TRINITY
AVIATION SERVICES

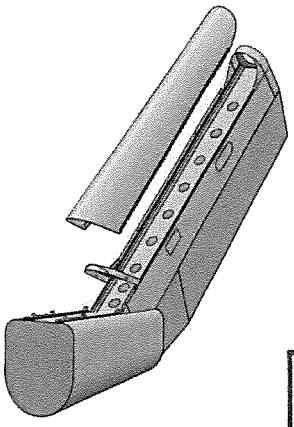
Bell 205, 212, 412 Tail Rotor Driveshaft Fin Cover Instructions for Continued Airworthiness

Document: TAS-5411-102

Revision: B

Aircraft Serial Number: _____

Kit Serial Number: _____



TCR-135
Canada

TCCA Accepted: PATRICIA A. DAVEY

Date Accepted: DEC 2 0 2017

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Log of Revisions

Revision	Date	Description	Pages	Approved
O	18-SEP-2017	Original Release	All	J Wilfong
A	02-NOV-2017	Changed airworthiness limitation statement to comply with MSI 53 and added page to create its own section. Updated Table of Contents and list of effective pages. Revised section 2.6.3 and 2.8.	All	J Wilfong
B	18-DEC-2017	Re-issue	All	J Wilfong

List of Effective Pages

Page	Revision	Date
1	B	18-DEC-2017
2	B	18-DEC-2017
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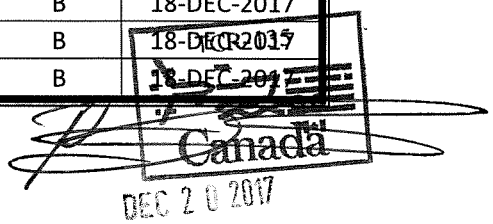

1 Introduction

The content of this document provides the Instructions for Continued Airworthiness for Trinity Aviation Services Ltd. carbon fiber tail rotor driveshaft fin cover installation, P/N T17450-000-0001 on the Bell Textron 205/212/412 series rotorcraft as applicable.

The information and data contained in this document supplements that which is contained in the rotorcraft Approved Maintenance Manual and any applicable Approved Maintenance Manual Supplements, in those areas listed herein. These Instructions for Continued Airworthiness only apply to the components listed herein and is only applicable to the aircraft and parts specified. For limitations not contained in this document refer to the applicable Bell Textron 205/212/412 Approved Maintenance Manual.

1.1 Arrangement

These Instructions for Continued Airworthiness are arranged as far as practical to reference or follow the applicable Bell Textron 205/212/412 Approved Maintenance Manual Section 52 and 53.

1.2 Description

The carbon fiber tail rotor driveshaft fin cover installation P/N T17450-000-0001 consists of a carbon fiber monolithic cover with bonded integral hinge to replace the aluminum honeycomb sandwich construction cover. The carbon fiber tail rotor driveshaft fin cover is lighter and less susceptible to damage than the original aluminum honeycomb cover providing many hours of damage free operation and reduced replacement intervals.

In addition the carbon tail rotor driveshaft fin cover installation P/N T17450-000-0001 incorporates an improved hinge pin and hinge pin retainer system eliminating chaffing damage to the left hand spar cap caused by improperly bent hinge pins.

For replacement parts or additional information please contact:

Trinity Aviation Services Ltd.
201-19148 27th Avenue
Surrey, BC Canada V3Z 5T1
www.trinityav.ca
604-536-9606

1.3 Applicability

The model and serial number eligibility is listed below:

205A1 Series	Serial Numbers: 30309-Subs
212 Series	Serial Numbers: 30875-Subs
412 Series	Serial Numbers: 33001-Subs

The serial number eligibility listed above is based upon the rotorcrafts configuration at time of delivery from Bell Textron Helicopter. Many of the early part number tailbooms for the 205A1 and 212 series rotorcraft have upgraded configurations for interchangeability.

