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ANNEX to EASA OPINION No 07/2013

COMMISSION REGULATION (EU) No .../..

of **XXX**

amending Commission Regulation (EU) No 748/2012 of 3 August 2012 laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations

[...]

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[...]

THE EUROPEAN COMMISSION,

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

Having regard to Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency, and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC¹, and in particular Article 5(5) and Article 7 thereof,

Whereas:

- (1) With the replacement of Commission Regulation (EC) No 1592/2002 by Regulation (EC) No 261/2008, the scope of the Agency was extended to include, among others, operations and pilot licensing
- (2) It has been found necessary to propose amendments to Commission Regulation (EU) No 748/2012 to regulate the competence and experience for pilots and for lead flight test engineers depending on the complexity of the flight tests performed and of the aircraft.
- (3) In order to promote the safe conduct of flight testing, amendments to the requirements for production and design organisations conducting flight testing requiring a flight test operations manual defining the organisation's policies and procedures in relation to flight test are also necessary.
- (4) The proposed amendments are based on proposals from the Joint Aviation Authorities, which have been transposed into the European legal frame.
- (5) The measures provided for in this Regulation offer a grandfathering scheme for flight test crews engaged in flight test activities, and a transitional approach to support further work on the topic of licensing of lead flight test engineers (LFTE).
- (6) The Agency prepared draft implementing rules and submitted them as an Opinion to the Commission in accordance with Article 19(1) of Regulation (EC) No 216/2008.
- (7) The measures provided for in this Regulation are in accordance with the Opinion of the European Aviation Safety Agency Committee established by Article 65 of Regulation (EC) No 216/2008.

¹ *OJ L 143, 30.4.2004, p. 76.*

HAS ADOPTED THIS REGULATION:

Article 1

Annex I to Commission Regulation (EU) No 748/2012 (Part 21) is amended in accordance with the Annex to this Regulation Article [...]

Article 2

Entry into force and transition measures

- (1) This Regulation shall enter into force 20 days after its publication in the Official Journal of the European Union.
- (2) By way of derogation from (1), the competence and experience requirements established in Appendix XII to Part 21 shall become applicable 36 months following the date of entry into force.
- (3) By way of derogation from (1), the requirement for a flight test operations manual established in Part 21.A.143 and Part 21.A.243 shall become applicable 12 months following the date of entry into force.
- (4) By way of derogation from (1) and (2), a Member State may continue to apply its existing national licensing scheme for flight test crew members other than pilots until 36 months following the date of entry into force, provided that it issues these types of licenses up to the date of entry into force of this Regulation.
- (5) Flight test pilots engaged in Category 3 or 4 flight tests and flight test engineers who before the entry into force of this Regulation have conducted flight test activities in accordance with national rules, are deemed to comply with the relevant requirements of Appendix XII to Part 21 and may continue to exercise their current scope of functions.

Applicants for or holders of a permit to fly may continue to use the services of the flight test pilots engaged in Category 3 or 4 flight tests and flight test engineers within their current scope of functions. The current scope of functions of the flight test crew member shall be established by the applicant for or holder of a permit to fly that uses or plans to use their services, based on the flight test crew members' flight test experience and training, and on the relevant records of the applicant for or the holder of a permit to fly. This scope of functions shall be made available to the competent authority.

Any addition or any other amendment to the scope of the privileges given to these flight test crew members by the applicant for or holder of a permit to fly that uses or plans to use their services, shall comply with the requirements of Appendix XII to Part 21.

This Regulation shall be binding in its entirety and directly applicable in the Member States in accordance with the Treaties.

Done at Brussels,

For the Commission

The President

[...]

ANNEX 1

Amendments to Part 21

Annex I (Part 21) to Commission Regulation (EU) No 748/2012 is amended as follows:

Contents

1. The text of 'Contents' (detailed layout) is amended by adding in 'Appendices' as follows:

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2. In point (a) of point 21.A.143 'Exposition' a new point 13 is added as follows:
'13. if flight tests are to be conducted, a flight test operations manual (FTOM) defining the organisation's policies and procedures in relation to flight test. The flight test operations manual (FTOM) shall include:
 - (i) a description of the organisation's processes for flight test, including the flight test organisation involvement into the permit to fly issuance process;
 - (ii) crewing policy, including composition, competency, currency and flight time limitations, in accordance with Appendix XII to this Part, where applicable;
 - (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; and
 - (vi) a list of documents that need to be produced for flight test.'
3. Point (a) of point 21.A.243 'Data' is replaced by the following:

- ‘(a) The design organisation shall furnish a handbook to the Agency describing, directly or by cross-reference, the organisation, the relevant procedures and the products or changes to products to be designed. If flight tests are to be conducted, a flight test operations manual (FTOM) defining the organisation’s policies and procedures in relation to flight test shall be furnished. The FTOM shall include:
- (i) a description of the organisation’s processes for flight test, including the flight test organisation involvement into the permit to fly issuance process;
 - (ii) crewing policy, including composition, competency, currency and flight time limitations, in accordance with Appendix XII to this Part, where applicable;
 - (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; and
 - (vi) a list of documents that need to be produced for flight test.’

4. Point (b) 2 of point 21.A.708 ‘Flight conditions’ is replaced by the following:

‘2. any conditions or restrictions put on the flight crew to fly the aircraft, in addition to those defined in Appendix XII to this Part.’

5. A new Appendix XII is added as follows:

Appendix XII - Categories of flight tests and associated flight test crew qualifications

(a) General

This Appendix establishes the qualifications necessary for flight crew involved in the conduct of flight tests for aircraft certified or to be certified in accordance with CS-23 for aircraft with a maximum take-off mass (MTOM) above 2 000 kg, CS-25, CS-27, CS-29 or equivalent airworthiness codes.

