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# *Office of Inspector General*

# *Audit Report*

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## **FAA LACKS AN EFFECTIVE STAFFING MODEL AND RISK- BASED OVERSIGHT PROCESS FOR ORGANIZATION DESIGNATION AUTHORIZATION**

*Federal Aviation Administration*

*Report Number: AV-2016-001*

*Date Issued: October 15, 2015*





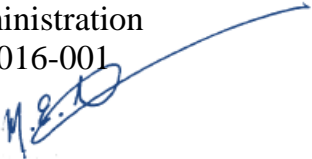
# Memorandum

U.S. Department of  
Transportation

Office of the Secretary  
of Transportation  
Office of Inspector General

Subject: **ACTION:** FAA Lacks an Effective Staffing  
Model and Risk-Based Oversight Process for  
Organization Designation Authorization  
Federal Aviation Administration  
Report Number AV-2016-001

Date: October 15, 2015

From: Matthew E. Hampton   
Assistant Inspector General  
for Aviation Audits

Reply to  
Attn. of: JA-10

To: Federal Aviation Administrator

The U.S. civil aviation industry is vital to the Nation's economy and encompasses more than 200,000 aircraft, 1,600 approved manufacturers, and 5,400 aircraft operators, among others. Recognizing that it is not possible for Federal Aviation Administration (FAA) employees to oversee every facet of such a large industry, public law<sup>1</sup> allows FAA to delegate certain functions, such as approving new aircraft designs and certifying aircraft components, to private individuals or organizations. Designees perform a substantial amount of critical work on FAA's behalf. For example, one aircraft manufacturer approved about 90 percent of the design decisions for all of its own aircraft.

FAA created the Organization Designation Authorization (ODA) program in 2005 to standardize its oversight of organizations (e.g., manufacturers) that are approved to perform certain functions on its behalf. In June 2011, we reported<sup>2</sup> that FAA needed to improve its oversight of the ODA program, including better monitoring of ODA personnel and training of FAA engineers. Since then, the ODA program has continued to evolve. Currently, there are approximately 80 delegated authorities that approve work for FAA at airlines, aircraft manufacturers, and repair facilities. In May 2012, a joint Government-industry report recommended that FAA expand and fully use the program to help manage

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<sup>1</sup> 49 U.S.C § 44702 (d).

<sup>2</sup> *FAA Needs To Strengthen Its Risk Assessment and Oversight Approach for Organization Designation Authorization and Risk-Based Resource Targeting Programs* (OIG Report No. AV-2011-136), June 29, 2011. OIG reports are available on our Web site at <http://www.oig.dot.gov/>.

its workload and keep pace with emerging aviation technologies that require certification.<sup>3</sup>

Representative Peter DeFazio requested that we review FAA's staffing and oversight of the ODA program's delegated organizations. In particular, Representative DeFazio expressed concerns as to whether FAA has the resources and risk-based tools in place to provide effective oversight of the ODA program. Accordingly, our audit objectives were to assess FAA's (1) process for determining staffing levels needed to conduct ODA oversight and (2) oversight of delegated organizations' program controls.

We conducted our work in accordance with generally accepted Government auditing standards. Exhibit A details our scope and methodology, and exhibit B lists the organizations we visited or contacted.

## RESULTS IN BRIEF

FAA lacks a comprehensive process for determining staffing levels needed to provide ODA oversight. Although the Agency uses a staffing model to aid in identifying staffing needs, the model does not yet include detailed ODA data on important workload drivers such as a company's size and location, type of work performed, past performance, and project complexity and volume. Additionally, although FAA uses the model to help determine overall staffing needs, the Agency does not use it to forecast staffing needs at the field certification office and oversight team levels. Instead, a committee of managers allocates staffing using the model's overall results, which are based on average amount of time spent on ODA oversight regardless of company size, and a discussion of individual office needs. Without a comprehensive, data-driven approach, FAA cannot be assured that it has the right number of people in the right places to effectively oversee the ODA program.

FAA's oversight of ODA program controls is not systems- and risk-based<sup>4</sup> as recommended by an aviation rulemaking committee.<sup>5</sup> Instead, in planning and performing oversight, FAA certification offices use minimum requirements in program guidance, primarily a checklist completed annually and a biennial audit. FAA's current guidance provides little direction as to how to accomplish the checklist and does not provide details on how to shift from a focus on individual

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<sup>3</sup> *A Report from the Aircraft Certification Process Review and Reform Aviation Rulemaking Committee to the Federal Aviation Administration: Recommendations on the Assessment of the Certification and Approval Process*, May 22, 2012.

<sup>4</sup> Systems-based oversight shifts from focusing on individual project engineering work to holistically assessing whether ODA companies have the people, processes, procedures, and facilities in place to produce safe products, thus allowing FAA to focus its oversight on the highest risk areas, such as new, innovative aircraft designs.

<sup>5</sup> Aircraft Certification Process Review and Reform (ACPRR) Aviation Rulemaking Committee, a joint FAA and industry group, formed in response to a congressional mandate to study the aircraft certification process.