To determine the eligibility of this alteration, ensure that your tail rotor driveshaft fin cover is P/N 209-031-816-105 and has the feature depicted in Detail A of the installation drawing T17450-000-100.

Prior to replacement of the older P/N 209-031-816-005 tail rotor driveshaft fin cover with Trinity Aviation Services Ltd. tail rotor driveshaft fin cover installation P/N T17450-000-0001, it is recommended the owner/operator replace the RH fin skin P/N 212-030-099-069 with P/N 212-030-099-105 RH fin skin, using Bell Textron approved data for the rotorcraft affected.

1.4 Distribution

This document and any revision thereto, shall be distributed to the operator of the rotorcraft incorporating this design change. CAR 521.368 / FAR 21.50(b) require the approval holder to make the ICA available to the operator of the rotorcraft. Trinity Aviation Services will retain a list of rotorcrafts in which the tail rotor driveshaft fin cover installation P/N T17450-000-001 is installed and will distribute or make available in so far as practical, any updates to this manual.

1.5 Service Difficulty Reporting

Any service difficulty with the installed tail rotor driveshaft fin cover shall be reported back to Trinity Aviation Services Quality Assurance personnel at www.trinityav.ca. Service difficulties shall also be reported to Transport Canada following the Service Difficulty Reporting procedures identified on Transport Canada's website at www.tc.gc.ca.

1.6 Approval

The engineering design aspects of this alteration are Transport Canada Civil Aviation approved.

2 Maintenance

2.1 Special Tools

There are no specific special tool requirements for the removal, installation, or maintenance of the tail rotor driveshaft fin cover installation.

2.2 Removal

Referencing Section 5 of this document, loosen all the studs⑦ on the RH side of the cover①. Remove the screws⑨, washers⑪, nuts⑧, retainer②, and retainer plate③. Remove cover① by removing hinge pins④&⑤.

2.3 Installation

For initial installation refer to document TAS-5411-101 and drawing T17450-000-100.

Referencing Section 5 of this document, install the cover① with hinge pins④&⑤. Ensure hinge pins④&⑤ are in the correct position per figure 1.

Install the hinge pin retainer② using the following procedure per figure 1;

- Install screws⑨ through cover① with the head against the outer surface.
- Install retainer plate③ onto screws⑨ against the inner face of the cover①.

- Position hinge pins④&⑤ into the notches of the retainer②. Install retainer② onto screws⑨ and retainer plate③.
- Install washers⑪ onto screws⑨ and retainer②.
- Install nuts⑧ onto screws⑨ and washers⑪, and torque nuts⑧ to 30 inlb...

Check for proper operation per section 2.5 of this document.

Close cover① and secure the studs⑦.

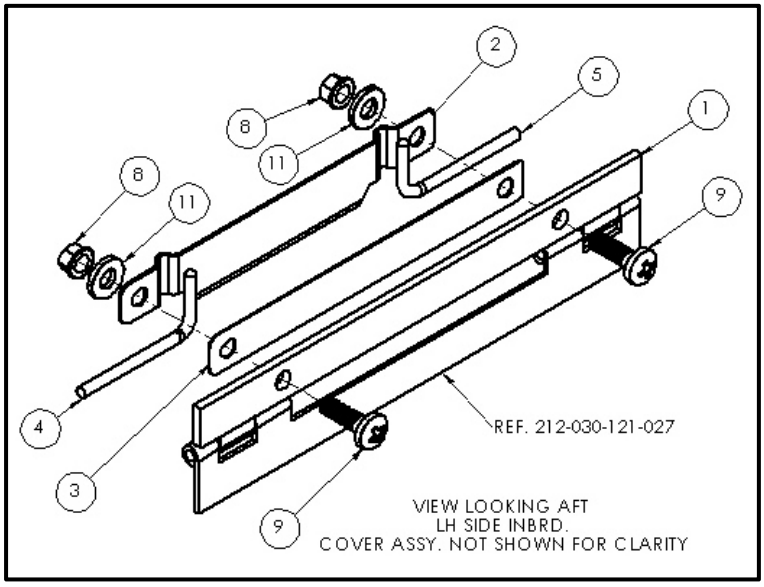

Figure 1

2.4 Cleaning and Storage

The tail rotor driveshaft fin cover may be cleaned with a non-caustic mild detergent and water or aliphatic naphtha (TT-N-95, Type II).

