Commission Implementing Regulation (EU) 2020/1159 of 5 August 2020 amending Regulations (EU) No 1321/2014 and (EU) No 2015/640 as regards the introduction of new additional airworthiness requirements

COMMISSION IMPLEMENTING REGULATION (EU) 2020/1159

of 5 August 2020

amending Regulations (EU) No 1321/2014 and (EU) No 2015/640 as regards the introduction of new additional airworthiness requirements

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to 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[(1)], and in particular point (h) of Article 17(1) thereof,

Whereas:

(1) Pursuant to Article 76(3) of Regulation (EU) 2018/1139, the European Union Aviation Safety Agency (the 'Agency') issues certification specifications ('CS') and regularly updates them. However, an aircraft, the design of which has already been certified, is not required to comply with an updated version of CS when it is produced or while in service. Therefore, in order to maintain a high level of aviation safety and environmental requirements in the Union, compliance of such aircraft with additional airworthiness requirements that were not included in the initial CS at the time of certification of design should be introduced. Commission Regulation (EU) 2015/640[(2)] sets out such additional airworthiness requirements. That Regulation should now be amended to add new requirements on ageing aircraft.

(2) In 2007, the Agency issued Acceptable Means of Compliance (AMC) 20-20 which provide technical guidance for developing a continuing structural integrity programme aiming at ensuring safe operation of ageing aircraft throughout their operational life. Due to the non-binding nature of the AMC, the application of that guidance may not be consistent throughout the Union. In consequence, there may be currently large aircraft in operation which were designed, modified or repaired without effectively addressing damage tolerance evaluations, widespread fatigue damage and corrosion prevention. With the objective of preventing catastrophic failures due to fatigue, including widespread fatigue and corrosion, additional airworthiness requirements on ageing aircraft should be introduced in Regulation (EU) 2015/640.

(3) Any aircraft could be considered to be ageing from the moment of its manufacture. The ageing of an aircraft depends on such factors as age, the number of flight cycles and the number of flight hours. Individual aircraft components age differently and some of the ageing factors are fatigue through repetitive cycles, wear, deterioration and corrosion. Those factors could cause significant safety concern if they are not properly managed throughout the life of the aircraft. Service experience has shown that there is a need to continually update knowledge about the structural integrity of ageing aircraft. Therefore, new requirements to keep up to date knowledge about ageing factors on the basis of real-time operational experience and with the use of modern tools of analysis and testing should be introduced in Regulation (EU) 2015/640.

(4) Those requirements on ageing aircraft should ensure that design approval holders produce the data and follow procedures, instructions and manuals necessary to prevent ageing structure failures due to corrosion and fatigue and make them available to operators. In order to achieve this, design approval holders should be required to develop a comprehensive continuing structural integrity programme for the aircraft type and to evaluate existing changes and repair designs for damage tolerance. At the same time, operators should be required to incorporate into their maintenance programme those data whilst addressing the adverse effects of changes and repairs on each airframe and its associated maintenance requirements.

(5) In order to ensure that those data, procedures, instructions and manuals produced on the basis of those new requirements are also used when maintaining large aeroplanes, point M.A.302 of Annex I to Commission Regulation (EU) No 1321/2014[(3)] needs to refer to the requirements introduced in Part-26 of Annex I to Regulation (EU) 2015/640.

(6) Several hundred large aeroplanes fitted with Class D cargo or baggage compartments are currently registered in Member States. The risk of uncontrollable fires in this type of compartment is considered high, in particular considering that the carriage of lithium batteries in cargo or baggage compartments has increased over recent years, together with the identified risk of thermal runaways and the subsequent fires related to those batteries.

(7) In September 2007 the Agency had introduced new design standards eliminating Class D cargo and baggage compartments from the certification specifications for large aeroplanes. Those standards were aimed at mitigating the risk of injuries or fatalities in the event of an in-flight fire in the cargo or baggage compartment, but they only apply to large aeroplanes certified on the basis of requests made after September 2007. Considering that certain large aeroplanes might not comply with those standards and having due regard to the nature and risk of operations with large aeroplanes, those standards should now apply to all in service large aeroplanes certified by the Agency.

(8) For the last few decades, runway excursions have been major contributors to accidents worldwide and a significant risk to aviation safety. The EASA Annual Safety Review 2018 identifies runway excursions as one of the two highest key risk areas. Furthermore, runway excursions accounted for 30 % of the non-fatal accidents over the same period and for the same population. The number of occurrences of runway excursions during landings has increased in line with the growth in traffic. As aviation traffic is expected

to continue to grow worldwide, as well as in Europe, the number of runway excursions can also be expected to increase further if no action is taken.

(9) In January 2020 the Agency has introduced new design standards for the installation of systems supporting flight crews in their decision-making during approach and landing. Those standards are aimed at mitigating the risk of runway excursions during landing. Having due regard to the nature and risk of operations with large aeroplanes those new standards should apply now to all in service large aeroplanes certified by the Agency.

