



# Safety Management Systems For AAR



***FAA SMS Focus Group August 2008***

C. Rayner Hutchinson III  
Corporate Quality & Safety



# Agenda

- ▶ SMS at AAR - an Enterprise-wide Program
- ▶ SMS Tools
  - > Overview
  - > Programs
    - ECATS
    - Airworthiness Awareness
  - > Air Carrier Programs
    - ATOS
    - Human Factors
    - CASS
    - ASAP
- ▶ Discussion

- ▶ Enterprise Information System & Quality Standardization Project
  - ▶ A New Way of Life
    - ▶ Wood Dale, IL
    - ▶ February 16, 2004

"Quality, like anything else worth doing, doesn't just happen. It's not like tomorrow; you can't just wait and it will come to you." - Harrington

# Enterprise Approach

- ▶ CEO driven - New Culture
- ▶ Common Policy and Procedures
- ▶ Shared Data
- ▶ Effective Reporting
- ▶ Unified Business Identity

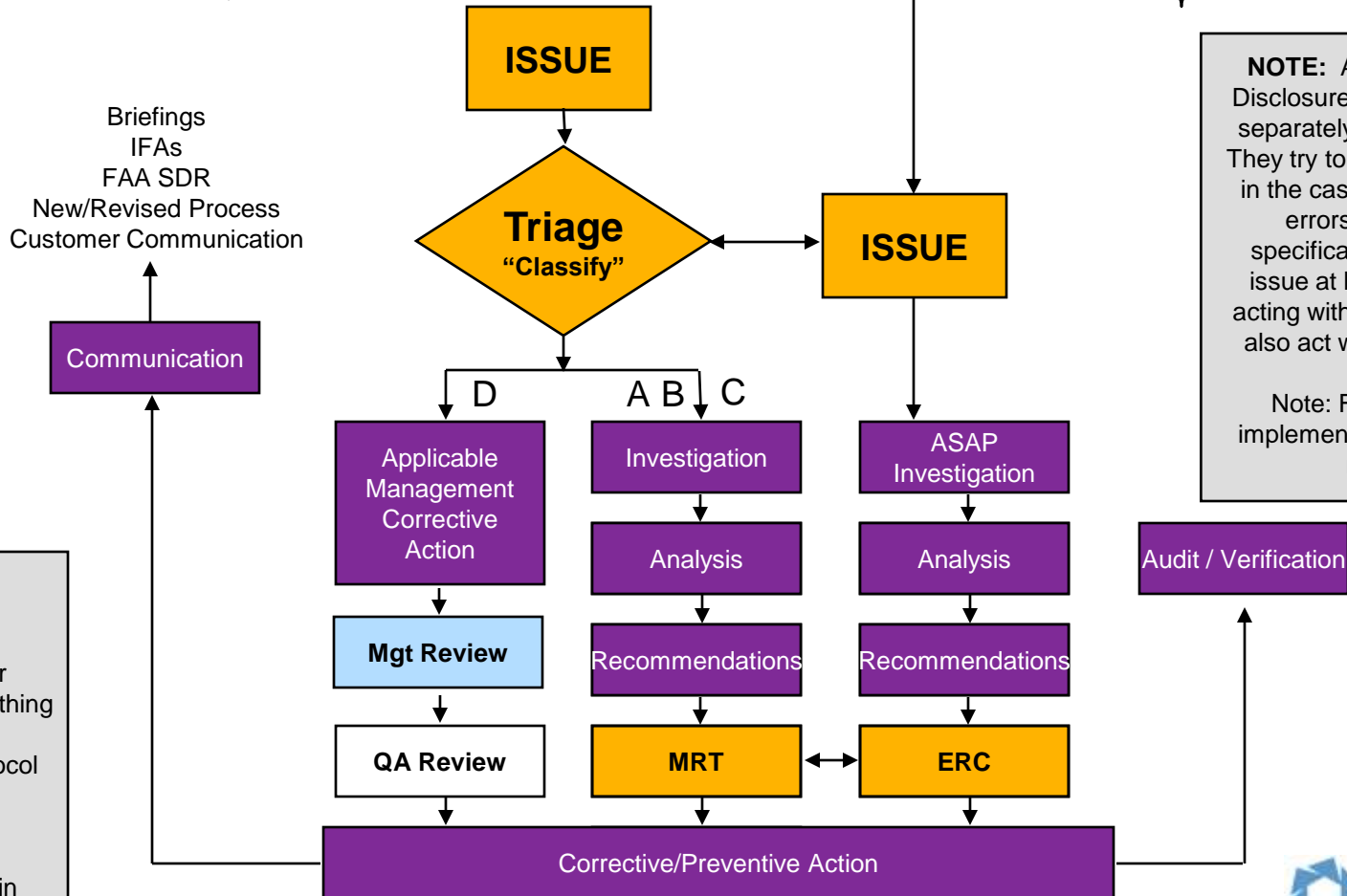
**Environment**  
Just Culture  
HF Principles

