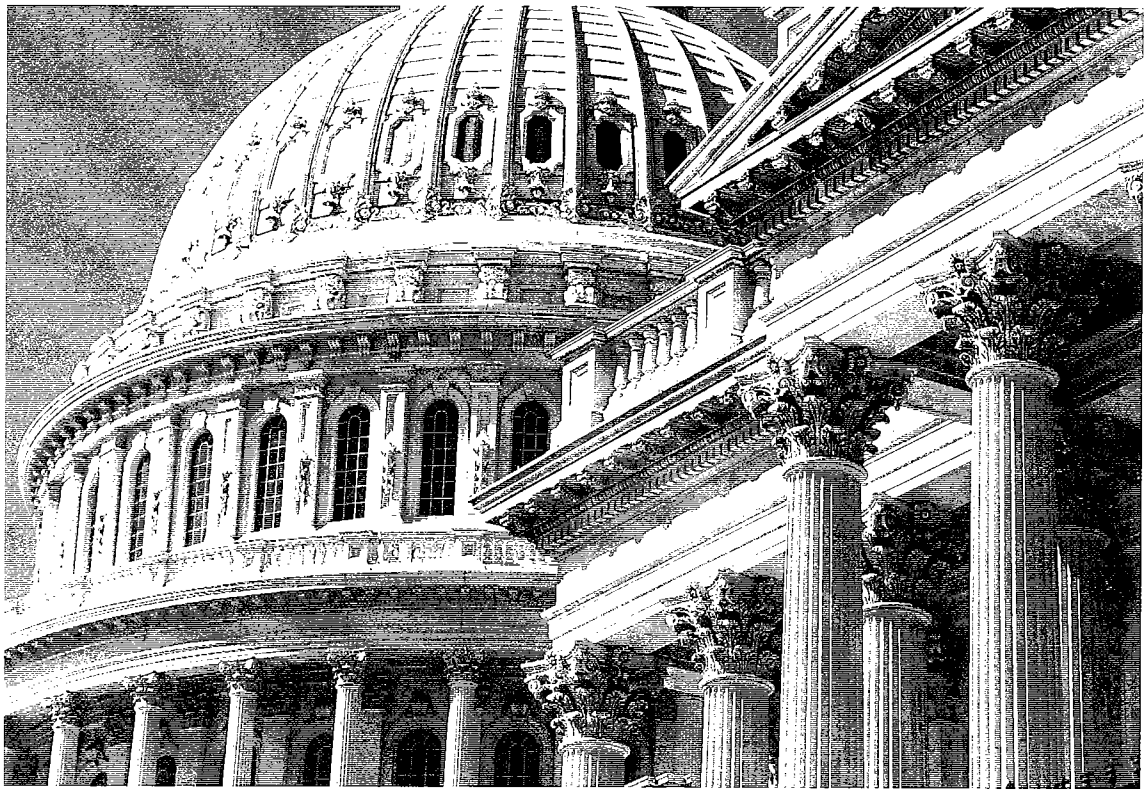
ATA TESTIMONY

Oversight of Outsourced Maintenance



Statement of Basil J. Barimo
Vice President of Operations and Safety
Air Transport Association of America, Inc.
before the
Subcommittee on Aviation
of the
House Committee on Transportation and Infrastructure

March 29, 2007

AIR TRANSPORT ASSOCIATION

Introduction

The Air Transport Association of America, Inc. (ATA), the trade association of the principal U.S. passenger and cargo airlines,[1] appreciates the opportunity to submit these comments for the record on safety and other issues affecting the U.S. airline industry. ATA member airlines have a combined fleet of more than 4,000 airplanes and account for more than 90 percent of domestic passenger and cargo traffic carried annually by U.S. airlines.

Safety is the constant, overriding imperative in our members' activities. They understand their responsibilities and they act accordingly. The U.S. airline industry's stellar - and improving - safety record demonstrates that indisputable commitment.

Airlines Fuel our Nation's Economy

The U.S. airline industry is not simply an important sector of the national economy; its services fuel our entire economy. Air transportation is an indispensable element of America's infrastructure and our nation's economic well-being. Individuals, businesses and communities depend on the national air transportation system. U.S. airlines transport more than two million passengers on a typical day and directly employ 550,000 persons to do so; they provide just-in-time cargo services; they are the backbone of the travel and tourism industry; and airlines link communities throughout our nation and to the world.

