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 135) Regulations 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. Subsection 98(1) 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 (the 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 *Civil Aviation Safety Amendment (Part 135) Regulations 2018* (the Regulations) amend the *Civil Aviation Safety Regulations 1998* (CASR) to insert a new Part 135 – Air transport operations—smaller aeroplanes. Part 135 is part of a suite of legislative reform that encompasses Parts 91, 119, 121, 133, 135 and 138 of CASR. The parts are designed to lower the existing accident rate differential between charter and regular passenger transport (RPT) operations, meet Australia’s obligations under the Chicago Convention and better align with international standards and practices.

Under the previous rules, fare-paying passengers could be carried on flights classified as either charter or RPT. Baseline safety standards for charter flights were lower than those for RPT, even though identical aircraft were often used for both types of operation. The Regulations work with Part 119 of CASR to harmonise requirements for scheduled and non-scheduled air transport in smaller aeroplanes.

Analysis of Australian charter and RPT over the last two decades identified a significant accident rate disparity between low capacity charter and low capacity RPT operations. In addition, the 2017 CASA report *Sector Risk Profile for the small aeroplane transport sector*, developed in conjunction with the aviation industry, identified that small aeroplane charter operations had an accident rate 11 times greater than for small aeroplane RPT operations.

The risk profile also identified that the top five safety factors contributing to occurrences in the small aeroplane sector were monitoring and checking of aircraft systems and equipment, pre-flight assessment of the flight route and flight planning, pilot communications/coordination, aircraft pre-flight inspection and aircraft handling.

Regulatory oversight of charter and RPT operations is currently spread over a number of legislative instruments. The instruments include the *Civil Aviation Regulations 1988* (CAR), a number of Civil Aviation Orders (in particular Part 82 – Air Operator’s Certificates) and other exemptions and directions. As well as differentiating between charter and RPT, the previous safety standards created a separation between high capacity and low capacity RPT aircraft operations (high capacity was defined as a certified seating capacity of greater than 38 seats or a payload capacity of greater than 4,200 kg).

The Regulations lower this separation point to aeroplanes with a maximum take-off weight (MTOW) of less than 8,618kg and a maximum permitted passenger seating configuration of nine seats or less. The amended limit requires some larger aeroplanes, currently classified as ‘other than high capacity’, to operate to the increased safety requirements of Part 121 of CASR (which regulates operations of larger aeroplanes).

The new rules aim to:

* reduce the safety differential between charter and regular public transport operations through common rules that apply to all air transport operations but are scaled for size and complexity of 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
* permit existing charter operators to conduct fixed scheduled flights for the general public
* require operators of aeroplanes with a maximum take-off weight greater than 5,700 kg to fit terrain awareness and warning systems, in line with international standards
* require operators to produce and retain a journey log
* modify existing rules for weather radar fitment to focus the requirement on pressurized aeroplanes and remove the requirement for certain unpressurized aeroplanes
* introduce air transport requirements for medical transport flights to replace the current ambulance function aerial work requirements, in line with international best practice
* establish higher levels of compliance with International Civil Aviation Organization (ICAO) standards, to simplify the conduct of international operations

Part 135 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, planned for February 2019, of the *Civil Aviation Safety Amendment (Operations Definitions) Regulations 2019* (available in draft on the CASA Part 135 webpage at https://www.casa.gov.au/rules-and-regulations/standard-page/project-os-0111-casr-part-135-air-transport-operations-small).

Criminal law issues

The Regulations provide for 54 offences of strict liability, which are outlined in the Statement of Compatibility with Human Rights at Attachment A.

Consistent with the principles set out in the Attorney-General’s *A Guide to Framing* *Commonwealth Offices, 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-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 integrity of the aviation safety scheme for air transport operations in smaller aeroplanes by promoting compliance and deterring non-compliance.

The rationale is that people who perform activities that engage with safety risk should be expected to be aware of their duties and obligations. In the context of the operating rules for air transport operations (in this case in smaller aeroplanes), a defendant can reasonably be expected to know what conduct is required by the law, 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 that there is not an honest and reasonable mistake of fact.

The Regulations also contain 9 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.

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

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.

Consultation

In accordance with section 17 of the *Legislation Act 2003*, CASA consulted on the proposed changes. Significant consultations were conducted prior to 2017, including publication of notices of proposed rulemaking and the formation of industry/CASA working groups. In June 2018, the Aviation Safety Advisory Panel (ASAP) convened a technical working group (TWG) to evaluate drafts of the Regulations and associated Manual of Standards (MOS). The TWG made a number of suggestions, the majority of which CASA addressed in the draft regulations released between 3 August and 2 September 2018. The 2018 consultation received 12 submissions. In response to feedback received, CASA amended the draft regulations where appropriate.

At the final meeting of the Part 135 TWG, industry identified one remaining significant issue. Industry stated that the safety split between Part 135 and Part 121 at nine passenger seats would economically disadvantage certain current charter operators with maximum passenger capacities of 12 passengers, due to the requirement in proposed Part 121 that single engine aeroplanes operate with two pilots when ten or more passengers are carried during instrument flight and that multi-engine aeroplanes operate with two pilots at all times. CASA benchmarked this requirement to world’s best practice with the United States, Canada, European and ICAO standards all meeting, and in some cases exceeding, the proposed Australian standard. Current RPT operators conducting these operations are already required to operate with two pilots. CASA considers that Part 135, rather than solely increasing requirements on current charter operators also in some cases reduces requirements on current low capacity RPT operators and therefore represents a reasonable balance of safety versus economic viability. In conclusion, CASA did not revise its proposal in response to the issue being raised at the TWG.

Following reporting of its recommendations by the TWG, the ASAP endorsed CASA making Part 135 in its current form provided further discussions were held with industry prior to commencement in 2021.

Incorporation by reference

In accordance with paragraph 15J (2) (c) of the *Legislation Act 2003* and subsection 98 (5D) of the Act, the Regulations apply, adopt or incorporate matters contained in the following instruments:

* Annex 2 to the Chicago Convention - Rules of the Air (Annex 2)
* ICAO Document 8168 (PANS-OPS).
* the exposition of a Part 135 operator
* flight manual instructions of aircraft operated under Part 135
* the Part 61 Manual of Standards (Part 61 MOS)
* the Part 91 Manual of Standards (Part 91 MOS)
* the Part 135 Manual of Standards (Part 135 MOS)
* the Aeronautical Information Publication (AIP).

Subsection 98 (5D) of the Act permits a non-legislative instrument to be 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.

The following table contains a description of the documents incorporated by reference into the legislative instrument, together with the manner of incorporation and how it may be obtained.

| Document | Description | Manner of incorporation | Source |
| --- | --- | --- | --- |
| Annex 2, Rules of the Air, to the Chicago Convention | 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 | As the Annex is in force from time to time, in accordance with clause 15 of Part 2 of the CASR Dictionary | This document is publicly available but subject to copyright that belongs to ICAO. It is made available by ICAO for a fee (<https://store.icao.int/>) – see below for more information) |
| ICAO Document 8168 (PANS OPS) | International operational procedures recommended for the guidance of flight operations personnel | A reference in the regulations to an *Annex to the Chicago Convention* is defined in item 15 in Part 2 of the CASR Dictionary as being a reference to that Annex as in force from time to time. Analogously with the definition of *Annex* and the definition in Part 1 of the CASR Dictionary of *other AIS applicable ICAO documents* as being, relevantly, those in force from time to time*,* a reference in the Regulations to ICAO document 8168 is also taken to be a reference to the document as in force from time to time | This document is publicly available but subject to copyright that belongs to ICAO. It is made available by ICAO for a fee (<https://store.icao.int/>) – see below for more information) |
| exposition of a Part 135 operator | 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. For Part 135, it is incorporated in relation to managing exposure of persons to cosmic radiation, aeroplane loading procedures, carriage of additional flight crew, and certain crew requirements | 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 | Not publicly or freely available. The exposition 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. 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 |
| aircraft flight manual instructions | “Aircraft flight manual instructions”, for an aircraft, will be defined in the CASR Dictionary by the *Civil Aviation Safety Amendment (Operations Definitions) Regulations 2019* (available in draft on the CASA Part 135 consultation webpage at <https://consultation.casa.gov.au/regulatory-program/cd1804os-1/>) to comprise 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. The instructions comprise information required to safely operate the specific aircraft | As the instructions exist from time to time, consistent with the definition of “flight manual” in the CASR Dictionary | Publicly available but not for free. The aircraft flight manual instructions for an aircraft is proprietary to the owner of the aircraft design (usually the manufacturer). The incorporated requirements of aircraft flight manual instructions are at the aircraft-specific level, and instructions are required to be provided to owners of aircraft |
| Part 61 MOS | Legislative instrument that prescribes matters for the purpose of Part 61 of CASR | As the MOS is 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* | The MOS is freely available on the Federal Register of Legislation |
| Part 91 MOS | Legislative instrument that prescribes matters for the purpose of Part 91 of CASR | As the MOS is 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, the MOS will be freely available on the Federal Register of Legislation |
| Part 135 MOS | Legislative instrument that prescribes matters for the purpose of Part 135 | As the MOS is 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, the MOS will be freely available on the Federal Register of Legislation |
| 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: https://www.airservicesaustralia.com/aip/aip.asp |

In relation to Annex 2, ICAO Document 8168 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 Annex 2, ICAO Document 8168, 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 135, 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 meeting the Best Practice Regulation requirements (OBPR id: 24505).

The RIS is provided at Attachment B.

Statement of Compatibility with Human Rights

A Statement of Compatibility with Human Rights is provided at Attachment A.

