A Textron Company

TECHNICAL BULLETIN **505-21-29**

5 October 2021

MODEL AFFECTED: **505**

SUBJECT: **SLS-704-017-105 RETROFIT KIT CARGO HOOK - EASA, INTRODUCTION OF**

HELICOPTERS AFFECTED: **Serial numbers 65011 and subsequent equipped with Cargo Hook Provisions SLS-706-016-105**

COMPLIANCE: At customer's option.

DESCRIPTION:

Following airframe drop testing activity in accordance with European Union Aviation Safety Agency (EASA) guidelines, some airframe modifications were deemed necessary.

The main components being implemented by this Technical Bulletin (TB) are Kevlar doublers and a reinforced fuel cell to be installed on EASA registered Bell 505s equipped with a preexisting cargo hook provisions kit SLS-706-016-105.

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

Approved for public release.

MANPOWER:

Approximately 24 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. Order **SLS-704-017-105** (Note 1) Cargo Hook EASA retrofit kit, consist of the following:

Part Number	Nomenclature	Qty (Note)
SLS-066-121-101	Airframe bungee mount	1 (2)
FT29748/1	Foam packing	1 (3)
FT29748/2	Foam packing	1 (3)
FT29749/1	Foam packing	1 (3)
FT29749/2	Foam packing	1 (3)
FT29770/1	Foam packing	1 (3)
FT29770/2	Foam packing	1 (3)
FT29828	Foam packing	2 (3)
FT29829	Foam packing	2 (3)
FT30725	Fuel Cell, reinforced	1 (4)
FT30806	Kevlar doubler	2
MS27039C0819	Screw	2
NAS557-18C	Grommet	1 (5)

NOTES:

1. Retrofit kit SLS-704-017-105 contains all parts necessary to cover all possible aircraft configurations to fulfill the EASA requirements. Some parts may not be required depending of the modifications already done to the airframe or upon accomplishment of the TB.
2. Cargo hook bungee attachment point airframe mount. Bungee is part of the Cargo Hook Kit SLS-706-017-109.
3. If PART II of this TB is chosen, the same foam pieces cut may be reutilized if not damaged during removal. Therefore, all the foam pieces listed above may not be required to meet the intent of this TB.
4. Fuel cell FT30725 is part of basic production build S/N 65348 and subsequent in replacement to fuel cell FT29658.
5. Grommet required if ASB 505-21-21 has not previously been complied with.

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.

Part Number	Nomenclature	Qty (Note)	Reference *
2010-00082-00	Sealant Corrosion Inhibitor	6 OZ (1)	C-251
2010-00134-00	Sealant fuel resistant	1 QT (2)	C-308
2100-06673-00	Cleaner Isopropyl alcohol	A/R	C-385
Commercial	Clean Cloth	A/R	C-516
2000-06047-00	Vinyl Tape 2 inches	A/R	C-453

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

NOTES:

1. Any sealant meeting MIL-PRF-81733 specification is acceptable.
2. Any sealant meeting AMS-S-8802 specification is acceptable.

SPECIAL TOOLS:

None required.

WEIGHT AND BALANCE:

	Longitudinal		Lateral*	
Weight	Arm	Moment	Arm	Moment
+2.7 pounds	163.8 inch	+442 inch-pounds	0.6 inch	1.6 inch-pounds
+1.22 kgs	4161 mm	+51 kg x mm/100	15 mm	0.2 kg x mm/100

* In lateral calculations, - is left and + is right.

REFERENCES:

505-IPC, Illustrated Parts Catalog
505-MM, Maintenance Manual
ASB 505-21-21, Alert Service Bulletin

PUBLICATIONS AFFECTED:

505-IPC, Illustrated Parts Catalog, Chapter 25
505-MM, Maintenance Manual, Chapter 25
505-II-3, Installation Instructions for Cargo Hook kit

ACCOMPLISHMENT INSTRUCTIONS:

1) Prepare the helicopter for maintenance.

