

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

**AMERICAN AIRLINES  
FLIGHT 587, AIRBUS INDUSTRIES,  
A300-600, N14053  
BELLE HARBOR, NEW YORK  
NOVEMBER 12, 2001**

**PUBLIC HEARING EXHIBIT LIST**

- 1A Order of Hearing
- 1B Notice of Designation of Chairman of Board of Inquiry
- 1C Designation of Hearing Officer
- 1D Designation of Parties to Hearing
- 1E Notice of Hearing
- 1F Public Hearing Exhibit List
  
- 2A Operational Factors Group Chairman Factual Report of Investigation
- 2B\* Operations Attachment A – Excerpts from Interview Summaries, pages 5 – 9, 12 – 16, 24 – 27, 29 – 30, 34 – 53, 264 – 265, 274 – 276, 279, 283 – 287, 293 – 295, 299, 303 – 304, 313, 296 – 297, 370 – 371, 377 – 378, 382 – 387, 393 – 394, 398, 401, 467, 470 – 472, 475 – 478, 483 – 485, 489 – 490, 492 – 493, 704, 717 – 720, 730 - 731
- 2C Operations Attachment H – Correspondence from Airplane Manufacturers to American Airlines and Response
- 2D Operations Attachment I – Excerpts from the AAMP Training Course Material
- 2E Operations Attachment J – FAA Correspondence
- 2F Operations Attachment K – Excerpt from Airbus Industrie Presentation at 10<sup>th</sup> Performance and Operations Conference
- 2G Operations Attachment L – Excerpts from A300-600 American Airlines Operating Manual Volume 1
- 2H Operations Attachment M – Flight Operations Technical Information Bulletin
- 2I Operations Attachment N – FCOM Bulletin Use of Rudder on Transport Category Airplanes
- 2J Operations Attachment O – Boeing Commercial Airplane Group Flight Operations Technical Bulletin
- 2K Operations Attachment P – Excerpt from T.O. 1C-135(K), Flight Manual USAF Series KC-135E-R/T Aircraft
- 2L Operations Attachment Q – Excerpts from the A300-600 American Airlines Operating Manual Volume 2
- 2M Operations Attachment R – Excerpts from the Airbus A300-600 FCOM Volume 1

- 2N Operations Attachment S – Excerpts from the Airbus A300-600 FCOM Volume 2
- 2O Operations Attachment T – Excerpts from the Airbus A300-600 Flight Manual
- 2P Operations Attachment U – Excerpts of Airbus Aerodynamic Principles of Large-Airplane Upsets
- 2Q Operations Attachment V – Boeing/Airbus Training Aid
- 2R Operations Attachment Z – Excerpts from Pilot Interviews on AA903
- 2S Operations - Letter from Captain David Tribout, American Airlines, to Mr. William Wainwright, Airbus
- 2T Operations – Airbus Technical Digest FAST/Number 24, Airplane Upset Recovery
- 2U Operations – DOT/FAA/RD-95/6, Final Report April 1995, Excerpts from *Wake Turbulence Training Aid*
- 2V Operations – Airbus Submission to the NTSB in regards to AA903 upset investigation
- 2W *Operations – Intentionally Left Blank***
- 2X Operations – AIAA 2002-4715, *An Engineering Study of the Unsteady Response of a Jet Transport During a Wake Encounter in a Transitional State of Potential Crow Instability*, AIAA Atmospheric Flight Mechanics Conference, 5 – 8 August 2002, Monterey, California
- 2Y Operations – FAA Advisory Circular 61-23C, Pilots Handbook of Aeronautical Knowledge, 7/10/97, AFS-630, pages 2 - 5
- 2Z Operations – The Report of the FAA Associate Administrator for Regulation and Certification’s Study of the Commercial Airplane Certification Process, *An Evaluation of Selected Aircraft Certification, Operations and Maintenance Processes*, March 2002
- 7A Structures Group Chairman Factual Report
- 7B Structures – Figures and Photographs
- 7C Structures – Development of the A300 Fin in Modern Composite Fibre Construction and Structural Certification of Airbus Fin Box in Composite Fibre Construction
- 7D Structures – Factory Repair Concession TS-9802
- 7E Structures - A310, A300-600 & A300-600R Airworthiness Requirements, AI/V 600/78, Issue 9 November 1994 (Applicable Sections)
- 7F Structures – FAA Loads Exhibits; Yawing Maneuver Sideslip & Rudder Deflection Diagram, Yawing Maneuver Time History Diagram, Design Loads & Factor of Safety, Operation Loads Monitoring Program
- 7G Structures – AD 2001-23-51, AD 2002-06-09, AD 2001-09-03, AD 2002-03-11
- 7H *Structures – Airbus Loads Review***
- 7I Structures – Airbus Loads Certification Standards
- 7J Structures – Airbus Loads Models
- 7K Structures – Airbus Loads Methods (General)
- 7L Structures – Airbus Loads – Flexibility
- 7M Structures – Gust Requirements – Historical
- 7N Structures – A300-600R Vertical Tail Loads (Correlated Loads)
- 7O Structures – Airbus Loads Process & Methods – In Service Events

