



# Terms of Reference

for a rulemaking task

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## Review of aeroplane performance requirements for CAT operations

RMT.0296 (OPS.008(A)) — ISSUE 1 — 9.6.2015

<b>Applicability</b>		<b>Process map</b>	
Affected regulations and decisions:	Commission Regulation (EU) No 965/2012 Part-CAT; ED Decision 2012/018/R.	Concept Paper:	No
Affected stakeholders:	CAT aeroplane operators.	Rulemaking group:	Yes
Driver/origin:	Safety.	RIA type:	Full
Reference:	SR UNKG-2008-76; SR NORW-2011-011; EASp/EAPPRE (Edition 1.0, Jan 2013).	Technical consultation during NPA drafting:	No
		Publication date of the NPA:	2016/Q2
		Duration of NPA consultation:	3 months
		Review group:	TBD
		Focussed consultation:	TBD
		Publication date of the Opinion:	2017/Q3
		Publication date of the Decision:	2018/Q3



## 1. Issue and reasoning for regulatory change

A first attempt to review the operational requirements on aeroplane performance for commercial air transport (CAT) operations with the purpose of harmonisation between US and EU rules was initiated by the Joint Aviation Authorities (JAA)/Federal Aviation Authority (FAA) Aviation Rulemaking Advisory Committee (ARAC) Performance Harmonisation Working Group (PERFWG).

The recommendations of this working group were subsequently discussed by the JAA OPS Performance Sub-Committee (PERFSC) and included in an NPA (NPA-OPS 47). Such NPA became the input for the EASA rulemaking task OPS.008 (old numbering).

The main effects of the proposed changes were considered to be an improvement of clarity, technical accuracy and flexibility for operators. The three main topics addressed by the proposal were:

- ‘damp runways’,
- ‘groove and porous friction course runways’, and
- miscellaneous amendments.

However, it soon became evident that the number of issues and safety concerns to be addressed in the field of aeroplane performance was larger.

Later on in fact, the Takeoff and Landing Performance Assessment Advisory and Rulemaking Committee (TALPA ARC) was tasked by FAA with an exhaustive review of safety issues of operations on contaminated runways, and produced proposals along the three main directions of:

- standards for runway condition reporting,
- definition of operational landing performance computation, and
- operational rules.

Most of the TALPA ARC recommendations were endorsed by the European Action Plan for the Prevention of Runway Excursions (EAPPRE) which, while recognising runway excursions as a recurring cause of accidents and serious incidents and identifying the main casual factors, contained the following recommendations to EASA:

- 3.7.1 — Establish and implement one consistent method of contaminated runway surface condition assessment and reporting by the aerodrome operator for use by aircraft operators. Ensure the relation of this report to aircraft performance as published by aircraft manufacturers.
- 3.7.2 — Establish and implement one consistent method of calculation of crosswind limits for use by aircraft manufacturers and aircraft operators.
- 3.7.3 — It is recommended that aircraft operators always conduct an in-flight assessment of the landing performance prior to landing. Note: Apply an appropriate margin to these results.

Part of the TALPA ARC recommendations on certification aspects related to performance have also been already considered by EASA in RMT MDM.069 — Takeoff and Landing Performance Assessment, which was then deleted from the inventory to be included in the present rulemaking task.

The TALPA ARC recommendations are also the basis for the following two draft Advisory Circulars (ACs) published by FAA in January 2015:



- AC 25-X — Landing Performance Data for Time of Arrival Landing Performance Assessments. This AC provides guidance and standardised methods that data providers, such as type certificate (TC) holders, supplemental type certificate (STC) holders, applicants, and aeroplane operators, can use when developing landing performance data for time-of-arrival landing performance assessments for transport category aeroplanes. This AC also promotes the use of consistent terminology for runway surface conditions used among data providers and FAA personnel.
- AC 25-X — Takeoff Performance Data for Operations on Contaminated Runways. This AC is equivalent to the above one but intended for developing take-off performance data.