2) Remove fuel cell (DMC-505-A-28-10-01-00A-520A-A).

-NOTE-

In the following steps two options are offered. Only **PART I** or **PART II** is required to be accomplished to meet the intent of this bulletin. The foam packings under the fuel cell can be cut per **PART II** instead of removing the complete foam piece as specified in **PART I**.

PART I: Option 1, Removal of the applicable foam pieces to allow installation of the Kevlar doublers. Accomplish on both Right Hand and Left Hand sides.

a) Remove all applicable foam pieces (as listed in the required material list of this TB) to gain access to the structure (DMC-505-A-53-20-07-00A-920A-A).

b) Remove sealant from the structure and clean the surfaces using isopropyl alcohol.

c) Heat can be used to bend the Kevlar doublers to match the shape of the structure. Do not exceed 120ºF (48.9ºC) while heating the Kevlar material.

d) Apply sealant (C-308) to Kevlar doublers and install them as shown (Figure 1, Sheet 2 of 2). Reference dimensions for locating Kevlar doubler onto the airframe. The foam piece cut out dimension is applicable only for option 2.

-NOTE-

Do not cover fuel cell compartment drain holes with sealant. Refer to (Figure 3) for drain hole locations.

e) Install new foam pieces with wet sealant (C-308) over the Kevlar doublers. Let dry for 4 hours at ambient temperature (DMC-505-A-53-20-07-00A-920A-A).

f) Apply a bead of sealant (C-308) to all edges of the foam pieces, let dry at ambient temperature.

PART II: Option 2, Cut the foam pieces in situ and only remove the sections required where the Kevlar doublers need to be bonded. Accomplish on both Right Hand and Left Hand sides.

CAUTION

Make sure not to damage the airframe structure using a knife or a sharp edge. Sacrificial material should be inserted underneath the foam pieces to prevent damage to the aluminum or carbon fiber material.

a) Existing foam pieces must be cut 0.250'' (6.35 mm) larger than the Kevlar doublers as shown (Figure 1, Sheet 2 of 2). Retain cut foam pieces if not damaged during the removal process.

b) Remove sealant from the structure and clean the surfaces using isopropyl alcohol (C-385).

c) Cut the new foam pieces to fit within the cutout made earlier or use the retained cut foam pieces. Maximum gap allowed between foam pieces is 0.125 in. (3.18 mm). Apply a layer of sealant (C-308) to the foam cut edges.

d) Heat can be used to bend the Kevlar doublers to match the shape of the structure. Do not exceed 120ºF (48.9ºC) while heating the Kevlar material.

e) Apply a layer of sealant (C-308) to the Kevlar doublers and install them on the structure as shown in (Figure 1, Sheet 2 of 2).

-NOTE-

Do not cover fuel cell compartment drain holes with sealant.
Refer to (Figure 3) for drain hole locations.

f) Install foam pieces with wet sealant (C-308) and fill the gaps between the foam pieces with the same sealant. Maximum gap allowed between foam pieces is 0.125 in. (3.18 mm). Hold the foam in the correct position and let dry for 4 hours at ambient temperature. Weight bags can be used to hold while bonding as shown (Figure 2).

g) Apply a bead of sealant (C-308) on all edges of the foams, let dry at ambient temperature.

3) Install Grommet NAS557-18C in accordance with Alert Service Bulletin (ASB) 505-21-21 if not already accomplished.

4) Install fuel cell (DMC-505-A-28-10-01-00A-720A-A).

5) Install airframe bungee mount SLS-066-121-101 with new screws MS27039C0819 at the most forward R/H side from the control tunnel access panel as shown in (Figure 3).

6) As required, install Cargo Hook Kit SLS-706-017-109 (Bungee included) to complete the installation.

7) Make an entry in the helicopter logbook and historical service records indicating compliance with this Technical Bulletin.