Moreover, the airline industry is the foundation of the commercial aviation sector, which comprises airlines, airports, manufacturers and associated vendors. U.S. commercial aviation ultimately drives $1.2 trillion in U.S. economic activity and 11.4 million U.S. jobs. By any measure, the U.S. airline industry is a valuable national asset and its continued economic health should be a matter of national concern.

The Safest Airlines in the World

Despite the unprecedented travails of the U.S. airline industry throughout the first half of this decade, its safety record has continued to improve. Our commitment to safety, even in the face of unprecedented financial adversity, has been unflagging and will remain so.

Following $35 billion in losses from 2001 to 2005, 2006 was a much-improved year for the U.S. airline industry from an economic standpoint. Including the all-cargo

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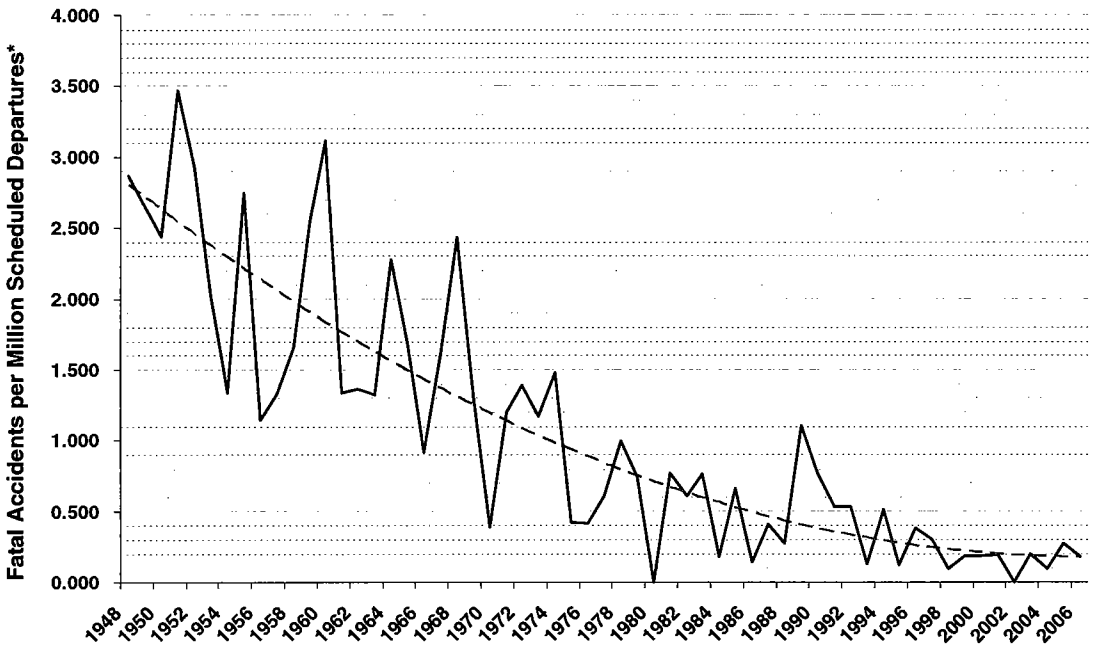
[1] ABX Air, Inc.; Alaska Airlines; Aloha Airlines; American Airlines; ASTAR Air Cargo; Atlas Air; Continental Airlines; Delta Air Lines; Evergreen International Airlines; Federal Express Corp.; Hawaiian Airlines; JetBlue Airways; Midwest Airlines; Northwest Airlines; Southwest Airlines; United Airlines; UPS Airlines; and US Airways.

sector, the Air Transport Association estimates that the industry will report earnings ranging from $2 billion to $3 billion.

While conditions have improved and the overall financial outlook is guardedly optimistic, debt levels remain high, leaving the airlines vulnerable to fuel spikes, recession or exogenous shocks (e.g., terrorism, pandemics, natural disasters), let alone ill-advised public policy decisions. The challenge we face is to achieve meaningful and sustainable profits, and to improve credit ratings to the point where airlines can weather normal economic turbulence while simultaneously investing in the future.

