



A Textron Company

ALERT SERVICE BULLETIN

505-22-33

3 November 2022

MODEL AFFECTED: 505

SUBJECT: MAIN ROTOR FLIGHT CONTROL RIGGING CHECK, PERFORMANCE OF.

HELICOPTERS AFFECTED: Serial numbers 65011 through 65412, 65414 through 65416, 65419 through 65426, 65428, 65430, and 65431.

[Serial number 65413, 65417, 65418, 65427, 65429, and 65432 and subsequent will have the intent of this bulletin accomplished prior to delivery.]

COMPLIANCE: **PART I** - Within 10 flight hours or 30 days, whichever occurs first, following the release date of this bulletin.

PART II – Prior to next flight, if required by **PART I**.

DESCRIPTION:

Bell has become aware of a potential fouling condition with the main rotor flight controls. **PART I** of this bulletin provides instructions to perform a one-time rigging check of the collective control system to ensure sufficient minimum clearance is available. If the minimum clearances are not within tolerance, performing the flight control rigging of **PART II** will be required. **PART I** and **PART II** require the use of a Hydraulic Power Unit (HPU). **PART II** also requires special tooling to accomplish the procedures.

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 1.5 man-hours are required to complete **PART I** of this bulletin.
Approximately 4.0 man-hours are required to complete **PART II** of 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:

Required Material:

The following material is required for the accomplishment of this bulletin and may be obtained through your Bell Supply Center.

<u>Part Number</u>	<u>Nomenclature</u>	<u>Qty (Note)</u>
AS5174W0505	UNION	1 (1)
MS24665-151	COTTER PIN	3 (2)
MS24665-155	COTTER PIN	3 (2)

NOTES:

1. Used to connect Hydraulic Power Unit (HPU) to helicopter hydraulic system for accomplishment of **PART I** and **PART II**.
2. Required for accomplishment of **PART II**.

Consumable Material:

The following material is required to accomplish **PART II** of this bulletin, but may not require ordering, depending on the operator’s consumable material stock levels. This material may be obtained through your Bell Supply Center.

<u>Part Number</u>	<u>Nomenclature</u>	<u>Qty (Note)</u>	<u>Reference *</u>
2100-00349-00	Corrosive Preventative Compound	2.5 OZ (1)	C-101
2100-00350-00	Corrosive Preventative Compound	2.5 OZ (1)	C-104

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

NOTE 1: Quantity indicated is the format that the product is delivered in. Actual quantity required to accomplish the instructions in this bulletin may be less than what has been delivered.

SPECIAL TOOLS:

Required for accomplishment of **PART I:**

Hydraulic Power Unit (available commercially) (1 required)

- Specifications to be 600 PSI (4137 kPa) operating pressure, 1.7 gallons per minute (6.44 L/min) maximum flow, 5-micron pressure filter.

Required for accomplishment of **PART II:**

Hydraulic Power Unit (available commercially) (1 required)

- Specifications to be 600 PSI (4137 kPa) operating pressure, 1.7 gallons per minute (6.44 L/min) maximum flow, 5-micron pressure filter.

SLS-200-017-001 (Kitted Collector, Cyclic and Collective Rigging Tools) (1 required) consisting of the following tools and parts:

SLS-200-010-001 (Collective Centering Tool) (QTY 1)

SLS-200-012-001 (Cyclic Aft and Centering Rigging Tool) (QTY 1)

SLS-200-013-001 (Swashplate Rigging Tool) (QTY 1)

SLS-200-016-001 (T505005) (Cyclic Centering Tool) (QTY 1)

427-201-001-147 (Servo Rigging Pin) (QTY 3)

NAS6607-20 (BOLT) (QTY 1)

NAS1149DO763J (WASHER) (QTY 1)

WEIGHT AND BALANCE:

Not affected.

ELECTRICAL LOAD DATA:

Not affected.

REFERENCES:

BHT-505-MM Maintenance Manual, Chapter 67.

PUBLICATIONS AFFECTED:

BHT-505-MM Maintenance Manual, Chapter 67.

ACCOMPLISHMENT INSTRUCTIONS:

PART I – Collective control system (rigging check).

1. Prepare the helicopter for maintenance.

-NOTE-

Rotate the swashplate outer ring so that one of the outer most pitch link attachment points (the arm) is directly over the collective lever, in a forward and aft direction, when measuring the clearance dimensions.

2. Perform collective control system rigging check ([DMC-505-A-67-11-00-00A-360A-A](#)).
 - a. If all minimum clearance parameters are within acceptable tolerances, go to step 3.
 - b. If any of the minimum clearance parameters are not met, perform **PART II** prior to next flight.
 - (1) Submit the following information to Product Support Engineering at productsupport@bellflight.com :
 - (a) Include helicopter serial number in the subject line of the email.
 - (b) Include the ASB number 505-22-33 in the subject line of the email.
 - (c) Provide total time in service of the helicopter.
 - (d) Provide which clearance parameter was not meeting the minimum tolerance.
 - (e) Provide the dimension of the measured parameter that was not meeting the minimum tolerance.
3. Make an entry in the helicopter logbook and historical service records indicating compliance with **PART I** of this Alert Service Bulletin.

PART II – Cyclic and collective control system rigging.

1. Prepare the helicopter for maintenance.

-NOTE-

The collective control system is to be rigged prior to the cyclic control system.

-NOTE-

During the non-boosted control rigging procedures in the DMCs below, both the collective and cyclic sticks, and all three hydraulic servos actuators, are required to be centered simultaneously using the required rigging tools. This differs from the currently published procedures in the 505-MM Maintenance Manual. The remainder of the procedures are accurate.

2. Perform collective control system rigging ([DMC-505-A-67-11-00-00A-271A-A](#)).
3. Perform the cyclic control system rigging ([DMC-505-A-67-12-00-00A-271A-A](#)).
4. Verify and adjust as required the main rotor autorotation RPM ([DMC-505-A-62-00-00-00A-300A-A](#)).
5. Make an entry in the helicopter logbook and historical service records indicating compliance with **PART II** of this Alert Service Bulletin.