes be established. However, factors on landing distance are applied by operational rules, where appropriate.	Nil
Chapter 3. Structure		
3.5 Miscellaneous Loads In addition to or in conjunction with the manoeuvring and gust loads and with the ground and water loads, consideration shall be given to all other loads (flight control loads, cabin pressures, effects of engine operation, loads due to changes of configuration, etc.) that are likely to occur in the anticipated operating conditions.	The adopted FAR 25 claims no difference. The adopted CS-25 claims less protective or partially implemented or not implemented. CS 25 does not contain specifications for water loads but large flying-boats are not under development. Would this happen EASA would develop the necessary special conditions in accordance with Part-21.	Nil

Chapter 4. Design and Construction		
4.1 General Details of design and construction shall be such as to give reasonable assurance that all aeroplane parts will function effectively and reliability in the anticipated operating conditions. Shall be based upon practices that experience has proven to be satisfactory or that are substantiated by tests or by other appropriate investigations or both. They shall also consider human factor principles. *Note. – Guidance material on human factors principles can be found in the* Human Factors Training Manual *(Doc 9683)*	The adopted FAR 25 claims no difference. The adopted CS-25 is less protected or partially implemented or not implemented. When using CS, the added sentence "They shall also observe human factors principles" is not fully complied with.	Nil
4.1.6 System Design Features Special consideration shall be given to design features that affect the ability of the flight crew to maintain controlled flight. That shall include: a) *Controls and control systems.* b) *System survivability* c) *Crew environment* d) *Pilot vision* e) *Provision for emergencies* f) *Fire precautions* *g) Fire suppression* *h) Incapacitation of occupants* *i) Protection of flight crew compartment*	For the adopted CS, The differences related to security standards have been removed by the amendment of CS 25.795 introduced by Amendment 9 to CS-25 effective 12 August 2010. After this date the new security provisions are applicable to new applications for type certification as well as already certificated types subjected to certification of significant changes to TC (application of changed product rule Part 21A.101). The FAA does not have similar requirements relative to paragraphs b), f), g), h) and i). The FAA published a notice to amend the U.S. to amend the U.S. regulations with the purpose of eventually meeting the intent of these provisions for new designs. However, the amendment will not be retroactive, and will apply to airplanes for which application for certification is submitted after the effective dates of the future amendment. For b), the FAA does not have a specific requirement for physical separation of systems. However, physical separation is considered in the means of compliance to various regulations such as 25.1309, 25.901(c) and 25.903(d). For g), h) and i), the FAA does not have specific requirements to consider the effects of explosions or incendiary devices. For CS, less protective for paragraphs (b), (g), (h) and (i). Protection against explosive and incendiary devices was not requested in the applicable airworthiness codes (JAR-25, CS-25) effective within the time span of the applicability of this provision of Part IIIA (from 12 March 2000 until 2 March 2004.)	4.1.6 (b), 4.1.6 (g), 4.1.6 (h), 4.1.6 (i) The United States does not have similar requirements. The FAA has begun work in an effort to amend the U.S. regulations with the purpose of eventually meeting the intent of these provisions.
Chapter 8. Instruments and Equipment		
8.4.1 the lights required by Annex 2 – *Rules of the Air* to be displayed by aeroplanes in flight or operating on the movement area of an aerodrome shall have intensities, colours, fields of coverage and other characteristics such that they furnish the pilot of another aircraft or personnel on the ground with as much time as possible for interpretation and for subsequent manoeuvre necessary to avoid a collision. In the design of such lights, due account shall be taken of the conditions under which they may reasonably be expected to perform these functions. Note1. – It is likely that lights will be viewed against a variety of background, such as typical city lighting, clear starry sky, moonlit	ICAO requires that airplanes operating on the movement area of an airport shall have airplane lights of such intensity, colour, fields of coverage and other characteristics to furnish personnel on the ground with as much time as possible for interpretation and for subsequent manoeuvre necessary to avoid a collision. The adopted FAR 25 has no such requirement. The adopted CS-25 claims no difference to this requirement	8.4.1 ICAO requires that airplanes operating on the movement area of an airport shall have airplane lights of such intensity, color, fields of coverage and other characteristics to furnish personnel on the ground with as much time as possible for interpretation and for

water and daytime conditions of low background luminance. Furthermore, collision risk situations are most likely to arise in terminal control areas in which aircraft are manoeuvring in the intermediate and lower flight levels at closing speeds that are unlikely to exceed 900km/h (500kt). Note 2.- Detailed technical specifications for exterior lights for aeroplanes can be found in the Airworthiness Manual (Doc 9760).		subsequent maneuver necessary to avoid a collision. The FAA has no such requirement.
8.4.2 Lights shall be installed in aeroplanes so as to minimize the possibility that they will: a) adversely affect the satisfactory performance of the flight crews' duties; or b) subject an outside observer to harmful dazzle. Note: - In order to avoid the effects mentioned in 8.4.2, it will be necessary in some cases to provide means whereby the pilot can switch off or reduce the intensity of the flashing lights.	The adopted FAR 25 is less protective or partially implemented or not implemented. The adopted CS-25 claims no difference. This provision addresses the lights' effect on outside observers in reference to "harmful dazzle." The adopted FAR 25 regulations do not address the effect of aircraft lights on outside observers. However, visibility to other pilots and the lights' effect on the flight crew are addressed	8.4.2 (b) This provision addresses the lights' affect on outside observers in reference to "harmful dazzle." The U.S. regulations do not address the affect of aircraft lights on outside observers. However, visibility to other pilots and the lights' affect on the flight crew is addressed.
Chapter 9 – Operating Limitations and Information		
9.2 Operating Limitations Limitations which there is a risk of exceeding in flight and which are defined quantitatively shall be expressed in suitable units and corrected if necessary for errors in measurements so that the flight crew can, by reference to the instruments available to them, readily determine when the limitations are reached.	The adopted FAR 25 does not explicitly meet this requirement, but the guidance material associated with FAR 25 does. The adopted CS-25 claims no difference	Nil
		9.3.5 The United States does not have similar requirements. The FAA has begun work in an effort to amend the U.S. regulations with the purpose of eventually meeting the intent of these provisions.
Chapter 11 - Security		
11.1. Aeroplanes used for domestic commercial operations Recommendation. – International Standards and Recommended Practices set forth in this chapter should be applied by all Contracting States for aeroplanes engaged in domestic commercial operations (air services).	The adopted US FARs are no different to this requirement. The adopted CS are less protective, partially implemented or not implemented. Not covered (except for pilots compartment doors) by the applicable airworthiness codes (JAR-25, CS-25).	Nil
		11.2, 11.3, 11.4

