

EXPLANATORY STATEMENT

Issued by the authority of the Deputy Prime Minister and Minister for Infrastructure,
Transport and Regional Development

Civil Aviation Act 1988

Civil Aviation Safety Amendment (Part 121) Regulation 2018

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. That subsection also provides that the Governor-General may make regulations for the purpose of carrying out and giving effect to the provisions of the Convention on International Civil Aviation (Chicago Convention) relating to aviation safety, and in relation to the safety of air navigation, being regulations with respect to any other matters to which the Parliament has power to make laws.

Subsection 9(1) of the Act specifies, in part, that the Civil Aviation Safety Authority (CASA) has the function of conducting the safety regulation of civil air operations in Australian territory by means that include developing and promulgating appropriate, clear and concise aviation safety standards and issuing certificates, licences, registrations and permits.

The purpose of the *Civil Aviation Safety Amendment (Part 121) Regulations 2018* (the Regulations) is to make amendments to the *Civil Aviation Safety Regulations 1998* (CASR), to substitute a new Part 121 (Australian air transport operations – larger aeroplanes). Part 121 is part of a suite of legislative reforms that encompasses the flight operations regulations (comprised of CASR Parts 91, 119, 121, 133, 135 and 138) and the proposed Parts 103, 105 and 131 of CASR.

The Regulations are designed to lower the accident rate differential between the operations previously identified as low capacity charter and low capacity regular passenger transport (RPT), meet Australia's obligations to the International Civil Aviation Organization (ICAO) and to better align with international standards.

Previously, the rules allowed fare-paying passengers to be carried on flights which were classified as either charter or regular public transport (RPT). Base safety standards for charter flights were lower than those for RPT, even though aircraft used for the operations may have looked the same.

The regulatory oversight of charter and RPT operations had for many years been spread over the *Civil Aviation Regulations* (the CARs) and a number of other legislative instruments, including the Civil Aviation Orders (in particular Part 82 – Air Operator's Certificates), exemptions and directions.

As well as differentiating between charter and RPT, the safety standards created a separation between high capacity and low capacity aircraft (high capacity is defined as an aircraft that

has a certified seating capacity of greater than 38 seats or a payload capacity of greater than 4,200 kg).

The Regulations, together with the other CASR Parts mentioned above, remove the distinction between charter operations and RPT operations and introduce a single graduated air transport standard. In line with multiple foreign jurisdictions, including the United States, the Regulations implement a significant safety rule differentiation for operations in aircraft with a maximum permitted passenger seating configuration of nine or more seats. Part 121 also adds a weight-based split point of more than 8,618 kg maximum take-off weight. The limits ensure some medium sized aeroplanes, previously classified as ‘other than high capacity’, are required to be operated to the increased safety requirements of Part 121 of CASR.

The new rules:

- reduce the complexity of the aviation regulations
- reduce the safety differential between charter and RPT operations through common rules that apply to all air transport operations but are scaled for size and/or complexity or operations
- apply certain safety enhancements across all air transport operations such as crew training and checking requirements, human factors training and a scalable safety management system
- implement of fuel and flight planning requirements which includes refinement of extended division time operations requirements.

Part 121 uses a number of new defined terms which will not take effect until 25 March 2021. The new definitions will be included in the CASR Dictionary following the making and registration, in February 2019, of the *Civil Aviation Safety Amendment (Operations Definitions) Regulations 2019* (A draft of these regulations is currently available on the CASA website.)

Consultation

In accordance with section 17 of the *Legislation Act 2003*, CASA consulted on the proposed changes. Prior to 2018, significant consultations on Part 121 of CASR were conducted in 2014 and 2015. During 2014 and 2015, CASA consulted with industry during nine working groups prior to conducting a public consultation that generated 25 responses.

In June 2018, the Aviation Safety Advisory Panel (ASAP) convened a technical working group (TWG) to evaluate drafts of the Part 121 regulations. The TWG made a number of suggestions, the majority of which CASA sought to address in the Part 121 draft released for public consultation between 3 August and 2 September 2018 (CD1806OS). CASA received seven submissions with no significant comment received on the key proposals. Respondents commented on discrete matters and CASA made multiple amendments based on this feedback.

At the final meeting of the TWG, no major matters were raised by industry. On 2 November 2018, the ASAP confirmed by letter their support for the making of Part 121 of CASR.

Incorporation by reference

In accordance with paragraph 15J (2) (c) of the *Legislation Act 2003*, and subsection 98(5D) of the Act, the legislative instrument applies, adopts or incorporates matters contained in the following instruments:

- Annex 2 to the Chicago Convention - Rules of the Air (Annex 2)
- Annex 8 to the Chicago Convention – Airworthiness of Aircraft
- aircraft flight manual instructions that relate to an aeroplane operated under Part 121
- the exposition of an Australian air transport operator (and any procedures that Part 121 requires an operator to include in the exposition)
- the Aeronautical Information Publication (AIP)
- the Part 91 Manual of Standards (Part 91 MOS)
- the Part 121 Manual of Standards (Part 121 MOS).

In accordance with subsection 98 (5D) of the Act, the instruments and other writing are incorporated as in force or existing at a particular time or from time to time and may not yet exist when the legislative instrument is made.

Each incorporated document is described below, together with the manner of incorporation and how it may be obtained.

The Annexes 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 without exception over the high seas and over national territories, to the extent that they do not conflict with the rules of the State being overflown. Regulation 121.340 (survival equipment procedures) incorporates the distress signals set out in Appendix 1 of the Annex, for the purpose of an operator's procedures regarding pyrotechnic signalling devices that will ensure distress signals can be made.

Annex 8 sets out rules for the issue of a certificate of airworthiness declaring that an aircraft is fit to fly in accordance with the appropriate airworthiness requirements of the contracting State that registers the aircraft. Amongst other things, the Annex sets out performance standards requiring an aircraft to be capable of accomplishing the minimum performance specified in the Annex at all phases of flight and assuming failure of the critical engine. Regulation 121.390 incorporates the performance standards in respect of what is required regarding performance data for an aeroplane to achieve minimum performance.

Aircraft flight manual instructions:

A definition of "aircraft flight manual instructions" will be inserted into the CASR Dictionary by the Civil Aviation Safety Amendment (Operations Definitions) Regulations (mentioned above).

The aircraft flight manual instructions include the flight manual, checklists of normal, abnormal and emergency procedures for the aircraft and any operating limitation, instructions, markings and placards relating to the aircraft. A flight manual is a book containing the information required to safely operate the specific aircraft. "Flight manual" is defined in the CASR Dictionary to include authorised amendments and supplements. The instructions are incorporated as they exist from time to time, consistent with the definition.

The aircraft flight manual instructions for an aircraft is proprietary to the owner of the aircraft design (usually the manufacturer). The instructions are publicly available but not for free. The incorporated requirements of an instructions are at the aircraft-specific level, and instructions are required to be provided to owners of aircraft. Where available, and by prior arrangement, CASA will make aircraft flight manual instructions available for inspection at any CASA office.

Expositions:

An exposition is a document, or suite of documents, that specifies the scope of the operations and activities conducted by the operator, and sets out the plans, processes, procedures, programs and systems implemented by the operator to comply with the civil aviation legislation. It is prepared by the relevant operator and given to CASA. The exposition of a Part 121 operator is incorporated as the exposition is changed from time to time, in accordance with the definition of “exposition” to be inserted into CASR by the *Civil Aviation Safety Amendment (Operations Definitions) Regulations 2019*, mentioned above.

The exposition of an operator is a proprietary document prepared by, and used exclusively by, the operator and will generally include commercial in confidence information about the operator’s business. It is not publicly or freely available. The incorporated requirements of an exposition are at the operator-specific level and apply only to the operator and its personnel. Further, the operator is under obligations to make the exposition available to its personnel who have obligations under the exposition.

AIP:

The AIP is published by Airservices Australia (AA) as an Aeronautical Information Service provider, under the *Air Services Regulations 1995*, to disseminate information relevant to aviation participants on matters essential to safe air navigation that are of lasting relevance. Some parts of the AIP are underpinned by legislative instruments, while other parts are not. The AIP is incorporated into Part 91 as the AIP exists and is published by AA from time to time. The AIP is freely available on the AA website at: www.airservicesaustralia.com/aip/aip.asp.

Part 91 MOS:

The Part 91 MOS is a legislative instrument that prescribes matters for Part 91 of CASR in the nature of general operating rules. The Part 91 MOS and is incorporated as in force from time to time, in accordance with section 10 of the *Acts Interpretation Act 1901* and section 13 of the *Legislation Act 2003*. When made, it will be freely available on the Federal Register of Legislation.

Part 121 MOS:

Part 121 subdelegates matters to the MOS. The MOS is a legislative instrument and is incorporated as in force from time to time, in accordance with section 10 of the *Acts Interpretation Act 1901* and section 13 of the *Legislation Act 2003*. When made, it will be freely available on the Federal Register of Legislation.

Costs and copyright:

In relation to the Annexes and aircraft flight manual instructions, the cost of obtaining a copy is a matter for a person wishing to review the matter to which the document relates. CASA has no effective control over those costs. However, as noted and by prior arrangement with

CASA where the document is available, a copy of the document can be made available for viewing free of charge at any office of CASA.

In the case of the Annexes, expositions of operators and aircraft flight manual instructions, CASA considers it extremely unlikely that the relevant owner of the document would sell CASA the copyright at a price that would be an effective and efficient use of CASA funds, or otherwise permit CASA to make the document freely available. CASA has incorporated the documents in the instrument because they are appropriate and necessary to give effect to the safety regulatory scheme under Part 121, and because no other, freely available document is available that serves the purpose.

Regulation Impact Statement

A Regulation Impact Statement (RIS) prepared by CASA was assessed by the Office of Best Practice Regulation as compliant with the Best Practice Regulation requirements with a level of analysis commensurate with the likely impacts (OBPR ID: 24505). A copy of the Statement is set out in [Attachment A](#).

Criminal law issues

The Regulations provide for 81 offences of strict liability, which are outlined in the Statement of Compatibility with Human Rights at [Attachment B](#).

Consistent with the principles set out in the Attorney-General's *A Guide to Framing Commonwealth Offences, Infringement Notices and Enforcement Powers* (September 2011) (the AGD Guide) and the Sixth Report of 2002 of the Senate Standing Committee for the Scrutiny of Bills, *Application of Absolute and Strict Liability Offences in Commonwealth Legislation* (26 June 2002), the strict liability offences are considered reasonable, necessary and proportionate to the objective of ensuring aviation safety. In this regard, the offences are regulatory in nature, in other words their aim is to insist on reasonable compliance with regulated safety standards by those conducting activities which are otherwise intrinsically or potentially unsafe unless such high standards of compliance are met. Not having to prove fault in the relevant circumstances aims to provide a strong deterrent. To this extent, and in this context, they are consistent with other safety-focused regulatory regimes and do not unreasonably or impermissibly limit the presumption of innocence. The offences are designed to achieve the legitimate objective of ensuring the integrity of the overall aviation safety regulatory scheme by promoting compliance and deterring non-compliance.

The rationale is that people who owe general safety duties should be expected to be aware of their duties and obligations. In the context of the operating rules for air transport operations in larger aeroplanes, a defendant to a prosecution can reasonably be expected to know what the requirements of the law are, and the mental, or fault, element can justifiably be excluded.

For strict liability offences in the Regulations, the prosecution will have to prove only the conduct of the accused. However, where the accused produces evidence of an honest and reasonable, but mistaken, belief in the existence of certain facts which, if true, would have made that conduct innocent, it will be incumbent on the prosecution to establish, beyond reasonable doubt, that there was not an honest and reasonable mistake of fact.

The Regulations also contain six provisions that reverse the evidential burden of proof in relation to prescribed defences to strict liability offences ("offence-specific defences"). Consistent with section 4.3.1 of the AGD Guide, the provisions have been included in the Regulations because they relate to matters that are peculiarly within the knowledge of a

defendant and/or would be significantly more difficult and more costly for the prosecution to disprove than for the defendant to establish the matter.

Details and justification of the offence-specific defences are provided in the Statement of Compatibility with Human Rights at Attachment B.

In practice, any enforcement action contemplated by CASA is subject to the provisions of CASA's "just culture" policy as set out in CASA's Regulatory Philosophy.

Statement of Compatibility with Human Rights

A statement of Compatibility with Human Rights is set out in Attachment B.

Commencement and making

The Regulations are a legislative instrument for the purposes of the Legislative Instruments Act 2003. Details of the Regulations are set out in Attachment C.

The Act specifies no conditions that needed to be satisfied before the power to make the proposed Regulations may be exercised.

The provisions of the *Civil Aviation Safety Amendment (Part 121) Regulations 2018* commence on 25 March 2021.

Transition period

To avoid the undesirable situation of different air operators operating to different rulesets through a staged transition period, compliance will be expected from commencement of the proposed regulations on 25 March 2021.

Authority: Subsection 98(1) of the
Civil Aviation Act 1988

Regulation Impact Statement for CASR Parts 119, 121, 133, 135 and 138

Summary

The current regulations applying to commercial passenger, cargo and aerial work operations have not been comprehensively reviewed or updated in over 20 years. During that time there has been considerable technological change and changes to International standards. Combined with recent operational experience within Australia and Australian safety data trends and disparities between types of operations the Australian public sees as largely similar, it is timely to review and update the regulatory requirements.

There are a number of safety improvements identified by CASA that are likely to be beneficial. The most significant improvements relate to businesses undertaking charter flights.

Within commercial passenger operations, the accident rate for low capacity charter is markedly higher than low capacity regular public transport (RPT) flights. The accident rate disparity is approximately 11 to 1 for small aeroplanes.

The ATSB has found that a significant contributing factor to accidents involving charter aircraft has been organisational failures and under developed safety management systems.

The preferred option would create a single regulatory standard for businesses carrying fare paying passengers and cargo. This will remove the current differential in regulatory standards between businesses operating scheduled flights that are publicly available and charter flights. The new single standard will be largely based on the current standards applying to RPT operators and will require businesses currently conducting charter flights to implement;

- *A safety management system (SMS)*; the important elements involve having a safety manager who is responsible for safety and ensuring that safety risks are identified and resolved
- *Improved staff training and management of competency*; with pilots of small aircraft required to undertake bi-annual or annual training and checks for competency

The preferred option would also make changes to the requirements for the fitment of safety equipment, including Terrain Awareness and Warning Systems (TAWS) and weather radar, however, there will not be significant cost impacts associated with these changes.

The aerial work regulations will be streamlined to remove the need for time limited exemptions and clarify the aircraft performance requirements when using helicopters for particular aerial work operations.

Overall the changes within the preferred option are estimated to have a 10-year annualised cost impact of \$6.51m.

Background/Problem

The current regulatory requirements that apply to businesses seeking to operate commercial passenger carrying, cargo and aerial work operations are primarily contained in the *Civil Aviation Act 1988*, *Civil Aviation Regulations 1988* and the Civil Aviation Orders. The

operator must be issued with an Air Operator's Certificate (AOC) by CASA under the Act. To apply for an AOC an applicant must provide an operations manual that outlines the operational procedures of the business including;

Key personnel being a CEO and Head of Flying Operations and if required the Head of Aircraft Airworthiness and Maintenance Control;

- The employment of suitably qualified pilots assessed by the operator;
- Aircraft equipped with the necessary navigation and safety equipment;
- Management of the continuing airworthiness of aircraft and maintenance; and
- Organisational requirements if required, for an SMS, training and checking and management of pilot fatigue.

Whilst the operations manual is a universal requirement for AOC operators, the specific operational requirements are differentiated both by the nature of the operations and the type of the aircraft used by the business.

CASA undertakes initial entry control to issue an AOC. CASA also undertakes ongoing surveillance to ensure ongoing compliance. The operations manual is an important document which is required to be complied with by the operator's personnel. CASA also has regard to it for surveillance to ensure that the business is following the procedures set out in their operations manual. The current compliance costs with the initial AOC requirements are estimated to be in order of \$70 000 for a typical business, with ongoing compliance costs estimated to range from \$23 000 for a small single pilot operator to \$245 000 for a large charter business employing more than 20 pilots (Appendix 2).

Problem

Whilst the current Act and regulatory requirements have evolved over time, any changes have been *ad hoc* focused on one issue or a limited set of issues and there has been no holistic and comprehensive review within the last 20 years in the light of advancement in technology, changes to international standards and operational experience within Australia.

There are different standards based on whether the flights are charter or RPT. This can result in the same aircraft carrying the same number of passengers (or cargo) having different regulatory standards.

Some regulatory requirements are not aligned to international standards. Australia is subject to audits from the International Civil Aviation Organization (ICAO) and from ICAO member States, including the USA. Whilst there is no immediate threat, failure to maintain parity with international standards over the medium to longer-term may result in Australia's ability to participate in international markets being compromised.

Advancement in technology

In some cases, the current regulations have not fully taken into account the advancements in technology, such as the expansion in the number of flight data recorder parameters and an increase in the sampling rate of those parameters.

Safety

In reviewing the operational experience within Australia, it is apparent that the accident rate within commercial air transport operations is highest for lower capacity aircraft conducting charter flights (ATSB 2018, p.18).

Over the last ten years for aerial work operations there were 326 accidents and 55 deaths. There have been 148 accidents and 16 deaths through the operation of low capacity charter aircraft (ATSB 2018, p. 10), compared to 4 accidents and 2 deaths in low capacity RPT. The accident rate for low capacity charter flights is higher than for low capacity RPT flights (ATSB 2018, p. 17 - 18).

In an analysis of the cause of charter accidents the ATSB found that the most common were: mechanical problems with the aircraft's landing gear (20 per cent), wheels-up, landing (12 per cent), partial and complete power loss/engine failure (14 per cent),

loss of aircraft control (11 per cent), and fuel-related accidents (7 per cent) (p. 17, ATSB 2007). However, in terms of fatal accidents the most likely occurrences were collisions, loss of control and power loss occurrences (p. 19 ATSB 2007). Table 1a provides examples of the types of fatal accidents within the charter sector. (ATSB 2007, p. 54)

In explaining the high accident rate, the ATSB notes that charter flights are generally shorter and that can provide part of the explanation as to why the charter sector has a higher accident rate per flight hour, because in part charter flights have greater exposure to approach and landing accidents per hour flown (ATSB 2018, p. 18).

It is CASA's assessment that part of the disparity in the accident rate between RPT and charter is due to differences in the type of aircraft and their reliability. To highlight this point approximately 62% of the aircraft registered to RPT operators are powered by more reliable turbine engines compared to only 16% for charter operators.

Mitigators

In addition, it is generally accepted that aircraft accidents rarely have one cause and even if an accident is attributed to pilot actions, it is important to consider the operational environment in which the pilot operates. The US Federal Aviation Administration (FAA) researchers note:

It is generally accepted that like most accidents, those in aviation do not happen in isolation. Rather, they are often the result of a chain of events often culminating with the unsafe acts of aircrew (p.1 Wiegman et al, 2005)

Table 1a: Fatal Charter Accidents reported by the ATSB

The fatal charter accidents included:

- A Partenavia P.68 aircraft impacting terrain while on approach to land (1998).
- A Bell 206L LongRanger helicopter that collided with the sea due to a loss of visual contact in heavy rain (1999).
- Hypobaric incapacitation of the pilot and passengers of a Beech Super King Air 200 following a failure of the aircraft's pressurisation and supplemental oxygen system (2000).
- In-flight structural failure and breakup of a Piper Aerostar 600A aircraft during attempted recovery from a spiral manoeuvre (2000).

Fuel starvation or interruption to the engine of a Cessna 210 Centurion aircraft (2001).
A Beech C90 King Air aircraft that suffered a loss of control and impacted power lines following an uncontained engine failure (2001).
A Piper PA-32 Seminole aircraft that suffered abnormal engine performance shortly after take-off, and subsequently impacted with terrain (2002).
A Robinson R44 helicopter that was operating with a maximum take-off weight and centre of gravity outside limits, leading to an in-flight loss of control and collision with terrain (2003).
In-flight loss of control accidents including a Britten Norman BN-2A Islander aircraft that crashed on final approach due to an engine failure (1999), a Cessna 206 Stationair aircraft conducting manoeuvres in darkness with a lack of visual cues (2000), a Cessna 210 Centurion aircraft conducting aerial manoeuvres (2001), a Cessna 206 flying at low level over water in severe weather conditions (2002), a Cessna 172 Skyhawk aircraft that suffered carburettor icing (2003), and a Beech 58 Baron aircraft that lost control for unknown reasons (2006).
Collision with terrain accidents (Cessna 185 Skywagon in 1998, Aero Commander 500-S in 2001, Cessna 210 Centurion in 2002, Piper PA-31 Navajo in 2005, Cessna 210 in 2007, Robinson R44 in 2007).

Source: ATSB 2007, p.54

This approach to safety highlights the importance of creating the appropriate organisational safeguards to mitigate against human error. SMS and training in human factors is an important mechanism for ensuring that an operational environment within a business is created that minimises the risk of accidents. The ATSB analysis of aviation accidents has found that poor or non-existent SMSs are a contributing factor to a number of aviation accidents and has advocated for the introduction of SMS for the aviation industry (ATSB 2008).

It is CASA's assessment that in part the accident rate can be attributed to differences in the safety processes adopted by charter operators, with all RPT operators having an SMS, compared to approximately 40% of charter operators.

An important mitigator against accidents is also requiring pilots to be trained to avoid loss of control and to deal with emergencies such as engine failures. Pilot training and competency is maintained at two levels, through the general requirements applying to all pilots under Part 61 of the *Civil Aviation Safety Regulations 1998* (CASR) and through the operator providing training to a company pilot, which can be through a training and checking organisation.

Aircraft safety equipment can contribute to avoiding accidents. The ATSB found in analysing a collision with terrain accident at Lockhart River in 2005, that resulted in 15 fatalities that the accident was most likely a controlled flight into terrain accident and that had the aircraft been fitted with TAWS it is probable that the accident would not have occurred (ATSB 2007a, p. xiv).

Objective

The primary objective is to review to the existing regulatory requirements with the intention of proposing regulatory options that are beneficial to society by reducing the risk of aircraft accidents. The factors that need to be considered in proposing options for change are: safety, regulatory impact and alignment with international standards.

Options

Option 1

Option 1 is to maintain the current distinction between businesses operating RPT and charter services in terms of organisational requirements. The specific operating requirements for aircraft used by AOC holders, including large aeroplanes, small aeroplanes and rotorcraft would remain unchanged.

Organisational requirements

An SMS is an organised approach to managing safety, the key elements include:

- establishing safety policy at the company's management level,
- collecting safety information,
- identifying safety hazards,
- analysing safety risks,
- performing safety investigations,
- developing corrective actions,
- providing safety training;
- monitoring safety performance;
- creating a continuous improvement environment; and
- safety communication.

Under option 1 all RPT operators are required to have an SMS, however, charter and Aerial work operators are not required to have an SMS.

The training and checking organisation is a system of regularly checking the competency of pilots to operate the aircraft and handle and emergencies and to provide relevant training, referred to as proficiency checks.

Under option 1 all RPT operators and charter operators with aircraft Maximum Take-Off Weight (MTOW) >5700kg are required to have a training and checking organisation. Currently charter and aerial work operators operating aircraft MTOW <5700kg are not required to have a training and checking organisation unless directed by CASA.

Terrain Awareness and Warning System

TAWS fitted to an aircraft provides pilots with predictive warning if they are at risk of collision with terrain. TAWS is seen as the most effective way of reducing the risk of controlled flight into terrain accidents and is an ICAO standard for certain aircraft.

The current Australian requirement is for TAWS to be fitted to aeroplanes with a turbine engine(s) operating under Instrument Flight Rules (IFR) and carrying 10 or more passengers or with a MTOW greater than 15000kg.

Weather radar

A weather radar is capable of giving pilots the latest weather information during the flight and will reduce the risk of the flight crew operating in dangerous weather conditions, such as hail, lightning and thunderstorms.

The current requirement is for a weather radar to be fitted to aircraft operating under IFR with 2 pilots that are:

- pressurised with piston engine(s); or
- pressurised with turbine engine(s); or
- unpressurised with turbine engine(s) weighing more than 5700kg.

The requirements under option 1 are summarised in Table A.

Option 2

Option 2 will introduce revised organisational requirements applying to all businesses and revised aircraft operational requirements. The option would revise the operational classifications to eliminate the differences between the current regular public transport, charter and aerial work ambulance flight categories by forming an air transport category. There would be other minor changes to the naming of classifications (Figure 1).

Figure 1: Operational Classifications

Present Classifications	Proposed Classifications
Regular Public Transport	Air Transport
Charter	
Aerial work: Ambulance flights	
Aerial work: other	Aerial Work
Private	General Aviation

Option 2: Organisational Requirements

Option 2 would require all air transport operators to implement:

An exposition, which is a document or collection of documents that describes the way in which the organisation operates and the procedures they use to meet the requirements of the regulations.

A SMS will be required by air transport operators and some aerial work operators; and Improved staff training and management of competency, with a training and checking system required by air transport operators and some aerial work operators

Option 2 would remove the requirement for aerial work operators to possess an AOC – instead replacing the AOC for aerial work with an aerial work certificate. This replacement permits CASA to remove the requirements for AOCs specified by the *Civil Aviation Act 1988* for certain types of aerial work operators.

Improved staff training and management of competency

Option 2 will require air transport and select aerial work operators to provide a formal training and checking system for flight crew, either internally or contracted to a flight training organisation (approved under CASR Part 142). This will only be a new requirement for

organisations operating aircraft below an MTOW of 5700kg that have not been directed by CASA to have a training and checking organisation. The number of proficiency checks required will depend on the types of operations being conducted by the operator.

Option 2: Aircraft equipment and operational requirements

Option 2: would expand the requirement for TAWS and weather radar to primarily base the requirements on aircraft weight consistent with the standards published by ICAO.

Option 2 will require TAWS to be fitted to aeroplanes weighing more than 5700kg operating under IFR or Night Visual Flight Rules (VFR) for air transport flights. This change will result in an expansion of the requirement to night VFR operations, however, it will not include freight only operations in aeroplanes below 8618kg. It will capture freight only operations in aeroplanes between 8618kg and 15000kg that are not currently captured. The requirement will also apply to aircraft that have a weight greater than 5700kg, but are certified to carry less than 10 passengers.

Option 2 will require a weather radar to be fitted to aeroplanes that operate IFR or night VFR that are:

- pressurised turbine of any weight (single or 2 pilot); or
- pressurised piston weighing more than 5700kg and 2 pilot.

This will expand the requirement from operations under the IFR to capture night VFR operations and it will expand the requirement to include single pilot aeroplanes that are pressurised with a turbine engine(s). However, the proposed change will remove the requirement from aircraft that are unpressurised with turbine engine(s) weighing more than 5700kg. It will also remove the requirement from pressurised aircraft with a piston engine(s) weighing less than 5700kg required to be operated by 2 pilots. The intention of the change is to only apply the requirement to the aircraft that are most likely to be exposed to hazardous weather conditions, with storms carrying the greatest risk to aircraft occurring within the cruising altitude of pressurised aeroplanes.

Option 3

Option 3: Organisational Requirements

Option 3 would require all AOC holders to implement:

- An exposition;
- An SMS; and
- A training and checking system

Option3: Aircraft equipment and operational requirements

Option 3: would expand the requirement for TAWS and weather radar to primarily base the requirements on aircraft weight and passenger capacity consistent with the recommendations published by ICAO.

Option 3 will require TAWS to be fitted to aeroplanes weighing more than 5700kg operating under IFR or night VFR for air transport flights or carrying more than five passengers. This change will result in an expansion of the requirement to night VFR operations, however, it will not include freight only operations in aeroplanes below 8618kg. It will capture freight only operations in aeroplanes between 8618 and 15000kg that are not currently captured.

Option 3 will require a weather radar to be fitted to aeroplanes that operate IFR or night VFR that are:

- MTOW>5700kg; or
- Have a capacity to carry more than five passengers.

The requirements under Option 3 are summarised in Table A relative to Option 1 (status quo) and Option 2.

Table A: Requirements by Option1

Requirement	Option 1 (status quo)	Option 2	Option 3
<i>Exposition</i>	<i>no AOC holders</i>	<i>Air transport</i>	<i>Air transport and aerial work</i>
<i>SMS</i>	<i>RPT</i>	<i>Air transport (RPT, charter, ambulance) and complex aerial work</i>	<i>Air transport and aerial work</i>
<i>Training and checking</i>	<i>MTOW>5700kg</i>	<i>Air transport (RPT, charter, ambulance) and complex aerial work</i>	<i>Air transport and aerial work</i>
<i>Weather Radar</i>	<i>IFR, two pilot and pressurised</i>	<i>IFR, pressurised and MTOW>5700kg</i>	<i>IFR, passenger seats>5 and MTOW>5700kg</i>
<i>TAWS</i>	<i>IFR & Seats >9</i>	<i>IFR & MTOW>5700kg</i>	<i>IFR, passenger seats>5 and MTOW>5700kg</i>
<i>Helicopter TAWS</i>	<i>No requirement</i>	<i>Passenger seats>9</i>	<i>Passenger seats>9</i>

1: In addition, Options 2 and 3 would require a Life Raft and First Aid kit to be carried for selected flights

Requirements common to Options 2 and 3

In addition to the major organisation requirements of an Exposition, SMS and training and checking system, and the aircraft specific requirements for TAWS and weather radar there are other less significant requirements that are common to both Options 2 and 3.

