



Australian Government

Civil Aviation Safety Authority

I, PHILIPPA JILLIAN SPENCE, Director of Aviation Safety, on behalf of CASA, make this instrument under the *Civil Aviation Safety Regulations 1998*.

[Signed P. Spence]

Pip Spence
Director of Aviation Safety

1 December 2021

Part 133 Manual of Standards Amendment Instrument 2021 (No. 1)

1 Name

This instrument is the *Part 133 Manual of Standards Amendment Instrument 2021 (No. 1)*.

2 Commencement

This instrument commences at the time it is registered.

3 Amendment of Part 133 Manual of Standards

Schedule 1 amends the *Part 133 Manual of Standards*.

Schedule 1 Amendments

[1] Section 1.05

substitute

1.05 Meaning of *medical transport operating site*

- (1) Subject to subsections (2) and (3), a ***medical transport operating site***, for a rotorcraft, is a site:
 - (a) at which a take-off or landing of the rotorcraft is, or is to be, conducted as part of a medical transport operation; or
 - (b) over which the rotorcraft is required to operate to conduct a medical transport operation.
- (2) A ***medical transport operating site***, for a rotorcraft, does not include a place that meets the requirements stated in subregulation 91.410(2) of CASR.
- (3) Despite subsection (2), a place mentioned in subparagraph 91.410(2)(a)(iv) of CASR is a ***medical transport operating site*** if the pilot in command of the rotorcraft determines the place is a medical transport operating site, after:
 - (a) following any procedures mentioned in the rotorcraft operator's exposition under regulation 133.170 of CASR that relate to managing the safety of operations to an unfamiliar aerodrome; and
 - (b) conducting a risk assessment of the medical transport operation for the place.

[2] Subsection 3.01(1), Note 2

omit

disinfection

insert

aircraft disinsection

[3] Section 3.04, Table 3.04, Item 2

omit

pyrotechnic

[4] Paragraph 5.10(3)(c)

omit

have received confirmation

insert

be satisfied

[5] Subsections 5.12(5) and (6)

substitute

- (5) Also, for subsection (2), the rotorcraft must be operated so that it does not create a hazard to a person, or property, on the ground or water under the rotorcraft's flight path in the event of an engine failure or other emergency.

[6] Section 6.02, definition of *final reserve fuel*, Table, Items 2 and 3

substitute

2	VFR flight	the range speed for the rotorcraft	20 minutes
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[7] Section 6.02, definition of *MSL*

omit

[8] Subsection 7.01(1)

omit

For

insert

Subject to subsections (3) and (4), for

[9] After subsection 7.01(2)

insert

- (3) Subsection (4) applies to an operator of a rotorcraft that, immediately before the commencement of this instrument, held an AOC authorising the operator to engage in regular public transport operations or charter operations, within the meaning of those terms immediately before the commencement of this instrument.
- (4) Until 1 December 2022, for paragraph 133.235(4)(a) of CASR, the information prescribed is:
- (a) the information mentioned in paragraphs 14.1.3 and 14.1.4 of repealed *Civil Aviation Order 20.11*, as in force immediately before the commencement of this instrument; or
 - (b) the information mentioned in subsection (1).

[10] Chapter 9, heading

substitute

Chapter 9 — Wearing of seatbelt, safety harness or restraint strap etc.

[11] Subsection 9.01(1)

omit

A crew member, other than a flight crew member,

insert

Subject to subsection (2), a crew member

[12] Subsection 9.01(2)

renumber as subsection (3)

[13] After subsection 9.01(1)

insert

- (2) Subsection (1) does not apply to an air crew member who is assigned duties, during the flight, requiring the air crew member to occupy a crew station in the rotorcraft's cockpit.