Amid Rising Departures, Safety Has Improved



* Scheduled passenger and cargo operations of U.S. air carriers operating under 14 CFR 121; NTSB accident rates exclude incidents resulting from illegal acts

Source: National Transportation Safety Board (NTSB)

Notwithstanding these financial challenges, airline safety has remained rock solid. NTSB figures show fewer accidents in 2006 compared to 2005 for all segments of civil aviation, with Part 121 carriers continuing to have the lowest accident rates. In 2006, Part 121 carriers transported 750 million passengers more than eight billion miles and logged 19 million flight hours on 11.4 million flights. Tragically, there were two fatal accidents in 2006 which claimed 50 lives. This yields an accident rate of 0.18 per 100,000 departures, down 30 percent from 2005. For comparison, the average rate for the five-year period of 2002-2006 was 0.36, and the five years prior to that saw a rate of 0.45 accidents per 100,000 departures. The trend continues in 2007 and, without question scheduled air service is incredibly safe, getting safer, and maintenance certainly plays a role in that remarkable achievement.

The chart above clearly depicts the remarkable improvements in airline safety that have occurred over time. U.S. air carrier accidents are rare and random. A prominent

reason for this is the extraordinary, long-standing collaboration among the FAA, NTSB, NASA, manufacturers, airline employees and their unions, airlines themselves, and of course, maintenance, repair and overhaul service providers (MROs). That collaborative relationship is firmly entrenched in the aviation community; indeed, it has strengthened over the years. Programs such as the joint government-industry Commercial Aviation Safety Team, Flight Operational Quality Assurance Programs, Aviation Safety Action Programs, and Line Operations Safety Programs are important, tangible results of that ongoing collaboration.

These collaborative safety-improvement efforts have created a safety management system that is data driven and is based on risk analysis. That undistracted focus on data enables safety-related trends to be identified, often before they emerge as problems, and properly resolved. This objective and measurable approach means that we apply our resources where the needs actually are, not where surmise or unverified assumptions might take us.

We can and do spot these trends, whether they are operational or maintenance related. With respect to the long-standing practice in the airline industry to use the expertise of regulated contractors to perform maintenance services, the data quite clearly do not tell us that safety suffers.

Maintenance Contracting is Not a New Concept

In simple terms, contract maintenance is the process explicitly allowed by FAR 121.363(b) [2] where airlines hire experts to perform maintenance tasks. The type of maintenance involved can range from minor servicing to major overhaul of components, engines or the airframe itself.

Airlines exist to transport people and goods. In order to survive they must do it safely, but to thrive in a fiercely competitive, global environment they must also do it efficiently. Safety need not be comprised because of considerations of efficiency; in fact, it can be significantly advanced in an environment where a focus on efficiency spurs a willingness to re-examine time-worn practices and encourage innovation that embraces newer - and improved - practices.

The maintenance of commercial airliners is a complex, capital-intensive business requiring specialized equipment and facilities along with highly-skilled personnel. One implication of this is that using a maintenance facility or facilities with specialized

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[2] FAR 121.363 Responsibility for Airworthiness states that:

(a) Each certificate holder is primarily responsible for-

(1) The airworthiness of its aircraft, including airframes, aircraft engines, propellers, appliances, and parts thereof; and

(2) The performance of the maintenance, preventive maintenance, and alteration of its aircraft, including airframes, aircraft engines, propellers, appliances, emergency equipment, and parts thereof, in accordance with its manual and the regulations of this chapter.

(b) A certificate holder may make arrangements with another person for the performance of any maintenance, preventive maintenance, or alterations. However, this does not relieve the certificate holder of the responsibility specified in paragraph (a) of this section.

skills is likely to be considered. Complexity inevitably will lead a carrier to examine dividing maintenance functions; some airlines will elect to do so, while others will not. Either way, examining alternative sources in this type of environment is entirely reasonable.

