

Workshop: Improving Railroad Safety through Understanding Close Calls

Captain Hank Krakowski Presentation



UNITED AIRLINES

Safety Culture

An evolution of learning & cooperation

State of
UNITED AIRLINES



Chapter 11 - Update

Airline is running well – Excellent operational and safety performance

#1 On-time in 2002

No significant Safety or Reliability issues

Negotiated agreements with labor

Safety Department



Mission: Find Truth – Facilitate Change

Mechanisms

- Independent Safety Department
- Self disclosure
Employee > Company > Unions > FAA
- Partnership between Management, Unions and Regulators
- Evolution to systems auditing & continuous improvement



Safety at United

*An engine of
Continuous Improvement*



Mission: Find Truth – Facilitate Change

Safety Programs - Flight

Safety Training



Watershed Event – 1978



United alarmed by UAL DC-8 fuel starvation accident Portland, Ore

Crew members aware of danger but silent due to human factors

All crewmembers now trained to Inquire, Discuss and Advocate

Captain authority is strengthened not undermined through CRM tools

Pilot simulator checks equally evaluate CLR / CRM and flight skills

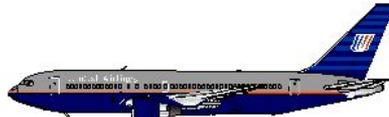
(CRM Crew Resource Management)

Safety Programs - Flight

Safety Auditing



FOQA – Flight Operations Quality Assurance



Data driven analysis

60% of UAL aircraft equipped with FOQA recorders

Program has saved engines, aircraft and lives

FAA / industry working to aggregate de-identified data

Very labor sensitive



Safety Programs - Flight

Safety Auditing



FOQA – Flight Operations Quality Assurance

Aircraft FOQA Data downloaded



Data aggregated & deidentified

Trend Data Identified

- Unstable approaches
- TCAS RA's
- Flap / Speed exceedances

Flight management and ALPA analyze
Changes to procedures / training



Safety Programs - Flight

Safety Auditing



FOQA – Flight Operations Quality Assurance

ALPA Exceedence Guidance Team reviews IDENTIFIED data

If significant – Crew is Contacted

- Gross exceedances
- Significant over limits

Discussion is between EGT / Crew Only
Learning Environment



Safety Programs - Flight

Safety Auditing

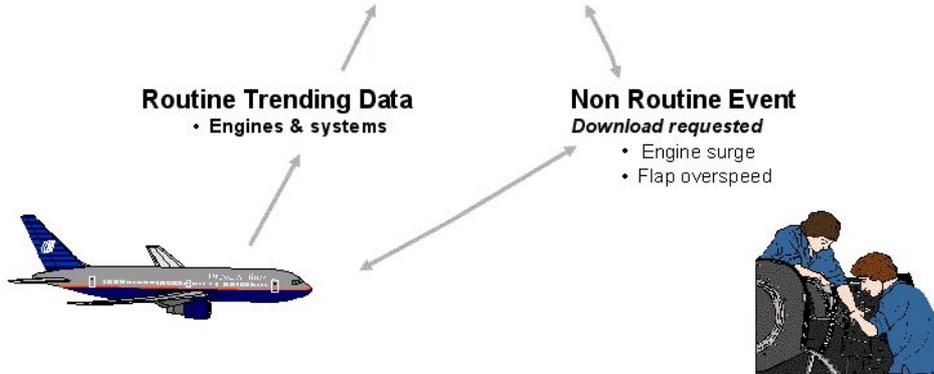


FOQA – Flight Operations Quality Assurance

Maintenance & Engineering

Routine Trending Data
• Engines & systems

Non Routine Event
Download requested
• Engine surge
• Flap overspeed



Safety Programs - Flight

Safety Auditing



Quality Assurance Auditing

Shift in Philosophies



Compliance police (*Traditional*)

Systems & Processes (*ISO 9000*)
(*JQRT Joint Quality Review Team*)



Identifies:

- Non-compliance (direct violations)
- Non-conformance (written procedures different from practice)
- Significant concerns (oversight & systems weak)

