

NTSB Board Meeting AA Flight 587



Rudder Control System

Steven Magladry



Rudder Controls

Rudder Control Characteristics

- Pedal Travel
- Pedal Force
- Airplane Response

Rudder Control Sensitivity

- A300-600 – High sensitivity at accident
airspeed



NTSB Board Meeting AA Flight 587



Changes to Rudder Control System

A300-B2B4 preceded the A300-600

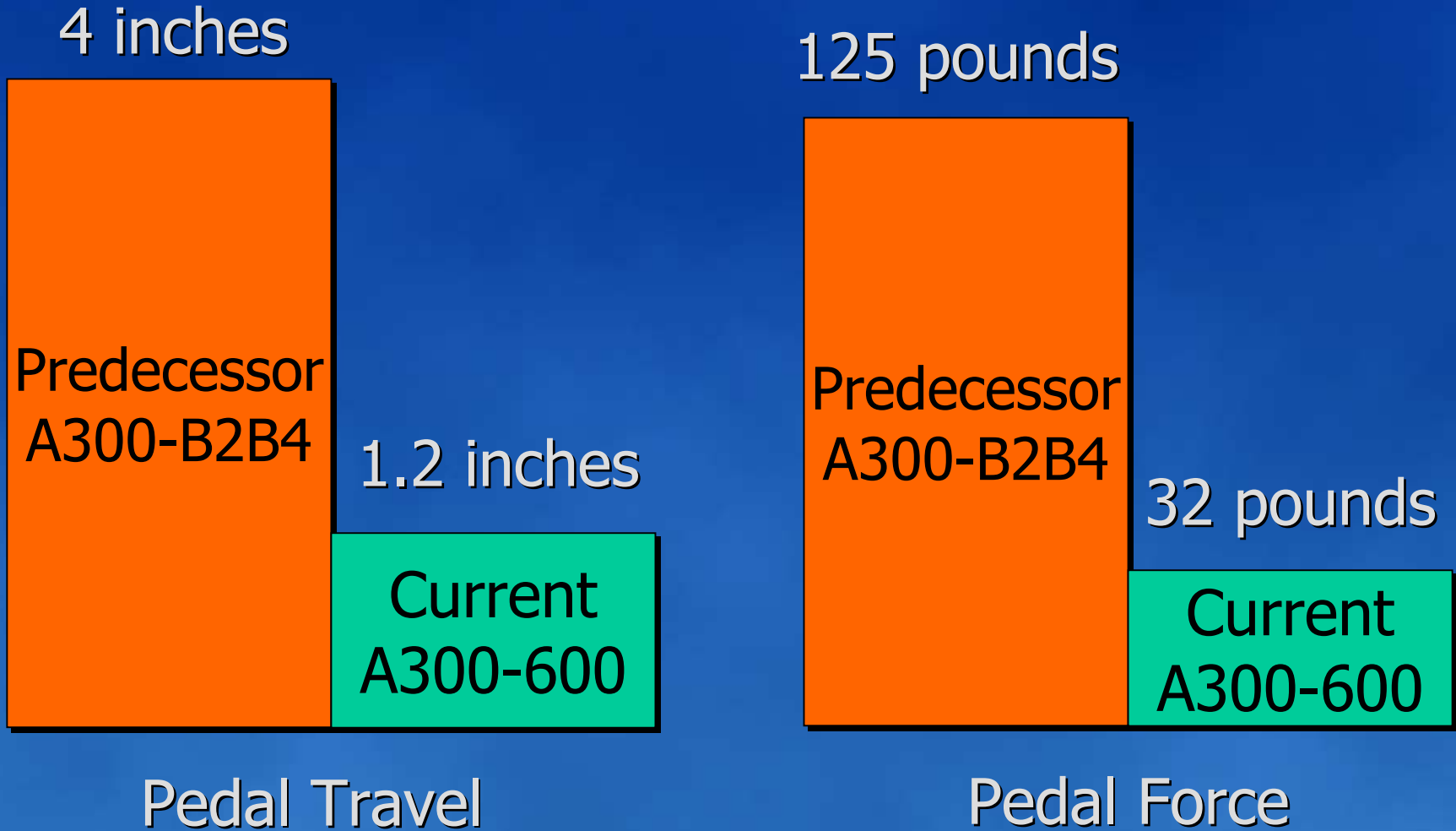
- **Control force change**
 - Reduced pedal forces
- **Rudder limiter design change**
 - Reduced pedal travel and force to reach full pedal travel