		With the exception of the door required by 11.3, the United States does not have similar requirements. The FAA has begun work in an effort to amend the U.S. regulations with the purpose of eventually meeting the intent of these provisions.
11.4 Interior Design For aeroplanes of a maximum certificated take-off mass in excess of 45500kg or with a passenger seating capacity greater than 60 and for which the application for certification was submitted on or after 12 March 2000, consideration shall be given to design features that will deter the easy concealment of weapons, explosives or other dangerous objects on board aircraft and that will facilitate search procedures for such objects.	The adopted FAR 25 does not have similar requirements. The adopted CS-25 claims no difference	Nil
Part IIIB. Aeroplanes over 5700Kg for which application for certification was submitted on or after 2 March 2004 **Chapter 2. Flight**		
2.2.4.2 As of 5 November 2020, for aeroplanes for which application for certification was submitted on or after 2 March 2019, at the maximum masses scheduled for take-off and for landing permitted by the performance data in the flight manual (see 2.2.7.3) as functions of the aerodrome elevation or pressure-altitude either in the standard atmosphere or in specified still air atmospheric conditions, and, for seaplanes, in specified conditions of smooth water, the aeroplane shall be capable of accomplishing the minimum performances specified in 2.2.5 and 2.2.6, respectively, not considering obstacles, or runway or water run length.	Applicable to changes within the FAR and EASA CS compliance documents	Nil
2.2.7.2 As of 5 November 2020, for aeroplanes for which application for certification was submitted before 2 March 2019, performance data shall be determined and furnished in the flight manual so that its application by means of the operating rules to which the aeroplane is to be operated in accordance with 5.2 of Annex 6, Part 1, will provide a safe relationship between the performance of the aeroplane and the aerodromes and routes on which it is capable of being operated. Performance data shall be determined and furnished for the stages in 2.2.7.1 a) to e) for the ranges of mass, altitude or pressure-altitude, wind velocity, gradient of the take-off and landing surface for landplanes; water surface conditions, density of water and strength of current for seaplanes; and for any other operational variables for which the aeroplane is to be certificated.	Applicable to changes within the FAR and EASA CS compliance documents	Nil
2.2.7.3 As of 5 November 2020, for aeroplanes for which application for certification was submitted on or after 2 March 2019, performance	Applicable to changes within the FAR and EASA CS compliance documents.	Nil

data shall be determined and furnished in the flight manual. Such performance data shall be so that its application by means of the operating rules to which the aeroplane is to be operated in accordance with 5.2 of Annex 6, Part 1, will provide a safe relationship between the performance of the aeroplane and the aerodromes and routes on which it is capable of being operated. Performance data shall be determined and furnished for the stages in 2.2.7.1.a) to f)) for the ranges of mass, pressure-altitude, ambient temperature, wind velocity, and for any other operational variables for which the aeroplane is to be certificated. Additionally, the take-off performance data and the at time of landing performance data shall include the effect of the gradient and conditions (dry, wet or contaminated) of the take-off or landing surface as appropriate for landplanes, and water surface conditions, density of water and strength of current for seaplanes. The at time of take-off landing performance data need only to be determined with standard day temperature and level, dry landing surfaces for landplanes, but shall include the effect of water surface conditions, density of water, and strength of current for seaplanes.		
2.4.2.1 Stall warning. Until 7 March 2021, when the aeroplane approaches a stall both in straight and turning flight with all engines operating, a clear and distinctive stall warning shall be apparent to the pilot with the aeroplane in all permissible configurations and powers or thrusts, except those which are not considered to be essential for safe flying. The stall warning and other characteristics of the aeroplane shall be such as to enable the pilot to arrest the development of the stall after the warning begins and, without altering the engine power or thrust, to maintain full control of the aeroplane.	Australian legislation references FAR 25 and JAR 25 and these do not explicitly refer to stall warning with one power-unit inoperative. **Australia has adopted the applicable FAR 25 and JAR 25. Civil aeroplanes above 5700 kg MTOW are not designed or manufactured in Australia**	Nil
2.4.2.1 Stall warning. As of 7 March 2021, when the aeroplane approaches a stall both in straight and turning flight, a clear and distinctive stall warning shall be apparent to the pilot with the aeroplane in all permissible configurations and powers or thrusts, except those which are not considered top be essential for safe flying. The stall warning and other characteristics of the aeroplane shall be such as to enable the pilot to arrest the development of the stall after the warning begins and, without altering the engine power or thrust, to maintain full control of the aeroplane.	Not applicable until March 2021.	Nil
3.1.2 For aeroplanes for which application for certification was submitted on or after 24 February 2013, the aeroplane structure shall be designed, manufactured and provided with instructions for its maintenance and repair with the objective of avoiding hazardous and catastrophic failure throughout its operational life.	The adopted US FARs are different in character or means of compliance. The adopted CS Standard is less protective, or partially implemented or not implemented. The adopted CS Standard does not specifically address hazardous failure conditions in relation to fatigue.	Nil
Chapter 3. Structures		
3.7 Survivability The aeroplane shall be designed so as to provide the occupants with the maximum practicable protection in the event of structural failure,	The adopted FAR 23 and FAR 25 have no difference to this requirement. The adopted CS-23 and CS-25 and less protective, partially implemented or not implemented. Only bird impact on windshield is required for CS-23 Commuter. Certification with	Nil

