United States of America

Department of Transportation—Federal Aviation Administration

Supplemental Type Certificate

Number **SE3590NM**

This certificate, issued to **Machen, Inc.**
10555 Airport Drive
Coeur d'Alene Airport
Hayden Lake, ID 83835

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 13 *of the* Civil Air *Regulations,* effective June 15, 1956.

Original Product—Type Certificate Number: 1E4

Make: AVCO Lycoming

Model: IO-540-P1A5, S1A5 and AA1A5 (See note)

Description of the Type Design Change: Installation of Machen, Inc. Intercooler and associated systems in accordance with Machen, Inc. Report 62-1, or later FAA approved revision. Model IO-540-AA1A5 only is approved for a power increase to 305 hp, 37 inHg manifold pressure, and 2425 rpm. Model IO-540-S1A5 only is approved for a power increase to 300 hp, 29.5 inHg manifold pressure and 2700 rpm.

NOTE: Models IO-540-P1A5 and S1A5 have been modified for the installation of turbochargers in accordance with STC SE60WE for installation in Piper Aerostar Models PA-60-601 and 601P. Model IO-540-AA1A5 is modified for turbochargers in accordance with Type Certificate No. A17WE for Piper Model PA-60-602P.

Limitations and Conditions: Approval of this change in type design applies to the above model engines only. This approval should not be extended to other engines of this model 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 engine. 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.

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 18, 1986

Date reissued:

Date of issuance: August 22, 1986

Date amended: October 8, 1986, April 19, 1988
November 1, 1998

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.

FAA FORM 8110-2(10-68)