

ALERT SERVICE BULLETIN

Bell Helicopter **TEXTRON**

A Subsidiary of Textron Inc.

NO. 214-03-66

DATE 03-12-03

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DATE

REV

MODEL AFFECTED: 214B/214B-1

SUBJECT: TAIL ROTOR BLADE, P/N 214-015-750-005, -109, AND -113, TIP CLOSURE INSPECTION

HELICOPTERS AFFECTED: All 214B/B-1 helicopters S/N 28001 and subsequent and all spare tail rotor blades, P/N 214-015-750-005, -109, and -113.

COMPLIANCE: Within 10 flight hours after receipt of this bulletin for installed blades, prior to installation for spare blades, and then at each 50 flight hours thereafter until the blade is retired from service.

DESCRIPTION:

During ground run-up, a 214B tail rotor blade lost a portion of its tip closure. Investigation by BHT determined that this resulted, in part, from voids in the tip closure to skin bond line which occurred during manufacture.

This Alert Service Bulletin establishes a recurring 50-hour Special Inspection of the tip closure area on all existing 214B tail rotor blades. P/N 214-015-750-113 Blades manufactured after a specific serial number, as noted in the Accomplishment Instructions, do not require the recurring special inspection.

APPROVAL:

The engineering design aspects of this bulletin are FAA/DER approved.

MANPOWER:

Approximately 1.0 man-hour is required to complete this bulletin per helicopter. Man-hours are based on hands-on time and may vary with personnel and facilities available.

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MATERIAL:

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>
MILC87936TYI 5 GAL	Cleaning Compound	AR	C-318
CCCC440TY2CL2	Cheese Cloth	AR	C-486

SPECIAL TOOLS:

None required

WEIGHT AND BALANCE:

Not affected

ELECTRICAL LOAD DATA:

Not affected

REFERENCES:

OSN 214-02-11, dated 12/16/02, "P/N 214-015-750 Tail Rotor Blade Tip Closure".
BHT-214B-IPB Illustrated Parts Breakdown, Chapter 64
BHT-214B-MM-1 Maintenance Manual, Chapter 65

PUBLICATIONS AFFECTED:

BHT-214B-MM-1 Maintenance Manual, Chapter 5 and Chapter 65

ACCOMPLISHMENT INSTRUCTIONS:

1. Blades with serial number A-3033 and subsequent do not require the 50-hour recurring special inspection as defined by paragraph 3 below.

2. Blades identified with serial number A-3032 and prior, or any serial number with prefix of ATR or A3, must be inspected as described in paragraph 3 below according to the following schedule:
 - a. Installed blades - within 10 flight hours after receipt of this bulletin and at each 50 flight hours thereafter until the blade is retired from service.
 - b. Spare blades - prior to installation and then at each 50 flight hours thereafter until the blade is retired from service.
3. Refer to Figure 1. Using suitable material clean the tip closure and the skin area at the tip of each blade in the area to be inspected.
 - a. Visually inspect for cracks or voids in the tip closure to skin and in the tip closure to tip block bond lines. Cracks or visible edge voids are cause for removal of the blade.
 - b. Tap inspect for voids between the upper and lower skins and the tip closure along the length and width of the closure:
 - 1) Tap using a large coin (20 mm diameter minimum) with a tapping frequency of 3-6 taps/second, making sure that the entire area shown in Figure 1 is inspected.
 - 2) Areas that are well bonded will distribute the tapping sound to the entire structure. Any voided areas will isolate the tapping sound locally to the void area – the sound will not seem as loud.
 - 3) Map any void areas to determine size.
 - c. Voids between the skin and tip closure which are 0.38 inch spanwise width by 3.0 inch chordwise length, and smaller, are acceptable as long as they are not within 0.12 inch of the skin edge. Voids larger than those noted or within 0.12 inch of the skin edge are cause for removal of the blade. Voids within one inch of each other shall be considered as one void.
4. Contact BHT Product Support Engineering at facsimile 817-280-2635 or email psemil214@bellhelicopter.textron.com for disposition of blades removed from service as noted above.