or the event of damage due to ground, water or object impact. Consideration shall be given to at least the following: a) Likely impact with birds; b) Energy absorption by the airframe, occupant seats and restraints; c) The probable behaviour of the aeroplane in ditching; and d) Allowing egress in the shortest practicable time.	ditching provisions is not required per CS-23 and CS-25. Some ditching design provisions are provided in CS-25 (25.801), which include investigating the probable behaviour of the aeroplane in a water landing. However these provisions are applicable only under request if the applicant seeks certification for ditching. CS-23 does not include equivalent ditching provisions.	
3.8.2 For aeroplanes for which application for certification was submitted on or after 24 February 2013, the design and construction of the aeroplane shall, wherever practicable, conform to damage tolerance and failsafe principles and shall be such as to avoid catastrophic failure during the operational life, taking into account: a) the expected environment: b) the expected repeated loads applied in service; c) expected vibrations from aerodynamic interaction or internal sources; d) thermal cycles; e) accidental and discrete source damage; f) likely corrosion or other degradation; g) widespread fatigue damage; i) likely structural repairs. *Note: - The expression "wherever practicable" is introduced to ensure that when an effective damage-tolerant structure cannot be achieved within the limitations of geometry, inspectability or good design practice, the structure can be designed to the fatigue evaluation (safe-life) principles. Typical examples of structures that might not be amenable to damage-tolerant design are landing gear, engine mounts and their attachments.*	The adopted FAR 25 is less protective or partially implemented or not implemented. The adopted CS-25 is no different to this requirement	3.8.2 The corresponding FAA requirement does not specify the use of failsafe principles; however, the FAA does advise the use of failsafe principles.
Chapter 4. Design and Construction **4.1. General**		
4.1.1 Details of design and construction shall be such as to give reasonable assurance that all aeroplane parts will function effectively and reliability in the anticipated operating conditions. Shall be based upon practices that experience has proven to be satisfactory or that are substantiated by tests or by other appropriate investigations or both. They shall also consider human factor principles. *Note. – Guidance material on human factors principles can be found in the* Human Factors Training Manual *(Doc 9683)*	The adopted FAR 23 and 25 are no different to this requirement. The adopted CS-23 and CS-25 are less protective, partially implemented or not implemented. The sentence 'consider Human Factors principles' is not fully complied with in the adopted CS-23 and CS-25 standards.	Nil
4.1.6 Inspection Provisions Adequate provision shall be made to permit any necessary examination, replacement or reconditioning of parts of the aeroplane that require such attention, either periodically or after unusually severe operations.	The adopted FAR 23 and FAR 25 are less protective or partially implemented or not implemented. The adopted CS-23 and CS-25 are no different to this requirement. On November 28, 2008, the FAA adopted new regulations that meet the intent of these provisions. However, Part IIIB applies to airplanes with a date of application of March 2, 2004 or later, but the U.S. requirements	On November 28, 2008, the FAA adopted new regulations that meet the intent of these provisions. However, Part IIIB applies to airplanes with a date of application of March 2, 2004 or

	apply to airplanes with a date of application of November28, 2008, or later.	later, but the U.S. requirements apply to airplanes with a date of application of November 28, 2008 or later.
4.2 System design features Special consideration shall be given to design features that affect the ability of the flight crew to maintain controlled flight. That shall include: a) *Controls and control systems.* b) *System survivability* c) *Crew environment* d) *Pilot vision* e) *Provision for emergencies* f) *Fire precautions* *g) Fire suppression* *h) Incapacitation of occupants* i) *Protection of flight crew compartment*	The adopted FAR 23 and 25 are less protective, partially implemented or not implemented. The adopted CS-23 and CS-25 have no difference to this requirement. For 4.2(b): On November 28, 2008, the FAA adopted new regulations that meet the intent of these provisions. However, Part IIIB applies to airplanes with a date of application of March 2, 2004 or later, but the U.S. requirements apply to airplanes with a date of application of November 28, 2008, or later. For 4. (f): The provisions requires lavatory fire protections systems (detection and suppression) for all airplanes covered by Part IIIB. U.S. regulations only require lavatory fire protection systems for airplanes with 20 or more passengers. For 4.2(g)1: Paragraph 4.2(g) requires a fire suppression system for each cargo compartment accessible to a crewmember in a passenger-carrying airplane. U.S. requirements permit manual firefighting in an accessible cargo compartment by a crewmember or members for an all-passenger-carrying airplane or a passenger-cargo combination	D.2 (g) Paragraph D.2.g.1 of the ICAO standard requires a fire suppression system for each cargo compartment accessible to a crewmember in a passenger-carrying airplane. U.S. requirements permit manual firefighting in an accessible cargo compartment by a crewmember or members for an all-passenger-carrying airplane or a passenger-cargo combination carrying airplane. Additionally, the FAA does not have specific requirements to consider the effects of explosions or incendiary devices. D.2 (h) The United States does have provisions to protect against possible instances of cabin depressurization. However, the FAA does not have specific requirements to consider the effects of explosions or incendiary devices. F.4.1 ICAO requires that airplanes operating on the movement area of an airport shall have airplane lights of such intensity, color, fields of coverage and other characteristics to furnish personnel on the ground with as much time as possible for interpretation and for subsequent maneuver necessary

