

Establishment of Continuous Operational Airworthiness System and Operational Safety Planning Document to be constructed by design approval holders for aircraft etc. manufactured in Japan under Article 13-4 of the CAA

June 17, 2020	First Issue (KOKU-KU-KI-285)
August 2, 2021	Amended (KOKU-KU-KI-383)

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

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Director, Airworthiness Division
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Subject: Establishment of Continuous Operational Airworthiness System and Operational Safety Planning
Document to be constructed by design approval holders for aircraft etc. manufactured in Japan under
Article 13-4 of the CAA

1. Purpose

Any person who was granted a type certificate or who was granted approval of the type design change, supplemental type design approval and repair and alteration design approval and who resides in Japan (hereinafter referred to as "domestic type approval holder, etc.") obliged to collect information concerning an air accident or any other situation specified by Ordinances of the Ministry of Land, Infrastructure, Transport and Tourism (hereinafter referred to as "failure information, etc.") that an aircraft whose type is subject to the said type certificate or whose design is subject to the said approval fails or likely to fail to conform to the standards specified in Article 10, paragraph 4 of the Civil Aeronautics Act (hereinafter referred to as the "CAA") and report it to the Minister of Land, Infrastructure, Transport and Tourism under Article 13-4 of the CAA and Article 23-10 of the Civil Aeronautics Regulations (hereinafter referred to as the "CAR"). For this reason, domestic type approval holders, etc. are required to actively collect and organize information concerning the continuous operational safety from users of aircraft etc. manufactured in Japan, or from those who manufacture, maintain or alter aircraft etc. manufactured in Japan, or their components or parts, and to establish a system to analyze and evaluate the obtained information and take necessary measures.

In addition, pursuant to the provisions of Article 23-10 of the CAR, domestic type approval holders, etc. are required to:

- 1) maintain a system for collecting, organizing and analyzing information on the event that requires reporting to the Minister of Land, Infrastructure, Transport and Tourism (Article 23-10, paragraph 1 of the CAR);
- 2) prepare and preserve records (Article 23-10, paragraph 2 of the CAR);
- 3) report the event within 72 hours after becoming aware of the occurrence (Article 23-10,

paragraph 3 of the CAR); and

- 4) submit the necessary improvement measures when the cause of the problem is found to be the design or manufacture (Article 23-10, paragraph 4 of the CAR).

The events that require reporting to the Minister of Land, Infrastructure, Transport and Tourism are defined in Article 23-11 of the CAR as aircraft accidents, serious incidents, and situations recognized by the Minister of Land, Infrastructure, Transport and Tourism as one in which aircraft etc. manufactured in Japan fails to conform to the standards under Article 10 paragraph 4 of the CAA or is likely to fail to conform to the standards under the same paragraph. Furthermore, the provisions of the said regulation are applied mutatis mutandis to the holders of Type/Specification approval for equipment, etc., in accordance with Article 14-2, paragraph 12 of the CAR.

The purpose of this Circular is to provide details of the procedures, examination criteria, etc., pertaining to the continuous operational airworthiness system to be established by the domestic type approval holders, etc. and the holders of Type/Specification Approvals, in accordance with the provisions of Article 13-4, etc. of the CAA.

2. Related Circulars

- (1) Circular No. 1-001 "General Policy and Procedures for Certification / Inspection"
- (2) Circular No. 1-003 "Procedures for Type Certification of Japanese Manufactured Aircraft"
- (3) Circular No. 1-004 "General Policy for Approval of Types and Specifications of Appliances"
- (4) Circular No. 1-013 "Approval of Service Bulletin (SB) "
- (5) Circular No. 1-029 "Establishment of License Agreement between Designer and Manufacturer"

3. Applicable person and aircraft for this Circular

This Circular applies to the domestic type approval holders, etc. and the holders of the Type/Specification Approval (hereinafter referred to as the "applicable holders of this Circular"). For details of the transitional measures for each applicable holder, please refer to the supplementary provisions.

In addition, with regard to the certifications and aircraft etc. subject to the collection of failure information, etc. by applicable holders of this Circular, the category of certification, etc. listed in the left column of the Table 1 "Categories of certification and applicable aircraft etc." corresponds to the applicable aircraft etc. listed in the right column of the same table (hereinafter referred to as "aircraft etc. pertaining to the certified design") respectively.

Table 1 Categories of certification and applicable aircraft, etc.

