PMA WORKSHOP FOR

NEW 8110.42D & AC21-303-4
NEW EASA BI-LATERALS &
AMDT 21-92; 14 CFR 21.303 IMPACTS
TO DOING BUSINESS WITH FAA/EASA

- PMA VS EPA
- DER REPAIR
- MODIFICATIONS

DERS Group Svc LLC, INDIANA

Dominick P DaCosta
Principle

March 23, 2015

About your Instructor

Dominick P. DaCosta

. **FAA DER-T Engines Chart E, Powerplant Chart B, Systems Chart C1, Structures Chart A ~ PMA ID Findings Authority & Major Repair/Alterations Multiple Use Authority & RS-DER Authority.**

. **FAA DAR-F ~ Class I, II, and III Parts .**

. **30 years Aerospace Manufacturing Engineering**

. **22 years Engine/APU Maintenance & Repair Engineering**

. **15 years doing this Gorham Workshop**

. **Worked for or with GE, P&W, Textron/Lycoming, Rolls Royce, Honeywell APU, Garrett Engine, Bendix Fuel Cntrls/Brake/LG, CTL Inc., United Airlines, CRT, American Airlines, Exotic Metals, Soundair, Lufthansa, MTU, Alitalia, Air France FedEx, Iberia, ITT, Hamilton Std., Parker, Rexnord, SR Technics, ACS, Eaton, SW Airlines and others.**

. **ASNT Level III Since 1976~2015**

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- The Federal Aviation Administration is not in any way responsible for the data, or the opinions presented in **this** presentation.
- The opinions and data presented herein are those of the **presenter.**
- The **audience is responsible** for confirming all data relative to Applicable CFR's, National Policies, Orders, and Advisory Circulars for their accuracy and in their being the latest amendment or revision applicable.
- The FAA DER Delegation is FAA designee, they can act as a Consultant DER as defined in 14 CFR 183.29, following the established policies and procedures of FAA Orders 8110.37E, 8110.42D & 8100.8D and the Guidance of Multiple orders , and AC's specific to the certification action.
- FAA data used herein may be obtained on FAA Home, at www.FAA.gov.

Definitions & Acronyms

Term / Acromym	Definition
AC	Advisory Circular
Accepted	When data is determined to be suitable for its intended function but is not 'Approved'
ACE	Aircraft Certification Engineer [FAA- ACO]
ACO	Aircraft Certification Office [a FAA Branch]
ACSEP	Aircraft Certification Systems Evaluation Program [FAA Audit]
AD	Airworthiness Directlve - Issued by FAA
AEG	Aircraft Equipment Group [a FAA Branch]
AFM	Airplane Flight Manual
AML	Approved Materials List / Approved Model List
AMM	Aircraft Maintenance Manual
APIS	Approved Production Inspection System
Approved	Approved by the FAA or his Authorized Designee
AR	Authorized Representative [an ODA Member (Engineering or Manufacturing]
Article	A material, part, component, process, or appliance.
AS	National Aerospace Standerds
ASI	Alrworthiness Safety Inspector
BAA	Bilateral Alrworthiness Agreement
BASA	Bilateral Aviation Safety Agreement
C of A	Certificate of Airworthiness
CA	Certificating Authority
CAA	Civil Aviation Authority
CAR	Civil Air Regulation
Certification Lab Test	Test conducted on conformed equipment installed in laboratories, fixtures, etc.
Certification Plan	Document that describes how Applicant intends to demonstrate compliance of the design to the CFRs
Certification Test	Test conducted on an aircraft to find compliance with a TIA or Certificate of Conformity
CFR	Code of Federal Regulations
Change Product Rule	Certification process defined in 14 CFR §21.101
CMM	Cornponent Maintenance Manual

Term / Acromym	Definition
Company Testing	Test conducted to show compliance on an aircraft prior to issuance of a TIA
Compliance Checklist	A formal method of documenting compliance to all applicable regulations during certification
Conformity Inspections	Inspections to verify and provide objective documentation that test articles, parts, installations, and test set-ups conform to the design.
Conformity Plan	Describes the actions necessary to ensure required inspections are accomplished
CPN	Certification Project Notification
DAR	Designated Alrworthiness Representative
DAR-F	DesIgnated Alrworthiness Representative (Manuracturing)
DAR-T	DesIgnated Alrworthiness Representative (Maintenance)
DAS	Designated Alteration Station
DER	Designated Engineering Representative
DER-T	Designated Engineering Representative (Consultant)
DER-Y	Designated Engineering Representative (Company)
Development Testing	Tests to determine feasibility of a change
DMIR	Designated Manufacturin g Inspection Representative
EASA	European Aviation Safely Administration
eCOA	Electronic Certificate of Authority Letter for a designee specifying authorized functions
ELOS	Equivalent Level of Safety
FAA	F ederal Aviation Administration
FAI	First Article Inspection
FAR	Federal Aviation Regulations
Finding	A show of compliance
FIS	Fabrication Inspection System
FOIA	Freedom of Information Act
FSDO	Flight Standard District Office [a FAA Branch]
ICA	Instructions for Continued Airworthiness
IFCAW	Instructions for Continued Alrworthiness [a k a : ICA]
IP	Issue Paper
IPC	Illustrated Parts Catalog

