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## INSTALLATION INSTRUCTIONS

## **VERTICAL FIN CAP WITH LED LIGHT KIT**

407-003-005 (206B, 206L, L-1, L-3, L-4, & 407 S/N 53000 - 54299) 407-003-006 (407 S/N 54300 - SUB) 407-003-007 (407 S/N 54300 - SUB) 407-003-008 (407 S/N 53000 - 54299)

**FOR** 

**BELL TEXTRON CANADA LIMITED** MODEL 206B, 206L, L-1, L-3, L-4, 407 HELICOPTERS

**Report Number AA-06109** 

Revision L

October 3, 2023



## BTCL 206B, 206L, INSTALLATION INSTRUCTIONS L-1, L-3, L-4, 407 VERTICAL FIN CAP WITH LED LIGHT KIT

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# BTCL 206B, 206L, INSTALLATION INSTRUCTIONS VERTICAL FIN CAP WITH LED LIGHT KIT

Rev	Date	Description	Pages	Prepared By
				Approved
	44/00/00	Original Palessa	A !!	Ву
-	11/22/06	Original Release	All	
Α	10/16/08	Removed 407-003-002 Vertical Fin Cap Kit	All	N/A
		Removed 407-003-003 Auxiliary Anti-Collision Light Kit	All	
		Updated format	All	N/A
		Added 407-003-005 Vertical Fin Cap w/LED Light Kit	All 4	
		Revised note to add maximum antenna size information – Section 1.1	4	
		Revised note to add "See Section 3.0 for procedure to determine if installation of OEM, quartz anti-collision light to belly of aircraft is required"	4	
		Added note to Section 2.0	5	
		Added notes 2.1 and 2.2 to Section 2.0	5	
		Created Section 3.0 (previously part of Section 4.0) for procedure to	5-6	
		determine if belly light is required		
		Revised Section 4.0 (previously Section 3.0) specific to 407-003-005  Vertical Fin Cap w/LED Light Kit	6-8	
		Revised Section 5.0 (previously Section 4.0) specific to installing OEM, quartz anti-collision light to belly of aircraft, if required (ref Sec. 3.0)	8-9	
		Revised weight and balance data and formatted as Table 1	10	
		11		
		Revised Figure 1 – drilled hole diameter was .143146 Added new Figure 2 – Maximum Antenna Envelope	12	
1		Revised Figure 3 (was Figure 2) – to show LED light - pictorially	13	
		Revised Figure 4 (was Figure 3) – to show LED light - pictorially	14	
		Revised Figure 5 (was Figure 4) – wiring diagram for LED light	15	
		Added Figure 6 – wiring diagram for LED light w/OEM, quartz light mounted on belly of aircraft	16	
		Revised Figure 7 (was Figure 5) – removed 2 <sup>nd</sup> power supply for auxiliary light and added notes	17	
		Added new Figure 8 – LED Light Installed	18	
		Revised Parts List (formatted as Table 2):	19	
		407-003-005 Vertical Fin Cap W/LED Light Kit was 407-003-002		
		Vertical Fin Cap Kit and 407-003-003 Auxiliary Anti-Collision Light Kit		
		Revised Parts List (formatted as Table 3) - 407-003-051 Wiring Kit was 407-003-050 Wiring Kit	20	
		Added Table 4 - Parts List for Documentation Required	20	
В	2/18/09	Reason for Change: Incorporation of Arc Tube.		N/A
	2, 10,00	Section 4.0: Incorporated installation of Arc Tube and reformatted	6	
		Section 5.0: Reformatted	8	N/A
		Figure 5.0: Replaced with new figure showing incorporation of Arc Tube.	16	/ IN/A
	,	Figure 6.0: Replaced with new figure showing incorporation of Arc Tube.	17	
		Table 2: Updated list of parts.	20	
		Table 3: Updated list of parts.	21	

# BTCL 206B, 206L, L-1, L-3, L-4, 407 INSTALLATION INSTRUCTIONS VERTICAL FIN CAP WITH LED LIGHT KIT

Rev	Date	Description	Doggo	Prepared /
1100	Date	Description	Pages	Ву
				Approved
				Ву
С	1/7/10	Revised Hardware in Section 4.2.3.	8,9	N/A
		Revised Figure 8	20	
		Deleted MS20426AD4-10 Rivet, MS20601AD4W10 Rivet, & 140-001-1	21	N/A
		Washer from Parts List.	04	
		Added MS20426AD5-9 Rivet, MS20601AD5W6 Rivet, & 140-001-3 Washer to Parts List	21	
D	01/07/10	Reason for Change: Incorporation of 206B & 206L Series Helicopters.		N/A
		Incorporated 206B, 206L, L-1, L-3, & L-4 Models in Section 1.0.	5	
		Added STC No. in Section 1.0.	5	N/A
		Added Note to Section 1.1.	5	
		Added 206 Maintenance Manual to note in Section 2.0.	6	
		Revised Section 4.3 to include 206B and 206 L Series Models.	9	
10		Added Note to Section 4.2.8	9	
		Revised Sections 4.3.1 - 4.3.4 & Section 4.4.1	9	
		Revised Section 4.4.1 to include Station Lines for 206B and 206L	10	
		Series Models.		
		Added Section 5.5.	11	
		Revised Weight and Balance Tables to include 206B and 206 L Series Models.	12-14	
		Removed Figures that depicted Drawing 407-003 Sheets and	All	
		referenced instructions to Drawing 407-003.		
		Resequenced Page Numbers, Sheet References, and Figure Numbers	All	
Е	8/5/10	Revised Section 1.1 to reduce antenna weight limitations of 206	5	PW /
		Series.		
				PJB
F	9/02/10	Revised Section 4.3 and removed Sections 4.3.1 - 4.3.4 due to		PW /
		relocation of Arc Tube.	9	
		Revised MS25274-2 Cap QTY in Parts List.	18	PJB
		Deleted M81824/1-2 Splice (Blue), and M39029/56-352 from Parts	18	
		List.	19	
_	4/00/40	Deleted L11E18W, L11F18W, & L11G18B Wires from Parts List.	A 1 1	
G	1/08/13	Updated report to current standards.	ALL	PW /
		Revised Section 1.1.	5	
		Revised Section 3.1, 3.2, & 3.4. Revised Section 4.0 to add S/N break.	7	BL
		Revised Section 4.0.0 and S/N break.	8 8	
		Revised Section 4.2.3. Revised Section 5.0 to add S/N break.	10	
		Revised Section 5.0 to add 5/N break.	11	
		Created Section 6.0 & 7.0.	12, 13	
		Added S/N Break to Table 1.	15	
		Created Table 4.	18	
		Revised Sheet Number Reference on Figure 1 & 2.	19, 20	
		Created 412-003-006 and -007 Kits on PL	22, 23	
Н	7/10/13	Deleted MS24693-32 QTY 4	22	PW /
		Added MS24693-C32 QTY 4	22	
		Revised Section 7.2.1 to correct Adaptor P/N	13	BL
		<u> </u>		/ DL

## INSTALLATION INSTRUCTIONS VERTICAL FIN CAP WITH LED LIGHT KIT

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Rev	Date	Description	Pages	Prepared
		and the second for second as a	, agoo	By /
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		Povined Section 7.2.2 to servest Adenter D/N and Common D/N	44	Ву
		Revised Section 7.2.3 to correct Adaptor P/N and Screw P/N	14	
ı	11/21/13	Added Alt. DCF-0230L to the Parts List	23	MYC
		0.000		
				BL
J	12/18/14	Deleted Wire # L20A22 FROM -051 PL.	24	PW /
				BL
K	9/28/17	Added-008 to Section 1.0	6	PW
		Added-008 to Section 7.0	14-15	BL
		Added-008 to Weight and Balance	19	
		Added-008 to PL	23	
		Added the following parts to -008 PL	23	
		(1) 01-0771080-01 LED Anti-Collision Light		
		(5 IN) M23053/5-204-C Heatshrink Clear (1) M81714/65-22-2 Splice		
		(2) M83519/1-2 Splice		
		(4) MS21042-06 Nut		
		(1) MS25036-103 Terminal Ring		
		(4) MS24693-C32 Screw		
		(4) NAS1149DN632J Washer		
L	10/3/23	Added note to Section 1.1 to allow electrical access hole to be opened	7	PW
		up.		(PA)
		Added New Figure 1 to Section 1.1 to clarify electrical access hole	7	
		location.		
		Resequenced all figure numbers.	All	

This data has been approved by BTI ODA-710621-SW, IAW the FAA-approved ODA Procedures Manual

Christopher M Rowe
Digitally signed by Christopher M Rowe
Date: 2023.10.25 08:39:33 -04'00'

Authorized Signature/Date

## 1.0 GENERAL INFORMATION

## 1.1 INTRODUCTION

These instructions contain the necessary information to install **AERONAUTICAL ACCESSORIES VERTICAL FIN CAP WITH LED LIGHT KIT** (407-003-005) on Bell Helicopter Textron Canada Limited 206B, 206L, L-1, L-3, L-4, 407 S/N 53000 – 54299 model helicopters. These instructions also contain the necessary information to install **AERONAUTICAL ACCESSORIES VERTICAL FIN CAP KIT** (407-003-006) or the LED ANTI-COLLISION BELLY LIGHT KIT (407-003-007) on Bell Helicopter Textron Canada Limited 407 S/N 54300 – SUB model helicopters or the LED ANTI-COLLISION BELLY LIGHT KIT (407-003-008) on Bell Helicopter Textron Canada Limited 407 S/N 53000 – 54299 model helicopters. All Engineering aspects of these instructions are FAA approved under BTI STC No. SR09533RC-D.