Moreover, current airline business models demand continual scrutiny of costs, commonly with a bias to shed non-core activities. In the case of maintenance, there are many incentives to utilize contract maintenance providers:

- Access to specialized repair facilities when and where they are needed
- Avoidance of major capital investments (equipment and facilities)
- Increased utilization of existing facilities
- Improved employee focus on core airline activities
- Optimization of flight schedules around customer demand instead of maintenance infrastructure availability
- Exceptional quality at a reduced cost

As expected, the level of contract maintenance utilized by individual airlines varies significantly based on factors such as the type(s) of aircraft used, geographic region of operation, business philosophy, labor agreement limitations, internal cost structure, and commercial relationships with airframe, engine and component manufacturers. Without exception, all airlines rely to some extent on contract maintenance providers. This is a point that should not be obscured: contract maintenance is a commonly accepted practice in this industry. The extent of it may vary from airline to airline but there is nothing out of the ordinary about its use.

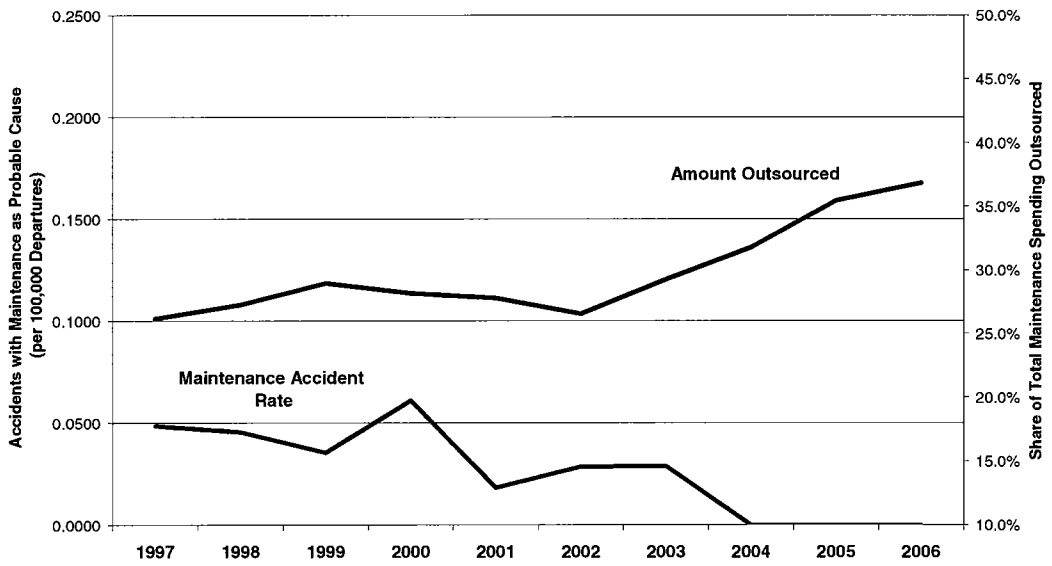
Airlines are by no means unique in their reliance on contract maintenance. In fact, many industries rely heavily on contract maintenance providers for a broad range of services. Trains, buses and cruise ships are predominantly maintained by companies other than those who operate them. The United States Department of Defense contracts with private companies for the maintenance of aircraft, in many cases the same companies utilized by commercial airlines. As this widespread pattern of relying on contract maintenance suggests, operators with very demanding and sophisticated needs routinely and successfully outsource maintenance.

Statistics Don't Lie

Commercial airlines have utilized contract maintenance for decades. The industry's reliance on contract maintenance providers increased since 2001 as airlines restructured their business models. The implications of this change have been misunderstood. It does not signal a diminution in safety or a "slippery slope." Critics of contract maintenance argue that 'If airlines don't perform all of the maintenance themselves, then they can't be safe.' Independent data from the National Transportation Safety Board (NTSB) proves them wrong.

Based on data compiled by the NTSB, maintenance-related accidents make up roughly eight percent of all Part 121 accidents over the last ten years.

Maintenance Safety Improves with Increased Outsourcing



The chart above clearly illustrates that U. S. airlines' use of contract maintenance has not been a detriment to safety. In fact, maintenance-related safety performance is the best its ever been. It is simply not reasonable, based on the data available, to consider the practice of maintenance contracting unsafe.

Effective Oversight is the Key

Air carriers understand that aircraft maintenance is vital to continued operational safety. Likewise, safe operations are elemental to compliance with regulatory requirements and ultimately to an airline's existence. Over time, the industry has developed a comprehensive, multilayered approach to oversight that ensures the

highest levels of quality and safety regardless of who does the work or where that work is performed. This point cannot be overstated - safety is what counts, first and foremost.

