

Explanatory Statement

Civil Aviation Act 1988

Civil Aviation Order 100.5 Amendment Instrument 2015 (No. 1)

Purpose

The purpose of *Civil Aviation Order 100.5 Amendment Instrument 2015 (No. 1)* (the **CAO amendment**) is to amend Civil Aviation Order 100.5 (**CAO 100.5**) to incorporate the contents of certain airworthiness directives (**ADs**) as maintenance directions for aircraft to which Part 42 of the *Civil Aviation Safety Regulations 1998 (CASR 1998)* does not apply — the ADs will be amended thereafter to restrict their application to these Part 42 aircraft only. The amendments also provide for the maintenance of certain navigation systems previously dealt with by Civil Aviation Order 108.34 (**CAO 100.34**) which was repealed. They deem that certain headsets and night vision goggles are not aircraft components subject to maintenance under the regulations, provided they are otherwise subject to appropriate maintenance; to provide for the completion of certain maintenance release forms. Finally, the amendments provide for certain aspects of the maintenance of approved single engine turbine-powered aeroplanes (**ASETPA**) involved in passenger-carrying charter operations at night.

Legislation

Section 98 of the *Civil Aviation Act 1988* (the **Act**) empowers the Governor-General to make regulations for the Act and the safety of air navigation.

Under subregulation 2 (2) of the *Civil Aviation Regulations 1988 (CAR 1988)*, CASA may direct that any part, equipment or apparatus for an aircraft shall, for the purposes of CAR 1988 or CASR 1998, be deemed not to be an aircraft component.

Under paragraph 2A (2) (e) of CAR 1988, approved maintenance data (**AMD**) for an aircraft, an aircraft component or aircraft material, includes instructions approved by CASA under subregulation 2A (4) relating to how maintenance is to be carried out.

Under subregulations 5 (1) and (1A) of CAR 1988, if CASA is empowered under the regulations to issue a direction or give an approval, CASA may issue the direction or give the approval in Civil Aviation Orders (the **CAOs**).

Under subregulation 38 (1) of CAR 1988, CASA may issue directions relating to the maintenance of Australian aircraft.

Subdivision 2 in Division 2, and Division 3 in Part 4A of CAR 1988 set out relevant requirements for systems of maintenance and maintenance schedules.

Under subregulation 43 (2) of CAR 1988, CASA may give a direction specifying the information to be entered on a maintenance release before its issue.

Under subparagraphs 174B (2) (d) (i) and (ii) and 175A (1) (d) (i) and (ii), respectively, of CAR 1988, the pilot in command of ASETPA must not fly the aeroplane at night under, respectively, the V.F.R. or the I.F.R., unless (among other things) the flight is a charter operation involving the carriage of passengers for hire or reward, by an approved operator, and the operation is conducted in a turbine-powered aeroplane approved in writing by CASA for the operation.

Under regulation 214 of CAR 1988, an operator must ensure that provision is made for the proper and periodic instruction of all maintenance personnel, through a training program approved by CASA.

CAO 100.5 contains requirements, generally in the form of directions, relating to the maintenance of certain Australian aircraft in respect of which an Australian certificate of airworthiness is in force. These are smaller aircraft (the *relevant aircraft*). Larger passenger aircraft are dealt with under Part 42 of CASR 1998.

Background

In preparation for the application of Parts 42 and 145 of CASR 1998 to other than regular public transport operations, CASA reviewed general certification and maintenance matters covered by ADs, legislative and non-legislative instruments, and Airworthiness Advisory Circulars (*AACs*). (This was initially Project MS08/20, subsequently becoming Project MS 14/06 which was announced 5 February 2015).

Following the review, CASA identified a number of ADs which did not satisfy the requirements for the issuing of a binding AD under Part 39 of CASR 1998. The requirements in these ADs are included in the CAO amendment (that is, those that are binding). Other matters are included in advisory materials (as guidance or information or as acceptable means of compliance). In addition, a particular maintenance requirement, detailed in a previously cancelled AD (AD/GEN/48 Amdt 3), was determined as necessary to ensure the integrity of fire protection in aircraft toilet areas and, therefore, required appropriate reinstatement through the CAO amendment.

Thus, the CAO amendment transfers the contents of ADs relevant to small aircraft to CAO 100.5 for greater transparency and ease of access. The opportunity has also been taken to improve the drafting of the maintenance requirements in the interests of greater clarity. At the same time as the making of the CAO amendment, the transferred ADs will be amended to limit their application to aircraft covered by Part 42 of CASR 1998 only. Thus, the relevant maintenance of non-Part 42 aircraft will be covered by the amended CAO 100.5 only, not the ADs.