Categories of certification	Applicable aircraft, etc.
Type certification (Article 12 of the CAA)	Aircraft of the type that approved the relevant type

	certification
Approval of the Type design change (Article 13-2 of the CAA)	Aircraft to which the design for which the relevant change of type design has been applied
Supplemental type design approval (Article 13-2 of the CAA) that falls under the following -Major changes -Major alteration of minor changes	Aircraft to which the design for which the relevant approval for supplemental type design has been applied
Design approval for repair and alteration (Article 17-2 of the CAA) that falls under the following -Major changes -Major alteration of minor changes -Major repairs	Aircraft to which the design for which the relevant repair and alteration design approval has been applied
Type/Specification Approval (Article 14-2 of the CAR)	Aircraft equipped with the equipment, etc. that relevant Type/Specification approved

4. A situation that fails to or is likely to fail to conform to the standards of Article 10 paragraph 4 of the CAA which becomes a subject to report

Applicable holders of this Circular shall report the situations as listed in (1) through (3) below to the Minister of Land, Infrastructure, Transport and Tourism in accordance with the provisions of Article 13-4 of the CAA and Article 23-11 of the CAR. However, those caused by inappropriate maintenance are excluded. Failure information, etc. pertaining to aircraft to which the relevant design has been applied shall be collected in the case of holders of supplemental type design approval or repair and alteration design approval. A wide range of information should be collected as it may not be clear if the situation is caused by the part pertaining to design approval when relevant failure, etc. occur. In addition, holders of Type/Specification approvals shall report when the equipment, etc. for which Type/Specification Approval was granted is the cause or suspected cause of the situation in the situations listed in (1) through (3) below.

- (1) Aircraft accidents listed in each item of Article 76 paragraph 1 of the CAA
- (2) A situation prescribed in Article 76-2 of the CAA (limited to a situation that is caused or suspected to be caused by the design or manufacturing process)
- (3) In addition to those listed in (1) and (2), the following situations which are recognized by the Minister of Land, Infrastructure, Transport and Tourism as those in which aircraft etc. manufactured in Japan fail to conform with the standards under Article 10 paragraph 4 of the CAA or are likely to fail to conform with the standards under the same paragraph;

- (a) In the event of a fire caused by damage, malfunction, or defect of the system or equipment
- (b) Damage, malfunction, or defect in the engine exhaust system that may cause damage to the engine, airframe, equipment, or components
- (c) Accumulation or circulation of toxic or noxious gases in the cockpit or cabins
- (d) Damage, malfunction or defect in propeller control system
- (e) Structural damage to propeller or rotor blade hub or blade
- (f) If there is a leak of flammable fluid in an area where an ignition source is normally considered to be present
- (g) Damage to the brake system caused by structural damage or material defects during operation
- (h) Significant defects or failures of aircraft main structural members caused by self-generated causes (fatigue, lack of strength, corrosion, etc.)
- (i) Abnormal vibration or buffeting due to structural or system damage, malfunction or defect
- (j) Damage to the engine
- (k) Any damage, malfunction or defect in the structure or control system that impairs the normal operation of the aircraft or impairs its flight characteristics
- (l) Complete failure of two or more of the electric power systems or two or more of the hydraulic systems during aircraft operation
- (m) When two or more of the attitude indicators, two or more of the air speed indicators, or two or more of the altimeters are damaged or malfunction during aircraft operation
- (n) Partial loss of fuselage parts
- (o) Other situations necessary for continuous operational airworthiness of aircraft etc. manufactured in Japan (including those related to the continues operational safety)

5. Create a Continued Operational Safety Plan

In order to demonstrate conformity with the provisions of Article 23-10 of the CAR, applicable holders of this Circular shall prepare a document describing the matters indicated in 5-1 through 5-4 (hereinafter referred to as the "Continued Operational Safety Plan") and submit it to the organization having jurisdiction specified in paragraph 7 for confirmation in accordance with the procedures specified in paragraph 6.

If the same holder has obtained multiple certifications such as type certification and repair and alteration design approval, they may be combined into a single "Continued Operational Safety Plan." The following requirements must be satisfied for the format of the document.

- (1) Use Japan Industrial Standard A4 paper.
- (2) The revision history should be manageable.

