



A Textron Company

## **ALERT SERVICE BULLETIN**

**505-21-27**  
**7 OCTOBER 2021**

**MODEL AFFECTED:** 505

**SUBJECT:** GENESYS THIRD AXIS AUTOPILOT  
INSTALLATION FOR POSSIBLE CHAFFING WITH  
TAIL ROTOR CONTROL CABLE, INSPECTION OF.

**HELICOPTERS AFFECTED:** Serial numbers 65011 through 65234, 65236  
through 65348, 65350, 65352 through 65359  
equipped with Genesys third axis autopilot.

[Serial number 65235, 65349, 65351, 65360 and  
subsequent will have the intent of this bulletin  
accomplished prior to delivery.]

**COMPLIANCE:** Within 25 flight hours or 30 days, whichever comes  
first.

### **DESCRIPTION:**

Bell has received a report of a tail rotor control cable chaffing with a roller bracket assembly installed as part of the Genesys STC third axis (yaw) autopilot kit option.

In advance of Genesys communicating this situation with owners/operators, Bell is releasing this Alert Service Bulletin (ASB) to have the tail rotor control cable inspected for possible chaffing.

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 approved per S-TEC Corporation STC SR09758DS.

**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 man-hour is 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>
M207-20M489-041	Cable assembly	1 (1)

**NOTE 1:** Required only if chaffing damage is found following inspection.

**Consumable Material:**

None required.

**SPECIAL TOOLS:**

None required.

**WEIGHT AND BALANCE:**

Not affected

**ELECTRICAL LOAD DATA:**

Not affected.

