

Clearance Record
DOCUMENT COMMENT LOG

Originating Office: AIR-130	Document Description: AC 20-162A, Airworthiness Approval of Passive RFID Tags	Project Lead: Lee Nguyen	Reviewing Office:	Date of Review:
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Commenter	Para. No.	Referenced Text	Comment	Recommendation	Disposition
Brian Verna, AFS-360	1	First sentence reads: "...guidance for installing and using radio frequency identification (RFID) passive tags..."	Consistency with the document's use of the term "passive UHF RFID tag" or "passive RFID tag"	Replace with the following: "...guidance for installing and using passive radio frequency identification (RFID) tags..."	Accepted. Action: Make the change.
Brian Verna, AFS-360	6	List of items this AC does not cover.	Clarity of scope to preclude battery assisted passive RFID tags.	Add: "battery assisted passive RFID tags" to the list of RFID tags this AC does not cover.	Accepted. Action: Add the following as the last sentence in paragraph 6: This AC also does not cover battery assisted passive RFID tags or active RFID tags.
Brian Verna, AFS-360	8.a.(1)		Would like to add a new subparagraph (c) for integrated nameplates similar to the one proposed in SAE AS 5678A.	Add the following: "(c) Integrated nameplate. An integrated nameplate is an identification or part marking that contains an embedded RFID chip or device that may be utilized in the same manner as other identification and markings as shown in 14 CFR § 21.182 and part 45, subpart B. The exterior or human readable portion of the integrated nameplate must conform with the regulatory requirements in 14 CFR § 21.182 and part 45, subpart B. The RFID enabled segment of the integrated	Accepted. The intent of the addition is to clarify the authority between the human readable and electronic enabled segment of the integrated nameplate. This will avert and preclude users to assume the electronic/RFID portion of the nameplate has the same authority as the human readable segment. Action: Add the following to paragraph 8.a.(1): (c) Integrated nameplate. An

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				<p>nameplate can contain the same part identification information (e.g., part birth record elements as defined in ATA Spec 2000 encoded in digital and printed in text formats). The human readable segment will act as the primary part marking and the RFID enabled segment is still considered ancillary part marking. An integrated nameplate is only interchangeable with an identical integrated nameplate."</p>	<p>integrated nameplate is an identification or part marking that contains an embedded RFID chip or device that may be utilized in the same manner as other identification and markings as shown in 14 CFR 21.182 and part 45, subpart B. The exterior or human readable portion of the integrated nameplate must conform to the regulatory requirements in 14 CFR 21.182 and part 45, subpart B. The RFID enabled segment of the integrated nameplate can contain the same part identification information (for example, part birth record elements as defined in Airlines for America (A4A), formerly known as Air Transport Association of America, Inc. (ATA), Spec 2000 encoded in digital and printed in text formats). The human readable segment will act as the primary part marking and the RFID enabled segment is still considered ancillary part marking. An integrated nameplate is only interchangeable with an identical integrated nameplate.</p>

