

ALERT SERVICE BULLETIN
Bell Helicopter **TEXTRON**

A Subsidiary of Textron Inc.

NO. 407-06-72

DATE SEP 12, 2006

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DATE

REV

MODEL AFFECTED: 407

SUBJECT: HORIZONTAL STABILIZER 407-023-801-109,
INSPECTION AND REPLACEMENT OF

HELICOPTERS AFFECTED: All Model 407 listed in Table 1 and all Model 407 that had the stabilizer 407-023-801-109 replaced after March 01, 2004.

TABLE 1: List of affected horizontal stabilizers 407-023-801-109 and the helicopter serial number they were installed on at delivery.

STABILIZER S/N	ORIGINAL ALLOCATION	STABILIZER S/N	ORIGINAL ALLOCATION
BP725	53603	BP780	53643
BP750	53628	BP781	53645
BP751	53620	BP785	Note
BP752	53621	BP787	53647
BP753	53624	BP788	53650
BP756	53626	BP789	Note
BP758	53627	BP790	53652
BP760	Note	BP795	53657
BP765	53631	BP796	53658
BP769	Note	BP797	53659
BP770	53634	BP800	Note
BP771	53637	BP801	Note
BP775	Note	BP802	Note
BP776	53639	BP803	53663
BP778	Note	BP805	53661
BP779	53644	BP829	Note

NOTE:
These stabilizers were sold in Spare and may have been installed on any fielded 407

COMPLIANCE:

PART I AND PART II

Within the next 100 hours but no later than 30 days after receipt of this bulletin and every 600 hours or annual inspection thereafter until PART III is accomplished.

PART III

No later than September 30, 2008.

DESCRIPTION:

It has been determined by Bell Helicopter that the horizontal stabilizers 407-023-801-109 as listed in Table 1, may have flaws present on the inside surface of the upper and/or lower skin at the tailboom attachment inserts area. Over time the flaws may produce cracks in the upper and/or lower skin.

PART I of this bulletin provides instructions to verify the serial number of the horizontal stabilizer.

PART II of this bulletin introduces a first inspection and a recurring 600 hour / annual inspection that have to be performed until PART III can be accomplished.

PART III of this bulletin mandates the replacement of all affected stabilizers. This will be considered as the terminating action for the recurring inspection introduced by PART II of this bulletin.

APPROVAL:

The engineering design aspects of this bulletin are Transport Canada approved.

MANPOWER:

Approximately 2.5 man-hours are required to complete Part I of this bulletin.
Approximately 4.0 man-hours are required to complete Part II of this bulletin.
Approximately 8.0 man-hours are required to complete Part III of this bulletin. Man-hours are based on hands-on time, and may vary with personnel and facilities available.

WARRANTY:

Owner / Operators of aircraft that have the subject serial numbers installed on their aircraft or that have the one or more of the subject serial numbers in their stock that comply with the instructions outlined in this bulletin are eligible for 100% credit for the replacement part mentioned in the "Required Material" section of this bulletin.

To Receive This Credit:

- Purchase the required part from an approved BHTI supply source.
- Comply with this bulletin no later than 30 September, 2008.
- Submit a completed MMIR report to BHTI no later than 30 days after completion of this bulletin.

Customers that fail to comply with the instructions outlined in this bulletin before September 30, 2008 are not eligible for the special warranty provisions listed above.

Exclusions To Warranty:

Warranty consideration for parts found in the "Consumable Material" section of this bulletin and labor to inspect or remove and replace the horizontal stabilizer are not a subject of this ASB.

MATERIAL:**Required Material:**

The following material is required for the accomplishment of this bulletin and may be obtained through your Bell Helicopter Textron Supply Center.

<u>Part Number</u>	<u>Nomenclature</u>	<u>Quantity</u>
407-023-801-109	Horizontal stabilizer	1

Consumable Material:

The following material is required to accomplish this bulletin, but may not require ordering, depending on the operator's consumable material stock levels. This material may be obtained through your Bell Helicopter Textron Supply Center.

<u>Part Number</u>	<u>Nomenclature</u>	<u>Quantity</u>	<u>Reference</u>
EC2216 B/A TAN N/S	Adhesive	1	C-322
299-947-100TY2CL2G50	Adhesive	50 g	C-317
MIL-PRF-81733 TY2 PT	Sealant	1 pint	C-392
ACETONE GALLON	Acetone (per Q-A-51)	1 gallon	C-316(Note 1)
EWDE072	Primer	1 quart	C-204(Note2)
299-947-110TY3CL1 2I	Teflon tape (2 inch wide)	1 roll	C-460
PETROLATUM 13 OZ	Petrolatum jelly	13 oz	C-008
P-P-101	Aluminum oxide sandpaper	1	C-423
CCCC0046	Cheesecloth	1	C-486

Notes:

1. As an alternate, use Methyl Ethyl Ketone (C-309)
2. As an alternate, use MIL-P-23377

SPECIAL TOOLS:

None required

WEIGHT AND BALANCE:

Weigh and balance is not affected.