When removed from the rotorcraft the tail rotor driveshaft fin cover should be stored in an area that precludes any damage.

2.5 Operation

2.5.1 Opening

Referencing Section 5 of this document, loosen all the studs⑦ on the RH side of the cover① and rotate cover① to the LH side of the rotorcraft.

2.5.2 Closing

Referencing Section 5 of this document, rotate the cover① to the RH side of the rotorcraft and tighten all studs⑦.

2.5.3 Function

Hinge operation should be smooth without any binding or distortion of the cover. Studs⑦ should fully engage and be of the proper grip length.

2.6 Inspection

2.6.1 Preflight Inspection

Before each flight inspect and verify that the cover① is correctly installed and all studs⑦ are secure per section 2.3 of this document.

2.6.2 Maintenance Schedule

The rotorcraft's current inspection program may be followed as long as the interval for inspecting the fin cover system does not exceed 100 hours' time in service or 12 months whichever occurs first.

2.6.3 Inspection Procedure

- Inspect the tail rotor driveshaft fin cover installation for obvious damage and security of attachment.
- Press down firmly across the entire top edge of the cover① to remove any fastener play and verify a minimum clearance of 0.032" between the fin nose rib P/N 212-030-136-015, -019, or -107 with the intermediate gearbox cover installed and the cover① lower leading edge.
- Press down firmly across the entire top edge of the cover① to remove any fastener play. The cover① should sit flush on the tail rotor gearbox fitting P/N 212-030-103-001. Ensure there is a minimum of 0.032" between the cover① and the LH P/N 212-030-099-069 and RH P/N 212-030-099-105 skins in this area.
- Press down firmly across the entire top edge of the cover① to remove any fastener play and verify a minimum clearance of 0.032" between the cover① with the RH forward fin skin P/N 212-030-099-105 upper edge.
- Verify that the studs⑦ and hinge pins④&⑤ are correctly installed and in serviceable condition.
- Verify the hinge operation is smooth without any binding or distortion of the cover①.
- Using a 10X magnifier inspect the area of the studs⑦, ejectors⑥, and attachment rivets⑩ for corrosion, cracking, or edge breakout.
- Inspect all edges of the cover① for delamination or any other defect. Pay particular attention to the hinge to laminate bond line for cracking and disbonding.

2.6.4 Conditional Inspections

The inspections listed below are to supplement the inspection requirements identified in the applicable Bell Textron 205/212/412 Approved Maintenance Manual.

2.6.4.1 Hard Landing

- Check the cover① for proper fit and alignment. A misaligned cover① may indicate a distorted tailboom fin structure, resulting in major stresses and damage to components.
- Perform the inspection procedure identified in section 2.6.3 of this document.

2.6.4.2 Lightning Strike

- Visually inspect for burn marks, heat discoloration, or delamination. Replace the cover① in accordance with Section 2.7 below, when it shows evidence of a lightning strike.

2.6.5 Overhaul Schedule

There is no component overhaul of the tail rotor driveshaft fin cover required.

2.7 Replacement

Replacement of the tail rotor driveshaft fin cover is covered in the appropriate sections of the Installation Instructions document TAS-5411-101 and drawing T17450-000-100.

2.8 Weight and Balance

Table 1 identifies the weight of the tail rotor driveshaft fin cover① without the studs⑦, ejectors⑥, pins④&⑤, retainer plate③, and retainer② installed.

Part Number	Weight	Arm	Moment
T17450-000-0010	3.7	450.00	1,665.0

Table 1

2.9 Testing

There are no specific testing requirements for the tail rotor driveshaft fin cover installation.