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Brian Verna, AFS-360	9.f and 9.g.	<p>f. Electromagnetic Compatibility (EMC) requirements for RFID tags. Passive RFID tags incorporate electronic circuits that operate only when interrogated by the RFID tag reader. Therefore, no laboratory radio frequency emissions tests are required, as in the RTCA/DO-160, Environmental Conditions and Test Procedures for Airborne Equipment. No aircraft EMC tests are required for passive RFID tags installed on aircraft, aircraft engines, or propellers and the equipment, components, or parts of these aircraft, engines and propellers, or passive RFID tags permanently installed on galley carts.</p> <p>g. Environmental qualification (other than</p>	Simplification and clarity of compiling all environmental qualification paragraphs in one subparagraph. Note there is residual impact to Table 1 and remainder of section 9.	<p>I recommend the following for new section 9.f. which is a combination of the existing paragraphs 9.f. and 9.g.:</p> <p>"f. Environmental Qualification.</p> <p>(1) Passive RFID tags that meet the scope and applicability of this AC and meet SAE AS 5678A, Section 6.2 are exempt from radiated RF emissions testing. See SAE AS 5678A, Section 6.2 for more information.</p> <p>(2) Qualify passive RFID tags according to SAE AS 5678A, Section 6.3.5 and Table 3."</p>	<p>Partially accepted.</p> <p>Paragraph 9.f addresses no electromagnetic compatibility requirement for standalone and installed passive RFID tags. Paragraph 9.g addresses environmental qualification requirements of standalone passive RFID tags.</p> <p>Edit paragraphs 9.f. and 9.g as follows:</p> <p>f. Electromagnetic Compatibility (EMC) requirements for RFID tags. Passive RFID tags that meet the scope and applicability of this AC and meet SAE AS 5678A, Section 6.2 are exempt from laboratory RF emissions tests, like those in RTCA, Inc. document RTCA/DO-160, <i>Environmental Conditions and Test Procedures for Airborne Equipment</i>. No aircraft EMC tests are required for installed passive RFID tags.</p> <p>g. Environmental qualification (other than EMC). Qualify passive RFID tags according to SAE</p>

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		EMC). Follow SAE AS5678A, Section 6.3.5, for other environmental qualifications of passive RFID tags.			AS5678A, Section 6.3.5.
Brian Verna, AFS-360	9.h.	<p>h. Flammability and fire safety. RFID tags must meet the following flammability requirements. The adhesive or means of attachment of the RFID tags must be included in the flammability testing as part of meeting the flammability requirements.</p> <p>Long Tags (≥ 50 mm) All tags with a longest dimension greater than 50 mm shall comply pursuant to the flammability requirements specified in SAE AS5678A, and 14 CFR 25.853(a), including appendix F part 1(a)(1)(ii).</p>	Recommend either title the Table in 9.h. or break it out into separate subparagraphs, see next column.	<p>"h. Flammability and fire safety. RFID tags must meet the following flammability requirements. The adhesive or means of attachment of the RFID tags must be included in the flammability testing as part of meeting the flammability requirements.</p> <p>(1) All tags with a longest dimension greater than 50 mm shall comply pursuant to the flammability requirements specified in SAE AS 5678A, Table 3 and 14 CFR 25.853(a), and Appendix F part 1 paragraph (a)(1)(ii).</p> <p>(2) All tags with a longest dimension less than 50 mm shall comply pursuant to the requirements specified SAE 5678A, Table 3 and 14 CFR 25.853(a) and Appendix F part 1 paragraph (a)(1)(v).</p>	<p>Accepted.</p> <p>Action: Make the change.</p> <p>h. Flammability and fire safety. RFID tags must meet the following flammability requirements. The adhesive or means of attachment of the RFID tags must be included in the flammability testing as part of meeting the flammability requirements.</p> <p>(1) All tags with a longest dimension greater than 50 mm must comply pursuant to the flammability requirements specified in SAE AS 5678A, Table 3 and 14 CFR 25.853(a), and Appendix F part 1 paragraph (a)(1)(ii).</p> <p>(2) All tags with a longest dimension less than 50 mm must comply pursuant to the requirements</p>

