Safety Magazine

Summer 2003

Safety Focus Audits

Fellow employee,

Thank you for taking the time to read this publication. You may be asking yourself why the company would be dedicating time and resources during this difficult time to conduct yet another audit. The answer is simple. At times like these it is incumbent on an organization to evaluate how it does business so that it can be improved wherever possible. Improving the Safety, Efficiency, and Quality of our operation will go a long way to achieving the goals of our Turnaround Plan.

Our Federal Regulators agree. As part of the Federal Aviation Administration's focus during these difficult financial times, they have agreed to partner with us in taking a fresh look at our operation. In this spirit of cooperation, representatives from the ranks of our line employees, management, and the FAA came together to evaluate how we comply with our own procedures designed to protect our customers, employees, and assets. In most cases, we confirmed what we already believe; American Airlines is a professional organization with the highest standards of safety. However, we also learned that there are many areas in which we require improvement.

As you read through this analysis, please think about how the observations that were made might be improved. Remember that each of us makes choices every day that can have either a positive or negative impact on those around us. By choosing to what is right, you are helping your company, your co-workers, your customers, and ultimately…yourself.

Let's Pull Together, and Win Together……Safely!

Sincerely,
Peggy E. Sterling
Vice President
Safety, Security & Environmental

Safety Magazine

Published by the Safety Department for the employees of American Airlines

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Safety and Compliance:

Understanding Risks and Preventing Accidents

It is commonly held that for every industrial accident there are thousands of unsafe acts or precursors that do not result in adverse outcomes and remain unnoticed. Consequently, unsafe behaviors and practices can be accepted in the workplace simply because nothing bad happened as a result.

A few examples in our business might be:

- ✓ A fleet service clerk fails to observe the 8 foot stop requirement when operating a vehicle approaching an aircraft, becomes distracted and narrowly misses colliding with the aircraft. No one else observes the incident. The flight departs on time with all the bags loaded successfully.
- ✓ A flight attendant is rushed due to time contraints during descent for landing and does not complete the required cabin safety check. However, the first class customers are favorably impressed with the in-flight service and compliment the flight attendant for a "job well done."
- ✓ A pilot flies an unstabilized approach due to ATC handling that should have resulted in a go-around. However, the plane lands smoothly and the flight and cabin crew congratulate the pilot for making another "grease job."

Each of these actions occur every day across the industry and can go uncorrected so long as the end result isn't an accident, damage or injury. In other words, serious risk-taking behaviors are often reinforced so long as the outcome is positive.

When accidents do occur, however, we often focus on the last link in the chain of actions that contributed to the event. "The employee didn't follow procedures" is often cited as the cause, and discipline or even termination can be seen as the corrective action to prevent recurrence. Discipline does have a deterent effect and can demonstrate the commitment of an organization to a safe work environment. However, discipline based only on the outcome following repeated instances of risk-taking behaviour by an individual or group can send the wrong signal to employees: "unsafe acts are OK so long as nothing bad happens."

Clearly, this is not the message that American Airlines wishes to accept nor communicate. The consequences of not performing our jobs safely are dramatic. Employee injuries inflict enormous amounts of pain and suffering on us and our families and drain precious resources from our company. Similarly, the total losses associated with aircraft and equipment damages far exceed the direct costs when out-of-service time and other indirect factors are added in. Ultimately, we all pay the price when an accident or incident occurs, regardless of what caused it. Our challenge, then, is to take every step possible to prevent it from happening in the first place.

Compliance with well-established procedures is the starting point for safe operations. Typically, rules and procedures are developed only after an incident or accident and are designed to prevent a recurrence. However, over time, individuals may lose sight or focus on what can happen when procedures are not followed. In everyday life, how often do we hold onto the handrail when descending stairs? How often do we talk on our cell phones while driving? How often do we change the batteries in our home smoke alarms? Do we recognize the risks involved in not adhering to safe behaviors and practices?

There is a view held by some within our industry that dedication to safety comes only at the expense of operational imperatives such as on-time performance and reliability. That is a myth. Other industries have demonstrated that corporations who hold safety as a core value out-perform their competitors in all areas of operational performance. My experience within the airline business is that those employees who perform their jobs safely are those who do the job right, every time. In short, safety is just good business.

