

ALERT SERVICE BULLETIN



A Textron Company

NO. 210-08-03

DATE Dec 22, 2008

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DATE Oct 18, 2018

REV E

MODEL AFFECTED: 210

SUBJECT: MAIN ROTOR BLADE P/N 210-015-001-001,
INSPECTION OF.

HELICOPTERS AFFECTED: All Model 210 helicopters

COMPLIANCE: Within the next 25 hours after the date of issuance as indicated on this bulletin and every 25 hours thereafter.

DESCRIPTION:

The initial release of this Alert Service Bulletin introduced a recurring 100 hour main rotor blade inspection for debonding of doublers and cracks in the root end area. The bulletin was released following the report of a main rotor blade found cracked through Blade Station 36.0. The cracked main rotor blade P/N 212-015-501-115 had approximately 1000 hours total time in service. The main rotor blade contained a fatigue fractured grip plate, fatigue fractured doublers and a fatigue cracked spar on the bottom of the blade as a result of inadequate bond between the doublers and grip plate.

The Revision "A" of this bulletin was released for an editorial change in the "DESCRIPTION" paragraph.

The Revision "B" was released to change the inspection procedure and the interval was reduced from a 100 to 25 hours. Some blade part numbers were also added in the "SUBJECT" section. These changes were required after two more blades with similar conditions were found.

The Revision "C" is released to change the inspection procedure. The investigation conducted on another main rotor blade found a crack through the blade retention bolt hole. The change in this inspection procedure now mandates a visual inspection with a 10X-power magnifying glass for possible presence of crack emanating from the blade bolt bushing bore. The inspection interval of 25 flight hours remains unchanged.

The Revision "D" removed the statement "If no cracks are found, the affected blade must be immediately removed from service" in para. 6.

The Revision "E" added Revision "D" paragraph to the DESCRIPTION.

As the 210-015-001-001 Main Rotor Blade on the Model 210 is virtually the same as the reference 212 Main Rotor Blade, this bulletin also applies to the 210 Main Rotor Blade.

Applicability of this bulletin to any spare part shall be determined prior to its installation on an affected helicopter.

APPROVAL:

The engineering design aspects of this bulletin are FAA approved for FAA certified helicopters as listed in the applicable Type Certificate Data Sheet. For non FAA certified helicopters, the engineering design aspects of this bulletin are Bell Helicopter Engineering approved.

CONTACT INFO:

For any questions regarding this bulletin please contact:

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MANPOWER:

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

WARRANTY:

There is no warranty provided for this bulletin.

MATERIAL:

Required Material:

None required

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>
MILC87936TY1	Cleaning Compound	1 liter	C-318
WD-40	Preservative Oil	12 OZ	C-125
TT-1735 ISOPROPYL	Isopropyl Alcohol	As Required	C-385

*C-XXX numbers refer to the consumables list in the BHT-ALLP-SPM, Standard Practices Manual

SPECIAL TOOLS:

None required

WEIGHT AND BALANCE:

Not affected

ELECTRICAL LOAD DATA:

Not affected

REFERENCES:

BHT-210 CR&O Component Repair and Overhaul Manual

PUBLICATIONS AFFECTED:

BHT 210-MM Maintenance Manual

ACCOMPLISHMENT INSTRUCTIONS:

1. Wash upper and lower Main Rotor Blade surfaces with a solution of cleaning compound (C-318) and water. Rinse thoroughly and wipe dry.

-NOTE-

Accomplishment of this inspection does not require removal of the blades from the Main Rotor Hub.

2. Inspect the Main Rotor Blade upper and lower grip plates and doublers for their entire length and chord width. Inspect for signs of cracks, corrosion and edge voids, paying particular attention to the bond lines between doublers, grip plates and skin. Hair line cracks in the paint finish should be suspect for possible cracks / voids.
3. Wipe the area to be inspected with an alcohol-soaked cloth (-385) and wipe dry with a clean cloth

NOTE

Accomplish Step 4 of this ASB immediately after carrying out the above alcohol wipe. Any potential cracks in the bond lines between doublers or grip plates will be indicated by the presence of excess alcohol bleeding out of an edge void. This excess alcohol in the void will appear as a dark line between the bond lines of the doublers.

CAUTION

Pay particular attention not to remove any parent material from the skin / doublers during sanding operation.

