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CUTTING COSTS AND CUTTING CORNERS—THE SAFETY RISKS ASSOCIATED WITH OUTSOURCING AIRCRAFT MAINTENANCE AND THE NEED FOR EFFECTIVE SAFETY OVERSIGHT BY THE FEDERAL AVIATION ADMINISTRATION

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I. INTRODUCTION

WITHIN THE PAST decade, United States air carriers have exhibited an escalating partiality for outsourcing their maintenance tasks to maintenance, repair and overhaul facilities (repair stations).¹ Consequently, serious safety issues in the airline industry have emerged.² Currently, United States air carriers are outsourcing more than half of their maintenance to repair stations in order to reduce costs and receive maintenance services from specialists and experts.³ Several aircraft crashes have already been caused by the sub-par maintenance being performed at repair stations and inefficient oversight of those re-

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¹ See DAVID A. DOBBS, DEP'T OF TRANSP., REPORT ON THE AUDIT OF SAFETY OVERSIGHT OF AN AIR CARRIER INDUSTRY IN TRANSITION 1–2 (2005). The 2005 data for aviation safety oversight is the most recent data available for a full cumulative year. *An Accident Waiting to Happen? Outsourcing Raises Air-Safety Concerns*, CONSUMER REPS., Mar. 2007, at 16 [hereinafter *An Accident Waiting to Happen*].

² See DOBBS, *supra* note 1, at 1; see also ALEXIS M. STEFANI, DEP'T OF TRANSP., REVIEW OF AIR CARRIERS' USE OF AIRCRAFT REPAIR STATIONS 12 (2003).

³ See *Aviation Safety: FAA's Safety Efforts Generally Strong but Face Challenges, Testimony before the Subcomm. on Aviation of the H. Comm. on Transp. and Infrastructure*, 109th Cong. 5 (2006) (statement of Gerald L. Dillingham, Director of Physical Infrastructure Issues, United States Government Accountability Office) [hereinafter *Aviation Safety: FAA's Safety Efforts Generally Strong but Face Challenges*]; DOBBS, *supra* note 1, at 1; Letter from Kenneth M. Mead, Inspector General, U.S. Dep't of Transp., to The Honorable James L. Oberstar, Ranking Democratic Member, House Committee on Transportation and Infrastructure (July 27, 2005) (on file with author).

pair stations by the Federal Aviation Administration (FAA).⁴ As a result, there is an extremely high level of speculation and fear that such tragedies will only occur more frequently as the outsourcing trend in the airline industry becomes more popular but the ability to oversee this trend becomes less feasible.⁵ Nonetheless, both air carriers and the FAA continue to inadequately supervise and regulate repair stations.⁶ What is most alarming is that the FAA allows air carriers to use repair stations that it has not certified, that have no formal limitations on the scope of the maintenance that they perform, and that effectively operate without regulatory oversight.⁷

This Comment will explore maintenance outsourcing within the airline industry today, the adverse effect maintenance outsourcing is having on the United States' aviation industry's immaculate reputation for safety, what the FAA and air carriers are doing to correct the problem, and more importantly, what they should be doing to correct the problem.

Specifically, the second section of this Comment will provide a brief overview defining outsourcing in a general sense of the term. The third section of this paper will discuss outsourcing within the airline industry, maintenance outsourcing in particular. It will explore the internal structure of the FAA and its responsibility for oversight of safety within the aviation industry. It will also compare and contrast the two types of repair stations that the FAA authorizes to perform maintenance for United States air carriers, namely, those repair stations that are certificated and those that are not.

The fourth section of the paper will focus on the problems currently arising out of maintenance outsourcing to certificated repair stations. In particular, it will describe the details of a highly publicized plane crash demonstrating the fatal consequences of faulty maintenance work and poor oversight of certificated repair stations. It will then summarize the Department of Transportation's 2003 and 2005 investigations into the FAA's

⁴ See *Aviation Safety: FAA's Safety Efforts Generally Strong but Face Challenges*, *supra* note 3, at 12; see also *Oversight of Maintenance and Repair Facility Practices Under Examination*, AIR SAFETY WK., Sept. 6, 1999, available at http://findarticles.com/p/articles/mi_m0UBT/is_36_13/ai_55694275).

⁵ See *Aviation Safety: FAA's Safety Efforts Generally Strong but Face Challenges*, *supra* note 3, at 12.

⁶ See KENNETH M. MEAD, DEP'T OF TRANSP., AIR CARRIERS' USE OF NON-CERTIFICATED REPAIR FACILITIES, 1, 3 (2005); DOBBS, *supra* note 1, at 1-4; see also STEFANI, *supra* note 2, at 12-23.

⁷ See generally MEAD, *supra* note 6.

oversight policies and regulation of certificated repair stations. It will discuss the promises made by the FAA in response to the Department of Transportation's constructive criticisms and how those promises differed from the FAA's actual follow-through behavior. Finally, it will discuss the FAA's most recent corrective efforts to amend the statutory provision regulating repair stations as an attempt to solve its current oversight problems.

The fifth section of the paper will focus specifically on air carriers' and the FAA's lack of adequate oversight of non-certificated repair stations. Similar to the structure of the third section analysis, this section will begin by describing in detail a recent plane crash attributed to faulty maintenance performed by a non-certificated repair station and the FAA's failure to properly oversee the outsourcing that was being done. Then it will provide an overview of the National Transportation Safety Board's investigation into the accident and the Department of Transportation's ensuing 2005 report on air carriers' use of non-certificated repair stations. Finally, this section will discuss the adverse effects of the FAA's failure to assume responsibility for oversight of non-certificated repair stations.

The final section will argue that the FAA should assume responsibility for the downgrade in aviation safety as a result of insufficiently-regulated repair stations. Moreover, this section will recommend that the FAA expressly prohibit air carriers from outsourcing any type of maintenance to non-certificated repair stations. Consequently, air carriers will only be able to use repair stations certified and regularly overseen by the FAA. This will contain outsourced maintenance within one sector of the aviation industry, thereby permitting the FAA's proposed improvements to be implemented and efficient oversight to be effectuated.

II. WHAT IS OUTSOURCING?

Outsourcing is the process by which one party hires a third party to perform services that are traditionally done by in-house employees.⁸ Outsourcing has been a common practice in many industries, dating back to the 1970's.⁹ Traditionally, outsource-

⁸ Kim Newby, *Feature: Outsourcing, At Home and Abroad*, 21 ME. B.J. 74, 74 (2006).

⁹ Richard Johnstone, Claire Mayhew & Michael Quinlan, *Outsourcing Risk? The Regulation of Occupational Health and Safety Where Subcontractors are Employed*, 22 COMP. LAB. L. & POL'Y J. 351, 351 (2001).

ing has been a way for companies to manage "excess work loads" and has only been utilized in response to "seasonal or similar trends."¹⁰ However, outsourcing has become increasingly prevalent over the past fifteen years in most industrialized countries and across an array of industries.¹¹ Large organizations are particularly fond of outsourcing as a way to "increase competitiveness/cut costs, bypass regulatory controls, and secure more flexible employment arrangements."¹² The third parties to whom the work is outsourced are outfitted for the specific services they offer and therefore can provide such services at lower costs than the outsourcing company's own employees.¹³ Also, the third party hired to do the outsourced work typically uses "temporary and contingent employees, which reduces the size of the labor force as well as the cost of the remaining workforce [and thus] the price of conducting business."¹⁴ In sum, companies are increasingly exercising their preference for outsourcing "peripheral activities"¹⁵ to heighten internal focus on their primary competencies.¹⁶

Notwithstanding the economic and quality benefits, there are also risks affiliated with outsourcing that are applicable to any industry or business that uses outsourcing as a way to cut costs.¹⁷ Companies that make the choice to outsource must get to know the company performing the outsourced work to determine whether the outsourcee is "financially stable and has the ability to perform the services [being] outsourced."¹⁸ The most fundamental yet severe "downside of outsourcing" occurs when the outsourcee is incapable of performing its assumed responsibilities.¹⁹

¹⁰ Carol A. Pisano, *The Outsourcer's Apprentice: Employee or Illusion?*, BRIEF, Summer 1997, at 13.

