

## ข้อกำหนดของสำนักงานการบินพลเรือนแห่งประเทศไทย

### ฉบับที่ ๗๑

ว่าด้วยประเภทอากาศยานและส่วนประกอบสำคัญของอากาศยานที่มีวัตถุประสงค์เฉพาะตามลักษณะของการใช้งานที่ให้ผลิตตามแบบโดยไม่ต้องมีใบรับรองแบบ และหลักเกณฑ์และวิธีการผลิตอากาศยานหรือส่วนประกอบสำคัญของอากาศยานที่ไม่ต้องมีใบรับรองแบบ และการผลิตขึ้นส่วนรับรองคุณภาพที่ติดตั้งกับอากาศยานและส่วนประกอบสำคัญที่ไม่ต้องมีใบรับรองแบบ

(Thailand Civil Aviation Regulation - Airworthiness Part - 21 Non-Type Certificated Products Certification (TCAR AIR PART - 21 Non - TC))

อาศัยอำนาจตามความในมาตรา ๖/๑ มาตรา ๓๖ วรรคสาม มาตรา ๔๑/๒๐ วรรคสอง และมาตรา ๔๑/๓๖ วรรคสอง แห่งพระราชบัญญัติการเดินอากาศ พ.ศ. ๒๔๙๗ ซึ่งแก้ไขเพิ่มเติมโดยพระราชกำหนดแก้ไขเพิ่มเติมพระราชบัญญัติการเดินอากาศ พ.ศ. ๒๔๙๗ พ.ศ. ๒๕๕๘ ผู้อำนวยการสำนักงานการบินพลเรือนแห่งประเทศไทยจึงออกข้อกำหนดเพื่อระบุประเภทอากาศยานและส่วนประกอบสำคัญของอากาศยานที่มีวัตถุประสงค์เฉพาะตามลักษณะของการใช้งาน ให้ผลิตตามแบบโดยไม่ต้องมีใบรับรองแบบ และกำหนดหลักเกณฑ์และวิธีการสำหรับการผลิตอากาศยานหรือส่วนประกอบสำคัญของอากาศยานที่ไม่ต้องมีใบรับรองแบบ และการผลิตขึ้นส่วนรับรองคุณภาพสำหรับใช้ติดตั้งกับอากาศยานหรือส่วนประกอบสำคัญของอากาศยานที่ไม่ต้องมีใบรับรองแบบ เพื่อให้มีความปลอดภัยในการใช้งานไว้ ดังต่อไปนี้

ข้อ ๑ ข้อกำหนดนี้เรียกว่า “ข้อกำหนดของสำนักงานการบินพลเรือนแห่งประเทศไทย ฉบับที่ ๗๑ ว่าด้วยประเภทอากาศยานและส่วนประกอบสำคัญของอากาศยานที่มีวัตถุประสงค์เฉพาะตามลักษณะของการใช้งานที่ให้ผลิตตามแบบโดยไม่ต้องมีใบรับรองแบบ และหลักเกณฑ์และวิธีการผลิตอากาศยานหรือส่วนประกอบสำคัญของอากาศยานที่ไม่ต้องมีใบรับรองแบบ และการผลิตขึ้นส่วนรับรองคุณภาพที่ติดตั้งกับอากาศยานและส่วนประกอบสำคัญที่ไม่ต้องมีใบรับรองแบบ (Thailand Civil Aviation Regulation - Airworthiness Part - 21 Non-Type Certificated Products Certification (TCAR AIR PART - 21 Non - TC))”

ข้อ ๒ ข้อกำหนดนี้ให้ใช้บังคับเมื่อพ้นกำหนดสองปีนับแต่วันประกาศในราชกิจจานุเบกษา

ข้อ ๓ ในข้อกำหนดนี้

“ผู้ออกแบบผลิตภัณฑ์” (Declared Design Organisation) หมายความว่า หน่วยงานที่เป็นผู้ออกแบบอากาศยาน หรือส่วนประกอบสำคัญของอากาศยานที่ไม่ต้องมีใบรับรองแบบ หรือเป็นผู้ออกแบบชิ้นส่วนรับรองคุณภาพ สำหรับใช้ติดตั้งกับอากาศยานและส่วนประกอบสำคัญที่ไม่ต้องมีใบรับรองแบบและออกแบบการแก้ไขเปลี่ยนแปลงหรือซ่อมอากาศยาน แล้วแต่กรณี

“ผู้ผลิตผลิตภัณฑ์ (Production Organisation)” หมายความว่า ผู้ได้รับใบอนุญาตผลิตอากาศยาน หรือส่วนประกอบสำคัญของอากาศยานที่ไม่ต้องมีใบรับรองแบบ หรือผู้ได้รับใบอนุญาตผลิตชิ้นส่วนรับรองคุณภาพที่ติดตั้งกับอากาศยานและส่วนประกอบสำคัญที่ไม่ต้องมีใบรับรองแบบ แล้วแต่กรณี

“ผลิตภัณฑ์ที่ไม่ต้องมีใบรับรองแบบ” หมายความว่า อากาศยานหรือส่วนประกอบสำคัญของอากาศยานที่ไม่มีใบรับรองแบบ หรือชิ้นส่วนรับรองคุณภาพ บริษัท หรือชิ้นส่วนมาตรฐานที่ผลิตขึ้นสำหรับใช้ติดตั้งกับอากาศยานหรือส่วนประกอบสำคัญที่ไม่ต้องมีใบรับรองแบบ แล้วแต่กรณี

“อากาศยานเบาพิเศษ” หมายความว่า อากาศยานหนักกว่าอากาศซึ่งได้รับแรงยกในการบินส่วนใหญ่จากแรงพลวัตของอากาศและมีน้ำหนักสูงสุดเมื่อบินขึ้นตามที่ระบุไว้ในคู่มือการบินไม่เกินห้าร้อยกิโลกรัม และให้หมายความถึงอากาศยานเบาพิเศษประเภทร่มบิน (Paramotor) ร่มร่อน (Paraglider) พาราเพลน (Paraplane) และแฮงไกลเดอร์ (Hangglider) หรืออากาศยานอื่นทำนองเดียวกันที่ผู้อำนวยการกำหนด

“อากาศยานเบา” (Light Aircraft) ได้แก่ อากาศยานใด ๆ นอกจากเฮลิคอปเตอร์ อากาศยานขึ้นลงทางดิ่ง (powered-lift) และไจโรเพลน (Gyroplane) และถูกผลิตภายใต้ระบบประกันคุณภาพที่เป็นไปตามมาตรฐานของสมาคมการทดสอบและวัสดุของสหรัฐอเมริกา (American Society for Testing and Materials: ASTM) หรือมาตรฐานอื่นที่เทียบเท่า และได้รับเอกสารการปฏิบัติตามข้อบังคับจากผู้ผลิต (Manufacturer Statement of Compliance)

“ผู้อำนวยการ” หมายความว่า ผู้อำนวยการสำนักงานการบินพลเรือนแห่งประเทศไทย

ข้อ ๔ อากาศยานและส่วนประกอบสำคัญของอากาศยานที่มีวัตถุประสงค์เฉพาะตามลักษณะของการใช้งานที่ให้ผลิตตามแบบโดยไม่ต้องมีใบรับรองแบบ หรือผลิตตามมาตรฐานอื่นนอกเหนือจากมาตรฐานความสมควรเดินอากาศได้ มีดังต่อไปนี้

(๑) อากาศยานเบาพิเศษ

(๒) อากาศยานเบา (Light Aircraft)

(๓) อากาศยานเพื่อการทดลอง (Experimental) ซึ่งใช้ทำการบินเพื่อวัตถุประสงค์ ดังต่อไปนี้

(ก) วิจัยและพัฒนา (Research and development) การออกแบบอากาศยานแบบใหม่ ส่วนประกอบหรืออุปกรณ์ใหม่ เทคนิคการใช้งานอากาศยานแบบใหม่

(ข) แข่งขันการบิน (Air racing)

(ค) แสดงนิทรรศการ (Exhibition)

(ง) ฝึกสอนผู้ประจำหน้าที่ของผู้ซื้ออากาศยาน (Customer Crew Training) ในการซื้อขาย อากาศยาน

(จ) ปฏิบัติการบินด้วยอากาศยานประกอบเองแบบสมัครเล่น (Operating Amateur-Built) ซึ่งถูกประดิษฐ์และประกอบโดยบุคคลเพื่อใช้สำหรับบินพักผ่อนหย่อนใจ (Recreation) หรือการศึกษา (Education) ของตัวเอง

(ฉ) ปฏิบัติการบินด้วยอากาศยานเบา (Operating light-sport aircraft) ที่ถูกประกอบโดยใช้ ชุดอากาศยานประกอบ (Aircraft Kit) ตามคำแนะนำการประกอบของผู้ผลิต หรือเป็นอากาศยาน ที่เคยได้รับใบสำคัญสมควรเดินอากาศแบบพิเศษ ประเภทที่ ๔

(ช) วัตถุประสงค์อื่นที่ผู้อำนวยการกำหนด

ข้อ ๕ ผู้ออกแบบผลิตภัณฑ์ ผู้ผลิตผลิตภัณฑ์ หรือผู้ดำเนินการในฐานะของผู้ออกแบบ หรือผู้ผลิตผลิตภัณฑ์ ต้องดำเนินการออกแบบหรือผลิตผลิตภัณฑ์ที่ไม่ต้องมีใบรับรองแบบให้เป็นไปตามมาตรฐานที่กำหนดไว้ ดังต่อไปนี้

(๑) General Provisions

(๒) Declarations of Aircraft Design Compliance

(๓) Changes to Aircraft

(๔) Production Certificates

(๕) Special Certificate of Airworthiness Type IV

(๖) Declared Design Organisations

(๗) Parts

(๘) Design of Repairs to Aircraft

(๙) Flight Test Permit

(๑๐) Identification of Products and Parts

(๑๑) Statement of Conformity

ข้อ ๖ รายละเอียดเพิ่มเติมตามข้อ ๕ ให้เป็นไปตามที่กำหนดไว้ใน

(๑) Cover regulation to TCAR AIR - Airworthiness Part - 21 Non - TC Issue 01 Revision 00 Date 18 October 2024 แนบท้ายข้อกำหนดนี้ และที่แก้ไขเพิ่มเติม

(๒) Thailand Civil Aviation Regulation - Airworthiness Part - 21 Non-Type Certificated Products Certification (TCAR AIR PART - 21 Non - TC) Issue 01 Revision 00 Date 18 October 2024 แนบท้ายข้อกำหนดนี้ และที่แก้ไขเพิ่มเติม

ให้ไว้ ณ วันที่ ๑๘ ตุลาคม พ.ศ. ๒๕๖๗

สุทธิพงษ์ คงพล

ผู้อำนวยการสำนักงานการบินพลเรือนแห่งประเทศไทย



Cover Regulation to TCAR AIR Part - 21 Non - TC  
(Non - Type Certificated Products Certification)

Issue 01

Revision 00

Date 18 Oct 2024

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Suttipong Kongpool

Director General

The Civil Aviation Authority of Thailand

Thailand Civil Aviation Regulation (TCAR)

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## RECORD OF REVISION

<b>Revision No.</b>	<b>Date (DD-MMM-YYYY)</b>	<b>Subject</b>	<b>Updated By (Department-Division)</b>
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## COVER REGULATION

### Article 1 Scope and definitions

1. This Regulation lays down, in accordance with Air Navigation Act section 36 paragraph 3, section 41/20 and 41/36, common technical requirements and administrative procedures for the airworthiness certification of non-type certificated aircraft and non-type certificated major aircraft appliance including products, parts and appliances specifying:

- (a) the issue of special certificates of airworthiness type IV and authorised release certificates;
- (b) the identification of products, parts and appliances;
- (c) the certification of certain parts and appliances;
- (d) the certification of production organisations;
- (e) the issue of airworthiness directives;
- (f) the making of declarations of design compliance and changes to those declarations;
- (g) the making of declarations of design capability.

