MODEL AFFECTED: 206B3

SUBJECT: CREW SEAT CLIP RETAINERS, INSTALLATION OF

HELICOPTERS AFFECTED: Serial number 4598 through 4690.

COMPLIANCE: No later than 1 June, 2012

DESCRIPTION:

Bell Helicopter has received field reports indicating that aircraft equipped with the improved crew seat retaining clips introduced in production do not restrict the bottom seat cushion assembly from displacing itself laterally. To eliminate the possibility of in-flight crew seat movement, Bell Helicopter is introducing a two-piece retaining system that adapts to the pre-existing seat clip design. Applicability of this bulletin to any spare part shall be determined prior to its installation on an affected aircraft.

APPROVAL:

The engineering design aspects of this Bulletin are Transport Canada Civil Aviation (TCCA) approved.

CONTACT INFO:

For any questions regarding this Bulletin, please contact:

Bell Helicopter Product Support Engineering - Light Helicopters
Tel: 450-437-2862 / 1-800-363-8023 / pselight@bellhelicopter.textron.com
MANPOWER:

Approximately 8.0 man-hours are required to complete the installation. Man-hours are based on hands-on time, and may vary with personnel and facilities available.

Taking into consideration adhesive cure times at ambient temperatures, approximately 48 hours are required to complete this Bulletin. Hours may be reduced if adhesive cure times are accelerated per BHT-ALL-SPM.

WARRANTY:

Owners / Operators of Bell Helicopters who comply with the instructions in this Bulletin will be eligible to receive a credit for the replacement Kit outlined in the material section of this Bulletin.

To receive this credit:

- Comply with the instructions contained in this Bulletin no later than the applicable date in the “COMPLIANCE” section of this ASB.
- Purchase replacement parts as required in the materials section of this Bulletin from a Bell approved source.
- Submit a Maintenance Malfunction Information Report (MMIR) to the Bell Warranty Department.

Customers who fail to comply with the instructions in this Bulletin before 1 June, 2012 are not eligible for the special warranty credit listed above. There is no warranty coverage for 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. Order kit CA-206-11-128 consisting of the following parts. The kit excludes Consumable Materials except for quantity one of 299-947-066, TY1 4OZ of which will be included.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Nomenclature</th>
<th>Quantity</th>
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<tr>
<td>407-030-054-101</td>
<td>Clip restraint</td>
<td>4</td>
</tr>
<tr>
<td>407-030-055-101</td>
<td>Base restraint</td>
<td>4</td>
</tr>
<tr>
<td>120-225-3R12</td>
<td>Screw (1)</td>
<td>4</td>
</tr>
<tr>
<td>MS24693-S274</td>
<td>Screw (1)</td>
<td>4</td>
</tr>
</tbody>
</table>

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.
<table>
<thead>
<tr>
<th>Part Number</th>
<th>Nomenclature</th>
<th>Quantity</th>
<th>Reference</th>
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<tbody>
<tr>
<td>400 Grit</td>
<td>Abrasive paper</td>
<td>AR</td>
<td>Commercial</td>
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<tr>
<td>180 Grit</td>
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<td>Commercial</td>
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<tr>
<td>120 Grit</td>
<td>Abrasive paper</td>
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<td>Commercial</td>
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<tr>
<td>299-947-066, TY1 4OZ</td>
<td>Adhesive (3)</td>
<td>4 oz</td>
<td>C-301</td>
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<tr>
<td>299-947-107 TYPE-1</td>
<td>Adhesive (2)</td>
<td>5 oz</td>
<td>C-324</td>
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<tr>
<td>Acetone</td>
<td>Solvent</td>
<td>AR</td>
<td>C-316</td>
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<tr>
<td>MIL-PRF-23377, TY I</td>
<td>Primer</td>
<td>2 oz</td>
<td>C-204</td>
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</table>

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

(1) Replacement mounting screws required. These screws are longer to fit with the addition of a base restraint in step 2 and for installation of the crew seat fitting in step 6.

(2) Adhesive may or may not be required dependent if seat cover material requires debonding to fit clip restraint onto seat frame tubing.

(3) Quantity one included in the parts order kit.

**SPECIAL TOOLS:**

None required.

**WEIGHT AND BALANCE:**

Not affected.

**ELECTRICAL LOAD DATA:**

Not affected.

**REFERENCES:**

BHT-206A/B-MM Maintenance Manual
BHT-ALL-SPM Standard Practice Manual

**PUBLICATIONS AFFECTED:**

BHT-206A/B-SERIES-IPB Illustrated Parts Breakdown
BHT-206A/B-MM Maintenance Manual

**ACCOMPLISHMENT INSTRUCTIONS:**

1. Prepare helicopter for maintenance.
   
   a. Prepare a clean work surface for the modification of the crew seat assemblies.
b. Remove crew seats (4, Figure 1, Sheet 2) assemblies from the helicopter.

c. For easier seat manipulation, the seat back cushion may be separated from the seat bottom cushion as required. Refer to BHT-206A/B-MM chapter 25.