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		Short Tags (< 50 mm) All tags with a longest dimension less than 50 mm shall comply pursuant to the requirements specified in 14 CFR 25.853 and appendix F part 1(a)(1)(v).			specified SAE 5678A, Table 3 and 14 CFR 25.853(a) and Appendix F part 1 paragraph (a)(1)(v).
Brian Verna, AFS-360	9.i.	first sentence reads: "The RFID tag installation must be permanent."	It is difficult to understand what "permanent" means when talking about an installed RFID tag that has a useful life and will have to be replaced. I recommend using a little more guidance from SAE AS 5678A Section 4.1	Recommend to replace the sentence with the following: "The RFID tag installation must be permanently-affixed to aircraft parts using approved adhesives, methods and processes."	Accepted. Action: Make the change.
Brian Verna, AFS-360	9.i.	Third sentence reads awkwardly: "Document the method you used and agreed to by the FAA before you submitted your request for finding compliance."	I am not 100% sure on how to change the sentence, but as written it is very difficult to understand. I propose to restructure the entire paragraph and revise the sentence.	Recommend replacing paragraph 9.i. with the following: "The RFID tag installation must be permanently-affixed to aircraft parts using approved adhesives, methods and processes. Document the mounting or attachment method you use before you submit your compliance documentation to the sections referenced in this paragraph. Installers of RFID tags must comply with 14 CFR 23, 25, 27, or 29.301, .303, .305, .307, .471, .561, .601,	Accepted. Action: Make the following change to paragraph 9.i: The installed RFID tag must be permanently-affixed to aircraft parts using approved adhesives, methods and processes. Describe the mounting or attachment method you use in the certification plan to show compliance with the 14 CFR

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				23.333, or 25.333 by design data review, analysis or test. You can demonstrate compliance with 14 CFR 23.787, 25.787, 25.789, 27.787, or 29.787 by design data review or analysis."	requirements referenced in this paragraph. Installers of RFID tags must comply with 14 CFR 23, 25, 27, or 29.301, .303, .305, .307, .471, .561, .601, 23.333, or 25.333 by design data review, analysis or test. You can demonstrate compliance with 14 CFR 23.787, 25.787, 25.789, 27.787, or 29.787 by design data review or analysis.
Brian Verna, AFS-360	9.j.	title reads "ICA <u>or</u> maintenance information."	recommend saying the title is for both, should both ICA update and maintenance logbook entry.	Recommend changing the "or" to and "and". Also, update the Table 1 entry to reflect the change.	Accepted. Action: Make the change.
Brian Verna, AFS-360	9.j.(1)	Paragraph 9.j.(1) reads: "If passive RFID tags are installed under a supplemental type certification, document the <u>instructions for continued airworthiness information in the ICA</u> . If the RFID tag has a service life limit, state <u>it</u> in the ICA. State if and when the RFID tag requires any other	Revise for clarity purposes.	Recommend replacing the first two sentences of paragraph 9.j.(1) with the following: "If passive RFID tags are installed under a supplemental type certificate <u>(STC), then the applicant must document the RFID's ICA in the applicable ICA section of the STC</u> . If the <u>passive</u> RFID tag has a service life limit, <u>then the applicant must state the mandatory replacement limit in the ICA, see 14 CFR § 43.10. The applicant must</u> state if	Accepted. Action: Clarify paragraph 9.j.(1) as follows: If passive RFID tags are installed under a supplemental type certificate (STC), then the applicant must document the RFID's ICA in the applicable ICA section of the STC. If the passive RFID tag has a service life limit, then the applicant must state the mandatory replacement

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		periodic maintenance. "		and when the <u>passive</u> RFID tag requires any other periodic maintenance."	limit in the ICA, see 14 CFR 43.10. The applicant must state if and when the passive RFID tag requires any other periodic maintenance.
Brian Verna, AFS-360	9.j.(2)	Comment applies to the entire paragraph 9.j.(2)	For accuracy and clarity purposes with respect to major and minor alterations, I recommend replacing paragraph 9.j.(2).	<p>Recommend replacing paragraph 9.j.(2) with the following two subparagraphs (one to address major alterations and one to address minor alterations):</p> <p>"(2) If the passive RFID tag is being installed as part of a major alteration, then the installer must comply with the maintenance record entry required by 14 CFR 49.3(a) and the form creation and disposition required by 14 CFR 43.9(d) and Appendix B. Your responsible Flight Standards District Office (FSDO) will use FAA Order 8300.16, <i>Major Repair and Alteration Data Approval</i>, and the current revision of AC 43-210 to give you further guidance for preparing the maintenance documentation.</p> <p>(3) If the passive RFID tag is being installed as part of a minor alteration,</p>	<p>Accepted.</p> <p>Action: Revised paragraph 9.j.(2) as follows:</p> <p>(2) If the passive RFID tag is being installed as part of a major alteration, then the installer must comply with the maintenance record entry required by 14 CFR 49.3(a) and the form creation and disposition required by 14 CFR 43.9(d) and Appendix B. Your responsible Flight Standards District Office (FSDO) will use FAA Order 8300.16, <i>Major Repair and Alteration Data Approval</i>, and the current revision of AC 43-210 to give you further guidance for preparing the maintenance documentation.</p> <p>(3) If the passive RFID tag is being installed as part of a minor alteration,</p>