2. For the purpose of this Regulation, the following definitions shall apply:

- (a) “Part-21 Non-TC” means the requirements and procedures for the declaration of design compliance of aircraft intended primarily for sports and recreational use and related products and parts, including declaration of design capability of organisations and certification of production organisation laid down in this Regulation;
- (b) “principal place of business” means the head office or registered office of the undertaking within which the principal financial functions and operational control of the activities referred to in this Regulation are exercised;

### Article 2 Declaration of design compliance of products, parts and appliances

A declaration of design compliance may be made, as specified in this regulation for the following products:

1. An aeroplane of 1,200 kg MTOM or less that is not jet-powered and with a maximum operational seating configuration of two persons;
2. A sailplane or a powered sailplane of 1,200 kg MTOM or less;
3. A balloon designed for not more than four persons;
4. A hot air airship designed for not more than four persons.

### Article 3 Technical specifications

1. Non-Type Certificated aircraft

Design of Non-Type Certificated aircraft as specified in Article 2 shall conform to one of following technical specifications as applicable;

- (a) EASA Detailed Technical Specifications and Guidance Material for the declaration of design compliance in accordance with Part 21 Light, Section A, Subpart C (DS-21LD)
  - (b) FAA Accepted ASTM Consensus Standards - LSA
  - (c) Amateur-Built Aircraft technical specifications prescribed by Contracting States acceptable to CAAT
2. Non-Type Certificated major aircraft appliance
- Design of Non-Type Certificated major aircraft appliance shall conform to technical specifications of engine and/ or propeller to be installed on Non-Type Certificated aircraft specified in point 1. (a), 1. (b) or 1. (c) as applicable.
3. Aircraft Replacement Parts for Non-Type Certificated Product
- Design of Aircraft Replacement Parts for Non-Type Certificated Product shall conform to technical specifications of aircraft replacement parts to be installed on Non-Type Certificated aircraft or Non-Type Certificated major aircraft appliance specified in point 1. (a), 1. (b) or 1. (c) as applicable.
4. Standard Changes and Standard Repairs
- EASA CS-STAN

#### **Article 4 Manufacturing standards**

The products, parts or appliances shall be manufactured according to information on the materials and processes used including methods of manufacture and assembly as specified in aircraft design data prescribed under Subpart C of this regulation to ensure such products are in compliance with technical specifications prescribed in point article 3.

#### **Article 5 Flight Test Permit**

The flight test permit and flight conditions relate to the demonstration of compliance activities for an aircraft for which design compliance is, or is intended to be, declared prescribed under this Regulation.

#### **Article 6 Design organisations**

Natural or legal persons involved in the design of aircraft subject to a declaration of design compliance referred to in Article 2 need demonstrate their capability in accordance with this regulation.

#### **Article 7 Production organisations**

An organisation responsible for the manufacture of products, parts and appliances shall demonstrate its capability in accordance with the provisions of this regulation. This demonstration of capability is not required for the parts or appliances that an organisation manufactures which, in accordance with the provisions of this regulation, are eligible for installation in a declared design product without the need to be accompanied by an authorised release certificate (i.e. CAAT Form 1).

#### **Article 8 Director General measures**

1. The Director General shall develop acceptable means of compliance (“AMC”) which competent official, organisations and personnel may use to demonstrate compliance with this regulation.
2. The AMC issued by Director General shall neither introduce new requirements nor alleviate the requirements of this regulation.



Thailand Civil Aviation Regulation - Airworthiness  
Part 21 - Non -Type Certificated Products Certification  
(TCAR AIR Part - 21 Non-TC)

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Suttipong Kongpool

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The Civil Aviation Authority of Thailand

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## Subpart A - General Provisions

### 21N.A.1 Scope

This Thailand Civil Aviation Regulation (TCAR) establishes general rights and obligations that are applicable to:

- (a) the applicant for, and holder of, any certificate issued or to be issued in accordance with this regulation;
- (b) any declarant of design capability or of design compliance; and
- (c) any natural or legal person issuing a statement of conformity for an aircraft, or an authorised release certificate (CAAT Form 1) for an engine, propeller or part produced.

### 21N.A.2 Obligations and actions performed by a person other than the applicant for, or holder of, a certificate or the declarant of a declaration of design compliance

The actions and obligations required to be undertaken by the applicant for, or holder of, a certificate for a product or part or by the declarant of a declaration of design compliance under this regulation may be undertaken on its behalf by any other natural or legal person, provided that the applicant's, holder's or declarant's obligations are and will be properly discharged.

### 21N.A.3 Reporting system

- (a) any natural or legal person who holds or has applied for a production certificate, or any other relevant certificate deemed to have been issued under this regulation, or who has declared the compliance of an aircraft design, or a design change or repair design to it under this regulation shall:
  - 1. establish and maintain a system for collecting, investigating and analysing occurrence reports in order to identify adverse trends or to address deficiencies, and to extract occurrences, whose reporting is mandatory in accordance with point (3) and those which are reported voluntarily. The reporting system shall include:
    - (i) reports of and information related to failures, malfunctions, defects or other events which cause or might cause adverse effects on the continuing airworthiness of the product or part covered by any other relevant certificate deemed to have been issued under this regulation, or by the declaration of design compliance issued under this regulation;
    - (ii) reports of errors, near misses, and hazards that do not fall under point (i);
  - 2. make available to known operators of the product or part, and, on request, to any person authorised under other associated implementing regulations, the information about the system established in accordance with point (a)(1), and on how to provide such reports of and information related to failures, malfunctions, defects or other events referred to in point (a)(1)(i);
  - 3. report to CAAT any failure, malfunction, defect or other event of which they are aware related to a product or part, covered by the production certificate or any other relevant certificate deemed to have been issued under this regulation, or by a declaration of design compliance issued under this regulation, and which has resulted in or may result in an unsafe condition.

- (b) Any natural or legal person who hold production certificate under Subpart G of this regulation, shall:
1. establish and maintain a system for collecting and assessing internal occurrence reports, including reports on internal errors, near misses, and hazards, in order to identify adverse trends or to address deficiencies, and extract occurrences, whose reporting is mandatory in accordance with points (2) and (3) and those which are reported voluntarily;
  2. report, to the declarant of a declaration of design compliance, all cases in which products or parts have been released by them and subsequently identified to have possible deviations from the applicable design data, and investigate with the declarant of a declaration of design compliance, to identify those deviations which could lead to an unsafe condition;
  3. report to CAAT, the deviations which could lead to an unsafe condition that were identified according to point (2) of point 21N.A.3(b);
  4. if acting as a supplier to another production organisation, report to that other organisation all the cases in which it has released products or parts to that organisation and subsequently identified them to have possible deviations from the applicable design data.

The reporting obligations of point 21N.A.3 (b) of natural and legal persons who hold or have applied for a production certificate shall include occurrences related to products and parts produced in conformity with design data declared in accordance with this regulation, and, where the design compliance was declared, reports shall be made to the declarant of design compliance.

- (c) Any natural or legal person referred to in points (a) and (b) when reporting in accordance with points (a)(3), (b)(2), (b)(3) and (b)(4), shall appropriately safeguard the confidentiality of the reporter and of the persons mentioned in the report.
- (d) Any natural or legal person referred to in points (a) and (b) shall make the reports defined in points (a)(3) and (b)(3) as soon as practicable, and in any case, dispatch the reports not later than 72 hours after the natural or legal person referred to in points (a) and (b) has identified the possible unsafe condition, unless exceptional circumstances prevent this.
- (e) If an occurrence reported under point (a)(3) or under point (b)(3) results from a deficiency in the design, or a production deficiency, the holder of the production certificate, or any other relevant certificate deemed to have been issued under this regulation, the declarant of a declaration of design compliance, shall investigate the reason for the deficiency and report to CAAT, the results of its investigation and any action it is taking or proposes to take to correct that deficiency.
- (f) If CAAT finds that an action is required to correct the deficiency, the holder of the production certificate, or any other relevant certificate deemed to have been issued under this regulation, the declarant of a declaration of design compliance, shall submit the relevant data to CAAT upon its request.

#### **21N.A.4 Airworthiness Directives**

- (a) An airworthiness directive means a document issued or adopted by CAAT in accordance with TCAR AIR Part-39 which mandates actions to be performed on an aircraft to restore an acceptable level of safety, when evidence shows that the safety level of this aircraft may otherwise be compromised.

- (b) CAAT shall issue an airworthiness directive in accordance with TCAR AIR Part-39 when:
1. an unsafe condition has been determined by CAAT to exist in an aircraft, as a result of a deficiency in the aircraft, or an engine, propeller, part or appliance installed on this aircraft; and
  2. that condition is likely to exist or develop in other aircraft.
- (c) When an airworthiness directive has to be issued by CAAT to correct the unsafe condition referred to in point (b), or to require the performance of an inspection, the holder of the production certificate or any other relevant approval deemed to have been issued under this Regulation, shall:
1. propose the appropriate corrective action or required inspections, or both, and submit details of these proposals to CAAT for approval;
  2. following the approval by CAAT of the proposals referred to under point (1), make available to all known operators or owners of the product, part or appliance and, on request, to any person required to comply with the airworthiness directive, appropriate descriptive data and accomplishment instructions.
- (d) An airworthiness directive shall contain at least the following information:
1. an identification of the unsafe condition;
  2. an identification of the affected aircraft;
  3. the action(s) required;
  4. the compliance time for the required action(s);
  5. the date of entry into force.

#### **21N.A.5 Collaboration between design and production**

The holder of a production certificate and the declarant of a declaration of design compliance shall collaborate so as to ensure that the product or part are in conformity to that design and to ensure the continued airworthiness of the product or part.

#### **21N.A.6 Marking**

- (a) The declarant of a declaration of design compliance shall specify the marking for products or parts in accordance with Subpart Q of this regulation.
- (b) The organisation producing products or parts shall mark these products and parts in accordance with Subpart Q of this regulation.

#### **21N.A.7 Record-keeping**

All natural or legal persons who hold or who have applied for a production certificate, who have declared design compliance or who have issued a declaration of design capability under this Regulation shall:

- (a) when designing a product or part or changes or repairs thereto, establish a record-keeping system that incorporates the requirements imposed on its partners and subcontractors and maintain the relevant design information/data and hold it at the disposal of CAAT in order to provide the information necessary to ensure their continued airworthiness;

- (b) when producing a product or part, establish a record-keeping system and record the details of the work relevant to the conformity of the products or parts, and the requirements imposed on its partners and suppliers, and hold them at the disposal of CAAT in order to provide the information necessary to ensure the continuing airworthiness of the product and part;
- (c) retain records of competence and the qualifications of personnel who are involved in design or production and in the independent function to monitor the compliance, if required by points 21N.A.125(c), 21N.A.175(b) or 21N.A.175(e).