4. Carry out a detailed visual inspection of the top and bottom inspection areas of the blade using a 3X-power magnifying glass and a strong light source. Refer to Figure 1. Check for evidence of a dark line between doublers, grip plates and skin with excess alcohol bleeding out of the possible edge voids. Any cracks in the finish must be investigated further by removing paint in the affected areas (sand with 180-220 grit paper in a spanwise direction) to determine if the grip plate / doublers are cracked or voided. Any crack in paint finish which follows grip plate / doubler outline may indicate a possible edge void.
5. Carry out a detailed visual inspection of the top and bottom inspection areas in the blade bolt area using a 10X-power magnifying glass and a strong light source. Refer to Figure 4. Inspect the leading edge and the trailing edge sides of the blade across the doublers. Refer to Figure 3. Any cracks in the finish must be investigated further by removing paint in affected areas (sand with 180-220) grit paper in a spanwise direction) to determine if the grip plate / doublers are cracked or voided.
6. If cracks in grip plate / doublers are found, the affected blade must be immediately removed from service. If no cracks are detected, continue with Step 7

CAUTION

Pay particular attention not to remove any parent material from the skin / doublers during sanding operation

7. If edge voids between grip plate / doublers / skin are found, determine the depth and length by using a 0.0015 in. feeler gage. If edge voids are suspected near the outboard tip of grip plate doublers, carry out tap test of the affected area. Refer to BHT-210-CR&O, 62-8 thru 62-10 for void repair limits and inspection/repair instructions. If no voids are detected, continue with Step 8
8. Refinish the sanded area as per BHT-210-CR&O, Chapter 62.
9. Following the inspection, apply a light coat of preservative oil (C-125) to all surfaces of blade.
10. Annotate records to indicate finding and compliance with this bulletin.
11. Make an entry in the helicopter logbook and historical service records indicating findings and compliance with this Alert Service Bulletin.



Figure 1. Area to be inspected with 3X-power magnifying glass (upper and lower surfaces)



Figure 2
Crack Indications

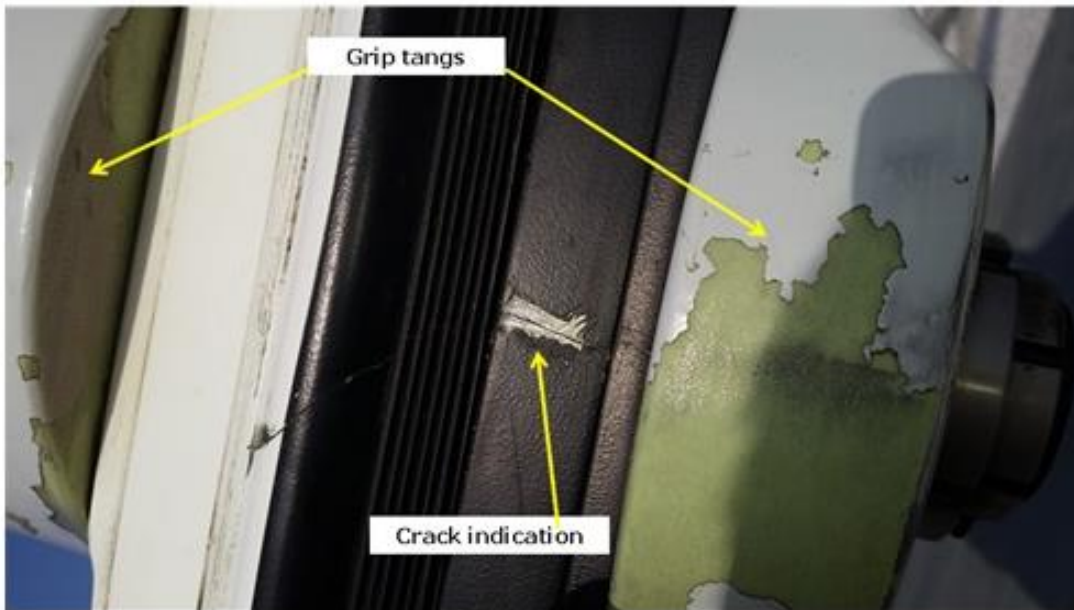


Figure 3 - Crack Indication



Figure 4 - Area to be Inspected with a 10X Power Magnifying Glass (Upper and Lower Surfaces)

Note: It is not required to remove the blade for inspection. The areas under the grip tangs will not be visible.