EASA has also published:

- in 2010 a study, under the Research Project EASA.2008/4, on runway friction characteristics measurement and aircraft braking (RuFAB) which endorses some of the TALPA ARC recommendations; and
- in 2014, the Safety Information Bulletin (SIB) No 2014-20 on aeroplane operations in crosswind conditions.

Furthermore, the Agency has received the following safety recommendations (SRs):

- UNKG-2008-076: The European Aviation Safety Agency should require operators to ensure that flight crews are provided with guidance material on aircraft performance when operating on a runway that is notified as 'may be slippery when wet', or has sections thereof notified as 'may be slippery when wet'; and
- NORW-2011-011: The Accident Investigation Board Norway (AIBN ) recommends that FAA, EASA and the Civil Aviation Authority (CAA) Norway evaluate the airlines' crosswind limits in relation to friction values and consider whether they should be subject to separate approval by the authorities.

Eventual future safety recommendations related to aeroplane performance issues, which might be published during this rulemaking task, will be taken into consideration as appropriate.

Finally, in 2014, the European Business Aviation Association (EBAA) approached the Agency to discuss the review of the applicable landing factors for CAT operations in relation to the specificities of certain aircraft types used in business aviation in order to determine whether more flexibility is achievable under given conditions. For this purpose, EBAA has commissioned a study to an independent research body (National Aerospace Laboratory NLR) and has submitted it to the Agency for consideration during the present rulemaking task (Report No NLR-CR-2014-206 — Safety Assessment Of Landing Performance Factors Of Business Type Of Aircraft).

## 2. Objectives

The general objective is to maintain a uniform and high safety level with cost-efficient rules.

The specific objectives, in consideration of the above-described issues, are:

- to reduce the number of accidents and serious incidents where aeroplane performance is a causal factor;
- to provide improved clarity, technical accuracy, flexibility or a combination of these benefits for the EU operational requirements on aeroplane performance for CAT operations; and



- to contribute to the harmonisation of FAA and EU operational requirements on aeroplane performance for CAT operations.

### 3. Activities

During the development of the draft rules and the RIA, the following activities will be considered:

- review of the following materials:
  - JAA NPA-OPS 47 — Aeroplane Performance;
  - objectives of the former rulemaking task MDM.069 — Take-off and Landing Performance Assessment;
  - TALPA ARC recommendations;
  - EAPPRE recommendations;
  - EASA Safety Information Bulletin (SIB) No 2014-20;
  - study contained in Report No NLR-CR-2014-206 — Safety Assessment Of Landing Performance Factors Of Business Type Of Aircraft;
  - reports of SRs UNKG-2008-076 and NORW-2011-011; and
  - ICAO Annex 14;
- review of the existing European certification standards for aeroplane performance to ensure consistency with the operational requirements;
- review of the operational requirements on aeroplane performance for CAT operations;
- review of other comparable regulatory frameworks;
- development of the RIA; and
- drafting of the amended and/or new requirements and related AMC/GM.

### 4. Deliverables

- Regulatory Impact Assessment (RIA);
- Notice of Proposed Amendment (NPA) containing the amendment(s) to one or more of the following regulatory texts:
  - CS-23,
  - CS-25, and
  - Regulation (EU) No 965/2012<sup>1</sup> and related AMC/GM;
- CRD to NPA containing the new/amended implementing rules;
- Opinion; and

<sup>1</sup> 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).



- ED Decision containing the new/amended CSs/AMC/GM.

## 5. Interface issues

This rulemaking task should take into account the progress and results of RMT.0570 — Reduction of runway excursions.

Moreover, the work of the ICAO Friction Task Force (FTF) should also be taken into consideration to the largest possible extent.

## 6. Focussed consultation

A focussed consultation with the concerned stakeholders may be considered, if needed, during the review of the comments received on the NPA.

Depending on the nature and the extent of the comments received on the NPA, the establishment of a review group may also be considered.

