

**NATIONAL TRANSPORTATION SAFETY BOARD
OFFICE OF AVIATION SAFETY
WASHINGTON, D.C. 20594**

**ALASKA AIRLINES FLIGHT 1282
BOEING 737-9, N704AL
PORTLAND, OREGON
JANUARY 5, 2024**

**INVESTIGATIVE HEARING
WITNESS LIST**

All witnesses will be sworn in, then asked to state their full name, title and the organization for which they work.

PANEL 1: Overview of B737-9 Manufacturing and Inspections

WITNESSES #1, #2, #3, #4, #5:

Elizabeth Lund
Chair, Quality Operations Council,
Senior Vice President, Quality
Boeing Commercial Airplanes
Seattle, WA

Doug Ackerman
Vice President of Supplier Quality
Boeing Commercial Airplanes
Seattle, WA

Terry George
Senior Vice President
General Manager Boeing Programs
Spirit AeroSystems
Wichita, KS

Scott Grabon
Senior Director 737/P8 Quality
Spirit AeroSystems
Wichita, KS

Lloyd Catlin
Business Representative
International Association of Machinists
Renton, WA

Issues:

- B737-9 Production (in general)
 - Fuselage manufacturing
 - Inspections at Spirit and Boeing
 - Company organization and reporting structure
 - Reporting concerns/observations, stopping production from a line level staff concern
- Training of mechanics/turnover/retention
- Mechanic experience/pairing & assigning of tasks
- Process for documenting non-conformance (records, non-conformance order (NCO), work cards)
- Description of Shiplside Action Tracker (SAT) system and how is it intended to be used
- Description of Common Manufacturing Execution System (CMES) and how is it intended to be used
- Process for documenting removals of previously installed parts or components.
 - Boeing Process Specs - Boeing Process Instructions (BPI) and Desktop Instructions
 - Training process and details for BPI end users

Exhibits: 9A, 9E, 11A – 11V

Questioned by: Pocholo Cruz, Nils Johnson, Sabrina Woods

PANEL 2: Events Surrounding the Opening and Closing of the MED Plug

WITNESSES #6, #7:

Elizabeth Lund
Chair, Quality Operations Council,
Senior Vice President, Quality
Boeing Commercial Airplanes
Seattle, WA

Michael Riney
Senior Manager – Manufacturing General Support
Spirit AeroSystems
Seattle, WA

Issues:

- B737-9 Production (specific to accident airplane #8789)
- Lack of documentation of the MED plug being opened and closed
- MED plug removal and reinstallation at Boeing - Task Management
 - Description of the normal task(s) to remove the MED plug, and how they are managed and tracked
 - Comparison of previous MED plug openings vs accident airplane
- Description of flow and component travelling during assembly (for the processes surrounding MED plug removal/reinstallation)
- Assembly Line Flow Pace (how is it determined)
- Boeing/Spirit procedures for reporting/addressing discrepancies anomalies or concerns from the floor up
 - Reports made regarding MED plug removal and reinstallation
- Explain what we learned from Shiplide Action Tracking (SAT) for this airplane
- Role of the Spirit employees (staffed by Aerotech, Strom Aviation, Launch) in Renton
- Changes after accident

Exhibits: 11A – 11V

Questioned by: Pocholo Cruz, Nils Johnson, Sabrina Woods

PANEL 3: Quality Management Systems (QMS) and Safety Management Systems (SMS)

WITNESSES #8, #9, #10, #11, #12, #13, #14, #15, #16, #17:

Paul J. Wright
Senior Director, Safety Management System
Chief Aerospace Safety Office
Boeing Commercial Airplanes
Seattle, WA

Hector Silva

**Vice President, Regulatory Compliance and Core
Quality
Boeing Commercial Airplanes
Renton, WA**

Doug Ackerman

**Vice President of Supplier Quality
Boeing Commercial Airplanes
Seattle, WA**

Gregg Brown

**Senior Vice President – Quality and Support
Spirit AeroSystems
Wichita, KS**

William (Bill) Brown

**Senior Advisor – Quality
Spirit AeroSystems
Wichita, KS**

Chris Eick

**Aerospace Engineer, Policy & Standards
Division
Federal Aviation Administration
Washington, DC**

Michael Bartron

**Chief Scientist and Technical Advisor for Safety
and Risk Analysis
Federal Aviation Administration
Washington, DC**

Steve Slagle

**Program Manager, Project Management Section
Federal Aviation Administration
Washington, DC**

Brian Knaup
Manager AIR-580 (System Operation and Oversight Branch)
Federal Aviation Administration
Washington, DC

Lloyd Catlin
Business Representative
International Association of Machinists
Renton, WA

Issues:

- Safety Management Systems
 - Process of Promoting Effective Safety Culture
 - Voluntary
 - Implementation
 - Reporting(tracking) systems and (internal) audits
- Quality Management System process
 - Explain what QMS is and how it relates to manufacturing
 - External and internal
 - Suppliers/process managing, reacquiring Spirit
 - Describe Significant Challenges in the last 5 years
 - hiring/retention/other (new, lesser experienced staffing)
 - other
- Policy Communications/Dissemination
- Describe Production Rate Evolution (-5 years, -10 years) and actions taken as rate changes.
- FAA actions regarding NTSB recommendation SMS for manufacturing A-21-048
- Changes after accident

Exhibits: 11A – 11V

Questioned by: Sabrina Woods, Pocholo Cruz, Nils Johnson

PANEL 4: FAA Oversight

WITNESSES #18, #19, #20, #21, #22:

Hector Silva

**Vice President, Regulatory Compliance and Core
Quality
Boeing Commercial Airplanes
Seattle, WA**

Bill Brown

**Senior Advisor
Spirit AeroSystems
Wichita, KS**

Brian Knaup

**Manager AIR-580 (System Operation and
Oversight Branch)
Federal Aviation Administration
Lakewood, CA**

Bryan Kilgroe

**Manager, AIR-582B, Airplane Oversight Section,
Designated PC700 Principal Inspector
Federal Aviation Administration
Charleston, SC**

Lloyd Catlin

**Business Representative
International Association of Machinists
Renton, WA**

Issues:

- Describe work plan and process for oversight of production
 - How is the audit schedule determined
 - Other methods/tools for oversight
 - Changes in oversight methods
 - designated vs direct
 - other
- Results of FAA audit of Boeing
 - Describe how/why/procedure for auditing

- Issues with process and documentation and non-conformance
- Effectiveness of FAA guidance and actions on manufacturing:
 - SMS currently is not a requirement – how does this affect tasking for FAA oversight now, and in the future when it is required?
 - QMS
 - Training/enhanced oversight programs
- FAA Oversight of
 - Manufacturers records keeping
 - History of Audits – undocumented removals – (BPI for part or assembly removal)
- Boeing
 - History of BPI for part or assembly removal
- FAA actions regarding NTSB recommendation SMS for manufacturing A-21-048

Exhibits: 11A – 11V

Questioned by: Sabrina Woods, Pocholo Cruz, Nils Johnson