AVIATION SAFETY

FAA's Risk-Based Oversight for Repair Stations Could Benefit from Additional Airline Data and Performance Metrics

Why GAO Did This Study

FAA is responsible for overseeing nearly 4,800 FAA-certificated repair stations in the United States and in foreign countries. While U.S. airlines' rely on repair stations for much of their maintenance, some aviation stakeholders have questioned FAA's oversight of foreign repair stations.

GAO was asked to examine maintenance contracting trends and FAA oversight of repair stations. This report assesses: (1) trends and factors influencing airline maintenance contracting from 2010 through 2014, (2) how FAA's oversight of foreign and domestic repair stations differs and associated challenges, and (3) efforts taken by FAA to improve its risk-based oversight. GAO analyzed BTS data on airlines' maintenance spending from 2010 through 2014 for 28 selected U.S. commercial airlines with the largest number of flights, and interviewed representatives for 10 U.S. airlines. GAO visited seven foreign repair stations in three countries, and interviewed industry representatives. GAO also analyzed FAA inspection and enforcement data for repair stations from 2010 through 2014.

What GAO Recommends

FAA should: (1) develop and implement a process for incorporating into SAS volume data for U.S. airlines' maintenance contracted to repair stations and (2) develop a process to evaluate the effectiveness of SAS. FAA disagreed with the first recommendation, noting it considered other volume-related data, and agreed with the second recommendation. GAO continues to believe the recommendation is valid as discussed in this report.

What GAO Found

The extent to which U.S. airlines contract out aircraft maintenance to domestic and foreign repair stations (as opposed to performing maintenance in-house) has remained relatively steady from 2010 through 2014. GAO's analysis of Bureau of Transportation Statistics (BTS) data for that period (the most recent available) showed that 28 selected U.S. airlines' annual contracted maintenance spending ranged from 58 to 64 percent of their total annual maintenance spending. In addition, representatives for all 10 U.S. airlines GAO interviewed said that the type of aircraft maintenance can affect an airline's decision to contract out maintenance. For instance, airlines generally indicated that the majority of light, routine maintenance—i.e., more suited for overnight or quick turnaround—is performed in-house. However, when it is more cost-effective, they contract some, if not all, of the more involved maintenance and repairs that may require specialized skills and equipment. Industry representatives GAO interviewed also identified three key influencing factors that affect airlines' maintenance decisions: (1) service quality available at repair stations, (2) cost considerations, and (3) the use of service contracts with manufacturers of original aircraft parts.

The Federal Aviation Administration's (FAA) regulatory requirements for foreign repair stations differ in several ways from the requirements for domestic repair stations, including certification, renewal, personnel, and drug and alcohol testing requirements. FAA faces challenges in overseeing foreign repair stations related to its inspectors' ability to conduct routine and unannounced inspections of foreign repair stations. FAA also faces challenges with coordinating inspections of repair stations conducted by its oversight offices for airlines and its oversight offices for repair stations, with some stations receiving around 50 visits per year from the airline oversight offices alone. In response, FAA is implementing new strategies aimed at more efficiently using its resources.

In fiscal year 2015, FAA began to deploy its Safety Assurance System (SAS), a risk-based, data-supported oversight system to help standardize how its inspectors identify safety risks in planning and conducting oversight, including of repair stations. Safety assurance is one of the four components of FAA's new Safety Management System oversight approach, and FAA designed SAS to implement that component. GAO found the design of SAS fully meets three of the five principles FAA identified as key for the safety assurance component and partially meets the other two principles, which involve data collection and management review. SAS enables inspectors to collect various data, but does not enable them to consider a repair station's volume of work when determining risk. FAA does not otherwise collect or track this data. FAA officials said they do not consider volume data to be a standalone risk factor, but FAA has previously stated that tracking volume data could help identify high-risk repair stations. GAO and the Department of Transportation's (DOT) Office of Inspector General have reported on the importance of FAA's collection of quality data for providing a comprehensive risk-based oversight system. Also, FAA conducts management reviews, but has not developed a process with goals and performance metrics for determining the effectiveness of SAS. Without the ability to measure progress toward goals, FAA risks not knowing whether its new, risk-based oversight approach is a success or could be improved.

_____ **United States Government Accountability Office**