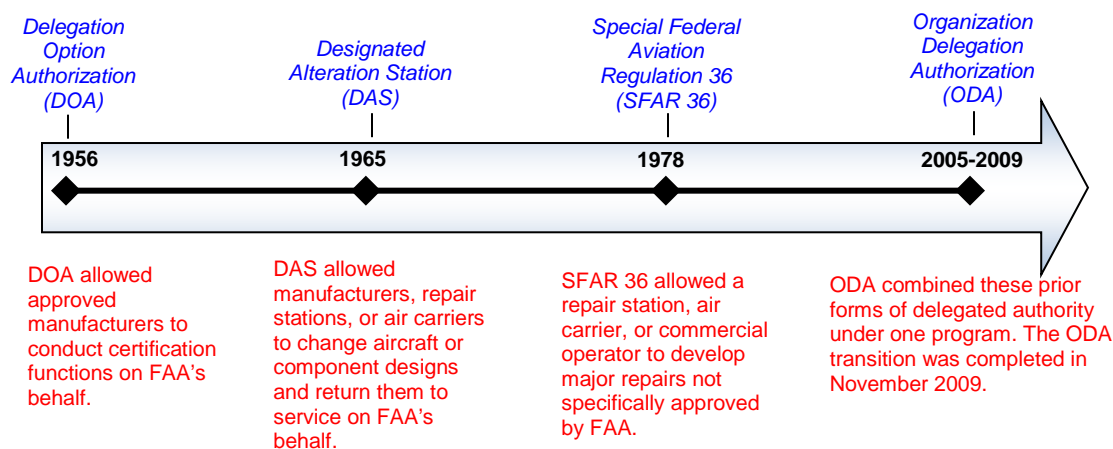
projects and company personnel to overseeing processes and systems. For example, one checklist item directs FAA team members to review changes to FAA regulations and policies with ODA personnel rather than assess the company's overall system and processes for providing personnel this information. Further, FAA has not provided oversight teams with tools or guidance on data they should use to identify highest risk areas. As a result, FAA's oversight is not data-driven and fully targeted toward the areas of highest risk. Another gap in FAA's oversight pertains to companies that produce and supply components to other manufacturers. FAA performed oversight of only 4 percent of personnel conducting certification work on FAA's behalf at suppliers in fiscal year 2014. Recognizing the need to improve its oversight, FAA is developing a new ODA oversight process, but it will not be implemented until 2016 at the earliest.

We are making recommendations to improve FAA's staffing and oversight of the ODA program.

## BACKGROUND

Since 1956, FAA has developed various forms of organizational delegation to meet specific needs. FAA created the ODA program in 2005 to standardize its oversight of organizational designees.<sup>6</sup> The program was fully implemented in November 2009 when FAA required all delegated organizations to transition to FAA's new ODA policy. Figure 1 illustrates the development and evolution of organizational delegation since the inception of the program.

**Figure 1. Development of Organizational Delegation**



Source: OIG analysis of FAA documents.

<sup>6</sup> Organizational designees are companies (e.g., aircraft manufacturers) that FAA has approved to perform certain functions on its behalf, such as determining compliance with aircraft certification regulations. The organization is responsible for overseeing the employees who perform the delegated functions.

To oversee a diverse aviation manufacturing industry, FAA employs about 700 engineers and 250 inspectors in over 30 certification offices across the country, who are responsible for overseeing over 1,600 manufacturers, about 80 of which are ODAs.<sup>7</sup>

Only one ODA company, Boeing, has a dedicated oversight office due to its high level of project volume and complexity, with the remaining ODAs overseen by engineers and inspectors in Aircraft Certification Offices and Manufacturing Inspection District Offices. These team members are not dedicated to ODA oversight and may be responsible for overseeing more than one ODA company as well as other certification and manufacturing activities, such as individual designees<sup>8</sup> and proposed certification projects for companies that do not participate in the program.

## **FAA LACKS A COMPREHENSIVE PROCESS FOR DETERMINING ADEQUATE STAFFING LEVELS FOR EFFECTIVE ODA OVERSIGHT**

FAA uses a model, known as the Aviation Safety Staffing Tool and Reporting System, to identify staffing needs for making budget requests. However, the current model does not have detailed ODA data, is not used to forecast staffing needs at the field office level, and does not include the staffing needs for the largest field office, which is dedicated to providing oversight for Boeing. Instead, a committee of managers<sup>9</sup> allocates staff to directorates<sup>10</sup> using the model's overall results, which are based on the average amount of time spent on oversight, and their technical knowledge of individual field office needs.

According to FAA, Agency managers base specific office- and team-level staffing decisions for ODA oversight on a company's size and location, type of work performed, past performance, and project complexity and volume rather than the staffing model results because the model does not include these factors. FAA managers at two of six offices expressed concerns that there are not enough labor distribution codes to adequately reflect all of their specific workload drivers, such as time spent on other certification activities versus ODA oversight. This can

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<sup>7</sup> There are eight types of ODA programs. The focus of our audit was on FAA offices that oversee delegated organizations that manufacture aircraft (production certification), approve new aircraft designs (type certification), and changes to existing designs (supplemental type certificates).

<sup>8</sup> Private individuals authorized by FAA to perform certain functions on its behalf such as determining compliance with aircraft certification regulations.

