

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

*Number* **SA5968NM**

*This certificate, issued to:*

**BLR Aerospace, LLC  
3102 100th Street SW  
Everett, WA 98204**

*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:* A0SO  
*Make:* Piper  
*Model:* PA-31-325

*Description of the Type Design Change:* Vortex generators manufactured in accordance with Document AA1150, Revision A, dated June 04, 1993, and installed in accordance with Document AA1151, Revision A, dated June 04, 1993, or later FAA-approved revision.

*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 this model on which other previously approved modifications are incorporated unless it is determined that the relationship between this change and any of the 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, continuation sheets, and the Flight Manual Supplement (FMS) dated July 06, 1993, or later FAA-approved revision, must be maintained as part of the permanent records for the modified aircraft.

(See Continuation Sheets on Pages 3 and 4)..

*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:* January 05, 1993  
*Date of issuance:* July 07, 1993

*Date reissued:* November 23, 2009  
*Date amended:*



*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* **SA5968NM**

**BLR Aerospace, LLC**

*Issued:* July 07, 1993

*Reissued:* November 23, 2009

*Limitations and Conditions continued:*

This continuation sheet, which is part of STC SA5968NM, prescribes the conditions and limitations under which the product for which the STC was issued meets the standards for airworthiness of the Federal Aviation Regulations.

The conditions and limitations of Type Certificate Data Sheet Number A20SO apply except where superseded by the following:

The system consists of eighty-six vortex generators on the wing and vertical tail of the airplane and four strakes (two on each nacelle).

There may be a maximum combined total of four vortex generators missing from the wing and/or vertical tail before replacements must be installed.

If any of the eighty-six vortex generators are missing, the airplane must be operated within the limitations of the basic airplane flight manual until replacements are installed.

**Engine Limits:**

Maximum Take-off Power

Maximum of 3 minutes except in emergency.

2575 RPM, 49.0 inches Hg manifold pressure below 14,000 feet MSL.

Reduce manifold pressure by 1.6 inches for every 1000 feet of altitude above 14,000 feet MSL up to maximum operating altitude of 24,000 feet MSL.

Maximum Continuous Power

2400 RPM, 39.5 inches Hg manifold pressure below 19,700 feet MSL.

Reduce manifold pressure by 1.6 inches for every 1000 feet of altitude above 19,700 feet MSL up to maximum operating altitude of 24,000 feet MSL.

**Airspeed Indicator  
Markings (IAS):**

Normal operating range (green arc)..... 77 to 183 knots

Flaps operating range (white arc) ..... 71 to 127 knots

Best single-engine rate-of-climb speed (blue radial) ..... 98 knots.

(See Continuation Sheet on Page 4)..

---

*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* **SA5968NM**

**BLR Aerospace, LLC**

*Issued:* July 07, 1993

*Reissued:* November 23, 2009

*Limitations and Conditions continued:*

<b>Maximum Weights:</b>	Ramp.....	6770 pounds
	Takeoff .....	6730 pounds
	Landing.....	6500 pounds
	Zero Fuel.....	6200 pounds
<b>CG Range(Landing Gear Extended):</b>	+137.3 inches to +138.0 inches at .....	6730 pounds
	+134.0 inches to +138.0 inches at .....	6500 pounds
	+128.5 inches to +138.0 inches at .....	6000 pounds
	+121.4 inches to +138.0 inches at .....	5000 pounds or less
	Straight line variation between points given	
<b>Load Factor Limits (g's):</b>	Positive maneuvers:.....	+3.53
	Negative maneuvers: .....	-1.41

- END -

---

*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.*