



A Textron Company

ALERT SERVICE BULLETIN

505-22-34

19 December 2022
Revision A, 11 July 2023

MODEL AFFECTED: 505

SUBJECT: ANTI-TORQUE ROTOR CONTROL CABLE ASSEMBLIES, INSPECTION OF.

HELICOPTERS AFFECTED: **PART I:** Serial numbers 65011 through 65476, and 65480 through 65496.

[Serial numbers 65477 through 65479, and 65497 and subsequent are not affected by **PART I** and **PART II** of this bulletin.]

PART II: Serial numbers 65011 through 65476, and 65480 through 65496, if required by **PART I**.

PART III: Serial numbers 65011 and subsequent.

COMPLIANCE: **PART I:** Within the next 100 flight hours or 3 months, whichever comes first, following the release date of this bulletin revision.

PART II: If required by **PART I**, Within the next 100 flight hours after accomplishment of **PART I**.

PART III: For helicopter serial numbers 65011 through 65401, 300 flight hours after accomplishment of **PART I** and/or **PART II** and every 300 flight hours thereafter. For helicopter serial numbers 65402 and subsequent, 300 flight hours following the release date of this bulletin, and every 300 flight hours thereafter.

DESCRIPTION:

Bell has been made aware that some anti-torque rotor control cable assemblies may have been delivered through Spares or installed on helicopters with missing or faded slippage indicators applied at the junction between the cable and the swaged fittings (Figure 1).

PART I of this bulletin requires a one-time inspection of the subject cable assemblies for the presence of the slippage indicators and any indication of cable slippage. Following accomplishment of **PART I**, cables that are found non-conforming (improper or missing slippage indicators) will require accomplishment of **PART II** that mandates those affected cables be inspected for possible slippage. **PART III** introduces a new slippage indicator inspection requirement that will be incorporated in the 505-MM Maintenance Manual. This inspection will be part of the existing 300 flight hour control cable inspection requirements.

Revision A of this bulletin revises the **HELICOPTERS AFFECTED** section as Bell has received a report of a helicopter that was not part of the affected helicopters of the original release of this bulletin, with faint/faded slippage indicators on the cable assemblies. Bell has put in place additional procedures to prevent further occurrences. Owners/operators that have accomplished **PART I** and/or **PART II** of the original release of the bulletin are not required to perform those **PARTs** again.

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 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 3.0 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:

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> |
|--------------------|------------------------------|-------------------|
| M207-20M488-041 | LEFT FORWARD CABLE ASSEMBLY | 1 (1) |
| M207-20M489-041 | RIGHT FORWARD CABLE ASSEMBLY | 1 (1) |
| M207-20M488-043 | LEFT AFT CABLE ASSEMBLY | 1 (1) |
| M207-20M489-043 | RIGHT AFT CABLE ASSEMBLY | 1 (1) |

NOTE 1: Only required if needing to be replaced as required by **PART I** of this bulletin.

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 Supply Center.

| <u>Part Number</u> | <u>Nomenclature</u> | <u>Qty (Note)</u> | <u>Reference *</u> |
|--------------------|---------------------|-------------------|--------------------|
| 2230-10536-00 | Torque Seal Lacquer | 1 OZ (1,2,3) | C-049 |

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

NOTES:

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.
2. 2230-10536-00 torque seal lacquer (C-049) is color yellow, however other colors are available, at customer's option, as shown in BHT-ALL-SPM Standard Practice Manual, in Chapter 13 under C-049.
3. Polyurethane paint (C-245) or 2230-10547-00 (Vibra-TITE Viz-Torque® 202) are acceptable alternates to C-049.

SPECIAL TOOLS:

None required.

WEIGHT AND BALANCE:

Not affected.

ELECTRICAL LOAD DATA:

Not affected.

REFERENCES:

505-MM Maintenance Manual, Chapter 53 and 67.
BHT-ALL-SPM Standard Practice Manual, Chapter 13.

PUBLICATIONS AFFECTED:

505-MM Maintenance Manual, Chapter 67.

