



**Committee on Transportation and Infrastructure
U.S. House of Representatives**

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October 25, 2013

SUMMARY OF SUBJECT MATTER

TO: Members, Subcommittee on Aviation
FROM: Staff, Subcommittee on Aviation
RE: Subcommittee Hearing on “Review of FAA’s Certification Process: Ensuring an Efficient, Effective, and Safe Process”

PURPOSE

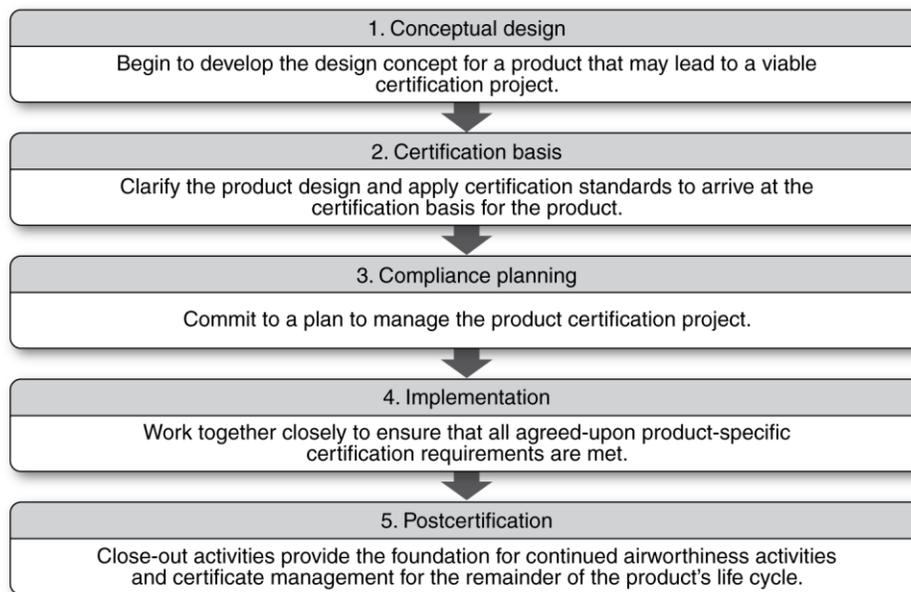
The Subcommittee on Aviation will meet on Wednesday, October 30, 2013, at 10:00 a.m. in 2167 Rayburn House Office Building to discuss the Federal Aviation Administration’s (FAA) aircraft certification process. Specifically, the Subcommittee will learn about the progress that the FAA has made in implementing provisions in the FAA Modernization and Reform Act of 2012 (Reform Act), which require the agency to develop plans to streamline their certification process and address regional inconsistencies. The Subcommittee will receive testimony from witnesses representing the FAA, the Government Accountability Office (GAO), the Inspector General of the Department of Transportation (DOT IG), the General Aviation Manufacturers Association (GAMA), the Aerospace Industries Association (AIA), the National Air Transportation Association (NATA), and the Professional Aviation Safety Specialists (PASS). Each witness will provide their assessment of the FAA’s progress to streamline the certification processes and reduce regulatory inconsistencies while maintaining the highest level of safety. They will also share what actions they believe can be taken in the short term to achieve these goals.

Aircraft Certification

The FAA is responsible for issuing type and manufacturing certificates for aircraft, aircraft engines and propellers, as well as aircraft parts and appliances (aircraft and aircraft components). To ensure the safety of an aircraft and aircraft components the FAA has developed a set of safety standards that an aircraft and aircraft component must comply with. In exercising its discretion, the FAA has devised a system of compliance review that involves the certification of the design and manufacture of aircraft and aircraft component. Under this process, the duty to ensure that aircraft and aircraft components conform to FAA safety regulations lies with the manufacturer and operator, while the FAA retains responsibility for overseeing compliance.

Thus, the manufacturer is required to (1) develop the plans and specifications and (2) perform the inspections and tests necessary to establish that an aircraft design comports with the regulations; the FAA then reviews the data by conducting a risk-based review of the manufacturer’s work. If the FAA finds that a proposed new type of aircraft and aircraft component comports with minimum safety standards, it signifies its approval by issuing a type certificate. Typically, aircraft appliances are approved through technical standard orders. Aircraft components can also be approved by the FAA through a supplemental type certificate, which has similar process for approval as type certificate. Figure 1 provides a basic overview of key FAA aircraft certification processes.

Figure 1: Key Phases in Aircraft Certification’s Process for Approving Aviation Products



Source: FAA.

Type Certificate

When a new aircraft or aircraft component design is being proposed, the applicant must first apply to the FAA for a type certificate. The applicant must show that the proposed design meets the applicable existing airworthiness requirements. The regulations provide for the issuance of special conditions when the Administrator finds that the airworthiness standards do not contain adequate or appropriate safety standards because of novel or unusual design features of the product to be type certificated. In order to receive a type certificate, the applicant must conduct a series of tests and reviews to show that the product is compliant with existing standards and any special conditions issued by the FAA.