(b) Definitions

‘Flight test engineer’:

- any engineer involved in flight test operations either on the ground or in flight.

‘Lead flight test engineer’

- a flight test engineer assigned for duties in an aircraft for the purpose of conducting flight tests or assisting the pilot in the operation of the aircraft and its systems during flight test activities.

‘Flight tests’

- flights for the development phase of a new design (aircraft, propulsion systems, parts and appliances);
- flights to demonstrate compliance to certification basis or conformity to type design.

- flights intended to experiment new design concepts, requiring unconventional manoeuvres or profiles for which it could be possible to exit the already approved envelope of the aircraft;
- flight test training flights.

(c) Categories of flight tests

1. General

The descriptions below address the flights performed by design and production organisations under Part 21.

2. Scope

For the purposes of this Appendix, the definition of flight tests is provided in point (b) above.

If more than one aircraft is involved in a test, each individual aircraft flight shall be assessed under this Appendix to determine if it is a flight test and when appropriate, its category.

The flights described above are the only flights that are under the scope of this Appendix.

3. Categories of flight tests

Flights tests include the following four categories:

Category One (1)

- Initial flight(s) of a new type of aircraft or of an aircraft of which flight or handling characteristics may have been significantly modified;
- Flights during which it can be envisaged to potentially encounter flight characteristics significantly different from those already known;
- Flights to investigate novel or unusual aircraft design features or techniques;
- Flights to determine or expand the flight envelope;
- Flights to determine the regulatory performances, flight characteristics and handling qualities when flight envelope limits are approached;
- Flight test training for Category 1 flight tests.

Category Two (2)

- Flights not classified as Category 1 on an aircraft whose type is not yet certified;
- Flights not classified Category 1 on an aircraft of an already certified type, after embodiment of a not yet approved modification and which:
 - require an assessment of the general behaviour of the aircraft; or
 - require an assessment of basic crew procedures, when a new or modified system is operating or is needed; or
 - are required to intentionally fly outside of the limitations of the currently approved operational envelope, but within the investigated flight envelope.
- Flight test training for Category 2 flight tests.

Category Three (3)

Flights performed for the issuance of statement of conformity for a new-built aircraft which do not require flying outside of the limitations of the type certificate or the aircraft flight manual.

Category Four (4)

Flights not classified as Category 1 or 2 on an aircraft of an already certified type, in case of an embodiment of a not yet approved design change.

(d) Competence and experience of pilots and lead flight test engineers

1. General

Pilots and lead flight test engineers shall have the competences and experience specified in the following table.

Aircraft	Categories of flight tests			
	1	2	3	4
CS-23 commuter or aircraft having a design diving speed (Md) above 0.6 or a maximum ceiling above 7 260 m (25 000 ft), CS-25, CS-27, CS-29 or equivalent airworthiness codes	Competence level 1	Competence level 2	Competence level 3	Competence level 4
Other CS-23 with an MTOM above 2 000 kg	Competence level 2	Competence level 2	Competence level 3	Competence level 4

Competence level 1:

The pilots shall comply with the requirements of Part-FCL of Commission Regulation (EU) No 1178/2011 of 3 November 2011².

The lead flight test engineer shall have:

- satisfactorily completed a Competence level 1 training course; and
- a minimum of 100 hours of flight experience, including flight test training.

Competence level 2:

The pilots shall comply with the requirements of Part-FCL.

The lead flight test engineer shall have:

- satisfactorily completed a Competence level 1 or level 2 course; and
- a minimum of 50 hours of flight experience, including flight test training.

The course shall cover at least the following subjects:

- Performance;
- Stability and control/handling qualities;
- Systems;

² OJ L 311, 25.11.2011, p.1

- Test management; and
- Risk/safety management.

Competence level 3:

The pilot(s) shall hold a valid licence appropriate to the category of aircraft under test, issued in accordance with Part-FCL and hold a Commercial Pilot Licence (CPL) as a minimum. In addition, the pilot-in-command shall:

- hold a flight test rating;

or

- have:
 - at least 1 000 hours of flight experience as pilot-in-command on aircraft having similar complexity and characteristics, and
 - participated, for each class or type of aircraft, in all flights that are part of the programme leading to the issuance of the individual certificate of airworthiness of at least five aircraft;

The lead flight test engineer shall:

- satisfy Competence level 1 or 2;

or,

- have:
 - gained a significant amount of flight experience relevant to the task; and
 - participated in all flights that are part of the programme leading to the issuance of the individual certificate of airworthiness of at least five aircraft.

Competence level 4:

The pilot(s) shall hold a valid licence appropriate to the category of aircraft under test, issued in accordance with Part-FCL and hold a CPL as a minimum. The pilot-in-command shall hold a flight test rating or have at least 1 000 hours as pilot-in-command on aircraft having similar complexity and characteristics.

Competence and experience for lead flight test engineers is defined in the flight test operations manual.

2. Lead flight test engineers

Lead flight test engineers shall receive an authorisation from the organisation that employs them detailing the scope of their functions within the organisation. The authorisation shall contain the following information:

- Name;
- Date of birth;
- Experience and training;
- Position in organisation;
- Scope of the authorisation;
- Date of first issue of the authorisation;
- Date of expiry of the authorisation, if appropriate; and
- Identification number of the authorisation.

Lead flight test engineers shall only be appointed for a specific flight if they are physically and mentally fit to safely discharge assigned duties and responsibilities.

The organisation shall make all relevant records related to authorisations available to their holders.

(e) Competence and experience of other flight test engineers.

Other flight test engineers on board the aircraft shall have an amount of experience and training commensurate with the tasks assigned to them as crew members, in accordance with the flight test operations manual.

The organisation shall make all relevant records related to their flight activities available to the relevant flight test engineer.