AIRWORTHINESS NOTICE

NOTICE 8102

Issue 1
19 July 2019

TYPE CERTIFICATE
(CAAM PART 21 SUBPART B)

IN exercise of the powers conferred by section 24O of the Civil Aviation Act 1969 [Act 3], the Chief Executive Officer makes this Airworthiness Notice ("Notice") – Type Certificate (CAAM Part 21 Subpart B).

This Notice provides the procedures and requirements pertaining to a Type Certificate under regulation 23 of the Civil Aviation Regulations 2016 and for any matters connected therewith.

This Notice is published by the Chief Executive Officer under section 24O of the Civil Aviation Act 1969 [Act 3] and come into operation on 19th July 2019.

Non-compliance with this Notice

Any person who contravenes any provision in this Notice commits an offence and shall on conviction be liable to the punishment under section 24O of the Civil Aviation Act 1969 [Act 3].

(Ahmad Nazar Zolfakar)
Chief Executive Officer
Civil Aviation Authority of Malaysia
19th July 2019
CIVIL AVIATION ACT 1969
AIRWORTHINESS NOTICE – TYPE CERTIFICATE
(CAAM PART 21 SUBPART B)

1.0 CITATION

This Notice may be cited as the Airworthiness Notice – Type Certificate (CAAM Part 21 Subpart B) [Notice 8102].

2.0 APPLICATION

This Notice shall apply to —

(a) an applicant for a Type Certificate; and
(b) a holder of a Type Certificate.

3.0 INTERPRETATION

In this Notice, unless the context otherwise requires —

“Authority” means the Civil Aviation Authority of Malaysia;

“MCAR” means Civil Aviation Regulations 2016;

“Type Certificate” means a certificate issued under regulation 23 of MCAR.

4.0 DEMONSTRATION OF CAPABILITY [21.14]

Any organisation applying for a type certificate shall demonstrate its capability by holding a certificate of approval for design issued under regulation 21 of MCAR.

5.0 APPLICATION FOR ISSUANCE OF A TYPE CERTIFICATE [21.15]

5.1 An applicant shall submit—

(a) an application form CAAM/AW/8102-01 to the Authority and accompanied by the prescribed fee;
(b) in the case of an aeroplane—
(i) three-view drawing of that aircraft and preliminary basic data, including the proposed operating characteristics and limitations;

(ii) it shall include, or be supplemented with, after the initial application, the application for approval of operational suitability data consist of:

(A) the minimum syllabus of pilot type rating training, including determination of type rating;

(B) the definition of scope of the aircraft validation source data to support the objective qualification of simulator(s) associated to the pilot type rating training, or provisional data to support their interim qualification;

(C) the minimum syllabus of maintenance certifying staff type rating training, including determination of type rating;

(D) the master minimum equipment list; and

(E) other type-related operational suitability elements;

(c) in the case of an engine or propeller, a general arrangement drawing, a description of the design features, the operating characteristics, and the proposed operating limitations.

6.0 AIRWORTHINESS CODE

6.1 The applicant shall select the airworthiness code as specified in Appendix 1 or any later amendment of that code to be established by the Authority as standard means to demonstrate compliance of products, parts and appliances with the relevant essential requirements.

6.2 The applicant shall ensure the airworthiness code shall be sufficiently detailed and specific to indicate the conditions under which the Type Certificates will be issued.

7.0 SPECIAL CONDITIONS

7.1 The Authority may impose special conditions if the airworthiness code does not contain adequate or appropriate safety standards for the aeronautical product, because:
(a) the aeronautical product has novel or unusual design features relative to the design practices on which the applicable airworthiness codes are based; or

(b) experience from other similar aeronautical products in service or products having similar design features, has shown that unsafe conditions may develop.

7.2 The special conditions may contain such safety standards as the Authority finds necessary to establish a level of safety equivalent to that established in the applicable airworthiness code.