2. Install the seat clip base restraint between base plate and crew seat fitting as follows:

a. Remove crew seat fitting (2) assembly from the crew seat panel (1) and position on the work surface. Remove the retaining hardware (8, 9 and 10) from seat fitting (2) and base plate (13).

b. Prepare mating surfaces of crew seat fitting (2) and base restraint (12) as shown in Figure 2 Sheet 1.

(1) Use 400-grit abrasive paper to remove polyamide primer glossy finish on crew seat fitting (2) bottom surface area to be bonded.

(2) Radially and axially abrade in both directions with 120-grit abrasive paper the base restraint (12) interior surface area to be bonded until gloss is removed to promote maximum adherence.

(3) Thoroughly remove sanding dust from the faying surfaces by wiping clean with acetone (C-316).

-NOTE-

Pot life of adhesive (C-301) is approximately 30 minutes

c. Heat the base restraint (12) faying surface to approximately 150 °F (66 °C) for 4 to 5 minutes using hair dryer. Nylon has moisture absorbing properties; properly heating the material will eliminate any possible trace of condensation that may prevent proper adhesion.

d. Apply adhesive (C-301) [approximately 0.010 inch (0.25mm)] thick to faying surfaces of crew seat fitting (2) and interior surface of base restraint (12) enough to ensure a positive squeeze out. Refer to Figure 2, Sheet 1.

e. Match fit into position base restraint (12) onto the crew seat fitting (2). Confirm positive contact between faying surfaces.

f. Place clamps as necessary (see Figure 2, Sheet 2) to maintain a constant contact between all faying surfaces. Remove excess adhesive squeeze out as shown.
g. Accomplish the same steps on the remaining three crew seat fittings (2). Allow to
dry for 24 hours at room temperature or refer to BHT-ALL-SPM chapter 13 for
accelerated cure times.

h. Once the 4 individual assemblies have cured, position modified crew seat fitting
(2) onto the base plate (13). Insert the p/n MS24693-S274 replacement screw
(8), washers (9) and nut (10). Match fit slotted ends on the base plate (13) with
crew seat fitting slotted ends (2). Confirm that the crew seat fitting (2) points out
perpendicularly from base plate (13).

i. Touch up all bare metal surfaces as required. Refer to BHT-ALL-SPM chapter 3
and 4.

3. Remove the two bonded Nylon tubes located on the forward seat frame as follows:

a. Unbound as necessary, the seat covering to temporarily gain access to the seat
cushion forward frame to gain full access to the bonded Nylon tubes (14).
Instructions to bond covering back into position are provided in the final steps.

CAUTION

During the removal steps of the Nylon tubes, be careful not
to grind into the seat frame or the seat cover.

b. Use a spatula to work the Nylon tubes free and discard. Refer to Figure 3. If
required, utilize a sanding wheel as shown to cut a groove in the Nylon tubing.
Use the spatula to work the two Nylon tube halves free. Remove adhesive from
the tube.

4. Install the clip restraint onto bottom seat cushion seat frame as follows:

a. Adjust the plunger (6) with the use of a locally fabricated tube with an
approximate diameter of 0.880” or comparable to the diameter of a forward frame
nylon-covered seat tube. Adjust seat fitting plunger (6) tension, plunger
adjustment screw (7) until fabricated tool surface contacts crew seat fitting
plunger face (2) and plunger spring is fully compressed. Unscrew plunger
assembly ½ turn. Refer to Figure 4 Sheet 1.

-NOTE-

Protect seat fabric from unwanted adhesive or surrounding
debris during the rework. Also, before you proceed the crew
seat fitting assembly reworked in Step 2 must be available
and ready to work with per step 4,f.
CAUTION

The long term durability of the bond line between associated parts in the next step is directly related to adequate and acceptable surface preparation. Also, it is imperative to properly locate the clips on the seat tubing per Figure 1 Sheet 2 Detail D. Failure to do so will off-center the seat bottom resulting in an inappropriate fit in the aircraft. If in doubt, confirm measurements by temporarily installing the seat in the aircraft to see if any fouling with the controls or door is apparent prior to bonding.

b. Prepare seat frame (5) surface area where the clip restraints (11) are to be locally bonded (Detail D, Figure 1, Sheet 2). The tube faying portion to be bonded must be free of paint and primer.

(1) Use 180-grit abrasive paper or finer to remove primer on tube faying surface, careful not to remove frame tube material. Refer to Figure 4, Sheet 1.

(2) Radially and axially abrade in both directions with 120-grit abrasive paper the clip restraint (11) interior surface area to be bonded until gloss is removed to promote maximum adherence.

(3) Thoroughly remove sanding dust from the faying surfaces by wiping clean with acetone (C-316).