7P	Structures – AA587 Loads Assessment
7Q	Structures – Airbus Vertical Tail High Loads for In Service Events
7R	Structures – Summary of Airbus Loads Analysis for AA903
7S	Structures – Comparison of AA587 & AA903 Events
7T	Structures – Airbus Nodal Loads Process
7U	Structures – Airbus Report “AAL587 Crash: Study of Aeroelastic Scenarios”
7V	Structures – Airbus Report “AAL587 Crash: Study on Potential effect of Rudder Delamination”
7W	Structures – FAA Composites Exhibits, Composite Certification Practices for the Load Requirements
<b>7X</b>	<b><i>Structures – Airbus Structures Overview</i></b>
7Y	Structures – Static and Fatigue/Damage Tolerance Demonstration
7Z	Structures – Compliance with FAR/JAR 25.571
7AA	Structures – Stabilizer Attach Point Design Conditions
7BB	Structures – Airbus FEM Calculation of Rear Main Lug
7CC	Structures – Structural Analysis and Evaluation for the Airbus 300-600R/MSN 420 VTP and Rudder for the Accident Flight AA587, Part 1: Calculation of the Load Levels Experienced by the VTP & Rudder During the Accident
7DD	Structures - Structural Analysis and Evaluation for the Airbus 300-600R/MSN 420 VTP and Rudder for the Accident Flight AA587, Part 2: Analysis of the Rupture Sequence of the VTP During the Accident
7EE	Structures – Vertical Stabilizer Attachment Loads Experienced During Flight AA903 Incident and NDI Finding Assessment
7FF	Structures – Static Tests on Rudder Fittings (BR3) A300-600
7GG	Structures – A300-600R Vertical Stabilizer Structure, Design & Construction
7HH	Structures – NASA Support Overview
<b>7II</b>	<b><i>Structures – Intentionally Left Blank</i></b>
7JJ	Structures – NASA Local Lug Analysis
7KK	Structures – Structural Analysis and Evaluation for the Airbus A300-600R/MSN420 VTP and rudder for the accident flight AA587, Part 3: Analysis of the rupture sequence of the rudder following the accident
7LL	Structures – Various Airbus Communications referencing AA903
9A	Systems Group Chairman Factual Report
9B	Systems – A300-600 Yaw Damper System Overview
9C	Systems – A300-600 Yaw Autopilot System Overview
9D	Systems – A300-600 Rudder Travel Limitation System
9E	Systems – A300-600 Rudder Servo Controls Overview
9F	Systems – Addendum No. 1 to the Systems Group Chairman’s Factual Report of Investigation concerning the Artificial Feel and Trim Systems
10A	Flight Data Recorder Group Chairman Solid State Flight Data Recorder Factual Report

- 10B FDR Attachment I - FDR Parameter Listing Sorted By Word Location  
 10C FDR Attachment II - Selected FDR Data Plotted (8 Plots Total)
- 12A Cockpit Voice Recorder Group Chairman Factual Report  
 12B Sound Spectrum Analysis Report
- 13A Aircraft Performance Group Chairman Aircraft Performance Study  
 13B Aircraft Performance Group Chairman Aircraft Performance Study for American Airlines flight 903 dated June 30, 1998
- 14A Human Performance Group Chairman Factual Report  
 14B Human Performance Study Report, Vertical Motion Simulator Activities Phase I: Backdrive of Accident Flight  
 14C Human Performance – Article from the National Academy Press, Washington, D.C. 1997, *Aviation Safety and Pilot Control: Understanding and Preventing Unfavorable Pilot-Vehicle Interactions*
- 15A Selected Photographs and Drawings of the Damage Areas on the Vertical Stabilizer and Rudder  
 15B Selected Results of the Nondestructive Examination of the Vertical Stabilizer and Rudder  
 15C Selected Photographs of the Fractographic Examination  
 15D Airbus Technical Note - Thermal Analysis by DMA and MDSC  
**15E *Airbus Submission - Composites Manufacturing at Airbus***
- 17A Specialist's Report of Investigation – Video Study

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**Notes:**

Exhibits in ***Bold Italics*** will be added to the docket following their presentation at the hearing.

Exhibits marked with \* contain additional pages not originally identified on exhibit list published on CD-ROM.