8.0 TYPE CERTIFICATION BASIS

8.1 The Authority may notify type certificate basis to the applicant which consist of:

(a) the airworthiness codes established by the Authority that are effective on the date of application for that certificate unless:

   (i) otherwise specified by the Authority; or

   (ii) compliance with airworthiness codes of later effective amendments is chosen by the applicant or required under paragraph 8.3 and 8.4 of this Notice;

(b) any special condition as imposed by the Authority.

8.2 An application for a Type Certificate shall be valid for a period of three (3) years from the date of an application for a Type Certificate.

8.3 Notwithstanding paragraph 8.2 of this Notice, the applicant may apply to the Authority in writing for an extension of the period referred to under paragraph 8.2 of this Notice and the Authority may have the discretion whether or not to extend the period if the Authority is satisfied that the aeronautical product requires a longer period of time for its design, development and testing.

8.4 Where the Authority extends the period under paragraph 8.3 of this Notice, the applicant shall comply with terms and conditions as may be determined by the Authority.

8.5 If a Type Certificate is not issued within the period referred to under paragraph 8.2 of this Notice or within the extension period agreed by the Authority under paragraph 8.3 of this Notice, the applicant may make a new application for a Type Certificate and comply with requirements of an application for a Type Certificate in this Notice.
8.6 If an applicant chooses to comply with an amendment to the airworthiness codes that is effective after the application for a type certificate, the applicant shall also comply with any other airworthiness codes that the Authority finds is directly related.

9.0 OPERATIONAL SUITABILITY DATA CERTIFICATION BASIS  [21.17B]

9.1 The Authority shall notify to the applicant the operational suitability data certification basis as stated in Appendix 1 of this Notice. It shall consist of:

(a) the applicable airworthiness codes for operational suitability data issued in accordance with paragraph 6.0 of this Notice that are effective on the date of application, unless:

(i) the Authority accepts other means to demonstrate compliance with the relevant requirements in this Notice; or

(ii) compliance with airworthiness codes of later effective amendments is chosen by the applicant.

(b) any special condition as imposed by the Authority.

10.0 DESIGNATION OF APPLICABLE ENVIRONMENTAL PROTECTION REQUIREMENTS  [21.18]

An applicant for a Type Certificate shall comply with the requirements for environmental protection as stated in Appendix 1 of this Notice.

11.0 CHANGES REQUIRING A NEW TYPE CERTIFICATE  [21.19]

A holder of a Type Certificate shall apply for a new Type Certificate if the holder intends to change the design, power, thrust or mass of the aeronautical product where the Authority determines that the change is so extensive which requires complete investigation of compliance with the applicable type certification basis.

12.0 DEMONSTRATION OF COMPLIANCE  [21.20]

12.1 The applicant shall demonstrate compliance with requirements as specified in this Notice and shall provide the Authority with the means by which such compliance has been demonstrated.

12.2 The applicant shall provide the Authority with a certification programme detailing the means for compliance demonstration and shall update the certification programme as necessary during the certification process.
12.3 The applicant shall record justification of compliance within compliance documents according to the certification programme established under paragraph 12.2 of this Notice.

12.4 The applicant shall declare that it has demonstrated compliance under this paragraph.

13.0 INSPECTION AND TESTS

13.1 The applicant shall perform all inspections and tests to demonstrate compliance with the applicable type certification basis and environmental protection requirements.

13.2 Before conducting each inspection and test, the applicant shall ensure—

(a) in the case of the test specimen:
   (i) that materials and processes adequately conform to the specifications for the proposed type design;
   (ii) that parts of the products adequately conform to the drawings in the proposed type design;
   (iii) that the manufacturing processes, construction and assembly adequately conform to those specified in the proposed type design; and

(b) that the test equipment and measuring equipment used for inspections and tests are adequate for the inspection and test and are appropriately calibrated.

13.3 The applicant shall allow the Authority to make any safety regulatory oversight under section 24Q of Act 3 to determine compliance with paragraph 13.2 of this Notice.

13.4 The applicant shall allow the Authority to review any report and make any inspection and to perform or witness any flight and ground test necessary to check the validity of the declaration of compliance submitted by the applicant under paragraph 12.4 of this Notice and to determine that no feature or characteristic makes the product unsafe for the uses for which certification is requested.

