

General Policies for Permitting Test Flights, etc.
for Amateur-Built Aircraft

March 29, 2002	First issue (KOKU-KU-KI-1357)
June 30, 2011	Amended (KOKU-KU-KI-282)
March 20, 2015	Amended (KOKU-KU-KI-1745)
March 30, 2018	Amended (KOKU-KU-KI-2287)
December 24, 2020	Amended (KOKU-KU-KI-937)

Airworthiness Division, Aviation Safety and Security Department
Japan Civil Aviation Bureau
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JCAB Circular

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

Subject: General Policies for Permitting Test Flights, etc. for Amateur-Built Aircraft

Chapter I General Provisions

1-1 Purpose

This JCAB Circular aims to stipulate general policies that cover matters from aircraft registration of amateur-built aircraft to flight permission under the proviso of Article 11, paragraph (1) of the Civil Aeronautics Act.

1-2 Applicability

This JCAB Circular applies to amateur-built aircraft stipulated in Paragraph 1-3 for which, due to their peculiarities, it is difficult to demonstrate compatibility with the standards stipulated in Article 10, paragraph (4) of the Civil Aeronautics Act. However, if the amateur-built aircraft meet the requirements stipulated in Paragraph 1-4 of JCAB Circular No.1-007, “General policies for permitting Test Flights, etc. for Ultralight Planes or Gyroplanes,” JCAB Circular No. 1-007 will be applied.

1-3 Definition

In this JCAB Circular, the term “amateur-built aircraft” refers to aircraft that are designed, produced, altered, or restored, or aircraft that are produced through purchasing a kit.

Chapter II Registration of Amateur-Built Aircraft

2-1 Purpose

The aircraft registration and the identification mark given in this Chapter aim to identify aircraft for evaluation on the flight permit application, flight management, confirmation of obtaining permission based on this JCAB Circular, and the like, but are not replaced with the registration under Article 3 of the Civil Aeronautics Act and do not intend to permit test flights.

2-2 Applicability

This Chapter applies to the cases listed below.

- (1) First registration (hereinafter referred to as “new registration”)
- (2) If there is any change to the following registration information of amateur-built aircraft that has already been registered (hereinafter referred to as “registration of change”)
 - (i) Name or address of the owner or manager of an amateur-built aircraft
 - (ii) Home-base

2-3 Registration Requirements

Registration requirements are as follows.

- (1) Application must be made by the owner or manager of the amateur-built aircraft
- (2) In principle, registration may not be made in cases falling under any of the following:
 - (i) If the aircraft has already been registered under Article 3 of the Civil Aeronautics Act
 - (ii) If the aircraft has a registration mark, etc. that has been approved by a foreign aviation authority or equivalent agencies

2-4 Period for Registration Application

The registration must be completed before the period when the flight permit application concerning the proviso of Article 11, paragraph (1) of the Civil Aeronautics Act is submitted.

2-5 Application of New Registration

The owner or manager of an amateur-built aircraft who intends to make the first registration must submit the following documents to the Airworthiness Engineer Office of the Regional Civil Aviation Bureau listed in Paragraph 2-7 of this JCAB Circular.

- (i) Application Form for Amateur-Built Aircraft Registration (Form 1): 1 copy
- (ii) Return-addressed envelope (postage attached): 1 envelope

2-6 Notification Concerning Registration of Change

The owner or manager of an amateur-built aircraft must, if there is any change falling under the cases in Paragraph 2-2 (2), submit the following documents to the Airworthiness Engineer Office of Air Traffic Service and Safety Department of the Regional Civil Aviation Bureau listed in Paragraph 2-7 of this JCAB Circular:

- (i) Notification Form for Amateur-Built Aircraft Registration of Change (Form 2): 1 copy
- (ii) Return-addressed envelope (postage attached): 1 envelope

2-7 Destinations where Application, etc. Concerning New Registration or Notification, etc. Concerning Registration of Change Should Be Submitted

- (1) If the home-base is in or east of Shizuoka Prefecture, Nagano Prefecture, and Niigata Prefecture, the destination is as follows.