[14] Sections 9.02 to 9.04

substitute

9.02 Restraining of persons on a flight of a rotorcraft

- (1) Each person on a flight of a rotorcraft must be restrained, in accordance with section 9.03, 9.04 or 9.05, when:
- (a) for a VFR flight by day — the rotorcraft flies below 1 000 ft AGL; or
 - (b) for a VFR flight at night — the rotorcraft is flown along a route, or route segment, at a height lower than the minimum height mentioned in subregulation 91.277(2) of CASR; or
 - (c) for an IFR flight — the rotorcraft is flown along a route, or route segment, at a height lower than the minimum height mentioned in subregulation 91.305(2) of CASR; or
 - (d) the pilot in command of the rotorcraft, acting in accordance with the rotorcraft operator's exposition, directs that the person be restrained.
- (2) The requirements stated in this section are directions to the person for the purposes of regulation 11.245 of CASR.
- (3) The directions cease to be in force at the end of 1 December 2024.

9.03 Fastening of seatbelt or shoulder harness — passengers

A passenger of a rotorcraft for a flight is taken to comply with section 9.02 if the passenger fastens the passenger's seatbelt or shoulder harness, and keeps it fastened, during the period the passenger must be restrained under the section.

9.04 Wearing of safety harness and restraint strap, or restraining on stretcher etc. — medical transport operation

- (1) Subject to subsection (2), a medical patient, a person who is one of the medical personnel, or a crew member on a flight of a rotorcraft that is a medical transport operation is taken to comply with section 9.02 if the medical patient, person, or crew member is restrained in accordance with this section.
- (2) A medical patient, a person who is one of the medical personnel, or a crew member on a flight of a rotorcraft that is a medical transport operation must, during the operation:
 - (a) for a crew member, other than a flight crew member or an air crew member who is assigned duties, during the operation, requiring the air crew member to occupy a crew station in the rotorcraft's cockpit — wear a safety harness and a restraint strap; or
 - (b) for a medical patient for whom paragraph (a) is not practicable — be restrained on a stretcher, in accordance with the procedures mentioned in the rotorcraft operator's exposition; or
 - (c) for a medical patient who is an infant, for whom paragraph (a) is considered by the medical or nursing authority responsible for conducting the transport to be detrimental to the infant's medical condition or the general situation inside the rotorcraft — be carried inside an incubator, humidicrib or other neonatal transport unit, or in the arms or on the lap of an adult occupying a seat, in accordance with the procedures mentioned in the rotorcraft operator's exposition; or
 - (d) for a medical patient who is a child under the age of 6, for whom paragraph (a) is considered by the medical or nursing authority responsible for conducting the transport to be detrimental to the child's medical condition or the general situation inside the rotorcraft — be carried in the arms, or on the lap, of an adult occupying a seat, in accordance with the procedures mentioned in the rotorcraft operator's exposition.
- (3) For paragraph (2)(b), before the medical transport operation commences, a crew member, for the flight, who fits the equipment to the medical patient must ensure the requirements stated in the rotorcraft operator's exposition about the fitting of the equipment to the medical patient are complied with.
- (4) For paragraph (2)(b), before the medical transport operation commences, the rotorcraft's operator must ensure the equipment:
 - (a) is fit for the particular purpose of the operation; and
 - (b) meets the requirements of, or is approved under, Part 21 of CASR; and
 - (c) is serviceable.
- (5) For subsection (3), before the medical transport operation commences, the rotorcraft's operator must ensure the crew member has been trained in the fitting of the equipment and assessed as competent to fit the equipment.
- (6) The requirements stated in subsections (2) to (5) are directions to the affected person for the purposes of regulation 11.245 of CASR.
- (7) The directions cease to be in force at the end of 1 December 2024.

