SAFETY PERFORMANCE INDICATORS AND COST OF AIRCRAFT DAMAGES

Moderator: Ms Iva Pluhackova, Manager, Ground Operations, IATA

Panelists:
- Mr. Stuart Carmichael, VP Network Health & Safety Standards, Menzies Aviation
- Mr. John DeGiovanni, Managing Director-Corporate QA, Safety and Regulatory, United Airlines (ASG Chair)
- Mr. Michael Green, Manager, Network Ground Safety - Airports
IATA Ground Operations Governance

Operations Committee (OPC)

Ground Operations Group (GOG)

Direction, Strategy and Standards Approval

Ground Ops Standards Development

Other WGs under OPC, PSC and CSC

Ground Ops. Technical Groups (TGs)

A A A A
G S S G
S E E E
I G O M
L C A M

IGHC
IATA GROUND HANDLING CONFERENCE
22-25 APRIL 2018, DOHA
ASG Overview

Goal: Improve Airline Safety through common approaches by standardizing policy, best practices, tools and sharing data in an IATA collaborative forum.

Team Focus
- Safety Management System (SMS)
- Occupational Health and Safety (OHS)
- Ground Damage Data Base (GDDB)
- Load Team

Integrated approach anchoring safety into your operation
GROUND DAMAGE DATABASE
COST OF AIRCRAFT DAMAGES
Why do you want to be supporting GDDB?

Dashboard

- Ground Damage Database (GDDB) objectives:
  - Integrated global data
  - Industry trends and performance
    - Total network
    - Regional
    - Fleet analysis
  - Identification of safety risks
    - Frequencies
    - Severity
  - ASG uses the GDDB data to create new polices, and procedures for risk mitigation.

WE NEED YOUR DATA!
Area of Damage

Damage Severity Index = \[ \sum \text{Minor} + \sum \text{Low} \times 5 + \sum \text{Moderate} \times 25 + \sum \text{High} \times 125 \]
Total No. Damage Reports

Cargo Hold - 737 reports
- 71% Minor
- 29% High
DSI = 5.12

Cargo doors - 444 reports
- 71% Minor
- 29% High
DSI = 5.77

H/V Stabilizer - 16 reports
- 45% Minor
- 51% High
DSI = 37.5

Fuselage - 386 reports
- 45% Minor
- 51% High
DSI = 16.61

Cabin doors - 244 reports
- 49% Minor
- 51% High
DSI = 15.31

Wing - 71 reports
- 77% Minor
- 23% High
DSI = 17.19

Landing Gear - 103 reports
- 77% Minor
- 23% High
DSI = 17.19

Engine - 105 reports
- 34% Minor
- 66% High
DSI = 33.89
Damage Caused by Equipment

Top 15 Involved Equipment excluding minor severity (Summer 2017)
Actions Taken by ASG

- GSE minimum safety requirements and aircraft damage prevention requirements (AHM 910, 913 & equipment spec. sections)

Biannual review:
- Top 3 threats to aircraft damage. (i.e.: bridge ops, GSE)
- Root cause and human factors
- Seasonal damage trends (“Winter – Summer GDDB analysis report)
- Regional trending
- FOA (Found on Arrival) damage trending
- Ongoing GDDB maintenance and enhancements to meet the needs of the industry. (i.e.: new GSE and equipment groupings, Low Cost Carrier (LCC & ULCC) aircraft damage analysis)
Why to join the GDDB membership?

Benefits for the Participants

- All data are de-identified and encrypted
- Access to the GDDB allows participants to
  - benchmark against peers
  - see industry trends (global, regional or individual basis)
  - fleet comparisons (regional to mainline operations)
- Supports changes to Standards (AHM), Procedures (IGOM) and Oversight (ISAGO/IOSA)

Registration?

To join this program, please download and complete the GDDB participation form which is available online at [http://www.iata.org/services/statistics/gadm/Pages/GDDB.aspx](http://www.iata.org/services/statistics/gadm/Pages/GDDB.aspx). Once completed, send the form to GDDB@iata.org.
Aircraft Damage Cost Model

Future enhancement of GDDB

A cost model is being developed to allow a better understanding of the costs associated with ground damage.

GDDB Cost Model proposal:
- Rationalize the cost for defined areas of damage
- Landing Gear
- Wings

Average Component damage
- Main Landing Gear
- Winglet,…
- Labor cost – per IATA region
- AOG average cost – out of service time
- Narrow / Wide Body
- Jet / Turboprop, …
SAFETY PERFORMANCE INDICATORS (SPIs)
Safety Performance Indicators

Input
• Health
• Variable control
• Training
• Control points
• Leadership

Output
• Yield/Result
  • Good/Bad
• Success
• Scorecard
• Control points
• Leadership

Performance Outcome (examples)
• Examples:
  • Injuries
  • Aircraft damages
  • Cost of events
  • Days out of service

Insight to variables (examples)
• Recurrent training status
• Pre-arrival Operational Safety Checks
• Arrival at gate prior to aircraft
• Leadership on the ramp

Diagnostic approach utilizes: Leading and Lagging Indicators
Why are we talking SPIs today?

Safety Management Systems (SMS)
- Integrated Safety approach
- Proactive Safety
- Risk recognition

Generating a list of potential SPIs for industry guidance
- Controlling leading indicators drives outcomes
- Performance indicators are results

We want to shape the future
- Improve safety
- Increase safety advocacy
- Drive performance
- By reducing risk

We see SPIs are ingredient

Lowering Risk/Running a great operations/Sending people home safe!
Workshop - Exercise
<table>
<thead>
<tr>
<th>Process Measures</th>
<th>Compliance/Risk (A)</th>
<th>Worker Safety (B)</th>
<th>Damage Prevention (C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leading Indicators</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Instructions:**
1. In 3 groups take 5 minutes to brainstorm measures for column (A), (B) or (C) for both Process and Leading indicators.
2. Assign 1 person to brief your items taking 5 minutes.
3. The composed list will be posted on the IATA Ground Operations extranet.

https://corp-extranet.iata.org/sites/groundops/default.aspx
Note: SLA’s are used to identify contract performance and can include payment for achieving an objective or a penalty for not achieving that objective. SLA’s can include a fixed fee for performance award (or possible bonus awards) for achieving milestone objectives.

Please list SLAs that you see or would like to see supporting a safety culture?
1. __________________________________________________________________________
2. __________________________________________________________________________
3. __________________________________________________________________________

Please list SLAs that inhibit a safety culture?
1. __________________________________________________________________________
2. __________________________________________________________________________
3. __________________________________________________________________________

The purpose of this exercise is to collect data for providing input to the ASG that support “just culture objectives”.
Direction of the ASG

- Common Processes
- Data Centric
- Proactive
- Risk focused
- Global and Collaborative

Changing Our World

Thank you for your time and participation-Together we make a difference!