

	<h1>AVS</h1> <h2>Quality Management System</h2>	QPM # AIR-001-007-F1	Revision 0
		Title: Document Review Log	Date: June 19, 2009

1. Document No.: DRAFT AC 33-2C General Type Certification Guidelines for Turbine Engines	2. Project Manager: Marc Bouthillier	3. Reviewing Office: Honeywell	4. Date of Review: March 7, 2013	5. Date of Disposition: April 9, 2013
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Instructions for Completing the Document Review Log

Blocks 1 & 2: To be completed by project manager prior to sending out for comments.
Blocks 3 & 4: To be completed by reviewing office. Enter office symbol, reviewers name and phone number.
Block 5: To be completed by project manager after receiving comments from reviewing office. Enter date of disposition.
 The below columns are to be completed by the reviewing office, except for the “Disposition” column.
 Project manager’s disposition in comments in the last column below. Enter the reasons for non-incorporated comments. Identify each disposition as:

- **Adopted;**
- **Partially Adopted;**
- **Non-Concur;**
- **Concur but Outside of Scope (Will be considered in next change/revision); or**
- **Answer to Question or Statement.**

Item No:	Page and Paragraph No:	Comment:	Reason:	Recommendation:	Disposition:
1.	P. 5 Para. (7)	take exception to listing approved oils by Brand Name.	We don't want to have to revise the TCDS for changes to oil brand names.	Leave it as only approved oil type and specification. Approved brands are listed in the EMM and Installation manual.	Not Concur. No changes. TCDS has options does not require brands to be listed if other bookkeeping method is agreed.

	<h1 style="margin: 0;">AVS</h1> <h2 style="margin: 0;">Quality Management System</h2>	QPM # AIR-001-007-F1	Revision 0
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2.	P. 8 Table 1 Note 12	Not all Service Bulletins are appropriate to be listed on the TCDS as bulletins are routinely updated and modified as additional data are acquired.	Other Service Bulletins are added and canceled on an ongoing basis. We do not need to clutter the TCDS with all of these SB changes.	Include only the SB's for Life Limited Parts and Periodic Inspection Intervals, for those engines pre-Amendment 11, which do not have an AWLS Chapter 5 in the EMM.	Not Concur. No changes. TCDS has options does not require all SBs to be listed, only those chosen by the OEM/FAA for specific reasons.
3.	P. 8 Table 1 Note 13	This information is best left in the Installation manual and operating instructions	The TCDS is not a routine document referenced in daily routine operations	Make note on the TCDS that there are special operating procedures and refer the reader to the IM and OPS instructions	Not Concur. No changes. Special ops should be listed in both places.
4.	P. 8 Table 1 Note 14	Special Repairs and overhaul limitations can be reworked, rescheduled, or changed often	These need to be in the approved maintenance or overhaul manuals	That these exist should be noted, but refer the reader to the EMM and/or OHM	Agree. Deleted.
5.	P. 9 Table 1 Note 14	This requirement is redundant.	this is already covered by Note 12 and possibly Note 15 (EMM having AWLS Chapter 5)	Remove the note.	Comment not understood. No changes. Redundancy not found.
6.	P. 9 Table 1 Note 18	This is only applicable if there is identity between the civil and military versions	This is not a normal situation as there are usually notable differences in the two applications	Clarify the note to assure the applicant recognizes this applies only when the two are identical.	Comment not understood. No changes. Identity not an issue.
7.	P. 12 Para. 9.	Provide a part number option on the information	Part number distinction can be a significant discriminator.	Change wording to: "...may wish to label a certain engine model, part number, or serial number to designate it..."	Agree. Part number added to listing.