9.05 Wearing of safety harness and restraint strap — certain crew members

- (1) A crew member for a flight of a rotorcraft, other than a flight crew member or an air crew member who is assigned duties, during the operation, requiring the air crew member to occupy a crew station in the rotorcraft's cockpit, is taken to comply with section 9.02 if the crew member wears a safety harness and a restraint strap (the *equipment*) during the period the crew member must be restrained under the section.
- (2) Before the operation commences, the crew member must ensure the requirements stated in the rotorcraft operator's exposition about the wearing of the equipment are complied with.
- (3) Without limiting subsection (2), before the operation commences, the crew member must ensure the equipment is:
 - (a) correctly fitted, worn, and adjusted, to prevent injury to the crew member; and
 - (b) correctly adjusted to prevent the crew member, while wearing the equipment, from completely exiting the rotorcraft; and
 - (c) secured, via the restraint strap, to a hard point of the rotorcraft in accordance with the relevant approved data; and
 - (d) available always to be worn by the crew member.
- (4) Before the operation commences, the pilot in command, of the rotorcraft, must confirm the requirements stated in subsection (3) have been complied with.
- (5) Before the operation commences, the rotorcraft's operator must ensure the equipment:
 - (a) is fit for the particular purpose of the operation; and
 - (b) meets the requirements of, or is approved under, Part 21 of CASR; and
 - (c) is serviceable.
- (6) Before the operation commences, the rotorcraft's operator must ensure the crew member has been trained in the use of the equipment and assessed as competent to use the equipment.
- (7) If the crew member intends, in-flight, to transfer from a seatbelt to the equipment, the crew member must be secured by the equipment before the crew member unfastens the seatbelt.
- (8) The pilot in command, of the rotorcraft, must not manoeuvre the rotorcraft, in-flight, in a way that subjects the crew member to additional flight loads, unless the crew member has been briefed on the manoeuvre by the pilot in command beforehand.
- (9) The crew member must:
 - (a) advise the pilot in command, of the rotorcraft, of the crew member's proposed movements in the cabin in-flight; and
 - (b) not adversely affect the rotorcraft's centre of gravity or controllability during any movements by the crew member in the cabin in-flight.
- (10) The requirements stated in subsections (2) to (9) are directions to the affected person for the purposes of regulation 11.245 of CASR.
- (11) The directions cease to be in force at the end of 1 December 2024.

(12) In this section:

relevant approved data means:

- (a) the manufacturer's fitment and use instructions for the equipment; and
- (b) any instructions in the rotorcraft's flight manual about hard points, and securing mechanisms, of the rotorcraft.

[15] Section 10.01, definition of *helicopter clearway*

omit

[16] Section 10.01, definition of *take-off distance available – rotorcraft*

omit

helicopter clearway, for

insert

additional area, in relation to

[17] Subsection 10.06(1)

omit

stage

insert

stage, or take-off and initial climb stage,

[18] Section 10.09, definition of *PC2WE flight*

omit

during the

insert

during the take-off stage,

[19] Paragraphs 10.11(1)(a) and (b)

substitute

- (a) take-off;
- (b) take-off and initial climb;
- (c) approach and landing, or baulked landing.

[20] Subsection 10.11(2)

omit

all the words from and including "paragraph" to and including "that stage of the flight"

insert

paragraphs (1)(a) and (b), the exposure time in relation to the take-off, and take-off and initial climb, stages of the flight must be measured from the point during the flight

[21] Subsection 10.11(3)

omit

(1)(b), the exposure time for

insert

(1)(c), the exposure time in relation to

[22] Subparagraph 10.18(2)(b)(ii)

omit

national aviation authority

insert

NAA

[23] Subsection 10.33(7), definition of *elevated aerodrome*

omit

erected on land

[24] Paragraph 11.02(4)(d)

omit

rotorcraft.

insert

rotorcraft; and

[25] After paragraph 11.02(4)(d)

insert

- (e) if the equipment is surveillance equipment — the equipment, whether functional or otherwise, must not at any time adversely affect the safety of other aircraft or interfere with the proper functioning of an air traffic service.

[26] Section 11.04

substitute

11.04 Serviceability of equipment

Any equipment required by this Chapter to be fitted to, or carried on, an aircraft for a flight must be operative unless:

- (a) another section of this Chapter provides otherwise; or

Note: A minimum equipment list (a *MEL*), approved under regulation 91.935 of CASR, may only permit equipment required to be fitted to, or carried on, an aircraft by this Chapter, to be unserviceable within the limits of the requirements stated in this Chapter. For example, section 11.21 provides for an allowable period of 72 hours in relation to flights of a rotorcraft with inoperative altitude alerting equipment. An MEL would not be approved if it contained a maximum period for altitude alerting equipment to be inoperative that was greater than the period specified by either a master minimum equipment list (MMEL) or the legislation.

