



A Textron Company

ALERT SERVICE BULLETIN

206L-24-190

25 July 2024

- MODEL AFFECTED:** 206L, 206L-1, 206L-3 and 206L-4
- SUBJECT:** SWASHPLATE OUTER RING AND COLLECTIVE LEVER, CLEARANCE CHECK OF
- HELICOPTERS AFFECTED:** Serial numbers 45001 through 45153, 46601 through 46617, 45154 through 45790, 51001 through 51612, 52001 through 52496.
- COMPLIANCE:**
- PART I:** Within the next 100 flight hours or 180 days, whichever occurs first, after the release date of this bulletin.
- PART II:** After accomplishment of main rotor flight controls rigging.

DESCRIPTION:

Bell has received reports of swashplate drive collar set fracture due to contact between the swashplate outer ring and collective lever assembly. Incorrect rigging and lack of clearance check between the swashplate outer ring and the collective lever are the suspected root causes. **PART I** of this ASB mandates a one-time clearance check for proper clearance between the swashplate outer ring and the collective lever. **PART II** introduces a new requirement to ensure proper clearance is achieved between the swashplate outer ring and the collective lever after accomplishment of main rotor flight controls rigging. All applicable Maintenance Manuals (MM) will be revised to incorporate the new clearance check requirement.

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 Product Support Engineering
Tel: 1-450-437-2862 / 1-800-363-8023 / productsupport@bellflight.com

MANPOWER:

Approximately 2 man-hours are required to complete this bulletin. 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:

None required.

SPECIAL TOOLS:

Hydraulic Test Stand, specifications according to the applicable 206L-MM Maintenance Manual, Chapter 29 (Available commercially).

WEIGHT AND BALANCE:

Not affected.

ELECTRICAL LOAD DATA:

Not affected.

REFERENCES:

Applicable 206L-MM Maintenance Manual, Chapter 27, 29, 67 and 71.

PUBLICATIONS AFFECTED:

Applicable 206L-MM Maintenance Manual, Chapter 27 and 67.

ACCOMPLISHMENT INSTRUCTIONS:**PART I: Main rotor flight controls One-Time clearance check.**

1. Prepare the helicopter for maintenance.
2. Open forward fairing 206-063-801 (Applicable 206L-MM, Chapter 71).

3. Remove transmission fairing 206-063-802 (Applicable 206L-MM, Chapter 71).

WARNING

Make sure that there are no personnel and/or equipment on or near the flight controls. Operation of the flight controls can cause injury and/or damage to the equipment.

CAUTION

Make sure that all the parts from the collective control system and the cyclic control system are installed in their correct position and that all the support equipment used for the rigging are removed before accomplishing this procedure.

CAUTION

Clearance check must be performed with hydraulic boost applied to the system. Failure to do so will lead to erroneous measurements.

4. Inspect the swashplate outer ring and the collective lever for evidence of contact. If there is evidence of contact, contact Product Support Engineering for disposition.
5. Connect hydraulic test stand (Applicable 206L-MM, Chapter 29).
6. Position the collective control stick against the down stop. Tighten the friction knob to hold the collective control stick in position.
7. Position the cyclic control stick fully forward and centered laterally. Tighten the friction knob to hold the cyclic control stick in position.

CAUTION

When rotating the swashplate outer ring, make sure it does not contact the collective lever assembly. If contact is made, damage to the outer ring and collective lever can occur.

8. Slowly rotate the swashplate outer ring (2, Figure 1) until one of the pitch link attachment points is directly over the collective lever assembly (4).
9. Measure and record the clearance between the collective lever assembly (4) and the swashplate outer ring (2).