The Vertical Fin Cap with LED Light Kit provides a replacement for the factory installed Vertical Fin Fairing Assembly to allow for mounting a variety of antennas, (See Section 3.0 for antenna size limitations), along with replacing the factory installed (OEM) quartz, anti-collision light with a state-of-the-art, LED anti-collision light. The Kit also provides for re-location of the OEM, quartz anti-collision light to the belly of the aircraft, to comply with FAA anti-collision light requirements, if required.

## **NOTE**

Weight of antenna to be installed may not exceed 1 lb (0.45 kg) for 407 installations, and 0.75 lb (0.34 kg) for 206 Series installations. Size of antenna to be installed may not exceed the maximum antenna envelope shown in Figure 1. See Drawing 407-003, Sheet 13, for a full scale template of the maximum antenna envelope. Verify the template is to full scale with a measuring scale.

#### NOTE

Installation of antenna is to be accomplished in accordance with antenna manufacturer's instructions.

If required, it is permissible to open up the existing .44 diameter hole in the top of the vertical fin to provide clearance for the antenna connector. Care should be taken to prevent damage to the sides of the vertical fin when enlarging the hole.

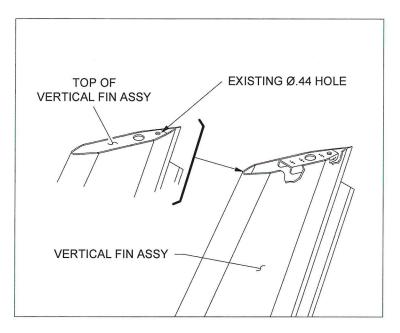


FIGURE 1 - VERTICAL FIN ASSY

## NOTE

If the size of antenna to be installed is larger than the envelope shown in Figure 2, the OEM, quartz anti-collision light must be installed on the belly of the aircraft. See Section 3.0 for procedure to determine if installation of OEM, quartz anti-collision light to belly of aircraft is required.

### NOTE

Maintain a minimum of two times fastener diameter edge distance when installing the antenna onto the mounting surface of the vertical fin cap assembly.

## INSTALLATION INSTRUCTIONS VERTICAL FIN CAP WITH LED LIGHT KIT

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## **NOTE**

Due to the difference in wiring nomenclature, the wiring diagrams for the "Vertical Fin Cap with LED Light" and "Vertical Fin Cap with LED Light with OEM Quartz Light on Belly of Aircraft" have been separated for the 407, 206B, and 206 L series. After determining if a belly light is required per Section 3.0, identify the appropriate wiring diagram (Sheet 4, 5, 6, 7, 8 or 9) for the model of helicopter and refer to it for the remainder of the installation.

The Vertical Fin Cap Kit provides a replacement for the factory installed Vertical Fin Fairing Assembly to allow for mounting a variety of antennas. (See Section 3.0 for antenna size limitations).

The LED Anti-Collision Light provides for locating an anti-collision light to the belly of the aircraft, to comply with FAA anti-collision light requirements, if required.

## NOTE

Weight of antenna to be installed may not exceed 1 lb (0.45 kg) for 407 installations. Size of antenna to be installed may not exceed the maximum antenna envelope shown in Figure 2. See Drawing 407-003, Sheet 13, for a full scale template of the maximum antenna envelope. Verify the template is to full scale with a measuring scale.

## NOTE

Installation of antenna is to be accomplished in accordance with antenna manufacturer's instructions.

### NOTE

If the size of antenna to be installed is larger than the envelope shown in Figure 3, an anti-collision light must be installed on the belly of the aircraft. See Section 3.0 for procedure to determine if installation of an anti-collision light to belly of aircraft is required.

#### NOTE

Maintain a minimum of two times fastener diameter edge distance when installing the antenna onto the mounting surface of the vertical fin cap assembly.

## 1.2 SPECIAL TOOLS

No special tools are required to accomplish this installation.

### 1.3 UNPACKING AND INSPECTING EQUIPMENT

Carefully unpack the equipment and note any damage to the shipping containers or equipment. Visually inspect for evidence of damage. Report any evidence of damage to Aeronautical Accessories immediately.

## 2.0 PRE-INSTALLATION PREPARATION

## **NOTE**

Refer to Bell Helicopter Model 407 or 206 Maintenance Manual and all applicable maintenance manuals and/or ICA's for disassembly/reassembly instructions not specifically addressed in this document.

- 2.1 General shop practices to be in accordance with AC43.13.
- 2.2 Items removed from helicopter should be tagged for identification and protected from damage.
- 2.3 Following any drilling or cutting operation, remove burrs and metal particles. Apply a thin coat of primer to bare metal per MIL-PRF-23377, except when hole is used for grounding.
- 2.4 Unless otherwise noted, do not string, tie, or clamp wire bundles or cables until all wiring has been routed and connected.
- 2.5 When installing ground wires, or components requiring grounding, clean structure surface to provide good electrical contact.
- 2.6 All wiring and wire routing to be installed in accordance with AC43.13-1, Chapter 11, and component manufacturer recommendations.
- 2.7 Ground aircraft and ensure battery master switch is OFF prior to beginning installation.

## 3.0 DETERMINING REQUIREMENT FOR BELLY LIGHT

3.1 To determine if the antenna being installed requires installing the OEM, anticollision light to the belly of the aircraft, proceed as follows:

Figure 3 shows the orientation of the maximum antenna envelope not requiring an additional anti-collision light in relation to the helicopter. See Drawing 407-003, Sheet 12, for a full scale template of the maximum antenna envelope to be used to determine acceptance or un-acceptance of your respective antenna. Verify the template is to full scale with a measuring scale before starting the evaluation.

- 3.2 Using the template, from Drawing 407-003, Sheet 12, place the antenna's mounting side on the top-view. If needed, cut holes through the template to allow the mounting post(s) of the antenna to protrude. Move the antenna to the left (fwd), ensuring the antenna's perimeter remains inside the cross section. If any portion of the antenna's perimeter falls outside the cross section, you must install an, anti-collision light on the belly of the aircraft, per Section 5.0 or Section 7.0. If the entire perimeter of the antenna is still within the cross section, proceed to the next step.
- 3.3 With the antenna still positioned as described above, draw a perpendicular line downward from the right-most (aft) point of the antenna until the line intersects the antenna mounting surface line shown in the side-view of the template (Ref. Figure 3). This point represents the aft-most point the antenna can be located on the mounting surface.
- 3.4 Verify antenna area does not exceed the cross section remaining to the left of the perpendicular line, shown in the side view of the template. If antenna area exceeds, you must install an anti-collision light on the belly of the aircraft, per Section 5.0 or Section 7.0.

### NOTE

If antenna is asymmetrical and fails to meet the envelope criteria above, re-orient the antenna and repeat steps 3.2 through 3.4. Figure 4 provides examples of acceptable and unacceptable antenna configurations.

## 4.0 <u>VERTICAL FIN CAP WITH LED LIGHT KIT INSTALLATION P/N 407-003-005</u> (BTCL 206B, 206L, L-1, L-3, L-4, & 407 SN 53000 – 54299)

Install in accordance with Drawing 407-003 (Ref. Sheets 3 and 14).

