



A Textron Company

**INFORMATION LETTER**

**GEN-10-118**

12 August 2010

Revision A, 24 March 2021

**TO: All owners and operators of Bell helicopters**

**SUBJECT: BREEZE-EASTERN CARGO HOOK MAINTENANCE CONCEPT**

This information letter is being revised to advise Bell customers that Breeze-Eastern Corporation has released the SERVICE INFORMATION LETTER SIL02 Maintenance Concept Rev B dated 04/06/2020, which replaces the Breeze-Eastern document E-91-03, "External Cargo Hook Inspection, Maintenance and Overhaul Recommendations" in its entirety.

A copy of the SERVICE INFORMATION LETTER SIL02 Maintenance Concept Rev B dated 04/06/2020 is provided to ensure that all Bell customers are aware of this change.

For any questions regarding this letter, please contact:

Bell Product Support Engineering

Tel: 1-450-437-2862 / 1-800-363-8023 / [productsupport@bellflight.com](mailto:productsupport@bellflight.com)



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## SERVICE INFORMATION LETTER

CAGE CODE 08484

SIL02 Maintenance

REV B 04/06/2020

Page 1 of 5

## Breeze-Eastern Cargo Hook Maintenance Concept

**SUBJECT:** Breeze-Eastern has revised its maintenance concept for Cargo Hooks to reflect revised government aviation authority requirements, as well as revisions to current industry and military standards.

This Service Information Letter replaces Breeze-Eastern document E-91-03, “External Cargo Hook Inspection, Maintenance and Overhaul Recommendations” in its entirety.

### INFORMATION.

#### A. Reason.

Revisions made to the Federal Aviation Regulations (FAR), specifically FAR 27, “Airworthiness Standards: Normal Category Rotorcraft,” and FAR 29, “Airworthiness Standards: Transport Category Rotorcraft,” as well as the corresponding European Aviation Safety Agency (EASA) CS-27, “Small Rotorcraft,” and CS-29, “Large Rotorcraft,” mandate a stringent set of design requirements on the handling of external loads, both human and non-human.

To meet the FAR / JAR requirements for helicopter type certification the commercial helicopter manufacturers are requiring an additional in-depth level of detail in analyses, test, inspection, and maintenance.

Although the military is not bound by the commercial FAR’s and EASA CS’s, their design requirements on the handling of external loads, both human and non-human is *as detailed and stringent* as the civil aviation authorities.

Therefore, Breeze-Eastern is adopting and implementing a maintenance concept that will meet the changing / evolving requirements for safe Cargo Hook operation and maintenance.

#### B. Effectivity.

This Service Information Letter pertains to all Cargo Hooks manufactured by Breeze-Eastern.

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## SERVICE INFORMATION LETTER

CAGE CODE 08484

SIL02 Maintenance

REV B 04/06/2020

Page 2 of 5

## Breeze-Eastern Cargo Hook Maintenance Concept

### C. Maintenance Concept Description.

Breeze-Eastern has revised its maintenance concept to three (3) levels of established maintenance. They encompass both commercial and military definitions as defined below.

**NOTE:** All maintenance actions of Breeze-Eastern Cargo Hooks shall be accomplished in accordance with applicable Breeze-Eastern manuals and technical documentation. Furthermore, it is recommended that all maintenance requiring new components be accomplished utilizing Breeze-Eastern Federal Aviation Administration (FAA) / European Aviation Safety Agency (EASA) approved parts. Any and all actions taken by the owners / operators / maintenance facilities that deviate from Breeze-Eastern recommended procedures contained herein or actions taken utilizing parts or procedures not prescribed by Breeze-Eastern shall not be the responsibility of Breeze-Eastern.

### Definitions.

#### 1. Organizational / Flight Line Level:

Maintenance at this level consists of preventative maintenance, visual inspection, and scheduled maintenance of the system, corrective maintenance for fault isolation, removal and replacement of the hardware that can be performed at the organizational or flight line level “within the shadow of the aircraft.”

#### 2. Intermediate / Hangar Level:

Maintenance actions that cannot be accomplished at the Organizational / Flight Line Level of maintenance will require removal of the system or component to a hangar workshop / bench.

Examples where removal is required are access restrictions due to ground clearance or helicopter interface and alternate power or testing needs not available on the flight line, etc.

(Note: For certain export controlled items (ITAR), intermediate, or depot-level repair, and maintenance information may be exported to a location outside the United States only under a Technical Assistance Agreement approved specifically for that purpose).

#### 3. Depot Level / FAA – EASA Certified Repair Station:

Maintenance at the Depot Level consists of Line Replaceable Unit (LRU) / Weapons Replaceable Assembly (WRA) repair or overhaul, to return the unit to a fully operational condition.

At this level the units are tested prior to disassembly, disassembled, inspected, repaired / overhauled and reassembled. After completion of assembly, the unit is acceptance tested.

At the Depot Level a functional test rig as well as some special fixtures may be required.



35 Melanie Lane  
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## SERVICE INFORMATION LETTER

CAGE CODE 08484

SIL02 Maintenance

REV. B, 04/06/2020

Page 3 of 5

### **Breeze-Eastern Cargo Hook Maintenance Concept**

(Note: Intermediate or depot-level repair and maintenance information may be exported to a location outside the United States only under a license agreement approved specifically for that purpose).

