Explanatory Statement

Civil Aviation Safety Regulations 1998

Part 133 (Australian Air Transport Operations—Rotorcraft) Manual of Standards 2020

Purpose
The *Part 133 (Australian Air Transport Operations - Rotorcraft) Manual of Standards 2020* (the ***MOS***) sets out the standards for the commercial operation of operators of helicopters, gyroplanes or powered-lift aircraft who currently conduct regular public transport operations under subregulation 206 (1) (c), charter passenger or cargo operations under subregulation 206 (1) (b) and ambulance functions aerial work operations under subregulation 206 (1) (a) of the *Civil Aviation Regulations 1988* (***CAR***) and who undertake these operations under the *Civil Aviation Safety Regulations 1998* (***CASR***).

The MOS is made under Part 133 of the CASR. The MOS sets out detailed requirements and safety standards for the conduct of rotorcraft air transport operations, including medical transport and contains new rules to enhance operational flexibility, improve aviation safety and bring Australian requirements more in line with the Standards and Recommended Practices (***SARP***s) of the International Civil Aviation Organization (***ICAO***).

Legislation
The *Civil Aviation Act 1988* (the ***Act***) establishes the regulatory framework for maintaining, enhancing and promoting the safety of civil aviation, with particular emphasis on preventing aviation accidents and incidents.

Subsection 98 (1) of the Act provides, in part, that the Governor-General may make regulations, not inconsistent with the Act, prescribing matters required or permitted by the Act to be prescribed, or necessary or convenient to be prescribed, for carrying out or giving effect to the Act. The CAR and CASR are made under the Act.

The *Civil Aviation Safety Amendment (Part 133) Regulations 2018* (***Part 133 of CASR***) were made on 6 December 2018 and amended by the *Civil Aviation Legislation Amendment (Flight Operations—Miscellaneous Amendments) Regulations 2020* made on 1 October 2020. Compilation No.1 (which contains these amendments) of the *Civil Aviation Safety Amendment (Part 133) Regulations 2018* was registered on 21 October 2020. Part 133 of CASR commences on 2 December 2021. Under regulation 133.020 of CASR, the Civil Aviation Safety Authority (***CASA***) may issue a Manual of Standards for Part 133 of CASR that prescribes matters required or permitted by that Part to be prescribed, or necessary or convenient for carrying out or giving effect to Part 133. This power is complemented by other provisions, throughout Part 133, which empower CASA to prescribe specific matters in the MOS.

Section 4 of the *Acts Interpretation Act 1901* (the ***AIA***) as applied by section 13 of the *Legislation Act 2003*, provides, among other things, that if an Act (including a regulation) is enacted and at a time after its enactment (the ***start time***) the Act will confer power to make an instrument, that power may be exercised before the start time as if the relevant commencement had occurred. However, in general terms, the exercise of this power does not confer a power or right to impose an obligation on a person before the relevant commencement. Using section 4 of the AIA, the MOS is made under regulation 133.020 of CASR, a regulation that will not commence until 2 December 2021.

For convenience in this Explanatory Statement, unless a contrary intention appears, mention of a provision with the prefix "133." is a reference to that provision in Part 133 of CASR.

Background
Part 133 of CASR established a regulatory model that is designed to:

1. provide more transparent and comprehensible aviation safety requirements by consolidating the rules for Australian air transport operations for rotorcraft;
2. modernise the regulatory framework by recognising developments in technology and international standards;
3. introduce medical transport requirements in line with international best practice;
4. introduce certain new rules to enhance operational flexibility;
5. enhance aviation safety by providing a more active regulatory focus on managing the safety risks associated with passenger transport operations and achieve required safety outcomes in a manner that is best suited to the operator;
6. include operational rules for emerging technologies such as the tiltrotor power lift aircraft; and
7. bring Australian requirements more in line with ICAO SARPs.

The MOS prescribes matters required, or permitted, by Part 133 of CASR, or matters that are necessary or convenient for carrying out or giving effect to Part 133.

The Part 133 MOS
The MOS sets out detailed requirements and safety standards for the conduct of rotorcraft air transport operations, including medical transport and are designed to mitigate the risks that might impact on the continued safe conduct of flight.

As far as possible in the context of the matters to be addressed, the MOS has been drafted in as plain a style of English presentation as the technical nature of the material will allow, to ensure that the document is, and is as usable as, a practical manual. It contains numerous lists of various procedural and equipment requirements to be observed by a pilot in command to ensure safe flight.

This Explanatory Statement provides a note on, or reference to, every Chapter, Division and section of the MOS, to explain the purpose and operation of the instrument as required by section 15J of the *Legislation Act 2003* but it is not a repeat of the highly technical content of the MOS or in any sense a reader's substitute for the MOS. It provides a general explanation of the purpose and operation of the MOS as required by section 15J.

In support of the MOS, and before it commences on 2 December 2021, CASA will publish free and easily accessible guidance materials, including acceptable means of compliance documentation which can form the basis of exposition content for Part 133 operators. These will offer practical guidance on many discrete issues dealt with in the MOS. This guidance will further explain the technical requirements of the MOS and, using plain language, it will clarify acceptable means of compliance with the MOS that can be used by an operator. This material will, therefore, complement the explanations of the purpose and operation of the MOS given in this Explanatory Statement.

The following provides a summary overview of the structure and content of the 15 Chapters of the MOS:

1. Chapter 1 provides the name, commencement and authority of the MOS. It also provides definitions and abbreviations, and addresses how certain documents are referenced, applied, adopted, or incorporated (***called up***).
2. Chapter 2 prescribes the requirements for operational limitations for air transport rotorcraft.

3. Chapter 3 makes the prescriptions required for the keeping, carriage and updating of certain documents and information.
4. Chapter 4 prescribes the requirements for operational flight plans.
5. Chapter 5 prescribes the requirements for external load winching and the minimum height rules for medical transport operations.
6. Chapter 6 prescribes the fuel requirements.
7. Chapter 7 prescribes the requirements for safety briefings, instructions and demonstrations.
8. Chapter 8 prescribes the requirements for head-up displays, enhanced vision systems, synthetic vision systems and night vision imaging systems (NVIS).
9. Chapter 9 prescribes an exemption to subregulation 91.555(1) of CASR and the additional requirements for the wearing of seatbelts, safety harnesses or restraint straps.
10. Chapter 10 prescribes the performance requirements for rotorcraft conducting air transport operations.
11. Chapter 11 prescribes the requirements for equipment.
12. Chapter 12 prescribes the requirements for flight crew member training and checking.
13. Chapter 13 prescribes the requirements for cabin crew member training and checking.
14. Chapter 14 prescribes the requirements for air crew member training and checking.
15. Chapter 15 prescribes the requirements for medical transport specialists training and checking.

More details on the MOS are set out in Appendix 2 of this Explanatory Statement.

Legislation Act 2003

Under subsection 8 (4) of the *Legislation Act 2003*, an instrument is a legislative instrument if it is made under a power delegated by the Parliament, and any provision determines the law or alters the content of the law, and it has the direct or indirect effect of affecting a privilege or interest, imposing an obligation, creating a right, or varying or removing an obligation or right. The MOS satisfies these requirements. Under paragraphs 98 (5A) (a) and 98 (5AA) (a) of the *Civil Aviation Act 1988*, an instrument made under regulations is a legislative instrument if it is issued in relation to matters affecting the safe navigation and operation of aircraft, and is expressed to apply to classes of persons. On each of these criteria, the MOS is a legislative instrument subject to registration, and tabling and disallowance in the Parliament, under sections 15G, 38 and 42 of the *Legislation Act 2003*.

Incorporations by reference

Under subsection 98 (5D) of the Act, the MOS may apply adopt or incorporate any matter contained in any instrument or other writing. A non-legislative instrument may be incorporated into a legislative instrument made under the Act, as that non-legislative instrument exists or is in force at a particular time or from time to time (including a non-legislative instrument that does not exist when the legislative instrument is made).

Under paragraph 15J (2) (c) of the *Legislation Act 2003*, the Explanatory Statement must contain a description of the incorporated documents and indicate how they may be obtained. The Table below identifies the international and domestic instruments and documents that have been applied, adopted, or incorporated (***called up***) in the MOS. The Table also identifies how the document may be obtained.

Document	**Description**	**Manner of incorporation**	**Source**

Document	Description	Manner of incorporation	Source
CASR Dictionary	The CASR Dictionary provides definitions and interpretations of a general nature that are applicable across the whole regulatory structure. Various provisions of the MOS call up the CASR Dictionary.	As in force or existing from time to time.	This document is available for free on the Federal Register of Legislation.
Part 11 of CASR	Part 11 sets out administrative provisions for the regulation of civil aviation, including approvals. Some operators may have to obtain CASA's written approval for various matters.	As in force or existing from time to time.	This document is available for free on the Federal Register of Legislation.
Part 21 of CASR	Part 21 sets out the certification and airworthiness requirements for aircraft and aircraft equipment. Various provisions of the MOS call up the Part 21 requirements.	As in force or existing from time to time.	This document is available for free on the Federal Register of Legislation.
Part 42 of CASR	Part 42 sets out the continuing airworthiness requirements for aircraft and aeronautical products. This document is called up in section 3.01 of the MOS.	As in force or existing from time to time.	This document is available for free on the Federal Register of Legislation.
Part 60 of CASR	Part 60 sets out the requirements for synthetic training devices. This document is called up in relation to the definition of ***qualified*** flight simulator.	As in force or existing from time to time.	This document is available for free on the Federal Register of Legislation.
Part 61 of CASR	Part 61 sets out the requirements and standards for the issue of flight crew licences and ratings, and their privileges. Section 5.10 of the MOS calls up the Part 61 requirements.	As in force or existing from time to time.	This document is available for free on the Federal Register of Legislation.
Part 91 of CASR	Part 91 sets out the standards for the rules of the air for pilots who are not operating under an Air Operator's Certificate (AOC) or another certificate.	As in force or existing from time to time.	This document is available for free on the Federal Register of Legislation.

Document	Description	Manner of incorporation	Source
	Various provisions of the MOS call up the Part 91 requirements.		
Part 91 Manual of Standards	The Part 91 MOS prescribes matters relating to general operating and flight rules permitted under Part 91 to be prescribed in the MOS. Various provisions of the MOS call up the Part 91 Manual of Standards	As in force or existing from time to time.	This document will be made available for free on the Federal Register of Legislation.
Part 119 of CASR	Part 119 set out the certification and management requirements for Australian air transport operators. Various provisions of the MOS call up the Part 119 requirements.	As in force or existing from time to time.	This document is available for free on the Federal Register of Legislation.
Part 139 Manual of Standards	The Part 139 MOS prescribes the standards for aerodromes used in air transport operations. This document is called up in section 10.32 of the MOS.	As in force or existing from time to time.	This document is available for free on the Federal Register of Legislation.
Part 142 of CASR	Part 142 prescribes the organisational and administrative framework for issuing Part 142 authorisations for operators to conduct integrated flight training. Section 10.24 of the MOS calls up the Part 142 requirements.	As in force or existing from time to time.	This document is available for free on the Federal Register of Legislation.
Regulation 252 of CAR	Regulation 252 of CAR sets out the standards for the provision of emergency systems. This document is called up in section 11.50 of the MOS.	As in force immediately before the commencement of the MOS.	This document is available for free on the Federal Register of Legislation.