ELECTRICAL LOAD DATA:

Not affected

REFERENCES:

BHT-407-MM-5, Rev 19, Maintenance Manual, chapter 53.

PUBLICATIONS AFFECTED:

BHT-407-MM-1, Rev 21, Maintenance Manual, chapter 4.

ACCOMPLISHMENT INSTRUCTIONS:

PART I: Horizontal stabilizer serial number verification

1. Determine if you have an affected horizontal stabilizer as listed in Table 1. Refer to Figure 1. Part number and serial number can be found on identification tag (24) that is located centerline on the upper surface of the stabilizer (7).

-NOTE-

Horizontal stabilizer does not require to be removed from tailboom.

CAUTION

Protection underneath stabilizer is required to avoid damage to stabilizer or tailboom when stabilizer is detached from upper supports. Slat may remain installed however side movement will be limited. Ensure no damage to slats and/or tailboom surfaces.

-NOTE-

Do not damage liquid shim compound between upper and lower supports (4 and 5) and stabilizer (7). If liquid shim is damaged during removal of the parts, the shimming procedure shall be repeated as described in BHT-407-MM-5.

2. Remove the screws (9) and the washers (12) from the L/H and R/H lower supports (5). Remove the nuts (22), washers (21), and screws (20).
3. Remove L/H and R/H lower supports (5).
4. Protect tailboom (6) underneath stabilizer (7) with padding or equivalent.
5. Hold the stabilizer (7). Remove the screws (9) and the washers (12) that attached the L/H and R/H upper supports (4) to stabilizer (7).
6. Carefully lower stabilizer and get access to the identification tag (24). Record the serial number.
7. If the serial number of the stabilizer is not listed in Table 1, reinstall the stabilizer in accordance with BHT-407-MM-5 and make an entry to indicate that this bulletin has been accomplished.
8. If you have an affected horizontal stabilizer, accomplish Part II immediately or Part III if a replacement stabilizer is available.

PART II: Horizontal stabilizer – First inspection and recurring 600 hour / annual inspection

1. Refer to figure 1. Inspect the horizontal stabilizer (7) as follows:

-NOTE-

Horizontal stabilizer does not require to be removed from tailboom.

CAUTION

Protection underneath stabilizer is required to not damage stabilizer or tailboom when stabilizer is detached from upper supports. Slat may remain installed however side movement will be limited. Ensure no damage to slats and/or tailboom surfaces.

-NOTE-

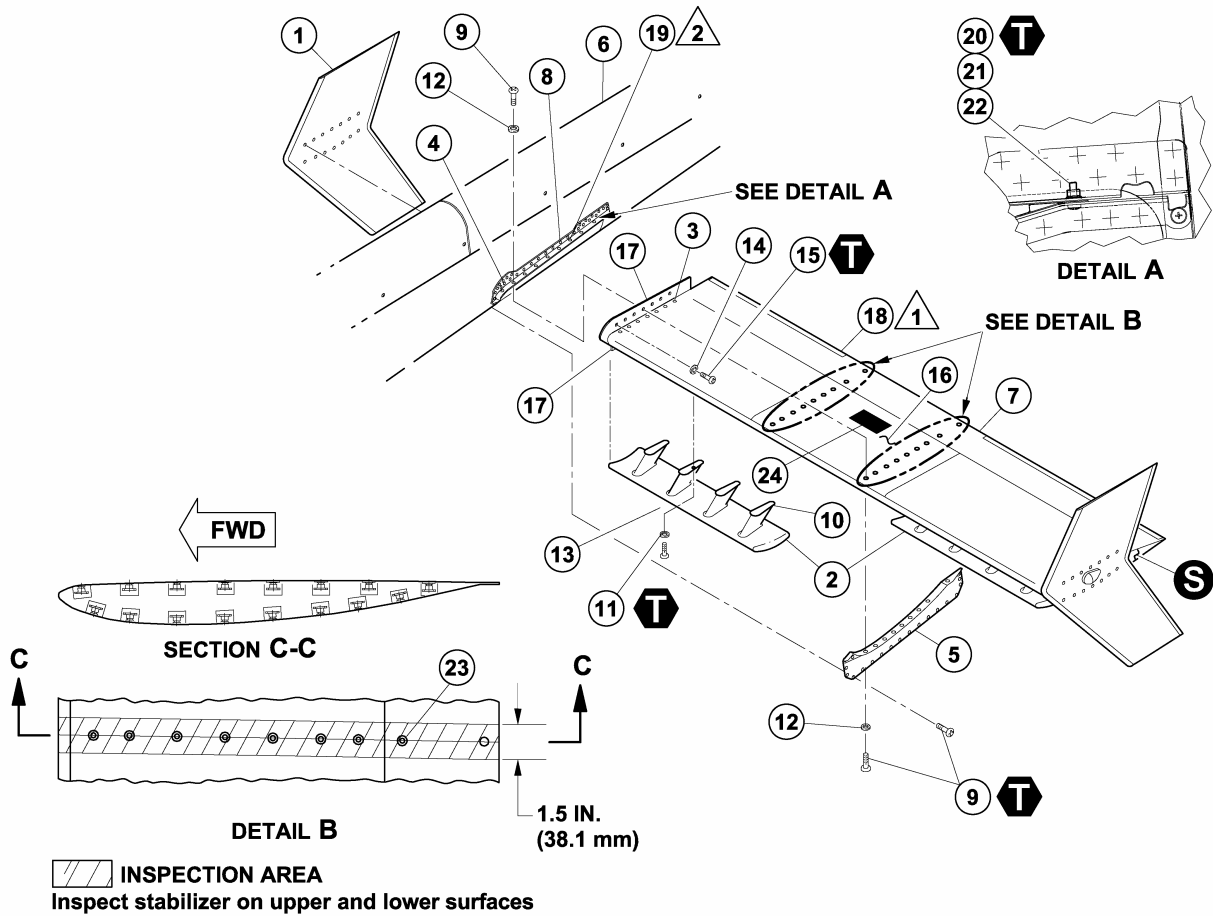
Do not damage liquid shim compound between upper and lower supports (4 and 5) and stabilizer (7). If liquid shim is damaged during removal of the parts, the shimming procedure shall be repeated as described in BHT-407-MM-5.