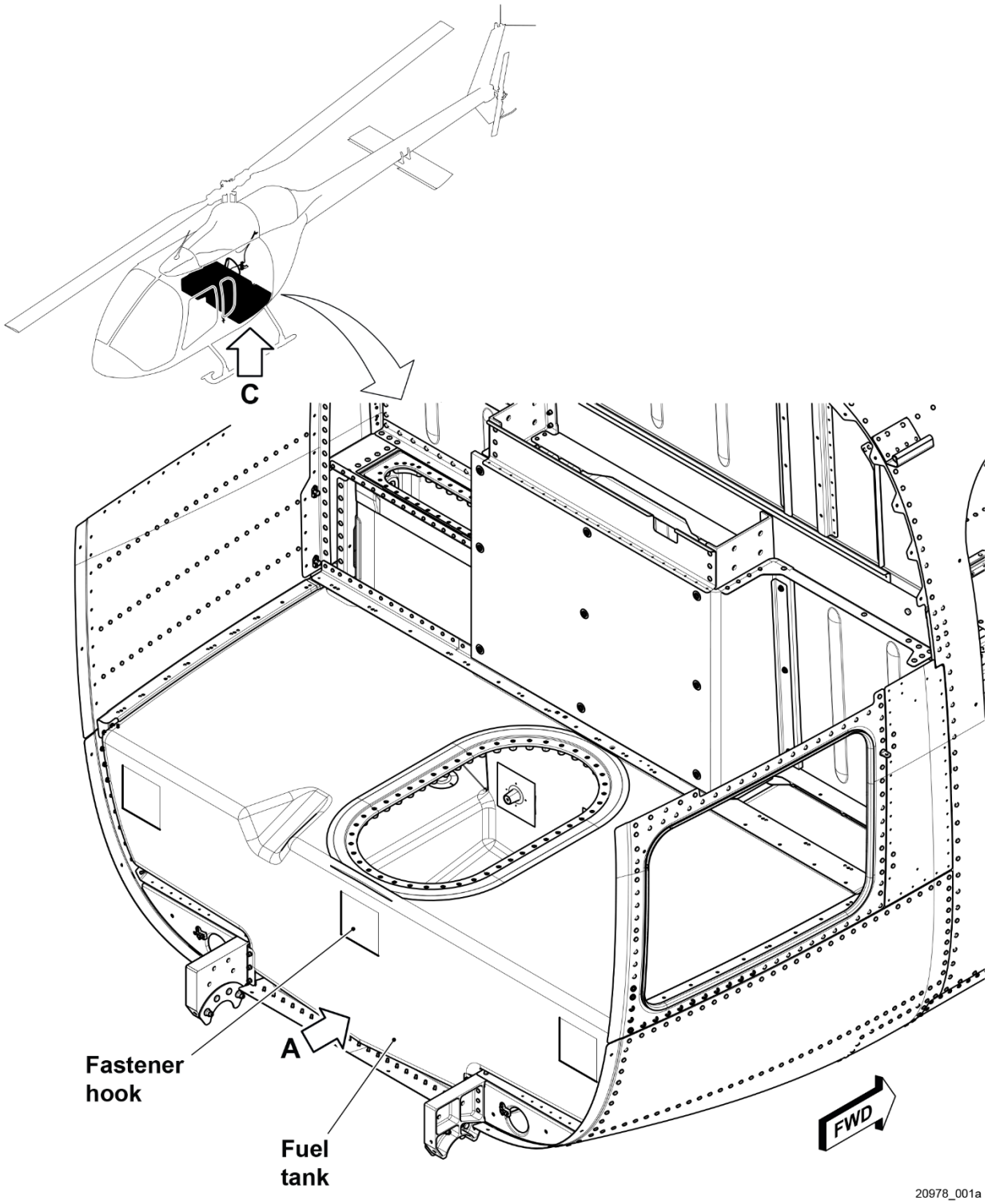

Figure 1 – Fuel Cell Compartment (Sheet 1 of 2)