Initial levels of protection are contained in the Federal Aviation Administration (FAA) regulations, which provide a basic framework to ensure competence among those certificated to perform aircraft maintenance.[3] Prior to granting certification, the FAA confirms that an entity or individual has fulfilled specific regulatory requirements.

Part of this approval process involves the issuance of Operations Specifications (OpSpecs) by the FAA. Air carrier OpSpecs contain a specific section to address aircraft maintenance, and repair station OpSpecs delineate the ratings and limitations of the maintenance that can be performed. In FAA Order 8300.10, Volume 2, Chapter 84, it is stated, in part, that:

> OpSpecs transform the general terms of applicable regulations into an understandable legal document tailored to the specific needs of an individual certificate holder. OpSpecs are as legally binding as the regulations... *(Citations omitted)*

Once certificated, air carriers and repair stations are inspected and monitored by the FAA to verify their continued conformity with the rules. This ongoing surveillance process can be viewed as the second layer of safety.

Additionally, certificated air carriers acquire the <u>non-delegable</u> responsibility for the airworthiness of the aircraft in their fleet.[4] The backbone of any air carrier's airworthiness is its Continuing Analysis and Surveillance System (CASS). CASS is a quality-assurance system required by FAR 121.373 consisting of surveillance, controls, analysis, corrective action and follow-up. Together, these functions form a closed loop system that allows carriers to monitor the quality of their maintenance. In a structured and methodical manner, the CASS provides carriers with the necessary information to enhance their maintenance programs.

Aircraft maintenance is the primary ingredient of airworthiness and FAA regulations contain detailed maintenance program and manual requirements,[5] which validate the related air-carrier processes and procedures. When work is sent to a repair station, it

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[3] See, for example, 14 CFR parts 121, 145 and 65.

[4] See 14 CFR § 121.363 which provides that:

> (a) Each certificate holder is primarily responsible for—
>
> (1) The airworthiness of its aircraft, including airframes, aircraft engines, propellers, appliances, and parts thereof; and
>
> (2) The performance of the maintenance, preventive maintenance, and alteration of its aircraft, including airframes, aircraft engines, propellers, appliances, emergency equipment, and parts thereof, in accordance with its manual and the regulations of this chapter.
>
> (b) <u>A certificate holder may make arrangements with another person for the performance of any maintenance, preventive maintenance, or alterations. However, this does not relieve the certificate holder of the responsibility specified in paragraph (a) of this section.</u> *(Emphasis added.)*

[5] See 14 CFR §§ 121.365; 121.367; 121.369.

must follow the maintenance program of the air carrier with whom it has contracted.[6] Combined, these duties comprise the third level of protection.

Apart from external FAA surveillance, and in line with their ultimate responsibility for airworthiness, airlines conduct in-depth initial and frequent follow-up maintenance vendor audits. As a rule, these audits are performed by air carrier quality, compliance or inspection department employees, but oftentimes may include outside counsel and/or consulting firms who specialize in air carrier maintenance. These audits create a robust fourth level of oversight.

Industry protocol for conducting and substantiating independent audits of air carriers and repair stations is established by the Coordinating Agency for Supplier Evaluation (C.A.S.E.). In addition, guidance materials and inspection checklists created for FAA inspectors are frequently used.

Typically, preliminary investigation of a potential repair station vendor by an air carrier would include:

- Review of repair station performance and quality metrics
- Feedback from past and current repair station customers
- Verification of repair station capabilities (OpSpecs)
- Review of FAA mandated Repair Station Manual, Quality Manual and Training Manual

If this repair station examination is satisfactory, it is normally followed by an on-site visit to verify compliance with applicable regulations, C.A.S.E. requirements and adherence to the repair station's own manuals. Some areas of investigation include:

- Validation of FAA certificates held by persons directly in charge of maintenance and/or those who perform maintenance
- Inspection of training records of inspectors, technicians and supervisors
- Examination of procedures for technical data, documentation and maintenance record control
- Examination of procedures for work processing, disposal of scrap parts, tool calibration and handling material with a limited shelf life
- Review of repair station internal inspection and quality programs
- Review of previous inspection program results and corrective actions

If the repair station is selected to perform maintenance for the air carrier, similar on-site audits would be conducted on a regular basis.