Life raft

Under Options 2 and 3 operators will be required to carry a life raft if they are operating for a significant distance over water. The requirement is risk based, with the requirement for a life raft based on the reliability of the aircraft. Aeroplanes with two engines are not required to carry a life raft unless they are beyond 100 nautical miles or 30 minutes flying time at normal cruising speed from land. Single engine aircraft will require a life raft when the flight over water is greater than the gliding distance to a forced landing site, plus the distance the aircraft

travels in 5 minutes at normal cruising speed. The relevant staff must also be trained to operate the life raft, with life raft training required every 3 years.

Minimum Equipment List

Under Options 2 and 3 aircraft will be required to be operated in accordance with a Minimum Equipment List (MEL) if the aircraft is operated internationally or if the aircraft is operated within Australia under the IFR and the manufacturer provides a Master MEL for that aircraft. The minimum equipment list outlines the conditions under which the aircraft can be operated without a serviceable part. For example, if the fuel gauge is inoperative then the aircraft may be operated if the fuel level is measured using a dipstick.

There are efficiency benefits for aircraft operators in having a MEL and many operators have one without regulatory compulsion. The safety benefit is clarity and consistency of the condition in which the aircraft is safe to operate. MELs are currently required under the regulations for smaller aeroplanes used in regular public transport operations but not for aircraft used in 'on-demand' charter operations.

Larger aeroplanes

Requirement for two pilots

Option 2 and 3 will require all aeroplanes weighing more than 8618kg or carrying 10 or more passengers to be operated with two pilots when undertaking air transport flights, however, certain aircraft (single engine that have a weight of 8618kg or less and a seating capacity of 10 or more) will be permitted to carry the maximum number of passengers their aircraft can fit with a single pilot if operated under day VFR conditions.

The current requirement is for all high capacity (not the same as larger aeroplanes) RPT flights to be operated with 2 pilots, for low capacity RPT to conduct operations with 2 pilots when carrying greater than 9 adult passengers and for charter flights to be operated with the number of pilots specified by the aeroplane flight manual. Accordingly, for all current high capacity RPT operators there will be no change in this requirement. However, this will represent a new requirement for current charter operators of single pilot certificated aeroplanes with a passenger seating capacity of more than 10 that operate under IFR.

Underwater locating device

To be consistent with international standards, aircraft with a weight greater than 27 000kg will be required to be fitted with an underwater locating device attached to the aircraft frame. The frequency omitted by this beacon will be different to the frequency of the beacon attached to the flight data recorder and will increase the probability of locating aircraft wreckage in oceanic areas. The impact of the requirement is minimised by imposing the requirement on aircraft that operate over oceans.

Flight data recorder parameters

The current requirements for the parameters and sampling rates that apply to flight data recorders are not consistent with international standards. This situation requires CASA to issue exemptions to aircraft that are fitted with flight data recorders that meet the ICAO standard, but exceed the current outdated Australian requirements.

First aid kit

Operators of all aircraft within air transport will be required to carry a first aid kit for treating passengers.

Requirements for businesses operating helicopters

Option 2 and 3 would introduce the ICAO standard performance model, appropriately adjusted for Australia and based on a 3 Tier Performance class system, that sets the number of passengers that can be carried by each type of rotorcraft in passenger transport.

Performance classes

Performance class 1 – mandatory for > 19 passengers – can continue flight after a critical failure.

Performance class 2 – minimum mandatory standard for operations with between 10 and 19 passengers – can continue flight after a critical failure except if this occurs during take-off or late in the landing phase.

Performance class 3 – limited to 9 or less passengers – in the event of a critical failure may or will be required to make a forced landing.

In addition to the performance classes, Option 2 and Option 3 would introduce:

A requirement that operations over water have flotation equipment, unless the rotorcraft is capable of operating with one engine inoperative or the flight is in an access lane, or no more than 2 minutes from a safe landing area and are complying with Air Traffic Control instructions.

Helicopter TAWS (HTAWS) to be fitted to helicopters conducting passenger transport and medical transport flights (excluding freight only flights) operating under the IFR and having a maximum operational seating capacity of more than 9.

Aerial work

Option 2 and 3 will consolidate the existing rules governing aerial work operations into one regulatory part, CASR Part 138. Whilst Part 138 will largely adopt the current requirements applying to aerial work operations there will be some changes that could be viewed as new requirements, these include:

Reclassification of aerial work operations; The reclassification of aerial work operations will reduce the number of aerial work purposes from the current 41 to three;

Introduce an operating certificate and remove the need for an AOC described in the background section of this document; The introduction of the Part 138 Certificate will remove the requirement for operators to obtain and maintain an AOC. The requirements of the Certificate will be graduated depending on the complexity of the operation;

Require a SMS for complex operations; an SMS will be required for complex operations that involve marine pilot transfer and certain of the more complex emergency service operations;

Require a training and checking system for complex operations that involve marine pilot transfer, and certain of the more complex emergency service operations and when aerial work is conducted in some of the more complex aircraft types;

Incorporate current exemptions into regulation; A number of aerial work operations are not permitted by the existing regulations and are only permitted by CASA issuing a general or individual exemption; and

Introduce aircraft performance requirements by risk of operation, Part 138 will introduce performance requirements for operations based on the potential for risk to third party individuals and for operations where aerial work passengers are carried. The requirements will potentially impact on a limited number of Search and Rescue, marine pilot transfer and police/ fire fighting operations using large and complex aircraft.

Impact

The major cost impacts for Option 2 and Option 3 are the organisational requirements of an Exposition, an SMS and training and checking system that will be new requirements for existing charter operators. The following sections outline the cost impact by requirement with a total estimated cost impact for each option provided in a summary section.

Impacted Operators

In order to analyse the nature of the impacted operators CASA has analysed a range of data sources with a focus on the number of pilots employed by the operator and the number of aircraft and aircraft types registered to that operator.

There are currently 786 businesses that hold an AOC to conduct RPT, charter, or aerial work operations using an aeroplane or rotorcraft. There is a significant proportion of operators with an AOC for multiple activities the key points being:

- All RPT operators also hold a charter authorisation on their AOC;
- Of the 505 operators authorised for charter operations, 460 are also authorised in at least one aerial work function; and
- There are only four aerial work operators that are authorised for the air ambulance function that do not currently hold a charter authorisation on their AOC.
- There are 240 aerial work operators (excluding ambulance function) that do not hold a charter authorisation on their AOC.

Table 1: Number of current operators

	<i>Approved operators</i>
<i>RPT</i>	37
<i>charter only</i>	45
<i>Charter and aerial work</i>	460
<i>Aerial work (ambulance, excluding charter)</i>	4
<i>Aerial work (other, excluding charter)</i>	240

Exposition

In order to meet the exposition requirement operators are likely to be able to use material from their existing manuals, however, it is likely that the operators will need to review these

manuals to confirm compliance with the new regulations and identify this compliance for CASA. However, CASA is not proposing that operators will be required to modify their existing manuals to some different form of “exposition standard”.

Feedback from organisations that have been required to prepare an entirely new exposition for CASA acceptance (including Flight Training Organisations approved under CASR Part 142 and Maintenance Organisations under CASR Part 145) is that preparing the exposition, including learning about the requirement, interacting with CASA staff and going through the application process requires the full-time effort of one person for approximately one month.

For the exposition requirement under CASR Part 119, CASA has sought to implement the requirement in a more flexible way to reduce the impact on operators when compared to the implementation of previous CASRs. For existing AOC holders with simple operations there will be the ability to provide a short document that essentially identifies the suite of manuals that constitute the operator’s exposition. Operators will need to, as a minimum, compare their existing manuals to the new regulatory requirements, make any necessary adjustments (the main common refinements will be the necessity for all air transport operators to possess an approved change management process and include a training and checking and an SMS outlined below) and then inform CASA about these refinements.

This refined approach to the implementation of the exposition requirement will reduce the amount of time that the operator needs to comply with the requirements relative to the compliance time experienced by Part 145 or Part 142 operators. In addition, the change management process will reduce the time that operators interact with CASA for manual amendments, which is approximately once per year for the average operator. Based on five days of full-time effort the exposition requirement is estimated to cost each operator approximately \$2 500 when based on a wage rate of \$500 per day (Table 2). For the more complex RPT operators it is estimated that they will require further time to develop an exposition, estimated at 20 days and a cost of \$10 000 (Table 2).

Table 2: Exposition Cost

Operator size	Full-time effort (days)	Cost per operator	Number of operators	Cost by type of operator
Current RPT	20	\$10 000	37	\$0.37m
Current charter	5	\$2 500	505	\$1.26m
Ambulance only	5	\$2 500	4	\$0.01m
Total for Option 2				\$1.64m
Aerial work	5	\$2 500	240	\$0.6m
Total for Option 3				\$2.24m

Safety Management System (SMS)

The cost impact of the requirement to develop and maintain a SMS will depend on the operator's current approach to the management of safety. All current RPT operators are required to have a SMS, and there is a significant voluntary compliance among existing charter operators with the SMS requirement. A 2011 CASA survey found that of the current charter operators 40% reported having a fully implemented SMS, 38% have a SMS under development and 22% have no SMS. In addition, analysis of a 2006 CASA surveillance tool found that approximately 45% of charter operators and 35% of aerial work operators have an SMS. Given the lack of recent evidence and to be conservative CASA has assumed that 40% of existing charter operators and 30% of aerial work operators have an SMS. This will result in 305 existing charter operators requiring to implement a SMS under Option 2 and a further 168 aerial work operators under Option 3.

The experiences of other aviation organisations developing a CASA approved SMS indicates that it would take one staff member within a small organisation approximately 1 week of full-time work to utilise the CASA material to develop the SMS structure, processes and a manual, including the associated forms and spreadsheets. For medium and large operators this initial set up would take approximately 2 weeks (Table 2). The operator would also be required to provide initial SMS training to their staff which would involve approximately 4 days of training per staff member. The total cost for SMS implementation is estimated at \$3.77m (Table 3) for Option 2. The total for Option 3 includes the additional cost for aerial work operators resulting in a total cost of \$4.87m for Option 3. The assumptions underlying the estimation method for the SMS compliance costs are outlined in Appendix 3.

Table 3: SMS set up costs

Operator size	Set up, manual, training, spreadsheet	Number of staff requiring training	Total training cost (based \$ 1000 training cost per staff member)	Total upfront cost per operator (set up plus staff training)	Number of operators	Total cost by size of operator
Single pilot	1 week valued at \$2 500	1	\$1 000	\$3 500	83	\$0.29m
Small	1 week valued at \$2 500	4	\$1,000	\$6 500	105	\$0.69m
Medium	2 weeks valued at \$5000	14	\$1 000	\$19 000	96	\$1.83m
Large	2 weeks valued at \$5 000	41	\$1 000	\$46 000	21	\$0.97m
Total for					305	\$3.77m

Option 2						
Aerial work	1 week valued at \$2 500	4	\$1 000	\$6 500	168	\$1.09m
Total for Option 3						\$4.87m

Ongoing SMS requirements

Feedback from organisations currently operating a SMS indicates that for the ongoing management of the SMS, the nominated safety manager would likely spend approximately 3 days per year to update and maintain the processes of the SMS.

For the medium to large sized charter operators there will be increased on-going time costs due to maintenance of the SMS processes (hazard/incident reporting, internal audit, safety meetings and safety investigations) which will be undertaken by the person in the safety manager role for approximately 5 to 10 days each year plus an additional 2 days of training for this SMS manager. The assumptions underlying these estimates are outlined in Appendix 2 and on a wage rate of \$500 per day which results in an annual estimated compliance cost of \$0.76m for Option 2 and \$1.09m for Option 3 (Table 4).

Table 4: SMS ongoing maintenance costs

Operator size	SMS maintenance	Training for the SMS manager	Total days per year	Cost (based on a wage rate of \$500 per day)	Number of operators	Cost by type of operator
Single pilot	1 day	1 day	2	\$1 000	83	\$0.08m
Small	2 days	2 days	4	\$2 000	105	\$0.21m
Medium	5 days	2 days	7	\$3 500	96	\$0.34m
Large	10 days	2 days	12	\$6 000	21	\$0.13m
Total for Option 2					305	\$0.76m
Aerial work	2 days	2 days	4	\$2 000	168	\$0.34m
Total for Option 3						\$1.09m

For all operators there will be a requirement to provide refresher training on the principles of the SMS and Human Factors and Non-Technical Skills (HF and NTS) to staff, which as outlined in Appendix 3 is based on one day of training per staff member. Based on the number of staff employed by operators this is estimated to cost \$1.36m annually for Option 2 and \$1.69m for Option 3 (Table 5).

Table 5: Ongoing costs for staff training in SMS, HF and NTS

Operator size	Number of staff requiring training	Annual training cost per staff member	Annual training cost per operator	Number of operators	Total cost by size of operator
Single pilot	1	\$500	\$500	83	\$0.04m
Small	4	\$500	\$2 000	105	\$0.21m
Medium	14	\$500	\$7 000	96	\$0.67m
Large	41	\$500	\$20 500	21	\$0.43m
Total for Option 2				305	\$1.36m
Aerial work	4	\$500	\$2 000	168	\$0.34m
Total for Option 3					\$1.69m

Safety benefit

These new organisational requirements are important safety enhancements and would bring the regulatory requirements for charter operators in line with current requirements for RPT operators, implement recommendations from the ATSB and comply with international standards set by the ICAO. Within Australia and internationally a leading causal factor of aircraft accidents are human factors and deficient organisational practices. This is why Australia introduced the SMS and HF & NTS requirements for RPT operations in 2009 and why other countries have adopted similar requirements for their entire passenger air transport sector consistent with this proposed option.

Training and Checking

Part 119 will require operators to provide a formal training and checking system for flight crew, either internally or contracted to an approved flight training organisation. Of the 509 AOC holders that CASA estimates will move to the air transport classification, 105 currently have a training and checking organisation approved by CASA.

Pilots of current charter aircraft of MTOW<5700kg that conduct IFR operations will be required under options 2 and 3 to undertake bi-annual training and checks of competency. Under current regulations, these pilots employed by a charter business are only required to undertake an annual check of competency, whereas there is a bi-annual requirement if the same pilot is employed by an RPT operator.

Pilots of current charter aircraft of MTOW<5700kg that conduct VFR operations will be required to undertake an annual check of competency. Under current regulations, these pilots employed by a charter business are only required to undertake a Part 61 flight review once every two years, which is the same requirement for Private Pilots. Pilots currently conducting RPT operations are required to undertake bi-annual checks.

It is assumed for this analysis that the training and checking function would need to be contracted out to a Part 142 operator. The costs associated with this would involve the

development of a training and checking system and documentation and competency checks. The costs are likely to be in the range of \$10 000 for production of the documentation based on the feedback of operators who have recently acquired one (Table 6). This will result in a \$4.04m industry wide cost when based on 404 air transport operators requiring the system under Option 2 or \$6.44m with an additional 240 aerial work operators under Option 3 (Table 6).

Table 6: Training and Checking Requirement set up costs

Operators	Training and Checking system	Number of operators	Cost by type of operator
Option 2	\$10 000	404	\$4.04m
Option 3	\$10,000	644	\$6.44m

The costs of undertaking proficiency checks of pilots will vary according to the type of aircraft. As outlined in Appendix 4 the cost is likely to be \$1015 for single engine aircraft and \$1165 for multiple engine aircraft. To be conservative CASA has assumed that the multiple engine aircraft cost will apply to all additional checks. This results in an industry cost of \$3.98m for the 404 operators under Option 2 or including aerial work operators under Option 3 will result in an estimated cost of \$4.07m (Table 7). The average number of pilots employed by the impacted operators is based on the reported pilot numbers to a CASA AOC holders survey in 2014.

Safety benefit

The increased frequency of proficiency checks will enhance safety by ensuring that pilots have demonstrated competency for their specific operations and provide a training opportunity for those pilots.

Table 7: Training and checking requirement ongoing costs

Operators	Cost per check	Number of pilots	Check cost per year	Number of operators	Cost by type of operator
Single Pilot	\$1,165	1	\$1,165	128	\$0.15m
2 to 5 pilots	\$1,165	3.5	\$4,078	168	\$0.68m
6 to 20 pilots	\$1,165	11.5	\$13,398	75	\$1.01m
20+	\$1,165	33	\$38,445	32	\$1.25m
Total Option 2					\$3.09m
Aerial work	\$1,165	3.5	\$4,078	240	\$0.98m
Total for Option 3					\$4.07m

Aeroplane specific requirements

Terrain Awareness and Warning System (TAWS)

The new requirement will impact primarily on aeroplanes weighing more than 5700kg with a piston engine(s) and aeroplanes with turbine engine(s) weighing more than 5700kg, but carrying less than 10 passengers. The other potential impact is on non-IFR that operate night VFR and current medical transport only aircraft weighing more than 5700kg.

There are currently 348 aeroplanes on the Australian aircraft register that are piston powered with an MTOW greater than 5700kg or are turbine powered with a MTOW less than 15000kg, but greater than 5700kg.

Of the aircraft on the aircraft register, 132 are registered to an operator authorised to conduct RPT, charter or air ambulance operations. As the current TAWS fitment requirement applies to aircraft operated carrying more than 10 passengers in RPT or charter it is necessary to consider the seating configuration of the aircraft. It is estimated that of the current 132 aircraft registered to an RPT or charter operator, 65 are configured with more than 10 seats and would currently be required to be fitted with TAWS. These include aircraft such as the Beechcraft 1900, Dornier 228 and 328, Embraer 120 and Fairchild Metroliner SA227 (excluding those in freight configuration).

The TAWS requirement will therefore potentially require 67 aircraft currently on the aircraft register to be fitted with TAWS in order to operate within the air transport category. CASA has contacted a sample of the operators of these aircraft and determined that there is already TAWS fitted to 49 aircraft. This results in approximately 18 aircraft that would be required to be fitted with TAWS at an estimated cost of \$21 000 per aircraft (Table 8).

For option 3, TAWS would be required for aircraft with 6 or more passenger seats. The types of aircraft that are within this category include, the piston powered AeroCommander 680, Beech 95 and Cessna 421 and the turbine powered aeroplanes that include the Cessna 208, Fairchild SA 226 and Pilatus PC 12. CASA estimates that there are approximately 323 of these types of aircraft. Based on 323 aircraft within the six to nine seat range and the 18 aircraft with MTOW>5700kg of option 2 this would result in an estimated cost impact of \$7.2m for 341 aircraft (Table 8).

Table 8: Terrain Awareness Warning System costs

	Purchase¹	Number of aircraft	Total upfront cost
<i>Option 2</i>	\$21,000	18	\$0.38m
<i>Option 3</i>	\$21,000	341	\$7.2m

1: Estimated fitment cost based on feedback from two Avionics Businesses and a small sample of operators who have recently fitted GNSS to their aircraft with ADS-B. The cost is based on a unit cost of \$12 000, \$2000 for installation, \$4000 for an Engineering Order and Supplementary Type Certificate if required and \$1000 for training of an average of 3 pilots per operator.

Weather Radar

CASA has analysed the operators and aircraft likely to be affected by the change to requirement for the fitment of weather radar. The impact of the new requirement will be on single pilot pressurised turbine powered aeroplanes that are currently not required to be fitted with a weather radar when operated in RPT, charter or air ambulance. These aircraft undertaking flights in the air transport category under option 2 will require a weather radar.

Currently there are 304 aeroplanes that are registered to an RPT, charter or ambulance flight operator that are turbine powered, pressurized and could be operated with a single pilot. The most common types of aircraft are the King Air B200, Cessna Citation, Cessna Conquest, Global Express, PC12, Lear Jet 35s and single pilot Metro Liners.

CASA has analysed a random sample of 30 of the 304 aircraft to determine if a weather radar is currently fitted. Based on information contained in the maintenance control and operations

manuals of the aircraft, or from contacting the operator, CASA estimates that 237 of the 304 aircraft are already fitted with a weather radar. For the remaining 67 aircraft it is possible some of these are already fitted with weather radar, however, to be conservative CASA has estimated that there are 67 aircraft that would be required to be fitted with a weather radar.

The cost of fitting weather radar is estimated at \$34,000 based on feedback from an avionics business that fits weather radar and from a small number of operators that have recently fitted a weather radar to their aircraft. This results in an estimated industry wide cost impact of \$2.28m for this Option 2 (Table 9). Under option 3, with an additional 323 aircraft within the six to nine seat category the estimated cost is \$13.26m (Table 9).

Table 9: Weather radar costs

	Purchase¹	Number of aircraft	Total upfront cost
Option 2	\$34,000	67	\$2.28m
Option 3	\$34,000	390	\$13.26m

1: The cost is based on a unit cost of \$25 000, \$2000 for installation, \$4000 for an Engineering Order and Supplementary Type Certificate if required and \$1000 for training of an average of 3 pilots per operator.

Weather radar provides for a significant improved ability for aircraft to avoid entering a thunderstorm or areas of severe turbulence associated with thunderstorms that in the worst scenario can lead to structural damage to an aircraft that results in an accident and loss of life.

Common requirements Options 2 and 3

Two pilots for 10 plus seat aircraft

Aircraft types impacted

The requirement for two pilots when operating a 10 plus seat aircraft will be a new requirement that will potentially impact on an aircraft with a single engine weighing less than 8618kg that are capable of carrying more than 9 passengers. Based on the current aircraft registered in Australia the only aircraft that is within this category is the Cessna 208B, known as the Grand Caravan. There are currently 71 Cessna Grand Caravans registered, with 35 registered to operators authorised for RPT, 23 to charter operators and 13 in aerial work or private.

The current RPT and aerial work operators will not be impacted by this requirement and the evidence from existing charter operators is that these aircraft are operated under the VFR and therefore would not be impacted by the requirement, or if they are operated under IFR they are already operated with two pilots.

Life Raft

A small number of businesses (approximately 20) operating 40 single engine aircraft up to 25 miles from land would be required to fit a life raft costing approximately \$4 000 per aircraft, with an approximate industry wide cost of \$160 000. These operators would also need to provide 3 yearly proficiency training and checking of staff, with the training estimated to cost \$1 100 per person, with annualised industry cost of approximately \$20 000.

The life raft requirement would increase the likelihood of passengers surviving a ditching of an aircraft. There have been a number of accidents involving the ditching of an aircraft for

which the passengers survive the initial ditching and having the life raft will increase their chances of survival.

Requirement for a first aid kit

A first aid kit will be required to be carried in each aircraft. A first aid kit meeting the regulatory requirements costs \$50. During consultation with affected aircraft operators, the evidence indicates that at least half already carry a first aid kit meeting the regulatory requirements. If half of the 1750 small aeroplanes are required to be fitted with a first aid kit costing \$50 this will have an industry wide cost of \$43 750.

Rotorcraft Impact

Helicopter Terrain Awareness and Warning System (HTAWS)

The option 2 requirement will require helicopters that have the capacity to carry 10 or more passengers that are operated within air transport under the IFR to be fitted with an HTAWS. There are currently 1404 helicopters on the Australian aircraft register that are registered to an operator currently undertaking charter or ambulance flights. Of these aircraft CASA has identified 196 that would have the potential for a maximum operator seating capacity of 10 or more, with these 196 consisting of 14 models (Table 10).

Of the 196, based on current usage approximately 84 are not used under the IFR for an air transport flight and therefore would not be impacted by this requirement. Of the remaining 112, based on industry feedback, 74 are already fitted with HTAWS, this leaves 38 helicopters, of which some may be operated in the air transport category. Based on feedback from the operators of these aircraft, approximately 26 are not used in air transport and therefore CASA estimates that approximately 12 Helicopters would require the fitment of HTAWS.

The estimated cost for the fitment of HTAWS is estimated at \$48 000 based on feedback from avionics businesses that fit HTAWS to these types of aircraft. That is a unit cost of \$35 000, installation of \$7000 including an Engineering Order and STC if required, plus training of 6 pilots at average cost of \$1 000 per pilot. Based on 12 aircraft this results in an estimated cost of \$0.58m.

Table 10: Helicopters with a seating capacity of 10 plus

Model	Number	Seats	Used in air transport IFR	HTAWS fitment
<i>Augusta AW139</i>	45	15	Yes	100%
<i>Bell 412</i>	30	14	Yes (but MOPSC <= 9)	
<i>Kawasaki BK117</i>	29	10	Yes (but MOPSC <= 9)	
<i>Sikorsky S-92</i>	22	19	Yes	100%
<i>Sikorsky S-76</i>	14	12	some	
<i>Bell 212</i>	12	15	some	
<i>Bell 205</i>	12	14	No	
<i>Eurocopter EC225</i>	10	19	No	

<i>Eurocopter AS365</i>	11	12	Yes (but MOPSC <= 9)	
<i>Bell 214B</i>	3	14	No	
<i>Augusta AW189</i>	3	19	Yes	100%
<i>Eurocopter AS.332L</i>	2	19	Yes	100%
<i>Eurocopter EC 175</i>	2	16	Yes	100%
<i>Bell 421EPI</i>	1	13	Yes	

Performance classes

The introduction of performance requirements for rotorcraft formalise the current requirements specified in the Rotorcraft Flight Manual into regulation. The regulations replace the current policy letter requiring operators to insert a performance supplement in their operational documentation. There are likely to be no additional costs as the new legislative requirement will replace an existing policy letter.

Overall impact

Costs

The overall cost impact for the changes is annualised over a 10-year period to be \$6.51m for Option 2 and \$10.35m for Option 3 (Table 11).

The impact of Option 2 on a typical business is primarily based on the requirement for an existing business undertaking charter flights to implement an SMS and training and checking for their pilots, indeed over 90% of the estimated \$6.51m cost is attributed to these two requirements. Option 3 includes additional costs primarily due to broader application of requirements for SMS, training and checking, TAWS and weather radar.

For a small charter operator the upfront cost is estimated at \$6500 to implement a SMS and \$10 000 to implement training and checking. In order to see these costs in context, CASA has estimated the existing compliance costs with the initial AOC requirements to be in order of \$70 000 for a typical business (Appendix 2).

The ongoing compliance cost estimated for a small operator is \$2000 for SMS and \$2000 for training and checking. To put this compliance cost in perspective, CASA has estimated the current compliance cost for these operators to be approximately \$23 000 (Appendix 2).

Table 11: Total Cost for Option 2 and Option 3 by requirement

<i>Requirement</i>	Option 2		Option 3	
	One off upfront cost	Annualised cost	One off upfront cost	Annualised cost
<i>Exposition</i>	\$1.64m	\$0.16m	\$2.24m	\$0.22m
<i>SMS (upfront)</i>	\$3.77m	\$0.38m	\$4.87m	\$0.49m
<i>SMS (annual maintenance)</i>	\$0.76m	\$0.76m	\$1.09m	\$1.09m
<i>SMS (annual training)</i>	\$1.36m	\$1.36m	\$1.69m	\$1.69m
<i>Training and checking manual</i>	\$4.04m	\$0.40m	\$6.44m	\$0.64m

<i>Training and checking (annual)</i>	\$3.09m	\$3.09m	\$4.07m	\$4.07m
<i>TAWS</i>	\$0.38m	\$0.04m	\$7.161m	\$0.72m
<i>HTAWS</i>	\$0.58m	\$0.06m	\$0.58m	\$0.06m
<i>Life Raft fitment (upfront)</i>	\$0.16m	\$0.02m	\$0.16m	\$0.02m
<i>Life Raft training (annual)</i>	\$0.02m	\$0.02m	\$0.02m	\$0.02m
<i>First Aid Kit</i>	\$0.04m	\$0.00m	\$0.04m	\$0.00m
<i>Weather radar</i>	\$2.28m	\$0.23m	\$13.26m	\$1.33m
<i>Total</i>		\$6.51m		\$10.35m

Appendix 3 provides further information on how the cost estimates were derived for the safety management system and training and checking requirements.

Safety benefits

Options 2 and 3 will reduce the risk of accidents. As highlighted by the ATSB the cause of accidents is difficult to attribute to a single factor, therefore it is difficult to make estimations as to the extent of the risk reduction. Individually, the equipment fits will reduce the risk of accidents and/or mitigate the extent of the injuries:

- TAWS will reduce the risk of controlled flight into terrain accidents
- Weather radar will reduce the risk of accidents from pilots flying into adverse weather conditions
- Life raft improve the chances of survival should an aircraft ditch

The requirements for an SMS will address the organisational settings that provide a mitigation against organisational factors that can attribute to accidents.

The increased frequency of proficiency checks will enhance safety by ensuring that pilots have demonstrated competency for their specific operations and provide a training opportunity for those pilots.

In terms of the scale of the potential safety benefits, the ATSB estimates that each year for charter operators there are approximately 15 accidents, resulting in 1.6 fatalities, 2 serious injuries and 15 written-off or substantially damaged aircraft. Using a value of statistical life of \$4.5m, a serious injury value of \$0.26m and an average aircraft value of \$1m¹, these accidents result in a \$22.5m cost to society each year.

