



U.S. Department
of Transportation
**Federal Aviation
Administration**

800 Independence Ave., S.W.
Washington, D.C. 20591

June 15, 2015

Exemption No. 11191A
Regulatory Docket No. FAA-2014-0915

Mr. Mike Singer
Singer's Creations
4075 Linglestown Road, PMB #333
Harrisburg, PA 17112

Dear Mr. Singer:

This letter is to inform you that we have granted your petition to amend Exemption No. 11191. It explains the basis for our decision, describes its effect, and lists the revised conditions and limitations.

By letter dated March 17, 2015, you petitioned the Federal Aviation Administration (FAA) on behalf of Singer's Creations (hereinafter petitioner or operator) for an amendment to Exemption No. 11191. That exemption from §§ 61.113(a), 91.7(a), 91.119(c), 91.121, 91.151(a)(1), 91.405(a), 91.407(a)(1), 91.409(a)(1) and (2), and 91.417(a) and (b) of Title 14, Code of Federal Regulations (14 CFR) allows the petitioner to conduct aerial photography and videography for homeowners, realtors, home builders, home contractors, and/or home inspectors for use in real estate marketing and inspections of home exteriors. You requested an amendment to modify Condition no. 16 (pilot in command certification), Condition no. 6 (visual observer), Condition no. 25 (Certificate of Waiver or Authorization (COA)).

In your petition, you indicate that there has been no change in the conditions and reasons relative to public interest and safety that were the basis for granting the original exemption.

The FAA has determined that good cause exists for not publishing a summary of the petition in the Federal Register because the requested amendment to the exemption would not set a precedent, and any delay in acting on this petition would be detrimental to the petitioner. The unmanned aircraft(s) authorized in the original grant is comparable in type, size, weight, speed and operating capabilities to those in this petition.

The Basis for Our Decision

The FAA has updated the conditions and limitations since the petitioner's initial grant of exemption to those found in Exemption No. 11213 to Aeryon Labs, Inc. (Docket No. FAA-2014-0642). Also in Grants of Exemption Nos. 11062 to Astraeus Aerial (*see* Docket No. FAA-2014-0352), 11109 to Clayco, Inc. (*see* Docket No. FAA-2014-0507), 11112 to VDOS Global, LLC (*see* Docket No. FAA-2014-0382), the FAA found that the enhanced safety achieved using an unmanned aircraft (UA) with the specifications described by the petitioner and carrying no passengers or crew, rather than a manned aircraft of significantly greater proportions, carrying crew in addition to flammable fuel, gives the FAA good cause to find that the UAS operation enabled by this exemption is in the public interest.

Having reviewed your reasons for requesting an amendment to an exemption, I find that—

- They are similar in all material respects to relief previously requested in Grant of Exemption Nos. 11062, 11109, 11112, and 11213;
- The reasons stated by the FAA for granting Exemption Nos. 11062, 11109, 11112, and 11213 also apply to the situation you present; and
- A partial grant of an amendment is in the public interest.

The petitioner should note that its entire request has not been granted. Specifically:

- Condition no. 13 below describes the current requirements for PIC certification. Those pilot certification requirements apply to anyone controlling the unmanned aircraft during flights pertinent to this exemption. See Grant of Exemption No. 11213 to Aeryon Labs, Inc. for the pilot certification analysis.
- The requirement to utilize a visual observer (VO) remains in effect. One of the determinations for operations under section 333 is operation within visual line of sight (VLOS). The PIC must maintain VLOS while operating the UA. The VO complements the PIC's capability to see and avoid other aircraft, including when the PIC may be momentarily attending to other flying tasks. The VO provides an additional level of operational safety.
- The requirement that all operations shall be conducted in accordance with an ATO-issued Certificate of Waiver or Authorization (COA) remains in effect. The majority of current UAS operations occurring in the National Air Space (NAS) are being coordinated through Air Traffic Control by the issuance of a COA. The COA helps to minimize potential impact to the NAS. This process not only makes local ATC facilities aware of UAS operations, but also provides ATC the ability to consider airspace issues that are unique to UAS operations. Furthermore, the COA requires the operator to request a NOTAM, which is the mechanism for alerting other users of the NAS to the UAS activities being conducted.