In fact, the third tenet of the Turnaround Plan is "Pull Together, Win Together." Pulling together and winning together safely has never been more important to our success than now.

Simply put, safety must be at the core of our operating philosophy because the product that we sell to our customers depends on it. As the front line employees who deliver this product your commitment to safety is what enables our operational performance; and that is what brings our customers back time after time.

As the world's largest airline, the sheer size and scope of our operations requires us to do a better job of risk identification and mitigation in order to match industry safety standards. More importantly, we must be diligent in risk management to ensure a safe environment for our employees and customers. Safe operations must be the cornerstone of our success as an airline. American Airlines' commitment to safety begins with each of us, individually, as employees and managers alike. I am confident that each of you will join with us as we "Pull together, Win Together" safely.

By Capt. Scott Griffith
Managing Director
Safety, Quality Audits
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Safety Focus Audits

Safety Focus Audits were performed for the Flight, Flight Service, and Ramp areas.

Definitions

Risk Multiplier - Assigned risk value of each audit question or task. Tasks that may result in a significant or fatal injury were assigned the highest risk multiplier of 3. Tasks that may result in injury to an employee or significant damage to aircraft were assigned a 2 and tasks that may result in operational inefficiencies or minor aircraft damage were assigned a 1.

Risk Index – The product of the risk multiplier and the percent non-standard observations. Attempts to assign a risk to each question or task by factoring the risk of each task and the frequency or percentage of the time that is not performed properly.

ASC – Airport Safety & Compliance Analysts.

Standard Observations – Observations that were in compliance with published procedures.

Non-standard Observations – Observations that were not in compliance with published procedures.

Percent Non-standard Observations – The percentage of observations that were not to be in compliance with published procedures.

Flight Safety Focus Audits

Introduction

The need for an operational audit became apparent during recent economic crisis.

Safety considered a Line Operations Safety Audit (LOSA) vs a safety focus audit; time and cost considerations drove the decision to an in-house safety focus audit.

The object of the audit was to take a snapshot of compliance with basic operating policies, procedures, and safe operating practices, gain feed back and improve the safety focus.

Fifteen auditors observed 294 flights from May 15, 2003 to June 16, 2003. Three auditors were Line pilots selected by the APA, three were FAA inspectors, and nine were Line pilots selected by the Flight Department.

Observers noted that Captains effectively controlled distractions in the cockpit on **93.5%** of observed flights.