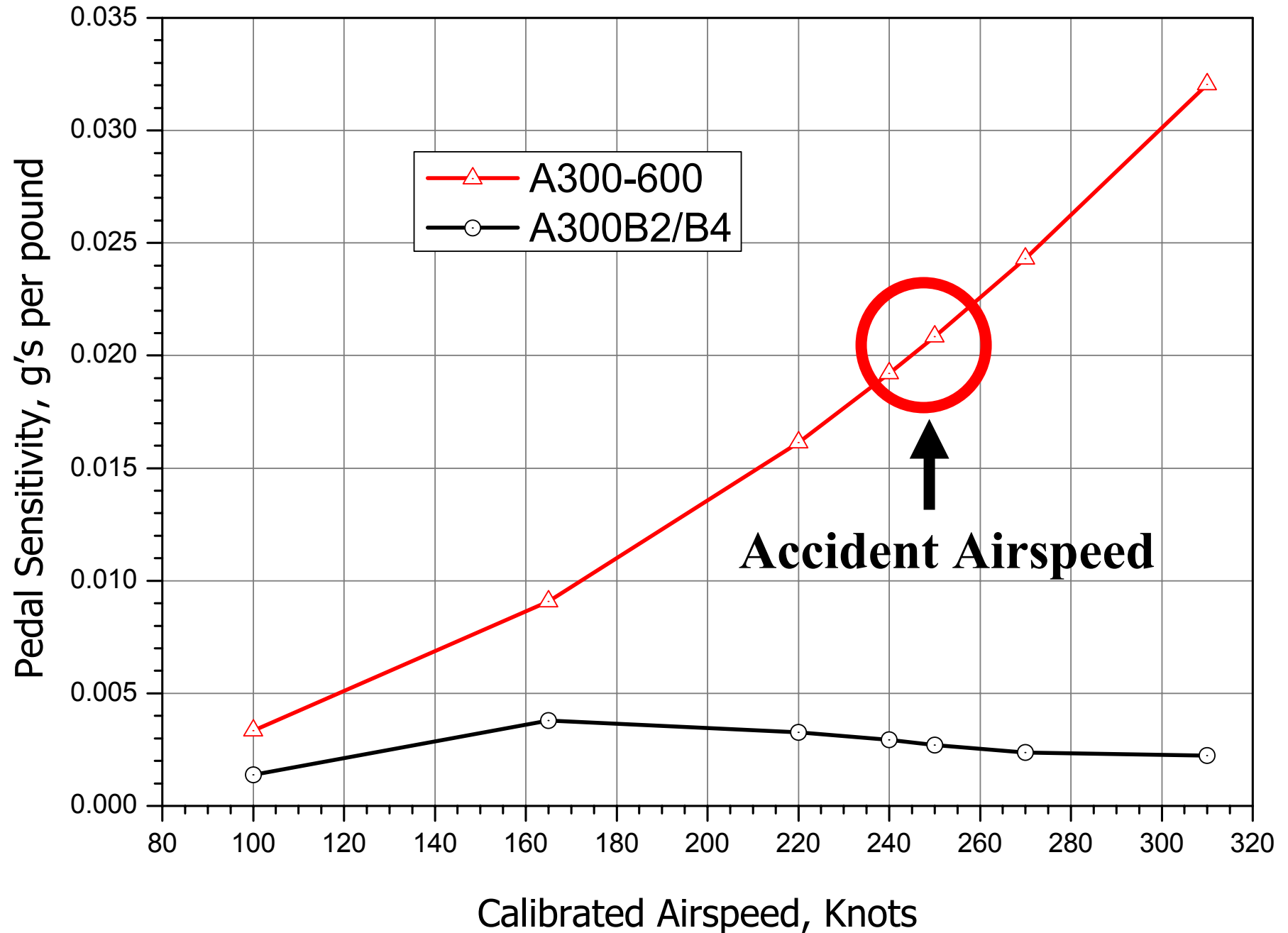
NTSB Board Meeting AA Flight 587



Change to A300 Rudder Limiter System High Speed Characteristics



A300-B2B4 & -600 Pedal Sensitivity Comparison



High Speed Rudder Characteristics

Compared to other airplanes:

- A300-600 has lightest pedal forces.
- A300-600 has among the shortest pedal travel.

Rudder sensitivity of A300-600 is a concern.



NTSB Board Meeting AA Flight 587



Rudder Control Certification Standards

- No quantitative standards
- Staff proposes safety recommendations



NTSB Board Meeting AA Flight 587



National Transportation Safety Board



American Airlines Flight 587
Belle Harbor, New York
November 12, 2001

NTSB Board Meeting
October 26, 2004

