

Explanatory Statement

Acts Interpretation Act 1901

Civil Aviation Safety Regulations 1998

Part 135 (Australian Air Transport Operations—Smaller Aeroplanes) Manual of Standards 2020

Purpose

The Part 135 (Australian Air Transport Operations—Smaller Aeroplanes) Manual of Standards 2020 (*the MOS*) sets out the standards for the operation of smaller aeroplanes for an Australian air transport operation.

The MOS is made under Part 135 of the *Civil Aviation Safety Regulations 1998 (CASR)*. The MOS consolidates the existing rules of the air and contains some new rules to enhance operational flexibility, improve aviation safety and bring Australian requirements more in line with the Standards and Recommended Practices (*SARPs*) 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 *Civil Aviation Regulations 1988 (CAR)* and CASR are made under the Act.

The *Civil Aviation Safety Amendment (Part 135) Regulations 2018 (Part 135 of CASR)* was registered on 18 December 2018 and amended by the *Civil Aviation Legislation Amendment (Flight Operations—Miscellaneous Amendments) Regulations 2020* registered on 21 October 2020. Part 135 of CASR commences on 2 December 2021. Under regulation 135.025, the Civil Aviation Safety Authority (*CASA*) may issue a Manual of Standards (*MOS*) for Part 135 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 135. This power is complemented by other provisions, throughout Part 135, that 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 135.025 of CASR, a regulation that will not commence until 2 December 2021.

Background

Part 135 of CASR establishes a regulatory model that is designed to:

- provide more transparent and comprehensible aviation safety requirements by consolidating the general operational and flight rules;
- modernise the regulatory framework by recognising developments in technology and international standards;

- minimise the safety differential between charter and regular public transport (RPT), with rules that broadly apply to all air transport operations but are scaled for size and/or complexity;
- introduce medical transport requirements in line with international best practice;
- introduce certain new rules to enhance operational flexibility;
- 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;
- bring Australian requirements more in line with ICAO SARPs.

The MOS is issued to prescribe matters required, or permitted, by Part 135 of CASR, or matters that are necessary or convenient for carrying out or giving effect to Part 135 and thereby achieve the new regulatory model for the continued safe conduct of flights

The Part 135 MOS

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

In support of the MOS, and before it commences on 2 December 2021, CASA will freely accessible guidance materials that will offer further practical guidance on many discrete issues dealt with in the MOS. This guidance will further explain the technical requirements of the MOS and clarify acceptable means of compliance for some of the matters dealt with in the MOS.

The MOS encompasses the smaller aircraft air transport operations in Australia for Australian and domestic foreign-registered civil aircraft. The following provides a summary overview of the structure and content of the 14 Chapters of the Part 135 MOS:

- Chapter 1 provides the name, commencement, authority, and scope of the MOS. It also provides definitions and abbreviations, and addresses how certain documents are applied, adopted, or incorporated (*called up*)
- Chapter 2 prescribes the limitations on flight distances
- Chapter 3 makes the prescriptions required for the keeping, carriage and updating of certain documents and information
- Chapter 4 prescribes the requirements for operational flight plans
- Chapter 5 prescribes the requirements for certain alternate aerodromes
- Chapter 6 is reserved for a future date
- Chapter 7 prescribes the fuel requirements
- Chapter 8 prescribes the requirements for certain single-engine aeroplanes (formerly approved single-engine turbine powered aeroplanes – ASETPA)
- Chapter 9 prescribes the requirements for safety briefings, demonstrations, and instructions
- Chapter 10 prescribes the performance requirements
- Chapter 11 prescribes the requirements for equipment
- Chapter 12 prescribes the requirements for flight crew member training and checking
- Chapter 13 prescribes the requirements for air crew member training and checking
- Chapter 14 prescribes the requirements for medical transport specialist training and checking

More details on the MOS are in Appendix 2 of this Explanatory Statement, which sets out the notes on clauses.

Legislation Act 2003

Under subsection 8 (4) of the LA, 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 amendment satisfies these requirements. Under paragraphs 98 (5A) (a) and 98 (5AA) (a) of the *Civil Aviation Act*, 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, and 38 and 42, of the LA.

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 LA, 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.

The MOS is empowered by Part 135 of CASR and provisions in the MOS make reference to provisions in other parts of the same legislative framework, for example, the following Parts of CASR, in force from time to time, and freely available on the Federal Register of Legislation:

- Part 11, which sets out the administrative provisions for the regulation of civil aviation, including approvals;
- Part 21, which sets out the certification and airworthiness requirements for aircraft and aircraft equipment;
- Part 42, which sets out the requirements for continuing airworthiness of certain aircraft and aeronautical products;
- Part 61, which sets out the requirements and standards for the issue of flight crew licences and ratings, and their privileges;
- Part 91, which sets out certain standards, including rules of the air, that are applicable to all operations (unless an alternative rule is stated to apply);
- Part 92, which sets out the standards for the consignment and carriage of dangerous goods by air;
- Part 119, which sets out the certification and management requirements for Australian air transport operators; and
- Part 139, which sets out the standards for certified aerodromes.

Subsection 11.51(1) of the MOS is transitional in nature and incorporates the matters in regulation 252A of CAR, as in force from time to time, until immediately before 2 December 2023. Regulation 252A sets out the standards for emergency locator transmitters and is freely available on the Federal Register of Legislation.

The table below identifies other instruments and documents that have been applied, adopted, or incorporated into the MOS, describes the manner of their incorporation and identifies how the incorporated material may be obtained.