<sup>9</sup> The Aircraft Certification Management Team consists of the Director and Deputy Director of the Aircraft Certification Service, and the four directorate managers, and representatives from the Design, Manufacturing and Airworthiness Division, International Policy Office, and the Planning and Program Management Division.

<sup>10</sup> FAA's Aircraft Certification Service has four directorates—the Transport Airplane Directorate in Renton, Washington; the Rotorcraft Directorate in Fort Worth, Texas; the Small Airplane Directorate in Kansas City, Missouri; and the Engine and Propeller Directorate in Burlington, Massachusetts.

hinder FAA's ability to accurately forecast future staffing needs and respond to changing workload demands. As a result, all ODAs, regardless of size and complexity, are treated equally in FAA's staffing model. According to FAA, the Agency is continuing to work on developing staffing standards to more effectively perform ODA oversight.

In addition to the lack of detailed ODA data on workload drivers, FAA only uses the model to project staffing needs nationally and by directorate rather than at the office and ODA team level. Although FAA added a feature to the model in December 2014 that offers office-level forecasts for aircraft certification offices, the Agency currently does not use this feature and relies on directorate managers to make office-level staffing decisions, sharing resources when needed. In addition, FAA does not use this information to staff ODA oversight teams within offices because the model is based only on an average amount of time spent on oversight, and there are disparities between large and small ODAs. The lack of office- and oversight team-level model results may lead to missed opportunities to identify potential staffing shortages at individual offices. For example, team leaders at four of the six oversight offices we reviewed expressed concern with staffing levels and a backlog of projects awaiting approval. It is uncertain when and if the new feature will help office managers better determine their needs when making staffing decisions.

While sharing resources can be an efficient option to help address staffing shortages, the process can be cumbersome, time consuming, and does not assure each office will have the staffing it needs. At one office, an FAA manager requested additional staff but was denied and directed to negotiate an agreement with another office to share resources. It took about 6 months to establish an initial agreement—and the agreement will offer only limited additional oversight coverage because it only includes oversight visits to one geographic area near the company's main facility.

Finally, the largest ODA oversight office—which is dedicated to Boeing and encompasses about 40 staff—is not currently included in FAA's staffing model. A key FAA manager responsible for developing the Agency's aviation safety budget requests told us that FAA did not include this office initially because Boeing is a large and unique organization, and the Agency wanted to improve other parts of the model before adding it. FAA expects to add this office to the model by October 2015 and have an initial forecast available by fiscal year 2016. Until then, FAA does not know whether it has adequate staffing levels needed to meet workload requirements at the largest ODA oversight office or how the inclusion of its largest office will impact overall staffing numbers.

## **FAA'S OVERSIGHT OF ODA PROGRAM CONTROLS IS NOT SYSTEMS- OR RISK-BASED**

FAA's ODA oversight has evolved since the program was implemented in 2009, but it is not systems- and risk-based, which FAA and industry agree are key attributes for effective oversight of this complex program. Systems-based oversight requires a shift from focusing on individual projects to holistically assessing whether ODA companies have the people, processes, procedures, and facilities in place to produce safe products, thus allowing FAA to focus its oversight on the highest risk areas, such as new, innovative aircraft designs. Although FAA has revised its ODA guidance twice, engineers and inspectors still do not have sufficient guidance and risk-based tools to meet program requirements and focus on highest risk areas. Further, FAA has not provided sufficient oversight of ODA personnel performing work on FAA's behalf at manufacturing suppliers and offsite facilities. Recognizing that transitioning to a risk-based oversight process is a cultural shift, FAA is developing a new oversight system for the ODA program.

### **FAA's ODA Oversight Process Does Not Use a Risk-Based Approach**

FAA has established two types of oversight—an 18-item supervisory checklist<sup>11</sup> required annually and a team audit<sup>12</sup> required every 2 years. However, inspectors and engineers are not fully performing systems- and risk-based oversight of ODA controls due to the lack of adequate guidance, risk-based tools, and robust data analyses. Instead, FAA oversight focuses on meeting the minimum ODA oversight requirements by completing the checklist items annually and the biennial audits.

As a result, ODA oversight team findings are often not related to high-risk issues—e.g., issues that could directly impact the potential loss of critical systems or other safety concerns. Our review of the biennial team audits conducted by FAA in fiscal years 2013 and 2014 at five ODAs found that roughly half of the 123 findings were minor issues (i.e., paperwork errors). For example, FAA found that a company was using its marketing name rather than its official name on a technical document.

Similarly, during our review, industry representatives expressed concern that FAA's focus was often on paperwork—not on safety-critical items. For example, in reviewing airworthiness certificates as part of annual oversight, one FAA manufacturing inspector cited an aircraft manufacturer for incorrectly including the company name with the aircraft model number rather than *only* the aircraft model number as specified on the form. While the inspector was technically

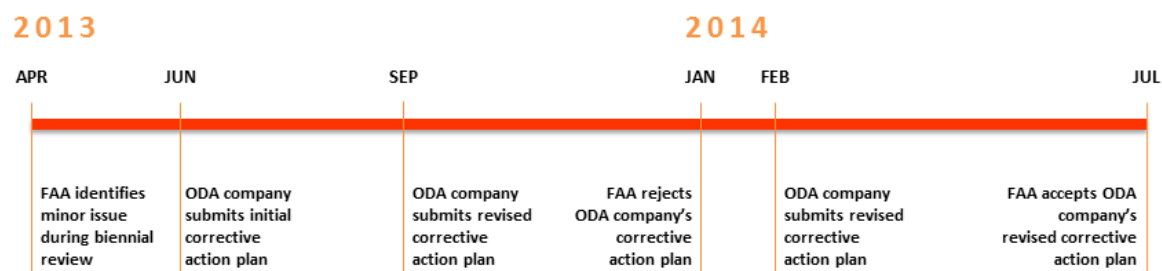
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<sup>11</sup> Annual supervision record.

