

**ALERT SERVICE BULLETIN**

**214-18-77**

30 January 2018

**MODEL AFFECTED:** 214B/B-1

**SUBJECT:** MAIN DRIVESHAFT OUTER COUPLING 214-040-659-005, INSPECTION OF.

**HELICOPTERS AFFECTED:** Serial numbers 28001 THROUGH 28070.

**COMPLIANCE:**

**Part I:** Within the next 25 flight hours or 30 days, whichever occurs first after the release date of this bulletin.

**Part II:** Within the next 100 flight hours or 60 days, whichever occurs first after the completion of Part I, or as instructed in the accomplishment instructions.

**DESCRIPTION:**

Bell Helicopter has found that some main driveshaft outer couplings 214-040-659-005 may have a manufacturing defect. The defect, which was found to be cracks induced during manufacturing of a particular lot of parts, is in the root of the splines and can be detected by magnetic particle inspection (MPI) as shown in Figure 1. Six outer couplings are in the affected manufacturing lot, see Table 1 in the Accomplishment Instructions section for the list of serial numbers.

This ASB mandates an initial inspection to determine if the coupling installed is one of the serial numbers affected and if so, an additional MPI may be required in accordance with this ASB. 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:

Bell Helicopter Product Support Engineering - Medium Military Helicopters  
Tel: 817-280-8377 / mts-medium@bh.com

**MANPOWER:**

Approximately 1.0 man-hour is required to complete Part I of this bulletin. This estimate is based on hands-on time and may vary with personnel and facilities available.

Approximately 8.0 man-hours are required to complete Part II of this bulletin (NDT not included). This estimate is based on hands-on time and may vary with personnel and facilities available.

**WARRANTY:**

There is no warranty credit applicable for parts or labor associated with this bulletin.

**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 (Note)</u>
214-040-659-005	Outer Coupling	AR (1)
AS3209-162	Packing	AR (1)

**NOTE 1:** Only required based on findings from Part II, refer to the Accomplishment Instructions.

**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>Qty (Note)</u>	<u>Reference *</u>
204-040-755-005	Lubricant	AR (1)	C-015

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

**NOTE 1:** Only required if Part II is carried out, refer to the Accomplishment Instructions.

**SPECIAL TOOLS:**

None required.

**WEIGHT AND BALANCE:**

Not affected.

**ELECTRICAL LOAD DATA:**

Not affected.

**REFERENCES:**

BHT-214-MM Maintenance Manual  
BHT-214-CR&O Component Repair and Overhaul Manual  
BHT-ALL-SPM, Standard Practice Manual

**PUBLICATIONS AFFECTED:**

None affected.

**ACCOMPLISHMENT INSTRUCTIONS:**

**Part I:**

1. Prepare the helicopter for maintenance and gain access to the main driveshaft assembly. (BHT-214-MM)

-NOTE-

The serial number is marked by Dot Peen method on the outer diameter of the coupling flange. (Figure 2)

2. Visually confirm the forward and aft 214-040-659-005 outer couplings' serial number.
  - a. If the coupling serial number is not listed in Table 1 or there are records showing that a MPI has previously been carried out with no crack indications, then no further action is required. Accomplish step 3.
  - b. If the coupling is affected and there are no records showing that a MPI has previously been carried out, then accomplish Part II within the specified compliance time.

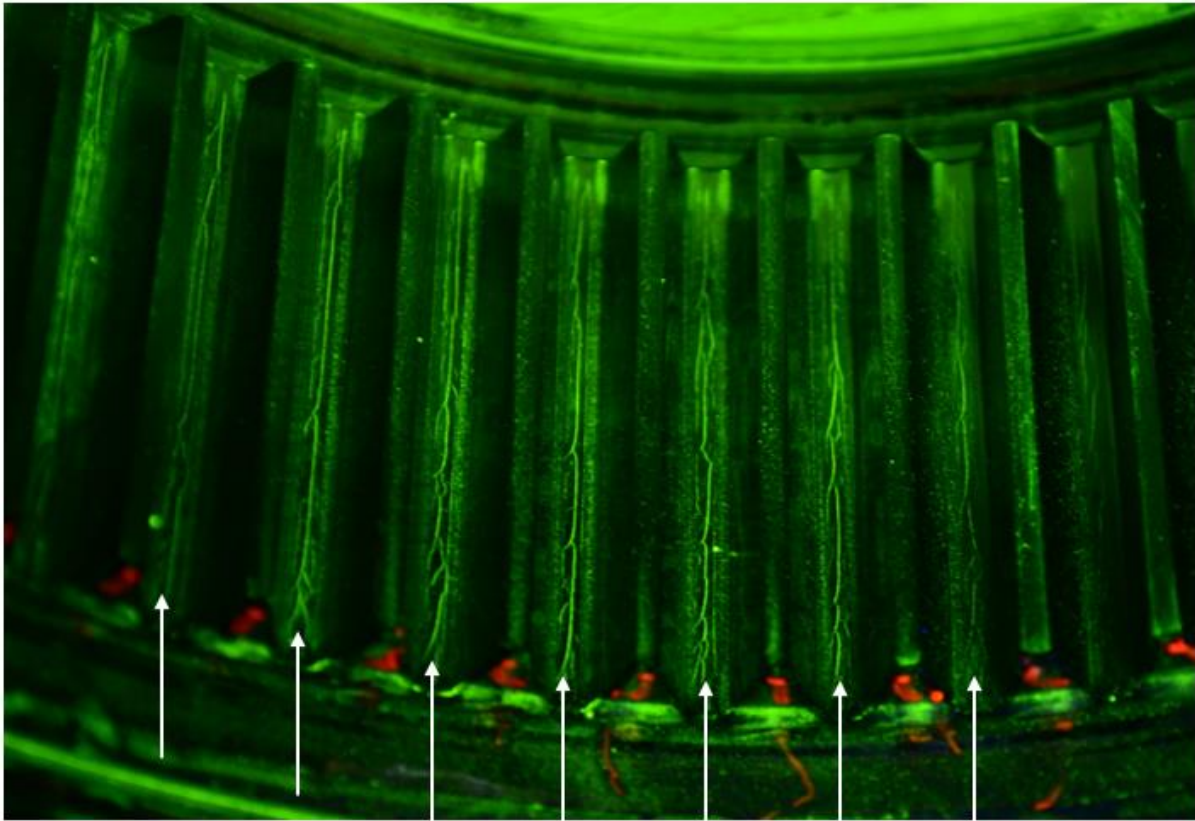
A-2569	A-2570
A-2572	A-2574
A-2576	A-2578