- (b) the equipment:
 - (i) is inoperative because of a defect that has been approved as a permissible unserviceability for the aircraft for the flight; and
 - (ii) is fitted, or carried, in accordance with the permissible unserviceability.

[27] Subsection 11.08(1)

omit

all the words from and including “(a *relevant*” to and including “radiocommunications”

insert

, for a flight

[28] Subsection 11.08(1)

omit

91.675,

insert

91.675

[29] Subsection 11.08(2)

omit

relevant

[30] Paragraph 11.08(3)(b)

substitute

- (b) if a VHF radiocommunication system would not allow for continuous communication with ATS at all stages of the flight — one of the following:
- (i) an additional radiocommunication system capable of continuous two-way communications with ATS or the rotorcraft's operator;
 - (ii) an additional radiocommunication system capable of, after activation of the system by a crew member of the rotorcraft, sending an automatic notification to the rotorcraft's operator, or a person nominated by the operator, which:
 - (A) notifies the operator or person of an emergency situation during the flight; and
 - (B) includes information about the rotorcraft's general location.

Note: The notification may involve a signal from the radiocommunication system being relayed via multiple communication technologies, for example, satellite relays or mobile phone networks.

[31] Subsection 11.08(4)

substitute

- (4) If an additional radiocommunication system is fitted to the rotorcraft under paragraph (3)(b), the system must only be used for communications with ATS, the rotorcraft's operator or a person nominated by the operator, during the flight, when VHF communications with ATS are not available.

[32] Section 11.09, after heading

insert

Note: For an aircraft entering oceanic airspace with RNP 2, RNP 4, or RNP 10, navigation specification capability, see subsections 11.03(1B) and (1C) of the Part 91 Manual of Standards in relation to long-range navigation systems (LRNS) operability requirements. The term *oceanic airspace* is defined in subsection 11.01(2) of the Part 91 Manual of Standards.

[33] Section 11.10

substitute

11.10 Automatic pilot

A rotorcraft flight that is:

- (a) an IFR flight; or
- (b) a VFR flight at night, which is:
 - (i) operated by a single pilot; and

- (ii) conducted over an area where the rotorcraft's attitude cannot be maintained by use of visual external surface cues provided by lights on the ground, celestial illumination or lighting fitted to the rotorcraft;

must be fitted with an automatic pilot or automatic stabilisation system.

Note: Visual external surface cues can be established by unaided sight or with the use of an aided system, for example, NVIS or an enhanced vision system.

[34] Section 11.12, heading

omit

Cockpit and cabin

insert

Cockpit, and cabin,

[35] Subsection 11.12(3)

substitute

- (3) If natural light does not adequately illuminate the items of equipment and documents mentioned in paragraphs (2)(a) and (b), cockpit lighting equipment of a rotorcraft operating by day must illuminate the items of equipment and documents and be compatible with each item of equipment that may be used by a flight crew member.

[36] Subsection 11.15(1)

omit

, or in poor visibility,

[37] Section 11.23

substitute

11.23 Flight data recorder

One FDR must be fitted to a rotorcraft that has an MTOW of more than 5 700 kg and is:

- (a) turbine-powered; or
- (b) of a type first certificated in its country of manufacture on, or after, 1 July 1965.

[38] Paragraph 11.24(a)

substitute

- (a) a rotorcraft that has an MTOW of more than 5 700 kg and is:
 - (i) turbine-powered; or
 - (ii) of a type first certificated in its country of manufacture on, or after, 1 July 1965;

[39] Paragraph 11.37(2)(a)

substitute

- (a) is of a type that was first issued with a certificate of airworthiness, or an authorisation (however described) equivalent to a certificate of airworthiness issued by the NAA of a Contracting State, on, or after, 9 November 1998; and

[40] Subsection 11.38(4)

omit

megaphone or radiocommunications equipment

insert

or radiocommunications, equipment

[41] Section 11.48, heading

omit

amphibians

insert

certain rotorcraft

[42] Paragraph 11.48(1)(a)

substitute

(a) the rotorcraft is designed to take-off from, and land on, land or water; and

[43] Subsections 11.51(1) and (2)

substitute

(1) This section applies to a flight of a rotorcraft, other than a rotorcraft designed to take-off from and land on water, which is a passenger transport operation.