Our Decision

The FAA has determined that the justification for the issuance of Exemption No. 11191 remains valid with respect to this exemption and is in the public interest. Therefore, under the

authority contained in 49 U.S.C. 106(f), 40113, and 44701, delegated to me by the Administrator, Singer's Creations is granted an amendment to its exemption from 14 CFR §§ 61.23(a) and (c), 61.101(e)(4) and (5), 61.113(a), 61.315(a), 91.7(a), 91.119(c), 91.121, 91.151(a)(1), 91.405(a), 91.407(a)(1), 91.409(a)(1) and (2), and 91.417(a) and (b), to the extent necessary to allow the petitioner to operate a UAS to perform aerial data collection. This exemption is subject to the conditions and limitations listed below.

Conditions and Limitations

The conditions and limitations within Grant of Exemption No. 11191 have been superseded, and are amended as follows.

In this grant of exemption, Singer's Creations is hereafter referred to as the operator.

Failure to comply with any of the conditions and limitations of this grant of exemption will be grounds for the immediate suspension or rescission of this exemption.

1. Operations authorized by this grant of exemption are limited to the DJI Phantom 2 Vision + when weighing less than 55 pounds including payload. Proposed operations of any other aircraft will require a new petition or a petition to amend this exemption.
2. Operations for the purpose of closed-set motion picture and television filming are not permitted.
3. The UA may not be operated at a speed exceeding 87 knots (100 miles per hour). The exemption holder may use either groundspeed or calibrated airspeed to determine compliance with the 87 knot speed restriction. In no case will the UA be operated at airspeeds greater than the maximum UA operating airspeed recommended by the aircraft manufacturer.
4. The UA must be operated at an altitude of no more than 400 feet above ground level (AGL). Altitude must be reported in feet AGL.
5. The UA must be operated within visual line of sight (VLOS) of the PIC at all times. This requires the PIC to be able to use human vision unaided by any device other than corrective lenses, as specified on the PIC's FAA-issued airman medical certificate or U.S. driver's license.
6. All operations must utilize a visual observer (VO). The UA must be operated within the visual line of sight (VLOS) of the PIC and VO at all times. The VO may be used to satisfy the VLOS requirement as long as the PIC always maintains VLOS capability. The VO and PIC must be able to communicate verbally at all times; electronic messaging or texting is not permitted during flight operations. The PIC must be designated before the flight and cannot transfer his or her designation for the

duration of the flight. The PIC must ensure that the VO can perform the duties required of the VO.

7. This exemption and all documents needed to operate the UAS and conduct its operations in accordance with the conditions and limitations stated in this grant of exemption, are hereinafter referred to as the operating documents. The operating documents must be accessible during UAS operations and made available to the Administrator upon request. If a discrepancy exists between the conditions and limitations in this exemption and the procedures outlined in the operating documents, the conditions and limitations herein take precedence and must be followed. Otherwise, the operator must follow the procedures as outlined in its operating documents. The operator may update or revise its operating documents. It is the operator's responsibility to track such revisions and present updated and revised documents to the Administrator or any law enforcement official upon request. The operator must also present updated and revised documents if it petitions for extension or amendment to this grant of exemption. If the operator determines that any update or revision would affect the basis upon which the FAA granted this exemption, then the operator must petition for an amendment to its grant of exemption. The FAA's UAS Integration Office (AFS-80) may be contacted if questions arise regarding updates or revisions to the operating documents.
8. Any UAS that has undergone maintenance or alterations that affect the UAS operation or flight characteristics, e.g. replacement of a flight critical component, must undergo a functional test flight prior to conducting further operations under this exemption. Functional test flights may only be conducted by a PIC with a VO and must remain at least 500 feet from other people. The functional test flight must be conducted in such a manner so as to not pose an undue hazard to persons and property.
9. The operator is responsible for maintaining and inspecting the UAS to ensure that it is in a condition for safe operation.
10. Prior to each flight, the PIC must conduct a pre-flight inspection and determine the UAS is in a condition for safe flight. The pre-flight inspection must account for all potential discrepancies, e.g. inoperable components, items, or equipment. If the inspection reveals a condition that affects the safe operation of the UAS, the aircraft is prohibited from operating until the necessary maintenance has been performed and the UAS is found to be in a condition for safe flight.
11. The operator must follow the UAS manufacturer's maintenance, overhaul, replacement, inspection, and life limit requirements for the aircraft and aircraft components.
12. Each UAS operated under this exemption must comply with all manufacturer safety bulletins.

