

FAA Guidance Material and DER Delegation Updates

Presented by:
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Overview

Changes Effecting FAA Designees

- DERs – Delegation By Rule
- Repair Specification DER

Changes in FAA Guidance Material

- Recent Updates to Orders
- Draft ACs
- Recent ACs
- Web Resources

DER Delegation and Authority

14 CFR § 183.29

A DER may approve engineering information (data, reports, etc.) within **limitations** prescribed by the Administrator when that information complies with the **applicable regulations**

Order 8110.37D – DER Handbook

- Delegated Functions
- Authorized Areas

DER Delegated Authority Charts - Current

Order 8110.37D – DER Handbook

- Delegated Functions
- Authorized Areas

8110.37D
Appendix 2

08/10/06

APPENDIX 2. DELEGATED FUNCTIONS AND AUTHORIZED AREAS (CONTINUED)

FIGURE 2. CHART B, DESIGNATED ENGINEERING REPRESENTATIVE POWERPLANT INSTALLATIONS

Functions and areas that *can* be authorized are defined by *white squares*. Each DER's authority may be different, and is identified in their letter of appointment.

		AUTHORIZED AREAS					
		Airplane Turbine Engine	Airplane Piston Engine	Rotorcraft Turbine Engine	Rotorcraft Piston Engine	Auxiliary Power Unit (APU)	Special (Specify)
DELEGATED FUNCTIONS		A	B	C	D	E	F
1	ENGINE INSTALLATION						
2	FUEL & OIL						
3	INDUCTION/EXHAUST SYSTEMS						
4	THRUST REVERSERS						
5	FIRE PROTECTION						
6	ICE PROTECTION						
7	COOLING						
8	ENGINE PERFORMANCE/OPERATIONS						
9	INDICATING SYSTEMS						
10	LIGHTNING/HIRF PROTECTION						
11	SOFTWARE						
12	CONTROL SYSTEM - ELECTRONIC						
13	CONTROL SYSTEM - MECHANICAL						
14	EMISSIONS						
15	VIBRATION - ENGINE, PROPELLER, OR DRIVE SYSTEM						
16	PROPELLER						
17	DRIVE SYSTEM						
18	TRANSMISSIONS						
19	SAFETY ANALYSIS						
20	SERVICE DOCUMENTS						

DER Data Approval Applicable Requirements

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION STATEMENT OF COMPLIANCE WITH THE FEDERAL AVIATION REGULATIONS			DATE
AIRCRAFT OR AIRCRAFT COMPONENT IDENTIFICATION			
MAKE	MODEL NO.	TYPE (Airplane, Rotor, Helicopter, etc.)	NAME OF APPLICANT
LIST OF DATA			
IDENTIFICATION	TITLE		
PURPOSE OF DATA			
APPLICABLE REQUIREMENTS (List specific sections)			
<p>CERTIFICATION - Under authority vested by direction of the Administrator and in accordance with conditions and limitations of appointment under Part 183 of the Federal Aviation Regulations, data listed above and on attached sheets numbered _____ have been examined in accordance with established procedures and found to comply with applicable requirements of the Federal Aviation Regulations.</p> <p>I (We) Therefore <input type="checkbox"/> Recommend approval of these data <input type="checkbox"/> Approve these data</p>			
SIGNATURE(S) OF DESIGNATED ENGINEERING REPRESENTATIVE(S)	DESIGNATION NUMBER(S)	CLASSIFICATION(S)	

Applicable Regulations →


DER Delegated Authority Charts Delegation by Rule (coming soon)

DER Chart - Part 25 DER Name: John Doe

Version 4 Sep 07 DER Candidate Consultant DER Company DER (Company Name: _____)

Areas of expertise	Structural			Powerplant										Systems & Equipment (Mech)																							
	Metallic Structure	Non-metallic Structure	Loads	Cabin Safety	Engine Installation	Fuel	Oil	Induction Systems	Exhaust Systems	Thrust Reversers	Fire Protection	Engine Performance	Engine Operability	Control System-Elec	Control System-Mech	Propeller	Drive System	Air Conditioning	Ventilation	Hydraulics	Ice Protection	Rain Protection	Oxygen	Pneumatics	Wheels, Tires & Brakes	Pressurization	Water Sys (Pot&Waste)	Evacuation Systems	Pilot Static	Door Mechanism	Flight Controls	Fire Protection	Landing Gear				
Chapter 2 - REGULATIONS																																					
GENERAL																																					
Sec. 25.601	General	X																																			
Sec. 25.603	Materials																																				
Sec. 25.605	Fabrication methods (Usage)	X																																			
	Fabrication methods (Development)																																				
	Structural Joining (Mechanical)	X																																			
	Structural Joining (Bonding)																																				
	Surface Treatments/ Coating																																				
	Metallurgy (Heat Treating, Forming, etc)																																				
	Non-Destructive Inspection Technique - Recommend Only																																				
Sec. 25.607	[Fasteners.]	X																																			
Sec. 25.609	Protection of structure	X																																			
Sec. 25.611	[Accessibility provisions.]																																				
Sec. 25.613	Material strength properties and material design values (Usage)	X																																			
Sec. 25.613	Material strength properties and material design values (Development)	X																																			
	Material Allowable (Strength Properties)																																				
	Fastener Allowables (Strength)																																				
	Adhesive Allowables (Strength)																																				
	Joint Allowables (Strength)																																				
	Material Qualification Tests																																				
Sec. 25.619	Special factors																																				
Sec. 25.621	Casting factors	X																																			

