

The Current State of the Cargo Industry

-An ALPA Perspective-

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Introduction

- March 2001 - ALPA Calls for Public Hearing on Cargo Airline Operations and Safety
- The “People Dimension” of Cargo



Introduction

- Accident Rate of Cargo Operations
 - 1984 to present:
 - ❖ 38 NTSB cargo accident investigations
 - UK Civil Aviation Authority (CAA) study:
 - ❖ “...fatal accident risk at least four times that for passenger flights”



Introduction

- Accident Rate for Cargo Operations
 - Commercial Aviation Safety Team (CAST) study, from 1994 to 2003:
 - ❖ *accident rate for cargo operations is **twice** the equivalent accident rate of passenger flights*
 - ❖ *when relatively low risk events are excluded from the study, the accident rate rises to **5 times** the accident rate for passenger operations*



Introduction

- Age Difference Between Passenger and Cargo Fleets
 - Average Age of U.S. Cargo Fleet – **28 years**
 - Average Age of U.S. Pax Fleet – **7 years**
- Government and Industry Activities
 - Cargo Strategic Planning Group
 - FAA Advisory Circular
- Implementing CAST Initiatives



Regulatory Certification

- Supplemental vs. Domestic/Flag Operations Differences
 - Flight Time/Duty Time
 - Flight Dispatchers
 - Weather Reporting
 - Alternate Airports



Regulatory Certification

- Other Differences
 - Escape Slides
 - No Airport Rescue & Firefighting (ARFF) Requirements
- Licensing and Oversight of Loading Personnel
- Airport Facility and Infrastructure Limitations



Equipment and Certification

- Differing Certification Standards
- Post-Delivery Modifications
- Fire Suppression Requirements
- Lack of Escape Slide Requirements



Qualification & Certification of Loading Personnel

- Certification and Licensing of Loading Personnel
 - Limited FAA qualification and training requirements
- Training of Cargo Preparation and Loading Personnel
 - Adverse and demanding conditions
 - Increased risk, increase errors → **Accident**



Qualification & Certification of Loading Personnel

- Outsourcing of Cargo Preparation and Loading
 - Lack of standardization among contractors
 - Difficult to maintain operational control
 - Difficult for FAA to ensure compliance



Qualification & Certification of Loading Personnel

- Need for Licensed Loadmasters
 - Loadmaster's role in operations just as critical as that of a flight dispatcher
 - FAA certifies and regulates dispatchers but neither requires nor certifies loadmasters.



Cargo Handling

- Coordination of People and Organizations in the Cargo Handling Process
 - Oversight/regulation of originating organizations
 - Oversight/operational control of the loading and handling operations
 - Outsourcing
 - Turnover rate of qualified cargo personnel
 - Improperly built-up pallets or ULDs
 - Operational constraints, schedule pressure, “cross-loading”, and weighing equipment



Cargo Handling

- **Weight & Balance Errors**
 - Lack of industry standards for scales
 - No standard for scale calibration
 - No accurate weight tolerance for cargo transferred between airlines
- **Lack of Adequate Industry Standards**
 - Load planning systems
 - Qualifications, certification and training of ground personnel who handle cargo



Cargo Handling

- Need for Further Education and Training
 - Legal and oversight
 - Consequences of mishandling and incorrect loading of cargo
 - Incorporate industry's "best practices" into universal Standard Operating Practices



Ground and Flight Crew Qualifications and Training

- Improperly Loaded/Shifting Cargo Accidents
 - Deficiencies in ground and flight crew training
- Flight Crew Training for Mistrimmed Cues
 - NTSB Recommendation



Ground and Flight Crew Qualifications and Training

- Specialized Crew Training for Cargo
Unique In-Flight Safety Issues
- Systemic factors Associated with Training
Issues
 - Cargo handling, loading and flight training
deficiencies
 - Captain's authority vs. captain's responsibility
 - FAR training requirements