Document	Description	Manner of incorporation	Source
Regulation 252A of CAR	Regulation 252A of CAR sets out the standards for emergency locator transmitters. This document is called up in section 11.45 of the MOS.	As in force immediately before the commencement of the MOS.	This document is available for free on the Federal Register of Legislation.
Civil Aviation Order 20.4	CAO 20.4 sets out the requirements for the provision and use of oxygen and protective breathing equipment on an aircraft. This document is called up in section 11.40 of the MOS.	As in force immediately before the commencement of the MOS.	This document is available for free on the Federal Register of Legislation.
Civil Aviation Order 20.11.	CAO 20.11 sets out the standards for emergency and lifesaving equipment and passenger control in emergencies. This document is called up in sections 11.45 and 11.50 of the MOS.	As in force immediately before the commencement of the MOS.	This document is available for free on the Federal Register of Legislation.
Civil Aviation Order 82.6	CAO 82.6 sets out the requirements for night vision imagining systems in the operation of helicopters. CAO 82.6 is called up in sections 5.10 and 8.02 of the MOS.	As in force or existing from time to time.	This document is available for free on the Federal Register of Legislation.
Civil Aviation Order 103.19	CAO 103.19 sets out the standards for flight data recorders. This document is called up in section 11.26 of the MOS.	As in force or existing from time to time.	This document is available for free on the Federal Register of Legislation.
Civil Aviation Order 103.20	CAO 103.20 sets out the standards for cockpit voice recorders. This document is called up in section 11.26 of the MOS.	As in force or existing from time to time.	This document is available for free on the Federal Register of Legislation.
Civil Aviation Order 108.26	CAO 108.26 sets out the standards for system specifications for oxygen systems.	As in force immediately before the commencement of the	This document is available for free on the Federal Register of Legislation.

Document	Description	Manner of incorporation	Source
	This document is called up in section 11.40 of the MOS.	MOS.	
Annex 2 to the Chicago Convention – Rules of the Air	Annex 2 sets out general rules, visual flight rules and instrument flight rules and applies to a contracting State to the Chicago Convention. Various provisions of the MOS call up Annex 2 requirements.	As in force or existing from time to time.	This document is publicly available but subject to copyright that belongs to ICAO. It is made available by ICAO for a fee (https://store.icao.int/) – see below for further information.
Annex 10 to the Chicago Convention	Annex 10 sets out the aeronautical communications, navigation and surveillance requirements for international civil aviation. Various provisions of the MOS call up Annex 10 requirements.	As in force or existing from time to time.	This document is publicly available but subject to copyright that belongs to ICAO. It is made available by ICAO for a fee (https://store.icao.int/) – see below for further information.
Determination of Airspace and Controlled Aerodromes Etc. (Designated Airspace Handbook) Instrument	This instrument determines relevant volumes of airspace as flight information regions and areas, as classifications of airspace, and as control zones, and determines relevant controlled aerodromes. Section 1.04 of the MOS calls up the Determination.	As in force or existing from time to time.	This document is available for free on the Federal Register of Legislation.
Aeronautical Information Publication (AIP)	The AIP is published by Airservices Australia to disseminate information relevant to aviation participants on matters essential to safe air navigation. Section 11.51 of the MOS calls up the AIP requirements.	As in force or existing from time to time.	The AIP is available for free on the Airservices Australia website www.airservicesaustralia.com/aip/aip.asp.
Rotorcraft flight manual (RFM)	An RFM contains information required to safely operate the specific aircraft. Various provisions of the MOS call up RFM requirements.	As in force or existing from time to time.	These documents are publicly available but not for free. The RFM for an aircraft is the proprietary property of the owner of the aircraft design (usually the manufacturer). The incorporated requirements of the RFM are at the aircraft-specific level, and instructions are required to be provided to

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			owners or registered operators of aircraft. Where available, and by prior arrangement, CASA will make an RFM available for inspection at any CASA office.
Part 27 of the FAR (Federal Aviation Regulations) (FAR 27)	FAR 27 sets out the FAA airworthiness standards for normal category rotorcraft. FAR 27 is called up in multiple definitions for the MOS.	As in force or existing from time to time.	This document is available for free on the Electronic Code of Federal Regulations website https://www.ecfr.gov/cgi-bin/text-idx?SID=24e75b7361a31df6fc7b4b34c9208c66&mc=true&tpl=/ecfrbrowse/Title14/14tab_02.tpl.
Part 29 of the FAR (Federal Aviation Regulations) (FAR 29)	FAR 29 sets out the FAA airworthiness standards for transport category rotorcraft. FAR 29 is called up in multiple definitions for the MOS.	As in force or existing from time to time.	This document is available for free on the Electronic Code of Federal Regulations website https://www.ecfr.gov/cgi-bin/text-idx?SID=24e75b7361a31df6fc7b4b34c9208c66&mc=true&tpl=/ecfrbrowse/Title14/14tab_02.tpl.
14 CFR 91.227	Part 91 of the FAR sets out the FAA general operating and flight rules. 14 CFR 91.227 sets out, within FAR 91, the FAA requirements for ADS-B equipment performance and pre-flight performance based on an ADS-B Out equipment. This document is called up in section 11.57 of the MOS.	As in force or existing from time to time.	This document is available for free on the Electronic Code of Federal Regulations website https://www.ecfr.gov/cgi-bin/text-idx?SID=24e75b7361a31df6fc7b4b34c9208c66&mc=true&tpl=/ecfrbrowse/Title14/14tab_02.tpl.
AS/NZS 4280.1:2003, *406 MHz satellite distress beacons - Marine emergency position-indicating radio beacons*	AS/NZS 4280:2017 Part 1 sets out the minimum radiofrequency and environmental requirements to comply with the Australia and New Zealand radiofrequency spectrum and maritime regulatory requirements. This document is called up in section 11.44 of the MOS.	As in force or existing from time to time.	This document is publicly available but subject to copyright that belongs to Standards Australia. It is made available by Standards Australia for a fee (https://shop.standards.govt.nz/catalog/4280.1%3A2003%28AS%7CNZS%29/view)

Document	Description	Manner of incorporation	Source
(EPIRBs)			
AS/NZS 4280.2 :2003,*406 MHz satellite distress beacons - Personal locator beacons (PLBs)*	This document sets out the minimum radiofrequency and environmental requirements to comply with Australian and New Zealand radiofrequency spectrum, and maritime and aviation regulatory requirements. This document is called up in section 11.44 of the MOS.	As in force or existing from time to time.	This document is publicly available but subject to copyright that belongs to Standards Australia. It is made available by Standards Australia for a fee (https://shop.standards.govt.nz/catalog/4280.2%3A2003%28AS%7CNZS%29/view)
ATSO-1C74c—Airborne ATC Transponder Equipment	This document prescribes the requirements that a manufacturer of airborne air traffic control (ATC) transponder equipment must meet in order for the equipment to be identified with the applicable ATSO marking and for the equipment to be an approved article. This document is called up in the definition of ***approved Mode A/C transponder*** in the MOS.	As in force or existing from time to time.	This document is available for free on the Federal Register of Legislation, contained within the *Part 21 Manual of Standards Instrument 2016* (https://www.legislation.gov.au/Details/F2017C01160/Html/Text#_Toc500486105)
ETSO-C74d *Airborne ATC Transponder Equipment*	This document provides the EASA standards for airborne ATC transponder equipment. This document is called up in the definition of ***approved Mode A/C transponder*** in the MOS.	As in force or existing from time to time.	This document is available for free on the EASA website (https://www.easa.europa.eu/domains/aircraft-products/etso-authorisations/list-of-all-etso)
TSO-C74c *Airborne ATC Transponder Equipment*	This document provides the FAA standards for airborne ATC transponder equipment. This document is called up in the definition of ***approved Mode A/C transponder*** in the MOS.	As in force or existing from time to time.	This document is available for free on the FAA website (https://rgl.faa.gov/Regulatory_and_Guidance_Library/rgTSO.nsf/MainFrame?OpenFrameSet)
ETSO-C88a *Automatic Pressure Altitude Reporting Code Generating Equipment*	This document provides the EASA requirements which automatic pressure altitude reporting code generating equipment must meet in order to be identified with the applicable ETSO marking. Section 11.54 of the MOS calls up this document.	As in force or existing from time to time.	This document is available for free on the EASA website (https://www.easa.europa.eu/domains/aircraft-products/etso-authorisations/list-of-all-etso)

Document	Description	Manner of incorporation	Source
TSO-C88a *Automatic Pressure Altitude Reporting Code Generating Equipment*	This document provides the FAA requirements automatic pressure altitude reporting code generating equipment must meet in order to be identified with the applicable TSO marking. Section 11.54 of the MOS calls up this document.	As in force or existing from time to time.	This document is available for free on the FAA website (https://rgl.faa.gov/Regulatory_and_Guidance_Library/rgTSO.nsf/MainFrame?OpenFrameSet)
ETSO-2C91a *Emergency Locator Transmitter (ELT) Equipment*	This document sets the EASA requirements which emergency locator transmitter equipment must meet in order to be identified with the applicable ETSO marking. This document is called up in sections 11.43 and 11.44 of the MOS.	As in force or existing from time to time.	This document is available for free on the EASA website (https://www.easa.europa.eu/domains/aircraft-products/etso-authorisations/list-of-all-etso).
ETSO-2C112a *Air Traffic Control Radar Beacon System/Mode Select (Atcrbs/Mode S) Airborne Equipment*	This document provides the EASA requirements which a secondary surveillance radar mode S transponder must meet in order to be identified with the applicable ETSO marking. This document is incorporated in the definition of ***approved Mode S transponder***.	As in force or existing from time to time.	This document is available for free on the EASA website (https://www.easa.europa.eu/domains/aircraft-products/etso-authorisations/list-of-all-etso)
TSO-C112 *Air Traffic Control Radar Beacon System/Mode Select (Atcrbs/Mode S) Airborne Equipment*	This document provides the FAA requirements which ATCRBS/Mode S airborne equipment must meet for identification with the applicable TSO marking. This document is incorporated in the definition of ***approved Mode S transponder.***	As in force or existing from time to time.	This document is available for free on the FAA website (https://rgl.faa.gov/Regulatory_and_Guidance_Library/rgTSO.nsf/MainFrame?OpenFrameSet)
ETSO - C123a *Cockpit Voice Recorder Systems*	This document gives the requirements that new models of cockpit voice recorder systems that are manufactured on or after the date of this ETSO must meet to be identified with applicable ETSO marking.	As in force or existing from time to time.	This document is available for free on the EASA website (https://www.easa.europa.eu/domains/aircraft-products/etso-authorisations/list-of-all-etso)

