Annex to ED Decision 2019/014/R



# **Certification Specifications**,

## **Acceptable Means of Compliance**

## and

## **Guidance Material**

# for

## **Aircraft Engine Emissions and Fuel Venting**

# (CS-34)

Amendment 3

29 July 2019<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> For the date of entry into force of this Amendment, kindly refer to Decision 2019/014/R in the Official Publication of EASA.



### TABLE OF CONTENTS

Table of contents	
Preamble	
CS & AMC/GM for Aircraft Engine Emissions and Fuel Venting	4
CS 34.1 Fuel venting	4
CS 34.2 Aircraft engine emissions	4
AMC 34.2 Aircraft engine emissions	4
GM 34.2 Aircraft engine emissions	5



### 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(a) to (p)	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-34 — Amendment 3

### 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 21.B.85(b).

[Amdt 34/2] [Amdt 34/3]

### CS 34.2 Aircraft engine emissions

The aircraft engine must be designed to comply with the applicable emission requirements defined under 21.B.85(c).

[Amdt 34/2] [Amdt 34/3]

### 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 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;
- for instrumentation and measurement techniques for gaseous emissions from afterburning gas (e) turbine engines, Appendix 5 to ICAO Annex 16, Volume II;
- (f) for compliance procedure for gaseous emissions and smoke, Appendix 6 to ICAO Annex 16, Volume II; and
- for compliance procedure for particulate matter emissions, Appendix 7 to ICAO Annex 16, (g) Volume II.

[Amdt 34/2] [Amdt 34/3]

ED Decision 2019/014/R

ED Decision 2019/014/R

ED Decision 2019/014/R



### GM 34.2 Aircraft engine emissions

ED Decision 2019/014/R

Guidance material for the application of the certification specifications for aircraft engine emissions is presented in 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 NOx emissions production cut-off requirements.

[Amdt 34/1] [Amdt 34/2] [Amdt 34/3]