

United States of America
Department of Transportation Federal Aviation Administration
Supplemental Type Certificate

Number **SA5756NM**

This certificate, issued to:

Aeronautical Testing Service

certifies that the change in the type design for the following product with the limitations and conditions therefore as specified hereon meets the airworthiness requirements of Part 3 of the Civil Air Regulations.

Original Product—Type Certificate Number: 3A10
Make: Cessna
Model: 310K, 310L, 310N, 310P, 310Q, T310P and T310Q

Description of the Type Design Change: Installation of vortex generators on the wings and vertical stabilizer and strakes on the inboard and outboard sides of the engine nacelles, in accordance with an FAA approved copy of Aeronautical Testing Service, Inc. (ATS) Drawing List No. ATS-310K-Q, Revision B, dated May 26, 1994, or later FAA approved revision.

NOTE: Several modification options are provided. These may include changes to the airplane stall speed, minimum control speed, and maximum gross weight. For specific information regarding each option, including Supplemental Airplane Flight Manual (SAFM) requirements, please refer to Continuation Sheet (page 3 of 7)

Limitations and Conditions: Approval of this change in type design applies to the above model aircraft only. This approval should not be extended to other aircraft of these models on which other previously approved modifications are incorporated unless it is determined by the installer that the relationship between this change and any of those other previously approved modifications, including changes in type design, will introduce no adverse effect upon the airworthiness of that aircraft.

(See Continuation Sheet page 3 of 7)

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: April 8, 1991

Date reissued:

Date of issuance: August 4, 1992

Date amended: October 18, 1993; June 13, 1994



By direction of the Administrator

(Signature)

Acting Manager, Seattle Aircraft Certification Office

(Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.

This certificate may be transferred in accordance with FAR 21.47.

Supplemental Type Certificate

(Continuation Sheet)

Number **SA5756NM**

Aeronautical Testing Service, Inc.

Issued: August 4, 1992

Reissued:

Amended: October 18, 1993; June 13, 1994

Description of the Type Design Change continued:

Description of Modification Options Each of these options incorporate the vortex generator kit.

- Option 1: All models; no change in airspeeds, airspeed indicator markings or placards; SAFM not required.
- Option 2: All models: reduced V_{MCA} and stall speeds, changes required for airspeed indicator markings and placards: SAFM required.
- Option 3: T310P & T3100 models equipped with 2-bladed propellers; reduced V_{\sim} and stall speeds; increased gross weight, changes required for airspeed indicator markings and placards; SAFM required.
- Option 4: T310P & T3100 models equipped with 3-bladed propellers, or with 300 Hp or 325 Hp engine installation in accordance with RAM STC No. SA2750SW or SA4011SW, respectively; reduced V and stall speeds; increased gross weight, changes required for airspeed indicator markings and placards; SAFM required.
- Option 5: 310K, 310L, 310N, 310P and 3100 models; reduced V_{MCA} and stall speeds; increased gross weight, changes required for airspeed indicator markings and placards; SAFM required.

Limitations and Conditions continued:

The following aircraft limitations apply to the various options:

- Option 1: No change
- Option 2: Reduced V_{MCA} and stall speeds
- Option 3: T310 and T3100 equipped with two-bladed propellers; reduced V_{MCA} and stall speeds; increased gross weight.

T310P

C.G. Range (landing gear extended):

- (+38.72) to (+42.97) at 5508 lbs. (takeoff)
 - (+38.00) to (+43.10) at 5400 lbs. (landing)
 - (+43.60) at 5000 lbs.
 - (+32.00) to (+43.60) at 4500 lbs. or less
- Straight line variation between points given.

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Supplemental Type Certificate

(Continuation Sheet)

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Issued: August 4, 1992

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Limitations and Conditions continued:

T310Q

C.G. Range (landing gear extended):

(+39.89) to (+42.87) at 5684 lbs. (takeoff)
(+38.00) to (+43.20) at 5400 lbs. (landing)
(+43.60) at 5100 lbs.
(+32.00) to (+43.60) at 4500 lbs. or less
Straight line variation between points given.