Commencement and making

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

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

The provisions of the *Civil Aviation Safety Amendment (Part 135) Regulations* commence on 25 March 2021, to provide industry and CASA time to prepare for the commencement of the Regulations.

**Transition period**

To avoid the undesirable situation of different air operators operating to different rule sets through a staged transition period, compliance is expected from commencement of the new Regulations on 25 March 2021. However, CASA will publish transitional, savings and consequential provisions in early 2019 that will defer the effective date of certain higher cost items for a period of time beyond the 25 March 2021 date.

Authority: Subsection 98(1) of the

*Civil Aviation Act 1988*

Attachment A

**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 135) 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 135) Regulations 2018* (the Regulations) amends the Civil Aviation Safety Regulations 1998 (CASR) to introduce a new `Part 135 which provides a regulatory framework for the Australian air transport operations in smaller aeroplanes. Smaller aeroplanes have a maximum operational passenger seat configuration of not more than 9 and a maximum take-off weight of not more than 8,618 kg.

Subpart 135.A prescribes the application of Part 135, approvals made by the Civil Aviation Safety Authority (CASA) for Part 135 and for the issue of a Manual of Standards for Part 135.

Subpart 135.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 135.

Subpart 135.D prescribes the operational procedures for the operations regulated under Part 135. This includes operational procedures for operational control, flight preparation, flight planning, flight rules, aerodromes, fuel requirements, passenger transport and medical transport-specific requirements, instruments, indicators, equipment and systems.

Subpart 135.F prescribes the performance requirements for aeroplanes used for the operations regulated under Part 135.

Subpart 135.J prescribes the weight and balance requirements for aeroplanes used in operations regulated by Part 135.

Subpart 135.K prescribes the instruments, indicators, equipment and systems requirements for aeroplanes used in operations regulated by Part 135, as well as when such aeroplanes can be flown with inoperative instruments, indicators, equipment or systems.

Subpart 135.N and Subpart 135.P provide the regulatory framework for, respectively, flight crew and air crew/medical transport specialists for operations regulated by Part 135.

Non-compliance with a number of the stated requirements in Subparts 135.C to 135.P is an offence under the Regulations.

**Human rights implications**

The Regulations engage the following human 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***

*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

54 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 135.C provides the general provisions for this Part, including strict liability offence provisions in relation to the regulation of:

* permitted categories of small aeroplanes
* flight distance limitations
* compliance with requirements related to operational documents
* availability and carriage of flight-related documents
* information about search and rescue services and emergency and survival equipment
* requirements for various crew and ground support activities and personnel requirements
* persons authorised to occupy a flight crew seat.

Subpart 135.D provides strict liability offence provisions regulating the operational procedures for operations under Part 135, including:

* flight planning
* aerodrome-related procedures, such as take-off and landing minima, using instrument approach procedures, and provision for alternate aerodromes
* fuel requirements
* particular requirements for passenger and medical transport-specific operations
* management of cosmic radiation exposure.

Subpart 135.F provides strict liability offence provisions regulating small aeroplane performance in operations under Part 135, including:

* take-off and landing weights
* flight in a performance class and requirements of small aeroplanes in each performance class.

Subpart 135.J provides strict liability offence provisions regulating weight and balance requirements for small aeroplane flights under Part 135, including:

* loading of small aeroplanes
* weight and balance documents that must exist.

Subpart 135.K provides a strict liability offence provision regulating instruments, indicators, equipment and systems and their requirements for operations under Part 135.

Subparts 135.N and 135.P provide strict liability offence provisions regulating crew members on operations under Part 135, including:

* various requirements for flight, and air crew, and medical transport specialists, including requirements in relation to crew composition, number, age, language abilities, qualifications, training, recent experience and competence
* assignment to duty of pilot in command and the requirements of the position.

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, to whom functions are given under law to administer aviation activities, operate in accordance with the requirements of Part 135. 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 system for the benefit 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.

*Reversal of burden of proof*

A total of 9 of the strict liability 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 burden of proof has been reversed to establish a defence to 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. This is in accordance with subsection 13(3)(6) of the Criminal Code.

Aim

The aim of CASA and its regulatory framework, including Part 135 of CASR, is to uphold aviation safety by prescribing the conduct of individuals 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 provision in circumstances where the defence relates to a safe aviation practice.

Reasonableness, necessity and proportionality

*A Guide to Framing Commonwealth Offences, Infringement Notices and Enforcement Powers*, September 2011, states that provisions imposing a reversal of the evidential burden of proof are permissible for either or both of the following justifications:

* the relevant information or evidence to be established 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 each defence provision 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 item 1 of the table, the matter is that a medical transport operation can be conducted without prescribed information being recorded in the journey log because of the urgent nature of the operation and an assessment that safety will not be affected if the information is entered after the operation. Whether or not the operation is urgent and can be conducted safely without the recording of the information are matters that would not be documented, or not documented in a manner visible to CASA. They are matters of judgement peculiarly within the knowledge or control of the defendant in relation to the particular case.

Similarly, item 2 of the table relates to the recording of information in a location alternate to the passenger list for a flight. Whether or not the information is recorded in another document kept by the operator, or is readily available from another source, may be unknown to, and not readily ascertainable by, CASA. Further, it is within the knowledge of the defendant in relation to the particular case.

In both these examples, due to the nature of the matter and the knowledge of the defendant, it would be difficult and costly for the prosecution to disprove, and significantly cheaper for the defendant to establish.

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 135.085(6) provides that subregulations (1), (2) and (4) do not apply to the operator or the pilot in command in relation to required information if the information is recorded in another document of the operator or is available to the operator from another source. Subregulation (7) provides subregulation 135.085(2) does not apply to the operator or the pilot in command in relation to information mentioned in that subregulation if the flight is a medical transport operation, the information is not recorded in the journey log before the flight begins because of the urgent nature of the medical transport operation, the pilot in command is satisfied, when the flight begins, that the failure to record the information in the journey log before the flight begins will not affect the safety of the aeroplane and the information is recorded in the journey log as soon as is practicable after the flight ends. | Whether the failure to record the information in the journey log before the flight begins will affect the safety of the operation, in relation to any particular flight, will be peculiarly within the knowledge of the defendant. Similarly, whether information is in another document of the operator or available from another source, will be peculiarly within the knowledge of the defendant. These matters will be significantly more difficult and costly for the prosecution to disprove than for the defendant to establish. |
| 2 | Subregulation 135.090(3) provides that subregulation 135.090(1) does not apply to the operator in relation to information required to be included in a passenger list under subregulation (1) 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. | The matter, in relation to any particular flight, will be 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 135.145(4) provides subregulation 135.145(1) or (3) does not apply to the operator or the pilot in command in relation to information required to be included in the operational flight plan under that 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. | The matter, in relation to any particular flight, will be 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 135.180(4) provides subregulation 135.180(2) does not apply if the flight is a medical transport operation, and when the flight begins, the aeroplane is carrying sufficient fuel to fly to the planned destination aerodrome for the flight or, if a destination alternate aerodrome is required for the flight by the flight preparation (alternate aerodromes) requirements, to comply with the requirements for conducting a flight to a destination alternate prescribed by the flight preparation (alternate aerodromes) requirements. | The matters, in relation to a particular flight, are not the subject of regulatory documentation visible to CASA. They are matters of judgement for the defendant and will be peculiarly within the knowledge of the defendant in relation to any particular flight, and significantly more difficult and costly for the prosecution to disprove than for the defendant to establish. |
| 5 | Subregulations 135.190(3) and (4) provide that subregulation 135.190(2) does not apply if either: (1) the pilot in command receives a weather forecast meeting prescribed requirements for the particular flight are met; or (2) the aeroplane is carrying a prescribed amount of fuel for the flight. | Whether or not the pilot receives a relevant forecast will be peculiarly within the knowledge of the defendant, and significantly more difficult and costly for the prosecution to disprove than for the defendant to establish.  Whether or not the aircraft was carrying sufficient fuel is a matter of judgement for the pilot and is significantly more difficult and costly for the prosecution to disprove than for the defendant to establish. |
| 6 | Subregulation 135.260(3) provides subregulation 135.260(1) does not apply if the flight is a medical transport operation and the emergency exit is obstructed by a stretcher fit-out that is described or identified in a supplemental type certificate (STC) for the aeroplane. | Whether or not a stretcher fit out is supported by a STC may not be known to CASA in relation to the particular aircraft, since CASA does not regulate the issue of all STCs and there is no regulatory requirement for an operator to inform CASA when they modify an aircraft to incorporate an STC. Accordingly, not only will the matter be peculiarly within the knowledge of the defendant, it is significantly more difficult and costly for the prosecution to disprove than for the defendant to establish. |
| 7 | Subregulation 135.270(2) provides subregulation 135.270(1) does not apply in relation to a passenger with reduced mobility if the passenger is accompanied or assisted, for the flight, by a suitable person who is seated adjacent to an emergency exit, the suitable person is accompanying or assisting only that passenger for the flight and the suitable person has agreed to assist the aeroplane’s crew with the evacuation of the aeroplane in an emergency. | The suitability of an accompanying passenger is a matter of judgement for a defendant. That matter, and the agreement of the accompanying person to assist, 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. |
| 8 | Subregulation 135.280(2) provides subregulation 135.280(1) does not apply in relation to a medical patient on a flight that is a medical transport operation. | Whether a passenger was a medical patient on a medical transport operation will be within the knowledge of a defendant and in this context is significantly more difficult and costly for the prosecution to disprove than for the defendant to establish. |
| 9 | Subregulation 135.285(2) provides subregulation 135.285(1) does not apply in relation to a medical patient on a flight that is a medical transport operation. | Whether a passenger was a medical patient on a medical transport operation will be within the knowledge of a defendant and in this context is 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 reversed only 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 have 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, nor to unlawful attacks on his honour and reputation. It further provides that everyone has the right to the protection of the law against such interference or attacks.