Document	Description	Manner of incorporation	Source
	This document is called up in section 11.26 of the MOS.		
TSO-C123a *Cockpit Voice Recorder Systems*	This document provides the minimum FAA performance standard that cockpit voice recorder systems must meet to be identified with the applicable TSO marking. This document is called up in section 11.26 of the MOS.	As in force or existing from time to time.	This document is available for free on the EASA website (https://www.easa.europa.eu/domains/aircraft-products/etso-authorisations/list-of-all-etso)
ETSO - C124a *Flight Data Recorder Systems*	This document gives the requirements that new models of flight data recorder systems that are manufactured on or after the date of this ETSO must meet be identified with applicable ETSO marking. This document is called up in section 11.26 of the MOS.	As in force or existing from time to time.	This document is available for free on the EASA website (https://www.easa.europa.eu/domains/aircraft-products/etso-authorisations/list-of-all-etso)
TSO - C124a *Flight Data Recorder Systems*	This document provides the minimum FAA performance standard that flight data recorder systems must meet to be identified with the applicable TSO marking. This document is called up in sections 11.26 of the MOS.	As in force or existing from time to time.	This document is available for free on the EASA website (https://www.easa.europa.eu/domains/aircraft-products/etso-authorisations/list-of-all-etso)
ETSO-2C126 *406 MHz Emergency Locator Transmitter (ELT)*	This document sets the EASA requirements for 406 MHz emergency locator transmitters (ELT) manufactured before 28 June 2012 This document is called up in sections 11.43 and 11.44 of the MOS.	As in force or existing from time to time.	This document is available for free on the EASA website (https://www.easa.europa.eu/domains/aircraft-products/etso-authorisations/list-of-all-etso).
ETSO -C126 *406 MHz Emergency Locator Transmitter*	This document sets the EASA requirements for 406 MHz emergency locator transmitters (ELT) manufactured on or after 28 June 2012. This document is called up in section 11.44 of the MOS.	As in force or existing from time to time.	Various versions of this document are available for free on the EASA website (https://www.easa.europa.eu/domains/aircraft-products/etso-authorisations/list-of-all-etso)
TSO-C126 *406 MHz*	This document sets the FAA requirements for 406 MHz ELTs.	As in force or existing from	This document is available for free on the

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Emergency Locator Transmitter (ELT)	This document is called up in sections 11.43 and 11.44 of the MOS.	time to time.	FAA website (https://rgl.faa.gov/Regulatory_and_Guidance_Library/rgTSO.nsf/MainFrame?OpenFrameSet).
ETSO-C129 *Airborne Supplemental Navigation Equipment Using Global Positioning System (GPS)*	This document provides the EASA requirements for airborne supplemental navigation equipment using GPS to be identified with the applicable TSO marking. This document is called up in the definition of ***approved GNSS*** in the MOS.	As in force or existing from time to time.	Various versions of this document are available for free on the EASA website. (https://www.easa.europa.eu/domains/aircraft-products/etso-authorisations/list-of-all-etso)
TSO-C129 *Airborne Supplemental Navigation Equipment Using Global Positioning System (GPS)*	This document provides the FAA requirements for airborne supplemental navigation equipment using GPS to be identified with the applicable TSO marking. This document is called up in the definition of ***approved GNSS*** in the MOS.	As in force or existing from time to time.	Various versions of this document are available for free on the FAA website (https://rgl.faa.gov/Regulatory_and_Guidance_Library/rgTSO.nsf/MainFrame?OpenFrameSet)
ETSO-C129a *Airborne Supplemental Navigation Equipment Using Global Positioning System (GPS)*	This document provides the EASA requirements for airborne supplemental navigation equipment using GPS to be identified with the applicable TSO marking. This document is called up in the section 11.09 of the MOS.	As in force or existing from time to time.	Various versions of this document are available for free on the EASA website. (https://www.easa.europa.eu/domains/aircraft-products/etso-authorisations/list-of-all-etso)
TSO-C129a *Airborne Supplemental Navigation Equipment Using Global Positioning System (GPS)*	This document provides the FAA requirements for airborne supplemental navigation equipment using GPS to be identified with the applicable TSO marking. This document is called up in the section 11.09 of the MOS.	As in force or existing from time to time.	Various versions of this document are available for free on the FAA website (https://rgl.faa.gov/Regulatory_and_Guidance_Library/rgTSO.nsf/MainFrame?OpenFrameSet)
ETSO-C142a *Non-Rechargeable Lithium Cells and Batteries*	This document provides the EASA requirements which non-rechargeable lithium cells and batteries must meet.	As in force or existing from time to time.	This document is available for free on the EASA website (https://www.easa.europa.eu/domains/aircraft-

Document	Description	Manner of incorporation	Source
	This document is called up in section 11.42 of the MOS.		products/etso-authorisations/list-of-all-etso)
TSO-C142a *Non-Rechargeable Lithium Cells and Batteries*	This document provides the FAA requirements which non-rechargeable lithium cells and batteries must meet. This document is called up in section 11.42 of the MOS.	As in force or existing from time to time.	This document is available for free on the FAA website (https://rgl.faa.gov/Regulatory_and_Guidance_Library/rgTSO.nsf/MainFrame?OpenFrameSet)
ETSO-C145 *Airborne Navigation Sensors Using the Global Positioning System (GPS) Augmented by the Wide Area Augmentation System (WAAS)*	This document provides the EASA requirements for airborne navigation sensors using the GPS augmented by WAAS to be identified with the applicable ETSO marking. This document is called up in the definition of ***approved GNSS*** in the MOS.	As in force or existing from time to time.	Various versions of this document are available for free on the EASA website (https://www.easa.europa.eu/domains/aircraft-products/etso-authorisations/list-of-all-etso)
TSO-C145 *Airborne Navigation Sensors Using the Global Positioning System (GPS) Augmented by the Wide Area Augmentation System (WAAS)*	This document provides the FAA requirements for airborne navigation sensors using the GPS augmented by WAAS to be identified with the applicable TSO marking. This document is called up in the definition of ***approved GNSS*** in the MOS.	As in force or existing from time to time.	Various versions of this document are available for free on the FAA website (https://rgl.faa.gov/Regulatory_and_Guidance_Library/rgTSO.nsf/MainFrame?OpenFrameSet)
ETSO-C145a *Airborne Navigation Sensors Using the Global Positioning System (GPS) Augmented by the Wide Area Augmentation System (WAAS)*	This document provides the EASA requirements for airborne navigation sensors using the GPS augmented by WAAS to be identified with the applicable ETSO marking. Various provisions of the MOS call up ETSO-C145a.	As in force or existing from time to time.	Various versions of this document are available for free on the EASA website (https://www.easa.europa.eu/domains/aircraft-products/etso-authorisations/list-of-all-etso)
TSO-C145a *Airborne Navigation Sensors Using the Global Positioning System (GPS) Augmented by*	This document provides the FAA requirements for airborne navigation sensors using the GPS augmented by WAAS to be identified with the applicable TSO marking. Various provisions of the MOS	As in force or existing from time to time.	Various versions of this document are available for free on the FAA website (https://rgl.faa.gov/Regulatory_and_Guidance_Library/rgTSO.nsf/MainFrame?OpenFrameSet)

Document	Description	Manner of incorporation	Source
the Wide Area Augmentation System (WAAS)	call up TSO-C145a.		
ETSO-C146 *Stand-Alone Airborne Navigation Equipment Using the Global Positioning System (GPS) Augmented by the Wide Area Augmentation System (WAAS)*	This document provides the EASA requirements for stand-alone airborne navigation equipment using the GPS augmented by the satellite-based augmentation System to be identified with the applicable ETSO marking. This document is called up in the definition of ***approved GNSS*** in the MOS.	As in force or existing from time to time.	Various versions of this document are available for free on the EASA website (https://www.easa.europa.eu/domains/aircraft-products/etso-authorisations/list-of-all-etso)
TSO-C146 *Stand-Alone Airborne Navigation Equipment Using the Global Positioning System (GPS) Augmented by the Wide Area Augmentation System (WAAS)*	This document provides the FAA requirements for stand-alone airborne navigation equipment using the GPS augmented by the satellite-based augmentation System to be identified with the applicable TSO marking. This document is called up in the definition of ***approved GNSS*** in the MOS.	As in force or existing from time to time.	Various versions of this document are available for free on the FAA website (https://rgl.faa.gov/Regulatory_and_Guidance_Library/rgTSO.nsf/MainFrame?OpenFrameSet)
ETSO-C146a *Stand-Alone Airborne Navigation Equipment Using the Global Positioning System (GPS) Augmented by the Wide Area Augmentation System (WAAS)*	This document provides the EASA requirements for stand-alone airborne navigation equipment using the GPS augmented by the satellite-based augmentation System to be identified with the applicable ETSO marking. Various provisions of the MOS call up ETSO-C146a.	As in force or existing from time to time.	Various versions of this document are available for free on the EASA website (https://www.easa.europa.eu/domains/aircraft-products/etso-authorisations/list-of-all-etso)
TSO-C146a *Stand-Alone Airborne Navigation Equipment Using the Global Positioning System (GPS) Augmented by*	This document provides the FAA requirements for stand-alone airborne navigation equipment using the GPS augmented by the satellite-based augmentation System to be identified with the applicable TSO marking. Various provisions of the MOS call up TSO-C146a.	As in force or existing from time to time.	Various versions of this document are available for free on the FAA website (https://rgl.faa.gov/Regulatory_and_Guidance_Library/rgTSO.nsf/MainFrame?OpenFrameSet)