Definitions & Acronyms

Term / Acromym	Definition
Major Change	A type design change that has an appreciable effect on weight, balance, structural strength, reliability, operational characteristics or other characteristics affecting airworthiness of the product per 14 CFR §21.93
MARPA	Modification and Replacement Parts Association
MCO	Military Certification Office
MIDO	Manufacturing Inspection District Office [a FAA Branch]
Minor Change	Any type design change that is not a Major Change as defined above per 14 CFR §21.93
MIS	Manufacturing Inspection Specialist [a FAA Staff Position]
MMEL	Master Minimum Equipment List
MRP	Modification and Replacement Parts [14 C F R Part 21.303)
MS	Military Standard
NPRM	Notice of Proposed Rule Making
ODA	Organization Designation Authorization
ODAR	Orginizational DesIgnated Alrworthiness Representative
ODAR-F	Orginizational DesIgnated Alrworthiness Representative [Manufacturing]
ODAR-T	Orginizational DesIgnated Alrworthiness Representative [Maintenance]
OEM	Origina l Equ ip ment M a n u f a cture r
Orders	FAA Orders Issued to define methods or procedures to accomplish rules
PACO	Project Aircraft Certification Offlce
PAH	Production Approval Holder
PC	Production Certificate
PM 's	Policy Memo's - FAA driven guidance to accomplish FAR , Orders, AC's
PMA	Parts Manufacturing Approval
PMI	Principle Maint Inspector [FAA FSDO]
Product	Aircraft, Engine or Propeller
PSCP	Project Specific Certification Plan
PSP	Partnership for Safety Plan
RFC	Request For Conrormlty Issued by ACO to MIDO or FSDO
RGL	Regulatory and Guidance Library

Term / Acromym	Definition
SB	Service Bulletin [Issued by OEM, TC, STC, TSO, or PMA]
Significant Change	A change to the type certificate, a new STC, or an existing STC, to the extent that it changes the general configuration, principles of construction, or the assumptions used for certification, but not to the extent to be considered a substantial change per 14 CFR §21.101 (b)(1)
SME	Subject Matter Expert
SRM	Structural Repair Manual
STC	Supplernental Type Certificate
Substantial Change	An change requiring a complete investigation of compliance with the applicable regulations in support of a new type certificate
Summary Compliance Report	Document informing the FAA of a completed Certification Project by describing how the applicable airworthiness requirements were shown to be in compliance. Contains the Compliance Checklist
TC	Type Certificate
TCDS	Type Certificate Data Sheet [Approved FAA document defining a Configuration of a Type Certificated Product
Test Plan/ Procedure	Document defining method to be used to verify and ensure a product meets a rule.
Test Report	Document memorializing test results achieved by executing a test plan/procedure
TIA	Type Inspection Authorization, Official conformity prior to flight tests
TIR	Type Inspection Report
TSO	Technical Standard Order

WHAT'S NEW IN FAA NATIONAL POLICIES

- **AC21.303-2**, [air-110], Mar 24, 2014, Application For Parts Manufacturer Approval Via Tests And Computations Or Identicality.

- **8110.42D,** [air-100], Mar 23, 2014, Parts Manufacturer Approval Procedures

- **8110.119**, [air-100], Nov 12, 2012, Streamlined Process for Parts Manufacturer Approval (PMA)

U.S. Department
of Transportation
Federal Aviation
Administration

Advisory Circular

Subject: Application For Parts Manufacturer Approval Via Tests And Computations Or Identicality

Date: 3/21/14
Initiated by: AIR-110

AC No: 21.303-2
Change: **0**

1. Purpose.

a. This advisory circular (AC) updates the Federal Aviation Administration's (FAA) guidance to applicants for parts manufacturer approval (PMA) of articles via tests and computations or identicality without a license agreement. This AC cites regulations in Title 14, Code of Federal Regulations (14 CFR) part 21, Subpart K that became effective April 16, 2011. In addition, this AC provides a convenient application and compliance checklist, adds a certifying statement of compliance, provides guidance for assessing an article's impact on safety and describes how the FAA approves replacement parts for technical standard order (TSO) articles. This AC does not apply to the articles that are listed in 14 CFR 21.9(a)(1) through (6).