<sup>12</sup> Delegated Organization Inspection Program (DOIP).

correct, the event went through the Letter of Investigation process, which requires documented corrective action. In another example, during a biennial review of an ODA company, FAA found a project folder that contained informal notes attached that should have been removed before the files were finalized and closed. It took over a year for the ODA company and FAA to resolve this minor issue, as shown in figure 2.

**Figure 2. Timeline for FAA To Resolve Minor Issue With ODA Company Project Files**



Source: OIG analysis of FAA documents.

Furthermore, FAA has yet to fully transition to systems-based oversight, which industry experts agree is a more effective approach to overseeing the ODA program. In May 2012, an aircraft certification rulemaking committee reported that FAA's slow shift to a systems-based approach to certification is limiting the Agency's ability to realize the key benefits of ODA—i.e., to improve the efficiency and lower the cost of certification processes. According to industry representatives, a systems-based approach should include robust safety oversight of authorized organizations with direct FAA involvement in critical projects that include novel aspects of certification, such as new types of aircraft or components. According to FAA, this approach should also focus oversight on areas where the ODA company is not experienced or proficient. Industry officials further stated that success in this effort requires effective implementation of a risk-based approach to better use industry and governmental resources.

### **FAA Guidance Is Not Sufficient To Ensure Engineers and Inspectors Meet Requirements and Focus on Risk**

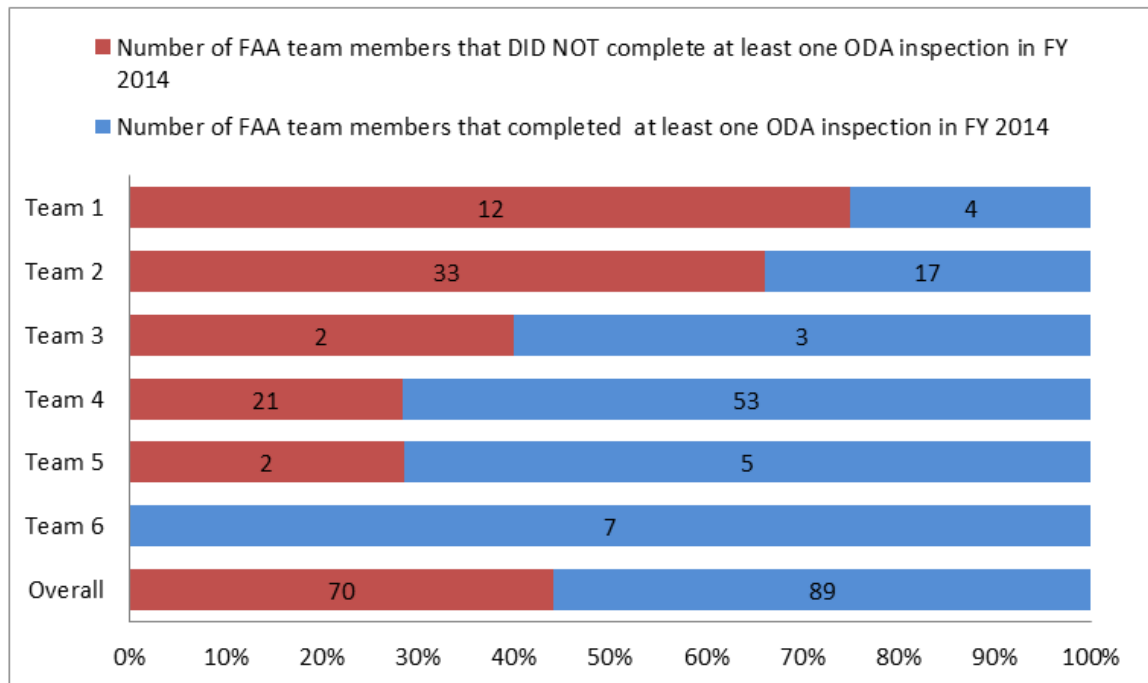
FAA guidance provides little direction as to how engineers and inspectors should complete their ODA oversight checklist and lacks a focus on risk. Most checklist items are focused on activities of individual company personnel rather than overseeing the ODA system. For example, one checklist item directs FAA inspectors and engineers to review and discuss changes in FAA regulations and policies with ODA personnel. In contrast, FAA has established risk-based tools on the manufacturing side for identifying high-risk areas and determining the FAA



involvement level for non-ODA holders. However, no such tools currently exist for ODA oversight.