# SMS at AAR Corp

Audit  
Cust  
Damage  
IFA  
LOI  
Report

**MAT ENG PLAN OPS INSP**  
Product

\*ASAP Report  
Injury Release  
**AVSAFE EH&S QA TRAIN**  
System



**NOTE:** ASAP and Self-Disclosures are processed separately, but in parallel. They try to limit punishment in the case of unintended errors and do not specifically address the issue at hand. Persons acting within the SMS may also act within the ASAP ERC.  
Note: Formal ASAP implementation still under review

**TOOLS**  
Policy  
ECATS  
myCareer  
Report Something  
\*ASAP  
Invest. Protocol  
Analysis  
IFA  
QAM  
Q/S Bulletin



# AAR Programs

- ▶ Common Reporting/Tracking Tool
- ▶ Standard(s) Awareness
- ▶ Training Recognition Program
- ▶ Air Carrier - Initiatives
  - > ATOS – FAA Order 8900.1 Chg 0, Volume 10
  - > ASAP - AC120-66
  - > CASS – AC120-79
  - > Human Factors Program – FAA Operator’s Manual
  - > SMS - AC120-92

# ECATS – Enterprise Corrective Action Tracking System



Enterprise Corrective Action Tracking System

The screenshots show the ECATS software interface. The top screenshot is the 'Main Menu' with a table of events. The middle screenshot shows a detailed view of an event. The bottom screenshot shows a bar chart of 'Open Events by Source'.

Event#	Event Date	Abstract	Respond By	Status
5218			13-APR-06	Pending Review
4731	25-OCT-05	Cannot add two of the Business Units to the feed		Open
4730	25-OCT-05	Make Feedback Make records Active by default	15-APR-06	Request Close
4557	05-OCT-05	Update the mainline escalation screen to be more	31-MAR-05	Pending Verification
4096	07-JUL-05	Audit Get to the 3rd Corp GA escalation level		Open
4094	05-OCT-05	Remove the auto select from the Mainline Agencies		Request Close
4002	13-OCT-05	Create Overall ECATS report chart for Raynor		Open
4091	13-OCT-05	Quick recording of event for EVC		Open
4009	07-JUL-05	Create ECATS Views for Randy to implement for		Open
4008	19-OCT-05	Escalation table not showing up in journal		Request Close
4007	07-JUL-05	Implement a super user to handle misc. Administral		Open
4005	07-JUL-05	Outside Vendor Notification		Open
		Create report to alert auditors to verification issues		Open

Source	Count
AAR Receiver Inspection	8
AAR Vendor Audit	1
Agency Audit	1
Concrete Audit	3
Customer Accounts Inspection	7
Customer Audit	23
Customer Service Inspection	1
Crabtree Facility	2
Extreme Audit	9
EVA Audit Facility	8
Feedback	20
Human Factors SQA	3
Internal Audit	59
Safety/Health/Env. Inc.	6
Software Application	44
Vendor Audit	1
Unknown	4



## ECATS – Enterprise Corrective Action Tracking System

- ▶ **ECATS** is a portal-based integrity solution to support any enterprise. It provides a closed-loop process for management of internal and external Corrective Action Requests, Human Factors Investigations, Environmental Health and Safety issues and Supplier Management.
- ▶ ECATS is uniquely suited to enterprise business environments. It provides fully customizable user security access and analysis of data from the enterprise to Business Unit and department levels. It was built to complement ISO programs and procedures that govern daily business activities.
- ▶ Corrective actions that result from non-conformances, receiving inspections, customer feedback, human factors and safety investigations, audits, employee observations and more are all tracked through resolution and final verification in one system. All modules of ECATS are interrelated and easily tied together allowing total visibility.