### **21N.A.8 Manuals**

The holder of a production certificate or the declarant of a declaration of design compliance shall produce, maintain and update master copies of all the manuals or variations in the manuals required by the applicable technical specifications for the product or part, and provide copies, on request, to CAAT.

### **21N.A.9 Instructions for continued airworthiness**

- (a) The holder of a production certificate or the declarant of a declaration of design compliance shall establish the information which is necessary for ensuring that the airworthiness of the aircraft type and any associated part, conforming to that design, is maintained throughout the operational life.
- (b) The holder of a production certificate or the declarant of a declaration of design compliance shall provide the information established in (a) before that design is released to service.
- (c) The instructions for continued airworthiness shall be provided by:
  - 1. the declarant of a declaration of design compliance to each known owner of one or more products upon its delivery or upon the issuance of the first special certificate of airworthiness for the affected aircraft, whichever occurs later;
  - 2. the declarant of a declaration of design compliance for a design change to all known operators of the product affected by the change upon the release to service of the modified product;
  - 3. the declarant of a declaration of design compliance for a repair design to all known operators of the product affected by the repair upon the release to service of the product in which the repair design is embodied. The repaired product or part may be released into service before the related instructions for continued airworthiness have been completed, but this shall be for a limited service period, and in agreement with CAAT.

Thereafter, these declarants shall make this information available on request to any other person required to comply with those instructions for continued airworthiness.

- (d) By way of derogation from point (b), the declarant of a declaration of design compliance may delay the availability of a part of the instructions for continued airworthiness, dealing with long lead accomplishment instructions of a scheduled nature, until after the product or modified product has entered into service, but shall make those instructions available before the use of this data is required for the product or modified product.
- (e) The declarant of a declaration of design compliance who is required to provide instructions for continued airworthiness in accordance with point (b) shall also make available all the changes to those instructions to all the known operators of the product affected by the change, and, on request, to any other person required to comply with those changes.

### **21N.A.10 Access and investigation**

All natural or legal persons who hold or who have applied for a production certificate, certificate of airworthiness, who have declared design compliance or who have declared their design capability, shall:

- (a) grant the competent official access to any facility, product, part, document, record, data, processes, procedures or any other material, and permit the review of any report and make any inspection and perform or witness any test that is necessary to verify the compliance and the continued compliance with the applicable requirements of this regulation;
- (b) if the natural or legal person uses partners, suppliers or subcontractors, make arrangements with them to ensure that the competent official has access and can investigate as described in point (a).

### **21N.A.11 Findings and observations**

- (a) After the receipt of the notification of findings, the natural or legal person who holds or who has applied for a production certificate, certificate of airworthiness, who has declared design compliance or who has declared their design capability, shall take the following steps within the time period determined by the competent official :
  - 1. identify the root cause(s) of, and contributing factor(s) to, the non-compliance;
  - 2. define a corrective action plan and propose it to the competent official;
  - 3. demonstrate the implementation of the corrective action(s) to the satisfaction of the competent official.
- (b) An observation notified by the competent official shall be given due consideration. The natural or legal person shall record the decision taken in respect of those observations.

### **21N.A.12 Means of compliance**

- (a) A legal or natural person may use any alternative means of compliance to the acceptable means of compliance (AMC) to establish compliance with this Regulation.
- (b) If a natural or legal person wishes to use an alternative means of compliance, they shall, prior to using it, provide the competent official with a full description. The description shall include any revisions to manuals or procedures that may be relevant, as well as an explanation indicating how compliance with this Regulation is achieved.
- (c) The natural or legal person may use those alternative means of compliance subject to prior approval from the competent official.

## **Subpart B - Not Applicable**

## Subpart C - Declarations of Aircraft Design Compliance

### 21N.A.41 Scope

- (a) This Subpart establishes the procedure for declaring the design compliance of aircraft, and establishes the rights and obligations of the persons making such declarations.
- (b) This Subpart applies to the following categories of aircraft, provided that the design of the aircraft does not include novel or unusual design features:
  - 1. an aeroplane with a maximum take-off mass (MTOM) of 1,200kg or less that is not jet-powered, and has a seating configuration of maximum two persons;
  - 2. a sailplane or powered sailplane with an MTOM of 1,200kg or less;
  - 3. a balloon designed for not more than four persons;
  - 4. a hot air airship designed for not more than four persons.

### 21N.A.42 Eligibility

Any natural or legal person may declare the compliance of an aircraft design under the conditions laid down in this Subpart.

### 21N.A.43 Declaration of design compliance

- (a) Prior to producing an aircraft or agreeing with a production organisation to produce an aircraft, a natural or legal person who designs that aircraft shall declare that its design complies with the applicable technical specifications.
- (b) The declaration shall be made in a form and manner established by CAAT and shall contain at least the following information:
  - 1. the name of the person submitting the declaration, and their address/place of business;
  - 2. a unique reference for identifying the aircraft;
  - 3. indication of the applicable technical specifications with which the declarant declares compliance;
  - 4. a signed statement made under the sole responsibility of the person making the declaration that the design of the aircraft, and if applicable the engine or propeller, is in compliance with the applicable technical specifications referred to in point 3, according to the compliance demonstration plan referred to in point (c)(3);
  - 5. a signed statement made under the sole responsibility of the person making the declaration that no features or characteristics have been identified by that person that may make the aircraft unsafe for the intended use;
  - 6. a signed commitment that the person making the declaration will undertake the obligations referred to in point 21N.A.47;
  - 7. if the aircraft design covered by the declaration includes an engine or propeller, in the case of piston engines and fixed pitch propellers, a statement that the declaration of design compliance of the aircraft covers the compliance of the engine or propeller with the applicable engine or propeller technical specifications;

8. the instructions for continued airworthiness;
  9. the operating limitations;
  10. the data sheet for airworthiness;
  11. any other conditions or limitations prescribed for the aircraft, and if applicable the engine or propeller, in the applicable technical specifications with which the declarant declares compliance.
- (c) The declarant shall submit the declaration of design compliance referred to in point (b) to CAAT. Together with this declaration, the declarant shall provide to CAAT:
1. a drawing of the aircraft;
  2. a detailed description of the aircraft design, including all the configurations covered by the declaration, the operating characteristics, design features and any limitations;
  3. a compliance demonstration plan detailing the means by which compliance with the applicable technical specifications has been demonstrated during compliance demonstration;
  4. recorded justifications of compliance obtained from the compliance activities that have been conducted according to the compliance demonstration plan;
  5. where compliance is demonstrated by carrying out tests, recorded justification of the conformity of the test articles and equipment, demonstrating:
    - (i) for the test specimen, that:
      - (A) the materials and processes adequately conformed to the specifications for the design;
      - (B) the constituent parts of the products adequately conformed to the drawings in the design; and
      - (C) the manufacturing processes, construction and assembly adequately conformed to those specified in the design;
    - (ii) that the test and measuring equipment used for the test were adequate for the test and appropriately calibrated;
  6. reports, results of inspections or tests that the declarant found necessary to determine that the aircraft, and if applicable the engine or propeller, complies with the applicable technical specifications.

#### **21N.A.44 Compliance activities for a declaration of design compliance**

Prior to making a declaration of design compliance in accordance with point 21N.A.43, the declarant responsible for design of that aircraft shall, for that specific aircraft design:

- (a) establish a compliance demonstration plan detailing the means for compliance demonstration that shall be followed during the compliance demonstration. This document shall be updated as necessary;
- (b) record the justification of compliance within compliance documents according to the compliance demonstration plan;
- (c) perform testing and inspections as necessary in accordance with the compliance demonstration plan;

- (d) ensure and record the conformity of the test articles and equipment and ensure that the test specimen conforms to the specifications, drawings, manufacturing processes, construction and assembly means in the design;
- (e) ensure that the test and measuring equipment to be used for testing are adequate for testing and appropriately calibrated;
- (f) allow competence official to conduct or participate in any inspections or tests of aircraft in the final or suitably mature design and production configuration that are necessary to determine that the product has no feature or characteristic that makes the aircraft unsafe for the intended use;
- (g) carry out flight testing, in accordance with the methods for such flight testing specified by CAAT, to determine whether the aircraft complies with the applicable technical specifications. The flight testing shall include a period of operation in the final configuration of a sufficient duration to ensure that there will be no safety issues when the aircraft first enters service.

#### **21N.A.45 Technical specifications that are applicable to aircraft subject to declarations of design compliance**

The declarant shall demonstrate the compliance of the aircraft design with the technical specifications as specified in Cover Regulation Article 3, which are applicable to that aircraft and which are effective on the date on which the declaration of design compliance is made to CAAT.

#### **21N.A.46 Aircraft design data**

- (a) The declarant shall clearly define the aircraft design to enable its unique and unambiguous identification.
- (b) The aircraft design data that is used by the declarant to uniquely define the aircraft design shall include:
  - 1. the drawings and specifications and a listing of those drawings and specifications that are necessary to define the configuration and the design features of the product;
  - 2. information on the materials and processes used;
  - 3. information on the methods of manufacture and assembly;
  - 4. any airworthiness limitations; and
  - 5. any other data allowing by comparison the determination of the airworthiness of later products of the same type.

#### **21N.A.47 Obligations of the declarant of a declaration of design compliance**

The declarant who made a declaration of aircraft design compliance to CAAT in accordance with point 21N.A.43 shall:

- (a) upon submission of the declaration, arrange for CAAT to conduct a physical inspection and flight tests of the first article of that aircraft in the final or a suitably mature configuration to ensure that the aircraft can achieve an acceptable level of safety;
- (b) retain all the supporting documents for the declaration of design compliance, and make them available to CAAT upon request;
- (c) comply with all other obligations applicable to a declarant of a declaration of design compliance set forth in Subpart A of this regulation.

**21N.A.48 Non-transferability of a declaration of aircraft design compliance**

- (a) A declaration of aircraft design compliance cannot be transferred.
- (b) A natural or legal person who is taking over the design of an aircraft for which compliance of the design has been previously declared shall:
  - 1. submit a new declaration of aircraft design compliance in accordance with this Subpart;
  - 2. demonstrate that the declarant who previously made a declaration of aircraft design compliance is no longer active or has agreed to the transfer of the aircraft design data;
  - 3. commit to comply with all the obligations applicable to persons making a declaration of aircraft design compliance set forth in this Subpart as per point 21N.A.47.

## **Subpart D - Not Applicable**

## **Subpart E - Not Applicable**

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## Subpart F - Changes to aircraft for which design compliance has been declared

### 21N.A.101 Scope

This Subpart establishes:

- (a) the procedure for declaring the compliance of a change to the design of an aircraft which was subject to a declaration made in accordance with Subpart C of this regulation;
- (b) the rights and obligations of the declarant making a declaration of compliance of the change referred to in point (a); and
- (c) provisions regarding the standard changes that do not require a declaration of design compliance.

