



**U.S. Department
of Transportation
Federal Aviation
Administration**

SAFO

Safety Alert for Operators

SAFO 18012
DATE: 10/2/18

Flight Standards Service
Washington, DC

http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/safo

A SAFO contains important safety information and may include recommended action. SAFO content should be especially valuable to air carriers in meeting their statutory duty to provide service with the highest possible degree of safety in the public interest. Besides the specific action recommended in a SAFO, an alternative action may be as effective in addressing the safety issue named in the SAFO.

Subject: Weight and Balance Calculations for Title 14 of the Code of Federal Regulations Part 135 Certificate Holders.

Purpose: This SAFO serves to remind part 135 certificate holders of the criticality of ensuring accurate data is used when calculating aircraft weight and balance.

Background: A number of accident and incident investigations have revealed several instances where inaccurate basic operating weight was entered into the weight and balance software program. Errors of this type could have serious ramifications.

Discussion: The FAA is aware of prior accidents or incidents that were either a result of, or related to, the aircraft operating outside of its approved weight and balance limits. FAA regulations require aircraft to operate within approved weight and center of gravity limits per the approved Airplane or Rotorcraft Flight Manual. As a result, accurate weight and balance calculations must be completed. Certificate holders can use various methods to calculate aircraft weight and balance, including aircraft-specific software programs. The use of software programs can increase the efficiency of making these calculations and reduce the possibility of errors, as long as the data entered is correct. Correct data is equally important for all methods used to calculate weight and balance, but unlike other methods, software programs usually have pre-loaded information, such as basic operating weight. If the pre-loaded data is not verified to be accurate, then the calculations will be incorrect and could place the aircraft outside of weight and/or center of gravity limitations, which could have catastrophic consequences.

Recommended Action: Part 135 certificate holders should review Advisory Circular 120-27E, as amended, and conduct a review of their weight and balance procedures to ensure that the persons responsible for the weight and balance calculations are:

- Provided with current and correct aircraft weight and balance information, and
- Verifying pre-loaded information in weight and balance software programs is correct prior to use.

Contact: Questions or comments regarding this SAFO should be directed to the Air Transportation Division's Part 135 Air Carrier Operations Branch at (202) 267-8166.