Regulation 135.065 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 135 operation are available for checking by operators for quality assurance purposes and by CASA for safety regulatory purposes.

Regulation 135.070 prescribes requirements in relation to the availability or carriage of documents for certain flights, including information about the name of persons needing special consideration during an evacuation. The information is required so that the interests of the person can be properly managed in an emergency.

Regulation 135.085 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 135.090 prescribes requirements in relation to the keeping of passenger lists, including the names of passengers. The information is 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.

Regulation 135.365 prescribes requirements in relation to weight and balance documents for aircraft, including the name of the person who prepared the documents. The name is required so that the person can be identified for safety regulatory purposes.

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 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.

**Attachment B**

**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 CivilAviation 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



*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 Option 1

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

*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

|  |  |
| --- | --- |
|  | ***Approved operators*** |
| *RPT* | *37* |
| *charter only* | *45* |
| *Charter and aerial work* | *460* |
| *Aerial work (ambulance, excluding charter)* | *4* |
| *Aerial work (other, excluding charter)* | *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, spread-sheet** | **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 Option 2 |  |  |  |  | 305 | $3.77m |
| 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** |
| *Option 2* | $21,000 | 18 | $0.38m |
| *Option 3* | $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** |
| *Augusta AW139* | 45 | 15 | Yes | 100% |
| *Bell 412* | 30 | 14 | Yes (but MOPSC <= 9) |  |
| *Kawasaki BK117* | 29 | 10 | Yes (but MOPSC <= 9) |  |
| *Sikorsky S-92* | 22 | 19 | Yes | 100% |
| *Sikorsky S-76* | 14 | 12 | some |  |
| *Bell 212* | 12 | 15 | some |  |
| *Bell 205* | 12 | 14 | No |  |
| *Eurocopter EC225* | 10 | 19 | No |  |
| *Eurocopter AS365* | 11 | 12 | Yes (but MOPSC <= 9) |  |
| *Bell 214B* | 3 | 14 | No |  |
| *Augusta AW189* | 3 | 19 | Yes | 100% |
| *Eurocopter AS.332L* | 2 | 19 | Yes | 100% |
| *Eurocopter EC 175* | 2 | 16 | Yes | 100% |
| *Bell 421EPI* | 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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Option 2** | | **Option 3** | |
| *Requirement* | One off upfront cost | Annualised cost | One off upfront cost | Annualised cost |
| *Exposition* | $1.64m | $0.16m | $2.24m | $0.22m |
| *SMS (upfront)* | $3.77m | $0.38m | $4.87m | $0.49m |
| *SMS (annual maintenance)* | $0.76m | $0.76m | $1.09m | $1.09m |
| *SMS (annual training)* | $1.36m | $1.36m | $1.69m | $1.69m |
| *Training and checking manual* | $4.04m | $0.40m | $6.44m | $0.64m |
| *Training and checking (annual)* | $3.09m | $3.09m | $4.07m | $4.07m |
| *TAWS* | $0.38m | $0.04m | $7.161m | $0.72m |
| *HTAWS* | $0.58m | $0.06m | $0.58m | $0.06m |
| *Life Raft fitment (upfront)* | $0.16m | $0.02m | $0.16m | $0.02m |
| *Life Raft training (annual)* | $0.02m | $0.02m | $0.02m | $0.02m |
| *First Aid Kit* | $0.04m | $0.00m | $0.04m | $0.00m |
| *Weather radar* | $2.28m | $0.23m | $13.26m | $1.33m |
| *Total* |  | $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 $1m[[1]](#footnote-1), 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 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.

# References

ABS (Australian Bureau of Statistics) 2006: *Census of Population and Housing*, catalogue number 2068.0, ABS, Canberra.

ABS 2007, *Counts of Australian Businesses, including Entries and Exits, June 2003 to June 2007, catalogue number 8165.0*, ABS, Canberra.

ATSB 2007, *Aviation Research and Analysis Report – AR-2007-057*, Canberra

ATSB 2007a, Collision with Terrain, 11 km NW Lockhart River Aerodrome, 7 May 2005, VH-TFU, SA227-DC (Metro 23), Canberra.

ATSB 2008, *Learning From Poor Safety Management Systems, http://www.atsb.gov.au/media/24563/sia281008.pdf*

ATSB 2018, *Aviation occurrence statistics: 2007 to 2016*, Canberra.

Australian Government 2007, *Best Practice Regulation Handbook*, Canberra

BITRE (Bureau of Infrastructure, Transport and Regional Economics) 2010, *Domestic airline on time performance February 2010*, Canberra

FAA 2000, *Terrain Awareness and Warning System; Final Rule , Docket No. 29312,* Washington

FAA 2014, *Economic Values for FAA Investment and Regulatory Decisions, A Guide*, Washington

PM&C 2014, *Best Practice Regulation Guidance Note Value of statistical life*, Canberra.

Wiegmann, D., Faaborg, T., Boquet, A., Detwiler, C., Halcomb, K. & Shappell, S. (2005) *Human error and general aviation accidents: A comprehensive, fine-grained analysis using HFACS* (Report Number DOT/FAA/AM-05/24). Washington DC: Office of Aerospace Medicine

Skyservice Airlines Inc 2006, *Safety Management System,* Presentation to the Civil Aviation Authority of Singapore

**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** |
| *Initial approval* |  |  |  |
| *AOC application* | 6 to 12 months | $12 000 | $12 000 |
| *Operations Manual* | 3 months |  | $45 000 |
| *Interactions with CASA* | 2 weeks |  | $10 000 |
| *Interview with Chief Pilot* | 1 day |  | $500 |
| *Interview with CEO and HAAMC* | 1 day |  | $500 |
| *Inspection of premises* | 1 day |  | $500 |
| *Check flights* | 1 day |  | $1 000 |
| *Aircraft registration* | 1 day | $130 | $390 |
| *Total* |  |  | $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 and 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 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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Ongoing requirements* | **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

|  |  |
| --- | --- |
| *Aircraft based cost components* |  |
| Aircraft operating costs per hour1 | $250 |
| Value of 1.5 hours of aircraft use | $375.0 |
| Pilot time2 | 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

|  |  |
| --- | --- |
| *Aircraft based cost components* |  |
| Aircraft operating costs per hour1 | $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.

Attachment C

**Details of the *Civil Aviation Safety Amendment (Part 135) Regulations 2018***

Section 1 – Name of Regulations

Section 1 provides that the title of the Regulations is the *Civil Aviation Safety Amendment (Part 135) Regulations 2018.*

Section 2 – Commencement

Section 2 provides for the Regulations to commence on 25 March 2021.

Section 3 – Authority

Section 3 provides that the *Civil Aviation Safety Amendment (Part 135) Regulations 2018* are made under the *Civil Aviation Act 1988.*

Section 4 – Schedule(s)

Section 4 provides that each instrument that is specified in a Schedule to this instrument is amended or repealed as set out in the applicable items in the Schedule concerned, and any other item in a Schedule to this instrument has effect according to its terms.

Schedule 1 - Amendments

*Civil Aviation Safety Regulations 1998 (CASR)*

**Item 1 – Part 135**

Item 1 inserts a new Part 135—Australian air transport operations—smaller aeroplanes that comprises eight Subparts listed in a Table of contents.

Subpart 135.A—Preliminary

**Regulation 135.005** states that Part 135 applies in relation to the operation of an aeroplane for an Australian air transport operation that has a maximum operational passenger seat configuration of not more than 9 and a maximum take-off weight less than 8,618kg.

**Regulation 135.010** provides that an operator is taken to comply with a provision of this Part about a particular matter if the operator complies with a provision in Part 121 of CASR about the same matter.

Regulation 135.015 – Definition of *suitable forced landing area* for aeroplane flights

**Subregulation 135.015(1)** provides the definition of *suitable forced landing area* forareas of ground. An area of ground is suitable as a forced landing area if there is a reasonable expectation that there would be no injuries to persons in the aeroplane or on the ground.

**Subregulation 135.015(2)** provides the definition of *suitable forced landing area* for areas of water. An area of water is suitable as a forced landing area if the aeroplane is a prescribed single-engine aeroplane being closer to land than the distance prescribed in the Part 135 Manual of Standards (MOS) for this provision, or is certificated for landing on water, and the area meets the requirements of subregulation (3).

**Subregulation 135.015(3)** provides the requirements mentioned in subregulation (2) in relation to forced landings on water. Paragraph (3)(a) provides that the aeroplane must be able to ditch in the area of water with a reasonable expectation there would be no injuries to the persons in the aeroplane or on the water. Paragraph (3)(b) provides that there must be a reasonable expectation that the persons in the aeroplane would survive in the water for the time it would take to rescue them. Paragraph (3)(c) provides that if the flight is a passenger transport operation or a medical transport operation, the area of water must be either adjacent to land, adjacent to an offshore installation with search and rescue facilities or in a location listed in the operator’s exposition, that has search and rescue facilities.

**Subregulation 135.015(4)** provides factors that affect whether there would be a reasonable expectation of no injuries to persons as required by paragraph (2)(a) and a reasonable expectation of survival as required by paragraph (2)(b).

Regulation 135.020 – Approvals by CASA for Part 135

**Subregulation 135.020(1)** provides that, where a provision of Part 135 refers to a person holding an approval under this regulation, the person may apply to CASA in writing for the approval.

**Subregulation 135.020(2)** provides that subject to regulation 11.055 of CASR, the approval must be granted.

**Subregulation 135.020(3)** provides that subregulation 11.055(1B) of CASR applies to the granting of an approval under this regulation.