Airworthiness Engineer, Air Traffic Service and Safety Department
East Japan Civil Aviation Bureau
Ministry of Land, Infrastructure, Transport and Tourism
Kudan Common Government Office Bldg. No. 2
Kudan Minami 1-1-15, Chiyoda-ku, Tokyo 102-0074
Tel.: 03-5275-9325
Fax: 03-5216-5571

- (2) If the home-base is in or west of Aichi Prefecture, Gifu Prefecture, and Toyama Prefecture, the destination is as follows.

Airworthiness Engineer, Air Traffic Service and Safety Department
West Japan Civil Aviation Bureau
Ministry of Land, Infrastructure, Transport and Tourism
Osaka Common Government Office Bldg. No. 2 Annex
Otemae 4-1-67, Chuo-ku, Osaka City, Osaka 540-0008
Tel.: 06-6949-6235
Fax: 06-6945-6313

2-8 Issuance of Identification Mark Notification, etc.

2-8-1 New Registration

If the application and attached documents submitted are in order, the acceptance of the application concerning new registration is performed by issuing the applicant an “Identification Mark Notice” (Form 1). The identification mark is composed of the following two alphabetic characters, and four Arabic numerals and shall be allocated in order of application submission as follows.

Amateur-built aircraft	JX0001–9999
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2-8-2 Registration of Change

If the notification submitted is considered appropriate, the acceptance of the notification concerning registration of change is performed by issuing the notifying person a “Receipt of Registration of Change” (Form 2).

2-9 Display of Identification Mark

An applicant who has received a registration notice must display the identification mark on his/her aircraft in such a manner as instructed below.

The identification mark, consisting of each character with a size of 100 mm, a width of 56 mm, and a thickness of 20 mm, must be displayed in such a manner as to be easily observed visually from the outside of both sides of vertical tails or both sides of the fuselage. In addition, the identification mark, consisting of each character with a size of 200 mm or more, a width of 120 mm or more, and a thickness of 33 mm or more, must be displayed on the bottom of the left main wing (on the bottom of the fuselage if no space is available on the main wing). Each of the displays must have a space of 30 mm between individual characters.

If there is no space for the display as instructed above, by describing this information in the section for the identification mark display position of the “Application Form for Amateur-built Aircraft Registration”, the size of characters may be changed, or the display on the bottom of the main wing (or on the bottom of the fuselage) may be omitted.

The identification mark seal described above is also available at the Japan Aeronautic Association.

2-10 Interim Measures

Aircraft that are given an identification mark by the Japan Aeronautic Association prior to March 31, 2002 are deemed to be in effect even after April 1, 2002.

Chapter III Procedures Concerning Flight Permission

3-1 Purpose

This Chapter aims to stipulate general policies to provide amateur-built aircraft with flight permission under the proviso of Article 11, paragraph (1) of the Civil Aeronautics Act.

3-2 Flight Categories

In principle, a flight shall be performed by categorizing it into two phases as follows.

3-2-1 First-Phase Flight: A jump flight at an altitude of three meters or less, on the ground surface used for takeoff and landing or on the water surface used for takeoff and landing on water.

3-2-2 Second-Phase Flight: In principle, a flight that flies within airspace in the vicinity of an aerodrome (or places other than aerodromes permitted for takeoff and landing in accordance with Article 79 of the Civil Aeronautics Act), excluding the airspace over persons, houses, or properties, and that does not fly in a control area or control zone, as well as that complies with the provisions of Article 81 of the Civil Aeronautics Act and Article 174 of the Ordinance for Enforcement of the Civil Aeronautics Act (Minimum Safe Altitude)

3-3 Period for Application

An application for the first-phase flight must arrive at the submission destination no later than one month before the desired date to conduct the flight; for the second-phase flight, no later than three weeks before the desired date to conduct the flight.