ACCOMPLISHMENT INSTRUCTIONS:

PART I. One-time inspection of slippage indicators of the anti-torque rotor control cable assemblies.

1. Prepare the helicopter for maintenance.
2. Remove the forward belly panel (120AB) ([DMC-505-A-53-10-02-00A-520A-A](#)).
3. Remove left aft-fuselage panel (191AL) ([DMC-505-A-53-30-01-00A-520A-A](#)).
4. Remove the tail-rotor-gearbox and empennage support-cover (310CB) ([DMC-505-A-53-50-05-00A-520A-A](#)).

-NOTE-

Figure 1 shows anti-torque rotor control cable assemblies with the slippage indicators correctly applied all the way up to the swaged device (ball joint, turnbuckle, or clevis). If the cable has slipped, a gap between the slippage indicator lacquer on the cable and the lacquer on the swaged device will be visible.

5. Verify the left and right forward and left and right aft cable assemblies at the ball joints, turnbuckles, and clevis in the locations identified (Figure 2) for the presence of slippage indicators and any signs of slippage.
 - a. If slippage indicators are missing or faded to the extent that it is not possible to determine that the cable has not slipped, perform a tension check of the cables ([DMC-505-A-67-20-00-00A-360B-A](#)), and add torque seal lacquer (C-049) at the junction between the swaged device and the cable. Perform **PART II** of this bulletin within the compliance period. A cable assembly that required tension adjustments during operation may be an indication of cable assembly slippage. If in doubt, replace the suspected cable assembly before next flight.
 - b. If there are no signs of slippage go to step 6.

- c. If there are signs of slippage, replace the defective cable assembly before next flight with a serviceable cable assembly meeting the intent of this bulletin using the following data modules as applicable, then go to step 6:

LEFT FORWARD CABLE ASSEMBLY M207-20M488-041

Removal: [DMC-505-A-67-20-10-00A-520A-A](#)

Installation: [DMC-505-A-67-20-10-00A-720A-A](#)

RIGHT FORWARD CABLE ASSEMBLY M207-20M489-041

Removal: [DMC-505-A-67-20-11-00A-520A-A](#)

Installation: [DMC-505-A-67-20-11-00A-720A-A](#)

LEFT AFT CABLE ASSEMBLY M207-20M488-043

Removal: [DMC-505-A-67-20-16-00A-520A-A](#)

Installation: [DMC-505-A-67-20-16-00A-720A-A](#)

RIGHT AFT CABLE ASSEMBLY M207-20M489-043

Removal: [DMC-505-A-67-20-17-00A-520A-A](#)

Installation: [DMC-505-A-67-20-17-00A-720A-A](#)

6. Install left aft-fuselage panel (191AL) ([DMC-505-A-53-30-01-00A-720A-A](#)).
7. Install the forward belly panel (120AB) ([DMC-505-A-53-10-02-00A-720A-A](#)).
8. Install the tail-rotor-gearbox and empennage support-cover (310CB) ([DMC-505-A-53-50-05-00A-720A-A](#)).
9. 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. Inspection of added slippage indicators of the anti-torque rotor control cable assemblies.

-NOTE-

PART II is applicable only to the anti-torque rotor control cable assemblies found with improper or missing slippage indicators applied and required to have torque seal lacquer (C-049) applied per **PART I**.

1. Prepare the helicopter for maintenance.

-NOTE-

Only remove the panel assemblies required to gain access to the cable assemblies that required the application of torque

seal lacquer (C-049) while performing **PART I**. The panel removal procedures are in steps 2 through 4 of **PART I**, as applicable.