Document	Description	Manner of incorporation	Source
the Wide Area Augmentation System (WAAS)			
ETSO-C166 *Extended Squitter Automatic Dependent Surveillance - Broadcast (TIS-B) Equipment Operating on the Radio Frequency of 1090 Megahertz (MHz)*	This document provides the requirements which Extended Squitter Automatic Dependent Surveillance-Broadcast (ADS-B) and Traffic Information Services-Broadcast (TIS-B) Equipment Operating on the Radio Frequency of 1090 Megahertz (MHz) must meet in order to be identified with the applicable ETSO marking. This document is called up in the definition of ***approved Mode S transponder with ADS-B capability*** in the MOS.	As in force or existing from time to time.	This document is available for free on the EASA website (https://www.easa.europa.eu/domains/aircraft-products/etso-authorisations/list-of-all-etso)
TSO-C166 *Extended Squitter Automatic Dependent Surveillance - Broadcast (TIS-B) Equipment Operating on the Radio Frequency of 1090 Megahertz (MHz)*	This document provides the FAA requirements which extended squitter ADS-B and TIS-B equipment operating on the radio frequency of 1090 MHz must meet in order to be identified with the applicable TSO marking. This document is called up in the definition of ***approved Mode S transponder with ADS-B capability*** in the MOS.	As in force or existing from time to time.	This document is available for free on the FAA website (https://rgl.faa.gov/Regulatory_and_Guidance_Library/rgTSO.nsf/MainFrame?OpenFrameSet)
ETSO–C194 *Helicopter Terrain Awareness and Warning System (HTAWS)*	This document provides the EASA requirements which Helicopter Terrain Awareness and Warning System (HTAWS) that are manufactured on or after the date of this ETSO must meet in order to be identified with the applicable ETSO marking. This document is called up in the definition of ***approved HTAWS*** in the MOS.	As in force or existing from time to time.	This document is available for free on the EASA website (https://www.easa.europa.eu/domains/aircraft-products/etso-authorisations/list-of-all-etso)
TSO–C194 *Helicopter Terrain Awareness and Warning*	This document provides the minimum performance standards of a FAA requirements which a Helicopter Terrain Awareness and Warning System (HTAWS) must	As in force or existing from time to time.	This document is available for free on the FAA website (https://rgl.faa.gov/Regulatory_and_Guidance_Lib

Document	Description	Manner of incorporation	Source
System (HTAWS)	first meet prior to FAA approval and identification with the applicable TSO marking. This document is called up in the definition of ***approved HTAWS*** in the MOS.		rary/rgTSO.nsf/MainFrame?OpenFrameSet)
ETSO-C196a *Airborne Supplemental Navigation Sensors for Global Positioning System Equipment Using Aircraft-Based Augmentation*	This document provides the EASA requirements which airborne supplemental navigation sensors for GPS equipment using aircraft-based augmentation must meet in order to be identified with the applicable ETSO marking. This document is called up in various provisions of the MOS.	As in force or existing from time to time.	This document is available for free on the EASA website (https://www.easa.europa.eu/domains/aircraft-products/etso-authorisations/list-of-all-etso)
TSO-C196a *Airborne Supplemental Navigation Sensors for Global Positioning System Equipment using Aircraft-Based Augmentation*	This document provides the FAA requirements which airborne supplemental navigation sensors for GPS equipment using aircraft-based augmentation must meet in order to be identified with the applicable TSO marking. This document is called up in various provisions of the MOS.	As in force or existing from time to time.	This document is available for free on the FAA website (https://rgl.faa.gov/Regulatory_and_Guidance_Library/rgTSO.nsf/MainFrame?OpenFrameSet)
EASA AMC 20-24 *Certification Considerations for the Enhanced ATS in Non-Radar Areas using ADS-B Surveillance (ADS-B-NRA) Application via 1090 MHZ Extended Squitter*	This document sets out acceptable means of compliance for the certification considerations for the enhanced ATS in non-radar areas using ADS-B Surveillance (ADS-B-NRA) application via 1090 MHZ extended squitter.	As in force or existing from time to time.	This document is available for free at https://www.easa.europa.eu/sites/default/files/dfu/Annex%20II%20-%20AMC%2020-24.pdf
EASA AMC1 CAT.POL.H.305(b)	This document sets out the acceptable means of compliance provided by EASA for the engine reliability statistics required for helicopters that operate without	As in force or existing from time to time.	This document is available for free at Easy Access Rules for Air Operations | EASA (europa.eu)

Document	Description	Manner of incorporation	Source
	an assured safe forced landing capability.		
EASA CS ACNS	This document provides the Certification Specifications and acceptable means of compliance for Airborne Communications, Navigation and Surveillance.	As in force or existing from time to time.	This document is available for free at https://www.easa.europa.eu/sites/default/files/dfu/Annex%20I%20to%20ED%20Decision%202019-011-R%20-%20CS%20ACNS%20Issue%202.pdf
EASA CS – 27	This document provides the EASA certification specifications for small rotorcraft.	As in force or existing from time to time.	This document is available for free at https://www.easa.europa.eu/sites/default/files/dfu/cs-27_amendment_7.pdf.
EASA CS – 29	This document provides the EASA certification specifications for large rotorcraft.	As in force or existing from time to time.	This document is available for free at https://www.easa.europa.eu/sites/default/files/dfu/CS-29%20Amendment%208.pdf.
EASA-OPS Part CAT (EU Regulation n° 965/2012)	This document sets out the technical requirements and administrative procedures related to air operations.	As in force or existing from time to time.	This document is available for free at Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (europa.eu)
RTCA/DO-229D *Minimum Operational Performance Standards for Global Positioning System/Wide Area Augmentation System Airborne*	RTCA/DO -229D sets out the minimum operational performance standards for global positioning system/wide area augmentation system airborne equipment.	As in force immediately before the commencement of this instrument.	This document is publicly available but subject to copyright protection. The document may be purchased from RTCA/DO-229D. Alternatively, CASA will, by prior arrangement, make CASA's copy available, for in-situ viewing, free of charge, at any office of CASA

Document	Description	Manner of incorporation	Source
Equipment			
RTCA/DO-260 *Minimum Operational Performance Standards for 1090 MHz Automatic Dependent Surveillance – Broadcast (ADS-B)*	RTCA/DO-260 sets out the minimum operational performance standards for 1090 MHz ADS-B. This document is called up in the definition of ***NUCp*** in the MOS.	As dated 13 September 2000.	This document is publicly available but subject to copyright protection. The document may be purchased from RTCA/DO-260. Alternatively, CASA will, by prior arrangement, make CASA's copy available, for in-situ viewing, free of charge, at any office of CASA
RTCA/DO-260A *Minimum Operational Performance Standards for 1090 MHz Automatic Dependent Surveillance – Broadcast (ADS-B) and Traffic Information Services – Broadcast (TIS-B)*	RTCA/DO260A sets out the minimum operational performance standards for ADS-B and TIS-B utilizing 1090 MHz Mode S Extended Squitter.	As dated 10 April 2003	This document is publicly available but subject to copyright protection. The document may be purchased from RCTA/DO-260A. Alternatively, CASA will, by prior arrangement, make CASA's copy available, for in-situ viewing, free of charge, at any office of CASA
RTCA/DO-260B *Minimum Operational Performance Standards for 1090 MHz Extended Squitter Automatic Dependent Surveillance – Broadcast (ADS-B) and Traffic Information Services – Broadcast (TIS-B)*	RTCA/DO-260B sets out the minimum operational performance standards for airborne equipment for ADS-B and TIS-B utilizing 1090 MHz Mode S Extended Squitter. This document is called up in the definitions of ***NACp*** and ***SIL*** in the MOS.	As dated 2 December 2009.	This document is publicly available but subject to copyright protection. The document may be purchased from RTCA/DO-260B. Alternatively, CASA will, by prior arrangement, make CASA's copy available, for in-situ viewing, free of charge, at any office of CASA

Further information
Annex 2 and Annex 10 to the *Convention on International Civil Aviation and Radio Technical Commission for Aeronautics* (RTCA) DO – 229D and DO-260, DO-260A and DO-260B are copyright, commercial products for which there is a cost to obtain a copy. These costs are not considered to be unreasonably onerous for operators to whom they are most relevant, but do involve a modest impost for some others, although academic and other researchers may obtain free access through university library subscriptions.

CASA has no effective control over these costs and it is considered extremely unlikely that the relevant owner of the intellectual property in the documents would sell CASA the copyright at a price that would be an effective and efficient use of CASA's appropriated funds, or would otherwise permit CASA to make the document freely available.

CASA has incorporated the documents in the instrument because they are appropriate and necessary to modernise the safety regulatory scheme in the Part 133 MOS, and because no other similar documents that serve the same aviation safety purpose are freely available.

CASA noted the views of the then Senate Standing Committee on Regulations and Ordinances (in its report *Parliamentary scrutiny of delegated legislation*, tabled out of session on 3 June 2019) that:

> The incorporation of material by reference (particularly where that material is not publicly available) has been a longstanding concern for the committee. [para 3.65]

and:

> The committee appreciates that it may in some cases be costly to provide free, public access to all incorporated Australian and international standards. Nevertheless, the committee reiterates that one of its core functions is to ensure that all persons subject to or interested in the law may readily and freely access its terms. It intends to continue to monitor this issue. Any justification for a failure to provide for public access to incorporated documents, and any action the committee takes in relation to this matter, will be determined on a case-by-case basis. [para 3.75]

Where an incorporated document is copyright and not otherwise freely available to the general public, but is available to CASA as a licenced subscriber, CASA will, by prior arrangement, make CASA's copy available, for in-situ viewing, free of charge, at any office of CASA.

Consultation
CASA developed the Part 133 MOS over a lengthy period of time through the collaborative efforts of the Aviation Safety Advisory Panel (***ASAP***), its Part 133 Technical Working Group (***TWG***) and the wider aviation community.

In June 2018, the Part 133 TWG first convened to evaluate the new CASR Part 133 and the MOS prior to public consultation. CASA engaged in public consultation on the proposals, from 23 July to 21 August 2018, through the release of a Summary of Proposed Change outlining the proposed amendments to Part 133 of CASR and the proposed MOS standards. From this date onwards, all consultation was based on actual drafts of the proposed rules. The consultation received 9 responses.

In October 2018, the TWG reconvened to review and discuss CASA's response to the feedback received during public consultation and provided their final recommendations to the ASAP. Based on these recommendations the ASAP endorsed making both CASR Part 133 and the Part 133 MOS.

Regulation Impact Statement

A Regulation Impact Statement (***RIS***) was prepared by CASA for the Part 133 and this RIS also covered the MOS which the regulations empower. The RIS was assessed by the Office of Best Practice Regulation (***OBPR***) as compliant with the Best Practice Regulation requirements and contained a level of analysis commensurate with the likely impacts (OBPR ID: 24505). A copy of the RIS was included in the Explanatory Statement for the new Part 133 regulations (Civil Aviation Safety Amendment (Part 133) Regulations 2018 (legislation.gov.au).

Statement of Compatibility with Human Rights

A Statement of Compatibility with Human Rights is at Appendix 1. This concludes that the MOS is compatible with human rights and, to the extent that it may also limit human rights in some particular respects, those limitations are reasonable, necessary and proportionate to ensure the safety of aviation operations and to promote the integrity of the aviation safety system.

