# Proposal to amend the aeroplane TAWS rules – (CD 2311OS)

# Overview

We want your feedback on a proposed change to the rules on the fitment of Terrain Awareness and Warning Systems (TAWS) in small turbine-engine aeroplanes.

The consultation relates to Part 121 and 135 turbine-engine aeroplanes with a maximum take-off weight of 5700kg or less and that either:

* have a maximum operational passenger seat configuration between 10-13 seats

or

* carry 10 or more persons.

Under the new Part 121 and Part 135 of the *Civil Aviation Safety Regulations 1998 (CASR)*, the TAWS requirement for certain aeroplanes was raised from a TAWS B+ system to TAWS A.

Feedback from the aviation community advised:

* TAWS B+ with a detailed visual terrain display would only have small (if any) safety differences compared to TAWS A for aeroplanes with a maximum take-off weight of 5700kg or less
* the projected cost of upgrading from the old TAWS B+ to TAWS A has increased dramatically since the new Part 121 and 135 rules were made in 2018.

In response to the feedback, we set up a working group to discuss the safety differential between different TAWS standards in the context of these aeroplanes and the contemporary costs associated with TAWS A fitment.

This resulted in a recommendation that the TAWS fitment policy for certain aeroplanes be changed from TAWS A to a new version of TAWS B+.

The proposed amendment would permit these aeroplanes to be fitted with either a TAWS A ***or*** a TAWS B equipped with a visual terrain display that provides the terrain-related information outlined in section 3.5 of Appendix 1 of Technical Standard Order (TSO)-C151c for a terrain display.

We are proposing to call it TAWS-Class B+ as distinct from the previous TAWS-B+ system.

The details of the proposed changes to the legislation are provided in the attached Summary of Proposed Change.

Your feedback on these changes will help us check that the amended policy achieves an acceptable level of aviation safety for crew and passengers.

Please note that we are not proposing changes to the fitment requirement deadline of 2 December 2023.

**Previous consultations**

Prior to the release of this Summary of Proposed Change, a working group provided advice to CASA. Earlier consultations occurred in 2018 and between 2009 and 2012.

# Why your views matter

Your feedback will help us make sure the proposed requirements are suitable, the final legislation is clear and will work as intended.

Please submit your comments using the survey link on this page.

If you are unable to provide feedback via the survey link, please email regulatoryconsultation@casa.gov.au for advice.

**Documents for review**

All documents related to this consultation are attached in the ‘Related’ section at the bottom of the overview page. They are:

* Summary of proposed change on CD 2311OS, which provides background on the proposed standards
* MS Word copy of online consultation for ease of distribution and feedback within your organisation.

**What happens next**

At the end of the response period, we will:

* review all comments received
* make responses publicly available on the consultation hub (unless you request your submission remain confidential)
* publish a Summary of Consultation which summarises the feedback received and outlines any intended changes and next steps.

All comments received on the proposal will be considered. Relevant feedback that improves upon the proposal will be incorporated into the final legislation changes.

# Give Us Your Views

[Appears on the overview page at the bottom]

Online Survey

[This link is on the front page of the survey and takes you to the survey questions]

**Related**

[This section is at the bottom of the front page and contains all the links to other sites and documents related to this consultation]

**Related Links**

List of links attached to the consultation

[Part 135 (Australian Air Transport Operations—Smaller Aeroplanes) Manual of Standards 2020 (legislation.gov.au)](https://www.legislation.gov.au/Details/F2021C01303%22%20%5Ct%20%22_blank)

[CASA EX85/21 – Part 135, Subpart 121.Z and Part 91 of CASR – Supplementary Exemptions and Directions Instrument 2021 (legislation.gov.au)](https://www.legislation.gov.au/Details/F2022C01219%22%20%5Ct%20%22_blank)

[CASA EX97/22 – Part 121 – Single Pilot Aeroplane (MOPSC 10-13) Operations – Exemptions Repeal, Remake, and Direction Instrument 2022 (legislation.gov.au)](https://www.legislation.gov.au/Details/F2023C00475%22%20%5Ct%20%22_blank)

[Technical Standard Order (TSO)-C151c](https://drs.faa.gov/browse/excelExternalWindow/D6AD0EEE7A2261CF86257A300053602C.0001?modalOpened=true" \t "_blank)

**Related Documents**

List of documents attached to the consultation

* Summary of proposed change on CD 2311OS
* MS Word copy of online consultation Proposal to amend the aeroplane TWAS rules - (CD 2311OS)

# Audience & Interest groups

**Audience**

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| * Air operator
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| * Pilots
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| * Aircraft owner/operator
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| * Passengers travelling on small commercial turbine aeroplanes
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**Interest**

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| * Air travel
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| * Operational standards
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| * Airworthiness/maintenance (CAR 30 and CASR Part 145 maintenance orgs)
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| * Equipment standards
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# Page 1. About this consultation

This consultation asks for your feedback on the proposed amendments to the aeroplane TAWS rules CD 2311OS.

The survey has been designed to give you the option to provide feedback on the survey in its entirety or to provide feedback on the policy topics applicable to you.

We will ask you for:

* **personal information**, such as your name, any organisation you represent, and your email address
* **your consent** to publish your submission
* **your responses** to the proposed changes in the regulations
* **demographic information** to help us understand your interest in the proposed change
* **any comments** you may want to provide

Our [website](https://www.casa.gov.au/rules/changing-rules/consultation-industry-and-public)<https://www.casa.gov.au/rules/changing-rules/consultation-industry-and-public>, contains more information on making a submission and what we do with your feedback.

