

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

Number SA02291AK

This Certificate issued to Aero Twin, Inc.
2403 Merrill Field Dr
Anchorage, AK 99501

certifies that the change in the type design for the following product with the limitations and conditions therefor as specified hereon meets the airworthiness requirements of Part 23 of the Federal Aviation Regulations.

Original Product Type Certificate *Number:* A37CE
Make: Cessna
Model: 208, 208B

Description of Type Design Change: Installation of Honeywell TPE331-12JR turbine engine and Hartzell HC-B4TN-5QL/LT10890N(K) or HC-B4TN-5QL/LT10891N(K) propeller, and associated structure and equipment in accordance with Aero Twin, Inc., Master Descriptive Data List, 850-MDDL, Issue 10, dated May 14, 2012, or later FAA approved revision.

Limitations and Conditions:

1. The following modifications are required for Cessna 208 airplanes as part of this modification;
 - a) Wipaire Inc., Gross Weight Increase, STC SA270CH
 - b) Aero Twin, Inc., Auxiliary Vacuum Pump, STC SA4626NM
2. The following modifications are required for Cessna 208B airplanes as part of this modification;
 - a) AeroAcoustics Aircraft Systems, Inc., APE III Aircraft Payload Extender, STC SA01213SE
 - b) Aero Twin, Inc., Auxiliary Vacuum Pump, STC SA4626NM

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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: August 31, 2001

Date Reissued:

Date of issuance: July 16, 2007

Date amended: February 25, 2009,
June 11, 2010, January 18, 2013



By direction of the Administrator

(Signature)

August A. Asay
Manager, Anchorage Aircraft Certification Office

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

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Date of application: August 31, 2001

Date of issuance: July 16, 2007

Date amended: January 18, 2013

Limitations and Conditions (cont'd):

3. For Cessna 208, FAA Approved Airplane Flight Manual Supplement, Doc. No. 850-AFMS, Rev. C, dated June 11, 2012, with Supplement 9-1 for Flight Into Known Icing (FIKI), Rev. A, dated November 20, 2012, or later FAA approved revision is a required part of this installation.
4. For Cessna 208B, FAA Approved Airplane Flight Manual Supplement, Doc. No. 900-AFMS, Rev. B, dated June 11, 2012, or later FAA approved revision is a required part of this installation.
5. For Cessna 208B, FAA Approved Airplane Flight Manual Supplement, Doc. No. 950-AFMS, Rev. A, dated June 11, 2012, with Supplement 9-1 for Flight Into Known Icing (FIKI), Rev. B, dated October 31, 2012, or later FAA approved revision is a required part of this installation.
6. For Instructions for Continued Airworthiness reference Maintenance Manual for Cessna 208 and 208B Aircraft Equipped with Honeywell TPE331-12JR Engine, Doc. No. 850-MM, Revision H, dated November 19, 2012, or later FAA accepted revision.
7. For FIKI, the airplane must be operated in accordance with Cessna Flight Manual Supplement S-1, Known Icing Equipment, as supplemented by Aero Twin Supplements; Section 9-1 of 850-AFMS or Section 9-1 of 950-AFMS. The airplane must also comply with Airworthiness Directives 2006-01-11 R1 and 2007-10-15. In addition to the Cessna training material, Aero Twin, Inc., Honeywell Powered Caravan Cold Weather OPS Training Addendum, Document ATI-ICE-ADD, Issue 4, dated November 19, 2012, or later FAA approved revision, must be included in the annual cold weather operations training as required by Airworthiness Directive 2007-10-15.
8. Any electronic equipment, including EFIS, flight critical electronic hardware not envisioned under the original Type Design, cannot be installed on an aircraft modified with this STC without a further showing of compliance to 23.1353(h) [Amendment 23-49 effective 3/11/96].
9. Compatibility of this modification with other FAA approved modifications, on the specific aircraft being altered, must be evaluated by the installer.
10. If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

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Limitations and Conditions (cont. d):

11. For the Cessna 208, this modification has been verified to be compatible with both the original wheel-plane landing gear and with Wipaire, Inc., Model 8000 Amphibious/Seaplane floats. Other undercarriage configurations may require further FAA approval to show compatibility with this engine modification.
12. This modification is not compatible with;
 - a) Cessna Model 208 serial numbers 416, 500 and greater
 - b) Cessna Model 208B serial number 1190, 1216, 2000 and greater
 - c) Supplemental Type Certificate SA01478WI
13. The Certification Basis for this modification is;
 - 14 CFR Part 23 effective February 1, 1965, as amended by Amendments 23-1 through 23-28.
 - Additionally 14 CFR Part 23 effective February 1, 1965, as amended by Amendments 23-1 through 23-54 for; 23.143, 23.145, 23.175, 23.207, 23.629(e)(1)&(e)(2), 23.863, 23.901(d)(1)&(2), 23.1103, 23.1181, 23.1301, 23.1303(e), 23.1305, 23.1307, 23.1309, 23.1311, 23.1321, 23.1322, 23.1331, 23.1337, 23.1351, 23.1353, 23.1357, 23.1361, 23.1365, 23.1367, 23.1381, 23.1529.
 - Special Condition 23-ACE-3, Factors from the special condition requirement were incorporated into whirl mode flutter analysis per 14 CFR 23.629(e)(1)&(2) Amendment 23-54, Flutter.
 - Equivalent Level of Safety (ELoS) Findings have been made for the following regulation(s):

14 CFR, part 23, § 23.145, Longitudinal Control (documented in ELOS Memo ACE-09-03)
 - 14 CFR Part 34, effective January 1, 1994, as amended by Amendments 34-1 through 34-3.
 - 14 CFR Part 36, effective December 1, 1969, as amended by Amendments 36-1 through 36-26.

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