10. Repeat steps 8 and 9 for the second pitch link attachment point.

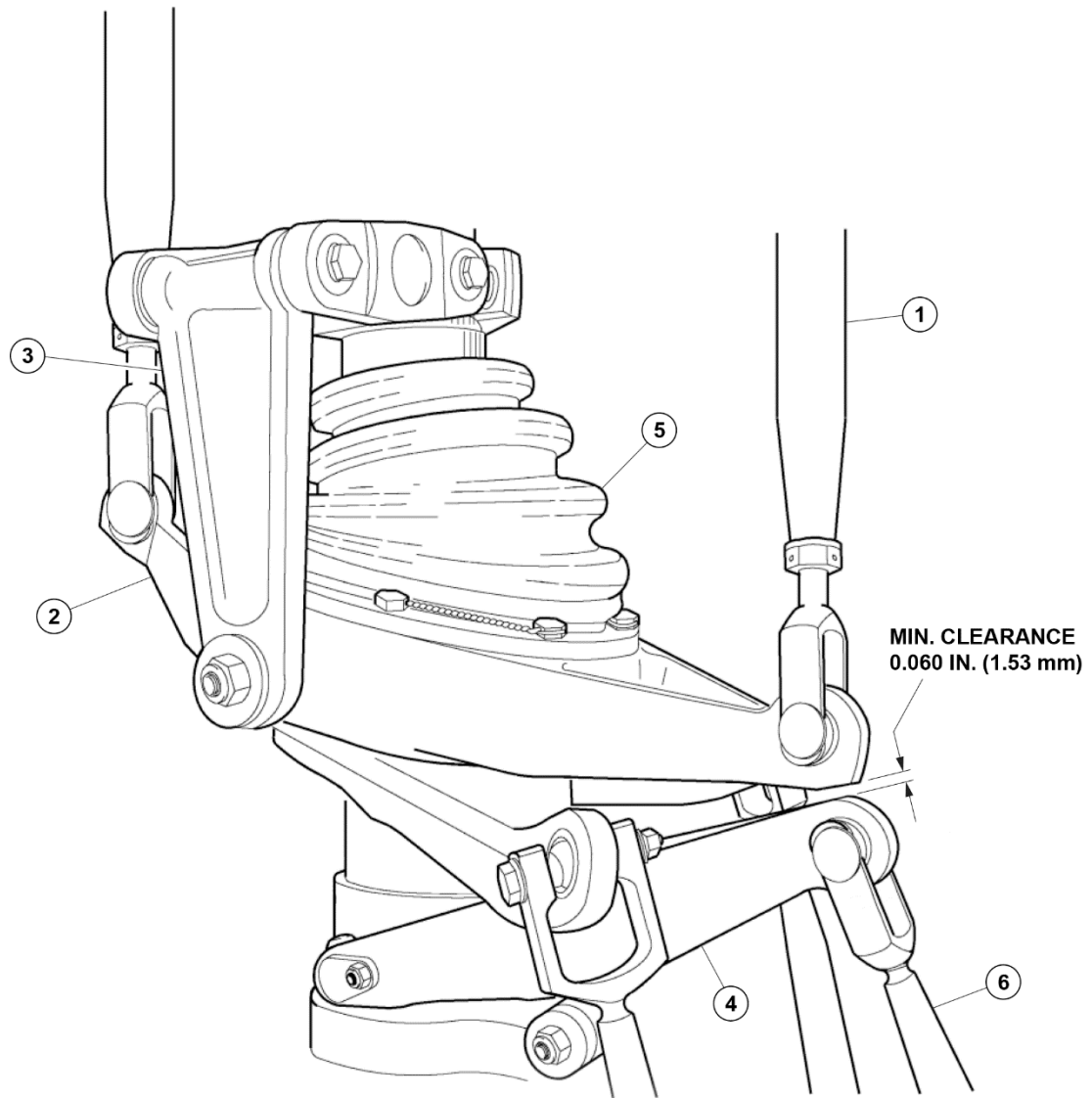
CAUTION

Aircrafts models 206L, 206L-1 and 206L-3 (S/N 51001 to 51307) who complied with Technical Bulletin 206L-91-153 MOD B or Service Instructions BHT-206-SI-2052 require different rigging dimensions than on the basic aircraft. Refer to OSN 206L-24-55 and Figure 2 for further details. Regardless of the aircraft rigging procedure and dimensions, the minimum clearance of 0.060 inch (1.53 mm) between the swashplate outer ring and collective lever applies.

11. If clearance is 0.060 inch (1.53mm) or more at both pitch link attachment points, go to step 13.
12. If clearance is less than 0.060 inch (1.53 mm) at one or both pitch link attachment points, rigging of the collective and cyclic flight controls (Applicable 206L-MM, Chapter 27 or 67) is required prior to next flight.
 - a. If minimum clearance of 0.060 inch (1.53mm) cannot be achieved at both pitch link attachment points after collective and cyclic controls rigging, it is acceptable to adjust the length of collective link 206-001-558 (6) to obtain the minimum clearance. Tolerance for rigging dimensions of the collective lever must be maintained (Applicable 206L-MM, Chapter 67 and Figure 2).
 - b. If minimum clearance of 0.060 inch (1.53mm) cannot be obtained at both pitch link attachment points without exceeding collective lever dimensions tolerances, contact Product Support Engineering.
13. Disconnect hydraulic test stand (Applicable 206L-MM, Chapter 29).
14. Install transmission fairing 206-063-802 (Applicable 206L-MM, Chapter 71)
15. Close forward fairing 206-063-801 (Applicable 206L-MM, Chapter 71)
16. Make an entry in the helicopter logbook and historical service records indicating findings and compliance with **PART I** of this Alert Service Bulletin.

