ASSISTANCE EN ESCALE
SÉCURITÉ DES VOLS, AGIR ENSEMBLE AU SOL
Structure awareness campaign for the Ground Handling community
An Intelligent Airframe by design

Titanium
- High load frames
- Door surroundings
- Landing gear
- Pylons
No corrosion tasks

Composite
53%

Al/Al-Li
19%

Steel
6%

Titanium
14%

Misc.
8%

CFRP
- Wings
- Centre wing box and keel beam
- Tail cone (Section 19)
- Skin panels
- Frames, stringers and doublers
- Doors (Passenger & Cargo)
No corrosion & fatigue tasks
With the fuselage in Carbon Fiber Reinforced Plastic (CFRP), the ground handler working area has changed!
Reinforced docking areas

Analysis of impacts on metallic wide body aircraft
Different type of GSE impact
Normal and Abnormal Operation

Normal operations

- GSE impacts aircraft in “DOCKING AREA”
- Contact is done over full bumper length
- No aircraft structure deformation observed

Nothing to report

Abnormal operations

- GSE impacts aircraft outside of “DOCKING AREA”
- Violent and sudden impact on aircraft
- Structure deformation observed

Ground Handler to report

All ramp operators must be **aware** of the risk of damaging the aircraft structure

**Report** abnormal operations **immediately**, even if no visual damage
Airbus launched a structure awareness campaign with all our A350 operators

- Explain the impact of CFRP on ground handling activities
- Promote participation to a dedicated Ground Handling training module
- Provide material (presentations/videos) which can be used by the operator to inform their ground handling community

For ground handlers, the prime source of information on handling the A350 has to come from the aircraft operator through the Ground Handling Manual.

- Our A350 customers agreed to extend this structure awareness campaign to the whole Ground Handling community

Following slides are addressing the Ground Handling Community directly
Introduction

Awareness & reporting

Conclusion
Manufacturer’s view on ground handling

Understand the aircraft you’re handling
  ▶ Awareness

Follow the best standard procedures
  ▶ Best practices

Use correct Ground Support Equipment
  ▶ Enhanced standards

Report when something went wrong
  ▶ Report & Just culture
Ground Handling best practices

• Our ground handling training does not cover procedures as this doesn’t fall under the manufacturer’s responsibility

• Nevertheless, our recommendation is to make use of international standards and best practices

• SAE recommended practices
• IATA Ground Operations Manual (IGOM)
Airbus is supporting actively the GHI, IATA, SAE & ISO activities to reduce ramp damage

• Improve procedures – low speed near aircraft,

• Improve GSE standards – anti collision, speed limits, bumpers, impact detection and data logging

• Improve GSE maintenance

Such enhancements will be specifically beneficial for A350
Report abnormal events

GROUND HANDLER: ACT AS TRIGGER
REPORT THE EVENT!
It is recommended to make use of defined damage report templates including a maximum of information on the event

- Aircraft impact location
- Type of GSE
- Part of GSE impacting the fuselage
- Type of GSE interface protection (soft or hard bumper)
- Any visible damage: scratch, dents or marks…
- Did aircraft shake violently
- Aircraft skin deformation observed
- Any noise heard?
- Speed of GSE at time of impact
Introduction

Awareness & reporting

Conclusion
Training course, video and presentation material available to raise awareness

Ground Handlers to report abnormal events, even in the absence of visible marks on the aircraft structure

This initiative must be complemented by a just culture to promote event reporting

Awareness

Best practices

Reporting

Standards
MERCI DE VOTRE ATTENTION

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