

VIII. COURSE SUMMARY AND ASSESSMENT

Course Summary and Assessment

Section VIII

CPR 3/03 328

A. Course Summary

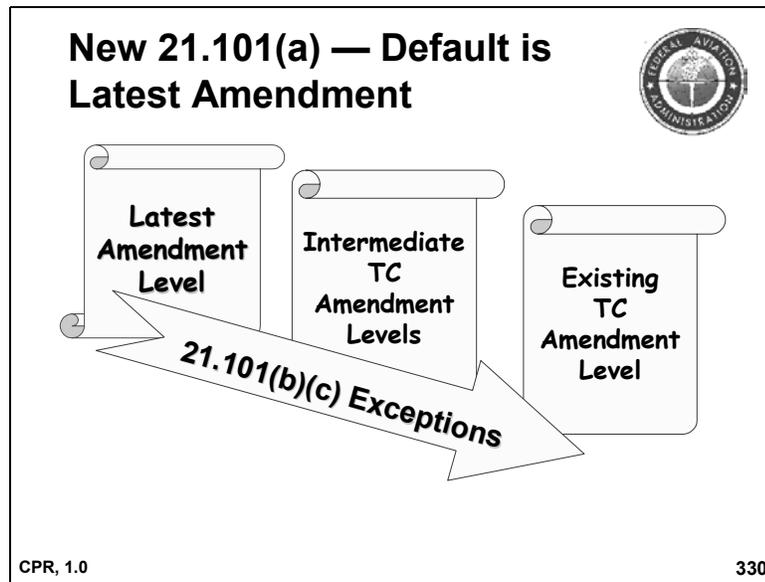
Intent of New Rule



- Enhance safety by applying latest airworthiness standards for certification of *significant* changes to products, to greatest extent practical
- Minor changes and Field Approvals not *significant*, so certification basis remains at regulations in existing TC

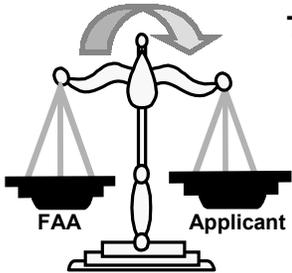
CPR, 1.0 329

- The approach we use when applying 21.101 has been changed to meet this objective.



- When determining the certification basis for most products, start at the latest amendment level. Reversions to earlier amendments are accomplished through the 21.101(b) exceptions.
- 21.101(c) provides an exception for aircraft of a particular weight. The starting point for these aircraft is the regulations referenced in the type certificate unless the FAA determines that the change is significant.

Shift in Responsibility





The Applicant must now

- Use an FAA-approved system to determine when change is significant or not significant
- Apply latest regulations for all major changes that are significant at product level
- Propose exceptions

CPR, 1.0331

- Under the new rule, the burden is on the applicant to demonstrate that compliance with an earlier amendment is permitted using the exceptions given in 21.101(b).

Streamlining Tools



Product-level change concept

- Establishes framework to assess if change is significant or not significant

Delegation

- FAA may authorize applicant to make determination *without further FAA finding*
- Written agreement *required*

CPR, 1.0332

When Does CPR Take Effect?



- **June 10, 2003** for all products
- **JAA and Transport Canada plan to implement CPR on same date**

CPR, 1.0

333

Challenges



- **Apply equitably across all applicants and methods of approval**
- **Meet intent of rule without creating unnecessary burden for negligible safety benefit**
- **Keep focus on significant changes without undue burden on FAA and industry**
- **Strive to implement CPR internationally in accordance with agreed-upon principles**

CPR, 1.0

334

Resources



- **AC 21.101-1, Change 1**
 - Appendix 1 tables classify significant/not significant changes by product line
- **Order 8110.CPR**
 - Defines how existing delegation systems will facilitate implementing CPR
- **Designated focal points**
 - Appendix A of Participant Guide
- **Continuous Improvement Team (CIT)**

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335

B. Questions from Participants

Questions





Figure 1, AC 21.101-1?

Substantial?

Significant?

Affected area?

Secondary effects?

Contribute materially?

Impractical?

CPR, 1.0
336

C. Post-training Assessment for IVT and Classroom

- The assessment is on the next page.
- This is an open-book test.

IVT: Complete assessment via the key pads.

Classroom: Complete assessment using the questions in the Guide.

CPR Course Assessment

Review of the Rule

1. The main reason that the changed product rule has been introduced is
 - a. Because there have been too many accidents related to design that needed corrective action.
 - b. To specifically address the aging aircraft fleet and ensure that there are other mechanisms in place to meet more recent standards.
 - c. To provide detailed procedures that would help in establishing the certification basis of all major and minor design changes.
 - d. To ensure that a changed product complies with the latest standards whenever practical.