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	<h1>AVS</h1> <h2>Quality Management System</h2>	QPM # AIR-001-007-F1	Revision 0
Title: Document Review Log		Date: June 19, 2009	Page 3 of 5

8.	P. 14, Para. g	The definition of "... at least one-half of the maximum expected mission flight time." Is a changeable definition after TC has been issued	The TC applicant can only certify to what is known at the time of application. The mission flight time is a changeable definition by the operator after TC.	Recommended Change to the wording: "Section 33.67(b)(5) requires the applicant to show that, from the first sign of impending filter blockage, the engine will operate satisfactorily for a period acceptable to the Administrator. A duration of at least one-half of the maximum expected mission flight time identified at the time of certification is considered acceptable."	Agree in part. Text revised for clarity. Many limits and missions definitions are changeable; nothing new.
9.	P. 16, Para. k (4)	Full power surges are usually the result of engine damage (including bird/FOD ingestion), or severe compressor deterioration, or control system anomalies.	During development and testing, a great deal of work is done to insure adequate engine operability under worst case conditions. Stability audits are done to show minimum acceptable surge margin is retained under the combination of all aggravating conditions. Why subject an engine which conforms to the intended type design to an abnormal event?	Change the wording from "...without damage..." to "...without causing a hazardous engine event as defined in 33.75".	Agree in part. Text revised to better describe a performance based criteria. Dropped the TO power test.

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		Title: Document Review Log	Date: June 19, 2009

10.	P. 16, Para. k (6)	Is this a bench durability test or an engine test? What about a “continuous duty” ignition system, would you have to run it until failure, or run multiples to establish a statistically valid nominal life for continuous duty?	Proper function is normally demonstrated during engine development and testing per 33.87 and 33.90, plus the manufacturer’s bench and environmental tests per DO-160.	Clarify the intent for this testing, particularly with regard to possible continuous duty systems.	Agree in part. Text revised for clarity. Lead in statement allows variable methods of compliance (e.g., 33.91).
11.	P. 4, Para. 7.e.(4) (a), (b),(c): Item 3	Item 3 states the TCDS should include flat rating ambient temps	Our typical practice has been to not do this and rely on the Installation Manual to define these.	Suggest adding a statement that these can be provided in the reference IMs instead.	Not concur. This is a limit value that is of the type often placed in a TCDS.
12.	P. 10, Para. 8.a.(3)	states that engine used for restricted category aircraft do not need to meet part 33, but it says that design changes must meet part 33.	How would the paperwork be handled for this when the engine has no TC?		Agree text is confusing. Text revised for clarity and to send the reader to Order 8110.56 for instruction on how to make design changes.
13.	P. 14, Para. f. 33.66.	The wording as shown is unclear regarding the ‘orifice’ term.	A change to clarify the intent would appear to be needed.	Suggested wording: “The need to restrict bleed airflow should either be incorporated in the engine type design, such as by an orifice, or otherwise specified in the engine installation instructions and engine TCDS.”	Agree. Text revised in this regard.

	<h1>AVS</h1> <h2>Quality Management System</h2>	QPM # AIR-001-007-F1	Revision 0
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14.	P. 15, Para. j 33.88, Item 2.	Item (2) should have the first sentence reworded.	It indicates that maximum permissible rpm is the maximum steady-state rpm and that the TCDS temperature limit is an exhaust temperature. Some engine measure an interturbine temp (ITT). In other certification compliance max permissible has been defined as max transient.	Suggested rewording such as: "The maximum permissible rpm refers to the highest approved transient rpm limit specified in the engine TCDS and the maximum indicated gas temperature is the highest approved steady-state temperature limit specified in the engine TCDS."	Agree in part. Text revised for clarity, accuracy and to be consistent with the rule.
15.	P. 15, Para. j 33.88, Item 3.	Item (3) should be reworded.		Change the end of the last sentence to say "...to determine the corresponding overtemperature indicated gas temperature value."	Agree in part. Overall text revised to be clearer in this regard.
16.	P. 16, Para. j 33.88, Item 4.	Applicable components include "gearbox".	Gearbox does not appear to be appropriate for a turbine engine overtemperature test.	Remove the "gearbox" reference.	Agree. Text revised to delete reference to gearbox.
17.	P. 16, Para. j 33.88.	Items (2) and (3) both include "altitude envelope". So Item (2) is redundant and not needed.		Remove Item (2).	Agree. Redundant line deleted.

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