¹¹ Johnstone, Mayhew & Quinlan, *supra* note 9, at 351.

¹² *Id.*

¹³ Pisano, *supra* note 10, at 13.

¹⁴ *Id.*

¹⁵ Ann H. Spiotto & James E. Spiotto, *The Ultimate Downside of Outsourcing: Bankruptcy of the Service Provider*, 11 AM. BANKR. INST. L. REV. 47, 47 (2003).

¹⁶ Newby, *supra* note 8, at 74.

¹⁷ *See id.* at 75; Spiotto & Spiotto, *supra* note 15, at 48.

¹⁸ Spiotto & Spiotto, *supra* note 15, at 48.

¹⁹ *Id.*

III. *OUTSOURCING IN THE AIRLINE INDUSTRY*

Outsourcing aircraft maintenance is an accepted practice within the aviation industry.²⁰ The economic background of the industry has dramatically changed over the past fifteen years, resulting in a dramatic increase in the amount of outsourced aircraft maintenance.²¹ The United States' aviation industry suffered a \$35 billion loss between 2001 and 2005.²² Economic pressure is weighing on the airline industry from an enfeebled economy, bankruptcies, rising fuel costs, consumer expectations for cheap airfares, the terrorist attacks on September 11, 2001, and the resulting war in Iraq.²³ This dire economic background has left United States air carriers scrambling to find ways to cut their operating costs and keep the aviation industry afloat.²⁴ For example, the five air carriers which the Department of Transportation had reviewed in their 2005 report,

retired 664 aircraft from September 2001 through December 31, 2004; stored 166 aircraft as of December 31, 2004; reduced their personnel by 9,920 pilots and 12,873 mechanics from 2001 through 2003; closed forty-two maintenance facilities from 2001 through 2003; and established two low-cost airlines within their own corporate structures.²⁵

An industry-wide solution utilized to counteract the record financial losses endured by many United States air carriers has been to expand the amount of maintenance being outsourced to repair stations.²⁶ The kind of maintenance performed by repair stations can range from menial tasks necessary to keep the aircraft in operation on a day-to-day basis, to critical repairs including the replacement of engines and flight control motors.²⁷

²⁰ See STEFANI, *supra* note 2, at 2.

²¹ See *Aviation Safety: FAA's Safety Efforts Generally Strong but Face Challenges*, *supra* note 3, at 12; MEAD, *supra* note 6, at 2; DOBBS, *supra* note 1, at 1; *Differences of Opinion Fail to Taint Benefits of Outsourcing*, WORLD AIRLINE NEWS, July 21, 2000, available at http://www.findarticles.com/p/articles/mi_m0ZCK/is_29_10/ai_63644642/print.

²² *An Accident Waiting to Happen*, *supra* note 1, at 17.

²³ DOBBS, *supra* note 1, at viii, 1.

²⁴ See Ruwantissa Abeyratne, *Competition in Air Transport—The Need for a Shift in Focus*, 33 TRANSP. L.J. 29, 30–31 (2005–2006); see also DOBBS, *supra* note 1, at 1.

²⁵ DOBBS, *supra* note 1, at 1–2.

²⁶ *Oversight of Maintenance and Repair Facility Practices Under Examination*, *supra* note 4.

²⁷ MEAD, *supra* note 6, at 5.

Air carriers generally justify their increased utilization of repair stations on two grounds.²⁸ First, air carriers outsource maintenance in order to reduce their overall costs of operation.²⁹ Maintenance is generally the second largest cost incurred by an air carrier.³⁰ By negotiating lower labor rates, air carriers can potentially save thirty to forty percent of their maintenance costs by outsourcing to repair stations.³¹ Second, air carriers outsource maintenance in order to retain expert mechanics that specialize in areas of repair work.³² Air carrier's in-house facilities typically are neither staffed nor equipped for maintenance requiring specialized expertise, thereby making it much more expensive to handle such repair work internally.³³

The increased use of repair stations has been analyzed in various investigative reports published by the Department of Transportation.³⁴ The Department of Transportation's research revealed the following statistical trends. In 1996, even though maintenance outsourcing was gaining momentum as a popular trend in the aviation industry, United States air carriers still were primarily using in-house mechanics certified by the FAA to maintain their aircrafts and were only outsourcing thirty-seven percent of their maintenance work.³⁵ By 2003, maintenance outsourcing was much more commonplace, as major airlines were collectively outsourcing forty-seven percent of their aircraft maintenance.³⁶ Most recently, the United States Department of Transportation reported in July of 2005 that air carriers are currently using repair stations more than ever before, contracting out fifty-three percent of their aircraft maintenance tasks.³⁷

The above statistics are intended to apply to the aviation industry as a whole; however, the amount of maintenance that is outsourced to repair stations by a particular air carrier is not fixed; rather, it is dependent on that air carrier's individual

²⁸ STEFANI, *supra* note 2, at 8–9; *Oversight of Maintenance and Repair Facility Practices Under Examination*, *supra* note 4.

²⁹ STEFANI, *supra* note 2, at 8–9.

³⁰ *Differences of Opinion Fail to Taint Benefits of Outsourcing*, *supra* note 21.

³¹ STEFANI, *supra* note 2, at 9.

³² *Id.*

³³ *Id.*

³⁴ See generally MEAD, *supra* note 6; DOBBS, *supra* note 1.

³⁵ DOBBS, *supra* note 1, at 1; STEFANI, *supra* note 2, at 1.

³⁶ Letter from Kenneth M. Mead, *supra* note 3.

³⁷ *Id.*

needs.³⁸ For example, Southwest Airlines outsources approximately fifty percent of its heavy duty maintenance and approximately ninety percent of its more minor maintenance such as component repair.³⁹ Southwest Airlines' director of heavy maintenance Tony Quillen described the airline's outsourcing policy as a "natural division of labor,"⁴⁰ allowing the airline to focus on its expertise of carrying passengers and the repair stations to utilize their expertise by performing maintenance repairs.⁴¹ Other air carriers that outsource a high percentage of their maintenance costs include Alaska Air, America West and Jet Blue.⁴²

On the other hand, some airlines prefer to trust the majority of their maintenance tasks, if not all of their maintenance tasks, to their own in-house mechanics.⁴³ For example, United Airlines performs practically all of its own maintenance work, including heavy maintenance, outsourcing only twenty percent of its repairs.⁴⁴ Yvonne Daverin, quality assurance director for United Airlines, cited "[United's] own core competencies[.]. . . a stable workforce and a greater inherent flexibility to respond to demands" as the airline's primary reasons for performing the majority of its maintenance internally.⁴⁵ Other airlines that have exhibited a preference for utilizing their in-house faculties include Spirit, Frontier, and Delta Airlines.⁴⁶

While it is recognized that the United States possesses and maintains the safest aviation system in the world, there is an undeniable correlation between the rising levels of outsourced

³⁸ See *Oversight of Maintenance and Repair Facility Practices Under Examination*, *supra* note 4 (contrasting the amount of maintenance outsourced by Southwest Airlines with the amount of maintenance outsourced by United Airlines).

³⁹ *Id.*; STEFANI, *supra* note 2, at 9 (charting the percent of maintenance expense outsourced by several major air carriers and showing that Southwest outsourced sixty-four percent of its maintenance expenses in the year 2004).

⁴⁰ *Oversight of Maintenance and Repair Facility Practices Under Examination*, *supra* note 4.

⁴¹ *Id.*

⁴² STEFANI, *supra* note 2, at 7, 9.

⁴³ *Oversight of Maintenance and Repair Facility Practices Under Examination*, *supra* note 4.

