



# Ground Related Safety Issues Through the Eyes of Flight Crews

InfoShare – Ground Operations

Dallas, TX

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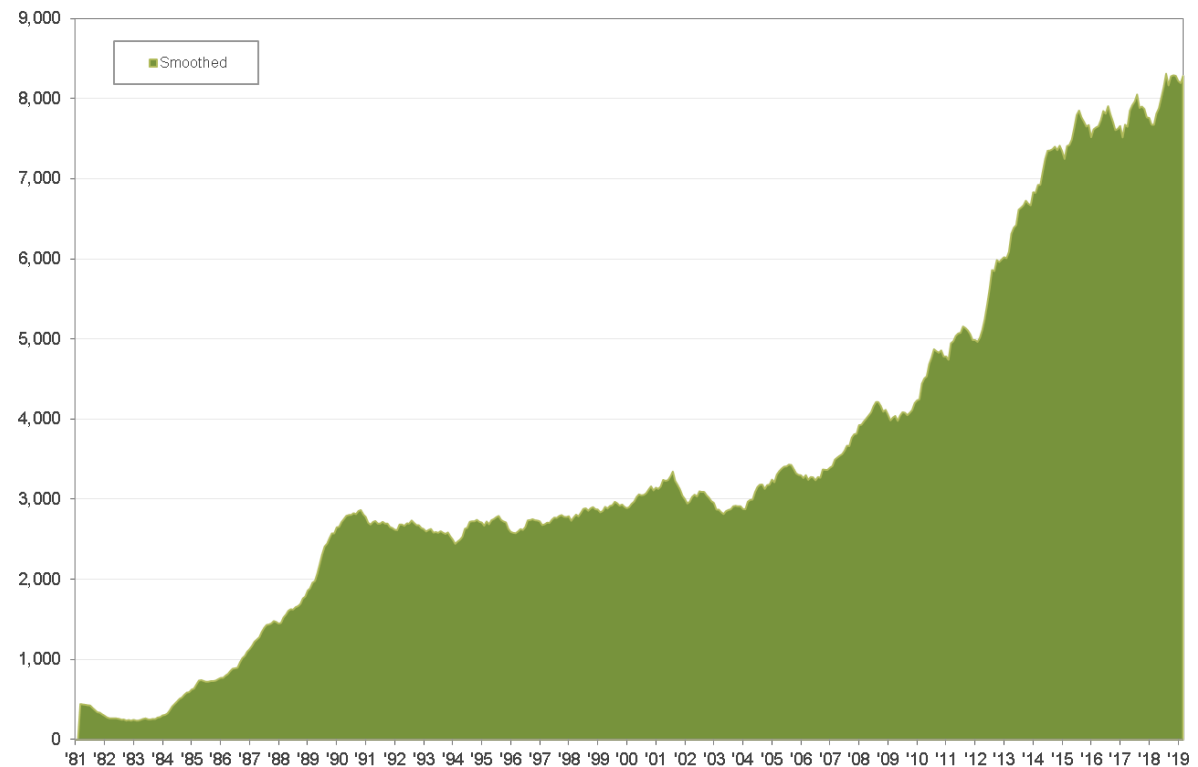
**AVIATION SAFETY  
REPORTING SYSTEM**