-NOTE-

Pot life of adhesive (C-301) is approximately 30 minutes.

c. Heat the clip restraint (11) faying surface to approximately 150 °F (66 °C) for 4 to 5 minutes using hair dryer. Nylon has moisture absorbing properties; properly heating the material will eliminate any possible trace of condensation that could prevent proper adhesion.

d. Apply adhesive (C-301) [approximately 0.010 inch (0.25mm)] thick to faying surfaces of the clip restraint (11) and seat frame (5), enough to ensure a positive squeeze out. Refer to Figure 4, Sheet 2.

e. Locate and push the clip restraint (11) on seat frame (5) in a rolling motion to ease the insertion. Ensure positive adhesive squeeze out forming a continuous bead around the entire periphery of the clip restraint. Remove excess adhesive squeeze-out as required only if interference is suspected. Refer to Figure 4, Sheet 2 and Sheet 3.
f. Immediately position the reworked seat clip base restraint from step 2 into the clip restraints (11). Center the two clips into position. Refer to Figure 4, Sheet 3.

g. Temporarily position 0.125 inch wooden sticks or equivalent to provide a flat surface in plane with base plate (13). Turn seat over on the working surface. Refer to Figure 4 Sheet 3 & 4. Apply a weight of [10-15 lbs (4.5-6.8 Kg)] on the forward portion of the seat cushion to ensure positive pressure while adhesive is curing.

h. Confirm that the clip restraints (11) are properly positioned in the base restraints (12). Confirm that the clip restraints (11) are properly centered on the seat frame (5) Refer to Figure 1, Detail D and Figure 4 Sheet 4.

i. Allow to dry for 24 hours at room temperature or refer to BHT-ALL-SPM chapter 13 for accelerated cure times.

j. Repeat steps a) through i) for the remaining crew seat.

k. Once the adhesive is cured, to disengage both assemblies from one another, flex forward the locking tab on the clip restraints (11) enough to separate the crew seat fitting (2) from the seat bottom cushion forward frame (5).

5. Bond seat covering back into position (if required) as follows:

a. Use a cheesecloth wet with acetone (C-316) to remove the cured adhesive from the seat fabric material without damaging the seat fabric material. As an alternate method, sand the fabric with a 120-grit abrasive paper and then wipe with a cloth dampened with acetone (C-316).

b. Use 120-grit abrasive paper to sand seat frame cover material to be bonded. Do not damage the cover material. Do not remove the cured adhesive, abrade the adhesive surface only. Wipe the bonding surfaces clean with a cloth dampened with acetone (C-316).

-NOTE-

Bond seat frame cover and seat bottom material at the original locations to obtain correct tautness.

c. Apply adhesive to surfaces to be bonded as follows:

(1) Stir adhesive (C-324) well before using. Apply a thin and uniform coat to each surface. Two coats are required on seat fabric surface. Allow about four minutes drying time between coats.

(2) When the adhesive is tacky, position surfaces to be bonded and then press firmly together with firm pressure.
(3) Apply a weight of [10-15 lbs (4.5-6.8 Kg)] on the bonded surfaces by using a bag and allow to cure for four hours at room temperature.

6. Assemble and install the crew seats as follows:

   a. Reattach seat back cushion to seat bottom cushion as required. Refer to BHT-206A/B-MM chapter 25.

   b. Install the crew seat fitting (2) on the crew seat panel (1) with replacement p/n 120-225-3R12 screws.

   c. Push down on the crew seat and snap into position; visually verify for the proper mating between both the base restraint (12) and clip restraints (11). It may help to slightly lift the back end of the bottom cushion a few inches to assist or ease the clipping of the seat frame with the base restraint locking nipple. Press firmly on the seat corners to confirm security. As necessary, adjust the plunger (6) per instructions noted in step 4 a) to ensure a final setting of ½ turn on the plunger (6) from clip restraints (11). This will ensure maximum plunger ball friction and pinch to hold the seat into position.

   d. Verify that the seats are properly positioned and do not interfere with the cockpit center controls nor when closing the doors. If the aircraft is equipped with dual controls, confirm that the copilot crew seat does not interfere with the co-pilot collective stick movement. If interference is noted, the clip restraints (11) may need to be repositioned on the seat frame (5).

   [CAUTION]

   Inform your flight and ground personnel that these clips have been installed and advise them that the clip restraint tabs need to be pulled fwd just enough to clear the base plate restraint nipple before pulling upwards to remove the crew seats.

7. Make an entry in helicopter historical service records indicating compliance with this Alert Service Bulletin.
FIGURE 1. Seat panel and clip assembly (Sheet 1)
FIGURE 1. Seat cushion and frame (Sheet 2)
FIGURE 2. Seat clip assembly modification (Sheet 1)
FIGURE 2. Seat clip assembly modification (Sheet 2)
FIGURE 3, Removal of the bonded Nylon tubes
FIGURE 4, Installation of the clip restraint (Sheet 1 of 4)
FIGURE 4, Installation of the clip restraint (Sheet 2 of 4)
FIGURE 4, Installation of the clip restraint (Sheet 3 of 4)
Position a sand bag [10-15 lbs (4.5-6.8 Kg)] or equivalent to apply a constant pressure

FIGURE 4, Installation of the clip restraint (Sheet 4 of 4)