

**Clearance Record**  
**DOCUMENT COMMENT LOG**

<b>Originating Office:</b> AIR-110	<b>Document Description:</b> AC 20-176A	<b>Project Lead:</b>	<b>Reviewing Office:</b>	<b>Date of Review:</b>
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#	Company & Group	Page & Paragraph	Comment	Rationale for Comment	Recommendation	Disposition
1	Airbus	Front page (and several other locations in this AC)	The introductory sentence states that this AC presents “best practices”. The use of the adjective ‘best’ may not be suitable.	This AC describes an acceptable means of compliance recommended by the FAA, but it is not the only means. Some other practices (also acceptable from the standpoint of the FAA) may be considered by some stakeholders better than those described in this AC, depending on the context.	It is recommended to amend the text to read: “This advisory circular (AC) presents <del>best</del> <u>recommended</u> practices for drafting service bulletins (SB) related to an airworthiness directive (AD)	Partially concur. The information contained in Chapters 2-5 was deemed best practices by the AD Compliance Review Team (CRT). However, the commenter is correct in that it is not the only means. As such, paragraph 1-1b was revised for clarity as follows:  “...This AC describes an acceptable means, but not the only means, for drafting SBs related to ADs.”
2	Airbus	Page 1, para. 1-1.a.(1)(b)	This paragraph mentions guidance for maintaining airworthiness of an AD-mandated design change.  Airbus considers that referring to the airworthiness of the	The ICAO Annex 8 defines the term ‘airworthy’ as “The status of an aircraft, engine, propeller or part when it conforms to its approved design and is in a condition for safe operation”. It may be understood that the associated characteristic, i.e.	It is recommended to amend the text to read: “This advisory circular (AC) provides: [...] recommendations for design approval holder (DAH) for developing service bulletin (SB) descriptive data to resolve	Partially concur. Revision to paragraph 1-1a was not incorporated because the AD CRT deemed the information as best practices. Paragraph 1-1a(1)(b) was revised accordingly.

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			<p>design change does not match the international standard.</p> <p>This may be confusing.</p>	<p>the airworthiness, is defined at the level of aircraft, engines, propellers or parts. The para. 1-1.b. refers to “continued compliance with an AD”. Our recommendation takes into account this wording.</p>	<p>an unsafe condition, including guidance for: [...] Maintaining <u>airworthiness compliance</u> of an airworthiness directive (AD)-mandated design change.”</p>	
3	Garmin	<p>Page 1, ¶ 1-1.a.(2) Page 4, ¶ 1-9.b.</p>	<p>“Owners/operators” was changed to “owners and operators” which seems ok since we understand “owners/operators” as shorthand for “owner(s) and/or operator(s)”. Elsewhere in the document this substitution for “owners/operators” does not consistently include “owners”. It is not clear if this is intentional, and if it is intentional, what is being communicated if only “operators” is included. Example at Page 4, ¶ 1-9.b and Example page 11, ¶ 2-9.a.(2).</p> <p>Chapter 4, ¶ 4-1 and ¶ 4-2 also seem to have</p>	<p>The intent is not clear if only one of the two (owner or operator) is used without the other.</p>	<p>Include “owners and operators” as appropriate throughout the document.</p> <p>It may be helpful to define the terms “owner” and “operator” as used in the document if the meaning is not “owner(s) and/or operator(s)” when used separately.</p>	<p>Concur. Each use of the individual terms was evaluated for appropriate usage. As such, the following paragraphs were revised to specify “owner or operator” – paragraphs 1-8e, 1-9b, 2-3b(2), 2-8a, 2-9b, 2-11c(8), 4-3a, and 5-5a.</p>