b. This AC refers to parts and components as articles per 14 CFR 21.1. This section defines an article as a material, part, component, process or appliance. These items may include sealants, modified standard parts, brake assemblies, etc. that are in a product's type design. Please note PMA is not for base materials, processes or inspection procedures.

c. This AC is not mandatory and does not constitute a regulation. This AC describes an acceptable means, but not the only means, to comply with 14 CFR Part 21, Subpart K. If you chose to use any of these best practices, we expect you to follow it completely. Adherence to the guidance for each applicable facet will show that an article's design complies with the airworthiness requirements of its eligible products. Also consult other ACs when you need guidance on product specific requirements for showing compliance. For example, AC 33-8 has guidance for Parts Manufacturer Approval of Turbine Engine and Auxiliary Power Unit Parts under Test and Computation.

2. Audience.

a. This AC is for applicants seeking PMA through tests and computation or identicality without a license agreement. Consult AC 21-43, *Production under 14 CFR Part 21, Subparts F, G, K, and O* and Order 8120.22, *Production Approval Procedures* for further guidance on applications for PMA via identicality with a license agreement or via supplemental type certificate (STC). Recommend new applicant's consult with the responsible ACO before applying for PMA. Early discussions will provide essential information on the PMA process, the

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

National Policy

ORDER 8110.119

Effective Date:

November 30, 2012

SUBJ: Streamlined Process for Parts Manufacturer Approval (PMA)

1. Purpose of this Order. This order establishes a streamlined process to approve articles from current holders of PMA that meet our qualifying criteria. The process applies to non-safety significant articles that have little or no effect on safe flight and landing. These articles from qualified applicants represent the lowest risk to safety. The process still uses tests and computations to show compliance to applicable airworthiness requirements.

2. Audience. This order is for Federal Aviation Administration (FAA) personnel responsible for evaluating applications for PMA.

3. Where to Find This Order. You can find this order on the MyFAA Employee Web site: https://employees.faa.gov/tools_resources/orders_notices/. This order is available to the public at http://www.faa.gov/regulations_policies/orders_notices/, or on the FAA Regulatory and Guidance Library (RGL) website at http://rgl.faa.gov.

4. Current Process. The processes in FAA Order 8110.42, *Parts Manufacturer Approval Procedures*, to issue PMA require approval of each replacement article's design by an aircraft certification office (ACO) regardless of its nature. A proposed article whose failure has little or no effect on safe flight or landing competes for limited resources at each ACO. Under the test-and-computation method, an application for each new replacement article requires submittal of data, followed by ACO review for compliance with appropriate airworthiness standards.

5. Streamlined FAA and Industry Processes.

a. We teamed with a leading PMA industry group to expedite approval of non-safety significant articles by PMA. The streamlined process entails our receiving a uniform data package that relies on PMA holder showings and statements of compliance. This is followed by a shortened ACO review based on our experience with the manufacturer. A key component of this package is the applicant's safety assessment that 1) categorizes the article as non-safety significant, 2) shows that the article's failure has little or no impact on safe flight and landing and 3) evaluates the service history of the original article including any known service issues, alert service bulletins/letters/notices, and Airworthiness Directives (AD). An AD on the original article disqualifies the corresponding replacement article from the streamlined process.

b. Applicant guidance for this process is in the Modification and Replacement Parts Association (MARPA) Document 1100, Streamlined Program for PMA Applications of Non-

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

National Policy

ORDER
8110.42D

Date: 3/21/2014

SUBJ: Parts Manufacturer Approval Procedures

This order describes the procedures for evaluating an application for a parts manufacturer approval (PMA) for replacement and modification articles on type-certificated products. These procedures apply to engineering personnel at Aircraft Certification Offices (ACO) in the Federal Aviation Administration (FAA). The associated procedures for manufacturing personnel are now in FAA Order 8120.22, *Production Approval Procedures.* This revision removes applicant guidance, updates the regulatory citations from the latest Title 14 of the Code of Federal Regulations (14 CFR), part 21 rule changes, incorporates directive feedback and clarifies certification office responsibilities under our quality management system. The applicant guidance is now in AC 21.303-2.

FOR David W. Hempe
Manager, Design, Manufacturing, &
Airworthiness Division
Aircraft Certification Service

Distribution: Electronic

Initiated By: AIR-100

How many different ways can you obtain an APPROVED part?

The definition of APPROVED part is found in several regulations and FAA Orders and AC's…

- **AC43-18 Chg 2**
- **AC21.29C**

There are the 11 [Eleven ways] to obtain an approved Part that is intended to be installed into a TC product!