The US experience provides an illustration of the possible safety improvements for establishing common safety standards of charter and scheduled services. In the US scheduled (Part 135 Commuter) and charter operators (Part 135 On Demand) are required to meet the same regulatory standards. In the US the charter accident rate is only 1.2 times higher than

¹ Based on the 2014 VSL published by OBPR (PM&C 2014) and indexed by CPI. Serious injury value of 5.75% of VSL based on Table 2-2 (FAA 2004). Aircraft value is a CASA assumption based on Table 5-5 (FAA 2004).

the scheduled service accident rate, instead of 4.5 times higher as is currently the case in Australia.

If imposing the same regulatory standards on charter operators in Australia was to reduce the charter accident rate so that it was only 1.2 times higher than the scheduled service accident rate this benefit would amount to a 75% reduction in the charter accident rate. With the average annual cost of charter accidents valued at approximately \$22.5m, this equates to a safety benefit of \$16.9m.

Consultation

Formal Consultation

CASA has developed this regulatory proposal working with the aviation industry over a five-year period. CASA formed an industry working group consisting of affected businesses and associations representing those businesses and pilot associations to assist in reviewing the existing regulations and proposing revised regulations.

A notice of proposed rule-making was published for each Regulatory Part outlining the broad changes over the current operational parts and the proposed terminology to be used in the regulations in order to seek feedback from stakeholders.

In response to the consultation CASA made a number of changes to the proposed regulatory requirements. The initial consultation proposed TAWS and weather radar applicability requirements consistent with Option 3, that is aircraft carrying 6 or more passengers. In response to the initial consultation, CASA revised the requirements to base the requirement on an MTOW > 5700kg, with this requirement consulted on in 2018.

Informal consultation

CASA has presented the draft options to affected businesses through informal consultation. Some of the key comments made during this consultation from affected businesses were that:

- Charter businesses are operating in a difficult market place with many not profitable
- The proposed option would impose a cost on charter businesses which may result in some choosing to withdraw from the charter flight industry
- Strict liability offences in the regulations is unnecessary (CASA has responded to industry comments about strict liability by publishing an explanation of strict liability provisions and how they are administered (treated) by CASA).

Strict liability offences arise in a regulatory context where, for reasons such as public safety and the public interest in ensuring that regulatory schemes are observed, the sanction of criminal penalties is justified. They also arise in a context where a defendant can reasonably be expected to know what the requirements of the law are, and the mental, or fault, element can justifiably be excluded.

The rationale is that people who owe general safety duties should be expected to be aware of their duties and obligations.

For strict liability offences in this regulation, the prosecution will have to prove only the conduct of the accused. However, where the accused produces evidence of an honest and reasonable, but mistaken, belief in the existence of certain facts which, if true, would have made that conduct innocent, it will be incumbent on the prosecution to establish that there was not an honest and reasonable mistake of fact.

The inclusion of strict liability in certain offences in this regulation is consistent with the principles set out in the Attorney-General's *Guide to Framing Commonwealth Offices, Infringement Notices and Enforcement Powers* (September 2011) and the Sixth Report of 2002 of the Senate Standing Committee for the Scrutiny of Bills, *Application of Absolute and Strict Liability Offences in Commonwealth Legislation* (26 June 2002).

Implementation and Review

The changes will be formally implemented by making of Parts 119, 121, 133, 135 and 138 in the *Civil Aviation Safety Regulations 1998* and an individual Manual of Standards for each of Parts 121, 133, 135 and 138. The commencement date will be 25 March 2021, which will allow operators approximately two years to prepare for the new rules. CASA will be publishing transitional arrangements in 2019 that address extended compliance periods between 2022 and 2024 for the provisions related to new aircraft equipment (that includes the requirements for weather radar and TAWS), new training and checking and new SMS requirements.

Prior to implementation of the new Parts, CASA plans to conduct an extensive education, training and communication program for both affected industry personnel and internal staff. This will be supplemented by the development and distribution of appropriate support tools to assist with the introduction of the initiatives, including sample materials that will reduce operator costs to update their documentation.

Review

CASA will monitor and review the new regulations on an ongoing basis during the transition phase, with careful consideration given to the feedback from the regulated organisations and their members and CASA will make any necessary changes to internal processes or the regulatory requirements.

The key information that CASA will be collecting during the transition is feedback from the regulated organisations as to the reasonableness of the requirements and whether the requirements reflect the original intent.

An important way that CASA will monitor the effectiveness of regulations, including safety performance, is surveillance of the organisations to ensure that they are implementing their processes documented in their Exposition or Manuals.

CASA will continue to monitor accident and incident data, including from the ATSB. This data will help inform any future changes required to the regulations, CASA procedures or the manuals or expositions of organisations.

The regulatory changes will be subject to a post-implementation review in 2025, which is one year after the end of the compliance date for all provisions. Prior to 2025 there will be on-going monitoring of the performance of the charter operators to assess how the new regulations are performing. This monitoring will be undertaken through the CASA field officers and CASA's industry oversight programs.

Conclusion

Australia has historically applied a lower regulatory safety standard to charter flights compared to RPT flights. The basis for a lower standard is difficult to sustain with evidence that charter flights can operate the same types of aircraft carrying the same number of passengers on the same routes. In effect the only difference is whether the flight is scheduled and generally available to the public.

Recent operational experience has highlighted the higher accident rate for charter flights relative to RPT flights, with a significant difference in the smaller aeroplane air transport industry sector where the disparity is 11 to 1. Overall, the charter accident rate is approximately 4.5 times higher than the comparable scheduled service accident rate. Whilst part of the higher accident rate could be explained by the differences in the operations involved, the relative accident rate difference is not as dramatic in countries that regulate the two operations the same. In the US where charter and RPT services are regulated the same the charter accident rate is only 1.2 times higher.

A key motivating factor for the creation of the air transport category is to address the relatively high accident rate for charter operations.

CASA is proposing to create a single air transport category including both current RPT and charter services. The standards for air transport would generally be the current standards for RPT services and therefore they will be relatively unaffected by the new Parts.

Approximately 500 charter businesses would be required to:

- Implement a safety management system
- Increase the frequency of pilot training and competency checks

Option 2 is the preferred option because the requirements are consistent with International Standards and recommendations from the ATSB, with a lower annualised compliance cost impact when compared to Option 3. CASA estimates that the 10-year annualised cost impact of the proposed changes under Option 2 is \$6.51m.

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Appendix 1: Explanation of minor regulatory changes

Aerial work changes under CASR Part 138 that will not be a significant impact

Reclassification of operations

The reclassification of aerial work operations will reduce the number of aerial work purposes from the current 41 to three. For new applicants or operators with multiple authorisations the reduction in the number of the operational categories will reduce the number of categories that require separate approval from CASA. This will provide an administrative saving for these affected operators.

Currently aerial work operators would require a specific CASA assessment to include an additional aerial work purpose on their AOC. The new three categories will potentially result in a simpler approval process for operations within a specific aerial work category, as the risk mitigating aspects of the category have been highly standardised.

Part 138 Certificate

The introduction of the Part 138 certificate will remove the requirement for operators to obtain and maintain an AOC. The requirements of the certificate will be graduated depending on the complexity of the operation. Complex operations, such as dedicated police, SAR and marine pilot transfer operations, will be required to meet comparable requirements to current AOC requirements, so in effect the Part 138 certificate will not be a significant change for these types of operations.

However, for non-complex operations the Part 138 certificate will potentially provide a simplification in terms of obtaining an initial certificate because CASA will not be required to impose the requirements specified in the *Civil Aviation Act* for the issue of an AOC. For example, entry control will potentially (dependant on the experience and previous history of the nominated person), not involve a specific assessment of the head of operations, rather the nominated person for this position could just be approved by CASA based on their history of operations.

The operating certificate will also open the possibility of a generic CASA approved or developed operations manual for specific types of operations, for example an acceptable means of compliance (AMC) based mustering manual could be developed by the relevant association and assessed by CASA once. After this initial CASA assessment of the operating procedures these procedures could then be adopted by operators at low cost and require minimal CASA assessment.

SMS

A safety management system will be required for complex operations that involve marine pilot transfer and more complex emergency service operations. This requirement will not be a significant impact because a larger majority of the current operators already have a SMS in place that would meet the proposed requirements. Many operators have reported to CASA that customers through formal contract terms require a SMS or that there are insurance or other business benefits from having a SMS.

Training and checking

Training and checking will be required for complex operations that involve marine pilot transfer, and more complex emergency service operations and when aerial work is conducted

in more complex aircraft types. This requirement will not be a significant impact because the current operators undertaking these types of operations in most cases are required to already undertake training and checking of their pilots that would meet the proposed requirements.

Incorporate current exemptions

Some aerial work operations are required to obtain an approval or exemption, for example, external sling load, and most aerial work operations which require operations at low levels below that specified in CAR 157 of the Civil Aviation Regulations.

Part 138 will incorporate the current exemptions into legislation by adopting the conditions that are currently specified in the exemptions in a Manual of Standards. This will mean that there will be no change in the requirements that operators must meet in order to undertake the operation, however, the incorporation of the exemptions into Part 138 could provide a cost saving, particularly where an individual exemption was previously needed for the operation.

In the above situation operators will no longer incur the cost of applying for an exemption and there is likely to be a reduction in the number of CASA assessments required for individual operations.

Performance requirements

Part 138 will introduce performance requirements for operations based on the potential for risk to third party individuals and for operations where aerial work passengers are carried. The requirements will potentially impact on some high-end SAR, marine pilot transfer, police and firefighting operations.

For rotorcraft, the impact for some operations will be minimal because the current operations are already undertaken in types of rotorcraft that will meet the performance requirements, however in other cases this impact may require a reconsideration of how the operation is managed or resourced from an equipment perspective. There may be a limited number of police operations involving low-level operations over populous areas that are currently undertaken in a single-engine rotorcraft that may require the adoption of a more conservative operational strategy or possibly the use of a multi-engine aircraft.

Appendix 2: Current Compliance Costs for Commercial Operators

Section 27 of the *Civil Aviation Act 1988*, read with regulation 206 of the *Civil Aviation Regulations 1988* requires RPT, charter and aerial work operators to hold an AOC. In order to obtain and maintain an AOC the significant requirements are:

- Develop an Operations Manual. An important function of the manual is to outline how the operator will comply with the relevant regulatory requirements and be used by staff as a reference for decision making and to outline what processes they must follow. An operations manual can be in order of 300 to 400 pages.
- Appoint key personnel, currently a CEO, Head of Flying Operations and if required Head of Aircraft Airworthiness and Maintenance Control.
- CASA interviews with key personnel and a check flight with the CEO and Head of Flying Operations.
- Comply with the aviation legislation
- Submit variations to the operations manual
- Ensure pilot flight reviews are undertaken as required by CASR Part 61 and competency checks or training specified in the operations manual.
- Comply with pilot flight and duty limits to manage fatigue.
- Undertake aircraft maintenance, which in the case of current charter aircraft requires an inspection after 100 hours of operation.
- Engine overhaul based on the manufacturer specified requirements, typically after every 2000 hours of flying.

CASA has surveyed a number of businesses that have recently obtained an AOC, or varied their existing AOC or have been subject to ongoing surveillance. The purpose of the survey was to determine the time and resource cost involved in complying with the AOC requirements. The major findings were:

- The average time to prepare the manual was approximately 12 weeks of full-time work for one person
- Some businesses contracted out the preparation of the operations manual at an approximate cost of \$10 000
- 2 days to complete other associated paperwork with the application, including the application form
- 1 day for a CASA site visit and inspection of premises
- 1 day for each interview of key personnel
- 1 day for a check flight with the Head of Flying Operations
- 10 days for other miscellaneous requirements, including corresponding with CASA
- CASA assessment fees of \$12 000
- 1 day to complete associated paperwork for aircraft registration, including the initial application form and compiling supporting documentation

Table A1 provides the estimated costs associated with initial AOC application process with the estimated costs based on a wage rate of \$500 per day. For the issue of an initial AOC the compliance cost is estimated at approximately \$70 000.

Table A1: Current Compliance Costs for an Initial AOC

	Time to complete	CASA fees	Total cost
<i>Initial approval</i>			
<i>AOC application</i>	6 to 12 months	\$12 000	\$12 000
<i>Operations Manual</i>	3 months		\$45 000
<i>Interactions with CASA</i>	2 weeks		\$10 000
<i>Interview with Chief Pilot</i>	1 day		\$500
<i>Interview with CEO and HAAMC</i>	1 day		\$500
<i>Inspection of premises</i>	1 day		\$500
<i>Check flights</i>	1 day		\$1 000
<i>Aircraft registration</i>	1 day	\$130	\$390
<i>Total</i>			\$69 890

Ongoing requirements

The compliance costs associated with maintaining an AOC include ensuring that any change to the operational procedures of the business that requires a change to operations manual is submitted to CASA and approved. Feedback from AOC holders is that the time associated with varying the operations manual would take approximately 4 hours and require the payment of \$300 in CASA fees, resulting in an annual cost of \$550 for one change per year (Table A2).

A CASA audit of the AOC holder generally involves an onsite inspection, which is typically completed in one day with a further day of preparation. If the AOC holder was to be audited once every two years this would result in an annualised cost of \$500.

In order to ensure that the pilots employed by the AOC holder remain current they must undertake a flight review and a review for any endorsement held by the pilot that is used for the operations of the AOC holder, for example if the pilot undertakes aerial application for the AOC holder, this endorsement must be maintained with a review once per annum.

The frequency of flight reviews for pilots depend on the type of aircraft operation. For a single engine pilot in a small aeroplane or helicopter operating day VFR this would require a flight review once every 2 years at an estimated cost of \$1015 (Table A2). For the pilot operating a multiple engine aircraft the flight review is once per year at an estimated cost of \$1165 (Table A2). Most pilot ratings, including the commonly held instrument rating, require a review once per annum in order to maintain currency and would typically be done as part of pilot a flight review. Therefore if the pilot is authorised to operate a single engine aeroplane and holds an instrument rating, these pilots would be required to have an annual Instrument Proficiency Check.

Whilst not part of the current review of the requirements applying to AOC holders, the aircraft airworthiness standards impose a cost on operators. A charter operator must undertake 100 hourly inspections to maintain a Certificate of Airworthiness. The typical cost of 100 hourly inspection is \$2 000.

In addition, the maintenance requirements applying to charter aircraft require the engine to be overhauled according to the manufacturer's time limits, typically every 2000 hours. The engine overhaul costs are typically in the order of \$50 000 (Table A2).

Table A2: Ongoing AOC holder Compliance Costs

<i>Ongoing requirements</i>	Time to complete	CASA fees	Total cost	Annualised cost
Variations to manuals	0.5 days	\$300	\$250	\$550
Comply with audits	2 days		\$1 000	\$500
Pilot flight reviews (single engine, once every 2 years)	1 day		\$1 015	\$500
Pilot flight reviews (multi-engine, once per year)	1 day		\$1 165	\$1 165
Aircraft maintenance (100 hourly inspection in charter)	1 day		\$2 000	\$8 000
Engine overhaul every 2000 hours	1 week		\$50 000	\$12 500

The total cost of ongoing compliance will vary according to the number of pilots employed, hours flown and number of aircraft operated. For a current AOC charter operator employing 3 pilots, operating 2 single engine aircraft with a total of 1500 flight hours annual, the annual cost would be approximately \$46 128 (Table A3). This currently assumes that all operators employ multiple engine rated pilots.

Table A3: Compliance Cost by size of Operator

Operators	Number of pilots	Number of Aircraft	Variation to manuals	Comply with audits	Flight Reviews	Aircraft Maintenance	Engine Overhaul	Total
Single Pilot	1	1	\$550	\$500	\$1 165	\$8 000	\$12 500	\$22 715
2 to 5 pilots	3.5	2	\$550	\$500	\$4 078	\$16 000	\$25 000	\$46 128
6 to 20 pilots	11.5	5	\$550	\$500	\$13 398	\$40 000	\$62 500	\$116 948
20+	33	10	\$550	\$500	\$38 445	\$80 000	\$125 000	\$244 495

Appendix 3: Cost Impact for implementing and maintaining a Safety Management System

Upfront Costs

For small charter organisations employing less than 20 safety sensitive staff, it is anticipated that there is a requirement for the organisation to develop, implement and maintain a safety management system, and a program for training and assessing operational staff in human factors principles and non-technical skills. Training time for initial staff SMS induction training would be approximately 4 hours, with a further one to two days to set-up SMS process forms and spread sheets. A typical HF & NTS course would run for approximately 2 days. Therefore, the total SMS and HF & NTS training implementation for the organisation would be approximately five days.

For a medium-sized charter organisation employing between 20 to 50 personnel, the training time/costs would be similar to the smaller organisations, however, there would be an additional 2 days required for the safety manager/designate to ensure SMS process forms and spread sheets are fully integrated within the organisation's SMS. Induction would be ½ a day for all personnel, plus a 2-day HF & NTS course for all safety sensitive staff. Total SMS and HF & NTS training requirements for the organisation would be approximately 6 ½ days (1/2 – SMS induction and 2 – HF & NTS for all personnel plus 4 days for the safety manager/designate).

For larger charter organisations, employing more than 50 staff, the time cost will be similar to the small/medium organisations, however, the development and implementation of the SMS would take approximately 2 further days for the safety manager/department, plus an extra half a day to cover initial SMS induction training for all safety sensitive staff. Therefore, total SMS and HF & NTS training requirements would be approximately 9 days (2 x ½ day – SMS induction courses and 2 days – HF & NTS to cover all personnel plus 6 days for the safety manager/department).

On-going Costs

For the smaller charter organisations there will be an on-going requirement to provide staff with refresher training to cover both the organisation's SMS and HF & NTS principles and processes. This could be accomplished by 1 day per year for refresher training covering SMS and HF & NTS for all personnel. An additional 2 days per year is required to maintain/amend SMS policies and processes for the safety manager/designate. Therefore, the on-going requirement for SMS and HF & NTS would be approximately 3 days per year.

For the medium-sized charter organisations there will be increased on-going time costs due to maintenance of the SMS processes (hazard/incident reporting, internal audit, safety meetings and safety investigations) which will be undertaken by the person in the safety manager role. Approximately 5 to 10 days per year would be required by the safety manager/designate to maintain the SMS plus additional induction training as required, and approximately 1 day per year for all safety sensitive staff to cover SMS and HF & NTS refresher training requirements.

For the larger charter organisations there will be additional full-time time and costs for the safety department to cover the on-going maintenance and amendment of SMS processes including: safety reporting processes, safety meeting coordination, safety investigations similar to the medium organisations, however, larger in scale. The on-going training time/cost for the safety department to cover SMS and HF & NTS induction and refresher training would be in the order of 24 days per year (based on 2 days per month, noting

probable staff turn-over), as well as all safety sensitive staff having 1 day per year to cover refresher training for SMS and HF & NTS principles and processes.

Assumptions

Small to medium organisations would most likely have a person in the safety manager role as a part-time appointment (a secondary duty) to maintain the organisation's SMS procedures, policies and processes

HF & NTS training for the larger organisations would be carried out internally

SMS induction and refresher training is carried out internally for all organisations

Refresher training is an annual event for all safety sensitive personnel

Time and cost considerations are approximate only, noting that each organisation will have SMS training and process requirements specifically 'tailored' for their operations

Appendix 4: Cost of flight reviews and operator proficiency checks

The cost of flight reviews is determined by the aircraft operating costs and the opportunity cost of staff time.

The typical operating cost for a single engine aircraft weighing less than 5700kg such as a Cessna 172 is approximately \$250 per hour. For multi-engine aircraft weighing less than 5700kg, the weighted average operating cost is approximately \$350 per hour.

The other significant cost of the review is the opportunity cost for the two pilots valued at \$80 per hour, which represents the hourly rate of a \$135 000 salary.

Table 4: Flight Review costs for single engine aircraft <5700kg

<i>Aircraft based cost components</i>	
Aircraft operating costs per hour ¹	\$250
Value of 1.5 hours of aircraft use	\$375.0
Pilot time ²	640
Total review cost	\$1 015.0

1: Average costs obtained from a survey of affected aircraft operators

2: Four hours for two pilots valued at \$80 per hour

Table 5: Competency Check costs for multi-engine aircraft <5700kg

<i>Aircraft based cost components</i>	
Aircraft operating costs per hour ¹	\$350
Value of 1.5 hours of aircraft use	\$525.0
Pilot time	640
Total review cost	\$1 165.0

1: Average costs obtained from a survey of affected aircraft operators

2: Four hours for two pilots valued at \$80 per hour.

Statement of Compatibility with Human Rights

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

Civil Aviation Safety Amendment (Part 121) Regulations 2018

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 121) Regulations 2018* (the Regulations) amends the *Civil Aviation Safety Regulations 1998* (CASR) to introduce a new Part 121 which provides a regulatory framework for the Australian air transport operations in larger aeroplanes.

Subpart 121.A prescribes the application of Part 121, approvals made by the Civil Aviation Safety Authority (CASA) for Part 121 and for the issue of a Manual of Standards (MOS) for Part 121.

Subpart 121.C prescribes the framework for the required documents, reporting and recording of defects and incidents, search and rescue services and associated equipment and other miscellaneous requirements for operations regulated by Part 121.

Subpart 121.D prescribes the operational procedures for the operations regulated by Part 121. This includes operational procedures for general flight limitations, flight preparation, flight planning, flight rules, aerodromes, fuel requirements, passenger transport and medical transport-specific requirements, instruments, indicators, equipment and systems.

Subpart 121.F prescribes the performance requirements for aeroplanes used in operations regulated by Part 121.

Subpart 121.J prescribes the weight and balance requirements for aeroplanes used in operations regulated by Part 121.

Subpart 121.K prescribes the instruments, indicators, equipment and systems requirements, as well as when an aeroplane used in operations regulated by Part 121 can be flown with inoperative instruments, indicators, equipment or systems.

Subpart 121.N and Subpart 121.P provide the regulatory framework for, respectively, flight crew and cabin crew for operations regulated by Part 121.

Subpart 121.V prescribes the requirements for emergency evacuation procedures for aeroplanes used in operations regulated by Part 121.

Subpart 121.Z prescribes requirements for use of certain single-engine aeroplanes in operations regulated by Part 121.

Non-compliance with a number of the stated requirements in Subparts 121.C to 121.Z is an offence under the Regulations.

Human rights implications

The Regulations engage the following rights:

- the right to a fair trial and fair hearing in Article 14 of the *International Covenant on Civil and Political Rights* (ICCPR)
- the right to protection against arbitrary and unlawful interference with privacy in Article 17 of the ICCPR.

The right to a fair trial and fair hearing: presumption of innocence

Article 14 of the ICCPR provides that in the determination of a criminal charge, everyone shall be entitled to a fair and public hearing by a competent, independent and impartial tribunal established by law. Further, in criminal proceedings, people are entitled to a range of protections including minimum guarantees as set out in Article 14(3) and following of the ICCPR.

The presumption of innocence in Article 14(2) imposes on the prosecution the burden of proving the charge and guarantees that no guilt can be presumed until the charge has been proven beyond reasonable doubt. For the charge to be proven beyond reasonable doubt, the legal and evidential burden is on the prosecution.

Strict liability offence provisions

81 offence provisions specified in the Regulations are strict liability offences.

Strict liability offences engage the presumption of innocence through the imposition of liability without the need to prove fault. A strict liability offence will not impermissibly limit the right to the presumption of innocence if the offence pursues a legitimate aim and is reasonable, necessary and proportionate to that aim.

Nature of strict liability provisions

Subpart 121.C provides strict liability offence provisions for the general regulation of Part 121 operations, including:

- permitted categories of aeroplanes
- the manner in which an aeroplane is operated during specified kinds of flights, and non-compliance with the aeroplane's flight manual
- the requirement for an operator to have a minimum equipment list for the aeroplane
- the requirement to make prescribed checklists available to crew members
- the requirement to make available necessary parts of the exposition to a crew member and to assign crew duties
- requirements to carry, and in certain cases make accessible, prescribed kinds of documents
- maintenance of journey logs, passenger lists and other operational documents for flights
- requirements for information relating to search and rescue services and emergency and survival equipment
- proscribing certain crew activities during specified phases of flight, and controlling access to the cockpit

- competence and duties of ground support personnel.

Subpart 121.D provides strict liability offence provisions for the regulation of operational procedures for flights of an aeroplane, including:

- requirements for flight preparation and planning
- flight rule requirements relating to altitude minima
- requirements in relation to aerodromes used for Part 121 operations
- fuel and oil requirements
- safety rules for passengers and cargo
- requirements relating to polar operations and exposure to cosmic radiation
- assignment of cabin crew seats
- the requirement for CASA approval of prescribed 3D instrument approach operations.

Subpart 121.F provides strict liability offence provisions for the regulation of performance of aeroplanes used in Part 121 operations, including:

- requirements for aeroplane performance data
- take-off and landing weights and their calculation
- requirements for use of computerised performance data systems not fitted to aeroplanes.

Subpart 121.J provides strict liability offence provisions for the regulation of weight and balance requirements of aeroplanes used in Part 121 operations, including:

- the loading of aeroplanes
- information and documents relating to weight and balance
- requirements for use of computerised weight and balance systems not fitted to aeroplanes.

Subpart 121.K provides a strict liability offence regulating instruments, indicators, equipment and systems.

Subparts 121.N and 121.P provide strict liability offence provisions regulating crew members on operations under Part 121, including:

- various requirements for pilots, flight engineers, cabin, and air crew, and medical transport specialists, including requirements in relation to crew composition, number, age, language abilities, training and checking, recent experience and competence
- assignment to duty of pilot in command, the requirements of the position, and delegation of duties to relief pilots in command
- assignment to duty of certain cabin crew members, and additional cabin crew requirements for operators who use more than 3 aeroplane types
- requirements for use of simulators for training and checking of flight crew.

Subpart 121.Z provides strict liability offence provisions regulating the use of certain single-engine aeroplanes in Part 121 operations, including in relation to:

- required number of pilots in flights under the instrument flight rules
- engine condition monitoring
- terrain awareness and warning systems
- the proscription of flights under the visual flight rules at night.

Reasonableness, necessity and proportionality

The strict liability offences relate to administrative and safety requirements that must be adhered to by regulated individuals and operators involved in the aviation industry to ensure the integrity of the aviation safety system. The imposition of strict liability offences in the amendments limits the right to the presumption of innocence. However, the limitation is necessary to ensure that operators and pilots in command of aircraft, and other listed individuals, are subject to appropriate safety-related obligations in relation to operations under Part 121. The limitation also ensures that CASA retains oversight over such persons as is necessary to ensure the safety of air navigation.

Further, the defence of honest and reasonable mistake, as set out in section 9.2 of the *Criminal Code Act 1995*, will be available to the defendant in all offence provisions. If relied upon, this is an evidential burden on the defence to prove, on the balance of probabilities, that the accused had an honest and reasonable mistaken belief of fact which, if those facts existed, would not have constituted an offence.

The strict liability offences in this instrument are considered reasonable, necessary and proportionate to the objective of ensuring aviation safety. The offences are regulatory in nature, in other words their aim is to insist on reasonable compliance with regulated safety standards by those conducting activities which are otherwise intrinsically or potentially unsafe unless such high standards of compliance are met. Not having to prove fault in the relevant circumstances aims to provide a strong deterrent. To this extent, and in this context, they are consistent with other safety-focussed regulatory regimes and do not unreasonably or impermissibly limit the presumption of innocence. The offences are designed to achieve the legitimate objective of ensuring the safety and integrity of the aviation industry and the public. On the basis of the material above, the strict liability offences are considered reasonable and necessary for the purposes of the Act.

The offences are also proportionate in that they fall at the lower end of the penalty scale, not exceeding 50 penalty units, and are otherwise consistent with the guidance set out in *A Guide to Framing Commonwealth Offences, Infringement Notices and Enforcement Powers*, September 2011 (the Guide).

Reversal of burden of proof provisions

A total of 6 offence provisions impose a reversed burden of evidential proof on the accused. The nature of these provisions can be found in the table below.

The reversal of the evidential burden of proof only applies to an exemption from an offence provision, once the prosecution discharges the legal and evidential burden of proof in establishing the offence. The burden of adducing or pointing to evidence must only suggest a reasonable possibility that the matter exists or does not exist, in accordance with subsection 13(3)(6) of the Criminal Code.

Aim

The aim of CASA and its regulatory framework, including Part 121 of CASR, is to uphold aviation safety by prescribing the conduct of persons involved in civil aviation operations.

The provisions reversing the burden of proof pursue this aim as they are each attached to a defence to a strict liability offence in circumstances where the defence relates to a safe aviation practice.

Reasonableness, necessity and proportionality

The Guide states that provisions that reverse the evidential burden of proof are permissible for either or both of the following justifications:

- the relevant information or evidence is peculiarly within the knowledge of the defendant
- it is significantly more difficult and costly for the prosecution to disprove the matter than for the defendant to establish the matter.

Each reversal of onus provision in the Regulations affords a defendant the opportunity to adduce evidence of specific aviation practices, of a kind contemplated by the offence provisions, that are safe despite contravening the general rule in the offence provision. For the reasons set out below, each reversal of onus provision is considered reasonable, necessary and proportionate.

The table below details the provisions giving rise to a reversal of the evidential burden of proof, describes the factual matter that is the subject of the reversal of the burden, and sets out the justification for the reversal of the burden.