3-4 Category of Applicant

The categories of application shall be as follows

- (1) Initial The first aircraft application
- (2) Renewal Application concerning aircraft that has previously been given permission (excluding cases where the applications for (3))
- (3) Change Application concerning a change of the flight area, the pilot or the passenger

3-5 Documents Required for Application

Applicant must submit an Application Form for Test Flight Permission, etc. (Form 3) and the following attached documents as necessary to the Airworthiness Engineer Office of Air Traffic Service and Safety Department of the Regional Civil Aviation Bureau listed in Paragraph 3-6 of this JCAB

Circular.

3-5-1 Documents Attached to the Application Form for First-Phase Flight Permission

- (1) Copy of application form (used as written permission issued to the applicant): 1 copy
- (2) Documents that described name of passengers and the purpose of boarding. (In the cases where there is no passenger, this document may be substituted by describing that information in the remarks column of application): 1 copy
- (3) Return-addressed envelope (postage attached): 1 envelope
- (4) Trihedral figure that includes the display position of identification mark for amateur-built aircraft: 1 copy
- (5) Photos of the front and the side of amateur-built aircraft (identification mark must be identified) and instrument condition: 1 photo each
- (6) The following documents concerning aircraft design: 1 copy each
 - a. Document that demonstrates conformity with the Airworthiness Inspection Manual corresponding to the aircraft's airworthiness category concerning the application that is created in consideration of anticipated operation condition
 - b. Document that describes the aircraft designer's name, affiliation, and aircraft-related career
 - c. If the applicant received design instructions, document that describes the instructor's name, affiliation, and aircraft-related career
 - d. Document that describes matters concerning maintenance of inspection items, etc., including the overview of aircraft maintenance methods and preflight inspection items
 - e. Document that describes aircraft operation methods, etc.
- (7) The following documents concerning aircraft production: 1 copy each
 - a. Document that describes the aircraft production methods and the condition of the aircraft produced based on the methods
 - b. Document that describes the aircraft manufacturer's name, affiliation, and aircraft-related career
 - c. If the applicant received production instructions, document that describes the instructor's name, affiliation, and aircraft-related career
- (8) The following documents concerning results, etc. of ground test operation and ground running: 1 copy each
 - a. Document that describes the results of ground test operation and ground running (the number of ground running trials, running time, etc.) and the evaluation by the executor on the results, as well as problems that occurred during such tests and remedial actions for the problems
- (9) Documents concerning flight location and flight zone, etc. (for an applicant who currently has permission given to his/her other amateur-built aircraft, etc. under the same conditions as

his/her new amateur-built aircraft, or has received such permission before, a part or the whole of the following documents for attachment may be omitted by providing this information): 1 copy each

- a. Document that describes the overview of the location used for takeoff and landing and flight zone (a map that shows such the location and airspace, etc.) and that demonstrates the availability of the location used for takeoff and landing (land-use permission or use permission from the land manager, etc.)
- b. Document that describes measures to ensure the safety (protection) of persons on board, persons on the ground, houses, or property during the flight (operational limitations on the aircraft [aircraft operation procedures for emergencies must be included], safety management manual created by the applicant, etc.)
- c. Document that demonstrates the flight will have no adverse effects (noise, etc.) on the living environment of residents in the vicinity of the flight airspace (explanatory documents with maps, topographical maps, etc. and the like)
- d. If the applicant is a different person from the aircraft owner, document that demonstrates the owner's agreement to the flight (consent form or letter of proxy, etc.)