In addition, the airworthiness standard for ASETPA operations was previously published in AAC 1-116 and an associated instrument. (CASA instrument *Approved Single Engine Turbine Powered Aircraft (ASETPA)*, issue 3, dated 18 July 2013.) For ASETPA aircraft covered by CAR 1988, such matters are now embodied in CAO 100.5 under the CAO amendments, and the instrument is revoked.

Previously, the policy of recognising certain instructions as maintenance data (if current maintenance data is deficient) was contained within CASA instrument 515/11, *Approval of instructions as maintenance data*. This instrument has expired and its requirements are now re-introduced by the CAO amendment.

Also in the interests of greater transparency, clarity and ease of access, the CAO amendment replaces 2 non-legislative instruments, CASA 307/03 and CASA 347/07, which were intended to deem that certain headsets, and night vision goggles were not aircraft components. As components, they would have been subject to the maintenance rules in the regulations. These rules no longer apply to this equipment and are replaced by the requirement that other appropriate arrangements must be in place for their

ongoing maintenance, for example, manufacturers' requirements. The 2 non-legislative instruments are revoked

The CAO amendment also contains some maintenance-related approvals as described below.

CAO amendment

(Note that amendment number (*no.*) 1 contains new definitions and amendment no. 8 contains amendments to sequential subsections of the CAO.)

Headsets and night vision goggles (amendment no. 2)

For the purposes of certain regulations in CAR 1988 dealing with maintenance of aircraft components, an amendment provides that a headset is not an aircraft component if it is not mentioned in the AMD for the aircraft, and the headset is otherwise maintained in accordance with the manufacturer's instructions, or if there are no such instructions, is at least visually checked before flight.

Similarly, night vision goggles (*NVG*) used in a helicopter is not an aircraft component if it is maintained in accordance with the AMD by an organisation that both complies with regulation 30 of CAR 1988 or Part 145 of CASR 1998 (in effect, CASA-approved maintenance providers), and is endorsed by the manufacturer of the NVG as an appropriate organisation to carry out the maintenance.

However, a note explains that the items are still treated as aircraft components for defect reporting and related purposes.

These amendments replace instruments CASA 307/03 and 347/07.

Maintenance release forms (amendment nos. 3, 4 and 5)

An amendment provides for the introduction of a differently referenced maintenance release form, that is CASA Maintenance Release Form 918. However, existing stocks of the old form may continue to be used until they are exhausted.

If an authorised person uses the CASA Maintenance Release Form 918 (or other form as provided for by the amendments) as a form of maintenance release for an aeroplane engaged in an aerial application operation conducted at night although the aeroplane is not equipped and certificated for night V.F.R. flight, then certain modified information is to be entered on the form. This is to ensure that it is understood that the aeroplane is to be engaged in such an operation at night, although not so equipped and certificated.

ASETPA maintenance requirements (amendment nos. 6 and 16)

The CAO amendment has the effect of approving a single engine turbine-powered aeroplane for paying-passenger-carrying charter operations at night under the V.F.R. or the I.F.R. However, the approval applies only if: (a) the aeroplane complies with the new maintenance requirements which the CAO amendment sets out in Part 1 of Appendix 2 of the CAO; and (b) the aeroplane is approved in writing by CASA in the type acceptance certificate, the type certificate or the supplementary type certificate; and (c) the operator is approved by CASA. For such operator approvals, each of the requirements mentioned in Part 2 of new Appendix 2 will be assessed by CASA.

Previously, the relevant requirements for these ASETPA approvals were located in Airworthiness Advisory Circulars (*AACs*). *AACs* are not legally binding and to be legally binding the requirements must appear in a legislative instrument such as a CAO.

Part 1 of new Appendix 2 sets out the compliance requirements for an ASETPA aircraft approval, which relate to the aeroplane type, the engine type, the engine's control system, ignition system, fire warning system, monitoring system, and oil metal contamination detection system, the electrical power sources, the battery capacity, the electrical load shedding, the flight instrument systems, the autopilot system, the global navigation satellite system (GNSS), the radar altimeter, the weather radar and the passenger seating.

Part 2 of new Appendix 2 sets out the criteria to be used in assessing an ASETPA operator for approval. The requirements relate to the operator's training programs and maintenance system.

Additional maintenance requirements (amendment nos. 7, and 9 to 15)

Paragraph 11.2 of the CAO recasts its predecessor for greater clarity. It now provides that the registered operator of an Australian aircraft that is not covered by a maintenance program must comply with, and ensure compliance with, each additional maintenance requirement set out in Appendix 1 of the CAO as it applies to or for the aircraft.