Aging Aircraft

- Aircraft Life Cycles
 - Structural issues
 - Outdated technology
 - Higher parts failure rate
 - Lack of availability of replacement parts
 - Decrease in manufacturers support



Aging Aircraft

- Capabilities of Older Aircraft

- Performance

- Reliability

- Automation

- Higher failure rate of systems – higher maintenance



Aging Aircraft

- Supportability of Older Aircraft
 - Limited support from airframe and component manufacturers
 - Some manufacturers no longer in business
 - Weaker communication and business ties with manufactures



Aircraft Modification, Support and Maintenance

- Modifications and Conversions of Cargo Aircraft
 - Manufactured as passenger aircraft then converted to cargo aircraft
 - Further modifications and conversions



Aircraft Modification, Support and Maintenance

- Variations of Cockpit and Instrumentation on Same Model Aircraft
 - Non standard configurations
 - Complexity of recordkeeping and accountability
 - Cockpit layout, installed equipment, and performance differences



Aircraft Modification, Support and Maintenance

- Maintenance

- Maintenance performed at outstations
- Loss of operational control and familiarity
- Language problems and long distances from parts, suppliers, and company control
- Loss of corporate knowledge from experienced mechanics
- Many deferred maintenance items and inoperable equipment



Flight Time and Duty Time

- Applicability of Today's FARs for “Supplemental” Carriers
 - Developed decades ago
 - Many for un-pressurized piston operations
 - Crews consisting of two pilots and a flight engineer



Flight Time and Duty Time

- Safety Deficiencies Addressed in Collective Bargaining Agreements
 - Affects only a part of the industry
 - No uniform treatment of the issues
 - No industry involvement in the rulemaking process



Flight Time and Duty Time

- “One Level of Safety”
 - Baseline for all operations
 - Fatigue and rest rules
 - ❖ Back side of the clock scheduling
 - ❖ Non standardized airport infrastructure
 - ❖ Crew support and rest facilities
 - ❖ FAR Part 91 ferry operations



Hazardous Materials

- Types and Quantities of HazMat
- Undeclared, Improperly Packaged, Improperly Loaded, and Unauthorized Shipments of HazMat
- Flight Crew Notification of Types, Amounts, and Location of HazMat



Regulatory Compliance and Oversight

- FAA Oversight of Compliance is a Key Element to Safety
- Logistical Challenges
 - Night operations
 - Flexible route structures
 - Remote hubs and/or destinations



Regulatory Compliance and Oversight

- Organizational and Geographic Diversity
 - Oversight responsibilities across multiple FAA offices
 - Inspector's familiarity with cargo operations
 - Familiarity with operator or outsource organizations
 - Inconsistent application of the rules



Regulatory Compliance and Oversight

- Oversight by Multiple Regulatory Agencies
 - FAA, RSPA, OSHA
 - Elements of “Jurisdictional Creep”



Safety Culture

- A Core Fundamental Business Practice
 - Influences everything the company does
 - Specific, deliberate and learned
 - Affects profitability
- Company Organizational Chart
 - Where does the safety organization sit?



Safety Culture

- Establishing Clear Safety Goals
 - Maximizing Profit **AND** Safety
- Safety Initiatives and Programs
 - Volunteer Reporting Programs
 - Flight Operations Quality Assurance (FOQA)
 - Aviation Safety Action Program (ASAP)
 - Line Orientated Safety Audits (LOSA)



Safety Culture

- FOQA
 - 12 Programs in Operation in U.S.
 - Only 1 Cargo Carrier
- ASAP
 - 32 Programs in Operation in U.S.
 - Only 4 Cargo Carriers
- LOSA
 - 16 Airlines Conducted Audits in U.S.
 - 0 Cargo Carriers



Conclusions

Same Airplane Type

→ Same Airspace

→ Same Airport

- Different regulatory requirement
- Different safety standards

Need for Single High Level of Safety





Thank You