(10) Document that describes other relevant references

3-5-2 Documents Attached to the Application Form When Making the First Application for Flight Permission in the Second Phase

- (1) Copy of application form (used as written permission issued to the applicant): 1 copy
- (2) Documents that described name of passengers and the purpose of boarding. (In the cases where there is no passenger, this document may be substituted by describing that information in the remarks column of application): 1 copy
- (3) Return-addressed envelope (postage attached): 1 envelope
- (4) Copy of written permission issued previously: 1 copy
- (5) Document that describes the results of the first-phase flight (the number of flights, flight time, etc.) and the evaluation by the pilot of the results, as well as problems that occurred during such flights and remedial actions for the problems: 1 copy
- (6) If minor alteration was performed on the structures, systems, etc. as a result of the first-phase flight, document that demonstrates conformity with the Airworthiness Inspection Manual in regard to the altered part, an overview of the alteration and the strength, performance, etc. pertaining to the alteration: 1 copy
- (7) Document that describes the overview of periodic inspection conducted after the previous permission was given: 1 copy
- (8) Documents concerning flight location and flight zone, etc. (for an applicant who currently has

permission given to his/her other amateur-built aircraft, etc. under the same conditions as his/her new amateur-built aircraft, or has received such permission before, a part or the whole of the following documents for attachment may be omitted by providing this information): 1 copy each

- a. Document that describes the overview of the location used for takeoff and landing and flight zone (map that shows such a location and the airspace, etc.) and that demonstrates the availability of the location used for takeoff and landing (land-use permission or use permission from the land manager, etc.)
- b. Document that describes measures to ensure the safety (protection) of persons on board, persons on the ground, houses, or property during the flight (operational limitations on the aircraft [aircraft operation procedures for emergencies must be included], safety management manuals created by the applicant, etc.)
- c. Document that demonstrates the flight will have no adverse effects (noise, etc.) on the living environment of residents in the vicinity of the flight zone (explanatory documents with maps, topographical maps, etc. and the like)
- d. If the applicant is a person other than the aircraft owner, document that demonstrates the owner's agreement to the flight (consent form or letter of proxy, etc.)

(9) Document that describes other relevant references

Note: For an applicant who currently has permission given to his/her other amateur-built aircraft, etc. under the same conditions as his/her new amateur-built aircraft, or has received such permission before, a part or the whole of the following documents of (8) listed above for attachment may be omitted by providing this information.

3-5-3 Documents Attached to the Application Form for Renewal of Flight Permission in the Second Phase

- (1) Copy of application form (used as written permission issued to the applicant): 1 copy
- (2) Documents that described name of passengers and the purpose of boarding. (In the cases where there is no passenger, this document may be substituted by describing that information in the remarks column of application): 1 copy
- (3) Return-addressed envelope (postage attached): 1 envelope
- (4) Copy of written permission issued previously: 1 copy
- (5) Document that describes the results of the previous flight permission (the number of flights, flight time, etc.) and the evaluation by the pilot of the results, as well as problems that occurred during such flights and remedial actions for the problems: 1 copy
- (6) If minor alteration was performed on the structures, systems, etc. as a result of the previous flight permission, document that demonstrates conformity with the Airworthiness Inspection

Manual in regard to the altered part, an overview of the alteration, and the strength, performance, etc. pertaining to the remodeling: 1 copy

(7) Document that describes the overview of periodic inspection conducted after the previous permission was given: 1 copy

(8) Documents concerning flight location and flight zone, etc. (for an applicant who currently has permission given to his/her other amateur-built aircraft, etc. under the same conditions as his/her new amateur-built aircraft, or has received such permission before, a part or the whole of the following documents for attachment may be omitted by providing this information): 1 copy each

a. Document that describes the overview of the location used for takeoff and landing and flight zone (map that shows such a location and the airspace, etc.) and that demonstrates the availability of the location used for takeoff and landing (land-use permission or use permission from the land manager, etc.)

b. Document that describes measures to ensure the safety (protection) of persons on board, persons on the ground, houses, or property during the flight (operational limitations on the aircraft [aircraft operation procedures for emergencies must be included], safety management manuals created by the applicant, etc.)

c. Document that demonstrates the flight will have no adverse impacts (noise, etc.) on the living environment of residents in the vicinity of the flight zone (explanatory documents with maps, topographical maps, etc. and the like)

d. If the applicant is a person other than the aircraft owner, document that demonstrates the owner's agreement to the flight (consent form or letter of proxy, etc.)