13. Under this grant of exemption, a PIC must hold either an airline transport, commercial, private, recreational, or sport pilot certificate. The PIC must also hold a current FAA airman medical certificate or a valid U.S. driver's license issued by a state, the District of Columbia, Puerto Rico, a territory, a possession, or the Federal government. The PIC must also meet the flight review requirements specified in 14 CFR § 61.56 in an aircraft in which the PIC is rated on his or her pilot certificate.
14. The operator may not permit any PIC to operate unless the PIC demonstrates the ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption, including evasive and emergency maneuvers and maintaining appropriate distances from persons, vessels, vehicles and structures. PIC qualification flight hours and currency must be logged in a manner consistent with 14 CFR § 61.51(b). Flights for the purposes of training the operator's PICs and VOs (training, proficiency, and experience-building) and determining the PIC's ability to safely operate the UAS in a manner consistent with how the UAS will be operated under this exemption are permitted under the terms of this exemption. However, training operations may only be conducted during dedicated training sessions. During training, proficiency, and experience-building flights, all persons not essential for flight operations are considered nonparticipants, and the PIC must operate the UA with appropriate distance from nonparticipants in accordance with 14 CFR § 91.119.
15. UAS operations may not be conducted during night, as defined in 14 CFR § 1.1. All operations must be conducted under visual meteorological conditions (VMC). Flights under special visual flight rules (SVFR) are not authorized.
16. The UA may not operate within 5 nautical miles of an airport reference point (ARP) as denoted in the current FAA Airport/Facility Directory (AFD) or for airports not denoted with an ARP, the center of the airport symbol as denoted on the current FAA-published aeronautical chart, unless a letter of agreement with that airport's management is obtained or otherwise permitted by a COA issued to the exemption holder. The letter of agreement with the airport management must be made available to the Administrator or any law enforcement official upon request.
17. The UA may not be operated less than 500 feet below or less than 2,000 feet horizontally from a cloud or when visibility is less than 3 statute miles from the PIC.
18. If the UAS loses communications or loses its GPS signal, the UA must return to a pre-determined location within the private or controlled-access property.
19. The PIC must abort the flight in the event of unpredicted obstacles or emergencies.
20. The PIC is prohibited from beginning a flight unless (considering wind and forecast weather conditions) there is enough available power for the UA to conduct the intended operation and to operate after that for at least five minutes or with the reserve power recommended by the manufacturer if greater.