We also determined that 70 of 159 (44 percent) FAA inspectors and engineers on the 6 ODA oversight teams we reviewed did not complete the minimum required number of inspections in fiscal year 2014 (see figure 3).

**Figure 3. Number of Completed and Non-Completed Inspections**



Source: OIG analysis of FAA data.

According to FAA officials from the ODA policy office, each ODA team member is required to complete at least one checklist item annually. However, ODA team members we spoke to were confused about this requirement. FAA guidance states that each team member must evaluate each of the items applicable to their technical discipline/specialty area. However, FAA teams were interpreting Agency guidance to mean that their team only needed to complete one inspection for each technical specialty their team covered (e.g., one inspection related to flight testing), rather than completing one inspection per team member.

FAA also does not provide guidance regarding how many and which ODA employees are selected as part of their oversight reviews. FAA engineers and inspectors no longer have to provide oversight of every person performing work on FAA's behalf because it is now the responsibility of the ODA company to review the work of each individual. FAA team members may target areas based on their assessment of safety risk and past performance, or randomly select ODA company personnel for oversight. However, the Agency does not provide guidance

on an appropriate sampling method or what factors should be considered (e.g., project activity or complexity) in evaluating the level of oversight for personnel performing work on FAA's behalf. One inspector responsible for oversight of nearly 400 manufacturing personnel performing work on FAA's behalf reviewed the work of only 9 personnel during fiscal year 2014. According to OIG's statistician, an appropriate sample would include almost 60 personnel.<sup>13</sup> The inspector stated that the small sample size was chosen in part due to resource and travel constraints rather than statistical reliability.

Further, in sampling ODA company personnel, FAA was not using a risk-based approach to select personnel for oversight. For example, at the four ODA companies we reviewed that certified aircraft or engines, FAA was not maintaining data that would allow it to target oversight on personnel who were authorized to issue airworthiness certifications, a critical last step before releasing an aircraft for flight.

### **FAA Is Not Performing Adequate Data Analyses Needed To Target High Risk Areas for Oversight**

FAA has not provided guidance on the data ODA teams should be reviewing to identify higher risk areas. Instead, FAA's policy only provides general guidance for ODA team members to consider quality of past work or previously identified problems that occurred on aircraft in operation. As a result, at the six oversight offices we visited, only one was using data to plan and perform inspections. However, this office has had to develop a data-analysis system on its own due to the lack of Agency guidance and is only in the initial stages of this effort.

While FAA collects and analyzes data from biennial audits at the national level and issues a report annually,<sup>14</sup> the analyses do not provide ODA team members with adequate information to target their oversight. It does not include all work they perform, such as annual oversight findings. Additionally, the analysis lacks detail to aid in targeting high-risk areas for oversight. For example, FAA determines the total number of discrepancies identified in procedures manuals, but does not specifically categorize the types of discrepancies or prioritize their significance. In addition, although FAA's annual report stated that FAA will disseminate the results and recommendations to the workforce, the ODA teams we met with were not using the information.

Further, FAA oversight offices we reviewed were not consistently using ODA company self-audits to target their oversight. FAA requires companies to perform self-audits and provide the results to the Agency. Self-audits can contain useful

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<sup>13</sup> To achieve a confidence level of 90 percent with a precision of plus or minus 10 percent.

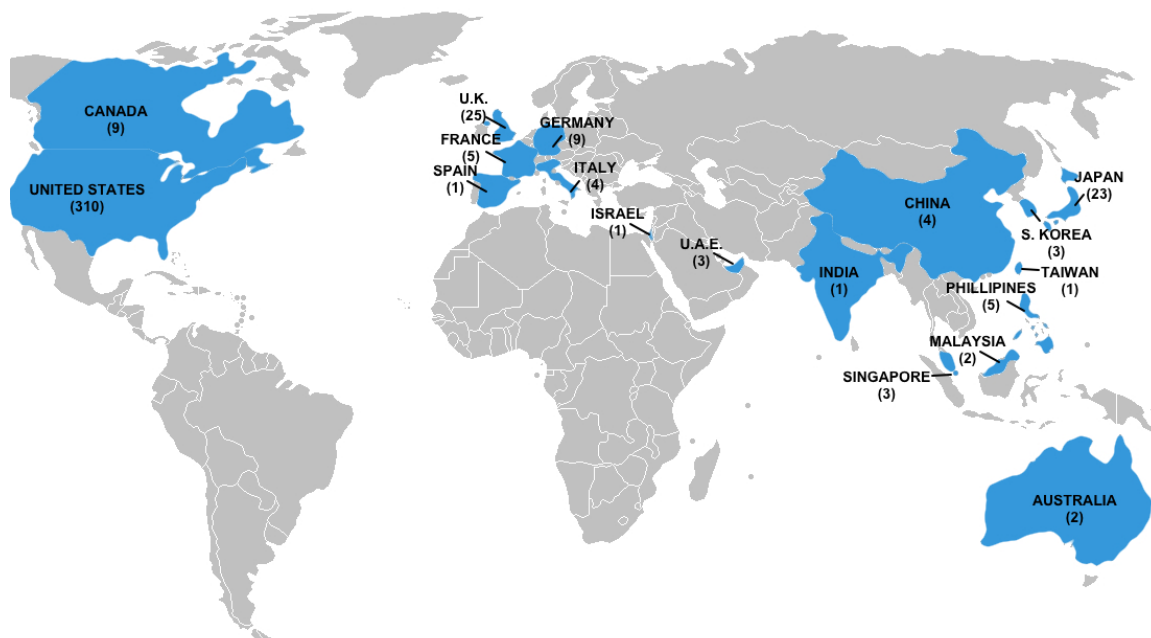
<sup>14</sup> The Office of Aviation Safety (AVS) Organization Designation Authorization (ODA) System Evaluation Report is issued annually.