Document	Description	Manner of incorporation	Source
<i>Civil Aviation Order 20.4 Instrument 2004</i>	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 11.46 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.
<i>Civil Aviation Order 20.11. Instrument 2007</i>	CAO 20.11 sets out the standards for emergency and lifesaving equipment and passenger control in emergencies. This document is called up in section 11.46 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.
<i>Civil Aviation Order 20.18. Instrument 2014</i>	CAO 20.18 set outs the basic operational requirements for aircraft equipment. This document is called up in section 11.27 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.
<i>Civil Aviation Order 103.19 Instrument 2007</i>	CAO 103.19 sets out the standards for flight data recorders. This document is called up in section 11.33 of the MOS.	As in force or existing from time to time.	This document is available for free on the Federal Register of Legislation.
<i>Civil Aviation Order 103.20 Instrument 2007</i>	CAO 103.20 sets out the standards for cockpit voice recorders. This document is called up in section 11.33 of the MOS.	As in force or existing from time to time.	This document is available for free on the Federal Register of Legislation.
<i>Civil Aviation Order 108.26 Instrument 2007</i>	CAO 108.26 sets out the standards for system specifications for oxygen systems. This document is	As in force immediately before the commencement of the MOS.	This document is available for free on the Federal Register of Legislation.

	called up in section 11.46 of the MOS.		
Annex 2 to the Chicago Convention	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 6 to the Chicago Convention	Annex 6 sets out the general operation rules as required by Part 135 Various provisions of the MOS call up Annex 6 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.
<i>Determination of Airspace and Controlled Aerodromes Etc. (Designated Airspace Handbook) Instrument</i>	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. Various provisions of the MOS call 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	The AIP is published by Airservices	As in force or existing from time to	The AIP is available for free on the

Publication (AIP)	Australia to disseminate information relevant to aviation participants on matters essential to safe air navigation. Various provisions of the MOS call up the AIP requirements.	time.	Airservices Australia website www.airservicesaustralia.com/aip/aip.asp.
Aircraft flight manual (AFM)	An AFM contains information required to safely operate the specific aircraft. Various provisions of the MOS call up AFM requirements.	As in force or existing from time to time.	These documents are publicly available but not for free. The AFM for an aircraft is the proprietary property of the owner of the aircraft design (usually the manufacturer). The incorporated requirements of the AFM are at the aircraft-specific level, and instructions are required to be provided to owners or registered operators of aircraft. Where available, and by prior arrangement, CASA will make an AFM available for inspection at any CASA office.
14 CFR 91.227	FAR 91 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 11.64 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.
Biosecurity Act 2015	The Biosecurity Act sets out the requirements relating to the management of	As in force or existing from time to time.	This document is available for free on the Federal Register of Legislation.

	diseases and pests that may cause harm to human, animal or plant health or the environment. This document is called up in section 3.01 of the MOS.		
AS/NZS 4280.1:2003, <i>406 MHz satellite distress beacons - Marine emergency position-indicating radio beacons (EPIRBs)</i>	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 11.50 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.standard.s.govt.nz/catalog/4280.1%3A2003%28AS%7CNZS%29/view)
AS/NZS 4280.2:2003, <i>406 MHz satellite distress beacons - Personal locator beacons (PLBs)</i>	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 11.50 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.standard.s.govt.nz/catalog/4280.2%3A2003%28AS%7CNZS%29/view)
AS/NZS 1754:2004, <i>Child restraint systems for use in motor vehicles</i>	This document sets out the requirements for restraining devices for child occupants of passenger cars and their derivatives. This document is called up in section 1.06 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://www.standards.org.au/standards-catalogue/others/sa-

			slash-snz/as-slash-nzs--1754-2004)
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 <i>approved Mode A/C transponder</i> 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 <i>Part 21 Manual of Standards Instrument 2016</i> (https://www.legislation.gov.au/Details/F2017C01160/Html/Text#_Toc500486105)
ETSO- C74d <i>Airborne ATC Transponder Equipment</i>	This document provides the EASA standards for airborne ATC transponder equipment. This document is called up in the definition of <i>approved Mode A/C transponder</i> 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 <i>Airborne ATC Transponder Equipment</i>	This document provides the FAA standards for airborne ATC transponder equipment. This document is called up in the definition of <i>approved Mode A/C transponder</i> 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 <i>Automatic Pressure Altitude Reporting Code Generating Equipment</i>	This document provides the EASA requirements which automatic pressure altitude reporting code generating	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-

	equipment must meet in order to be identified with the applicable ETSO marking. Section 11.61 of the MOS calls up this document.		authorisations/list-of-all-etso)
TSO-C88a <i>Automatic Pressure Altitude Reporting Code Generating Equipment</i>	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 11.61 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 <i>Emergency Locator Transmitter (ELT) Equipment</i>	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 11.49 and 11.50 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-C112 <i>Air Traffic Control Radar Beacon System/Mode Select (Atcrbs/Mode S) Airborne Equipment</i>	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 <i>approved Mode S</i>	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)

	transponder in section 11.59 of the MOS.		
TSO-C112 <i>Air Traffic Control Radar Beacon System/Mode Select (Atcrbs/Mode S) Airborne Equipment</i>	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 in section 11.59 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 -C119c <i>Traffic Alert And Collision Avoidance System(TCAS)Airborne Equipment, TCAS II</i>	This document provides the EASA requirements that new models of traffic alert and collision avoidance system airborne equipment must meet to be identified with the applicable ETSO marking. This document is incorporated in the definition of approved ACAS in section 11.19 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-C119c <i>Traffic Alert and Collision Avoidance System (TCAS) Airborne Equipment, TCAS II with Optional Hybrid Surveillance</i>	This document provides the minimum FAA performance standards (MPS) traffic alert and collision avoidance system II (TCAS II) must meet for approval and identification with the applicable TSO marking. This document is incorporated in the	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)