**REFERENCES:**

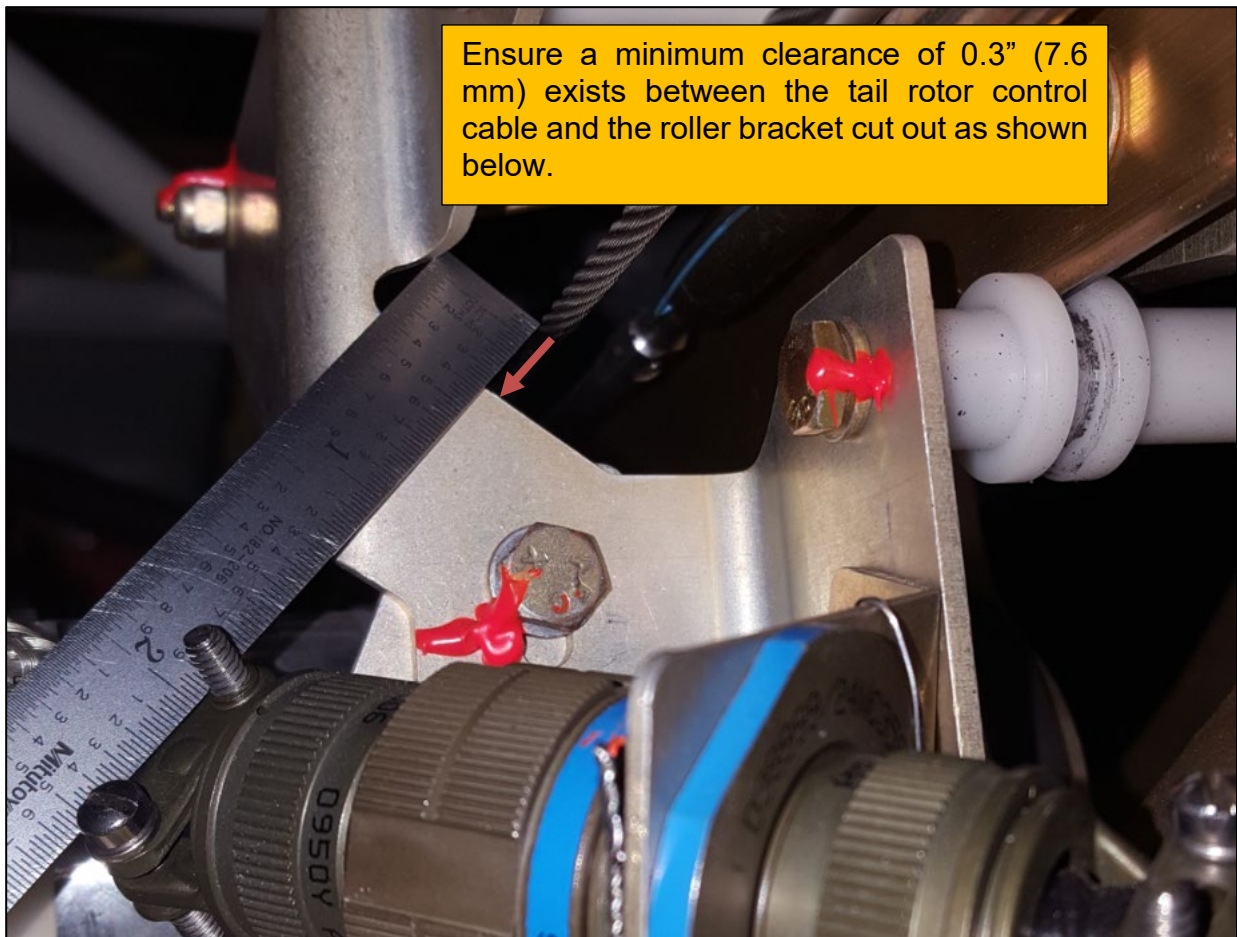
505-IPC, Illustrated Parts Catalog

**PUBLICATIONS AFFECTED:**

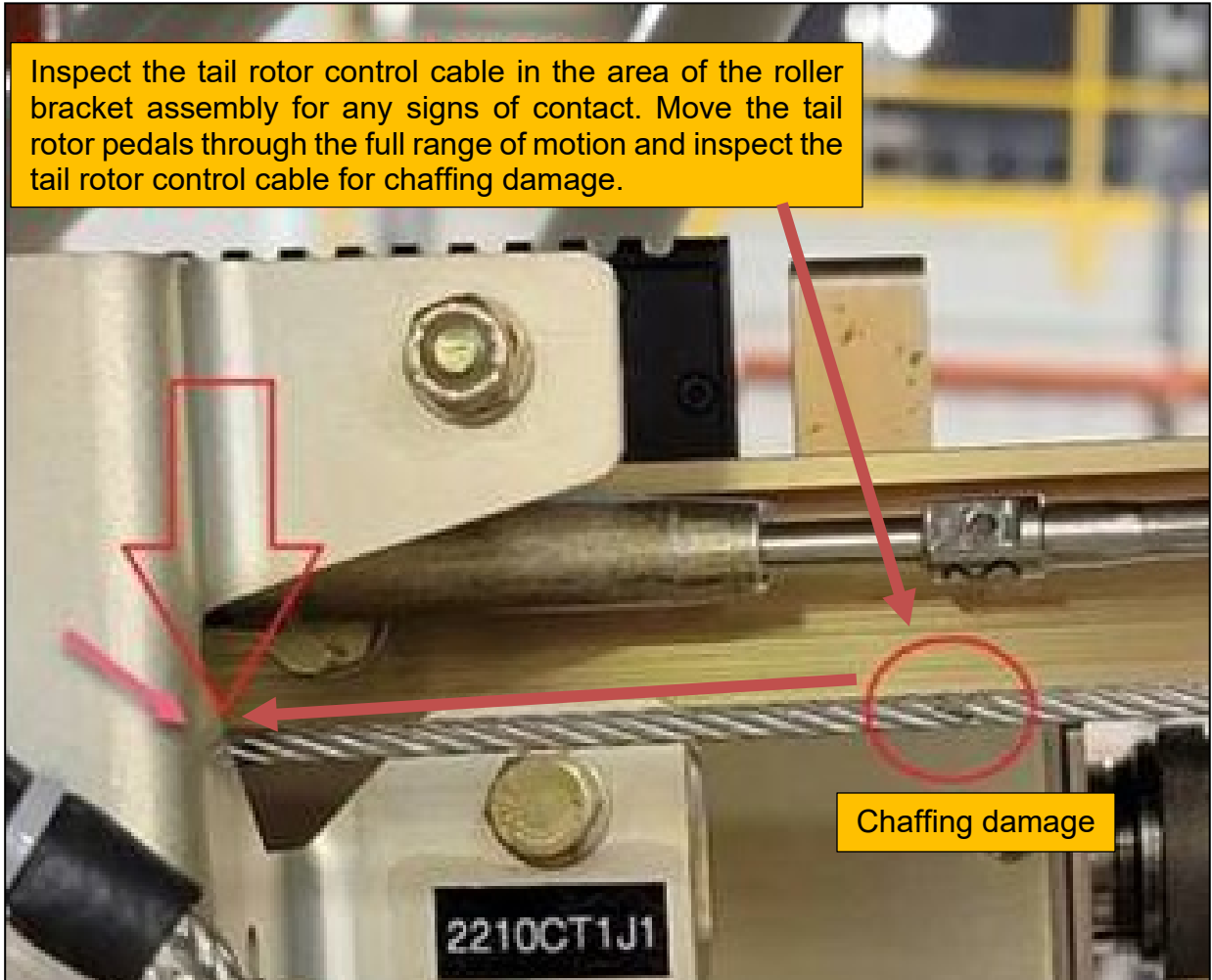
Genesys Install Instructions ST-974-II-0001  
Genesys Instructions for Continued Airworthiness ST-974-ICA-0001

**ACCOMPLISHMENT INSTRUCTIONS:**

1. Prepare the helicopter for maintenance.
2. Gain access to the Genesys third axis (yaw) autopilot installation by removing the right side aft-fuselage panel 192AR ([DMC-505-A-53-30-02-00A-520A-A](#))
  - a. Gain access to roller bracket assembly installation as shown in Figure 1.
  - b. Inspect the right forward tail rotor control cable in the area of the roller bracket assembly for any signs of contact. Move the tail rotor pedals through the full range of motion and inspect the tail rotor control cable M207-20M489-041 for chaffing damage (Figure 2). If there is no chaffing damage go to step 3.
    - (1) If chaffing damage is confirmed from contact with roller bracket assembly report findings with pictures to Product Support Engineering at [productsupport@bellflight.com](mailto:productsupport@bellflight.com) before proceeding. Make sure that the following is in the subject line of the e-mail:
      - (a) Service directive number: 505-21-27.
      - (b) Helicopter serial number.
    - (2) Include the following information in the body of the email:
      - (a) Operator name.
      - (b) Total time in service.
      - (c) Gap measured between the tail rotor control cable and the roller bracket cut out.
    - (3) If chaffing damage is found cable assembly M207-20M489-041 must be replaced.
3. Ensure a minimum clearance of 0.3" (7.6 mm) exists between the tail rotor control cable and the roller bracket cut out. Refer to Genesys Install Instructions ST-974-II-0001 for height adjustment options of the roller bracket assembly position.
4. Make an entry in the helicopter logbook and historical service records indicating compliance with this Alert Service Bulletin.



**Figure 1 – Roller Bracket Assembly Installation**



**Figure 2 – Tail Rotor Control Cable Chaffing Damage Example**