# Page 2. Personal information

## First name

*(Required)*

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## Last name

*(Required)*

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## Email address

*If you enter your email address, you will automatically receive an acknowledgement email when you submit your response.*

Email

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## Do your views officially represent those of an organisation?

## *(Required)*

*Please select only one item*

[ ]  Yes, I am authorised to submit feedback on behalf of an organisation

[ ]  No, these are my personal views.

If yes, please specify the name of your organisation.

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Which of the following best describes the group you represent?

*Please select one of the options below.*

[ ]  Aircraft owner/operator

[ ]  Pilot

[ ]  Passengers travelling on small commercial turbine aeroplanes

[ ]  Other

Please specify ‘Other’ if selected.

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# Page 3. Consent to publish your submission

To provide transparency and promote debate, we intend to publish all responses to this consultation. This may include both detailed responses/submissions in full and aggregated data drawn from the responses received.

Where you consent to publication, we will include:

* **your last name** if the submission is made by you as an individual
* **the name of the organisation** on whose behalf the submission has been made
* **your responses** and comments

We **will not** include any other personal or demographic information in a published response

Do you give permission for your response to be published?

*(Required)*

*Please select only one item*

[ ]  Yes - I give permission for my response/submission to be published.

[ ]  No - I would like my response/submission to remain confidential but understand that de-identified aggregate data may be published.

[ ]  I am a CASA officer.

Information about how we consult and how to make a confidential submission is available on our [website](https://www.casa.gov.au/rules/changing-rules/consultation-industry-and-public)<https://www.casa.gov.au/rules/changing-rules/consultation-industry-and-public>.

# Page 4. Aeroplane TAWS rules

**Policy proposal**

This policy proposal applies to turbine-engine aeroplanes, with a maximum take-off weight of 5700kg or less, conducting Australian air transport operations that are:

* passenger transport operations or medical transport operations

and

* conducting an IFR flight or VFR flight at night, but also VFR flights by day if operating under Subpart 121.Z and not using EX97/22

and

* carrying 10 or more passengers or have a maximum operational passenger seat configuration (MOPSC) of at least 10 seats, but not more than 13 seats.

It is proposed the TAWS fitment requirements for these aeroplanes be changed from only allowing TAWS-Class A to allow either TAWS-Class A or TAWS-Class B+.

Please refer to the Summary of Proposed Change document that outlines the differences between the old CAO 20.18 TAWS-B+ system standard and the new proposed TAWS-Class B+.

A TAWS-Class B+ is a TAWS B that is equipped with a visual terrain display that provides the terrain-related information outlined in section 3.5 of Appendix 1 of TSO-C151c for a terrain display.

**Policy aim**

To enable an appropriate level of assurance that these Australian air transport operations will be conducted at an acceptable level of aviation safety.

Fact bank - The proposed amendments to the rule set – principal changes

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| **CASA EX85/21 – Part 135, Subpart 121.Z and Part 91 of CASR – Supplementary Exemptions and Directions Instrument 2021**Amend Section 23 of CASA EX85/21 to permit fitment of either a TAWS A or a TAWS B that is equipped with a visual terrain display that provides the terrain-related information outlined in section 3.5 of Appendix 1 of TSO-C151c for a terrain display (proposed to be called TAWS-Class B+) by 2 December 2023.**CASA EX97/22 – Part 121 – Single Pilot Aeroplane (MOPSC 10-13) Operations – Exemptions Repeal, Remake, and Direction Instrument 2022**It is proposed to amend Item 4 of Schedule 1 of CASA EX97/22 to permit fitment of either a TAWS A or a TAWS B that is equipped with a visual terrain display that provides the terrain-related information outlined in section 3.5 of Appendix 1 of TSO-C151c for a terrain display (proposed to be called TAWS-Class B+).Note: Paragraphs 8 (3) and (4) of CASA EX87/21 allow certain transitional operators to defer this requirement until 2 December 2023. **Part 135 (Australian Air Transport Operations—Smaller Aeroplanes) Manual of Standards 2020**It is proposed to amend Section 11.25 of the Part 135 MOS to permit fitment of a TAWS A or a TAWS B that is equipped with a visual terrain display that provides the terrain-related information outlined in section 3.5 of Appendix 1 of TSO-C151c for a terrain display (proposed to be called TAWS-Class B+). |

Fact bank – Section 3.5 of Appendix 1 of TSO-C151c for a terrain display

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| **Class A Equipment Requirements for a Terrain Display**Class A equipment must be designed to interface with a color terrain display, and may be designed to also interface to a monochromatic terrain display. Class A equipment for TAWS must also be capable of providing the following terrain-related information to a display system:1. The terrain must be depicted relative to the airplane’s position such that the pilot can estimate the relative bearing to the terrain of interest.
2. The terrain must be depicted relative to the airplane’s position such that the pilot may estimate the distance to the terrain of interest.
3. The terrain depicted must be oriented to either the heading or the track of the airplane. In addition, a north-up orientation may be added as a selectable format.
4. Variations in terrain elevation must be depicted relative to the airplane’s current or projected elevation (above and below) and be visually distinct. Terrain that is more than 2000 feet below the airplane’s elevation can be excluded.
5. Terrain that generates alerts must be displayed in a manner to distinguish it from nonhazardous terrain, consistent with the caution and warning alert level.
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**Question – Do the proposed amendments to the TAWS rules achieve the aim?**

[ ]  Yes

[ ]  Yes, with changes (please provide suggested changes below)

[ ]  No – please explain why and provide alternative suggestions below

Please provide any comments you may have on the proposal.

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# General comments

Do you have any additional comments about the proposed policy?

Please include in these comments any **impact** this change may have on you or your operation.

Comments

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