The factual matters may not be the subject of documentary evidence, for example because they relate to matters of judgement by the defendant, or are matters relating to a particular flight that are subject to actions only. In each case the matter is of a nature that is significantly easier for the defendant to raise, for example because it relates to information within the control of the defendant, and/or is a matter peculiarly within the knowledge or control of the defendant.

In addition:

- the offence provisions to which a defence with the reversed onus is provided carry relatively low penalties, not exceeding 50 penalty units
- the proscribed conduct relates to the safe operation of aircraft or the integrity of the regulatory scheme for the safety of air navigation, and therefore relates to matters that potentially pose a danger to public safety
- CASA expects that in each case the facts in relation to a defence can be readily and cheaply provided by the defendant.

For example, in items 1, 2 and 3 of the table, the matter is that the relevant information is recorded in another document kept by the operator or readily available to the operator from another source. This matter is documented at a place that may be unknown to, and not identifiable by, CASA. Further, they are matters that are within the knowledge of the defendant.

Similarly, items 4 and 5 of the table relate to matters specific to particular operations that may not be the subject of a regulatory document known to CASA and in circumstances that requiring the creation of documentary evidence of the matter is considered unnecessarily onerous regulation. However, those matters are within the knowledge of the defendant.

Additional justification for some specific provisions is detailed in the table.

Exemptions to offences, and justification of the reversed burden of proof		
Item	Provision description	Justification for reversal of evidential burden of proof
1	Subregulation 121.105(6) provides that subregulation 121.105(1), (2) and (4) do not apply to the operator or the pilot in command in relation to information required to be included in the journey log under each subregulation if, by the time it is required to be recorded, the information is recorded in another document kept by the operator or readily available to the operator from another source.	Whether the information is recorded in another document kept by the operator, or that is readily available to the operator, is peculiarly within the knowledge of the defendant and significantly more difficult and costly for the prosecution to disprove than for the defendant to establish.
2	Subregulation 121.110(3) provides that subregulation 121.110(1) does not apply to the operator in relation to information mentioned in subregulation (1) if, by the time it is required to be recorded, the information is recorded in another document kept by the operator, or readily available to the operator from another source.	Whether the information is recorded in another document kept by the operator, or that is readily available to the operator, is peculiarly within the knowledge of the defendant and significantly more difficult and costly for the prosecution to disprove than for the defendant to establish.
3	Subregulation 121.175(4) provides that subregulation 121.175(1) or (3) does not apply to the operator or the pilot in command in relation to information to be included in the operational flight plan mentioned in each subregulation if, by the time it is required to be recorded, the information is recorded in another document kept by the operator, or readily available to the operator from another source.	Whether the information is recorded in another document kept by the operator, or that is readily available to the operator, is peculiarly within the knowledge of the defendant and significantly more difficult and costly for the prosecution to disprove than for the defendant to establish.
4	Subregulation 121.635(5) provides that subregulation 121.635(1) does not apply if a requirement mentioned in subregulation (2) or (3) (as the case requires) is not met for the flight, but the flight is operated with a reduced number of cabin crew members in accordance with regulation 121.670. Regulation 121.670 provides for operation with a reduced number of cabin crew in accordance with procedures in an operator's exposition.	Whether a flight was conducted with reduced cabin in a manner that complies with the operator's exposition is peculiarly within the knowledge of the defendant and significantly more difficult and costly for the prosecution to disprove than for the defendant to establish.
5	Subregulation 121.640(4) provides that	Whether or not a cabin crew

Exemptions to offences, and justification of the reversed burden of proof		
Item	Provision description	Justification for reversal of evidential burden of proof
	subregulation 121.640(2) does not apply for a cabin crew member if the cabin crew member is successfully participating in the operator's training and checking system and the operator holds a prescribed approval under regulation 121.010. The rule operates as an exception to the requirement in subregulation 121.640(1) to comply with subregulation (2), contravention of which requirement is an offence under subregulation 121.640(5).	member is successfully participating in an operator's training and checking system is peculiarly within the knowledge of the defendant and significantly more difficult and costly for the prosecution to disprove than for the defendant to establish.
6	Subregulation 121.665(2) provides that subregulation 121.665(1) does not apply if, before the flight begins, another cabin crew member is assigned to duty as the senior cabin crew member for the flight, and the original senior cabin crew member becomes unable to report for duty due to unforeseen circumstances that are beyond the operator's control	The matter to be established is peculiarly within the knowledge of the defendant and significantly more difficult and costly for the prosecution to disprove than for the defendant to establish.

Implication on right to presumption of innocence

The provisions reversing the evidential burden of proof are consistent with the presumption of innocence, as they are within reasonable limits which take into account the importance of the objective being sought while maintaining the defendant's right to a defence. In particular, the burden is only reversed where the matter to be established is peculiarly within the knowledge of the defendant in particular circumstances, and/or the matter is costly for the prosecution to disprove and significantly cheaper for the defendant to establish. In the context of regulatory offences that are directed to secure compliance with the high standards appropriate for air transport operations, including through providing an appropriate deterrent against breaches of those standards, it is reasonable, necessary and proportionate for a defendant to be required to establish matters that provide an alternative safe practice that is significantly more difficult and / or costly for the prosecution to prove than it is for a defendant to establish.

The right to a fair trial and fair hearing: right to an effective remedy

A person affected by decisions under the Regulations has rights of merit review in accordance with regulation 201.004 of CASR, in addition to administrative law rights under the *Administrative Decisions (Judicial Review) Act 1977* (Cth) and general principles of Australian administrative law. These merits and administrative law rights exist within a framework for seeking the review of a decision that may not be correct or preferable or where there has been jurisdictional error.

As such, the rights of persons under the Regulations are linked to existing mechanisms that promote an individual's right to an effective remedy.

Right to protection against arbitrary and unlawful interference with privacy

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 honour and reputation. It further provides that everyone has the right to the protection of the law against such interference or attacks.

Regulation 121.085 prescribes requirements in relation to the availability or carriage of flight crew member medical certificates and flight crew licences for flights, in the circumstances prescribed in the subregulation. The information is required so that documents that demonstrate whether a person is authorised to act as a flight crew member for a Part 121 operation are available for checking by operators for quality assurance purposes and by CASA for safety regulatory purposes.

Regulation 121.105 prescribes requirements in relation to the keeping of journey logs, including the names or other identifier of each crew member. The information is required so that crew involved in operations can be identified for safety regulatory purposes, and for search and rescue and recovery operations in the event of an incident.

Regulation 121.110 prescribes requirements in relation to the keeping of passenger lists, including the names of passengers. The lists are required for search and rescue and recovery operations in the event of an incident, to ensure that each passenger is able to be accounted for.

Reasonableness, necessity and proportionality

The requirements in the abovementioned regulations involve activities of one or more of the collecting, recording and storing of personal information. For the reasons stated above in relation to each provision, the requirements are reasonable as they relate to data and information that is required to uphold the integrity of the safety regulatory scheme that protects all individuals on a flight, by ensuring that information is available about who is performing activities affecting safety and demonstrating that they are appropriately authorised.

For the reasons stated above, the requirements are also necessary to achieve the fulfilment of specific safety objectives, since there are no other sources of the information available that will adequately serve the reasonable regulatory purposes.

The requirements are also proportionate as they operate to ensure the fulfilment of safety objectives which are required to ensure the protection and safety of all individuals on the flight, and seek only the minimum information to identify persons with safety-related responsibilities.

The protections afforded by the *Privacy Act 1988* continue to apply.

To the extent that the Regulations limit the privacy-related rights in Article 17 of the ICCPR, those limitations are reasonable, necessary and proportionate for safety purposes, consistent with the objects of the Act.

Conclusion

This legislative instrument is compatible with human rights and, to the extent that it may limit human rights, those limitations are reasonable, necessary and proportionate to ensure the safety of aviation operations and to promote the integrity of the aviation safety system.

Details of the *Civil Aviation Safety Amendment (Part 121) Regulations 2018*

Section 1 – Name of Regulations

This section provides that the title of the Regulations is the *Civil Aviation Safety Amendment (Part 121) Regulations 2018*.

Section 2 – Commencement

This section provides that the Regulations commence on 25 March 2021.

Section 3 – Authority

This section provides that the Regulations are made under the *Civil Aviation Act 1988*.

Section 4 – Schedules

This section provides that each instrument that is specified in a Schedule to the instrument will be amended or repealed as set out in the applicable items in the Schedule concerned, and any other item in a Schedule to the instrument will have effect according to its terms.

Schedule 1 – Amendments

Civil Aviation Safety Regulations 1998

Item 1 Part 121—Australian air transport operations—larger aeroplanes

This item provides for the insertion of Part 121 of CASR –Air transport operations —larger aeroplanes.

The new Part 121 of CASR applies to the operation of Australian civil aircraft and foreign registered civil aircraft conducting air transport operations in Australia. It sets out operational rules for those aircraft.

Subpart 121.A—Preliminary

This Subpart is a completely new Subpart 121.A comprising regulations 121.005 to 121.015. It prescribes the operations that Part 121 applies to, CASA approvals for certain topics and the authority for CASA to issue a Manual of Standards (MOS).

Regulation 121.005 – Application of Part 121

Subregulation 121.005 provides that this Part, except for Subpart 121.Z, applies to the operation of a *multi-engine* aeroplane for an Australian air transport operation if it has *either* a maximum operational passenger seating capacity (MOPSC) of more than nine, or a maximum take-off weight (MTOW) of more than 8,618 kg.

Subregulation 121.005(2) provides that Subpart 121.Z applies to the operation of a *single-engine* aeroplane for an Australian air transport operation if it has a MOPSC of greater than nine, *and* a MTOW of not more than 8,618 kg.

Regulation 121.010 – Approvals by CASA for Part 121

Subregulation 121.010 provides that if a provision of this Part refers to a person holding an approval under this regulation, a person may apply to CASA, in writing, for the approval.

Subregulation 121.010(2) provides that, subject to regulation 11.055 of CASR, the approval must be granted.

Subregulation 121.010(3) provides that subregulation 11.055(1B) of CASR applies to the granting of an approval under this regulation.

This regulation promotes procedural fairness while maintaining aviation safety by allowing a person required under these regulations to hold an approval for a matter, to apply to CASA for the approval; and in respect of the approval, CASA must grant the approval subject to regulation 11.055.

Regulation 121.015 provides that, for subsection 98(5A) of the Act, CASA may issue a Manual of Standards for this Part (Part 121 MOS). The Part 121 MOS prescribes matters required by the Regulations or those that are necessary or convenient to be prescribed for carrying out or giving effect to Part 121.

Subpart 121.C—General

This Subpart is a complete Subpart 121.C of CASR inclusive of Divisions 121.C.1 to 121.C.6. It prescribes general flight limitations, matters relating to documents and matters relating to defects and incidents. It also prescribes matters relating to search and rescue equipment along with other miscellaneous requirements.

Division 121.C.1—General flight limitations

This Division is a completely new Division 121.C.1 of CASR comprising regulations 121.020 to 121.050. It prescribes the types of aeroplanes that can be used for Part 121, which must be operated under the IFR (instrument flight rules) and limitations on operational distances. It also provides requirements for simulation of certain circumstances and ferry flights.

Regulation 121.020 – Permitted categories of aeroplanes

Subregulation 121.020(1) prescribes the operator of an aeroplane for a flight contravenes this section if the aeroplane begins a flight, and the aeroplane is not type certificated in the transport, commuter or normal category.

Subregulation 121.020(2) provides that a contravention of subregulation 121.020(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation prescribes the aeroplane type certification categories permitted to conduct Part 121 operations. The presence of a type certificate for each of the prescribed categories represents the method of ensuring that the aeroplane conforms to the type design aspects that provide an acceptable level of safety for use in air transport operations.

Regulation 121.025 – Aircraft to be flown under the IFR

Subregulation 121.025(1) provides that the operator and pilot in command (PIC) of an aeroplane each contravene this subregulation if, during a stage of the flight, the aircraft is flown under the Visual Flight Rules (VFR).

Subregulation 121.025(2) provides that a contravention of subregulation 121.025(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation requires all flights under this Part to be conducted under the Instrument Flight Rules (IFR). Flights operating under the IFR have a higher level of safety compared to flights operating under the VFR. Under the VFR an aeroplane is required to be flown in meteorological conditions that permit aeroplane control to be maintained by reference to external visual cues, navigated by reference to visual features and to maintain separation from terrain and other aircraft by visual means. The IFR are rules that permit an aeroplane to be oriented, navigated and separated from terrain and other aircraft by reference to instruments, in meteorological conditions less than are required for flight under VFR.

Regulation 121.030 – Flights further than the 60 minute distance

Flying further than the 60 minute distance

Subregulation 121.030(1) provides that the operator and PIC of an aeroplane each contravene this subregulation if the aeroplane is operated between the 60 minute distance and the threshold distance and a requirement mentioned in subregulation 121.030(2) is not met.

Requirements to be met

Subregulation 121.030(2) provides the requirements mentioned in subregulation 121.030(1).

Offence

Subregulation 121.030(3) provides that a contravention of subregulation 121.030(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring that an aeroplane remains within the safe distance of an adequate aerodrome, to allow for a diversion if circumstances require.

The 60 minute distance refers to the distance an aeroplane can travel in 60 minutes at a certain speed; the speed depends on the configuration of the aeroplane. The table in subregulation (1) sets out the 60 minute distance and the threshold distance for an aeroplane. The 60 minute distance requirement is international best practice and is based on ICAO requirements. The regulation requires the operator and PIC to ensure that the aeroplane remains within the 60 minute distance of an adequate aerodrome at the one-engine-inoperative cruising speed specified in the operator's exposition, unless an exception prescribed in the regulation is met.

The exceptions are twin-engine propeller-driven aeroplanes with a maximum take-off weight of more than 5,700 kg and a maximum certificated passenger seating capacity of 19 or less. These aeroplanes must remain within the 180 minute distance of an adequate aerodrome at the one-engine-inoperative cruising speed specified in the operator's exposition. Turbine engine aeroplanes with 3 or 4 engines which have either, or both, a maximum take-off weight of more than 8618kg and/or maximum seating capacity of 20 or more must remain within the 180 minute distance of an adequate aerodrome at the normal cruising speed specified in the operator's exposition.

For flights further than the 60 minute distance limit, the operator must ensure that procedures for operating more than the 60 minute distance are detailed in the exposition, the procedures should include procedures for dispatching flights and providing the crew the most up to date information relating to the adequate aerodrome/s to be used. That an adequate aerodrome is available and the weather at the adequate aerodrome is above the landing minima, the operator must also have operational control for the flight in accordance with the requirements in regulation 121.160.

Regulation 121.035 – Flights further than the threshold distance

Flying further than the threshold distance

Subregulation 121.035(1) provides that the operator and PIC each contravene this subregulation if the aeroplane is operated further than the threshold distance mentioned in subparagraph 121.030(1)(b)(ii), and the operator does not hold CASA approval under regulation 121.010 to do so.

Requirements in the Manual of Standards

Subregulation 121.035(2) provides the Part 121 MOS may prescribe criteria for the grant of an approval under regulation 121.010, as well as the form in which an application for such an approval must be made and the factors to be considered by CASA in deciding whether to grant such an approval.

Subregulation 121.035(3) provides that the operator and PIC of an aeroplane each contravene this subregulation if a requirement prescribed by the Part 121 MOS applies to flights further than the threshold distance and it is not met.

Exposition procedures

Subregulation 121.035(4) provides that if a flight will travel further than the threshold distance, the operator's exposition must include procedures for doing so.

Offence

Subregulation 121.035(5) provides that a contravention of subregulation 121.035(1) or (3) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring that an aeroplane remains within the safe distance of an adequate aerodrome, to allow for diversion if circumstances require. The threshold distance refers to the distance an aeroplane can travel at a certain speed over a certain time: the speed and time depend on the configuration of the aeroplane and is outlined in regulation 121.030. The concept of a threshold distance is an international best practice and is based on ICAO requirements. This regulation allows the Part 121 MOS to contain the requirements necessary to ensure the safety of an aeroplane when operating at distances greater than the threshold distance provided in 121.030.

Regulation 121.040 – Flight distance limitation over water

Subregulation 121.040(1) provides that this regulation applies to an aeroplane that has a maximum operational passenger seat configuration of more than 30 and that does not comply with the ditching requirements of the relevant airworthiness standards (as defined) for the aeroplane.

Subregulation 121.040(2) provides that the operator of an aeroplane contravenes this subregulation if, during the flight, the aeroplane is flown over water and the aeroplane is flown further than the distance mentioned in subregulation 121.040(3) from land.

Subregulation 121.040(3) provides the distance is the lesser of the distance the aeroplane can fly in 2 hours at its normal cruising speed in International Standard Atmosphere conditions and in still air, and 400 nautical miles.

Subregulation 121.040(4) provides that a contravention of subregulation 121.040(2) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by requiring an operator of an aeroplane that has a maximum operating passenger seating capacity of more than 30 and which does not comply with the ditching standards for that aeroplane to constrain the distance from land at which the aeroplane can operate over water. The operator must ensure that the aeroplane is not operated further from land than the distance the aeroplane can fly in 2 hours at the aeroplane's normal cruising speed or 400 nautical miles.

Regulation 121.045 – Simulation of emergency or abnormal situations, or IMC

Subregulation 121.045(1) provides that the operator and PIC of an aeroplane each contravene this subregulation if an emergency or abnormal situation is simulated during the flight.

Subregulation 121.045(2) provides that the operator and PIC of an aeroplane each contravene this subregulation if IMC (instrument meteorological conditions) are simulated during the flight.

Subregulation 121.045(3) provides that a contravention of subregulation 121.045(1) or (2) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring neither the operator nor the PIC of an aeroplane is permitted to simulate an emergency, an abnormal situation or simulate IMC for a flight.

Regulation 121.050 – Ferrying an aeroplane with one engine inoperative

Subregulation 121.050(1) provides that the operator of an aeroplane contravenes this subregulation if an aeroplane is ferried with one engine inoperative.

Subregulation 121.050(2) provides that a contravention of subregulation 121.050(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

The regulation mitigates against adverse effects on the safety on air navigation by ensuring that an aeroplane for an air transport operation does not commence a flight with one engine inoperative. For the avoidance of doubt, this regulation is intended to ensure that a one-engine inoperative ferry flight cannot be interpreted as being permissible under this Part.

Division 121.C.2—Operational documents

This Division inserts a completely new Division 121.C.2 of CASR comprising regulations 121.025 to 121.045. It prescribes requirements to comply with aeroplane flight manual instructions, and requirements for certain documents to be available to crew, minimum equipment lists, checklists and duty statements.

Regulation 121.055 – Compliance with flight manual

Subregulation 121.055(1) provides that the operator of an aeroplane contravenes this subregulation if the aeroplane is operated in a way during the flight that does not meet a limitation or requirement that is set out in the aircraft flight manual instructions.

Subregulation 121.055(2) provides that a contravention of subregulation 121.055(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation prescribes requirements to ensure that the aeroplane is not operated in contravention of a limitation or requirement that is set out in the aircraft flight manual instructions, thereby ensuring an acceptable level of safety is maintained by operating within the established certification standards for the aeroplane, and not in a manner not intended by the manufacturer or the certifying authority for its use.

Regulation 121.060 – Operator to have minimum equipment list for certain flights

Subregulation 121.060(1) provides that the operator of an aeroplane for a flight contravenes this regulation if, when the flight begins, there is no minimum equipment list for the aeroplane.

Subregulation 121.060(2) provides that a contravention of subregulation 121.060(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation prescribes a requirement that ensures the operator provides the PIC a minimum equipment list that can be used to determine whether a flight may be commenced or continued from any intermediate stop should any instrument, equipment or system become inoperative.

Regulation 121.065 – Duty statement to be available to crew

Subregulation 121.065(1) provides that the operator of an aeroplane contravenes this subregulation if, when a crew member is assigned to duty for the flight, the operator has not made a statement of the crew member's duties for the flight available to them and they begin to carry out their duties for a flight.

Subregulation 121.065(2) provides that a contravention of subregulation 121.065(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation prescribes that the operator is to ensure that when a crew member is assigned to a duty on an air transport flight, an acceptable level of aviation safety is maintained through the provision of a duty statement for the duty. The required mechanism for the provision of a duty statement to the crew member is not prescribed.

Regulation 121.070 – Availability of checklists

Subregulation 121.070(1) provides that the operator of an aeroplane contravenes this subregulation if the requirement mentioned in subregulation 121.070(2) is not met.

Subregulation 121.070(2) provides that the requirement mentioned in subregulation 121.070(1) is that before carrying out a duty, crew members must have relevant normal, abnormal and emergency checklists available.

Subregulation 121.070(3) provides that a contravention of subregulation 121.070(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation prescribes the requirement for a flight crew member to be provided, as applicable to the duty to which they are assigned, such checklists as are required to enable the crew member to perform normal, abnormal and emergency procedures in order to ensure the safe conduct of the operation.

Division 121.C.3—Flight related documents

This Division is a complete new Division 121.C.3 of CASR inclusive of regulations 121.075 to 121.115. It prescribes requirements for documents that must be available to crew, documents that must be carried on a flight and their retention period. It also provides for documents to be carried in an electronic format.

Regulation 121.075 provides that documents required to be carried by this Division may be carried in an electronic format.

This regulation clarifies that in accordance with the *Electronic Transaction Act 1999* the requirement of the regulation is met if an electronic copy of the document is carried. The note clarifies that electronic documents may not satisfy the requirement of the National Aviation Authorities of the territory in which the flight is conducted.

Regulation 121.080 – Availability of parts of exposition

Subregulation 121.080(1) provides that the operator of an aeroplane contravenes this subregulation if certain components of an operator's exposition are not available to a crew member before a flight begins.

Subregulation 121.080(2) provides that a contravention of subregulation 121.080(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation prescribes that the operator is responsible for providing the appropriate instructions from the exposition to the crew. This provides CASA assurance that the operator is ensuring the crew members conduct the operation safely in accordance with the operator's instructions.

Regulation 121.085 – Carriage of documents

Documents required by Part 121 Manual of Standards

Subregulation 121.085(1) prescribes the operator and PIC each contravene this subregulation if a document prescribed by the Part 121 MOS is not carried on the aeroplane when it begins its flight.

Flight crew medical certificates

Subregulation 121.085(2) prescribes the operator and a flight crew member each contravene this subregulation if the flight crew member's medical certificate is not carried on the aeroplane and the flight crew member does not give CASA written notice that the certificate is not being carried on the aeroplane for a flight before the flight begins, or within 24 hours after the flight ends, if it is not practicable to give the notice before the flight begins.

Flight crew licenses

Subregulation 121.085(3) prescribes the operator and a flight crew member each contravene this subregulation if the flight crew member's flight crew licence is not carried on the aeroplane and the flight crew member does not give CASA written notice that the licence is

not being carried on the aeroplane before the flight begins, or within 24 hours if it is not practicable to give the notice before the flight begins.

Offence

Subregulation 121.085(4) prescribes the contraventions of subregulation 121.085(1), (2) or (3) as offences of strict liability, with a maximum penalty of 50 penalty units.

This regulation makes the operator and the PIC jointly responsible for ensuring that the required aircraft documentation prescribed in the Part 121 MOS is carried on the aeroplane for a flight. The operator is also responsible to ensure that the flight crew member's medical certificate and pilot licence is carried in the aeroplane when it commences a flight. There is a provision for not complying with this requirement if written advice is provided to CASA. The advice must be provided either before the flight begins or if this is not practical within 24 hours after the flight ends.

Regulation 121.090 – Accessibility of documents

Subregulation 121.090(1) provides that the operator and PIC of an aeroplane each contravene this subregulation if, under regulation 121.085, a document is required to be carried on the flight and it is not readily accessible to the crew.

Subregulation 121.090(2) provides that a contravention of subregulation 121.090(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by requiring that the documents that are required for a flight must be accessible by the crew when the aeroplane begins a flight. The documents could include weather, aeroplane checklists, the parts of the operator's exposition that relate to the flight and any other documents that the crew may need to refer to during flight.

Regulation 121.095 – Carriage of documents for flights that begin or end outside Australian territory

Subregulation 121.095(1) provides that the regulation applies to a flight of an aeroplane that begins or ends at an aerodrome outside Australian territory.

Subregulation 121.095(2) provides that the operator and PIC of an aeroplane each contravene this subregulation if a document prescribed by the Part 121 MOS is not carried on the aeroplane and the aeroplane begins the flight.

Subregulation 121.095(3) provides that a contravention of subregulation 121.095(2) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

Regulation 121.100 prescribes the requirement for the operator's exposition to include procedures for keeping the documents prescribed by the Part 121 MOS with a person on the ground for the duration of the flight, and the procedures for providing updated information to such a person during the flight if the information in the document requires updating during that time.

Regulation 121.105 – Journey logs

Operator—preparation of journey log

Subregulation 121.105(1) provides that the operator of an aeroplane contravenes this subregulation if, when the flight begins, the operator has not prepared a journey log for the

flight that can include the information mentioned in subregulations 121.105(3) and (5), and that has a place for the PIC to verify the entries for the flight.

Pre-flight completion of journey log

Subregulation 121.105(2) provides that the operator and the PIC of an aeroplane each contravene this subregulation if, when the flight begins, the information about the flight mentioned in subregulation 121.105(3) is not recorded in the journey log.

Subregulation 121.105(3) prescribes the following information for pre-flight completion: the aeroplane's registration mark or flight number; the date of the flight; the name of each crew member assigned to the flight's name or another means to identify the crew member and the duties assigned to the crew member; the place of departure and time the flight begins; the amount of fuel added to the aeroplane's fuel tank before the flight begins and the amount of fuel in the aeroplane's fuel tank when the flight begins.

Post-flight completion of journey log

Subregulation 121.105(4) prescribes the operator and the PIC of an aeroplane each contravene this subregulation if the information about the flight mentioned in subregulation 121.105(5) is not recorded in the journey log for the flight as soon as is practicable after the flight ends.

Subregulation 121.105(5) provides the relevant information for post-flight completion. The information is the place of arrival, the time the flight ends, the duration of the flight, the amount of fuel in the aeroplane's fuel tanks when the flight ends and incidents and observations (if any) relevant to the flight.

Exception to completion of journey log

Subregulation 121.105(6) provides that subregulation 121.105(1), (2) and (4) do not apply to the operator or the PIC in relation to information mentioned in those subregulations if, by the time it is required to be recorded, the information is recorded in another document kept by the operator or is readily available to the operator from another source. Such a document could be the operational flight plan for the flight.

A defendant bears an evidential burden of proof in relation to the matters in this subregulation. Whether the information is recorded in another document kept by the operator, or that is readily available to the operator, is peculiarly within the knowledge of the defendant and significantly more difficult and costly for the prosecution to disprove than for the defendant to establish.

Offence

Subregulation 121.105(7) provides that a contravention of subregulation 121.105(1), (2) or (4) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation enhances the safety of flight by requiring a journey log. The information provided in the journey log allows CASA and the operator to monitor flight trends, record flight times and fuel consumption.

Regulation 121.110 – Passenger lists

Subregulation 121.110(1) provides that the operator of an aeroplane that is a passenger transport operation or a medical transport operation contravenes this subregulation if, when

the flight begins, the operator has not prepared a passenger list for the flight that contains the information mentioned in subregulation 121.110(2).

Subregulation 121.110(2) prescribes the information mentioned in subregulation 121.110(1). The information is the aeroplane's registration mark or flight number, the name of each passenger, the places of departure and destination for each passenger, the number of infants carried, and the date and estimated time of departure of the flight.

Subregulation 121.110(3) provides that subregulation 121.110(1) does not apply to the operator or the PIC in relation to information mentioned in that subregulation if, by the time it is required to be recorded, the information is recorded in another document kept by the operator or is readily available to the operator from another source.

A defendant bears an evidential burden of proof in relation to the matters in this subregulation. Whether the information is recorded in another document kept by the operator, or that is readily available to the operator, is peculiarly within the knowledge of the defendant and significantly more difficult and costly for the prosecution to disprove than for the defendant to establish.

Subregulation 121.110(4) provides that a contravention of subregulation 121.110(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units

This regulation promotes the maintenance of aviation safety through ensuring passengers on a flight are recorded so in the event of an emergency the authorities can easily determine who is expected to be on the aeroplane.

Regulation 121.115 – Flight preparation forms for flights that begin or end outside Australian territory

Subregulation 121.115(1) provides that this regulation applies to a flight of an aeroplane that will begin or end at an aerodrome outside Australian territory.

Subregulation 121.115(2) provides that the operator and the PIC of an aeroplane for a flight each contravene this subregulation if, when the flight begins, the PIC has not signed a flight preparation form certifying that he or she is satisfied about the matters mentioned in subregulation 121.115(3).

Subregulation 121.115(3) provides the requirements for subregulation 121.115(2).

Subregulation 121.115(4) provides that a contravention of subregulation 121.115(2) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation promotes the safety of air navigation by requiring the PIC to certify on a flight preparation form, prior the commencement of a flight, that they are satisfied that the matters in relation to safety of flight have been completed.

Division 121.C.4—Reporting and recording defects and incidents etc.

This Division is a complete new Division 121.C.4 of CASR inclusive of regulations 121.120 to 121.125. It prescribes requirements for procedures surrounding aircraft defects and operational incidents.

