European Union Aviation Safety Agency

Notice of Proposed Amendment 2025-02(D)

issued in accordance with Article 6 of MB Decision 01-2022

Proposed amendments to the AMC and GM to Annex I (Part 21) to Regulation (EU) No 748/2012

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Proposed amendments

The amendments are arranged as follows to show deleted, new and unchanged text:

— deleted text is ~~struck through~~;

— new text is highlighted in blue;

— an ellipsis '[…]' indicates that the rest of the text is unchanged.

GM1 21.A.3B(b) ~~Failures, malfunctions and defects~~ Airworthiness directives

DETERMINATION OF AN UNSAFE CONDITION

[…]

1. INTRODUCTION

The ~~C~~certification or approval of a product, part ~~or appliance~~, non-installed equipment, unmanned aircraft system (UAS), control and monitoring unit (CMU) or CMU component is a demonstration of compliance with the applicable airworthiness requirements which are intended to ensure an acceptable level of safety. […]

2. GUIDELINES FOR ESTABLISHING WHETHER ~~IF~~ A CONDITION IS UNSAFE

The following paragraphs give general guidelines for analysing the reported events and determining whether ~~if~~ an unsafe condition exists, and are provided for each type of product, part ~~or appliance~~, non-installed equipment, UAS, CMU or CMU component subject to a specific airworthiness approval: type-certificates (TCs) or supplemental type-certificates (STCs) for aircraft, engines or propellers, or European Technical Standard Orders (ETSOs).
[…]

2.1 Analysis method for aircraft

2.1.1 Accidents or incidents without any aircraft, engine~~s~~, system, propeller or part ~~or appliance~~ malfunction or failure
[…]

2.1.2 Events involving an aircraft, engine~~s~~, system, propeller or part ~~or appliance~~ failure, malfunction or defect
[…]

[…]

2.4 Parts, non-installed equipment and ~~appliances~~ CMU components

The consequences and probabilities of installed and non-installed equipment, as well as of UAS-related CMU and CMU component failures, have to be assessed at ~~the~~ aircraft level in accordance with paragraph 2.1.

[…]

GM1 21.A.3B(c) Airworthiness directives

CORRECTIVE ACTIONS OR INSPECTIONS

Corrective actions in the form of design changes or repairs to be made mandatory by airworthiness directives are classified in accordance with point 21.A.91 or 21.A.611 and approved under Subparts D, E, M or O, as applicable.

Corrective actions that are expected to be of a temporary nature as preventive mitigation measures, or not involving any design change or repair (e.g. one-off or repetitive inspections, new or revised maintenance task), may be accepted by the Agency and recorded accordingly.

GM1 21.A.3B(e) Airworthiness directives

ALTERNATIVE METHOD OF COMPLIANCE (AMOC)

An AMOC is an EASA-approved deviation to an airworthiness directive (AD). It is a different way, other than the one specified in an AD, to address an unsafe condition identified in products, parts, non-installed equipment, CMU and CMU components. An AMOC must provide a level of safety equivalent to the level of safety intended to be restored by compliance with the original AD.

Where an application for an AMOC is linked with an application for the approval of a design change or repair, the two processes should be coordinated in such a way that the design change / repair approval is granted prior to, or at the same time as, the AMOC approval.

If the AD subject of an approved AMOC is revised, the AMOC remains valid.

If the AD subject of an approved AMOC is superseded, the AMOC is no longer valid.

Any operator/owner of Member-State-registered aircraft covered by the Basic Regulation may apply for the approval of an AMOC. However, applications of general applicability (‘generic AMOC’, effective to all aircraft with defined configuration) may also be accepted from the design approval holder (DAH) (to which the AD is addressed) or even from any other DAH (to which the AD is NOT addressed) when a specific EASA-approved configuration of aircraft is affected by compliance with the AD. In this latter case, deviation by AMOC from the applicable AD may be necessary to account for technical peculiarities associated with a design change/STC or repair.

GM1 21.A.151 Terms of approval – Scope and categories

[…]

FOR PRODUCTS:

1. General area, similar to the titles of the corresponding certification codes.
2. Type of Product, in accordance with the type-certificate.

FOR PARTS AND ~~APPLIANCES~~ EQUIPMENT:

1. General area, showing the expertise, e.g. mechanical, metallic structure.
2. Generic type, e.g. wing, landing gear, tyres.