# ECATS™ Attributes

- ▶ Proprietary Web Based Relational Database
- ▶ Modules
  - > Corrective Action Tracking System
  - > Quality
  - > Safety
  - > Human Factors
- ▶ Features
  - > Event Classification
  - > Event Notification
  - > Dashboards
  - > Issue Escalation
  - > Custom Reporting
  - > Statistical Analysis
  - > Automatic ASRS (NASA) De-Identified Data Reporting
  - > Vendor Management (optional application)



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AAR People Search: First Name  Last Name  Go

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Rayner Hutchinson

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- Company Information
- HR, Payroll and Benefits
- Employee Development
- Travel
- Documentation
- myAAR Applications
- Safety/Quality Mgmt Systems
- Templates and Forms
- Communities
- Reports
- Frequently Asked Questions

**Event Search**

Business Unit  Event Source

Response Assigned To  Owner

Status  Report Format

Keyword Search

Opened Between 28-FEB-2007 and 29-FEB-2008 OR Closed Between  and

**Open Events By Business Unit**

<a href="#">AAR Aircraft Services Hot Springs</a>	14
<a href="#">AAR Cargo Systems</a>	44
<a href="#">ACS Amsterdam, Holland</a>	15
<a href="#">ACS-NY</a>	14
<a href="#">ATC</a>	3
<a href="#">Allen</a>	1
<a href="#">Composites</a>	28
<a href="#">Defense Systems</a>	93
<a href="#">Distribution</a>	1
<a href="#">ILS</a>	2
<a href="#">Indianapolis</a>	60
<a href="#">Landing Gear</a>	6
<a href="#">Malaysia JV</a>	4
<a href="#">Mobility Systems</a>	93
<a href="#">Oklahoma</a>	95
<a href="#">Power Services</a>	8
<a href="#">Roswell</a>	1

**Open Events By Responsible Assign To**

<a href="#">Abeqaz, Sisav</a>	1
<a href="#">Aladro, Alex</a>	7
<a href="#">Allen, Gerald</a>	3
<a href="#">Angel, Lesley</a>	1
<a href="#">Angel, Mark</a>	3
<a href="#">Austin, Paul</a>	2
<a href="#">Aylen, Cindy</a>	21
<a href="#">Aylen, David</a>	2
<a href="#">Baker, Ed</a>	5
<a href="#">Banal, Jesus</a>	2
<a href="#">Barton, Kris</a>	1
<a href="#">Barton, Jennifer</a>	4

**Open Events by Source**

<a href="#">AAR Receiving Inspection</a>	32
<a href="#">AAR Vendor Audit</a>	3
<a href="#">Agency Audit</a>	25
<a href="#">Aircraft Damage</a>	13
<a href="#">Audit</a>	36
<a href="#">Corporate Audit</a>	4
<a href="#">Customer Acceptance Inspection</a>	41
<a href="#">Customer Audit</a>	58
<a href="#">Customer Receiving Inspection</a>	15
<a href="#">Daily QA Audit</a>	2
<a href="#">EHS Audit</a>	1
<a href="#">Employee Finding</a>	19
<a href="#">FAA Audit Finding</a>	10
<a href="#">FAA Letter of Investigation</a>	1
<a href="#">FAA Self Disclosure</a>	4
<a href="#">Failed AAR Shipping Requirements</a>	2
<a href="#">Failed Customer Incoming Inspection</a>	1
<a href="#">Feedback</a>	59
<a href="#">Incident</a>	2
<a href="#">Injury</a>	17
<a href="#">Inspection</a>	8
<a href="#">Internal Audit</a>	54
<a href="#">Investigation</a>	42
<a href="#">Rejected Supplier Product</a>	14
<a href="#">Reported Event</a>	7
<a href="#">Sole Source Report (Human factors)</a>	2
<a href="#">Supplier Performance Deficiency</a>	5
<a href="#">Vendor Audit</a>	2
<a href="#">Unknown</a>	3