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			inconsistent use of these terms.			
4	Garmin	Page 3, ¶ 1-8 Definitions	The Definitions section should “decode” abbreviations such as “AD”, “AMOC”, “IBR”, etc. at their first use.	To provide good communication to the reader, especially someone with limited “AD” experience, it makes the definition section more valuable and prevents the uninitiated from going back and forth to the abbreviation section which is in the back of the document.	Provide important abbreviation meaning in the definitions section like was done in the initial version of AC 20-176.	Non-concur. Each abbreviation is defined when first used in the document. Therefore, they may have already been “decoded” prior to the definitions section.
5	Airbus	Page 4, para. 1-9.b.	The way this paragraph is worded gives the impression that operators bear a responsibility for the outcomes of a process applied within the design domain (involving design organizations and authorities). A responsibility pertaining to the design domain should not be transferred to the in-service operation domain.	This paragraph indicates that it is the operator’s ultimate responsibility to ensure that FAA approval was obtained if FAA approval is required before using the advice, recommendations, alterations, repairs, etc., prescribed in service documents.  The prerequisite for such a responsibility is to know which service documents/engineering data resulting from design activities require an FAA approval.	It is recommended to amend the text to read: <u>“b. It is the responsibility of the person or organization developing advice, recommendations, alterations, repairs, etc., prescribed in service documents to: (i) indicate in the body of such service documents specifically what information was approved by the FAA or its designees, or if no FAA approval is required (refer to Chapter 6 of this AC), (ii) not publish service documents containing</u>	Partially concur. The paragraph was revised for clarity as follows:  “It is the owners/operator’s ultimate responsibility to ensure that FAA approval was obtained if FAA approval is required before using the advice, recommendations, alterations, repairs, etc., prescribed in service documents. For this reason, it is desirable for the DAH to assist the owner and operator by

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				<p>How could an operator be responsible for an outcome that depends on (upstream) activities for which he is neither involved nor accountable/responsible?</p> <p>Note: FAR 43.13 does not explicitly require the operator to ensure that FAA approval was obtained if FAA approval is required. It indicates that each person performing maintenance, alteration, or preventive maintenance on an aircraft, engine, propeller, or appliance shall use the methods, techniques, and practices prescribed in the current manufacturer's maintenance manual or Instructions for Continued Airworthiness prepared by its manufacturer, or other methods, techniques, and practices acceptable to the Administrator, except as noted in FAR 43.16 (Airworthiness Limitations).</p>	<p><u>advice, recommendations, alterations, repairs, etc., requiring FAA approval until such approval is obtained.</u>"</p> <p><del>b. It is the operator's ultimate responsibility to ensure that FAA approval was obtained if FAA approval is required before using the advice, recommendations, alterations, repairs, etc., prescribed in service documents. For this reason, it is desirable to assist the operator by indicating in the body of service documents specifically what information was approved by the FAA or its designees.</del></p>	<p>indicating in the body of service documents specifically what information was approved by the FAA or its designees."</p>

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6	Airbus	Page 5, para. 2-2.a.(6)	Airbus recommends the differentiation refers only to “required for compliance” instead of using the word “critical”.	<p>The NPRM 12-07 defined the term ‘essential maintenance’ as maintenance that could result in a failure, malfunction, or defect endangering the safe operation of an aircraft <u>if not performed properly or if improper materials are used</u>. The synonym term ‘critical maintenance’ is also stated in this NPRM. The term ‘critical’ is preferred as it conveys the idea of a link with the severity of error consequences.</p> <p>Required Inspection Items (RII), as defined in the AC 120-16F, include those tasks that could result in a failure, malfunction, or defect that endangers the safe operation of the aircraft if the task is not completed properly or if improper parts or material are used.</p> <p>Such maintenance (critical or RII) may require that an independent person be</p>	<p>It is recommended to amend the text to read: <u>“(6) Differentiating critical tasks and task sequences:</u></p> <p>(i) <u>Those requiring exact conformance from tasks that can be flexible, advisory, or common acceptable procedures, on one hand and</u></p> <p>(ii) <u>Those that could result in a failure, malfunction, or defect that endangers the safe operation of the aircraft if the task/sequence of tasks is not completed properly or if improper parts or material are used, from others on the other hand. For operators, these tasks/sequences of tasks are candidate</u></p>	<p>Non-concur. The term “critical task differentiation” was used in response to AD CRT recommendation No. 1 using the same term – “Service instructions should explain the safety intent of the instructions. They should differentiate the critical tasks and task sequences requiring exact conformance from flexible advisory instructions for tasks that are common acceptable air carrier procedures. This differentiation will allow improved understanding of crucial AD requirements and consistent judgment in AD compliance.”</p> <p>Additionally, Boeing has issued ADs using this terminology. Changing it could create confusion.</p>