21. Air Traffic Organization (ATO) Certificate of Waiver or Authorization (COA). All operations shall be conducted in accordance with an ATO-issued COA. The exemption holder may apply for a new or amended COA if it intends to conduct operations that cannot be conducted under the terms of the attached COA.
22. All aircraft operated in accordance with this exemption must be identified by serial number, registered in accordance with 14 CFR part 47, and have identification (N-Number) markings in accordance with 14 CFR part 45, Subpart C. Markings must be as large as practicable.
23. Documents used by the operator to ensure the safe operation and flight of the UAS and any documents required under 14 CFR §§ 91.9 and 91.203 must be available to the PIC at the Ground Control Station of the UAS any time the aircraft is operating. These documents must be made available to the Administrator or any law enforcement official upon request.
24. The UA must remain clear and give way to all manned aviation operations and activities at all times.
25. The UAS may not be operated by the PIC from any moving device or vehicle.
26. All Flight operations must be conducted at least 500 feet from all nonparticipating persons, vessels, vehicles, and structures unless:
 - a. Barriers or structures are present that sufficiently protect nonparticipating persons from the UA and/or debris in the event of an accident. The operator must ensure that nonparticipating persons remain under such protection. If a situation arises where nonparticipating persons leave such protection and are within 500 feet of the UA, flight operations must cease immediately in a manner ensuring the safety of nonparticipating persons; and
 - b. The owner/controller of any vessels, vehicles or structures has granted permission for operating closer to those objects and the PIC has made a safety assessment of the risk of operating closer to those objects and determined that it does not present an undue hazard.

The PIC, VO, operator trainees or essential persons are not considered nonparticipating persons under this exemption.

27. All operations shall be conducted over private or controlled-access property with permission from the property owner/controller or authorized representative. Permission from property owner/controller or authorized representative will be obtained for each flight to be conducted.
28. Any incident, accident, or flight operation that transgresses the lateral or vertical boundaries of the operational area as defined by the applicable COA must be reported

to the FAA's UAS Integration Office (AFS-80) within 24 hours. Accidents must be reported to the National Transportation Safety Board (NTSB) per instructions contained on the NTSB Web site: www.nts.gov.

If this exemption permits operations for the purpose of closed-set motion picture and television filming and production, the following additional conditions and limitations apply.

29. The operator must have a motion picture and television operations manual (MPTOM) as documented in this grant of exemption.
30. At least 3 days before aerial filming, the operator of the UAS affected by this exemption must submit a written Plan of Activities to the local Flight Standards District Office (FSDO) with jurisdiction over the area of proposed filming. The 3-day notification may be waived with the concurrence of the FSDO. The plan of activities must include at least the following:
 - a. Dates and times for all flights;
 - b. Name and phone number of the operator for the UAS aerial filming conducted under this grant of exemption;
 - c. Name and phone number of the person responsible for the on-scene operation of the UAS;
 - d. Make, model, and serial or N-Number of UAS to be used;
 - e. Name and certificate number of UAS PICs involved in the aerial filming;
 - f. A statement that the operator has obtained permission from property owners and/or local officials to conduct the filming production event; the list of those who gave permission must be made available to the inspector upon request;
 - g. Signature of exemption holder or representative; and
 - h. A description of the flight activity, including maps or diagrams of any area, city, town, county, and/or state over which filming will be conducted and the altitudes essential to accomplish the operation.
31. Flight operations may be conducted closer than 500 feet from participating persons consenting to be involved and necessary for the filming production, as specified in the exemption holder's MPTOM.

Unless otherwise specified in this grant of exemption, the UAS, the UAS PIC, and the UAS operations must comply with all applicable parts of 14 CFR including, but not limited to, parts 45, 47, 61, and 91.

This exemption terminates on March 31, 2017, unless sooner superseded or rescinded.

Sincerely,

/s/

John S. Duncan

Director, Flight Standards Service

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DEPARTMENT OF
TRANSPORTATION
DOCKET OPERATIONS

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March 17, 2015

U.S. Department of Transportation, Docket Operations
West Building Ground Floor, Room W12-140
1200 New Jersey Avenue, SE
Washington, DC 20590

Re: Application for Amendment to Exemption 11191, Singer's Creations Regulatory Docket
No. FAA-2014-0915

Dear Sir or Madam:

On March 3, 2015, the FAA issued Exemption 11191 (hereinafter "exemption") to Singer's Creations, allowing commercial operations of its SUA under Section 333 of the FAA Modernization and Reform Act of 2012. Singer's Creations is requesting that the exemption be amended since some of the requirements imposed by the FAA are (1) not required in order to provide a level of safety that is equal to the safety provided by existing rules, (2) create a dangerous situation that greatly reduces the safety provided by existing rules, (3) create an unnecessary burden that is detrimental to Singer's Creations' operations, and/or (4) are not in the public interest.

