

**DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration**

Glider Towing as a Restricted Category Special Purpose Operation

SUMMARY: The FAA proposes glider towing as a restricted category special purpose operation under Title 14 CFR § 21.25(b)(7), limited to civil-derived restricted category aircraft certificated under 14 CFR § 21.25(a)(1). This action is intended to increase the number of tow aircraft available to glider clubs throughout the country, by making available to them aircraft that are currently certificated for other uses, such as agricultural spraying.

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COMMENTS INVITED: You are invited to comment on the proposal by submitting written data, views, or arguments to the e-mail address above.

BACKGROUND

Restricted Category and Special Purpose Operations

Title 14 CFR § 21.25, Issue of type certificate: Restricted category aircraft, provides an avenue for the use of restricted category aircraft for the special purpose operations specified in 14CFR § 21.25(b). The operations permitted under this section cover a wide variety of uses, such as agricultural use (spraying, dusting, and seeding, and livestock and predatory animal control), forest and wildlife conservation, aerial advertising (skywriting, banner towing, etc) and others. Type certification of civil-derived restricted category aircraft is provided for in 14 CFR § 21.25(a)(1).

Restricted Category Regulatory History

Civil Air Regulations, part 8, Aircraft Airworthiness; Restricted Category, became effective October 11, 1950, and replaced the provisions for restricted category in other parts of the Civil Air Regulations (CAR). Civil Aeronautics Manual (CAM) part 8 was published in the Federal Register on December 23, 1950, and provided the Administrator's policies and interpretations to CAR 8. CAR 8 provided for the civil certification of aircraft in the restricted category for special purpose operations, which required appropriate restrictions and limitations for their intended use.

In 1964 the Civil Air Regulations were re-codified into Title 14 of the Code of Federal Regulations, and a new Part 21 was published in the Federal Register on October 24, 1964. The restricted category provisions in CAR 8 were transposed and re-organized

into the new Part 21, Certification Procedures for Products and Parts. The intent of the recodification program was to streamline and clarify the existing regulatory language and delete obsolete or redundant provisions. Type and airworthiness certification of restricted category aircraft is currently provided for in 14 CFR § 21.25(a) and 14 CFR § 21.185, respectively.

Proposal for Glider Towing as a Restricted Category Special Purpose

The Soaring Society of America has requested FAA approval of glider towing as a restricted category special purpose. Glider towing is not currently specified as a restricted category special purpose. Currently glider towing may be performed by aircraft certificated in a standard category, such as in the normal, utility, and acrobatic categories. We also noted that banner towing, a physically similar activity, is accepted as a mission under the special purpose of aerial advertising under 14 CFR § 21.25(b)(6).

Fundamental to restricted category is the protection of the public. A reduced level of safety is accepted for restricted category aircraft, provided that the level of safety of the public is maintained. Therefore, in evaluating glider towing as a special purpose, a primary concern is the protection of the public. In considering the similarities and differences between glider towing and banner towing, we note the carriage of persons on board the glider aircraft being towed.

To maintain the level of safety of the public we have considered the crew and passengers in the glider as the public. Gliders and tow aircraft are required to have safety mechanisms to release the glider by either party if an emergency occurs on the part of the tow aircraft or the glider. This event could be critical during the initial tow phase during takeoff and initial climb-out, when speed and altitude are both reduced. The use of a restricted category aircraft as a tow aircraft could increase the risk if an engine failure were to occur during this phase. Civil-derived restricted aircraft, those type-certificated under 14 CFR § 21.25(a)(1), unlike military-derived aircraft type-certificated under 14 CFR § 21.25(a)(2), are required to have engines that have been issued their own engine type certificates that meet civil airworthiness standards for engines. We have therefore considered that aircraft with civil certificated engines have similar levels of safety in regards to the critical situation above. We believe therefore that little if any increased risk is produced by the use of restricted category aircraft with civil certificated engines as glider tow aircraft.

Additional concerns for restricted category aircraft are the operating restrictions imposed by 14 CFR § 91.313. Under this section, restricted category aircraft are prohibited from performing operations over densely-populated areas, in congested airways, or near airports where passenger transport operations are conducted. Glider towing operations takes place at and near airports and could be performed within these restrictions.

Accordingly we propose that glider towing be accepted as a new special purpose under the provisions of 14 CFR § 21.25(b)(7) for civil-derived aircraft type certificated

under 14 CFR § 21.25(a)(1), but not for military-derived aircraft type certificated under 14 CFR § 21.25(a)(2).

This proposal would increase the number of tow aircraft available to glider and sailplane clubs throughout the country, by making available to them aircraft that are currently certificated under 14 CFR § 21.25(a)(1). Agricultural spraying aircraft have good performance capabilities, in power and maneuverability, which make them well-suited for glider tow operations. In addition many have already been modified for banner towing operations. We do not believe that this proposal will have a negative effect on the level of safety of the public.

We also note that restricted category aircraft must comply with the applicable noise requirements of 14 CFR part 36. Small propeller-driven airplanes and rotorcraft being used for agricultural aircraft operations are excepted from showing compliance to part 36. However, approving an agricultural aircraft for uses other than agricultural operations, such as glider towing, removes the aircraft's exception to the noise requirements and requires substantiation of noise levels to comply with part 36.