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# **Risks Associated with Foreign Repair Stations Executive Summary**

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## 1. EXECUTIVE SUMMARY

From our review of publicly available related material and information, U.S. standards associated with domestic oversight and repair, including the capabilities of personnel involved in both tasks, are superior to those overseas. The disparity between the venues are primarily due to multiple legal, regulatory and cultural differences. This includes limitation on access controls and the thoroughness of background checks on personnel. Both conditions increase risks related to situations that could be more easily exploited by terrorists or individuals with harmful intent.

The quality, frequency and thoroughness of inspections are under much closer scrutiny in the United States than elsewhere. Given the absence of direct FAA oversight coupled with the differences more fully described in the following report, we concluded that the safety and security concerns of commercial aviation are better addressed when the repair and maintenance is done in the United States.

There are obvious disparities between domestic and foreign oversight and repair of commercial airline repair stations in foreign venues. Legal, regulatory and cultural differences clearly affect the quality, frequency and thoroughness of inspections. Given the absence of direct oversight by the FAA and the differences described in the report that follows, the qualifications of those responsible for oversight and those maintaining and repairing the aircraft in foreign countries cannot be viewed as meeting the rigorous standards of inspection and repair as required in the U.S.

The Transportation Workers Union of America contracted with Ridge Global, LLC. To examine and assess safety and security risks associated with foreign based repair and overhaul facilities involving the maintenance and repair of commercial airliners. It is estimated that nearly 50% by dollar volume of maintenance work done by operators of U.S. registered aircraft is done in one or more of the nearly 900 FAA certified repair facilities located outside the U.S. The examination relied on publicly available research data and sources and the experience of the authors. All U.S. registered airline aircraft are required by the FAA to be maintained to FAA standards regardless of where the work is performed. Such an examination invited comparison to the standards and protocols required of repair and maintenance facilities operating domestically. Our examination revealed differences in the regulatory environments, levels of oversight, cultural views of safety and security, staffing practices and issuance and possession of FAA certifications for mechanics and technicians between domestic and offshore facilities.”

Repair stations, particularly large ones, are complex operations. Risks can be encountered in many ways. It should be noted that the Department of Transportation can address risks through its regulatory authority over domestic facilities. It cannot impose U.S. security regulations on facilities outside the country. This responsibility is vested in the airlines and the FAA.

Foreign repair stations present risks that domestic ones do not. The primary and critical source of these risks is due, in part, to the variance in how regulations and laws are applied. This



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situation is exacerbated because of FAA's internal systemic and budgetary challenges that relate to foreign stations. These challenges within the FAA have impacted the number of inspectors available for foreign oversight and their inspections. Logistical and cultural challenges complicate foreign oversight as well. There are procedural differences in how the foreign oversight authorities audit repair stations for FAA compliance. Risk based assessment methodology varies and there are regulatory disparities. One of the most significant challenges deals with drug and alcohol testing requirements. Testing is mandated in the U.S. Employment and privacy laws in many foreign countries prevent such testing. Another contrast involves the inspection process itself. FAA Domestic inspections can be random, i.e. without notice. That approach is prohibited in foreign countries.

The U.S., along with many other nations with well-developed aviation safety and security processes, have embraced a cultural change to what are generically called non-punitive voluntary reporting systems that allow mechanics and other front-line employees to identify deficiencies in processes or even in their own work, without fear of retribution in order to ensure these deficiencies are fully addressed. Many developing nations, however, face significant societal or even legal barriers to developing these systems. An obvious issue that can lead to increased safety and security risk is language differences. Although English is the universal language of aviation, there are potential gaps in ensuring the accuracy of translations to and from English to the native languages of technicians.

The labor pool of highly skilled technicians needed for the ever-increasing technology in modern airline aircraft may differ significantly offshore, particularly in developing market, leading to risks associated with understaffing and inadequate training. The process by which technicians receive certifications to be FAA technicians includes an allowance for non-U.S. citizens to be certified. This potential risk factor and the disparities of certified to non-certified mechanics and technicians were notable and in some cases the ratio of certified to non-certified mechanics was as high as 31 to 1. The comparable U. S. ratio is closer to 2-to-1.