### 21N.A.102 Standard changes

- (a) Standard changes are changes to the design of an aircraft which was subject to a declaration made in accordance with Subpart C of this regulation and which:
  - 1. follow the design data included in the certification specifications accepted by CAAT, containing the acceptable methods, techniques and practices for carrying out and identifying standard changes, including the associated instructions for continued airworthiness; and
  - 2. are not in conflict with the design data covered by the declaration of aircraft design compliance made in accordance with Subpart C of this regulation.
- (b) Points 21N.A.103 to 21N.A.108 are not applicable to standard changes.

### 21N.A.103 Classification of changes to the design of an aircraft for which design compliance has been declared

- (a) Changes to the design of an aircraft which was subject to a declaration made in accordance with Subpart C of this regulation shall be classified as minor or major, using the following criteria:
  - 1. A 'minor change' is a change that has no appreciable effect on the mass, balance, structural strength, reliability, operational characteristics, or other characteristics affecting the airworthiness of the product.
  - 2. All other changes are 'major changes', unless the change in design, power, thrust, or mass is so extensive that a substantially complete investigation of compliance with the applicable technical specifications is required.
- (b) The design compliance of a minor change shall be declared in accordance with point 21N.A.105.
- (c) The design compliance of a major change shall be declared in accordance with point 21N.A.107.

### 21N.A.104 Eligibility

- (a) A declarant who made a declaration of aircraft design compliance in accordance with Subpart C of this regulation may declare compliance of a minor change to the design of that aircraft under the conditions laid down in this Subpart.

- (b) Only the declarant who made a declaration of aircraft design compliance in accordance with Subpart C of this regulation may declare the compliance of a major change to the design of an aircraft for which design compliance has been declared in accordance with Subpart C of this regulation, under the conditions laid down in this Subpart.
- (c) By derogation from point (b) of point 21.N.A.104, if the declarant who made a declaration of aircraft design compliance in accordance with Subpart C of this regulation is no longer active or is unresponsive to requests for design changes, the compliance of a changed aircraft design may also be declared in accordance with Subpart C of this regulation by any other natural or legal person who is able to undertake the obligations laid down in point 21.N.A.47 with respect to that changed aircraft.

#### **21N.A.105 Declaration of design compliance for minor changes**

- (a) Prior to installing or incorporating or agreeing with a production organisation to install or incorporate a minor change to the design of an aircraft for which design compliance has been declared in accordance with Subpart C of this regulation the organisation that has designed that minor change shall declare that the design of that minor change complies with:
  - 1. either the technical specifications incorporated by reference in the declaration of design compliance of the aircraft, unless those technical specifications or parts of them are no longer applicable because CAAT has determined that experience from other similar products in service or products that have similar design features has shown that unsafe conditions may develop, and the technical specifications that were referenced in the declaration of design compliance of the aircraft do not address this unsafe condition, or
  - 2. the technical specifications applicable, on the date on which the declaration is made, if chosen by the declarant; and
- (b) The declaration of design compliance shall be made in a form and manner established by CAAT.
- (c) The declarant or the organisation that has designed the minor change shall maintain a acceptance of minor changes to the design of aircraft for which design compliance has been declared, and make any declaration made in accordance with point (a) available to CAAT upon request.

#### **21N.A.106 Obligations of the person making a declaration of compliance of the design of a minor change**

Any person that has made a declaration of compliance of a minor change to an aircraft design in accordance with point 21N.A.105 shall:

- (a) maintain a acceptance of those declarations and shall make those declarations available to CAAT upon request;
- (b) retain all supporting documents for a declaration of design compliance, and make them available to CAAT upon request;
- (c) undertake all other obligations of a declarant of a declaration of design compliance set forth in Subpart A of this regulation.

### 21N.A.107 Declaration of design compliance for a major change

- (a) Prior to installing or incorporating or agreeing with a production organisation to install or incorporate a major change to the design of an aircraft for which design compliance has been declared in accordance with Subpart C of this regulation, the organisation that has designed that major change shall declare that the design of that major change and the areas affected by that change comply with:
1. either the technical specifications incorporated by reference in the declaration of design compliance of the aircraft, unless those technical specifications or parts of them are no longer applicable because CAAT has determined that experience from other similar products in service or products that have similar design features has shown that unsafe conditions may develop and the technical specifications that were referenced in the declaration of design compliance of the aircraft do not address this unsafe condition, or
  2. the technical specifications applicable on the date on which the declaration is made, if chosen by the declarant; **and**
- (b) The declaration of design compliance shall be made in a form and manner established by CAAT.
- (c) The declaration shall contain at least the following information:
1. the name of the person submitting the declaration, and their address/place of business;
  2. the declaration reference number of the aircraft to which the major change relates;
  3. a unique reference for identifying the major change;
  4. indication of the technical specifications with which the declarant declares compliance;
  5. a signed statement made under the sole responsibility of the person making the declaration that the design of the major change is in compliance with the technical specifications referred to in point (4), according to the compliance demonstration plan referred to in point (d)(3);
  6. a signed statement made under the sole responsibility of the person making the declaration that no features or characteristics have been identified by that person that may make the aircraft unsafe for the intended use;
  7. a signed commitment that the person making the declaration will undertake the obligations referred to in point 21N.A.47 in respect of the changed aircraft design;
  8. the instructions for continued airworthiness;
  9. the operating limitations, if changed;
  10. the data sheet for airworthiness;
  11. any other conditions or limitations prescribed for the aircraft in the applicable technical specifications with which the declarant declares compliance.
- (d) The declarant that designs a major change shall submit the declaration referred to in point (c) to CAAT. Together with this declaration, the declarant shall provide to CAAT:
1. a description of the major change;
  2. basic data about the major change, including the operating characteristics, design features and any limitations;

3. a compliance demonstration plan detailing the means for compliance demonstration that was followed during the compliance demonstration;
  4. recorded justifications of compliance within the compliance data obtained from the compliance activities that have been conducted according to the compliance demonstration plan;
  5. the means by which such compliance with the applicable technical specifications has been demonstrated;
  6. where compliance is demonstrated by carrying out tests, recorded justification of the conformity of the test articles and equipment, demonstrating:
    - (i) for the test specimen, that:
      - (A) the materials and processes adequately conformed to the specifications for the design;
      - (B) the constituent parts of the products adequately conformed to the drawings in the design; and
      - (C) the manufacturing processes, construction and assembly adequately conformed to those specified in the design;
    - (ii) that the test and measuring equipment used for the test were adequate for the test and appropriately calibrated;
  7. reports, results of inspections or tests that the declarant found necessary to determine that the aircraft complies with the applicable technical specifications.
- (e) The declaration of a major change to a declaration of design compliance shall be limited to the specific configuration(s) in the declaration of design compliance to which the change relates.

### **21N.A.108 Compliance activities for declaring compliance of a major change**

Prior to making a declaration of compliance in accordance with point 21N.A.107, the declarant shall, for that specific design:

- (a) establish a compliance demonstration plan detailing the means for compliance demonstration that shall be followed during the compliance demonstration. This document shall be updated as necessary;
- (b) record the justification of compliance within compliance documents according to the compliance demonstration plan;
- (c) perform testing and inspections as necessary in accordance with the compliance demonstration plan;
- (d) ensure and record the conformity of the test articles and equipment and ensure that the test specimen conforms to the specifications, drawings, manufacturing processes, construction and assembly means in the design;
- (e) ensure that the test and measuring equipment to be used for testing are adequate for testing and appropriately calibrated;
- (f) allow CAAT to conduct or participate in any inspections or tests of aircraft in the final or suitably mature design and production configuration that are necessary to determine that the changed product has no feature or characteristic that makes the aircraft unsafe for the intended use;
- (g) carry out flight testing, in accordance with the methods for such flight testing specified by CAAT, as necessary to determine that the aircraft complies with the applicable technical specifications.

## Subpart G - Production Certificates

### 21N.A.121 Scope

- a) This Subpart establishes:
1. the procedure for the issuance of a production certificates for a production organisation showing conformity of products, parts and appliances with the applicable design data;
  2. the rules governing the rights and obligations of the applicant for, and holders of, such approvals.
- (b) The following categories of products and parts may be produced by organisations which have hold production certificate in accordance with this Subpart:
1. products and parts the design of which has been declared in accordance with this regulation;
  2. aircraft the design of which is covered by a declaration made in accordance with this regulation, and their engines, propellers and parts.

### 21N.A.123 Application

Each application for a production certificates shall be made to CAAT in a form and manner established by CAAT, and shall include an outline of the information required by point 21N.A.124A and the operation specification requested to be issued under point 21L.A.126.

### 21N.A.123A Issuance of production certificates

An organisation shall be entitled to have a production certificates issued by CAAT when it has demonstrated compliance with the applicable requirements under this Subpart.

### 21N.A.124 Production management system

- (a) The production organisation shall establish, implement and maintain a production management system that includes a safety management element and a quality management element, with clearly defined accountability and lines of responsibility throughout the organisation.
- (b) The production management system shall:
1. correspond to the size of the organisation, and to the nature and complexity of its activities, taking into account the hazards and associated risks inherent in those activities;
  2. be established, implemented and maintained under the direct accountability of a single manager appointed pursuant to point 21N.A.125 (c)(1).
- (c) As part of the safety management element of the production management system, the production organisation shall:
1. establish, implement and maintain a safety policy and the corresponding related safety objectives;
  2. appoint key safety personnel in accordance with point 21N.A.125 (c)(2);
  3. establish, implement and maintain a safety risk management process to identify safety hazards entailed by its aviation activities, evaluate them and manage associated risks, including taking actions to mitigate the risks and verify their effectiveness;

4. establish, implement and maintain a safety assurance process that includes:
    - (i) the measurement and monitoring of the organisation's safety performance;
    - (ii) the management of changes in accordance with point 21N.A.128;
    - (iii) the principles for the continuous improvement of the safety management element;
  5. promote safety in the organisation through:
    - (i) training and education;
    - (ii) communication;
  6. establish an occurrence reporting system in accordance with point 21N.A.3 in order to
- (d) as part of the quality management element of the production management system, the production organisation shall: contribute to the continuous improvement of safety.
1. ensure that each product, part or appliance produced by the organisation or by its partners, or supplied from or subcontracted to outside parties, conforms to the applicable design data and is in a condition for safe operation, and thus exercise the privileges as defined in point 21N.A.126B;
  2. establish, implement and maintain, as appropriate, within the scope of the approval, control procedures for:
    - (i) document issue, approval or change;
    - (ii) vendor and subcontractor assessment audit and control;
    - (iii) the verification that incoming products, parts, materials and equipment, including items supplied new or used by buyers of products, are as specified in the applicable design data;
    - (iv) identification and traceability;
    - (v) manufacturing processes;
    - (vi) inspection and testing, including production flight tests;
    - (vii) the calibration of tools, jigs, and test equipment;
    - (viii) non-conforming item control;
    - (ix) airworthiness coordination with the natural or legal person who made a declaration of design compliance in accordance with Subpart C of this regulation;
    - (x) the completion and retention of records;
    - (xi) the competence and qualifications of personnel;
    - (xii) the issue of airworthiness release documents;
    - (xiii) handling, storage and packing;
    - (xiv) internal quality audits and the resulting corrective actions;
    - (xv) work within the terms of approval performed at any location other than the approved facilities;
    - (xvi) work performed after the completion of production but prior to delivery, to maintain the aircraft in a condition for safe operation;
  3. include specific provisions in the control procedures for any critical parts.