# ASRS Report Volume Profile

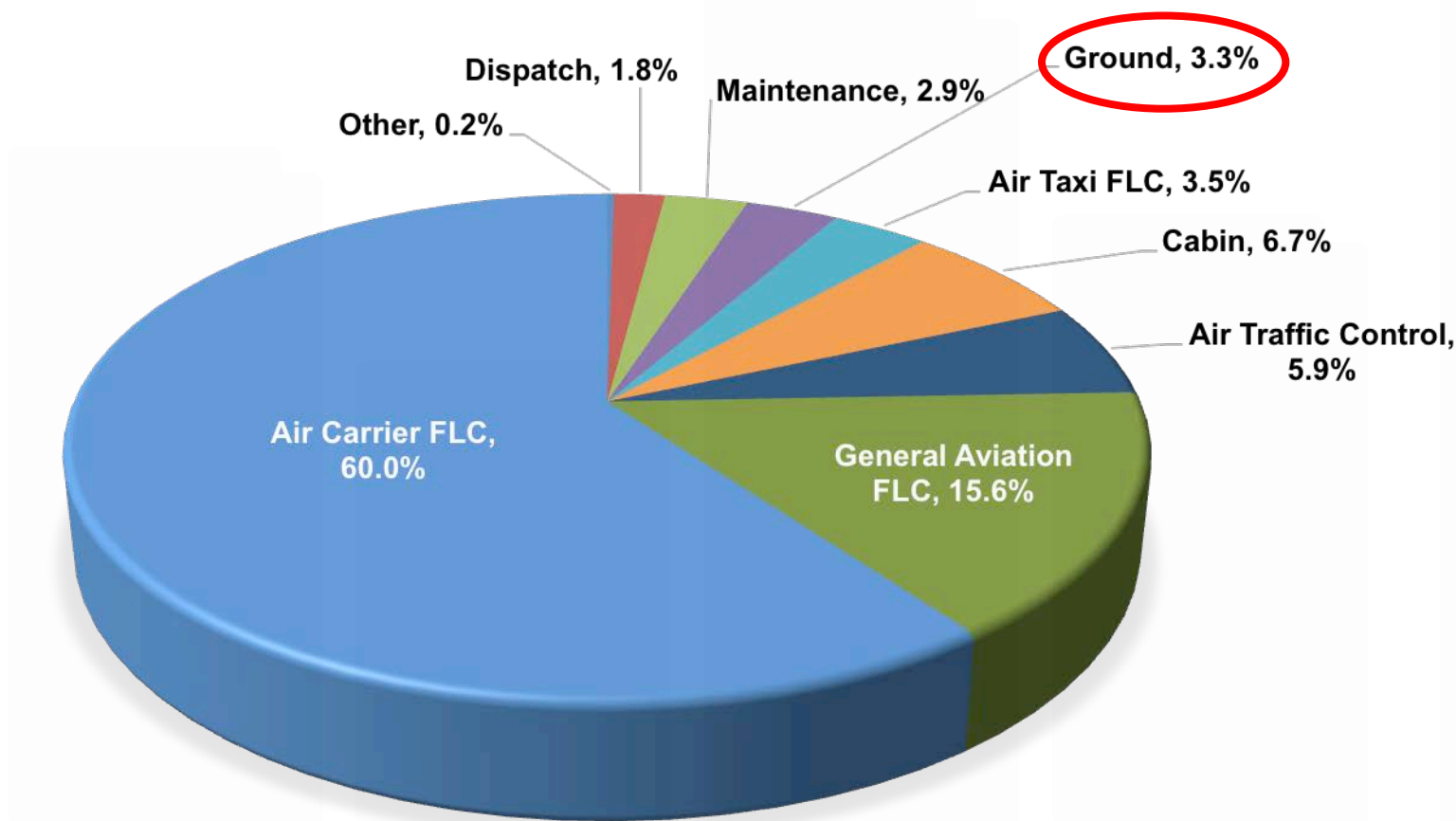
- Over 43 years of confidential safety reporting
- Over 1,631,000 reports received
- Over 6,590 alert messages issued
- Over 8,425 reports per month, or 405 per working day
- Total report intake for 2018 was 99,010
- Current intake estimate for 2019 is over 102,000

Monthly Intake  
January 1981 – March 2019



# Incident Reporter Distribution

April 2018 – March 2019



n = 101,101



Source: 100% ASRS Report Data



# ASAP Reporting to ASRS

## ■ ASAP Reporting

- 263 Total Programs
- 138 Air Carriers/Operators

More programs being added continuously

## ■ Reporting Groups

- 133 Pilot
- 57 Maintenance
- 46 Dispatch
- 23 Flight Attendant

ASRS Electronic Transmission Protocol compatible with numerous software platforms

- 4 Other (Including Ground Crew, etc.)

- Majority are received through Secure Electronic Data Transmission protocols
- Paper form submissions continue to be received at ASRS

24.4% of all reports are matched to unique events in 2018



# Recent ASRS Safety Telecon Topics

*September 2018 – March 2019 (Since Last Infoshare)*

## Recent Safety Telecon Topics

A320 ACARS Data Transmissions Blocks VHF

B737NG Uncommanded Roll With Spoiler Use

Aspen Evolution PFD Failure

Piper PA28 Alternator Failure

ATC Insufficient Staffing/TMU Flow Management

CRJ-200 Water in Pitot Static System

Air Ambulance Operations in IAD Class B Airspace

B737 Incorrect Arming of Evacuation Slides

CPDLC ATC Clearance Issues

MDT Airspace Issues

CE-525A Stabilizer Trim Frozen in Cruise Flight

C206 Rudder Cable Failure

A320 Flight Crew O2 Dispatch Requirements

CLT RNAV STAR BANKR2 Crossing Restrictions

FLL Class C Not Sufficient for Current Traffic Levels

CL35 False Dual Engine Fire Warning

B737-800 Broken Flight Control Cables

NMAC at Non Towered Airport



# Recent Ground/Ramp Operations Alerts

- Towbarless Aircraft Tug Equipment Issues
- Jet Blast Incidents Involving Ramp Operations Personnel
- Ground Vehicle Conflict Issues
- Potential Effects of Insecticide Spray on Crewmembers
- Ramp Personnel in the Vicinity of Operating Engines
- ERJ-170 Baggage Loading Procedure Deviations
- B737-800 Baggage Loading Procedure Deviations at JFK
- Ramp Personnel Safety Issues



# Ground-Related Safety Issues

- Use of Cell Phones in Unauthorized Areas
- Hazmat Documentation Errors
- Non-Adherence to Standard Operating Procedures
- Training Deficiencies
- Inappropriate Use of Equipment
- Communication Breakdown and Signaling Confusion
- On-Time Departure Pressure
- Lack of Procedural Knowledge
- Distractions, Interruptions



# Ground-Related Issues through the Eyes of Flight Crews

- Airline employees work together to provide safe operation on the ground as well as in-flight
- Requires a high degree of communication and cooperation
- ASRS has typically presented reports describing challenges from the Ground Personnel perspective
- ASRS is sharing reports describing the challenges from the Flight Crew perspective
- Presentation is intended to provoke thought and discussion...





