

PREAMBLE

ED Decision 2019/014/R

CS-34 Amendment 3

The following is a list of paragraphs affected by this Amendment:

CS 34.1	Amended
CS 34.2	Amended
AMC 34.2(c) and (e)	Amended
AMC 34.2(g)	Added
GM 34.2	Amended

ED Decision 2016/001/R

CS-34 Amendment 2

The following is a list of paragraphs affected by this Amendment:

CS 34.1	Amended
CS 34.2	Amended
AMC 34.2(a) to (f)	Amended
GM 34.2(a) and (b)	Amended
GM 34.2(f) to (i)	Amended
GM 34.2(j) to (p)	Added
GM 34.2 final section	Amended

ED Decision 2013/002/R

CS-34 Amendment 1

The following is a list of paragraphs affected by this Amendment:

Preamble	Preamble page added
GM 34.2(c) to (i)	Added
GM 34.2 final section	Added

CS & AMC/GM FOR AIRCRAFT ENGINE EMISSIONS AND FUEL VENTING

CS 34.1 Fuel venting

The aircraft must be designed to comply with the applicable fuel venting requirements defined under point ~~21.A.18(b)(1)~~ 21.B.85(b).

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[Amdt 34/3]

CS 34.2 Aircraft engine emissions

(See [AMC 34.2](#) and [GM 34.2](#))

The aircraft engine must be designed to comply with the applicable emission requirements defined under point ~~21.A.18(b)(2) and (3)~~ 21.B.85(c).

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AMC 34.2 Aircraft engine emissions

The acceptable means of compliance for aircraft engine emissions are presented in:

- (a) for measurement of reference pressure ratio, Appendix 1 to ICAO Annex 16, Volume II;
- (b) for smoke emission evaluation, Appendix 2 to ICAO Annex 16, Volume II;
- (c) for instrumentation and measurement techniques for gaseous emissions, Appendix 3, ~~except for its attachments,~~ to ICAO Annex 16, Volume II;
- (d) for specification for fuel to be used in aircraft turbine engine emission testing, Appendix 4 to ICAO Annex 16, Volume II;
- (e) for instrumentation and measurement techniques for gaseous emissions from afterburning gas turbine engines, Appendix 5, ~~except for its attachments,~~ to ICAO Annex 16, Volume II; ~~and~~
- (f) for compliance procedure for gaseous emissions and smoke, Appendix 6 to ICAO Annex 16, Volume II; **and**
- (g) **for compliance procedure for particulate matter emissions, Appendix 7 to ICAO Annex 16, Volume II.**

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GM 34.2 Aircraft engine emissions

Guidance material for the application of the certification specifications for aircraft engine emissions is presented in:

- (a) ~~for instrumentation and measurement techniques for gaseous emissions, the attachments to Appendix 3 to ICAO Annex 16, Volume II;~~
- (b) ~~for instrumentation and measurement techniques for gaseous emissions from afterburning gas turbine engines, the attachments to Appendix 5 to ICAO Annex 16, Volume II;~~
- (c) ~~for definitions and symbols, Part I of the ICAO Environmental Technical Manual, Volume II;~~
- (d) ~~for emissions certification of turbojet and turbofan engines intended for propulsion only at subsonic speeds, Part III, Chapter 2 of the ICAO Environmental Technical Manual, Volume II; except for the exemption process from the NO_x emissions production cut-off requirements;~~
- (e) ~~for turbojet and turbofan engines intended for propulsion at supersonic speeds, Part III, Chapter 3 of the ICAO Environmental Technical Manual, Volume II;~~
- (f) ~~for smoke emission evaluation, Appendix 2 to the ICAO Environmental Technical Manual, Volume II;~~
- (g) ~~for instrumentation and measurement techniques for gaseous emissions, Appendix 3 to the ICAO Environmental Technical Manual, Volume II;~~
- (h) ~~for specification for HC analyser, Attachment A to Appendix 3 to the ICAO Environmental Technical Manual, Volume II;~~
- (i) ~~for specification for fuel to be used in aircraft turbine engine emission testing, Appendix 4 to the ICAO Environmental Technical Manual, Volume II;~~
- (j) ~~for measurement of reference pressure ratio, Appendix 1 to the ICAO Environmental Technical Manual, Volume II;~~
- (k) ~~for specification for CO and CO₂ analysers, Attachment B to Appendix 3 to the ICAO Environmental Technical Manual, Volume II;~~
- (l) ~~for specification for NO_x analyser, Attachment C to Appendix 3 to the ICAO Environmental Technical Manual, Volume II;~~
- (m) ~~for calibration and test gases, Attachment D to Appendix 3 to the ICAO Environmental Technical Manual, Volume II;~~
- (n) ~~for calculation of the emissions' parameters, Attachment E to Appendix 3 to the ICAO Environmental Technical Manual, Volume II;~~
- (o) ~~for specification for additional data, Attachment F to Appendix 3 to the ICAO Environmental Technical Manual, Volume II; and~~
- (p) ~~for compliance procedure for gaseous emissions and smoke, Appendix 6 to the ICAO Environmental Technical Manual, Volume II.~~

References throughout these certification specifications to the ICAO Environmental Technical Manual, Volume II, refer to ICAO Doc 9501 — Environmental Technical Manual, Volume II — Procedures for the Emissions Certification of Aircraft Engines, Second Edition 2014. ICAO Doc 9501 'Environmental Technical Manual', Volume II 'Procedures for the Emissions Certification of Aircraft Engines', Third Edition, 2018, except for the exemption process from the NO_x emissions production cut-off requirements.

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[Amdt- 34/2]

[Amdt 34/3]