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				then the installer must comply with the maintenance record entry required by 14 CFR 43.9(a). See the latest revision to FAA AC 43-210 for guidance on completing the required maintenance record entry."	then the installer must comply with the maintenance record entry required by 14 CFR 43.9(a). See the current revision of AC 43-210 for guidance on completing the required maintenance record entry.
Massoud Sadeghi & Sekhar Vaidyanath, ANM-110	8.b.	b.RFID tag functions with adverse effects that could cause catastrophic, hazardous/severe-major, or major failure conditions are outside the scope of this AC. Address them in a specific certification plan.	More emphasis of the requirements is needed.	b.RFID tag functions with adverse effects that could cause catastrophic, hazardous/severe-major, or major failure conditions are outside the scope of this AC. They must be addressed in a specific certification plan.	Accepted. Action: Make the change.
Massoud Sadeghi & Sekhar Vaidyanath, ANM-110	9	In addition to paragraph 8, Table 1 below lists the requirements necessary for installing passive RFID tags. The table identifies the sub-paragraphs detailing each specific requirement.	A clarification is needed.	In addition to paragraph 8, the specific requirements necessary for installing passive RFID tags are identified in detail in the following sub-paragraphs.	Accepted. Action: Changed paragraph 9 as follows: In addition to paragraph 8, the specific requirements necessary for installing passive RFID tags are described in detail in the following sub-paragraphs.

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Massoud Sadeghi & Sekhar Vaidyanath, ANM-110	9	Table 1	Table 1 should be deleted. It is not needed, does not provide any additional information and may cause confusion in the future revisions.	Delete Table 1.	Accepted. Action: Make the change.
Massoud Sadeghi & Sekhar Vaidyanath, ANM-110	9.b.	Assess the installed RFID tag safety pursuant to 14 CFR 23, 25, 27, or 29.1309.	Clarification and completeness of the requirements are needed.	Assess the installed RFID tag safety pursuant to sections 23.1309, 25.1309, 27.1309, 29.1309, 33.28, 33.75 and/or 35.23.	Accepted. Action: Make the change.
Massoud Sadeghi & Sekhar Vaidyanath, ANM-110	9.b	Identify the hazard levels associated with installing and using the RFID tags. Determine the maximum acceptable levels of “probability of failure” for the tag as installed on the aircraft. Show that the tag complies with safety objectives.	This change is for better readability.	The applicant should perform a system safety assessment (SSA) to establish the hazards associated with the proposed installation. The applicant should develop the SSA in accordance with the guidance provided in AC 25.1309-1, 23.1309-1, AC 27-1, or AC 29.2, and SAE Aerospace Recommended Practice (ARP) 4761, Guidelines and Methods for Conducting the Safety Assessment Process on Civil Airborne Systems and Equipment.	Accepted. Action: Make the change.