Covered by a maintenance program, is a defined expression. It means that the relevant aircraft is covered by an approved system of maintenance (a ***SOM***) or a maintenance schedule under Part 4A of CAR 1988 that incorporates the additional maintenance requirements set out in the new Appendix 1 that the CAO amendment now incorporates into the CAO.

Before the CAO amendment, Appendix 1 of CAO 100.5 contained additional maintenance requirements only for pitot-static systems, pressure altimeters, airspeed indicators and fuel quantity gauges. The CAO amendment modifies these through amendments to Appendix 1, first by removing a redundant definition ("exempted aircraft") and making consequential amendments and, secondly, by adding new classes of additional maintenance consequent on the repeal of ADs covering the same matter.

The ADs whose essential requirements the CAO amendment now captures, and which are to be simultaneously modified for use under Part 42 of CASR 1998, were the following:

1. AD/GAS/1: Inspection, Test and Retirement of certain rechargeable compressed gas cylinders;
2. AD/REC/1: Maintenance of Cockpit Voice Recorders Systems;
3. AD/SUPP/8: Towing Release Systems;
4. AD/SUPP/16: Electrical Hoist Assemblies;
5. AD/GEN/37: Emergency Exits;
6. AD/AIRCON/9: Combustion Type Cabin Heaters;
7. AD/EMY/2: Life Jackets and Inflatable Flotation Devices;
8. AD/EMY/4: Life Rafts;
9. AD/Prop/2: Feathering Propellers – Functional Check;
10. AD/Rad/47: Periodic Testing of ATC Transponders;
11. AD/PFP/1: *Wooden Propellers – Inspection (to be repealed, not modified)*;

12. AD/GEN/48: Fire Protection in Toilet Areas (previously cancelled; some maintenance requirements for aircraft toilet fire protection are re-introduced by the CAO amendment).

Thus, the CAO amendment adds requirements for propeller systems, feathering propellers, cockpit voice recording systems, emergency exits, life rafts, life jackets and inflatable flotation devices, towing release systems, electrical hoist assembly, transponders, compressed gas cylinders, combustion type cabin heaters, and fire protection in toilet areas.

The CAO amendment also includes in Appendix 1, additional maintenance requirements for ADF systems (automatic direction finders), including VOR, localiser and glidescope, VOR in I.F.R. flight, and glidescope in I.F.R. These are not sourced from repealed ADs, but rather from the now repealed CAO 108.34. CAO 108.34 specified installation and performance requirements for airborne radio systems.

Following the repeal of regulation 21A of CAR 1988 in 2011, and the commencement of Subparts 21.K and 21.N of CASR 1998 (which deal with the approval of aircraft parts and appliances), CAO 108.34 was repealed because it was considered either dated or obsolete, not having been subject to periodic review in comparison with industry avionics equipment design standards.

Formerly, paragraphs (4) (a) to (d) in Section 5 of the Schedule 5 CASA Maintenance Schedule called up relevant maintenance requirements in CAO 108.34 for maintenance in relation to navigation systems in aircraft equipped for I.F.R. flight. It was considered that these particular requirements arguably remained applicable as being incorporated by reference into Schedule 5, notwithstanding the repeal of CAO 108.34, although this position was not beyond all doubt.

However, the position has now been placed beyond all doubt. First, the *Civil Aviation Legislation Amendment (Airworthiness and Other Matters—2015 Measures No. 1) Regulation 2015* amended Schedule 5 of CAR 1988 to omit the previous mention of maintenance within the limits specified in CAO 108.34 and direct the required maintenance to be carried out in accordance with the approved maintenance data for the system.

Secondly, the CAO amendment incorporates relevant navigation system maintenance data for automatic direction finders, including VOR, localiser and glidescope, VOR in I.F.R. flight, and glidescope in I.F.R., having abstracted these from CAO 108.34 for continuing use.

Thirdly, and more generally, the CAO amendments point to alternative sources of approved maintenance data if subsection 14 is relevant, that is, when recourse must be had to the maintenance data approved under paragraph 14.1 when there is no other source of maintenance data (see “Approval of Maintenance Data”, below.)

Approved SOMs and maintenance schedules (amendment no. 8)

The additional maintenance requirements just mentioned, as set out in Appendix 1 of the CAO, are “additional” requirements. Therefore, they must be carried out *in addition to* the requirements of the approved SOM or maintenance schedule that is used for an aircraft by the holder of its certificate of registration. Thus, if the holder uses an approved SOM, a manufacturer’s maintenance schedule, or the CASA maintenance schedule, and this does not include the maintenance required by Appendix 1, then the

maintenance required by Appendix 1 must be carried out *in addition to* the maintenance in the approved SOM or the maintenance schedule.