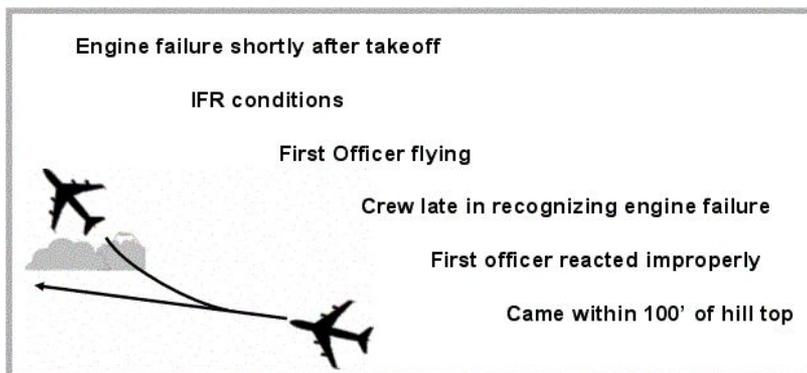
Safety Programs

Safety Auditing



Quality Assurance Auditing

B747 near - accident



Safety Programs

Safety Auditing



Quality Assurance Auditing

B747 near - accident



- Full FAA / UA compliance at takeoff
- People “ felt “ problems existed
- COO directs audit of training center
- 263 findings (all corrected)
 - Proficiency
 - Scheduling
 - Long range relief pilots
- FAA joint experiment (JQRT)
- Ability to keep self interests at bay

Safety Programs - Flight

Safety Auditing



FSAP – Flight Safety Awareness Program

Provides atmosphere for open and honest discussion

- Management
- Union
- Crews
- FAA

Provides protections for Company & Crews (unless willful disregard or intentional)

Requires solid agreements & understandings
between unions / management / FAA



Safety Programs - Flight

Safety Auditing



FSAP – Flight Safety Awareness Program



Pilots electronically submit reports

- Altitude deviations
- Missed communications
- Security issues

Safety department collects reports

- Ranks risk
- Assigns taxonomies

Weekly Event Review Committee meetings
(QA Management, ALPA & FAA)

Three options:

- Close issue outright or with recommendations
- Letter of No Action
- Notice of Violation



Safety Programs - Flight

Safety Auditing



FSAP – Flight Safety Awareness Program

- **DSAP (Dispatch Safety Awareness Program)**
 - Began program in October 2002
 - Already effective
(deficient employee out of service)
- **MSAP (Maintenance Safety Awareness Program)**
 - Revisiting concept with new union leadership (IAM)



VISION: FSAP + DSAP + MSAP will create a total safety analysis culture overall and traverse departmental barriers

Recent FSAP / ASAP example



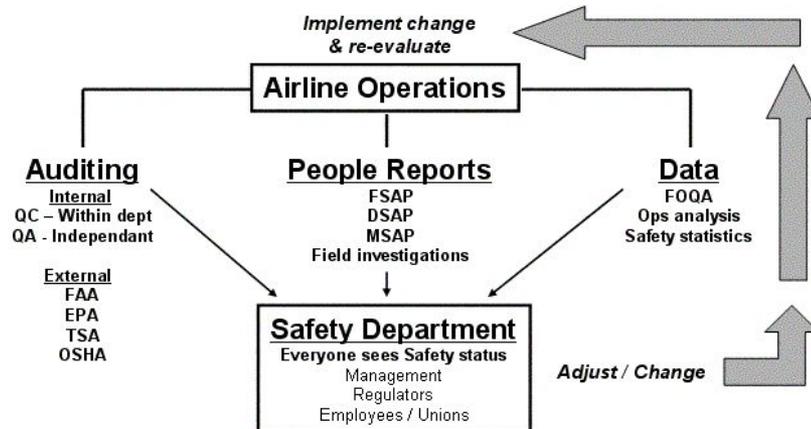
DEN B737 ice damaged engines

- Very unusual event
- Probable cause atmospheric / procedures mismatch
- Employee groups very different to work with
- Serious immediate safety issue took too long to resolve



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