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ STEFANI, *supra* note 2, at 8. In the year 2004, Spirit outsourced thirty percent of its maintenance expenses, Frontier outsourced thirty-three percent of its maintenance expenses, and Delta outsourced thirty-five percent of its maintenance expenses. *Id.*

maintenance and resulting aircraft accidents.⁴⁷ As noted previously, airlines are currently outsourcing over half of their maintenance to repair stations.⁴⁸ As maintenance outsourcing has become more commonplace, so have instances of improper maintenance.⁴⁹ Between 1985 and 1996, poor maintenance was a factor in one out of five major aircraft accidents.⁵⁰ More specifically, between 1992 and 1996, reports of inadequate quality materialized into four aircraft accidents caused by improper maintenance performed at repair stations.⁵¹ In 2005, the Inspector General characterized the number of general aviation accidents as simply "still too high," adding up to 1,614 general aviation accidents resulting in 556 fatalities.⁵² Most recently, the Government Accountability Office reported in 2006 that the FAA will not meet its 2006 performance target for commercial air carrier safety as a result of four fatal crashes in fiscal year 2006.⁵³ It is clear that such efforts by United States air carriers to be financially savvy are taking their toll on the value of safety in the aviation industry.⁵⁴

IV. THE FEDERAL AVIATION ADMINISTRATION AND REPAIR STATIONS

The FAA is the agency ultimately responsible for ensuring that economic changes affecting the airline industry as a whole do not adversely affect the level of safety provided to the civilian flyer.⁵⁵ Additionally, the FAA is responsible for ensuring that repair stations operate in a manner that is in compliance with

⁴⁷ See *Aviation Safety—Observations on FAA's Oversight and Changes in the Airline Industry, Testimony Before the Subcomm. on Aviation of the S. Comm. on Commerce, Sci. and Transp., Subcommittee on Aviation*, 109th Cong. 1 (2005) (statement of Kenneth M. Mead, Inspector General, Department of Transportation) [hereinafter *Observations on FAA's Oversight and Changes in the Airline Industry*]; see also *Oversight of Maintenance and Repair Facility Practices Under Examination*, *supra* note 4.

⁴⁸ *Aviation Safety: FAA's Safety Efforts Generally Strong but Face Challenges*, *supra* note 3, at 12.

⁴⁹ *Oversight of Maintenance and Repair Facility Practices Under Examination*, *supra* note 4.

⁵⁰ *Id.*

⁵¹ STEFANI, *supra* note 2, at 1.

⁵² See *Observations on FAA's Oversight and Changes in the Airline Industry*, *supra* note 47, at 1.

⁵³ *Aviation Safety: FAA's Safety Efforts Generally Strong but Face Challenges*, *supra* note 3, at 6.

⁵⁴ Abeyratne, *supra* note 24, at 31.

⁵⁵ DOBBS, *supra* note 1, at 3.

the FAA's safety standards.⁵⁶ The FAA expressly authorizes air carriers to outsource their maintenance to two types of repair stations.⁵⁷ The first type of repair station which can perform maintenance work outsourced by air carriers is called a certificated repair station.⁵⁸ Certificated repair stations are contract repair facilities that have been certified by the FAA under Title 14 Part 145 of the Code of Federal Regulations.⁵⁹ In order to be a certificated repair station, the facility must submit an application to the FAA containing a repair station manual, a quality control manual, the proposed scope of the repair station, the names and titles of supervisory personnel, a description of housing and facilities, a physical address, whether the repair station intends on hiring contract workers, and a training program.⁶⁰ Currently, there are over 5,200 certificated repair stations that perform maintenance on United States aircraft.⁶¹

The FAA not only requires a rigorous approval process for a repair station to become certificated, but additionally, it has an oversight system in place that requires continual evaluation of all certificated repair stations in order to verify that they have the staff and equipment needed to complete the type of maintenance work the facility is authorized to perform.⁶² The FAA employs approximately 3,300 safety inspectors who provide worldwide oversight to 5,250 certificated repair stations; 139 commercial air carriers; 273,000 aircraft mechanics; 7,600 commercial aircraft; 11,000 charter aircraft; 220,000 general aviation aircraft; and 700 aviation training facilities.⁶³ More specifically, the FAA staffs two kinds of safety inspectors: Flight Standards District Office inspectors and Certificate Management Office in-

⁵⁶ STEFANI, *supra* note 2, at 2.

⁵⁷ See MEAD, *supra* note 6, at 10.

⁵⁸ See *id.*; see also 14 C.F.R. § 145.1 (2007).

⁵⁹ *Oversight of Maintenance and Repair Facility Practices Under Examination*, *supra* note 4. Note that this article refers to repair stations as third-party repair facilities and that the two terms are interchangeable for purposes of this comment.

⁶⁰ 14 C.F.R. § 145.51(a)(1)-(7) (2007). Mechanics who are certified by the Federal Aviation Administration (FAA) must have graduated from a certified aviation maintenance technical school; they must pass a written test on the construction and maintenance of aircraft, the federal regulations, and provisions governing mechanics; and they must pass an oral and a practical skills test. *Indemnity Ins. Co. of N. Am. v. Am. Aviation*, 344 F.3d 1136, 1137 (11th Cir. 2003) (citing 14 C.F.R. §§ 65.71, 65.75, 65.77, 65.79).

⁶¹ *Aviation Safety: FAA's Safety Efforts Generally Strong but Face Challenges*, *supra* note 3, at 5; STEFANI, *supra* note 2, at 1.

⁶² MEAD, *supra* note 6, at 3, 4.

⁶³ STEFANI, *supra* note 2, at 1.

spectors.⁶⁴ The primary responsibility of the district office inspectors is to conduct surveillance at certificated repair stations; the certificate management inspectors are assigned to one specific air carrier and may inspect the certificated repair stations which perform significant work for that assigned air carrier.⁶⁵

The second type of repair station expressly authorized by the FAA to perform outsourced maintenance is a non-certificated repair station.⁶⁶ Outsourcing maintenance to non-certificated repair stations historically has been an accepted and cost-effective way for air carriers to keep their maintenance costs to a minimum.⁶⁷ The key differences between certificated and non-certificated facilities are the applicable FAA operating requirements and restrictions.⁶⁸ While the FAA requires certificated repair stations to have quality control systems, designated supervisors, inspectors, and training programs; non-certificated repair stations must only be staffed with one certified mechanic, are not bound by FAA operating requirements, and are not required to have a facility in which to operate.⁶⁹ Furthermore, the FAA does not track the amount or type of work non-certificated facilities perform and does not maintain information on where these facilities are located.⁷⁰ The sole requirement imposed on non-certificated repair stations by the FAA is that a mechanic certified by the FAA signs off on the repairs upon their completion.⁷¹

The FAA's approval of non-certificated repair stations is premised on the unwritten assumption that the non-certificated repair stations are performing only minor maintenance tasks and any repair exceeding minor maintenance is only permissible in emergency situations.⁷² However, a 2005 investigation by the Department of Transportation showed that non-certificated repair stations were performing on-call maintenance, scheduled

⁶⁴ *Id.* at 2. In addition to using human inspectors for oversight purposes, the FAA also uses an electronic surveillance system, dubbed Air Transportation Oversight System (ATOS). *An Accident Waiting to Happen*, *supra* note 1, at 17. The significance of ATOS will be discussed in further detail in the context of the FAA's failure to effectively oversee certificated repair stations.

⁶⁵ STEFANI, *supra* note 2, at 2.

⁶⁶ MEAD, *supra* note 6, at 1-2.

⁶⁷ *Id.* at 1.

⁶⁸ *Id.* at 4.

⁶⁹ *Id.* at 4, 11.

⁷⁰ *Id.* at 6.

⁷¹ *Id.* at 1-2.