Singer's Creations is requesting that the FAA amend the exemption by removing and/or modifying the following requirements: (1) the requirement for the PIC to hold a private pilot certificate, (2) the requirement for a visual observer (VO) to be used in all UAS operations, and (3) the requirement to obtain a Certificate of Waiver or Authorization (COA) prior to conducting any operations.

Private Pilot Certificate Requirement

Singer's Creations requests that the exemption be amended to allow operations without a private pilot certificate. Per 49 USC § 44711, Singer's Creations may not serve in any capacity as an airman with respect to a civil aircraft in air commerce without an airman's certificate authorizing the airman to serve in the capacity for which the certificate was

issued. The FAA does not possess the authority to exempt Singer's Creations from this statutory requirement. However, the FAA has been tasked with deciding which airman certificate authorizes the airman to serve in the capacity for which the certificate was issued. In the approved exemption, the FAA determined that a private pilot certificate is the airman certificate that was issued for the intended operation -- using an unmanned aircraft system (UAS) to conduct aerial photography and videography for homeowners, realtors, home builders, home contractors, and/or home inspectors for real estate marketing and inspections of home exteriors.

On February 15, 2015 (16 days prior to when the exemption was approved), the FAA announced new proposed rules for SUAS¹. In that document, the FAA stated the following:

"In addition to obtaining an airworthiness certificate, any person serving as an airman in the operation of a small UAS must obtain an airman certificate. 49 U.S.C. 44711(a)(2)(A). The statute defines an "airman" to include an individual who is "in command, or as pilot, mechanic, or member of the crew, who navigates aircraft when under way." 49 U.S.C. 40102(a)(8)(A). Because the person operating the small UAS is in command and is a member of the crew who navigates the aircraft, that person is an airman and must obtain an airman certificate.

Under current pilot certification regulations, depending on the type of operation, the operator of the small UAS currently must obtain either a private pilot certificate or a commercial pilot certificate. A private pilot certificate cannot be used to operate a small UAS for compensation or hire unless the flight is only incidental to the operator's business or employment. Typically, to obtain a private pilot certificate, the small UAS operator currently has to: (1) Receive training in specific aeronautical knowledge areas; (2) receive training from an authorized instructor on specific areas of aircraft operation; (3) obtain a minimum of 40 hours of flight experience; and (4) ~~obtain a third-class airman medical certificate. Conversely, holding at least a~~ commercial pilot certificate allows the small UAS to generally be used for compensation or hire, but is more difficult to obtain. In addition to the requirements necessary to obtain a private pilot certificate, applicants for a commercial pilot certificate currently need to also obtain 250 hours of flight time, satisfy extensive testing requirements, and obtain a second-class airman medical certificate.

While these airman certification requirements are necessary for manned aircraft operations, they impose an unnecessary burden for many small UAS operations. This is because a person typically obtains a private or commercial pilot certificate by

¹ <http://www.gpo.gov/fdsys/pkg/FR-2015-02-23/pdf/2015-03544.pdf>

learning how to operate a manned aircraft. Much of that knowledge would not be applicable to small UAS operations because a small UAS is operated differently than a manned aircraft. In addition, the knowledge currently necessary to obtain a private or commercial pilot certificate would not equip the certificate holder with the tools necessary to safely operate a small UAS. Specifically, applicants for a private or commercial pilot certificate currently are not trained in how to deal with the "see-and-avoid" and loss-of-positive-control safety issues that are unique to small unmanned aircraft. Thus, requiring persons wishing to operate a small UAS to obtain a private or commercial pilot certificate imposes the cost of certification on those persons, but does not result in a significant safety benefit because the process of obtaining the certificate does not equip those persons with the tools necessary to mitigate the public-risk-posed-by-small-UAS-operations."