Approval of maintenance data (also contained within amendment no. 8)

The opportunity has been taken in the CAO amendment to create an additional, though conditional, source of approved maintenance data for regulation 2A of CAR 1988. Thus, instructions in an advisory document published by the European Aviation Safety Agency (EASA) or the National Airworthiness Authority of a listed recognised country, relating to how maintenance on an aircraft, an aircraft component or aircraft material is to be carried out, are approved.

The approval is subject to the condition that the instructions may only be used if the other categories of maintenance data mentioned elsewhere in regulation 2A do not provide sufficient detail on how the maintenance is to be carried out; and the instructions are otherwise appropriate and applicable and not inconsistent with the manufacturer's data or other applicable AMD mentioned in regulation 2A of CAR 1988.

A Note explains that the approval under this amendment of certain instructions in a relevant document as maintenance data under paragraph 2A (2) (e) of CAR 1988 does not constitute approval of a modification or repair for the purposes of regulation 42U of CAR 1988. The approval under this paragraph only provides for the instructions in the relevant documents to be used to supplement the information in an approved modification or repair in relation to how that modification or repair may be carried out.

This amendment is intended to have essentially the same effect as CASA instrument 515/11 which has time-expired.

Legislative Instruments Act 2003 (LIA 2003)

Under subsections 98 (5) and 98 (5AAA) of the Act, where the regulations provide for certain instruments to be issued in the form of CAOs, such CAOs are legislative instruments. As noted above, under regulation 5 of CAR 1988, CASA may issue directions and approvals in CAOs. The CAO amendment is, therefore, a legislative instrument and it is subject to registration, and tabling and disallowance in the Parliament, under sections 24, and 38 and 42, of the LIA 2003.

Gazettal

Under subregulation 38 (2) of CAR 1988, a maintenance direction is not binding on a person unless it has been served on the person. Under subregulation 5 (3) of CAR 1988, when a direction to a person is contained in a CAO, it is taken to have been served on the person on the date on which "the making of the Order" was notified in the *Gazette*.

Under subsection 56 (1) of the LIA 2003, if certain enabling legislation requires *the text of a legislative instrument, or particulars of its making*, to be published in the *Gazette*, such requirements are taken to be satisfied when the instrument is registered.

This facilitative provision for registration to take the place of gazettal does not appear to cover the specific case of the service requirements under subregulations 38 (2) and 5 (3) of CAR 1988. The matter is at least doubtful. Therefore, to avoid doubt, the CAO amendment was also gazetted on the day on which it commenced, that is, 22 December 2015.

Consultation

Consultation under section 17 of the LIA 2003 was undertaken as follows.

An earlier version of the CAO amendment instrument was placed on the CASA website for public and industry consultation over the period 14-29 April 2015. In response, CASA received requests for explanations and clarifications of certain matters in relation to ASETPA requirements and record keeping. Information and clarification was given directly to those requesting it. CASA was also asked to include approved data in relation to ADF (automatic direction finding) systems and this is included in the CAO amendment.

Statement of Compatibility with Human Rights

The Statement in Appendix 1 is prepared in accordance with Part 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011*. The instrument does not engage any of the applicable rights or freedoms, and is compatible with human rights, as it does not raise any human rights issues.

Office of Best Practice Regulation (OBPR)

A Regulatory Impact Statement (*RIS*) is not required because the CAO amendment is covered by an OBPR RIS exemption (OBPR id: 11547).

Making and commencement

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

The CAO amendment commences on 22 December 2015.

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Statement of Compatibility with Human Rights

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

Civil Aviation Regulations 1988

Civil Aviation Order 100.5 Amendment Instrument 2015 (No. 1)

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 legislative instrument

The purpose of *Civil Aviation Order 100.5 Amendment Instrument 2015 (No. 1)* (the **CAO amendment**) is to amend Civil Aviation Order 100.5: to incorporate the contents of certain airworthiness directives as maintenance directions; to provide for the maintenance of certain navigation systems; to deem that certain headsets and night vision goggles are not aircraft components, provided they are subject to appropriate maintenance; to provide for the completion of certain maintenance release forms; and to provide for certain aspects of the maintenance of approved single engine turbine-powered aeroplanes involved in passenger-carrying charter operations at night.

Human rights implications

The CAO amendment 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*. The instrument does not engage any of the applicable rights or freedoms.

Conclusion

This legislative instrument is compatible with human rights as it does not raise any human rights issues.

Civil Aviation Safety Authority