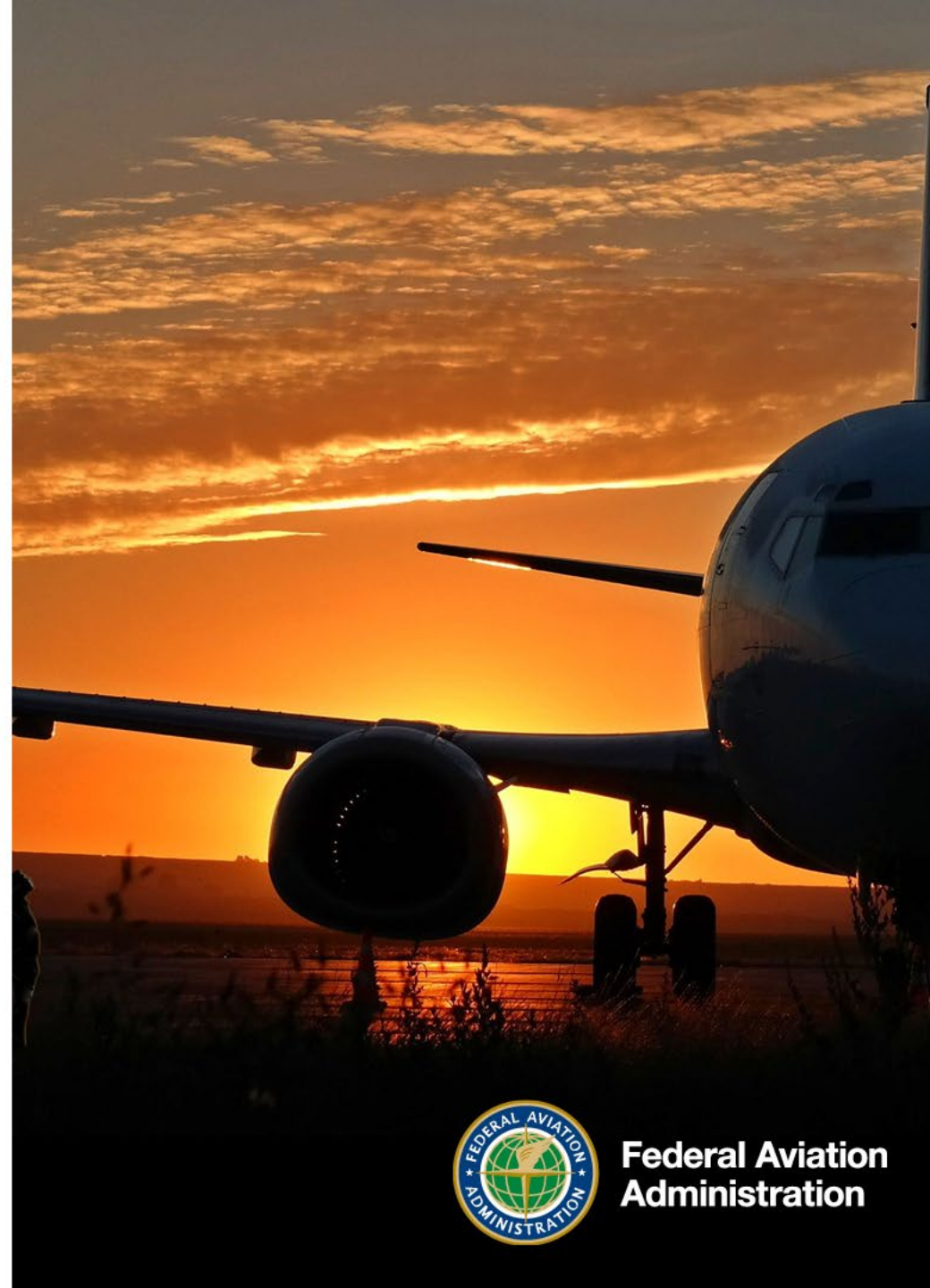# NTSB Public Hearing
Alaska Airlines 1282

Presented to: NTSB Public Hearing

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Date: August 7, 2024

Federal Aviation Administration

Quality System Oversight

- Each applicant for or holder of a production certificate must establish a quality system that ensures that each product and article conforms to its approved design and is in a condition for safe operation (14 CFR 21.137)

- Each applicant for or holder of a production certificate must provide a manual describing its quality system to the FAA for approval (14 CFR 21.138)

- The holder of a production certificate must:

  - (b) Maintain the quality system in compliance with the data and procedures approved for the production certificate

  - (c) Ensure that each completed product or article … conforms to its approved design and is in a condition for safe operation (14 CFR 21.146)

Quality System Oversight

- A Quality System Manual (QSM) documents the Production Approval Holder's (PAH's) policies and procedures and is the top – level authoritative source that the FAA approves

  - Provides controls for PAH design, manufacturing and inspection methods, recordkeeping and appropriate corrective actions should product and/or system non-compliances be identified