(10) Commission Regulations (EU) No 1321/2014 and (EU) No 2015/640 should therefore be amended accordingly. In consideration of the ongoing COVID-19 outbreak, a transition period has been included to avoid additional burden to the industry during this crisis and to facilitate the compliance with the new rules and procedures introduced by this Regulation.

(11) The measures provided for in this Regulation are based on opinion No 12/2016[(4)] and opinion 04/2019[(5)] issued by the Agency in accordance with Article 76(1) of Regulation (EU) 2018/1139.

(12) The measures provided for in this Regulation are in accordance with the opinion of the Committee referred to in Article 127(3) of Regulation (EU) 2018/1139,

HAS ADOPTED THIS REGULATION:

Article 1

Annex I (Part-M) to Regulation (EU) No 1321/2014 is amended in accordance with Annex I to this Regulation.

Article 2

Regulation (EU) 2015/640 is amended as follows

(1) Article 1 is replaced by the following:

Article 1

Subject matter and scope

1 This Regulation lays down common additional airworthiness specifications related to the continuing airworthiness and safety improvements of aircraft.

2 This Regulation applies to:

a operators of:

(i) aircraft registered in a Member State;

(ii) aircraft registered in a third country and used by an operator for which a Member State ensures oversight;

b holders of a type-certificate, restricted type-certificate, supplemental type-certificate or a change and repair design approval approved by the Agency in accordance with Commission Regulation (EU) No 748/2012[(6)]or deemed to have been issued in accordance with Article 3 of that Regulation;

c the applicants for a type-certificate or a restricted type-certificate for a turbine-powered large aeroplane, for which the application was submitted before 1 January 2019 and who are issued with the certificate after 26 August 2020 when specified in Annex I (Part-26).;

(2) In Article 2, the following points (e) to (o) are added:

(e) "limit of validity" (LOV) means, in the context of the engineering data that supports the structural maintenance programme, a period of time, stated as a number of total accumulated flight cycles or flight hours or both, during which it is demonstrated that widespread fatigue damage will not occur in the aeroplane;

(f) "airworthiness limitation section" (ALS) means a section in the instructions for continued airworthiness, as required by points 21.A.61, 21.A.107 and 21.A.120A of Annex I (Part 21) to Regulation (EU) No 748/2012, that contains airworthiness limitations that set out each mandatory replacement time, inspection interval and related inspection procedure;

(g) "corrosion prevention and control programme" (CPCP) means a document reflecting a systematic approach to prevent and to control corrosion in an aeroplane's primary structure, consisting of basic corrosion tasks, including inspections, areas subject to those tasks, defined corrosion levels and compliance times (implementation thresholds and repeat intervals). A baseline CPCP is established by the type certificate holder, which can be adapted by operators to create a CPCP in their maintenance programme specific to their operations;

(h) "widespread fatigue damage" (WFD) means a simultaneous presence of cracks at multiple locations in the structure of an aeroplane that are of such size and number that the structure will no longer meet the fail-safe strength or residual strength used for certification of that structure;

(i) "baseline structure" refers to the structure that is designed under the type certificate for that aeroplane model (that is, the 'as delivered aeroplane model configuration');

(j) "fatigue-critical baseline structure" (FCBS) means the baseline structure of an aeroplane that is classified by the type certificate holder as a fatigue-critical structure;

(k) "fatigue-critical modified structure" (FCMS) means any fatigue critical structure of an aeroplane introduced or affected by a change to its type design and that is not already listed as part of the fatigue-critical baseline structure;

(l) "damage tolerance evaluation" (DTE) is a process that leads to a determination of maintenance actions necessary to detect or preclude fatigue cracking that could contribute to a catastrophic failure. When applied to repairs and changes, a DTE includes the evaluation of the repair or change and the fatigue critical structure affected by the repair or change;

(m) "damage tolerance inspection" (DTI) means a documented inspection requirement or other maintenance action developed by holders of a type-certificate or restricted type-certificate as a result of a damage tolerance evaluation. A DTI includes the areas to be inspected, the inspection method, the inspection procedures (including the sequential inspection steps

***Changes to legislation:** There are currently no known outstanding effects for the Commission Implementing Regulation (EU) 2020/1159. (See end of Document for details)*

and acceptance and rejection criteria), the inspection threshold and any repetitive intervals associated with those inspections. DTIs may also specify maintenance actions such as replacement, repair or modification;

(n) "repair evaluation guideline" (REG) means a process established by the type certificate holder that guides operators to establish damage tolerance inspections for repairs that affect fatigue-critical structure to ensure the continued structural integrity of all relevant repairs;

(o) "fatigue-critical structure" (FCS) means a structure of an aeroplane that is susceptible to fatigue cracking that could lead to a catastrophic failure of the aeroplane.;

(3) Annex I (Part-26) is amended in accordance with Annex II to this Regulation.

Article 3

Entry into force and application

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

It shall apply from 26 February 2021 with the exception of point (4) of Annex II that shall apply from 26 August 2023.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 5 August 2020.

For the Commission

The President

Ursula VON DER LEYEN