⁷² *Id.* at 1.

maintenance and critical aircraft repairs on a regular basis.⁷³ Therefore, critical aircraft maintenance is being performed by outsourcees that are neither certified nor routinely reviewed and that lack any limitations on the scope of maintenance that they may perform.⁷⁴ Only the contract between the air carrier and the non-certificated repair station defines the work the repair station is hired to do, and more often than not, the contracts are "open-ended" and the scope of the repair station's authority is contained in "broad language" such as "as needed."⁷⁵

V. PROBLEMS WITH FEDERAL AVIATION ADMINISTRATION OVERSIGHT OF CERTIFICATED REPAIR STATIONS

A. THE VALUJET TRAGEDY

Despite the increased amount of maintenance outsourcing among United States air carriers, the FAA has not responded in step with a sufficient shift in oversight of repair stations.⁷⁶ In the context of certificated repair stations, this deficiency was first brought to light in 1996 when ValuJet Flight 592 crashed into the Florida Everglades, killing all 110 passengers aboard the aircraft.⁷⁷

ValuJet had been experiencing a wide range of maintenance complications for several years before the infamous crash occurred.⁷⁸ Two years before the crash, ValuJet had reported fifteen emergency landings; in the following year, that number increased to fifty-seven.⁷⁹ In the four months prior to the crash, ValuJet was averaging one unscheduled landing every other day.⁸⁰ Emergency landings were not ValuJet's only problems.⁸¹ Other complications included landing gear malfunctions,

⁷³ *Id.* at 5.

⁷⁴ *Id.* at 12.

⁷⁵ *Id.*

⁷⁶ DOBBS, *supra* note 1, at ii; Letter from Kenneth M. Mead, *supra* note 3; STEFANI, *supra* note 2, at xx-xxi.

⁷⁷ *United States v. SabreTech*, 271 F.3d 1018, 1020 (11th Cir. 2001); Lea Ann Carlisle, Comment, *The FAA v. The NTSB: Now that Congress has Addressed the Federal Aviation Administration's "Dual Mandate," Has the FAA Begun Living up to its Amended Purpose of Making Air Travel Safer, or is the National Transportation Safety Board Doing its Job Alone?*, 66 J. AIR L. & COM. 741, 752-54 (2001).

⁷⁸ Carlisle, *supra* note 77, at 752.

⁷⁹ *Id.* at 793.

⁸⁰ *Id.* at 753.

⁸¹ *See id.*

smoke and fumes infiltrating into the cabin air, engine explosions, shorted out microphones inhibiting pilot communication with Air Traffic Control, sudden cabin depressurization, and the use of duct tape to fix "problem spots."⁸² In 1996, just before the crash, the FAA's inspectors filed a report on ValuJet's problems.⁸³ Despite the horrific nature of the safety issues described by the inspectors, the FAA took disproportionate action.⁸⁴ Not only did the FAA refuse to ground the airline, giving ValuJet a mere warning, but it continually represented to the public that ValuJet was not having any problems.⁸⁵

SabreTech was the certificated repair station hired by ValuJet to do "repair[s], modification[s] and maintenance" that ValueJet had decided to outsource rather than perform internally.⁸⁶ In January 1996, ValuJet delivered three used aircrafts to SabreTech for "major modification and maintenance" with the ultimate goal of incorporating these aircraft into the ValuJet fleet.⁸⁷ During the renovation of these three planes, SabreTech mechanics executed orders to replace old oxygen generators with new ones subject to the warning that if the old oxygen generators were not emptied, they would generate extremely high temperatures.⁸⁸ However, the SabreTech mechanics did not empty the old generators.⁸⁹ Instead, the old oxygen generators were removed and then packed into boxes and described on a shipping slip as "Oxy Canisters Empty."⁹⁰ Tragically, the outdated and unemptied oxygen canisters were loaded by SabreTech employees onto ValuJet Flight 592 and shortly after take off, a fire erupted on the plane causing the aircraft to crash into the Florida Everglades, resulting in the death of all 110 passengers.⁹¹

Immediately after the ValuJet tragedy, the FAA began conducting daily inspections, publicly admitted that there were serious problems with the airline warranting its shut-down, and assumed at least some responsibility for the faulty maintenance

⁸² *Id.*

⁸³ *Id.* at 754.

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ *United States v. SabreTech, Inc.*, 271 F.3d 1018, 1020 (11th Cir. 2001).

⁸⁷ *Id.*

⁸⁸ *Id.*

⁸⁹ *Id.*

⁹⁰ *Id.*

⁹¹ *Id.*

performed at the repair station.⁹² Three years later, a federal indictment was issued for three SabreTech employees on charges of conspiracy, making false statements and mislabeling and mishandling hazardous materials.⁹³ Although the charges against the individual mechanics were eventually dismissed, SabreTech was convicted of “willfully failing to train its employees.”⁹⁴ While the National Transportation Safety Board did assign blame to the FAA and ValuJet in its report for inadequate oversight of the work being performed by SabreTech, no charges were filed against either entity.⁹⁵

B. THE FEDERAL AVIATION ADMINISTRATION’S EMPTY PROMISES AFTER VALUJET

Over the past several years, the FAA has repeatedly assured the Department of Transportation and the American public that they have created a system for overseeing certificated repair stations.⁹⁶ Despite the Department of Transportation’s continued demand for change and the FAA’s promises to enhance its oversight of repair stations, it has yet to implement a system of effective oversight.⁹⁷

Going back to 2003, partially in response to the ValuJet tragedy, the Department of Transportation issued a report calling for immediate improvement in the FAA’s oversight of certificated repair stations as a result of the increasing level of work certificated repair stations were doing on United States aircraft.⁹⁸ The Department of Transportation expressed concern that while the aviation industry was quickly shifting a large portion of its maintenance work to certificated repair stations, the FAA’s oversight of aircraft maintenance was still focused on the work performed in air carriers’ in-house facilities.⁹⁹ The FAA’s oversight shortcomings had resulted in problems such as repair stations’ improper use of parts as specified in maintenance

⁹² Carlisle, *supra* note 77, at 754.

⁹³ *SabreTech, Inc.*, 271 F.3d at 1020–21.

⁹⁴ *Id.*

⁹⁵ Carlisle, *supra* note 77, at 774. Note that the National Transportation Board is not an eligible agency to enforce against inadequate safety oversight. *Id.* at 746. While the National Transportation Board is responsible for investigating air disasters, it does not have the statutory authority to enforce the recommendations it makes to the FAA. *Id.*

⁹⁶ DOBBS, *supra* note 1, at 1; STEFANI, *supra* note 2, at 9.

⁹⁷ Letter from Kenneth M. Mead, *supra* note 3.

⁹⁸ DOBBS, *supra* note 1, at 1; STEFANI, *supra* note 2, at 7.

⁹⁹ STEFANI, *supra* note 2, at xx–xxi, 12–23.

manuals; improper calibration of tools and equipment used for repairs; a lack of records attesting to mechanics' training and qualifications; and failure to correct inadequacies already identified by FAA inspectors.¹⁰⁰ The Department of Transportation recommended at the conclusion of its 2003 report that the FAA develop ways to determine which repair stations air carriers were using for their most critical repairs; perform risk assessments or analysis of data collected on air carrier outsourcing practices; and develop a comprehensive, standardized approach to repair station surveillance.¹⁰¹ The FAA was amenable to all of the aforementioned recommendations and assured the Department of Transportation that the corrections would be implemented.¹⁰²

In 2005, the Department of Transportation issued yet another report pertaining to the FAA's oversight of maintenance being outsourced to, and performed by, certificated repair stations.¹⁰³ Again, the Department of Transportation expressed the same concerns it had two years prior.¹⁰⁴ Despite some progress toward a "more risk-based approach to safety oversight," the Department of Transportation still was not satisfied with the FAA's oversight as a sufficient response to rapidly occurring changes within the aviation industry.¹⁰⁵ In particular, the report criticized the FAA for not yet establishing "processes used by inspectors to identify risks in air carriers' systems, prioritize their inspections, and shift their inspections to areas of greater risks."¹⁰⁶ The FAA had promised to implement similar processes in 2003, and again, was making the same promises after the Department of Transportation made the aforementioned findings.¹⁰⁷

One specific measure that was taken by the FAA to draw inspectors' somewhat immediate attention to repair station oversight was to initiate a "special emphasis program" requiring FAA inspectors to analyze how well air carriers monitored the work performed by the certificated repair stations with whom they

¹⁰⁰ *Id.* at xiv.