information that could point to a need for additional oversight. For example, from four company self-audits we reviewed identified employee concerns about undue pressure, which could lead to rushing safety-critical tasks to meet production schedules. Although FAA guidance states that FAA teams must review self-audit reports for possible trends, the extent and process used for this review differed among the offices we reviewed. As a result, FAA is missing an important opportunity to target higher risk areas for enhanced oversight and improve ODA company processes.

### Gaps Exist in ODA Oversight at Suppliers and Other Locations

ODA companies often rely on external suppliers—firms that produce and supply components to other manufacturers—and facilities located away from their main facility to support manufacturing activities. As shown in figure 4, there are 411 company personnel performing work on FAA’s behalf located at suppliers, with 101 of those based in foreign countries.

**Figure 4. ODA Employees at Supplier Locations**



Source: OIG analysis of six ODA companies reviewed.

However, as shown in table 1, FAA only performed oversight of 4 percent of these company personnel who perform work on FAA’s behalf, exclusively at domestic locations. This leaves a critical portion of ODA work without FAA oversight.

**Table 1. FAA Oversight of ODA Personnel at Suppliers**

ODA Company	ODA Personnel at Suppliers	Personnel Reviewed
1	257	16
2	118	0
3	24	0
4	6	0
5	6	0
6	0	0
Total	411	16

Source: OIG analysis of FAA records.

Oversight of suppliers is critical because suppliers often provide major aircraft components to ODA companies. For example, the ODA company personnel on site at a supplier that builds fuselages for one aircraft type did not receive any ODA-related oversight by FAA team members during fiscal year 2014.

For international locations, it is unclear if and how FAA will conduct ODA oversight. FAA has a pilot initiative underway to oversee priority international suppliers by a dedicated team of Agency inspectors located across the country. These inspectors will travel overseas to review the priority international suppliers with an occasional follow-up for corrective action compliance. However, according to an FAA official, the Agency determined early on that this concept would not include oversight of ODA functions at international locations.

Recognizing the need to enhance ODA oversight at supplier facilities, one office we reviewed has reached an agreement for another office to provide additional oversight of ODA personnel located at suppliers. However, the agreement is not comprehensive as it will only include company personnel at domestic suppliers and ones near the company's main facilities. It will not be until fiscal year 2016 that FAA will add more locations and key offsite facilities.

Moreover, it is uncertain whether the new agreement will be effective because FAA's ODA oversight office is relying on the manufacturing oversight office to identify risks, which may not necessarily apply to ODA activities. For example, ODA activities do not take place at certain facilities at all times. While there is a formal process on the manufacturing side to hand off inspection work to other FAA offices, no such corresponding process exists for ODA oversight. FAA's

current guidance only provides an expectation that oversight teams should coordinate with other offices as needed. According to FAA officials, other agreements with different organizations will be required to include domestic suppliers outside of the local geographic area and international suppliers.

### **Transitioning to a Risk-Based Oversight Process Presents Cultural Challenges and Paradigm Shifts**

Oversight of ODA represents a major cultural shift in the way FAA inspectors and engineers perform their work, from overseeing individual designees and performing project engineering work to overseeing organizations performing the work on FAA's behalf. In our June 2011 report, we recommended FAA provide training on ODA's new enforcement requirements. While most team members have now received this training, FAA officials told us problems still exist. For example, during site visits to offices to review ODA oversight practices, FAA has identified issues such as the perceived inability to impose penalties and resolve disagreements between FAA management and oversight teams. FAA policy officials also discovered that the two offices they have visited thus far are not fully using a systems approach and barriers such as policy and training gaps exist.

Recognizing the need to improve its oversight, FAA policy officials stated that the Agency is developing a new oversight process that will represent a significant change in its approach, including identifying system elements and developing new evaluation criteria. FAA is prototyping the new process in one oversight office, but it will not be implemented until 2016 at the earliest. In addition, in response to recommendations from the aircraft certification rulemaking committee regarding a continued lack of audit skills among ODA staff, the Agency began offering additional training in December 2014. This should assist team members in transitioning from direct project involvement to a more systems- and risk-based oversight model.

## **CONCLUSION**

The aviation industry is critical to our Nation's economy, and an efficient certification process enables aircraft manufacturers and others in the industry to quickly introduce new equipment and technology into the marketplace. Delegation is an essential part of meeting FAA's certification goals. However, robust FAA oversight that is systems-based and targeted to high-risk areas is necessary to ensure that ODA companies maintain high standards and comply with FAA safety regulations. Shifting to an oversight approach that is systems- and risk- based will take time and require sustained management attention. Ensuring adequate staffing levels and providing inspectors and engineers with the necessary guidance and tools will be key to successfully transitioning to a new oversight approach. Unless FAA leverages available tools such as company self-audits and FAA assessment

results to target its oversight, the Agency cannot increase efficiency while closely monitoring the highest-risk areas of aircraft certification.