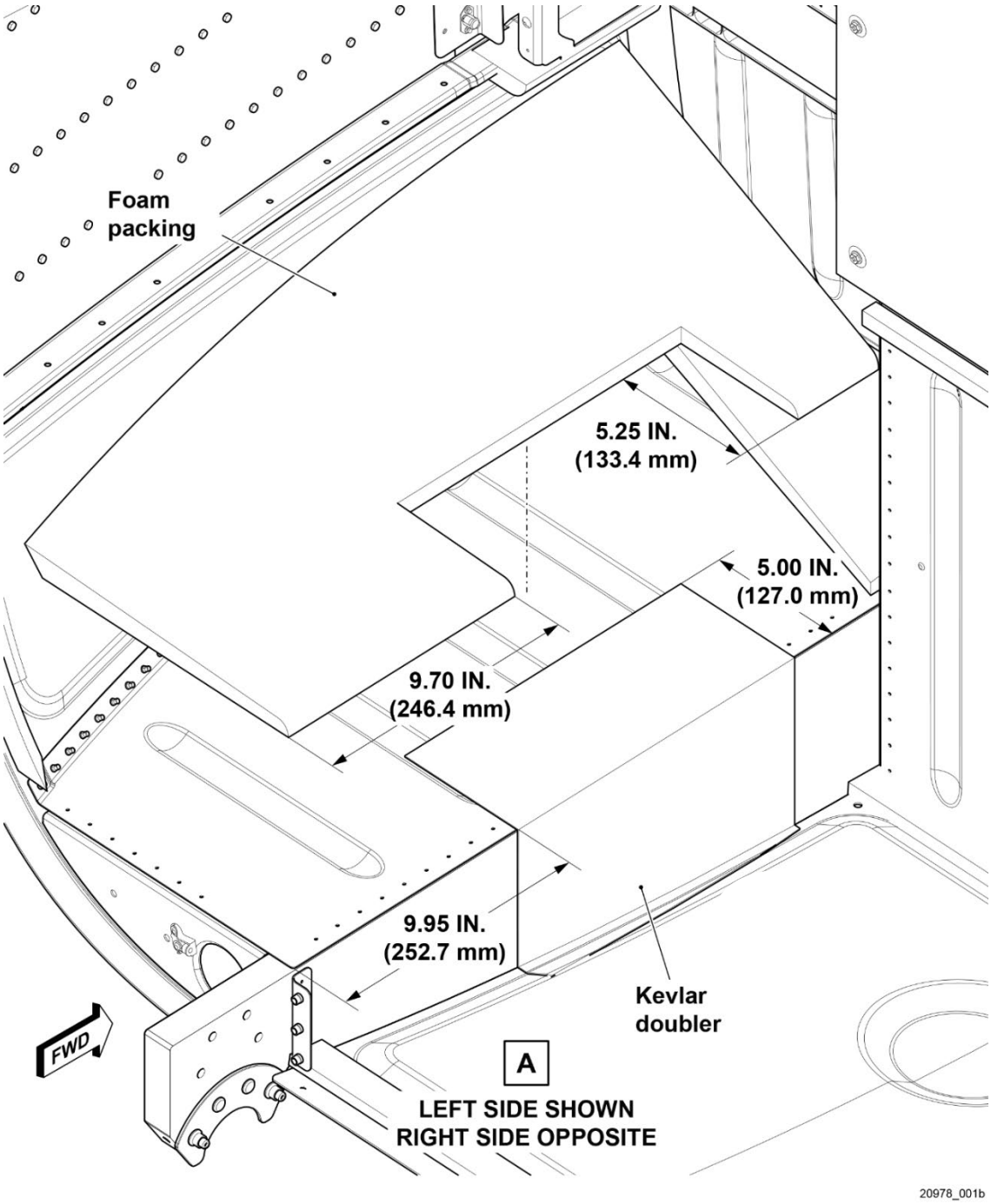

Figure 1 – (View A) Foam Cut Out Dimensions + Kevlar Doubler Location (Sheet 2 of 2)

