



# Federal Aviation Administration

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## Memorandum

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To: See Distribution Lists

From: David W. Hempe, Manager, Aircraft Engineering Division, AIR-100 *DW*

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Subject: Fuel Tank Flammability Reduction (FTFR) Supplemental Type Certificate (STC) Limitation

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### Background

The Fuel Tank Flammability Reduction (FTFR) final rule became effective on December 26, 2008. The Title 14 Code of Federal Regulations (14 CFR) part 26 portion of this rule provides requirements that must be met by certain design approval holders and applicants for changes to type certificates affecting fuel tank flammability. This memorandum addresses how we issue supplemental type certificates (STCs) affected by § 26.35(a)(2) and (a)(3) to applicants. In certain cases, § 26.35 allows us to issue an STC to these applicants before they show us compliance with its requirements. When we do this, we should add one or more limitations to the STC. We wrote this policy memorandum to guide you on adding those limitations.

Section 26.35(b) requires certain STC applicants to submit for approval, to the FAA Oversight Office, a flammability exposure analysis of auxiliary fuel tanks or other affected fuel tanks. STC applicants must submit this analysis by December 27, 2009, or before we issue the certificate, whichever occurs later.

Section 26.35(c) requires certain STC applicants to submit for approval, to the FAA Oversight Office, an assessment of the fuel tank system as modified by their design change. The assessment must identify any features of the design change that compromise any critical design configuration control limitation (CDCCL) applicable to any airplane on which the design change can be installed. STC applicants must submit this assessment before June 26, 2011, or before we issue the certificate, whichever occurs later.

Section 26.35(d) requires certain STC applicants to submit for approval, to the FAA Oversight Office, design changes and service instructions for flammability impact mitigation means that

bring a design change into compliance with the CDCCL. Section 26.35(d) also requires certain other STC applicants to comply with § 25.981 at Amendment 25-125, and certain other STC applicants to comply with § 26.33. Section 26.35(e)(2) requires these STC applicants to comply with § 26.35(d) before December 26, 2012, or before we issue the certificate, whichever occurs later.

We decided to add limitations to STCs when applicants are going to comply with § 26.35 after we issue the STC. These limitations prevent installation after certain dates if, by then, the STC holder hasn't met the § 26.35 requirements. The limitations will also allow the STC holder and us to see that the holder still needs to provide, as applicable, a flammability exposure analysis, impact assessment, design changes, and service instructions according to § 26.35.

Some of the § 26.35 compliance dates represent the date that applicants must submit compliance documents to the FAA. In these cases, the dates by which applicants must meet the applicable § 26.35 requirements (to allow installation of the STC) are based on two things: FAA review and approval times identified in Order 8110.104, *Responsibilities and Requirements for Implementing Part 26 Safety Initiatives*, and an estimated 4 weeks for the STC holder to incorporate any changes we may require. Section 26.35 has another compliance date that represents the date when we must approve compliance documents. We should not issue an STC on or after this date if we haven't found compliance.

Some of the § 26.35 compliance dates represent the date that compliance documents must be submitted to, not approved by, the FAA. For these cases, the dates by which the applicable § 26.35 requirements must be met to allow installation of the STC are based on FAA review and approval times identified in Order 8110.104 and an estimated 4 weeks for the STC holder to incorporate any changes that may be required by the FAA. Section 26.35 has another compliance date that represents the date when compliance documents must be approved, as opposed to submit by the applicant. STCs should not be issued on or after this date if compliance has not been found.

Add the following statements, as applicable, to the STC limitation section when compliance with § 26.35 will occur after we issue the STC. The goals of these limitations are (1) to prevent any installations after the indicated dates, if an STC holder has not met the § 26.35 requirements, and (2) to prevent grounding any airplanes that already have the STC installed.

#### **STC Limitation for Flammability Exposure Analysis Required by § 26.35(b)**

For STCs we issue before December 27, 2009, add the following to the limitations section if the applicant hasn't submitted a flammability exposure analysis required by § 26.35(b) to the FAA Oversight Office:

*Do not install this modification after March 19, 2009 unless the flammability exposure analysis required by 14 CFR 26.35(b) has been FAA-approved.*

After December 26, 2009, don't issue the STC if no flammability exposure analysis was submitted to the FAA Oversight Office.

