



U.S. Department  
of Transportation  
Federal Aviation  
Administration

# Advisory Circular

---

**Subject:** Jig Fixtures; Replacement of Wing Attach Angles and Doublers on The Boeing Company DC-3 Series Aircraft, Airworthiness Directive 66-18-02  
**Date:** DRAFT  
**AC No:** 39-1B  
**Initiated by:** AFS-300  
**Change:**

- 1 PURPOSE OF THIS ADVISORY CIRCULAR (AC).** This AC describes methods of determining that jig fixtures used in the replacement of the subject attach angles and doublers meet the requirements of Airworthiness Directive (AD) [66-18-02](#) per Title 14 of the Code of Federal Regulations (14 CFR) § [39.11](#).

**Note: This is a guidance document. Its content is not legally binding in its own right and will not be relied upon by the Department as a separate basis for affirmative enforcement action or other administrative penalty. Conformity with the guidance document is voluntary only. Nonconformity will not affect rights and obligations under existing statutes and regulations.**

- 2 AUDIENCE.** This AC applies to all DC-3 series aircraft including Military Type C-41, C-41A, C-47, C-47A, C-47B, C-48, C-48A, C-49, C-49A, C-49B, C-49C, C-49D, C-49J, C-49K, C-50, C-50A, C-50B, C-50C, C-50D, C-51, C-52, C-52A, C-52B, C-52C, C-53, C-53B, C-53C, C-53D, C-68, C-117A, and R4D series except R4D-8 aircraft, certificated in all categories. The current type certificate (TC) holder for these model aircraft is The Boeing Company.
  - 3 WHERE YOU CAN FIND THIS AC.** You can find this AC on the Federal Aviation Administration’s (FAA) website at [https://www.faa.gov/regulations\\_policies/advisory\\_circulars](https://www.faa.gov/regulations_policies/advisory_circulars) and the Dynamic Regulatory System (DRS) at <https://drs.faa.gov>.
  - 4 WHAT THIS AC CANCELS.** AC 39-1A, Jig Fixtures; Replacement of Wing Attach Angles and Doublers on Douglas DC-3 Series Aircraft, Airworthiness Directive 66-18-2, dated March 5, 1970, is canceled.
  - 5 GENERAL.** AD 66-18-02 specifies that Douglas Aircraft Company jig fixtures, or their equivalent (that are designed and built for the specific purpose of installation of the new heavier attach angles and doublers on DC-3 series aircraft), shall be utilized in the AD compliance.
  - 6 ACTION.** The use of accurate jig fixtures in compliance with the AD is of utmost importance. The determination that satisfactory jigs are utilized may be accomplished in accordance with the following:
-

**6.1 Obtain Jig Fixtures.** Obtain jig fixtures, Douglas P/N A652-5110506-1-1F2 and P/N A652-5110506-1F2 or Douglas P/N C652-5110500-101-1F1 and P/N C652-5110500-101-1-1F1, manufactured by the Douglas Aircraft Company; or

**6.2 Obtain Equivalent Jig Fixtures.** Authorized persons (appropriately rated certificated mechanics, repair stations, air carriers, or commercial operators) complying with the AD may make the determination that jig fixtures are Douglas Aircraft Company-equivalent. For this purpose, facilities and equipment should be available for checking the accuracy of these fixtures, particularly in the following critical areas:

**6.2.1 Face Alignment.** The vertical face of the jig fixture that will come in contact with the outer wing or center section attachment surfaces should be smooth and in a straight undeviating plane from leading to trailing edge and from top to bottom of the attach angle and doubler area.

**6.2.2 Rigidity.** The jig should be of such rugged construction that, when bolted to the outer wing or center section for the purpose of installing replacement parts, it should not be possible to pull the jig fixture out of the straight plane alignment specified in paragraph 6.2.1 above.

**6.2.3 Bolt Hole Location.** A Douglas Aircraft Company-manufactured template or an equivalent template should be used for determining bolt hole location.

**7 PRECAUTION.** For continued accurate results, jig fixtures should be carefully stored to avoid warpage or other damage. Prior to each subsequent use, the jig fixtures should be checked to be sure that original accuracy has been retained.

**8 AC FEEDBACK FORM.** For your convenience, the AC Feedback Form is the last page of this AC. Note any deficiencies found, clarifications needed, or suggested improvements regarding the contents of this AC on the Feedback Form.

Hugh Thomas  
Executive Director, Flight Standards Service