- (e) The production organisation shall establish, as part of the production management system, an independent monitoring function to verify compliance of the organisation with the relevant requirements of this regulation as well as compliance with and adequacy of the production management system. Monitoring shall include feedback to the person or group of persons referred to in point 21N.A.125 (c)(2) and to the manager referred to in point 21N.A.125 (c)(1) to ensure, where necessary, the implementation of corrective action.
- (f) If the production organisation holds one or more additional organisation certificates, the production management system may be integrated with that required under the additional certificate(s) held.

#### **21N.A.124A Production organisation exposition**

- (a) The production organisation shall establish and maintain a production organisation exposition (POE) that provides directly or by cross reference the following information related to the production management system as described in point 21N.A.124:
1. a statement signed by the accountable manager confirming that the production organisation exposition and any associated manuals which define the approved organisation's compliance with this Subpart will be complied with at all times;
  2. the title(s) and names of managers accepted by CAAT in accordance with point 21N.A.125 (c)(2);
  3. the duties and responsibilities of the manager(s) as required by point 21N.A.125 (c)(2) including matters on which they may deal directly with CAAT on behalf of the organisation;
  4. an organisational chart showing associated chains of responsibility of the managers as required by point 21N.A.125 (c)(1) and (2);
  5. a list of certifying staff as referred to in point 21N.A.125 (d);
  6. a general description of man-power resources;
  7. a general description of the facilities located at each address specified in the production certificates;
  8. a general description of the production organisation's scope of work relevant to the operation specification;
  9. the procedure for the notification of organisational changes to CAAT;
  10. the amendment procedure for the production organisation exposition;
  11. a description of the production management system, the policy, processes and procedures as provided for in point 21N.A.124 (c);
  12. a list of the outside parties referred to in point 21N.A.124 (d)(1);
  13. if flight tests are to be conducted, a flight test operations manual defining the organisation's policies and procedures in relation to flight test. The flight test operations manual shall include:
    - (i) a description of the organisation's processes for flight test;
    - (ii) crewing policy, including composition, competency, currency and flight time limitations;
    - (iii) procedures for the carriage of persons other than crew members and for flight test training, when applicable;

- (iv) a policy for risk and safety management and associated methodologies;
  - (v) procedures to identify the instruments and equipment to be carried;
  - (vi) a list of documents that need to be produced for flight test.
- (b) The initial issue of the POE shall be approved by CAAT.
- (c) The POE shall be amended as necessary so that it remains an up-to-date description of the organisation. Copies of any amendments shall be supplied to CAAT.

### **21N.A.125 Resources**

The production organisation shall demonstrate that:

- (a) the facilities, working conditions, equipment and tools, processes and associated materials, number and competence of staff, and the general organisation are adequate to discharge its obligations under point 21N.A.127;
- (b) with regard to all the necessary airworthiness data:
  - 1. the production organisation is in receipt of such data from CAAT and from a natural or legal person who made a declaration of design compliance under Subpart C of this regulation, to determine conformity with the applicable design data;
  - 2. the production organisation has established a procedure to ensure that the airworthiness data are correctly incorporated in its production data;
  - 3. such data is kept up to date and made available to all personnel that need access to such data to perform their duties;
- (c) with regard to management and staff:
  - 1. an accountable manager has been appointed by the production organisation with CAAT to ensure that, within the organisation, all production is performed to the required standards and that the production organisation is continuously in compliance with the requirements of the production management system referred to in point 21N.A.124, and the data and procedures identified in the POE referred to in point 21N.A.124A;
  - 2. a person or group of persons has/have been nominated by the accountable manager to ensure that the organisation is in compliance with the requirements of this regulation, and are identified, together with the extent of their authority; such person or group of persons shall be responsible to the accountable manager and have direct access to him. The person or group of persons shall have the appropriate knowledge, background and experience to discharge their responsibilities;
  - 3. staff at all levels have been given the appropriate authority to be able to discharge their allocated responsibilities and that there is full and effective coordination within the production organisation in respect of airworthiness data matters;
- (d) with regard to certifying staff authorised by the production organisation to sign the documents issued under point 21N.A.126B within the scope of the operation specifications:
  - 1. they have the appropriate knowledge, background (including other functions in the organisation) and experience to discharge their allocated responsibilities;
  - 2. they are provided with evidence of the scope of their authorisation.

### **21N.A.126 Operation Specifications**

The operation specifications shall identify the scope of work, the products or the categories of parts and appliances, or both, for which the holder is entitled to exercise the privileges under point 21N.A.126B.

#### **21N.A.126A Duration and continued validity**

- (a) A production certificate shall be issued for;
  - 1. 30 years for production certificate for aircraft
  - 2. 20 years for production certificate for major aircraft appliance
  - 3. 10 years for production certificate for aircraft replacement part
- (b) Production certificate shall remain valid subject to the production organisation's compliance with all the following conditions:
  - 1. the production organisation continues to comply with the applicable requirements of this regulation;
  - 2. CAAT is permitted by the production organisation or by any of its partners, suppliers or subcontractors to perform the investigations in accordance with point 21N.A.10;
  - 3. the production organisation is able to provide CAAT with evidence showing that it maintains satisfactory control of the manufacture of products, parts and appliances under the approval;
  - 4. the production organisation certificate has not been revoked by CAAT or surrendered by the production organisation.
- (c) Upon surrender or revocation, the production certificate shall be returned to CAAT.

#### **21N.A.126B Privileges**

Pursuant to the operation specification issued under point 21N.A.123A, the holder of a production certificate may:

- (a) perform production activities under Air Navigation Act and this regulation;
- (b) in the case of an aircraft that is subject to a declaration of design compliance under point 21N.A.43 of this regulation and upon presentation of a statement of conformity issued under points 21N.A.143(d), obtain an aircraft special certificate of airworthiness without further showing;
- (c) in the case of products or parts to be installed on an aircraft that is subject to a declaration of design compliance under point 21N.A.43 of this regulation, issue authorised release certificates (CAAT Form 1) under this regulation without further showing;
- (d) maintain a new aircraft that it has produced and issue a certificate of release to service in respect of that maintenance;

### **21N.A.127 Obligations of the holder**

Pursuant to the operation specifications issued under point 21N.A.123A, the holder of a production certificate shall:

- (a) ensure that the production organisation exposition furnished in accordance with point 21N.A.124A and the documents to which it refers, are used as basic working documents within the organisation;
- (b) maintain the production organisation in conformity with the data and procedures approved for the production certificate;
- (c)
  - 1. determine that each completed aircraft conforms to the type design and is in condition for safe operation prior to submitting statements of conformity to CAAT; or
  - 2. determine that other products, parts or appliances are complete and conform to the declared design data and are in a condition for safe operation before issuing an CAAT Form 1 to certify conformity to declared design data and condition for safe operation;
  - 3. determine that other products, parts or appliances conform to the applicable data before issuing an CAAT Form 1 as a conformity certificate;
- (d) provide assistance to legal person who made a declaration of design compliance under Subpart C in dealing with any continuing airworthiness actions that are related to the products, parts or appliances that have been produced;
- (e) where, under its operation specification, the holder intends to issue a certificate of release to service, determine that each completed aircraft has been subjected to the necessary maintenance and is in a condition for safe operation, prior to issuing the certificate;
- (f) comply with Subpart A of this regulation.

### **21N.A.128 Changes in the production management system**

After the issue of a production certificate, each change in the production management system that is significant for the demonstration of conformity or the airworthiness characteristics of the product, part or appliance, shall be approved by CAAT before being implemented. The production organisation shall submit an application for approval to CAAT demonstrating that it will continue to comply with this regulation.

#### **21N.A.128A Changes of location**

A change of the location of the manufacturing facilities of the production certificate shall be deemed of significance and therefore shall comply with point 21N.A.128.

#### **21N.A.128B Changes to Operation Specifications**

Each change to the operation specification shall be approved by CAAT. An application for a change to the operation specification shall be made in a form and manner established by CAAT. The applicant shall comply with the applicable requirements of this Subpart.

#### **21N.A.128C Transferability**

Except as a result of a change in ownership, which is deemed significant for the purposes of point 21N.A.128, a production certificate is not transferable.

## Subpart H - Special Certificate of Airworthiness Type IV

### 21N.A.141 Scope

This Subpart establishes the procedure for applying for a special certificate of airworthiness type IV for an aircraft whose design has been declared in accordance with this regulation, and establishes the rights and obligations of the applicants for, and holders of, those certificates.

### 21N.A.142 Eligibility

Any natural or legal person under whose name an aircraft is registered or will be registered in Thailand may apply for a special certificate of airworthiness type IV for that aircraft under the conditions laid down in this Subpart.

### 21N.A.143 Application for a special certificate of airworthiness type IV

- (a) A natural or legal person shall apply for a special certificate of airworthiness type IV in a form and manner established by CAAT.
- (b) A natural or legal person may apply for a special certificate of airworthiness type IV for aircraft which conform to a declaration of design compliance in accordance with Subpart C of this regulation which is registered by CAAT at the time of application.
- (c) For a new aircraft that conforms to a declaration of design compliance which is registered by CAAT, the applicant shall include in the application:
  - 1. an aircraft statement of conformity (CAAT Form 52B) that is either issued or signed by a production certificate that has issued under Subpart G of this regulation
  - 2. a weight and balance report with a loading schedule;
  - 3. the flight manual if required by the applicable technical specifications for the declaration of design compliance.
- (d) For a used aircraft, the application shall be submitted in accordance with CAAT requirement no. 43.
- (e) Unless otherwise agreed, the statements referred to in points (c)(1) shall be issued no more than 60 days before the presentation of the aircraft to CAAT.

### 21N.A.144 Obligations of the applicant for a special certificate of airworthiness type IV

The applicant for a special certificate of airworthiness type IV shall:

- (a) present the manuals, placards, listings, and instrument markings and other necessary information required by the applicable technical specifications for declarations of design compliance in Thai or English language;
- (b) demonstrate that their aircraft is identified in accordance with Subpart Q of this regulation;
- (c) arrange for inspections of the competent official to assess whether the aircraft has any non-conformities that could affect the safety of the aircraft.

### 21N.A.145 Transferability and re-issuance of a special certificate of airworthiness type IV

Transferability and re-issuance of a special certificate of airworthiness type IV shall be conducted in accordance with CAAT requirement no. 43.

**21N.A.146 Continued validity of a special certificate of airworthiness type IV**

- (a) A special certificate of airworthiness type IV shall be issued for 1 year and remain valid as long as:
1. the aircraft remains on the same register;
  2. the certificate has not been surrendered by the holder;
  3. the aircraft remains in compliance with the relevant requirements of regulation on the basis thereof and with the applicable design data of an aircraft for which design compliance has been declared, and with the continuing airworthiness requirements, taking into account the provisions related to the handling of findings;
  4. the certificate has not been revoked by CAAT.
- (b) Upon surrender or revocation, the certificate shall be returned to CAAT.