¹⁰¹ *Id.* at 2.

¹⁰² *Id.* at 33–34.

¹⁰³ See generally DOBBS, *supra* note 1.

¹⁰⁴ See generally *id.*; STEFANI, *supra* note 2.

¹⁰⁵ DOBBS, *supra* note 1, at ii.

¹⁰⁶ *Id.* at 1.

¹⁰⁷ *Id.*

contracted.¹⁰⁸ However, the inspectors have not and are not executing their jobs effectively.¹⁰⁹ District office inspectors manage colossal workloads and can typically only complete “full facility inspections at certificated repair stations once or twice a year.”¹¹⁰ The certificate management inspectors make infrequent visits to the certificated repair stations performing the maintenance work for the particular air carrier which they have been assigned to oversee, and do not draft any sort of written review of the certificated repair stations’ operations.¹¹¹ Overall, FAA inspectors did not complete twenty-six percent of their inspections in 2005, even though airlines were outsourcing more maintenance than ever before.¹¹²

Moreover, the Department of Transportation reported in 2005 that the availability of FAA inspection personnel is only expected to decrease.¹¹³ In 2005, the Department of Transportation predicted a loss of 300 aviation safety inspectors, 233 of those coming from the FAA Flight Standards District Office.¹¹⁴ Additionally, the FAA is gradually moving toward an electronic-surveillance system called the Air Transportation Oversight System, also known as ATOS.¹¹⁵ ATOS relies on statistical analysis and reporting by the airlines themselves rather than inspections physically conducted by FAA staff.¹¹⁶ However, the Department of Transportation has asserted that such corrective efforts are not going to be sufficient “to ensure that all high risk and emerging issues receive adequate coverage.”¹¹⁷

The Department of Transportation is not the only governmental entity that is unsatisfied with the FAA’s safety oversight of certificated repair stations. On September 20, 2006, the United States Government Accountability Office released a re-

¹⁰⁸ Letter from Kenneth M. Mead, *supra* note 3.

¹⁰⁹ *Id.*; STEFANI, *supra* note 2, at 12.

¹¹⁰ STEFANI, *supra* note 2, at 12. For example, one district office inspector was assigned thirty-two agricultural operations, nineteen repair stations, seven on-demand operators, two helicopter operators and one maintenance school. *Id.* at 16.

¹¹¹ *Id.* at 12.

¹¹² *Observations on FAA’s Oversight and Changes in the Airline Industry*, *supra* note 47, at 4.

¹¹³ DOBBS, *supra* note 1, at 3.

¹¹⁴ *Id.*

¹¹⁵ *An Accident Waiting to Happen*, *supra* note 1, at 17.

¹¹⁶ *Id.* Despite the FAA’s increasing reliance on ATOS, it still plans on utilizing physical inspections as evidenced by the its funding request for eighty new Flight Standards inspectors during the fiscal year of 2006. DOBBS, *supra* note 1, at 3.

¹¹⁷ DOBBS, *supra* note 1, at 3.

port characterizing the FAA's safety oversight efforts as "generally strong but [still] fac[ing] challenges."¹¹⁸ The report asserts that the FAA inspectors are not being efficiently utilized, such that their responsibilities mostly center on non-risk based activities.¹¹⁹ Additionally, the report expressed concern that the FAA is not adequately supervising individuals and organizations which it authorizes to oversee certificated repair stations on its behalf.¹²⁰ Because these "designees" conduct approximately ninety percent of safety certification-related activities on behalf of the FAA, the report urges that they be effectively managed so as to ensure the safety of the aviation industry and compliance with the FAA's policies.¹²¹ Finally, the Government Accountability Office finds enforcement of the FAA's rules to be unclear and lenient, such that there exists minimal incentive to comply with safety regulations.¹²²

C. THE FEDERAL AVIATION ADMINISTRATION'S MOST RECENT CORRECTIVE EFFORT

Since the Department of Transportation and the Government Accountability Office issued their unflattering reports on the status of the FAA's oversight efforts, the FAA has released a long-awaited Notice of Proposed Rulemaking to revamp the standards imposed upon certificated repair stations by Title 14 Section 145 of the Code of Federal Regulations and hopefully depart from its history of inefficient oversight.¹²³ One of the primary ways the FAA proposes to improve the quality of maintenance work being performed by certificated repair stations is to require internal evaluation programs.¹²⁴ Rather than merely requiring an evaluation of the final product, the FAA proposes to mandate "internal evaluations of operations and establish a

¹¹⁸ See generally *Aviation Safety: FAA's Safety Efforts Generally Strong but Face Challenges*, *supra* note 61.

¹¹⁹ *Id.* at 1.

¹²⁰ *Id.* at 4–5. Through these "designee" programs, the FAA employs 13,400 persons and 218 organizations to perform safety certification activities, including the oversight of certificated repair stations. *Id.* at 5.

¹²¹ *Id.* at 11.

¹²² *Id.* at 12.

¹²³ 14 C.F.R. § 145 (2007); Department of Transportation and Repair Stations, 71 Fed. Reg. 70,254, 70,254–56 (Dec. 1, 2006) (to be codified at 145 C.F.R. § 145); Aeronautical Repair Station Ass'n, FAA Releases Proposed Rules for Repair Stations, <http://www.arsa.org/node/375> (last visited Oct. 31, 2007).

¹²⁴ Department of Transportation and Repair Stations, 71 Fed. Reg. at 70,264.

management review and follow up system.”¹²⁵ Moreover, the FAA explains that there is no rigid framework for internal evaluation systems and that air carriers may tailor the program to meet their particular needs.¹²⁶ Other proposed amendments to the current oversight system include requiring a certificated repair station to designate a chief inspector, possess permanent housing, meet expanded quality system requirements, and maintain a capabilities list.¹²⁷ The FAA has averred that these proposed amendments will be an effective way to identify deficiencies in operations, promptly correct the problems, and quickly generate plans for improvement.¹²⁸

VI. PROBLEMS WITH OVERSIGHT OF NON-CERTIFICATED REPAIR STATIONS

A. THE 2003 AIRMIDWEST CRASH

Although the Department of Transportation had devoted almost all of its attention prior to 2003 to the FAA’s ineffective oversight of certificated repair stations, it recently became acutely aware of an emerging oversight issue for which it demanded the FAA’s immediate attention.¹²⁹ On January 8, 2003, a fatal plane crash occurred in North Carolina.¹³⁰ The plane was an Air Midwest twin-turboprop.¹³¹ Shortly after it departed from Charlotte-Douglas International Airport, the pilot called air traffic control to issue an emergency distress alert.¹³² Suddenly, the airplane “pitched upward from seven degrees nose up to fifty-two degrees, veered left, turned over” and headed straight for a United States Airways maintenance hangar.¹³³ The plane crashed, killing all twenty-one people aboard the plane

¹²⁵ *Id.* at 70,264.

¹²⁶ *Id.* at 70,265.

¹²⁷ *Id.* at 70,263–66.

¹²⁸ *Id.* at 70,264.

¹²⁹ MEAD, *supra* note 6, at 1.

¹³⁰ *Poor Maintenance Cited as Primary Cause of Air Midwest Crash*, AIR SAFETY WK., Mar. 1, 2004, http://findarticles.com/p/articles/mi_m0UBT/is_9_18/ai_113773896/print.

¹³¹ *Id.*

¹³² Gregory Polek, *Air Midwest Crash Ushers in Regionals’ Day of Disaster*, AIN ONLINE, Feb. 2003, http://www.ainonline.com/issues/02_03/02_03_airmidwestpg58.html.