Methods and Procedures

The scope of the audit was cross-fleet

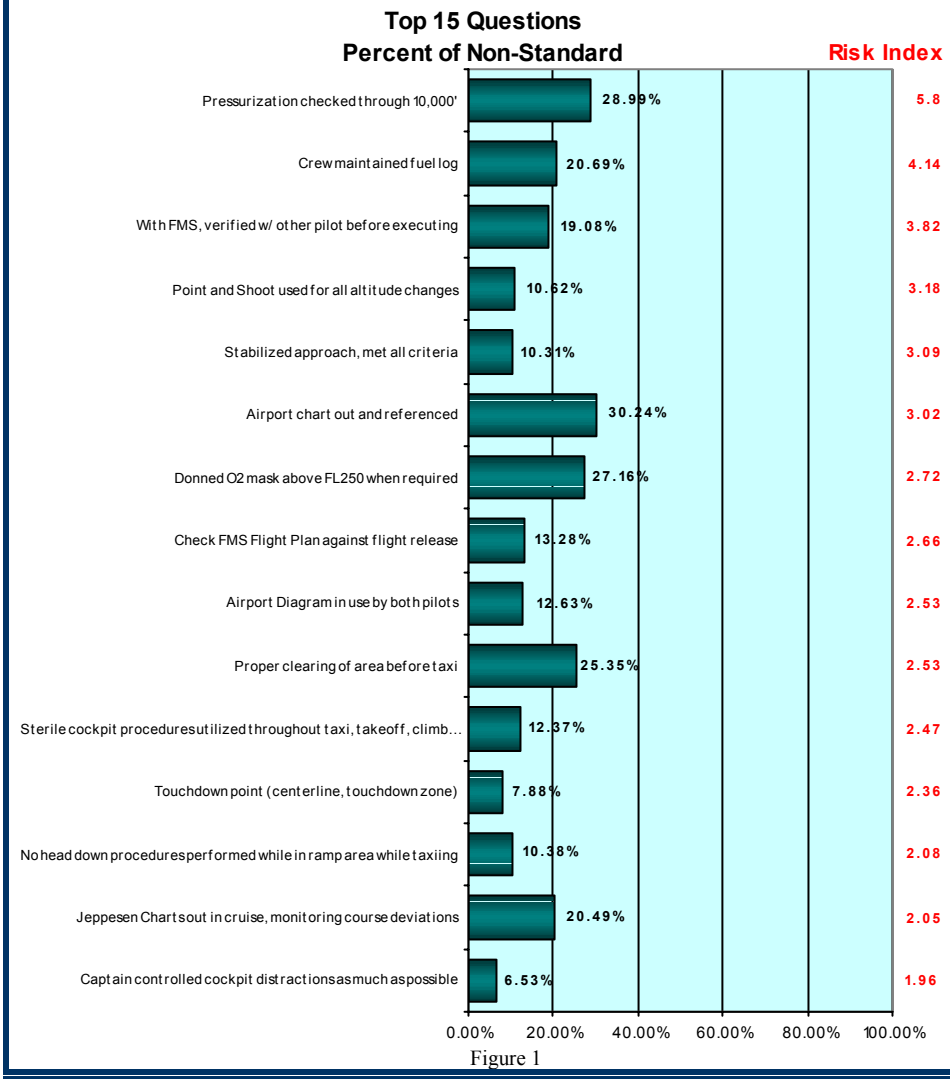


Figure 1

Total valid Observations	Total Standard	Total Non-Standard	Percent Standard
13,582	12,466	1,116	91.78%

procedures and general safety practices.

Pilots were informed of audit via letter from AA Safety, APA Safety, and Principle Operating Inspector (POI).

The question list included input from Line pilots, POI and his deputies, and Flight and Safety managers. The audit group received two days of "calibration" training taught by the Flight Training Human Factors department.

The question list was placed on the Pilots website with access given to FAA members.

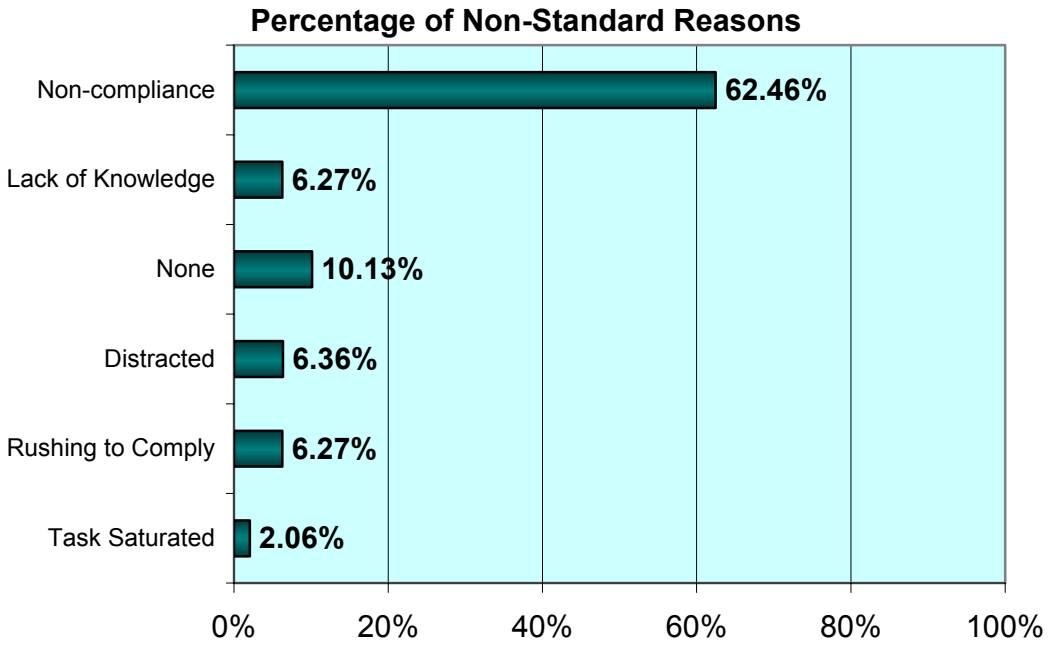


Figure 2

Auditors created their own schedule to complete minimum of 24 observations with one "all nighter" and either one international city or special(terrain challenging) city.