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Massoud Sadeghi & Sekhar Vaidyanath, ANM-110	9b.	Your safety analysis of the design and installation of RFID tag should demonstrate that the tag failure or malfunction will not have a greater adverse impact than a “minor effect,”	This change is for better readability, and the concept of "minor effect" can be explained with a probability of failure requirement	The probability of a failure that would lead to the loss of all functions as they are described in paragraph 8. (Intended Functions of RFID tags) of this AC shall be less than or equal to 10 ⁻³ per flight hour.	Not accepted. An installed RFID tag does not provide all of the functions described in paragraph 8. Paragraph 9.b addresses failure and malfunction, not loss of function, of the tag. In paragraph 9.b, the concept of minor safety effect is used since for part 23 airplanes the probability of failure requirement is scaled with the different classes of airplanes. No change made.
Massoud Sadeghi & Sekhar Vaidyanath, ANM-110	9b.	None	This is added as this concept was missing	Failure of the installed RFID tag should not degrade the integrity of any essential or critical system installed in the aircraft with which the RFID tag interfaces.	Accepted. Action: Make the change.
Massoud Sadeghi & Sekhar Vaidyanath, ANM-110	9.e.(2) Note:	Performing a minor alteration does not invalidate the existing approval to the parts and components. We do not require a part number "roll."	There may be a unique case in which a part number change would be necessary.	Performing a minor alteration does not invalidate the existing approval to the parts and components. In that case a part number "roll" may not be required.	Accepted. Revised paragraph 9.e.(2) note as follows: Performing a minor alteration does not invalidate the existing approval to the parts and components. In that case, a part number "roll" is not required.

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Massoud Sadeghi & Sekhar Vaidyanath, ANM-110	9.e.	10.e Configuration control	"e." is used twice in numbering subparagraphs in paragraph 10.	Renumber the subparagraphs.	Accepted. Action: Make the change.
Massoud Sadeghi & Sekhar Vaidyanath, ANM-110	9.e Configuration control	...to enter the RFID tag('s)...	Typo.	...to enter the RFID tag's...	Accepted. Action: Make the change.
Massoud Sadeghi & Sekhar Vaidyanath, ANM-110	9.f.	Passive RFID tags incorporate electronic circuits that operate only when interrogated by the RFID tag reader. Therefore, no laboratory radio frequency emissions tests are required, as in the RTCA/DO-160, Environmental Conditions and Test Procedures for Airborne	The need for testing should be established as an outcome of the safety assessment.	The need for laboratory radio frequency emissions tests as in RTCA/DO-160 Environmental Conditions and Test Procedures for Airborne Equipment, should be established from the safety assessment described in paragraph 9.b.	Not accepted. The SAE G-18, Passive RFID for Aerospace Applications Committee, conducted analysis and RF emission testing of passive RFID tags and demonstrated there is no harmful interference from backscatter RF using a modified test setup from RTCA DO-160E, Section 21 Radiated Emissions. The results were documented in SAE AS5678. Furthermore, the passive RFID tags

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		Equipment. No aircraft EMC tests are required for passive RFID tags installed on aircraft, aircraft engines, or propellers and the equipment, components, or parts of these aircraft, engines and propellers, or passive RFID tags permanently installed on galley carts.			<p>incorporate electronic circuits that operate only when interrogated by the RFID tag reader when the aircraft is on the ground, off the runway and flight operation is completed.</p> <p>The FAA has accepted this policy and documented in AC 20-162. Passive RFID tags that meet the scope and applicability of this AC and meet SAE AS 5678A, Section 6.2 are exempt from laboratory RF emissions tests, like those in RTCA/DO-160.</p>
Massoud Sadeghi & Sekhar Vaidyanath, ANM-110	9.i.	i. Mounting and attachment integrity. The RFID tag installation must be permanent. Installers of RFID tags must comply pursuant to 14 CFR 23, 25, 27, or 29.301, .303, .305, .307, .471, .561, .601, .609, 23.333 or 25.333 by design data review, analysis and/or test. Document the method you used and agreed to by the FAA before you submitted	It is difficult to clearly see the requirements identified in this subparagraph. The first sentence should be restructured to clearly identify each applicable sections associated with each part.		<p>Accepted.</p> <p>Clarified paragraph 9.i as follows:</p> <p>i. Mounting and attachment integrity. The installed RFID tag must be permanently affixed to aircraft parts using approved adhesives, methods and processes. Describe the mounting or attachment method you use in the certification plan to show compliance with the 14 CFR requirements referenced in this paragraph. Installers of RFID tags must comply with 14 CFR</p>