(9) Document that describes other relevant references: 1 copy

Note: For an applicant who currently has permission given to his/her other amateur-built aircraft, etc. under the same conditions as his/her new amateur-built aircraft, or has received such permission before, a part or the whole of the following documents of (8) listed above for attachment may be omitted by providing this information.

3-5-4 Documents Attached to the Application Form for change of the flight area, the pilot and the fellow passenger

(1) Copy of application form (will be used as written permission issued to the applicant): 1 copy

(2) Documents that described name of passengers and the purpose of boarding. (In the cases where there is no passenger, this document may be substituted by describing that information in the remarks column of application): 1 copy

(3) Return-addressed envelope (postage attached): 1 envelope

(4) Copy of written permission issued previously: 1 copy

- (5) Documents describe the difference of permission which issued previously: 1 copy
- (6) Document that describes other relevant references: 1 copy

3-6 Destinations where Application Form, etc. Should Be Submitted

Application Form for Test Flight Permission, etc. must be submitted to the following Airworthiness Engineering Office of Air Traffic Services and Safety Department at the Regional Civil Aviation Bureau that exercises jurisdiction over the applicable flight areas.

- (1) If the flight area is in or east of Shizuoka Prefecture, Nagano Prefecture, and Niigata Prefecture, the destination is as follows.

Airworthiness Engineer, Air Traffic Service and Safety Department
East Japan Civil Aviation Bureau
Ministry of Land, Infrastructure, Transport and Tourism
Kudan Common Government Office Bldg. No. 2
Kudan Minami 1-1-15, Chiyoda-ku, Tokyo 102-0074
Tel.: 03-5275-9325

- (2) If the flight area is in or west of Aichi Prefecture, Gifu Prefecture, and Toyama Prefecture, the destination is as follows.

Airworthiness Engineer, Air Traffic Service and Safety Department
West Japan Civil Aviation Bureau
Ministry of Land, Infrastructure, Transport and Tourism
Osaka Common Government Office Bldg. No. 2 Annex
Otemae 4-1-67, Chuo-ku, Osaka City, Osaka 540-0008
Tel.: 06-6949-6235

3-7 Evaluation

Evaluation shall be conducted by document review as well as on-site inspection where necessary.

3-8 Conditions for Permission

- (1) Permission is given under the condition of strict compliance with the Precautions for Safety of Amateur-Built Aircraft listed in Paragraph 3-12 of this JCAB Circular.

3-9 General Policies

- (1) Permission is given only to flights that are originally intended to be flown by aircraft fans, and not given to flights intended for passenger/cargo transport, chemical spraying, etc. that contradict the purpose of this original intent.
- (2) Persons on board other than the pilot are limited to persons required for flight operation, such

as measurement personnel and maintenance personnel.

- (3) Application must start with the first-phase flight; subsequent applications must be made in a phased manner.
- (4) If the aircraft was altered by the applicant on his/her own or if a special repair was made due to accident, damage, etc., the application must start with the first-phase flight again, even if permission for the second-phase flight has already been given.
- (5) In order to prevent adverse effects (noise, etc.) on the living environment of residents in the vicinity of the flight zone, the person who applies for permission (hereinafter referred to as "applicant") is responsible for undertaking necessary coordination to obtain permission to use the location for takeoff and landing, and an agreement on the flight from the residents in the vicinity, to avoid problems from occurring.
- (6) In principle, permission is given under the condition of strict compliance with the Precautions for Safety of Amateur-Built Aircraft listed in Paragraph 3-11 of this JCAB Circular; therefore, the applicant must be well familiar with the precautions. Other requirements may be added for permission if it is deemed necessary to ensure safety.
- (7) Applicant must fully confirm the safety of the amateur-built aircraft before application.
- (8) The applicant may enter "A person who has obtained permission under Article 28 paragraph 3 of the Civil Aeronautics Act pertaining to the aircraft in this application" in the column of "The name and qualification of the pilot" in the application of permission for test flights(Form 3). In the event of an application for permission based on this description, the application for change in Article 3-5-4 of this Circular shall not be required only if the pilot is changed during the permitted period of the application.