2. Remove the panel assembly required to gain access to the cable assembly.
3. Verify the cable assembly for any signs of slippage.
 - a. If there are no signs of slippage go to step 4.
 - b. If there are signs of slippage, replace the defective cable assembly before next flight with a serviceable cable assembly meeting the intent of this bulletin using the following data modules as applicable, then go to step 4:

LEFT FORWARD CABLE ASSEMBLY M207-20M488-041

Removal: [DMC-505-A-67-20-10-00A-520A-A](#)

Installation: [DMC-505-A-67-20-10-00A-720A-A](#)

RIGHT FORWARD CABLE ASSEMBLY M207-20M489-041

Removal: [DMC-505-A-67-20-11-00A-520A-A](#)

Installation: [DMC-505-A-67-20-11-00A-720A-A](#)

LEFT AFT CABLE ASSEMBLY M207-20M488-043

Removal: [DMC-505-A-67-20-16-00A-520A-A](#)

Installation: [DMC-505-A-67-20-16-00A-720A-A](#)

RIGHT AFT CABLE ASSEMBLY M207-20M489-043

Removal: [DMC-505-A-67-20-17-00A-520A-A](#)

Installation: [DMC-505-A-67-20-17-00A-720A-A](#)

-NOTE-

The panel installation procedures are in step 6 through 8 of **PART I**, as applicable.

4. Install panel assembly previously removed to accomplish the inspection of the affected anti-torque rotor control cable assembly.
5. Make an entry in the helicopter logbook and historical service records indicating findings and compliance with **PART II** of this Alert Service Bulletin.

PART III – Recurring inspection of slippage indicators of the anti-torque rotor control cable assemblies.

1. Prepare the helicopter for maintenance.

2. Remove the forward belly panel (120AB) ([DMC-505-A-53-10-02-00A-520A-A](#)).
3. Remove left aft-fuselage panel (191AL) ([DMC-505-A-53-30-01-00A-520A-A](#)).
4. Remove the tail-rotor-gearbox and empennage support-cover (310CB) ([DMC-505-A-53-50-05-00A-520A-A](#)).

-NOTE-

Figure 1 shows anti-torque rotor control cable assemblies with the slippage indicators correctly applied all the way up to the swaged device (ball joint, turnbuckle, or clevis). If the cable has slipped, a gap between the slippage indicator lacquer on the cable and the lacquer on the swaged device will be visible.

5. Verify the left and right forward and left and right aft cable assemblies at the ball joints, turnbuckles, and clevis in the locations identified (Figure 2) for the presence of slippage indicators and any signs of slippage.
 - a. If slippage indicators are missing or faded to the extent that it is not possible to determine that the cable has not slipped, perform a tension check of the cables ([DMC-505-A-67-20-00-00A-360B-A](#)), and add torque seal lacquer (C-049) at the junction between the swaged device and the cable. Perform **PART II** of this bulletin within the compliance period. A cable assembly that required tension adjustments during operation may be an indication of cable assembly slippage. If in doubt, replace the suspected cable assembly before next flight
 - b. If there are no signs of slippage go to step 6.
 - c. If there are signs of slippage, replace the defective cable assembly before next flight with a serviceable cable assembly meeting the intent of this bulletin using the following data modules as applicable, then go to step 6:

LEFT FORWARD CABLE ASSEMBLY M207-20M488-041

Removal: [DMC-505-A-67-20-10-00A-520A-A](#)

Installation: [DMC-505-A-67-20-10-00A-720A-A](#)

RIGHT FORWARD CABLE ASSEMBLY M207-20M489-041

Removal: [DMC-505-A-67-20-11-00A-520A-A](#)

Installation: [DMC-505-A-67-20-11-00A-720A-A](#)

LEFT AFT CABLE ASSEMBLY M207-20M488-043

Removal: [DMC-505-A-67-20-16-00A-520A-A](#)

Installation: [DMC-505-A-67-20-16-00A-720A-A](#)

RIGHT AFT CABLE ASSEMBLY M207-20M489-043

Removal: [DMC-505-A-67-20-17-00A-520A-A](#)

Installation: [DMC-505-A-67-20-17-00A-720A-A](#)

6. Install left aft-fuselage panel (191AL) ([DMC-505-A-53-30-01-00A-720A-A](#)).
7. Install the forward belly panel (120AB) ([DMC-505-A-53-10-02-00A-720A-A](#)).
8. Install the tail-rotor-gearbox and empennage support-cover (310CB) ([DMC-505-A-53-50-05-00A-720A-A](#)).
9. Make an entry in the helicopter logbook and historical service records indicating findings and compliance with **PART III** of this Alert Service Bulletin.