- The FAA has also retained approval of select processes under the Quality Manual that define the expectations for operation of the Quality System
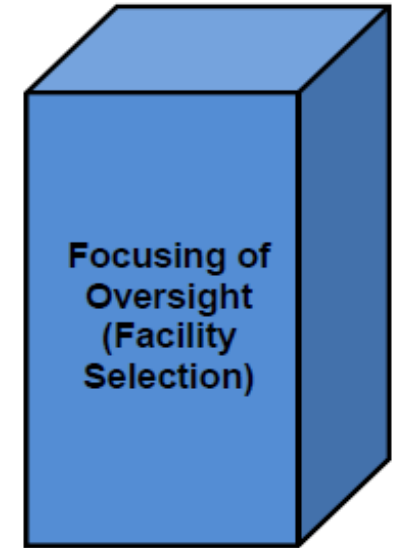
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Quality System Oversight

- FAA oversight of the quality system is covered by Order 8120.23, *Certificate Management of Production Approval Holders,* provides a system approach to monitoring compliance with regulations
- FAA oversight consists of a combination of Quality System Audits (QSAs), Principal Inspector (PI) Audits, and Supplier Control Audits (SCAs) that all contain product audits
  - QSAs – a 2-week long comprehensive system audit to ensure a PAH complies with their FAA-approved QSM procedures
  - SCAs – determine whether a PAH is satisfactorily controlling its suppliers
  - PI Audits – Data-driven product-based audits in areas of high risk on a daily basis
  - Product Audit – evaluates the effectiveness of the PAH's quality system using critical characteristics generated during the manufacturing process

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Quality System Oversight

- Three Pillars of Risk Assessment
  - Ensure resources applied appropriately
  - Consistent basis for resource use

Exposure Within the National Airspace System

Organizational Risk Assessment

Focusing of Oversight (Facility Selection)

- Certificate Management (CM) consists of a four-step closed-loop process:
  - (1) Plan Audit Activities
  - (2) Conduct Audits
  - (3) Document Audit Activities
  - (4) Perform Post-Audit Activities

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Compliance & Enforcement

- Policy
  - FAA Order 2150.3, *FAA Compliance and Enforcement (C&E) Program*
  - AIR-002-035, *Aircraft Certification Service (AIR) Compliance and Enforcement Process*
- Objective
  - Promote compliance with statutory and regulatory requirements by encouraging regulated persons to adopt practices to ensure compliance and, when violations occur, to disclose the violations
  - Foster the implementation of permanent corrective measures to improve overall safety
  - Ensure that statutory or regulatory noncompliance is addressed promptly, which may include the application of compliance action, administrative action, or legal enforcement actions
- Compliance and Enforcement Types
  - Lowest Level – Compliance Action - Utilized when the applicant willing and able to correct issue
  - Mid Level – Administrative Enforcement Action – Utilized when compliance action will not remediate noncompliance and ensure future compliance and legal action is not required
  - Higher Level – Legal Enforcement Action – Utilized in specific situations, such as intentional conduct

Federal Aviation Administration

Voluntary Disclosure Reporting Program (VDRP)

- Objective
  - Designed to encourage compliance with regulations, foster safe operating practices, and promote the development of internal evaluation programs
  - Critical Component of a healthy SMS
- Policy
  - FAA Advisory Circular (AC) 00-68, *Aircraft Certification Service Voluntary Disclosure Reporting Program*
  - Encourages voluntary disclosures as part of a safety culture to find, report, and correct issues

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Speak Up and Aviation Safety Action Program (ASAP)

- Boeing Speak Up system
  - Main SMS channel for voluntary employee reporting
  - All issues reviewed and directed for corrective action activities appropriately
  - Could lead to Voluntary Disclosure Reports to FAA
- Aviation Safety Action Program (ASAP) Event Review Committee (ERC)
  - FAA, Boeing, International Association of Machinists and Aerospace Workers (IAM) members on ERC
  - ERC reviews IAM member eligible Speak Up reports for disposition

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FAA Actions

- Actions taken since Alaska Airlines Flight 1282 Accident
  - Released Emergency Airworthiness Directive 2024-02-51
    - Effectively grounded 171 Boeing 737-9 MAX aircraft operated by U.S. Airlines
  - Conducted 6-week Special Audit Item of the Boeing and Spirit 737 Quality System
  - Increased Staffing at all Boeing Facilities
    - Increased both inspector and engineering staffing for dedicated Boeing Oversight
  - Increased on-site visibility
    - Acquired dedicated space for FAA personnel in Renton & Spirit Factories
    - Increased visits on areas/processes of high risk within the Boeing facilities to observe current product handling and manufacturing practices
    - Increased involvement with Boeing Internal Audit activities

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FAA Actions

- Actions taken since Alaska Airlines Flight 1282 Accident
  - Increased on-site visibility
    - Increased participation in Boeing scheduled "Gemba" (actual place of employee engagements) walks
    - Increased review of performance metrics, progress and understanding challenges in address audit findings and implementing changes in the quality system
    - Increased attendance at Boeing Quality informational and planning meetings to better understand changes in product producibility, resource, risk mitigations to inform future FAA oversight
    - Increased engagement with manufacturing, quality and engineering personnel regarding regulatory and Boeing Quality System requirements
    - Increased investigation of hotline and whistleblower reports
    - Increased opportunity for unscheduled auditing activities

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