	definition of <i>approved ACAS</i> in section 11.19 of the MOS.		
ETSO - C123a <i>Cockpit Voice Recorder Systems</i>	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. This document is called up in sections 11.33 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-C123a <i>Cockpit Voice Recorder Systems</i>	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 sections 11.33 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 <i>Flight Data Recorder Systems</i>	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 to be identified with applicable ETSO marking. This document is called up in sections 11.33 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 <i>Flight Data Recorder Systems</i>	This document provides the minimum FAA performance standard that flight data recorder systems must meet to be	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)

	identified with the applicable TSO marking. This document is called up in sections 11.33 of the MOS.		all-etso)
ETSO-2C126 <i>406 MHz Emergency Locator Transmitter (ELT)</i>	This document sets the EASA requirements for 406 MHz emergency locator transmitters (ELT). This document is called up in sections 11.49 and 11.50 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-C126 <i>406 MHz Emergency Locator Transmitter (ELT)</i>	This document sets the FAA requirements for 406 MHz ELTs. This document is called up in sections 11.49 and 11.50 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-C129 <i>Airborne Supplemental Navigation Equipment Using Global Positioning System (GPS)</i>	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 version 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 <i>Airborne Supplemental Navigation Equipment Using Global Positioning System (GPS)</i>	This document provides the FAA requirements for airborne supplemental navigation equipment using GPS to be identified with the applicable TSO marking.	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)

	This document is called up in the definition of <i>approved GNSS</i> in the MOS.		
ETSO-C142a <i>Non-Rechargeable Lithium Cells and Batteries</i>	This document provides the EASA requirements which non-rechargeable lithium cells and batteries must meet. This document is called up in section 11.48 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-C142a <i>Non-Rechargeable Lithium Cells and Batteries</i>	This document provides the FAA requirements which non-rechargeable lithium cells and batteries must meet. This document is called up in section 11.48 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 <i>Airborne Navigation Sensors Using the Global Positioning System (GPS) Augmented by the Wide Area Augmentation System (WAAS)</i>	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 various definitions 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 <i>Airborne Navigation Sensors Using the Global Positioning System (GPS) Augmented by the Wide Area Augmentation System (WAAS)</i>	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 various definitions in the	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).

	MOS.		
ETSO-C146 <i>Stand-Alone Airborne Navigation Equipment Using the Global Positioning System (GPS) Augmented by the Wide Area Augmentation System (WAAS)</i>	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 various definitions 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 <i>Stand-Alone Airborne Navigation Equipment Using the Global Positioning System (GPS) Augmented by the Wide Area Augmentation System (WAAS)</i>	This document provides the FAA requirements for stand-alone airborne navigation equipment using the GPS augmented by the WAAS to be identified with the applicable TSO marking. This document is called up in various definitions 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-C151b <i>Terrain Awareness and Warning System (Taws)</i>	This document provides the EASA requirements which Terrain awareness and Warning System (TAWS) equipment that is manufactured on or after the date of this ETSO, must meet to be identified with the applicable ETSO marking.	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-C151b <i>Terrain Awareness and Warning System</i>	This document provides the minimum FAA performance standards (MPS) their Terrain Awareness and Warning System (TAWS) equipment	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?OpenFra

	must first meet to obtain and be identified with the TSO-C151b Class A, B, or C marking. This document is called up in section 11.22 of the MOS		meSet).
ETSO-C166 <i>Extended Squitter Automatic Dependent Surveillance - Broadcast (TIS-B) Equipment Operating on the Radio Frequency of 1090 Megahertz (MHz)</i>	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 <i>approved Mode S transponder with ADS-B capability</i> 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 <i>Extended Squitter Automatic Dependent Surveillance - Broadcast (TIS-B) Equipment Operating on the Radio Frequency of 1090 Megahertz (MHz)</i>	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 <i>approved Mode S transponder with ADS-B capability</i> in	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)

	the MOS		
ETSO-C196a <i>Airborne Supplemental Navigation Sensors for Global Positioning System Equipment Using Aircraft-Based Augmentation</i>	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 <i>Airborne Supplemental Navigation Sensors for Global Positioning System Equipment using Aircraft-Based Augmentation</i>	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)
ETSO– C219 <i>TSO-C219 Airborne Collision Avoidance System (ACAS) Xa/Xo</i>	This document is anticipated to provide the minimum EASA performance standards (MPS) airborne collision avoidance system (ACAS) Xa/Xo required to be met for approval and identification with the applicable marking. The document is incorporated for the purposes of the definition of approved ACAS in section 11.19 of the MOS.	This version and any later version of the document is incorporated, in accordance with section 1.06 of the MOS.	This document will be available for free on the EASA website (https://www.easa.europa.eu/domains/aircraft-products/etso-authorisations/list-of-all-etso).