		to avoid a collision. The U.S. has no such requirement.
4.3 Aeroelasticity The aeroplane shall be free from flutter, structural divergence, and loss of control due to structural deformation and aeroelastic effects, at all speeds within the sufficiently beyond design envelope to comply with 1.3.1. Account shall be taken of the characteristics of the aeroplane and variations in pilot skill and workload. Allowable limits for aerodynamic control surfaces and how those limits are to be monitored shall be specified so as to ensure that the aeroplane remains free from aeroelastic problems during its operational life.	The adopted FAR 25 is less protective, partially implemented or not implemented. The adopted CS-25 is no different to this requirement. The U.S. does not have specific requirements addressing allowable limits for aero-dynamic control surfaces and how those limits are to be monitored. The FAA issued policy to establish a means of compliance for 25.629 that addresses this issue	Nil
4.5 Electrical bonding and protection against lightning and static electricity		
4.5.1 Electrical bonding and protection against lightning and static electricity shall be such as to: a) protect the aeroplane, its systems, its occupants, and those who come in contact with the aeroplane on the ground or water from the dangerous effects of lightning discharge and electrical shock; and b) prevent dangerous accumulation of electrostatic charge.	FAR 25 does not contain specific requirements for electrical bonding. FAR 25 does not address protection of persons coming into the contact with an aeroplane on the ground or in the water.	Nil
Chapter 5. Powerplant		
5.3.5.6 Fire protection. For regions of the powerplant where the potential fire hazards are particularly serious because of the proximity of ignition sources to combustible materials, the following shall apply in addition to the general Standard of 4.2 f): a) Isolation. Such regions shall be isolated by fireproof material from other regions of the aeroplane where the presence of fire would jeopardize continued flight, taking into account the probable points of origin and paths of propagation of fire. b) Flammable fluids. Flammable fluid system components located in such regions shall be fire resistant. Drainage of each region shall be provided to minimize hazards resulting from the failure of any component containing flammable fluids. Means shall be provided for the crew to shut off the flow of flammable fluids into such regions if a fire occurs. Where sources of flammable fluid exist in such regions, the whole of the related system within the region, including supporting structure, shall be fireproof or shielded from the effects of the fire. c) Fire detection. A sufficient number of fire detectors shall be provided and located to ensure rapid detection of any fire that might occur in such regions. d) Fire extinguishment. Such regions shall be provided with a fire extinguisher system capable of extinguishing any fire likely to occur therein, unless the degree of isolation, quantity of combustibles, fire resistance of the structure and other factors are such that any fire likely to occur in the region would not jeopardize the safety of the aeroplane.	The adopted FAR 25 is less protective, partially implemented or not implemented. The adopted CS-25 is no different to this requirement. The adopted FAR 25 does not meet 5.3.5.5 b) which imposes “fireproof or shielded from the effects of the fire” requirement on all sources of flammable fluid in the regions specified. 14 CFR 25.1183(a) and (b) provide exceptions to this requirement for items such as an integral oil sump of less than 25-quart capacity on a reciprocating engine, lines, fittings, and components which are already approved as part of a type certificated engine and vent and drain lines, and their fittings, whose failure will not result in, or add to, a fire hazard.	Nil

Chapter 6. Systems and Equipment		
6.4 Navigation lights and anti-collision lights 6.4.1 The lights required by Annex 2 – Rules of the Air to be displayed by aeroplanes in flight or operating on the movement area of an aerodrome shall have intensities, colours, fields of coverage and other characteristic such that they furnish the pilot of another aircraft or personnel on the ground with as much time as possible for interpretation and for subsequent manoeuvre necessary to avoid a collision. In the design of such lights, due account shall be taken of the conditions under which they may reasonably be expected to perform these functions. Note – It is likely that lights will be viewed against a variety of backgrounds, such as typical city lighting, clear starry sky, moonlit water and daytime conditions of low background luminance. Furthermore, collision risk situations are most likely to arise in terminal control areas in which aircraft are manoeuvring in the intermediate and lower flight levels at closing speeds that are unlikely to exceed 900 km/h (500 kt).	The adopted FAR 25 is less protective, partially implemented or not implemented. The adopted CS-25 is no different to this requirement. ICAO requires that airplanes operating on the movement area of an airport shall have airplane lights of such intensity, colour, fields of coverage, and other characteristics to furnish personnel on the ground with as much time as possible for interpretation and for subsequent manoeuvre necessary to avoid a collision. The U.S. FAR has no such requirement	Nil
6.5 Electromagnetic interference protection Aeroplane electronic systems, particularly flight-critical and flight - essential systems, shall be protected against electromagnetic interference from both internal and external sources.	Australian requirements do not address electromagnetic interference from external sources. High Intensity Radiated Fields (HIRF)are addressed by 'special conditions' but only for flight critical systems, not flight essential systems.	Nil
Chapter 7. Operating Limits and Information		
7.2 Operating limitations 7.2.1 Limitations which might be exceeded in flight and which are defined quantitatively shall be expressed in suitable units. These limitations shall be corrected if necessary for errors in measurements so that the flight crew can, by reference to the instruments available to them, readily determine when the limitations are reached.	The adopted FAR 25 is different in character or other means of compliance. The adopted CS-25 is no different to the requirement. ICAO requires that limitations are expressed in suitable units and corrected if necessary. This requirement is only found in guidance material and not in the regulations. U.S. advisory material states that the flight manual units should be consistent with the flight deck instrumentation, placards, and other measuring devices for a particular airplane.	7.3.5 The United States does not have similar requirements. The FAA has begun work in an effort to amend the U.S. regulations with the purpose of eventually meeting the intent of these provisions.
Chapter 10. Security		
10.2 Least-risk bomb location For aeroplanes of a maximum certificated take-off mass in excess of 45 500 kg or with a passenger seating capacity greater than 60, consideration shall be given during the design of the aeroplane to the provision of a least-risk bomb location so as to minimize the effects of a bomb on the aeroplane and its occupants.	The adopted FAR 25 is less protective, partially implemented or not implemented. The adopted CS-25 is no different to this requirement. On November 28, 2008, the FAA adopted new regulations that meet the intent of these provisions. However, Part IIIB applies to airplanes with a date of application of March 2, 2004 or later, but the U.S. requirements apply to airplanes with a date of application of November 28, 2008, or later.	10.3.1, 10.3.2 The FAA has a door requirement, but no requirements addressing bulkheads, floors, etc. On January 5, 2007, the FAA published Notice of Proposed Rulemaking that, when adopted, will meet the intent of these provision