Auditors completed the web-based questions which was then routed to Safety personnel electronically.

Auditors listed one of five reasons codes for each area found Non-standard. The reasons were 1) distracted, 2) task saturated, 3) rushing to comply, 4) lack of knowledge, and 5) non-compliance.

Data Analysis

Each question given a risk multiplier based on input from auditors and Safety pilots at AA and LLC.

Questions were listed by "risk index", the percentage of non-standard times the multiplier in descending order.

All charts present percentages vs. absolute values.

Figure 2 is a summary of the top fifteen findings ranked according to risk index.

Observers noted that Captains effectively controlled distractions in the cockpit on 93.5% of observed flights.

All night operations had a lower rate of Non-standard findings than day flights.

Cockpit-to-cabin communications was the area found Non-standard most often on the 1997 Line Observations Safety Audit (LOSA). Less than 1% of observed flights were found to be Non-standard during this audit, a reflection on heightened security concerns.

The B-757 and 737 fleets had the highest rate of non-standard findings.

Non-standard findings between crew bases is consistent with the results of the 1997 LOSA in that the MIA crew had the highest rate of Non-standard findings by a small amount.

Conclusions

Pilots did not meet all criteria for a stabilized approach as defined in Flight Manual Part I and FAA Order 8400.10 on **10.31 %** of observed flights. Applying this ratio to the total AA system would result in finding over **242 unstablized approaches per day.** The Safety Department views this as a critical area of concern.

Pilots did not employ the "Point and Shoot" altitude verification procedure on **10.62%** of observed flights. ASAP reports of altitude deviations rank in the top five most frequently reported pilot errors for the last nine years.

Pilots failed to confirm FMS entries with the other pilot **19.08%** of observed flights, a failure that was a factor in at least one fatal Controlled Flight Into Terrain (CFIT) accident.

Pilots were found to be Non-standard most often in areas where the threat is not readily apparent. For example, the pressurization check after takeoff, the last opportunity to prevent an undetected pressurization problem from becoming an emergency descent, was non-standard **28.99%** of observed flights. Maintaining a fuel log, a procedure to prevent a center tank pump failure from becoming low fuel emergency, was Non-standard **20.69%** of observed flights. Use of airport maps, a factor in preventing runway incursions, was Non-standard **30.24%** of observed flights.

Ramp

Safety Focus Audits

Introduction

The need for an operational audit became apparent during the recent economic crisis. Additionally, the FAA, AA Ramp, and Safety Action Team (SAT) determined additional observations/findings were necessary to complete their work.

In late 2002, as well as in 2003, the FAA has observed non-compliance with safety-related Customer Services procedures at several stations. A joint observation and correction process will assist in minimizing multiple same/similar findings by the FAA and demonstrate AA's desire to correct findings and work cooperatively with the FAA.

The object of the audit was to measure compliance with safety-related Customer Services procedures, identify areas of concern, and assist in developing a corrective action plan.

Methods and Procedures

Scope of the audit was compliance with AA Customer Services safety-related procedures.

Safety and Customer Services modified Ramp Safety & Dependability evaluation forms to ensure items observed were clearly identified through references to the Line Cargo Manual, Cabin Services Manual and Terminal Services Manual.

Airport Safety and Compliance Analysts (ASC) teamed with FAA Inspectors in audits at 19 stations (all hubs and a sample of smaller stations). The teams completed 709 audits in areas including Pre-arrival/Arrival, Load/Unload, Pre-departure/Departure, Jetbridge Operation and Lav & Water Servicing.

Auditors (FAA and ASC) were calibrated through a joint session where each question was reviewed and information / discussion regarding how to score each question was provided.

Advanced notice of the audits was not provided to the stations audited, although a general notice of the process was provided to all station managers.

Data Analysis

The AA / FAA team completed 709 audits of the arrival, load/unload, departure, jetbridge, lavatory servicing and water servicing processes. 5,962 tasks were observed during the 709 audits. Of this total, 1,938 (32.51%), of the observations were non-standard.