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[6] See 14 CFR § 145.205 which states, in part, that:

> (a) A certificated repair station that performs maintenance, preventive maintenance, or alterations for an air carrier or commercial operator that has a continuous airworthiness maintenance program under part 121 or part 135 <u>must follow the air carrier's or commercial operator's program and applicable sections of its maintenance manual</u>. *(Emphasis added.)*

Finally, a fifth layer of oversight is provided by on-site air carrier representatives. These individuals monitor the day-to-day operations and coordinate the activities of the repair station related to the air carrier's equipment. Final inspections and, ultimately, air carrier approval for service are also normally accomplished by these on-site airline personnel.

In essence, there are two separate but mutually reinforcing oversight schemes, one regulatory and one independent, both effective in ensuring satisfaction of applicable FAA regulations. However, air carriers have further incentive to provide adequate oversight through the potential negative impact - real or perceived - of safety related issues. Without question, air carriers continue to make safety their top priority. Safety is ingrained in our culture.

Global Competition, Local Politics

U.S. airlines continually lead the world in virtually every performance metric, including safety. Their ability to compete effectively on a global scale is due, at least in part, to their ability to evolve with changing market conditions. Airlines across the United States and around the world have formed alliances that extend beyond their networks to many aspects of airline operations, including maintenance. These complex relationships involve airlines, aircraft manufacturers and a host of service providers.

The loss of some 130,000 airline jobs since 9/11 has been well documented. As airlines downsized to meet a reduced demand for air travel, it became even more difficult for them to efficiently utilize their exhaustive maintenance infrastructure. Fleet reductions targeted older, maintenance-intensive aircraft, leaving too few aircraft being maintained at too many facilities, and airlines looked to contract maintenance providers as a way to secure quality maintenance while shedding the expensive infrastructure costs. Airlines were also forced to renegotiate labor agreements in an effort to reduce costs, bolster productivity and increase asset utilization. Scope clauses were modified to allow air carriers to more broadly leverage contract maintenance – a painful move for affected employees, but ultimately essential to the airline's survival. It is this impact on employees, particularly maintenance employees, that draws attention to the issue of maintenance contracting.

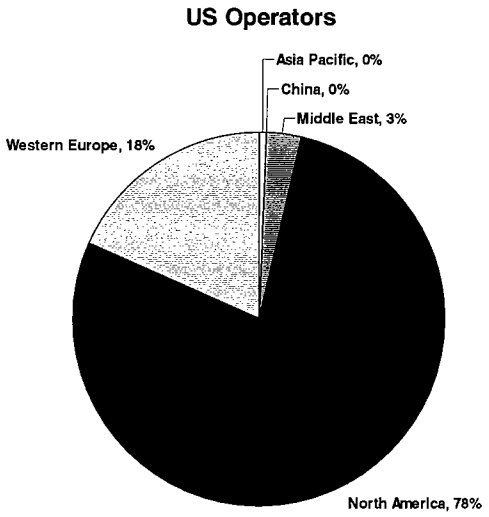
The debate surrounding the issue of contract maintenance is best understood when broken down into several key points:

- Most statistics relating to the amount of maintenance contracted are based on the amount an airline spends. The amount 'outsourced' is derived by dividing the amount spent on contract maintenance by the total maintenance cost for the airline. These include all costs associated with the maintenance of airframes, engines and components.

- Engine maintenance is much more expensive per event than airframe maintenance, due largely to the replacement of expensive parts within the engine. The fact that virtually all engine maintenance is performed outside the airline can skew the numbers.

- Even the largest engines are readily transportable enabling access to repair centers around the world. Engine manufacturers such as GE, Pratt & Whitney, and Rolls-Royce rely on their subsidiaries worldwide for maintenance of their products although, as shown below, most of that work is performed domestically. Large U.S. airline MROs also maintain engines for foreign and domestic customers.