RATING		PRODUCTS/CATEGORIES
A1	Large Aeroplanes	State types
A2	Small Aeroplanes	"
A3	Large Helicopters	"
A4	Small Helicopters	"
A5	Gyroplanes	"
A6	Sailplanes	"
A7	Motor Gliders	"
A8	Manned Balloons	"
A9	Airships	"
A10	Light Sport Aeroplanes	"
A11	Very Light Aeroplanes	"
A12	Other	"
B1	Turbine Engines	"
B2	Piston Engines	"
B3	APUs	"
B4	Propellers	"
B5	Other	"
C1	~~Appliances~~ Equipment:	State ~~appliance~~ equipment generic types (e.g.~~,~~ Tyres, Altimeter, etc.) Examples include: Avionics, Com/Nav/Pulse Computer System, Aircraft/Engine/Avionics Instruments, Mechanical/Electrical/Gyroscopic/Electronic Mechanical/Hydraulic/Pneumatic CMU/CMU components
C2	Parts:	State part generic types (e.g.~~,~~ Wing, Landing Gear, etc.) Examples include: Structural, Metallic/~~n~~Non-metallic Mechanical/Hydraulic/Pneumatic Electrical/Electronic
D1	Maintenance	State aircraft types
D2	Issue of permit to fly	State aircraft types

AMC1 21.A.303~~(c)~~(a)(3) ~~Standard Parts~~ Compliance with applicable requirements

STANDARD PARTS

[…]

GM1 ~~No 2 to~~ 21.A.303~~(c)~~(a)(3) ~~Officially recognised Standards~~ Compliance with applicable requirements

OFFICIALLY RECOGNISED STANDARDS

[…]

GM1 21.A.303(b) Compliance with applicable requirements

NON-INSTALLED EQUIPMENT (NIE)

NIE is defined in Article 3(29) of Regulation (EU) 2018/1139[1] as 'any instrument, equipment, mechanism, apparatus, appurtenance, software or accessory carried on board of an aircraft by the aircraft operator, which is not a part, and which is used or intended to be used in operating or controlling an aircraft, supports the occupants' survivability, or which could impact the safe operation of the aircraft'.

Certain equipment may be considered as part or NIE depending on its inclusion or not in the aircraft type design by a design approval holder.

With reference to the current published CS-ETSO, the following table provides some (non-exhaustive) examples of parts and NIE.

Table: Examples of parts and NIE

Part	Part or NIE*	NIE
Transponders (ETSO-C112)	ELT(S) (ETSO-C126)	Survivor Locator Lights (ETSO-C85)
Airborne Multipurpose Electronic Displays (ETSO-C113)	Headsets (ETSO-C139)	Cargo Pallets, Nets and Containers (Unit Load Devices) (ETSO-C90)
Seats (ETSO-C127)	Helicopter Life Jacket (ETSO-2C504)	Cargo Restrain Straps (ETSO-C172)

[1] Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91 (OJ L 212, 22.8.2018, p. 1).

Terrain Avoidance Warning System (TAWS) (ETSO-C151)	Personnel Parachutes (ETSO-C23)	Helicopter Immersion Suits (ETSO-2C502, ETSO-2C503)
Autopilot (ETSO-C198)		Electronic Flight Bags Software Applications (ETSO-2C521)
VHF Radios (ETSO-2C169)		Electronic Map Systems for Depiction of Aircraft Position (ETSO-C165)

* It depends upon whether or not the article is included within the type design.

Regulation (EU) No 965/2012[2], Regulation (EU) 2018/395[3] and Implementing Regulation (EU) 2018/1976[4] prescribe the instruments and equipment required for aircraft operations considering the type of aircraft used and the purpose of operations. These Regulations require that such instruments and equipment be airworthiness approved and list the items of equipment which are exempted from this approval.

Certain required equipment under those Regulations meets the definition of 'NIE' and may be considered NIE.

Example 1

Point (b) of point SPA.HOFO.165 of Part-SPA requires that, for certain operational conditions, all passengers on board shall wear an approved survival suit. This type of equipment meets the definition of 'NIE'. According to point 21.A.303(b)(1), the approval of such NIE shall be made under the ETSO authorisation procedures of Subpart O.

Example 2

Point CAT.IDE.A.100(a) of Part-CAT exempts 'child restrain devices' from an airworthiness approval. Such devices also meet the definition of 'NIE'. EASA has published ETSO-C100 'Aviation Child Safety Devices' which is applicable to such equipment. Even if such NIE is exempted from approval, according to point 21.A.303(b)(2), its manufacturer may request the certification of such NIE under the ETSO authorisation procedures of Subpart O.