Part IVA. Helicopters for which application for certification was submitted on or after 22 March 1991 but before 13 December 2007 **Chapter 2. Flight**		
2.2.2 Minimum performance At the maximum mass scheduled (see 2.2.3) for take-off and for landing as functions of the take-off or landing site elevation or pressure-altitude either in the standard atmosphere or in specified still air atmospheric conditions, and, for water operations, in specified conditions of smooth water, the helicopter shall be capable of accomplishing the minimum performances specified in 2.2.2.1 and 2.2.2.2, respectively, not considering obstacles, or final approach and take-off area length.	The adopted CS-27 and CS-29 has no difference. The adopted FAR 27 and 29 is different in character or other means of compliance. ICAO bases their helicopter classification (Class I, II and III) on performance. The FAA has only two performance classifications (Category A and non category A). The United States does not have a performance classification equivalent to ICAO performance Class II.	Nil
2.2.2.1 Take-off a) In the event of critical engine failure, at or after the take-off decision point (for performance /class 1) or the defined point after take-off (for performance Class 2), performance Classes 1 and 2 helicopters shall be capable of continuing safe flight, the remaining engines(s) being operated within the approved limitations. b) The minimum performance at all stages of take-off and climb shall be sufficient to ensure that under conditions of operation departing slightly from the idealized conditions for which data is scheduled (see 2.2.3), the departure from the scheduled values is not disproportionate.	The adopted CS-27 and CS-29 are less protective. The adopted FAR 27 and 29 is different in character or other means of compliance. ICAO bases their helicopter classification (Class I, II and III) on performance. The FAA has only two performance classifications (Category A and non category A (Cat B)). The United States does not have a performance classification equivalent to ICAO performance Class II.	Nil
2.2.2.2 Landing a) Starting from the approach configuration, in the event of critical engine failure at or before the landing decision point (performance Class 1) or the defined point before landing (performance Class 2), the helicopter shall be capable of continuing safe flight, the remaining engine(s) being operated within the approved limitations. b) Starting from the landing configuration, the helicopter shall be capable in the event of a balked landing, of making a climb-out, with all engines operating.	The adopted CS-27 and CS-29 are less protective. The adopted FAR 27 and 29 is different in character or other means of compliance. ICAO bases their helicopter classification (Class I, II and III) on performance. The FAA has only two performance classifications (Category A and non category A (Cat B)). The United States does not have a performance classification equivalent to ICAO performance Class II. EASA CS-27 and CS-29 address category A and Category B Helicopters.	Nil
2.2.3.1 *Take-off.* The take-off performance data shall include the take-off distance required and the take-off path. For performance Class 1 helicopters, it shall also include the rejected take-off distance required.	The adopted FAR 27 and FAR 29 less protective, partially implemented or not implemented. The adopted CS-27 and CS-29 are less protective, partially implemented or not implemented. These provisions address take-off performance data for all classes of helicopters and require that this performance data include the take-off distance required. However, the United States has not adopted the requirements to present take-off distance for non category A helicopters. CS-27 and CS-29 address category A and Category B Helicopters and not class 1, 2 and 3.	Nil
2.2.3.1.1. *Take-off decision point*. (For performance Class I helicopters only) The take-off decision point shall be the point in the	The adopted FAR 27 and FAR 29 less protective, partially implemented or not implemented. The adopted CS-27 and CS-29	Nil