## **RECOMMENDATIONS**

To enhance the effectiveness of FAA's oversight of ODA, we recommend the Agency:

1. Determine what additional model inputs and labor distribution codes are needed to identify ODA oversight staffing needs and report the results to the Aircraft Certification Management Team.
2. Develop a process to assess the model results at the office level for potential staffing shortages, determine the validity of the results, and include in a regular written report to the Aircraft Certification Management Team.
3. Develop and implement system-based evaluation criteria and risk-based tools to aid ODA team members in targeting their oversight.
4. Clarify guidance to ODA oversight staff on the minimum oversight requirements for each oversight team member.
5. Provide guidance on data that ODA team members should be analyzing on an ongoing basis, enhance its national summary of biennial audit results to include more specificity, and disseminate it to ODA teams to use in planning their oversight.
6. Clarify guidance to engineers and inspectors on actions to take in response to self-audits and develop a process to validate that the audits are being used to identify trends that warrant a need for oversight.
7. Provide guidance on the level of sampling required to achieve effective oversight of ODA company personnel performing key aircraft certification functions, and issue sampling guidance to field offices.
8. Develop agreements and a process for sharing resources to assure that ODA personnel performing certification and inspection work at supplier and company facilities receive adequate oversight.
9. Require annual assessments of audit training provided to ODA oversight personnel for effectiveness and report the results of the assessment on an annual basis to the Aircraft Certification Management Team.

## **AGENCY COMMENTS AND OFFICE OF INSPECTOR GENERAL RESPONSE**

We provided FAA a copy of our draft report on August 26, 2015, and received its response on September 24, 2015, which is attached as an appendix to this report. FAA concurred with recommendations 1, 2, 3, 4, 6, and 9 as written and provided appropriate target action dates. Based on FAA's response, we consider these six recommendations resolved but open pending completion of planned actions.

FAA partially concurred with recommendations 5, 7, and 8. FAA officials stated that they agreed with the intent of the recommendations but requested we make clarifying changes, as detailed in the Agency's response. However, FAA did not provide its rationale for the requested changes or describe its planned alternative courses of action to address our findings. In addition, requested changes to recommendations 5 and 7 do not fully meet the intent of our recommendations. For recommendation 5, FAA removed a key part related to enhancing its national audit results summary report. For recommendation 7, FAA changed our reference to effective oversight from ODA company personnel to certification functions. We require further details from FAA on recommendation 8 to determine whether FAA's changes still meet the intent of the recommendation. As a result, recommendations 5, 7, and 8 will remain open and unresolved pending receipt and review of additional information from FAA.

## **ACTIONS REQUIRED**

We consider recommendations 1, 2, 3, 4, 6, and 9 resolved but open pending completion of planned actions. For recommendations 5, 7, and 8 we request that FAA provide its rationale and planned alternative actions for our consideration. In accordance with Department of Transportation Order 8000.1C, we request FAA provide this information within 30 calendar days of the date of this report. Until then, we consider recommendations 5, 7, and 8 open and unresolved.

We appreciate the courtesies and cooperation of FAA representatives during this audit. If you have any questions concerning this report, please call me at (202) 366-0500 or Robin P. Koch, Program Director, at (404) 562-3770.

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cc: DOT Audit Liaison, M-1  
FAA Audit Liaison, AAE-100

## **EXHIBIT A. SCOPE AND METHODOLOGY**

We conducted this audit between May 2014 and August 2015 in accordance with generally accepted Government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. Our audit objectives were to assess FAA's (1) process for determining staffing levels needed to conduct ODA oversight and (2) oversight of delegated organizations' program controls.

We met with management officials responsible for administration of their respective ODA programs at 5 randomly selected manufacturers out of 46 who had ODA approvals as of April 2014 and 1 additional ODA selected to provide a look at engine manufacturing. The selected ODA companies include manufacturers for both small and transport category airplanes, helicopters, aircraft engines, aircraft interiors, and aircraft systems. We interviewed individual employees who perform work under each company's ODA and analyzed ODA company personnel qualifications, company self-audits and ODA procedures manuals for these companies. We obtained and reviewed documents to analyze policies and procedures for ODA.

To obtain information about FAA's process to determine staffing levels needed to conduct ODA oversight, and to assess FAA's oversight of delegated organizations' program controls, we performed audit work at the six certification offices that oversee the ODAs we visited. To determine whether FAA's staffing model, the Office of Aviation Safety Staffing Tool and Reporting System, is being used to staff certification offices at the local level, we interviewed officials and obtained documentation from DOT's John A. Volpe Aviation Safety Management Systems Division, FAA headquarters, and certification managers.

We met with representatives at the six FAA certification offices that provide oversight for the six manufacturers we visited to determine whether FAA was using systems- and risk-based oversight of the ODA holders, including their world-wide suppliers. We reviewed biennial FAA delegated organization inspection program audits, FAA supervision records, and ODA procedures manuals. We interviewed certification managers and engineers at FAA Headquarters and certification offices.