Regulation 121.120 provides that an aeroplane operator's exposition must include procedures for the reporting and recording by a flight crew member, for a flight of the aeroplane, an abnormal instrument indication, abnormal behaviour by the aeroplane, exceedance of an operating limit specified in the aircraft flight manual instructions or a defect in the aeroplane, if any occur during the flight.

This regulation prescribes the requirement for the operator's exposition to include the specified instances or occurrences that must be reported and recorded in relation to a flight for the purpose of maintaining the acceptable level of safety. Each of the specified conditions have consequential safety implication that could remain as latent threats to safety if not reported and subsequently tracked, actioned or remedied as applicable to the nature of the occurrence.

Regulation 121.125 provides that an aeroplane operator's exposition must include procedures for the reporting and recording by crew members of any incidents relating to a flight of the aeroplane that endangers, or could endanger, the safe operation of the aeroplane.

This regulation prescribes the procedures are intended to contain the requirements for the reporting of various safety related occurrences or potential occurrences to the appropriate authorities.

Division 121.C.5—Search and rescue services and emergency and survival equipment

This Division is a complete new Division 121.C.5 of CASR inclusive of regulations 121.130 to 121.135. It prescribes requirements for information regarding search and rescue services to be available to flight crew. It also prescribes requirements for information regarding emergency and survival equipment.

Regulation 121.130 – Information about search and rescue services

Subregulation 121.130(1) provides that the operator of an aeroplane contravenes this subregulation if, when the flight begins, information about the search and rescue services relevant to the flight is not readily accessible to the flight crew members for the flight

Subregulation 121.130(2) provides that a contravention of subregulation 121.130(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation prescribes the requirement for the flight crew members for a flight to have available and readily accessible information relating to the search and rescue services in the area over which the aeroplane is flown. The regulation is intended to ensure that if an emergency situation which endangers the safety of the aeroplane or persons involved in its operation arises, that notification to the appropriate authorities of the nature of the situation or requests for assistance, if required, can be made without delay.

Regulation 121.135 – Information about emergency and survival equipment

Subregulation 121.135(1) provides that the operator of an aeroplane contravenes this regulation if the information about emergency equipment on board an aeroplane is not readily available for communication to a rescue coordination centre.

Subregulation 121.135(2) provides that a contravention of subregulation 121.135(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation requires that an operator has available for immediate communication to rescue coordination centres, information on the emergency and survival equipment carried on board any of their aeroplanes. The information is required to facilitate the expedient and efficient conduct of search and rescue operations within a search and rescue region.

Division 121.C.6—Miscellaneous requirements

This Division is a complete new Division 121.C.6 of CASR inclusive of regulations 121.140 to 121.155. It provides limits for the types of activities that can be conducted by flight crew and requirements for the competence of ground support staff. It also prescribes requirements for duty statements and for limiting access to an aeroplane cockpit.

Regulation 121.140 – Crew activities necessary for safe operation

Subregulation 121.140(1) provides that the operator of an aeroplane contravenes this subregulation if they require a crew member to conduct an activity during a critical phase of flight that is not necessary for the safe operation of the aeroplane.

Subregulation 121.140(2) provides that a crew member of an aeroplane contravenes this subregulation if they conduct an activity during a critical phase of flight that is not necessary for the safe operation of the aeroplane.

Subregulation 121.140(3) provides that a contravention of subregulation 121.140(1) or (2) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation prescribes the requirement for crew activities during critical flight phases of take-off, initial climb, final approach or landing, to be limited to only those activities required for the safe operation of the aeroplane. The provision is intended to maintain an acceptable level of safety by ensuring that during the periods of a flight where crew member focus on their essential operational activities is required, they are prevented from being disturbed or distracted by non-flight related matters.

Regulation 121.145 – Competence of ground support personnel

Subregulation 121.145(1) provides that the operator of an aeroplane contravenes this subregulation if a member of their ground support personnel carries out duties and a requirement mentioned in subregulation 121.145(2) has not been met.

Subregulation 121.145(2) provides that the requirements mentioned by subregulation 121.145(1) is that the personnel must have completed training and been assessed as competent in their duty.

Subregulation 121.145(3) provides that a contravention of subregulation 121.145(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation prescribes that an operator must ensure that the ground support personnel for an operator are trained and assessed as being competent to conduct the duty prior to conducting that duty. In doing so, ensuring that an acceptable level of safety for the operation and the ground support personnel is maintained.

Regulation 121.150 – Duty statement to be available to ground support personnel

Subregulation 121.150(1) provides that the operator of an aeroplane contravenes this subregulation if a member of the operator's personnel is assigned to carry out a ground

support duty, the operator has not made a duty statement available and the personnel begins the duty.

Subregulation 121.150(2) provides that a contravention of subregulation 121.150(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation prescribes that an operator must ensure that ground support personnel have available to them: a duty statement, prior to commencing the ground support duty, thus ensuring an acceptable level of safety for the operation and the ground support personnel is maintained.

Regulation 121.155 – Cockpit authorisation and briefing

Subregulation 121.155(1) provides that this regulation applies to an aeroplane that is required to be equipped with a cockpit door under regulation 4.68 of the *Aviation Transport Security Regulations 2005*.

Subregulation 121.155(2) provides that the operator and PIC of an aeroplane each contravene this subregulation if, during the flight, a person enters the cockpit and the person is not a person mentioned in subregulation 121.155(3).

Subregulation 121.155(3) prescribes who is permitted to enter the cockpit of an aeroplane during a flight.

Subregulation 121.155(4) prescribes that the PIC of an aeroplane for a flight contravenes this subregulation if, during the flight, a person other than a member of the aeroplane's crew enters the cockpit and the person is not briefed by the PIC or the co-pilot on the safety procedures that are relevant to the cockpit before the person enters the cockpit, or as soon as practicable after the person enters.

Subregulation 121.155(5) provides that a contravention of subregulation 121.155(2) or (4) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation prescribes a requirement for operations where the aeroplane is required to be fitted with an intrusion resistant cockpit door, that only certain personnel are permitted to enter the cockpit. Additionally, the regulation requires that those personnel that are not members of the aeroplane's crew must be provided with a safety briefing by either the PIC or the co-pilot prior to, or as soon as possible after entering the cockpit, to ensure that safety is not compromised for the aeroplane, the operation or to the personnel entering the cockpit.

Subpart 121.D—Operational procedures

This Subpart is a complete new Subpart 121.D of CASR inclusive of Divisions 121.D.1 to 121.D.10. It forms the bulk of Part 121 of CASR. It prescribes regulations pertaining to the operation of aircraft rather than the 'administrative' requirements of the other Subparts.

Division 121.D.1—Operational control

Regulation 121.160 provides that an aeroplane operator's exposition must include procedures for determining how operational control for a flight is to be exercised and by whom.

This regulation ensures that the operator has procedures for determining who is in control of the flight. It is essential for the maintenance of the safety of the operation of a flight that only one person has operational control.

Division 121.D.2—Flight preparation

This Division is a complete new Division 121.D.2 of CASR inclusive of regulations 121.165 to 121.170. It prescribes requirements for ensuring the suitability of planned destination aerodromes.

Regulation 121.165 provides that an aeroplane operator's exposition must include procedures for complying with the flight preparation (weather assessments) requirements and the flight planning (Part 121 alternate aerodromes) requirements.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring an operator's exposition contains procedures for the assessment of weather for the destination and alternate aerodromes. This promotes the safe operation of the aeroplane by ensuring the weather for the destination and alternate aerodromes (if required) have been adequately assessed prior to departure.

Regulation 121.170 – Flight preparation (Part 121 alternate aerodromes) requirements

Subregulation 121.170(1) provides a head of power for the Part 121 MOS to prescribe requirements for relating to flight planning and alternate aerodromes.

Subregulation 121.170(2) provides that the operator and PIC of an aeroplane each contravene this subregulation if a requirement of subregulation 121.170(1) is not met.

Subregulation 121.170(3) provides that a contravention of subregulation 121.170(2) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring an operator and a PIC comply with the alternate aerodrome and alternate flight planning requirements prescribed by the Part 121 MOS. Alternate aerodromes are required under the circumstances contained in the Part 121 MOS and are intended to allow the PIC an option to divert the aeroplane to the alternate if weather and/or operational considerations require.

Division 121.D.3—Flight planning

This Division is a complete new Division 121.D.3. of CASR inclusive of regulations 121.175 to 121.180. It provides requirements for flight planning procedures an operator must have in place and the information flight crew must have access to during flight planning.

Regulation 121.175 – Operational flight plans

Subregulation 121.175(1) provides that the operator and the PIC of an aeroplane for a flight each contravene this subregulation if, when the flight begins, an operational flight plan that

meets the requirements mentioned in subregulation 121.175(2) has not been prepared for the flight.

Subregulation 121.175(2) provides the requirements mentioned in subregulation 121.175(1). The flight plan must be prepared having regard to the safety of the aeroplane, and of the people on board the aeroplane, during the flight, the aeroplane's performance, and the expected aeroplane operating limitations and conditions for the flight. The flight plan must contain the information prescribed by the Part 121 Manual of Standard for the purposes of this subregulation.

Subregulation 121.175(3) provides that the operator and the PIC of an aeroplane for a flight each contravene this subregulation if the Part 121 Manual of Standard prescribes information about the flight for the purposes of this subregulation and that information is not recorded in the operational flight plan for the flight, before the flight ends, or it is not practicable to record the information before the flight ends, as soon as practicable after the flight ends.

Subregulation 121.175(4) provides that subregulation 121.175(1) or (3) do not apply if, by the time it is required to be recorded, the information is recorded in another document kept by the operator or readily available to the operator from another source. Such a document could be the journey log for the flight.

A defendant bears an evidential burden of proof in relation to the matters in this subregulation. Whether the information is recorded in another document kept by the operator, or that is readily available to the operator, is peculiarly within the knowledge of the defendant and significantly more difficult and costly for the prosecution to disprove than for the defendant to establish.

Subregulation 121.175(5) provides that a contravention of subregulation 121.175(1) or (3) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring an operational flight plan is completed for all flights. The flight plan is a safety requirement and provides essential information to related operational personnel and authorities for operational planning and search and rescue.

Regulation 121.180 – Availability of flight planning information

Subregulation 121.180(1) provides that the operator of an aeroplane for a flight contravenes this subregulation if a requirement mentioned in subregulation 121.180(2) is not met for the flight.

Subregulation 121.180(2) prescribes the requirements mentioned in subregulation 121.180(1). The requirements are that people mentioned in this subregulation must have access to the information outlined in subregulation 121.180(3).

Subregulation 121.180(3) prescribes the information mentioned in subregulation 121.180(2), being specified kinds of information relevant to the planning of a flight.

Subregulation 121.180(4) provides that a contravention of subregulation 121.180(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

These regulations mitigate against adverse effects on the safety of air navigation by ensuring an operator provides the PIC, and any operational personnel that are involved with flight planning, the information necessary for determining the suitability of planned aerodromes.

These provisions are a safety requirement and places the responsibility on the operator to ensure that all information in regard to the operations of the aeroplane is available to the PIC.

Division 121.D.4—Flight rules

This Division is a complete new Division 121.D.4 of CASR inclusive of regulations 121.185 to 121.200. It prescribes requirements for certain procedures conducted during operations under the IFR. Specifically, it prescribes requirements for conducting instrument approach procedures.

Regulation 121.185 – Take-off and landing minima for aerodromes

Subregulation 121.185(1) provides that the operator’s exposition must include procedures for determining take-off minima that meet the requirements mentioned in subregulation 121.185(2) and landing minima mentioned in subregulation 121.185(3).

Subregulation 121.185(2) provides the requirements mentioned in subregulation 121.185(1) in relation to take-off minima.

Subregulation 121.185(3) provides the requirements mentioned in subregulation 121.185(1) in relation to landing minima.

This regulation provides for the safety of the aeroplane during take-off and landing if the take-off or landing is not a low visibility operation. The operator’s exposition must have procedures for determining the take-off and landing minima. The PIC must not take-off if the weather conditions are less than the take-off minima determined for the flight. The PIC must not continue to land an aeroplane if the weather conditions are below the minima determined for the flight. Adequate visual references must be visible and identifiable. An operator that has an approval under regulation 121.010 for operating an aeroplane fitted with a heads-up display, enhanced vision system or a synthetic vision system does not need to comply with these provisions.

The landing minima must not be less than the prescribed aerodrome landing minima. If the aeroplane operates to or from an aerodrome that requires a circling approach, then the operator’s exposition must include procedures for determining the minima for that aerodrome.

Regulation 121.190 – Establishing lowest safe altitudes etc.

Subregulation 121.190(1) provides that the operator of an aeroplane contravenes this regulation if, when the flight begins, the operator has not established a lowest safe altitude (LSALT) for each route or each route segment. In circumstances when a published LSALT is not available, the LSALT must be calculated. Further detail can be found in the CASR Dictionary.

Subregulation 121.190(2) provides that a contravention of subregulation 121.190(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

To ensure the safety of air navigation, an operator must establish, before the flight begins, a lowest safe altitude for the route or route segment of the flight.

Regulation 121.195 provides that, in relation to low-visibility operations, an operator's exposition must include: each type of low-visibility operation conducted using the aeroplane; the aircraft systems required to be used for each type of those operations; the aerodrome facilities required to conduct each type of those operations; the training and qualifications required for the aeroplane's flight crew members for each type of those operations; and the requirements to be met by the aeroplane's flight crew members during each of those operations. The requirements ensure that an operator has appropriate documentation in its exposition of matters necessary to conduct low-visibility operations safely.

Regulation 121.200 provides that an aeroplane operator's exposition must include procedures about conducting approaches to land at an aerodrome.

To ensure the safety of air navigation when an aeroplane is on approach and during a landing, an operator's exposition must contain the procedures in relation to conducting stabilised approaches to land at an aerodrome.

Division 121.D.5—Aerodromes

This Division is a complete new Division 121.D.5 of CASR inclusive of regulations 121.205 to 121.220. It prescribes requirements for the characteristics of an aerodrome, procedures for determining information about those characteristics and rules for using narrow runways. It also prescribes general requirements for safety at aerodromes.

Regulation 121.205 – Aerodrome requirements

Subregulation 121.205(1) provides that the operator and the PIC each contravene this subregulation if the aeroplane takes off from, or lands at, an aerodrome that does not meet a requirement mentioned in subregulation 121.205(2).

Subregulation 121.205(2) prescribes the requirements mentioned in subregulation 121.205(1). The aerodrome must be suitable for the aeroplane to take-off from and land at, and the aerodrome must be a certified aerodrome (in the context of the Part 139 MOS) or be an aerodrome for which the operator's exposition includes the matters required by subregulation 121.210(1).

Subregulation 121.205(3) provides that the operator and the PIC of an aeroplane each contravene this subregulation if certain the types of aeroplanes land of the runway of the planned destination and the runway does not meet the requirements mentioned in subregulation 121.205(4).

Subregulation 121.205(4) prescribes the requirements mentioned in subregulation 121.205(3). If any of the following are satisfied, the requirement is met. (1) The runway must be equipped with an approved visual approach slope indicator system as mentioned in regulation 139.190. (2) The runway is equipped with an approved visual approach slope indicator system as mentioned in regulation 139.190 that has been inoperative for no more than 7 days before the aeroplane lands on the runway and the operator's exposition includes procedures for conducting an approach and landing on a runway with such a system inoperative. (3) The aeroplane must be equipped or fitted with an approach slope indicator system mentioned in the operator's exposition that is suitable for use for the runway. (4) The operator holds an approval for the aeroplane and the runway under regulation 121.010(1).

Subregulation 121.205(5) provides that contravention of subregulation 121.205(1) or (3) is an offence of strict liability, with a maximum penalty of 50 penalty units.

This regulation is provided to ensure the safety of an aeroplane when operating at an aerodrome. The PIC and the operator must ensure that, as applicable, the aerodrome is suitable to take off from or to land at, it must be a certified aerodrome or relevant information about the aerodrome must be provided in the operator's exposition.

The regulation also ensures the safety of approach and landing operations of an aeroplane by requiring turbine-engine aeroplanes (other than turbine-engine propeller-driven aeroplanes) that have a seating capacity of more than 20 passengers; to have a visual approach slope indicator system at the planned destination aerodrome. If the visual approach slope indicator system has been unserviceable for less than 7 days and the operator's exposition includes procedures for conducting an approach with the system inoperative, the aeroplane may continue to operate. A visual approach slope indicator system is not required if the aeroplane is equipped with a slope indicator system suitable for the runway and procedures for its use are in the operator's exposition. Alternatively, the operator can use a runway if the operators is approved under 121.010 for the aeroplane and the runway.

Regulation 121.210 – Procedures to determine information about aerodromes

Subregulation 121.210(1) provides that an aeroplane operator's exposition must include procedures for determining certain information about an aerodrome used for a flight. The required procedures include those to determine the information mentioned in subregulation 121.210(2), special procedures and restrictions that might apply, and flight planning procedures.

Subregulation 121.210(2) prescribes the requirements mentioned in subregulation 121.210(1). It must include runway or strip lengths, widths, directions, slopes and surface types for the aerodrome, the location of taxiways and turning nodes (if any), the aerodrome's elevation, the location on the aerodrome of the aerodrome reference point (if any), the location of the aerodrome's windsocks, the aids to navigation and communication facilities available at the aerodrome (if any), the limitations (if any) on the use of the aerodrome, the special procedures (if any) in use at the aerodrome, in flight or on the ground or water, and a contact person capable of providing information about the condition of the aerodrome.

Subregulation 121.210(3) provides that the aerodromes referred to by subregulation 121.210(1) are the aerodromes of departure and planned destination, and any alternate aerodromes required for the flight by the Part 121 flight preparation requirements for alternate aerodromes.

This regulation maintains the safety of air navigation by requiring the aeroplane operator's exposition to ensure that essential aerodrome information is available to the operating crew.

Regulation 121.215 provides that an aeroplane operator's exposition must include procedures ensuring the safety of persons in the vicinity of an aeroplane when a person is embarking or disembarking the aeroplane, the aeroplane is being loaded or unloaded, or the aeroplane is being operated at an aerodrome.

This regulation is provided to ensure the safety of persons at an aerodrome in the vicinity of an aeroplane.

Regulation 121.220 – Taking off from and landing on narrow runways

Subregulation 121.220(1) provides that this regulation applies to an aeroplane if its MTOW is greater than 5,700kg, it was type certificated on or after 1 March 1978 and it uses a runway that has a width less than that required by the Part 121 MOS.

Subregulation 121.220(2) provides that the operator and PIC of an aeroplane each contravene this subregulation if the aeroplane uses a narrow runway and the aircraft flight manual instructions for the aeroplane do not include requirements for the operation of the aeroplane on a narrow runway.

Subregulation 121.220(3) provides that an aeroplane operator's exposition must include procedure for taking off from, or landing on, a narrow runway.

Subregulation 121.220(4) provides that an aeroplane operator's exposition must include procedures relating to the training required for the aeroplane's flight crew in operating on a narrow runway.

Subregulation 121.220(5) provides that a contravention of subregulation 121.220(2) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

The operation of aeroplanes from runways narrower than the width required by the Part 121 MOS has potentially significant aviation safety implications that can be mitigated provided specified procedures are followed and appropriate training is undertaken.

Division 121.D.6—Fuel requirements

This Division is a complete new Division 121.D.6 of CASR inclusive of regulations 121.225 to 121.240. It prescribes requirements for operator procedures, oil quantities and fuel quantities to be carried. It also prescribes requirements for fuelling safety.

Regulation 121.225 provides that an operator's exposition must include procedures for calculating the amount of fuel to be carried, in accordance with regulation 121.235 of CASR.

Regulation 121.230 – Oil requirements

Subregulation 121.230(1) provides that the operator and PIC of an aeroplane each contravene this subregulation if the aeroplane is not carrying sufficient oil to complete the flight safely when the flight starts.

Subregulation 121.230(2) provides that a contravention of subregulation 121.230(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

Regulation 121.235 – Fuel requirements

Subregulation 121.235(1) provides a head of power for the Part 121 MOS to prescribe requirements for relating to planning the amount of fuel to be carried, for monitoring fuel levels during the flight and procedures to be followed if fuel levels reduce to a certain amount.

Subregulation 121.235(2) provides that the PIC of an aircraft contravenes this subregulation if a requirement mentioned in subregulation 121.235(1) is not met.

Subregulation 121.235(3) prescribes the operator of an aircraft contravenes this subregulation if the operator if a requirement of 121.235(1) is not met.

Subregulation 121.235(4) provides that a contravention of subregulation 121.235(2) or (3) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation is provided to require the operator and PIC of an aircraft to take prescribed steps to ensure that the aircraft carries sufficient fuel to enable a flight to be undertaken in safety.

Regulation 121.240 provides that an operator's exposition must include procedures to ensure that fuelling operations are safe. The procedures are specifically required to cover the situations where passengers embark or disembark the aeroplane during fuelling, and where *low-risk electronic devices* are permitted to be used in the aeroplane cabin during fuelling.

Division 121.D.7—Passenger transport and medical transport

This Division is a complete new Division 121.D.7 of CASR inclusive of regulations 121.245 to 121.295. It prescribes requirements for the carriage of certain passengers (restricted and those with reduced mobility) and their seating arrangements. It provides for the briefing of passengers (by safety card and verbally) and the supervision of passengers. It also prescribes requirements for cabin safety: stowage of baggage; securing of service equipment; and obstruction of aisles.

Regulation 121.245 provides that this Division applies in relation to the operation of an aeroplane for a passenger transport operation or a medical transport operation.

Regulation 121.250 provides that an operations exposition must include procedures for the carriage of a restricted person on the aeroplane for a flight, for the notification to the PIC of the aeroplane about the carriage of the person.

Regulation 121.255 provides that an operations exposition must include procedures for the management of carry-on baggage.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring an operator's exposition contains procedures for the safety of carry-on baggage including: locations for stowing carry-on baggage; determining the maximum weight and size of baggage that can be taken on the aeroplane as carry-on baggage; giving instructions to passengers about securely stowing carry-on baggage before take-off, before landing and at any other time as directed by the PIC.

Regulation 121.260 – Aisles to remain unobstructed

Subregulation 121.260(1) provides that this regulation applies in relation to a flight if regulation 121.630 requires a cabin crew member to be carried on the aeroplane for the flight.

Subregulation 121.260(2) provides that the operator of the aeroplane for a flight contravenes this regulation if an aisle of the aeroplane is obstructed during the flight, other than by a person or cabin service equipment while cabin service is being provided to passengers.

Subregulation 121.260(3) provides that a contravention of subregulation 121.260(2) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation ensures the maintenance of aviation safety through ensuring that an aisle of an aeroplane must not be obstructed during the flight except by a person, or by cabin service equipment while cabin service is being provided to passengers.

Regulation 121.265 – Stowage of passenger service equipment etc.

Subregulation 121.265(1) prescribes that the operator of an aeroplane contravenes this subregulation if the aeroplane is being fuelled, taxiing, taking off or landing, and the requirement mentioned in subregulation 121.265(2) is not met.

Subregulation 121.265(2) provides that the requirement mentioned in subregulation 121.265(1) is that any piece of passenger service equipment that could interfere with an evacuation of the aeroplane in an emergency must be secured in its stowed position.

Subregulation 121.265(3) provides that the operator of an aeroplane contravenes this subregulation if the aeroplane is taxiing, taking off or landing, and an item of gallery equipment or a serving cart is not secured to prevent it from moving in the emergency landing conditions set out in the aeroplane's type certification basis.

Subregulation 121.265(4) provides that a contravention of subregulation 121.265(1) or (3) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring that any piece of passenger service equipment that could interfere with an evacuation of the aeroplane in an emergency must be secured in its stowed position when the aeroplane the aeroplane is taxiing, taking off or landing.

Regulation 121.270 – Passengers in emergency exit row seats

Subregulation 121.270(1) provides that this regulation applies in relation to a flight if regulation 121.630 requires a cabin crew member to be carried on the aeroplane for the flight.

Subregulation 121.270(2) provides that an operations exposition must include procedures for the assigning of passengers to seats in an emergency exit row.

Subregulation 121.270(3) provides that the operator of an aeroplane contravenes this subregulation if, when the aeroplane is taxiing, taking off or landing, the requirement mentioned in subregulation 121.270(4) is not met.

Subregulation 121.270(4) prescribes that at least one crew member for the flight must be satisfied that each person occupying an emergency exit row seat is a suitable person.

Subregulation 121.270(5) prescribes the operator of an aeroplane contravenes this subregulation if a person occupying an emergency exit row seat has not given the person's agreement to a member of the aeroplane's crew to assist the crew with evacuation of the aeroplane in an emergency and the aeroplane begins the flight.

Subregulation 121.270(6) prescribes a contravention of subregulations 121.270(3), or (5) is an offence of strict liability, with a maximum penalty of 50 penalty units.

This regulation promotes the safety of air navigation by requiring an operator, of a flight for which a cabin crew member is required, to include procedures for the assigning of passengers to seats in an emergency exit row. The regulation also requires the passengers assigned to emergency exit row seats to be a suitable person and to give agreement to a member of the aeroplane's crew to assist the crew with the evacuation of the aeroplane in an emergency.

Regulation 121.275 – Carriage of passengers with reduced mobility

Subregulation 121.275(1) provides that the operator and PIC of an aeroplane each contravene this subregulation if, during the flight, a passenger with reduced mobility occupies where they could hinder the crew in their duties, obstruct access to emergency equipment or hinder the evacuation of the aeroplane in an emergency.

Subregulation 121.275(2) provides that the operator of an aeroplane contravenes this subregulation if a passenger with reduced mobility is carried on the flight they do not advise the crew.

Subregulation 121.275(3) provides that a contravention of subregulation 121.275(1) or (2) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring that passengers with reduced mobility do not occupy a seat on the aeroplane for a flight where the passenger could hinder the crew in their duties, obstruct access to emergency equipment, or hinder the evacuation of the aeroplane in an emergency. The regulation also ensures that the level of safety is maintained by ensuring that an appropriate member of the aeroplane's crew is notified by the operator of the passenger being carried for the flight.

Regulation 121.280 – Safety briefing cards

Subregulation 121.280(1) provides that the operator of an aeroplane contravenes this subregulation if a safety briefing card for the aeroplane is not available to each passenger on the aeroplane when the flight begins.

Subregulation 121.280(2) provides that the operator of an aeroplane contravenes this subregulation if a safety briefing card does not meet the requirements mentioned in subregulation 121.280(3) or (4).

Subregulation 121.280(3) provides the requirements mentioned in subregulation 121.280(2). The safety briefing card must only include information that is relevant to the type and model of aeroplane and information that is relevant to the safety of the aeroplane and its passengers.

Subregulation 121.280(4) provides a head of power for the Part 121 MOS to prescribe requirements for the content of a safety briefing card .

Subregulation 121.280(5) provides that a contravention of subregulation 121.280(1) or (2) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring that before the flight begins passengers are provided with a safety briefing card for the aeroplane that contains only the relevant information for the aeroplane type and model and that is relevant to the safety of the aeroplane and its passengers, including the information prescribed for the purpose in the Part 121 MOS, thus ensuring that superfluous or extraneous information does not diminish the importance of the contents of the safety briefing card.

Regulation 121.285 – Safety briefings, instructions and demonstrations

Subregulation 121.285(1) provides a head of power for the Part 121 MOS to prescribe requirements for safety briefings and instructions. It provides that the operator and PIC of an aeroplane each contravene this subregulation if those requirements are not met.

Subregulation 121.285(2) provides that the operator of an aeroplane contravenes this subregulation if a safety briefing, instruction or demonstration includes information that is not relevant to the type and model or to the safety of the aeroplane and its passengers.

Subregulation 121.285(3) prescribes the operator of an aeroplane for a flight contravenes this subregulation if a passenger with reduced mobility is carried on the flight the passenger, or a person accompanying them, is not asked about the best way of helping the passenger in the event of an emergency.

Subregulation 121.285(4) provides that a contravention of subregulation 121.285(1), (2) or (3) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring that before the take-off of an aeroplane, the passengers are provided with a safety briefing, instructions, or demonstrations, including the information prescribed for the purpose in the Part 121 MOS. In addition, the regulation prescribes the specific conditions where the safety briefing, instructions or demonstrations are not required to be repeated for the passengers before a subsequent take-off. The regulation also ensures the maintenance of aviation safety through requiring a crew member, when a passenger with reduced mobility is carried, to ask the person with reduced mobility or a person accompanying them, the best way of helping the passenger if an emergency evacuation of the aeroplane is necessary.

Regulation 121.290 – Additional safety briefing for passengers in emergency exit rows

Subregulation 121.290(1) provides that the operator of an aeroplane for a flight contravenes this subregulation if a passenger seated in an emergency exit row for the flight may be required to operate the emergency exit and they are not briefed about what to do during an emergency.

Subregulation 121.290(2) provides that a contravention of subregulation 121.290(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation promotes the safety of air navigation by requiring an operator to ensure that a passenger seated at an emergency exit row seat, where the passenger will be required to operate the emergency exit if it became necessary to use the exit during the flight, is briefed by a crew member for the flight about what to do if it became necessary to use the exit.

Regulation 121.295 provides that an aeroplane operator's exposition must include procedures for briefing passengers on what to do if an emergency occurs during a flight of the aeroplane.

