

**Exploring FAA New  
National Policy  
Which created the new  
“Special” DER delegation  
“RS-DER”  
FAA Notice N8110.111**

**“Authorizing Designated Engineering  
Representative (DERs) to Approve Repair  
Specifications”**



# The FAA issued a New National Policy N8110.11

- **Effective Issue date 4-16-10**
- **Effective date 7-16-2010**
- **Will be incorporated into 8110.37E - planned due for finale release in April 2011**
- **This NOT a different DER, but rather a “Special Delegation” authorized by the FAA.**
- **Existing DER’s that meet qualifications may apply for this new delegation.**
- **Presently there are less than 40 RS-DER’s across the seven (7) applicable delegated areas.**



## NOTICE

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

N 8110.111

National Policy

Effective Date:  
04/16/2010  
Cancellation  
Date: 04/16/2011

SUBJ: Authorizing Designated Engineering Representative (DERs) to Approve Repair Specifications

1. **Purpose of this Notice.** This notice specifies the requirements for authorizing designated engineering representatives (DERs) to manage and approve the technical data in repair specifications (RS).

a. This notice is not retroactive. Previous approvals will not be re-evaluated to comply with this process unless obvious regulatory non-compliance is discovered. However, all new repair specifications will be expected to comply with these requirements within 3 months of the effective date.

b. This notice does not affect the way that design approval holder (DAH) data for multiple use, non serial number specific repair data is approved for their products.

2. **Audience.** We've written this notice for aircraft certification office (ACO) managers, engineers and DERs.

3. **Where to Find This Notice.** You can find and download this notice on the Federal Aviation Administration's (FAA) Directives Management website at:  
[http://www.faa.gov/regulations\\_policies/orders\\_notices/](http://www.faa.gov/regulations_policies/orders_notices/)

4. **How this Notice Affects Organization Designation Authorizations (ODA) Approvals.** Major repair, alteration and airworthiness (MRA) organization designation authorizations (ODA's) can manage the approval of a RS as defined in this notice. For MRA ODA's we, the FAA, will sign the RS, in addition to the ODA statement of completion, when the ODA unit has approved the data and the RS meets the requirements of this notice. It is the MRA ODA administrator's responsibility to ensure that all requirements of this notice are met and the RS is included in the ODA's quarterly activity report or as required by their procedures manual.

5. **Background.**

a. Title 14 of the Code of Federal Regulations (14 CFR) part 183 allows us to appoint individuals to represent the FAA. For many years, we've authorized DERs, by special delegation, to approve data for major repairs.

Distribution: Electronic

Initiated By: AIR-140

# The FAA RS-DER Creation Purpose

- 1. Purpose of this Notice. This notice specifies the requirements for authorizing designated engineering representatives (DERs) to manage and approve the technical data in repair specifications (RS).**
  - a. This notice is not retroactive. Previous approvals will not be re-evaluated to comply with this process unless obvious regulatory non-compliance is discovered. However, all new repair specifications will be expected to comply with these requirements within 3 months of the effective date.**
  - b. This notice does not affect the way that design approval holder (DAH) data for multiple use, non serial number specific repair data is approved for their products.**



## What has changed with the new national policy N8110.111?

**Background.** a. Title 14 of the Code of Federal Regulations (14 CFR) part 183 allows us to appoint individuals to represent the FAA. For many years, we've authorized DERs, by special delegation, to approve data for major repairs.

b. The FAA has identified a need to require certain multiple-use, non serial number specific, major repair data to be approved, and authorized in the form of repair specifications. Because of this ACOs may delegate coordination and approval of the technical data in the repair specifications to DERs. The ability to delegate multiple, non serial number specific, major repair data already exists in FAA Order 8110.37, Designated Engineering Representative (DER) Handbook. This notice defines the qualifications, roles, and responsibilities of DERs granted this authority. This **notice does not** apply to DAHs approving data for their products.



## Excerpts from N8110.111

**c. To support this need for RS approval and authorization, we are:**

- (1) Creating a new authority for RS under the special delegation for major repairs, and**
- (2) Changing how specially delegated DERs approve data for multiple-use repairs.**

**d. DERs granted the specific authority to manage and approve technical data in the repair specifications are called repair specification – designated engineering representative (RS-DERs) in this notice. RS-DERs are not a new type of DER. An “RS-DER” is a shortened name for a DER with the special delegation to approve serial number specific major repair data, non serial number specific major repair data, and manage RS approvals.**



**e. After this notice is published the only way for multiple-use, non serial number specific, non DAH, major repair data to be FAA approved will be via a repair specification.**