**Regulation 135.025** provides for CASA to issue a MOS for Part 135.

Subpart 135.C—General

The Subpart prescribes the permitted categories of aeroplanes used in a Part 135 operation, operational documents required by the operator, flight-related documents required by the operator, requirements for reporting and recording defects and incidents, requirements for emergency and survival equipment, and other miscellaneous requirements.

Division 135.C.1—General flight limitations

Regulation 135.030 – Permitted categories of aeroplanes

**Subregulation 135.030(1)** provides the aeroplane type certification categories that may be used in Part 135 operations. The permitted categories are transport, commuter, normal, or another category prescribed by the Part 135 MOS.

**Subregulation 135.030(2)** provides that a contravention of subregulation (1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.035 – Flight distance limitations

**Subregulation 135.035 (1)** provides that the Part 135 MOS may prescribe distance limitations for a flight of an aeroplane.

**Subregulation 135.035 (2)** provides the circumstances where the operator and pilot in command of an aeroplane for a flight each contravene this subregulation.

**Subregulation 135.035 (3)** provides that a contravention of subregulation (2) is an offence of strict liability, with a maximum penalty of 50 penalty units.

This provision ensures that the Part 135 MOS can restrict the distance an aeroplane may operate from a particular point. This is to ensure the safety of an aeroplane in the event of an emergency and a diversion to an aerodrome is required.

Division 135.C.2—Operational documents

Regulation 135.040 – Compliance with flight manual

**Subregulation 135.040(1)** provides that the operator of an aeroplane for a flight contravenes this subregulation if the aeroplane is operated in a way that does not meet a requirement or limitation in the aircraft flight manual instructions for the aeroplane that relates to the operation of the aeroplane.

**Subregulation 135.040(2)** provides that a contravention of subregulation (1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.045 – Operator to have minimum equipment list for certain flights

**Subregulation 135.045(1)** provides that the operator of an aeroplane contravenes this subregulation if there is a master minimum equipment list for the aeroplane and, when the flight begins, there is no minimum equipment list for the aeroplane.

**Subregulation 135.045(2)** provides that the operator of an aeroplane contravenes this subregulation if a flight begins or ends outside Australian territory and, when the flight begins, there is no minimum equipment list for the aeroplane.

**Subregulation 135.045(3**) provides that a contravention of subregulation (1) or (2) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.050 – Availability of checklists

**Subregulation 135.050(1)** provides that an operator of an aeroplane for a flight contravenes this subregulation if the requirement in subregulation 135.050(2) is not met for the flight.

**Subregulation 135.050(2)** provides that, before a crew member for the flight begins to carry out a duty for the flight, the operator must make available to the member each checklist of normal, abnormal and emergency procedures for the aeroplane that is relevant for that member’s duty.

**Subregulation 135.050(3)** provides that a contravention of subregulation (1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

These provisions ensure that the operator of an aircraft provides appropriate checklists for the crew members. Checklists are provided to ensure crew action items are not missed at critical stages of the aircraft operation. These provisions increase the safety of the aircraft operation.

Division 135.C.3—Flight related documents

**Regulation 135.055** provides that if a document is required to be carried on a flight an electronic copy of the document satisfies that requirement.

Regulation 135.060 – Availability of parts of exposition

**Subregulation 135.060(1)** provides that the operator of an aeroplane for a flight contravenes this subregulation if a part of the operator’s exposition that is relevant to the duties of a crew member for the flight, and is required for the conduct of the flight, is not available to the crew member before the flight begins.

**Subregulation 135.060(2)** provides that a person commits an offence of strict liability if the person contravenes subregulation (1), with a maximum penalty of 50 penalty units.

Regulation 135.065 – Carriage of documents

**Subregulation 135.065(1)** provides that the operator and pilot in command of an aeroplane for a flight each contravene this subregulation if a document prescribed by the Part 135 MOS is not carried on the aeroplane when the flight begins.

**Subregulation 135.065(2)** provides that the operator and a flight crew member for a flight 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 of this before the flight began, or if it is not practicable to give the notice before the flight began, within 24 hours after the flight ends.

**Subregulation 135.065(3)** provides that the operator and a flight crew member of an aeroplane for a flight each contravene this subregulation if each flight crew member’s flight crew licence is not carried on the aeroplane and the flight crew member does not give CASA written notice of this before the flight begins or if it is not practicable to give the notice before the flight began, within 24 hours after the flight ends.

**Subregulation 135.065(4)** provides that a contravention of subregulation (1), (2) or (3) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.070 – Availability or carriage of documents for certain flights

**Subregulation 135.070(1)** provides that the operator and the pilot in command for a flight each contravene this regulation if the aeroplane begins a flight of a kind specified in paragraph (1)(a) and a document mentioned in subregulation (4) is not carried on the aeroplane.

**Subregulation 135.070(2)** provides that the operator and the pilot in command of an aeroplane each contravene this subregulation if the aeroplane begins a visual flight rules (VFR) flight by day during which the aeroplane will remain within 50 nautical miles of the departure aerodrome and the requirement mentioned in subregulation (3) is not met.

**Subregulation 135.070(3)** provides that, the documents mentioned in subregulation (4) must be available to the pilot in command immediately before the flight or be carried on the aeroplane.

**Subregulation 135.070(4)** provides a list of required documents for paragraph (1)(b) and subregulation (3). The required documents include a flight notification, weight and balance information, NOTAMs and AIS briefing documents (if any), authorised weather forecast (if any) and information on anyone on board which requires any special consideration during the flight or in the event of an evacuation, forms to comply with the reporting requirements of the operator’s safety management system, operating instructions for any computerised navigation equipment on the aeroplane, and any document required by a foreign country within which the flight is conducted.

**Subregulation 135.070(5)** provides that a contravention of subregulation (1) or (2) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.075 – Carriage of documents - flights that begin or end outside Australian territory

**Subregulation 135.075(1)** provides that this regulation applies to a flight of an aeroplane that begins or ends at an aerodrome outside Australian territory.

**Subregulation 135.075(2)** provides that the operator and pilot in command each contravene this subregulation if a document prescribed by the Part 135 MOS for the purposes of this provision is not carried on aeroplane, and the aeroplane begins the flight.

**Subregulation 135.075(3)** provides that a contravention of subregulation (2) is an offence of strict liability, with a maximum penalty of 50 penalty units.

**Regulation 135.080** provides that an aeroplane operator’s exposition for a flight must include specified procedures for keeping documents prescribed by the Part 135 MOS accessible to a person on the ground, for keeping this information updated and for providing the information to another person.

Regulation 135.085 – Journey logs

**Subregulation 135.085(1)** provides that an aeroplane operator for a flight contravenes this subregulation if when the flight begins, the operator has not prepared a journey log that is capable of containing the information mentioned in subregulations (3) and (5) and has a place for the pilot in command to verify the entries for the flight.

**Subregulation 135.085(2)** provides that the operator and the pilot in command of an aeroplane for a flight each contravene this subregulation if the information about the flight mentioned in subregulation (3) is not recorded in the journey log when the flight begins.

**Subregulation 135.085(3)** prescribes the information required to be in the journey log.

**Subregulation 135.085(4)** provides that the operator and the pilot in command of an aeroplane each contravene this subregulation if the information required by subregulation (5) is not recorded in the journey log as soon as practicable after the flight ends.

**Subregulation 135.085(5)** prescribes the information required by subregulation (4) to be in the journey log.

**Subregulation 135.085(6)** provides exceptions from the application of subregulations (1), (2) and (4).

A defendant bears an evidential burden in relation to the matters in this subregulation because the issue is peculiarly within the knowledge of the defendant, and it is significantly more difficult and costlier for the prosecution to disprove than for the defendant to establish the matter.

**Subregulation 135.085(7)** provides exceptions to the application of subregulation (2) in relation to medical transport operations.

A defendant bears an evidential burden in relation to the matters in this subregulation because the issue is peculiarly within the knowledge of the defendant, and it is significantly more difficult and costlier for the prosecution to disprove than for the defendant to establish the matter.

**Subregulation 135.085(8)** provides that a contravention of subregulation (1), (2) or (4) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.090 – Passenger lists

**Subregulation 135.090(1)** provides that the operator of an aeroplane for a passenger transport operation contravenes this subregulation if they have not prepared a passenger list for the flight that contains the information mentioned in subregulation (2) when the flight begins.

**Subregulation 135.090(2)** provides the information mentioned in subregulation (1).

**Subregulation 135.090(3)** provides that subregulation (1) does not apply in relation to information mentioned if it is recorded in another document kept by the operator or readily available from another source at that time.

A defendant bears an evidential burden in relation to the matters in this subregulation because the issue is peculiarly within the knowledge of the defendant, and it is significantly more difficult and costlier for the prosecution to disprove than for the defendant to establish the matter.

**Subregulation 135.090(4)** provides that a contravention of subregulation (1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

These provisions ensure the names passengers on a flight are recorded so in the event of an emergency the authorities can readily determine who is on the aeroplane.

Regulation 135.095 – Flight preparation forms for flights that begin or end outside Australian territory

**Subregulation 135.095(1)** provides the application of regulation 135.095, as a flight that begins or ends at an aerodrome outside Australia.

**Subregulation 135.095(2)** provides that the operator and the pilot in command of an aeroplane each contravene this subregulation if the pilot in command has not signed a flight preparation form certifying that they were satisfied about the matters mentioned in subregulation (3) when the flight began.

**Subregulation 135.095(3)** provides the matters which require signing off by the pilot in command in the flight preparation form.

**Subregulation 135.095(4)** provides that a contravention of subregulation (2) is an offence of strict liability, with a maximum penalty of 50 penalty units.