AC 21.29C "SUP"

U.S. Department of Transportation
Federal Aviation Administration

Advisory Circular

Subject: Detecting and Reporting Suspected Unapproved Parts | **Date:** 7/22/08 | **AC No:** 21-29C
Initiated by: AFS-300 | **Change:** 1

1. PURPOSE. This advisory circular (AC) provides updated information and guidance to the aviation community for detecting suspected unapproved parts (SUP) and reporting them to the Federal Aviation Administration (FAA). Appendix 1 contains FAA Form 8120-11, Suspected Unapproved Parts Report, which serves as a standardized means of reporting.

2. RELATED REGULATIONS.

a. Title 14 of the Code of Federal Regulations (14 CFR):

(1) Part 1, Definitions and Abbreviations.

(2) Part 21, Certification Procedures for Products, Articles and Parts.

(3) Part 43, Maintenance, Preventive Maintenance, Rebuilding, and Alteration.

(4) Part 45, Identification and Registration Marking.

(5) Part 91, General Operating and Flight Rules.

(6) Part 145, Repair Stations.

b. Title 49 CFR part 7, Public Availability of Information.

c. Title 49 of the U.S. Code (49 U.S.C.), §§ 44701, 44702, and 44704.

3. DEFINITIONS. Not withstanding specific definitions in part 1, the following definitions apply to terms used in this AC:

a. Administrator. The FAA Administrator or any person to whom authority is delegated in the matter concerned.

b. Approved Parts. This AC uses the term "approved parts" in a colloquial sense. The term approved parts is not synonymous with "a part that has received a formal FAA approval." Identify approved parts as parts that have met one of the following requirements:

(1) Produced in accordance with a Parts Manufacturer Approval (PMA) issued under part 21 subpart K.

Federal Aviation Regulations

Part 21

Certification Procedures for Products and Parts

Defines

Eight (8) ways to obtain new parts that are considered to be approved, plus Three (3) special conditions

A total of 11 ways.

Ref: AC21.29C

New Approved Parts

1. **FAR §21.123**

   Production Under Type Certificate Only (TC)

   - **Operate under TC only for 6 months unless extended by the Administrator.**

2. FAR §21.125

   Approved Production Inspection System (APIS)

   - After 6 months TC holder obtains (APIS) Ref. §21.123 (c)

3. FAR §21.131

   Production Certificate (PC)

   - Eligibility for PC Ref. FAR §21.133

     a. Current TC holder

     b. Rights to a TC under Licensing Agreement

     c. Supplement Type Certificate (STC) holder

New Approved Parts

4. FAR §21.303 Standard Part

- **A part manufactured in complete compliance with an established industry or U.S.government specification which includes design, manufacturing, and uniform identification requirements. The specification must include all information necessary to produce and conform the part and be published so that any party may manufacture the part. Examples include but are not limited to National Aerospace Standards (AS), and Military Standards (MS).**

Definition per A/C 20-62E
Order 8110.42C
Order 8120.10

5. FAR §21.303

Parts produced by Owner Operator

- The Owner-Operator controls the design, manufacture, or quality of parts produced. These parts may only be sold to the Owner-Operator who has approved the parts.

New Approved Parts

6. **FAR §21.502**

Imported Parts

- **Produced in accordance with an Approval under a Bilateral Airworthiness Agreement (BAA).**

7. **FAR §21.601**

Technical Standard Order (TSO)

- Parts produced in accordance with a (TSO) authorization issued by the Administrator.

8. **FAR §21.303**

Replacement and Modification Parts

- **Parts Manufacturer Approval (PMA)**
- **Order 8110.42D establishes procedures for the evaluation and approval of Parts Manufacturer Approval.**

Three (3) Special Conditions for MRP Part Approval

9. Parts sold prior to the issuance of a Type Certificate (Provisioning).

- **A manufacturer with a PC may ship replacement parts prior to the issuance of TC or STC provided the parts are segregated at their destination and identified as "Not for Revenue Service - Type Certificate Pending". Ref. Advisory Circular 21-32A.**

10. 14 CFR 21.8(d)

- In any other manner approved by the FAA
- 14 CFR 21.9 is also defined in AC21.29C
- AC21.62E

U.S. Department
of Transportation
Federal Aviation
Administration

Advisory Circular

Subject: Eligibility, Quality, and Identification of Aeronautical Replacement Parts	**Date:** 12/23/10	**AC No:** 20-62E
	Initiated by: AFS-300	**Change:**

1. PURPOSE. This advisory circular (AC) provides information and guidance for use in determining the quality, eligibility and traceability of aeronautical parts and materials intended for installation on U.S. type-certificated (TC) products and articles, and to enable compliance with the applicable regulations.

2. CANCELLATION. AC 20-62D, Eligibility, Quality, and Identification of Approved Aeronautical Replacement Parts, dated May 24, 1996, is canceled.