Figure 2 – Installation of Foam Pieces Right Hand and Left Hand Sides

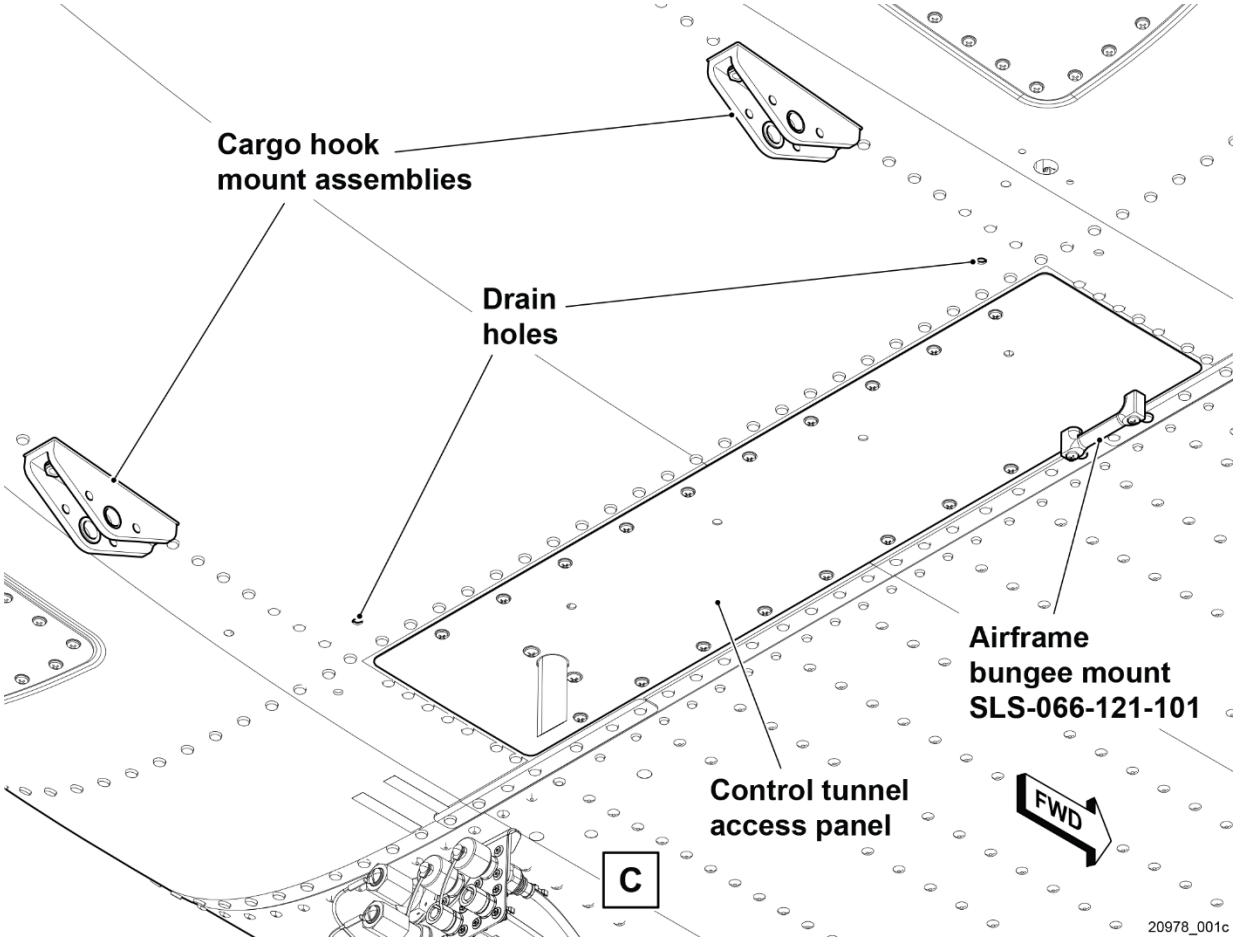

Figure 3 – Airframe Bungee Mount Location
View Looking Up