13.5 For tests performed or witnessed by the Authority under paragraph 13.4 of this Notice:
(a) the applicant shall submit to the Authority a statement of compliance with paragraph 13.2 of this Notice; and

(b) no change relating to the test that would affect the statement of compliance may be made to a product between the time compliance with paragraph 13.2 of this Notice is shown and the time it is presented to the Authority for test.

14.0 FLIGHT TESTS

14.1 For purposes of an issuance of a Type Certificate, the applicant shall conduct flight test in accordance with such conditions as may be determined by the Authority.

14.2 The applicant shall make all flight tests that the Authority finds necessary—

(a) to determine compliance with the applicable type certification basis and environmental protection requirements; and

(b) to determine whether there is reasonable assurance that the aeroplane, its parts and appliances are reliable and function properly for aeroplane to be certificated under this Notice.

14.3 In the case of flight tests for aeroplane, the applicant shall—

(a) for aeroplane incorporating turbine engines of a type not previously used in a type certificated aircraft, conduct flight test at least 300 hours of operation with a full complement of engines that conform to a type certificate; and

(b) for all other aeroplane, conduct flight test at least 150 hours of operation.

15.0 ISSUANCE OF A TYPE CERTIFICATE

15.1 The Authority may issue a Type Certificate if the Authority is satisfied that the applicant has fulfilled requirements as follows:

(a) demonstrating its capability in accordance with paragraph 4.0 of this Notice;

(b) requirements as specified in this Notice;

(c) it is shown that:
(i) any airworthiness provisions not complied with are compensated for by factors that provide an equivalent level of safety;

(ii) no feature or characteristic makes the aeronautical product it unsafe for the uses for which certification is requested.

(d) in the case of an application for an aeroplane Type Certificate—

(i) the engine or propeller, or both, if installed on the aeroplane, have a type certificate issued or determined in accordance with this Notice.

(ii) the applicant has demonstrated that the operational suitability data meets the applicable operational suitability data certification basis.

15.2 Notwithstanding paragraph 15.1, the Authority may issue an aeroplane Type Certificate without compliance to paragraph 15.1(d)(ii) if the applicant has demonstrated compliance with the operational suitability data certification basis before the operational suitability data must actually be used.

16.0 TYPE CERTIFICATE [21.41]

16.1 The Type Certificate issued by the Authority may include the type design as referred in paragraph 17, the operating limitations, the type certificate data sheet for airworthiness and emissions, the applicable type certification basis and environmental protection requirements and any other conditions or limitations prescribed for the product in the applicable type certification basis and environmental protection requirements.

16.2 The aeroplane Type Certificate in addition, may include the applicable operational suitability data certification basis, the operational suitability data and the type certificate data sheet for noise.

16.3 The engine Type Certificate in addition, may include the record of emission compliance.

17.0 TYPE DESIGN [21.31]

17.1 The type design shall consist of:

(a) the drawings and specifications, a listing of those drawings and specifications, necessary to define the configuration and the design features of the product shown to comply with the applicable type certification basis and environmental protection requirements;
(b) information on materials and processes and on methods of manufacture and assembly of the aeronautical product necessary to ensure the conformity of the aeronautical product;

(c) an approved airworthiness limitations section of the instructions for continued airworthiness as defined by the applicable airworthiness codes; and

(d) any other data necessary to allow by comparison, the determination of the airworthiness, the characteristics of noise, fuel venting, and exhaust emissions (where applicable) of later products of the same type.

17.2 Each type design may be adequately identified.

18.0 OBLIGATIONS OF THE HOLDER

A holder of a Type Certificate shall:

(a) undertake the obligations to:

   (A) have a system for collecting, investigating and analysing reports and information related to failures, malfunctions, defects or other occurrences which cause or might cause adverse effects on the continuing airworthiness of the aeronautical product;

   (B) propose the appropriate corrective action or required inspections for Airworthiness Directive issued following an unsafe condition in the aeronautical product as determined by the Authority; and

   (C) coordinate with the holder of a certificate of approval under regulation 21 of the MCAR as necessary to ensure the satisfactory coordination of design and production including the proper support of the continued airworthiness of the aeronautical product.