## NOTE

Selection and installation of antenna to Vertical Fin Cap Assembly (407-002-101) is to be accomplished in accordance with Section 1.1 and antenna manufacturer's installation instruction's prior to installing Vertical Fin Cap to aircraft.

Ensure Anti-Collision Light mounting surface on the AA Vertical Fin Cap Assembly will be at the same W.L. as the light mounting surface on the OEM Vertical Fin Fairing before proceeding with installation.

- 4.1 Prepare LED Anti-Collision Light:
- 4.1.1 Install Connector (1-480305-0) to leads of LED Anti-Collision Light (01-0771080-01) using Contacts (Pins) (60618-1), as shown on Drawing 407-003, Sheet 4, 5, 6, 7, 8 or 9.
- 4.2 Vertical Fin Cap and LED Anti-Collision Light Installation:
- 4.2.1 Remove existing Vertical Fin Fairing Assembly from aircraft tail fin.
- 4.2.2 Remove and retain existing OEM, quartz anti-collision light, light mounting base, and shield from Vertical Fin Fairing Assembly, removed in step 4.2.1.
- 4.2.3 Locate and install Shield (BTI P/N 206-031-243-X), removed in step 4.2.1, and LED Anti-Collision Light (01-0771080-01) on Vertical Fin Cap Assembly (407-002-101) wet using Sealant (099-050-222) with Rivets (MS20426AD5-9) and Washers (140-001-3), as shown on Drawing 407-003, Sheet 14.

## NOTE

Refer to Whelen Installation Guide along with Drawing 407-003, when installing LED Anti-Collision light (01-0771080-01) to Vertical Fin Cap Assembly (407-002-101).

#### NOTE

Ensure Shield orientation will be as shown on Drawing 407-003, Sheet 14 before proceeding to install Vertical Fin Cap Assembly (407-002-101) to aircraft.

### NOTE

Alternate method of installing Shield and LED Anti-Collision Light to Vertical Fin Cap Assembly: Locate Shield (BTI P/N 206-031-243-X) and LED Anti-Collision Light (01-0771080-01) to Vertical Fin Cap Assembly (407-002-101) as shown on Drawing 407-003, Sheet 14. Match drill Vertical Fin Cap Assembly .128/.133 diameter (4 places). Install Vertical Fin Cap to tail fin, per steps 4.2.4 through 4.2.8, ensuring the wiring from LED light passes through the hole in the Shield. Install Shield and LED Anti-Collision Light to Vertical Fin Cap Assembly wet using Sealant (099-050-222) with Rivets (MS20601AD5W6) and Washers (140-001-3), as shown on Drawing 407-003, Sheet 14.

- 4.2.4 Attach Connector (1-480305-0), installed in step 4.1.1, to aircraft connector (8DS3J1) on top of tail fin.
- 4.2.5 Position Vertical Fin Cap Assembly (407-002-101) to aircraft tail fin as shown on Drawing 407-003, Sheet 3.
- 4.2.6 Match drill Vertical Fin Cap Assembly (407-002-101) to existing vertical fin rivet locations as shown on Drawing 407-003, Sheet 3.
- 4.2.7 Apply layer of Sealant (099-050-222) to mating surfaces of Vertical Fin Cap Assembly (407-002-101) and vertical fin. Remove excess sealant from drain hole.
- 4.2.8 Wet install rivets (MS20600AD4W2) with Sealant (099-050-222).

Before proceeding with step 4.3, locate and use the appropriate model schematic in Drawing 407-003 (Ref: Sheets 4-9).

- 4.3 Install Arc Tube (DCF-0090L) as shown Drawing 407-003.
- 4.4 Modification based on antenna evaluation:
- 4.4.1 If size of antenna being installed does not require locating the OEM, quartz anticollision light to the belly of the aircraft, complete wiring as shown on Drawing 407-003, Sheet 4, 5, or 6. Remove OEM, quartz anti-collision Power Supply (P/N A490A) at (8PS1) STA 183.00, 179.66, or 154.66 / (+) 10.00 B.L., along with attaching hardware, and wire, from aircraft.
  - If size of antenna being installed does require locating the OEM, quartz anticollision light to the belly of the aircraft, complete wiring as shown on Drawing 407-003, Sheet 7, 8, or 9, along with Section 5.0.
- 4.5 Vertical Fin Cap with LED Anti-Collision Light Installation complete.
- 5.0 <u>INSTALLATION OF OEM, QUARTZ ANTI-COLLISION LIGHT TO BELLY OF AIRCRAFT P/N 407-003-005 (BTCL 206B, 206L, L-1, L-3, L-4, & 407 S/N 53000 54299) (IF REQUIRED REFERENCE SECTION 3.0)</u>

Install OEM, quartz anti-collision light (01-0770019-21), per Drawing 407-003, Sheets 7,8,9 & 11.

Location for OEM, quart anti-collision light (01-0770019-21), shown on Drawing 407-003, Sheet 11 is the recommended location. Alternate locations may be used if additional equipment is mounted at or near the shown location. If an alternate location is used; it is the installer's responsibility to ensure that all mounting locations and orientations comply with the equipment's installation instructions, approval of deviation is obtained and weight and balance is calculated.

- 5.1 Aircraft preparation for light installation:
- 5.1.1 Determine position for OEM, quartz anti-collision light (01-0770019-21) and mark panel for modification, per Drawing 407-003, Sheet 11.
- 5.1.2 Drill four .094" diameter pilot holes through outer skin only. Drill one 1.00" diameter hole.
- 5.1.3 Undercut core, as specified, around the four (.094"diameter) holes and the 1.00" diameter hole.
- 5.1.4 Deburr holes and remove debris and loose material from cavity and surface of panel. Mask circumference of 1.00" diameter hole.
- 5.1.5 Fill cavity full of adhesive (099-050-121).
- 5.1.6 Remove excess adhesive and allow to cure for 24 hours at room temperature before handling. Full cure is achieved in 7 days.
- 5.1.7 Remove tape. Sand surface of area with fine grit Scotchbrite pad, or equivalent.
- 5.1.8 Brush alodine bare aluminum per MIL-DTL-5541.
- 5.1.9 Prime with epoxy polyamide per MIL-PRF-23377, Type 1, Class C2.
- 5.2 Light Installation:
- 5.2.1 Align light mounting base (Ref. P/N 07-730068-000), previously removed from Vertical Fin Fairing Assembly (Ref. step 4.2.2), to .094" diameter pilot holes, along with Doubler (407-002-127), and match drill .143/.149 diameter holes (4 places).
- 5.2.2 Apply coat of Sealant (099-050-222) to contacting surfaces prior to assembly.
- 5.2.3 Install light mounting base (Ref. P/N 07-730068-000) and Doubler (407-002-127) to prepared area of aircraft using Screws (MS35206-231), Washers (NAS1149DN632J), and Nuts (MS21042-06), as shown on Drawing 407-003 Sheet 11. Final Torque to 3-6 in lbs. (does not include tare torque).

- 5.3 Wire Installation:
- 5.3.1 Complete wiring of OEM, quartz anti-collision light in accordance with Drawing 407-003, Sheet 7,8, or 9.
- 5.4 Installation of OEM, quartz anti-collision light to belly of aircraft complete.
- 5.5 Perform Weight and Balance for applicable model per Tables 1, 2, or 3.

## 6.0 <u>VERTICAL FIN CAP WITH OEM LED LIGHT KIT INSTALLATION P/N 407-003-006 (BTCL 407 SN 54300 – SUB)</u>

Install in accordance with Drawing 407-003 (Ref. Sheets 3 and 14).

## **NOTE**

Selection and installation of antenna to Vertical Fin Cap Assembly (407-002-101) is to be accomplished in accordance with Section 1.1 and antenna manufacturer's installation instruction's prior to installing Vertical Fin Cap to aircraft.

## NOTE

Ensure Anti-Collision Light mounting surface on the AA Vertical Fin Cap Assembly will be at the same W.L. as the light mounting surface on the OEM Vertical Fin Fairing before proceeding with installation.