# Pilot-Reported Ground Operation Issues

## Worksheet Guidelines (ACN 1604270)

- B747 flight crew reported numerous procedure and documentation errors regarding Hazmat shipment due to inconsistencies in company procedural manuals
- Event Details:
  - NOTOC document with multiple cross-outs and ink changes
  - Loadmaster's lack of reference to worksheet, and reportedly stated *"...worksheets were just 'generic,' and that 'sometimes we just make things work.'"*
  - Reporter noted extra straps in some locations and missing straps in one or two places
  - On-time departure pressure vs. flight safety and legality
  - Communication Breakdown – Loadmaster confused and upset
  - Unclear guidance, but departed within specifications.....



# Pilot-Reported Ground Operation Issues

## Worksheet Guidelines (ACN 1604270)

### ■ Event Details (Cont'd):

- In cruise, First Officer discovered a signature missing on the verification line of the tie down worksheet.
- *“While at the time of departure I believed that everything was secured properly, upon reading the manuals afterwards I'm no longer 100% sure everything was correct.”*



Source: <https://stock.adobe.com>

# Pilot-Reported Ground Operation Issues

*Snake Charmer* (ACN 1603361)

- B767-300 flight crew reported poor adherence to SOP and poor communication led to starting Number 2 engine with the air cart parked directly in front of that engine
- **Event Details:** With APU inoperable, #2 engine air start required
  - Ground crew utilization of non-standard and unclear communication phraseology *“...yeah go ahead...” “yeah, you're good.”*
  - First Officer reported a Maintenance Technician came on the radio and said *“abort the start and shut down #2! They parked the huffer right in front of the engine!”*
  - Situation could have resulted in catastrophic engine damage or worse *“...injuries...from items becoming projectiles.”*
  - Flight crew also cited non-standard pushback procedures



# Pilot-Reported Ground Operation Issues

## *Is the Parking Brake Set?* (ACN 1591840)

- B777 flight crew reported a tow bar issue during pushback required a return to the gate
- Event Details:
  - Normal initial pushback with “...*clear to start engines...*” received
  - Communication/headset problems were noted
  - Captain reported after communication was re-established “... *the tug driver...asked ‘is parking brake set’ and I replied ‘no, do you want the parking brake set?’ He replied ‘set parking brake’ and I set parking brake and replied ‘parking brake set’.*”
  - Tow bar disconnected with no command to set parking brake
  - Tow bar was wedged between the nose gear wheels
  - Passengers returned to terminal via stairs and buses
  - Maintenance action required to remove tow bar and complete inspection



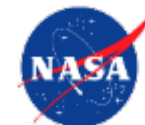
# Pilot-Reported Ground Operation Issues

*Numbers Game* (ACN 1580034)

- EMB-140 flight crew identified weight and balance discrepancy during preflight
- Event Details:
  - Preflight release documents review determined aircraft exceeded Maximum Takeoff Weight (MTOW) for the conditions
  - Documented payload was reduced to maximum allowable
  - Crew did not observe any baggage or cargo off loaded
  - Station Agent admitted that bags were omitted from computer system, but not physically removed from the cargo compartment
  - Captain questioned Station Manager then stated *“they...just removed the carry-on bags from the system and he didn't seem to think that it was a big deal.”*
  - Crew concerned that employees would deliberately exceed aircraft loading and CG limits



Aviation Safety Reporting System



# Pilot-Reported Ground Operation Issues

*Wireless SNAFU* (ACN 1559770)

- EMB-175 flight crew reported the ramp crew pushed the aircraft without clearance, towards conflicting taxiing aircraft
- Event Details:
  - Passenger door was closed and crew was ready for pushback
  - Ramp person communicated the area was clear and FOD walk had been completed – ready for brake release
  - Crew released brakes-would advise when clearance received
  - Push started without clearance and with aircraft inbound
  - Crew told driver to stop the push, but did not receive response
  - Communication Breakdown: Ramp crew wireless headsets were crossed between the aircraft on two adjacent gates



# Pilot-Reported Ground Operation Issues

*Missing in Action* (ACN 1539844)

- B737-800 flight crew reported releasing the parking brake for pushback, but the ground crew was not present and the aircraft which was not connected to a tug, rolled a few feet on its own.



Source: <https://stock.adobe.com>

- Event Details:
  - Before Start Checklist was completed
  - Ramp Personnel were not able to use headsets due to weather in the area, and hand signal briefing was accomplished
  - When ready, the flight crew called for pushback clearance
  - Parking brake was released, and aircraft rolled back a few feet
  - Flight crew was unaware the Ramp Crew had left due to ramp closure for weather and lightning



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<https://asrs.arc.nasa.gov/>



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