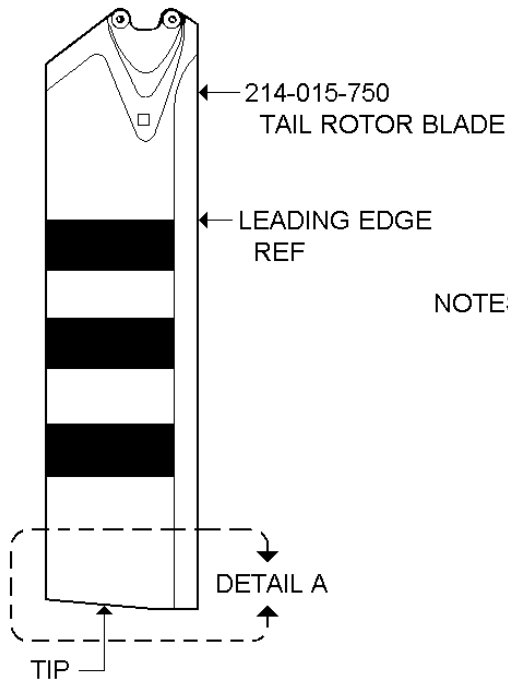

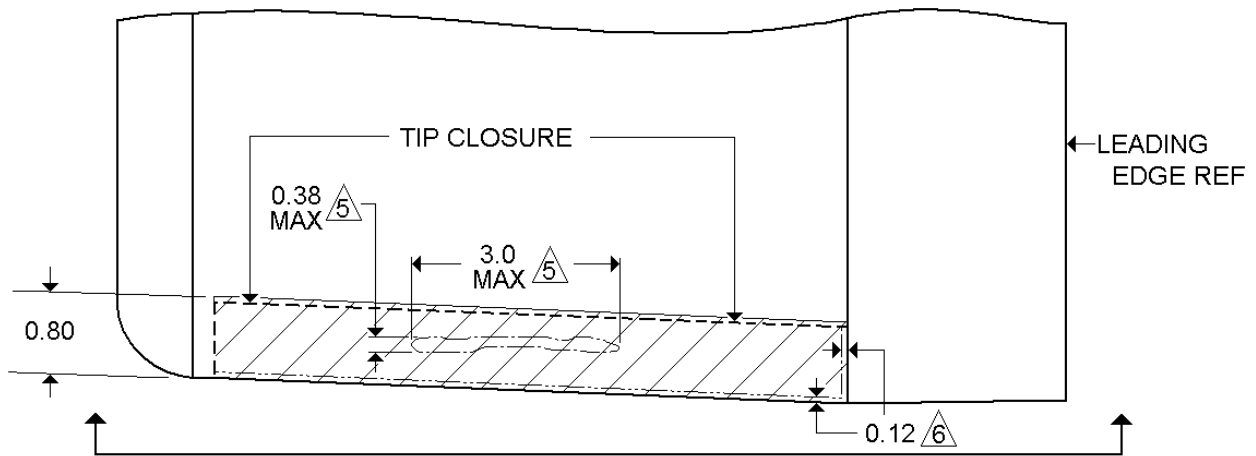


FIGURE 1

- NOTES: 1. FIGURE NOT TO SCALE.
 2. ALL DIMENSIONS IN INCHES.
 3. INSPECT FOR CRACKS AND VOIDS AT BOND LINES.
 4.  TAP INSPECTION AREA UPPER AND LOWER SKIN.
 5. MAXIMUM ALLOWABLE VOID DIMENSIONS. VOIDS WITHIN 1.0 INCH OF EACH OTHER SHALL BE CONSIDERED AS ONE VOID.
 6. VOIDS MAY NOT BE WITHIN 0.12 INCH OF SKIN EDGE.



DETAIL A
 VIEW LOOKING AT UPPER SKIN
 (LOWER SKIN OPPOSITE)

