

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

Number SA2147NM

This Certificate issued to Turboplus Aircraft Systems, Inc.
4117 35th Ave. NW
Gig Harbor, WA 98335

certifies that the change in the type design for the following product with the limitations and conditions therefore as specified herein meets the airworthiness requirements of Part 3 of the Civil Air Regulations
Original Product Type Certificate Number: A3SO

Make: Piper

Model: PA28R-201T, PA-28RT-201T and PA-28-201T

Description of Type Design Change: Installation of Continental TSIO-360-FB(C) (converted)* engine and associated system in accordance with Turboplus, Inc., Report No. PA28-1100 dated June 2, 1983, or later FAA approved revision.

NOTE: *Modified by STC SE2146NM.

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 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. A copy of this Certificate must be maintained as part of the permanent records for the modified aircraft. 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.

(See Continuation Sheet, pages 3 thru 5)

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: September 12, 1983

Date issued: 3/19/86; 10/30/87; 10/25/00;
8/25/05; 10/15/07; 2/24/2017

Date of issuance: October 17, 1983

Date amended: 3/19/86; 1/13/89; 10/25/00



By direction of the Administrator

(Signature)
Manager, Technical and Administrative
Support Staff

(Title)

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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Supplemental Type Certificate

(Continuation Sheet)

Number SA2147NM

Allied Eagles, LLC (Nevada LLC8556-2001)

Reissued: 3/19/86; 10/30/87; 10/25/00; 8/25/05; 10/15/07

Amended: 3/19/86; 1/13/89; 10/25/00

Limitations and Conditions: (cont'd)

MODEL PA-28R-201T *TURBO ARROW III), PA-28RT-201T (TURBO ARROW IV), AND PA-28-201T (CHEROKEE), 4 PCLM (NORMAL CATEGORY) AS MODIFIED BY STC SA2147NM

Engine: 1 Teledyne Continental TSIO-360-FB (C)

Fuel: 100/100LL Minimum Grade Aviation Gasoline

Engine Limits: * Takeoff, 5 minutes, 2800 RPM and 40" Hg - Manifold Pressure (220 HP)
* Max Continuous, 2600 RPM and 40" Hg - Manifold Pressure (200 HP)
* Critical Altitude, 16,500 ft.; 2800 RPM and 40" Hg. Manifold Pressure (220 HP)

Propeller and
Propeller Limits:

(1) Hartzell HUB Model PHC-C3YF-1RF
Blade Model: F7663-2R

Pitch Setting at 30: Station:
High $33^{\circ} \pm 1.0^{\circ}$, Low $13.2^{\circ} \pm 0.2^{\circ}$

Diameter: Not Over 76", Not Under 72"
Spinner: Hartzell P/N C3570 Spinner Assembly

Governor Assembly:
1 Hartzell Hydraulic Governor Model E-5

Avoid continuous operation between 2000 and 2200
RPM with engine manifold pressure above 32" Hg.

Avoid continuous ground operation in cross and tail
winds of over 10 knots between 1700 and 2100 RPM.

(2) Hartzell HUB Model BHC-C2YF-1 () F
Blade Model: F8459A-8R

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Amended: 3/19/86; 1/13/89; 10/25/00

Limitations and Conditions: (cont'd)

Propeller and

Propeller Limits: (2) (Cont'd)

Pitch Setting at 30" Station:

High $29^{\circ} \pm$, Low $12.6 \pm 0.2^{\circ}$

Diameter: Not Over 76", Not Under 75"

Spinner: Hartzell P/N C3568 Spinner Assembly

Governor: Hartzell E-5, Woodward G210681

Avoid continuous operation between 2000 and 2200 RPM with engine manifold pressure above 32" Hg.

Avoid continuous ground operation in cross and tail winds of over 10 knots between 1700 and 2100 RPM.

Powerplant Instrument
Markings:

Manifold Pressure: Red Line 40" Hg.

Tachometer:

Green Arc (Normal Operating Range) 500 to 2600 RPM

Yellow Arc (Avoid Cont. Operation) 2000 to 2200 RPM

Yellow Arc (Takeoff - 5 min.) 2600 to 2800 RPM

Red Line (Maximum) 2800 RPM

Fuel Flow:

Green Arc (Normal) 3.5 to 18.1 psi (23.8

GPH)

Yellow Arc (5 min.) 18.1 to 21.0 psi (23.8 to 26.4

GPH)

Red Line (Max @ Sea Level) 21.0 psi (26.4

GPH)

Airspeed Limits:

V_y (Best Rate of Climb Speed) 97 Knots (IAS)

Maximum Weight:

2900 lbs.

Note 1: Current weight and balance report, together with list of equipment included in certificated empty weight and loading instructions, when necessary, must be provided for each aircraft at the time of modification.

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Limitations and Conditions: (cont'd)

NOTE 2: The following placards must be displayed as indicated:

- (1) Adjacent to, or in close proximity to, the aircraft identification plate:

CONTINENTAL TELEDYNE ENGINE
SUPPLEMENTAL DATA PLATE
STC SA2147NM

TAKEOFF (5 MIN) 220 H.P.
2800 RPM 40" MP
MAX CONTINUOUS POWER 200 H.P.
2600 RPM 40" MP

- (2) In full view of the pilots:

POWER LIMITS

T.O POWER - 220 HP (5 MIN)
AT 2800 RPM - 40" MP
MAX CONTINUOUS - 200 MP

NOTE 3: With the described engine and propeller installation, performance will be at least equal to, or better than, that given in the original FAA Approved Flight Manual for the Piper PA-28-200 series.

- END -

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