¹³³ *Id.*

and injuring a bystander on the ground.¹³⁴ The impact of the crash structurally annihilated the plane and a post-crash fire cremated both the aircraft and the passengers' bodies.¹³⁵

After investigating the crash, the National Transportation Safety Board discovered that the maintenance on the plane had been double-outsourced.¹³⁶ Air Midwest had contracted their maintenance to be performed by a non-certificated repair station called Raytheon Aerospace.¹³⁷ Raytheon Aerospace then hired mechanics from another company called Structural Modification and Repair Technicians (hereinafter SMART) to work on the Air Midwest aircrafts.¹³⁸ The most extensively-trained mechanic that was provided by SMART to Raytheon Aerospace had been with the company for a mere two months.¹³⁹ As for the other five mechanics who had been working on the aircraft, the National Transportation Safety Board characterized them as having "virtually zero experience."¹⁴⁰

After its investigation, the National Transportation Safety Board determined that the accident had been caused by an improperly-serviced airfoil, faulty rigging of the elevator control system and the fact that the plane was almost 600 pounds overweight before take off.¹⁴¹ All these complications resulted from inadequate maintenance performed at Raytheon Aerospace.¹⁴² Additionally, the National Transportation Safety Board reported that other problems contributing to the crash included:

Air Midwest's lack of oversight of the work being performed at [its] maintenance station, Air Midwest's maintenance procedures and documentation . . . the Raytheon Aerospace quality assurance inspector's failure to detect the incorrect rigging of the elevator control system . . . [and] the Federal Aviation Administration's lack of oversight of Air Midwest's maintenance program and its weight and balance program.¹⁴³

¹³⁴ Press Release, Nat'l Transp. Safety Bd., Loss of Pitch Control Caused Fatal Airliner Crash in Charlotte, North Carolina Last Year (Feb. 26, 2004) [hereinafter NTSB Press Release].

¹³⁵ *Id.*; Polek, *supra* note 132.

¹³⁶ NTSB Press Release, *supra* note 134.

¹³⁷ *Id.*

¹³⁸ *Id.*

¹³⁹ *Id.*

¹⁴⁰ *Poor Maintenance Cited as Primary Cause of Air Midwest Crash*, *supra* note 130.

¹⁴¹ *An Accident Waiting to Happen*, *supra* note 1, at 17; *Poor Maintenance Cited as Primary Cause of Air Midwest Crash*, *supra* note 130.

¹⁴² NTSB Press Release, *supra* note 134.

¹⁴³ NAT'L TRANSP. SAFETY BD., NTSB/AAR-04/01, LOSS OF PITCH CONTROL DURING TAKEOFF AIR MIDWEST FLIGHT 541 RAYTHEON (BEECHCRAFT) 1900 D,

Upon the release of its investigative findings, the National Transportation Safety Board expressed its opinion that what needed to come out of this calamity was the recognition of “how important it is for everyone involved in the safety chain to do their jobs properly.”¹⁴⁴

B. THE 2005 DEPARTMENT OF TRANSPORTATION REPORT ON
NON-CERTIFICATED REPAIR STATIONS

The Air Midwest accident prompted the Department of Transportation to depart from their traditional approach to investigating the FAA’s oversight efforts.¹⁴⁵ Historically, the Department of Transportation conducted investigations into the effectiveness of FAA oversight of certificated repair stations.¹⁴⁶ However, the 2003 Air Midwest crash shed light on non-certificated repair stations as an increasingly popular resource for air carriers to obtain inexpensive maintenance services without restrictions, regulation, or review.¹⁴⁷ Thus, the Department of Investigation launched an investigation into non-certificated repair stations with three primary objectives:

- (1) to determine the reasons and extent to which air carriers use non-certificated repair facilities to complete their aircraft maintenance work;
- (2) how FAA requirements for non-certificated facilities differ from those for certificated repair stations; and
- (3) how the FAA identifies and monitors work performed at noncertificated repair facilities and ensures that air carriers are providing effective oversight of this work.¹⁴⁸

Before delving into its investigation, the Department of Transportation asked the FAA about its knowledge of the kind of maintenance non-certificated repair stations were performing.¹⁴⁹ The FAA informed the Department of Transportation that non-certificated repair stations “only performed minor services.”¹⁵⁰ However, the investigation uncovered much more

N233YV CHARLOTTE, NORTH CAROLINA JANUARY 8, 2003 x (2004), *available at* <http://www.nts.gov/publicn/2004/AAR0401.pdf>; NTSB Press Release, *supra* note 134.

¹⁴⁴ NTSB Press Release, *supra* note 134.

¹⁴⁵ *See generally* MEAD, *supra* note 6.

¹⁴⁶ *Id.* at 2; *see, e.g.*, DOBBS, *supra* note 1, at 1.

¹⁴⁷ MEAD, *supra* note 6, at 1.

¹⁴⁸ *Id.* at 1–2.

¹⁴⁹ *Id.* at 3.

¹⁵⁰ *Id.* at 2.

work being performed at non-certificated repair facilities than merely minor maintenance tasks.¹⁵¹ The Department of Transportation determined that 1,400 non-certificated repair stations were routinely performing scheduled maintenance tasks and critical aircraft repairs.¹⁵² Scheduled maintenance that non-certificated repair stations are performing includes:

detailed interior and exterior checks that verify the airworthiness of the aircraft; daily checks to evaluate wings, engine, landing gear, and flight control systems for damage; inspections of crew and passenger oxygen, aircraft fuselage, wings, and engines for discrepancies at prescribed time intervals; and repairs to hydraulic valves required by Federal Aviation Administration Airworthiness Directives.¹⁵³

Critical aircraft repairs that are being performed by non-certificated repair stations include, for example, "removing and replacing engines, replacing flight control motors, and removing and replacing aircraft doors."¹⁵⁴ Additionally, the investigation uncovered "improper maintenance procedures, overlooked maintenance discrepancies, and incorrect logbook entries."¹⁵⁵

The FAA informed the Department of Transportation that because the air carriers hire these non-certificated repair stations, they are responsible for adequately training and evaluating the work completed by the on-site mechanics.¹⁵⁶ However, the Department of Transportation's inspection of the air carriers' training programs showed that such programs are inadequate.¹⁵⁷ Examples of inadequate training provided by air carriers to mechanics at non-certificated repair stations include less than one hour of video training, one and a half hours of classroom training, and handing out a maintenance procedure workbook to be completed, signed and returned by fax.¹⁵⁸

As a result of insufficient training, the Department of Transportation found numerous instances of improper documentation of the maintenance performed by mechanics at various non-certificated repair stations.¹⁵⁹ When maintenance tasks are

¹⁵¹ *Id.* at 1, 3, 5.

¹⁵² *Id.* at 6.

¹⁵³ *Id.*

¹⁵⁴ MEAD, *supra* note 6, at 6.

¹⁵⁵ *Id.* at 12.

¹⁵⁶ *Id.* at 17.

¹⁵⁷ *Id.* at 18.

¹⁵⁸ *Id.*

¹⁵⁹ *Id.*

not recorded in the logbooks accurately, there is a serious risk of compromising aviation safety and maintenance error-prevention.¹⁶⁰ For instance, one mechanic misrepresented in the repair station's logbook that a repair had been completed when actually it had been deferred.¹⁶¹ As a result, the pilot was unable to determine that the aircraft had a malfunctioning aircraft control system.¹⁶²

At the conclusion of its investigation, the Department of Transportation made several recommendations to the FAA in order to improve their oversight of non-certificated repair stations and thus the quality of work being performed by the non-certificated repair stations.¹⁶³ The Department of Transportation recommended that the FAA immediately:

Identify which non-certificated facilities perform critical maintenance functions and scheduled maintenance tasks; determine whether it should limit the type of work non-certificated facilities can perform; expand its maintenance oversight program to include non-certificated repair facilities if it determines that no limitations should be placed on the type or scope of work these facilities can perform; [routinely] evaluate air carrier training and oversight programs to determine whether carriers have effective systems in place to ensure work performed by non-certificated facilities is completed in accordance with air carrier and Federal Aviation Administration requirements; and determine whether air carriers evaluate background, experience, and qualifications of temporary maintenance personnel.¹⁶⁴

Upon presenting these suggestions to the FAA on November 18, 2005, the Deputy Associate Administrator for Aviation Safety and the Director of Flight Standards agreed with the Department of Transportation that such recommendations were both reasonable and achievable.¹⁶⁵ However, one month later, the FAA came out with a contradictory position when it issued a written response that candidly disagreed with the Department of Transportation's recommendations.¹⁶⁶ The FAA provided multiple excuses and justifications for the current lack of supervision over non-certificated repair stations.¹⁶⁷ The FAA asserted

¹⁶⁰ *Id.*

¹⁶¹ *Id.* at 19.