<i>TSO-C219 Airborne Collision Avoidance System (ACAS) Xa/Xo</i>	This document provides the minimum FAA performance standards (MPS) airborne collision avoidance system (ACAS) Xa/Xo meet for approval and identification with the applicable TSO marking. This document is called up in section 11.19 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)
<i>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.</i>	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. 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 at https://www.easa.europa.eu/sites/default/files/dfu/Annex%20II%20-%20AMC%2020-24.pdf
<i>EASA CS ACNS</i>	This document provides the Certification Specifications and acceptable means of compliance for Airborne Communications, Navigation and Surveillance. 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 at https://www.easa.europa.eu/sites/default/files/dfu/Annex%20I%20to%20ED%20Decision%202019-011-R%20-%20CS%20ACNS%20Issue%202.pdf
<i>RTCA/DO-229D Minimum Operational Performance Standards for Global Positioning</i>	RTCA/DO -229D sets out the minimum operational performance	As in force on 13 December 2006.	This document is publicly available but subject to copyright protection. The

<i>System/Wide Area Augmentation System Airborne Equipment</i>	standards for global positioning system/wide area augmentation system airborne equipment. This document is called up in various provisions of the MOS.		document may be purchased from www.rtca.org .
<i>RTCA/DO-260 Minimum Operational Performance Standards for 1090 MHz Automatic Dependent Surveillance – Broadcast (ADS- B)</i>	RTCA/DO-260 sets out the minimum operational performance standards for 1090 MHz extended squitter automatic dependent surveillance-broadcast (ads-b) and traffic information services-broadcast (tis-b). This document is called up in various provisions of the MOS.	As dated 13 September 2000	This document is publicly available but subject to copyright protection. The document may be purchased from www.rtca.org .
<i>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)</i>	This document contains 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 www.rtca.org .
<i>RTCA/DO-367 Minimum Operational Performance Standards (Mops) For Terrain Awareness and Warning Systems (Taws) Airborne Equipment</i>	This document contains the minimum operational performance standards (MOPS) for a Terrain Awareness and Warning System (TAWS). These standards specify system characteristics that should be useful to designers,	As dated 21 May 2017.	This document is publicly available but subject to copyright protection. The document may be purchased from www.rtca.org .

	manufacturers, installers, and users of the equipment. This document is called up in various provisions of the MOS.		
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Incorporations by reference—further information

The following documents are copyright—commercial products for which there is a cost to obtain a copy:

- Annex 2, Annex 6, and Annex 10 to the Convention on International Civil Aviation;
- Australian Standard/New Zealand Standards (AS/NZS) 4280.1-2003, 4280.2-2003 and 1754:2004;
- Radio Technical Commission for Aeronautics (RTCA) DO – 229D, DO-260 and DO- 367.

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, under the Chicago Convention, they are appropriate and necessary to modernise the safety regulatory scheme in the Part 135 MOS, and because no other similar documents that serve the same aviation safety purpose are freely available.

CASA has noted the views of the 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]

CASA appreciates the Committee's concern and to mitigate the situation as far as currently practicable proposes that 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 has developed the Part 135 MOS over a lengthy period of time through the collaborative efforts of the Aviation Safety Advisory Panel (**ASAP**), its Part 135 Technical Working Group (**TWG**) and the wider aviation community.

In June 2018, the Part 135 TWG first convened to evaluate the new CASR Part 135 and the MOS prior to public consultation. CASA engaged in public consultation on the proposals, from 3 August to 2 September 2018, through the release of a Summary of Proposed Change outlining the proposed amendments to Part 135 of CASR and the proposed MOS standards **and** drafts of the proposed rules. The consultation received 12 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 135 and the Part 135 MOS.

Regulation Impact Statement

A Regulation Impact Statement (**RIS**) was prepared by CASA for the new Part 135 and this RIS also covered the MOS which the regulations empowered. 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 135 regulations (<https://www.legislation.gov.au/Details/F2018L01782/Download>).

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 135 of CASR on 2 December 2021. The empowerment for the MOS, contained in Part 135, in particular in regulation 135.025, had not commenced when the MOS was made. The making of the MOS before the commencement of Part 135 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.

Statement of Compatibility with Human Rights

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

Part 135 (Australian Air Transport Operations - Smaller Aeroplanes) 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 *Part 135 (Australian Air Transport Operations – Smaller Aeroplanes) Manual of Standards 2020* (this MOS) is made under Part 135 of the *Civil Aviation Safety Regulations* (the **CASR**). New Part 135 was inserted into CASR by *The Civil Aviation Safety Amendment (Part 135) Regulations 2018*. Those regulations enable CASA to issue a Manual of Standards for the regulation of standards for the Air Transport Operations of Smaller Aeroplanes.

The MOS sets out the standards for the operational, procedural and safety risk management standards for the conduct of Australian Air Transport operations in smaller aeroplanes. The MOS consolidates the existing rules of the air and contains some new rules to enhance operational flexibility, improve aviation safety and bring Australian requirements more in line with the Standards and Recommended Practices (**SARPs**) of the International Civil Aviation Organization (**ICAO**).

As might be expected for a subject matter encompassing smaller aeroplane operations in civil aviation the MOS is highly detailed and prescribes safety standards for a very wide range of matters. The following provides a summary overview of its structure and content:

- Chapter 1 provides the name, commencement, authority, and scope of the MOS. It also provides definitions and abbreviations, and addresses how certain documents are applied, adopted, or incorporated (**called up**)
- Chapter 2 prescribes the limitations on flight distances
- Chapter 3 makes the prescriptions required for the keeping, carriage and updating of certain documents and information
- Chapter 4 prescribes the requirements for operational flight plans
- Chapter 5 prescribes the requirements for certain alternate aerodromes
- Chapter 6 is reserved for a future date
- Chapter 7 prescribes the fuel requirements
- Chapter 8 prescribes the requirements for certain single-engine aeroplanes (formerly approved single-engine turbine powered aeroplanes – ASETPA)
- Chapter 9 prescribes the requirements for safety briefings, demonstrations, and instructions
- Chapter 10 prescribes the performance requirements
- Chapter 11 prescribes the requirements for equipment
- Chapter 12 prescribes the requirements for flight crew member training and checking
- Chapter 13 prescribes the requirements for air crew member training and checking
- Chapter 14 prescribes the requirements for medical transport specialist 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 135 of CASR and its related MOS, is to uphold aviation safety by prescribing the conduct of individuals and organisations involved in smaller aeroplanes 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 smaller aeroplanes.