**Open Events by Owner**

Active: Yes  
Status: Closed

Active: Yes  
Status: Closed

Active: Yes  
Status: Closed

Active: Yes  
Status: Closed

Active: Yes  
Status: Closed



### Investigation Worksheet

System Event ID: 463  
Incident Type:  Aircraft Damage  
 Equipment Damage  
 Personal Injury  
Date Incident Reported:  
Reported To:  
Incident Date/Time: 25-FEB-09  
Aircraft Return  
Near Miss  
Rework  
Customer Complaint  
Other  
Vehicle Incident  
Reporting Facility: Indianapolis, IN (A/C Svcs)  
Investigator Name & Contact Information  
Name: Dominguez, Ronald  
Phone: 317-227-5449  
Email: john.dominguez@aarorp.com  
Fax: 317-227-5104  
Abstract: Main Event - Flap struck by panel rack

Error Description	
<b>L. Installation / Removal Error</b> <input checked="" type="checkbox"/> Other: N/A <input type="checkbox"/> Equipment / Part Not Removed / Installed <input type="checkbox"/> Wrong Equipment / Part Removed / Installed <input type="checkbox"/> Wrong Orientation <input type="checkbox"/> Improper Location <input type="checkbox"/> Incomplete Removal / Installation <input type="checkbox"/> Extra Parts Removed / Installed <input type="checkbox"/> Access Not Opened / Closed <input type="checkbox"/> System / Equipment Not Reactivated / Deactivated <input type="checkbox"/> Damaged during Installation / Removal / Build Up <input type="checkbox"/> Cross connection Other: (Please Explain Here)	<b>II. Servicing Error</b> <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Not enough fluid <input type="checkbox"/> Too much fluid <input type="checkbox"/> Wrong fluid type <input type="checkbox"/> Servicing not performed <input type="checkbox"/> Access door not closed <input type="checkbox"/> Equipment not Deactivated / Reactivated Other: (Please Explain Here)
<b>III. Repair Error</b> <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Component <input type="checkbox"/> Structural Other: (Please Explain Here)	<b>IV. Fault Isolation/Inspection/ Error</b> <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Did not detect fault <input type="checkbox"/> Not found by fault isolation <input type="checkbox"/> Not found by ops functional check <input type="checkbox"/> Not found by inspectors (R/I, etc) Other: (Please Explain Here)
<b>V. Actions Causing Foreign Object Damage (FOD)</b> <input type="checkbox"/> N/A <input type="checkbox"/> Material left in aircraft / engine <input type="checkbox"/> Debris on ramp / Hangar floor / Shop floor <input type="checkbox"/> Debris falling into open system <input checked="" type="checkbox"/> Other: (Please Explain Here)	<b>VI. Actions Causing Equipment Damage</b> <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Equipment used incorrectly <input type="checkbox"/> Equipment used improperly (abuse) <input type="checkbox"/> Struck by / against another object Other: (Please Explain Here)

Specific Maintenance Errors:  
Copied from the supervisor's report  
How accident occurred:  
Inadvertently made contact with the aircraft while moving a interior sidewall panel stand  
Items Damaged:  
Left outboard flap trailing edge  
Circumstances:  
while moving the aircraft into the hangar the panel carts were in the way and had to be moved to the other side aft of the aircraft  
Preventative actions:





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Safety Tip my Career Blogs Green Voices Requests



### Inside AAR

## Earn Money for Referring Your Friends and Family!

[Refer a Friend - Instructions and Form](#)

Special Incentives may apply for certain positions in some locations.

Check with your local HR Rep for more details.