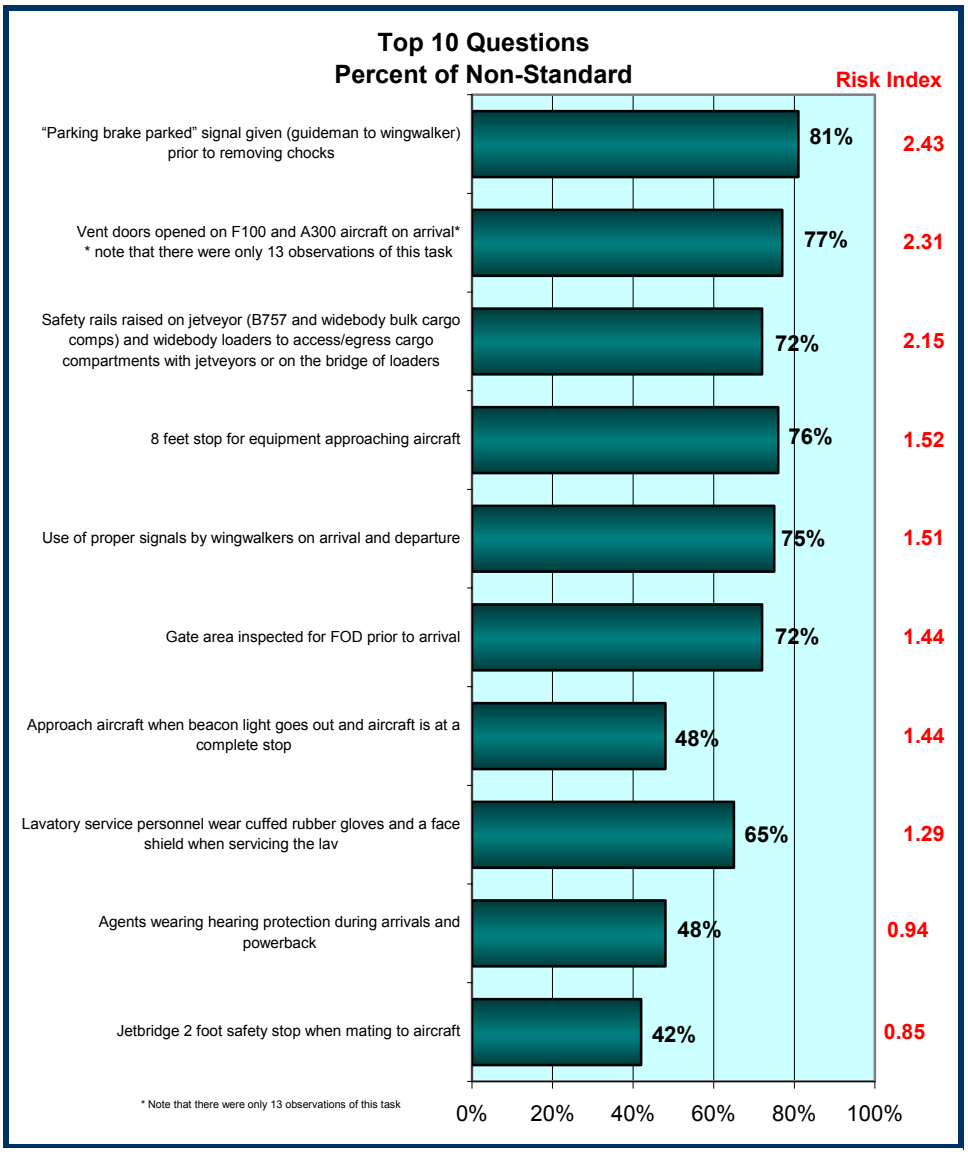


Figure 3

Each question/task was assigned a risk multiplier. The risk index is a product of the percentage of non-standard observations and the risk multiplier. The risk index attempts to prioritize risk associated with the findings.

Station personnel complete the same observations on an on-going basis. The stations included in this audit observed 11,520 tasks in the same time

period, of which 482 (4.18%) were non-standard.

The rate of non-standard observations tended to overcome the risk multiplier in many instances. The top ten at risk items have non-standard percentages of 48 to 81.

Figure 3 is a summary of the top ten findings ranked according to the risk index.