Right to privacy and reputation under the ICCPR

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 a flight must be available for immediate communication to a rescue coordination centre.

Under Division 7 of Chapter 11 (about flight recorders), operators of certain aeroplanes must fit flight data recorders (FDRs) and cockpit voice recorders (CVRs) to the aeroplane. The FDRs must record and retain the last 25 hours of flight data metrics from the aeroplane'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 aeroplane 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* — (about the 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.

Chapters 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 aforementioned 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 135 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.

Details of the Part 135 (Australian Air Transport Operations – Smaller Aeroplanes) Manual of Standards 2020

CHAPTER 1 – PRELIMINARY

Section 1.01 provides for the naming of the *Part 135 (Australian Air Transport Operations—Smaller Aeroplanes) Manual of Standards 2020* (the **MOS**).

Section 1.02 provides that the commencement of the MOS is immediately after the commencement of Part 135 of CASR. Part 135 of CASR was created within the *Civil Aviation Safety Amendment (Part 135) Regulations 2018* which was registered on 18 December 2018 but does not 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 135.025 of CASR provides that CASA may issue a Manual of Standards for Part 135 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 135. This power is complemented by other provisions, throughout Part 135, 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.

Subsection 1.05 (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 1.05 (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 1.05 (3) provides that a reference to a numbered ICAO Manual is a reference to the Manual of that number, or later version, as in force or existing from time to time and issued by ICAO.

Subsection 1.05 (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 1.05 (5) provides that, unless a contrary intention appears, a reference in a provision of the MOS to an 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 1.06 (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 1.06 (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 1.06 (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 1.07 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 – FLIGHT DISTANCE LIMITATIONS

Section 2.01 prescribes the flight distance limitations for the flight of certain aeroplanes.

CHAPTER 3 — CARRIAGE OF DOCUMENTS AND INFORMATION

Division 1 — Flight-related documents

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

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

Section 3.03 provides that if the flight is a passenger transport operation, an aeroplane 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 operations using a smaller aeroplane.

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 smaller aeroplane contravene subregulation 135.145 (3) of CASR.

CHAPTER 5 — ALTERNATE AERODROME REQUIREMENTS

Section 5.01 prescribes the circumstances in which an aeroplane with more than 1 engine and that is conducting a passenger transport operation or medical transport operation which involves flying to a remote island (as defined in subsection 5.01 (1) of the MOS) must nominate a destination alternate aerodrome for the flight, and the requirements for such an alternate aerodrome.

CHAPTER 6 — NARROW RUNWAY REQUIREMENTS

Chapter 6 is reserved for future use.

CHAPTER 7 — FUEL REQUIREMENTS

Section 7.01 provides that the purpose of this Chapter is to prescribe the requirements relating to fuel for aeroplanes.

Section 7.02 provides the definitions for this Chapter.

Section 7.03 sets out the considerations the operator and pilot in command must take into account when determining the quantity of usable fuel required under this Chapter for a flight of an aeroplane, including:

- aeroplane-specific fuel consumption data (subsection 7.03 (1))
- operational conditions (subsection 7.03 (2))

Section 7.04 sets out the amount of fuel that must be carried for a flight, and obliges the operator and pilot in command of an aeroplane to ensure that the aeroplane is carrying on board at least the specified amounts of usable fuel:

- when a flight of the aeroplane commences (subsection 7.04 (1))
- at any point of in-flight replanning (subsection 7.04 (2))
- at any time to continue the flight safely (subsection 7.04 (3))

Subsection 7.04 (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 7.04 (5) sets out that subsection 7.04 (6) applies if an aeroplane has been unable to land at its planned destination aerodrome and is diverting to a destination alternate aerodrome.

Subsection 7.04 (6) provides despite subsection 7.04 (3) the operator and the pilot in command must ensure the aeroplane is carrying destination alternate fuel, holding fuel (if required) and final reserve fuel from the time the aeroplane has been unable to land at the planned destination aerodrome.

Section 7.05 requires the operator and pilot in command of an aeroplane for a flight to ensure that the quantity of usable fuel on board the aeroplane is determined before the flight commences and that regular in-flight fuel amount 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 7.06 sets out the procedures that the pilot in command of an aeroplane must follow if the amount of usable fuel onboard an aircraft reaches specified amounts. This section also prescribes what such procedures must contain.

Section 7.07 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 and safety risk assessments are submitted to CASA.

CHAPTER 8 — PRESCRIBED SINGLE-ENGINE AEROPLANES

Section 8.01 provides that the purpose of this Chapter is to prescribe:

- the single-engine aeroplanes for IFR flights and VFR flights at night; and
- the matters which the operator of a prescribed single-engine aeroplane that conducts an IFR flight or a VFR flight at night must include procedures for in their exposition

Section 8.02 provides the definition of *relevant aeroplane* for this Chapter.