Production Certificate

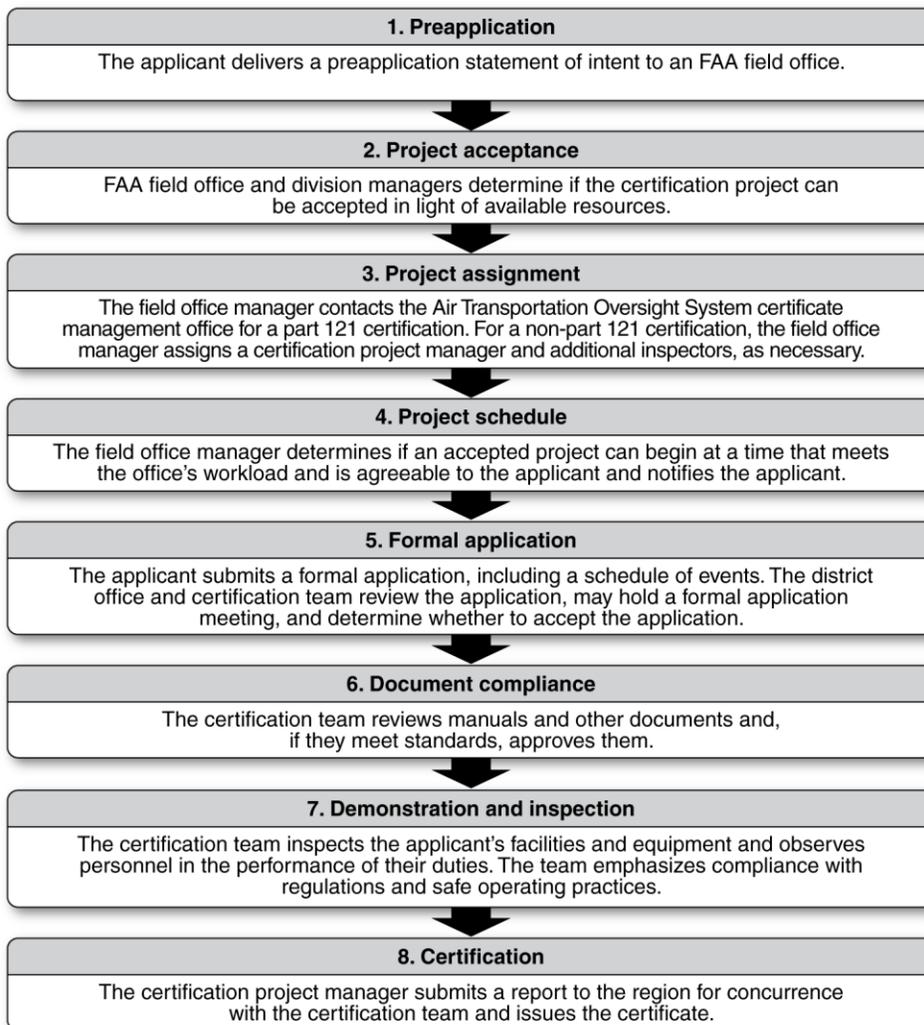
Along with seeking a type certificate, the applicant can simultaneously seek a production certificate from the FAA. A production certificate is an approval by the FAA to manufacture duplicate products of the type design approved by the type certificate. Before approving a

production certificate, the FAA will review the manufacturer’s quality control systems against regulatory and policy requirements. The holder of the production certificate is responsible for the quality of all parts, even those that are not specifically manufactured by the production certificate holder. Aircraft parts can obtain a parts manufacturing approval, which is equivalent to a production certificate but is only for one specific part.

Flight Standards’ Certificates for Air Operators and Air Agencies

Within the FAA, the Flight Standards Office is responsible for issuing certificates and approvals for airmen, air operators, air agencies, commercial air carriers, repair stations, designees, pilot schools and training. These certificate actions are covered in over 100 FAA field offices with roughly 4,000 flight standards inspectors. This office, in conjunction with the Aircraft Certification office, is responsible for continued oversight of (1) operational safety of certificate holders, (2) designees, (3) air operators, and (4) air agencies operation and maintenance. Figure 2 shows the process by which Flight Standards carries out their duties.

Figure 2: Key Steps in Flight Standards’ Process for Issuing Certificates to Air Operators and Air Agencies



Source: FAA.

Organization Designation Authorization

In order to ensure that all parts meet quality standards, the FAA also has the ability to issue a company an Organization Designation Authorization (ODA). The ODA allows a company to set up an organization of airworthiness representatives (AR) who act on behalf of the FAA. The FAA, in conjunction with the approved ODA, develops a manual which specifies the procedures, processes, and practices to be used. The ARs are authorized by the FAA and carryout routine certification actions. The FAA inspectors have the authority to perform any of these activities themselves should they wish to, or they can delegate the responsibility to the AR. An AR is approved by the FAA after going through a review process and are responsible for ensuring the manufacturers' compliance to FAA standards. The FAA has multiple processes that must be met to ensure that a new aircraft meets the standards of aircraft design and manufacturing. Ultimately, the FAA remains responsible for safety oversight.