Division 121.D.8—Instruments, indicators, equipment and systems

This Division is a complete new Division 121.D.8 of CASR inclusive of regulations 121.300 to 121.340. It prescribes requirements for procedures that must be included in an operator's exposition regarding operation of weather radar, enhanced vision systems and firefighting equipment. It also prescribes requirements for procedures regarding protective breathing equipment, fire-extinguishers, first aid kits and survival equipment.

Regulation 121.300 provides that an operator's exposition must include procedures for using airborne weather radar equipment, and procedures to be followed for conducting a flight when airborne weather radar equipment is inoperative.

Regulation 121.305 – Head-up displays, enhanced vision systems and synthetic vision systems

Subregulation 121.305(1) provides that this regulation applies if an aeroplane if it is fitted with a head-up display, an enhanced vision system or a synthetic vision system.

Subregulation 121.305(2) provides that an aeroplane operator's exposition must include procedures for using the system, and procedures for conducting the flight when an element of a system is inoperative.

Regulation 121.310 provides that an operator's exposition must include procedures for the use of protective breathing equipment carried on the aircraft (as required by Subpart 121.K of CASR).

Regulation 121.315 provides that aeroplane operator's exposition must include, for each configuration of the aeroplane operated, a description of the location of each hand-held fire extinguisher, required under Subpart 121.K, carried on the aeroplane and of the extinguishing agent in each of them.

Regulation 121.320 – Procedures relating to first-aid kits

Subregulation 121.320(1) provides that this regulation applies to an aeroplane that is, or will be, used to conduct a flight when a first-aid kit must be carried (as required by Subpart 121.K of CASR).

Subregulation 121.320(2) provides that the operator's exposition must include procedures to ensure first-aid kits contain sufficient supplies, are readily recognisable, are readily accessible by each crew member at all times, procedures for inspecting first-aid kits and procedures for replacing items in the first-aid kits.

Subregulation 121.320(3) provides that the operator's exposition must also include a list of the minimum contents of each first-aid kit for the aeroplane.

This regulation promotes the safety of air navigation by ensuring the operator's exposition contains the procedures required to support the provision the first-aid kits required under Subpart 121.K are available use by cabin crew in managing incidents of ill health for a flight.

Regulation 121.325 – Procedures relating to universal precaution kits

Subregulation 121.325(1) provides that this regulation applies to an aeroplane that is or will be required to carry a universal precaution kits (by Subpart 121.K of CASR).

Subregulation 121.325(2) provides that the aeroplane operator's exposition must include procedures for inspecting the kits and procedures for replacing items in the kits.

Subregulation 121.325(3) provides that the operator's exposition must also include a list of the minimum contents of each universal precaution kit for the aeroplane.

This regulation is intended to ensure that the risks to the safety of passengers, crew and other persons or items are mitigated through the provision of procedures to ensure the effective use of universal precautions kits by cabin crew members in managing incidents of ill health

associated with a case of suspected communicable disease, or in the case of illness involving contact with body fluids.

Regulation 121.330 – Procedures relating to emergency medical kits

Subregulation 121.330(1) provides that this regulation applies to an aeroplane that is, or will be, used to conduct a flight for which the aeroplane is required to carry an emergency medical kit (as required by Subpart 121.K of CASR).

Subregulation 121.330(2) provides that the operator's exposition must include procedures for inspecting the kit and procedures for replacing items in the kit. The exposition must also include procedures for the administration and supply of prescription medicines in the kit, including procedures to ensure that prescription medicines are administered only under the authority of a medical practitioner.

Subregulation 121.330(3) provides that the operator's exposition must also include a list of the minimum contents of the emergency medical kit.

This regulation is intended to ensure that the risks to the safety of passengers and crew are mitigated through the provision of procedures that ensure the availability of items in an emergency medical kit for the use by medical doctors or other qualified or authorised persons in treating in-flight medical emergencies.

Regulation 121.335 – Life-saving equipment for life rafts

Subregulation 121.335(1) provides that this regulation applies to an aeroplane that is, or will be, used for a flight if where it required to carry a life raft (as required by Subpart 121.K of CASR).

Subregulation 121.335(2) provides that the operator's exposition must include a list of the minimum life-saving equipment that must be carried.

This regulation is intended to mitigate the risks to the safety of passengers and crew by requiring an operator's exposition to contain a list of the minimum life-saving equipment to be carried on the aeroplane for each life raft required under Subpart 121.K for a flight.

Regulation 121.340 – Survival equipment procedures

Subregulation 121.340(1) provides that this regulation applies to a flight if the flight is in, or through, a remote area or it is required to carry a life raft (as required by Subpart 121.K of CASR)

Subregulation 121.340(2) provides that if such an aeroplane is, or will be, used for a flight, the operator's exposition must include procedures for determining the survival equipment required to be carried (including procedures for determining the type of equipment that must be carried, including pyrotechnic signalling devices).

This regulation is intended to mitigate the risks to the safety of passengers and crew by requiring an operator's exposition to contain the procedures to enable the determination of the requirements to carry survival equipment that would assist in the location of survivors.

Division 121.D.9—Miscellaneous

This Division is a complete Division 121.D.9 of CASR inclusive of regulations 121.345 to 121.385. It prescribes requirements for obstruction of emergency exits, assignment of

passengers to cabin crew seats and the carriage of animals. It also prescribes requirements regarding operating in icing conditions, in polar regions and the monitoring of cosmic radiation.

Regulation 121.345 provides that an aeroplane operator's exposition must include procedures for the inspection of the aeroplane by the PIC before the flight if frost or icing conditions exist. It must also contain procedures for carrying ground de-icing and anti-icing measures. It must contain procedures for using de-icing and anti-icing equipment during flight.

Regulation 121.350 provides that an aeroplane operator's exposition must include procedures for the operation of portable electronic devices for a flight of the aeroplane.

Regulation 121.355 provides that an operator's exposition must include procedures for the carriage of animals for a flight of the aeroplane.

Regulation 121.360 – Polar operations

Subregulation 121.360(1) provides that this regulation applies to a flight of an aeroplane if it enters the polar region during the flight.

Subregulation 121.360(2) provides the operator for a flight contravenes this subregulation if the aeroplane is flown in the polar region during the flight and the operator does not hold an approval under regulation 121.010 to fly in the polar region.

Subregulation 121.360(3) provides the procedures which must be included in the aeroplane operator's exposition. There must be procedures for monitoring and dealing with fuel freezing, ensuring communication capability for the duration of an operation that includes a flight in the polar region, training the aeroplane's flight crew in polar operations and mitigating crew member and passenger exposure to cosmic radiation during solar flare activity. Further, if the aeroplane conducts a flight for which an alternate aerodrome in the polar region is required at a time of year when extreme climatic conditions are expected at the aerodrome, the carrying of at least 2 serviceable, cold weather, anti-exposure suits.

Subregulation 121.360(4) provides that a contravention of subregulation 121.360(2) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation ensures the safety of air navigation by requiring an operator of a flight of an aeroplane in a polar region to be approved by CASA to do so. The regulation also requires the operator's exposition to contain the procedures prescribed in the regulation that ensure the safety of the aeroplane and the occupants in a polar region.

Regulation 121.365 – Cosmic radiation limits

Subregulation 121.365(1) provides that the operator of an aeroplane contravenes this subregulation if the aircraft is flown above flight level 490 and their exposition does not set a limit for the total cosmic radiation receivable inside the aeroplane's cabin during the flight.

Subregulation 121.365(2) provides that a contravention of subregulation 121.365(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by requiring an operator's exposition to contain a limit for the total cosmic radiation, being the total of

ionizing and neutron radiation of galactic and solar origin receivable in the aeroplane's cabin for the flight if the aeroplane is flown above flight level 490.

Regulation 121.370 – Exceeding cosmic radiation limits

Subregulation 121.370(1) provides that the operator and PIC of an aeroplane each contravene this subregulation if the aircraft is above flight level 490, the cosmic radiation limit set by an operator's exposition is exceeded and the PIC does not descend as low as practicable.

Subregulation 121.370(2) provides that a contravention of subregulation 121.370(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation promotes the safety of air navigation by ensuring that at any time when the aeroplane is flown above flight level 490 and the limit for the total cosmic radiation receivable inside the aeroplane's cabin for a flight, set in operator's exposition, is exceeded: the PIC must as soon as practicable, descend to the lowest altitude at which it is practicable to complete the flight safely.

Regulation 121.375 – Obstruction of emergency exits

Subregulation 121.375(1) provides that the operator of an aeroplane contravenes this subregulation if an emergency exit is obstructed while the aeroplane is taxiing, taking off, landing, or at any time that the PIC directs that the exit not be obstructed.

Subregulation 121.375(2) provides that an emergency exit is not taken to be obstructed by a passenger occupying a seat adjacent to the exit or a seat in a row of seats adjacent to the exit.

Subregulation 121.375(3) provides that a contravention of subregulation 121.375(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by requiring an operator to ensure that emergency exits are unobstructed while the aeroplane is taxiing, taking-off, landing, or at any other time the PIC directs. A passenger occupying a seat adjacent to the emergency exit or occupying a seat in a row of seats adjacent to the emergency exit is not taken to be obstructing the emergency exit.

Regulation 121.380 – Assignment of cabin crew seats

Subregulation 121.380(1) provides that the operator of an aeroplane contravenes this subregulation if the requirement mentioned in subregulation 121.380(2) is not met for the flight.

Subregulation 121.380(2) provides that the requirement mentioned in subregulation 121.380(1) is that the assignment of seats to cabin crew members for the flight must be in accordance with the emergency evacuation procedures for the aeroplane required by regulation 121.755.

Subregulation 121.380(3) provides that the operator of an aeroplane contravenes this subregulation if a cabin crew seat in a row of cabin crew seats that are adjacent to a floor level exit assigned to a someone other than a crew member or a person outlined in subregulation 121.380(4), (5) or (6).

Subregulation 121.380(4) provides that a person mentioned in subregulation 121.380(3) is a crew member employed by the operator who has not been assigned to the flight by the

operator, for whom a passenger seat is not available, and who is identified as an employee of the operator. They must be briefed on the use of the seat and its restraint system, the location and use of the oxygen system, the location and use of the life jacket and their responsibilities during an emergency.

Subregulation 121.380(5) provides that a person mentioned in subregulation 121.380(3) is a person authorised to conduct in-flight inspections and for whom a passenger seat is not available. They must be briefed on the use of the seat and its restraint system, the location and use of the oxygen system, the location and use of the life jacket and their responsibilities during an emergency.

Subregulation 121.380(6) provides that a person mentioned in subregulation 121.380(3) is a person if, during an emergency, they are able-bodied and assigned the seat by a cabin crew member. They must be briefed on their responsibilities while using the seat.

Subregulation 121.380(7) provides that a contravention of subregulation 121.380(1), or (3) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by requiring that the operator ensures that cabin crew seats be assigned only to cabin crew members. The regulation permits, in situations where a passenger seat is not available, the operator to assign a cabin crew seat to a person who is a crew member employed by the operator that has not been assigned to the flight by the operator, or a person who is an authorised officer carrying out an in-flight passenger cabin inspection, provided that the person is briefed by a cabin crew member prior to take-off on the items required to safely occupy that seat. In the interest of safety, the regulation also permits a cabin crew seat to be occupied by an able-bodied person who has been assigned by a cabin crew member and briefed on the person's responsibilities while occupying the cabin crew seat, if the PIC has declared an emergency or abnormal circumstance exists for the flight.

Regulation 121.385 – CASA approvals relating to take-offs and landings

Subregulation 121.385(1) provides that the operator of an aeroplane contravenes this subregulation if the aeroplane conducts an operation mentioned in subregulation 121.45(2) and the requirement in subregulation (3) is not met.

Subregulation 121.385(2) provides that the operations mentioned in subregulation 121.385(1) are a 3D instrument approach operation with an approach path angle of 4.5 degrees or more

Subregulation 121.385(3) prescribes the requirement mentioned in subregulation 121.385(1). It provides that the operator must hold an approval under regulation 121.010 to conduct the take-off or landing in those circumstances.

Subregulation 121.385(4) provides that a contravention of subregulation 121.385(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by requiring the operator of an aeroplane to hold an approval under Part 121.010 for those circumstances relating to an aeroplane take-off or landing prescribed in the Part 121 MOS, for those purposes.

Subpart 121.F—Performance

This Subpart is a complete Subpart 121.F of CASR inclusive of regulations regulation 121.390 to 121.430. It prescribes requirements for take-off and landing weight limits for an aeroplane along with requirements for calculating those weights. It also prescribes standards for aircraft performance data, the use of computerised calculations, procedures relating to operations with inoperative engines and certain CASA approvals.

Regulation 121.390 – Performance data

Subregulation 121.390(1) provides that the operator of an aeroplane contravenes this subregulation if, when the flight begins, the performance data in the aircraft flight manual instructions do not comply with Annex 8 to the Chicago Convention.

Subregulation 121.390(2) prescribes that the operator and PIC each contravene this subregulation if a calculation relating to the aeroplane’s performance is made and the data other than either the performance data set out in the aircraft flight manual instructions, or the performance data for which the aeroplane operator holds an approval under regulation 121.010, is used to make that calculation.

Subregulation 121.390(3) provides that a contravention of subregulation 121.390(1) or (2) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

The Convention on International Civil Aviation (also known as Chicago Convention), was signed on 7 December 1944 by 52 States and is administered by the International Civil Aviation Organisation (ICAO). Of the 19 annexes, Annex 8 prescribes rules for the airworthiness of aircraft.

This regulation mitigates against adverse effects on the safety of air navigation by requiring the operator of an aeroplane to ensure that the performance data for the aeroplane is compliant with the airworthiness standards for performance data contained in Annex 8 to the Chicago Convention. The regulation also provides for the safety of air navigation, by requiring that the operator and the PIC for each flight, when calculating the aeroplane performance in accordance with this Subpart, use the performance data set out in the aircraft flight manual instructions or the performance data for which the aeroplane operator holds an approval under regulation 121.010.

Regulation 121.395 – Take-off weights to be below certain weights

Subregulation 121.395(1) provides that the operator and PIC of an aeroplane each contravene this subregulation if the aeroplane’s take-off weight for the flight is greater than the MTOW or the maximum weight for the aeroplane calculated in accordance with the method prescribed by the Part 121 MOS (refer subregulation 121.395(2)).

Subregulation 121.395(2) provides a head of power for the Part 121 MOS to prescribe requirements relating to the calculation of an aircraft take-off weight.

Subregulation 121.395(3) provides the circumstances and methods that the Part 121 MOS may mention. This subregulation does not limit subregulation 121.395(2).

Subregulation 121.395(4) provides that a contravention of subregulation 121.395(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by requiring an operator and the PIC of an aeroplane to ensure that the take-off weight of the aeroplane is: less than the maximum take-off weight for the aeroplane; or where circumstances specified in the Part 121 MOS prevail, less than the weight determined for the applicable circumstances. The regulation also provides that the Part 121 MOS may prescribe the circumstances and the methods for calculating the weight of the aeroplane for a flight under those circumstances.

Regulation 121.400 – Calculations relating to take-off weights

Subregulation 121.400(1) provides that the operator and PIC of an aeroplane each contravene this subregulation if, when the flight begins, a requirement for calculating a take-off weight prescribed by the Part 121 MOS applies and it is not met (refer subregulation 121.395(2)).

Subregulation 121.400(2) provides that a contravention of subregulation 121.400(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation promotes the safety of air navigation by requiring the operator and the PIC to ensure that when the flight begins the take-off weight for the aeroplane has been calculated in accordance with the methods prescribed in the Part 121 MOS for those circumstances.

Regulation 121.405 – Planning landing weights to be below certain weights

Subregulation 121.405(1) provides that the operator and PIC of an aeroplane each contravene this subregulation if the aeroplane's estimated landing weight for the flight is greater than the Maximum Landing Weight (MLW) or the maximum weight for the aeroplane calculated in accordance with the method prescribed by the Part 121 MOS (refer subregulation 121.405(2)).

Subregulation 121.405(2) provides a head of power for the Part 121 MOS to prescribe requirements relating to the calculation of an aircraft landing weight.

Subregulation 121.405(3) provides the circumstances and methods that the Part 121 MOS may mention. This subregulation does not limit subregulation 121.405(2).

Subregulation 121.405(4) provides that a contravention of subregulation 121.405(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation mitigates against adverse effect on the safety of air navigation by requiring an operator and the PIC of an aeroplane to ensure that when a flight begins, the estimated landing weight of the aeroplane for the flight is: less than the maximum landing weight for the aeroplane; or where circumstances specified in the Part 121 MOS prevail, less than the landing weight determined for the applicable circumstances. The regulation also provides that the Part 121 MOS may prescribe the circumstances and the methods for calculating the landing weight of the aeroplane for a flight under those circumstances.

Regulation 121.410 – Calculations relating to planned landing weights

Subregulation 121.410(1) provides that the operator and PIC of an aeroplane each contravene this subregulation if, when the flight begins, a requirement for calculating a landing weight prescribed by the Part 121 MOS applies and it is not met (refer subregulation 121.405(2)).

Subregulation 121.410(2) provides that a contravention of subregulation 121.410(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation promotes the safety of air navigation by requiring the operator and the PIC to ensure that when a flight begins the calculation of the estimated landing weight of the aeroplane for the flight has been conducted in accordance with the methods prescribed in the Part 121 MOS for those circumstances.

Regulation 121.415 – Inflight landing weights to be below certain weights

Subregulation 121.415(1) provides that the operator and PIC of an aeroplane each contravene this subregulation if the aeroplane's actual landing weight for the flight is greater than the Maximum Landing Weight (MLW) or the maximum weight for the aeroplane calculated in accordance with the method prescribed by the Part 121 MOS (refer subregulation 121.415(2)).

Subregulation 121.415(2) provides a head of power for the Part 121 MOS to prescribe requirements relating to the calculation of an aircraft landing weight.

Subregulation 121.415(3) provides the circumstances and methods that the Part 121 MOS may mention. This subregulation does not limit subregulation 121.415(2).

Subregulation 121.415(4) provides that a contravention of subregulation 121.415(1) is an offence. The penalty for the offence has been established as 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by requiring an operator and the PIC of an aeroplane to ensure that in-flight, the landing weight of the aeroplane for the flight is: less than the maximum landing weight for the aeroplane; or where circumstances specified in the Part 121 MOS prevail, less than the landing weight determined for the applicable circumstances. The regulation also provides that the Part 121 MOS may prescribe the circumstances and the methods for calculating the landing weight of the aeroplane for a flight under those circumstances.

Regulation 121.420 – Inflight calculations relating to landing weights

Subregulation 121.420(1) provides that the operator and PIC of an aeroplane each contravene this subregulation if a requirement for calculating a landing weight while en-route, prescribed by the Part 121 MOS, applies and it is not met (refer subregulation 121.415(2)).

Subregulation 121.420(2) provides that a contravention of subregulation 121.420(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation promotes the safety of air navigation by requiring the operator and the PIC to ensure that for the flight, at a time between when the flight begins and when the aeroplane lands, the landing weight calculated for the circumstances prescribed in the Part 121 MOS, is verified and if necessary recalculated.

Regulation 121.425 – Computerised performance data systems not fitted to aeroplanes

Subregulation 121.425(1) provides a head of power for the Part 121 MOS to prescribe requirements relating to the electronic calculation of performance data. It provides that the operator of an aeroplane contravenes this subregulation if a computerised system, other than one fitted to the aeroplane, is used as the primary means to make performance calculations and the system does not meet those requirements.

Subregulation 121.425(2) provides that a contravention of subregulation 121.425(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation promotes the safe conduct of operations by ensuring that the computerised performance data systems used as the primary means in making the aeroplane performance calculations for the purposes of this subpart are fitted to the aeroplane or meet the requirements prescribed in the Part 121 MOS for the purpose.

Regulation 121.430 – Procedures relating to inoperative engines

Subregulation 121.430(1) provides that an aeroplane operator's exposition must include procedures to allow the aeroplane's flight path to meet the requirements mentioned in subregulation 121.430(2) if one engine becomes inoperative during take-off and the take-off is continued.

Subregulation 121.430(2) provides that the requirements mentioned in subregulation 121.430(1) are that the aeroplane's flight path must provide a safe route, clearing all obstacles along the flight path, for the aeroplane to land at either the departure aerodrome, or the take-off alternate aerodrome (if nominated).

Subregulation 121.430(3) prescribes that the operator of a 3-engine or 4-engine aeroplane must include, in the operator's exposition, procedures to follow if 2 engines become inoperative during the flight.

This regulation mitigates against adverse effects on the safety of air navigation by requiring the operator's exposition to include procedures that ensure, in the event of one engine becoming inoperative during the take-off and the take-off is continued; the aeroplane's flight path provides a safe route clearing all obstacles along the flight path, for the aeroplane to land at either the departure aerodrome or the take-off alternate, if the take-off alternate is included in the operational flight plan. The regulation also provides that the operator of a 3-engine or 4-engine aeroplane must include in the operator's exposition procedures to follow if 2 engines become inoperative during the flight.

Subpart 121.J—Weight and balance

This Subpart is a complete Subpart 121.J of CASR inclusive of regulations 121.435 to 121.455. It prescribes requirements for ensuring an aircraft weight and balance are within limits during flight.

Regulation 121.435 – Loading of aeroplane

Subregulation 121.435(1) provides that the operator and PIC each contravene this subregulation if, when the flight begins, the aeroplane is loaded in a way that contravenes the aeroplane's weight and balance limits.

Subregulation 121.435(2) provides that the operator and PIC of an aeroplane for a flight each contravene this subregulation if, during the flight, the aeroplane ceases to be loaded in accordance with the aeroplane's weight and balance limits.

Subregulation 121.435(3) prescribes a contravention of subregulations 121.435(1) or (2) is an offence of strict liability, with a maximum penalty of 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by requiring the operator and the PIC of an aeroplane to ensure that the aeroplane is loaded so that the aeroplane's weight and balance limits are not exceeded; before the flight commences and during the flight.

Regulation 121.440 – Procedures for loading aeroplane etc.

Subregulation 121.440(1) provides requirements for procedures that must be included in an operator's exposition with regard to the loading of an aircraft.

Subregulation 121.440(2) provides requirements for the procedures used in determining the weight of passengers and their carry-on baggage along with the weight of crew members and their carry-on baggage. It provides that the weight must be determined by weighing, in accordance with a method for which the operator holds an approval under regulation 121.010, or in accordance with the standard weights prescribed by the Part 121 MOS.

Subregulation 121.440(3) provides requirements for the procedures used in determining the total weight of fuel to be carried. It provides that the weight must be determined by reference to its density, if known, or in accordance with procedures set out in the operator's exposition.

This regulation mitigates against adverse effects on the safety of air navigation by requiring the operator of an aeroplane to have in the operator's exposition procedures that ensure the aeroplane's weight and balance, for and during a flight, are maintained within the aeroplane's weight and balance limits. The regulation also prescribes the requirement for the operator's exposition to contain procedures for the following: calculating the weights for a flight for the aeroplane; loading; circumstances for last minute changes; confirming weight and balance documents; and for off-loading passengers or cargo to ensure that the aeroplane does not exceed its weight and balance limits.

Regulation 121.445 – Pilot in command must have information about aeroplane's weight and balance

Subregulation 121.445(1) provides a head of power for the Part 121 MOS to prescribe requirements for weight and balance information. It provides that the operator and PIC of an aeroplane each contravene this subregulation if, when the flight begins, the PIC does not have the information about the aeroplane's weight and balance that is prescribed by the Part 121 MOS.

Subregulation 121.445(2) provides that a contravention of subregulation 121.445(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by requiring the PIC, when the flight begins, to have the information in respect of the weight and balance for the flight of the aeroplane, as prescribed in the Part 121 MOS for the purpose.

Regulation 121.450 – Computerised weight and balance systems not fitted to aeroplanes

Subregulation 121.450(1) provides a head of power for the Part 121 MOS to prescribe requirements relating to the electronic calculation of performance data. It provides that the operator of an aeroplane contravenes this subregulation if a computerised system, other than one fitted to the aeroplane, is used as the primary means to make weight and balance calculations and the system does not meet those requirements.

Subregulation 121.450(2) provides that a contravention of subregulation 121.450(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation promotes the safe conduct of operations by ensuring that the computerised weight and balance systems used as the primary means of making the aeroplane weight and balance calculations for the purposes of this Subpart are fitted to the aeroplane or meet the requirements prescribed in the Part 121 MOS for the purpose.

Regulation 121.455 – Weight and balance documents

Subregulation 121.455(1) provides a head of power for the Part 121 MOS to prescribe requirements relating to the content of weight and balance documents. It provides that the operator and PIC of an aeroplane each contravene this subregulation if, when the flight begins, the weight and balance documents for the flight do not meet those requirements.

Subregulation 121.455(2) provides that a contravention of subregulation 121.455(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation ensures the maintenance of the safety of air navigation through requiring, when the flight begins, the weight and balance documents for the flight to meet the requirements prescribed by the Part 121 MOS for the purpose.

Subpart 121.K—Instruments, indicators, equipment and systems

This Subpart is a complete Subpart 121.K of CASR inclusive of regulations 121.460 to 121.465. It prescribes requirements for items that must be or must not be installed in, or carried in, an aeroplane and requirements for their use.

Regulation 121.460 – Instruments, indicators, equipment and systems—requirements

Subregulation 121.460(1) provides a head of power for the 121 MOS to prescribe instruments, indicators, items of equipment or systems that must be fitted to, carried on, not fitted to or not carried on an aircraft.

It also prescribes requirements in relation to an instrument, indicator, item of equipment or system fitted to, or carried on a flight, whether it was prescribed by the 121 MOS or not.

Subregulation 121.460(2) prescribes that the operator and the PIC of an aeroplane each contravene this subregulation if, when the flight begins, a requirement mentioned in subregulation 121.460(1)(a) or (b) is not met.

Subregulation 121.460(3) prescribes that a crew member contravenes this subregulation if a requirement mentioned in subregulation 121.460(1)(c) is not met for a flight.

Subregulation 121.460(4) prescribes that a contravention of subregulation 121.460(2) or (3) is an offence of strict liability, with a maximum penalty of 50 penalty units.

This regulation is intended to provide that the Part 121 MOS contains the requirements for the instruments, indicators, equipment or systems to be fitted to an aeroplane for the safe conduct of operations permitted under these Regulations.

Regulation 121.465 provides a head of power for the Part 121 MOS to prescribe circumstances in which a flight may begin if a required instrument, indicator, item of equipment or system were inoperative.

This regulation is intended to permit the Part 121 MOS to specify the circumstances under which the safety of an operation would not be compromised by a flight commencing with an otherwise required instrument, indicator, item of equipment or system inoperative.

Subpart 121.N—Flight crew

This Subpart is a complete Subpart 121.N of CASR inclusive of Divisions 121.N.1 to 121.N.6. It prescribes requirements for general flight crew requirements, requirements for

relief of flight crew on long journeys and requirements for operation of different aircraft types. It also prescribes requirements for flight crew experience, training and checking.

Division 121.N.1—General

This Division is a complete Division 121.N.1 of CASR inclusive of regulations 121.470 to 121.515. It prescribes general requirements for flight crew including composition of flight crew, experience, qualifications and competence.

Regulation 121.470 provides that this Subpart applies to the operation of a multi-engine aeroplane if either or both of paragraph 121.005(1)(a) and (b) apply in relation to the aeroplane, the operator of the aeroplane holds an Australian air transport AOC that authorises the conduct of Part 121 operations, and the operation is of a kind specified in the operator's exposition.

This regulation promotes the safety of air navigation by allowing operators of multi-engine aeroplanes who hold an Australian air transport AOC authorised to conduct Part 121 operations to apply the provisions of this subpart to their flight crew when conducting the kinds of operations specified in their exposition, that are, not solely Part 121 operations.

Regulation 121.475 – Composition, number, qualifications and training

Composition, number, qualifications and training

Subregulation 121.475(1) provides that the operator of an aircraft contravenes this subregulation if, when the flight begins, a requirement mentioned in subregulation 121.475(2) is not met.

Subregulation 121.475(2) prescribes the requirements mentioned in subregulation 121.475(1)

Subregulation 121.475(3) provides that the operator's exposition must include the kinds of operation (if any) for which additional flight crew members must be carried as required by paragraph 121.475(2)(d).

Training and checking involving safety or emergency equipment

Subregulation 121.475(4) prescribes the operator contravenes this subregulation if training or checking mentioned in subregulation 121.475(2), to the extent that it involves safety equipment or emergency equipment, is conducted other than by a person who holds an approval under regulation 121.010.

Offence

Subregulation 121.475(5) provides that a contravention of subregulation 121.475(1) or (4) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by requiring an operator's flight crew for a flight to be of a composition, number, qualification and training standard specified.

Regulation 121.480 – Experience

Subregulation 121.480(1) provides that the experience required for a flight crew member is that the flight crew member holds the necessary aircraft rating or has successfully completed

the operators relevant command training, and that they have completed the flying experience mentioned in subregulation 121.475(2).

Subregulation 121.480(2) prescribes the flying experience mentioned in subregulation 121.480(1). It provides that the flying experience must be the number of hours and sectors mentioned in subregulation 121.480(3) in aeroplanes of that kind, it must be completed as part of line operations, and it may include experience while the flight crew member is flying under supervision.