### AAR Headlines In The News

[AAR Announces Additional Line At Its Indianapolis Maintenance Facility -- July 11, 2008](#)  
[AAR Reports Record Fourth Quarter and Fiscal 2008 Results -- July 10, 2008](#)  
[AAR SUMMA Technology Earns Recognition as a John Deere "Partner-level Supplier" -- May 12, 2008](#)  
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### Organization Changes

**NEW** [AAR CORP. -- Organizational Announcement -- August 6, 2008](#)  
Bill Huntley has been promoted to Director Human Factors and Safety Management Systems.  
[AAR CORP. -- Organizational Announcement -- July 30, 2008](#)  
Greg Dellinger has joined AAR as Director of Recruiting.  
[AAR Aviation Supply Chain Group -- Organizational Announcement -- July 23, 2008](#)  
Carl Glover has been promoted to Vice President of Sales, Aviation Supply Chain Group.  
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### Annual Report



**2007 AAR CORP.  
Annual Report**  
*One Billion and Beyond*  
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### AAR Poll/Trivia

### Rocket Man

\*Login ID:PUBLIC

[Click here to view the Trivia Archive](#)



### myFavorites

### Favorites

[Oracle](#)  
[Oracle Technology Network](#)



### myTo Do List

Login to view your To Do List

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**Please contact your local Helpdesk to report IT issues**

### Report Something

<b>Incident Type:</b>	<input type="text"/>	<b>Other Type:</b>	<input type="text"/>	<b>Severity:</b>	<input type="text"/>
<b>Your Name:</b>	<input type="text"/> Find	<b>Incident Date:</b>	<input type="text"/>	<b>People Involved:</b>	<input type="text"/> Find
<b>Facility:</b>	<input type="text"/>	<b>Building/Structure:</b>	<input type="text"/>		
<b>Summary:</b>	<input type="text"/>				
<b>Description:</b>	<input type="text"/>				
<b>Recommendation:</b>	<input type="text"/>				

Submit



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AAR People Search: First Name  Last Name  Go

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Rayner Hutchinson

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**IFA Search Page**

IFA#:	<input type="text"/>	Status:	<input type="text"/>	Revision Status:	<input type="text"/>
Date Of Issue:	Start <input type="text"/> End <input type="text"/>	Event #:	<input type="text"/>	Revision Number:	<input type="text"/>
Severity:	<input type="text"/>	AAR Customer:	<input type="text"/>	Operating Unit:	<input type="text"/>
ATA Chapter:	<input type="text"/>	Facility:	<input type="text"/>	AAR Location/Zone:	<input type="text"/>
Submitted By:	<input type="text"/>	Issue/History	<input type="text"/>	Resolution / Fix / Recommendation:	<input type="text"/>
IFA Type:	<input type="text"/>	Sub Type:	<input type="text"/>	Model:	<input type="text"/>

**IFAs By Operating Unit**

<a href="#">Aircraft Svcs - Indianapolis</a>	34
<a href="#">Aircraft Svcs - Oklahoma</a>	29
<a href="#">Hot Springs</a>	1
<a href="#">Not Specified</a>	2

**IFAs By Facility**

<a href="#">Hot Springs, AR (A/C Svcs)</a>	1
<a href="#">Indianapolis, IN (A/C Svcs)</a>	34
<a href="#">Oklahoma City, OK (A/C Svcs)</a>	29
<a href="#">Not Specified</a>	2

**IFAs By What Is Affected**

<a href="#">All</a>	2
<a href="#">737-All Models</a>	26
<a href="#">737-200</a>	1
<a href="#">737-300</a>	19
<a href="#">737-400</a>	8
<a href="#">737-500</a>	16
<a href="#">737-600</a>	1
<a href="#">737-700</a>	1
<a href="#">737-800</a>	1
<a href="#">737-900</a>	1
<a href="#">727-All Models</a>	2
<a href="#">727-200F</a>	3
<a href="#">MD80-All Models</a>	10
<a href="#">MD80-81</a>	1
<a href="#">MD80-82</a>	1
<a href="#">MD80-83</a>	1
<a href="#">MD80-87</a>	1
<a href="#">MD80-88</a>	1
<a href="#">CRJ-All Models</a>	1
<a href="#">CRJ-1100</a>	1