3. RELATED CFR PARTS. Title 14 of the Code of Federal Regulations (14 CFR) parts 1, 21, 39, 43, 45, 91, 119, 121, 125, 129, 135, and 145.

4. DEFINITIONS. The following definitions apply to this AC:

a. Federal Aviation Administration (FAA)-Approved Parts. Under part 21, § 21.8, articles produced under an FAA-approved production system and which conform to FAA-approved data, may be approved under the following:

(1) A Parts Manufacturer Approval (PMA) issued under part 21 subpart K.

(2) A Technical Standard Order Authorization (TSOA) issued under part 21 subpart O.

(3) In conjunction with type certification procedures for a product. In any manner approved by the Administrator, such as part 21 subpart F and G. In addition, part 21 subpart N provides for the acceptance of a new part produced in a country or jurisdiction with which the United States has an agreement for the acceptance of parts for export and import. The part is approved when the country of manufacture issues a Certificate of Airworthiness for export of the part.

b. Acceptable Parts. The following parts may be found to be acceptable for installation on a TC'd product:

(1) Standard parts (such as nuts and bolts) conforming to an established industry or U.S. specification.

(2) Parts produced by an owner or operator for maintaining or altering their own product and which are shown to conform to FAA-approved data.

Special Conditions for MRP Part Approval

(cont.)

11. Repair Station Production of Replacement or Modification Parts.

- **Parts manufactured by a Repair Station or other authorized person during alteration in accordance with a STC or Field Approval.**

  If part is sold separately for someone else to install, the part then requires a PMA Ref. AC43-18 & Order 8900.1 chp 4, Vol 9

What is a PMA ?

A Modifications and Replacement Part or (Parts Manufacturing Authority – {PMA}) And is one of the eleven (11) ways the FAA uses to control and approve replacement or modification parts manufactured for and installed on a Type Certificated Product following its initial Airworthiness Approval.

14 CFR 21.303 QMS changes see Reference AC 21-42, &
AC 21-43 for details to proper transition.
14 CFR 21 Amendment 21-92 has radically changed 21 rules.

There are two types of PMA's by Rule and by Order

MAJOR – PMA – Developed from an STC. Invoked under 14 CFR Part 21.95, & 21.97, and guidance given under Order 8110.4C. This PMA which is developed from a STC is a Major Change Designed Component. When this STC-PMA is installed you should follow 43 Appendix B, and issue to the TC product a Form 337, and the 8130-3 should be annotated in Box 13, that it is a Major Design Change Component, in some Bi-laterals this statement is mandatory.

MINOR – PMA – Developed from a TC or TSO sub component which does not go beyond 14 CFR Part 21.93, and is considered under Order 8110.42C as a minor change to the original TC or TSO. With the exception of LLP's most Bi-laterals allow the use of these types of PMA's without restrictions or re-validations.
Only a 8130-3 be executed upon installation to a TC product.

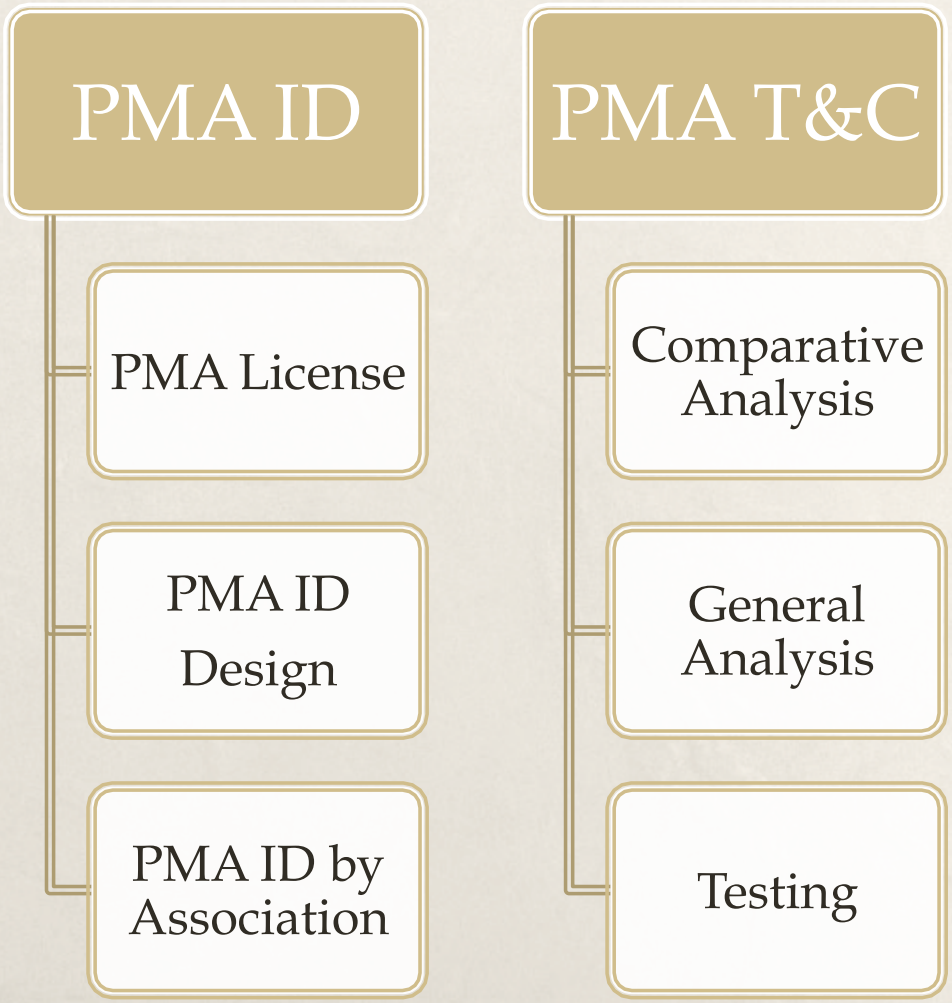
Note: Licensed PMA on LLP's are normally accepted without restriction in most Bi-laterals.