PART II: Clearance check after main rotor flight controls rigging.

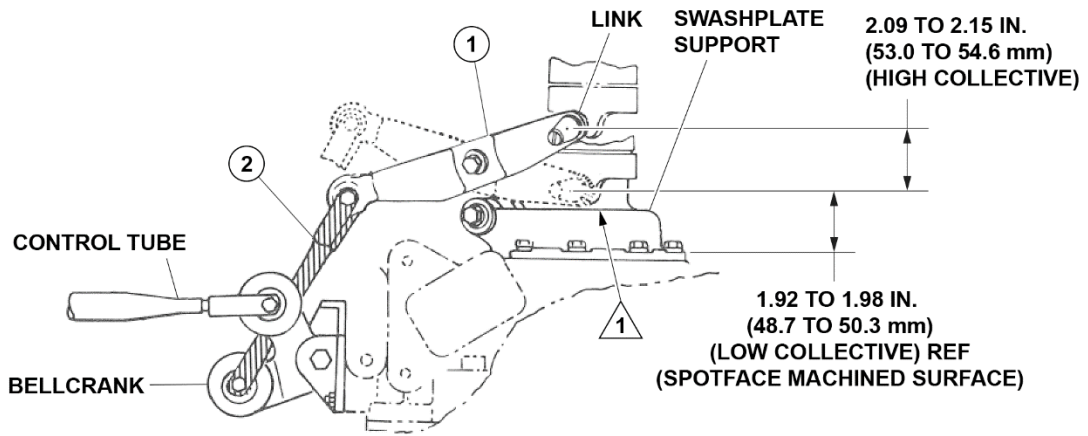
1. After main rotor flight controls rigging, accomplish steps 1 through 15 in accordance with **PART I** of this bulletin.
2. Make an entry in the helicopter logbook and historical service records indicating findings and compliance with **PART II** of this Alert Service Bulletin.



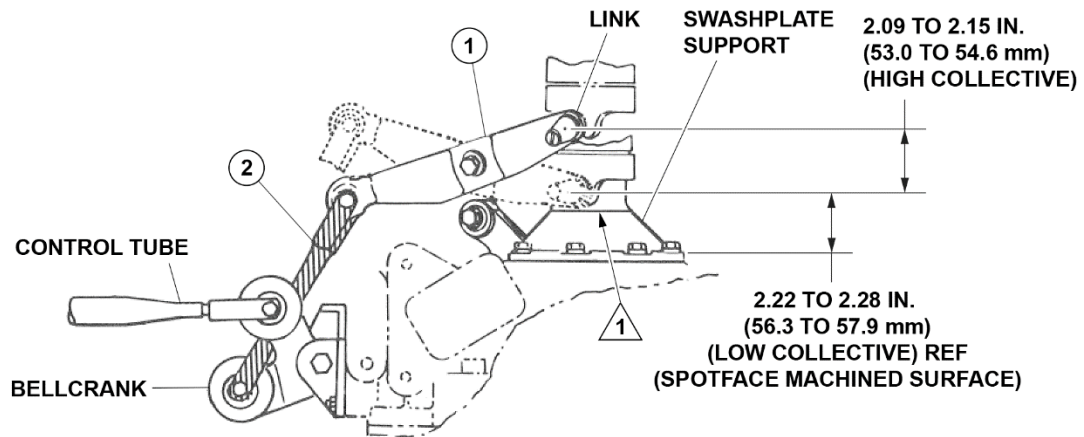
- 1. Pitch link
- 2. Swashplate outer ring
- 3. Idler link
- 4. Collective lever assembly
- 5. Boot
- 6. Collective link

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Figure 1 - Collective lever assembly - clearance check



EFFECTIVE
206L, 206L1, 206L3 (S/N 51001 THROUGH 51307)



EFFECTIVE
206L, 206L1, 206L3 (S/N 51001 THROUGH 51307) POST TB 206L-91-153 MOD B
206L1 AND 206L3+ IGW UPGRADE BHT-206-SI-2052
206L3 (S/N 51308 AND SUBSEQUENT) AND 206L4

- 1. Collective lever
- 2. Link

NOTE

1 With full down collective applied, ensure clearance exists between swashplate support and pivot sleeve after completion of collective and cyclic rigging.

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Figure 2 - Collective lever rigging dimensions