## 7. Profile and contribution of the rulemaking group

The expertise and experience of the rulemaking group and its members should cover at least the following:

- sound knowledge of and experience in the field of aeroplane performance;
- sound knowledge of and experience in flight operations;
- knowledge of European requirements for air operations and particularly aeroplane performance, ICAO Annex 6 and other relevant regulatory frameworks (e.g. FAA) with regard to air operations and aeroplane performance;
- sound knowledge of and experience in the field of runway surface conditions assessment and reporting;
- experience or knowledge in the context of performance-based regulations;
- experience in risk assessment and knowledge of the related methodology; and
- experience in or knowledge of the oversight of air operators.

The group should ensure a balanced representation of:

- CAT air operators,
- aircraft manufacturers,
- competent authorities, and
- aerodrome operators.

Expertise in CAT operations with different categories of aeroplanes should also be ensured.



## 8. Annex I: Reference documents

### 8.1. Affected regulations

Annex IV (Part-CAT) to 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) and subsequent amendments.

### 8.2. Affected decisions

- Decision No 2012/018/R of the Executive Director of the Agency of 24<sup>th</sup> October 2012 on Acceptable Means of Compliance and Guidance Material to 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 — Acceptable Means of Compliance and Guidance Material to Part-CAT (Annex IV) and subsequent amendments;  
and, if necessary:
- Decision No 2003/014/RM of the Executive Director of the Agency of 14 November 2003 on certification specifications, including airworthiness codes and acceptable means of compliance for normal, utility, aerobatic and commuter category aeroplanes ('CS-23') and subsequent amendments; and
- Decision No 02/2003 of the Executive Director of the Agency of 14 October 2003 on the implementation of airworthiness directives for products, parts and appliances designed in third countries and repealing Decision No 1/2003 of the Executive Director of the Agency of 26 September 2003 on the implementation of airworthiness directives for aircraft designed in third countries and subsequent amendments.

### 8.3. Reference documents

- JAA NPA-OPS 47 — Aeroplane Performance;
- SR UNKG-2008-076 — Aircraft Accident Report 1/2009, Air Accidents Investigation Branch (AAIB), UK Department for Transport, 9 January 2009;
- SR NORW-2011-011 — Report SL 2011/10, Winter Operations, Friction Measurements and Conditions for Friction Predictions, Vol II — Main Report, Accident Investigation Board Norway (AIBN), May 2011);
- European Action Plan for the Prevention of Runway Excursions (EAPPRE), Released Edition 1.0, January 2013;
- TALPA ARC recommendations, Airport/Part 139 Working Group Recommendation, 9 April 2009;
- study contained in Report No NLR-CR-2014-206 — Safety Assessment Of Landing Performance Factors Of Business Type Of Aircraft, conducted by the National Aerospace Laboratory Air Transport Safety Institute (NLR-ATSI);



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- Research Project EASA.2008/4 — Runway Friction Characteristics Measurement And Aircraft Braking (RuFAB), final report, March 2010;
  - EASA Safety Information Bulletin (SIB) No 2014-20 — Aeroplane Operations in Crosswind Conditions, 23 June 2014;
  - CS-25;
  - CS-23;
  - Federal Aviation Regulation (FAR) Part 121;
  - Federal Aviation Regulation (FAR) Part 135;
  - draft AC 25-X — Landing Performance Data for Time of Arrival Landing Performance Assessments;
  - draft AC 25-X — Takeoff Performance Data for Operations on Contaminated Runways;
  - ICAO Annex 6 to the Chicago Convention on International Civil Aviation, Operation of Aircraft, Part I — International Commercial Air Transport — Aeroplanes, 9<sup>th</sup> Edition, July 2010; and
  - ICAO Annex 14 to the Chicago Convention on International Civil Aviation, Aerodromes, Volume I — Aerodrome Design and Operations, 6<sup>th</sup> Edition, July 2013.

