

Aircraft Maintenance Outsourcing Issue

At-A-Glance

- ➔ **Background.** For the 11 years ending in 2007, U.S. airlines outsourced maintenance expenses increased from 37% to 64%; the number of foreign FAA-certificated repair facilities has grown from 344 to 704 over a comparable period of time. At risk: passenger safety, homeland security, jobs, the environment, the economy.
- ➔ **Problem 1: Eroding Passenger Safety.** There are two sets of maintenance standards. Airline-owned and FAA-certificated contract repair stations must adhere to, respectively, two standards-- Parts 121 and 145 of the Federal Aviation Regulations; foreign FAA-certificated repair facilities also adhere to Part 145 but critical exceptions are made in personnel and security standards such as background checks, duty-time limitations, and alcohol and drug testing. For example, supervisors and inspectors who sign off on maintenance work at foreign repair stations are not required to hold a FAA repairman certificate or an Airframe and/or Powerplant (A&P) certificate, nor are the mechanics working on the aircraft at these facilities. Exacerbating the problem is uneven FAA and airline oversight as well as a significant number of non-certificated FAA repair facilities. Outsourcing of aircraft maintenance has exploded in volume and complexity while regulatory standards and oversight have not kept pace.
- ➔ **Problem 2: Increasing Homeland Security Risk.** With respect to personnel background checks, drug and alcohol testing, access to aircraft, and parts inventory, there is one standard for airline-owned maintenance facilities and domestic U.S. FAA-certificated repair stations, and no standard for foreign repair stations. There are few safeguards in place to prevent terrorists from exploiting an opportunity to do us harm by, for example, tampering with airline systems or inserting explosives into aircraft while they are undergoing maintenance. The Transportation Security Administration (TSA) is now over four years delinquent in establishing security regulations for foreign repair stations.
- ➔ **Problem 3: Dwindling Skilled Workforce.** Dangerous industry direction and government regulation related to aircraft maintenance outsourcing are decimating a vital national infrastructure: highly skilled aircraft and avionics technicians. Once it is so cut down, this mission-critical workforce will be virtually impossible to rebuild.
- ➔ **Effects.** Airplane accidents and incidents, flight delays and cancellations, potential terrorist attacks, billions of dollars in negative U.S. economic impact, drug smuggling, environmental pollution from flying empty aircraft to and from foreign repair stations.
- ➔ **Causes.** Outdated FAA model for oversight of outsourced maintenance, dysfunctional FAA culture, counterproductive OMB budgeting approach, insufficient FAA resources, overwhelmed TSA.
- ➔ **Solution.** The Department of Transportation's Inspector General documented problems; Congress held numerous hearings. A sense of urgency is missing at the regulatory level proportionate to the growing risk to passengers, citizens and the U.S. economy, should terrorists exploit an increasing vulnerability. Legislative reforms are now required based upon the following five principles:
 1. A single, high regulatory standard should be established governing the operations of airline-owned maintenance facilities and domestic U.S. and foreign repair facilities.
 2. FAA inspector oversight of both domestic U.S. and foreign repair facilities should be increased to a level that is commensurate with the volume and complexity of current outsourcing practices.
 3. Airlines that choose to outsource to foreign repair facilities should assume the fully-burdened costs of FAA inspections and audits.
 4. Both domestic U.S. and foreign repair facilities should have adequate safeguards in place regarding personnel background checks, access to aircraft, and parts inventories to prevent terrorists from exploiting an opportunity to harm the U.S. or other countries.
 5. Airlines that outsource to foreign repair facilities should hold these facilities to high environmental standards with respect to disposal of toxic wastes and other processes associated with aircraft maintenance.