Section 8.03 sets out the kinds of single-engine aeroplane that are prescribed for subregulation 135.240(3), and prescribed as an aeroplane permitted to conduct an IFR flight or a VFR flight at night and required to have certain procedures set out in the operator's exposition.

Sections 8.04 – 8.09 prescribes, for subregulation 135.240(2) of CASR, matters which the operator of a prescribed single-engine aeroplane that conducts an IFR flight or a VFR flight at night must include procedures for in their exposition, including:

- an engine malfunction or failure (section 8.04)
- the decision speed for a runway (section 8.05)
- the conduct of a forced landing (section 8.06)
- certain matters relating to engine ignition and performance that occur during a flight (section 8.07)
- the assessment of a suitable route for the flight or an aeroplane, identification of aerodromes and suitable forced landing areas which are available for a forced landing, and considerations for such procedures (sections 8.08 and 8.09)

CHAPTER 9 — SAFETY BRIEFINGS, INSTRUCTIONS AND DEMONSTRATIONS

Section 9.01 prescribes, for paragraph 135.275(4)(a) of CASR, the information that a safety briefing card for an aeroplane and a flight must contain.

Section 9.02 prescribes, for subregulation 135.280(1) of CASR, the requirements for what the passenger safety briefing, instruction or demonstration must cover, and how and when such a briefing must be delivered.

Section 9.03 prescribes, for subregulation 135.280(1) of CASR, 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 aeroplane.

CHAPTER 10 — PERFORMANCE

Division 1 — Small aeroplanes

Subdivision 1 - Preliminary

Section 10.01 sets out the aeroplanes to which this Division applies in relation to their operation.

Section 10.02 provides the definitions for this Division.

Subdivision 2 — Take-off performance

Section 10.03 provides that the purpose of this Subdivision is to prescribe, for subregulation 135.345(1) of CASR, the requirements relating to take-off performance for a flight of an aeroplane.

Section 10.04 sets out the meaning of *factored take-off run* for certain aeroplanes.

Section 10.05 provides that CASA may approve a take-off factor for a propeller-driven aeroplane, for operations at a particular aerodrome, which is less than the standard take-off factor for the aeroplane, only if the proposed take-off factor has been risk-assessed by the aeroplane's operator for operations at the aerodrome.

Section 10.06 prescribes the permitted maximum weight at take-off for an aeroplane.

Section 10.07 prescribes the take-off run and distance requirements that the operator and pilot in command of an aeroplane for a flight must ensure are met, and the factors that must be taken into account.

Section 10.08 prescribes the initial climb performance and obstacle clearance requirements for an IFR flight or a VFR flight at night that the operator and pilot in command of an aeroplane must ensure are met, and the factors that must be taken into account.

Section 10.09 prescribes the en route obstacle clearance requirements for a multi-engine aeroplane that the operator and pilot in command of an aeroplane must ensure are met.

Subdivision 3 — Landing performance

Section 10.10 provides that the purpose of this Subdivision is to prescribe the requirements relating to landing performance for a flight of an aeroplane.

Section 10.11 prescribes the meaning of *factored landing distance* for certain aeroplanes.

Section 10.12 provides that CASA may approve a landing factor for a propeller-driven aeroplane, for operations at a particular aerodrome, which is less than the standard landing factor for the aeroplane, only if the proposed landing factor has been risk-assessed by the aeroplane's operator for operations at the aerodrome.

Section 10.13 prescribes the permitted maximum weight for the landing of an aeroplane.

Section 10.14 prescribes the landing distance requirements that the operator and pilot in command of an aeroplane for a flight must ensure are met, and the matters that must be taken into account.

Section 10.15 provides that CASA may approve a short landing operation at an aerodrome by day, and sets out the criteria for such an approval.

Division 2 – Large aeroplanes

Sections 10.16 and 10.17 provide that, for a propeller-driven, multi engine aeroplane with an MTOW of more than 5 700 kg, or a jet driven, multi engine aeroplane with an MTOW of more than 2 722 kg, the prescribed requirements relating to take-off performance and landing

performance, for a flight of an aeroplane, are the requirements stated in Chapter 9 of the Part 121 Manual of Standards.

CHAPTER 11 EQUIPMENT

Division 1 General

Section 11.01 provides that this Chapter prescribes, for subregulation 135.370(1) of CASR, requirements relating to the fitment and non- fitment of equipment to an aeroplane, the carrying of equipment on an aeroplane and equipment that is fitted to, or carried on, an aeroplane. 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 and sets out which specific subsections of Chapter 11 apply to the aeroplane's operator and the pilot in command of the aeroplane.

Division 2 Approvals, visibility and inoperability

Division 2 prescribes requirements relating to:

- the circumstances in which aeroplane equipment carried or fitted on an aeroplane 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 an aeroplane 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 aeroplane for the flight (section 11.04).

Division 3 Flight instruments

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

- flight under the VFR by day (section 11.05)
- flight under the VFR by night (section 11.06)
- flight under the IFR (section 11.07)

Division 4 Operational equipment

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

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

Section 11.10 sets out the circumstances in which an aeroplane flown by a single pilot must be fitted with an automatic pilot, and the capabilities of such equipment.

Section 11.11 sets out the circumstances in which an aeroplane must be fitted with equipment to remove ensure clear view through the windshield.

Section 11.12 sets out the requirements that must be met if an aeroplane is fitted with an internal door or curtain.

Section 11.13 sets out the circumstances in which an aeroplane must carry survival equipment and signalling equipment.