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				<p>available to personally check (to the extent necessary) that the work being done by another person is accomplished properly. Any other error capturing method contemplated by the operator should also be accepted as long as it fulfills the objective of an independent check.</p> <p>With regard to the compliance classification, it will influence the flexibility given to the operator to accomplish or not, or differently the task requirements. Mandatory (RC) and Critical have not the same meaning and do not cover the same perimeter of tasks:</p>	<p><u>for implementation of an error capturing method, possibly within the frame of Required Inspection Items (RII) in accordance with the AC 120-16.</u> (see paragraph 2-10).”</p>	

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7	Airbus	Page 5, para. 2-2.a.(6)	<p>The AC 20-176A is the right way forward as it makes the differentiation of tasks/task sequences requiring exact performance from the others for which flexibility exists. It participates in assisting the operator (as explained in paragraph 1-9.b.).</p> <p>A differentiation in service documents (containing advice, recommendations, alterations, repairs, etc.) should also be done for tasks/task sequences that could result in a failure, malfunction, or defect that endangers the safe</p>	General comment to improve service information	Airbus recommends the development of a new rulemaking task or AC material on this matter.	Recommendation is beyond the scope of this document.

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			<p>operation of the aircraft if the task/sequence of tasks is not completed properly or if improper parts or material are used.</p> <p>This differentiation would be the signal for operators /approved repair stations to evaluate and implement an appropriate error capturing method. This would contribute to assist operators/approved repair stations as well (refer to NPRM 12-07).</p>			
8	Airbus	Page 6, para. 2-3.b.(1)(b)	Same as comment no. 4	Mandatory (RC) and Critical have not the same meaning and do not cover the same perimeter of tasks.	<p>“[...] When appropriate, include the following types of procedures in the SB:</p> <p>[...]</p> <p>(b) <del>Critical</del> <u>Requirements</u> in procedures that exist in manuals that are not FAA-approved (e.g., torque values, gap measurements, electrical bonding, etc.). <u>Identify them as critical.</u></p> <p>List in the SB the <del>critical</del> requirements that must be met to comply with a</p>	Non-concur. Removing the term “critical” as proposed changes the intent of the sentence. The purpose is to only include the critical requirements.

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					planned AD and refer to the procedure in the manual that is not FAA-approved as an accepted procedure to achieve those requirements (see paragraph 2-9).”	
9	Jim Farrell, PRG-ACSS	Para 2-3b(2)	Section 2-3b(2) is somewhat contradictory.	The AC is trying to save work by not including the steps in the SB if they are in another document (for example the install manual). However, if you then need to CHANGE the install manual step, you have to AMOC the install manual. That’s a LOT more work than AMOC on an SB, just based on number of pages. Related issue – the AC wants to call out just the affected section – which is great until we make a change to the install manual (like adding a description of a new function) that changes Section numbers. Creating special sub section for new information gets unwieldy to reference after a while (a section number like Section 2.3.4.5.1 is		Concur. Paragraph 2-3b(2) was revised to remove the caution for an AMOC and instead reference paragraph 2-3c which was revised to address enforceability of referenced documents. Paragraph 2-3c was reformatted to paragraph 2-3d.

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				rather cumbersome).		
10	Jim Farrell, PRG-ACSS	Para 2-3c	<p>2-3c – the rule wants suppliers to include the revision and date of the documents that contain the steps discussed in Section 2-2. That’s great, but if the steps with the reference are RC, then the document is RC as well, I would think. Or, if the Referenced document contains the wording as requested by 2-3b(2) then the reference is the RC step. If you change the rev of the referenced doc, it requires a revision to the RC step that listed it. So you’d need an AMOC just to update the revision of a listed document.</p> <p><i>(refer to 2-10e.(3) If RC tasks state to do the work in accordance with a figure, drawing, or illustration, then all of the information in the figure, drawing, or illustration is mandatory</i></p> <p>– I take that to include referenced documents as</p>			<p>Partially concur. The sections of a service document that use the RC concept must be incorporated by reference (IBR’d) in an AD. The philosophy behind the RC concept is to only mandate those steps in a service document that are necessary to detect, prevent, resolve, or eliminate the unsafe condition. As such, not all steps in a service document (or the entire document) will be required for compliance (RC) as indicated by the commenter. The commenter is correct, however, that if a step in a service document is identified with “RC,” and that step uses mandatory language, such as “in accordance with,” to reference another document that changes, then you will</p>