Table 1  
S/N of Couplings Affected.

3. Make an entry in the helicopter logbook and historical service records indicating compliance with Part I of this Alert Service Bulletin and if further action is required based on the findings from Step 2.
4. If one of the discrepant coupling serial numbers are found installed, contact MTS-Medium@bh.com.

**Part II:**

1. Prepare the helicopter for maintenance.
2. Remove the main driveshaft. (BHT-214-MM)
3. Disassemble the driveshaft to the extent necessary to remove the affected outer couplings 214-040-659-005. (BHT-214-CR&O)
4. Inspect the coupling for cracks by MPI, no cracks are acceptable. Pay particular attention to the coupling spline root area. (BHT-214-CR&O and BHT-ALL-SPM)
  - a. If cracks are found replace the affected 214-040-659-005 outer coupling. If no cracks are found, return the part to service.
5. Re-assemble and install the main driveshaft. (BHT-214-CR&O and BHT-214-MM)
6. Make an entry in the helicopter logbook and historical service records indicating compliance with Part II of this Alert Service Bulletin.



Crack indications in root of splines

Figure 1. Crack Indications

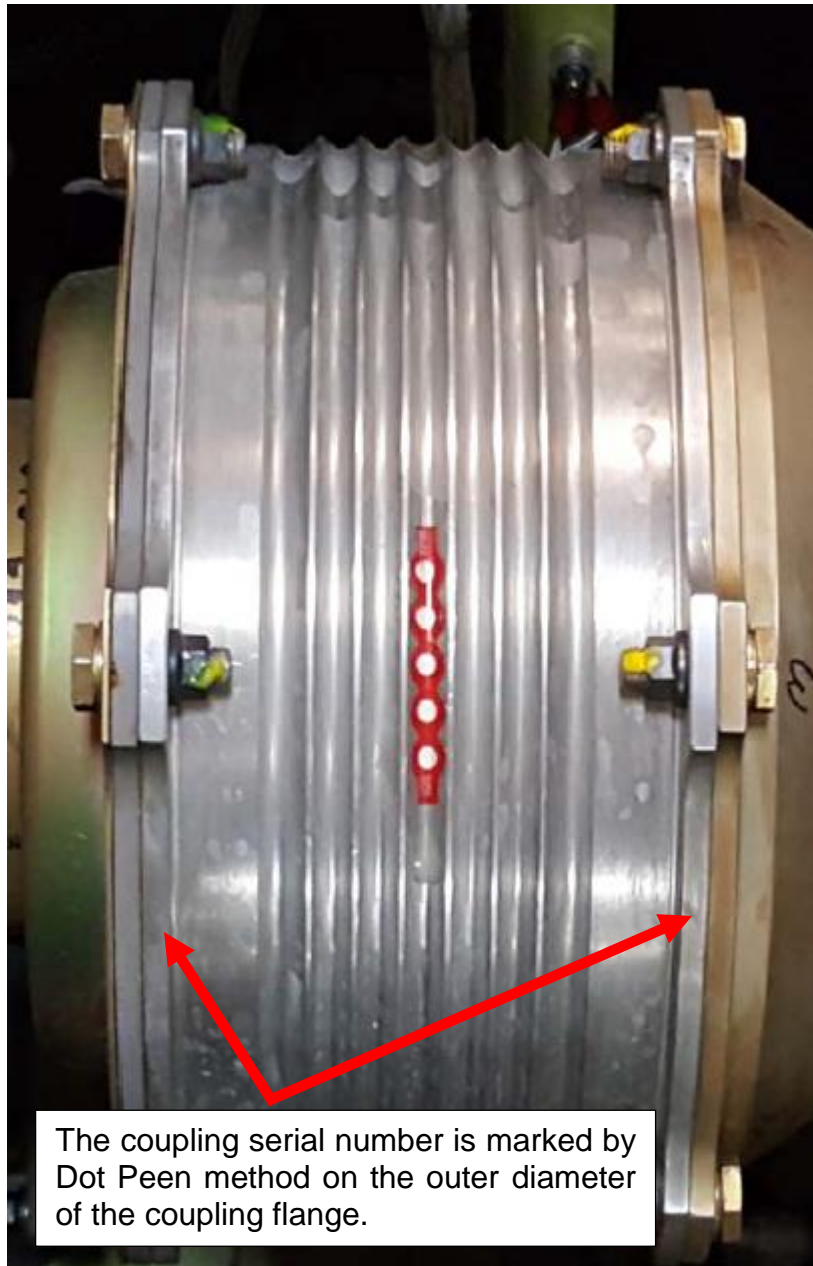


Figure 2.  
Serial Number marking location