

Safety Information Bulletin

Operations – Aerodromes

SIB No.: 2022-11

Issued: 19 December 2022

Subject: SAE Type II, III and IV Aircraft Anti-Icing Fluid Application

Ref. Publications:

- Transport Canada Civil Aviation Safety Alert (CASA) [2022-06](#), dated 08 December 2022.
- EASA Safety Information Bulletin (SIB) [2017-11](#) Global Aircraft De-icing Standards, dated 14 July 2017.
- SAE Aerospace Material Specifications (AMS) 1428 “Fluid, Aircraft De-icing/Anti-Icing, Non-Newtonian (Pseudoplastic)”, SAE Types II, III, and IV, latest published version.

Applicability:

Air operators and contracted ground de-icing service providers.

Description:

Transport Canada Civil Aviation (TCCA) recently issued CASA 2022-06, referenced above, to provide guidance on SAE type II, III and IV aircraft anti-icing fluid application.

Thickened fluids Type II, III and IV compliant with SAE AMS 1428 are typically used to provide aircraft with anti-icing protection under precipitation conditions on ground. To assure that those fluids provide the holdover time-protection published in the documents recognised by EASA (refer to EASA SIB 2017-11), it is important that they are applied in accordance with the instructions of SAE AS6285, being the correct amount indicated by the fluid just beginning to run off the leading and trailing edges in the case of a wing. Note that the correct amount of fluid is influenced by additional factors, such as the specific type of fluid and the prevailing environmental conditions. Consequently, the fluid quantities quoted in table B.2.4. of SAE AS6286B may not be sufficient to achieve the correct fluid amount, and they should not be used for operational purposes.

This SIB is published to ensure that all owners and operators of aircraft registered in EASA Member States, and their ground de-icing service providers are aware of the TCCA’s recommendations, endorsed by EASA.

At this time, the safety concern described in this SIB is not considered to be an unsafe condition that would warrant either a Safety Directive (SD) action under Regulation (EU) [965/2012](#), Annex II, ARO.GEN.135(c), or an SD action under Regulation (EU) [139/2014](#), Annex II, ADR.AR.A.040.

Recommendation(s):

EASA recommends that all staff from air operators and ground de-icing service providers involved in ground icing operations are aware of the adequate application of anti-icing fluids to ensure the expected holdover time is achieved, and in particular:

This is information only. Recommendations are not mandatory.



- Table B.2.4 “Amount of Fluid for Anti-Icing with Thickened Fluids”, found in Appendix B of AS6286 should not be used.
- Anti-icing fluids must be applied so that it can completely cover the surfaces and form a uniform coating. Enough anti-icing has been applied when it can be visually confirmed that the anti-icing fluid is just beginning to run off the leading and trailing edges of the surfaces.
- The anti-icing fluid application process should be continuous and carried out as near to the departure time as possible to maximize the available holdover time.
- While anti-icing fluid thickness will vary in time over the profile of the wing surface, it should be distributed uniformly. To control the uniformity of application, all horizontal aircraft surfaces should be visually checked during the application of the anti-icing fluid.
- Operations Manuals or other relevant documentation should be reviewed and revised where applicable to reflect the need to ensure that anti-icing fluid is applied accordingly.
- Training on proper fluid application should align with the application methodology of SAE AS6285.

Contact(s):

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