Section 11.14 sets out the circumstances in which an aeroplane must be fitted with equipment to measure and display cosmic radiation received in the aeroplane's cabin, and the capabilities of such equipment.

Division 5 Lighting systems

Division 5 sets out detailed requirements for the lighting systems required to be fitted or carried on an aeroplane, 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 an aeroplane (section 11.15)
- anti-collision lights for an aeroplane operating by day or at night (section 11.16)
- landing lights for an aeroplane operating by night (section 11.17)
- navigation lights for an aeroplane operating by night or in poor visibility (section 11.18)

Division 6 Alerting and warning system requirements

Section 11.19 provides the definitions for this Division.

Section 11.20 provides the circumstances in which an aeroplane must be fitted with altitude alerting equipment, and the specific alerts that the altitude alerting equipment must convey to the flight crew.

Section 11.21 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 11.22 provides the circumstances in which an aeroplane is required to be fitted with an approved airborne collision avoidance system (ACAS).

Section 11.23 provides the requirements for how an approved ACAS must be used during flight.

Section 11.24 provides the circumstances in which an approved ACAS required to be fitted to an aeroplane is permitted to be inoperative at the beginning of a flight.

Section 11.25 provides the circumstances in which an aeroplane is required to be fitted with a terrain awareness and warning system (TAWS). It requires that until immediately before 2 December 2023, to provide industry greater flexibility in acquiring a TAWS if one is not fitted to the relevant aeroplanes, a turbine-engine aeroplane and a piston-engine aeroplane must be fitted with a ground proximity warning system (GPWS), but only in accordance with the requirements in subsection 9 of Civil Aviation Order 20.18 as in force immediately before the commencement of the MOS; or for a turbine-engine aeroplane a TAWS-Class A; or for a piston-engine aeroplane a TAWS-Class A or a TAWS-Class B. From 2 December 2023, only a TAWS may be fitted.

Section 11.26 provides the circumstances in which the TAWS, or GPWS, required to be fitted to an aeroplane is permitted to be inoperative at the beginning of a flight.

Section 11.27 provides the circumstances in which an aeroplane is required to be fitted with airborne weather radar equipment.

Section 11.28 provides the circumstances in which the airborne weather radar equipment required to be fitted to an aeroplane 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 an aeroplane. 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 11.29).

Section 11.30 sets out the circumstances in which an FDR must be fitted to an aeroplane.

Section 11.31 sets out the circumstances in which an CVR must be fitted to an aeroplane.

Section 11.32 sets out the circumstances in which the requirements in sections 11.30 and 11.31, if requiring an aeroplane to be fitted with both 1 FDR and 1 CVR, may be met by the fitment of an alternative combination of equipment.

Section 11.33 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 11.34 sets out the requirements for when an FDR, CVR or combination recorder must begin and cease recording.

Section 11.35 sets out the circumstances in which an FDR, CVR or combination recorder may be inoperative at the beginning of a flight.

Section 11.36 is reserved for future use.

Division 8 Aeroplane interior communication systems

Section 11.37 sets out the circumstances in which an aeroplane is required to have a flight crew intercommunication system, and the requirements for such a system.

Section 11.38 sets out the circumstances in which an aeroplane is required to have a crew interphone 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 an aeroplane, including specific requirements relating to the use of each type of equipment. Section 11.39 also includes some definitional provisions for this Division. Specifically, this Division sets out the requirements for:

- supplemental oxygen for a pressurised aeroplane operated at a pressure altitude above 10 000 ft (section 11.40)
- supplemental oxygen for an unpressurised aeroplane operated at a pressure altitude above 10 000 ft (section 11.41)
- oxygen mask usage for a pressurised aeroplane, including for a flight above flight level (FL) 250 (section 11.42)
- oxygen dispensing units for passengers in a pressurised aeroplane (section 11.43)
- protective breathing equipment for flight crew members (section 11.44)
- portable protective breathing equipment for flight crew members (section 11.45)

- first aid oxygen equipment for a pressurised aeroplane operating in certain circumstances — up to immediately before 2 December 2023, with revised requirements after that date (section 11.46)

Division 10 Emergency locator transmitters

Section 11.47 provides the requirements for when an aeroplane is required to carry, and is not required to carry, an emergency locator transmitter (*ELT*).

Section 11.48 provides basic definitional technical requirements for what constitutes an ELT for this Division.

Section 11.49 provides the definition of *automatic ELT* for this Division, and sets out the technical requirements that an automatic ELT must meet.

Section 11.50 provides the definition of *survival ELT* for this Division, and sets out the technical requirements that a survival ELT must meet.

Section 11.51 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 11.52 provides the circumstances in an aeroplane 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 11.53 provides that, from 2 December 2023, an aeroplane 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 a seaplane or an amphibian aeroplane, and equipment for making the sound signals under the International Regulations must be carried (section 11.54)
- life jackets or flotation devices must be carried on an aeroplane, how the life jackets and flotation devices must be stowed on board an aeroplane, and when the life jackets must be worn (sections 11.55 - 11.57)
- life rafts must be carried on board an aeroplane, and the number of life rafts to be carried (section 11.58)

Division 13 Transponders and surveillance equipment

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

Section 11.59 provides the definitions for this Division, including for a range of technical equipment relevant for the Division.

Section 11.60 sets out the circumstances in which an aeroplane 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 11.61 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 11.62 sets out the specific requirements for how an approved Mode S transponder or an approved ADS-B OUT equipment configuration fitted to an aeroplane for a flight must be configured and how it must transmit, and includes technical requirements for such transponders.

