

NPA 21-28 COMMENT-RESPONSE DOCUMENT

1. Background
2. Harmonisation
3. Review of comments

1. Background

The NPA 21-7; Type Certification Procedures for Changed Products, based on the ICPTF harmonisation work was circulated for comments in 1996. (The FAA NPRM 97-7, based on the same work, was issued in May 1997).

The JAAC at their meeting in May 1999 adopted the amendment to JAR 21 section 1 included in NPA 21-7 but left the final version of the amendment to JAR 21 section 2 (draft AMJ) to be finalised in a harmonised manner (fine tuning) together with the FAA.

2. Harmonisation

The highest priority is given to the final result of a harmonised text with FAA and TCCA.

3. Review of comments

The numbering in the paragraphs follows the one used in the circulated version of the NPA 21-28. In the final draft sent to JAAC for adoption section 3 has disappeared due to FAA legal process and the numbering has been adjusted accordingly.

General comments:

3 commenters (authorities) agreed with the NPA.

1 commenter (industry) agreed but expressed concerns on the various ways the NPA can be interpreted.

1 commenter (industry) pointed that the NPA deviates in significant aspects from the authorities-industry working group proposal.

The same commenter also asked for joint review of the comments with FAA and the development of a common training.

1 commenter (industry) proposes to add separate ACJ for products other than large aeroplanes. This proposal goes outside the scope of the NPA and was not retained.

1 commenter (industry) asked for clarification in several paragraphs. As no text was proposed, the request was considered when dealing with the appropriate paragraph.

The same commenter also asked for adequate training to be provided to FAA/JAA staff members and industry before implementation date of the rule.

1 individual commenter (JAA) proposed one interpretation that implies a change of the rule. This was considered out of the scope of the NPA (only ACJ). In the same comment, the possible misinterpretation of the use of the word “assumptions either in the adopted NPA 21-7 and JAR-E 30 was raised. The potential misinterpretation has been corrected by adding a note in the ACJ, par. 7.3.2.

The same commenter also pointed to the potential practical problem of management of the configuration/certification basis combination. This problem of the determination of the certification basis for a product that has incorporated several design changes along its life was already raised during the Workshop held in Central JAA to present the NPA 21-28. The problem is not induced by the new situation and can not be solved by a change in the ACJ text. As a consequence, no text change was introduced in the NPA.

1 commenter (industry) identified the same problem. The same comment as above also applies.

1 individual commenter also proposed a fully new text due to the lack of participation of specialists dealing with products other than large aeroplanes in the drafting of the NPA. As the JAA ad-hoc group for finalisation of NPA 21-28 was open for membership to specialists dealing with all products, the detailed comments have been taken into account in the appropriate paragraph.

The same commenter required clarification on the use of “level of safety” in the ACJ. While the proposed text will not be retained for the ACJ, it will be added to the Explanatory Note.

1 commenter (authority) requires clarification when using “changes to type design”, “changes to type certificate”, “design changes”, etc...in the proposed ACJ. As the adopted NPA 21-7 reads “changes to type certificates” the references in the ACJ have been reviewed and changed accordingly.

1 commenter (industry) asked for consistency in implementation with request of useful or setting precedent examples to be available for review and learning.

1 commenter (authority) required further clarification in the explanatory note to the NPA. This has been taken into account when revising this document.

1 commenter (authority) asked for a system of resolution of conflicts. As the JCVP will be used for certification/validation projects and the procedure for resolution of conflicts in the various instances of the JAA already exists, it will be used if necessary and no further text has been added to the ACJ.

1 commenter (authority) required further clarification on par. 2 of the explanatory note.

JAR 21.19

1 individual commenter required a more fundamental analysis in the relation between JAR 21.19 and JAR 21.101 and pointed at the fact that the requirements under JAR 21.19 be also included in Subparts D and E. For the purpose of the NPA 21-28 the relationship between JAR 21.29 and JAR 21.101 was discussed. It was found appropriate to raise the proposal concerning Subparts D and E to the Certification Committee for further consideration although not retained for NPA 21-28 because the NPA only affects Section 2.