Commencement and making

The MOS commences immediately after the commencement of Part 133 of CASR on 2 December 2021. The empowerment for the MOS, contained in Part 133, in particular in regulation 133.020, had not commenced when the MOS was made. However, this is permitted under section 4 of the AIA which authorises the anticipatory making of a subordinate instrument in these circumstances, provided the instrument does not commence until (or after) the delayed empowering instrument has itself commenced.

The MOS has been made by the Director of Aviation Safety, on behalf of CASA, in accordance with subsection 73 (2) of the Act.

APPENDIX 1

Statement of Compatibility with Human Rights

Prepared in accordance with Part 3 of the Human Rights (Parliamentary Scrutiny) Act 2011

Part 133 (Australian Air Transport Operations - Rotorcraft) Manual of Standards 2020

This legislative instrument is compatible with the human rights and freedoms recognised or declared in the international instruments listed in section 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011*.

Overview of the Disallowable Legislative Instrument

The *Civil Aviation Safety Amendment (Part 133) Regulations 2019* (the ***Regulations***) amends the *Civil Aviation Safety Regulations 1998* (***CASR***) to introduce a new Part 133 under which a Manual of Standards is prescribed for the regulation of the standards for the General Operating and Flight Rules.

The following provides a summary overview of its structure and content of the *Part 133 (Australian Air Transport Operations - Rotorcraft) Manual of Standards 2020* (the ***MOS***):

1. Chapter 1 provides the name, commencement and authority of the MOS. It also provides definitions and abbreviations, and addresses how certain documents are applied, adopted, or incorporated (***called up***).
2. Chapter 2 prescribes the requirements for operational limitations for air transport rotorcraft.
3. Chapter 3 makes the prescriptions required for the carriage and updating of certain documents and information.
4. Chapter 4 prescribes the requirements for operational flight plans.
5. Chapter 5 prescribes the requirements for medical transport operations.
6. Chapter 6 prescribes the fuel requirements.
7. Chapter 7 prescribes the requirements for safety briefings, instructions and demonstrations.
8. Chapter 8 prescribes the requirements for head-up displays, enhanced vision systems, synthetic vision systems and NVIS.
9. Chapter 9 prescribes the requirements for the wearing of seatbelts, safety harnesses or restraint straps.
10. Chapter 10 prescribes the performance requirements for rotorcraft conducting air transport operations.
11. Chapter 11 prescribes the requirements for equipment.
12. Chapter 12 prescribes the requirements for flight crew member training and checking.
13. Chapter 13 prescribes the requirements for cabin crew member training and checking.

14. Chapter 14 prescribes the requirements for air crew member training and checking.

15. Chapter 15 prescribes the requirements for medical transport specialists training and checking.

Human rights implications

The MOS may engage the following human rights:

- the right to life under Article 6 and the right to privacy and reputation under Article 17 of the International Covenant on Civil and Political Rights (the ***ICCPR***);
- the right to work under Article 6 (1) and the right to safe and healthy working conditions under Article 7 of the International Covenant on Economic, Social and Cultural Rights (the ***ICESCR***).

Right to life under the ICCPR

Right to safe and healthy working conditions under the ICESCR

The MOS may engage these rights. This engagement is in the context of CASA's statutory purpose. The aim of CASA and its regulatory framework, including Part 133 of CASR and its related MOS, is to uphold aviation safety by prescribing the conduct of individuals and organisations involved in rotorcraft air transport operations, including medical transport operations. It is, therefore, a threshold requirement for all CASA legislative instruments that they preserve, promote and enhance aviation safety. Insofar as the MOS is crafted and intended, as far as practicable, to promote and enhance aviation safety standards for flight operations. it promotes the right to life under Article 6 of the ICCPR by legislating for safer conditions that will minimise the risk of accidents and prevent accidental death. Thus, for Article 7 of the ICESCR, the MOS also promotes the right to safe and healthy working conditions for all pilots and crew of rotorcraft.

Right to privacy and reputation

The MOS may engage these rights. Article 17 of the ICCPR provides that no one shall be subjected to arbitrary or unlawful interference with their privacy, family, home or correspondence, or to unlawful attacks on their honour and reputation. It further provides that everyone has the right to the protection of the law against such interference or attack.

Chapter 3 of the MOS prescribes requirements in relation to the keeping and maintaining of a journey log that must include the aircraft registration, names, place of departure and place of arrival. The information is required so that the crew members can be identified to CASA for safety regulatory purposes, for example, in the course of safety surveillance, inspections and audits or emergencies. If the flight is a passenger transport operation a copy of the passenger list for the flight.

Under Division 7 of Chapter 11 — *Flight recorders*, operators of certain turbine powered rotorcraft must fit flight data recorders (FDRs) and cockpit voice recorders (CVRs) to the rotorcraft. The FDRs must record and retain the last 25 hours of flight data metrics from the rotorcraft's operation. The CVRs must record and retain the last 30 minutes of cockpit voice recording during a flight, before the tape is wiped and the cycle resumes again for the next 30 minutes of flight. Both kinds of recorder are vital instruments for use in the official investigation if the rotorcraft suffers an accident. Because of the potential that the information recorded on a CVR might potentially infringe the right to privacy of pilots in the cockpit, *Part IIIB — Protection of CVR (cockpit voice recording) information of the Civil Aviation Act 1988* makes it an offence to copy or disclose CVR information except for a prescribed purpose (such as a statutory accident investigation, certain criminal proceedings, and civil

proceedings but only if a court has made a public interest order). Admissibility of CVR information in court is subject to statutory constraints. No disciplinary action may be taken against a person on the basis of CVR information.

Chapter 12 to 14 of the MOS prescribes requirements in relation to the keeping and maintaining records of training and checking of flight crew, cabin crew, air crew and medical transport specialists. The information is required so that the forementioned crew members can be identified to CASA for safety regulatory purposes, for example, during safety surveillance, inspections and audits.

The requirements in the provisions mentioned above involve activities of one or more of: collecting, recording and storing personal information. For the reasons stated above, the requirements are reasonable, necessary and proportionate to achieve the fulfilment of specific aviation safety objectives, including the protection of the safety of individuals and the protection of the integrity of the aviation safety regulatory scheme by ensuring that information is available about who is performing activities affecting safety and demonstrating, where relevant, that they are appropriately authorised. CVR requirements are often indispensable for accident investigation because they are designed to help to identify causes and facilitate remedies that will reduce or eliminate the risk of a similar accident occurring again, thereby protecting the right to life.

The protections afforded by the *Privacy Act 1988* and Part IIIB of the *Civil Aviation Act 1988*, continue to apply to the information. These two Acts embody the protections that the Australian Parliament currently regards as suitable for the protection of the relevant personal information.

To the extent that the MOS may limit the privacy-related rights in Article 17 of the ICCPR, those limitations are, therefore, reasonable, necessary and proportionate to ensure the safety of air navigation, consistent with the objects of the *Civil Aviation Act 1988*, CASR and, in particular, Part 133 of CASR in relation to safe operation in flight.

Right to work

The MOS may engage the right to work that is protected under Article 6 (1) of the ICESCR. This right includes the right of everyone to the opportunity to gain their living by work which they freely choose or accept.

The MOS does not directly address the right to work. However, its numerous provisions may have an impact on the way that the work involved in safely operating an aircraft is carried out. Many obligations of care, skill, technique and procedure are imposed on pilots to this end. Failure to follow the relevant requirements of the MOS when flying an aircraft could result in the loss of a licence or the loss of continued employment. However, in the interests of aviation safety, it is necessary that pilots follow the flying rules.

Therefore, in the circumstances, the obligations arising under the MOS are reasonable, necessary and proportionate requirements under aviation safety law to ensure aviation safety. Accordingly, any potential limitation on the right to work is itself necessary, reasonable and proportionate in achieving the aim of protecting and improving aviation safety consistent with the objects of the Act and the regulations.

Conclusion

The MOS is a legislative instrument that is compatible with human rights and, to the extent that it may also limit human rights, those limitations are reasonable, necessary and proportionate to ensure the safety and of the integrity of the aviation safety system which all aviation operations rely.

APPENDIX 2

Details of the Part 133 (Australian Air Transport Operations - Rotorcraft) Manual of Standards 2020

Chapter 1 – Preliminary

Section 1.01 provides for the naming of the *Part 133 (Australian Air Transport Operations—Rotorcraft) Manual of Standards 2020* (the ***MOS***).

Section 1.02 provides that the commencement of the MOS is immediately after the commencement of the *Civil Aviation Safety Amendment (Part 133) Regulations 2018* which was registered on 18 December 2018 but does not to commence until 2 December 2021. This is permitted under section 4 of the *Acts Interpretation Act 1901*, which authorises the anticipatory making of a subordinate instrument in these circumstances, provided the instrument does not commence until (or after) the delayed empowering instrument has itself commenced.

Section 1.03 provides, for the authority of the MOS, that the MOS is made under CASR. Regulation 133.020 of CASR provides that CASA may issue a Manual of Standards for Part 133 of CASR that prescribes matters required or permitted by that Part to be prescribed, or necessary or convenient for carrying out or giving effect to Part 133. This power is complemented by other provisions, throughout Part 133, which empower CASA to prescribe specific matters in the MOS.

Section 1.04 provides definitions of key words, phrases and abbreviations used in the MOS.

Section 1.05 provides the definition of a ***medical transport operating site*** for a rotorcraft.

Subsection 1.06 (1) provides that a reference to an International Civil Aviation Organization (***ICAO***) document is a reference to the document as in force or existing from time to time.

Subsection 1.06 (2) provides that a reference to a numbered ICAO Annex is a reference to the Annex of that number, as in force or existing from time to time, and as included in the Chicago Convention.

Subsection 1.06 (3) provides that a reference to a numbered ICAO Manual is a reference to that particular Manual, or later version, as in force or existing from time to time and issued by ICAO.

Subsection 1.06 (4) provides that a reference to a numbered ICAO circular is a reference to the Circular of that number, or later version, as in force or existing from time to time and issued by ICAO.

Subsection 1.06 (5) provides that, unless a contrary intention appears, a reference in a provision of the MOS to any ICAO document is to be taken to be applied, adopted or incorporated, as in force or existing from time to time. A Note provides a link as to how the relevant ICAO documents for this MOS may be accessed. A second Note clarifies that a reference to an ICAO document, including an ICAO Annex, which only occurs in a Note to a provision of the MOS does not have the effect that the document is taken to be applied,

adopted or incorporated for this MOS, unless a contrary intention appears. Such references in Notes are to documents which may be used as guidance or background information.