3-10 Permission Periods

In principle, the periods for flight permission are as follows.

- | | |
|--|--------------------|
| (1) First-phase flight | Within four months |
| (2) First attempt at second-phase flight | Within two months |
| (3) Renewal of the second-phase flight | Within four months |

3-11 Revocation of Permission

Permission may be revoked in cases that fall under any of the following.

- (1) Where a complaint has arisen from the residents in the vicinity of the flight zone due to noise, etc.
- (2) Where a problem has arisen with the land owner or manager about the use of the location for takeoff and landing
- (3) Where the applicant is deemed to have failed to comply with the Aviation Act and the conditions

for permission

- (4) Where it is found that there is discrepancy between the information that has been submitted and the facts
- (5) Where any event arises that is deemed appropriate to revoke permission

3-12 Precautions for Safety of Amateur-Built Aircraft

Precautions necessary to ensure the safety of amateur-built aircraft are as follows.

3-12-1 General

- (1) In principle, the flight area for amateur-built aircraft is limited to the airspace in the vicinity of an aerodrome excluding the airspace over persons, houses, or properties. In this case, it is prohibited to fly in a control area or control zone, and aircraft must fly in compliance with the provisions of Article 81 of the Civil Aeronautics Act and Article 174 of the Ordinance for Enforcement of the Civil Aeronautics Act (Minimum Safe Altitude).
- (2) The applicant is responsible for production, maintenance, and operation of the amateur-built aircraft for which he/she has applied; therefore, even if the amateur-built aircraft faces trouble that results in a crash landing or accident, the applicant is required not only to be fully careful not to inflict harm on the lives and property of persons other than those on board, but also to prepare appropriate aircraft operation procedures for emergencies (it is preferable to take out insurance).
- (3) It is prohibited to conduct flights that contradict the purpose of the original intent, such as passenger/cargo transport and chemical spraying.
- (4) Flight permission is given to flights that accumulate experience and are conducted in a phased manner; therefore, granting of permission should not be interpreted as a certificate of safety for the amateur-built aircraft for which he/she has applied.
- (5) Use beyond the scope of permission will be subject to punishment under Article 143 of the Civil Aeronautics Act. Primarily, a flight without permission of the proviso of Article 11, paragraph (1) of the Civil Aeronautics Act will be subject to punishment under Article 143 of the Civil Aeronautics Act.
- (6) Equipment that measures airspeed and altitude must be installed.

3-12-2 Precautions for Production of Amateur-Built Aircraft

- (1) *The Airworthiness Inspection Manual* (published by Hobun Shorin Co. Ltd.) is available as a reference for design standards.
- (2) *The Aircraft Maintenance Work Standards* (FAA Published Advisory Circular 43.13, Japan Aeronautical Engineers Association), etc. are available as references for working methods, including steel pipe structure, wooden structure, and steel structure as well as other working methods for amateur-built aircraft.

- (3) Safety belts for persons on board must be installed.
- (4) Necessary measures must be taken to prevent serious injury to persons on board at the time of emergency landing by avoiding forming parts that include sharp corners or edges, projections, knobs, etc. or by installing protective pads, etc.
- (5) It is preferable to install equipment that measures the temperature of engine cylinders and equipment that measures the rotational speed of the engine.
- (6) The aircraft identification number must be displayed in a durable manner.

