



**SAIB:** NM-13-12

**Date:** December 27, 2012

**SUBJ: Awareness of NTSB Performance Study and Addendum**

*This is information only. Recommendations aren't mandatory.*

## **Introduction**

This Special Airworthiness Information Bulletin (SAIB) is sent to advise **manufacturers of airplanes certified under parts 23 and 25 of the Federal Aviation Regulations (14 CFR parts 23 and 25)** to consider the possibility that the airplane's maximum lift coefficient in ground effect may be lower than its maximum lift coefficient in free air.

## **Background**

On October 10, 2012, the National Transportation Safety Board (NTSB) issued accident report NTSB/AAR-12/02, PB2012-910402. On November 28, 2012, the NTSB addressed Safety Recommendation A-12-54 to the FAA:

*Inform domestic and foreign manufacturers of airplanes that are certified under 14 Code of Federal Regulations Parts 23 and 25 about the circumstances of this accident and advise them to consider, when estimating an airplane's stall angle of attack in ground effect, the possibility that the airplane's maximum lift coefficient in ground effect could be lower than its maximum lift coefficient in free air. (A-12-54)*

The NTSB has posted the following documents on its Docket Management System. These documents include detailed technical discussions of the aerodynamic phenomenon described in Safety Recommendation A-12-54:

- February 17, 2012: The Aircraft Performance Study provides a detailed analysis of the aerodynamic properties and assumptions leading to this recommendation (<http://dms.nts.gov/public%2F50500-50999%2F50904%2F487618.pdf>).
- July 19, 2012: Minor corrections to the Aircraft Performance Study are provided in Errata #1 (<http://dms.nts.gov/public%2F50500-50999%2F50904%2F499864.pdf>).
- March 29, 2012: Additional detailed technical information is in the Aircraft Performance Study Addendum #1 (<http://dms.nts.gov/public%2F50500-50999%2F50904%2F489313.pdf>).
- July 19, 2012: Errata #1 to Addendum #1 identifies changes to a Gulfstream-provided document that was attached to Addendum #1 (<http://dms.nts.gov/public%2F50500-50999%2F50904%2F499866.pdf>).

## **Recommendations**

We recommend that manufacturers of airplanes certificated under 14 CFR parts 23 and 25 refer to the detailed performance analysis provided in the documents identified above. This technical information should be accounted for in the design and testing of airplanes.

## **For Further Information Contact**

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