



**EASA/FAA Significant Standard Differences (SSD)  
 Technical Implementation Procedures (TIP)  
 - CS-34 Aircraft Engine Emissions and Fuel Venting -**

TIP Rev	SSD Issue & Date	Standard Amendment Pairs	
Rev 6, Amendment 2	Issue 03 16 December 2021	<b>CS-34</b>	Amendment 4
		<b>14 CFR Part 34</b>	Amendment 6

SSD #	Title	Applicable Regulations and Specifications	Remarks
1	Aircraft Engine Emissions and Fuel Venting – Particulate matter emissions	<p><b>1.</b> Regulation on common rules in the field of civil aviation (EU) 2018/1139 CHAPTER III – SECTION I – Article 9 – Paragraph 2.</p> <p><b>2.</b> ANNEX I to Airworthiness and Environmental Certification Regulation (Part 21) Paragraph 21.B.85(c)3.</p> <p><b>3.</b> CS 34.2</p>	<p>FAA has no equivalent standard for particulate matter emissions in Part 34.</p> <p><b>1. REGULATION (EU) 2018/1139, as amended by (EU) 2021/1087</b>  <u>CHAPTER III SUBSTANTIVE REQUIREMENTS – SECTION I Airworthiness and environmental protection – Article 9 Essential requirements</u></p> <p>2. As regards noise and emissions, those aircraft and their engines, propellers, parts and non-installed equipment shall comply with the environmental protection requirements contained in Amendment 13 of Volume I, in Amendment 10 of Volume II, and in Amendment 1 to Volume III, all as applicable on 1 January 2021, of Annex 16 to the Chicago Convention.</p> <p><b>2. Part 21.B.85</b></p> <p>(a) The Agency shall designate and notify to the applicant the applicable environmental protection requirements for a type-certificate or restricted type-certificate for an aircraft or for a type certificate for an engine. The designation and notification shall contain:</p> <p>(...)</p> <p>3. the applicable smoke, gaseous and particulate matter engine emissions requirements established in:</p> <p>(i) Annex 16 to the Chicago Convention, Volume II, Part III, Chapter 1 and:</p> <p>(...)</p> <p>(C) for particulate matter emissions of turbojet and turbofan engines intended for propulsion only at subsonic speeds, in Chapter 4;</p> <p><b>3. CS 34.2</b></p> <p>The aircraft must be designed to comply with the applicable emissions requirements as specified in point 21.A.21 of Annex I (Part 21) to Commission Regulation (EU) No 748/2012.</p> <p><i>See also Appendix for AMC 34.2 and GM 34.2.</i></p> <p><b>[SEI]</b></p>

Notes:

**[SEI]** : This SSD is identified as a Safety Emphasis Item (SEI).

**Appendix**

**Guidance for EASA/FAA SSD**

*CS-34 Amendment 4 vs. 14 CFR Part 34 Amendment 6*

*And*

*GM1 21.B.85(a) Applicable environmental protection requirements*

## SSD #1 Aircraft Engine Emissions and Fuel Venting – Particulate matter emissions

### GM1 34.2 Aircraft engine emissions

Point 21.A.21 of Annex I (Part 21) to Commission Regulation (EU) No 748/2012 does not list the applicable requirements, but refers to point 21.A.20 of Annex I (Part 21) to Commission Regulation (EU) No 748/2012 that requests the applicant to demonstrate compliance with the environmental protection requirements designated by the Agency in accordance with point 21.B.85 of Annex I (Part 21) to Commission Regulation (EU) No 748/2012. Therefore, the environmental protection requirements which need to be complied with according to point 21.A.21 of Annex I (Part 21) to Commission Regulation (EU) No 748/2012 are in point 21.B.85 of Annex I (Part 21) to Commission Regulation (EU) No 748/2012.

### GM1 21.B.85(a) Applicable environmental protection requirements

#### 1. APPLICABLE ENVIRONMENTAL PROTECTION REQUIREMENTS

The applicable environmental protection requirements are the Standards and Recommended Practices in Volume I, Volume II and Volume III of Annex 16 to the Chicago Convention for aircraft and engines for which the first subparagraph of Article 9(2) of Regulation (EU) 2018/1139 applies. The applicable levels of amendment to Annex 16 to the Chicago Convention are those adopted in the first subparagraph of Article 9(2) of Regulation (EU) 2018/1139.

Article 9(2) of Regulation (EU) 2018/1139 has been amended by Commission Delegated Regulation (EU) 2021/1087 of 7 April 2021

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4. ENGINE EMISSIONS 4.1. Guidance material related to engine emissions requirements Guidance material for the application of the certification procedures for aircraft engine emissions is presented in:

- (a) Attachment E to Appendix 3 to Volume II of Annex 16 to the Chicago Convention for the calculation of the emissions parameters; and
- (b) ICAO Doc 9501 'Environmental Technical Manual' Volume II 'Procedures for the Emissions Certification of Aircraft Engines'.