We also met with representatives from the General Aviation Manufacturers Association and Aerospace Industries Association to obtain their perspectives on ODA. To assist us in assessing the effectiveness of ODA we contracted with



TeamSAI, an air transportation consulting firm. TeamSAI assisted in our analysis and participated in meetings with certification offices and aircraft manufacturers. The scope of work on internal controls was limited to gaining an understanding of ODA program controls and FAA oversight. Deficiencies identified are included in the report.

## **EXHIBIT B. ORGANIZATIONS VISITED OR CONTACTED**

### **Federal Aviation Administration**

Aircraft Certification Service (AIR)	Washington, DC
Finance and Budget Division	Washington, DC
Production and Airworthiness Division	Washington, DC
Delegation and Organizational Procedures Section	Oklahoma City, OK
Atlanta Aircraft Certification Office	Hapeville, GA
Boeing Aviation Safety Oversight Office	Renton, WA
Boeing Certificate Management Office	Renton, WA
Denver Aircraft Certification Office	Denver, CO
Engine Certification Office	Burlington, MA
Los Angeles Aircraft Certification Office	Lakewood, CA
New York Aircraft Certification Office	Westbury, NY
Rotorcraft Certification Office	Ft. Worth, TX
Seattle Aircraft Certification Office	Renton, WA

### **ODA Companies**

Bell Helicopter Textron Inc.	Hurst, TX
Boeing Commercial Airplanes	Seattle, WA
C&D Zodiac, Inc.	Huntington Beach, CA
General Electric Co.	Cincinnati, OH
Gulfstream Aerospace Corporation	Savannah, GA
PATS Aircraft, LLC	Georgetown, DE

### **Other Organizations**

Aerospace Industries Association (AIA)	Arlington, VA
General Aviation Manufacturers Association (GAMA)	Washington, DC
John A. Volpe National Transportation Systems Center - Aviation Safety Management Systems Division	Cambridge, MA

**EXHIBIT C. MAJOR CONTRIBUTORS TO THIS REPORT**

<b><u>Name</u></b>	<b><u>Title</u></b>
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## Federal Aviation Administration


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# Memorandum

Date: September 24, 2015

To: Matthew E. Hampton, Assistant Inspector General for Aviation Audits

From: H. Clayton Foushee, Director, Office of Audit and Evaluation, AAE-1 

Subject: Federal Aviation Administration's (FAA) Response to Office of Inspector General (OIG) Draft Report: FAA Oversight of Organization Designation Authorization (ODA)

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The ODA program is vital in accomplishing required FAA certification approvals for U.S. aircraft, powerplant, and component manufacturers, as well as for numerous other applicants required to achieve FAA approval of aircraft modifications and repairs. Since the program was first introduced in 2009, FAA has continued to evolve the ODA program, and without it, U.S. aircraft production and repair activities would be unacceptably delayed. The Agency is committed to continuously enhancing its oversight of the program, but the ever expanding magnitude of the U.S. aerospace industry requires that the Agency delegate an increasing number of oversight functions through the ODA program. The FAA is currently implementing policy and training improvements that will enhance ODA oversight. These changes include a greater emphasis upon risk-based approaches to the surveillance of ODA holders, which will result in better utilization of FAA inspector resources and more effective oversight.

The FAA has reviewed the draft report and offers the following comments in response to the OIG's findings and recommendations:

- The FAA continues to address ODA program recommendations developed in response to the FAA Modernization and Reform Act of 2012 (P.L. 112-95). These activities focus on a systems approach to oversight of ODA, including the use of risk-based tools and improvements in oversight and auditing training.
- The next significant change to ODA oversight policy will incorporate a risk-based systems oversight approach and will serve as the basis for future systems-based FAA certification process improvements.

The FAA concurs with OIG recommendations 1, 2, 3, 4, 6, and 9, as written, and partially concurs with recommendations 5, 7, and 8. With regard to the latter three recommendations, the Agency agrees with the apparent intent of those recommendations and suggests the following word changes

for clarification. With these clarifications for recommendations 5, 7, and 8, the Agency would fully concur with all recommendations.

- Recommendation 5: Provide guidance on data that ODA team members should be analyzing on an ongoing basis, disseminate its national summary of biennial audit results to ODA teams for their consideration in audit planning.
- Recommendation 7: Provide guidance on the level of review required to achieve effective oversight of ODA performance of key aircraft certification functions.
- Recommendation 8: Develop agreements and a process for sharing resources to assure adequate oversight of ODA activities at supplier and company facilities.

The FAA plans to complete action on recommendation 4 by December 31, 2015; recommendations 5 and 8 by March 31, 2016; and recommendations 1, 2, 6 and 7 by August 31, 2016. For recommendation 9, FAA has recently implemented a new audit skills training curriculum and will have sufficient data to complete its first annual assessment by December 31, 2016. Recommendation 3 will require significant changes in ODA oversight guidance resulting in a revision to ODA Order 8100.15, and will be completed by March 31, 2017.

We appreciate this opportunity to offer additional perspectives on the draft report. Please contact H. Clayton Foushee at (202) 267-9000 if you have any questions or require additional information about these comments.