

Circular No. 1-310

Manuals for Employing a Deviation Sheet

September 30, 2005
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First issue (KOKU-KU-KI-5029)
Amended (KOKU-KU-KI-282)

Airworthiness Division, Aviation Safety and Security Department
Japan Civil Aviation Bureau
Ministry of Land, Infrastructure, Transport and Tourism

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JCAB Circular

Director, Airworthiness Division
Aviation Safety and Security Department
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Subject: Manuals for Employing a Deviation Sheet

1. Purpose, Applicability, and Description

This JCAB Circular describes the operation manuals in the case of deviations occurring in a conformity inspection, and an inspection of manufacturing processes (hereinafter referred to as “conformity inspections, etc.”) that are performed as part of an inspection of type certification, etc. for aircraft made in Japan.

These operation manuals apply to deviations from design data (including test plans, etc.) or to matters that are not specified in said design data and need to be clarified.

If a deviation is found, in principle, re-inspection must be conducted by using test articles, etc. and items subject to inspection that conform to the design data; or, revision of the design data must be made. However, this JCAB Circular may still be applied in order to continue the inspection in cases that are deemed unavoidable based on the provisions in Sections 5-2-3-2 and 5-2-4 of Circular No.1-003, such as (1) apparent minor deviation, (2) necessity of continuous implementation, and (3) difficulty in conducting re-testing.

This JCAB Circular applies to type certification for aircraft designed in Japan and type approval for products (engines and propellers).

With regard to conformity inspections, etc. to which this JCAB Circular applies and that are conducted at places other than the Aircraft Engineering and Certification Center, institutions that use the name of the Aircraft Engineering and Certification Center in this JCAB Circular shall be replaced by the name of government offices responsible for conducting such inspections.

As for the operation concerning said inspection conducted by the person certified to have the ability that is stipulated in Article 20, paragraph (1), item (i) or (v) of the Civil Aeronautics Act, except Section 7 of this JCAB Circular, a reference to government offices shall be replaced by “approved design organizations,” and a reference to government officials shall be replaced by

“certifying staff for said operation stipulated in the approved organization exposition.”

2. Relevant Documents

JCAB Circular No.2-001 “General Policies for Approved Organizations”

JCAB Circular No.1-309 “Manuals for Performing Conformity Inspections and Onsite Inspections”

JCAB Circular No.1-311 “Manuals for Performing Onsite Inspections of Manufacturing Processes”

3. Basic Policies for Issuance of a Deviation Sheet

Procedures for deviation in this JCAB Circular shall apply to, but are not limited to, cases that are significantly difficult to perform re-inspection and re-testing, etc. or to discontinue testing during the period required for formal approval procedures, such as cases (1) through (5) listed below.

- (1) If test articles and setup are different from the configurations specified in the design data, discrepancies with said design data are clearly defined, and it is apparent that the discrepancies have no impact on performing said testing.
- (2) If testing equipment, measurement instruments, etc. other than those specified in the design data are used, it can be confirmed that the specifications of said measurement instruments, etc. have no impact on the testing results and said measurement instruments, etc. are properly managed in accordance with the provisions, etc. stipulated by the applicant.
- (3) If there is a failure of test articles, setup, and testing equipment, the details of said failure are clear, and it is apparent that said failure has no impact on the testing results.
- (4) If no detailed provisions, including test plans, are provided to accurately conduct the method specified in the test plan, the details of additional detailed provision are clearly defined, and it is apparent that said provision has no impact on the testing results and the safety.
- (5) If there is a deviation from the design data, etc. in the manufacturing process (correcting process, including I-TAG, etc.), the details of said failure are clear, and it is expected that said deviation will be resolved by future modification, etc. of the design data.

4. Issuance of a Deviation Sheet

When a deviation occurs, the personnel responsible for the applicant’s conformity inspection or manufacturing process (hereinafter referred to as “responsible personnel”) clarifies the discrepancies with the test plan, etc. and then contacts the technical division in charge of the

design data regarding this matter.

The technical division contacted by the responsible personnel confirms potential impacts of the deviation on the design data, etc. and determines whether or not said impacts need to be reflected in the design data. The technical division may issue a deviation sheet if it is determined that the certification of design data will not be affected. If said deviation sheet is granted an approval and signature from the Officer for Technical Investigation (hereinafter referred to as “Responsible Officer for Technical Investigation”) of the Japan Civil Aviation Bureau who is responsible for said design data, the testing and inspection may be continued. Although the format of deviation sheet is unspecified and may be created in a manner convenient for the applicant, the items listed below must be included.

- (1) Control number of the deviation sheet
- (2) Control number of the corresponding design data or test plans, etc., including revision number
- (3) Description of the deviation
- (4) Impacts on the design data of said deviation
- (5) Other information considered necessary
- (6) Date of issue of the deviation sheet
- (7) Signature of the personnel responsible for issuing the deviation sheet
- (8) Approval of the Responsible Officer for Technical Investigation and a column for the approval date

The applicant must receive an authority’s approval for the deviation sheet and describe said deviation in the Statement of Conformity (SOC) if the applicant intends to continue said testing and inspection.

The deviation sheet is based on the assumption of being managed and employed properly in accordance with the methods stipulated by the applicant. Therefore, in order to use a deviation sheet for type certification for which the applicant applies, the applicant must stipulate methods of said management and employment in the management methods based on the quality control, etc. that is applied to the type certification.

5. Approval of the Deviation Sheet

The Responsible Officer for Technical Investigation who has accepted a deviation sheet submitted by an applicant receives an explanation from the applicant with regard to the details. If approving that said impacts have been reflected in the design data or the certification of design data will not be affected, the Responsible Officer for Technical Investigation puts his/her signature on said deviation sheet and returns it to the applicant.

6. Coordination for the Deviation Sheet and Issuance Period

With regard to testing and inspection for which there is a known deviation sheet beforehand, in principle, said deviation sheet must, in accordance with this JCAB Circular, be approved by the Responsible Officer for Technical Investigation by the day before the conformity inspection and testing. If a deviation occurs on the day, said inspection and testing must be discontinued; when said inspection and testing are to be resumed, this JCAB Circular must be applied again and the applicant must create a new deviation sheet for approval.

If it is apparent that the design data is not affected and it is deemed inappropriate by the applicant to discontinue testing, etc. in terms of continuity, the deviation sheet may proceed after the completion of the testing, etc.

For continuation of testing in such a situation, it must be carried out under the responsibility of the applicant.

7. Miscellaneous Provision

Regardless of the provisions in Sections 4 through 6 of this JCAB Circular, employment of a deviation sheet may be performed by other means when it is deemed necessary by the director of Aircraft Engineering and Certification Center to do so.

Supplementary Provision

1. This JCAB Circular shall apply from October 1, 2005.

Supplementary Provision (June 30, 2011)

1. This JCAB Circular shall apply from July 1, 2011.

Contact the following for inquiries, opinions, etc. concerning this JCAB Circular.

Aircraft Engineering and Certification Center

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