¹⁶² *Id.*

¹⁶³ *Id.* at 8.

¹⁶⁴ *Id.* at 8, 22–23.

¹⁶⁵ *Id.* at 8, 23.

¹⁶⁶ *Id.* at 8–9.

¹⁶⁷ *Id.* at 29.

that the Department of Transportation failed to make clear in its report that non-certificated repair stations are required to staff at least one certificated mechanic to perform maintenance work at these facilities.¹⁶⁸ The letter emphasized that the certificated mechanics are well-trained pursuant to the FAA's standards and are ultimately responsible for ensuring that the aircraft are undergoing proper maintenance at non-certificated facilities.¹⁶⁹ The FAA also assured the Department of Transportation that using certificated mechanics has traditionally provided a sufficient level of safety oversight.¹⁷⁰

C. THE ADVERSE IMPLICATIONS OF THE ABSENCE OF SAFETY
OVERSIGHT AT NON-CERTIFICATED REPAIR STATIONS

Despite the numerous reports through which the Department of Transportation has repeatedly expressed its concern with inadequate FAA and air carrier oversight of outsourced maintenance to non-certificated repair stations, neither party has felt compelled to take sufficient steps to remedy this safety concern.¹⁷¹ The FAA openly refuses to accept any responsibility for the oversight of non-certificated repair stations based on the reasoning that such facilities have not been certificated by it, and therefore are not within its regulatory jurisdiction.¹⁷² The FAA views non-certificated repair stations as "extensions of the air carrier's maintenance program" and therefore relies on the air carriers to provide those mechanics with adequate training and oversight.¹⁷³ The FAA insists that requiring a certificated mechanic at every non-certificated repair station is more than a sufficient effort on its part to ensure quality maintenance work is performed on United States aircraft.¹⁷⁴ However, as clearly demonstrated by the Air Midwest Crash in 2003 and then the Department of Transportation's 2005 Report on Non-Certificated Repair Stations, the quality assurance provided by one certified mechanic's approval is wholly inadequate.¹⁷⁵ Nonetheless, according to the FAA, it is the air carrier that is supposed to

¹⁶⁸ *See id.*

¹⁶⁹ *Id.*

¹⁷⁰ *Id.* at 30.

¹⁷¹ *Id.* at 3.

¹⁷² *Id.* at 17.

¹⁷³ *Id.*

¹⁷⁴ *Id.* at 29-30.

¹⁷⁵ *Id.* at 17.

monitor the facility it hires, and that is the end of its responsibility in the oversight of non-certificated repair stations.¹⁷⁶

Despite the FAA's stance that air carriers should be held accountable for the oversight of non-certificated repair stations, air carriers cannot be entrusted with this responsibility because it would be economically disadvantageous for air carriers to regulate their least expensive source of maintenance labor. If the air carriers take appropriate regulatory measures by imposing quality control programs and requiring more extensive mechanic training, operating costs will rise.¹⁷⁷ Because the FAA has abdicated all responsibility to the air carriers, there is no enforcement mechanism to ensure that regulations are being imposed by the air carriers. Without enforcement, air carriers will continue to adapt to their rapidly changing economic status and an increasingly competitive market, they will continue to outsource to non-certificated repair stations, and they will never challenge the operations and procedures that make non-certificated repair stations the most economical way to manage repair work.¹⁷⁸ But according to the FAA, this complete and utter lack of authority over non-certificated repair stations is just not their problem.¹⁷⁹

Because the FAA refuses to regulate non-certificated repair stations, which it authorizes to exist, and because air carriers are not in any hurry to incur increased maintenance costs by increasing safety standards, non-certificated repair stations are effectively subject to no rules or restrictions. As a result, a "double standard" exists in the regulatory criteria applicable to the maintenance being performed at both certificated and non-certificated facilities.¹⁸⁰ The FAA, via its imposition of multiple rules and regulations at certificated repair stations, clearly recognizes that effective safety oversight is necessary at those facilities that have traditionally performed air carriers' critical maintenance

¹⁷⁶ *Id.* at 3-4.

¹⁷⁷ See Department of Transportation and Repair Stations, 71 Fed. Reg. 70,254, 70,268 (Dec. 1, 2006) (to be codified at 14 C.F.R. § 145). In its proposed amended version of Title 14 Section 145 of the Code of Federal Regulations, the FAA articulates the costs of implementing the new and improved regulations to govern certificated repair stations, namely \$136.6 million to the repair station industry and \$8.2 million to the FAA. *Id.* The proper inference from this data is that higher standards mean higher costs, a principle that is applicable in a wide variety of contexts.

¹⁷⁸ Abeyratne, *supra* note 24, at 29-30.

¹⁷⁹ See MEAD, *supra* note 6, at 17.

¹⁸⁰ *Id.* at 6, 24.

tasks.¹⁸¹ At certificated repair stations, the FAA's use of certificated mechanics "is only the first level of quality control"¹⁸² and is subsequently followed by "multiple levels of oversight."¹⁸³ In contrast, non-certificated repair stations are currently performing equally as critical maintenance work as certificated repair stations and yet are subject to none of the FAA's directives.¹⁸⁴ Nonetheless, the FAA insists that imposing similar rules and regulations on non-certificated repair stations is neither their place nor their obligation. Thus, the double standard is established – critical maintenance requires oversight, and at the same time, it requires no oversight.¹⁸⁵

Historically operating under the assumption that non-certificated repair stations were only performing minor maintenance tasks, the FAA was once able to rationalize anything more than minimal oversight was simply excessive for such menial work.¹⁸⁶ But now, the FAA has been given concrete statistical data by the Department of Transportation indicating that non-certificated repair stations are performing maintenance that is equally as critical as that performed by certificated repair stations.¹⁸⁷ The FAA is allowing non-certificated repair stations to perform this critical work without rules, regulations, or a watchful eye.¹⁸⁸ As the oversight agency responsible for aviation safety in the United States, the FAA is failing to recognize that "the transition to increased use of outside repair facilities is not the issue—it is that maintenance, wherever it is done, requires oversight."¹⁸⁹

D. THE FEDERAL AVIATION ADMINISTRATION LACKS THE
NECESSARY RESOURCES TO ASSUME RESPONSIBILITY OF
SAFETY OVERSIGHT OF NON-CERTIFICATED
REPAIR STATIONS

In response to the increasingly critical maintenance being performed by non-certificated repair stations, the Department of Transportation has called for the FAA to assume the responsi-

¹⁸¹ See generally 71 Fed. Reg. 70,254; DOBBS, *supra* note 1; STEFANI, *supra* note 2.

¹⁸² MEAD, *supra* note 6, at 23–24.

¹⁸³ *Id.* at 24.

¹⁸⁴ *Id.* at 6.

¹⁸⁵ *Id.*

¹⁸⁶ *Id.* at 4.

¹⁸⁷ See generally *id.*

¹⁸⁸ *Id.* at 3.