What's New – Did You Know?
2009 DER Recurrent Seminar



Federal Aviation Administration 38

Repair Specification DER

Repair Specification Approval

Repair Specification - repair procedure that is intended to be used repeatedly, requires FAA data approval, and is authorized for use by the FAA for a specific maintenance entity.

Order 8300.14 – Repair Specification Approval Procedures

Released by Flight Standards in December 2007 – withdrawn in early 2008

- Introduced an RS-DER (Repair Specification—Designated Engineering Representative)

Notice 8110.RS – Authorizing DERs to Approve Repair Specifications

Revised Notice scheduled for publication – May 2010

After implementation by AIR, a Repair Specification will be the ONLY method of authorization for open ended multiple use repairs by non Design Approval Holders

Order 8130.21G

Procedures for Completion & Use of Form 8130-3

Release Date: October 26, 2009

Effective Date: April 14, 2010

Two changes effecting distributors of aircraft parts and assemblies

1. Removal of language permitting distributors to apply for domestic 8130-3 tags

(Recent Question/Answer on 14 CFR Amendments web page clarifies – DARs can still issue 8130-3s for distributors)

1. Addition of language that creates confusion on how to provide 8130-3 tags for split bulk lots of parts

Draft AC 21.93-1

Determining the Classification of a Change to Type Design

Per 14 CFR 21.93(a), a change to type design that has an appreciable effect on characteristics affecting the airworthiness of the product is major; otherwise the change is minor.

Draft AC Impact

- Imposes new burden on the applicant to perform written assessment using System Safety Approach
- Failure modes present in existing design may lead to determination of a Major Change when no appreciable effect is created (PMA by Identity)
- Feedback from MARPA led FAA to rewrite the AC – new draft scheduled for 3rd qtr 2010

Draft AC 33.91-1

Engine Component Tests

Comments Due: April 5, 2010

- Provides a list of 25 tests that are considered necessary to meet 33.91
- References acceptable standards for conducting the tests
 - DO-160E
 - SAE ARP5757
- Imposes new limits on showing of compliance by similarity

AC 33-8

Guidance for PMA of Turbine Engine and APU Parts under T&C

Release Date: August 19, 2009

Applicable to critical and complex parts

- Critical or Complex ? → Part Categorization
- Category 1 - failure could prevent continued safe flight and landing
- Category 2 – failure may reduce the capability of the aircraft or the ability of the crew to cope with adverse operating conditions or subsequent failures.
- Category 3 - failure would have no effect on continued safe flight and landing of the aircraft
- APPENDIX 1. FAILURE MODES AND EFFECTS ASSESSMENT
- APPENDIX 2. TEMPLATES

AC 33.87-2

Comparative Endurance Test Method to Show Durability for PMA of Turbine Engine and APU Parts

Release Date: June 25, 2009

To be used when there is insufficient comparative data to show that the durability of the proposed PMA part is at least equal to the existing type design

- Turbine engine or APU parts that come in contact with the engine or APU gas flow path
 - Blades
 - Vanes
 - Shrouds

Resources on the Web

Web Links

MARPA Blog

<http://pmaparts.wordpress.com/>

ASA - The Update Report

<http://www.aviationsuppliers.org/index.asp?bid=34>

FAA Regulatory and Guidance Library

<http://rgl.faa.gov/>

Aviation Safety Draft Documents Open for Comment

http://www.faa.gov/aircraft/draft_docs/

FAA Question and Answer section for 14 CFR Parts 1, 21, 43, & 45 Amendments and Related Policy & Guidance

http://www.faa.gov/aircraft/air_cert/production_approvals/14cfr_amendments/QandA/qa_orders/

Thank You for Your Attention

Questions?

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