[2] Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 296, 25.10.2012, p. 1).

[3] Commission Regulation (EU) 2018/395 of 13 March 2018 laying down detailed rules for the operation of balloons pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 71, 14.3.2018, p. 10).

[4] Commission Implementing Regulation (EU) 2018/1976 of 14 December 2018 laying down detailed rules for the operation of sailplanes pursuant to Regulation (EU) 2018/1139 of the European Parliament and of the Council (OJ L 326, 20.12.2018, p. 64).

GM1 21.A.305(b) Approval of parts, non-installed equipment, and control and monitoring unit (CMU) components

VOLUNTARY CERTIFICATION OF NON-INSTALLED EQUIPMENT (NIE)

A manufacturer of an article of NIE that is not explicitly required to be approved may voluntarily request its certification under the ETSO authorisation procedures of Subpart O only if EASA has published an ETSO applicable to the respective article of NIE.

AMC1 21.A.602B(a)(2) Demonstration of capability

DEROGATION FROM PRODUCTION CAPABILITY DEMONSTRATION

The derogation under point 21.A.602B(a)(2) applies to NIE which consists only of software applications not intended to be installed on ETSO-authorised hardware. An example of such NIE is the electronic flight bag (EFB) software applications covered by ETSO-2C521().

The derogation from production capability demonstration is not applicable to those software applications that are intended to be installed on ETSO-authorised hardware. Example of such applications is any software developed according to ETSO-C214a 'Functional ETSO equipment using an ETSO-C153a-authorised IMA platform or module'.

AMC1 21.A.602B(b)(2) ~~Procedures for ETSO authorisations~~ Demonstration of capability

DESIGN CAPABILITY — PROCEDURES FOR ETSO AUTHORISATIONS

1. Scope

   1.1 A manual of procedures ~~must~~ should set out specific design practices, resources and sequence of activities relevant for the specific projects, taking ~~account of~~ Part 21 requirements into account.

   1.2 These procedures ~~must~~ should be concise and limited to the information needed for quality and proper control of activities by the applicant/holder~~,~~ and by the Agency.

2. Management of the ETSO authorisation process

   A procedure explaining how the application to the Agency and certification process to obtain an ETSOA will be made~~,~~ ~~must~~ should be established.

3. Management of design changes

   3.1 A procedure taking into account point 21.A.611, ~~must~~ should be established for the classification and approval of design changes to~~n~~ articles under the ETSO authorisation.

   3.2 A ~~P~~procedure for the classification and approval of repairs and unintentional deviations from the approved design data occurring in production (concessions or non-conformances~~'s~~) ~~must~~ should be established.

4. Obligations addressed in point 21.A.609

The applicant should establish the necessary procedures to show to the Agency how it will fulfil the obligations under point 21.A.609.

For the issue of information and instructions, a procedure following the principles of AMC1 21.A.14(b), paragraph 4 ~~must~~ should be established.

5. Control of design ~~sub-~~subcontractors

The applicant ~~must~~ should establish the necessary procedures to show to the Agency how it will control design ~~sub-~~subcontractors.

6. Distribution of software applications

When an applicant for an ETSO authorisation for non-installed equipment which consists only of software applications is not required to demonstrate its capability for production, i.e. the derogation under point 21.A.602B(a)(2) applies, the applicant should establish procedures for the distribution of authorised articles, and changes to them, to the end users. Such procedures should ensure that the distributed articles are exact copies of the authorised software application.

The software should be distributed together with the following accompanying information as applicable:

— software and media identification;

— reference to the design approval for software (e.g. ETSOA certificate number);

— integrity check instructions;

— hardware and software compatibility (e.g. minimum hardware requirements, minimum operating system requirements);

— loading instructions;

— procedures for the verification of the software installation, including specific configuration items according to the user operational needs;

— any specific instruction for functional checks (desk, ground or flight, as required);

— description of open problems and/or limitations;

— any other relevant, useful information.

AMC2 21.A.807(a) Identification of ETSO articles

MARKING OF NON-INSTALLED EQUIPMENT (NIE) THAT CONSISTS OF SOFTWARE APPLICATIONS ONLY

The electronic marking should be used for NIE that consists of software applications only. In addition, when physical distribution media are used, they should be marked as well.

To implement electronic marking, the software application should include a function that permits the user to retrieve the markings information required by point 21.A.807(a).

Note: The date of the official release of the software application is a means to comply with point 21.A.807(a)(3).