Section 11.63 sets out the requirements, for certain aeroplanes, as to what constitutes an alternate GNSS position source in place of ADS-B OUT, including certification and specification requirements.

Section 11.64 provides the requirements for an alternate ADS-B OUT equipment configuration, including certification and specification requirements.

Section 11.65 sets out the circumstances in which an approved transponder may be inoperative at the beginning of a flight.

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 135.380(4) of CASR, requirements relating to training and checking that must be completed by a flight crew member for a flight of an aeroplane.

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 aeroplane, 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, and sets out the matters which must be covered in the training.

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, and sets out the matters which must be covered in the training.

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 operator's recurrent training and 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 requires a flight crew member who fails to demonstrate competency or continuing competency for a relevant type or class of aeroplane under section 12.08 to meet the remedial training requirements of section 12.09 before conducting further operations for the operator with the relevant type or class of aeroplane.

Section 12.09 sets out the remedial training requirements that a flight crew member must meet, if the flight crew member has failed the operator's flight crew member general emergency check of competency or flight crew member proficiency check for a specific type or class of aeroplane.

Division 3 Individuals who conduct training and checking

Section 12.10 provides that the purpose of this Division is to prescribe, for subregulation 135.387 (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 Command training for pilot in command

Section 12.13 sets out, for paragraph 135.395 (1)(c) of CASR, the command training requirements that the pilot in command of an aeroplane must complete.

Division 5 Pilot in command in non-command seat

Section 12.14 sets out, for paragraph 135.405 (1)(b) and (2)(b) of CASR, the requirements for non-command seat proficiency checks for a pilot operating an aeroplane from the non-command seat as pilot in command or in command under supervision.

CHAPTER 13 AIR CREW MEMBER TRAINING AND CHECKING

Division 1 Preliminary

Section 13.01 provides the definitions for this Chapter.

Division 2 Air crew member training and checking events

Section 13.02 provides that the purpose of this Division is to prescribe, for subregulation 135.445 (2) of CASR, requirements relating to training and checking that must be completed by an air crew member for a flight of an aeroplane.

Section 13.03 sets out the circumstances in which an air crew member meets the training and checking requirements for the air crew member and flight.

Section 13.04 requires an air crew member to have successfully completed the operator's general emergency training for the aeroplane, and sets out the matters which must be covered in the training.

Section 13.05 sets out the conversion training and air crew member proficiency check requirements that an air crew member for a flight must meet, and sets out the matters which must be covered in the training.

Section 13.06 sets out the line training and air crew member line check requirements that an air crew member for a flight must meet, and sets out the matters which must be covered in the training.

Section 13.07 sets out the differences training requirements that an air crew member for a flight must meet, and the matters which must be covered in the training

Section 13.08 sets out the recurrent training and checking requirements that an air crew member for a flight must meet, including the intervals at which certain checks must be successfully completed. Subsection 13.08 (5) also requires an air crew member who fails to demonstrate competency or continuing competency under section 13.08 for a relevant kind of aeroplane to meet the remedial training requirements of section 13.09 before conducting further operations for the operator in the relevant kind of aeroplane.

Section 13.09 sets out the remedial training and proficiency check requirements that an air crew member must meet, if the air crew member has failed an air crew member general emergency check of competency or air crew member proficiency check for a specific kind of aeroplane.

Division 3 Individuals who conduct training and checking

Section 13.10 provides that this Division applies if an air crew member undertakes training or a check that is required under regulation 135.445 of CASR or Division 2 of the MOS.

Section 13.11 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 13.12 sets out that CASA may assess the competency of the individual nominated to conduct the training.

CHAPTER 14 MEDICAL TRANSPORT SPECIALIST TRAINING AND CHECKING

Division 1 Preliminary

Section 14.01 provides the definitions for this Chapter.

Division 2 Medical transport specialist training and checking events

Section 14.02 provides that the purpose of this Division is to prescribe, for subregulation 135.460 (2) of CASR, requirements relating to training and checking that must be completed by a medical transport specialist for a flight of an aeroplane.

Section 14.03 sets out the circumstances in which a medical transport specialist meets the training and checking requirements for the medical transport specialist and flight.

Section 14.04 requires a medical transport specialist to have successfully completed the operator's general emergency training for the aeroplane, and sets out the matters which must be covered in the training.

Section 14.05 sets out the conversion training and medical transport specialist proficiency check requirements that a medical transport specialist for a flight must meet, and the matters which must be covered in the training.

Section 14.06 sets out the line training and medical transport specialist line check requirements that a medical transport specialist for a flight must meet, and the matters which must be covered in the training.

Section 14.07 sets out the differences training requirements that a medical transport specialist for a flight must meet, and the matters which must be covered in the training.

Section 14.08 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 14.08 (5) also requires a medical transport specialist crew member who fails to demonstrate competency or continuing competency under section 14.08 for the relevant kind of aeroplane to meet the remedial training requirements of section 14.09 before conducting further operations for the operator in the relevant kind of aeroplane.

Section 14.09 sets out the remedial training and proficiency check requirements that a medical transport specialist must meet, if the medical transport specialist has failed a medical transport specialist general emergency check of competency or medical transport specialist proficiency check.

Division 3 Individuals who conduct training and checking

Section 14.10 provides that this Division applies if a medical transport specialist undertakes training or a check that is required under subregulation 135.460 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 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 14.12 sets out that CASA may assess the competency of the individual nominated to conduct the training.