

May 27, 2008

Exemption No. 5517K
Regulatory Docket No. FAA-2001-10800

Mr. Ernest W. King, III
Vice President, Engineering
Sierra Industries, Inc.
122 Howard Langford Drive
Uvalde, TX 78801

Dear Mr. King:

This letter is to inform you that we have granted your petition to amend Exemption No. 5517, as amended. It explains the basis for our decision, describes its effect, and lists the revised conditions and limitations.

The Basis for Our Decision

By letter dated February 11, 2008, you petitioned the Federal Aviation Administration (FAA) on behalf of Sierra Industries, Inc. (Sierra), for an amendment to Exemption No. 5517, as amended. That exemption from §§ 91.9(a) and 91.531(a)(1) and (2) of Title 14, Code of Federal Regulations (14 CFR) allows Sierra to permit certain qualified pilots of its Cessna Citation Model 500 series airplanes (Serial Nos. 0001 through 0349 only) equipped with supplemental type certificate (STC) No. SA8176SW or STC No. SA09377SC and either STC No. SA2172NM, STC No. SA645NW, or STC No. ST09559AC to operate those aircraft without a pilot who is designated as second in command (SIC). The amendment you request would add Cessna Citation Model 500 aircraft with Serial Nos. 0350 through 0418.

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 Sierra.

Our Decision

The FAA has determined that the justification for the issuance of Exemption No. 5517, as amended, remains valid with respect to this exemption and is in the public interest. The conditions and limitations of Exemption No. 5517 have been revised to reflect the inclusion of the additional Cessna Citation Model 500 aircraft (Serial Nos. 0350 through 0418).

Therefore, under the authority provided by 49 U.S.C. 40113 and 44701, which the FAA Administrator has delegated to me, I hereby grant, Sierra Industries, Inc., an exemption from 14 CFR §§ 91.9(a) and 91.531(a)(1) and (2) to allow Sierra to permit certain qualified pilots of its Cessna

Citation Model 500 series airplanes (Serial Nos. 0001 through 0418 only) equipped with supplemental type certificate (STC) No. SA8176SW or STC No. SA09377SC and either STC No. SA2172NM, STC No. SA645NW, or STC No. ST09559AC to operate those aircraft without a pilot who is designated as SIC, subject to the revised conditions and limitations below.

Conditions and Limitations

1. This exemption serves as an STC for CE-500 airplanes (Serial Nos. 0001 through 0418 only equipped with STC No. SA8176SW or STC No. SA09377SC and either STC No. SA2172NM, STC No. SA645NW, or STC No. ST09559AC) operated with a single pilot under the terms of this condition, provided the pilot has complied with all of the terms of this exemption.
2. This exemption is not effective unless Sierra's single-pilot training program receives and maintains approval from the FAA's General Aviation and Commercial Division, AFS-800, 800 Independence Avenue, SW., Washington, DC 20591.
3. This exemption applies only to operations conducted under part 91.
4. Each pilot conducting single-pilot operations must—
 - a. Before operations, complete a single-pilot training program approved by the FAA's General Aviation and Commercial Division, AFS-800, 800 Independence Avenue, SW., Washington, DC 20591;
 - b. Hold a current Class I or II airman medical certificate;
 - c. Hold an airline transport pilot certificate with a CE-500 type rating or commercial pilot certificate with an airplane instrument rating and a CE-500 type rating;
 - d. Have logged at least 1,000 hours total pilot flight time, including at least 50 hours flight time at night, 75 hours instrument flight time, 40 hours of instrument flight time in actual instrument meteorological conditions, and 500 hours as pilot in command (PIC) or SIC, or a combination of both, in turbine-powered airplanes;
 - e. Not perform any circling instrument approaches to minimums of less than 200 feet and 1 mile above the published minimums until completing at least 100 hours of single-pilot flight experience in CE-500 airplanes;
 - f. Not perform any straight-in instrument approaches to minimums of less than 100 feet and 1/2 mile above the published minimums until completion of at least 100 hours of single-pilot flight experience in CE-500 airplanes;
 - g. Use a boom microphone; and
 - h. Have a fully functioning autopilot, controllable about three axes that is capable of approach coupling.
5. The single-pilot initial authorization and authorization renewal training program must include the following:
 - a. Ground instruction that includes the following aeronautical knowledge areas:
 - i. Safe and efficient operation of aircraft;
 - ii. Weight and balance computations;
 - iii. Use of performance charts;
 - iv. Significance and effects of exceeding aircraft performance limitations;
 - v. Principles and functions of aircraft systems;
 - vi. Maneuvers, procedures, and emergency operations appropriate to the aircraft; and
 - vii. Night and high-altitude operations.