Where Engine Work Goes

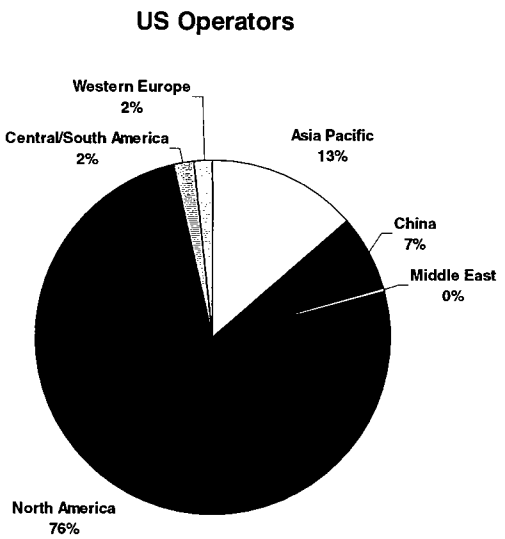


- ATA-member airlines continue to perform the majority of airframe checks internally.[7]

[7] According to a 2005 survey of ATA member airlines, 70 percent of all heavy maintenance checks ('C' or higher) were performed internally by direct airline personnel.

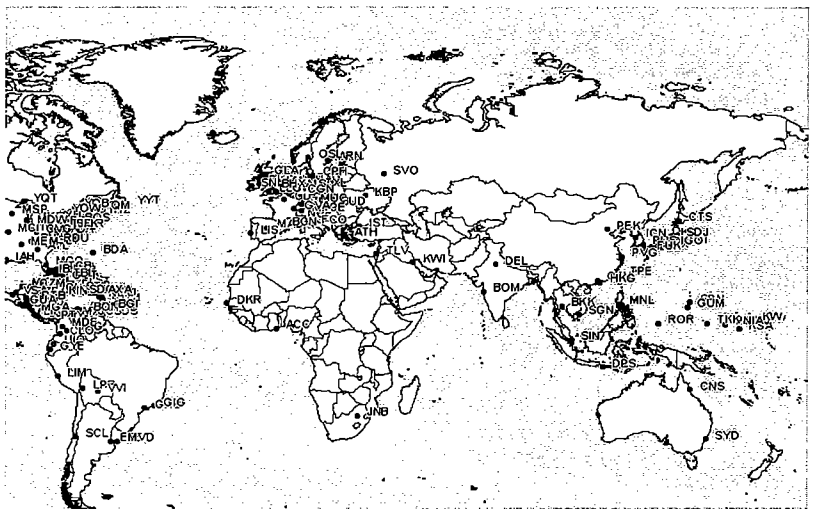
- The majority of narrow-body aircraft maintenance work contracted out in the past few years has stayed within North America. Maintenance, repair and overhaul companies (MROs) in Washington, North Carolina, Florida, New York, Georgia, Tennessee, Arizona, Texas and Indiana are among those now performing the work. Large airlines with available capacity have also captured a portion, and the remainder is performed by experts in Central/South America and Canada.

Where Heavy Airframe Work Goes



- Heavy airframe maintenance performed by MROs outside of North America is limited primarily to wide-body aircraft. Regularly scheduled operations enable these long-range aircraft to routinely transit locations abroad that offer best-in-class maintenance for these aircraft types. Asia and Europe do much of this work.

Easy Access to Global MROs



Conclusion

U.S. airlines have logged an exceptional safety record while steadily expanding their use of contract maintenance. So while critics charge that maintenance contracting undermines safety, independent government figures simply don't support that conclusion. When considered objectively, it is evident that the practice helps U.S. airlines compete effectively with their global counterparts. The ability to optimize maintenance practices to produce safe, reliable, customer-worthy aircraft at a competitive cost is essential to airlines' long-term health. Healthy airlines grow, adding service to new destinations and increasing service to existing ones. That growth requires new aircraft, creating new jobs within the airline for pilots, flight attendants, ramp and customer service personnel, and a wide range of support staff. Beyond the airline, the impact grows exponentially and is felt nationwide by manufacturers, ATC service providers, airports, caterers, fuelers – the list goes on and on. Contract maintenance has played and continues to play an important role in improving the health of the U.S. airline industry - in a way that is entirely consistent with our fundamental commitment to safety. It is imperative that this fact not be overshadowed by the movement of jobs from one state or district to another.