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			well if doing the work in accordance with data in the referenced document). That defeats the purpose of doing an RC step to avoid an AMOC for minor changes to textual, as opposed to procedural, steps.			need an AMOC to the AD, unless the referenced document includes the language “or later approved revision.”
11	Airbus	Page 10, para. 2-9.	Wording improvement to prevent confusion.	The possibility for confusion can be illustrated by the case of a step being RC labeled (mandatory) while some flexibility is given to operators for the choice of option or the compliance method (not mandatory) with this mandatory step (refer to paragraph 2-10.e.(3) & (4) example).	It is recommended to amend the introductory text of paragraph 2-9. to read: <del>“2-9. Mandatory versus Flexible Language</del> <b><u>Flexibility in Compliance Demonstration - Language.</u></b> The use of <del>mandatory language in</del> <u>allowing the selection of alternative procedures</u> to show compliance with the accomplishment instructions of an SB depends on whether other procedures acceptable to the FAA are adequate to address the unsafe condition in an AD. If other procedures are	Non-concur. The intent of this section is to provide guidance for how to specify mandatory and flexible language in an SB.

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					acceptable to the FAA, use <del>non-mandatory</del> language in the SB providing <u>flexibility to the operator.</u> ”	
12	Airbus	Page 11, para. 2-9.	Is it judicious to list examples in the paragraph 2-9.? The sub-paragraphs a. and b. provide examples of procedures or documents that must or may (respectively) be followed to accomplish an action. On one hand, examples may help in understanding the different cases, but on the other hand they may introduce confusion on whether compliance with a document (e.g. SRM) is mandatory or not.	For example, an AMM task for testing could be listed in both sub-paragraphs. The NTM, SRM, and SB could also be listed in sub-paragraph b. as some operators may have developed their own (alternative) procedures that are acceptable to the FAA.	Although the intent is understood, it is recommended to reassess the need for examples.	Non-concur. The examples provided in paragraphs 2-9a and 2-9b are not meant to be all inclusive as specified in each paragraph as provided by the statement “documents or procedures may include, but are not limited to:” It is up to the DAH drafting the SB to decide whether they want to use mandatory or flexible language with a specific procedure or document.
13	Garmin	Page 10, ¶ 2-9.a.	¶ 2-9.a. is one example of multiple locations within the document where “a SB” has been replaced with “an SB”. It should remain as “a SB”.	SB is not “essB” such that “an” is appropriate.	Replace “an SB” with “a SB” throughout the document.	Non-concur, per technical editing, only use “a” in front of an acronym if the acronym is read as a word, such as COS.

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14	Cessna Aircraft Company	Para 2-10	Use of RC – Cessna does not comply with the proposed use of RC.		The use of RC needs to be defined more clearly, limited in scope, or dropped from the proposal. Confusion could result from the use of RC. This does not appear to have a real value for the end users and if FAA believes it does then they need to explain otherwise.	Non-concur. Although Cessna may choose not to use the RC concept, other design approval holders have. Refer to ADs 2013-23-03 and 2013-24-12.
15	Airbus	Page 12, para. 2-10. 2 <sup>nd</sup> sentence	The term ‘critical task differentiation’ is found confusing.	Mandatory (RC) and Critical have not the same meaning and do not cover the same perimeter of tasks.	It is recommended to adopt the term ‘RC task differentiation’ rather than ‘critical task ... jdifferentiation’ and to adapt the sentence accordingly: e.g. “Differentiating these steps from other tasks in an SB will improve an owner’s or operator’s understanding of <u>which steps are required to comply with an</u> <del>erucial</del> AD requirements and help provide consistent judgment in AD compliance.”	Partially concur. The term “critical task differentiation” was used in response to AD CRT recommendation No. 1 using the same term; therefore the commenter’s recommendation was not used. Additionally, Boeing has issued ADs using this terminology. Changing it could create confusion.  The paragraph was revised for clarity as follows:  “...Differentiating these