#### **STC Limitation for Impact Assessment Required by § 26.35(c)**

For STCs we issue before June 26, 2011, add the following to the limitations section of an STC that meets the criteria of § 26.35(a)(3)(iii) if the applicant hasn't submitted an impact assessment required by § 26.35(c) to the FAA Oversight Office:

*Do not install this modification after September 16, 2011 unless the impact assessment required by 14 CFR 26.35(c) has been FAA-approved.*

After June 25, 2011, don't issue the STC if no impact assessment was submitted to the FAA Oversight Office.

#### **STC Limitations for Design Changes and Service Instructions Required by § 26.35(d)**

For STCs we issue before December 26, 2012, add the following to the limitations section of an STC that meets the criteria of §§ 26.35(a)(2) or 26.35(a)(3)(i) if the applicant hasn't shown compliance with § 25.981 at Amendment 25-125, according to § 26.35(d)(2) and (e)(2):

*Do not install this modification after December 25, 2012 unless (1) the FAA has found compliance with § 25.981 at Amendment 25-125, according to § 26.35(d)(2) and (e)(2) for this STC, and (2) service instructions for design changes necessary to meet § 25.981 at Amendment 25-125 and associated airworthiness limitations have been approved for installations of this STC that occurred before December 26, 2012.*

For STCs we issue before December 26, 2012, add the following to the limitations section of an STC that meets the applicability criteria of § 26.35(a)(3)(ii) if the applicant hasn't shown compliance with § 26.33, according to § 26.35(d)(3) and (e)(2):

*Do not install this modification after December 25, 2012 unless (1) the FAA has found compliance with § 26.33, in accordance with § 26.35(d)(3) and (e)(2) for this STC, and (2) service instructions for design changes necessary to meet § 26.33 and associated airworthiness limitations have been approved for installations of this STC that occurred before December 26, 2012.*

For STCs we issue before December 26, 2012, add the following to the limitations section of an STC that meets the criteria of § 26.35(a)(3)(iii) if we haven't found compliance with § 26.35(d)(1):

*Do not install this modification after March 20, 2013 unless this STC complies with § 26.33(d)(1).*

To install an STC after a compliance date in the limitation(s) above, the STC installer must have an FAA letter stating that the flammability exposure analysis, impact assessment and/or requirements of § 26.35(d), as applicable, were approved by the FAA Oversight Office. The FAA Oversight Office should send this letter to the STC holder and tell them to give it to each STC installer.

Once the STC holder has met the § 26.35 requirements, the STC doesn't need to be revised to remove the limitation(s). But if the STC needs to be amended, we may remove the limitation(s) at that time.

### **STC Transmittal Letter**

Finally, use the following wording (or similar) in the FAA letter transmitting the STC:

*"Title 14 of the Code of Federal Regulations 26.35 requires you to complete certain actions associated with this supplemental type certificate (STC). When you receive this STC, you must [include the statements that apply]:*

- *Submit, for approval by this office, the flammability exposure analysis required by § 26.35(b). Meet this requirement no later than December 26, 2009.*
- *Submit, for approval by this office, the impact assessment required by § 26.35(c). Meet this requirement no later than June 25, 2011.*
- *Demonstrate compliance with § 25.981 at Amendment 25-125 for this STC according to § 26.35(d)(2). Provide any service instructions for design changes necessary to meet this regulation and associated airworthiness limitations for installations of this STC before December 26, 2012. Meet these requirements no later than December 25, 2012.*
- *Demonstrate compliance with § 26.33 for this STC according to § 26.35(d)(3). Provide any service instructions for design changes necessary to meet this regulation and associated airworthiness limitations for installations of this STC before December 26, 2012. Meet these requirements no later than December 25, 2012.*
- *Demonstrate compliance with § 26.35(d)(1) no later than December 25, 2012.*

*Since you have not yet shown compliance to § 26.35, we added limitations to prevent installation of this STC modification after certain dates. These limitations remind you and us of these open compliance items, and give us visibility of them. Note that these limitations apply to you, the STC holder, and not to any person who may operate an*

*airplane with this installed STC modification. The FAA will likely pursue enforcement action on you (not operators) if you do not show compliance to § 26.35 by the dates in the limitations.*

*If you have any questions regarding these requirements, please contact [ACO focal] at [phone number].”*

For questions regarding this memo, please contact Chris Carter at (202) 493-4835, or by email at [chris.carter@faa.gov](mailto:chris.carter@faa.gov) or Mike Thompson at (425) 227-1157, or by email at [michael.t.thompson@faa.gov](mailto:michael.t.thompson@faa.gov).

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