2. Remove the screws (9) and the washers (12) from the L/H and R/H lower supports (5). Remove the nuts (22), washers (21) and screws (20).
3. Remove L/H and R/H lower supports (5).
4. Protect tailboom (6) underneath stabilizer (7) with padding or equivalent.
5. Hold the stabilizer (7). Remove the screws (9) and the washers (12) that attached the L/H and R/H upper supports (4) to stabilizer (7).
6. Carefully lower stabilizer (7) and move to left side.
7. Refer to Figure 1 Detail B. Clean and prepare surface of the stabilizer for inspection using cheesecloth (C-486) moistened with acetone (C-316).
8. Inspect stabilizer in area of the inserts (23), on upper and lower surfaces for cracks and deformation using a 10X power magnifying glass. Inspect the area around each inserts and between inserts for debonding using tap test method.
9. If any damage is found, the stabilizer is not repairable. Accomplish Part III immediately.
10. If no damage is found, continue with the inspection.

11. Carefully move stabilizer (7) to the right side with care.
12. Repeat step 7 to 9 for the R/H side of stabilizer in area of inserts (23).
13. If any damage is found, the stabilizer is not repairable. Accomplish Part III immediately.
14. If no damage is found, reinstall horizontal stabilizer in accordance with BHT-407-MM-5.
15. Make an entry in the helicopter records to indicate that Part II of this bulletin has been accomplished and that a recurring 600 hour or annual inspection is required until Part III is accomplished.

PART III: Replacement of horizontal stabilizer

1. Remove and retire from service affected horizontal stabilizer. Install a serviceable horizontal stabilizer in accordance with BHT-407-MM-5.
2. Make an entry in the helicopter records to indicate that this bulletin has been accomplished



/// INSPECTION AREA
 Inspect stabilizer on upper and lower surfaces

- | | | |
|-----------------------------|--------------------------------------|---|
| 1. Finlet | 13. Washer | S SEALANT MIL-PRF-81733 (C-392) |
| 2. Slat assembly | 14. Washer | T 20 TO 25 IN-LBS
(2.26 TO 2.83 Nm) |
| 3. Rivet | 15. Screw | |
| 4. Upper attachment support | 16. Upper and lower doubler | |
| 5. Lower attachment support | 17. Casting supports | |
| 6. Tailboom | 18. Flap | |
| 7. Horizontal stabilizer | 19. Spacer (left side only) 2 | |
| 8. Rivet | 20. Screw | |
| 9. Screw | 21. Washer | |
| 10. Support bracket | 22. Nut | |
| 11. Screw | 23. Inserts | |
| 12. Washer | 24. Identification tag | |

NOTES

- 1** EFFECTIVITY
 Aircraft Serial Numbers 53057 and subs.
 Aircraft Serial Numbers 53000 to 53056 Post TB 407-96-2.
- 2** Tailboom spacer effectivity: P/N 407-030-801-201, 407-030-801-203, 407-030-801-205.

Figure 1 – Horizontal stabilizer, first inspection and 600 hour / annual inspection