A PMA [Parts Manufacturing Authority] therefore is a specific way to obtain FAA approval to replace or modify a component to be installed onto a Type Certificated Product.

There are <u>two</u> (2) fundamental ways to apply for a PMA.

1. Identicality [Which has three (3) subsets]
   - Identicality by License Agreement
   - Identicality by Design without a License agreement
   - Identicality by Associative Means [OCM evidence]

2. Test & Computation Method [Which has three (3) subsets]
   - Comparative Analysis Method
   - General Analysis Method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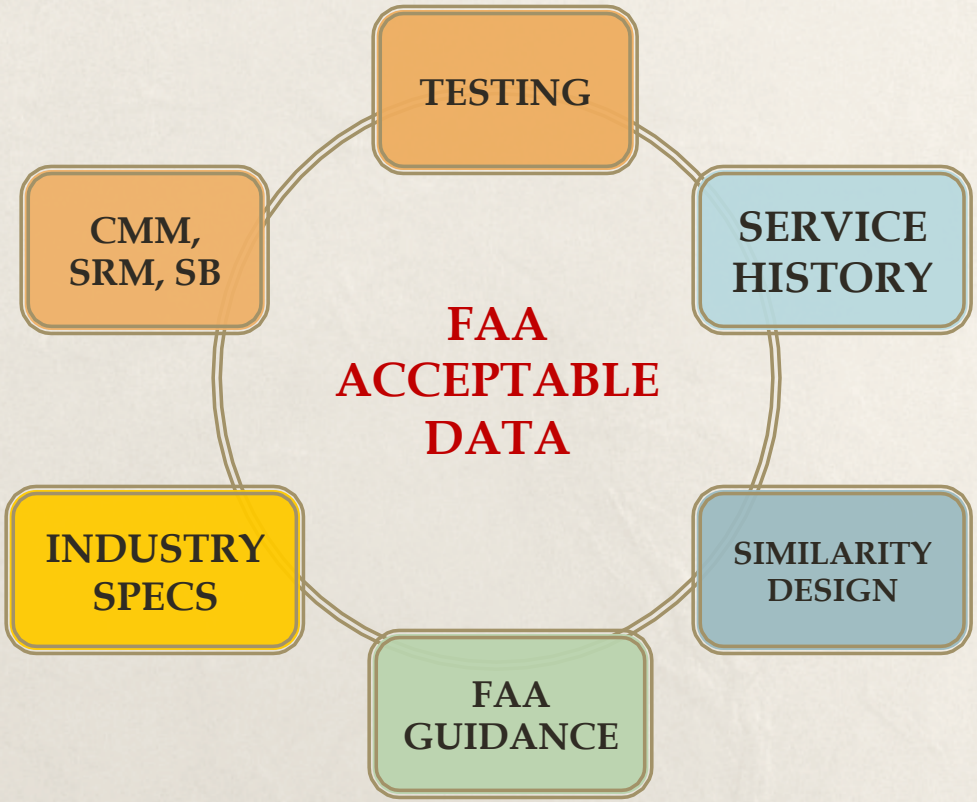
ACCEPTABLE DATA



Why is this thing this Important to Your Organization

- According to FAA Order 8110.42C & AC21.43 the FAA requirements flows down to ALL the sub vendors who supply services to the PMA holder! [see AC21.43].
- This is also true for EASA EPA [European Parts Authority].