- 6.1 Vertical Fin Cap and LED Anti-Collision Light Installation:
- 6.1.1 Remove existing Vertical Fin Fairing Assembly from aircraft tail fin.
- 6.1.2 Remove and retain existing OEM, LED anti-collision light, light adapter, and shield from Vertical Fin Fairing Assembly, removed in step 6.1.1.
- 6.1.3 Match drill Vertical Fin Cap Assembly (407-002-101) to existing vertical fin rivet locations as shown on Drawing 407-003, Sheet 3.
- 6.1.4 Apply layer of Sealant (099-050-222) to mating surfaces of Vertical Fin Cap Assembly (407-002-101) and vertical fin. Remove excess sealant from drain hole.
- 6.1.5 Wet install rivets (MS20600AD4W2) with Sealant (099-050-222).
- 6.2 Modification based on antenna evaluation:
- 6.2.1 Reinstall OEM, LED anti-collision light on new vertical fin cap.

If size of antenna being installed requires an anti-collision light on the belly of the aircraft, complete wiring as shown on Drawing 407-003, Sheet 10, along with Section 7.0.

- 6.2.2 Vertical Fin Cap with LED Anti-Collision Light Installation complete.
- 7.0 <u>INSTALLATION OF LED ANTI-COLLISION LIGHT TO BELLY OF AIRCRAFT P/N 407-003-007 (BTCL 407 S/N 54300 SUB) OR P/N 407-003-008 (BTCL 407 S/N 53000 54299) (IF REQUIRED REFERENCE SECTION 3.0)</u>

Install anti-collision light (01-0771080-01), per Drawing 407-003, Sheet 10 or Sheet 15.

## NOTE

Location for anti-collision light (01-0771080-01), shown on Drawing 407-003, Sheet 11 is the recommended location. Alternate locations may be used if additional equipment is mounted at or near the shown location. If an alternate location is used; it is the installer's responsibility to ensure that all mounting locations and orientations comply with the equipment's installation instructions, approval of deviation is obtained and weight and balance is calculated.

- 7.1 Aircraft preparation for light installation:
- 7.1.1 Determine position for anti-collision light (01-0771080-01) and mark panel for modification, per Drawing 407-003, Sheet 11.
- 7.1.2 Drill four .094" diameter pilot holes through outer skin only. Drill one 1.00" diameter hole.
- 7.1.3 Undercut core, as specified, around the four (.094"diameter) holes and the 1.00" diameter hole.
- 7.1.4 Deburr holes and remove debris and loose material from cavity and surface of panel. Mask circumference of 1.00" diameter hole.
- 7.1.5 Fill cavity full of adhesive (099-050-121).
- 7.1.6 Remove excess adhesive and allow to cure for 24 hours at room temperature before handling. Full cure is achieved in 7 days.
- 7.1.7 Remove tape. Sand surface of area with fine grit Scotchbrite pad, or equivalent.
- 7.1.8 Brush alodine bare aluminum per MIL-DTL-5541.
- 7.1.9 Prime with epoxy polyamide per MIL-PRF-23377, Type 1, Class C2.
- 7.2 Light Installation:
- 7.2.1 Disassemble anti-collision light (Ref. 01-0771080-01). Align light adapter plate (Ref. 07-771051-100), to .094" diameter pilot holes, along with Doubler (407-002-127), and match drill .143/.149 diameter holes (4 places).

## INSTALLATION INSTRUCTIONS VERTICAL FIN CAP WITH LED LIGHT KIT

AA-06109 Revision L

- 7.2.2 Apply coat of Sealant (099-050-222) to contacting surfaces prior to assembly.
- 7.2.3 Install light adapter plate (Ref. P/N 07-771051-100) and Doubler (407-002-127) to prepared area of aircraft using Screws (MS24693-C32), Washers (NAS1149DN632J), and Nuts (MS21042-06), as shown on Drawing 407-003 Sheet 11. Reassemble LED Anti-Collision Light. Final Torque to 3-6 in lbs. (does not include tare torque).
- 7.3 Wire Installation:
- 7.3.1 Complete wiring of anti-collision light in accordance with Drawing 407-003, Sheet 10 or Sheet 15.
- 7.4 Installation of LED anti-collision light to belly of aircraft complete.
- 7.5 Perform Weight and Balance for applicable model per Tables 1, 2, or 3.

## <u>TABLE 1 - WEIGHT AND BALANCE OF MODEL 407 (S/N 53000 – 54299)</u>

Weight and Balance information is as follows:

## \* Vertical Fin Cap with LED Light Kit

Weight (net)	<u>Station</u>	Lateral Arm
-1.00 lb	65.54 in	12.90 in
(45 kg)	(1664.72 mm)	(327.66 mm)

## \*\* Vertical Fin Cap with LED Light Kit and OEM, Quartz Light on Belly

Weight (net)	<u>Station</u>	Lateral Arm
.89 lb	310.62 in	4.10 in
(.40 kg)	(7889.75 mm)	(104.14 mm)

## Based on:

- Net weight of Vertical Fin Cap to OEM Vertical Fin Fairing Assy.
- Net weight of LED light to OEM, quartz anti-collision light.
- OEM, quartz anti-collision light Power Supply (P/N A490A) removed from aircraft at (8PS1) STA 183.00 / (+) 10.00 B.L.

### Based on:

- Net weight of Vertical Fin Cap to OEM Vertical Fin Fairing Assv.
- Net weight of LED light to OEM, quartz anti-collision light.
- OEM, quartz anti-collision light installed at STA 171.00 / (+) 3.00 B.L.

After installation is complete, the aircraft should be weighed in accordance with the applicable Maintenance Manual instructions and ballast adjusted as necessary to return the helicopter empty weight Center of Gravity to within allowable limits.

## TABLE 2 - WEIGHT AND BALANCE OF MODEL 206B

Weight and Balance information is as follows:

## \* Vertical Fin Cap with LED Light Kit

Weight (net)	<u>Station</u>	Lateral Arm
-1.00 lb	46.71 in	12.90 in
(45 kg)	(1186.43 mm)	(327.66 mm)

## \*\* Vertical Fin Cap with LED Light Kit and OEM, Quartz Light on Belly

Weight (net)	<u>Station</u>	Lateral Arm
.89 lb	278.49 in	4.10 in
(.40 kg)	(7073.65 mm)	(104.14 mm)

### \* Based on:

- Net weight of Vertical Fin Cap to OEM Vertical Fin Fairing Assy.
- Net weight of LED light to OEM, quartz anti-collision light.
- OEM, quartz anti-collision light Power Supply (P/N A490A) removed from aircraft at (8PS1) STA 160.20 / (+) 10.00 B.L.

## \*\* Based on:

- Net weight of Vertical Fin Cap to OEM Vertical Fin Fairing Assy.
- Net weight of LED light to OEM, quartz anti-collision light.
- OEM, quartz anti-collision light installed at STA 145.67 / (+) 3.00 B.L.

After installation is complete, the aircraft should be weighed in accordance with the applicable Maintenance Manual instructions and ballast adjusted as necessary to return the helicopter empty weight Center of Gravity to within allowable limits.

## INSTALLATION INSTRUCTIONS VERTICAL FIN CAP WITH LED LIGHT KIT

AA-06109 Revision L

## TABLE 3 - WEIGHT AND BALANCE OF MODEL 206 L SERIES

Weight and Balance information is as follows:

## \* Vertical Fin Cap with LED Light Kit

Weight (net)	<u>Station</u>	<u>Lateral Arm</u>
-1.00 lb	65.67 in	12.90 in
(45 kg)	(1668.72 mm)	(327.66 mm)

## \*\* Vertical Fin Cap with LED Light Kit and OEM, Quartz Light on Belly

Weight (net)	<u>Station</u>	<u>Lateral Arm</u>
.89 lb	310.17 in	4.10 in
(.40 kg)	(7878.32 mm)	(104.14 mm)

#### \* Based on:

- Net weight of Vertical Fin Cap to OEM Vertical Fin Fairing Assy.
- Net weight of LED light to OEM, quartz anti-collision light.
- OEM, quartz anti-collision light Power Supply (P/N A490A) removed from aircraft at (8PS1) STA 185.20 / (+) 10.00 B.L.

## \*\* Based on:

- Net weight of Vertical Fin Cap to OEM Vertical Fin Fairing Assy.
- Net weight of LED light to OEM, quartz anti-collision light.
- OEM, quartz anti-collision light installed at STA 171.00 / (+) 3.00 B.L.

After installation is complete, the aircraft should be weighed in accordance with the applicable Maintenance Manual instructions and ballast adjusted as necessary to return the helicopter empty weight Center of Gravity to within allowable limits.