JAR 21.101

The same commenter asked for introducing under JAR 21.101 a provision similar to JAR 21.17(e) allowing for voluntary compliance with amendments to the requirements becoming effective on a date after the application. The CC advised in the sense that the proposed change will improve JAR 21 consistency, but could not be retained because the NPA only affects Section 2.

JAR 21.101 (b) (1)

1 commenter (industry) raised the item on whether a DOA would need the authority finding of a minor change to be not significant with the consequent involvement of the authority prior to approval, this being inconsistent with the privilege of approval of minor changes under JAR 21.A263(b)(2) with no prior involvement of the authority. The CC advised in the sense that a DOA when exercising its privilege of approval of minor changes does not apply to the authority for this approval and so the references to “the applicant” do not apply to a DOA when using its privilege.

JAR 21.114

1 commenter (industry) proposed the reference under JAR 21.114 by adding also JAR 21.101. The referenced was found redundant and not retained; however the ad-hoc group found a wrong cross reference under JAR 21.97. A memo was sent to the JAR-21 WG and the wrong cross reference will be corrected by the appropriate change being included in the future NPA 21-22, Miscellaneous changes to JAR-21.

ACJ 21.101.1

1 individual commenter proposed to delete “highest practical level of safety” and replace it by “applicable requirements”. The comment was retained and after final discussion with FAA, TCCA and industry, retained in the final draft.

The same commenter proposed to delete the second sentence of last paragraph. The comment was retained and after final discussion with FAA, TCCA and industry, retained in the final draft.

1 commenter (authority) proposed an alternative text to emphasise the responsibility of the applicant to demonstrate that a change is not substantial. The proposed change was not retained because the text of the rule already covers the item.

ACJ 21.101.2

1 individual commenter proposed restore the reference to JAR 21.115 for consistency. After revision of the text, this referenced was found not needed as covered by the rule.

ACJ 21.101.4

1 commenter (industry) proposed an interpretation of the terms “aircraft” and “rotorcraft” in JAR 21.101 to include also the engines installed. The CC advised in the sense that the applicability of JAR 21.101 to the different products is established and the proposed interpretation departs from the general principle of separate certification for engines and propellers. The proposed text was not retained.

1 commenter (authority) proposes to introduce the definition of “non-significant change” and proposes a text. This addition was considered not necessary as the item is covered in other sections of the document.

ACJ 21.101.4.a

1 commenter (industry) proposes to delete the references to noise and emissions due to this not being part of JAR-21 Section 1. The reference was removed.

The same commenter proposes to change the reference from 21.115 to 21.114. The reference was removed.

1 commenter (industry) proposes to delete the references to noise and emissions and the addition of a note to clarify the item. The reference was removed as per the comment above and the note was retained for clarity.

1 commenter (industry) proposes the same changes as the one above. Same result is applicable.

ACJ 21.101.4.b

1 commenter (authority) has concerns on the need of the explanation of the term “design”, does not consider it useful and proposed deletion. The comment was retained and after final discussion with FAA, TCCA and industry, the definition deleted in the final draft.

ACJ 21.101.4.d

1 commenter (industry) proposes to add “of the product to be changed” at the end of the definition. The comment was retained and after final discussion with FAA, TCCA and industry, retained in the final draft.

ACJ 21.101.4.e

1 commenter (industry) raises a comment similar to other already covered in the “general” section of this document on the difficulty to determine the certification basis of one product when successive changes has been incorporated. The resolution of the problem, as already stated above, is out of the scope of the ACJ.

ACJ 21.101.4.f

1 commenter (authority) raises concerns on the definition of “impracticable”. Although the terms used by the comment is wrong, both the NPA 21-7 and 21-28 read “impractical”, the comment was retained and after final discussion with FAA, TCCA and industry, retained in the final draft by deleting the definition due to the item covered more in depth in other sections of the ACJ.

ACJ 21.101.4.h

1 individual commenter proposed an alternative text that was not retained due to not considered as an improvement of the existing one.

