

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

Number SA1195NW

This certificate, issued to Fletchair, Inc.

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, February 1, 1965, amended by 23-1 through 23-8.

Original Product — Type Certificate Number: A16EA
Make: Gulfstream American
Model: AA-5B

Description of Type Design Change: Installation of Sensenich 76EM8S10-0-60 through -65 propellers on a Lycoming O-360-A4K engine in accordance with Ameromod Corporation Installation Instruction No. AM 130.

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 those other previously approved modifications will introduce no adverse effect upon the airworthiness of that aircraft. A copy of this Certificate and Addendum No. SA1195NW, dated January 13, 1984, or later FAA Approved Revision, must be maintained as part of the permanent records for the modified aircraft. See page 3 of Continuation Sheet for limitations and conditions.

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 8, 1981

Date issued: January 13, 1986; June 14, 1991

Date of issuance: March 30, 1981

Date amended: June 14, 1991

By direction of the Administrator



(Signature)
Acting Mgr., Special Certification Branch
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.

United States of America
Department of Transportation—Federal Aviation Administration
Supplemental Type Certificate
(Continuation Sheet)

Number SA1195NW

LIMITATIONS AND CONDITIONS: (Continued)

The limitations and conditions of the original specification apply except as follows:
This addendum, which is part of Supplemental Type Certificate No. SA1195NW, prescribes the conditions and limitations under which the STC was issued and meets the airworthiness requirements of the Federal Aviation Regulation 23.

SUPPLEMENTAL TYPE CERTIFICATE HOLDER: FLECHAIR, INC.

1. MODEL AA-5B 4PCLM (NORMAL/UTILITY CATEGORY) AS MODIFIED BY STC SA1195NW

Engine: Lycoming O-360-A4K (Same as TCDS A16EA)
Fuel: 100/300 minimum grade aviation gasoline
Capacity: 51 gallons useable
Engine Limits: For all operations: 2700 rpm (180 Hp)
Propeller and
Propeller Limits: Sensenich 76EM8S10-0-60 through -65
Diameter: 76" maximum; 76" minimum
Placards: None
C. G. Range: Same as Type Certificate Data Sheet No. A16EA
Maximum Weight: 2400 pounds (Same as TCDS A16EA)
Instrument Markings: Oil Temperature:
245°F Oil Inlet (Red Line)
Oil Pressure:
60 to 90 psi (Green Arc)
Cylinder Head Temperature (Bayonet Thermocouples)
500°F (Red Line)

NOTE 1: Current weight and balance report including a list of equipment in the certified empty weight must be in the aircraft.

NOTE 2: In addition to the placards and Markings required by Type Certificate Data Sheet A16EA, Note 2, apply the following:

In full view of the pilot on the instrument panel:

NOTICE
AIRCRAFT MODIFIED BY SENSENICH 76EM8S10-0 SERIES PROPELLER
IN ACCORDANCE WITH STC SA1195NW

NOTE 3: With the described propeller installation, performance will be at least equal to or better than that given in the original FAA Approved Airplane Flight for the Gulfstream American (Grumman) AA-5B airplane.

- END -

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

3-13-81
Rev.

AMEROMOD CORPORATION
Everett, WA

Master Document List

STC No. SA1195NW - Installation Instructions No. AM130

<u>Identification</u>	<u>Description</u>	<u>Date</u>	<u>Rev./EO</u>
AM130-DL-1	Master Document List	3-13-81	
AM130-II-1	Installation Instructions	3-13-81	
AM130-II-2	Installation Instructions	3-13-81	
AM130-ID-1	<u>Installation Drawings</u> Propeller & Spinner Installation	3-13-81	

SUPPLEMENTAL TYPE CERTIFICATE DATA

STC SA1195NW

INSTALLATION INSTRUCTIONS No. AM130

Application:

Gulfstream American Corporation model AA-5B.

Specific Purpose:

Eliminate caution restriction between 1850 and 2250 RPM, allow optional propeller pitch selection, aid aircraft performance and fuel consumption, and eliminate applicability of Airworthiness Directive 80-04-05 and Gulfstream American Service Bulletin No. 167A (propeller hub inspection).

General Information:

The AA-5B "Tiger" is factory equipped with the McCauley 1A170FFA/7563 propeller. This propeller is placarded against operation between 1850 RPM and 2250 RPM, during descents, because of high aerodynamic stresses and vibration encountered under those conditions. Due to these stresses, there have been several cracked propeller hubs found, during routine inspections, resulting in the issuance of an emergency airworthiness directive and corresponding service bulletin requiring die-penetrant inspections of the propeller hub at prescribed intervals.

The replacement of the original propeller, with the Sensenich 76EM8S10-0-60 through -65 propeller, eliminates this inspection requirement and the applicability of the A.D. and S.B.

The Sensenich propeller is approved for installation on the AA-5B in a variety of pitches: 60", 61", 62", 63", 64" and 65", giving the owner/operator the option of selecting a blade pitch suited exactly to his flying requirements.

Prototype installations tested have demonstrated a noticeable increase in all performance areas, smoother operation, lower fuel consumption and improved engine cooling.

Detailed Installation Instructions:

1. Remove spinner and McCauley propeller.
 - A. Determine if aircraft is equipped with the SK143-2 type spinner assembly. (Identify by checking for 6 screws through spinner dome, forward of propeller, and a cone shaped aft bulkhead mounted between crankshaft flange and propeller spacer.)
2. Install Sensenich, 76EM8S10-0-60 through -65, propeller and SK143-2 spinner assembly IAW installation drawing No. AM130-ID-1 and Gulfstream American service manual.