## <u>TABLE 4 - WEIGHT AND BALANCE OF MODEL 407 (S/N 53000 – 54299)</u> (S/N 54300 – SUB)

Weight and Balance information is as follows:

## \* Vertical Fin Cap Kit

Weight (net)	<u>Station</u>	<u>Lateral Arm</u>
+ .40 lb	395.36	4.76
(+ .18 kg)	(10042.14 mm)	(120.90 mm)

## \*\* Vertical Fin Cap with LED Light on Belly

Weight (net)	<u>Station</u>	Lateral Arm
+ 1.00 lb	232.22 in	3.475 in
(+ .45 kg)	(5898.39 mm)	(88.27 mm)

## \* Based on:

- Net weight of Vertical Fin Cap to OEM Vertical Fin Fairing Assy.

## \*\* Based on:

- Net weight of LED light to OEM, anti-collision light.

After installation is complete, the aircraft should be weighed in accordance with the applicable Maintenance Manual instructions and ballast adjusted as necessary to return the helicopter empty weight Center of Gravity to within allowable limits.

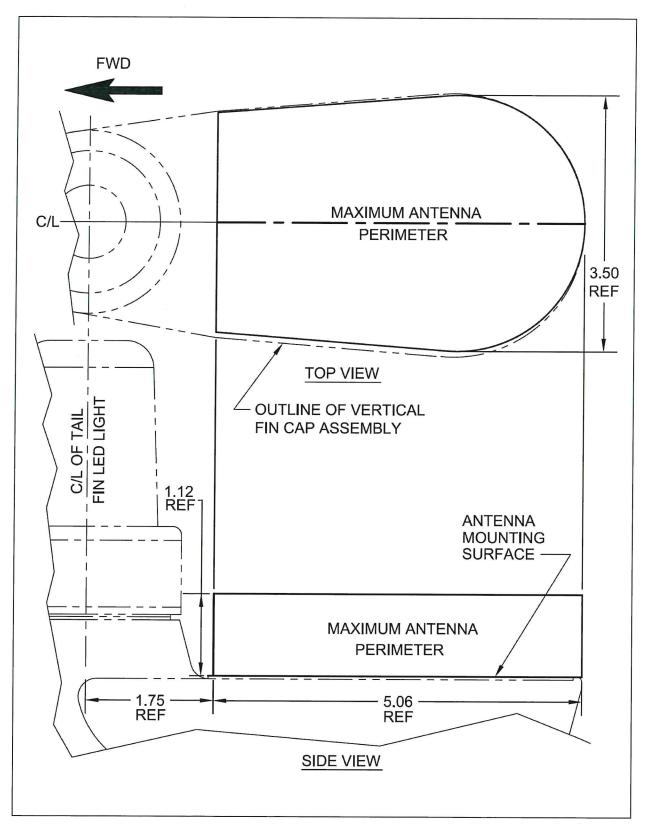


FIGURE 2 – MAXIMUM ANTENNA ENVELOPE (SEE DRAWING 407-003, SHEET 11, FOR TEMPLATE)

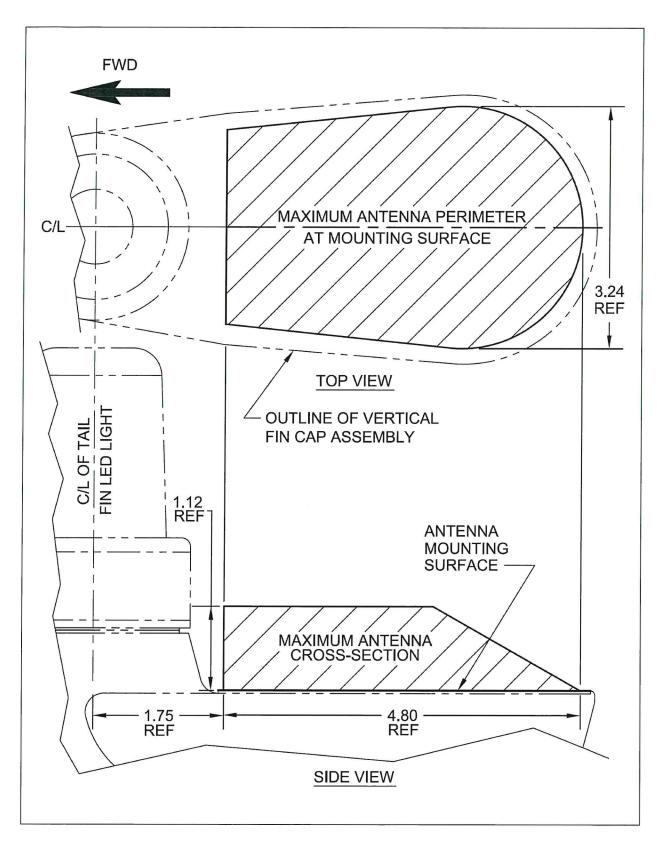


FIGURE 3 – MAXIMUM ANTENNA ENVELOPE NOT REQUIRING BELLY LIGHT (SEE DRAWING 407-003, SHEET 12, FOR TEMPLATE)

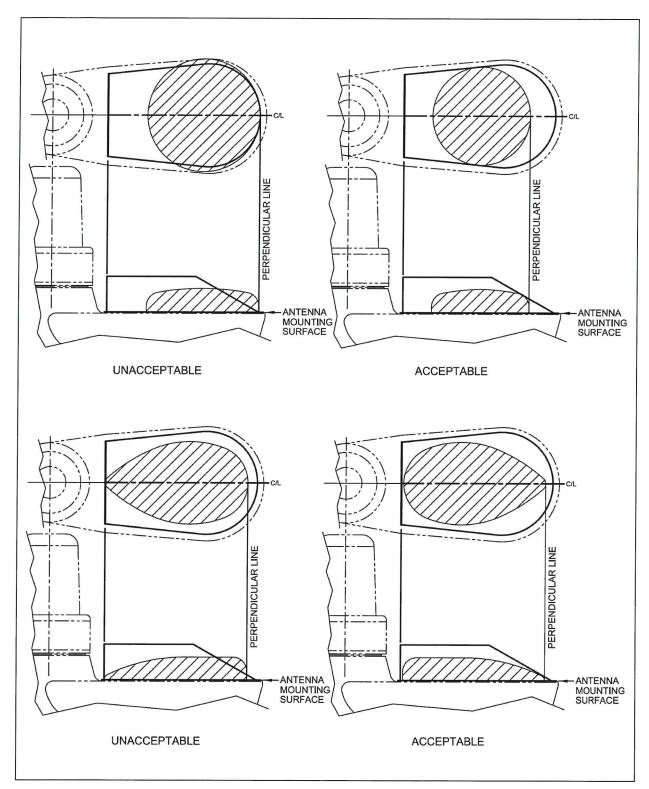


FIGURE 4 – EXAMPLES OF ANTENNA CONFIGURATIONS

Qty

Qty Qty

**Qty** 

## **TABLE 4**

## **PARTS LIST**

407-003-005 VERTICAL FIN CAP WITH LED LIGHT KIT 407-003-006 VERTICAL FIN CAP KIT 407-003-007 LED ANTI-COLLISION BELLY LIGHT KIT

-008	<u>-007</u>	<u>-006</u>	<u>-005</u>	Part Number	Description
	1		1	407-003-051	Wiring Kit
	1		1	099-050-121	Adhesive (Magnobond 6398 A&B)
		2	2	099-050-222	Sealant (AMS-S-8802)
		1	1	407-002-101	Vertical Fin Cap Assembly
	1		1	407-002-127	Doubler
			3	60617-1	Contact (Socket)
			5	60618-1	Contact (Pin)
			4	140-001-3	Washer
1	1		1	01-0771080-01	LED Anti-Collision Light
			1	1-480303-0	Connector
			1	1-480305-0	Connector
			1	AA-06109	Installation Instructions
			1	AA-06111	Instructions For Continued Airworthiness
1	1		1	DCF-0090L	Arc Tube (Deci-Arc Series) (Alt. DCF-0230L)
5 in	5 in		5 in.	M23053/5-204-C	Heat Shrink (Clear)
1	1			M81714/65-22-2	Splice
1	1			M39029/58-363	Pin
			1	M81824/1-3	Splice (Yellow)
 2	2			M83519/1-2	Splice
			1	M83519/1-5	Solder Sleeve
			4	MS20426AD5-9	Rivet
		16	16	MS20600AD4W2	Rivet
			4	MS20601AD5W6	Rivet
 4	4		4	MS21042-06	Nut
			1	MS24509-A-7-1/2	Circuit Breaker, 7.5 Amp
 1	1		3	MS25036-103	Terminal Ring
 4	4			MS24693-C32	Screw
			1	MS25274-2	Cap
			4	MS35206-231	Screw
 4	4		4	NAS1149DN632J	Washer

# BTCL 206B, 206L, L-1, L-3, L-4, 407 INSTALLATION INSTRUCTIONS VERTICAL FIN CAP WITH LED LIGHT KIT

AA-06109 Revision L

## TABLE 5

## **PARTS LIST**

407-003-051 WIRING KIT							
Qty  -051   1   1   1   1	Part Number L153A22N L152A18 L20B22 L20C22	<u>Description</u> WIRE, 22 AWG, (12 IN) WIRE, 18 AWG, 3 COND, SHIELDED (25 FT) WIRE, 22 AWG (12 IN) WIRE, 22 AWG, 2 COND SHIELDED (25 FT)					
TABLE 6							
PARTS LIST							
DOCUMENTATION REQUIRED							
Qty	Part Number	Description					
1	407-003	Vertical Fin Cap Installation					
Confirm inventory prior to installation.							
Packed by:		1 1 .					