3 Repairs

Generic repairs will be added at a later date to this section. For inclusion of a specific damage repair into this ICA please contact Trinity Aviation Services Ltd.

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4 Airworthiness Limitations

The Airworthiness Limitations section is approved by the Minister and specifies maintenance required by any applicable airworthiness or operating rule unless an alternative program has been approved by the Minister.

There is no airworthiness limitations associated with this installation.

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5 Parts List

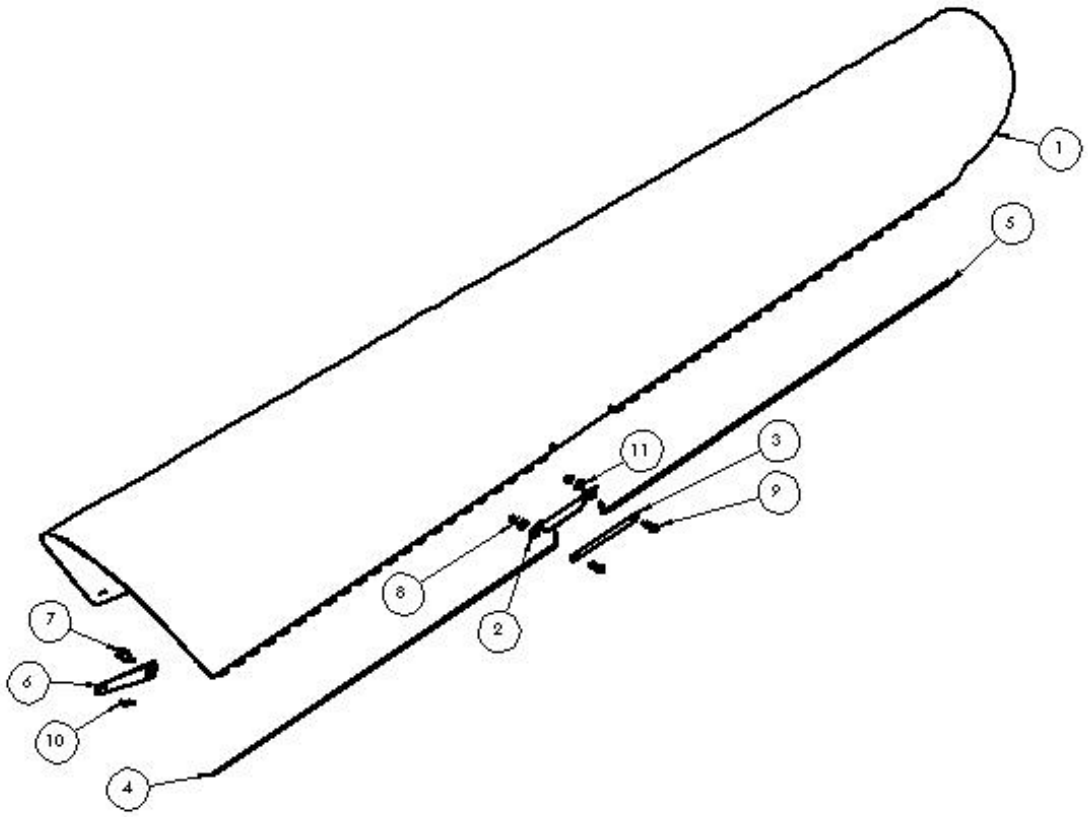

Figure 2

11	NAS1149C-0363R	WASHER	2
10	NAS1097AD4-5	RIVET	10
9	MS27039C1-09	SCREW	2
8	MS21043-3	NUT	2
7	50-019-6	STUD	5
6	50-011-1	EJECTOR BLADE	5
5	T17450-000-0215	PIN, UPPER	1
4	T17450-000-0115	PIN, LOWER	1
3	T17450-000-0017	PLATE, RETAINER	1
2	T17450-000-0016	RETAINER	1
1	T17450-000-0010	COVER ASSY.	1
ITEM	**PART NO.**	**NOMENCLATURE**	**QTY.**

Table 2

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