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		your request for finding compliance. You can demonstrate compliance with the requirements pursuant to 14 CFR 25.789 and 23.787, 25.787, 27.787, or 29.787 by reviewing and analyzing the design data.			23/25/27/29.301, .303, .305, .307, .471, .561, .601, 23.333, or 25.333 by design data review, analysis or test. You may demonstrate compliance with 14 CFR 23.787, 25.787, 25.789, 27.787, or 29.787 by design data review or analysis.
Tony Peplowski, ANM-108	Subject	Subject: Airworthiness Approval of Passive Radio Frequency Identification (RFID) Tags.	The AC is specific, as defined in paragraph 6 Scope, to only cover passive Ultra High Frequency (UHF) RFID tags. This information should be included in the Subject.	Subject: Airworthiness Approval of Passive Ultra High Frequency (UHF) Radio Frequency Identification (RFID) Tags	Accepted. Changed AC subject as follows: Subject: Airworthiness Approval of Installed Passive Ultra High Frequency (UHF) Radio Frequency Identification (RFID) Tags
Tony Peplowski, ANM-108	Para 2 Audience, Para 6 Scope, & Para 8 Airworthiness Considerations	Para 2 'Audience' and Para 8a.(1) Suggest different scope/applicability for this AC.	Para 2 "Audience" indicates this AC scope may include RFID tags on aircraft, aircraft engines, propellers, parts and components thereof.. While Para 8.a(1) suggests it may only include parts (e.g., 'Part Marking', reference to 14 CFR 45.15 or 45.16)	Provide clear scope of the AC. If the scope of this AC is to apply to aircraft, aircraft engines, propellers, parts and components thereof, this information should be included in para 6 'Scope' and Para 8 a.(1) multiple places. should be revised to 'Product and Part marking' and should reference 14 CFR 45 instead of just 45.15 & 45.16	Accepted. Action: Make the change.

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Tony Peplowski, ANM-108	Para 8.a.(1)(a)	Second sentence.	Second Sentence should be revised for clarity to differentiate when RFID tag markings may be considered as ancillary	Possible revision " RFID tagging is not ancillary when the aircraft, engine, propeller or parts and components thereof are identified via RFID tag as critical or life-limited'	Accepted. Revised the sentence as follows: RFID tag part marking is not considered ancillary when the aircraft, engine, or propeller components or parts are identified via RFID tag as critical or life-limited.
Tony Peplowski, ANM-108	Para 9.b.	Last sentence.	The last sentence should identify normal operation, failures or malfunctions of the RFID tag safety Analysis of	Possible revision "Your safety analysis of the design and installation of RFID tags should demonstrate that normal operation, failures, or malfunctions of the RFID tag will not have a greater adverse impact than..."	Accepted. The sentence was revised as: Your safety analysis of the design and installation of RFID tag should demonstrate that the tag failure or malfunction will not have a greater adverse impact than a "minor effect" according to AC 23.1309-1, AC 25.1309-1, AC 27-1, or AC 29.2.
Ruth Hirt, ACE-114	8.a.(1)	"...Passive RFID part marking is not an	The paragraph starts by stating it is not an	Recommendation - (1) remove the sentence after "Part	Not accepted.