5-1. Establishment of a system for collecting, organizing and analyzing information (Article 23-10, paragraph 1 of the CAR)

Applicable holders of this Circular shall stipulate the following items in the Continued Operational Safety Plan to establish a system for collecting, organizing and analyzing relevant information from users of aircraft etc. manufactured in Japan pertaining to certified designs, or persons who manufacture (including suppliers), maintain or alter aircraft etc. manufactured in Japan, or their equipment or parts in order to ensure reporting to the Minister of Land, Infrastructure, Transport and Tourism in accordance with the provisions of Article 13-4 of the CAA in the event of a situation specified in Article 23-11 of the CAR (a situation described in paragraph 4 of this Circular) with regard to aircraft, etc. pertaining to a design for which certification, etc. has been obtained.

(a) Matters related to responsibility for continued operational safety

Applicable holders of this Circular shall clearly state that have responsible for continuing the activities under this Plan until all aircraft, etc. pertaining to the design for which relevant certification, etc. has been no longer operated or used.

(b) Name of organization responsible for continued operational safety, name of person in charge, and contact address

(c) Collection destinations of information for continued operational safety

Depending on the aircraft, etc. pertaining to the certified design, users of aircraft manufactured in Japan pertaining to the certified design, persons who manufacture (including suppliers), maintain or alter (including shipping destination companies, if necessary), of aircraft etc. manufactured in Japan, or equipment or parts thereof, shall be stated as collection destinations of information.

(d) How to collect information for continued operational safety

In addition to information on failure related to the situation referred to in paragraph 4 (3) and warranty claims, etc. which directly related to the design and manufacture of its own aircraft, etc. and information obtained from aviation authorities such as airworthiness directives (TCDs), ADs, SAIBs, etc., when a similar design is used in another aircraft type and an accident or serious incident in the other aircraft type is considered to have an impact on the operational safety of the aircraft, etc., a means to actively collect information such as accident investigation reports, etc., shall be established.

(e) The process of organizing information

The workflow and procedures for organizing the information obtained.

(f) The process of information analysis

The workflow and work details for analyzing and evaluating the safety risks of an event that may affect the continued operational safety of aircraft must be described. The process of information analysis for Type/Specification Approval must indicate the evaluation and analysis

methods for following (h) and (i) regarding the impact of the situation on Type/Specification applied at the time of approval.

(g) Methods to ensure manufacturing quality

Requirement including the following must be described in order to ensure the quality of manufacture, repair or alteration of aircraft etc. pertaining to the design that has been certified etc. For related information, refer to Circular No. 1-029 "License Agreement between Designer and Manufacturer for Manufacture."

- (i) Notification method for design changes
- (ii) Notification method for changes in manufacturing methods
- (iii) Corresponding method in the event of a manufacturing or operational failure
- (iv) Method of managing suppliers

(h) Preparation of Service Bulletin (SB, etc.)

The procedure for preparing a Service Bulletin and coordinating with the JCAB must be described when the information analysis results in the need to establish improvement measures. The classification of Service Bulletin according to their importance must be in accordance with the provisions of Circular No. 1-013 "Approval of Service Bulletin (SB)." However, this does not apply when a different classification is set in the Continued Operational Safety Plan and confirmed by the organization having jurisdiction over the relevant design approval as specified in paragraph 7.

(i) Provision of technical documents such as Service Bulletin (SB, etc.) and Instructions for Continued Airworthiness

The method of providing technical documents to persons who uses or manufacture (including suppliers), repair or alter aircraft etc. manufactured in Japan, or their equipment or parts, must be described according to the aircraft etc. manufactured in Japan pertaining to the design for which certification, etc. has been obtained.

(j) Other necessary matters

5-2. Method of preserving records (Article 23-10, paragraph 2 of the CAR)

Applicable holders of this Circular shall specify in the Continued Operational Safety Plan the method for preserving the written and/or electronic records of the results of the collection, organization, and analysis of the information pertaining to 5-1 above, and shall properly preserve the records so that they can submit when the organization having jurisdiction over the relevant design approval as specified in paragraph 7 requests. The provisions for preservation of records must be specified requirements such as recorded documents and data, etc. to be preserved, record preservation methods, preservation periods, and procedures for destruct unnecessary records.

5-3. Preliminary report to the Minister of Land, Infrastructure, Transport and Tourism (Japan Civil Aviation Bureau) (Article 23-10, paragraph 3 of the CAR)

Applicable holders of this Circular shall preliminary report the organization having jurisdiction over the relevant design approval specified in paragraph 7 of the following items by e-mail etc. at the time when they become aware of the occurrence of a situation specified in paragraph 4, that is, within 72 hours after receiving information on the occurrence of a situation from the user of the aircraft or others, and judging that the situation corresponds to any of the situations specified in each item of Article 23-11 of the CAR as soon as possible.