### Item for Attention

**Aircraft Affected:**

B737- 300/400/500

**Task Card Affected:**

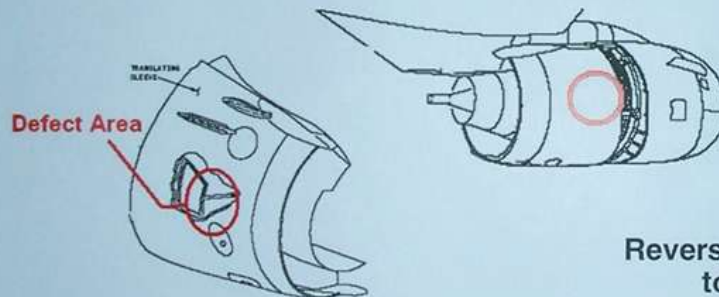
Reverser inspection task card.

**History:**

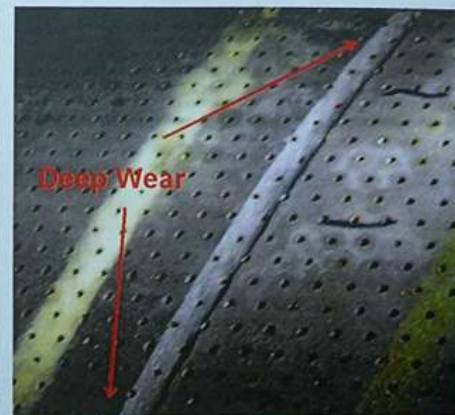
Wear on the reverser inner sleeve due to contact with a blocker door in the deployed position. This a common defect found during preliminary inspections, Reference Boeing SRM 54-30-01 pg.103 for maximum allowable inner sleeve wear limits.

**Action:**

Brief inspection personnel to be aware of this defect when inspecting the reverser inner sleeve for damage or wear.



Reverser inner sleeve wear due to blocker door contact



## SPECIAL SAFETY ADVISORY

### *The Obligation to Elevate a Safety/Quality Issue*

As AAR employees, we have an obligation to uphold the highest levels of quality, safety and airworthiness.

Sometimes conflicting priorities, pressure to get our work done and the personalities and work styles of the people we work with can influence our decision making when handling quality and safety matters.

Despite these potential influences, **you are obligated to report and, if necessary, escalate any quality and safety issues.**

If you raise a quality or safety concern and you do not believe that the situation is being handled adequately, or if you get a response that does not alleviate your concerns, it is appropriate to escalate the issue until you are confident that the matter is fully understood and is being addressed to your satisfaction.

We encourage teamwork and collaboration. However, if you're uncomfortable escalating an issue through your chain of command, resources are available to ensure that you are able to fulfill the obligation to report and escalate quality or safety matters quickly, appropriately and if you desire, anonymously:

**Online:** "Report a Quality or Safety Issue" on *myAAR* employee portal

**Telephone:** 888-687-7589 — AAR's Safety, Quality & HF Compliance Report Line

2007-002



Corporate Quality & Safety



## SPECIAL SAFETY ADVISORY

This week we had a fellow employee injured while improperly handling a squib. He sustained injuries to his hands, but over all we were very lucky as this incident could have been much worse.

### What is a Squib?

A squib is a small [explosive](#) device used in a wide range of industries, from special effects to aircraft applications. They resemble tiny sticks of [dynamite](#) in appearance and in construction. In our industry squibs are used in the aircraft fire suppression system,

### What precautions do we need to take?

The following precautions **MUST** be taken when working with squibs:

- Keep caps / shunts on the squibs at all times.
- Keep the squibs in a static sensitive bag to prevent accidental ignition.
- Label the box, and bag that contains the squib with the appropriate label.
- Tag every squib appropriately

2007-003



Corporate Quality & Safety



- Do NOT leave squibs unattended on parts racks or work tables.
- Properly dispose of the old squib.
- Never attempt to disassemble a squib.

If you have any questions [PLEASE](#) ask your supervisor or lead.







Got Wings?



More information coming soon.