- b. Airplane/flight simulator instruction that includes the following areas of operation:
 - i. Preflight preparation;
 - ii. Preflight procedures;
 - iii. Takeoff and departure phase;
 - iv. In-flight maneuvers;
 - v. Instrument procedures;
 - vi. Landings and approaches to landings;
 - vii. Normal and abnormal procedures;
 - viii. Emergency procedures; and
 - ix. Postflight procedures.
- c. The instruction required in Condition No. 5(b) may be completed in one of the following two ways:
 - i. In an approved flight simulator, qualified as a Level B, Level C, or Level D flight simulator, provided the applicant has performed three takeoffs and three landings to a full stop as the sole manipulator of the flight controls in the specific CE-500 make and model airplane (for Serial Nos. 0001 through 0418 equipped with either STC No. SA8176SW or STC No. SA09377SC and either STC No. SA2172NM, STC No. SA645NW, or STC No. ST09559AC) within the preceding 90 days; or
 - ii. In an approved flight simulator, qualified as a Level A flight simulator, provided the applicant has accomplished the following maneuvers and procedures in the specific CE-500 make and model airplane (for Serial Nos. 0001 through 0418 equipped with either STC No. SA8176SW or STC No. SA09377SC and either STC No. SA2172NM, STC No. SA645NW, or STC No. ST09559AC) in flight:
 - 1. Preflight inspection;
 - 2. Taxiing;
 - 3. Normal takeoff;
 - 4. Crosswind takeoff;
 - 5. Instrument landing system (ILS) approach;
 - 6. Missed approach;
 - 7. Simulated powerplant failure;
 - 8. Normal landing;
 - 9. Crosswind landing; and
 - 10. Landing with simulated powerplant failure.
- 6. An applicant seeking initial single-pilot authorization, in accordance with the provisions of this exemption, must accomplish the following:
 - a. Satisfactorily complete the training requirements as specified in the FAA-approved training course;
 - b. Satisfactorily accomplish the entire practical test in flight in the specific CE-500 make and model airplane;
 - c. Satisfactorily accomplish the final practical test, which must be conducted—
 - i. Within 10 days after the training has been completed; and
 - ii. By an appropriately rated FAA-designated pilot examiner or an FAA inspector who is authorized and qualified to give such examinations in CE-500 airplanes;
 - d. Except as provided in Condition No. 12, comply with the practical test requirements and standards appropriate to the grade and class of pilot certificate the applicant holds and demonstrate proficiency in circling approaches to the left and to the right; and
 - e. Satisfactorily perform all maneuvers and procedures throughout the entire practical test as a single pilot.
- 7. An applicant seeking renewal of single-pilot authorization in the

CE-

500 airplane (for Serial Nos. 0001 through 0418 that are equipped with STC No. SA8176SW or STC No. SA09377SC and either STC No. SA2172NM, STC No. SA645NW, or STC No. ST09559AC), under the provisions of this exemption, must accomplish the following:

a. Satisfactorily complete the training requirements as specified in the FAA-approved training course;

b. Satisfactorily accomplish the entire practical test in one of the following three ways:

i. In flight, in the CE-500 make and model airplane (for Serial Nos. 0001 through 0418 equipped with either STC No. SA8176SW or STC No. SA09377SC and either STC No. SA2172NM, STC No. SA645NW, or STC No. ST09559AC);

ii. In an approved simulator, qualified as a Level B, Level C, or Level D flight simulator, provided the applicant has performed three takeoffs and three landings to a full stop as the sole manipulator of the flight controls in the specific CE-500 make and model airplane (for Serial Nos. 0001 through 0418 equipped with either STC No. SA8176SW, or STC No. SA09377SC and either STC No. SA2172NM, STC No. SA645NW, or STC No. ST09559AC) within the preceding 90 days; or

iii. In an approved simulator, qualified as a Level A flight simulator, provided the applicant has accomplished the following maneuvers and procedures in the specified CE-500 make and model airplane (for Serial Nos. 0001 through 0418 equipped with either STC No. SA8176SW or STC No. SA09377SC and either STC No. SA2172NM, STC No. SA645NW, or STC No. ST09559AC) in flight:

1. Preflight inspection;
2. Taxiing;
3. Normal takeoff;
4. Crosswind takeoff;
5. ILS approach;
6. Missed approach;
7. Simulated powerplant failure;
8. Normal landing;
9. Crosswind landing; and
10. Landing with simulated powerplant failure.

c. Satisfactorily accomplish the final practical test, which must be conducted—

i. Within 10 days after the training has been completed; and

ii. By an appropriately rated FAA-designated pilot examiner or an FAA inspector who is qualified to conduct tests in CE-500 airplanes;

d. Except as provided in Condition No. 12, comply with the practical test requirements and standards appropriate to the grade and class of pilot certificate the applicant holds and demonstrate proficiency in circling approaches to the left and to the right; and

e. Satisfactorily perform all maneuvers and procedures throughout the entire practical test as a single pilot.