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		alternative to meeting the part marking requirements of 14 CFR 45.15 or 45.16."	<p>alternative to meeting 14 CFR 45.15 or 45.16. However, in the (b) subparagraph, "..those tags must comply pursuant to the requirements of 14 CFR 45.15 or 45.16"</p> <p>It seems to be contradicting by requesting RFID tags to comply to the requirements of 14 CFR 45.15 or 45.16 in 8.a.(1)(b), yet, the leading paragraph declares it is not an alternative.</p>	<p>marking", or, (2) include additional guidance regarding "alternative" vs "compliance" to 14 CFR 45.15 or 45.16.</p>	<p>According to paragraph 8.a.(1), passive RFID part marking is not an alternative to meeting the part marking requirements of 14 CFR 45.15 or 45.16.</p> <p>According to paragraph 8.a.(1)(a) on ancillary part marking, the FAA considers the RFID tags and data ancillary if they are performing a non-required, non-essential function. However, RFID tag part marking is not considered ancillary when the aircraft, engine, or propeller components or parts are identified via RFID tag as critical or life-limited.</p> <p>So, when using RFID tags for part marking of aircraft, engine, or propeller critical or life-limited components, those tags must comply with the requirements of 14 CFR 45.15 or 45.16.</p>

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Kyle Gustafson, ANE-141	9.b	Safety Assessment	Section does not make reference to 14 CFR 33 safety assessment requirements (33.75) or the associated Advisory Circular.	Include reference to 33.75 and AC 33.75	Accepted. The paragraph was revised as follows: Assess the installed RFID tag safety pursuant to 14 CFR 23.1309, 25.1309, 27.1309, 29.1309, 33.28, 33.75 and/or 35.23..... The applicant should develop the SSA in accordance with the guidance provided in AC 25.1309-1, AC 23.1309-1, AC 27-1, AC 29.2, or AC 33.75, Your safety analysis of the design and installation of RFID tag should demonstrate that the tag failure or malfunction will not have a greater adverse impact than a “minor effect” according to AC 23.1309-1, AC 25.1309-1, AC 27-1, AC 29.2 or AC 33.75.
Kyle Gustafson, ANE-141	7a	RFID Tags Covered by this AC (General Characteristics)	The purpose of this AC is to provide guidance for installing using <u>passive</u> RFID tags on aviation products and equipment. In section 7.a (General Characteristics), this AC states that RFID tags		Accepted. There are passive RFID tags that have the capability to measure temperature, pressure, humidity and strain. However, they cannot log or record unless they have a power source such as a battery. Those

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DOCUMENT COMMENT LOG**

Originating Office: AIR-130	Document Description: AC 20-162A, Airworthiness Approval of Passive RFID Tags	Project Lead: Lee Nguyen	Reviewing Office:	Date of Review:
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Commenter	Para. No.	Referenced Text	Comment	Recommendation	Disposition
			<p>“have varying data storage capacity and field programmable utility. Many RFID tags also incorporate means to monitor time-in-service, temperature, humidity, or other conditions.” I do not understand how a passive device with no internal power source has the capability to perform these functions. This AC only provides guidance on passive RFID tags. The functions described in this section seem to describe the capabilities of active RFID tags. This adds confusion to the document.</p>		<p>functions require a power source such as a battery.</p> <p>Deleted this sentence to avoid confusion.</p>
Kyle Gustafson, ANE-141	8.b	All	<p>In Section 8.2.b, this AC states that “other RFID functions include temperature logging, vibration monitoring, weight records, or time-in-service computation done by the RFID itself. Again, I do not understand how a</p>		<p>Accepted.</p> <p>See disposition to comment above.</p> <p>Deleted to avoid confusion.</p>

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Commenter	Para. No.	Referenced Text	Comment	Recommendation	Disposition
			passive device can perform such functions. It is my understanding that these functions would be performed by an active RFID device. If so, I would consider removing this information from the AC as it adds confusion to the document.		
Kyle Gustafson, ANE-141	All	All	This AC needs to have more consistency as to how it refers to RFID devices. At different times throughout this AC, RFID tags are referred to as “passive RFID tags,” “RFID tags,” Ultra High Frequency RFID tags,” and “installed RFID tags.” Is there a difference?		Accepted. Action: Use the term “installed passive RFID tag”, where appropriate, in the AC.