## **Subpart I - Not Applicable**

## Subpart J - Declared Design Organisations

### 21N.A.171 Scope

This Subpart establishes:

- (a) the procedure for declaring the design capability by natural and legal persons who design products under this regulation; and
- (b) the rights and obligations of the persons making declarations of design capability referred to in point (a).

### 21N.A.172 Eligibility

Any natural or legal person ('organisation' in this Subpart) required by point 21N.A.42, point 21N.A.104 or point 21N.A.224 to demonstrate their design capability may declare their capability under the conditions laid down in this Subpart.

### 21N.A.173 Declaration of design capability

- (a) Prior to or at the same time as applying for declaring the design compliance of aircraft in accordance with Subpart C, Subpart F and Subpart N the organisation shall submit a declaration of design capability to CAAT.
- (b) The declaration, and any subsequent changes thereto, shall be made in a form and manner established by CAAT.
- (c) The declaration shall include the information necessary for CAAT to become familiar with the organisation and the intended scope of work, and shall include at least the following:
  - 1. the registered name of the organisation;
  - 2. the contact details of the organisation's registered address of the principal place of business and, where applicable, of the operating sites of the organisation;
  - 3. the names and contact details of the head of the design organisation;
  - 4. the intended scope of work;
  - 5. a statement confirming that the organisation:
    - (i) has a management system for design in accordance with point (a) of point 21N.A.174; and
    - (ii) will maintain the management system for design in compliance with this Subpart;
  - 6. a statement confirming that the organisation will adhere to the processes and procedures established in accordance with point (d) of point 21N.A.174;
  - 7. a statement that the organisation agrees to undertake the obligations of a declared design organisation in accordance with point 21N.A.177.
- (d) The declaration of design capability shall be submitted to CAAT.

### **21N.A.174 Management system for design**

- (a) The declared design organisation shall establish, implement, and maintain a management system for design with clear accountability and lines of responsibility throughout the organisation that:
1. corresponds to the nature and complexity of its activities and the size of the organisation, and takes into account the hazards and associated risks inherent in these activities;
  2. is established under the accountability of a single manager nominated as the head of the design organisation according to point (a) of point 21N.A.175.
- (b) The declared design organisation shall have, as part of their management system for design, a means to provide design assurance by establishing, implementing and maintaining a system for the control and supervision of the design, and of design changes and repairs, of products. This system shall:
1. include an airworthiness function responsible for ensuring that the designs of products and the designs of changes and repairs thereto comply with the applicable technical specifications;
  2. establish, implement and maintain an independent function to verify the demonstration of compliance on the basis of which the organisation declares compliance with the applicable technical specifications;
  3. specify the manner in which the design assurance system accounts for the acceptability of the parts that are designed or the tasks that are performed by partners or subcontractors according to methods which are the subjects of written procedures.
- (c) The declared design organisation shall establish, as part of their management system for design, an independent function to monitor the compliance of the organisation with the relevant requirements, and compliance with, and adequacy of, the management system for design. This monitoring shall include a system to provide feedback to the person or a group of persons referred to in point (b) of point 21N.A.175, and to the accountable manager referred to in point (a) of point 21N.A.175 to ensure, as necessary, corrective action.
- (d) The declared design organisation shall establish, maintain and keep updated processes and procedures that ensure the design compliance of products with the applicable technical specifications. The declared design organisation shall make documentary evidence of these processes and procedures available to CAAT upon request.
- (e) Where any parts or any changes to the products are designed by partner organisations or subcontractors, the processes and procedures in point (d) shall include a description of how the design organisation is able to give, for all parts, the assurance of compliance required by point (b)(2), and shall contain, directly or by cross-reference, descriptions and information on the design activities and organisation of those partners or subcontractors.
- (f) If the declared design organisation holds (an)other organisation certificate(s), the declared design organisation may integrate the design management system with the management system that is required for the issuance of the other certificate(s).

### **21N.A.175 Resources of the declared design organization**

- (a) The declared design organisation shall nominate a head of the design organisation with the authority for ensuring that, within the organisation, all design activities are performed to the required standards and that the declared design organisation is continuously in compliance with the requirements for the management system for design referred to in points (a) to (c) of point 21N.A.174 and the processes and procedures referred to in point (d) of point 21N.A.174.
- (b) The head of the design organisation shall nominate and identify key personnel within the organisation that are responsible for:
1. ensuring that the designs of products and the designs of changes and repairs thereto comply with the applicable technical specifications;
  2. the independent monitoring of the compliance and adequacy function; and
  3. depending on the size of the organisation, any other person or group of persons who is or are needed to ensure that the organisation is in compliance with the requirements of this regulation.
- (c) The person or group of persons identified in point (b) shall:
1. be responsible to the head of the design organisation and have direct access to them;
  2. have the appropriate knowledge, background and experience to discharge their allocated responsibilities.
- (d) The declared design organisation shall ensure that:
1. the staff in all technical departments are of sufficient numbers and experience and have been given the appropriate authority to be able to discharge their allocated responsibilities and that these, together with the accommodation, facilities and equipment, are adequate to enable the staff to ensure that the products designed are airworthy;
  2. there is full and efficient coordination within the declared design organisation in respect of airworthiness.
- (e) The declared design organisation shall document the organisational structure of their organisation, along with the key personnel who are responsible for ensuring that the organisation is in compliance with this Subpart, keep them updated and make them available to CAAT upon request.

### **21N.A.176 Scope of work**

The declared design organisation shall identify the types of design work, the categories of products for which design activities are conducted, and the functions and duties that the organisation performs in regard to the airworthiness of products.

### **21N.A.177 Obligations of the declared design organization**

A declared design organisation shall:

- (a) work in accordance with clearly defined procedures, practices and processes;
- (b) if the declared design organisation intends to conduct flight testing, maintain and keep updated an operations manual that provides a description of the organisation's policies and processes for flight testing and make this manual available to CAAT upon request;

- (c) determine whether the designs of products, including changes and repairs, do not have any unsafe features and comply with the applicable technical specifications, and provide CAAT with statements/documentation confirming this;
- (d) provide CAAT with information or instructions relating to continued airworthiness actions;
- (e) comply with the requirements in Subpart A of this regulation applicable to declared design organisations.

**21N.A.178 Notification of changes and cessation of activities**

The declared design organisation shall notify CAAT without undue delay of the following:

- (a) any changes to the information that has been declared in accordance with point (c) of point 21N.A.173;
- (b) changes to the management system for design that are significant for the demonstration of compliance of the product designed by them;
- (c) the cessation of some or all of the activities covered by the declaration.

## Subpart K - Parts

### 21N.A.191 Scope

This Subpart establishes how the compliance of parts with the airworthiness requirements shall be shown.

### 21N.A.192 Showing of compliance

- (a) The showing of compliance with the airworthiness requirements of parts to be installed in an aircraft for which design compliance has been declared shall be made:
1. in conjunction with the declaration of design compliance procedures of Subpart C or F of this regulation for the product in which it is to be installed; or
  2. in the case of standard parts, in accordance with CAAT recognised standards.
- (b) In all cases where the approval of a part is explicitly required by CAAT measures, the part shall comply with the applicable specifications recognised as equivalent by CAAT in the particular case.

### 21N.A.193 Release of parts for installation

- (a) A part or product shall only be installed in a product when it is identified by a declaration of design compliance as being suitable for installation, and when it is:
1. in a condition for safe operation;
  2. marked in accordance with Subpart Q of this regulation; and
  3. accompanied by an authorised release certificate (CAAT Form 1) certifying that the item was manufactured in conformity with the applicable design data.
- (b) By way of derogation from point (a)(3) and provided that the conditions in point (c) are met, the following parts do not require an authorised release certificate (CAAT Form 1) in order to be installed in an aircraft for which design compliance has been declared:
1. a standard part;
  2. a part that is:
    - (i) not life limited, nor part of the primary structure, nor part of the flight controls;
    - (ii) identified for installation in the specific aircraft by a declaration of design compliance;
    - (iii) to be installed in an aircraft whose owner has verified compliance with the applicable conditions in (i) and (ii), and has accepted responsibility for this compliance;
  3. a part for which the consequences of a non-conformity with its declared design data has a negligible safety effect on the product and which is identified as such by the declarant of design compliance in the instructions for continued airworthiness. In order to determine the safety effects of a non-conforming part, the declarant of a declaration of design compliance may establish in the instructions for continued airworthiness specific verification activities to be conducted by the installer of the part on the product;

4. in the case of the embodiment of a standard change as per point 21L.A.102, a part for which the consequences of a non-conformity with its design data have a negligible safety effect on the product, and the part is identified as such in the certification specifications for standard changes and standard repairs. In order to determine the safety effects of a non-conforming part, specific verification activities to be conducted by the person that installs the part in the product may be established in these certification specifications;
  5. a part that is exempted from an airworthiness approval; and
  6. a part that is an item of a higher assembly identified in points (b)(1) to (b)(5).
- (c) Parts listed in point (b) are eligible for installation in an aircraft for which design compliance has been declared without being accompanied by an CAAT Form 1, provided that the installer holds a document issued by the person or organisation that manufactured the part, which declares the name of the part, the part number, and the conformity of the part with its design data, and which contains the date of issuance.

## **Subpart L - Not Applicable**

**Subpart M - Not Applicable**

## **Subpart N - Design of repairs to aircraft for which design compliance has been declared**

### **21N.A.221 Scope**

This Subpart establishes:

- (a) the procedure for declaring the compliance of repair designs to an aircraft which was subject to a declaration made in accordance with Subpart C;
- (b) the rights and obligations of the declarant making a declaration of compliance of the change referred to in point (a);
- (c) provisions regarding the standard repairs that do not require a declaration of design compliance.

### **21N.A.222 Standard repairs**

- (a) Standard repairs are repair designs to an aircraft which was subject to a declaration made in accordance with Subpart C and which:
  - 1. follow the design data included in the certification specifications accepted by the CAAT, containing the acceptable methods, techniques and practices for carrying out and identifying standard repairs, including the associated instructions for continued airworthiness; and
  - 2. are not in conflict with the design data covered by the declaration of aircraft design compliance made in accordance with Subpart C of this regulation.
- (b) Points 21N.A.223 to 21N.A.229 are not applicable to standard repairs.

### **21N.A.223 Classification of repair designs to an aircraft for which design compliance has been declared**

- (a) Repair designs to an aircraft which was subject to a declaration made in accordance with Subpart C of this regulation shall be classified as either a major or minor, using the criteria laid down as follows:
  - 1. A 'minor repair' is a repair design that has no appreciable effect on the mass, balance, structural strength, reliability, certified noise or emissions level, operational characteristics, or other characteristics affecting the airworthiness of the product.
  - 2. All other repair designs are 'major repairs'.
- (b) The design compliance of a minor repair design shall be declared in accordance with point 21N.A.225.
- (c) The design compliance of a major repair design shall be declared in accordance with point 21N.A.226.

### **21N.A.224 Eligibility**

- (a) A declarant who made a declaration of aircraft design compliance in accordance with Subpart C of this regulation may declare compliance of a minor repair design of that aircraft under the conditions laid down in this Subpart. In addition, such a declaration of compliance may be also made, under the conditions laid down in this Subpart, by a design organisation.