FAA Approved AGL/0805/0002/1



# Wings Program Overview

- ▶ Program is Designed to Touch All Employees
  - > Appreciate Aerospace Customer Perspective
  - > Interested Customers and Government Personnel Included
  - > Volunteer Trainers - Grassroots Feel - Culture Value
- ▶ Define and Understand “Airworthy”
  - > Airworthiness Awareness Requirement
  - > All Speak the Same Language
- ▶ Understand Individual and Organizational
  - > Privileges
  - > Limitations
- ▶ Test for Competence
  - > Open Book (Any Book) - Reinforcing Discussion
- ▶ Get/Wear Your Wings
  - > Reminds Self and Others of Personal and Company Commitment



**AAR**  
Aircraft Services



## Earn your wings.

Some companies give out lapel pins by the handful, no strings attached. *Not these. Not at AAR.*

When you see a pair of wings affixed to the lapel of an AAR employee, it's not there for show. It's there for a purpose. That purpose is to remind the wearers that airworthiness is their primary responsibility.

Embossed on the wings is the classic AAR turbine symbol, and the numbers 21, 43 and 91. Each number represents a key part of the Federal Aviation Regulation (FARs). Part 21 says you have to adhere to approved designs, manufacturer's maintenance procedures, and proper materials. Part 43 delineates who's allowed to maintain an airplane, and the standards they must meet. Part 91 says you can't fly the aircraft unless it's airworthy, that it must be inspected on a regular basis and repaired accordingly.

All of AAR's approximately 2,700 employees have either earned, or will earn, their wings — by undergoing a course demonstrating they understand that the main goal in MRO is airworthiness. This one-hour course has been reviewed and approved by the FAA (course number: #AGL/0805/0002/1).

It's not just maintenance personnel who have to understand the concept. AAR believes it's critical everyone who works for the company realize that everything is secondary to airworthiness.

"Everybody in our company has the potential to affect whether we produce an airworthy product, whether you are answering phones, sweeping floors or maintaining aircraft," says C. Rayner Hutchinson III, AAR's Vice President — Quality & Safety.

Just like the folks servicing the aircraft, each one of them must earn their wings.

## The Eagle — Symbolizing AAR's Commitment to Airworthiness.

Proudly displayed on the eagle's chest is the emblem from AAR's WINGS Airworthiness Awareness program. Each number represents a key part of the Federal Aviation Regulation (FARs).

Part 21 represents adherence to approved designs, manufacturers' maintenance procedures, and proper materials. Part 43 covers who's allowed to maintain an airplane, and the standards they must meet. Part 91 says you can't fly the aircraft unless it's 100% AIRWORTHY — inspected on a regular basis and repaired accordingly.

With its power, speed and acute vision, the eagle epitomizes the relentless commitment and dedication of AAR's worldwide team of Aviation Maintenance Technicians.



# AC 65-25 AMT Awards Program





*David Storch (left) accepts The Diamond Award on behalf of AAR from the FAA's Dave Cann.*

*“The FAA recognizes that AAR is clearly striving for excellence. This award is a tribute to the employees and leadership of AAR, as well as all of the personnel who worked to make this happen.”*

*- Dave Cann, Manager Aircraft Maintenance Division, Flight Standards Service, FAA*



*Rick Domingo (left) presents The Diamond Award to AAR's Mark McDonald.*

*“This is a very important milestone for AAR, given that they have nearly doubled the number of participants since last year. AAR has taken a leadership role in the 2005 AMT Award Program and this is no small achievement.”*

*- Rick Domingo, Assistant Manager, Aircraft Maintenance Division, Flight Standards Service, FAA*

# Air Carrier Programs

# Caution:

Good  
enough  
doesn't cut it.

Not in today's MRO business.

Strict compliance with FAR Part 145 is just the price of admission. It ensures neither satisfied customers, nor optimal safety.

That's why AAR is introducing FAR 145-type initiatives designed to do away with distinctions between outsourced maintenance and that performed by carrier themselves.

"The message is loud and clear" that carriers intend to raise their in-house maintenance, says C. Robert Hutchinson III, AAR's Vice President - Quality and Safety. They need to reduce overhead. Equally clear: "They can't lose even the slightest bit of safety, quality or value."

That AAR's new Advanced Quality and Safety Systems effort "is very clear to us that we had to change the way we were operating," says Hutchinson. "We had to come to programs that dovetailed right into what the airlines were already doing."