Subregulation 121.480(3) prescribes the requirements mentioned in subregulation 121.480(2). It provides that the experience must be at least 100 hours and 10 sectors, or the experience stated in an approval provided by CASA under regulation 121.010 of CASR.

Subregulation 121.480(4) provides that CASA may grant the approval mentioned in subregulation 121.480(3) only if satisfied that there are special circumstances in relation to the operator's operation that justify the grant of the approval.

This regulation promotes the safety of air navigation by requiring an operator to ensure that the flight crew assigned to a duty have the required experience.

Regulation 121.485 – Competence

Subregulation 121.485(1) provides that the operator of an aeroplane contravenes this subregulation if they assign a person to duty as a flight crew member and the person has not been assessed, in accordance with the operator's training and checking system, as being competent to perform the required duties.

Subregulation 121.485(2) provides that a contravention of subregulation 121.485(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by specifying the requirement for flight crew assigned to duty by an operator to have been assessed by the operator as being competent to perform those duties assigned.

Regulation 121.490 – Assignment to duty as pilot in command

Subregulation 121.490(1) provides that the operator of an aeroplane contravenes this subregulation if, when the flight begins, none of the pilots assigned as flight crew members are assigned to duty as the PIC of the aeroplane for the flight.

Subregulation 121.490(2) provides that a contravention of subregulation 121.490(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation ensures that the safety of air navigation is maintained by requiring the operator to assign a member of the flight crew as PIC for the flight.

Regulation 121.495 – Pilot in command

Subregulation 121.495(1) provides that a pilot is qualified as a PIC if they meet the minimum flying experience requirements specified, in accordance with subregulation 121.495(3), in the aeroplane operator's exposition for the aeroplane. They must also have successfully completed command training that complies with regulation 121.800 for the aeroplane operator and an aeroplane. Further, they must be authorised under Part 61 of CASR to pilot the aeroplane as PIC.

Subregulation 121.495(2) provides that, for the minimum flying experience requirement in subregulation 121.495(1), the aeroplane operator's exposition must include minimum flying experience requirements for all aeroplanes operated by the operator for Part 121 operations.

This regulation mitigates against adverse effects on the safety of air navigation by specifying the requirement for the flight crew member assigned to duty as the PIC by an operator to be qualified, experienced and trained to conduct the duties and responsibilities of the duty assigned.

Regulation 121.500 – Co-pilots

Subregulation 121.500(1) provides that the pilot is qualified as a co-pilot if they are authorised under Part 61 to conduct flight under the IFR in the aeroplane. The pilot must also have completed supervised line flying on an aeroplane of that kind as co-pilot for the number of sectors or flight hours mentioned in the aeroplane operator's exposition.

Subregulation 121.500(2) prescribes a pilot is qualified as co-pilot of an aeroplane if the pilot is qualified under regulation 121.495 as PIC of the aeroplane.

This regulation mitigates against adverse effects on the safety of air navigation by specifying the requirement for the flight crew member assigned to duty as co-pilot by an operator to be qualified, experienced and trained to conduct the duties assigned.

Regulation 121.505 – Cruise relief co-pilots

Subregulation 121.505(1) provides that the pilot is qualified as a cruise relief co-pilot if they are authorised under Part 61 to conduct flight under the IFR in the aeroplane. The pilot must also have completed supervised line flying on an aeroplane of that kind as co-pilot for the number of sectors or flight hours mentioned in the aeroplane operator's exposition.

Subregulation 121.505 prescribes that a pilot is qualified as co-pilot of an aeroplane if the pilot is qualified under regulation 121.495 as PIC of the aeroplane or under 121.500 as co-pilot of the aeroplane.

This regulation mitigates against adverse effects on the safety of air navigation by specifying the requirement for the flight crew member assigned to duty as cruise relief co-pilot by an operator to be qualified, experienced and trained to conduct the duties assigned.

Regulation 121.510 – Use of approved flight simulators for training or checking

Seating capacity of more than 19 and certain other aeroplanes

Subregulation 121.510(1) provides that subregulation 121.510(2) applies to an aeroplane with a MOPSC of more than 19, or an aeroplane of a kind prescribed by the Part 121 MOS.

Subregulation 121.510(2) provides that the operator of an aeroplane contravenes this subregulation if a flight crew member undertakes training or checking in an emergency procedure for the aeroplane, there is an approved flight simulator for the aeroplane in Australia (or a recognised foreign State) that is available for use and the exercises are not conducted in the simulator.

Seating capacity of 19 or less

Subregulation 121.510(3) provides that subregulation 121.510(4) applies to an aeroplane with a MOPSC of 19 or less, other than an aeroplane to which subregulation 121.510(2)

applies. Subregulation 121.510(2) might apply to an aeroplane with a MOPSC of 19 or less if it is of a kind prescribed by the Part 121 MOS (refer subregulation 121.510(1)).

Subregulation 121.510(4) provides that the operator of an aeroplane contravenes this subregulation if a flight crew member undertakes training or checking in an emergency procedure for the aeroplane, there is an approved flight simulator for the aeroplane in Australia that is available for use and the exercises are not conducted in the flight simulator.

Available for use

Subregulation 121.510(5) provides a definition of *available for use*. It provides that an approved flight simulator is *available for use* if it is available for the operator to use, or to reserve for use, is offered for use on a commercial basis, and is serviceable.

Offence

Subregulation 121.510(6) provides that a contravention of subregulation 121.510(2) or (4) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

For this regulation, *training and checking* does not include safety equipment training and checking (refer regulation 121.610 and 121.620).

Approved flight simulator and recognised foreign state are defined by regulation 61.010 of CASR).

This regulation mitigates against adverse effects on the safety of air navigation by ensuring that training and checking of flight crew, other than in relation to emergency equipment training and checking, is conducted in an approved flight simulator available for use in Australia or in a recognised foreign state, for aeroplanes with a maximum certificated seating capacity of more than 19, or any other aeroplane that CASA would, in the interest of safety, specify in the Part 121 MOS.

Regulation 121.515 provides that an aeroplane operator's exposition must include requirements for the PIC to have knowledge of the route, the departure, destination and alternate aerodromes.

Division 121.N.2—Operation of aeroplanes of different type ratings

This Division is a complete Division 121.N.2 of CASR inclusive of regulations 121.520 to 121.530. It prescribes requirements that apply if flight crew operate more than one aeroplane type.

Regulation 121.520 provides that this Division applies in relation to the operator of an aeroplane if, under the operator's AOC, the operator operates aeroplanes of more than one type rating for Part 121 operations, and the operator assigns, or is likely to assign, a flight crew member employed by the operator to duty on aeroplanes of more than one type rating.

Regulation 121.525 prescribes the required information to be included in the operator's exposition. It must have a description of the circumstances in which the operator may assign a flight crew member to duty on aeroplanes of more than one type rating. It must include the combinations of aeroplanes with different type ratings that a single flight crew member may be assigned to duty on by the operator. It must include the flying experience, checks and training that a flight crew member must gain or complete, while the flight crew member is employed by the operator, before being assigned to duty on aeroplanes of more than one type rating. The exposition must also include procedures to ensure that, if a flight crew member is assigned to duty on aeroplanes with different type ratings within one tour of duty, the flight crew member has adequate time between flights on aeroplanes with different ratings for the flight crew member to prepare for duty.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring an operator's exposition contains measures to address the matters required to assign flight crew members to aeroplanes of different type ratings.

Regulation 121.530 – Credit for checks, qualifications, training and experience

Subregulation 121.530(1) provides that subregulation 121.530(2) applies if an operator holds an approval under regulation 121.010 for this regulation in relation to a check or qualification, or particular training or experience, mentioned in this Subpart, and aeroplanes of 2 particular type ratings.

Subregulation 121.530(2) provides that, for the purpose of these Regulations, the successful completion by a flight crew member of the operator's personnel of the check, qualification, training or experience for an aeroplane of the first type rating is taken to also be the successful completion by the flight crew member of the check, qualification, training or experience for an aeroplane of the second type rating.

Subregulation 121.530(3) prescribes CASA may grant an approval for this regulation only if satisfied that the check, qualification, training or experience for an aeroplane of the first type rating is sufficiently similar to the check, qualification, training or experience for an aeroplane of the second type rating, and the aeroplane of the first type rating and second type rating are sufficiently similar in relation to their level of technology, operational procedures, and handling characteristics.

This regulation promotes the safety of air navigation by requiring CASA to approve credit for checks, qualifications, training or experience for an operator's flight crew for more than one type rated aeroplane subject to CASA being satisfied that aeroplanes of the different type ratings and the check, qualification, training or experience associated are sufficiently similar. In doing so ensuring that unnecessary duplication of checks, qualifications, training or experience can be eliminated.

Division 121.N.3 – Relief

This Division is a complete Division 121.N.3 of CASR inclusive of regulation 121.535. It prescribes rules for the time during which duty may be delegated to whom it may be delegated.

Regulation 121.535 – Relief of pilot in command

Subregulation 121.535(1) provides that the operator and PIC each contravene this subregulation if the PIC delegates the conduct of the flight and the delegation is not permitted by either subregulation 121.535(2) or (3).

General

Subregulation 121.535(2) provides that the PIC may delegate the conduct of the flight at any time to a pilot who is qualified under regulation 121.495 as PIC of the aeroplane.

Flight above flight level 200

Subregulation 121.535(3) provides that the PIC may delegate the conduct of the flight when above flight level 200 to a pilot who meets the requirements mentioned in subregulation 121.535(4).

Subregulation 121.535(4) provides that the pilot must hold an air transport pilot licence and the pilot must be qualified as co-pilot (under regulation 121.500) and have the flying experience required by regulation 121.480. The pilot must also have the knowledge of the route of the flight required by the operator's exposition.

Subregulation 121.535(5) prescribes the operator's exposition must include the knowledge the pilot must have of the route of the flight.

Offence

Subregulation 121.535(6) prescribes a contravention of subregulation 121.535(1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

This regulation promotes the safety of air navigation by ensuring that the delegation of relief PIC duties and responsibilities are conducted subject to the conditions deemed necessary by CASA.

Division 121.N.4—Recent experience

This Division is a complete Division 121.N.4 of CASR inclusive of regulations 121.540 to 121.550. It prescribes requirements for recent experience requirements and the need to document them in the operator's exposition.

Regulation 121.540 – Pilot in command and co-pilot—recent experience requirements

Operator

Subregulation 121.540(1) provides that the operator contravenes this subregulation if the operator assigns a pilot to duty as PIC or co-pilot of the aeroplane, and the pilot does not have recent experience required for the flight by subregulation 121.540(3).

Pilot

Subregulation 121.540(2) provides that a pilot contravenes this subregulation if the pilot operates the aeroplane as PIC or co-pilot for the flight and the pilot does not have the recent experience required for the flight by subregulation 121.540(3).

Recent experience requirements

Subregulation 121.540(3) prescribes the recent experience required for a flight is that the pilot must meet at least one of the requirements mentioned in subregulation 121.540(4)

within 90 days before the flight. If it is not practicable for the pilot to comply with this requirement, the flight experience required under the aeroplane operator's exposition.

Subregulation 121.540(4) prescribes the requirement for subregulation 121.540(3). The pilot must have carried out, in an aeroplane of that kind or an approved flight simulator for the aeroplane, at least 3 take-offs that are followed by a climb to at least 500 feet above the ground while controlling the aeroplane or simulator, and at least 3 landings while controlling the aeroplane or simulator. The pilot must have passed a flight test for the grant of a pilot licence or a rating on a pilot licence in an aeroplane of that kind or an approved flight simulator for the aeroplane. The pilot must also have successfully completed a Part 121 proficiency check for the operator and an aeroplane of that kind.

Subregulation 121.540(5) provides that, for the purpose of subregulation 121.540(4), each take-off must include a climb to at least 500 ft Above Ground Level (AGL).

Offence

Subregulation 121.540(6) provides that a contravention of subregulation 121.540(1) or (2) is an offence of strict liability, with a maximum penalty of 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring an operator's crew members assigned to duty as PIC and co-pilot flight meet the prescribed recent experience requirements of their positions prior to carrying out those duties.

Regulation 121.545 – Cruise relief co-pilot—recent experience requirements

Operator

Subregulation 121.545(1) provides that the operator contravenes this subregulation if the operator assigns a pilot to duty as cruise relief co-pilot for the flight and the pilot has not, within 90 days before the flight, done at least one of the listed requirements. They are (i) the pilot competed at least 2 hours of simulated flight time as co-pilot in an approved flight simulator for the aeroplane; (ii) the pilot passed a flight test for the grant of a pilot licence or a rating on a pilot licence in an aeroplane of that kind or an approved flight simulator for the aeroplane; or (iii) the pilot exercised the privileges of a pilot licence or a rating on a pilot licence that covers the aeroplane.

Pilot

Subregulation 121.545(2) provides that a pilot contravenes this subregulation if the pilot operates the aeroplane as cruise relief co-pilot for the flight and the pilot has not, within 90 days before the flight, done at least one of the listed requirements. They are (i) the pilot competed at least 2 hours of simulated flight time as co-pilot in an approved flight simulator for the aeroplane; (ii) the pilot passed a flight test for the grant of a pilot licence or a rating on a pilot licence in an aeroplane of that kind or an approved flight simulator for the aeroplane; or (iii) the pilot exercised the privileges of a pilot licence or a rating on a pilot licence that covers the aeroplane.

Offence

Subregulation 121.545(3) provides that a contravention of subregulations 121.545(1) or (2) is an offence of strict liability, with a maximum penalty of 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring an operator's cruise relief co-pilot flight crew meet the prescribed recent experience requirements of their position prior to carrying out their duties.

Regulation 121.550 – Flight engineers—recent experience requirements

Operator

Subregulation 121.550(1) provides that the operator contravenes this subregulation if the operator assigns a flight engineer to duty as flight engineer of the aeroplane for the flight, and the flight engineer does not have the recent experience required under regulation 61.1335 (limitations on exercise of privileges of flight engineer licences—recent experience) for the flight.

Flight engineer

Subregulation 121.550(2) provides that a flight engineer contravenes this subregulation if the flight engineer performs a duty that is essential to the operation of the aeroplane for the flight, and the flight engineer does not have the recent experience required under regulation 61.1335 (limitations on exercise of privileges of flight engineer licences—recent experience) for the flight.

Offence

Subregulation 121.550(3) prescribes a contravention of subregulation 121.550(1) or (2) is an offence of strict liability, with a maximum penalty of 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring an operator's flight engineer flight crew members meet the prescribed recent experience requirements of their position prior to carrying out their duties.

Division 121.N.5—Non-recurrent training and checking etc.

This Division is a complete Division 121.N.5 of CASR inclusive of regulations 121.555 to 121.565. It prescribes requirements for initial training, conversion training, command training and expectations of route knowledge.

Regulation 121.555 provides that for paragraph 121.475(2)(i), a flight crew member meets the initial training requirements for operator of an aeroplane if the flight crew member has completed the operator's initial training for a flight crew member, the initial training includes training on the matters prescribed by the Part 121 MOS, and the flight crew member has successfully completed an initial training check in accordance with the operator's exposition.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring an operator's flight crew members meet the prescribed initial training requirements of their positions prior to carrying out their duties.

Regulation 121.560 – Meeting conversion training requirements

Subregulation 121.560(1) provides that for paragraph 121.475(2)(j), a flight crew member meets the conversion training requirements under this subregulation for an operator of an aeroplane, and the aeroplane, if the flight crew member has completed training, for an aeroplane of that kind, that meets the requirements prescribed by the Part 121 MOS, and the training is conducted by an individual employed by the operator to conduct the training, or a Part 142 operator with which the operator has a contract for the Part 142 operator to conduct the training for the operator.

Subregulation 121.560(2) provides that for paragraph 121.475(2)(k), a flight crew member meets the conversion training requirements under this subregulation for an operator of an

aeroplane and the aeroplane if the flight crew member has completed supervised line flying in an aeroplane of that kind.

Subregulation 121.560(3) provides that the supervised line flying mentioned in subregulation 121.560(2) must have been completed after the flight crew member has successfully completed a Part 121 proficiency check for the operator and aeroplane, a valid annual emergency and safety equipment check for the operator and aeroplane under regulation 121.605, and a valid 3 yearly emergency and safety equipment check for the operator and the aeroplane under regulation 121.615.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring an operator's flight crew members meet the prescribed conversion training requirements of their positions prior to carrying out their duties.

Regulation 121.565 provides that command training for a pilot for an aeroplane operator and an aeroplane must include either flying training conducted in an aeroplane of that kind, or training conducted in the approved flight simulator if there is an approved flight simulator for the aeroplane. It must also include successful completion of a Part 121 proficiency check, for the operator and the aeroplane, for a PIC of the aeroplane. Further, it must include training in the responsibilities of the PIC of an aeroplane of that kind, training in relation to pilot incapacitation, as well as supervised line flying on an aeroplane of that kind as PIC under supervision for at least the number of sectors required by the operator's exposition. Finally, it must include successful completion of a line check that complies with regulation 121.590 for a PIC for an aeroplane of that kind.

This regulation promotes the safety of air navigation by requiring the command training of a pilot for an operator and for an aeroplane used by the operator to be comprised of the elements specified.

Division 121.N.6—Recurrent training and checking

This Division is a complete Division 121.N.6 of CASR inclusive of regulations 121.570 to 121.620. It prescribes requirements for regular checking the proficiency of crew in the conduct of aircraft operations and the regular checking the proficiency of crew in using emergency and safety equipment.

Regulation 121.570 – Recurrent training and checking requirements

Subregulation 121.570(1) provides that, for paragraph 12.690(2)(1), a flight crew member meets the recurrent training and checking requirements for a flight if the flight crew member holds a valid Part 121 proficiency check under regulation 121.575, a valid refresher check under regulation 121.595, a valid annual emergency and safety equipment check under regulation 121.605 and a valid 3 yearly emergency and safety equipment check under regulation 121.615. The flight crew member must have completed, within the previous 12 months, recurrent flight training, in accordance with the requirements prescribed by the Part 121 MOS, for an aeroplane of that kind.

Subregulation 121.570(2) provides that, for paragraph 121.475(2)(m), a flight crew member meets the recurrent training and checking requirements for a flight of an aeroplane if the flight crew member holds a valid line check under regulation 121.585 for the aeroplane operator and the aeroplane.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring an operator's flight crew members have met the recurrent training and checking requirements for a flight of the aeroplane and for the operator as specified.

Regulation 121.575 – Holding valid Part 121 proficiency check

Holding a valid check

Subregulation 121.575(1) provides that if a person successfully completes a Part 121 proficiency check, the check is valid for the period beginning on the completion date and ending at: the beginning of the day the person completes another Part 121 proficiency check for the operator and the aeroplane; or the end of the 8 month period beginning on the completion date; or, if the person has, with the 12 month period ending immediately before the completion day, successfully completed one or more Part 121 proficiency checks for the operator and the aeroplane, the end of the 12 month period beginning on the day the most recent of the previous checks was successfully completed. The earliest of the end date options applies.

When a check completed for a previous operator is valid

Subregulation 121.575(2) provides that if an operator of an aeroplane of a particular kind that has a maximum certificated passenger seating capacity of 19 or less holds an approval under regulation 121.010 for this subregulation in relation to Part 121 proficiency checks completed for another particular operator and an aeroplane of that kind, and a person holds a valid Part 121 proficiency check for the other operator and an aeroplane of that kind, the person is taken to hold a valid Part 121 proficiency check for the first operator and an aeroplane of that kind, for the purposes of CASR and CAR.

This regulation ensures the maintenance of aviation safety by requiring a person operating as a flight crew member to hold a valid Part 121 proficiency check for the operator of an aeroplane and for the aeroplane as prescribed, whilst promoting the flexibility for a valid proficiency check for one operator to be taken to meet the requirements for another operator under specific conditions, thus reducing otherwise unnecessary duplication.

Regulation 121.580 – Part 121 proficiency check

Pilots

Subregulation 121.580(1) provides that a proficiency check for a pilot for an aeroplane must, in accordance with any requirements prescribed by the Part 121 MOS, check the competence of the pilot in carrying out normal, abnormal and emergency procedures in relation to the flying of an aeroplane of that kind while performing duties at their normal pilot seat.

Subregulation 121.580(2) provides that the check for the pilot must be conducted by an individual who is either employed by the operator to conduct the check or is employed by a Part 142 operator with which the operator has a contract for the Part 142 operator to conduct the check for the operator. The individual must also meet the requirements mentioned in subregulation 121.580(3).

Subregulation 121.580(3) provides that the individual must hold a flight examiner rating for an aeroplane of that kind, or an approval under regulation 121.010 to conduct a Part 121 proficiency check for an aeroplane of that kind. They must also have successfully completed training in human factors principles and non-technical skills.

Flight engineers

Subregulation 121.580(4) provides that a proficiency check for a flight engineer for an aeroplane must, in accordance with any requirements prescribed by the Part 121 MOS, check the competence of the flight engineer in carrying out the duties of a flight engineer in relation to the operation of an aeroplane of that kind while acting as part of a normal flight crew for the aeroplane.

Subregulation 121.580(5) provides that the check for the flight engineer must be conducted by an individual who is either employed by the operator to conduct the check or employed by a Part 142 operator with which the operator has a contract for the Part 142 operator to conduct the check for the operator. They must also meet the requirements mentioned in subregulation 121.580(6).

Subregulation 121.580(6) prescribes the individual must hold a flight engineer rating for an aeroplane of that kind, or an approval under regulation 121.010 to conduct a Part 121 proficiency check for an aeroplane of that kind. They must also have successfully completed training in human factors principles and non-technical skills.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring a Part 121 proficiency check of a flight crew member for an operator is conducted in accordance with the prescribed conditions and by an appropriately qualified or approved individual.

Regulation 121.585 – Holding valid line check

Subregulation 121.585(1) provides that a flight crew member holds a valid line check for the operator of an aeroplane and the aeroplane if the flight crew member has successfully completed the operator's line check for an aeroplane of that kind, and the check complies with subregulation 121.590(1) (for a pilot), subregulation 121.590(2) (for a flight engineer), and the check is valid in accordance with subregulations 121.585(2) and (3).

Subregulation 121.585(2) prescribes that a line check is valid beginning from the day the check is completed and ending at the end of the 12-month period beginning at the end of the month in which the check is completed.

Subregulation 121.585(3) prescribes if a person's line check for the operator of an aeroplane and an aeroplane is valid in accordance with subregulation 121.585(2), and the person successfully completes another line check for that operator and aeroplane in accordance with paragraphs 121.585(1)(a) and (b) less than 3 months before the day the existing check is due to expire, the new check is valid for the period of 12 months beginning at the end of the day the existing check expires.

This regulation ensures the maintenance of aviation safety by requiring a person operating as a flight crew member to hold a valid line check for the operator of an aeroplane and the aeroplane as prescribed.

Regulation 121.590 – Line check requirements

Pilots

Subregulation 121.590(1) prescribes that a line check must check the pilot's competence in carrying out a normal line flight operation for the aeroplane. If the pilot is assigned duties as both the pilot flying and the pilot monitoring, the check must check the pilot in both

functions. Further, the person conducting the check must hold an appointment by the operator to conduct a line check for an aeroplane of that kind.

Flight engineers

Subregulation 121.590(2) prescribes that a line check must check the flight engineer's competence in carrying out normal flight operations for the aeroplane during a normal line flight of the aeroplane. The person conducting the check must not occupy a flight engineer panel seat during take-off, departure, initial cruise, descent, approach or landing. Further, the check flight engineer must hold an appointment by the operator of the aeroplane to conduct a line check for an aeroplane of that kind.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring a line check of a flight crew member for an operator is conducted in accordance with the prescribed conditions and by an appropriately qualified or approved individual.

Regulation 121.595 – Holding valid refresher check

Subregulation 121.595(1) provides that a flight crew member holds a valid refresher check for the operator of an aeroplane and the aeroplane if the flight crew member has undertaken the operator's refresher training for an aeroplane of that kind complies with subregulation 121.600(1), the flight crew member has successfully completed the operator's refresher check for an aeroplane of that kind that complies with subregulation 121.600(2), and the check is valid in accordance with subregulation 121.595(2) and (3).

Subregulation 121.595(2) provides that subject to subregulation 121.595(3), a refresher check is valid beginning on the day the check is completed and ending at the end of the 12 month period beginning at the end of the month in which the check is completed.

Subregulation 121.595(3) provides that if a person's refresher check for the operator of an aeroplane and an aeroplane is valid in accordance with subregulation 121.595(2), and the person successfully completes another refresher check for that operator and aeroplane in accordance with paragraph 121.595(1)(d) less than 3 months before the day the existing check is due to expire, the new check is valid for the period of 12 months beginning at the end of the day the existing check expires.

This regulation ensures the maintenance of aviation safety by requiring a person operating as a flight crew member to hold a valid refresher check for the operator of an aeroplane and for the aeroplane as prescribed.

Regulation 121.600 – Refresher training and checking requirements

Training requirements

Subregulation 121.600(1) provides that refresher training for a pilot must relate to the duties of a pilot for the aeroplane. Refresher training for a flight engineer must relate to the duties of a flight engineer for the aeroplane. The training must include training on aeroplane systems. It must also include training on operational procedures and requirements in relation to the Part 121 operations conducted by the operator using the aeroplane, including in relation to accident, incident and occurrence reviews.

Checking requirements

Subregulation 121.600(2) provides that a refresher check for a flight crew member must include an assessment of the flight crew member's knowledge of the training mentioned in

subregulation 121.600(1), other than the training on accident, incident and occurrence reviews.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring that refresher training and checking of a flight crew member for an operator is conducted in accordance with the prescribed conditions and requirements.

Regulation 121.605 – Holding valid annual emergency and safety equipment check

Subregulation 121.605(1) provides that a flight crew member holds a valid annual emergency and safety emergency check for the operator and the aeroplane if the flight crew member has undertaken the operator’s annual emergency and safety equipment training for an aeroplane of that kind that complies with subregulation 121.610(1), the flight crew member has successfully completed the operator’s annual emergency and safety equipment check for an aeroplane of that kind that complies with subregulation 121.610(2), and the check is valid in accordance with subregulations 121.605(2) and (3).

Subregulation 121.605(2) provide that subject to subregulation 121.605(3), an annual emergency and safety equipment check is valid beginning on the day the check is completed and ending at the end of the 12 month period beginning at the end of the month in which the check is completed.

Subregulation 121.605(3) provides that if a person’s annual emergency and safety equipment check for the operator of an aeroplane and an aeroplane is valid in accordance with subregulation 121.605(2), and the person successfully completes another annual emergency and safety equipment check for that operator and aeroplane in accordance with paragraph 121.605(1)(d) less than 3 months before the day the existing check is due to expire, the new check is valid for the period of 12 months beginning at the end of the day the existing check expires.

This regulation ensures the maintenance of aviation safety by requiring a person operating as a flight crew member to hold a valid annual emergency and safety equipment check for the operator of an aeroplane and the aeroplane as prescribed.

Regulation 121.610 – Annual emergency and safety equipment training and checking requirements

Training requirements

Subregulation 121.610(1) provides that annual emergency and safety equipment training for a pilot must relate to the duties of a pilot for the aeroplane in relation to emergency and safety equipment carried on the aeroplane. Annual emergency and safety equipment training for a flight engineer must relate to the duties of a flight engineer for the aeroplane in relation to emergency and safety equipment carried on the aeroplane. The training must also include training on the matters prescribed by the Part 121 MOS.

Checking requirements

Subregulation 121.610(2) prescribes an annual emergency and safety equipment check for a flight crew member must cover the location and use of all emergency and safety equipment carried on the aeroplane, cover the equipment for which the flight crew member has undertaken training mentioned in subregulation 121.610(1), and be carried out using the aeroplane or a training facility or device which meets the requirements prescribed by the Part 121 MOS for the purposes of regulation 121.680.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring that annual emergency and safety equipment training and checking of a flight crew member for an operator and the aeroplane is conducted in accordance with the prescribed conditions and requirements.

Regulation 121.615 – Holding valid 3 yearly emergency and safety equipment check

Subregulation 121.615(1) provides that a flight crew member holds a valid 3 yearly emergency and safety equipment check for the operator and the aeroplane if they satisfy a number of requirements. The flight crew member must have undertaken the operator's 3 yearly emergency and safety equipment training for an aeroplane of that kind. This training must comply with subregulation 121.620(1). The flight crew member must have successfully completed the operator's 3 yearly emergency and safety equipment check for an aeroplane of that kind. That check must comply with subregulation 121.620(2) and be valid in accordance with subregulations 121.615(2) and (3).

Subregulation 121.615(2) provides that subject to subregulation 121.615(3), a 3 yearly emergency and safety equipment check is valid beginning on the day the check is completed and ending at the end of the 3-year period beginning at the end of the month in which the check is completed.

Subregulation 121.615(3) provides that if a person's 3 yearly emergency and safety equipment check for the operator of an aeroplane and an aeroplane is valid in accordance with subregulation 121.615(2), and the person successfully completes another 3 yearly emergency and safety equipment check for that operator and aeroplane in accordance with subregulation 121.615(2) less than 3 months before the day the existing check is due to expire, the new check is valid for the period of 3 years beginning at the end of the day the existing check expires.