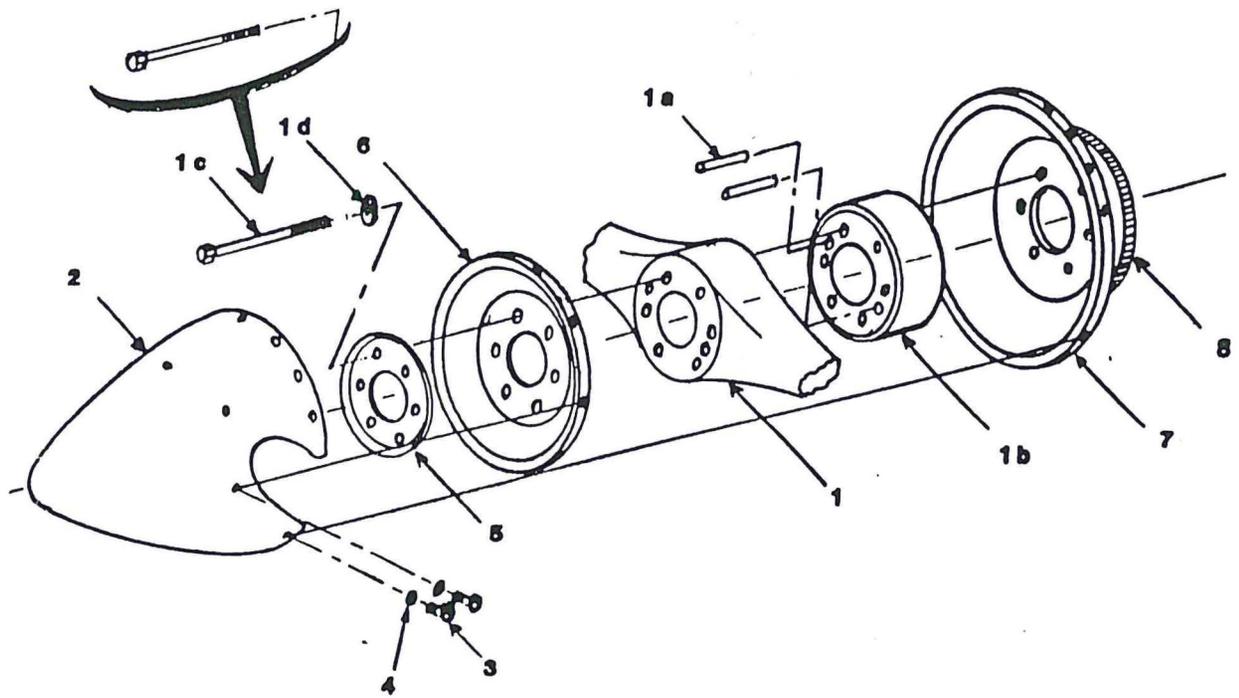
- A. Use of Sensenich bolt kit, p/n 76EM8S10 (propeller attaching kit) is preferable although Sensenich Corporation has approved the use of the McCauley bolts, p/n A-2513-71, used in the original installation.

NOTE: The alternate bolts are slightly shorter than the Sensenich bolts and cannot be installed with washers under the heads. If the original bolts are to be used, thoroughly inspect for damage of any kind. Damaged bolts MUST BE REPLACED.

- B. Installation is approved only with spinner assembly SK143-2. Earlier versions, having a lexan forward bulkhead and aft bulkhead/backplate mounted between the propeller hub and spacer, MAY NOT BE USED.
3. Remove placard from instrument panel, under tachometer, referring to RPM restriction. If tachometer is not being replaced, or having yellow caution arc removed, replace placard with the following wording, using "DYMO", or equivalent labeling tape:
" Aircraft Modified with Sansenich Propeller,
Yellow Arc on Tach Face Not Applicable."

NOTE: Tachometers, of the type installed in the AA-5B, are notoriously inaccurate, even when new. It is recommended that the tachometer be tested by an FAA certified instrument shop and calibrated. If found inaccurate, an instrument shop can remove the Yellow Arc during this operation. If a new tachometer is purchased, it should be tested and range marked prior to installation.

1c (alternate bolt)



8	Starter Ring Gear Assy (LYCOMING)
7	5506008-505 / Aft Blkhd Assy
6	5506010-503 / Fwd Blkhd Assy
5	5506011-3 / Doubler
4	NAS1515J3L / Washer
3	AN526C1032R8 / Screw
2	5506009-3 / Spinner (Attaching Parts)
G.A.	8K143-2 (spinner kit assy.)
(alt.)	A-2513-71 (McCauley)
1d	AN960-816 (washer)
1c	AN8H-72AS / AN78-72S (bolt) 76EM8810 Bolt Kit
1b	M88810 (Spacer)
1a	M816555-79 (Dowel Pins) (Attaching Parts)
1	76EM8910-0-60 / 65 (Prop)
ITEM No.	MFRS. PART No.

ITEM	NOMENCLATURE	REQ'd	MATERIAL SIZE & TOL.	MATERIAL DESCRIPTION
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LIST OF MATERIALS

Drawn by: H. G. B.	Date: 3-13-81	APPLICATION: GULFSTREAM AMERICAN Model AA-5B (TIGER)	DRAWING TITLE: PROPELLER and SPINNER INSTALLATION	Scale: NONE
Chk: J.L.D.	Date: 3-13-81			Redct:
Appr: <i>[Signature]</i>	Date: 3-19-81	Sh# Of		
Appr:	Date:	DRAWING No. AM130-ID-1		
		AMEROMOD CORPORATION		

DIMENSIONS ARE IN INCHES
 TOLERANCES ON
 FRACTIONS DECIMALS ANGLES