These provisions require a flight preparation form to be completed and signed by the pilot in command for international flights. This is an ICAO requirement. The form provides a checklist of essential requirements for an international flight. When signed by the pilot in command the form indicates that all requirements on the form have been met and the related regulatory requirements for the flight are being complied with.

Division 135.C.4—Reporting and recording defects and incidents etc.

**Regulation 135.100** requires operators to include in their exposition procedures for the reporting and recording by flight crew members of specified events.

**Regulation 135.105** provides that an aeroplane operator’s exposition must include procedures for the reporting and recording by crew members of incidents relating to a flight that endanger, or could endanger, the safe operation of the aeroplane.

Division 135.C.5—Search and rescue services and emergency and survival equipment

Regulation 135.110 – Information about search and rescue services

**Subregulation 135.110(1)** provides that the operator of an aeroplane for a flight 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 135.110(2)** provides that a contravention of subregulation (1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.115 – Information about emergency and survival equipment

**Subregulation 135.115(1)** provides that the operator of an aeroplane for a flight contravenes this subregulation if the Part 135 MOS prescribes an item of equipment for the purposes of this regulation and when the flight begins, the information prescribed by the Part 135 MOS for that equipment is not available for immediate communication by the operator to a rescue coordination centre.

**Subregulation 135.115(2)** provides that a contravention of subregulation (1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Division 135.C.6—Miscellaneous requirements

Regulation 135.120 – Crew activities necessary for safe operation

**Subregulation 135.120(1)** provides that an operator of an aeroplane for a flight contravenes this subregulation if the operator requires a member of the aeroplane’s crew to perform an activity during take-off, initial climb, final approach or landing of the aeroplane for the flight, and the activity is not necessary for the safe operation of the aeroplane.

**Subregulation 135.120(2)** provides that a crew member for a flight of an aeroplane contravenes this subregulation if they perform an activity during take-off, initial climb, final approach or landing of the aeroplane and the activity is not necessary for the safe operation of the aeroplane.

**Subregulation 135.120(3)** provides circumstances where subregulations (1) and (2) do not apply, including if the flight is a medical transport operation.

**Subregulation 135.120(4)** provides that a contravention of subregulation (1) or (2) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.125 – Competence of ground support personnel

**Subregulation 135.125(1)** provides that the operator of an aeroplane for a flight contravenes this subregulation if, before a member of the operator’s personnel carries out a ground support duty for the flight, the member has not met a requirement mentioned in subregulation (2).

**Subregulation 135.125(2)** provides that a member of the operator’s personnel must have successfully completed training for the ground support duty and been assessed as competent to carry out the duty before carrying out the duty for the flight.

**Subregulation 135.125(3)** provides that a contravention of subregulation (1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.130 – Flight crew seat authorisation and briefing

**Subregulation 135.130(1)** provides that the operator and the pilot in command of an aeroplane each contravene this subregulation if a person not mentioned in subregulation (2) occupies a flight crew seat during the flight.

**Subregulation 135.130(2)** provides the persons permitted to occupy a flight crew seat for the purposes of subregulation (1).

**Subregulation 135.130(3)** provides that the pilot in command of an aeroplane for a flight contravenes this subregulation if a person other than a member of the aeroplane’s crew occupies a flight crew seat during the flight and the pilot does not cause the person to be briefed on the safety procedures that are relevant to the seat before the person occupies the seat.

**Subregulation 135.130(4)** provides that a contravention of subregulation (1) or (3) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Subpart 135.D—Operational procedures

This Subpart prescribes the operational procedures for the operator and the pilot in command of the aeroplane.

Division 135.D.1—Operational control

**Regulation 135.135** provides that an aeroplane operator’s exposition must include procedures for determining how operational control for a flight of the aeroplane is be exercised and by whom.

This provision ensures that the operator has procedures for determining who is in control of the flight. It is a requirement for the safe operation of a flight that only one person has operational control.

Division 135.D.2—Flight preparation

**Regulation 135.140** provides that the aeroplane operator’s exposition must include procedures for complying with the flight preparation (weather assessments) requirements and the flight preparation (alternate aerodromes) requirements.

Division 135.D.3—Flight planning

Regulation 135.145 – Operational flight plans

**Subregulation 135.145(1)** provides that the operator and the pilot in command of an aeroplane for a flight each contravene this subregulation if the flight is of a kind mentioned in paragraph (1)(a) and when the flight begins, an operational flight plan that meets the requirements mentioned in subregulation (2) has not been prepared for the flight. This subregulation applies for an instrument flight rules (IFR) flight, a VFR flight at night, or a flight which does not remain within 50 nautical miles from the departure aerodrome during the flight.

**Subregulation 135.145(2)** provides the requirements of an operational flight plan for subregulation (1). The provision requires the flight plan to be prepared having regard to the safety matters mentioned in paragraph (2)(a) and contain the information prescribed by the Part 135 MOS for this provision.

**Subregulation 135.140(3)** provides that the operator and the pilot in command of an aeroplane each contravene this subregulation if the Part 135 MOS prescribes information about the flight for this subregulation and that information is not recorded in the operational flight plan.

**Subregulation 135.145(4)** provides exceptions to the application of subregulation (1) and (3) in relation to information recorded in another document kept by the operator or readily available from another source.

A defendant bears an evidential burden in relation to the matters in this subregulation because the issue is peculiarly within the knowledge of the defendant, and it is significantly more difficult and costlier for the prosecution to disprove than for the defendant to establish the matter.

**Subregulation 135.145(5)** provides that a contravention of subregulation (1) or (3) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.150 – Availability of flight planning information

**Subregulation 135.150(1)** provides that the operator of an aeroplane for a flight contravenes this subregulation if a requirement in subregulation (2) is not met for the flight.

**Subregulation 135.150(2)** provides the requirements for operator personnel to access information mentioned in subregulation (3).

**Subregulation 135.150(3)** provides the information required by subregulation (2) that must be available, such as authorised weather forecasts and NOTAMs.

**Subregulation 135.150(4)** provides that a contravention of subregulation (1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

These provisions ensure the operator provides the pilot in command and any operational personnel that are involved with the flight planning and/or replanning, with the authorised weather, NOTAMs and any information on the suitability of the departure aerodrome, destination aerodrome and proposed alternate aerodrome.

Division 135.D.4—Flight rules

Regulation 135.155 – Take-off and landing minima

**Subregulation 135.155(1)** provides that the operator’s exposition must include procedures for determining take-off minima that meet the requirements mentioned in subregulation (2) and procedures for determining landing minima that meet the requirements mentioned in subregulation (3).

**Subregulation 135.155(2)** provides the take-off minima requirements.

**Subregulation 135.155(3)** provides the landing minima requirements.

**Subregulation 135.155(4)** provides that, if an aeroplane conducts an IFR flight to or from an aerodrome with an approach involving visual circling, the aeroplane operator’s exposition must include procedures for determining landing minima for the aerodrome.

**Subregulation 135.155(5)** provides that the operator and the pilot in command of an aeroplane for a flight mentioned in subregulation (1) or (4) each contravene this subregulation if the minima for the take-off or landing are less than the minima determined in accordance with a procedure mentioned in subregulation (1) or (4).

**Subregulation 135.155(6)** provides that a contravention of subregulation (5) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.160 – IFR flights to or from foreign countries that do not use ICAO procedures

**Subregulation 135.160(1)** provides that this regulation applies if an aeroplane conducts an IFR flight to or from an aerodrome in a foreign country and at which IMC (Instrument Meteorological Conditions) exist, and the county does not base the design of its instrument procedures on ICAO Document 8168 (PANS-OPS).

**Subregulation 135.160(2)** provides that the aeroplane operator’s exposition must include the instrument approach and departure procedures for the aerodrome that are approved by the national aviation authority of the foreign country.

Regulation 135.165 – Authorised instrument approach procedures not in the AIP

**Subregulation 135.165(1)** provides that the operator of an aeroplane for an IFR flight contravenes this subregulation if the aeroplane conducts an instrument approach to an aerodrome for which an authorised instrument approach procedure is not published in the AIP, and an authorised instrument approach procedure for the aerodrome is not in the operator’s exposition.

**Subregulation 135.165(2)** provides that a contravention of subregulation (1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

**Regulation 135.170** provides that an aeroplane operator’s exposition must include stated information related to the conduct of low-visibility operations.

**Regulation 135.175** provides that an aeroplane operator’s exposition must include procedures about conducting stabilised approaches to land at an aerodrome.

Regulation 135.180 – Take-off alternate aerodromes

**Subregulation 135.180(1)** provides the circumstances for the application of this regulation, being an IFR flight in a multi-engine aeroplane, for a passenger transport operation or a medical transport operation.

**Subregulation 135.180(2)** provides that the operator and the pilot in command of an aeroplane for a flight each contravene this subregulation if the aeroplane will not be able to return to the departure aerodrome due to certain visibility or cloud ceiling height restrictions or for any other reason, and the operational flight plane does not include a take-off alternate aerodrome that meets the requirements mentioned in subregulation (3).

**Subregulation 135.180(3)** provides the requirements for subregulation (2) that relate to the authorised weather forecast for the take-off alternate aerodrome and the distance to the take-off alternate aerodrome.

**Subregulation 135.180(4)** provides an exception to the application of subregulation (2) for a medical transport operation for which the aeroplane is carrying sufficient fuel to meet the requirements of this subregulation.

A defendant bears an evidential burden in relation to the matters in this subregulation because the issue is peculiarly within the knowledge of the defendant, and it is significantly more difficult and costlier for the prosecution to disprove than for the defendant to establish the matter.