take-off phase used in determining take-off performance and from which either a rejected take-off may be made or a take-off safely continued, with the critical engine inoperative.	are less protective, partially implemented or not implemented. These provisions address take-off performance data for all classes of helicopters and require that this performance data include the take-off distance required. However, the United States has not adopted the requirements to present take-off distance for non category A helicopters. CS-27 and CS-29 address category A and Category B Helicopters and not class 1, 2 and 3.	
2.2.3.1.2 *Take-off distance required.* (For performance Class I helicopters only) The take-off distance required shall be the horizontal distance required from the start of the take0off safety speed (V_{ross}), a selected height above the take-off surface, and a positive climb gradient are achieved, following failure of the critical engine at the take-off decision point, the remaining engine(s) operating within approved operating limits.	The adopted FAR 27 and FAR 29 less protective, partially implemented or not implemented. The adopted CS-27 and CS-29 are no different to this requirement. These provisions address take-off performance data for all classes of helicopters and require that this performance data include the take-off distance required. However, the United States has not adopted the requirements to present take-off distance for non-category A helicopters	Nil
2.2.3.1.3 *Rejected take-off distance required.* (For performance Class 1 helicopters only). The rejected take-off distance required shall be horizontal distance required from the start of the take-off to the point where the helicopter comes to a complete stop following an engine failure and rejection of the take-off at the take-off decision point.	The adopted FAR 27 and FAR 29 less protective, partially implemented or not implemented. The adopted CS-27 and CS-29 are less protective, partially implemented or not implemented. These provisions address take-off performance data for all classes of helicopters and require that this performance data include the take-off distance required. However, the United States has not adopted the requirements to present take-off distance for non category A helicopters. CS-27 and CS-29 address category A and Category B Helicopters and not class 1, 2 and 3	Nil
2.2.3.1.4. *Take-off distance required.* (For Class 2 and 3 helicopters only) the take-off distance required shall be the horizontal distance required shall be the horizontal distance required from the start of take-off to the point where the best rate of climb speed (Vy) or the best angle of climb speed (Vx) or a selected immediate speed (provided this speed does not involve flight within the avoid areas of the height-velocity diagrams) and a selected height above the take-off surface are achieved, all engines operating at approved take-off power.	The adopted FAR 27 and FAR 29 less protective, partially implemented or not implemented. The adopted CS-27 and CS-29 are no different to this requirement. These provisions address take-off performance data for all classes of helicopters and require that this performance data include the take-off distance required. However, the United States has not adopted the requirements to present take-off distance for non-category A helicopters.	Nil
2.2.3.2. *En route.* The enroute performance shall be the climb, cruise or descent performance with: a) the critical engine inoperative; b) the two critical engines inoperative in the case of helicopters having three or more engines; and c) the operating engine(s) not exceeding the power for which they are certificated.	The adopted FAR 27 and FAR 29 are no different to this requirement. The adopted CS-27 and CS-29 are less protective, partially implemented or not implemented. This requirement is not covered by the adopted CS-27 and CS-29	Nil
2.2.3.3.1. *Landing decision point.* (For performance Class I helicopters only) The landing decision shall be the latest point in the approach phase from which either a landing may be made or a rejected landing (go-around) safely initiated, with the critical engine inoperative.	The adopted FAR 27 and FAR 29 are no different to this requirement. The adopted CS-27 and CS-29 are less protective, partially implemented or not implemented. The adopted CS-27 and CS-29 address category A and Category B Helicopters and not class 1, 2 and 3.	Nil
Chapter 3. Structure		

3.8 Fatigue strength The strength and fabrication of the helicopter shall be such as to ensure that the probability of disastrous fatigue failure of the helicopter's structure under repeated loads and vibratory loads in the anticipated operating conditions is extremely remote. *Note 1. – This Standard can be complied with by the establishment of "safe lives" or "fail safe" characteristics of the structure, having regard to the reasonable expected load magnitudes and frequencies under the anticipated operating conditions and inspection procedure. For some parts of the structure, it might be necessary to establish "fail safe" characteristics as well as "safe lives".* *Note 2. – Guidance material concerning the expression "extremely remote" is contained in the* Airworthiness Manual..	The adopted FAR 27 and FAR 29 Parts are different in character or other means of compliance. The adopted CS-27 and CS-29 are no different to this requirement	Nil
Chapter 4. Design and Construction		
4.1. General 4.1.1 Details of design and construction shall be such as to give reasonable assurance that all helicopter parts will function effectively and reliability in the anticipated operating conditions. They shall be based upon practices that experience has proven to be satisfactory or that are substantiated by tests or by other appropriate investigations or both. They shall also consider human factor principles. *Note. – Guidance material on human factors principles can be found in the* Human Factors Training Manual *(Doc 9683)*	The adopted FAR 27 and FAR 29 Parts are no different to this requirement. The adopted CS-27 and CS-29 are less protective, partially implemented or not implement	Nil
4.1.8 Ground Handling Adequate provisions shall be made in the design to minimise the risk that ground handling operations (e.g. towing, jacking) may cause damage, which could pass unnoticed, to the parts of the helicopter essential for its safe operation. The protection that any limitations and instructions for such operations might provide may be taken into account.	The adopted FAR 27 and FAR 29 are no different to this requirement. The adopted CS-27 and CS-29 are less protective, partially implemented or not implemented	Nil
Chapter 6. Rotor and Power Transmission Systems and Powerplant Installation		
6.7 Engine restarting Means shall be provided for restarting an engine in flight at altitudes up to a declared maximum altitude.	The adopted FAR 27 and Far 29 are less protective, partially implemented or not implemented. The adopted CS-27 and CS-29 are no different to this requirement	Nil
Chapter 7. Instruments and Equipment		
7.4.2 lights shall be installed in helicopters so as to minimise the possibility that they will: a) adversely affect the satisfactory performance of the flight crew' duties; or b) subject an outside observer to harmful dazzle. *Note. – In order to avoid the effects mentioned in 7.4.2, it will be necessary in some cases to provide means whereby the pilot can switch off or reduce the intensity of flashing lights.*	The adopted FAR 27 and 29 are less protective, partially implemented or not implemented. The adopted CS-27 and CS-29 are no different to this requirement.	Nil