- (b) Only the declarant who made a declaration of aircraft design compliance in accordance with Subpart C of this regulation may declare the compliance of a major repair design to an aircraft for which design compliance has been declared in accordance with Subpart C of this regulation, under the conditions laid down in this Subpart.
- (c) By derogation from point (b), if the declarant who made a declaration of aircraft design compliance in accordance with Subpart C of this regulation is no longer active or is unresponsive to requests for repair designs, the compliance of a changed aircraft design may also be declared in accordance with Subpart C of this regulation by a design organisation within the scope of their operation specification, or by any other natural or legal person who is able to undertake the obligations laid down in point 21N.A.47 with respect to that changed aircraft.

#### **21N.A.225 Declaration of design compliance for minor repair designs**

- (a) Prior to incorporating or embodying or agreeing with a production organisation to incorporate or embody a minor repair design to an aircraft for which design compliance has been declared in accordance with Subpart C of this regulation, the declarant or the organisation that has designed the minor repair shall declare that the minor repair design complies with the technical specifications with which compliance had been declared according to point 21N.A.43.
- (b) The declaration of design compliance shall be made in a form and manner established by CAAT.
- (c) The declarant or the organisation that has designed the minor change shall maintain a **register** of minor repair designs to aircraft for which design compliance has been declared, and make any declaration made in accordance with point (a) available to CAAT upon request.

#### **21N.A.226 Declaration of design compliance of major repair designs**

- (a) Prior to incorporating or embodying or agreeing with a production organisation to incorporate or embody a major repair design to an aircraft for which design compliance has been declared in accordance with Subpart C of this regulation, the declarant shall declare that the design of the major repair complies with the technical specifications with which compliance had been declared according to point 21N.A.43.
- (b) The declaration of design compliance shall be made in a form and manner established by CAAT.
- (c) The declaration shall contain at least the following information:
  1. the name of the person submitting the declaration, and their address/place of business;
  2. the declaration reference number of the aircraft to which the major repair design relates;
  3. a unique reference for identifying the major repair design;
  4. indication of the technical specifications with which the compliance of the aircraft had been declared by the declarant according to point 21N.A.43;
  5. a signed statement made under the sole responsibility of the person making the declaration that the design of the major repair is in compliance with the technical specifications referred to in point (4), according to the compliance demonstration plan referred to in point (d)(3);
  6. a signed statement made under the sole responsibility of the person making the declaration that no features or characteristics have been identified by that person that may make the aircraft unsafe or incompatible for the intended use;

7. a description of the damage and the repair design identifying the configuration of the type design upon which the repair is made;
  8. identification of all the areas of the type design and the approved manuals that are changed or affected by the repair design.
- (d) The declarant that designs a major repair shall submit the declaration referred to in point (c) to CAAT. Together with this declaration, the declarant shall provide to CAAT:
1. a description of the major repair;
  2. basic data about the major repair, including the operating characteristics, design features and any limitations;
  3. a compliance demonstration plan detailing the means for compliance demonstration that was followed during the compliance demonstration;
  4. recorded justifications of compliance within compliance data obtained from the compliance activities that have been conducted according to the compliance demonstration plan;
  5. the means by which compliance with the technical specifications with which the declarant had declared that aircraft compliance according to point 21N.A.43 has been demonstrated;
  6. where compliance is demonstrated by carrying out tests, a recorded justification of the conformity of the test articles and equipment, demonstrating:
    - (i) for the test specimen, that:
      - (A) the materials and processes adequately conformed to the specifications for the design;
      - (B) the constituent parts of the products adequately conformed to the drawings in the design; and
      - (C) the manufacturing processes, construction and assembly adequately conformed to those specified in the design;
    - (ii) that the test and measuring equipment used for the tests were adequate for the tests and appropriately calibrated;
  7. reports, results of inspections or tests that the declarant found necessary to determine that the aircraft complies with the technical specifications.
- (e) The declaration of a major repair to a declaration of design compliance shall be limited to the specific configuration(s) in the declaration of design compliance to which the change relates.

#### **21N.A.227 Compliance activities for declaring compliance of a major repair design**

Prior to making a declaration of compliance in accordance with point 21N.A.226, the declarant shall, for that specific design:

- (a) establish a compliance demonstration plan detailing the means for compliance demonstration that shall be followed during the compliance demonstration. This document shall be updated as necessary;
- (b) record the justification of compliance within compliance documents according to the compliance demonstration plan;

- (c) perform testing and inspections as necessary in accordance with the compliance demonstration plan;
- (d) ensure and record the conformity of the test articles and equipment and ensure that the test specimen conforms to the specifications, drawings, manufacturing processes, construction and assembly means in the design;
- (e) ensure that the test and measuring equipment to be used for testing are adequate for testing and appropriately calibrated;
- (f) allow CAAT to conduct or participate in any inspections or tests of aircraft in the final or suitably mature design and production configuration that are necessary to determine that the product with the repair design has no feature or characteristic that makes the aircraft unsafe or incompatible for the intended use;
- (g) carry out flight testing, in accordance with the flight conditions for such flight testing specified by CAAT, as necessary in order to determine that the aircraft complies with the applicable technical specifications.

#### **21N.A.228 Obligations of the declarant of a declaration of design compliance of a repair design**

The declarant of a declaration of design compliance shall:

- (a) for minor repair designs maintain a register of those declarations and shall make those declarations available to CAAT upon request;
- (b) provide to the organisation performing the repair all the necessary instructions to install or embody the repair design;
- (c) support any production organisation producing parts for the repair design, and ensure that those parts are produced using production data that is based upon the design data that is provided by the declarant;
- (d) if a repair design is declared subject to limitations, transmit these limitations to the operator using a documented procedure that is made available to CAAT upon request;
- (e) undertake the obligations of a declarant of design compliance of a repair design of Subpart A of this regulation.

#### **21N.A.229 Unrepaired damage**

The declarant of design compliance of an aircraft in accordance with Subpart C of this regulation or an approved design organisation with the appropriate scope of approval shall conduct an evaluation of the airworthiness compatibility consequences of any damage to such aircraft that is left unrepaired and that is not covered by previously declared data. Any necessary limitations shall be processed in accordance with point (d) of point 21N.A.228.

## **Subpart O - Not Applicable**

## Subpart P - Flight Test Permit

### 21N.A.241 Flight test permit and flight conditions

- (a) The procedures for applying for the issuance of flight test permit and related flight conditions for aircraft within the scope of this regulation shall be those established in this Subpart and those established in points (b) and (c) of point 21N.A.241.
- (b) When applying for a flight test permit in accordance with point 21N.A.241C, the applicant shall arrange for CAAT to conduct a conformity inspection of the aircraft when the application for a flight test permit relates to the demonstration of compliance activities in point 21N.A.44 for an aircraft for which design compliance is, or is intended to be, declared.
- (c) When applying for flight conditions in accordance with point 21N.A.241E, the applicant shall arrange for CAAT to physically inspect and assess the aircraft if the flight conditions are related to the demonstration of compliance to support a declaration of design compliance in point 21L.A.44 and if requested by CAAT during the demonstration of compliance activities.

### 21N.A.241A Scope

- (a) Flight test permit shall be issued in accordance with this Subpart to aircraft that do not meet, or have not been shown to meet, applicable technical specifications but are capable of safe flight under defined conditions and for the following purposes:
  - 1. development;
  - 2. showing compliance with regulations or technical specifications;
  - 3. production flight testing of new production aircraft;
  - 4. flying aircraft under production between production facilities;
  - 5. flying the aircraft for customer acceptance;
  - 6. delivering or exporting the aircraft;
  - 7. flying the aircraft for Authority acceptance;
  - 8. market survey, including customer's crew training;
  - 9. exhibition and air show;
  - 10. record breaking, air racing or similar competition;
  - 11. for non-commercial flying activity on individual non-complex aircraft or types for which a certificate of airworthiness or restricted certificate of airworthiness is not appropriate.
- (b) This Subpart establishes the procedure for issuing flight test permit and approving associated flight conditions, and establishes the rights and obligations of the applicants for, and holders of, those permits and approvals of flight conditions.

### **21N.A.241B Eligibility**

- (a) Any natural or legal person shall be eligible as an applicant for a flight test permit except for a flight test permit requested for the purpose of point 21N.A.241A (a)(11) where the applicant shall be the owner.
- (b) Any natural or legal person shall be eligible for application for the approval of the flight conditions.

### **21N.A.241C Application for flight test permit**

- (a) Pursuant to point 21N.A.241B and when the applicant has not been granted the privilege to issue a flight test permit, an application for a flight test permit shall be made to the competent authority in a form and manner established by CAAT.
- (b) Each application for a flight test permit shall include:
  - 1. the purpose(s) of the flight(s), in accordance with point 21N.A.241A;
  - 2. the ways in which the aircraft does not comply with the applicable technical specifications;
  - 3. the flight conditions approved in accordance with point 21N.A.241F.
- (c) Where the flight conditions are not approved at the time of application for a flight test permit, an application for approval of the flight conditions shall be made in accordance with point 21N.A.241E.

### **21N.A.241D Flight conditions**

Flight conditions include:

- (a) the configuration(s) for which the flight test permit is requested;
- (b) any condition or restriction necessary for safe operation of the aircraft, including:
  - 1. the conditions or restrictions put on itineraries or airspace, or both, required for the flight(s);
  - 2. any conditions or restrictions put on the flight crew to fly the aircraft;
  - 3. the restrictions regarding carriage of persons other than flight crew;
  - 4. the operating limitations, specific procedures or technical conditions to be met;
  - 5. the specific flight test programme (if applicable);
  - 6. the specific continuing airworthiness arrangements including maintenance instructions and regime under which they will be performed;
- (c) the substantiation that the aircraft is capable of safe flight under the conditions or restrictions of point (b);
- (d) the method used for the control of the aircraft configuration, in order to remain within the established conditions.

### **21N.A.241E Application for approval of flight conditions**

- (a) Pursuant to point 21N.A.241B (c) and when the applicant has not been granted the privilege to approve the flight conditions, an application for approval of the flight conditions shall be made:
  - 1. when approval of the flight conditions is related to the safety of the design, to CAAT in a form and manner established by CAAT; or
  - 2. when approval of the flight conditions is not related to the safety of the design, to the competent authority in a form and manner established by CAAT.

- (b) Each application for approval of the flight conditions shall include:
1. the proposed flight conditions;
  2. the documentation supporting these conditions; and
  3. a declaration that the aircraft is capable of safe flight under the conditions or restrictions of point 21N.A.241D (b).

#### **21N.A.241F Approval of flight conditions**

- (a) When approval of the flight conditions is related to the safety of the design, the flight conditions shall be approved by:
1. CAAT; or
  2. an appropriately approved design organisation, under the privilege of TCAR AIR Part-21.
- (b) When approval of the flight conditions is not related to the safety of the design, the flight conditions shall be approved by the competent authority, or the appropriately approved organisation that will also issue the flight test permit.
- (c) Before approving the flight conditions, CAAT, the competent authority or the approved organisation must be satisfied that the aircraft is capable of safe flight under the specified conditions and restrictions. CAAT or the competent authority may make or require the applicant to make any necessary inspections or tests for that purpose.