**Subregulation 135.180(5)** provides that a contravention of subregulation (2) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.185 – Alternate aerodrome requirements in certain circumstances

**Subregulation 135.185(1)** provides that the operator and pilot in command of an aeroplane for a flight each contravene this subregulation if circumstances prescribed by the Part 135 MOS apply for the flight and a requirement prescribed by the Part 135 MOS relating to alternate aerodromes is not met for the flight.

**Subregulation 135.185(2)** provides that a contravention of subregulation (1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.190 – IFR flights without destination alternate aerodromes

**Subregulation 135.190(1)** provides that this regulation applies to a flight of an aeroplane if the flight is an IFR flight and the operational flight plan for the flight does not include a destination alternate aerodrome.

**Subregulation 135.190(2)** provides the circumstances in which the pilot in command of an aeroplane for a flight contravenes this subregulation in circumstances where certain stated weather and fuel conditions exist, and the flight is continued to the planned destination aerodrome.

**Subregulation 135.190(3)** provides circumstances in which subregulation (2) does not apply.

A defendant bears an evidential burden in relation to the matters in this subregulation because the issue is peculiarly within the knowledge of the defendant, and it is significantly more difficult and costlier for the prosecution to disprove than for the defendant to establish the matter.

**Subregulation 135.190(4)** provides additional circumstances in which subregulation (2) does not apply.

A defendant bears an evidential burden in relation to the matters in this subregulation because the issue is peculiarly within the knowledge of the defendant, and it is significantly more difficult and costlier for the prosecution to disprove than for the defendant to establish the matter.

**Subregulation 135.190(5)** provides that a contravention of subregulation (2) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Division 135.D.5—Aerodromes

Regulation 135.195 – Procedures to determine information about aerodromes

**Subregulation 135.195(1)** provides that an aeroplane operator’s exposition must include procedures for determining information in relation to various matters and procedures for operating at an aerodrome.

**Subregulation 135.195(2)** provides the kinds of aerodrome information that the operator’s exposition procedures must be capable of determining.

**Regulation 135.200** provides that an aeroplane operator’s exposition must include procedures to ensure the safety of persons in the vicinity of an aeroplane at an aerodrome, in stated circumstances related to the safety of persons embarking, disembarking or on the aeroplane, loading and unloading the aeroplane, and the operation of the aeroplane.

Division 135.D.6—Fuel requirements

**Regulation 135.205** provides that an aeroplane operator’s exposition must include procedures to ensure that a flight of the aeroplane is conducted in accordance with the requirements mentioned in subregulation 135.215(1).

Regulation 135.210 – Oil requirements

**Subregulation 135.210(1)** provides that the operator and the pilot in command of an aeroplane for a flight each contravene this subregulation if the aeroplane is not carrying sufficient oil to complete the flight safety, when the flight began.

**Subregulation 135.210(2)** provides that a contravention of subregulation (1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.215 – Fuel requirements

**Subregulation 135.215(1)** provides that the Part 135 MOS may prescribe requirements relating to fuel for aeroplanes, including but not being limited to specified matters.

**Subregulation 135.215(2)** provides that the pilot in command of an aeroplane contravenes this subregulation if the pilot is subject to a requirement mentioned in subregulation (1) for the flight and the requirement is not met for the flight.

**Subregulation 135.215(3)** provides that the operator of an aeroplane contravenes this subregulation if the operator is subject to a requirement mentioned in subregulation (1) for the flight and the requirement is not met for the flight.

**Subregulation 135.215(4)** provides that a contravention of subregulation (2) or (3) is an offence of strict liability, with a maximum penalty of 50 penalty units.

**Regulation 135.220** provides that an aeroplane operator’s exposition must include procedures to ensure an aeroplane is fuelled safely, procedures relating to the safety of passengers during fuelling, and procedures related to the use of electronic devices in the cabin of an aeroplane during fuelling.

Division 135.D.7—Passenger transport and medical transport

**Regulation 135.225** provides that this Division applies to the operation of an aeroplane for a passenger transport operation or a medical transport operation.

Regulation 135.230 – IFR flights

**Subregulation 135.230(1)** provides that the operator of an aeroplane for an IFR flight contravenes this subregulation if the aeroplane did not meet the requirement mentioned in subregulation (2).

**Subregulation 135.230(2)** provides that for subregulation (1) the aeroplane must be a multi-engine aeroplane or a nominated single-engine aeroplane.

**Subregulation 135.230(3)** provides that a contravention of subregulation (1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.235 – VFR flights at night

**Subregulation 135.235(1)** provides that the operator of an aeroplane contravenes this subregulation if the flight is a VFR flight at night and a requirement mentioned in subregulation (2) is not met.

**Subregulation 135.235(2)** provides the requirements for subregulation (1). The aeroplane must be a multi-engine aeroplane or a prescribed single-engine aeroplane; the aeroplane must have a maximum take-off weight of not more than 5 700kg; and a member of the flight crew must hold an instrument rating.

**Subregulation 135.235(3)** provides that a contravention of subregulation (1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.240 – Prescribed single-engine aeroplanes

**Subregulation 135.240(1)** provides that this regulation applies to a prescribed single-engine aeroplane that conducts an IFR flight or a VFR flight at night.

**Subregulation 135.240(2)** provides that the aeroplane operator’s exposition must include procedures for the matters prescribed by the Part 135 MOS for this subregulation.

**Subregulation 135.240(3)** provides that a single-engine aeroplane is a prescribed single -engine aeroplane if it is of a kind prescribed by the Part 135 MOS for the purpose of this subregulation.

Regulation 135.245 – Simulation of emergency or abnormal situations

**Subregulation 135.245(1)** provides that the operator and pilot in command of an aeroplane each contravene this subregulation if an emergency or abnormal situation is simulated during a flight.

**Subregulation 135.245(2)** provides that a contravention of subregulation (1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.250 – Carriage of restricted persons

**Subregulation 135.250(1)** provides that an aeroplane operator’s exposition must state whether the operator will, or will not, carry a restricted person on a flight of the aeroplane.

**Subregulation 135.250(2)** provides the additional procedural requirements that an operator’s exposition must include if it states that the operator will carry a restricted person on a flight of the aeroplane.

These provisions are provided to ensure the safety of passengers and flight crew when carrying restricted persons, for example persons in custody or deportees. If the operator’s exposition states that restricted persons may be carried, then the exposition must have procedures for the carriage of restricted persons and procedures to advise each crew member.

**Regulation 135.255** provides that an aeroplane operator’s exposition must include procedures for ensuring carry-on baggage is securely stowed, determining the maximum weight and size of the baggage and determining stowage locations. The operator’s exposition must also have procedures for instructions to passengers regarding the secure stowage of carry-on baggage before take-off, landing and any other time the pilot in command directs.

Regulation 135.260 – Obstruction of emergency exits

**Subregulation 135.260(1)** provides that the operator and pilot in command of an aeroplane for a flight each contravene this subregulation if, during taxiing, take-off, landing or any other time that the pilot in command directs, an emergency exit is obstructed.

**Subregulation 135.260(2)** provides that, an emergency exit is not obstructed if a seat adjacent to the exit, or a seat in a row of seats adjacent to the exist, is occupied by a passenger.

**Subregulation 135.260(3)** provides the circumstances in which subregulation (1) does not apply. The provision does not apply to medical transport operations if the emergency exit is obstructed by an approved stretcher fit-out.

A defendant beasr an evidential burden in relation to the matters in this subregulation because the issue is peculiarly within the knowledge of the defendant, and it is significantly more difficult and costlier for the prosecution to disprove than for the defendant to establish the matter.

**Subregulation 135.260(4)** provides that a contravention of subregulation (1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.265 – Passengers in seats adjacent to emergency exits

**Subregulation 135.265(1)** provides that the operator of an aeroplane contravenes this subregulation if the requirement mentioned in subregulation (2) is not met.

**Subregulation 135.265(2)** provides the requirement for a pilot in command to be satisfied that each person occupying a seat adjacent to an emergency exit is a suitable person or is accompanied or assisted by a suitable person who can access the emergency exit.

**Subregulation 135.265(3)** provides that the operator of an aeroplane contravenes this subregulation if a suitable person is occupying a seat adjacent to an emergency exit and they have not agreed to assist the aeroplane’s crew with the evacuation of the aeroplane in an emergency.

**Subregulation 135.265(4)** provides that the operator of an aeroplane contravenes this subregulation if a person other than a suitable person is occupying a seat adjacent to an emergency exit, and a suitable person is accompanying or assisting the person but has not agreed to assist the aeroplane’s crew with the evacuation of the aeroplane in an emergency.

**Subregulation 135.265(5)** provides that a contravention of subregulation (1), (3) or (4) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.270 – Carriage of passengers with reduced mobility

**Subregulation 135.270(1)** provides that the operator and the pilot in command of an aeroplane each contravene this subregulation if a passenger with reduced mobility occupies a seat 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.

**Subregulation 135.270(2)** provides circumstances in which subregulation (1) does not apply when the person with reduced mobility is accompanied or assisted by a suitable person.

A defendant bears an evidential burden in relation to the matters in this subregulation because the issue is peculiarly within the knowledge of the defendant, and it is significantly more difficult and costlier for the prosecution to disprove than for the defendant to establish the matter.

**Subregulation 135.270(3)** provides that the operator’s exposition must include procedures for informing crew members about any passenger with reduced mobility who is to be carried on the flight.

**Subregulation 135.270(4)** provides that the operator of an aeroplane contravenes this subregulation if a procedure mentioned in subregulation (3) is not complied with for the flight.

