

November 10, 2014

United States Department of Transportation
Docket Management System
1200 New Jersey Ave., SE
West Building Ground Floor Room W12-140
Washington, DC 20590

Re: Exemption Request Pursuant To Section 333 of the FAA Reform Act of 2012

Dear Sir or Madam:

I am writing pursuant to the FAA Modernization and Reform Act of 2012 (the "Reform Act") and the procedures contained in 14 C.F.R. 11, to request that Saratoga Aerial Photo and Video, a division of SillyCar Design, owned and operated by Joel Andrew Glastetter, an owner and operator of small unmanned aircraft, be exempted from the Federal Aviation Regulations ("FARs") listed below so that Saratoga Aerial Photo and Video, a division of SillyCar Design may operate its small unmanned aircraft / lightweight unmanned aircraft systems ("UAS") commercially in airspace regulated by the Federal Aviation Administration ("FAA").

As identified and described herein, Joel Glastetter, and his company Saratoga Aerial Photo and Video, a division of SillyCar Design, is an experienced, recognized veteran in the printing, graphic design and website development industry. Joel and his company have been providing quality services to their clients since 2008. Mr. Glastetter has also been an avid Radio Controlled model builder and operator for over thirty-two (32) years. Mr. Glastetter is looking to add a valuable service to his clients through Saratoga Aerial Photo and Video, a division of SillyCar Design through the use of a small, lightweight UAS as several of his clients have requested this type of service. Primary uses will be low altitude aerial photography for use on client websites and print pieces and video for use on client websites.

Joel has operated his current UAS on several occasions non-commercially without incident. The UAS utilizes battery power, not combustible fuels. Flight time ranges between 5 and twenty minutes. The UAS has GPS functionality to hover in place as well as a return to home function in case of loss of contact with the radio. It has an audible and visual warning system and will start to descend slowly if battery power reaches 25%.

The failsafe software will disable the UAS from taking off and also limit the UAS systems from operating within specific GPS preset no-fly zones.

Saratoga Aerial Photo and Video, a division of SillyCar Design's exemption request would permit its operation of lightweight, unmanned (piloted by remote control) and comparatively inexpensive UASs in tightly controlled and limited airspace. Currently, similar lightweight, remote controlled UASs are legally operated by amateurs with no flight experience, safety plan or controls in place to prevent catastrophe. It is only logical to allow Joel Andrew Glastetter, an experienced remote control pilot, to operate similar lightweight UASs. This will act to further safety protocols specific to lightweight UASs as Saratoga Aerial Photo and Video, a division of SillyCar Design researches flight data and other information gained through permitted flight operations. Granting this request comports with the Secretary of Transportation's (FAA Administrator's) responsibilities to not only integrate UASs into the national airspace system, but to "...establish requirements for the safe operation of such aircraft systems [UASs] in the national airspace system" under Section 333(c) of the Reform Act. Further, Saratoga Aerial Photo and Video, a division of SillyCar Design will conduct its operations in compliance with the protocols described herein or as otherwise established by the FAA.

For the reasons stated below, Saratoga Aerial Photo and Video, a division of SillyCar Design respectfully requests the grant of an exemption allowing it to operate lightweight, remote controlled UAS's.

1. Contact Information:

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2. The Specific Sections of Title 14 of the Code of Federal Regulations From Which We Request Exemption are:

14 CFR 21;
14 C.F.R. 45.23(b);
14 CFR 61.113 (a) & (b);
14 C.F.R. 91, et seq.;
14 CFR 407 (a) (1);
14 CFR 409 (a) (2); and,
14 CFR 417 (a) & (b).
U.S. Dep't of Transp.

3. The Extent of Relief Saratoga Aerial Photo and Video, a division of SillyCar Design Seeks and the Reason It Seeks Such Relief:

Saratoga Aerial Photo and Video, a division of SillyCar Design submits this application in accordance with the Reform Act, 112 P.L. 95 §§ 331-334, seeking relief from any currently applicable FARs operating to prevent Saratoga Aerial Photo and Video, a division of SillyCar Design's contemplated commercial cinematic, research and other flight operations within the national airspace system. The Reform Act in Section 332 provides for such integration of civil unmanned aircraft systems into our national airspace system as it is in the public's interest to do so. Our lightweight UAS meets the definition of "small unmanned aircraft" as defined in Section 331 and therefore the integration of our lightweight UAS is expressly contemplated by the Reform Act. We would like to operate our lightweight UAS prior to the time period by which the Reform Act requires the FAA to promulgate rules governing such craft.

The Reform Act guides the Secretary in determining the types of UASs that may operate safely in our national airspace system. Considerations include:

- The weight, size, speed and overall capabilities of the UAS;
- Whether the UAS will be operated near airports or populated areas; and,
- Whether the UAS will be operated by line of sight.