3-12-3 Precautions for Flight Operations

3-12-3-1 Ground Test Operation and Ground (Water Surface) Running

- (1) Applicant must confirm that the installation and functionality of structures and systems (flight control system, fuel system, and other systems) are free of abnormalities.
- (2) Ground test operation (Operation when the aircraft is in a stop state)

Applicant must confirm that the engine is able to operate without problem after maintaining the tested engine in a state of anticipated flying posture for two or more hours in total for the period from low-speed state to full-throttle state. (If the engine manufacturer provides a recommended operating time, the applicant must follow it.) The engine must be handled in compliance with the instructions provided by the manufacturer. Applicant must confirm that vibration, etc. occurring during test operation do not cause any problem to the installation and functionality of structures and systems.

For helicopters, special attention must be paid to the precautions listed below.

- (2-1) Ground resonance must be taken into special consideration in operating a helicopter equipped with a fully articulated rotor system with three or more blades. Advance in ground resonance can unbalance the blades and create an extremely dangerous situation that may result in rollover or structural collapse.
- (2-2) Evaluation through hovering and other flights to determine whether or not the safety, vibration, and balance of a helicopter are appropriate must be performed after the helicopter is tied down and the propensity is confirmed.
- (3) Ground (water surface) running

For fixed-wing aircraft, ground (water surface) running of one or more hours in total must be performed. The running must include more than eight high-speed ground (water surface) running attempts. In addition, the running must include ground running performed with the nose wheels or tail wheels floated from the ground surface for more than 30 minutes.

After each set of several ground (water surface) running tests, at least, the applicant must inspect the status of the main mounting bolts and the aircraft as a whole in detail. Where necessary, torque inspection must be conducted, which is also for the purpose of additional tightening. For torque inspection, special attention must be paid to overtorque, which may result in damaging

bolts.

Detailed inspection must be carried out for the flight control system, power system, etc. and the aircraft as a whole after ground (water surface) running is performed in order to confirm that all of them are free of abnormalities. For inspection, special attention must be paid to the installation of propellers, engines, main wings, tails, rotors, landing gears, etc., as well as to the connecting parts of these flight control systems.

If the results of the ground test operation and ground (water surface) running are completely free of abnormalities and it is deemed appropriate to make the transition to jump flight, the applicant may apply for permission for the first-phase flight.

3-12-3-2 First-Phase Flight (Jump Flight)

Prior to the first-phase flight, ground test operation and ground (water surface) running must be performed. If the results of the ground test operation and ground (water surface) running are completely free of abnormalities and it is deemed appropriate to make the transition to flight, the applicant may perform a flight that slightly floats in the air with an altitude of three meters or less.

In the first phase, more than 20 flights must be conducted; for every single flight, the applicant must inspect the aircraft as a whole in detail in order to confirm that the aircraft is free of abnormalities. In particular, detailed inspection must be conducted for the flight control system and power system.

With careful attention to the controllability, reaction (vertical and horizontal directions), etc. of the flight control system, the applicant must obtain and utilize data concerning operational limitations and operation procedures that are deemed essential for safe flight. If the results of the first-phase flight are completely free of abnormalities and it is deemed appropriate to make the transition to a flight in the vicinity of an aerodrome, the applicant may apply for permission for the second-phase flight.

3-12-3-3 Second-Phase Flight (Flight in the vicinity of an aerodrome)

The second-phase flight must, in accordance with the environmental conditions of the location used for takeoff and landing, be conducted by performing straight flight and shallow turning to the extent possible at a minimum altitude required to ensure the safety. After that flight, altitude must be increased gradually in consideration of the previous flight conditions. In principle, more than ten flights with the same configuration must be conducted.

With special attention to the controllability and reaction of the flight control system for every single flight, the applicant must obtain and utilize data concerning operational limitations and operation procedures for the next-phase flight.

Flight must start with moderate maneuvers. Aerobatics such as steep turns and loop flight, and drastic motions such as nosedives, must not be performed.

Detailed inspection of the aircraft as a whole must be carried out before and after each flight in order to confirm that the aircraft is free of abnormalities.

