Issue date:	Date of entry into force:	In force:
5 February 2024	12 February 2024	Until further notice

Legal basis:
Section 33 of the Aviation Act (864/2014)

Sanctions for non-compliance with this Regulation are laid down in the following:
Sections 175 and 178 of the Aviation Act (864/2014)

Amendment information:
This Regulation repeals Regulation AIR M2-19 of the Aviation Safety Administration of the Finnish Civil Aviation Administration of 12 February 1981, entitled 'Requirements for powered aircraft in towing activities', and withdraws the aeronautical information service document AIR T2-4 issued on the same day, entitled 'Approval of powered aircraft for aerotowing of sailplanes'.

REQUIREMENTS FOR POWERED AIRCRAFT IN TOWING ACTIVITIES

1 SCOPE

This Regulation applies to powered aerotowing aircraft registered in Finland which, according to Annex I of the EASA Basic Regulation[1] or other provisions, are excluded from the scope of EU regulation. However, this Regulation does not apply to gliders, which are provided for separately in regulation OPS M2-9, or to unmanned aerial vehicles.

2 APPROVAL OF AN AIRCRAFT FOR AEROTOWING

2.1 Only aircraft approved for aerotowing may be used for this purpose. For approval, it must be demonstrated to the Finnish Transport and Communications Agency that the aircraft complies with the requirements set out in section 3 herein. In addition, the aerotowing annex to the flight manual or flight handbook must be submitted to the Agency.

[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. 1–122)

2.2 The aerotowing annex must indicate:

a) the additional equipment required for the towing activity (if only a specified type of propeller may be used in the towing activity, it must be mentioned)

b) instructions for the installation and maintenance of the towing equipment

c) operating restrictions and performance data applicable to the towing activity

d) emergency measures if they deviate from those specified elsewhere in the flight manual or flight handbook.

3 TECHNICAL REQUIREMENTS

3.1 Structure

It must be demonstrated by strength calculations and test loads that the structure of the towing aircraft is capable of withstanding the maximum load on the tow release as defined in section 3.6.2 herein.

3.2 Control characteristics

The towing aircraft must be safely under control when towing. Compliance with the control characteristics requirements is demonstrated by flight tests (see section 3.5).

3.3 Towing speed

The minimum aerotowing speed and the best-rate-of-climb aerotowing speed are determined by test flights. The minimum aerotowing speed may not be less than 1.3 times the stalling speed of the towing or towed aircraft, whichever is greater.

3.4 Performance

The take-off speed of the towing combination at its maximum mass must be sufficient for the controllability and manoeuvrability of the sailplane. Under normal conditions, the towing combination must reach a height of 360 metres from the surface of the take-off location within four minutes of breaking contact with the ground.

3.5 Aerotowing tests

In order to determine performance and flight characteristics, a sufficient number of aerotowing tests must be carried out, and a test flight record must be kept.

In addition, the aerotowing tests must be carried out by ensuring that the towed aircraft is a sailplane with the maximum mass for which approval is sought. In addition, aerotowing tests must be carried out at different towing speeds (cf. section 3.3).

However, if the aircraft already has a foreign type-certificate in accordance with an acceptable standard that includes an approval for aerotowing, separate test flights in Finland are not required.

3.6 Launching hook

3.6.1 The launching hook must be of a type approved in accordance with EASA CS-ETSO 2C513 or equivalent, or separately approved by the Finnish Transport and Communications Agency.

3.6.2 The launching hook must be mounted on the towing aeroplane in such a way that it can withstand the following forces in the direction of the longitudinal axis of

the aeroplane directly towards the rear, and at an angle of 20° downwards, an angle of 20° upwards and an angle of 20° on the sides:

- 1.5 times the strength of the maximum permissible strength of the weak link, or
- if there is no restriction on the maximum strength of the weak link, 1.2 times the maximum permissible weight of the towed or towing aircraft, whichever is lighter.

3.6.3 If the launching hook attachment does not have previous approval, the mounting parts of the launching hook must be subjected to a strength test. Alternatively, it must be computationally demonstrated by using accepted material values that the mounting parts meet the specified requirements.

3.6.4 The clearance behind the launching hook must be such that the tow cable is free to turn in the shape of a right circular cone parallel to the longitudinal axis of the aeroplane. The degree of one half of the cone's apex must be 20°.

3.6.5 The release lever in the cockpit must be easily accessible and the release force may not exceed 200 N when the launching hook is subject to the limit load specified in section 3.6.2. The size and shape of the release lever must be appropriate to ensure that achieving the required force of 200 N (= maximum permissible release force) is readily possible. It must be possible to operate the lever with the same hand as the throttle lever and without reaching when the seat belts are tight.

3.7 Other equipment

In addition to the normal equipment, the towing aircraft must also be equipped with:

- a cylinder head temperature indicator for critical temperature determined in cooling tests
- shoulder safety belts or three-point belts for each seat used during aerotowing
- the necessary number of rear-view mirrors or a camera display, from which the towed aircraft is continuously visible in all positions specified in section 3.6.2. without the need for the pilot to significantly turn their head
- aerotowing annex to the flight manual or flight handbook.

4 VALIDATION OF FOREIGN APPROVALS

Upon application, the Finnish Transport and Communications Agency may validate the approval of a foreign launching hook attachment included in a type-certificate if the approval is a BFU or LTF-UL approval issued by the German Aviation Authority or an organisation authorised by it, or an approval in accordance with the standard UL2 or equivalent requirements issued by the aeronautical authority of the Czech Republic or its authorised organisation.

5 DEROGATIONS

The Finnish Transport and Communications Agency may, upon application, grant derogations from the requirements of this Regulation if the Agency considers that the derogations are necessary and that the safety level corresponding to the purpose of the Regulation is achieved by means proposed by the applicant.

Jarkko Saarimäki

Director General

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