(b) comply with the requirements as specified in this Notice;

(b) comply with such terms and conditions attached to the Type Certificate as may be specified by the Authority;

(c) specify the marking in accordance with Airworthiness Notice 8206.
19.0 DURATION AND CONTINUED VALIDITY

19.1 A type certificate shall be issued for an unlimited duration. They shall remain valid subject to:

(a) the holder remaining in compliance with this Notice; and

(b) the certificate not being surrendered or revoked under the applicable administrative procedures established by the Authority.

20.0 RECORD-KEEPING

A holder of a Type Certificate shall keep the records of all relevant design information, drawings and test reports, including inspection records for the product tested, and shall be held by the type certificate holder at the disposal of the Authority and shall be retained in order to provide the information necessary to ensure the continued airworthiness, continued validity of the operational suitability data and compliance with applicable environmental protection requirements of the product.

21.0 MANUALS

21.1 A holder of a Type Certificate shall produce, maintain, keep and update all manuals in relation to Type Certificate.

21.2 A holder of a Type Certificate shall within a reasonable time after being requested by the Authority to provide copies of the manuals.

22.0 INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

22.1 A holder of a Type Certificate shall furnish to the Authority at least one set of complete instructions for continued airworthiness, comprising descriptive data and accomplishment instructions prepared in accordance with the applicable type certification basis, to each known owner of one or more aircraft, engine or propeller upon its delivery or upon issue of the first certificate of airworthiness for the affected aircraft, whichever occurs later and make those instructions available on request to any other person required to comply with any of the terms of those instructions. The availability of some manual or portion of the instructions for continued airworthiness, dealing with overhaul or other forms of heavy maintenance, may be delayed until after the product has entered into service, but shall be available before any of the products reaches the relevant age or flight-hours/cycles.
22.2 In the case of changes to the instructions for continued airworthiness, a holder of a Type Certificate shall make it available to the Authority, all known operators of the product and on request, to any person required to comply with any of those instructions.

23.0 AVAILABILITY OF OPERATIONAL SUITABILITY DATA [21.62]

23.1 A holder of a Type Certificate shall make available to all known operators of the aircraft:

(a) at least one set of complete operational suitability data prepared in accordance with the applicable operational suitability certification basis, before the operational suitability data must be used by a training organisation or an operator; and

(b) any changes to the operational suitability data.

24.0 REVOCATION

This Notice revokes Airworthiness Notice 1 and Airworthiness Notice 1 Appendix 2.
APPENDIX 1

1.0 AIRWORTHINESS CODES

1.1 EASA CERTIFICATION SPECIFICATIONS (CS)
   (a) CS-23 Normal, Utility, Acrobatic and Commuter Aeroplanes;
   (b) CS-E Engines;
   (c) CS-P Propellers; or

1.2 FAR
   (a) Part 23 Airworthiness Standards: Normal Category Airplanes; or

1.3 JOINT AVIATION AUTHORITIES (JAA)
   (a) JAR-VLA Very Light Aeroplanes; and

1.4 Other airworthiness design requirements that provide equivalent level of safety to the airworthiness codes specified in paragraph 1.1, 1.2 and 1.3 above.

Note: New applications received after effectivity of this Notice shall complied with EASA CS as stated above.

2.0 ENVIRONMENTAL PROTECTION

2.1 Airworthiness Notices 9101 Noise certificate;

2.2 Airworthiness Notices 9201 Aircraft engine emissions.

3.0 Operational Suitability Data (OSD)
   (a) CS-MMEL Master Minimum Equipment List;
   (b) CS-GEN-MMEL Generic Master Minimum Equipment List;
   (c) CS-FCD Flight Crew Data;
   (d) CS-SIMD Simulator Data;
   (e) CS-MCSD Maintenance Certifying Staff Data; and
4.0 Any other airworthiness requirements as may be specified by the Authority