**Subregulation 135.270(5)** provides that a contravention of subregulation (1) or (4) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.275 – Safety briefing cards

**Subregulation 135.275(1)** provides that this regulation applies to an aeroplane with more than 2 rows of seats.

**Subregulation 135.275(2)** 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 135.275(3)** provides that the operator of an aeroplane contravenes this subregulation if when the flight begins, a safety briefing card does not meet the requirements mentioned in subregulation (4).

**Subregulation 135.275(4)** provides that the safety briefing card must include any information prescribed by the Part 135 MOS, and only other information that is relevant for the type and model of the aeroplane, and to the safety of the aeroplane and its passengers.

**Subregulation 135.275(5)** provides that a contravention of subregulation (2) or (3) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.280 – Safety briefings and instructions and demonstrations

**Subregulation 135.280(1)** provides that the operator and pilot in command of an aeroplane for a flight each contravene this subregulation if a passenger is not given a safety briefing, instructions or demonstrations in accordance with the requirements prescribed by the Part 135 MOS.

**Subregulation 135.280(2)** provides that subregulation (1) does not apply in relation to a medical patient on a flight that is a medical transport operation.

A defendant bears an evidential burden in relation to the matters in this subregulation because the issue is peculiarly within the knowledge of the defendant, and it is significantly more difficult and costlier for the prosecution to disprove than for the defendant to establish the matter. Any reversal of evidential burden is in this case legally academic in that CASA would at least know whether the operator is a certificated medical transport operator.

**Subregulation 135.280(3)** provides that the operator of the aeroplane contravenes this subregulation if a safety briefing, instruction or demonstration required to be given to a passenger under this regulation includes information that is not relevant to the type and model of the aeroplane or information that is not relevant to the safety of the aeroplane and its passengers.

**Subregulation 135.280(4)** provides that the operator of an aeroplane contravenes this subregulation if a passenger with reduced mobility will be carried on the flight and before the aeroplane takes off, the passenger, or a person accompanying or assisting the passenger is not asked by a crew member for the flight about the best way of helping the passenger if an emergency evacuation of the aeroplane is necessary.

**Subregulation 135.280(5)** provides that a contravention of subregulation (1), (3) or (4) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.285 – Safety briefing in the event of an emergency

**Subregulation 135.285(1)** provides that an aeroplane operator’s exposition must include procedures for briefing passengers on what to do in the event of an emergency.

**Subregulation 135.285(2)** provides that subregulation (1) does not apply to a medical patient on a flight that is a medical transport operation.

Regulation 135.290 – Flights over water for single-engine aeroplanes

**Subregulation 135.290(1)** provides that the operator and pilot in command of a single-engine aeroplane (other than a prescribed single-engine aeroplane) each contravene this subregulation if, during the flight, the aeroplane is flown more than 25 nautical miles over water from a suitable forced landing area.

**Subregulation 135.290(2)** provides the circumstances where an operator and pilot in command of a prescribed single-engine aeroplane each contravene this subregulation for flights more than 25 nautical miles over water from a suitable forced landing area.

**Subregulation 135.290(3)** provides that a contravention of subregulation (1) or (2) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Division 135.D.8—Instruments, indicators, equipment and systems

Regulation 135.295 – Airborne weather radar equipment

**Subregulation 135.295(1)** prescribes the aeroplanes for which this regulation applies, being an aeroplane to which airborne weather radar is required to be fitted under Subpart 135.K, or an aeroplane that is fitted with airborne weather radar equipment, whether or not it is required to be fitted under Subpart 135.K.

**Subregulation 135.295(2)** provides that the aeroplane operator’s exposition must include procedures for using the equipment during a flight, and for when the equipment is inoperative.

Regulation 135.300 – Head-up displays, enhanced vision systems and synthetic vision systems

**Subregulation 135.300(1)** provides that this regulation applies to a flight of an aeroplane if the aeroplane is fitted with a head-up display, enhanced vision system, or a synthetic vision system and the flight is either an IFR flight or a VFR flight at night.

**Subregulation 135.300(2)** provides that an aeroplane operator’s exposition must include procedures for using each system that is fitted to the aeroplane during either an IFR flight or a VFR flight at night. The exposition must also include procedures for conducting an IFR flight or a VFR flight at night without an element of the system, for use if the element is inoperative.

Regulation 135.305 – Survival Equipment Procedures

**Subregulation 135.305(1)** provides the application of this regulation. It applies to a flight that is in or through an area prescribed as a remote area by the Part 91 MOS, or if the aeroplane is required under Subpart 135.K to carry a life raft for the flight.

**Subregulation 135.305(2)** provides that if an aeroplane is, or will be, used to conduct a flight to which this regulation applies, the operator’s exposition must include specified procedures for determining what survival equipment is required.

Division 135.D.9—Miscellaneous

**Regulation 135.310** provides that an aeroplane operator’s exposition must include procedures for inspecting aeroplanes in frost and freezing conditions, procedures for ground de-icing and ground anti-icing measures pre-flight and procedures for using de-icing and anti-icing equipment during flight.

**Regulation 135.315** provides that an aeroplane operator’s exposition must include procedures for the operation of portable electronic devices for a flight of the aeroplane.

**Regulation 135.320** provides that an aeroplane’s operator’s exposition must include procedures for the carriage of animals for a flight of the aeroplane.

This provision is provided to ensure the safety of the aeroplane when carrying animals. The operator must have procedures in the exposition.

Regulation 135.325 – Polar operations

**Subregulation 135.325(1)** provides that this regulation applies to an aeroplane that conducts a flight to or from an aerodrome in a polar region.

**Subregulation 135.325(2)** provides that an aeroplane operator’s exposition must include procedures for aspects relating to polar operations, including monitoring and dealing with fuel freezing, ensuring effective communication, training of crew, mitigating exposure to cosmic radiation, the use of anti-exposure suits if an aeroplane is not flown over water, and the use of immersion suits if an aeroplane is flown over water.

Regulation 135.330 – Cosmic radiation

**Subregulation 135.330(1)** provides that the operator of an aeroplane for a flight contravenes this subregulation if the operator’s exposition does not state a limit for the total cosmic radiation receivable inside the aeroplane’s cabin during the flight and the aeroplane is flown above flight level 490.

**Subregulation 135.330(2)** provides that the operator of an aeroplane contravenes this subregulation if a flight crew member has in the previous 12 month period flown on a flight operated by the operator during which the aeroplane was flown above flight level 490 and the operator does have of record of the total cosmic radiation dose received by the member during that period of such flights.

**Subregulation 135.330(3)** provides that a contravention of subregulation (1) or (2) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.335 – Exceeding cosmic radiation limits

**Subregulation 135.335(1)** provides that the operator and pilot in command of an aeroplane for a flight each contravene this subregulation if the aeroplane is flown above flight level 490, and during the flight the limit stated in the operator’s exposition for the total cosmic radiation receivable inside the aeroplane’s cabin during a flight is exceeded and the pilot in command does not, as soon as practicable after the limit is exceeded, descend to the lowest altitude at which it is practicable to complete the flight safely.

**Subregulation 135.335(2)** provides that a contravention of subregulation (1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Subpart 135.F—Performance

Regulation 135.340 – Performance data

**Subregulation 135.340(1)** provides that the operator and pilot in command of an aeroplane each would contravene this subregulation if, in making a calculation relating to the aeroplane’s performance for a flight, data other than performance data set out in the aircraft flight manual instructions for the aeroplane or performance data for the aeroplane for which the operator holds an approval under regulation 135.020, is used.

**Subregulation 135.340(2)** provides that a contravention of subregulation (1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.345 – Take-off weights

**Subregulation 135.345(1)** provides that the operator and pilot in command of an aeroplane for a flight each contravene this subregulation if the aeroplane’s take-off weight is greater than the maximum take-off weight for the aeroplane, or the weight for the aeroplane calculated in accordance with the requirements of subregulation (2)

**Subregulation 135.345(2)** provides that the Part 135 MOS may prescribe circumstances in which a weight for an aeroplane for a flight must be calculated under this subregulation and methods for calculating that weight.

**Subregulation 135.345(3)** provides that the Part 135 MOS may prescribe circumstances and methods that relate to various listed matters, without limiting what the MOS may prescribe under subregulation (2).

**Subregulation 135.345(4)** provides that a contravention of subregulation (1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.350 – Landing weights

**Subregulation 135.350(1)** provides that the operator and pilot in command of an aeroplane each contravene this subregulation if the aeroplane’s landing weight is greater than the maximum landing weight for the aeroplane or the weight for the aeroplane calculated in accordance with subregulation (2).

**Subregulation 135.350(2)** provides that the Part 135 MOS may prescribe circumstances in which a weight for an aeroplane for a flight must be calculated under this subregulation and methods for calculating that weight.

**Subregulation 135.350(3)** provides that the Part 135 MOS may prescribe circumstances and methods that relate to various listed matters, without limiting what the MOS may prescribe under subregulation (2).

**Subregulation 135.350(4)** provides that a contravention of subregulation (1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Subpart 135.J—Weight and balance

This Subpart provides the procedures for loading the aeroplane and requirements for weight and balance documents for aeroplane operations.

Regulation 135.355 – Loading of aeroplane

**Subregulation 135.355(1)** provides that the operator and pilot in command of an aeroplane for a flight 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 135.355(2)** provides that the operator and the pilot in command 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 135.355(3)** provides that a contravention of subregulation (1) or (2) is an offence of strict liability, with a maximum penalty of 50 penalty units.

**Regulation 135.360** provides that an aeroplane operator’s exposition must include certain procedures for loading and offloading passengers and cargo and working out various weights.

Regulation 135.365 – Weight and balance documents

**Subregulation 135.365(1)** provides that the operator and pilot in command of an aeroplane for a flight each contravene this subregulation if the weight and balance documents for the flight do not comply with subregulation (2) when the flight begins.