Subsection 1.07 (1) provides that unless a contrary intention appears, a reference to a particular AS/NZS standard is a reference to the particular joint Australian and New Zealand Standard, as in force or existing from time to time.

Subsection 1.07 (2) provides that unless a contrary intention appears, a reference to a particular TSO is a reference to that TSO or a later version of that TSO.

Subsection 1.07 (3) provides that unless a contrary intention appears, a reference to a particular ETSO is a reference to that ETSO or a later version of that ETSO.

Section 1.08 provides that, unless a contrary intention appears, a reference in the MOS to any document that is applied, adopted or incorporated is a reference to the document as it exists or is in force from time to time

Chapter 2 – Operational limitations

Section 2.01 is reserved for future use. No requirements are currently prescribed. This section has been reserved to preserve the MOS structure for any future provisions that would be appropriate following consultation.

Section 2.02 prescribes the circumstances for subregulation 133.030 (2) of CASR in which the operator and pilot in command of a rotorcraft are not bound by a requirement or limitation set out in the aircraft flight manual instructions for the rotorcraft.

Chapter 3 — Carriage of documents and information

Division 1 Flight-related documents

Section 3.01 prescribes the documents that must be carried on a rotorcraft before beginning a flight.

Section 3.02 prescribes the documents that must be carried on a rotorcraft for a flight that begins or ends outside Australian territory.

Section 3.03 provides that if the flight is a passenger transport operation, a rotorcraft operator's exposition must include procedures for keeping a copy of the passenger list for the flight accessible to a person on the ground for the duration of the flight.

Division 2 Emergency and survival equipment

Section 3.04 prescribes the information for emergency and survival equipment that must, when the flight begins, be available for immediate communication by the operator to a rescue coordination centre.

Chapter 4 — Operational flight plans

Section 4.01 prescribes the specific information that must be included in an operational flight plan for nominated rotorcraft operations.

Section 4.02 prescribes the information which, if not recorded in the operational flight plan for the flight at the prescribed time, means the operator and pilot in command of a rotorcraft contravene subregulation 133.135 (3) of CASR.

Chapter 5 — Medical transport operations

Division 1 External load operation conducted during medical transport operation

Section 5.01 provides the definitions for this Division.

Section 5.02 provides that the purpose of sections 5.03 – 5.06 of the MOS is to prescribe the requirements in relation to an external load operation that involves the winching of a person during a medical transport operation.

Section 5.03 sets out the general requirements that must be satisfied for a rotorcraft to conduct an external load operation involving winching a person during a medical transport operation.

Section 5.04 sets out that before and during the external load operation, the pilot in command must assess the risks of the operation, based on the risk considerations. The risks considered must be appropriate for the nature, size and complexity of the operation and ensure specific safety risk strategies have been developed for the operation.

Section 5.05 provides that the pilot in command must actively monitor the hazards and risks relevant to the external load operation, and sets out the matters the pilot in command must identify and take into account when conducting the ongoing risk-monitoring for the operation to determine whether the operation is safe to continue.

Section 5.06 prescribes that the external load equipment must meet the requirements of, or be approved under, Part 21 of CASR.

Section 5.07 prescribes the requirements that a rotorcraft operator's exposition must state, if the operator conducts an external operation involving winching a person during a medical transport operation.

Division 2 Minimum height rules for medical transport operation

Section 5.08 prescribes that the minimum height rules contained in regulation 91.265, 91.267, 91.277 or 91.305 of CASR do not apply to a pilot in command of a rotorcraft for a flight that is a medical transport operation, so long as the circumstances mentioned in subregulation 91.265 (4), 91.267 (3), 91.277 (3) or 91.305 (3) of CASR, as the case requires, apply to the rotorcraft and the operation.

Section 5.09 provides that the purpose of sections 5.10 – 5.12 of the MOS is to prescribe the requirements for paragraph 133.167 (b) of CASR.

Section 5.10 provides that the minimum height rules stated in subregulation 91.277 (2) or 91.305 (2) of CASR, as the case requires, do not apply to a rotorcraft IFR flight, or VFR flight

at night, during a medical transport operation. This section also sets out the requirements that must be met for such a flight.

Section 5.11 provides that the minimum height rules for a medical transport operation over a populous area or a public gathering stated in paragraph 91.265 (3) (a) of CASR do not apply to the flight if the requirements stated in this section are complied with.

Section 5.12 provides that the minimum height rules for a medical transport operation, other than over a populous area or public gathering, stated in paragraph 91.267 (2) (a) of CASR do not apply to the flight if the requirements stated in this section are complied with.

Chapter 6 — Fuel requirements

Section 6.01 provides that the purpose of this Chapter is to prescribe the requirements relating to fuel for rotorcraft.

Section 6.02 provides the definitions for this Chapter.

Section 6.03 sets out the considerations the operator and pilot in command must take into account when determining whether the rotorcraft has enough fuel to complete a proposed flight safely, including:

- rotorcraft-specific fuel consumption data (subsection 6.03 (1))
- the operational conditions (subsection 6.03 (2)).

Section 6.04 sets out the amount of fuel that must be carried for a flight, and obliges the operator and pilot in command of a rotorcraft to ensure that the rotorcraft is carrying on board at least the specified amounts of usable fuel:

- when a flight of the rotorcraft commences (subsection 6.04 (1))
- at any point of in-flight replanning (subsection 6.04 (2))
- at any time to continue the flight safely (subsection 6.04 (3)).

Subsection 6.04 (4) also requires the pilot in command to re-analyse the planned use of fuel for the remainder of the flight and adjust the parameters of the flight if necessary, if after commencement of the flight fuel is used for a purpose other than that originally intended during pre-flight planning.

Subsection 6.04 (5) sets out that subsection 6.04 (6) applies if a rotorcraft has been unable to land at its planned destination aerodrome and is diverting to a destination alternate aerodrome.

Subsection 6.04 (6) provides despite subsection 6.04 (3) the operator and the pilot in command must ensure the rotorcraft is carrying destination alternate fuel, holding fuel (if required) and final reserve fuel from the time it has been unable to land at planned destination aerodrome.

Section 6.05 requires the operator and pilot in command of a rotorcraft for a flight ensure that the quantity of usable fuel on board the aircraft is determined before the flight commences and that fuel quantity checks are carried out at regular intervals throughout a flight. This section also prescribes what the pilot in command must do at each in-flight fuel amount check.

Section 6.06 sets out the procedures that the pilot in command must follow if the amount of usable fuel onboard an aircraft reaches specified amounts.

Section 6.07 provides for the use of an operational variation for the calculation of certain fuel quantities provided certain conditions are satisfied and evidence of documented in-service experience or safety risk assessments are submitted to CASA.

Chapter 7 — Safety briefings, instructions and demonstrations

Section 7.01 prescribes, for paragraph 133.235 (4) (a) of CASR, the information that must be included on safety briefing cards for a rotorcraft and a flight.

Section 7.02 prescribes, for subregulation 133.240 (1) of CASR, the requirements for what the passenger safety briefing, instruction or demonstration must cover, and how and when such a briefing, instruction or demonstration must be delivered.

Section 7.03 prescribes requirements for subregulation 133.240 (1) of CASR and provides for when the passenger safety instructions should be given during flight and outlines the content of the safety instructions given at that time during flight before the landing of the rotorcraft.

Chapter 8 — Head-up display, enhanced vision system, synthetic vision system and NVIS

Section 8.01 is reserved for future use. No requirements are currently prescribed. This section has been reserved to preserve the MOS structure for any future provisions that would be appropriate following consultation.

Section 8.02 provides that the requirements for the use of a night vision imaging system for a flight of a rotorcraft are those stated in *Civil Aviation Order 82.6*.

Chapter 9 — Wearing of seat belt, safety harness or restraint strap

Section 9.01 sets out a general exemption that a crew member, other than a flight crew member, for a flight of a rotorcraft is exempt from compliance with subregulation 91.555 (1) of CASR. This exemption is repealed at the end of 1 December 2024.

Section 9.02 prescribes directions for the purposes of regulation 11.245 of CASR that sets out the circumstances in which each person on a flight of a rotorcraft must wear a seatbelt. The directions cease at the end of 1 December 2024.

Section 9.03 sets out the circumstances and associated requirements in which a medical patient or a person who is one of the medical personnel on a flight of a rotorcraft that is a medical transport operation is taken to comply with section 9.02 of the MOS by wearing a

safety harness or restraint strap instead of a seatbelt. Relevantly, subsections 9.03 (6) and (7) further stipulate that the requirements applied to a crew member and rotorcraft operator in subsection 9.03 (4) and (5) are directions for the purposes of regulation 11.245 of CASR. Such directions cease at the end of 1 December 2024.

Section 9.04 sets out the circumstances in which a crew member, other than a flight crew member or air crew member stationed at the flight crew member's crew station, is taken to comply with section 9.02 of the MOS by wearing a safety harness or restraint strap instead of a seatbelt during an operation of the rotorcraft. Subsections 9.04 (3) to (10) set out the requirements that must be met, which are directions for the purposes of regulation 11.245 of CASR. Such directions cease at the end of 1 December 2024.

Chapter 10 — Performance

Division 1 Preliminary

Section 10.01 provides the definitions for this Chapter.

Section 10.02 provides the meaning of ***adequate vertical margin***.

Section 10.03 provides the meaning of the ***take-off distance required - rotorcraft***.

Section 10.04 sets out when a multi-engine rotorcraft is flown in ***performance class 1***.

Section 10.05 sets out when a multi-engine rotorcraft is flown in ***performance class 2***.

Section 10.06 sets out when a multi-engine rotorcraft is flown in ***performance class 2 with exposure***.

Section 10.07 sets out when a rotorcraft is flown in ***performance class 3***.

Division 2 Flight in performance class 1 or 2 or performance class 2 with exposure

Section 10.08 sets out that a Category A rotorcraft is the kind of rotorcraft that is permitted to fly in performance class 1 or 2, or performance class 2 with exposure.

Division 3 Flight in performance class 2 with exposure

Subdivision 1 — Preliminary

Section 10.09 provides the definitions for this Division.

Subdivision 2 — Requirements to be complied with

Section 10.10 provides that the purpose of this Subdivision is to prescribe the requirements for rotorcraft flight in performance class 2 with exposure.

Section 10.11 prescribes the maximum permitted exposure time during the take-off and initial climb, approach and landing, or baulked landing stage of flight.

Section 10.12 prescribes the permitted maximum weight at take-off for a rotorcraft.

Section 10.13 sets out that before a flight a rotorcraft must have had all preventative maintenance actions completed for the rotorcraft and its engines, as recommended or required for the rotorcraft and its engines by the holder of the rotorcraft's type certificate, or the holders of the type certificates for the rotorcraft and its engines.

