



**SUBJ:** Leveling and Weighing: Aircraft With Weight and Balance Data from Rod Miland and/or RM Aircraft Services      **SAIB:** CE-13-13  
**Date:** January 23, 2013

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

### **Introduction**

This Special Airworthiness Information Bulletin (SAIB) provides safety information to you, owners and operators of airplanes with weight and balance performed by Rod Miland and/or RM Aircraft Services of Chugiak, Alaska.

At this time, this airworthiness concern has not been determined to be an unsafe condition that would warrant airworthiness directive (AD) action under Title 14 of the Code of Federal Regulations (14 CFR) part 39.

### **Background**

We are issuing this SAIB because the Federal Aviation Administration (FAA) has been made aware of several instances where aircraft weighing and balance calculations were performed incorrectly.

The FAA has collected erroneous weight and balance reports where arm measurements were taken from the main landing gear rather than the datum. For example, a Cessna 185 airplane main wheel (center of axel) was measured to be 21 inches aft of the datum, and a main wheel to tail wheel distance was measured to be 242 inches. When the as-weighed moments were calculated, Mr. Miland used the distance between the wheels (242 inches) instead of the distance from the datum (242 + 21 = 263 inches) for the arm of the tail wheel. The end result is a center of gravity (CG) of 39.6 versus the true CG of 41.4; an error of 1.8 inches. This error could lead a pilot to believe they loaded their aircraft within CG when in fact it would be loaded aft of CG.

During FAA (Flight Standards) investigation, the inspectors noted that the scale's calibration record was in question, and inspections were performed without current aircraft equipment lists or verified fuel levels.

### **Recommendations**

We recommend that the following be done by appropriate personnel:

1. Check maintenance records to see if the empty weight and CG they are using is based off of weightings performed by Rod Miland and/or RM Aircraft Services.
2. When maintenance records indicate that empty weight and CG they are using is based off of weightings performed by Rod Miland and/or RM Aircraft Services, check the weight and balance calculations for accuracy or reweigh the aircraft. Reference FAA Aviation Safety Program document, FAA-P-8740-5, and Aircraft Weight and Balance Handbook, FAA-H-8083-1A

3. Maintain knowledge and understand that aircraft performance and handling characteristics are affected by the gross weight and center of gravity. This could dramatically reduce general aviation accidents. An overloaded or improperly balanced aircraft will require more power and greater fuel consumption to maintain flight, and the stability and controllability will be seriously affected. Lack of appreciation for the effects of weight and balance on the performance of aircraft, particularly in combination with such performance reducing factors as high density altitude, frost or ice on the wings, low engine power, severe or uncoordinated maneuvers, and emergency situations is a prime factor in many accidents.

### **For Further Information Contact**

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