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**Instructions for
Continued Airworthiness
Talon LC Keeperless
Cargo Hook Kit
For the
Bell 206L series & 407**

**System Part Number
200-260-00**

STC SR00850SE



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RECORD OF REVISIONS

<i>Revision</i>	<i>Date</i>	<i>Page(s)</i>	<i>Reason for Revision</i>
1	9/17/02	Title	Factory address change.
2	10/10/03	00-00-00 Page 1 00-00-00 Page 2 05-00-00 Page 1 25-00-00 Page 2 25-00-00 Page 4	528-023-01 cargo hook configuration change Reference Service Bulletin 159-011-00
3	10/10/06	Section 5 25-00-00 page 2 25-00-00 page 4	Updated inspection and overhaul information including: adding daily check and an annual inspection, and revising overhaul interval. Added kg equivalent to table 25.2. Revised nut tightening instructions (item 6).
4	08/11/09	00-00-00 Page 1-2, 05-00-00, page 1 25-00-00 page 1,5	Add warnings, cautions, and notes provisions to document. Added caution notes and revised Figure 25-4.
5	03/10/10	05-00-00 Page 3-4	Changed overhaul frequency criteria.
6	01/20/16	Sections 0, 5, and 25	Updated definition of hours of external load operations, removed daily check (contained in the RFMS), expanded annual/100 hour inspection, updated removal and re-installation instructions.

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Section 0

Introduction

0.4 Scope

The following information is necessary to carry out the service, maintenance, and inspection of the Cargo Hook Kit P/N 200-260-00. This kit is a replacement hook kit for a helicopter with factory installed cargo hook suspension system and includes the cargo hook (P/N 528-023-01) and manual release cable (P/N 268-004-01) only. This kit interfaces with the remaining components of the cargo hook system as provided by Bell.

0.5 Purpose

The purpose of this Instructions for Continued Airworthiness (ICA) manual is to provide the information necessary to service, maintain and inspect the P/N 200-260-00 Cargo Hook Kit in an airworthy condition.

0.6 Arrangement

This manual contains instructions for the service, maintenance, inspection and operation of Cargo Hook Kit P/N 200-260-00 on Bell Model 206L series and 407 helicopters.

The manual is arranged in the general order that maintenance personnel would use to maintain and operate the cargo hook in service.

The arrangement is:

- Section 0 Introduction.
- Section 4 Airworthiness limitations (None apply to this cargo hook kit.)
- Section 5 Inspection and overhaul schedule.
- Section 25 Equipment and Furnishings.

0.7 Applicability

These Instruction for Continued Airworthiness are applicable to Cargo Hook P/N 528-023-01 installed as part of Kit P/N 200-260-00 on the following Bell helicopters:

Model	Serial Numbers
206L	45001-45153
206L-1	45154 and on
206L-3	51001 and on
206L-4	52001 and on
407	All

Equipped with one of the following

Bell Helicopter Cargo Hook Suspension Systems:

206-706-341-5 206-706-341-101 206-706-341-109

0.9 Abbreviations

FAA Federal Aviation Administration
FAR Federal Aviation Regulation
ICA Instructions for Continued Airworthiness

0.12 Precautions

The following definitions apply to the symbols used throughout this manual to draw the reader's attention to safety instructions as well as other important messages.



Indicates a hazardous situation which, if not avoided, will result in death or serious injury.



Indicates a hazardous situation which, if not avoided, could result in death or serious injury.



Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



Draws the reader's attention to important or unusual information not directly related to safety.



Used to address practices not related to personal injury.

0.19 Distribution of Instructions for Continued Airworthiness

Before performing maintenance ensure that the Instructions for Continued Airworthiness (ICA) in your possession is the most recent revision. Current revision levels of all manuals are posted on Onboard Systems Int'l web site at www.onboardsystems.com Current revision levels of all manuals are available from the factory.

Section 4

Airworthiness Limitations

4.2 No airworthiness limitations

No airworthiness limitations associated with this type design change.