If the results of the second-phase flight are completely free of abnormalities and it is deemed appropriate to continue flights in this condition, the applicant may apply for renewal of permission for the second-phase flight.

3-12-3-4 Amateur-built aircraft have the possibility to cause serious accidents due to fatigue fracture of structural members; therefore, even if his/her aircraft seems safe in terms of past successful performance, the applicant should keep this in mind and conduct sufficient inspection.

3-12-4 Other Precautions for Flight Operation

3-12-4-1 Aircraft that requires assembly work prior to flight must be assembled by experienced persons in accordance with proper assembly procedures.

3-12-4-2 Persons on board must wear a helmet and clothes suited for flight.

3-12-4-3 Persons on board flying over the water must wear a life jacket.

3-12-4-4 Prior to flight, necessary safety measures must be taken to prevent accidents.

Personnel responsible for limiting people's access, rescue personnel, and rescue equipment must be placed at the location used for takeoff and landing. In addition, appropriate communication methods, including a transceiver, hand-flags, etc. must be prepared in advance.

3-12-4-5 For flight operation, the safety management manuals, etc. developed by the applicant must be observed.

3-12-4-6 For flight, the applicant must pay full attention to the aircraft's motion characteristics and also note that drastic or excessive maneuvering must not be performed.

3-12-4-7 Flight is allowed to be conducted only during daytime hours with visual metrological conditions. Instrument navigation flight (flight over clouds and flight over the ocean) must not be performed. Flight must not be conducted when there is a possibility of icing on the aircraft or of flying over clouds, or when the wind is strong or the weather is inclement.

3-12-4-8 When performing takeoff and landing, equipment that indicates wind direction, such as a windsock, must be placed.

3-12-4-9 The applicant must strive to prevent adverse effects (noise, etc.) on the living environment of residents in the vicinity of the flight zone.

3-12-4-10 Flight must not be conducted if the aircraft has even very slight signs of malfunction.

3-12-4-11 For flight, inspection must be conducted before and after the flight. Maintenance work must be properly performed in accordance with the inspection items in the instructions, etc. developed by the designer or manufacturer.

3-12-4-12 If the aircraft was purchased as or produced through a kit, etc. and the flight method of the aircraft is specified by the state of manufacture or the manufacturer, the applicant must follow it.

3-12-4-13 For flight, the applicant must always carry the written permission for test flight, etc. or its copy with him/her.

3-12-4-14 The applicant must pay careful attention to the case that permission may be revoked in the event that his/her conduct falls under the Revocation of Permission specified in Paragraph 3-11 of this JCAB Circular.

3-12-5 Storage and Utilization of Records

The applicant must prepare a record book (a document that describes items equivalent to flight logbook specified in the Civil Aeronautics Act) of the aircraft and record necessary items in this record book so as to utilize the data for future maintenance and flight operation.

If the aircraft is handed over to a new owner or user, this record book must also be transferred to them.

Supplementary Provisions

1. This Circular shall be enforced on April 1, 2002. However, until September 30, 2002, it is accepted to comply with the previous Circular No. 1-005. In addition, the permits, etc. currently in effect at the time of this Circular remains in effect.

Supplementary Provisions (June 30, 2011)

1. This Circular shall be enforced on July 1, 2011.

Supplementary Provisions (March 20, 2015)

1. This Circular shall be enforced on March 20, 2015.
2. The previous types of Forms 1 and 2 will be in force until the day on which six months have elapsed from the date of this Circular application.

Supplementary Provisions (March 30, 2018)

1. This Circular shall be enforced on April 1, 2018.

Supplementary Provisions (December 24, 2020)

1. This Circular shall be enforced on January 1, 2021.

Please contact for questions or comments (as to the system, etc.) regarding this Circular to:

Airframe Section, Airworthiness Division, Aviation Safety and Security Department,
Civil Aviation Bureau, Ministry of Land, Infrastructure and, Transport and Tourism
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Tel 03-5253-8735

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