**Therefore, any NEW multiple use Major Repairs approvals by a Non-DAH, TCH, TSO, STC, must follow N8110.111.**

**Note: ODA non-DAH/TCH facilities will follow the FAA Modification Policy Memo dated April 28, 2011**



**Federal Aviation  
Administration**

### Memorandum

Date: APR 28 2010  
To: All ACO Managers (See distribution list)  
From: ~~Col.~~ David W. Hempe, Manager, Aircraft Engineering Division, AIR-100 *Sam Colasanti*  
Prepared by: Samuel Colasanti, Delegation & Airworthiness Programs Branch, AIR-140  
Subject: Authorizing Major Repair, Major Alteration, and Airworthiness Functions (MRA) ODA Holders to Approve Repair Specification

This memorandum clarifies how MRA ODA Holders will approve repair specifications per FAA Notice 8110.111, *Authorizing Designated Engineering Representative (DERs) to Approve Repair Specifications*, issued April 16, 2010. The notice requires MRA ODAs to approve any new, multiple-use major repair data that isn't serial number specific, as a repair specification as of July 16, 2010. Although the notice states that for MRA ODAs, "the FAA will sign and approve the repair specification," it is actually the responsibility of the ODA administrator to sign and approve the RS on behalf of the FAA much like the role of the RS-DER.

MRA ODA holders may be authorized to approve repair specifications under the authority of existing function code 12130. The MRA ODA holder must revise their ODA procedures manual to clearly specify its authority to approve repair specifications and identify any limitations associated with the repair specification data approval function. Also, the procedures manual must define the procedures for approval of repair specifications, including the qualifications and responsibilities of unit members authorized to support repair specification data approvals, and the coordination and management of data approvals supporting a repair specification project. The repair specification may be signed by the ODA administrator only after completion of the FAA Form 8100-11, ODA Statement of Completion.

The guidance provided in this policy memo will be incorporated into the next revision of FAA Order 8100.15. This policy is not retroactive and previous repair data approvals will not be re-evaluated.

If you have any questions or comments, please contact Samuel Colasanti, AIR-140, at (405) 954-7044 or at [samuel.r.colasanti@faa.gov](mailto:samuel.r.colasanti@faa.gov).



## 6. What is a Repair Specification (RS)?

**Repair specifications provide an alternative to the methods, techniques and/or practices contained in the current manufacturer's manuals, service bulletins, or instructions for continued airworthiness (ICA). They are required when the repair will be used for multiple-use, non serial number specific, non-DAH repairs.**

**They include step-by-step “how to” instructions for performing the repair. In the past this type of data has been referred to by many names including repair specifications, repair procedures, and maintenance specifications.**



# FAA N8110.111 States

The RS shall describes:

- 1) What the specific **repair accomplishes**,
- 2) When the repair is **applicable**,
- 3) How the repair will **be accomplished**,
- 4) How the repair **is substantiated**,
- 5) How the repair will **be inspected**,
- 6) How the repair must **be maintained**, and
- 7) How the repair specification will **be kept up to date**.





# FAA defines An acceptable RS

- 1) Results in a consistent, repeatable end state that can be evaluated to show compliance to the applicable airworthiness standards.
- 2) Provides the technical data for use in approving the aircraft or product for return to service.
- 3) Is a procedure not listed in the current manufacturer's maintenance manual, ICA or FAA-approved portions of service documents.
- 4) Is intended to be used repeatedly.
- 5) Requires **FAA data approval**.
- 6) Is authorized for use by the **FAA** for a **specific maintenance entity**. This includes maintenance facilities holding a 14 CFR part 145 certificate, and operators having a maintenance program authorized by operations specifications (Op-Specs) under 14 CFR part 121 or 135



## **Qualification of a RS-DER [Ref N8110.111, Section 9]**

**a. A DER must be experienced in both approving repair designs and managing repair data projects. Managing projects means ensuring all applicable certification requirements for the repair are identified, overseeing others develop and approve data that demonstrates compliance with the certification requirements, and ensuring that compliance issues resulting from or associated with overlapping of engineering disciplines are resolved. Finally, it means being the primary contact with the FAA, both flight standards district offices (FSDO)/ certificate management offices (CMO)/international field offices (IFO) and ACOs, for all discussions and decisions about repair data approval.**



## **Qualification of a RS-DER [Ref N8110.111, Section 9] Continued:**

**b. ACOs will ensure that the DER has the following experience before authorizing RS authority:**

**(1) Have at least three years experience as a DER with the special delegation of major repairs, or major repairs and major alterations, (or equivalent experience such as an ACO engineer or ODA unit member), **and****

**(2) Have at least five years experience in at least one of the DER disciplines (or equivalent experience such as an ACO engineer or ODA unit member).**



**Responsibilities of an RS-DER. To manage RS approvals the RS-DER performs a role for the FAA similar to an ACO certification project manager for a design approval project. The RS-DER will review the RS to ensure that it complies with the established type certification requirements for the product. They will ensure compliance with each applicable certification regulation has been found. The RS-DER evaluates the RS to ensure the repair design results in a repair that restores the part or product to an airworthy condition. Managing activities for compliance includes:**