< Items to be included in the preliminary report >

- (1) Name of applicable holders of this Circular
- (2) Basic information about the aircraft involved in the report
 - (a) Nationality, registration code and type
 - (b) Operator
 - (c) Departure point and first scheduled stop
 - (d) Number of passengers and crew
- (3) Date, time, and place of occurrence of the situation pertaining to the report
- (4) Summary of the situation pertaining to the report

Note: In the case of injuries occur, include the number and detail of injuries, and in the case of damage to the aircraft occur, include the detail of the damage.

- (5) Other items for reference

5-4. Submission of documents for improvement measures and technical verification (Article 23-10, paragraph 4 of the CAR)

Applicable holders of this Circular shall submit the necessary improvement measures to the organization having jurisdiction over the relevant design approval in paragraph 7 if the cause of the situation reported in paragraph 5-3 above is found to be in the design or manufacturing process as a result of the analysis after the preliminary report and shall also submit the necessary items (including drawings, analysis data, verification data, etc., as necessary) for technical verification whether the content of the improvement measures is appropriate. The items required for technical verification must include the following items.

- (a) Outline of the situation and causes
- (b) Type and number of aircraft affected (including information to identify number of aircraft affected such as L/N and S/N, etc. if necessary)
- (c) Outline of the unsafe condition associated with the situation (including the impact and situation

that could be expected if appropriate improvement measures are not taken).

(d) Details of improvement measures and deadline for implementation

Views on the appropriateness, urgency and feasibility of improvement measures must be included. If alternatives that were considered before the formulation of the improvement measures, necessary and sufficiently improvement measures must be submitted as a result of comparison and consideration with other actions. When improvement measures such as inspection and replacement of parts are required, information necessary for implementation of the work, such as procurement of parts, man-hours, necessity of special work place or support equipment, and difficulty of the work, must also be provided.

(e) Schedule for the formulation and implementation of improvement measures

(f) Other necessary matters

6. Procedures for submission and change of the Continued Operational Safety Plan

Applicable Holders of this Circular and intends to apply for type certification, etc., shall submit the Continued Operational Safety Plan and obtain confirmation from the competent organization specified in paragraph 7 by the time when the type certification, etc., of the aircraft, etc., is completed, or by the time specified in Supplementary Provision 2 in the case of a person who has already obtained such certification, etc., or has already applied for such certification, etc. The same applies when a person intends to change the plan. The organization having jurisdiction shall confirm that there are no deficiencies in the submitted Continued Operational Safety Plan and that the operation can be performed in accordance with the plan.

7. Submission address and competent organization

(1) For holders/applicants of type certification

Aircraft Engineering and Certification Center, Airworthiness Division, Aviation Safety and Security Department, Civil Aviation Bureau, Ministry of Land, Infrastructure, Transport and Tourism (Aircraft etc. manufactured in Japan)

(2) For holders/applicants of supplemental type design approval

Airworthiness Engineer, Air Traffic Service and Security Department, East Japan Civil Aviation Bureau

Airworthiness Engineer, Air Traffic Service and Security Department, West Japan Civil Aviation Bureau

(3) For holders/applicants of design approval for repair and alteration

Airworthiness Engineer, Airworthiness Division, Aviation Safety and Security Department, Civil Aviation Bureau, Ministry of Land, Infrastructure, Transport and Tourism (Imported aircraft)

Aircraft Engineering and Certification Center, Airworthiness Division, Aviation Safety and Security Department, Civil Aviation Bureau, Ministry of Land, Infrastructure, Transport and Tourism

(Aircraft etc. manufactured in Japan)

(4) For holders/applicants of Type/Specification Approval

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

8. Other reporting systems

Unairworthy condition report and aircraft failure report prescribed in Circular No. 2-001 "General Policy for Approved Organizations" and Circular No. 6-002 "Service Difficulty Reporting Procedure" can be omitted When report regulated on this circular is submitted in accordance with the provisions of Article 13-4 of the CAA and Article 23-11 of the CAR.

Supplementary provisions

1. This Circular comes into effect on June 18, 2020.
2. In the case of a person approved design approval to which this Circular applies at the time this Circular comes into effect, the applicable date for the confirmation of the Continued Operational Safety Plan shall be the date shown in Table 2 "Applicable dates for confirmation of the Continued Operational Safety Plan." However, for the period from enforced date of this circular to the relevant date, the previous method shown in Table 3 "Transitional measures" shall be applied.
3. The submission of the Continued Operational Safety Plan to the organization having jurisdiction must be made well in advance of the date on which confirmation is to be obtained.