Figure 1 –Typical Slippage Indicators as Received from Supplier

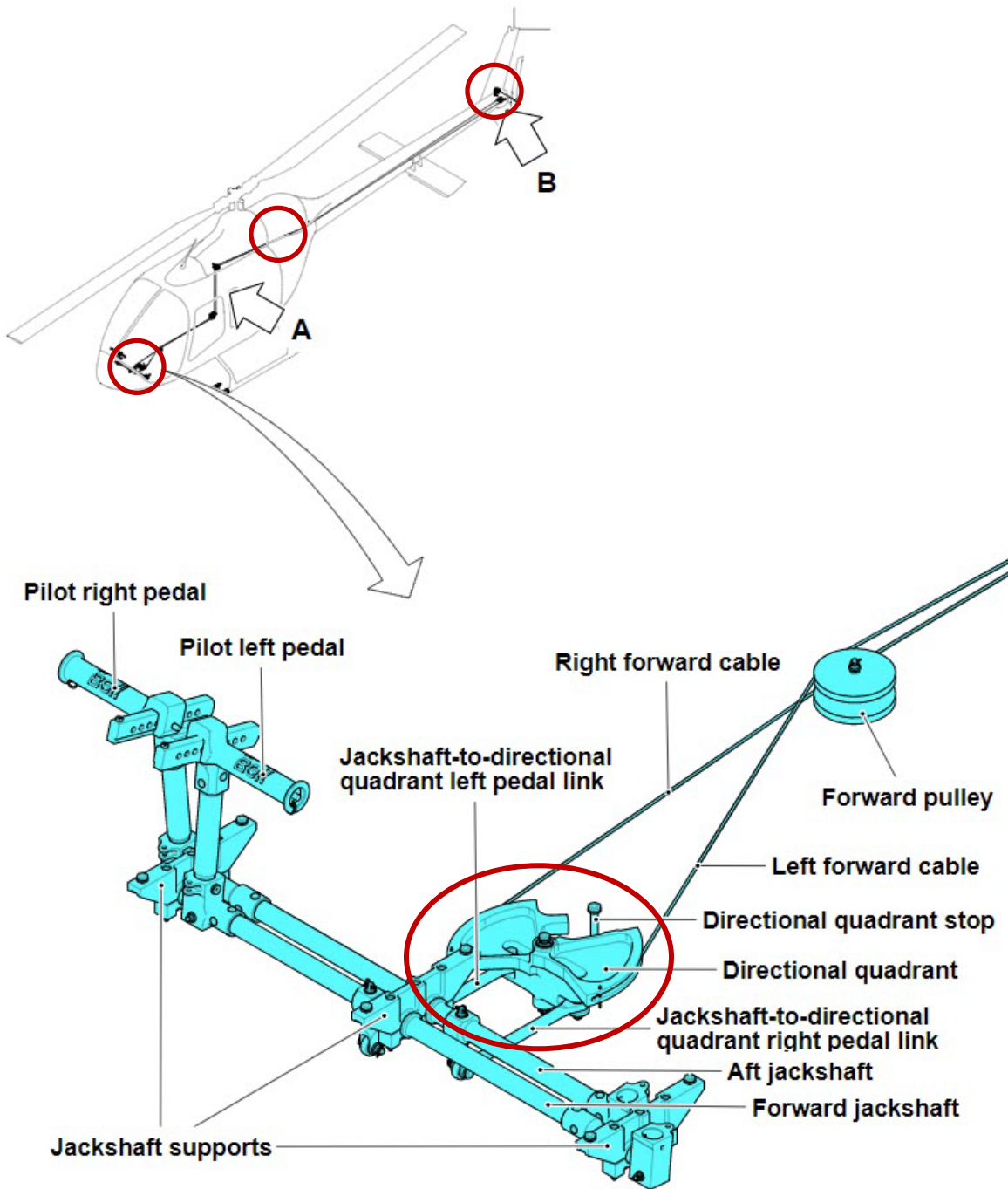


Figure 2 – Anti-Torque Rotor Control System (sheet 1 of 2)