#### United States of America

## Department of Transportation — Federal Abiation Administration

## Supplemental Type Certificate

Number BR09533RC-D

This certificate issued to

Bell Helicopter Textron, Inc. 441 Industrial Park Road Piney Flats, TN 37686

certifies that the change in the type design for the following product with the limitations and conditions therefor as specified hereon meets the airesorthiness requirements of Parl 27 of the Federal Aviation Regulations.

Original Product - Type Certificate Number:

H28W

Bell Helicopter Textron Canada Limited

Abodel.

407, 206B, 206L, 206L-1, 206L-3, 206L-4

Description of Type Design Change. Installation of a Vertical Fin Cap with LED Light Kit in accordance with Master Drawing List AA-04133 Revision D dated August 5, 2010, or later FAA approved revision.

Instructions for Continued Airworthiness, AAI Report Number AA-06111, Rev. B dated January 15, 2010, or later FTW ABG accepted revision is required.

Bimitations and Conditions:

(See continuation sheet 3 of 3)

This certificate and the supporting data which is the basis for approval shall remain in offset until surrendered, suspended, revoked or a termination date is otherwise established by the Administrator of the Federal Sociation Administration.

Date of application. November 11, 2008

Date resistant February 9, 2011

Tale of incarcos. May 13, 2009

Date amended. August 25, 2010

By direction of the Administrator

James A. Richmond, Acting Manager Rotorcraft Certification Office,

Southwest Region

(Title)



INSTRUCTIONS: The transfer endorsement below may be used to notify the appropriate FAF Regional Office of the transfer of the Supplemental Type Certificate.
The PAA will reissue the certificate in the name of the transferee and forward it to him.
TRANSFER ENDORSEMENT
Transfer the ownership of Supplemental Type Certificate Number
to (Name of transferee)
(Address of transferee)(Number and street)
(City, State, and ZIP code)
from (Name of grantor) (Print or type)
(Number & street)
(City, State, and ZIP code)  Extent of Authority (if licensing agreement):
Date of Transfer:
Signature of grantor (In ink):

### United States of America

Department of Transportation — Nederal Abiation Administration

## Supplemental Type Certificate

(Continuation Sheet)

Number BR09533RC-D

Date of Issuance: March 06, 2006 Date Amended: May 01, 2007 Date of Reissuance: February 9, 2011

## Zimitations and Conditions (Continued):

The Vertical Fin Cap with LED Light Kit is applicable for installation as a replacement for the factory installed Vertical Fin Fairing Assembly. The Kit also relocates the vertical fin quartz anti-collision light to the belly of the aircraft and installs a replacement LED anti-collision light on the fin. The installer must determine whether this design change is compatible with previously approved modifications. If the holder agrees to permit another person to use this certificate to alter a product, the holder must give the other person written evidence of that permission.

#### Certification Basis:

Subpart B 27.29[14], 27.171[1], 27.251[1]

Subpart C 27.301[1], 27.303[1], 27.305(a)[1], 27.307(a)[26], 27.337(a)[26], 27.351[26], 27.571(a)(b)[26]

Subpart D
27.601(a) [1], 27.603(a) (b) (c) [16], 27.605(a) [16], 27.609(a) (b) [1], 27.610[21],
27.611(a) [1], 27.613(c) (d) [26], 27.619(a) (b) [1], 27.625(a) [35], 27.629[26],
27.773(a) (b) [1]

Subpart F
27.1301(a) (b) (c) (d) [1], 27.1309(a) (c) (d) [21], 27.1351(a) (b) (1) (i) [13], 27.1357(a) [13], 27.1365[1], 27.1367[1], 27.1401(a) (b) (c) (d) (e) (f) [10]

Subpart G 27.1525[21], 27.1529[18] Appendix A



#### **CERTIFICADO SUPLEMENTAR DE TIPO**

(Supplemental Type Certificate)

NÚMERO

2015S12-07

(Number)

Este certificado, emitido com base na Lei nº 7565 "Código Brasileiro de Aeronáutica", de 19 de dezembro de 1986, (This certificate, issued in the basis of the Law No. 7565 "Código Brasileiro de Aeronáutica", dated 19 December 1986,

é conferido ao (à):

Bell Helicopter Textron, Inc.

is granted to:)

441 Industrial Park Road Piney Flats, TN 37686

USA

por ter a modificação ao projeto de tipo do produto abaixo citado, observadas as limitações e condições (for having the change to the type design of the product mentioned below, with the limitations and conditions therefor as) específicadas, satisfeito aos requisitos de aeronavegabilidade aplicáveis.

(specified hereon, met the applicable airworthiness requirements.)

Produto Original - Número do Certificado de Tipo: (Original Product - Type Certificate No:)

- \* See attached ANAC Approved Model List (AML), Rev. I.R., dated 04 Dec. 2015, or later approved revisions.
- Fabricante: (Manufacturer:)

\*

Modelo(s):

\*.

DESCRIÇÃO DA MODIFICAÇÃO AO PROJETO DE TIPO: {Description of Type Design Change:}

Installation of a Vertical Fin Cap with Led Light Kit in accordance with Master Drawing List, Document No. AA-04133, Rev. I, dated 28 July 2015, or later approved revisions.

This CST validates in Brazil the STC No. SR09533RC-D, issued by FAA (USA).

LIMITAÇÕES E CONDIÇÕES:

(Limitations and Conditions:)

See continuation sheet for applicable data.

DATAS:

(Dates of:)

Do Requerimento: 26 Oct. 2015

Da emissão: 04 Dec. 2015 Da reemissão:

va reemissao:

Da emenda:

[Application:]

(Issuance:)

(Reissuance:)

4 1140

Gerente-Geral, Certificação de Produto Aeronáutico
(General Manager, Aeronautical Product Certification)

Superintendente de Aeronavegabilidade (Airworthiness Superintendent)

F-400-01G (04.12)

Fl. 01 de 02

H 02-4649-0



## Folha de Continuação ao

#### **CERTIFICADO SUPLEMENTAR DE TIPO**

(Supplemental Type Certificate)

NÚMERO

2015S12-07

(Number)

LIMITAÇÕES E CONDIÇÕES:

- I. The approval of this type design change should not be extended to other rotorcraft of this model on which other previously approved modifications are incorporated unless it is determined by the installer 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 rotorcraft.
- II. 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.
- III. Instructions for Continued Airworthiness (ICA), Aeronautical Accessories Document No. AA-06111, Rev. C, dated 11 Oct. 2010, or later FAA accepted revisions, are required for this installation.
- IV. The Vertical Fin Cap with Led Light Kit is applicable for installation as a replacement for the factory installed vertical Fin Faairing Assembly. The Kit also relocates the vertical fin quartz anti-collision light to the belly of the aircraft and installs a replacement LED anti-collision light on the fin.
- V. The Certification Basis for parts changed or affected by this change, as specified on the FAA STC # SR09533RC-D is applicable.
- VI. A copy of this Certificate shall be maintained as part of the permanent records of the modified rotorcraft.

My

F-400-01G (04.12)



## ANAC APPROVED MODEL LIST (AML) FOR CST 2015S12-07

ITEM ROTORCRAFT MAKE		ROTORCRAFT MODEL (S)	TYPE CERTIFICATE NUMBER	
1	Bell Helicopter Textron Canada Limited	206B, 206L-1, 206L-3, 206L-4	H-92 (TCCA)	
2 Bell Helicopter Textron Canada Limited		407	9603 (ANAC)	

**ANAC Approved:** 

MÁRIO GAWA

Gerente-Geral, Certificação de Produto Aeronáutico (General Manager, Aeronaútical Product Certification)

ANAC Approved Date:

04 Dec. 2015

Revision:

I.R.