ACJ 21.101.i

1 commenter (authority) proposes to add “...consideration of...” after “...to require...”. The comment was retained and after final discussion with FAA, TCCA and industry, retained in the final draft.

1 commenter (authority) proposes to delete the definition of “significant change” because one of the purposes of the ACJ is this. The comment was not retained because the definition was found useful.

ACJ 21.101.6

1 commenter (industry) proposes to change the first sentence of the second paragraph by “In this context , the extent to which the latest requirements have been addressed for previous design changes needs to be considered” deleting the points (1) and (2) of the circulated version. Although the reasons for the comment were considered valid, the proposed change in text was not retained. The full paragraph dealing with “extent of the change” was acknowledged to need a rewording for clarity but no alternative text agreeable to all parties was developed during the final meeting for NPA 21-28 finalisation and after final discussion with FAA, TCCA and industry, no alternative was agreed to be introduced in the final draft.

The full paragraph will need reconsideration at the occasion of the introduction of examples of products other than large aeroplanes in the ACJ. A new NPA is expected for this initiative.

1 commenter (industry) comments based on a previous ARAC document. As the text in Section 1 is already adopted under NPA 21-7, the only reference is to be made to this adopted text. The comment was not retained.

1 commenter (authority) asked for clarification on the collective consideration of individual changes. The text of the ACJ was considered sufficiently explanatory and as no proposal for an alternative text was made, the comment was not retained.

ACJ 21.101.7

1 commenter (industry) raises concerns on the potential implications of the application of the NPA 21-7 and the future development of products. As no new text is proposed and the item of a generic nature, it was considered covered by the ACJ and not retained.

ACJ 21.101.7.2

1 individual commenter expressed concerns on the objective of JAR 21.19. A potential rewording of the paragraph was retained for consideration with FAA, TCCA and industry. As a result the paragraph was changed.

1 commenter (industry) proposed to decide on the need of a new type certificate only at the beginning of the process. As the information to base this decision may not be completely available in this moment, the comment was not retained.

1 commenter (industry) proposed to account for the cumulative effect of changes only from the applicability date of the NPA. This approach was considered inappropriate and as a consequence, the comment not retained.

ACJ 21.101.8

1 commenter (authority) expresses concerns in the fact that an area that is found not changed and not affected will automatically revert to compliance with the original certification basis. The use of “not changed” and “not affect” is not consistent with NPA 21-7 where, in a changed product, the affected and consequently not affected areas can be determined. Due to this misconception and that no alternative proposal for text was included, the comment was not retained.

ACJ 21.101.8.1

1 commenter (industry) proposed to replace “...requirements incorporated by reference in the certification basis.” by “...existing certification basis.”. The

comment was retained and after final discussion with FAA, TCCA and industry, retained in the final draft.

1 individual commenter raises concerns on the consideration of minor changes as not significant in the ACJ and the reasons for this. The comment was retained and after final discussion with FAA, TCCA and industry, not retained in the final draft; however some further changes were introduced in the text for clarification.

ACJ 21.101.8.2

1 commenter (authority) requests to delete "...for the entire product." For consistency with the rule. The comment was retained and after final discussion with FAA, TCCA and industry, retained in the final draft.

The same commenter raises a conflict with App. 1. Although the reference to the paragraph was wrong, the comment was retained and after final discussion with FAA, TCCA and industry, retained in the final draft for app. 1.

ACJ 21.101.8.3.1

1 commenter (industry) proposes several changes in wording for general consistency of the ACJ. The comment was retained and after final discussion with FAA, TCCA and industry, retained in the final draft and the text changed accordingly.

ACJ 21.101.8.3.1 Note

1 commenter (authority), another (industry) and one individual commenter raised concerns on the text of the note. The comments were retained and after final discussion with FAA, TCCA and industry, retained in the final draft and the note completely re-written for more clarity of the text.

ACJ 21.101.8.3.3

1 commenter (industry) proposes an interpretation of "affected areas" that was found not appropriate and consequently the comment not retained. The need of appropriate training to solve this misunderstandings was also identified.