FAA Modernization and Reform Act of 2012

Section 312: Aircraft Certification Process Review and Reform

The Reform Act contains two key provisions addressing the FAA's certification process. Section 312 requires the FAA to conduct an assessment of the certification approval processes and develop recommendations to improve efficiency and reduce costs through the streamlining and reengineering of the certification process. After developing the recommendations, the Administrator is required to submit a report to Congress containing the results of the assessment and an explanation of how they will implement the recommendations contained in the report. Section 312 also directed the FAA to begin implementing the recommendations by February 2013.

The FAA submitted the report required by section 312 on July 31, 2013.¹ The FAA is currently addressing six recommendations that were developed in consultation with industry and included in the report. They include:

1. Develop a comprehensive means to implement and measure the effectiveness of implementation and benefits of certification process improvements;
2. Enhanced use of delegation;
3. Develop an integrated Roadmap and vision for certification process reforms;
4. Update part 21 to reflect a systems approach for safety;
5. Develop and implement a comprehensive change management plan; and
6. Review and implement process reforms and efficiencies needed for other aircraft certification service functions.

¹ United States Department of Transportation, Federal Aviation Administration "Detailed Implementation Plan for the Federal Aviation Administration Modernization and Reform Act of 2012, Public Law no. 112-95, Section 312". July 31, 2013.

http://www.faa.gov/regulations_policies/rulemaking/committees/documents/media/ACPRR.ARC.Implementation%20Plan.20130731.pdf

According to the FAA's Implementation Plan, recommendations 1, 3 and 5 will be addressed in the FAA's roadmap for major change initiatives in aircraft certification service. Recommendation 2 is being addressed in an action plan to improve the effectiveness of the delegation process and as part of the Aircraft Certification Training Advisory Committee. The FAA will address recommendation 6 through a report exploring options for streamlining processes. The FAA has developed an implementation plan which will address all recommendations. According to the FAA, the agency was already in the process of implementing initiatives to address some of the recommendations and it will continue its efforts.

Section 313: Consistency of Regulatory Interpretation

Section 313 of the Reform Act requires the Administrator to establish an advisory panel of government and industry representatives to review the GAO's October 2010 report² on certification and approval processes and develop recommendations to address GAO's findings and other concerns raised by interested parties. In addition, the Advisory Panel is tasked with developing plans to increase consistency of interpretation of regulations by Flight Standards Service and Aircraft Certification Service. On July 19, 2013, the FAA submitted the advisory panel's report to Congress.³ The FAA planned to submit an Action Plan on implementation of these measures by the end of September 2013, however the plan is still in process.

The FAA charted an Aviation Rulemaking Committee (ARC) on April 30, 2013 and tasked the ARC with reviewing the GAO report, determining the root causes of inconsistent interpretations and developing recommendations. The ARC recommended the FAA should:

- review all guidance documents and interpretations to identify and cancel outdated material and cross-reference material to its applicable rule;
- develop a standard decision-making methodology for the development of all policy and guidance material to ensure such documents are consistent;
- review and revise regulatory training for agency personnel and make curriculum available to ensure the training includes interactive workshops, appropriate initial and recurrent training;
- establish a Regulatory Consistency Communications Board (RCCB) with representatives from the FAA to provide clarification to FAA personnel and certificate holders and applicants;
- improve the FAA's rulemaking procedures and guidance to ensure each proposed and final rule preamble contains a comprehensive explanation of the purpose, technical requirements, and intent; and
- determine the feasibility of establishing a full-time Regulatory Operations Communication Center (ROCC) as a centralized support center to provide real-time guidance to FAA personnel, industry, certificate holders, and applicants.

² U.S. Government Accountability Office "GAO-11-14, Aviation Safety: Certification and Approval Processes Are Generally Viewed as Working Well, but Better Evaluative Information Needed to Improve Efficiency." October 2010.

³ United States Department of Transportation, Federal Aviation Administration "Report to Congress: Consistency of Regulatory Interpretation, FAA Modernization and Reform Act of 2012 (P.L. 112-95)- Section 313." July 19, 2013.

The FAA has developed an implementation plan to execute the reforms needed to address the ARC recommendations.

Witnesses:

Panel I

Ms. Dorenda Baker
Director of Aircraft Certification Service
Federal Aviation Administration

Dr. Gerald Dillingham
Director of Civil Aviation Issues
Government Accountability Office

Mr. Jeff Guzzetti
Assistant Inspector General for Aviation Audits
U.S. Department of Transportation

Panel II

Mr. Ali Bahrami
Vice President – Civil Aviation
Aerospace Industries Association

Mr. Tom Hendricks
President
National Air Transportation Association

Mr. Pete Bunce
President
General Aviation Manufacturers Association

Mr. Michael Perrone
President
Professional Aviation Safety Specialists