Aircraft Maintenance Outsourcing Issue

Backgrounder

December 2008

Introduction

When passengers board a commercial flight today, there is an over 50% probability¹ that the maintenance on their U.S. aircraft was performed not by FAA-certificated mechanics employed by an airline, but instead by workers at one of nearly 5,000 domestic and foreign contract repair stations.²

As airlines have rushed to slash costs, aircraft maintenance outsourcing has increased significantly from 37% of maintenance expenditures for major U.S. airlines in 1996 to 64% in 2007.³

This maintenance work is now being performed at both foreign and domestic repair stations, which are not held to the same high standards of safety and security as carrier-owned maintenance operations. Despite legislative mandates to establish a security standard for repair stations and audit foreign stations, the Transportation Security Administration (TSA) has yet to issue a proposed rule.⁴ Because of this, the FAA has halted processing all new applications for certification submitted by foreign repair stations after August 3, 2008.⁵

Aircraft maintenance outsourcing is decimating what will be a hard-to-replace national asset: highly skilled aircraft and avionics technicians. In addition to safety and homeland security concerns, outsourcing is also tied to increased flight delays and cancellations. An examination of flight delay data shows that airlines with higher levels of maintenance outsourcing tend to have more delays blamed on the airline.⁶

Consequences of a Flawed Industry and Government Outsourcing Model:

- On January 8, 2003 twenty-one people were killed when an Air Midwest commuter plane, operating as US Airways Express, crashed after takeoff from Charlotte, NC. The incorrect rigging of the elevator control system led to lack of pitch control as the nose of the aircraft rose uncontrollably despite pilot attempts to restrain it.
- The National Transportation Safety Board (NTSB) determined that the elevator control cable tension had been incorrectly adjusted during the previous maintenance check. The work had been performed by mechanics employed by a firm to whom the work had been subcontracted by the primary repair station Air Midwest outsourced its maintenance work to. The NTSB also faulted Air Midwest for lack of oversight of the maintenance facility.⁷

Coalition to Legislate Aircraft Maintenance Outsourcing Reform

The Coalition to Legislate Aircraft Maintenance Outsourcing Reform (CLAMOR) has developed five principles to serve as a basis for reform of the aircraft maintenance outsourcing system.

Principle 1. A single, high regulatory standard should be established governing the operations of airline-owned maintenance bases, domestic U.S. repair stations and foreign repair stations.

The Problem

- Currently, there are four tiers to the aircraft maintenance system, each governed by a different regulatory regime, mandating the minimum oversight standards for outsourced airline maintenance, repair, and overhaul:
 - **Airline-owned maintenance bases** are held to the most stringent standards under Part 121 of the Federal Aviation Regulations (FARs).
 - **Domestic repair stations** certificated by the FAA fall under the less stringent FAR Part 145.
 - **Foreign repair stations** certificated by the FAA are also covered by FAR Part 145, but critical exceptions are made in personnel and security standards.
 - **Non-certificated repair stations**, both domestic and foreign, are not regulated or inspected by the FAA, nor are they limited in the types of maintenance they can perform. What's more, the FAA does not have a complete list of these repair stations.
- Mechanics employed directly by airlines are subject to drug and alcohol testing and criminal background checks as conditions of their employment; their hours of work are regulated by duty-time limitations; and most must hold either an FAA repairman certificate or an Airframe and/or Powerplant (A&P) certificate. No person deemed a threat by the TSA may hold any type of certificate.⁸
- Repair station supervisors and inspectors who sign off on maintenance work at foreign repair stations are not required to hold FAA airman certificates, nor are the mechanics working on the aircraft at these facilities.⁹
- Non-certificated mechanics are therefore not vetted by the TSA; and mechanics at foreign repair stations are not subject to drug or alcohol testing requirements.
- Although air carriers are required to submit quarterly reports to the FAA of their "top ten substantial maintenance providers," these lists do not necessarily reflect where the largest volume of outsourced maintenance is being performed, nor do they include any non-certificated repair stations used by carriers.¹⁰

Principle 2. FAA Aviation Safety Inspector oversight of both domestic U.S. and foreign repair stations should be increased to a level that is commensurate with the volume and complexity of current outsourcing practices.

The Problem

- The FAA is tasked with inspecting nearly 5,000 domestic and foreign repair stations that are certificated by the agency, including more than 700 overseas facilities, over 350 of which have been added to the FAA's inspection roster since 1994.¹¹
- The FAA has historically focused its inspections on airline-owned maintenance facilities, and has been slow to change its model and both increase the number of and redeploy aviation safety inspectors, even as maintenance has shifted to domestic and foreign repair stations.¹²
- While the FAA's mandate does not extend to the inspection of repair stations not certificated by the agency, the DOT Inspector General has stated that:

“FAA permits air carriers to use non-certificated facilities as long as the work is approved by an FAA-certificated mechanic. However, this is not an adequate substitute for an FAA-certificated repair facility because non-certificated facilities do not have the safeguards and controls for maintenance repair and oversight that is required at FAA-certificated facilities.”¹³
- In December of 2005, the DOT Inspector General's office identified 1,400 non-certificated repair facilities, including 100 in foreign countries, that perform aircraft maintenance for US carriers; 21 of these domestic and foreign non-certificated repair stations were performing maintenance “critical to the airworthiness of the aircraft.” The Inspector General further determined that neither the FAA nor the carriers using these facilities provided adequate oversight of the work being performed.¹⁴

Principle 3. The fully-burdened costs of FAA inspections and audits should be borne by airlines that choose to outsource to foreign repair stations.

The Problem

- Only 103 FAA inspectors (including management staff) are responsible for inspecting over 700 foreign repair stations.¹⁵ Limited staff and travel budgets, and passport and visa controls, make unannounced inspections of these facilities virtually impossible.¹⁶
- Of the heavy maintenance (such as teardowns and overhauls of aircraft) outsourced by nine major carriers¹⁷ in 2007, 27% was sent to foreign repair stations, up from 21% in 2003.¹⁸

Principle 4. Domestic U.S. and foreign repair stations should be held to the standards established in 49 CFR Chapter XII that govern air carriers and airports, regarding personnel background checks, access to aircraft, and facility perimeter security, to prevent terrorists from exploiting an opportunity to harm the U.S. or other countries.

The Problem

- As reported to the U.S. Senate by the Department of Transportation's (DOT) Inspector General, foreign repair stations "are not subject to U.S. security requirements," but to the existing regulations in that country.¹⁹ This situation has raised concerns regarding the potential for tampering with airline systems or insertion of explosives into U.S. aircraft while they are undergoing maintenance in another country.²⁰
- In March of 2005, a major enforcement operation involving the DOT Inspector General, Department of Homeland Security, Social Security Administration and the FBI resulted in the detention of 27 suspected undocumented immigrants. All had been employed by the contract labor firms that supply workers to TIMCO's FAA-certificated repair station in Greensboro, NC.²¹ At least five of those detained at TIMCO's Greensboro facility were later sentenced in federal district court on charges related to immigration document falsification.²²
- Federal statute mandates that US air carriers take necessary measures to prevent unauthorized access to facilities and aircraft. Furthermore, all authorized employees must display photo ID badges in secure areas,²³ and all licensed or certificated mechanics are subject to background checks by the Transportation Security Administration. Neither the background check requirements nor the secure perimeter regulations, however, apply to non-certificated mechanics or to foreign or domestic repair stations.
- The TSA and FAA are now over four years delinquent in establishing new security regulations for repair stations, and in conducting an audit of foreign repair stations, though the agencies were tasked with this under the Vision 100: Century of Aviation Reauthorization Act of 2003, and subsequently the 9/11 Commission Act of 2007.²⁴

Principle 5. Airlines that outsource to foreign repair stations should hold these facilities to high environmental standards with respect to disposal of toxic wastes and other processes associated with aircraft maintenance.

The Problem

- Aircraft maintenance produces significant quantities of hazardous materials, including waste oil, solvents and toxic heavy metals, which makes proper handling and disposal key to ensuring worker and community health and safety.²⁵
- According to John Goglia, former member of the National Transportation Safety Board (NTSB), airlines often fly planes empty to overseas repair stations, thus expending thousands of gallons of jet fuel and creating pollution that could be eradicated if heavy maintenance were done in the U.S. by the carriers themselves.²⁶

About CLAMOR

- The International Brotherhood of Teamsters (IBT) and Business Travel Coalition (BTC) are leading the way in the formation of a business-labor partnership that addresses and influences the safety and homeland security issues surrounding critical airline maintenance outsourcing in the absence of a single, high regulatory standard and stringent FAA oversight.
- BTC represents the interests of hundreds of corporations worldwide. Corporations that field millions of business travelers are increasingly alarmed over aircraft maintenance outsourcing and the lack of a modernized and harmonized regulatory regime.
- Founded in 1903, the International Brotherhood of Teamsters represents 1.4 million hardworking men and women in the United States, Canada and Puerto Rico, including 40,000 employees in the airline sector.
- The Coalition to Legislate Aircraft Maintenance Outsourcing Reform was formed following the first *Aircraft Maintenance Outsourcing Summit*, held in Washington, DC on February 11, 2008 and sponsored by IBT and BTC. Participants included the National Transportation Safety Board (NTSB), the Aeronautical Repair Station Association (ARSA), Professional Aviation Safety Specialists AFL-CIO (PASS), Transport Workers Union of America (TWU), and Congressional staff. Senator Claire McCaskill (D-MO) and Congressman James Oberstar (D-MN) provided pre-recorded remarks.