Part IVB Helicopters for which an application for certification was submitted on or after 13 December 2007 **Chapter 3. Structure**		
3.1.1. For helicopters for which application for certification was submitted before 24 February 2013, the helicopter structure shall be designed, manufactured and provided with instructions for its maintenance with the objective of avoiding catastrophic failure throughout its operational life	The adopted FAR 27 and FAR 29 are different in character or other means of compliance. The adopted CS-27 and CS-29 are no different to this requirement.	Nil
3.1.2. For helicopters for which application for certification was submitted after 24 February 2013, the helicopter structure shall be designed, manufactured and provided with instructions for its maintenance and repair with the objective of avoiding hazardous and catastrophic failure throughout its operational life. *Note. – Structures includes the airframe, undercarriage, control system, blades and rotorhead, rotor pylon and auxiliary lifting surfaces.*	The adopted FAR 27 and FAR 29 are different in character or other means of compliance. The adopted CS-27 and CS-29 are less protective, partially implemented or not implemented	Nil
3.4. – Strength and deformation In the various loading conditions prescribed in 3.7, 3.8 and 3.9, no part of the helicopter structure shall sustain detrimental deformation at any load up to and including the limit load, and the helicopter structure shall be capable of supporting the ultimate load.	The adopted FAR 27 and FAR 29 are different in character or other means of compliance. The adopted CS-27 and CS-29 are no different to this requirement	Nil
3.10 – Fatigue Strength The strength and fabrication technique of the helicopter structure shall be such as to avoid catastrophic fatigue failure under repeated loads and vibratory loads in gthe anticipated operating conditions. Environment degradation, accidental damage and other likely failures shall be considered.	The adopted FAR 27 and FAR 29 are different in character or other means of compliance. The adopted CS-27 and CS-29 are no different to this requirement.	Nil
Chapter 4. Design and Construction		
4.1.5 Protection The structure shall be protected against deterioration or loss of strength in service due to weathering, corrosion, abrasion or other causes, which could pass unnoticed, taking into account the maintenance the helicopter will receive.	The adopted FAR 27 and FAR 29 are different in character or other means of compliance. The adopted CS-27 and CS-29 are no different to this requirement	Nil
4.7. Ground Handling Adequate provisions shall be made in design to minimise the risk that normal ground handling operations (e.g. towing, jacking) may cause damage, which could pass unnoticed, to the parts of the helicopter essential for its safe operation. The protection that any limitations and instructions for such operations might provide may be taken into account.	The adopted FAR 27 and FAR 29 are different in character or other means of compliance. The adopted CS-27 and CS-29 are less protective, partially implemented or not implemented	Nil
Chapter 7. Operating Limitations and Information		
7.2.1. limitations which might be exceeded in flight and which are defined quantitatively shall be expressed in suitable units. These limitations shall be corrected if necessary for errors in measurements	The adopted FAR 27 and FAR 29 are different in character or other means of compliance. The adopted CS-27 and CS-29 are no different to this requirement	Nil

so that the flight crew can, by reference to the instruments available to them, readily determine when the limitations are reached.		
Chapter 9. Operating Environment and Human Factors		
9.1. General The helicopter shall be designed to allow safe operation within the performance limitations of its passengers and those who operate, maintain and service it. *Note. – The human/machine interface is often the weak link in an operating environment; so, it is necessary to ensure that the helicopter is capable of being controlled at all phases of the flight (including and degradation due to failures) and that neither the crew nor passengers are harmed by the environment in which have been placed for the duration of the flight.*		Nil
Part V. Small Aeroplanes **Part VA. Aeroplanes over 750Kg but not exceeding 5700Kg for which application for certification was submitted on or after 13 December but before 7 March 2021** **Chapter 1. General**		
1.1.1. The standards of this part are applicable in respect of all aeroplanes designated in 1.1.2 for which an application for the issue of a Type Certificate was submitted to the appropriate national authorities on or after 13 December 2007 but before 7 March 2021.	CASR Part 23 is stated to be applicable to aeroplanes in the normal, utility, acrobatic and commuter categories but no maximum or minimum weight is specified in the CASR. The maximum weight limit is specified in the following international standards: USA FAR Part 23 and EASA CS-23.	Nil
1.1.2. Except for those Standards and Recommended Practices which specify a different applicability, the Standards and Recommended Practices of this part shall apply to all aeroplanes having a maximum certificated take-off mass greater than 750 kg but not exceeding 5 700 kg intended for the carriage of passengers or cargo or mail in international air navigation. *Note 1 – The aeroplanes described in 1.1.2 are known in some states as normal, utility and aerobatic category aeroplanes.* *Note 2. – The following Standards do not include quantitative specifications comparable to those found in national airworthiness codes,. In accordance with 1.2.1 of Part 11, these Standards are to be supplemented by requirements established, adopted or accepted by Contracting States.*	CASR Part 23 is stated to be applicable to aeroplanes in the normal, utility, acrobatic and commuter categories but no maximum or minimum weight is specified in the CASR. The maximum weight limit is specified in the following international standards: USA FAR Part 23 and EASA CS-23.	Nil
1.1.3 The level of airworthiness defined by the appropriate parts of the comprehensive and detailed national code referred to in 1.2.1 of Part 11 for the aeroplanes designated in 1.1.2 shall be at least substantially equivalent to the overall level intended by the broad Standards of this part.	CS-VLA is applicable to aeroplanes not exceeding 750 kg. CASR Part 23 allows an aeroplane to be certificated to CS-VLA (providing the aeroplane does not exceed 750 kg).	Nil
1.2.1 Limiting conditions shall be established for the aeroplane, its powerplant, systems and equipment (see 7.2). Compliance with the Standards of this part shall be established assuming that the aeroplane is operated within the limitations specified. The limitations	The adopted FAR 23 is different in character or other means of compliance. The adopted CS-23 is no different to this requirement.	Nil