8. Sierra must provide a copy of this exemption to each person who is

authorized to operate under the provisions of this exemption.

9. Each operator must carry a copy of this exemption on board each airplane when operating under the provisions of this exemption.

10. No operator may transfer the provisions of this exemption when or if

ownership or lease of the airplane is relinquished.

11. The circling approach requirement must be accomplished in an airplane in flight or in a simulator equipped with a visual system that permits accomplishment of the circling approach task.
12. If the simulator used is not qualified for conduct of the circling maneuver, and the applicant does not demonstrate the circling maneuver—
 - a. The applicant's records will be annotated with the statement, "Demonstration of circling approach was not accomplished;" and
 - b. The applicant will be restricted from performing circling approaches as PIC when weather conditions are less than basic visual meteorological conditions until the circling approaches have been satisfactorily demonstrated, in an actual airplane or simulator qualified for the circling maneuver, to an FAA inspector or designated pilot proficiency examiner.
13. A person who previously has received single-pilot authorization in a CE-500 airplane must receive the FAA-approved differences training to obtain single-pilot authorization for a different Cessna Citation model.
14. A person requesting single-pilot authorization must satisfactorily accomplish ground and flight simulator training in accordance with the FAA-approved single-pilot training program and must receive training on the differences between the model presented by the simulator in which training is received and the model of Cessna Citation (for Serial Nos. 0001 through 0418 equipped with either STC No. SA8176SW or STC No. SA09377SC and either STC No. SA2172NM, STC No. SA645NW, or STC No. ST09559AC) for which single-pilot authorization is requested.
15. A single-pilot authorization will be valid for 12 calendar months. A person who renews a single-pilot authorization in the calendar month before or after the calendar month in which it is due is considered to have renewed the single-pilot authorization when due.
16. All CE-500 make and model airplanes (Serial Nos. 0001 through 0418 only) permitted to be used under the terms of this grant of exemption must have the following equipment installed and operational:
 - a. Pratt & Whitney (P&W) JT15D-1A engines (by STC No. SA8176SW), P&W JT15D-4 engines (by STC No. SA09377SC), or Williams FJ44-2A engines (by STC No. 09559AC);
 - b. Autopilot with approach coupling;
 - c. Flight director system;
 - d. Boom microphone;
 - e. Transponder "ident" switch on pilot's control wheel; and
 - f. STC SA2172NM or STC SA645NW.
17. On or before December 31 of each year, Sierra must provide the FAA's General Aviation and Commercial Division, AFS-800, 800 Independence Avenue, SW., Washington, DC 20591, with an analysis of operations conducted under this exemption with respect to operational exposure, accident/incident data, and any known problem areas.
18. Sierra must maintain the following records and make them available to the Administrator upon request—
 - a. The name, address, and dates of training enrollment and completion of each applicant who enrolls in its training course;

- b. The date and location where the practical test was conducted, including the name of the FAA-designated examiner or FAA inspector conducting the test;
 - c. The names of those applicants who require more flight training to pass the initial authorization or authorization renewal than that prescribed in the FAA-approved training course;
 - d. The amount of additional training hours required by each applicant listed in accordance with Condition No. 18(a) to pass the flight check;
 - e. A list of those pilots who—
 - i. Failed to complete the training program satisfactorily;
 - or
 - ii. Withdrew from the program and the reasons for withdrawal;and
 - f. The name, certificate number, and address of each person who is authorized to operate under this exemption.
19. No person may provide training nor may any person receive training while passengers are on board the aircraft during operations conducted under the privileges of this exemption.

The Effect of Our Decision

The termination date of Exemption No. 5517, as amended, remains March 31, 2010, unless sooner superseded or rescinded. This letter must be attached to, and is a part of, Exemption No. 5517.

Sincerely,

/s/

James J. Ballough
Director, Flight Standards Service

AFS-08-216-E

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