Weights:

Ramp	5720 lbs.
Takeoff	5684 lbs.
Landing	5400 lbs.

Option 5: 310K, 310L, 310N, 310P and 310Q models; reduced V_{MCA} and stall speeds; increased gross weight.

310K. 310L. 310N. and 310P

C.G. Range (landing gear extended):

(+38.67) to (+42.98) at 5300 lbs. (takeoff)
(+38.00) to (+43.10) at 5200 lbs. (landing)
(+43.60) at 4800 lbs.
(+32.00) to (+43.60) at 4300 lbs. or less
Straight line variation between points given.

Weights:

Ramp	5335 lbs.
Takeoff	5300 lbs.
Landing	5200 lbs.

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(Continuation Sheet)

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Limitations and Conditions continued:

310Q

C.G. Range (landing gear extended):

(+37.80) to (+43.01) at 5375 lbs. (takeoff)
(+37.30) to (+43.10) at 5300 lbs. (landing)
(+43.60) at 4900 lbs.
(+32.00) to (+43.60) at 4500 lbs. or less
Straight line variation between points given.

Weights:

Ramp	5410 lbs.
Takeoff	5375 lbs.
Landing	5300 lbs.

Supplemental Airplane Flight Manual (SAFM): Aircraft modified per this STC must be operated in accordance with the following Aeronautical Testing Service, Inc. (ATS) SAFM or later FAA revisions:

Option 1: SAFM not required.

Option 2: ATS SAFM Report Nos. ATS 92-02a, (310K, 310L, 310N, 310P), ATS 92-02b (310Q SIN 0001-0900), ATS 92-02c (310Q SIN 0901 and on), ATS 92-02d (T310P), ATS 92-02e (T310Q SIN 0001-0900), and ATS 92-02f (T310Q SIN 0901 and on), Revisions "B," each revised June 8, 1994.

Option 3: ATS SAFM Report Nos. ATS 92-020 (T310P), ATS 92-02p (T310Q SIN 0001-0900) and ATS 92-02q (T310Q SIN 0901 and on), Revision "A," each revised June 8, 1994.

Option 4: ATS SAFM Report Nos. ATS 92-02i (T310P), ATS 92-02j (T310Q SIN 0001-0900), and ATS 92-02k (T310Q SIN 0901 and on), Revisions "A," each revised June 8, 1994.

ATS SAFM Report Nos. ATS 94-09c (T310P) and ATS 94-09d (T310Q SIN 0001-0900), and ATS 94-09e (T310Q SIN 0901 and on), for 300 HP aircraft modified per STC SA2750SW, each dated June 13, 1994.

ATS SAFM Report Nos. ATS 94-09h (T310P), ATS 94-09i (T310Q SIN 0001-0900), and ATS 94-09j (T310Q SIN 0901 and on), for 325 HP aircraft modified per STC SA4011SW, each dated June 13, 1994.

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Limitations and Conditions continued:

Option 5: ATS SAFM Report Nos. ATS 93-08a (310K and 310L), ATS 93-08b (310N), ATS 93-08c (310P), ATS 93-08d (310Q SIN 0001-0900) and ATS 93-08e (310Q SIN 0901 and on), Revisions "A," each revised June 8, 1994.

Records: The following must be maintained as part of the permanent records for the modified aircraft:

Option 1: A copy of this Certificate.

Options 2, 3, 4 and 5: A copy of this Certificate and the appropriate FAA approved SAFM.

Other Limitations: All Options:

The ATS modification consists of ninety (90) vortex generators mounted on the wings and vertical fin, and four (4) metal strakes, one mounted on the inboard and outboard sides of each engine nacelle. If more than four vortex generators are missing or damaged, the aircraft must be flown in accordance with the original markings, placards and manual. If more than six vortex generators are missing or damaged, or if any strake is missing or damaged, the aircraft is not airworthy and must be repaired before flight.

Refer to the appropriate SAFM for specified Operating Limits placard language and airspeed indicator markings for Options 2, 3, 4 and 5.

- END -

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