ACJ 21.101.8.3.3b

1 commenter (industry) proposes to delete the references to noise and emissions due to not included in JAR 21 Section 1. The comment was agreed and the text changed accordingly.

ACJ 21.101.8.3.4

1 commenter (authority) raises concerns on the use of service experience. As this item is covered more in detail in App. 3 and no alternative text was proposed, the concerns was covered in the discussion on App.3.

ACJ 21.101.8.3.4a

1 commenter (industry) proposes to add an additional paragraph to cover the cases of amendments of the requirements due to reasons other than safety items. The comment was retained and after final discussion with FAA, TCCA and industry, retained in the final draft and the text changed accordingly.

ACJ 21.101.8.3.4a

1 individual commenter raises concerns on the interpretation of the wording of the paragraph. The ad-hoc group proposed a changed to the text. The comment was retained and after final discussion with FAA, TCCA and industry, retained in the final draft and the text changed accordingly.

1 commenter (authority) has concerns on the use of service experience. As no clear change of text proposal is made, the item is moved to the review of App.3 where service experience is covered in detail.

ACJ 21.101.8.3.4a)1)

1 individual commenter has concerns in the wording of the general example given in the paragraph. As no clear change of text proposal is made, the comment was acknowledged for consideration. No change of text resulted from final discussion with FAA, TCCA and industry.

ACJ 21.101.8.3.4.b)

1 individual commenter raised a concern similar to another under ACJ 21.101.8.3.1. The comment was retained and after final discussion with FAA, TCCA and industry, retained in the final draft and as a result of joint consideration of this paragraph and the note under ACJ 21.101.8.3.1, the text of the note was changed and the last paragraph of ACJ 21.101.8.3.4.b) was deleted.

ACJ 21.101.8.4

1 commenter (authority) proposed to include JAR 21.16 Special Conditions in this paragraph. As the special conditions case is already covered by the text in adopted NPA 21-7, the comment was not retained.

ACJ 21.101.9 figure 1

3 commenters (industry) proposed changes to the graphic, one also asking for replacing the graphic by a flowchart with standard symbols. The comment was retained and after final discussion with FAA, TCCA and industry, retained in the final draft and the flowchart symbols were introduced.

ACJ 21.101. appendices

1 commenter (authority) expressed concern on the examples included to be FAA examples and no JAA ones. No alternative examples were proposed. During the drafting of the NPA, the examples were widely checked, some of the initially proposed were removed, if not equally understood by all parties. As no alternative ones were proposed and also due to the need of widely check any example before inclusion, the comment was not retained.

ACJ 21.101. appendix 1,3

1 commenter (industry) proposes to delete the fourth sentence of the initial paragraph, due to inconsistent with par. 7 and 8 of the ACJ. The comment was retained and after final discussion with FAA, TCCA and industry, another change was introduced in the same sentence.

ACJ 21.101 appendix 1,3

1 commenter (industry) proposes to replace the third sentence of the initial paragraph by a different wording. The comment was retained and after final discussion with FAA, TCCA and industry, retained in the final draft and the text changed accordingly.

ACJ 21.101 appendix 1,3,b)

1 commenter (industry) asked for an less vague wording of the paragraph, the comment was retained but after final discussion with FAA, TCCA and industry, no alternative wording was agreed and the text remained unchanged.

ACJ 21.101 appendix 1,3,c)

1 commenter (industry) proposes to use the original wording of the paragraph as per the AMJ circulated with NPA 21-7 due to no adverse comments received at that circulation. The comment was retained and after final discussion with FAA, TCCA and industry, no alternative wording was agreed and the text unchanged.

1 individual commenter has also concerns in the wording of the paragraph, in this case related with the FAA response to comments in the FAA NPRM. As per the comment above, no change in text was agreed.

ACJ 21.101 appendix 1, 3,d)

1 commenter (industry) asked for clarification and proposed an alternative wording. The comment was retained and after final discussion with FAA, TCCA and industry, retained in the final draft and the text "...for primary structure..." was added after "...methods of construction...".

