

VOLUME 3 GENERAL TECHNICAL ADMINISTRATION**CHAPTER 48 EVALUATE 14 CFR PART 135 (NINE OR LESS) WEIGHT AND BALANCE CONTROL PROCEDURES****Section 1 Safety Assurance System: Accepting or Approving Weight and Balance Control Procedures****3-4006 REPORTING SYSTEM(S).**

A. Program Tracking and Reporting Subsystem (PTRS). None.

B. Safety Assurance System (SAS) Automation. This section is related to SAS Element 4.4.5, (AW) Weight and Balance Program.

3-4007 OBJECTIVE. This section provides guidance for accepting or approving Weight and Balance (W&B) control procedures.

3-4008 GENERAL. Title 14 of the Code of Federal Regulations (14 CFR) part 135, § 135.23(b) requires nine-or-less operator/applicants to develop their own W&B procedures. The operator/applicant has the option of using the procedures developed by the manufacturer, available in the approved Aircraft Flight Manual (AFM) or pilot's operating handbook (POH). Under these circumstances, the aviation safety inspector's (ASI) responsibilities are to ensure that the aircraft continue to be operated in accordance with these procedures. It is the operator/applicant's privilege to revise these procedures or develop procedures tailored to the specific needs of the operation. Under these circumstances, it is the ASI's responsibility to evaluate the procedures to ensure regulatory compliance and suitability to the operation.

3-4009 MANUFACTURER-DEVELOPED PROGRAM. If an operator/applicant decides to use the manufacturer's W&B program, it is the operator/applicant's responsibility to ensure that the program will meet the needs of the proposed/current operation. To ensure an operator/applicant's compliance with a manufacturer's W&B program, an ASI will have to verify that the operation or proposed operation will not conflict with the program.

3-4010 OPERATOR/APPLICANT-DEVELOPED PROGRAM.

A. Authorized W&B Limitations. The operator/applicant can submit any method or procedure by which it can show that all aircraft are properly loaded and will not exceed authorized W&B limitations during all operations.

1) These procedures can be provided in the operator's manual or they may be an independently controlled document that includes all instructions and procedures for maintenance, operations, and baggage handling personnel.

2) The W&B document must include company procedures and instructions for completing forms used in aircraft weight control and aircraft loading. Mathematical justification for loading provisions or schedules should be included in the submitted information.

B. Program Acceptance. The W&B procedures, including loading schedules and charts, are accepted by the principal maintenance inspector (PMI).

C. Unusual or Complex Programs. If the operator/applicant proposes an unusual or complex W&B program, or that program is substantially different from the approved AFM or POH, assistance from regional specialists should be requested.

NOTE: The use of actual weights is mandatory for part 135 reciprocating powered aircraft of nine or less passenger seats.

D. Load Schedules. The load schedule must include a manageable system for aircraft loading under all loading situations, including alternate procedures for nonstandard weight persons or groups. The operator's procedures must provide all necessary information (charts, graphs, tables, etc.), with related instructions for the loading.

E. Approval Requirements. There may be instances when an operator/applicant requests approval to operate an aircraft with an increase in gross weight and/or change in center of gravity (CG) range. This constitutes a major design change, and requires the approval of Federal Aviation Administration (FAA) engineering, per 14 CFR part 21, § 21.113.

3-4011 COORDINATION REQUIREMENTS. This task requires close coordination between Maintenance and Operation ASIs.

3-4012 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- Title 14 CFR Parts 21, 23, 43, and 91;
- Civil Aviation Regulation (CAR) part 3;
- Advisory Circular (AC) 43.13-1, Acceptable Methods, Techniques, and Practices—Aircraft Inspection and Repair;
- AC 120-27, Aircraft Weight and Balance Control;
- AC 120-85, Air Cargo Operations;
- FAA-H-8083-1, Aircraft Weight and Balance Handbook;
- Approved Flight Manuals
- POH or W&B Manuals;
- Type Data Sheets and Aircraft Specifications;
- Supplemental Type Certificates (STC);
- Aircraft Equipment Lists; and
- Aircraft W&B Records.

B. Forms. None.

3-4013 PROCEDURES.

A. Review Operator/Applicant's Data. Review the following:

- 1) Type of equipment.
- 2) Data to ensure that multiengine aircraft were weighed within the preceding 36 calendar-months (refer to § 135.185).
- 3) Operator/applicant's proposed/current method of recordkeeping.
- 4) Specific W&B information pertaining to operator's/applicant's aircraft to include:
 - a) Type Certificate Data Sheets (TCDS) for basic W&B data for individual aircraft.
 - b) Existing alteration records (FAA Form 337, Major Repair & Alteration (Airframe, Powerplant, Propeller, or Appliance)) that could affect the accuracy of approved W&B data.
 - c) An equipment list, to confirm that the list matches installed equipment. Verify that the list correlates with the actual location on the aircraft.
 - d) Past records in sufficient detail to determine the validity of current W&B information, if applicable.

NOTE: If aircraft W&B records are unavailable or inaccurate, the only acceptable method of determining the actual W&B is to weigh the aircraft.

- 5) Previous inspection reports, correspondence, and other documents in the office files to determine if there are any open items or if any areas were identified that require special attention.

B. Review Manufacturer's Program.

- 1) Verify that the W&B information in the AFM/Rotorcraft Flight Manual (RFM) includes current W&B information such as:

- Empty weight and CG,
- Loading graphs,
- CG envelopes,
- Loading schedules, and
- Index tables.

NOTE: The manual may refer to a W&B plotter. If so, ensure that this device is available.

- 2) Ensure that the manufacturer's procedures cover all aspects of the operator/applicant's intended operation.
- 3) Review load manifest requirements for multiengine aircraft (refer to § 135.63(c)).

C. Review W&B Revisions.

- 1) Determine who is responsible for updating W&B information.

NOTE: The operator/applicant is ultimately responsible for the current status of W&B after any major repair or alteration, or equipment change.

- 2) Ensure that revised W&B information has been entered in the AFM/RFM or applicable aircraft W&B record, following any major change that may affect the W&B.

D. Inspect Equipment and Facilities.

- 1) If the operator/applicant has aircraft weighing equipment available, inspect calibration records to ensure that scale(s) calibration is traceable to the National Institute of Standards and Technology (NIST).

- 2) Ensure that the operator/applicant has a draft free area or hangar in which the aircraft can be weighed.

- 3) Ensure that the loaded aircraft are still within manufacturer specified CG limits.

E. Evaluate W&B Training. Ensure that operator/applicant's flight training curriculum reflects the basic W&B procedures. The curriculum must also include any special W&B considerations for special use aircraft, e.g., all cargo.

F. Analyze Results. Upon completion of the evaluation, analyze the results and determine whether the aircraft and/or program meet all requirements.

G. Meet With Operator/Applicant. Discuss discrepancies with the operator/applicant and advise what areas need corrective action.

3-4014 TASK OUTCOMES.**A. Follow SAS Guidance Using Module 4 and 5.**

B. Accepting W&B. Successful completion of this task will result in accepting the W&B manual procedures or revision.

C. Document the Task. File all supporting paperwork in the operator/applicant's office file.

3-4015 FUTURE ACTIVITIES. Follow SAS guidance.

RESERVED. Paragraphs 3-4017 through 3-4030.