In addition to the FAA's recent findings, Singer's Creations believes requiring a private pilot certificate is not in the public interest because (1) the expenses incurred by obtaining a private pilot license and maintaining it will have to be passed on to Singer's Creations' customers, (2) flying manned aircraft is harmful to the environment, (3) flying manned aircraft poses a higher risk to people, property, and other aircraft than flying UAS, and (4) since Singer's Creations has no interest in flying manned aircraft, the bare minimum will be done in order to satisfy the requirement of obtaining and maintaining a private pilot certificate. Pilots whom are not deeply invested in flying manned aircraft pose a much greater risk to people, property, and other aircraft.

Since 49 USC § 44711 requires an airman certificate authorizing the airman to serve in the capacity for which it was issued, requiring a private pilot certificate does not satisfy this statutory requirement. This is evident since the FAA stated that obtaining a private pilot certificate for the purpose of operating a UAS (1) does not result in a significant safety benefit, (2) does not equip those persons with the tools necessary to mitigate the public risk posed by small UAS operations, and (3) much of that knowledge would not be applicable to small UAS operations because a small UAS is operated differently than a manned aircraft. Furthermore, Singer's Creations believes requiring a private pilot certificate will (1) create an unnecessary burden that is detrimental to Singer's Creations' operations, (2) will not increase the level of safety, (3) will introduce dangerous situations that pose a much higher risk to people, property, and other aircraft, and (4) is not in the public interest. Furthermore, the FAA does not require a private pilot certificate for non-commercial operations that perform the same flights, so removing this requirement will still allow Singer's Creations to operate within a level of safety that is equal to the level of safety provided by existing rules. For those reasons, Singer's Creations would like this requirement to be removed from the exemption and for the FAA to require a certificate that allows the

airman to serve in the capacity for which it was issued so that Singer's Creations is able to satisfy the statutory requirement in 49 USC § 44711.

Visual Observer Requirement

Singer's Creations requests that the exemption be amended to allow Singer's Creations to operate without a VO. Singer's Creations feels this requirement is not necessary for its proposed operations since (1) operations will always be conducted on private property, (2) operations will always be conducted in areas that are clear of all people not involved in the operations, (3) the PIC will maintain VLOS at all times, and (4) requiring an additional staff member will burden Singer's Creations and is not in the public interest since it will add additional costs to the operations. Furthermore, the FAA does not require a VO for non-commercial operations that perform the same flights, so removing this requirement will still allow Singer's Creations to operate within a level of safety that is equal to the level of safety provided by existing rules. For those reasons, Singer's Creations would like this requirement to be removed from the exemption.

Certificate of Waiver or Authorization Requirement

Lastly, Singer's Creations requests that the exemption be amended to allow Singer's Creations to operate without a COA in Class G airspace, at 400 feet AGL or below, and at least five nautical miles from the geographic center of an airport unless a letter of agreement with the airport's management is obtained. The FAA does not require a COA for non-commercial operations in Class G airspace that perform the same flights, so removing this requirement will still allow Singer's Creations to operate within a level of safety that is equal to the level of safety provided by existing rules. Furthermore, this requirement creates an unnecessary burden that is detrimental to Singer's Creations' operations since most operations will take place in Class G airspace, at 400 feet AGL or below, and at least five nautical miles from the geographic center of an airport. For those reasons, Singer's Creations would like the exemption to be amended so a COA is only required when not operating in Class G airspace.

If you have any questions, please contact me at your earliest convenience.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael J. Singer". The signature is fluid and cursive, with a long horizontal stroke at the end.

Mike Singer
Founder, Singer's Creations