The Soaring Safety Foundation (SSF) is the Training and Safety affiliate of the Soaring Society of America (SSA), with approximately 9,000 members including soaring pilots and flight instructors. Our mission is to provide instructors and pilots with the tools needed to teach/learn both the physical and the aeronautical decision-making skills needed to safely fly a glider. The SSA/SSF offers courses on various aspects of glider flight safety and conducts Flight Instructor Refresher Courses (FIRC) in pursuing that mission.

The SSA and the SSF support the broad goals of this NPRM but have the following concerns regarding these three (3) specific issues:

First, § 61.316: The V_{s1} limit for gliders should be changed from 45 Kts to 54 Kts as a 45Kt limit precludes the use of modern gliders manufactured with safety cockpits, and benign handling characteristics.

As noted in the introduction section "C Expansion of Eligibility for Light-Sport Category Aircraft and Sport Pilots" section 4. "Maximum Stalling Speed (V_{s1}), the increased V_{s1} speed for airplanes was to increase safety by allowing manufactures to incorporate additional safety features". The same benefits will be achieved by glider pilots by raising their V_{s1} speed to 54 Kts.

Modern gliders are designed and built to a maximum gross weight (GW) of up to 600 kg (1320 lbs) for single place gliders and up to 700 kg (1540 lbs) for two-place gliders. These GW limits are far below the 3000 lbs limit expected for airplanes developed under these regulations. Designed for minimum drag, modern gliders have V_{s1} speed in the 45 – 54 Kts range while older gliders typically have lower V_{s1} speeds. The 45 Kt limit would restrict Light Sport pilots to flying older generations of gliders with less benign stall and handling characteristics and less cockpit integrity in the event of a crash.

Examples that illustrate this point are: ASW-19 (1975) and LS-4 (1980) have V_{s1} speeds of 42 Kts and 44 Kts respectively. By contrast their more modern replacements ASW-24 (1987) and Discus 2 (1997) both have V_{s1} speeds of 49 Kts. Raising the V_{s1} speed for gliders to 54 Kts, identical to that for airplanes, would improve safety by allowing Light Sport pilots to fly modern gliders with designed in improved handling characteristics and built in safety features.

Second, Glider towing operations should be specifically called out in the appropriate regulations.

The proposed regulatory changes specifically allow Light Sport Aircraft (LSA) to be used for Aerial Work operations. This change adds text to § 91.327(a)(3) clarifying that a LSA can be used for this purpose, in accordance with a list of approved Aerial Work operations that are listed in the Pilot Operating Handbook (POH) in compliance with § 21.120(d)(4).

As described in the NPRM preamble: "Light-sport category aircraft are currently precluded by § 91.327 from conducting operations for compensation or hire, except to tow a glider or an unpowered ultralight vehicle or to conduct flight training. As the proposal would enable aerial work operations, the proposal would revise § 91.327 to permit the conduct of any aerial work operation specified in the aircraft's pilot operating handbook or operating limitations, as applicable, and specified in the manufacturer's statement of compliance for that aircraft."

However, the revisions to § 91.327 did not remove the text regarding glider towing operations, calling them out as a separate item in § 91.327(a)(1) while aerial work operations are in § 91.327(a)(3). In

addition, § 21.25(b)(7)(v) also calls out glider towing as a separate operation from aerial work operations described in § 21.25(b)(4)(i-vi). Thus, it seems clear that the FAA considers glider towing operations to be a separate and distinct operation not included in the Aerial Work operations definition.

In fact, as noted in the NPRM footnote 2 "The FAA does not explicitly define aerial work; however, the FAA broadly interprets the term to mean work done from the air for compensation that does not involve the carriage of persons or property".

This can create confusion regarding which LSA's are manufactured with glider towing operations in mind and how pilots can determine that the LSA can safely perform this operation Thus additional text, either augmenting the proposed text or adding new text in the appropriate places would clarify which LSA can be used for glider towing operations.

Specifically:

§ 21.190(d) should specifically mention glider towing. The proposed text in this regulation includes paragraph (4) stating that manufactures who build aircraft that conform to a list of approved aerial work operations certify that the aircraft can safely conducted the listed operations. Since § 91.327 specifically calls out glider towing operations and aerial work operations in 2 separate paragraphs, it is not clear that the manufactures will consider glider towing operations as aerial work operations. Either § 21.190(d)(4) should be updated to include mention of glider towing operations or a new paragraph should be added to § 21.190(d) to cover glider towing operations.

The same issue involves updates to § 21.190(c)(2)(iii), § 21.190(e), § 21.190(e)(6), § 22.120, and § 22.195(d). In each case the proposed text discusses aerial work operations but does not include text noting that the LSA owner/pilot may which to conduct glider towing operations. Adding text to specifically call out glider towing operations would clarify this issue.

The FAA should also clarify how the manufactures will indicate that the LSA is capable of safely conducting § 91.327(a)(1) glider towing operations. There is an explicit statement in § 91.327(a)(3) requiring manufactures to document the types of approved aerial work operations in the POH. By contrast this type of text is absent from § 91.327(a)(1) glider towing operations. It would improve safety to have similar text giving manufactures guidance on what text regarding glider towing operations should appear in the POH.

The purpose of these changes is to ensure that LSA owners and pilots know which LSAs are designed and built with glider towing operations in mind and thus ensure that an approved or acceptable tow hook can be installed on the aircraft.

Third, Update AC 43.13-1 2B Chapter 8 to include LSA specific guidance.

The amended text in § 91.309(a)(2) adds paragraph (iii) to address an omission in the original 2004 regulations specifically calling out the regulatory process for equipping a LSA with an approved or acceptable tow hook. In the preamble the FAA notes that AC 43.13-2B chapter 8 provides guidance on how to install/maintain tow hooks on certified aircraft. This document was last updated on 03/03/2008 and thus does not discuss any specific issues that may apply to installation and operation of glider tow hooks on these LSA aircraft. A revision would be appropriate to cover any LSA specific guidance

issues. It should also discuss now to determine that the LSA was designed to comply with the consensus standards that insure the airframe can deal with these ground and flight loads.

Thank you for your consideration of these comments.

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