

Noise Certification Workshop

Session 3: Aircraft Noise Re-certification

Re-certification provisions (standards and guidelines)

Jan Böttcher Luftfahrt-Bundesamt, Braunschweig, Germany

Re-certification - General

- → Definition of Re-certification:
 - "Certification of an aircraft, with or without a revision to its certification noise levels, to a Standard different to that to which it was originally certificated."
- → The re-certification of helicopters and small propellerdriven aeroplanes is not considered.
- → Re-certification shall be granted on the basis that the evidence used to determine compliance is as satisfactory as the evidence expected of a new type design.
- → Existing arrangements between certificating authorities should be respected. It is expected that bilateral arrangements will facilitate the mutual recognition between authorities of approvals granted.

Re-certification to Chapter 4

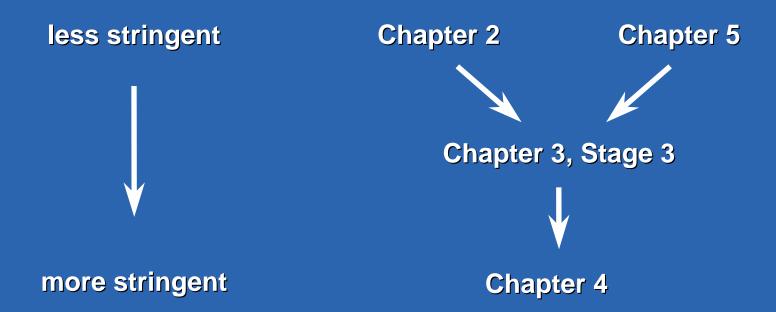
Chapter 4, 4.1 c):

"The Standards of this chapter shall be applicable to all subsonic jet aeroplanes and all propeller-driven aeroplanes certificated originally as satisfying Annex 16, Volume I, Chapter 3 or Chapter 5 for which re-certification to Chapter 4 is requested."

ICAO and FAA Noise Certification Regulation (1) - Relevant Chapters/Stages -

Regulation	Chapter/Stage Aircraft		
ICAO Annex 16	Chapter 2	subsonic jet	
ICAO Annex 16	Chapter 3	subsonic jet	
ICAO Annex 16	Chapter 3	large propeller-driven	
ICAO Annex 16	Chapter 4	subsonic jet	
ICAO Annex 16	Chapter 4	large propeller-driven	
ICAO Annex 16	Chapter 5	large propeller-driven	
FAR Part 36	Stage 3	subsonic jet	
FAR Part 36	Stage 3	large propeller-driven	

ICAO and FAA Noise certification Regulation (2) - Differences regarding noise limits -



Reason for Re-certification to Chapter 4

- → Question: An aircraft was originally approved in accordance with
 - > Chapter 3 or 5
 - > Chapter 2
 - ➤ FAR Part 36, Stage 3 and complies with the maximum noise levels of Chapter 4. Why is re-certification necessary?
- → Answer: Technical details within ICAO Annex 16 and FAR Part 36 have been changed over the years. It has to be assured that re-certification is granted on the current standard regarding the regulation and the guidance material.

History of Annex 16

Document	Edition	Amendment	Applicable since
Annex 16	1		January 1972

Annex 16	2		October 1977
Annex 16	3		August 1978
Annex 16, Vol. I	1		November 1981
•••			
Annex 16, Vol. I	2	3	November 1988
Annex 16, Vol. I	3	4	November 1993
Annex 16, Vol. I	3	5	November 1997

Annex 16, Vol. I	3	7	March 2002

Need for Re-certification - ICAO Annex 16

Re-certification necessary?

→ No

➢ for aeroplanes which were approved in accordance with Annex 16, Volume I, Third Edition, Amendment 5 (Nov. 1997) or higher.

→ Yes

➢ for aeroplanes which were approved in accordance with Annex 16, Volume I, Third Edition, Amendment 4 (Nov. 1993) or lower.

Need for Re-certification - FAR Part 36

Re-certification necessary? Yes.

- → For Stage 3 aeroplanes which were approved in accordance with FAR Part 36, Amendment 24 (August 2002) or higher, one assessment criterion has to be considered (criterion g*).
- → For Stage 3 aeroplanes which were approved in accordance with FAR Part 36, Amendments 7 through 23, 14 assessment criteria* have to be considered.
- * for details see presentation "Assessment Criteria"