#### **21N.A.241G Issuance of a flight test permit**

- (a) A flight test permit may be issued by the competent authority.
- (b) An appropriately approved design organisation may issue a flight test permit under the privilege granted under TCAR AIR Part-21, when the flight conditions referred to in point 21N.A.241D have been approved in accordance with point 21N.A.241G.
- (c) An appropriately production certificate holder may issue a flight test permit under the privilege granted under TCAR AIR Part-21 or Subpart G of this regulation, when the flight conditions referred to in point 21N.A.241D have been approved in accordance with point 21N.A.241F.
- (d) The flight test permit shall specify the purpose(s) and any conditions and restrictions which have been approved in accordance with point 21N.A.241F.
- (e) For permits issued under points (b) or (c), a copy of the flight test permit and associated flight conditions shall be submitted to the competent authority at the earliest opportunity but not later than 3 days.
- (f) Upon evidence that any of the conditions specified in point 21N.A.241K (a) are not met for a flight test permit that an organisation has issued pursuant to points (b) or (c), that organization shall immediately revoke that flight test permit and inform without delay the competent authority.

### **21N.A.241H Changes**

- (a) Any change that invalidates the flight conditions or associated substantiation established for the flight test permit shall be approved in accordance with point 21N.A.241F. When relevant an application shall be made in accordance with point 21N.A.241E.
- (b) A change affecting the content of the flight test permit requires the issuance of a new flight test permit in accordance with point 21N.A.241G.

### **21N.A.241I Language**

The manuals, placards, listings, and instrument markings and other necessary information required by applicable technical specifications shall be presented at least in English.

### **21N.A.241J Transferability**

- (a) A flight test permit is not transferable.
- (b) Notwithstanding, point (a) for a flight test permit issued for the purpose of point 21N.A.241A (a)(11), where ownership of an aircraft has changed, the flight test permit shall be transferred together with the aircraft provided the aircraft remains on the same register.

### **21N.A.241K Duration and continued validity**

- (a) A flight test permit shall be issued for a maximum period of 12 months and shall remain valid subject to compliance with all the following conditions:
  - 1. the organisation continues to comply with the conditions and restrictions associated with the permit to fly as set out in point 21N.A.241G (d);
  - 2. the holder or any of its partners, suppliers or subcontractors acknowledge that the competent authority may carry out investigations in accordance with TCAR AIR Part-21 or Subpart A of this regulation;
  - 3. the flight test permit has not been revoked by the competent authority, or surrendered by its holder;
  - 4. the aircraft remains on the same register.
- (b) Upon surrender or revocation, the flight test permit shall be returned to the competent authority.

### **21N.A.241L Renewal of flight test permit**

Renewal of the flight test permit shall be processed as a change in accordance with point 21N.A.241H.

### **21N.A.241M Obligations of the holder of a flight test permit**

The holder of a flight test permit shall ensure that all the conditions and restrictions associated with the flight test permit are satisfied and maintained.

## Subpart Q - Identification of products and parts

### 21N.A.251 Scope

This Subpart establishes the requirements for the identification of products and parts designed and produced under this regulation.

### 21N.A.252 Design of markings

- (a) The declarant of a declaration of design compliance shall specify in the design data the marking of products and parts designed in accordance with this regulation.
- (b) The specifications of the marking shall include the following information:
  - 1. for products:
    - (i) the name of the production organisation;
    - (ii) the product designation;
    - (iii) the serial number of the product;
    - (iv) any other information appropriate to identify the product;
  - 2. for parts:
    - (i) a name, trademark, or symbol identifying the production organisation;
    - (ii) the part number;
    - (iii) the serial number, in cases where a part to be fitted on a product has been identified as a critical part.
- (c) The specification of parts in accordance with point (ii) of point (b)(2) shall include the letter ‘(R)’ at the end of the part number when:
  - 1. the part is from a design subject to a declaration of design compliance in accordance with Subpart C of this regulation;
  - 2. the part is to be released on a CAAT Form 1 in accordance with point (a) of point 21N.A.193; and
  - 3. the part has been produced in accordance with Subpart R of this regulation.

### 21N.A.253 Identification of products

- (a) Any natural or legal person who produces products under Subpart G of this regulation for which the design has been declared in accordance with this regulation shall identify that product as specified in accordance with 21N.A.252 by means of a fireproof marking on a fireproof plate.
- (b) The identification plate shall be secured in such a manner that it is accessible and legible, and will not likely be defaced or removed during normal service, or lost or destroyed in an accident, and in the case of a propeller, propeller blade, or propeller hub, placed on a non-critical surface of the item.
- (c) For manned balloons, the identification plate shall be secured to the balloon envelope and shall be located, if practicable, where it is legible to the operator when the balloon is inflated. In addition, the basket, load frame assembly and any heater assembly shall be permanently and legibly marked with the name of the production organisation, part number, or its equivalent, and the serial number, or its equivalent.

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### **21N.A.254 Handling of identification data**

- (a) Any natural or legal person performing maintenance work may, in accordance with methods, techniques and practices established by CAAT:
  - 1. remove, change, or place the identification information referred to in point 21N.A.253; or
  - 2. remove or install an identification plate referred to in point 21N.A.253, when necessary during maintenance operations.
- (b) Unless for the purposes stated in point (a) of point 21N.A.254, no person shall remove, change, or place the identification information referred to in point (a) of point 21N.A.253.
- (c) Unless for the purposes stated in point (a) of point 21N.A.254, no person shall remove or install any identification plate referred to in point (a) of point 21N.A.253.
- (d) No person shall install an identification plate removed in accordance with point (a)(2) on any aircraft, engine, propeller, propeller blade, or propeller hub other than the one from which it was removed.

### **21N.A.255 Identification of parts**

Any natural or legal person who produces parts under Subpart G of this regulation for a product for which the design has been declared in accordance with this regulation shall permanently and legibly mark that part as specified in accordance with point 21N.A.252.

## **Subpart R - Statement of Conformity for aircraft and Authorised Release Certificate (CAAT form 1) for engines and propellers, or parts thereof, which conform to a declaration of design compliance**

### **21N.A.271 Scope**

This Subpart establishes the procedures for the issuance of statements of conformity for aircraft (CAAT Form 52B) and authorised release certificates (CAAT Form 1) for engines and propellers, or parts thereof, that have been produced in conformity with the design data of a declaration of design compliance, and the rights and obligations of the declarant.

### **21N.A.272 Eligibility**

Any natural or legal person who is granted access to the applicable design data and is able to undertake the obligations stated in point 21L.A.275 may issue a statement of conformity (CAAT Form 52B) for an aircraft or an authorised release certificate (CAAT Form 1) for an engine or propeller, or a part thereof, under the conditions laid down in this Subpart.

### **21N.A.273 Production control system**

A natural or legal person issuing a statement of conformity (CAAT Form 52B) or an authorised release certificate (CAAT Form 1) with the applicable declared design data of an aircraft, engine or propeller, or a part thereof, that they have produced, shall establish, implement and maintain a system for controlling production that:

- (a) includes processes and procedures that ensure that the aircraft, engine or propeller, and any part thereof, conforms with the applicable declared design data;
- (b) ensures that each statement of conformity (CAAT Form 52B) or authorised release certificate (CAAT Form 1) is only signed by authorised persons;
- (c) if flight tests are necessary within the scope of production, has processes in place that ensure that any flight tests are conducted in a safe manner;
- (d) ensures that the natural or legal person is in receipt of all the necessary airworthiness data to determine conformity;
- (e) has procedures in place that ensure that the airworthiness data is correctly incorporated in its production data, kept up to date and made available to all the personnel who need access to such data to perform their duties;
- (f) includes an inspection system that ensures that any aircraft, engine or propeller, and any part thereof, that are produced by the natural or legal person including their partners, or are supplied from or subcontracted to outside parties, conform with the applicable declared design data and are in a condition for safe operation;
- (g) includes an archiving system that records the requirements that have been placed on other organisations such as suppliers and subcontractors. The archived data shall be made available to CAAT for continuing airworthiness purposes;

- (h) ensures that the maintenance of a newly manufactured aircraft is conducted in accordance with the applicable maintenance instructions and that the aircraft is kept in an airworthy condition, and if applicable, a certificate of release to service is issued for any maintenance that has been completed;
- (l) includes an internal occurrence reporting system in the interest of safety, to enable the collection and assessment of the occurrence reports collected in accordance with point 21N.A.3 in order to identify adverse trends or to address deficiencies, and to extract reportable occurrences. This system shall include the evaluation of relevant information relating to occurrences and the promulgation of the related information.

**21N.A.274 Issuance of a statement of conformity (CAAT Form 52B) or an authorised release**

- (a) When issuing a statement of conformity (CAAT Form 52B) or an authorised release certificate (CAAT Form 1), the natural or legal person shall include all of the following:
  - 1. a statement that the aircraft, engine or propeller, or any part thereof, conforms to the applicable declared design data and is in a condition for safe operation;
  - 2. for each aircraft, a statement that the aircraft has been ground- and flight-checked;
  - 3. for each engine or variable pitch propeller, a statement that the engine or variable pitch propeller has been subjected to a final functional test;
  - 4. if applicable, a statement that the completed engine is in compliance with the applicable engine exhaust emissions requirements in force on the date of production of the engine.
- (b) The natural or legal person shall issue a statement of conformity (CAAT Form 52B) or an authorised release certificate (CAAT Form 1) upon:
  - 1. the initial transfer of the ownership of the aircraft, engine or propeller, or parts thereof; or
  - 2. for aircraft, the application for the issue of the special certificate of airworthiness for the aircraft.

**21N.A.275 Obligations of a natural or legal person issuing a statement of conformity (CAAT)**

The natural or legal person issuing a statement of conformity (CAAT Form 52B) or an authorised release certificate (CAAT Form 1) shall:

- (a) inform CAAT that they intend to produce an aircraft, engine or propeller, or a part thereof, in conformity with the design data of a declaration of design compliance and that they will issue statements of conformity (CAAT Form 52B) or authorised release certificates (CAAT Form 1) in accordance with this Subpart;
- (b) ensure that the details of any completed work are recorded;
- (c) maintain, at the place of production, the technical data and drawings necessary to determine whether the aircraft, engine or propeller, or a part thereof, conforms to the applicable declared design data;
- (d) provide continuing airworthiness support to the declarant of a declaration of design compliance for any aircraft, engine or propeller, or a part thereof, that they have produced;
- (e) for new aircraft that they have produced, ensure that the aircraft is kept in an airworthy condition and that maintenance is performed, including any necessary repairs in accordance with the applicable design data prior to the issuance of an aircraft statement of conformity (CAAT Form 52B);

- (f) when issuing a certificate of release to service after such maintenance, determine that each completed aircraft has been subjected to the necessary maintenance and is in a condition for safe operation, prior to issuing the certificate;
- (g) undertake the obligations of a natural or legal person issuing statements of conformity (CAAT Form 52B) or authorised release certificates (CAAT Form 1) of Subpart A of this regulation;
- (h) inform CAAT about the cessation of their activities under this Subpart.