ACJ 21.101 appendix 1,3,g)ii

1 commenter (industry) has concerns on the second individual example. The comment was retained and after final discussion with FAA, TCCA and industry, retained in the final draft and the individual example.

ACJ 21.101 appendix 2

1 commenter (industry) asked for the resource-evaluation guide recommended by the ARAC, with improvements if necessary, be included in the ACJ. The comment was retained but after final discussion with FAA, TCCA and industry, due to the concerns raised by the use of the ARAC guide, it will not be included, although it will be possible for the applicants so willing, to use it with the necessary corrections.

The same commenter asks for a data base containing the necessary data for use in the cost/benefit analysis to be rendered public. The request is out of the scope of the ACJ and was not retained.

Another commenter (industry) also asked for re-introduction of the ICPTF resource-evaluation guide in the ACJ and if necessary to render it optional procedure. As stated above, the ICPTF guide, with the necessary corrections is now an optional procedure on choice by the applicant but will not be published in the ACJ.

1 applicant (industry) asks for deletion of the appendix 2. The comment was not retained.

ACJ 21.101 appendix 2, 1

1 commenter (industry) proposes to delete "...as a starting point.." and add "...when the change has been determined to be significant and the affected areas have been identified.". The comment was retained and after final discussion with FAA, TCCA and industry, not retained in the final draft due to the order in which the sequence in which the decisions are made is not established in the rule.

1 commenter (industry) asks for examples of products other than large aeroplanes to be introduced. This initiative has already started with the establishment of ad-hoc group in charge of the different products.

ACJ 21.101 appendix 2, 1, 1 step 3

The same commenter above requires the occurrences to be applicable to rotorcraft. This is covered also by the initiative mentioned in the previous comment.

ACJ 21.101 appendix 2, 1 step 4

The same commenter has concerns on the prediction of future occurrences for helicopters. The same as for the two previous comments applies.

ACJ 21.101 appendix 2, 1 step 5

1 commenter (industry) proposes to replace "...but were not completely effective.." by "...to same extent...". The proposed wording was considered not to improve the text and was not retained.

1 commenter (industry) proposes to delete step 5 due to potentially leading to dispute the adequacy of the existing rules. The interpretation was considered not consistent and the comment not retained.

ACJ 21.101 appendix 2, 1 step 6

1 commenter (industry) proposes to delete the step due to the consideration of the cost of certification with a foreign agency being a business decision out of the scope of the ACJ. As the ACJ is being harmonised with FAA and TCCA, this aspect is relevant for the ACJ and not a decision outside the ACJ. Consequently the comment was not retained.

1 commenter (industry) has concerns on the consideration of cost of lawsuits, accident investigation, etc...arguing that industry will not proceed with a project if thinking it can cause an accident. The argument was considered not valid and the comment not retained.

1 commenter (industry) asks for clarification in the determination of operating cost. The existing text was considered to cover the item and the comment not retained.

1 commenter (authority) asked for clarification in the paragraph beginning "When determining the impracticality..." as potentially confusing due to total cost instead of costs over and above those needed for showing of compliance with the existing certification basis. The existing text was considered adequate and the comment not retained.

1 commenter (industry) asked for deletion of the two references to FAA in the third paragraph. The comment was retained and after final discussion with FAA, TCCA and industry, retained in the final draft and the text changed to read "authority".

ACJ 21.101 appendix 2, 2

1 commenter (authority) asks for more examples to be introduced. This is covered by the initiative on "other products".

ACJ 21.101 appendix 3

1 individual commenter refers to inconsistencies on text in relation with other sections of the ACJ. This correction of references was taken into account when revising the appropriate text.

The same commenter raises concerns on the availability of service experience data to enough for justification of impracticality. The comment was retained and after final discussion with FAA, TCCA and industry, but no change in the ACJ was introduced.

The same commenter expressed concerns on the wording of the example although not against the example itself. The comment was retained and after final discussion with FAA, TCCA and industry no alternative text was agreed and the text remained unchanged.

1 commenter (authority) required clarification on the use if the service experience in the ACJ. The interpretation of the commenter was not found in line with the ACJ and the comment not retained.