#### **D. Breeze-Eastern Maintenance Services.**

Breeze-Eastern has revised its available maintenance services as defined in the following information.

##### **1. Scheduled Maintenance:**

Breeze-Eastern's maintenance action at this level is to perform scheduled maintenance on a Cargo Hook returned by operators who do not have the capability or who do not wish to attempt to accomplish these maintenance actions on their own.

For cargo hook part numbers which do not have available Organizational / Flight Line Level inspections published in a corresponding manual the below checks are recommended. Published inspections for individual hook part numbers take precedence over these checks

A pre-flight visual check shall be performed prior to conducting sling operations, on at least a daily basis. Unless the cargo hook being utilized passes the following minimum requirements, it should not be used.

1. Check hook attachments for correct connections to aircraft mounting points, to emergency release cable connection, and to electrical harness connection for power, and load measuring, if equipped.
2. Check hook for proper operation of the manual release.
3. Check cargo hook electrical connectors and wiring to verify that wires are not frayed and connectors are in place.
4. Functionally check release systems or circuits.
5. Test the guillotine system on rotorcraft if equipped.
6. Check the load beam for binding.
7. Visually check the load beam and hook frame members for cracks, gouges, distortion, wear and latch engagement.
8. Inspect keeper on cargo hook if equipped.
9. Test other emergency release equipment if applicable.
10. Check the suspension members, if used, for alignment.
11. Check the primary hook suspension ropes, if used, for broken/frayed cables.
12. Check the manual release cable conduit, if used, for kinks. Conduit shall not be used if it is found kinked.



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## SERVICE INFORMATION LETTER

CAGE CODE 08484

SIL02 Maintenance

REV. B, 04/06/2020

Page 4 of 5

### **Breeze-Eastern Cargo Hook Maintenance Concept**

#### 2. Repair / Unscheduled Maintenance:

Breeze-Eastern's maintenance action at this level is to go to the repair level necessary to return the Cargo Hook to service. It will include functional testing, as well as any Breeze-Eastern mandated improvements that are known to enhance the performance and / or safety of the assembly.

#### 3. Overhaul:

Breeze-Eastern's maintenance action at this level is to bring the Cargo Hook to a zero time / zero cycle condition regarding its overhaul status. The unit is completely disassembled and the critical parts in the load path are inspected to engineering design criteria. Consumable, wear parts and mandated parts are replaced, or reworked, in accordance with customer instructions / contract. The unit is reassembled, and acceptance tested, prior to being returned to service.

#### Overhaul Interval:

Breeze-Eastern's Cargo Hook Time Between Overhaul (TBO) period \* is either five (5) years, three thousand (3,000) cycles, or one thousand (1,000) hours of external load operations from date of installation, whichever comes first. Refer to notes on following page.

This interval is effective as of the date of this SIL and begins at the next overhaul of fielded cargo hooks.

\* Note that this standard TBO period does not apply to the Breeze-Eastern 17169-16 Cargo Hook. Refer to SIL15 Maintenance for the overhaul interval.



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## SERVICE INFORMATION LETTER

CAGE CODE 08484

SIL02 Maintenance

REV. B, 04/06/2020

Page 5 of 5

# Breeze-Eastern Cargo Hook Maintenance Concept

## NOTES:

### 1. Definitions:

- A. Cargo Hook "Cycle" is defined as *any* unlatch and relatch of the load beam whether loaded or unloaded.
- B. Hours of external load operation is defined as the time the helicopter is engaged in external load operations, including time between loads on the hook.

2. If operators consistently utilize the Cargo Hook in adverse environmental conditions / extremes or consistently use at the Cargo Hook maximum rated load (particularly releases at maximum rated load), it is the *operator's responsibility* to increase the scope and frequency of all Cargo Hook maintenance actions to ensure safe operation of the equipment.

More frequent inspections can be made, but inspections cannot be accomplished less frequently.

3. Tracking of calendar time, number of cycles, or hours of external load operations is dependent on the operator's helicopter records / cargo hook usage logs.
4. If a Breeze-Eastern supplied load weigh indicator is included in the design it is considered "On-Condition" maintenance and not bound by the requirements of this SIL.
5. If a Breeze-Eastern supplied load carrying frame / support is included in the design the TBO as defined in paragraph D.3 above applies.
6. The application of corrosion preventative compounds; such as WD-40, ACF-50, Corrosion-X, or equivalent, on external metallic parts is acceptable if applied in accordance with the manufacturer's instructions.

## E. Breeze-Eastern Maintenance Services.

Operators are encouraged to coordinate all repair / overhaul work with Breeze-Eastern, or their authorized Service Centers. Breeze-Eastern is a Federal Aviation Administration (FAA) and an EASA-145 approved Repair Station (FAA Repair Station No. BZ7R1670, EASA No. 145.5454), and can repair / overhaul the system. Please contact Breeze-Eastern Customer Services as follows:

Breeze-Eastern LLC

35 Melanie Lane

Whippany, New Jersey 07981-1638 USA

Phone Number: 973-602-1001, Ext.1102, 1128 or 1059, or Fax Number: 973-739-9335

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