Chief Engineer
Air Safety Investigation
Commercial Airplanes

The Boeing Company
P.O. Box 3707 MC 07-32
Seattle, WA 98124-2207

21 November 2011
66-ZB-H200-ASI-18633

Dutch Safety Board
P.O. Box 95404
2509 CK Den Haag
The Netherlands

Subject: Boeing Response to Safety Recommendation 4 – Approach to Stall Procedures – Turkish Airlines 737-800 TC-JGE Accident at Amsterdam Schiphol – 25 Feb 2009

References: (a) Dutch Safety Board Final Report published 6 May 2010

Dear

Please find attached our response to Safety Recommendation 4 contained in the reference (a) final report.

The information included with this correspondence is controlled under the US Export Administration Regulations (15 CFR Parts 300-799) and has been categorized as ECCN: 9E991. Information categorized as ECCN 9E991 is acceptable for public release.

Please feel free to contact us if you have any questions.

Best regards,

<original signed by>

Chief Engineer
Air Safety Investigation

Enclosure: Boeing response to Dutch Safety Board Safety Recommendation 4 – Approach to Stall Procedures – Turkish Airlines 737-800 TC-JGE Accident at Amsterdam, 25 Feb 2009

Boeing response to Dutch Safety Board Safety Recommendations 4
Approach to Stall Procedures
Turkish Airlines 737-800 TC-JGE Accident at Amsterdam, 25 Feb 2009

On 25 February 2009, a Turkish Airlines 737-800, registration TC-JGE, crashed on approach to Amsterdam Schiphol Airport (EHAM). The final report published by the Dutch Safety Board included the following Safety Recommendation:

Operational
The investigation revealed the importance of having an appropriate recovery procedure for stall situations and the importance of recurrent training. The Board has thus formulated the following recommendations:
Boeing
4. Boeing should review its 'Approach to stall' procedures with regard to the use of autopilot and autothrottle and the need for trimming.

Boeing Response

As part of an industry-wide effort that included the FAA, Boeing and other airframe manufacturers, Boeing has reviewed and revised stall and approach to stall recovery procedures. The revised recovery procedure and training emphasize the need to reduce the angle of attack before attempting to re-establish the flight path. There are six main points in the new procedure, which applies to all Boeing models and for both "approach to stall" and "stall" conditions:

- Disconnect the autopilot
- Disconnect the autothrottle
- Exert nose-down pitch inputs
- Exert nose-down pitch trim, if needed
- Keep the wings level
- Add thrust as needed

The revised procedure is included in new revisions of the Quick Reference Handbook for each model. Flight Operations Technical Bulletin 737-20-1 (dated November 12, 2010) summarizes these changes. A copy is enclosed.