**Managing Data approval. An RS-DER will develop a compliance plan to ensure that all the activity necessary to review and approve individual data items is accomplished as part of the project. This includes design data, reports, analyses, inspection results, test plans, results, and reports. The approved technical data for the RS may originate either from the RS-DER using their own authority or from other DERs with the required authorization of multiple repairs. DERs must be authorized the special delegation of major repairs, and have specific authority to approve data for multiple-use repairs. The RS-DER must review all FAA Form 8110-3s, Statement of Compliance with the Federal Aviation Regulations, submitted by other DERs to determine that all necessary findings of compliance have been made.**



**Managing Test Activity. Normally, a repair does not require any testing to substantiate it. However, there may be some cases where testing is required. We authorize the RS-DER to review and approve test plans, coordinate the company's test article conformity, witness tests, and evaluate and make findings on test results. The RS-DER may rely on other DERs for some, all, or none of these tasks. The use of other DERs for structural, electrical, material, and other aspects of the repair are limited to those tasks for which they're authorized.**

**Coordinating Project Activity and Resolving Issues. The RS-DER is responsible to coordinate with the managing FSDO/CMO/IFO and obtain their concurrence that the proposed RS is within the capability of the applicant or that their rating will be adjusted to allow its use.**



**Approving the RS. After the RS-DER finds that the data substantiates the repair design and the repair complies with applicable certification regulations, they indicate that the technical data in the RS is approved for use on multiple products by signing the cover page of the RS with their DER number along with the applicant who plans on using the RS. Copies of the signed cover page of the RS must then be sent to the RS-DERs managing ACO advisor and the FSDO/CMO/IFO principal maintenance inspector (PMI). See appendix A for a sample cover page.**



# The RS-DER Cover Page

04/16/10

N 8110.111

**Appendix A. Sample Title/Signature Page**  
[Specification Name and/or Control Number (Assigned by Applicant)]  
[Revision Number and Revision Date]

Data contained in this specification may be used as approved data when: The repair is accomplished by the Certificate Holder identified below, and the specification title page contains all required signatures.

[Company Name]  
[Address]  
[FAA Certificate Number and Ratings]

List of applicable products or components:

I certify that the repair described in this document will restore the aircraft or aircraft component, as applicable, to an airworthy condition.

\_\_\_\_\_  
Date: \_\_\_\_\_

Signature—Certificate Holder's Authorized Representative

\_\_\_\_\_  
Printed Name and Title—Certificate Holder's Authorized Representative

I find the technical data are adequate to substantiate the repair design and the repair is compliant with applicable airworthiness CFRs.

\_\_\_\_\_  
Date: \_\_\_\_\_

ACO/RS-DER Signature

Office ID/RS-DER ID Number: \_\_\_\_\_

**Changes to the Repair Specification.** The FAA must authorize any change to the repair specification before the applicant implements the change. The repair specification holder must submit all technical data to support the proposed change. Minor changes that do not differ appreciably from the previously authorized data and having no bearing on safety are permitted provided the FSDO/CMO/IPO is notified of the change.





# **SUMMERIZING REPAIR SPECIFICATION APPROVAL MULTIPLE USE**

- **You need a DER with Major Repair Multiple Use Authority issue a 8110-3 for the technical design data.**
- **You need to Coordinate with the applicants FAA FSDO regarding the RS-DER project.**
- **The RS-DER must make certain no new AWL/ICA need FAA ACO/AEG approval, prior to his approval of the RS-DER package**
- **The RS-DER is the Project Manager, and coordinates ALL the compliance aspects of the Repair Specifications [RFC, Testing, Conformities etc.]**
- **Once the FAA FSDO, and any applicable AWL/ICA are satisfied the RS-DER can approve the repair process by co-signing the RS-Cover letter.**



# Other Related and applicable FAA Policies:



U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

National Policy

ORDER  
NUMBER  
8110.37E

Effective Date:

**SUBJ:** Designated Engineering Representative (DER) Handbook

This order is a handbook of procedures, technical guidelines, limitations of authority, and tools and resources for designated engineering representatives (DERs). We wrote it for all DERs and the ACO staffs that manage them. We designed this handbook to give ACOs and DERs a better understanding of their individual and mutual responsibilities.

All users of this order will familiarize themselves with its contents and comply with the instructions and guidance contained herein.

David W. Hempe  
Manager, Aircraft Engineering Division  
Aircraft Certification Service

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Federal Aviation  
Administration

## Memorandum

Date: APR 28 2010

To: All ACO Managers (See distribution list)

From: <sup>col</sup> David W. Hempe, Manager, Aircraft Engineering Division, AIR-100 *Sam Colasanti*

Prepared by: Samuel Colasanti, Delegation & Airworthiness Programs Branch, AIR-140

Subject: Authorizing Major Repair, Major Alteration, and Airworthiness Functions (MRA) ODA Holders to Approve Repair Specifications

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Order 8110.37E Draft

AIR 140 Memo – ODA RS-DER



# QUESTIONS

## CONTACT INFO:

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