112 P.L. 95 § 333 (a). Each of these items militates in favor of an exemption for Saratoga Aerial Photo and Video, a division of SillyCar Design.

Our UAS utilizes four counter-rotating propellers for extreme balance, control and stability. It weighs less than 5 pounds, including battery and all equipment. This small unmanned aircraft is designed to primarily hover in place and operate at less than a 50 knot maximum speed. It is capable of vertical and horizontal operations but operate only within the line of sight of the remote control pilot. In addition to the remote control pilot, we use a spotter, such that, at minimum, two Saratoga Aerial Photo and Video, a division of SillyCar Design personnel govern the safe flight of the aircraft at all times.

Utilizing battery power and not combustible fuels, flights generally last between five and twenty minutes. We do not operate the UAS with less than twenty five percent battery capacity. Safety systems in place include a GPS mode that allows the UAS to hover in place or return to takeoff location if communication with the radio control pilot is lost and then slowly descend the UAS at twenty five percent battery capacity. We generally do not operate the UAS near airports or near populated areas. To date, we have only operated the UAS in a non-commercial manner.

Our operation of this small unmanned aircraft will not “create a hazard to users of the national airspace system or the public.” 112 P.L. 95 § 333 (b). Given the small size and weight of the UAS, combined with its operation in cordoned off and well-controlled areas, this falls within Congress’s contemplated safety zone when it promulgated the Reform Act and the corresponding directive to integrate UASs into the national airspace system. Indeed, our UAS will not pose any threat to the general public or national security.

The FAA has the authority to issue the exemption sought by Saratoga Aerial Photo and Video, a division of SillyCar Design pursuant to the Federal Aviation Act, 85 P.L. 726 (1958), as amended (the “Act”).

4. How this Request Will Benefit the Public As A Whole:

Granting this exemption request furthers the public interest. First, Congress has already pronounced that it is in the public’s interest to integrate commercially flown UASs into the national airspace system, hence the passing of the Reform Act. Second, Saratoga Aerial Photo and Video, a division of SillyCar Design conducts research into safe UAS operations every time it flies its UAS. Flight data, visual inspections, recorded observations and flight analyses are compiled to further enhance current safety protocols. Allowing us to log more flight time directly relates to our research and our ability to further enhance current safety measures. Third, the public has an interest in reducing the danger and emission associated with current aerial cinematic capture methods, namely, full size helicopters. Our UAS is battery powered and creates no emissions. If our UAS crashes there is no fuel to ignite and explode. The impact of our lightweight UAS is negligible when compared to a full size helicopter, notwithstanding the statistically noteworthy safety record of full size helicopters used in motion picture capture. The public’s interest is furthered by minimizing ecological and crash impacts by permitting photo and motion picture capture through our lightweight UAS.

Progression of the arts and sciences has been fundamental to our society since its inclusion in the United States Constitution. Indeed, Congress mandated the integration of UASs into our national airspace system, in part, to achieve progression in this noteworthy, and inevitable, field. Permitting Saratoga Aerial Photo and Video, a division of SillyCar Design to immediately fly within the United States furthers these goals. Whether it is the amalgam of scientific discoveries applicable to feature film making (including those drawing upon architecture, physics, engineering and cultural inclusiveness) to advancements in publicly usable technologies or advancements in equipment available to law enforcement personnel / first responders that does not cost millions of dollars, granting this exemption request substantially furthers the public’s interest in ways known and currently unknown.

Granting this request will also allow small business owners and home owners to be able to afford high quality aerial images and video that they would otherwise have no access to due to several factors, cost being the biggest.

5. Reasons Why Saratoga Aerial Photo and Video, a division of SillyCar Design's Exemption Will Not Adversely Affect Safety Or How The Exemption Will Provide a Level of Safety At Least Equal To Existing Rule:

This exemption will not adversely affect safety. Quite the contrary, for the reasons stated, supra, permitting Saratoga Aerial Photo and Video, a division of SillyCar Design to log more flight time in FAA controlled airspace will allow us to innovate and implement new and novel, as of yet undiscovered safety protocols. In addition, we submit the following representations of enhancements to current aerial photo and motion picture capture techniques:

- Our UAS weighs less than 5 pounds complete with all mounted equipment and battery;
- We only operate our UAS below 400 feet;
- Our UAS only operates for 5-20 minutes per flight;
- We land our UAS when it reaches 25% battery power;
- Our remote control pilot operates the UAS by line of sight;
- Our remote control pilot has video backup should he somehow lose sight of the UAS;
- We staff each flight with a remote control pilot and spotter with communication systems enabling real time communication between them;
- Our UAS has GPS flight modes whereby it hovers, returns to takeoff position and then slowly lands if communication with the remote control pilot is lost or battery power is below 25%;
- We actively analyze electronic flight data and other sources of information to constantly update and enhance safety protocols;
- We conduct extensive briefings prior to flight, during which safety carries primary importance, and;
- We have procedures in place to abort flights in the event of safety breaches or potential danger.