## Department of Transport

## Supplemental Type Certificate

This approval is issued to:

Number: SH15-32

Issue No.:

441 Industrial Park Rd.

Approval Date:

June 29, 2015

Piney Flats, Tennessee

issue Date:

June 29, 2015

United States of America 37686

Bell Helicopter Textron, Inc.

Responsible Office:

Pacific

Aircraft/Engine Type or Model:

Bell 206B, 206L, 206L-1, 206L-3, 206L-4, 407

**Canadian Type Certificate or Equivalent:** 

**Description of Type Design Change:** 

Installation of a Vertical Fin Cap with LED Light Kit in

accordance with FAA STC SR09533RC-D

Installation/Operating Data, Required Equipment and Limitations:

Installation of the Vertical Fin Cap with LED Light Kit must be in accordance with Bell Helicopter Textron, Inc. Drawing List AA-04133 Revision H, dated October 15, 2013 or later FAA approved revision.

Maintenance of the Vertical Fin Cap with LED Light Kit must be in accordance with Aeronautical Accessories, Inc. Instructions for Continued Airworthiness AA-06111 Revision C dated October 11, 2010 or later FAA accepted revision.

## Certification Basis:

27.29[14], 27.171[1], 27.251[1], 27.301[1], 27.303[1], 27.305(a)[1], 27.307(a)[26], 27.337(a)[26], 27.351[26], 27.571(a)(b)[26] 27.601(a)[1], 27.603(a)(b)(c)[16], 27.605(a)[16], 27.609(a)(b)[1], 27.610[21], 27.611(a)[1], 27.613(c)(d)[26], 27.619(a)(b)[1], 27.625(a)[35], 27.629[26], 27.773(a)(b)[1] 27.1301(a)(b)(c)(d)[1], 27.1309(a)(c)(d)[21], 27.1351(a)(b)(1)(i)[13], 27.1357(a)[13], 27.1365[1], 27.1367[1], 27.1401(a)(b)(c)(d)(e)(f)[10], 27.1525[21], 27.1529[18] Appendix A

Conditions: This approval is only applicable to the type/model of aeronautical product specified therein. Prior to incorporating this modification, the installer shall establish that the interrelationship between this change and any other modification(s) incorporated will not adversely affect the airworthiness of the modified product.



Curtis Mah For Minister of Transport



## 补充型号认可证

## VALIDATION OF SUPPLEMENTAL TYPE CERTIFICATE

编号/NO.	VSTC0777
--------	----------

本证颁发给/This Certificate is issued to Bell Helicopter Textron,Inc.

适用机型/Applicable Aircraft Model:

Bell 206B, Bell 206L-4, Bell 407

## 叙述/Description:

Installation of a Vertical Fin Cap with LED Light Kit in accordance with Master Drawing List AA-04133 Revision D dated August 5, 2010, or later FAA approved revision. Instructions for Continued Airworthiness, AAI Report Number AA-06111, Rev. B dated January 15, 2010, or later FTW AEG accepted revision is required.

### 使用限制/Limitation:

See "Limitations and Conditions" of STC SR09533RC-D issued by FAA. Approved Chinese Marking and Placard: N/A

趋中国氏	用机空局审查朝认,上还		更改符合中国民用航空	规章的有关规定。中国民用
航空局对由	美国联邦航空局	類发的第	SR09533RC-D	号补充型号合格证给予认
可。				
This certifi	ies that the design change	of above civil aeronautic	al product meets applicab	le China Civil Aviation Regula-
tions. Civil Avia	tion Administration of Chi	na validates the Supplem	nental Type Certificate Na	SR09533RC-D issued
by FAA	·			
			局长授权:	
			For the Administrate	or of CAAC:
				to A beauty
			签字/Signature	KY Y Y LE
			_	Yang Zhenmei
			职务/Title	Deputy Director General
				- 1-1
			部门/Department_	CAAC-AAD
			日期/Date	2017-02-07

## **European Aviation Safety Agency**

## SUPPLEMENTAL TYPE CERTIFICATE 10027913. REV. 1

This Supplemental Type Certificate is issued by EASA, acting in accordance with Regulation (EC) No. 216/2008 on behalf of the European Community, its Member States and of the European third countries that participate in the activities of EASA under Article 86 of that Regulation and in accordance with Commission Regulation (EC) No. 1702/2003 to

#### AERONAUTICAL ACCESSORIES, INC. 441 INDUSTRIAL PARK ROAD PINEY FLATS TN 37686 ARU

and certifies that the change in the type design for the product listed below with the limitations and conditions specified meets the applicable Type Certification Basis and environmental protection requirements when operated within the conditions and limitations specified below:

Original Product TC Number:

TCCA TCDS H92

TC Holder: BELL HELICOPTER

Modei: BELL 407

Original STC Number: FAA STC 8R09833RC-D

#### EASA Certification Basis:

The Certification Basis for the original product remains applicable to this certificate/ approval The certificated noise and/ or emissions levels of the original product are unchanged and remain applicable to this certificate/ approval

Description of Design Change: Vertical Fin Cap with LED Light Kit

Associated Technical Documentation:

AA-04133 revision A dated 18 February 2009 - Drawing List, Vertical Fin Cap with LED Light Kit; AA-97130 revision F dated 18 April 2008 - Installation Instructions for Expanded Instrument panel; AA-06111 no revision dated 23 February 2009 - Instructions for Continued Airworthiness Vertical Fin Cap with LED Light Kit.

or later revisions of the above listed documents approved by EASA in accordance with EASA ED Decision 2004/04/CF (or subsequent revisions of this decision)

Limitations:

None

See Continuation Sheet(s)

For the European Aviation Safety Agency,

Date of Issue: 01.12.2009

**Certification Manager** Rotorcraft, Balloons, Airships

The following numbers are listed on the certificate: EASA current Project Number: 0010001827-001

SUPPLEMENTAL TYPE CERTIFICATE - 10027813, REV. 1 - AERONAUTICAL ACCESSORIES, INC.

EASA Form 81, Issue 3 - 11/11/2009

## **European Aviation Safety Agency**



#### Conditions:

The Vertical Fin Cap with LED Light Kit is applicable for installation as a replacement for the factory installed Vertical Fin Fairing Assembly. The kit also relocates the vertical fin quartz anti-collision light to the belly of the aircraft and installs a replacement LED anti-collision light on the fin. If the holder agrees to permit another person to use this certificate to after the product, the holder shall give the other person written evidence of that permission.

Prior to installation of this modification it must be determined that the interrelationship between this modification and any other previously installed modification and/ or repair will introduce no adverse effect upon the sinvertniness of the product

This Certificate shall remain valid unless otherwise surrendered or revoked.

- end -

Note:

The following numbers are listed on the certificate: EASA current Project Number: 0010001827-001

SUPPLEMENTAL TYPE CERTIFICATE - 10027813, REV. 1 - AÉRONALITICAL ACCESSORIES, INC.

GOVERNMENT OF INDIA
OFFICE OF THE
DIRECTOR GENERAL OF CIVIL AVIATION
OPP. SAFDARJUNG AIRPORT,
NEW DELHI – 110 003
Aircraft Engineering Directorate

Telephone/ दूरभाष : 2462 2500

Extn.:207

E-mail/ ई-मेल : kaushik.dgca@nic.in

M/S Bell Textron Inc., 441 Industrial Park Road, Piney Flats, TN, 37686, United States of America



भारत सरकार महानिदेशक नागर विमानन का कार्यालय सफदरजंग एरपोर्ट के सामने नई दिल्ली – ११० ००३ विमान अभियांत्रिकी निदेशालय

Reference No./ संख्या : IN23ASA054

Dated/ दिनांक : 8th June 2023

(Kind Attention: Mr. Matthew Tester)

Subject: Letter of Type acceptance for FAA STC No. SR09533RC-D for installation of a Vertical Fin Cap with LED Light Kit on Bell 206L-3 Helicopter

Ref.: e-Application Id: STC/Bell Textron Inc./Bell 206L-3/2023/000224

Sir/Madam.