shall include a margin of safety to render the likelihood of accidents arising therefrom extremely remote.		
Chapter 3. Structure		
3.1 General The aeroplane structure shall be designed, manufactured and provided with instructions for its maintenance and repair with the objective of avoiding catastrophic failure throughout its operational life.	The adopted FAR 23 is no different to this requirement. The adopted CS-23 is less protective, partially implemented or not implemented.	Nil
Chapter 6. Systems and Equipment		
6.5 Electromagnetic interference protection Aeroplane electronic systems, particularly flight-critical and flight-essential systems, shall be protected against electromagnetic interference from both internal and external sources.	U.S. regulations do not address electromagnetic interference from external sources. High Intensity Radiated Fields (HIRF) are addressed by Special Conditions but only for flight critical systems, not flight essential systems. EASA has new rules taking into consideration the increased use of critical and essential electrical/electronic systems on aircraft coupled with the development and use of non-metallic structural materials that are more 'transparent' to electromagnetic radiation and have low electrical conductivity. These rules were implemented in 2015.	Nil
Chapter 8. Crashworthiness And Cabin Safety		
8.5 Lighting and marking Emergency lighting, if installed, shall have the following characteristics: a) independence from main electrical supply; b) automatic activation upon loss of normal power/impact; c) visual indication of emergency exits; d) illumination both inside and outside the aeroplane during evacuation; and e) no additional hazards in the event of fuel spillage, emergency landings and minor crash events.	For 8.5e) – Fuel tanks must be designed, located, and installed so as to retain fuel. FAR 14 CFR part 23 does not address the impact of fuel spillage on emergency lighting systems. Only commuter category airplanes are required to install emergency lighting systems	Nil
Part VB. Aeroplanes not exceeding 5700Kg for which application for certification is submitted on or after 7 March 2021 **Chapter 1. General**		
1.1.1 The Standards of this part are applicable in respect of all aeroplanes designated in 1.1.2 for which an application for the issue of a Type Certificate is submitted to the appropriate national authorities on or after 7 March 2021.	CASR Part 23 is stated to be applicable to aeroplanes in the normal, utility, acrobatic and commuter categories but no maximum or minimum weight is specified in the CASR. The maximum weight limit is specified in the following international standards: USA FAR Part 23 and EASA CS-23.	Nil
1.1.2. Except for those Standards and Recommended Practices which specify a different applicability, the Standards and Recommended Practices of this part shall apply to all aeroplanes having a maximum certificated take-off mass not exceeding 5 700 kg intended for the carriage of passengers or cargo or mail in international air navigation.	CASR Part 23 is stated to be applicable to aeroplanes in the normal, utility, acrobatic and commuter categories but no maximum or minimum weight is specified in the CASR. The maximum weight limit is specified in the following international standards: USA FAR Part 23 and EASA CS-23 apply to aircraft of less than 8618kg	Nil

Note 1. – Guidance material concerning the appropriate airworthiness safety levels commensurate with acceptable risk levels is contained in the Airworthiness Manual (Doc 9760). Note 2. – The following Standards do not include quantitative specifications comparable to those found in national airworthiness codes. In accordance with 1.2.1 of Part 11, these Standards are to be supplemented by requirements established, adopted or accepted by Contracting States.		
1.2.1 Limiting conditions shall be established for the aeroplane, its powerplant, systems and equipment (see 7.2). Compliance with the Standards of this part shall be established assuming that the aeroplane is operated within the limitations specified. The limitations shall include a margin of safety to render the likelihood of accidents arising therefrom extremely remote.	The adopted FAR 23 is different in character or other means of compliance. The adopted CS-23 is no different to this requirement. This ICAO provision requires that operating limitations be established that include a margin of safety to render the likelihood of accidents arising there from to be extremely remote. The adopted FAR 23 requires operating limitations to be established for safe operation, but does not require a specific assessment that these limitations provide a safety margin that ensures the likelihood of an accident arising there from is extremely remote. Australia will further review compliance once USA FAR's and EASA CS details are known.	Nil
Chapter 3. Structure		
3.1 General The aeroplane structure shall be designed, manufactured and provided with instructions for its maintenance and repair with the objective of avoiding catastrophic failure throughout its operational life.	The adopted FAR 23 is no different to this requirement. The adopted CS-23 is less protective, partially implemented or not implemented. The adopted CS-23 and CS-25 do not mandate the provision of 3.1 structural repair manuals	Nil
Chapter 6. Systems and Equipment		
6.5 Electromagnetic interference protection Aeroplane electronic systems, particularly flight-critical and flight-essential systems, shall be protected against electromagnetic interference from both internal and external sources.	U.S. regulations do not address electromagnetic interference from external sources. High Intensity Radiated Fields (HIRF) are addressed by Special Conditions but only for flight critical systems, not flight essential systems. EASA has new rules taking into consideration the increased use of critical and essential electrical/electronic systems on aircraft coupled with the development and use of non-metallic structural materials that are more 'transparent' to electromagnetic radiation and have low electrical conductivity. These rules were implemented in 2015.	Nil
Chapter 8. Crashworthiness and Cabin Safety		
8.5 Lighting and marking Emergency lighting, if installed, shall have the following characteristics: a) independence from main electrical supply; b) automatic activation upon loss of normal power/impact; c) visual indication of emergency exits;	The adopted US FARs are less protective or partially implemented or not implemented. For 8.5e: The FAA provides requirements for emergency lighting systems in 14 CFR 23.812. These requirements do not address the impact of fuel spillage on emergency lighting systems. Only commuter category airplanes are required to install emergency lighting systems. The adopted CS is no different.	Nil

d) illumination both inside and outside the aero[plane during evacuation; and e) no additional hazards in the event of fuel spillage, emergency landings and minor crash events.		
Part VI. Engines **Chapter 2. Design and Construction**		
2.2 Failure analysis For turbine engines, a safety assessment of the engine shall be conducted to ensure that it functions safely throughout the full range of operating conditions. A summary shall be made of all foreseeable failures and combinations of failures that result in hazardous effects. If the primary failure of single elements (for example, disks) is likely to result in hazardous engine effects, reliance shall be placed on meeting prescribed integrity requirements.	The adopted FAR 35 is less protective, partially implemented or not implemented. The adopted CS-P is no different to this requirement.	Nil