This regulation ensures the maintenance of aviation safety by requiring a person operating as a flight crew member to hold a valid 3 yearly emergency and safety equipment check for the operator of an aeroplane and the aeroplane as prescribed.

Regulation 121.620 – The 3 yearly emergency and safety equipment checking requirements

Training requirements

Subregulation 121.620(1) provides that 3 yearly emergency and safety equipment training for a pilot must relate to the duties of a pilot for the aeroplane in relation to emergency and safety equipment carried on the aeroplane. 3 yearly emergency and safety equipment training for a flight engineer must relate to the duties of a flight engineer for the aeroplane in relation to emergency and safety equipment carried on the aeroplane. The training must also include training on the matters prescribed by the Part 121 MOS.

Checking requirements

Subregulation 121.620(2) provides that a 3 yearly emergency and safety equipment check for a flight crew member must cover the matters prescribed for 3 yearly emergency and safety equipment prescribed in the Part 121 MOS, and be carried out using the aeroplane or a training facility or device which meets the requirements prescribed by the Part 121 MOS for the purposes of regulation 121.680.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring that 3 yearly emergency and safety equipment training and checking of a flight crew member

for an operator and the aeroplane is conducted in accordance with the prescribed conditions and requirements.

Subpart 121.P—Cabin crew

This Subpart is a complete Subpart 121.P of CASR inclusive of Divisions 121.P.1 to 121.P.7. It prescribes requirements for general cabin crew requirements and requirements for operation of different aircraft types. It also prescribes requirements for cabin crew experience, training and checking.

Division 121.P.1—Preliminary

This Division is a complete Division 121.P.1 of CASR inclusive of regulations 121.625 and 121.630. It prescribes requirements for defining the operations that the Division applies to and goes on to define which of those operations require the carriage of cabin crew.

Regulation 121.625 – Application of Subpart 121.P

Subregulation 121.625(1) provides that this Subpart (other than Division 121.P.7) applies in relation to a flight of an aeroplane if regulation 121.630 requires a cabin crew member to be carried on the aeroplane for the flight.

Subregulation 121.625(2) provides that Division 121.P.7 applies in relation to a flight of an aeroplane if regulation 121.630 does not require a cabin crew member to be carried on the aeroplane for the flight.

Regulation 121.630 provides that a cabin crew member must be carried on a flight if the flight is a passenger transport operation, and either the aeroplane has a maximum operational passenger seat configuration of: more than 19; or more than 9 and a maximum certificated passenger seating capacity of more than 19.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring that a cabin crew member is carried on a passenger transport flight when the aeroplane has a maximum operational seating capacity of more than 19 or, when the maximum certificated passenger seating capacity is more than 19, more than 9 seats are fitted as the maximum operational passenger seating configuration.

Division 121.P.2—General

This Division is a complete Division 121.P.2 of CASR inclusive of regulations 121.635 to 121.680. It prescribes the number of cabin crew required for a flight. It provides requirements for their age, qualifications, competence and English language proficiency. It also provides requirements for the training and checking of cabin crew and their seniority.

Regulation 121.635 – Number of cabin crew

Number of cabin crew

Subregulation 121.635(1) prescribes the operator of an aeroplane for a flight contravenes this subregulation if, when the flight begins, a requirement mentioned in subregulation 121.635(2) is not met for the flight if the aeroplane does not have twin aisles, or a requirement mentioned in subregulation 121.635(3) is not met if the aeroplane does have twin aisles.

Aeroplanes without twin aisles

Subregulation 121.635(2) prescribes the required number of cabin crew for an aeroplane that does not have twin aisles.

Aeroplanes with twin aisles

Subregulation 121.635(3) prescribes the required number of cabin crew for an aeroplane that has twin aisles.

Approvals by CASA

Subregulation 121.635(4) prescribes a number approved by CASA under regulation 121.010 for paragraph 121.635(2)(c) may be zero.

Exception

Subregulation 121.635(5) prescribes subregulation 121.635(1) does not apply if a requirement mentioned in subregulation 121.635(2) or (3) (as the case requires) is not met for the flight, but the flight is operated with a reduced number of cabin crew members in accordance with subregulation 121.670(2).

Offence

Subregulation 121.635(6) prescribes a contravention of subregulation 121.635(1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

A defendant bears an evidential burden in relation to the matters in subregulation 121.635(5). In reversing the onus of proof, whether a flight was conducted with reduced cabin in a manner that complies with the operator's exposition is peculiarly within the knowledge of the defendant and significantly more difficult and costly for the prosecution to disprove than for the defendant to establish.

This regulation mitigates against adverse effects on the safety of air navigation by requiring the operator of an aeroplane for a flight to ensure that the appropriate number of cabin crew members are provided. The regulation further differentiates between aeroplanes with one or two aisles, with the required numbers being prescribed accordingly.

Regulation 121.640 – Qualifications, experience and training

Qualifications, experience and training

Subregulation 121.640(1) prescribes that an operator contravenes this subregulation if, when the flight begins, a requirement mentioned in subregulation 121.640(2) is not met for the flight.

Subregulation 121.640(2) prescribes each cabin crew member must have recent experience required for the flight by regulation 121.705. They must meet the initial training requirements under regulation 121.710 for the operator. They must meet the conversion training requirements under subregulation 121.715(1) for the operator and the aeroplane type. They must meet the conversion training requirements under subregulation 121.715(3) for the operator and the aeroplane type for unsupervised line flying for the flight. They must meet the differences training requirements (if any) under regulation 121.720 for the operator and the aeroplane. They must hold a valid annual training check under regulation 121.725 for the operator and the aeroplane type. They must hold a valid line check under regulation 11.985 for the operator and an aeroplane type operated by the operator for unsupervised line flying for the flight. They must hold a valid 3 yearly training check under regulation 121.735 for the operator and the aeroplane type. They must also have the qualifications and experience

required by the operator's exposition for the duties assigned to the cabin crew member for the flight.

Training or checking involving safety or emergency equipment

Subregulation 121.640(3) prescribes the operator of an aeroplane for the flight contravenes this subregulation if training or checking mentioned in subregulation 121.640(2), to the extent that it involves safety equipment or emergency equipment, is conducted other than by a person who holds an approval under regulation 121.010.

Exception

Subregulation 121.640(4) prescribes a requirement mentioned in subregulation 121.640(2) is taken to be met for a cabin crew member if they are successfully participating in the operator's training and checking system, and the operator holds an approval under regulation 121.010 that the system adequately covers the matters to which the requirement relates.

Offence

Subregulation 121.640(5) prescribes a contravention of subregulation 121.640(1) or (3) is an offence of strict liability, with a maximum penalty of 50 penalty units.

A defendant bears an evidential burden in relation to the matters in subregulation 121.640(4). In reversing the onus of proof, whether or not a cabin crew member is successfully participating in an operator's training and checking system is peculiarly within the knowledge of the defendant and significantly more difficult and costly for the prosecution to disprove than for the defendant to establish.

This regulation mitigates against adverse effects on the safety of air navigation by requiring the operator of an aeroplane for a flight to ensure that each cabin crew member is appropriately checked, qualified and trained prior to the commencement of duty.

Regulation 121.645 – Competence

Subregulation 121.645(1) prescribes the operator contravenes this subregulation if the operator assigns a person to duty as a cabin crew member for the flight and the person has not been assessed by the operator, in accordance with the operator's exposition, as competent to perform the duties assigned to the person for the flight.

Subregulation 121.645(2) prescribes a contravention of subregulation 121.645(1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring that an operator assigns a person to duty as a cabin crew member who has been assessed as competent to perform those duties.

Regulation 121.650 – Minimum age

Subregulation 121.650(1) provides that the operator of an aeroplane contravenes this subregulation if, when the flight begins, a cabin crew member for the flight has not turned 18.

Subregulation 121.650(2) provides that a contravention of subregulation 121.650 is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring that a cabin crew member assigned to a duty is of an appropriate age to conduct those duties.

Regulation 121.655 – English proficiency

Subregulation 121.655(1) provides that the operator of an aeroplane contravenes this subregulation if they assign a person to duty as a cabin crew member and the person does not meet a requirement relating to general English Language proficiency for cabin crew members prescribed by the Part 121 MOS.

Subregulation 121.655(2) provides that a contravention of subregulation 121.655(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring that a cabin crew member assigned to a duty has the language proficiency required to ensure safe conduct of those duties.

Regulation 121.660 – Assignment to duty as senior cabin crew member

Subregulation 121.660(1) provides that the operator of an aeroplane contravenes this regulation if, when the flight begins, there is more than one cabin crew member for the flight and none of the cabin crew members is assigned to duty as the senior cabin crew member for the flight.

Subregulation 121.660(2) provides that a contravention of subregulation 121.660(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by ensuring that an operator assigns a senior cabin crew member to a flight when more than one cabin crew member is required for the flight.

Regulation 121.665 – Training and checking for senior cabin crew member

Subregulation 121.665(1) prescribes the operator contravenes this subregulation if the operator assigns a cabin crew member to duty as the senior cabin crew member for the flight and the cabin crew member has not successfully completed the training and checking for a senior cabin crew member prescribed by the Part 121 MOS.

Subregulation 121.665(2) provides that subregulation 121.665(1) does not apply if, before the flight begins, another cabin crew member is assigned to duty as the senior cabin crew member for the flight and the original senior cabin crew member becomes unable to report for duty due to unforeseen circumstances that are beyond the operator's control.

Subregulation 121.665(3) prescribes a contravention of subregulation 121.665(1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

A defendant bears an evidential burden in relation to the matters in subregulation 121.665(2). In reversing the onus of proof, the matter to be established is peculiarly within the knowledge of the defendant and significantly more difficult and costly for the prosecution to disprove than for the defendant to establish.

This regulation mitigates against adverse effects on the safety of air navigation by requiring an operator who assigns a senior cabin crew member to a flight to ensure that the cabin crew member has been trained and checked in performing the duties to which they are assigned. The regulation also allows a degree of flexibility in allowing a senior cabin crew member who has not met the training and checking requirements to be assigned to address unforeseen situations where a previously assigned senior cabin crew member becomes unavailable and cannot be readily replaced.

Regulation 121.670 – Operating with a reduced number of cabin crew

Subregulation 121.670(1) provides that an operator's exposition must include the circumstances in which the aeroplane may be operated for a flight with a number of cabin crew members that is fewer than the number required by subregulation 121.635(2) or (3). The exposition must also include procedures for operating the aeroplane for the flight with a reduced number of cabin crew members, as well as procedures for notifying CASA of the reduced number of cabin crew members carried on the flight.

Subregulation 121.670(2) provides that the circumstances for subregulation 121.670(1) may only be included in the operator's exposition if the circumstances are unforeseen and beyond the operator's control.

Subregulation 121.670(3) provides that a reduced number of cabin crew members for a flight must not be less than the number equal to the sum of one cabin crew member for each 50, or part of 50, passenger carried on each deck of the aeroplane for the flight.

This regulation mitigates against adverse effects on the safety of air navigation by requiring an operator's exposition to contain the circumstances where an aeroplane may be operated with less than the full complement of cabin crew members required. In doing so it provides operators with greater flexibility in managing exceptional operational circumstances.

Regulation 121.675 – Second senior cabin crew member

Subregulation 121.675(1) provides this regulation applies in relation to an aeroplane if it is used to conduct a flight for which regulation 121.635 requires the aeroplane to carry more than 4 cabin crew members.

Subregulation 121.675(2) provides that an operator contravenes this subregulation if a cabin crew member is not assigned to duty as the second senior cabin crew member for the flight.

Subregulation 121.675(3) provides that an operator's exposition must include procedures to assign a cabin crew member to duty as the second senior cabin crew member for a flight, and the duties to be carried out by a second senior cabin crew member for a flight.

Subregulation 121.675(4) provides that a contravention of subregulation 121.675(2) is an offence of strict liability, with a maximum penalty of 50 penalty units.

This regulation mitigates against adverse effects on the safety of air navigation by providing a requirement to identify and assign a second senior cabin crew member for flights where the number of cabin crew members required is greater than four.

Regulation 121.680 – Training facilities and devices

Subregulation 121.680(1) provides that an operator's exposition must specify training facilities and devices that the operator will use for the purposes of training and checking cabin crew members.

Subregulation 121.680(2) provides that a training facility or device used in accordance with subregulation 121.680(1) must meet the requirements of the Part 121 MOS.

This regulation mitigates against adverse effects on the safety of air navigation by requiring an operator's exposition to specify the training facilities and devices to be used to provide the training and checking of cabin crew members.

Division 121.P.3—Operation of aeroplanes of different aeroplane types

This Division is a complete Division 121.P.3 of CASR inclusive of regulations 121.685 to 121.700. It prescribes requirements for the content required of an operator's exposition and rules regarding cabin crew operating on multiple aircraft types.

Regulation 121.685 provides that this Division applies in relation to the operator of an aeroplane if, under the operator's AOC, the operator operates more than one aeroplane type.

Regulation 121.690 provides that the operator's exposition must include the aeroplane's type for the purposes of this Subpart, for each aeroplane operated under an AOC.

Regulation 121.695 – Maximum number of aeroplane types

Subregulation 121.695(1) provides that the operator of an aeroplane contravenes this subregulation if the operator assigns a cabin crew member to duty on the aeroplane for the flight and the requirement in subregulation 121.695(2) is not met.

Subregulation 121.695(2) provides that the cabin crew member must hold no more than 3 valid annual training checks under regulation 121.725 for the operator and aeroplane types operated by the operator, or the cabin crew member must hold an approval under regulation 121.010 to be assigned to duty on 4 aeroplane types operated by the operator.

Subregulation 121.695(3) provides that a contravention of subregulation 121.695(1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 121.700 provides that an operator's exposition must include a description of the circumstances in which the operator may assign a cabin crew member who holds a valid annual training check for different aeroplane types to duty for a flight. It must also include procedures that such assignment for duty occurs only under those circumstances.

Division 121.P.4—Recent experience

Regulation 121.705 provides that for paragraph 121.640(2)(a), the recent experience required for a cabin crew member for a flight is that within 6 months before the flight, the cabin crew member must have flown as a cabin crew member on an aeroplane of that aeroplane type, or successfully completed the operator's refresher training for an aeroplane of that aeroplane type.

Division 121.P.5—Non-recurrent training and checking

This Division is a complete Division 121.P.5 of CASR inclusive of regulations 121.710 to 121.720. It prescribes requirements for the standards required for non-recurrent training and checking of cabin crew.

Regulation 121.710 provides that for paragraph 12.640(2)(b), a cabin crew member meets the initial training requirements for an operator if the cabin crew member has completed the operator's initial training, that initial training includes training on the matters prescribed by the Part 121 MOS and the cabin crew member has successfully completed an initial training check in accordance with the operator's exposition.

Regulation 121.715 – Meeting conversion training requirements

Subregulation 121.715(1) provides that a cabin crew member meets the conversion training requirements for paragraph 121.640(2)(c) for the operator of an aeroplane and the aeroplane if the cabin crew member has completed the operator's conversion training for the aeroplane type, and the training meets the requirements mentioned in subregulation 121.715(2).

Subregulation 121.715(2) provides that the requirements mentioned in subregulation 121.715(1) are that the training includes requirements of the Part 121 MOS and the training includes any additional training required to familiarise a cabin crew member with their duties.

Subregulation 121.715(3) provides that a cabin crew member meets the conversion training requirements for paragraph 121.640(2)(d) for the operator of an aeroplane and the aeroplane if they have completed supervised line flying on that aeroplane type, and successfully completed a valid line check for the operator and the aeroplane type under regulation 121.730.

Subregulation 121.715(4) provides that the supervised line flying mentioned in subregulation 121.715(3) must have been completed after the cabin crew member has successfully completed both a valid annual training check for the operator and the aeroplane type under regulation 121.725, and a valid 3 yearly training check for the operator and the aeroplane type under regulation 121.735.

Regulation 121.720 – Meeting differences training requirements

Subregulation 121.720(1) provides that for paragraph 121.640(2)(e), a cabin crew member meets the differences training requirements for the operator and the aeroplane if the cabin crew member has completed the operator's differences training for the aeroplane, the differences training includes the training mentioned in subregulation 121.720(2), and the person has successfully completed the operator's differences training check in accordance with the operator's exposition.

Subregulation 121.720(2) provides that the requirements mentioned in subregulation 121.720(1) are that training in the location and use of the safety equipment is required if the safety equipment on that aeroplane is of a kind that the cabin crew has not previously received training for, and training in the normal and emergency procedures is required if the normal and emergency procedures on that aeroplane are of a kind that the cabin crew member has not previously received training for.

Division 121.P.6—Recurrent training and checking

This Division is a complete Division 121.P.6 of CASR inclusive of regulations 121.725 to 121.735. It prescribes requirements for regular checking of the proficiency of cabin crew in the conduct of aircraft operations and the regular checking of the proficiency of cabin crew in using emergency and safety equipment.

Regulation 121.725 – Annual training and holding valid annual training check

Subregulation 121.725(1) provides that an aeroplane operator's annual training for a cabin crew member for that aeroplane type must include training on the matters prescribed by the Part 121 MOS.

Subregulation 121.725(2) provides that an operator's annual training check for a cabin crew member for an aeroplane type must check the competence of the cabin crew member in the matters mentioned in subregulation 121.725(1) for the aeroplane type.

Subregulation 121.725(3) provides that a cabin crew member holds a valid annual training check for the operator and the aeroplane type at a particular time if the member successfully completed the check mentioned in subregulation 121.725(2) in relation to the operator and the aeroplane type, and the time is within the period for which the check is valid in accordance with subregulations 121.725(4) and (5).

Subregulation 121.725(4) provides that an annual training check is valid beginning on the day the check is completed and ending at the end of the 12 month period beginning at the end of the month in which the check is completed. This is subject to subregulation 121.725(5).

Subregulation 121.725(5) provides that if a person's annual training check for the operator of an aeroplane and an aeroplane is valid in accordance with subregulation 121.725(4), and the person successfully completes another annual training check for that operator and aeroplane in accordance with paragraph 121.725(3)(a) less than 3 months before the day the existing check is due to expire, the new check is valid for the period of 12 months beginning at the end of the day the existing check expires.

Regulation 121.730 – Holding valid line check

Subregulation 121.730(1) provides that a line check for a cabin crew must check the competence of the cabin crew in: the operator's standard operating procedures during all phases of flight; knowledge of how to manage passengers with reduced mobility, restricted persons and unruly passengers; and any other procedures in the operator's exposition that are relevant to the flight. This must be done for a normal line flight operation of the specific aeroplane type in each instance.

Subregulation 121.730(2) provides that a cabin crew member holds a valid line check for the operator of an aeroplane and the aeroplane type at a particular time if the member has successfully completed the check mentioned in subregulation 121.730(1) for the operator and the aeroplane type, and the time is within the period for which the check is valid in accordance with subregulations 121.730(3) and (4).

Subregulation 121.730(3) provides that a line check is valid beginning on the day the check is completed and ending at the end of the 12 month period beginning at the end of the month in which the check is completed. This is subject to subregulation 121.730(5).

Subregulation 121.730(5) prescribes if a person's line check for the operator of an aeroplane and an aeroplane is valid in accordance with subregulation 121.730(3), and the person successfully completes another line check for that operator and aeroplane in accordance with paragraph 121.730(2)(a) less than 3 months before the day the existing check is due to expire, the new check is valid for the period of 12 months beginning at the end of the day the existing check expires.

Regulation 121.735 – Three yearly training and holding valid 3 yearly training check

Subregulation 121.735(1) provides that 3 yearly training for a cabin crew member for the operator of an aeroplane and the aeroplane type must include training on the matters prescribed by the Part 121 MOS.

Subregulation 121.735(2) provides that a 3 yearly training check for a cabin crew member for an operator and the aeroplane type must check the competence of the crew member in relation to the matters mentioned in subregulation 121.735(1) in relation to the aeroplane type.

Subregulation 121.735(3) provides that a cabin crew member holds a valid 3 yearly training check for the operator of an aeroplane and the aeroplane type at a particular time if the member has successfully completed a check mentioned in subregulation 121.735(2) for the operator and the aeroplane type, and the time is within the period for which the check is valid in accordance with subregulation 121.735(4) and (5).

Subregulation 121.735(4) provides that a 3 yearly training check is valid beginning on the day the check is completed and ending at the end of the 3 year period beginning at the end of the month in which the check is completed. This is subject to subregulation 121.735(5).

Subregulation 121.735(5) provides that if a person's 3 yearly training check for the operator of an aeroplane and an aeroplane is valid in accordance with subregulation 121.735(3), and the person successfully completes another 3 yearly training check for that operator and aeroplane in accordance with subregulation 121.735(2) less than 3 months before the day the existing check is due to expire, the new check is valid for the period of 3 years beginning at the end of the day the existing check expires.

Division 121.P.7—When cabin crew are carried but not required

This Division is a complete Division 121.P.7 of CASR inclusive of regulations 121.740 to 121.750. It prescribes requirements for flights on which cabin crew are carried even though they are not required by Part 121. It prescribes requirements for minimum age, general competence, and ability to conduct emergency procedures.

Regulation 121.740 – Competence

Subregulation 121.740(1) provides that the operator of an aeroplane contravenes this subregulation if they assign a cabin crew member to duty and that person has not been assessed as competent, in accordance with the operator's exposition.

Subregulation 121.740(2) provides that a contravention of subregulation 121.740(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

Regulation 121.745 – Minimum age

Subregulation 121.745(1) provides that the operator of an aeroplane contravenes this subregulation if, when the flight begins, a cabin crew member for the flight has not turned 18.

Subregulation 121.745(2) provides that a contravention of subregulation 121.745(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

Regulation 121.750 – Annual emergency and safety equipment check

Subregulation 121.750(1) provides that the operator of an aeroplane for a flight contravenes this subregulation if, when the aeroplane flight begins, a cabin crew member for the flight does not hold a valid annual emergency and safety equipment check under subregulation 121.750(2) for the operator and the aeroplane.

Subregulation 121.750(2) provides that a cabin crew member holds a valid annual emergency and safety equipment check for an operator of an aeroplane and the aeroplane if the flight crew member has successfully completed training and assessment in the operation and use of emergency and safety equipment on an aeroplane of that aeroplane type that is relevant to the cabin crew member's duties, and in emergency evacuation procedures for an aeroplane of that aeroplane type, and the check is valid in accordance with subregulations 121.750(3) and (4).

Subregulation 121.750(3) prescribes an annual emergency and safety equipment check is valid beginning on the day the check is completed and ending at the end of the 12 month period beginning at the end of the month in which the check is completed. This is subject to subregulation 121.750(4).

Subregulation 121.750(4) prescribes if a person's annual emergency and safety emergency check for the operator of an aeroplane and an aeroplane is valid in accordance with subregulation 121.750(3), and the person successfully completes another annual emergency and safety equipment check for that operator and aeroplane in accordance with paragraph 121.750(2) less than 3 months before the day the existing check is due to expire, the new check is valid for the period of 12 months beginning at the end of the day the existing check expires.

Subpart 121.V—Emergency evacuation procedures

This Subpart is a complete Subpart 121.V of CASR comprising regulation 121.755. It prescribes requirements for emergency evacuation procedures for flights on which cabin crew are required to be carried under regulation 121.630.

Regulation 121.755 – Emergency evacuation procedures

Subregulation 121.755(1) provides this regulation applies to an aeroplane if it is, or will be, used to conduct a flight for which regulation 121.630 requires the aeroplane to carry a cabin crew member.

Subregulation 121.755(2) prescribes an aeroplane operator's exposition must include emergency evaluation procedures that meet the requirements prescribed by the Part 121 MOS for the purposes of the regulation.

This regulation ensures the safety of air navigation by requiring the operator of an aeroplane for operations where a requirement to carry a cabin crew member exists, to have emergency evacuation procedures included in the operator's exposition that meet the prescribed requirements.

Subpart 121.Z—Certain single-engine aeroplanes

This Subpart is a complete Subpart 121.Z of CASR inclusive of regulations 121.760 to 121.780.

It prescribes requirements for the operation of single engine aeroplanes that have either a MTOW greater than 8,618 kg or a MOPSC of more than 9. Typically, Part 121 of CASR applies to such aeroplanes (refer subregulation 121.005(2)). However, this Subpart permits those aeroplanes to operate in accordance with the requirements of Part 135 of CASR and take advantage of the associated reduction in regulatory requirements.

Despite that, some regulations of Part 121.Z of CASR will apply in place of the Part 135 equivalent, such as in circumstances where more than nine passengers are carried for a flight. Subpart 121.Z also prescribes requirements for certain equipment to be fitted to a 'Part 121.Z aeroplane'.

This Subpart essentially provides that Part 121.Z aeroplanes must not be flown under the VFR by night. They may be flown under the IFR with the condition that, when more than 9 passengers are on board, the flight crew includes at least two pilots. Finally, the regulations allow operators to carry more than 9 passengers on a flight under the VFR by day; the passenger limit is simply be the aeroplane certificated maximum.

Regulation 121.760 – Application of Part 135 to certain operations

Application of this regulation

Subregulation 121.760(1) provides that this regulation applies to the operation of an aeroplane mentioned in subregulation 121.005(2) under the IFR or the VFR by day.

Part 135

Subregulation 121.760(2) provides that the majority of Part 135 of CASR applies to the operation of the aeroplane. Paragraph 135.380(2)(a) does not apply; the relevant subject matter is regulated by regulation 121.765.

Subregulation 121.760(3) provides that a provision of Part 135 does not apply if that provision is inconsistent with another provision of this Subpart.

This regulation describes the application of Part 135 (other than the requirement that relates to the composition of the flight crew to comply with the aircraft's flight manual instructions) to those operations prescribed in the Subpart 121.Z application provisions of Part 121. The regulation permits the operation of certain single-engine aeroplanes to be operated under the IFR or the VFR by day, without unduly impacting aviation safety.

Regulation 121.765 – At least 2 pilots required for certain IFR flights

Subregulation 121.765(1) provides that the operator of an aeroplane conducting a flight under the IFR contravenes this subregulation if, when the flight begins, the aeroplane is carrying more than 9 passengers and the aeroplane's flight crew does not include at least 2 pilots.

Subregulation 121.765(2) provides that a contravention of subregulation 121.765(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation promotes the safety of air navigation by requiring an operator of a relevant aeroplane that is carrying more than 9 passengers conducting an IFR flight to ensure the flight crew is comprised of at least 2 pilots.

For the operation of a Part 121.Z aeroplane, this regulation supersedes paragraph 135.745(2)(a) of CASR, as mentioned in subregulation 121.760(2).

Paragraph 135.745(2)(a) provides that “...the composition of the aeroplane’s flight crew for the flight must comply with the aircraft flight manual instructions...”.

This regulation provides that, during flight under the IFR, the flight crew *must include at least 2 pilots*, despite the requirements of the aircraft flight manual instructions.

Regulation 121.770 – Trend monitoring systems required for certain VFR flights by day

Engine automatic electronic condition trend monitoring system

Subregulation 121.770(1) provides that the operator of a relevant aeroplane operating under the VFR by day contravenes this subregulation if it is carrying more than 9 passengers, and the aeroplane is not fitted with an automatic electronic condition trend monitoring system for the engine.

Offence

Subregulation 121.770(2) provides that a contravention of subregulation 121.770(1) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation promotes the safety of air navigation by requiring an operator of an aeroplane that is carrying more than 9 passengers conducting a VFR flight by day to ensure the aeroplane is fitted with an automatic electronic condition trend monitoring system for the engine.

Regulation 121.775 – Terrain awareness and warning system

Turbine-engine aeroplanes

Subregulation 121.775(1) provides that an operator of a turbine–engine aeroplane, to which Subpart 121.Z applies, contravenes this regulation if the flight commences and the aeroplane is not fitted with a TAWS–Class A.

Piston-engine aeroplanes

Subregulation 121.775(2) provides that an operator of a piston–engine aeroplane, to which Subpart 121.Z applies, contravenes this regulation if the flight commences and the aeroplane is not fitted with either a TAWS–Class A or a TAWS–Class B.

Offence

Subregulation 121.775(3) provides that a contravention of subregulation 121.775(1) or (2) is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.

This regulation promotes the safety of air navigation by requiring an operator of an aeroplane to ensure the aeroplane is fitted a terrain awareness and warning system of the prescribed standard under the specified conditions.

This regulation displaces the Part 135 MOS (planned to be made in early 2019 and available prior to making on the Part 135 consultation webpage <https://consultation.casa.gov.au/regulatory-program/cd1804os-1/>) as provided for by subregulation 121.760(3).

The Part 135 MOS is proposed to require that TAWS must be fitted to an aeroplane if it is operated under Part 135, has a MTOW greater than 5,700 kg, is conducting a passenger carrying or medical transport operation and is operating under the IFR or the VFR by night.

This regulation adds to those requirements by stating that *any* single engine aeroplane to which Subpart 121.Z applies must be fitted with a TAWS.

Regulation 121.780 – Aircraft not to be flown under the VFR at night.

Subregulation 121.780(1) provides that the operator of an aeroplane contravenes this subregulation if a flight is conducted under the VFR at night.

Subregulation 121.780(2) provides that a contravention of subregulation is an offence of strict liability. The penalty for the offence has been established as 50 penalty units.