



U.S. Department  
of Transportation  
Federal Aviation  
Administration

# Advisory Circular

**Subject: Change 1 to SYSTEMS AND  
EQUIPMENT GUIDE FOR  
CERTIFICATION OF PART 23  
AIRPLANES AND AIRSHIPS**

**Date: 7/16/2012  
Initiated by: ACE-100**

**AC No: 23-17C**

1. **PURPOSE.** This change revises the last sentence of the paragraph to be clearer and deletes the words “as follows:” from the end of the first paragraph of paragraph 3d. It also deletes the entire second paragraph of paragraph 3d.
2. **CHANGE TEXT.** Changed text is indicated by vertical bars in the margins.

## PAGE CONTROL CHART

Remove Pages	Dated	Insert Pages	Dated
67 and 68	11/17/2011	67 and 68	7/16/2012

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**(3) Airworthiness Requirements (Tests and Analyses)**

Applicant should provide evidence in the form of drawings, test reports, computations, and other substantiating data showing the part meets either the applicable part 23 airworthiness requirements or the certification basis under which the airplane was approved (see the following NOTE). See Order 8110.42C. Compliance to applicable part 23 airworthiness requirements may include:

- |            |  |   |
|------------|--|---|
| <b>(a)</b> | Part 23, § 23.55 and<br>Part 135, Appendix A | Accelerate-stop distance for commuter category airplanes and other airplanes that have accelerate-stop distance requirements, including airplanes that have published data such as stopping distances and brake energy/cooling charts in the AFM. |
| <b>(b)</b> | Part 23, § 23.75                             | Landing.  |
| <b>(c)</b> | Part 23, § 23.143                            | Controllability and maneuverability:<br>General.  |
| <b>(d)</b> | Part 23, § 23.231                            | Longitudinal stability and control.   |
| <b>(e)</b> | Part 23, § 23.233                            | Directional stability and control.  |
| <b>(f)</b> | Part 23, § 23.493                            | Braked roll conditions.   |
| <b>(g)</b> | Part 23, § 23.731                            | Wheels.   |
| <b>(h)</b> | Part 23, § 23.735                            | Brakes.   |
| <b>(i)</b> | Part 23, § 23.1301                           | Function and installation.  |
| <b>(j)</b> | Part 23, § 23.1309                           | Equipment, systems, and installations.  |
| <b>(k)</b> | Part 23, § 23.1529 and                       | Instructions for Continued<br>Appendix G to Part 23<br>Airworthiness.   |
| <b>(l)</b> | TSO-C26d                                     | “Aircraft Wheels, Brakes and Wheel/Brake Assemblies for Parts 23, 27 and 29 Aircraft with Addendum 1,” October 14, 2004.  |

**NOTE:** A description of the certification basis in which an airplane was approved can be obtained from the FAA.

**b. Identical Wheel, Wheel/Brake Parts, or Assembly**

An identical wheel, wheel/brake part, or assembly is classified as a replacement in which either the included parts or assemblies being changed are of an identical design and will result in an equivalent level of demonstrated performance to that shown by either the originally approved parts or assemblies.

**c. Modified Wheel, Wheel/Brake Parts, or Assemblies May Be Approved Under a Provision of Part 21**

Under part 21, § 21.303, an applicant may be eligible for approval of modified wheel, wheel/brake parts, or assemblies by showing compliance to methods identified under paragraph 3.a.(3) above "Airworthiness Requirements (Tests and Analysis)". If modified wheel, wheel/brake parts, or assemblies are not produced for sale, then § 21.8 is applicable.

**d. Major Wheel, Wheel/Brake Parts, or Assembly Changes**

Since design changes appropriate to replacement and modified wheels, wheel/brake parts, or assemblies may involve changes to the original TSO wheel or wheel/brake assembly approval basis under an STC or TC in which the wheel or wheel/brake was installed, the applicant should also comply with applicable provisions for "major" design changes under part 21, § 21.93.

**4. Substantiation Procedures**

Replacement and modified wheels, wheel/brake parts or assembly changes should be substantiated by conducting the necessary analytical investigations, laboratory testing, or airplane testing, or all of these, to ensure the change can be made without adversely affecting aircraft safety and associated braking and rolling performance. A substantiation plan should first be proposed by the applicant for FAA approval followed by the applicant's implementation of the plan.

**a. Substantiation Plan**

A proposed substantiation plan may be presented to the FAA for approval that identifies the applicants requested change and intended approach in substantiating the change in accordance with the methods addressed under this section. The plan should include:

- (1) A description of the replacement or modified part or assembly, or both.