**Subregulation 135.365(2)** specifies what the weight and balance documents must include.

**Subregulation 135.365(3)** provides that a contravention of subregulation (1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Subpart 135.K—Instruments, indicators, equipment and systems

This Subpart provides requirements for the fitment and use of flight instruments, systems and equipment on an aeroplane.

Regulation 135.370 – Instruments, indicators, equipment and systems—requirements

**Subregulation 135.370(1)** provides that the Part 135 MOS may prescribe instruments, indicators, items of equipment or systems that must or must not be fitted to, or carried on, an aeroplane, and requirements related to these.

**Subregulation 135.370(2)** provides that the operator and the pilot in command each contravene this subregulation if, when a flight begins, an instrument, indicator, item of equipment or system prescribed by subregulation (1) is not fitted to, or carried on, the aeroplane or is fitted to or carried on the aeroplane, contrary to the requirements of the Part 135 MOS under paragraphs (1)(a) and (b).

**Subregulation 135.370(3)** provides that a crew member contravenes this regulation if the crew member is subject to a requirement of the Part 135 MOS under paragraph (1)(c) and the requirement is not met for the flight.

**Subregulation 135.370(4)** provides that a contravention of subregulation (2) or (3) is an offence of strict liability, with a maximum penalty of 50 penalty units.

**Regulation 135.375** provides that if an instrument, indicator, item of equipment or system is required under 135.370 to be fitted, or carried on, an aeroplane, the aeroplane may begin the flight with the instrument, indicator, item of equipment or system inoperative, if circumstances prescribed by the Part 135 MOS apply.

Subpart 135.N—Flight crew

Division 135.N.1—General

Regulation 135.380 – Composition, number, qualifications and training

**Subregulation 135.380(1)** provides that the operator of an aeroplane contravenes this subregulation if a requirement mentioned in subregulation (2) is not met when the flight begins.

**Subregulation 135.380(2)** provides the various requirements applicable to flight crew members. These relate to flight crew composition, qualifications, experience, training and checking, and knowledge.

**Subregulation 135.380(3)** provides that the aeroplane operator’s exposition must include the kinds of operation (if any) for which additional flight crew members must be carried.

**Subregulation 135.380(4)** provides that the Part 135 MOS may prescribe requirements relating to training and checking that must be completed by a flight crew member for a flight.

**Subregulation 135.380(5)** provides that an aeroplane operator’s exposition must include the requirements for new or inexperienced crew members to be assigned to duty for a flight.

**Subregulation 135.380(6)** provides that a contravention of subregulation (1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.385 – Competence

**Subregulation 135.385(1)** provides that the operator of an aeroplane contravenes this subregulation if the operator assigns a person to duty as a flight crew member and the person has not been assessed by the operator, in accordance with the operator’s training and checking system, as competent to perform the duties assigned to the person for the flight.

**Subregulation 135.385(2)** provides that a contravention of subregulation (1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.390 – Assignment to duty of pilot in command

**Subregulation 135.390(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 pilot in command of the aeroplane for the flight.

**Subregulation 135.390(2)** provides that a contravention of subregulation (1) is an offence of strict liability, with a penalty of 50 penalty units.

This regulation provides for operators to conduct an inflight relief of the pilot in command. Under all circumstances and at all times during the conduct of a flight, it is expected that one pilot in command will be assigned by the operator. No more than one pilot may be assigned to be the pilot in command at any single moment in time.

Regulation 135.395 – Pilot in command

**Subregulation 135.395(1)** provides the requirements for when a pilot is qualified as pilot in command for a flight of an aeroplane. A table sets out the flight hours required to qualify as pilot in command for various kinds of flights.

**Subregulation 135.395(2)** provides that the aeroplane operator’s exposition must include minimum flying experience requirements for pilots in command, for all aeroplanes operated by the operator for Australian air transport operations.

**Subregulation 135.395(3)** provides, in order to avoid doubt, that more than one item of column 2 in the table in subregulation (1) may apply to a particular hour of flight time.

Regulation 135.400 – Co-pilot

**Subregulation 135.400(1)** provides when a pilot is qualified as co-pilot for a flight of an aeroplane.

**Subregulation 135.400(2)** provides that a pilot is qualified as co-pilot for a flight of an aeroplane if the pilot is qualified under regulation 135.395 as pilot in command for the flight.

Regulation 135.405 – Pilot in command in non-command pilot’s seat

**Subregulation 135.405(1)** provides that the operator contravenes this subregulation if the operator requires the pilot in command to operate the aeroplane as pilot in command or perform other stated duties in the non-command pilot’s seat and the pilot in command does not hold a valid proficiency check in accordance with the requirements of the Part 135 MOS to do this.

**Subregulation 135.405(2)** provides that the pilot in command for a flight contravenes this subregulation if they operate the aeroplane in the non-command pilot’s seat and they do not hold a valid proficiency check in accordance with the requirements of the Part 135 MOS to do this.

**Subregulation 135.405(3)** provides that a contravention of subregulation (1) or (2) is an offence of strict liability, with a maximum penalty of 50 penalty units.

**Regulation 135.410** provides that an aeroplane operator’s exposition must include requirements in relation to the knowledge that a pilot in command must have of the route of the flight, the departure and planned destination aerodrome, and any alternative aerodrome required for the flight by the flight preparation (alternate aerodromes) requirements.

Division 135.N.2—Operation of aeroplanes of different type ratings

**Regulation 135.415** provides the application of this Division for the operation of aeroplanes of more than one type rating.

**Regulation 135.420** provides that the operator’s exposition must include various matters related to the flight crew members being assigned to duty on aeroplanes of more than one type rating.

Division 135.N.3—Operation of aeroplanes of different types

**Regulation 135.425** provides that this Division applies to the operator of an aeroplane if the operator operates aeroplanes of more than one type for Part 135 operations.

Regulation 135.430 – Assignment as pilot in command on different types

**Subregulation 135.430(1)** provides that the operator contravenes this subregulation if they assign a pilot to duty as pilot in command for flights on different types of turbine-engine aeroplanes, and the pilot does not hold a valid proficiency check, in accordance with the requirements prescribed by the Part 135 MOS, for an aeroplane of each type for a pilot in command.

**Subregulation 135.430(2)** provides that the operator contravenes this subregulation if they assign a pilot to duty as pilot in command for flights on different types of piston-engine aeroplanes, and the pilot does not meet the requirements mentioned in subregulation (3).

**Subregulation 135.430(3)** provides for two requirements for subregulation (2), based on the aircraft class rating.

**Subregulation 135.430(4)** provides that a contravention of subregulation (1) or (2) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Division 135.N.4—Recent experience

Regulation 135.435 – Recent experience requirements—90 days before flight

**Subregulation 135.435(1)** provides that the operator of an aeroplane for a flight contravenes this subregulation if they assign a pilot to duty as pilot in command or co-pilot and the pilot does not have the recent experience required for a flight by day by subregulation (3), or the recent experience required for a flight at night by subregulation (4).

**Subregulation 135.435(2)** provides that the pilot of an aeroplane contravenes this subregulation if they operate the aeroplane as pilot in command or co-pilot and they do not have the recent experience required for a flight by day by subregulation (3), or recent experience required for a flight at night by subregulation (4).

**Subregulation 135.435(3)** provides the recent experience requirements for flights by day.

**Subregulation 135.435(4)** provides the recent experience requirements for flights by night.

**Subregulation 135.435(5)** provides that a contravention of subregulation (1) or (2) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Subpart 135.P—Crew other than flight crew

Division 135.P.1—General

This Division is reserved for future use

Division 135.P.2—Air crew

Regulation 135.445 – Training and checking

**Subregulation 135.445(1)** provides that the operator of an aeroplane for a flight contravenes this subregulation if an air crew member is carried on the flight and the air crew member does not meet the training and checking requirements for the air crew member for the flight mentioned in subregulation (2).

**Subregulation 135.445(2)** provides that the Part 135 MOS may prescribe requirements relating to training and checking that must be completed by an air crew member for a flight.

**Subregulation 135.445(3)** provides that a contravention of subregulation (1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.450 – Competence

**Subregulation 135.450(1)** provides that the operator of an aeroplane for a flight contravenes this subregulation if they assign a person to duty as an air crew member for a 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 135.450(2)** provides that a contravention of subregulation (1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.455 – English proficiency

**Subregulation 135.455(1)** provides that the operator of an aeroplane for a flight contravenes this subregulation if the operator assigns a person to duty as an air crew member for the flight and the person does not meet the requirement mentioned in subregulation (2).

**Subregulation 135.455(2)** provides the English language proficiency requirement for air crew members.

**Subregulation 135.455(3)** provides that a contravention of subregulation (1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Division 135.P.3—Medical transport specialists

Regulation 135.460 – Training and checking

**Subregulation 135.460(1)** provides that the operator of an aeroplane for a flight contravenes this subregulation if a medical transport specialist is carried on the flight and they do not meet the training and checking requirements for the medical transport specialist and the flight mentioned in subregulation (2).

**Subregulation 135.460(2)** provides that the Part 135 MOS may prescribe requirements relating to training and checking that must be completed by a medical transport specialist for a flight.

**Subregulation 135.460(3)** provides that a contravention of subregulation (1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

Regulation 135.465 – Competence

**Subregulation 135.465(1)** provides that the operator of an aeroplane for a flight contravenes this subregulation if they assign a person to duty as a medical transport specialist for a 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 135.465(2)** provides that a contravention of subregulation (1) is an offence of strict liability, with a maximum penalty of 50 penalty units.

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). [↑](#footnote-ref-1)