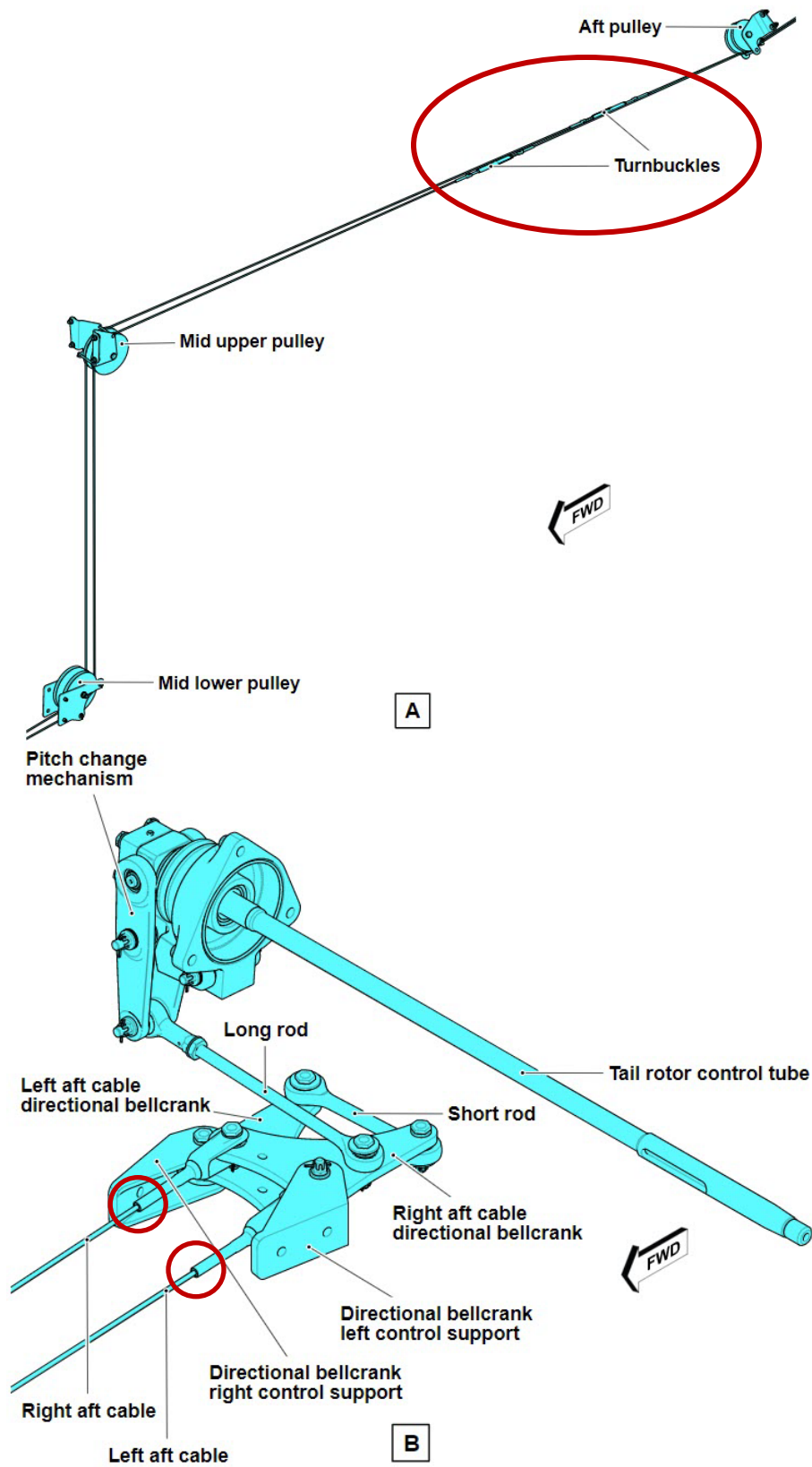


Figure 2 – Anti-Torque Rotor Control System (sheet 2 of 2)