Section 10.14 sets out the risk assessment requirements that must be met for a rotorcraft to be flown in performance class 2 with exposure.

Section 10.15 sets out that a rotorcraft may only be flown in accordance with the rotorcraft's flight manual procedures for performance class 2 with exposure flights, if any, and the operator's exposition procedures for performance class 2 with exposure flights.

Section 10.16 sets out that the rotorcraft may only be flown with flight crew members who have successfully completed all approved flight crew training and competency checking requirements.

Subdivision 3 — Information to be included in application for approval

This Subdivision states the information that must be included in an application by a rotorcraft's operator for an approval to conduct performance class 2 with exposure flights with a rotorcraft (section 10.17), including the following:

- information regarding reliability and sudden power loss (section 10.18)
- information regarding the rotorcraft's modification standard and conformance to the designated modification standard (section 10.19)
- details of the preventative maintenance actions recommended or required for the rotorcraft and its engines, as well as information demonstrating that details of the preventative maintenance actions are included in the rotorcraft's approved system of maintenance (section 10.20)
- information regarding the operator's risk assessment procedures for the flight, and the operational and airworthiness measures used to mitigate the identified risks (section 10.21)
- details of the operator's usage monitoring system (section 10.22)
- the operator's flight manual and relevant excerpts from the operator's exposition regarding the procedures for a performance class 2 with exposure flight (section 10.23)
- details of the procedures for the mandatory training and competency checking of each flight crew member who performs, or is likely to perform, a performance class 2 with exposure flight with the rotorcraft (section 10.24)
- details of the operator's mandatory procedures for reporting certain incidents which arise during a performance class 2 with exposure flight with the rotorcraft (section 10.25).

Division 4 Flight in performance class 3

Section 10.26 prescribes the requirements for flights in performance class 3 over populous areas, including that the rotorcraft:

- must not be flown in a way that may create a hazard to person or property under the rotorcraft's flight path (paragraph 10.26 (a))

- must minimise the flight over the populous area in which a suitable forced landing area is not available (paragraph 10.26 (b))
- must be equipped with a particle detection system which meets prescribed requirements and from the beginning of 2 December 2023 the system must include a flight deck caution indicator (paragraph 10.26 (c)).

Division 5 Rotorcraft performance — exposition — procedures for stages of flight

Section 10.27 sets out the procedures that a rotorcraft operator's exposition must state for rotorcraft operations flown in performance class 1.

Section 10.28 sets out the procedures that a rotorcraft operator's exposition must state for rotorcraft operations flown in performance class 2 or performance class 2 with exposure.

Section 10.29 sets out the procedures that a rotorcraft operator's exposition must state for rotorcraft operations flown in performance class 3.

Section 10.30 sets out that if a rotorcraft's flight manual does not state details of the minimum distance the rotorcraft must be from an object during a stage of flight, the rotorcraft operator's exposition must state the details.

Division 6 Rotorcraft performance — pre-flight

Section 10.31 sets out the performance factors and calculations the pilot in command of a rotorcraft must undertake before taking off or landing at an aerodrome.

Section 10.32 sets out lengthy and detailed requirements regarding the determination of whether an obstacle is ***relevant*** to the certain stages of a flight. This section specifically applies to a rotorcraft that under, Subpart 133.F of CASR and section 10.08 of the MOS must be flown in performance class 1 or 2, or performance class 2 with exposure unless the rotorcraft is taking off or landing at a certified aerodrome or registered aerodrome and is flying within the aerodrome's obstacle-protected-environment, as determined under Chapter 7 of the *Part 139 Manual of Standards*. This section also sets out the distance requirements for relevant obstacles for specified types of flights.

Division 7 Rotorcraft performance — performance class 1

This Division sets out detailed technical requirements for the stages of a performance class 1 flight of a rotorcraft, including the:

- take-off stage (section 10.33)
- take-off and initial climb stage (section 10.34)
- en route stage (section 10.35)
- approach and landing, or baulked landing stage (section 10.36)

Division 8 Rotorcraft performance — performance class 2

This Division sets out detailed technical requirements for the stages of a performance class 2 flight of a rotorcraft, including the:

- take-off stage (section 10.37)
- take-off and initial climb stage (section 10.38)

- en route stage (section 10.39)
- approach and landing, or baulked landing stage (section 10.40).

Division 9 Rotorcraft performance — performance class 3

This Division sets out detailed technical requirements for the stages of a performance class 3 flight of a rotorcraft, including the:

- take-off stage (section 10.41)
- take-off and initial climb stage (section 10.42)
- en route stage (section 10.43)
- approach and landing, or baulked landing stage (section 10.44).

CHAPTER 11 Equipment

Division 1 General

Section 11.01 provides that this Chapter prescribes, for subregulation 133.360 (1) of CASR, requirements relating to the fitment and non-fitment of equipment to a rotorcraft, the carrying of equipment on a rotorcraft and equipment that is fitted to, or carried on, a rotorcraft. This Chapter is lengthy and contains highly detailed technical requirements relating to equipment, including Tables and Figures. Section 11.01 also includes some definitional provisions.

Division 2 Approvals, visibility and inoperability

Division 2 prescribes requirements relating to:

- the circumstances in which rotorcraft equipment carried or fitted on a rotorcraft must be compliant, or not compliant, with Part 21 of CASR or, for foreign registered aircraft, the NAA equivalent (section 11.02)
- the visibility and accessibility of pilot-operated equipment and emergency equipment (section 11.03)
- the circumstances in which a rotorcraft may begin a flight with equipment that is inoperative, despite a requirement under this Chapter that equipment must be fitted to, or carried on, the rotorcraft for the flight (section 11.04).

Division 3 Flight instruments

Division 3 sets out the equipment that a rotorcraft must be fitted with, and the technical requirements for such equipment, for the following types of operations:

- rotorcraft visual flight rules (VFR) flight by day (section 11.05)
- rotorcraft VFR flight by night (section 11.06)
- rotorcraft instrument flight rules (IFR) flight (section 11.07).

Division 4 Operational equipment

Section 11.08 sets out the circumstances in which a rotorcraft for a flight must be fitted with radiocommunication systems, and the capabilities of such systems.

Section 11.09 sets out the circumstances in which a rotorcraft for a flight must be fitted with navigational equipment, and the capabilities of such equipment.

Section 11.10 sets out the circumstances in which a rotorcraft must be fitted with an automatic pilot or automatic stabilisation system.

Section 11.11 sets out the circumstances in which a rotorcraft must carry survival equipment and signalling equipment.

Division 5 Lighting systems

Division 5 sets out detailed requirements for the lighting systems required to be fitted or carried on a rotorcraft, including what each lighting system must be used for and when the lighting equipment must be displayed. Specifically, this Division sets out the requirements for:

- cockpit and cabin lighting for a rotorcraft (section 11.12)
- anti-collision lights for a rotorcraft operating by day or night (section 11.13)
- landing lights for a rotorcraft operating by night (section 11.14)
- navigation lights for a rotorcraft operating by night or in poor visibility (section 11.15).

Division 6 Alerting and warning system requirements

Section 11.16 provides the circumstances in which a rotorcraft must be fitted with altitude alerting equipment, and the specific alerts that the altitude alerting equipment must convey to the flight crew.

Section 11.17 provides the circumstances in which the altitude alerting equipment, or an assigned altitude indicator is permitted to be inoperative at the beginning of a flight.

Section 11.18 provides the circumstances in which a rotorcraft is required to be fitted with an approved helicopter terrain awareness and warning system (***HTAWS***). This section has a delayed application with effect from the beginning of 2 December 2023 to allow industry greater flexibility in acquiring this system if not already fitted to their rotorcraft.

Section 11.19 provides the circumstances in which the HTAWS required to be fitted to a rotorcraft is permitted to be inoperative at the beginning of a flight.

Section 11.20 provides the circumstances in which a rotorcraft is required to be fitted with airborne weather radar equipment.

Section 11.21 provides the circumstances in which the airborne weather radar equipment required to be fitted to a rotorcraft is permitted to be inoperative at the beginning of a flight.

Division 7 Flight recorders

Division 7 sets out the circumstances in which flight recording equipment must be fitted to a rotorcraft. For this Division, flight recording equipment comprises a flight data recorder

(***FDR***), or a cockpit voice recorder (***CVR***), or a combination recorder which combines the capabilities and functions of an FDR and CVR (section 11.22).

Section 11.23 sets out the circumstances in which an FDR must be fitted to a rotorcraft.

Section 11.24 sets out the circumstances in which an CVR must be fitted to a rotorcraft.

Section 11.25 sets out the circumstances in which the requirements in sections 11.24 and 11.25 of the MOS, if requiring a rotorcraft to be fitted with both 1 FDR and 1 CVR, may be met by the fitment of 1 combination recorder.

Section 11.26 sets out the technical requirements that an FDR, CVR or a combination recorder must comply with, including the requirements for the duration and occasions of data retention.

Section 11.27 sets out the requirements for when an FDR, CVR or combination recorder must begin and cease recording.

Section 11.28 sets out the circumstances in which an FDR, CVR or combination recorder may be inoperative at the beginning of a flight.

Section 11.29 is reserved for future use. No requirements are currently prescribed. This section has been reserved to preserve the MOS structure for any future provisions that would be appropriate following consultation.

Division 8 Rotorcraft interior communication systems

Section 11.30 sets out the circumstances in which a rotorcraft is required to have a flight crew intercommunication system, and the requirements for such a system.

Section 11.31 sets out the circumstances in which a rotorcraft is required to have a crew interphone system, and the requirements for such a system.

Section 11.32 sets out the circumstances in which a rotorcraft is required to have a public address system, and the requirements for such a system.

Division 9 Oxygen equipment and oxygen supplies

Division 9 sets out detailed requirements for the oxygen equipment and oxygen supplies required to be fitted or carried on a rotorcraft, including specific requirements relating to the use of each type of equipment. Section 11.33 also includes some definitional provisions for this Division. Specifically, this Division sets out the requirements for:

- supplemental oxygen for a pressurised rotorcraft operated at a pressure altitude above 10 000 ft (section 11.34)
- supplemental oxygen for an unpressurised rotorcraft operated at a pressure altitude above 10 000 ft (section 11.35)

- oxygen mask usage for a pressurised rotorcraft, including for a flight above flight level (FL) 250 (section 11.36)
- oxygen dispensing units for passengers in a pressurised rotorcraft (section 11.37)
- protective breathing equipment for flight crew members of a pressurised rotorcraft (section 11.38)
- portable protective breathing equipment for flight crew members of a pressurised rotorcraft (section 11.39)
- first aid oxygen equipment for a pressurised rotorcraft — up to immediately before 2 December 2023, with revised requirements after that date (section 11.40).