Conclusions

The Safety Focus Audit observations indicate a significantly greater non-standard percentage than the observations by the stations. This indicates that improvements should be made to the stations observation process. Potential reasons for the differences include:

1. Lack of accountability for completion and accuracy of observations.
2. Lack of understanding of the importance of this process.
3. Lack of understanding of the items being observed.

In many instances, employees demonstrated a disregard for established safety procedures; even those designed to help protect them. Potential reasons for this disregard include:

1. Lack of enforcement of safe work practices by Managers, CSMs and Crew Chiefs.
2. Lack of recognition by employees of the risk of not performing safe work practices.
3. Lack of knowledge by employees regarding safe work practice requirements.
4. Employees question the value of existing procedures.

The level of non-standard observations may indicate a cultural acceptance of non-compliance. Possible contributing factors are:

1. Compliance with safety-related, and other procedures, is not perceived by management and/or employees to benefit the well being of employees or AA, i.e., the perceived risks (injury, damage, costs) are not greater than the perceived rewards (on-time performance, more time to spend on other areas, quicker).
2. The current work environment appears to be strained by changes to the workforce.
3. Employees and managers are not held accountable for compliance.
4. There are fewer CSM to complete observations and fewer Managers to maintain CSM oversight.
5. Crew Chiefs do not consistently hold their crews accountable for these and other procedures
6. Individual employees do not hold themselves accountable for procedures.

Flight Service

Safety Focus Audits

Safety Audit of the Flight Environment (SAFE)

Introduction

The need for an operational audit became apparent during recent economic crisis for AA audit. The object of the audit was to take a snapshot of compliance with basic operating policies, procedures, and safe operating practices, gain feed back and improve the safety focus.

Twenty four auditors observed a total of 297 flights from June (?), 2003 to July 31, 2003. Four auditors were selected by the TWA LLC and twenty were from American Airlines Flight Service and Safety.

The rate of compliance by AA flight crew was 97.1%.

Information from incident databases illustrates a strong correlation between external factors and distractions leading to incidents and safety concerns. The need for an operational audit was determined due to recent financial **uncertainties**, added security procedures, and other added distractions over the past several months.

The object of the audit was to obtain a snapshot of compliance with basic operating policies, procedures and safe operating practices and to gain feedback to improve the safety focus.

Twenty-five auditors observed a total of 297 flights from July 2, 2003 to July 31, 2003.

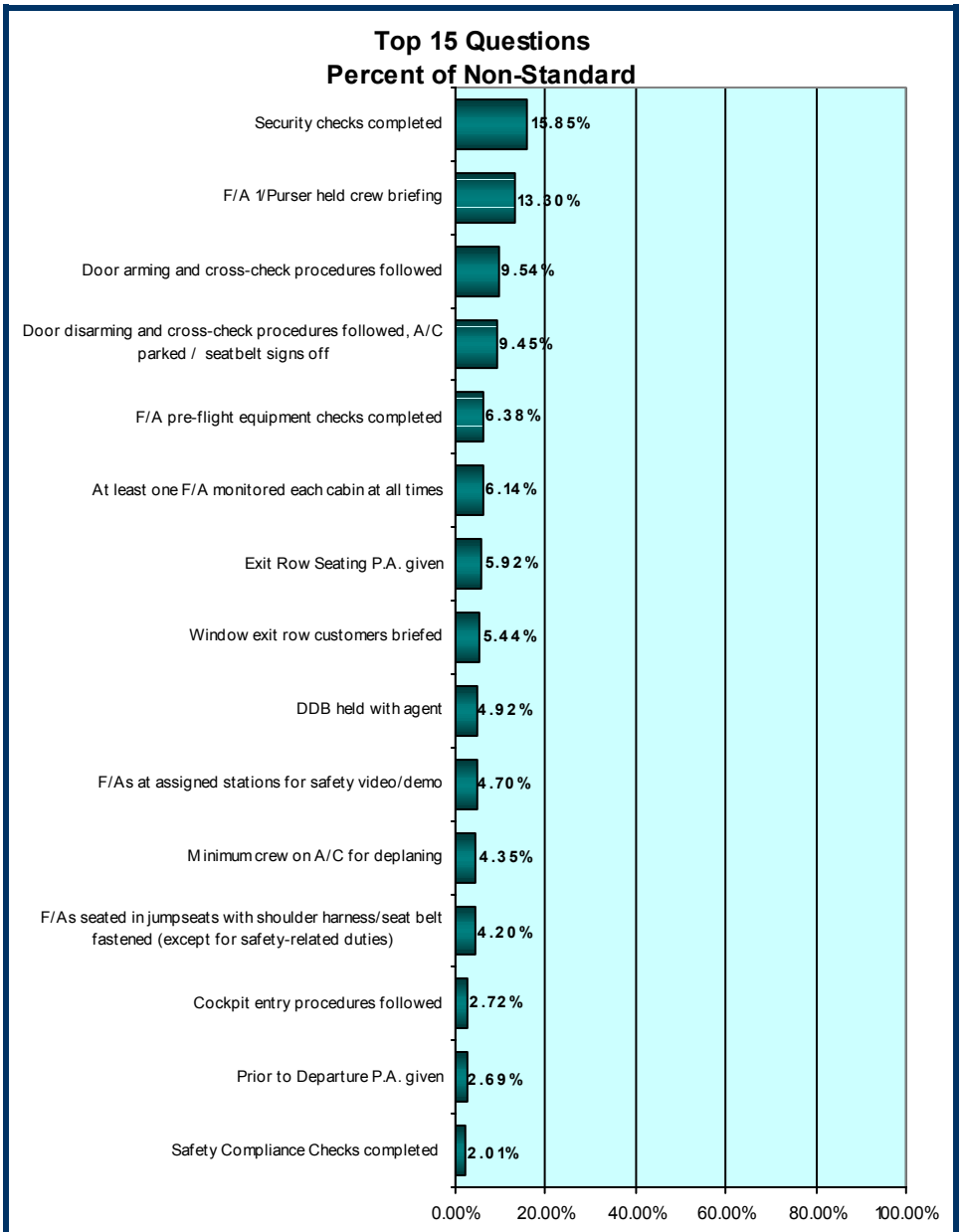
Of the 297 flights observed, 256 were American Airlines and 43 were TWA LLC.