Note: An example of a rotorcraft designed to take-off from, and land on, water is a rotorcraft fitted with fixed floats.

(2) Subject to subsection (3), the rotorcraft must be fitted with emergency flotation equipment if one or more of the following applies to the flight:

(a) the flight:

(i) is to, or from, a helideck on a vessel or other offshore facility; and

(ii) will have an approach and landing or baulked landing stage, or a take-off and initial climb stage, over water;

(b) the rotorcraft will be flown further over water from land than the distance in which, with 1 engine inoperative, the rotorcraft could reach a suitable forced landing area, for the flight, on land.

Note: For example, if a flight of a rotorcraft is over solid ice that is of suitable density to permit a safe rejected take-off, or a suitable forced landing or an emergency landing, of the rotorcraft, the rotorcraft is not required to be fitted with emergency flotation equipment.

[44] Section 11.52, definition of EASA CS-ACNS

omit

of EASA

insert

of EASA, or any later version

[45] Section 11.52, definition of NIC

omit

2.2.3.2.7.2.6 of RTCA/DO-260A

insert

2.2.8.1.16 of RTCA/DO-260B

[46] Subsections 11.55 (1) and (2)

omit

ATC (wherever occurring)

insert

ATS

[47] Section 11.58, at the end

insert

Note: See also section 11.04 for additional requirements related to a flight with inoperative equipment. For a flight with an inoperative transponder, within controlled airspace or at a controlled aerodrome, Division 11.2 of the Part 91 Manual of Standards has requirements related to air traffic control clearances. Whether a clearance is issued, or when a clearance may be issued, could be affected by the flight not being conducted with an operative transponder.

[48] Section 12.08

substitute

12.08 Recurrent training and checking

- (1) The flight crew member must have successfully completed the operator's recurrent training and checking for the rotorcraft, in accordance with the requirements stated in subsections (3) and (4).
- (2) The operator's recurrent training and checking, for the rotorcraft, in relation to the use of life rafts or life jackets does not need to include in-water practical training.
- (3) The flight crew member must successfully undertake the operator's flight crew member general emergency check of competency, for the relevant type or class of rotorcraft, as follows:
 - (a) in relation to underwater escape or the use of life rafts — subject to subsection (5), at intervals of not more than 3 years after the previous check;
 - (b) otherwise — subject to subsection (5), at intervals of not more than 1 year after the previous check.
- (4) The flight crew member must successfully undertake the operator's flight crew member proficiency check, for the relevant type or class of rotorcraft, as follows:
 - (a) for a flight crew member only conducting a flight under the VFR by day — subject to subsections (5) and (6), initially 6 months after first commencing unsupervised line operations for the operator, and then at intervals of 1 year after the previous proficiency check;
 - (b) otherwise — subject to subsections (5) and (6), initially 6 months after first commencing unsupervised line operations for the operator, and then at intervals of 6 months after the previous proficiency check.
- (5) Any check of competency or proficiency mentioned in this section, required to be completed at intervals of 1 or 3 years, successfully completed within 90 days before, or after, its due date is taken to meet the requirements stated in this section as if it had been completed on the due date.
- (6) Any check of competency or proficiency mentioned in this section, required to be completed at intervals of 6 months, successfully completed within 30 days before, or after, its due date is taken to meet the requirements stated in this section as if it had been completed on the due date.

- (7) A flight crew member who fails to demonstrate competency or continuing competency, for the relevant type or class of rotorcraft, under this section must not conduct a line operation with the relevant type or class of rotorcraft unless the flight crew member has met the remedial training requirements stated in section 12.09.

Note: The operator of a rotorcraft for a flight commits an offence if the operator assigns a person to duty as a flight crew member for the flight 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: see regulation 133.375 of CASR.

