



National Transportation Safety Board Board Meeting

Air Midwest Flight 5481
Charlotte, NC
January 8, 2003



NTSB Boardroom, Washington, DC

Air Midwest Flight 5481, Charlotte, NC Board Meeting

Lorenda Ward

Investigator-in-Charge



National Transportation Safety Board

Investigation

- A total of 47 Safety Board investigators and staff members were involved
- Core team consisted of five investigators and one writer
- An estimated 8 man years was spent on this investigation
- Public Hearing was held May 20 – 21, 2003
- Technical Review was held on June 20, 2003
- Report presented to the Board within 13 months



Parties to the Investigation

- Air Midwest, Inc.
- Raytheon Aircraft Company
- Raytheon Aerospace, LLC
- Federal Aviation Administration
- Air Line Pilots Association
- Hartzell Propeller
- International Association of Machinists
- National Air Traffic Controllers Association
- Structural Modification and Repair Technicians, Inc.



NTSB Staff

- Board Member John Goglia
- Lorenda Ward
- Greg Phillips
- Tom Haueter
- Christine Carey
- Brenda Yager
- Sharon Bryson
- Erik Grosf
- Don Chupp
- Frank Ciaccio
- Peter Knudson
- Bill English
- Ken Egge
- Paul Misencik
- Dr. Evan Byrne
- Dr. Bill Bramble
- Dr. Dan Bower
- Dr. Kevin Renze
- Bob Swaim
- Mike Hauf
- Pierre Scarfo
- Deepak Joshi
- Clinton Crookshanks



NTSB Staff (continued)

- Cindy Keegan
- Courtney Liedler
- Nora Marshall
- Stephen Carbone
- Butch Wilson (ATL)
- Eric Alleyne (ATL)
- Keith Holloway
- Paul Schlamm
- Sherri Filbin
- Paul Schuda
- Chris Julius
- Brian Fiffick
- Marci LaShells
- Kevin Peterson
- Kevin Petty
- Erin Gormley
- Doug Brazy
- John Clark
- John DeLisi
- Karen Stein
- Karen Bury
- Kristen Sears
- Christy Spangler
- Alice Park
- Abdullah Kakar



Details of Animation

- Airplane taxies to runway
- Accelerates down runway
- Rotates for takeoff
- Landing gear is raised
- Flight crew recognizes that there is a problem
- Airplane nose continues to rise up
- Flight crew pushes the control column forward



Significant Findings

- Elevator was misrigged
 - 7 degrees down rather than 14 degrees
- Aft center of gravity
 - 45.5% MAC rather than 40% MAC



Safety Improvements

- FAA – issued Airworthiness Directives and Notices, established an Aviation Rulemaking Committee
- Raytheon Aircraft – revised its manuals
- Air Midwest – changed its average weights, revised its work cards, changed its maintenance work schedule
- Raytheon Aerospace – increased its training



Issues Related to the Findings

- Restricted downward elevator travel
- Weight and balance
- Maintenance
- Human factors





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