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						steps from other tasks in an SB will improve an owner's or operator's understanding of which steps in the SB must be done to comply with the AD and help provide consistent judgment in AD compliance."
16	Garmin	Page 15, ¶ 2-10.f.	¶ 2-10.f. is one example of multiple locations within the document where the contraction "IBR'd" is used when it may be appropriate for "IBR".	In the ¶ 2-10.f. example, "IBR" seems adequate without the "'d".	Change "IBR'd" to "IBR" as appropriate throughout the document.	Non-concur, acronym is correct as written.
17	Jim Farrell, PRG-ACSS	Para 2-10f	The Required for Compliance (RC) designation is a great idea. EXCEPT for the statement in 2-10f <i>Once an SB using the RC concept is IBR'd in an AD:</i>  <i>(1) Any revision to the SB by the DAH will require an AMOC request. This applies even if the SB revision only changes steps that were not labeled RC.</i>	Because many of the SBs my company did in relation to an AD were IBR'd, the statement above seriously reduces the usefulness of the RC statement. In fact, I see no reason to put it in an IBR'd SB, because the point of the RC statement is to limit the need for an AMOC to change in the RC statements, correct? If the IBR document requires an AMOC for any change, having the RC steps doesn't really prevent an AMOC for		Non-concur. The purpose of the RC nomenclature in an SB is specifically to identify/mandate those steps that are necessary to detect, prevent, resolve, or eliminate the unsafe condition. It is not intended to reduce the number AMOCs for the steps identified with RC. When RC is used in an SB, steps that are not designated as RC can be accomplished

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			<p><i>(2) Any substitutions or changes made to the RC steps by owners and operators will require an AMOC (see FAA Order 8110.103, Alternative Method of Compliance, appendix A, paragraph 109). Owner and operator substitutions or changes made to non-RC steps will not require an AMOC if the RC steps can be completed and the aircraft returned to a serviceable condition.</i></p>	<p>a textual change to the IBR SB.</p>		<p>with acceptable methods different from those given in the SB as long as the RC steps can be done and the airplane can be returned to a serviceable condition. It is the non-RC steps that won't require an AMOC (which are required today if the SB is IBR'd in an AD.)</p>
18	Jim Farrell, PRG-ACSS	Para 4-5	<p><i>One way to minimize the number of AMOC requests for ADs requiring part changes is to use "later approved parts" language in the SB. This would allow—without an AMOC approval—installation of DAH parts for compliance with the AD that are FAA-approved after the release of the SB.</i></p> <p>Problem: when my company did an IBR SB,</p>			<p>Partially concur. The restriction on "later approved revision" is limited to documents specifically IBR'd in an AD, not parts.</p>

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			the FAA told us FAA legal would not allow use of such language on the IBR SBs. If this is a change to that rule, it's very useful. If not, it's a catch-22.			
19	Airbus	Page 22, para. 5-1.	In the AC, Airbus could not find a definition of the term 'routine maintenance' or a reference to a document containing that definition.	The concept of routine maintenance is a notion that may vary from one person/organization to another.	It is recommended to develop a definition to be placed in an appropriate location. Airbus would consider AC 120-16 the right document to include the definition.	Concur. AIR will consult with AFS-300 about developing the proposed definition.
20	Cessna Aircraft Company	Para 6-3	"FAA Approved" – Legacy SB's may not be compliant with the proposal. Current SB's do not claim to be FAA Approved at the document level, rather the FAA approval applies to the engineering data used as the source of the SB.		Allow for OEM's to reference approved data as the basis for a SB's. Example: This SB was from source data that was approved.	Partially concur. Paragraph 6-3 already provides guidance that it is the previously approved engineering data that is being identified as FAA approved, not the service document itself.
21	Jim Farrell, PRG-ACSS	Para 6-3b(5)	Many parts of typical service documents do not require, and should not receive, FAA approval. These parts include, but are not limited to: (5) Step-by-step routine			Non-concur. Reference to "Step-by-step routine alteration procedures" includes such tasks as contained in AC 43.13-2. Per the commenter's example, a step in a

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			alteration procedures; This requirement seems contradictory. If the “routine” alteration is the alteration to comply with the AD (say, for example, disassembly of the unit to replace the card as required by an AD) then it is an RC step, which requires FAA approval. But it’s a routine step that can’t be FAA approved. So this could be another catch-22.			service document to disassemble (gain access to the unsafe part) should not be labeled RC as specified in Chapter 2, paragraph 2-10d(2) of the AC.
22	Garmin	Page F-1, Appendix F	It not clear why “IRB’d” is indicated as the acronym for Incorporated by Reference.	It seems the appropriate acronym should be “IRB”.	Change “IRB’d” to “IRB”.	Non-concur, acronym is correct as written.