AC21.43 PAH SUPPLIERS CHAPTER 3

Chapter 3. Supplier Control Program

3-1. Purpose. This chapter provides information and describes criteria for establishing and maintaining a supplier control program. PAHs may use this document in support of their responsibilities under §§ 21.137, 21.307, and 21.607.

3-2. Background. Part 21 requires PAHs to establish and maintain a quality system. Part 21 also requires that this quality system ensure that supplier-produced components (for example, software, articles, and subassemblies), services (for example, special processes and calibration), and customer or buyer-furnished equipment or material conforms to the PAH's requirements.

3-3. Supplier Control.

a. Contract Requirements. A PAH's system is required by the rule to ensure all products or articles furnished by its suppliers, including subtier suppliers, conform to contract requirements. The contract requirements will depend on the complexity of supplied products or articles and whether or not the supplier holds a production approval for similar products or articles.

b. PAH Responsibilities. The PAH should ensure access to, and cooperation of, all involved facilities in the supply chain for the PAH and the FAA. The PAH is responsible for supplier adherence to the requirements flowed-down through the supply chain. A PAH does not delegate responsibility under its production approval to a supplier.

3-4. Use of Suppliers in Other Countries. A PAH may use suppliers in other countries when the PAH has established and implemented a supplier control system acceptable to the FAA. A PAH who plans to use a supplier in another country should notify the FAA as soon as possible to determine the FAA's ability to perform surveillance.

3-5. FAA Surveillance of Supplier Control Systems. The FAA does not approve suppliers, but may conduct surveillance of the supplier control system at both PAH and supplier facilities in accordance with FAA Order 8120.2, Production Approval and Certificate Management Procedures. The FAA may also request technical assistance from a bilateral partner civil aviation authority (CAA) to act on behalf of the FAA. The PAH cannot rely on FAA or CAA surveillance as a means of supplier control.

3-6. Elements of a Supplier Control System. A PAH is responsible for ensuring each product or article conforms to the FAA-approved design data and is in a condition for safe operation. This responsibility remains the same whether the PAH produces the entire product or article at its facility, or uses suppliers to furnish related articles. The supplier control program is required by the rule to be FAA-approved and defined in a manual. Implementation and maintenance of the supplier control system is subject to evaluation by the FAA. FAA production approvals are based on the ability of the quality system to ensure production of conforming products or articles. Therefore, the supplier control system should contain procedures that include the following:

AC21-43 Appendix F

Appendix F. PAH—Supplier Arrangement

The following list comprises elements typically found in the arrangement between the PAH and the supplier, if applicable. Guidance on the content of each element is provided, but this is not intended to be comprehensive.

Note: The supplier arrangement may indicate whenever the PAH finds one or more of the elements to be inapplicable.

1. Scope.

a. Identify articles to be provided by the supplier and the associated supplier facilities.

b. Identify any limitation(s) defined by the PAH.

2. PAH Evaluation. Stipulate that the supplier is acting under the PAH quality system and that all of the corrective actions requested by the PAH will be implemented.

3. Implementation Procedures. Attach a quality plan or equivalent documentation to the contract.

4. Internal Quality System.

a. Identify methods for the PAH to evaluate the internal quality system of the supplier.

b. Describe the interface between the PAH's quality systems and the supplier in the quality plan.

5. Design Data and Configuration Control.

a. Identify the design data package provided by the PAH, including all pertinent data required for the supplied article(s) to be identified, manufactured, inspected, used, and maintained.

b. Establish procedures for managing design changes.

6. Manufacturing Data. Identify the manufacturing data developed by the supplier, if any, based on the design data submitted by the PAH. (Refer to paragraph 5 of this appendix.)

7. Test and Inspections (Including Incoming).

a. Identify procedures to define the necessary test and inspection processes—

(1) To ensure and determine the conformity of the supplied article(s) during the supplier's manufacturing activities, and upon receipt by the PAH.

Under new Rules In general, the FAA proposes to:

1. Standardize quality system requirements for all Production Approval Holders (PAH)
2. Require PAHs, including those producing under Type Certificate, to mark all articles, including sub-assemblies and components
3. Require PAHs to issue airworthiness approvals for aircraft engines, propellers, and other aviation articles;
4. Require PAHs to create a certifying staff to issue those approvals; and
5. Revise export airworthiness approval requirements to facilitate global manufacturing.