¹ David A. Dobbs, "Air Carriers' Outsourcing of Aircraft Maintenance," US Department of Transportation, Office of the Inspector General, Memorandum to the Acting FAA Administrator, Sept. 30, 2008, p. i.

² Dobbs, Sept. 30, 2008 Memorandum, p. i.

³ Dobbs, Sept. 30, 2008 Memorandum, p. 1.

⁴ "Repair Station Rule Delayed," Aviation Week, July 25, 2008; US Department of Homeland Security, Transportation Security Administration, Public Listening Session on aircraft repair station security, Feb. 27, 2004, p. 7.

⁵ David Lombardo, "FAA Temporarily Halts Foreign Repair Station Certifications," AIN Online, Sept. 1, 2008.

⁶ "An Accident Waiting to Happen?," Consumer Reports, March 2007

⁷ National Transportation Safety Board, Aircraft Accident Report PB2004-910401, Notation 7545B, Adopted Feb. 26, 2004, <http://www.nts.gov/publictn/2004/AAR0401.pdf>.

⁸ FAR Parts 121 and 65.

⁹ CFR Title 14, Federal Aviation Regulations Part 145.75b.

¹⁰ Dobbs, Sept. 30, 2008 Memorandum, p. 3-4.

¹¹ Thomas Frank, "Risk Posed by Overseas Aircraft Repairs Debated," *USA Today*, Oct. 16, 2007; FAA Repair Station Database, April, 2008.

¹² Calvin Scovel III, "Aviation Safety: The FAA's Oversight of Outsourced Maintenance Facilities," Statement of the Inspector General, US Department of Transportation, before the House Transportation and Infrastructure Committee, Subcommittee on Aviation, March 29, 2007.

¹³ Scovel, March 29, 2007 Statement.

¹⁴ Scovel, March 29, 2007 Statement, pp. 12-13.

¹⁵ Scovel, March 29, 2007 Statement, p. 6; FAA Repair Station Database, April, 2008.

¹⁶ Kevin Mitchell, "Outsourcing Airline Maintenance to Foreign Repair Stations Problematic," Business Travel Executive, Nov. 2007.

¹⁷ The nine carriers referenced are: AirTran, Alaska Airlines, America West, Continental, Delta, JetBlue, Northwest, Southwest, and United. Note that American Airlines does not outsource heavy maintenance work and therefore is not included in this statistic.

¹⁸ Dobbs, Sept. 30, 2008 Memorandum, p. iii.

¹⁹ Calvin Scovel III, "Aviation Safety: FAA Oversight of Foreign Repair Stations," Statement of the Inspector General, US Department of Transportation, before the Subcommittee on Aviation Operations, Safety and Security of the Committee on Commerce, Science, and Transportation, US Senate, June 20, 2007.

²⁰ Thomas Frank, "Risk posed by overseas aircraft repairs debated." USA Today, Oct. 16, 2007.

²¹ DOT Office of Inspector General, "27 Alleged Illegal Aliens Arrested at FAA-Approved Repair Station in North Carolina," March 8, 2005 Investigation report.

²² DOT Office of Inspector General, "Three Former Repair Station Mechanics Sentenced in Undocumented Alien Case," June 22, 2005 Investigation report; and "Two Former Repair Station Mechanics Sentenced and to be Deported in Undocumented Alien Case," June 27, 2005 Investigation report.

²³ 49 CFR §1544.229.

²⁴ Transportation Security Administration, Public Listening Session, p. 7; Lombardo.

²⁵ International Finance Corporation and World Bank Group, "Environmental, Health, and Safety Guidelines for Airlines," April 30, 2007.

²⁶ Statement at Aircraft Maintenance Outsourcing Summit, Washington, DC, Feb. 11, 2008.