Reference may please be made to above referred application submitted by M/s Bell Textron Inc. on the subject matter. Your application for acceptance of FAA STC No. SR09533RC-D for installation of a Vertical Fin Cap with LED Light Kit on Bell 206L-3 Helicopter has been examined as per CAR Section 6, Series A, Part II and is found satisfactory.

Based on the information and certification documents provided, it is stated that the installation of a Vertical Fin Cap with LED Light Kit on Bell 206L-3 Helicopter, certified vide FAA STC No. SR09533RC-D dated 09.02.2011 is considered acceptable to DGCA from design view point subject to the following conditions:

- 1. The helicopter must conform to the type design change data as described in the STC with configuration specified above.
- 2. Limitations, conditions and procedures prescribed in the STC, approved manuals and applicable supplements shall be strictly adhered to.
- 3. The helicopter shall be fitted with mandatory instrument and equipment as per applicable regulations issued by DGCA, India, if required, as a result of this installation (available on website <a href="https://www.dgca.gov.in">www.dgca.gov.in</a>).

This letter of Supplemental Type Certificate acceptance for subject helicopter model is issued under the provision of Rule 49G of the Aircraft Rules, 1937 with the approval of the competent authority and shall remain in force until cancelled, superseded or revoked by the DGCA, India.

(Kaushik Mukhopadhyay)
Dy. Director(AE)
For Director General of Civil Aviation

#### Copy to:

- 1. DAW, DGCA Head Quarters, New Delhi 110003,
- 2. FAA, Compliance & Airworthiness Division, Aircraft Certification Service, DSCO Branch 10101 Hillwood Parkway Fort Worth, TX 76177 (Kind Attn: Mr. Kuethe Harmon)
- 3. M/s Malhotra Helikopters Pvt. Ltd., 2, Pitamajali, Ground Floor, 11 Baptista Road, Vile Parle(W), Mumbai, India-400 056. (Kind Attn: Mr. Naveen K Singh- C.A. Manager)

(Kaushik Mukhopadhyay) Dy. Director(AE) For Director General of Civil Aviation

Yours faithfully, Kaushik Mukhopadhyay Deputy Director (Aircraft Engineering Directorate) for Director General of Civil Aviation Government of India Civil Aviation Department Office Of The Directorate General of Civil Aviation Aircraft Engineering Directorate Opposite Safdarjung Airport New Delhi – 110 003



भारत सरकार नागर विमानन विभाग महानिदेशक नागर विमानन का कार्यालय सफदरजंग एयरपोर्ट के सामने नई दिल्ली - ११० ००३

Phone:-91-011-2462 3211 E mail: amit.dgca@nic.in

Reference

संख्या : 07-47/2018-AED

No.:

दिनांक : 30/10/2018

Dated:

Bell Helicopter Textron Inc, 441 Industrial Park Road, Piney Flats, TN 37686,USA.

#### (Kind Attn: Mr. Joyce Estep, Manager)

Sub: Type Acceptance of FAA Supplemental Type Certificate SR09533RC-D for installation of vertical Fin Cap with LED light Kit on Bell helicopter Model 206L-4.

#### References:

- I. FAA letter dated 23.08.2018.
- II. Letter of Intent from Indian operator M/s Dhillon Aviation Pvt Ltd letter dated 22.05.2018.

Sir,

Reference may please be made to the above referred letters and subsequent correspondence this office had on the subject matter.

The certification documents pertaining to installation of vertical Fin Cap with LED light Kit on Bell Helicopters Model 206L-4 have been examined and are considered satisfactory. Based on the information, documents and clarification provided, it is stated that the modification of vertical Fin Cap with LED light Kit installation certified vide FAA STC SR09533RC-D dated 09/02/2011 on Bell Helicopters Model 206L-4 is considered acceptable to DGCA from design view point subject to the following conditions;

- 1. The installation must conform to type design change data as specified in the FAA STC mentioned above.
- 2. Limitations, conditions and procedures specified in the STC, approved RFM shall be strictly adhered to;
- 3. The Indian operator shall provide to AED quarterly feedback/data on the vertical Fin Cap with LED light Kit installation pertaining to all faults/malfunctions/service difficulties/repairs/part replacements, etc.

4. Indian operator/STC holder shall arrange familiarisation program to AED officials of adequate duration i.a.w. relevant regulation/CAR.

This letter of STC acceptance is issued under the provisions of Rule 49G of the Aircraft Rules 1937 with the approval of the competent authority and shall remain in force until cancelled, superseded or revoked by the DGCA, India

Yours faithfully

(Amit Gupta)
Director (AED)

for Director General of Civil Aviation

## Copy to:

- 1. DAW, DGCA Head Quarters, New Delhi 110003.
- FAA, DSCO Branch, Airworthiness & Compliance Division, Aircraft Certification Service, 10101 Hillwood Parkway, Fort Worth, TX 76177.
   (Kind Attn: Mr. S, Frances Cox, Manager, DSCO Branch)
- 3. M/s Dhillon Aviation Pvt Ltd. A-883/C, Sushant Lok-I, Gurgaon-122001. (Kind Attn: Jaymalya Sengupta, Quality Manager).

GOVERNMENT OF INDIA No.DGCA-27014/5/2021-AED-DGCA

OFFICE OF THE

DIRECTOR GENERAL OF CIVIL

AVIATION

OPP. SAFDARJUNG AIRPORT,

NEW DELHI - 110 003

भारत सरकार
महानिदेशक नागर विमानन
का कार्यालय
सफदरजंग एरपोर्ट के सामने
नई दिल्ली – ११० ००३

#### Aircraft Engineering Directorate

विमान अभियांत्रिकी निदेशालय

Telephone/

दूरभाष: E-mail/ई-मेल: 91-011-2462 3211

kaushik.dgca@nic.in

Reference No./ संख्या:

DGCA-27014/5/2021-AED

Dated/ दिनांक:

18th Feb, 2021

To,

M/s Bell Textron Inc., 441 Industrial Park Road, Piney Flats, TN 37686.

Subject: Acceptance of FAA Supplemental Type Certificate STC (SR09533RC-D) for installation of a Vertical Fin Cap Kit with LED Light Kit on Bell 407 Helicopter.

Reference: (1) M/s FAA letter no. 30/09/2020;

- (2) M/s Bell Textron Inc. application dated 23/09/2020;
- (3) Email correspondences.

Sir,

Reference may please be made to the points under reference (I) thru' (3) on the above subject.

Your application for acceptance of FAA Supplemental Type Certificate (STC) SR09533RC-D dated 09/02/2011 for installation of a Vertical Fin Cap Kit with LED Light Kit on Bell 407 Helicopter has been examined as per CAR Section 6, Series A, Part II and AED Handbook of Procedures Part 8 and is found to be in order.

Based on the certification documents submitted, it is stated that installation of a Vertical Fin Cap Kit with LED Light Kit on Bell 407 Helicopter certified vide FAA Supplemental Type Certificate (STC) SR09533RC-D dated 09/02/2011 is considered acceptable to DGCA from design point of view subject to the following conditions:

- 1. The installation must conform to the type design change data as specified in the FAA STC mentioned above;
- 2. Limitations, conditions and procedures specified in the STC & in approved RFMS shall be strictly adhered to;
- 3. The aircraft shall be fitted with mandatory instruments and equipment as per applicable Civil Aviation Requirements (CARs) of DGCA, India that are available on website <a href="www.dgca.gov.in">www.dgca.gov.in</a>, if required as a result of this design change.

This letter of STC acceptance is issued under the provisions of Rule 49G of The Aircraft Rules, 1937 with the approval of the competent authority and shall remain in force until cancelled, superseded or revoked by the DGCA, India.

Yours faithfully

(Kaushik Mukhopadhyay) Deputy Director (AED) For Director General of Civil Aviation

## Copy to:

- DAW, DGCA Head Quarters, New Delhi 110 003. With a request to provide feedback/data to AED, pertaining to faults/malfunctions/service difficulties experienced by any Indian operator after incorporation of the said STC on Bell 407.
- 2. FAA, DSCO Branch, Airworthiness & Compliance Division, Aircraft Certification Service. (Kind Attn: Mr. S. Frances Cox, Manager, DSCO Branch)
- M/s Arrow Aircraft Sales & Charters Pvt. Ltd., Prime Towers, Room No. DPT-816, 8th Floor, Plot No. F-79-80, Okhla Industrial Area, Phase-1, New Delhi-110020. [Kind Attn. Mr. Shailendra Pratap Singh. Accountable Manager)