¹⁸⁹ *Observations on FAA's Oversight and Changes in the Airline Industry*, *supra* note 47, at 5.

bility of overseeing this recently discovered sector of the aviation industry. However, the FAA simply does not have the resources to adequately oversee non-certificated repair stations. As discussed previously, the FAA's staffing and financial resources are already strained such that it struggles to effectively oversee certificated repair stations.¹⁹⁰ The desire for effective oversight is not idle within the FAA, as evidenced by the December 2006 release of their proposed regulatory changes for the oversight of certificated repair stations and their transition into an efficient electronic oversight system.¹⁹¹ Rather, the FAA's resources render it incapable of executing the much-needed transformation in its current oversight policy for certificated repair stations.

Already operating with limited resources, the FAA cannot possibly provide adequate oversight to non-certificated repair stations. The past several years have revealed an entirely unregulated sector of the aviation industry by showcasing the FAA's nonexistent oversight efforts with non-certificated repair stations.¹⁹² Therefore, the case made by the FAA for its refusal to assume responsibility for non-certificated repair stations is moot because even if it wanted to, the FAA is neither adequately funded nor staffed to expand its oversight efforts into this new and substantially large sector of the aviation industry.¹⁹³ It is nothing short of dangerous for the Department of Transportation to add insult to injury by recommending that the FAA assume the responsibility of overseeing and regulating more than 1,400 non-certificated repair stations¹⁹⁴ in addition to the 5,200 certificated repair stations that it already struggles to manage.¹⁹⁵

¹⁹⁰ See *Aviation Safety: FAA's Safety Efforts Generally Strong but Face Challenges*, *supra* note 3, at 1.

¹⁹¹ See generally Department of Transportation and Repair Stations, 71 Fed. Reg. 70,254 (Dec. 1, 2006) (to be codified at 14 C.F.R. § 145); see also *An Accident Waiting to Happen*, *supra* note 1, at 17.

¹⁹² MEAD, *supra* note 6, at 1.

¹⁹³ *Aviation Safety: FAA's Safety Efforts Generally Strong but Face Challenges*, *supra* note 3, at 1; see also DOBBS, *supra* note 1, at 3-4; see also STEFANI, *supra* note 2, at 12.

¹⁹⁴ MEAD, *supra* note 6, at 1.

¹⁹⁵ STEFANI, *supra* note 2, at 1.

VII. THE SOLUTION: THE FEDERAL AVIATION
ADMINISTRATION SHOULD NOT PERMIT AIRLINES TO
OUTSOURCE THEIR MAINTENANCE TO NON-
CERTIFICATED REPAIR STATIONS

The major problem that can and must be remedied by the FAA is the critical maintenance being performed in an unsafe manner by non-certificated repair stations as a result of inadequate oversight. Engine swaps and repairs to hydraulic valves are critical maintenance tasks requiring critical preparation and critical oversight at multiple stages of the process.¹⁹⁶ The FAA has recognized this by requiring multi-tiered oversight at the facilities it assumes exclusively perform this level of repairs. It is true, especially against a background of economic distress, that "for every proposed safety regulation, the [FAA] must weigh the cost of implementation and determine if it is worth the financial strain on the airlines."¹⁹⁷ However, at no point should the agency in charge of the "safest aviation industry in the world" be willing to loosen its regulatory reigns and risk the lives of airborne consumers in order to ensure that airlines are saving every penny they can get in their bank account.¹⁹⁸

While the FAA must not continue its tradition of ignoring strong recommendations for change, it should not follow the Department of Transportation's recommendation of assuming responsibility for the oversight of all non-certificated repair stations. Rather than further strain its already limited resources and lessen the overall quality of aviation safety oversight, the FAA should propose an amendment to Chapter 14 Section 145 of the Code of Federal Regulations that expressly disallows outsourcing maintenance to non-certificated repair stations.

This amendment will have several significant effects. By prohibiting the use of non-certificated repair stations, the FAA will force all United States air carriers into using only certificated repair stations as the less expensive alternative to in-house maintenance facilities. Outsourced maintenance will be contained within one sector of the aviation industry and will be performed pursuant to the stricter safety standards within that sector. With its gradual movement toward efficient electronic oversight and its newly proposed amendments to Title 14 Part 145, the FAA has prepared itself to begin effectively managing

¹⁹⁶ MEAD, *supra* note 6, at 2-4, 24.

¹⁹⁷ Carlisle, *supra* note 77, at 741.

¹⁹⁸ DOBBS, *supra* note 1, at i.

even a larger number of air carriers.¹⁹⁹ Thus, it will no longer be sufficient for oversight of critical maintenance to consist of nothing more than the mere formality of signing off on the finished product. Rather, critical maintenance tasks will assuredly be performed by certificated repair stations where safety oversight is a constant factor at every stage of the maintenance being performed. While this would undoubtedly force airlines to incur additional maintenance costs by eliminating the cheapest source of maintenance labor, non-certificated facilities must not be able to perform maintenance in such a way that sacrifices safety. As the agency responsible for ensuring aviation safety, it is the FAA's duty to exterminate any safety hazard which it cannot effectively monitor.

The practice of outsourcing should not be banned altogether because for years it has provided the aviation industry with a way to cut costs in times of need. When an industry endures such a severe financial blow as has been weathered by the United States' aviation industry in the past decade, its survival is contingent on finding ways to decrease the cost of operations. Moreover, there are airlines in the United States that successfully outsource maintenance without compromising the safety of the airborne component of the American public. Nonetheless, there are some airlines that are cutting costs and cutting corners. It is crucial that the FAA recognize that airlines are sacrificing safety for low cost labor and have done so to the detriment of aircraft passengers, pilots, and even bystanders on the ground. This ranking of priorities is a reprehensible example of social irresponsibility and the FAA is equally irresponsible if it does not ensure that aviation safety is the number one priority of all United States air carriers.

VIII. CONCLUSION

Outsourcing is a method used by industries to reduce operating costs. In the past ten to fifteen years, the aviation industry in particular has gravitated toward maintenance outsourcing as an effective way to save money and counteract the grave financial distress which it has suffered as a result of unfortunate social and economic events.²⁰⁰ However, the industry's focus on cut-

¹⁹⁹ See *An Accident Waiting to Happen*, *supra* note 1, at 17; see generally Department of Transportation and Repair Stations, 71 Fed. Reg. 70,254 (Dec. 1, 2006) (to be codified at 14 C.F.R. § 145).

²⁰⁰ See DOBBS, *supra* note 1, at 1.

ting costs has eclipsed its commitment to safety. Notwithstanding the fact that airlines are outsourcing more maintenance than ever before, the Federal Aviation Administration's oversight of certificated repair stations is at best inadequate, and in the case of non-certificated repair stations, oversight is non-existent. Even more disturbing is that the FAA cannot assume responsibility for the oversight of non-certificated repair stations and yet its very recently proposed amendments to Chapter 14 Section 145 of the Code of Federal Regulations would continue to permit non-certificated repair stations to perform maintenance on United States aircraft.²⁰¹

It is necessary that the FAA be given the chance to properly do its job of overseeing safety of the United States' aviation industry. As proven in the Department of Transportation's investigations and the FAA's own admissions, the FAA currently struggles to effectively oversee certificated repair stations.²⁰² If the FAA is forced to spread its already rapidly-thinning inspection resources to also monitor non-certificated repair stations, the safety of the entire aviation industry will suffer. Therefore, in order to improve the maintenance being performed on United States aircrafts, the FAA must require that all outsourced maintenance be performed by certificated repair stations only. By implementing this mandate, the FAA will ensure that all outsourced maintenance is being performed pursuant to FAA standards. The FAA's electronic surveillance system will keep record of every airline that outsources maintenance, what kind of maintenance repair stations are doing, and whether the maintenance is being performed in accordance with the regulations set forth by the FAA.²⁰³ While the airlines may not retain the cheapest labor available through non-certificated repair stations, they will still be able to retain cheaper maintenance labor than that performed at their in-house facilities. Airlines continue to cut costs, but there is no more cutting corners.

²⁰¹ See 71 Fed. Reg. at 70,254.

²⁰² See generally DOBBS, *supra* note 1; STEFANI, *supra* note 2.

²⁰³ *An Accident Waiting to Happen*, *supra* note 1, at 17.