Division 10 Emergency locator transmitters

Section 11.41 provides the requirements for when a rotorcraft is required to carry, and is not required to carry, an emergency locator transmitter (***ELT***).

Section 11.42 provides basic technical requirements for what constitutes an ELT for this Division.

Section 11.43 provides the definition of ***automatic ELT*** for this Division, and sets out the technical requirements that an automatic ELT must meet.

Section 11.44 provides the definition of ***survival ELT*** for this Division, and sets out the technical requirements that a survival ELT must meet.

Section 11.45 sets out the transitional requirements for ELTs up to immediately before 2 December 2023, with revised requirements after that date.

Division 11 Portable emergency equipment

Division 11 sets out the requirements for the carriage of portable emergency equipment, namely hand-held fire extinguishers and first-aid kits.

Section 11.46 provides the circumstances in which a rotorcraft must carry hand-held fire extinguishers, the number of extinguishers to be carried, where the extinguishers must be located, and the type and quantity of extinguishing agent required.

Section 11.47 provides that, from 2 December 2023, a rotorcraft must carry a first-aid kit and sets out the requirements such first-aid kits must meet.

Division 12 Equipment for flights over water

Division 12 sets out the equipment requirements for flights over water, including requirements for circumstances in which:

- a sea anchor or other equipment for mooring must be carried on an amphibian rotorcraft, and equipment for making the sound signals under the International Regulations must be carried (section 11.48)

- life jackets and infant flotation cots must be carried onboard a rotorcraft (section 11.49)
- life rafts must be carried on board a rotorcraft (section 11.50)
- emergency flotation equipment must be carried onboard a rotorcraft (section 11.51).

Division 13 Transponders and surveillance equipment

Division 13 sets out the circumstances in which transponders and surveillance equipment must be carried on a rotorcraft for a flight, and contains detailed technical requirements that must be met by the equipment.

Section 11.52 provides the definitions for a range of technical equipment for Division 13.

Section 11.53 sets out the circumstances in which a rotorcraft conducting specified operations in corresponding classes of airspace must be fitted with transponders and surveillance equipment. This section also sets out the technical requirements that such equipment must meet.

Section 11.54 sets out the general requirements for the operation of a transponder, and includes a Table of Mode A standard codes for nominated flight situations.

Section 11.55 sets out the specific requirements for how an approved Mode S transponder or an approved ADS-B OUT equipment configuration fitted to a rotorcraft for a flight must be configured and how it must transmit, and includes technical requirements for such transponders.

Section 11.56 sets out the requirements, for certain rotorcraft, as to what would constitute an alternate GNSS position source in place of ADS-B OUT, including certification and specification requirements.

Section 11.57 provides the requirements for an alternate ADS-B OUT equipment configuration, including certification and specification requirements.

Section 11.58 sets out the circumstances in which an approved transponder may be inoperative at the beginning of a flight.

Division 14 Night vision imaging systems

This Division is reserved for future use. No requirements are currently prescribed. This section has been reserved to preserve the MOS structure for any future provisions that would be appropriate following consultation.

CHAPTER 12 Flight crew member training and checking

Division 1 Preliminary

Section 12.01 provides definitions for this Chapter.

Division 2 Flight crew member training and checking events

Section 12.02 provides that the purpose of this Division is to prescribe, for subregulation 133.370 (4) of CASR, requirements relating to training and checking that must be completed by a flight crew member for a flight of a rotorcraft.

Section 12.03 sets out the circumstances in which a flight crew member meets the training and checking requirements for the flight crew member and flight.

Section 12.04 requires a flight crew member to have successfully completed the operator's general emergency training for the rotorcraft, and sets out the matters which must be covered in the training.

Section 12.05 sets out the conversion training and flight crew member proficiency check requirements that a flight crew member for a flight must meet.

Section 12.06 sets out the line training and flight crew member line check requirements that a flight crew member for a flight must meet.

Section 12.07 sets out the differences training requirements (if any) that a flight crew member for a flight must meet.

Section 12.08 sets out the recurrent training and operator checking requirements that a flight crew member for a flight must meet, including the intervals at which certain checks must be successfully completed. Subsection 12.08 (6) also sets out the requirement for a flight crew member who fails to demonstrate competency or continuing competency under section 12.08 to meet the remedial training requirements of section 12.09 before conducting further operations for the operator.

Section 12.09 sets out the remedial training requirements that a flight crew member must meet, if the flight crew member fails the operator's flight crew member general emergency check of competency or flight crew member proficiency check.

Division 3 Individuals who conduct training and checking

Section 12.10 provides that the purpose of this Division is to prescribe, for subparagraph 133.377 (2) (a) (ii) of CASR, the requirements for who may conduct the training and checking for a flight crew member.

Section 12.11 sets out the minimum experience, recency requirements and competency required to conduct the training, and stipulates that the person must be nominated by the operator to be a training pilot, check pilot or training and check pilot, as applicable.

Section 12.12 sets out that CASA may assess the competency of the individual nominated to conduct the training.

Division 4 Use of available qualified flight simulator

Section 12.13 sets out detailed circumstances in which training and checking activities for a flight crew member must be conducted in an available qualified flight simulator, and the circumstances in which specified training and checking activities may be conducted in a rotorcraft.

Division 5 Command training for pilot in command

Section 12.14 sets out, for paragraph 133.385 (1) (c) of CASR, the command training requirements for a multi-crew operation that the pilot in command of the rotorcraft must complete.

Division 6 Pilot in command in non-command seat

Section 12.15 sets out the requirements for non-command seat proficiency checks for a pilot to operate the rotorcraft from a non-command seat as pilot in command.

CHAPTER 13 Cabin crew member training and checking

Section 13.01 prescribes, for subregulations 133.425 (2) and (3) of CASR, the circumstances in which a cabin crew member must be carried on a rotorcraft for a flight, and the number of cabin crew required for the flight.

Section 13.02 provides that, for subregulation 133.425 (4) of CASR, the requirements relating to training and checking that must be completed by a cabin crew member for a flight of a rotorcraft are the same as the requirements prescribed for an air crew member under Divisions 1 and 2 of Chapter 14 of the MOS.

Section 13.03 sets out who may conduct the training and checking mentioned in Section 13.02 of the MOS for a cabin crew member. This section states that sections 14.11 and 14.12 of the MOS apply as if those subsections refer to training a cabin crew member. The effect of this is to apply the requirements relating to minimum experience, recency requirements and competency required to conduct the training, and allow CASA to assess the competency of the individual nominated to conduct the training, as per sections 14.11 and 14.12 of the MOS.

CHAPTER 14 Air crew member training and checking

Division 1 Preliminary

Section 14.01 provides the definitions for this Chapter.

Division 2 Air crew member training and checking events

Section 14.02 provides that the purpose of this Division is to prescribe, for subregulation 133.455 (2) of CASR, requirements relating to training and checking that must be completed by an air crew member for a flight of a rotorcraft.

Section 14.03 sets out the circumstances in which an air crew member meets the training and checking requirements for the air crew member and flight.

Section 14.04 requires an air crew member to have successfully completed the operator's general emergency training for the rotorcraft, and sets out the matters which must be covered in the training.

Section 14.05 sets out the conversion training and air crew member proficiency check requirements that an air crew member for a flight must meet.

Section 14.06 sets out the line training and air crew member line check requirements that an air crew member for a flight must meet.

Section 14.07 sets out the differences training requirements that an air crew member for a flight must meet.

Section 14.08 sets out the recurrent training and proficiency check requirements that an air crew member for a flight must meet, including the intervals at which certain checks must be successfully completed. Subsection 14.08 (5) also sets out the requirement for an air crew member who fails to demonstrate competency or continuing competency under section 14.08 to meet the remedial training requirements of section 14.09 before conducting further operations for the operator.

Section 14.09 sets out the remedial training and proficiency check requirements that an air crew member must meet, if the air crew member has failed the operator's air crew member general emergency check of competency or air crew member proficiency check.

Division 3 Individuals who conduct training and checking

Section 14.10 provides that this Division applies if an air crew member undertakes training or a check that is required under regulation 133.455 of CASR or Division 2 of the MOS.

Section 14.11 sets out the minimum experience, recency requirements and competency required to conduct the training, and stipulates that the person must be nominated by the operator to be a training air crew member, check air crew member, or training and check air crew member, as applicable. The requirements of this section are directions for the purposes of regulation 11.245 of CASR and cease to be in force at the end of 1 December 2024.

Section 14.12 sets out that CASA may assess the competency of the individual nominated to conduct the training.

CHAPTER 15 Medical transport specialist training and checking

Division 1 Preliminary

Section 15.01 provides the definitions for this Chapter.

Division 2 Medical transport specialist training and checking events

Section 15.02 provides that the purpose of this Division is to prescribe, for subregulation 133.470 (2) of CASR, requirements relating to training and checking that must be completed by a medical transport specialist for a flight of a rotorcraft.

Section 15.03 sets out the circumstances in which a medical transport specialist meets the training and checking requirements for the medical transport specialist and flight.

Section 15.04 requires a medical transport specialist to have successfully completed the operator's general emergency training for the rotorcraft, and sets out the matters which must be covered in the training.

Section 15.05 sets out the conversion training and medical transport specialist proficiency check requirements that a medical transport specialist for a flight must meet.

Section 15.06 sets out the line training and medical transport specialist line check requirements that a medical transport specialist for a flight must meet.

Section 15.07 sets out the differences training requirements that a medical transport specialist for a flight must meet.

Section 15.08 sets out the recurrent training and checking requirements that a medical transport specialist for a flight must meet, including the intervals at which certain checks must be successfully completed. Subsection 15.08 (5) also sets out the requirement for a medical transport specialist crew member who fails to demonstrate competency or continuing competency under section 15.08 to meet the remedial training requirements of section 15.09 before conducting further operations for the operator.

Section 15.09 sets out the remedial training and proficiency check requirements that a medical transport specialist must meet, if the medical transport specialist has failed the operator's medical transport specialist general emergency check of competency or medical transport specialist proficiency check.

Division 3 Individuals who conduct training and checking

Section 15.10 provides that this Division applies if a medical transport specialist undertakes training or a check that is required under regulation 133.470 of CASR or Division 2 of the MOS.

Section 15.11 sets out the minimum experience, recency requirements and competency required to conduct the training, and stipulates that the person must be nominated by the operator to be a training medical transport specialist, check medical transport specialist, or training and check medical transport specialist, as applicable. The requirements of this section are directions for the purposes of regulation 11.245 of CASR and cease to be in force at the end of 1 December 2024.

Section 15.12 sets out that CASA may assess the competency of the individual nominated to conduct the training.