Five auditors were selected by TWA LLC and 20 were from American Airlines Flight Service and Safety, Quality Evaluations & Compliance.

Methods & Procedures

Scope of the audit was safety-related procedures and general practices

Flight Service Operations informed flight attendants of audit via an HI6 message



Total valid Observations	Total Standard	Total Non-Standard	Percent Standard
10,036	9,745	291	97.1%

Figure 4

Observers from American Airlines Flight Service and Safety, Quality Evaluations & Compliance performed the audits on American Airlines flights

Observers from TWA LLC Flight Service performed the audits of TWA LLC flights with American flight attendants trained in TWA LLC operating procedures

Flight attendants were observed performing routine general and safety procedures from pre-flight through deplaning on normal, scheduled flights

AA Flight Service and Safety, Quality, Evaluations & Compliance personnel analyzed data collected by the auditors.

Data Analysis

Auditors' findings were sorted electronically via MS Access database.

Conclusions

The highest incidence of non-standard operations was found during pre-flight.

15.85 % - required pre-flight aircraft security checks not performed as outlined in the Inflight Manual. Auditors reported the most common oversight was failure to check lavatories or open all overhead bins.

13.3% - F/A 1/Purser did not conduct a crew briefing. The most frequent feedback from flight attendants was that they did not feel the briefing was needed because the crew had flown the inbound leg together or they were distracted by outside factors such as catering or maintenance issues.

On 9.5% of observed flights, flight attendants did not follow prescribed door arming/disarming procedures.

Most deviations on AA flights involved failure to notify F/A 1/Purser when the door was armed/disarmed or failure to perform cross checks. Flight Service Operations views this as a critical area of concern in light of increasing numbers of inadvertent slide deployments.

The majority of non- standard observations on TWA LLC flights involved arming the door prior to attaching the red ribbon. This procedure is new to AA flight attendants recently trained on TWA LLC aircraft procedures. Flight Service Operations recommends that TWA LLC training reiterate proper arming/disarming procedures.

The findings show a high degree of standard operations when flight attendants are able to associate an FAR with a task or procedure. Verbiage will be added to the Inflight Manual and communications distributed to all flight attendants emphasizing that all general and safety procedures fulfill FAR requirements as interpreted by the Principal Operating Inspector and Cabin Safety Inspector assigned to AA.