2. What element is **NOT** a required part of an agreement permitting an applicant to make a determination that a change is *Not significant*?
 - a. Procedures to classify the change.
 - b. Definition of FAA oversight.
 - c. Process to address changes not addressed in the existing certification basis.
 - d. Negotiation and approval by ACO, applicant, and AIR-110.

Significant

3. A change that is significant at the product level
 - a. Results in a model change.
 - b. Is a change that makes the product distinct from the other models.
 - c. Is always more than one change.
 - d. May consist of several unrelated major changes.

4. Which one of the following statements is true?
 - a. A change to a system or component may be significant because of its effect on the overall product.
 - b. Changes that make a model distinct from other models are significant.

5. Which of the following would be a characteristic of a ***NOT significant*** change?
 - a. Design uses novel or unusual methods of construction.
 - b. General configuration is not retained.
 - c. Assumptions used for certification invalidated.

6. A determination of ***Not significant*** is the responsibility of
 - a. The Administrator.
 - b. The Applicant.
 - c. The DER.
 - d. None of the above.

7. To make a determination of ***Not significant***, you must consider
 - a. Secondary changes.
 - b. Cumulative effects of previous relevant design changes.
 - c. Cost of compliance.
 - d. Related service experience.

8. Which one of the following is an **INCORRECT** statement about making an assessment of whether a change is significant or not?
 - a. Consider the change and its effect on the overall product.
 - b. Consider all previous relevant design changes.
 - c. Consider changes to the regulations that have a marked safety benefit.
 - d. Assess the change against the three automatic criteria.

9. True or False?

The certification basis of a *Not significant* change is inadequate if the existing certification basis contains no standards for the change.

10. What is the starting point when establishing the certification basis of a *Not significant* change whose existing certification basis is inadequate?
- Regulations is effect on the date of application.
 - Existing certification basis.
 - Depends on the product's intended use.

Affected Area

11. Which one of the following does *NOT* cause an area to be considered an *affected area*?
- A physical change.
 - A change in functional characteristics.
 - A regulation change pertinent to the area.
12. An aircraft is re-engined with a net effect of 30% more thrust. Which of the following would be an *affected area*? Identify all that apply.
- The cabin floor.
 - The fuel tanks.
 - Flight characteristics.

Does Not Contribute Materially to the Level of Safety

13. Which of the following should **NOT** be considered when determining that compliance with the latest regulations would **not contribute materially to the level of safety**?
- a. Cumulative effects of previous design changes.
 - b. Compensating design features.
 - c. Product's intended use (restricted category).
 - d. Service history.
14. An applicant has cited service history in a proposal that compliance with the latest regulations would **NOT materially contribute to the level of safety**. Which one of the following is **NOT** an appropriate action for the FAA engineer?
- a. Determine that the data is adequate.
 - b. Ensure that the data are representative.
 - c. Consider the data's relevance to the safety issue addressed in the rule.
 - d. Evaluate the applicant's level of experience.

Impractical

15. In the context of 21.101(b)(3), the concept of *impractical* is best illustrated by which of the following statements?
- Meeting a particular safety benefit would cause a schedule delay in delivering an aircraft, thereby jeopardizing the contract for the company.
 - The amount budgeted by the company to achieve the safety benefit of complying with the latest regulation would exceed what was quoted to the customer.
 - The applicant, a small company, does not have the resources required to comply with the latest regulation and provide a particular safety benefit.
 - The incremental expenditures needed to accomplish a particular safety benefit are not commensurate with the safety gain.
16. If an applicant proposes utilizing the *impractical* exception, which of the following best describes an appropriate cost?
- The total cost of certifying the changed product to the latest regulation.
 - The administrative cost of proposing and substantiating the impractical argument.
 - The incremental cost of complying with the latest regulation relative to the cost of implementing the proposed change.
 - The cost of complying with the latest regulation, including the cost of lost business due to higher compliance expenses.

17. Which of the following **best** describes the allocation of burden for substantiating the case for *impractical*?
- a. The Applicant and the pertinent ACO Engineer(s) collaborate on jointly substantiating why complying with the latest amendment would be impractical.
 - b. The Applicant is responsible for providing substantiation of why complying with the latest amendment would be impractical.
 - c. The ACO provides substantiation to the applicant of why it is practical to comply with the latest amendment of a regulation.

Excepted Products - 21.101(c)

18. Which of the following are true for *excepted aircraft*?
- a. FAA has the burden to determine that the change is significant.
 - b. The FAA may authorize an applicant to make a determination of “not significant”, on the Administrator’s behalf, without further finding by the FAA.
 - c. Special Classes of aircraft that meet the weight requirements in 21.101(c) are considered excepted

Other Category Aircraft - 21.101(f)

19. Which factors are considered when establishing the certification basis for significant changes for aircraft covered by **21.101(f)**?
- a. Intended use.
 - b. Standards used when the product was originally approved.
 - c. Areas affected by the change.
 - d. All of the above.

D. Wrap-up

