



A Textron Company

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ALERT SERVICE BULLETIN

UH-1H-11-07

31 May 2011

**MODEL AFFECTED:** UH-1H

**SUBJECT:** MAIN ROTOR HUB INBOARD STRAP FITTING 204-012-102-005/-009, ONE TIME MAGNETIC PARTICLE INSPECTION OF.

**HELICOPTERS AFFECTED:** All Model UH-1H helicopters.

**COMPLIANCE:** All fittings with less than 400 hours TTIS are to be inspected within 100 flight hours, not to exceed 425 TT, or November 26, 2011, whichever occurs first.

All fittings with more than 400 hours TTIS are to be inspected within 25 hours, or November 26, 2011 whichever occurs first.

All 204-012-102-005 and -009 fittings s/n A-FS-7500 and subsequent, or s/n A-7500 and subsequent, will have the intent of this ASB accomplished prior to delivery.

## DESCRIPTION

Bell Helicopter has determined that main rotor hub inboard strap fittings may fracture as a result of a non-conformance. The possibility exists that cracks occurred during the quenching operation which were not detected during manufacturing inspections. Additionally, some 204-012-102-005 fittings were shot-peened and the resultant material rollover at the edges of the parts may not have been properly removed during manufacture. This raised material may lead to the formation of fatigue cracks.

Bell Helicopter mandates a one-time magnetic particle inspection of all main rotor hub inboard strap fittings in accordance with the appropriate military maintenance manual requirements.

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

**APPROVAL:**

The engineering design aspects of this bulletin are Bell Helicopter Engineering approved.

**CONTACT INFO:**

For any questions regarding this bulletin, please contact:

Bell Helicopter Military Technical Support - Medium Military Helicopters  
817-280-3548 / mts-medium@bellhelicopter.textron.com

**MANPOWER:**

Approximately 40 man-hours are required to complete this bulletin. Man-hours are based on hands-on time, and may vary with personnel and facilities available.

**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>Qty</u>
204-012-102-005/-009	Inboard strap fitting	AR
AS3209-237	Packing	2
AS3209-240	Packing	1

**Consumable Material:**

The following material may be required to accomplish this bulletin, but may not require ordering, depending on the operator's consumable material stock levels.

<u>Part Number</u>	<u>Nomenclature</u>	<u>Quantity</u>	<u>Reference</u>
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As required by appropriate military manual

**SPECIAL TOOLS:**

None required.

**WEIGHT AND BALANCE:**

None required

## **ELECTRICAL LOAD DATA:**

Not affected.

## **REFERENCES:**

TM 55-1520-210-23P Illustrated Parts Breakdown  
TM 55-1520-210-23 Maintenance Manual  
DMWR 55-1560-196 Depot Maintenance Work Requirement

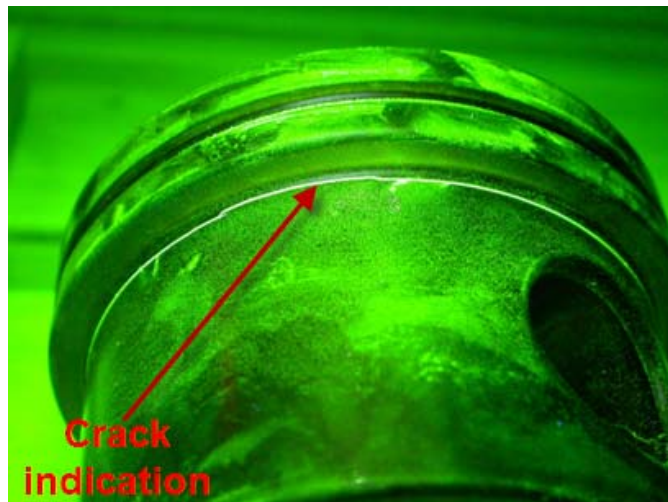
## **PUBLICATIONS AFFECTED:**

None affected.

## **ACCOMPLISHMENT INSTRUCTIONS:**

1. Make helicopter safe for maintenance.
2. Remove main rotor hub and blade assembly in accordance with applicable maintenance manual.
3. Disassemble main rotor hub assembly and remove main rotor hub strap inboard fittings, part number 204-012-102-005/-009.
4. Perform magnetic particle inspection on 204-012-102-005 and -009 inboard strap fittings IAW applicable maintenance manual. Refer to figure 1 for typical quench crack and location found during magnetic particle inspection. Additionally, carefully inspect all edges of the 204-012-102-005 fittings for cracks:
  - a. If cracks are found on either the -005 or -009 fittings, the fitting is unserviceable and must be replaced, proceed to step 7.
  - b. If no cracks are found on the -005 fitting, proceed to step 5 for an additional inspection. If no cracks are found on the -009 fitting, proceed to step 6.
5. If no cracks are found on the 204-012-102-005 fittings:
  - a. Visually inspect all edges for raised material (shot peen rollover). If raised material is found, remove by hand using an India stone. Maximum material removal is 0.010 inch x 40 to 50 degrees. If raised material cannot be removed within specified limits, fitting is unserviceable and must be replaced, go to step 7. Otherwise proceed to 5.b.
  - b. Perform magnetic particle inspection on reworked areas of 204-012-102-005 fitting. If cracks are found, fitting is unserviceable and must be replaced; go to step 7. Otherwise proceed to 5.c.

- c. Apply brush cadmium plating to reworked areas.
6. If no cracks are found on either fitting, and, if the 204-012-102-005 fitting has no raised edge material, or can be reworked within limits of step 5, fittings may remain in service but must be re-identified using a vibrating stylus with FM at the end of the part number. Touch up reworked area with brush cadmium plating. Historical service records are to be re-identified with FM at the end of the part number. An entry must be made in helicopter records stating that this ASB has been accomplished.
  7. If cracks are found on installed fittings or stock spares, or the 204-012-102-005 fitting cannot be reworked within limits of step 5, return affected parts to Bell Helicopter. Refer to the Information Letter GEN-04-98 REV C. Report any discrepancy to Bell Helicopter Military Technical Support at [mts-medium@bellhelicopter.textron.com](mailto:mts-medium@bellhelicopter.textron.com).
  8. Re-assemble main rotor hub and blade assembly in accordance with applicable maintenance manual.
  9. Re-install main rotor hub and blade assembly on aircraft in accordance with applicable maintenance manual.
  10. Make an entry in the helicopter logbook indicating compliance with this bulletin and findings.



**Typical crack indication and location.**

**FIGURE 1**