PRIMARY AREAS BEING AMENDED BY THE NEW 21 RULE CHANGE

List of Amended Rules Change Subjects:

14 CFR Part 1 “General Definitions”

14 CFR Part 21 “Production Aircraft, Aviation safety, Exports, Imports, Reporting and recordkeeping requirements.”

14 CFR Part 43 “Aircraft, Aviation safety, Reporting and recordkeeping requirements”

14 CFR Part 45 “ Parts Marking, Aircraft Identification, Exports, Signs and symbols”

Advisory Circular

Subject: Production Under 14 CFR Part 21, Subparts F, G, K, and O

Date: 10/16/2009 **AC No:** 21-43

Initiated by: AIR-200

This advisory circular (AC) provides information for production approval holders (PAH) under Title 14, Code of Federal Regulations (14 CFR) part 21, Certification Procedures for Products, Articles, and Parts. This AC guides PAHs in developing and maintaining quality systems for the products and articles they produce. This guidance aids the applicant for a production approval or current PAH in developing a quality system that both meets the needs of the PAH and is compliant with the regulations. You can find this AC at http://www.faa.gov/regulations_policies/advisory_circulars/.

/s/
Frank P. Paskiewicz
Manager, Production and Airworthiness Division

Advisory Circular

Subject: Issuance of Export Airworthiness Approvals Under 14 CFR Part 21 Subpart L

Date: 10/16/2009 **AC No:** 21-44
Initiated by: AIR–200

1. Purpose. This advisory circular (AC) provides information about Title 14, Code of Federal Regulations (14 CFR) part 21, Certification Procedures for Products, Articles, and Parts. The AC covers subpart L, Export Airworthiness Approvals. This AC is not mandatory and does not constitute a regulation. This AC describes an acceptable means, but not the only means, to comply with these requirements. However, if you use the means described in the AC, you must follow it in all important respects.

2. Audience. This AC affects persons and organizations who export a product or article under the provisions of 14 CFR, part 21, subpart L.

3. Effective Date. This AC is effective 180 days after the publication of Production and Airworthiness Approvals, Part Marking, and Miscellaneous Amendments; Final Rule in the Federal Register under docket number FAA-2006-25877-0114.

4. Related Publications.

a. Part 21, Certification Procedures for Products, Articles, and Parts.

b. Order 8130.2, Airworthiness Certification of Aircraft and Related Products.

c. Order 8130.21, Procedures for Completion and Use of the Authorized Release Certificate, FAA Form 8130-3, Airworthiness Approval Tag.

d. AC 21-2, Requirements of Importing Countries or Jurisdictions.

5. Subpart L Regulations. Part 21, subpart L contains procedural requirements for issuing export airworthiness approvals and the rules governing the holders of those approvals. This includes requirements that address the different types of export airworthiness approvals, the application process, the issuance of export airworthiness approvals, and the responsibilities of exporters.

are Responsible for which Cert Programs & Designe

FAA Headquarters

MIDO
- NEW PARTS MFG INSPECTION
- DAR-F
- DMIR
- FAR 21
- FAR 45
- TC
- STC
- PMA
- TSO

ACO
- ALL DESIGN ENGINEERING
- DER-T, DER-Y
- FAR 21, 23, 25, 27, 29, 33, & 39 etc.
- TC
- STC
- PMA
- TSO
- Repairs, Alterations
- ODA, DOA

FSDO
- MAINTENANCE AND FLIGHT STANDARDS
- DAR-T
- FAR 43, 45
- FAR 91, 121, 125
- FAR 129, 133, 135
- FAR 145
- DAS

AEG
- ICA
- AWL
- CMM
- AMM
- ESM
- SRM
- SB

SUMMARY

1. There are Eleven (11) ways to get an approval for a article to be installed into a TC product [Airplane/ Engine/Propeller.
2. PMA is one (1) of the Eleven ways!
3. Anyone trying to make, sell, repair, alter, or install a article into an Aircraft, Engine or Propeller, must meet one of the Eleven ways, or face the penalties defined in USC 49, and 14 CFR Part 3.1, 3.5

QUESTIONS REGARDING THIS Workshop

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References

* §21.137 QMS Quality System Production Certificates
* §21.303 Subpart K – Parts Manufacturer Approvals
* 8110-3 SUBJ: STATEMENT OF COMPLIANCE WITH AIRWORTHINESS STANDARDS (Form)
* ORDER 8120.2G SUBJ: Production Approval and Certificate Management Procedures
* Advisory Circular AC No: 21-42 Subject: Transition Document for 14 CFR Parts 1, 21, 43, and 45
* Advisory Circular AC No: 21-43 Subject: Production Under 14 CFR Part 21, Subparts F, G, K, and O
* Advisory Circular AC No: 23-21 Subject: AIRWORTHINESS COMPLIANCE CHECKLISTS USED TO SUBSTANTIATE MAJOR 3SAE AS9100C Quality Management Systems - Requirements for Aviation, Space and Defense Organizations
* AC21-303-2 PMA by Test & Computation or Identicality.
* Order 8110.42D, PMA
* Order 8110.119, Fast Track Method