[49] Chapter 12, Division 4, heading

omit

qualified

insert

approved

[50] Section 12.13, heading

omit

qualified

insert

approved

[51] Subsections 12.13(2), (4) and (5)

omit

qualified (wherever occurring)

insert

approved

[52] Subsection 12.13(6), definition of *available*

omit

a qualified

insert

an approved

[53] Subsection 12.13(6), definition of *qualified*

omit

[54] Section 14.08

substitute

14.08 Recurrent training and checking

- (1) The air crew member must have successfully completed the operator's recurrent training and checking for the rotorcraft, in accordance with the requirements stated in subsections (3) and (4).
- (2) The operator's recurrent training and checking, for the rotorcraft, in relation to the use of life rafts or life jackets does not need to include in-water practical training.

- (3) The air crew member must successfully undertake the operator's air crew member general emergency check of competency, for the relevant kind of rotorcraft, as follows:
 - (a) in relation to underwater escape or the use of life rafts — subject to subsection (5), at intervals of not more than 3 years after the previous check;
 - (b) otherwise — subject to subsection (5), at intervals of not more than 1 year after the previous check.
- (4) Subject to subsection (5), the air crew member must successfully undertake the operator's air crew member proficiency check, for the relevant kind of rotorcraft, initially 1 year after first commencing unsupervised line operations for the operator, and then at intervals of 1 year after the previous proficiency check.
- (5) Any check of competency or proficiency mentioned in this section, required to be completed at intervals of 1 or 3 years, successfully completed within 90 days before, or after, its due date is taken to meet the requirements stated in this section as if it had been completed on the due date.
- (6) An air crew member who fails to demonstrate competency or continuing competency, for the relevant kind of rotorcraft, under this section must not perform the duties of an air crew member in the relevant kind of rotorcraft unless the air crew member has met the remedial training requirements stated in section 13.09.

Note: The operator of a rotorcraft for a flight commits an offence if the operator assigns a person to duty as an air crew member for the flight and the person has not been assessed by the operator, in accordance with the operator's exposition, as competent to perform the duties assigned to the person for the flight: see regulation 133.460 of CASR.

[55] Paragraph 15.04(2)(d)

omit

all the words from and including "if" to and including "flight life"

insert

if life jackets and life rafts are required to be carried on the rotorcraft for the flight

[56] Section 15.08

substitute

15.08 Recurrent training and checking

- (1) The medical transport specialist must have successfully completed the operator's recurrent training and checking for the rotorcraft, in accordance with the requirements stated in subsections (3) and (4).
- (2) The operator's recurrent training and checking, for the rotorcraft, in relation to the use of life rafts or life jackets does not need to include in-water practical training.
- (3) The medical transport specialist must successfully undertake the operator's medical transport specialist general emergency check of competency, for the relevant kind of rotorcraft, as follows:
 - (a) in relation to underwater escape or the use of life rafts — subject to subsection (5), at intervals of not more than 3 years after the previous check;
 - (b) otherwise — subject to subsection (5), at intervals of not more than 1 year after the previous check.
- (4) Subject to subsection (5), the medical transport specialist must successfully undertake the operator's medical transport specialist proficiency check, for the relevant kind of rotorcraft, initially 1 year after first commencing unsupervised line

operations for the operator, and then at intervals of 1 year after the previous proficiency check.

- (5) Any check of competency or proficiency mentioned in this section, required to be completed at intervals of 1 or 3 years, successfully completed within 90 days before, or after, its due date is taken to meet the requirements stated in this section as if it had been completed on the due date.
- (6) A medical transport specialist who fails to demonstrate competency or continuing competency, for the relevant kind of rotorcraft, under this section must not perform the duties of a medical transport specialist in the relevant kind of rotorcraft unless the medical transport specialist has met the remedial training requirements stated in section 14.09.

Note: The operator of a rotorcraft for a flight commits an offence if the operator assigns a person to duty as a medical transport specialist for the flight and the person has not been assessed by the operator, in accordance with the operator's exposition, as competent to perform the duties assigned to the person for the flight: see regulation 133.475 of CASR.