## CUTTING EDGE AT INDIY

AAR is piloting this program through its new Indianapolis MRO operation, readying it for eventual deployment at all 14 of its facilities.

The effort is four-pronged:

### 1

#### ATIS

The Air Transportation Oversight System (ATOS) brings classic risk analysis to the repair station arena. Multiply the severity of a problem by its potential frequency. Take an engine change. If something goes wrong, even if only rarely, consequences can be catastrophic.

Contract that with muddying the cabin carpet. The likelihood of that happening is pretty high. But the consequences?

ATOS tells you where to focus your efforts to promote the safest operation possible.

### 2

#### HUMAN FACTORS

For years, human factors training has contributed to flight deck safety. Now, it's doing the same on the shop floor. Every AAR employee at our certified repair stations will undergo at least eight hours of human factors training, many of them most—depending on their jobs.

It's the job of David Sorich, AAR President and CEO, to ensure these initiatives aren't relegated to "Program of the Day" status. To work right, it's critical they become part of the company culture. In that vein, Sorich has been trained in each of these initiatives personally. "That's highly unusual," says veteran safety practitioner Hutchinson.

"What's all too usual," he contends, "is for safety experts to be at odds with their own management." That's not the case at AAR, where everyone is working to do away with the distinction between carrier and contract maintenance.

### 3

#### CASS

Airlines are required to have a Continuing Analysis and Surveillance System (CASS) to analyze and correct deficiencies in the execution and efficiency of maintenance and inspections—both in-house and outsourced.

Traditionally, carriers took AAR's data and translated it into their own format. The problem is, " anytime you translate something, something always gets lost in the translation," says Hutchinson.

Once AAR understands how the airline imports and uses information, "they will work with us to import the data directly into their CASS system," says Hutchinson.

### 4


#### ASAP


The Aviation Safety Action Program (ASAP) is one of the most beneficial aviation safety programs ever introduced. FAA trades the right to prosecute for human error when parties agree to share safety-related data on a real-time basis. That way everybody receives information immediately and works together to resolve the problem.

# Airline Transportation Oversight System

- ▶ FAA Order 8400.10, Appendix 6
- ▶ *Procedures* – there are, documented methods for doing a process
- ▶ *Controls* – there are checks and restraints designed into a process to get the desired results
- ▶ *Process Measurement* – the air carrier (and AAR) measure and assesses its processes to identify and correct problems or potential problems
- ▶ *Interfaces* – the air carrier (and AAR) identify and manage the interactions between processes
- ▶ *Responsibility* – there is a clearly identifiable, qualified, and knowledgeable person who is accountable for the quality of the process
- ▶ *Authority* – there is a clearly identifiable, qualified, and knowledgeable lead person with the authority to set up and change a process



 Operator's Manual  
Human Factors  
in Aviation Maintenance  
*Last update: 10/5/2005*

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**Introduction**

- 1.0 Event Investigation
- 2.0 Documentation
- 3.0 Human Factors Training
- 4.0 Shift/Task Turnover
- 5.0 Fatigue Management
- 6.0 Sustaining & Justifying an HF Program

Acknowledgements:



#### Introduction

This manual is in response to the industry's requests for a simple and manageable list of actions to implement a Maintenance Human Factors (MHF) program. A panel of experts selected the following six topics for such a program to be successful:

[www.hf.faa.gov/opsmanual](http://www.hf.faa.gov/opsmanual)

- ▶ Science Training
- ▶ Procedural Training
- ▶ Open Reporting Culture

## Continuing Analysis and Surveillance System

- ▶ FAA AC120-79
- ▶ Required for all 121 operators
- ▶ Are you following your inspection and maintenance manuals and procedures?
- ▶ In following your manual and procedures are you producing consistently airworthy aircraft (components)?

## Aviation Safety Action Program

- ▶ FAA AC120-66
- ▶ Encourage air carrier and repair station employees to voluntarily report safety information that may be critical to identifying potential precursors to accidents
- ▶ Under ASAP, safety issues are resolved with corrective actions rather than through punishment or discipline

Questions?

Thank you