Our safety protocols provide a level of safety at least equal to existing rules, and in nearly every instance, greater than existing rules. It is important to note that absent the integration of commercial UASs into our national airspace system, helicopters are the primary means of aerial motion picture capture. While the safety record of such helicopters is remarkably astounding, it is far safer to operate a battery powered lightweight UAS. First, the potential loss of life is diminished because UASs carry no people on board and Saratoga Aerial Photo and Video, a division of SillyCar Design only operates them in specific areas away from mass populations. Second, there is no fuel on board a UAS and thus the potential for fire or explosions is greatly diminished. Third, the small size and extreme maneuverability of our UAS allows our remote control pilot to avoid hazards. Lastly, given their small size and weight, even when close enough to capture amazing images, our UAS needs not be so close to the objects it is focused on. Accordingly, our UAS has operated and will continue to operate at and above current safety levels.

6. A Summary The FAA May Publish in the Federal Register:

A. 14 C.F.R. 21 and 14 C.F.R. 91: Airworthiness Certificates, Manuals and The Like.

14 C.F.R. 21, Subpart H, entitled Airworthiness Certificates, sets forth requirements for procurement of necessary airworthiness certificates in relation to FAR § 91.203(a)(1). The size, weight and enclosed operational area of Saratoga Aerial Photo and Video, a division of SillyCar Design's UAS permits exemption from Part 21 because Saratoga Aerial Photo and Video, a division of SillyCar Design's UAS meets an equivalent level of safety pursuant to Section 333 of the Reform Act. The FAA is authorized to exempt aircraft from the airworthiness certificate requirement under both the Act (49 U.S.C. § 44701 (f)) and Section 333 of the Reform Act. Both pieces of legislation permit the FAA to exempt UASs from the airworthiness certificate requirement in consideration of the weight, size, speed, maneuverability and proximity to areas such as airports and dense populations. Saratoga Aerial Photo and Video, a division of SillyCar Design's UAS meets or exceeds each of the elements.

14 C.F.R. 91.7(a) prohibits the operation of an aircraft without an airworthiness certificate. As no such certificate will be applicable in the form contemplated by the FARs, this Regulation is inapplicable.

14 C.F.R. § 91.9 (b) (2) requires an aircraft flight manual in the aircraft. As there are no pilots or passengers, and given the size of the UASs, this Regulation is inapplicable. An equivalent level of safety will be achieved by maintaining a manual at the flight operations center. The FAA has previously issued exemptions to this regulation in Exemption Nos. 8607, 8737, 8738, 9299, 9299A, 9565, 9565B, 10167, 10167A, 10602, 10700 and 32827.

14 C.F.R. § 91.121 regarding altimeter settings is inapplicable insofar as Saratoga Aerial Photo and Video, a division of SillyCar Design's UAS utilizes electronic global positioning systems and internal gyroscopes to provide spatial coordination.

14 C.F.R. § 91.203 (a) and (b) provides for the carrying of civil aircraft certifications and registrations. They are inapplicable for the same reasons described above. The equivalent level of safety will be achieved by maintaining such certifications and registrations at Saratoga Aerial Photo and Video, a division of SillyCar Design's flight operations center.

B. 14 C.F.R. § 45.23: Marking of The Aircraft.

Applicable Codes of Federal Regulation require aircraft to be marked according to certain specifications. Saratoga Aerial Photo and Video, a division of SillyCar Design's UAS is, by definition, unmanned. It therefore does not have a cabin, cockpit or pilot station on which to mark certain words or phrases. Further, two-inch lettering is difficult to place on such small aircraft. Regardless, Saratoga Aerial Photo and Video, a division of SillyCar Design will mark its UAS in the largest possible lettering by placing the word "EXPERIMENTAL" on its fuselage as required by 14 C.F.R. §45.29 (f) so that the pilot, technician, spotter and others working with the UAV will see the markings. The FAA has previously issued exemptions to this regulation through Exemptions Nos. 8738, 10167, 10167A and 10700.

C. 14 C.F.R. § 61.113: Private Pilot Privileges and Limitations: PIC. Pursuant to 14 C.F.R. §§ 61.113 (a) & (b), private pilots are limited to non-commercial operations. Saratoga Aerial Photo and Video, a division of SillyCar Design can achieve an equivalent level of safety as achieved by current Regulations because Saratoga Aerial Photo and Video, a division of SillyCar Design's UAS does not carry any pilots or passengers. Further, while helpful, a pilot license will not ensure remote control piloting skills. Further, the risks attendant to the operation of Saratoga Aerial Photo and Video, a division of SillyCar Design's UAS is far less than the risk levels inherent in the commercial activities outlined in 14 C.F.R. § 61, et seq. Thus, allowing Saratoga Aerial Photo and Video, a division of SillyCar Design to operate its UAS with a private pilot as the pilot in control will exceed current safety levels in relation to 14 C.F.R. §61.113 (a) & (b).

