



DOCUMENT NUMBER: ICA-150-5c

DOCUMENT TITLE: Instructions for Continued Airworthiness for the Four Blade Hartzell Propellers on the PA-31T and PA-31T1 Turbo-Prop Airplanes.

STC NO: SA01248SE

ORIGINAL DATE: 30 June 2003

REVISION DATE: 05 June 2008

REVISION: A

NOTICE

This document must be referenced on Block 8 of FAA form 337 and added to the aircraft permanent record as required by 14 CFR Part 91, §91.417 (a)(2)(vi) when the reference FAA-STC modification is accomplished on eligible aircraft. This document complies with the requirements of 14 CFR Part 23, §23.1529, in accordance with 14 CFR Part 23, Appendix G.

Aircraft Model Number _____

Aircraft Serial Number _____

Aircraft Registration Number _____

PROPRIETARY INFORMATION

THE INFORMATION CONTAINED IN OR DISCLOSED BY THIS DOCUMENT IS CONSIDERED PROPRIETARY BY BLACKHAWK MODIFICATIONS, INC. THIS DOCUMENT AND THE ITEMS AND INFORMATION CONTAINED OR DISCLOSED HEREIN SHALL NOT BE USED, COPIED OR REPRODUCED IN WHOLE OR IN PART, NOR SHALL THE CONTENTS BE REVEALED IN ANY MANNER TO ANY PERSON UNLESS WRITTEN PERMISSION IS OBTAINED FROM BLACKHAWK MODIFICATIONS, INC.



LIST OF EFFECTIVE REVISIONS

Always destroy superseded pages when you insert revised pages

REVISION	DATE	CHAPTERS AFFECTED
IR	30 JUNE 2003	ALL
A	05 JUNE 2008	ALL



TABLE OF CONTENTS

<u>SECTION</u>	<u>TITLE</u>	<u>PAGE</u>
1.	INTRODUCTION	4
2.	DESCRIPTION	4
3.	SPECIAL PROCEDURES	5
4.	MAINTENANCE, REMOVAL AND REPLACEMENT, SERVICING, TROUBLESHOOTING, AND SCHEDULED INSPECTIONS	4
5.	REPLACEMENT PARTS	5
6.	RECOMMENDED TIME BETWEEN OVERHAULS	5
7.	AIRWORTHINESS LIMITATIONS	5
8.	REVISION	5
9.	ASSISTANCE	6



**Instructions for Continued Airworthiness
PA-31T and PA-31T1 with 4-blade Hartzell Propeller**

1. INTRODUCTION:

THESE INSTRUCTIONS FOR CONTINUED AIRWORTHINESS WERE DEVELOPED FOR THE PIPER PA-31T AND PA-31T1 CHEYENNE AIRCRAFT MODIFIED PER STC SA01248SE. THIS STC INSTALLS THE FOUR BLADE HARTZELL HC-E4N-3N/D8990SB PROPELLER.

Keep these instructions with the aircraft service information manuals or with the aircraft logbooks for reference during maintenance. The maintenance instructions in this manual supplement the latest revision of the Piper Cheyenne Service Manual and Pratt & Whitney Canada PT6A-11 and PT6A-28 Service Manuals, Hartzell Propellers installation and maintenance manuals and Service Publications for maintaining the modified Piper PA-31T or PA-31T1 aircraft.

2. DESCRIPTION:

The following propellers are eligible for installation in accordance with STC SA01248SE Master Drawing List MDL-86140 on PA-31T1 airplanes equipped with PT6A-11 engines and PA-31T airplanes equipped with PT6A-28 engines.

(a) Number of propellers	2
(b) Propeller Manufacturer	Hartzell
(c) Blade Model	D8990SB
(d) Number of Blades	4
(e) Hub Model	HC-E4N-3N
(f) Propeller Diameter (inches)	90
(g) Propeller Pitch Limits	85.8°±.5° Feather -10.0° ± .5° Reverse
(h) Propeller Type	Hydraulically Operated, Constant
Speed, Full Feathering, Reversible	

3. SPECIAL PROCEDURES:

Refer to the Normal and Emergency Procedures Section in Blackhawk Modifications Document No. AFMS-158P Aircraft Flight Manual Supplement regarding operating procedures for this STC installation.

4. MAINTENANCE, REMOVAL AND REPLACEMENT, SERVICING, TROUBLESHOOT, AND SCHEDULED INSPECTIONS:

Aircraft modified per STC SA01248SE should be maintained in accordance with the scheduled time limits and standards outlined by the latest revision of the Piper Continuous Inspection Program or Approved Aircraft Inspection Program (AAIP). The maintenance requirements will be the same as the originally certificated airplane.



**Instructions for Continued Airworthiness
PA-31T and PA-31T1 with 4-blade Hartzell Propeller**

Installation of these propellers is addressed in Blackhawk Modifications Doc. 158-4b.

Routine maintenance and inspections on the propellers in accordance with Hartzell Propeller Maintenance Manual.

The HC-E4N-3N/D8990SB propellers are shot peened between station 7.0 and 30.0 on both face and camber sides. Blades having damage to the shot peened areas exceeding 0.015 inch deep (including material removal necessary to blend out such damage) must be removed from service and the reworked area shot peened before further flight. NOTE: For leading and trailing edge damage, a 0.250 inch deep rework limit applies before shot peening is required.

5. REPLACEMENT PARTS:

Replacement parts are addressed in Blackhawk Modifications Doc. 158-4b.

6. RECOMMENDED TIME BETWEEN OVERHAULS:

See Hartzell Service Letter HC-SL-61-61Y or later revision

7. AIRWORTHINESS LIMITATIONS:

NOTICE:

This section is FAA approved and specifies maintenance required under §43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

Refer to the Limitation Section in Blackhawk Modifications Document No. AFMS-158P Aircraft Flight Manual Supplement for specific limitations regarding this STC installation.

8. REVISION:

Each time this ICA is revised or reissued, the revised ICA will be distributed to operators using a Service Letter/Bulletin by Blackhawk Modifications, Inc. This revision will include a new Log of Revisions page along with the revised pages. The upper left hand corner of each revised page will reflect the revision letter. That portion of text or an illustration, which has been revised by the addition of, or change in, information is denoted by a solid revision bar located adjacent to the area of change, and placed along the inside margin of a page. Revision bars show only the information changed within the latest revision.



**Instructions for Continued Airworthiness
PA-31T and PA-31T1 with 4-blade Hartzell Propeller**

9. ASSISTANCE:

For assistance with anything, contact Blackhawk at the following address or phone number:

Blackhawk Modifications, Inc.

7601 Karl May Drive
Waco, Texas 76708

Phone: (254) 755-6711