

AEA ADS-B Field Approval Discussion

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Timothy W. Shaver

AFS-360 Avionics Maintenance Branch



Federal Aviation
Administration



ADS-B Field Approval

- **Policy Letter - Approval for ADS-B Out Systems**



**Federal Aviation
Administration**

Memorandum

Date: AUG 30 2010
To: See Distribution List
From: David W. Hempe, Manager, Aircraft Engineering
Carol Giles, Manager, Aircraft Maintenance Div
Prepared by: Chip Bulger, AIR-130 and Chris Parfitt, AFS-36
Subject: Approval for ADS-B Out Systems

The purpose of this memorandum is to explain the FAA's policy and non-interference installations of ADS-B Out systems.

What is the policy on approvals for ADS-B Out systems?

Until further notice, ADS-B Out equipment meeting the requirements of TSO-C154c shall only be installed when approved, using the type approval (ATC) or supplemental type certificate (STC) process. This policy applies to transmission equipment designed to the RTCA DO-260B and DO-260C ADS-B systems may not be approved as a major alteration with field approvals are not appropriate. It is expected that Organization Designation Authority (ODA) Management Teams (OMTs) will have significant experience in STC, TC, and ATC projects until the ODA holder has demonstrated

Why aren't we allowing other approvals at this time?

The FAA agrees that other approvals, including field approvals, will be integral tools in equipping many of the aircraft that will need to meet the new ADS-B Out rule mandate. However, because both the final rule and Advisory Circular (AC) 20-165 for installation guidance have recently been issued, the FAA feels that TC, ATC, or STC design approval is more appropriate to ensure consistent performance. It is expected that as both the FAA and industry gain experience on these initial installations, that the FAA will allow other approvals, including field approvals.

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Challenges

- **As presented yesterday, even after a “radio pair” has been shown to comply with 15 CFR 91.227, there are aircraft installation issues that can cause compliance problems.**
- **When is a follow-on approval appropriate?**
- **How are differences evaluated?**
- **Who can do the evaluation/justification?**

Field Approvals

- **Subject “radio pairs” must be evaluated and approved by an STC on a similar model**
 - Determination of compliance to 14 CFR 91.227
- **Installation and integration of systems**
 - Antenna(s), interconnection and location
 - Source systems must be same as called out in STC
 - Source system interconnection
 - AIR/GND source selection
 - Strapping

Installation Differences

- **Differences between installations must be assessed**
 - Determine if testing/evaluation can be accomplished to prove system still meets 14 CFR 91.227 requirements.
 - Ground testing? Evaluation flights?
- **As with any field approval, additional “approved data” may be necessary to cover installation differences**
- **ICAs and AFM/AFM-S acceptance/approval coordination**

Going forward – Discussion

- **Repair station capability list**
 - Evaluate repair station capability to do installation, identify/evaluate differences and accomplish testing.
 - Establish facility, skill, training, tooling and test equipment requirements
- **Unintended policy consequences or “What have we done to you now...”**