D. 14 C.F.R. 91.119: Minimum Safe Altitudes.

14 C.F.R. § 91.119 prescribes safe altitudes for the operation of civil aircraft. It allows helicopters to be operated at lower altitudes in certain conditions. Saratoga Aerial Photo and Video, a division of SillyCar Design's UAS will never operate at an altitude greater than 400 AGL. Saratoga Aerial Photo and Video, a division of SillyCar Design will, however, operate its UAS in cordoned off areas with security perimeters, providing a level of safety at least equivalent to those in relation to minimum safe altitudes. Given the size, weight, maneuverability and speed of Saratoga Aerial Photo and Video, a division of SillyCar Design's UAS, an equivalent level of safety will be achieved.

E. 14 C.F.R. 91.405 (a); 407 (a) (1); 409 (a) (2); 417(a) & (b): Maintenance Inspections.

The above-cited Regulations require, amongst other things, aircraft owners and operators to "have [the] aircraft inspected as prescribed in subpart E of this part and shall between required inspections, except as provided in paragraph (c) of this section, have discrepancies repaired as prescribed in part 43 of this chapter. . . ."

These Regulations only apply to aircraft with an airworthiness certificate. They will not, therefore, apply to Saratoga Aerial Photo and Video, a division of SillyCar Design should its requested exemption be granted. Saratoga Aerial Photo and Video, a division of SillyCar Design conducts an extensive maintenance program that involves regular software updates and curative measures for any damaged hardware. Therefore, an equivalent level of safety will be achieved.

F. Summary

Saratoga Aerial Photo and Video, a division of SillyCar Design seeks an exemption from the following Regulations: 14 C.F.R. 21, subpart H; 14 C.F.R. 45.23(b); 14 C.F.R. §§ 61.113 (a) & (b); 14 C.F.R. § 91.7 (a); 14 C.F.R. § 91.9 (b)(2); 14 C.F.R. § 91.103(b); 14 C.F.R. § 91.109; 14 C.F.R. § 91.119; 14 C.F.R. § 91.121; 14 C.F.R. § 91.151(a); 14 C.F.R. §§ 91.203(a) and (b); 14 C.F.R. § 91.405 (a); 14 C.F.R. § 91.407 (a)(1); 14 C.F.R. § 91.409 (a)(2); 14 C.F.R. § 91.409 (a)(2); and, 14 C.F.R. §§ 91.417 (a) & (b) to commercially operate its lightweight unmanned aircraft vehicle in motion picture or photography operations and to conduct its own research. Granting Saratoga Aerial Photo and Video, a division of SillyCar Design's request for exemption will reduce current risk levels and thereby enhance safety. Currently, motion picture image capture relies primarily on the use of larger aircraft running on combustible fuel. Saratoga Aerial Photo and Video, a division of SillyCar Design's craft does not contain potentially explosive fuel, is smaller, lighter and more maneuverable than conventional motion picture aircraft. Further, Saratoga Aerial Photo and Video, a division of SillyCar Design's operates at lower altitudes and in controlled airspace. Saratoga Aerial Photo and Video, a division of SillyCar Design's has been analyzing flight data and other information in compiling novel safety protocols and the implementation of a flight operations manual that exceeds currently accepted means and methods of safe flight. There are no people on board Saratoga Aerial Photo and Video, a division of SillyCar Design's UAS and therefore the likelihood of death or serious bodily injury is significantly limited. Saratoga Aerial Photo and Video, a division of SillyCar Design's operation of its UAS, weighting less than 5 pounds and travelling at speeds lower than 50 knots in cordoned off areas will provide at least an equivalent level of safety as that achieved under current FARs.

Accordingly, Saratoga Aerial Photo and Video, a division of SillyCar Design respectfully requests that the FAA grant its exemption request without delay. The FAA has the authority to issue the exemption sought by Saratoga Aerial Photo and Video, a division of SillyCar Design pursuant to the Federal Aviation Act, 85 P.L. 726 (1958), as amended (the "Act").

In closing, I would like to state that it would be very easy to ignore the FAA and operate a UAS commercially without applying for any consideration from them. I have seen and spoken with several people who are already doing so. I hope the simple fact that someone such as myself who operates a very small business and will be operating a UAS on a very small scale is applying for this exemption shows how serious I am about safety and doing things properly. Thank you very much for your time and consideration.

Respectfully submitted,

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