Table 2 Applicable dates for confirmation of the Continued Operational Safety Plan

Category of certification, etc.	Category of applicant	Deadline for confirmation of the Continued Operational Safety Plan
Type certification	Those who have already approved at the time this Circular comes into effect.	June 18, 2022. However, until the relevant date, the transitional measures shown in Table 3 shall apply.
	Those who have already applied for certification at the time this Circular comes into effect.	June 18, 2022 or the date of completion of type certification, whichever is later. However, until the relevant date, the transitional measures shown in Table 3 shall apply.
	Those who apply for certification after the effective date of this Circular.	Date of completion of type certification
Supplemental type design approval (including equivalent STC)	Those who have already approved at the time this Circular comes into effect. (Note: only those that fall under the category of major change or major alteration in minor change).	June 18, 2022. However, until the relevant date, the standards shown in Table 3 shall apply.
	Those who have already applied for certification at the time this Circular comes into effect (Note: only those that fall under the category of major change or major alteration in minor change).	June 18, 2022 or the date of completion of supplemental type design approval, whichever is later. However, until the relevant date, the transitional measures shown in Table 3 shall apply.
	Those who apply for certification after the effective date of this Circular. (Note: only those that fall under the category of major change or major alteration in minor change).	Date of completion of supplemental type design approval
Type/Specification Approval	Those who have already approved at the time this Circular comes into effect.	June 18, 2022. However, until the relevant date, the transitional measures shown in Table 3 shall apply.

	Those who have already applied for certification at the time this Circular comes into effect.	June 18, 2022 or the date of completion of Type/Specification Approval, whichever is later. However, until the relevant date, the transitional measures shown in Table 3 shall apply.
	Those who apply for certification after the effective date of this Circular.	Date of completion of Type/Specification Approval
Repair and alteration design approval	Those who have already approved at the time this Circular comes into effect.	Not applicable
	Those who have already applied for certification at the time this Circular comes into effect.	Not applicable
	Those who apply for certification after the effective date of this Circular. (Note: only those that fall under the category of major change, or major alteration or major repair in minor change).	Date of completion of repair and alteration design approval

Table 3 Transitional measures

Category of certification, etc.	Standards to be applied by the deadline for transitional measures (including subsequent revisions)
Type certification	<ul style="list-style-type: none"> ✓ Circular No.1-001 "General Policy and Procedures for Certification / Inspection" (partially amended on June 28, 2019: KOKU-KU-KI-359), Part II, paragraph 7 (Other Necessary Activities charged to the Holder of Type Certificate) ✓ Circular No.1-003 "Procedures for Type Certification of Japanese Manufactured Aircraft" (partially amended on March 29, 2019: KOKU-KU-KI-1692), paragraph 8 (Maintaining Airworthiness)
Supplemental type design approval	<ul style="list-style-type: none"> ✓ Circular No.1-001 "General Policy and Procedures for Certification / Inspection" (partially amended on June 28, 2019: KOKU-KU-KI-359), Part III, paragraph 6 (Other Necessary Activities charged to the Holder of a Supplemental Type Certificate) ✓ Circular No.1-003 "Procedures for Type Certification of Japanese Manufactured Aircraft" (partially amended on March 29, 2019: KOKU-

	KU-KI-1692), paragraph 8 (Maintaining Airworthiness)
Type/Specification Approval	<ul style="list-style-type: none"> ✓ Circular No.1-004 "General Policy for Approval of Types and Specifications of Appliances" Part I (partially amended on November 28, 2003: KOKU-KU-KI-768) Article 9 (Service bulletins) ✓ Circular No.1-004 "General Policy for Approval of Types and Specifications of Appliances" Part II (partially amended on June 28, 2019: KOKU-KU-KI-359), Chapter 2, 2-4-4 (Procedures for Reporting Service Difficulties), 2-4-5 (Procedures for Issuing Service Bulletins (SB etc.)), and Chapter 6, 6-1 (Maintaining the Attachment and Other Submitted Documents than the Attachment) and 6-4 (Reporting)

Supplementary Provisions (August 2, 2021)

1. This Circular comes into effect on August 2, 2021.

For questions and comments about this circular, please contact the following:

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