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Section 5

Inspection and Overhaul Schedule

5.1 Cargo Hook Kit Inspection

The scheduled inspection intervals noted below are maximums and are not to be exceeded. If the system is subjected to unusual circumstances, extreme environmental conditions, etc., it is the responsibility of the operator to perform the inspections more frequently to ensure proper operation.

Annually or 100 hours of external load operations, whichever comes first, inspect the cargo hook kit components per the following. Refer also to CMM 122-005-00 for additional procedures.

1. Activate the aircraft's electrical system and press the Cargo Release button to ensure the cargo hook electrical release system is operating correctly. The cargo hook must release. Reset the hook by hand after release. If the hook does not release or re-latch, do not use the unit until the problem is fixed.



Depressing the electrical release button continuously in excess of 20 seconds will cause the cargo hook release solenoid to overheat, possibly causing permanent damage.

2. Activate the manual release system by pulling the manual release handle in the cockpit. The mechanism should operate smoothly and the cargo hook must release. Reset the hook by hand after release. If the hook does not release or re-latch, do not use the unit until the problem is resolved.
3. Move the cargo hook throughout its full ranges of motion and observe the manual release cable and electrical harness to ensure that they have enough slack. The release cable and harness must not be the stops that prevent the cargo hook from moving freely in all directions.
4. Visually inspect the cargo hook for presence and security of fasteners, electrical connection, and manual release cable connection.
5. Visually inspect the external manual release cable for damage and security paying close attention to the transition at its attachment to the cargo hook (see Figure 5-1).

5.1 Cargo Hook Kit Inspection continued

6. Cut lock wire and remove the two screws securing the manual release cover in order to verify the manual release cable rigging. Verify the release cable is set properly per the following.
 - Ensure the load beam is in the closed and locked position.
 - Move the manual release lever in the clockwise direction until it is against the cam stop. This is readily apparent as the lever rotates relatively easily for several degrees before resistance is felt.
 - Measure the cable ball end free play with the manual release handle in the cockpit in the non-release position.
 - Verify that the manual release cable has a minimum of .125" of free play at the fork fitting as shown in Figure 25-4.
 - Before re-installing the manual release cover inspect the inner cable for kinks or fraying (see Figure 5-1). Re-install the manual release cover with the two screws and lock-wire.

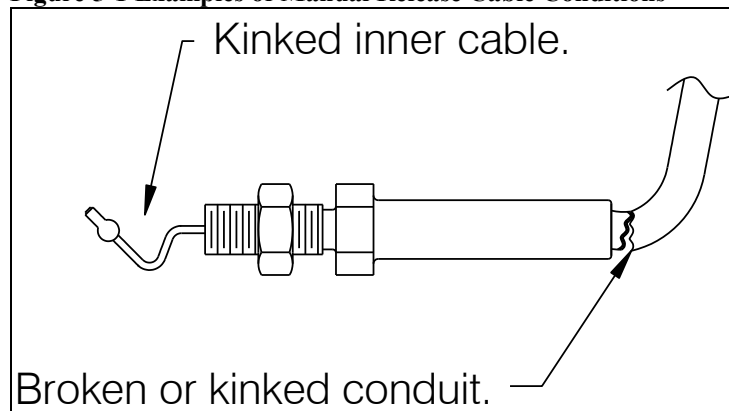


Manual release cable rigging must be done with the cargo hook in the closed and locked position.



Manual release cables are wearable items and must be replaced as condition requires. Broken or kinked conduit, inner cable kinks (ref Figure 5-1), frays, or sticky operation are each cause for immediate replacement.

Figure 5-1 Examples of Manual Release Cable Conditions



5.2 Cargo Hook Overhaul Schedule

Time Between Overhaul (TBO) for the cargo hook: 1000 hours of external load operations or 5 years, whichever comes first.



*Hours of external load operations should be interpreted to be (1) anything is attached to the primary cargo hook (whether or not a useful load is being transported) and (2) the aircraft is flying. If these conditions are **NOT** met, time does **NOT** need to be tracked.*

Overhaul instructions for the cargo hook are contained in Component Maintenance Manual 122-005-00. Contact Onboard Systems for guidance to locate authorized overhaul facilities.

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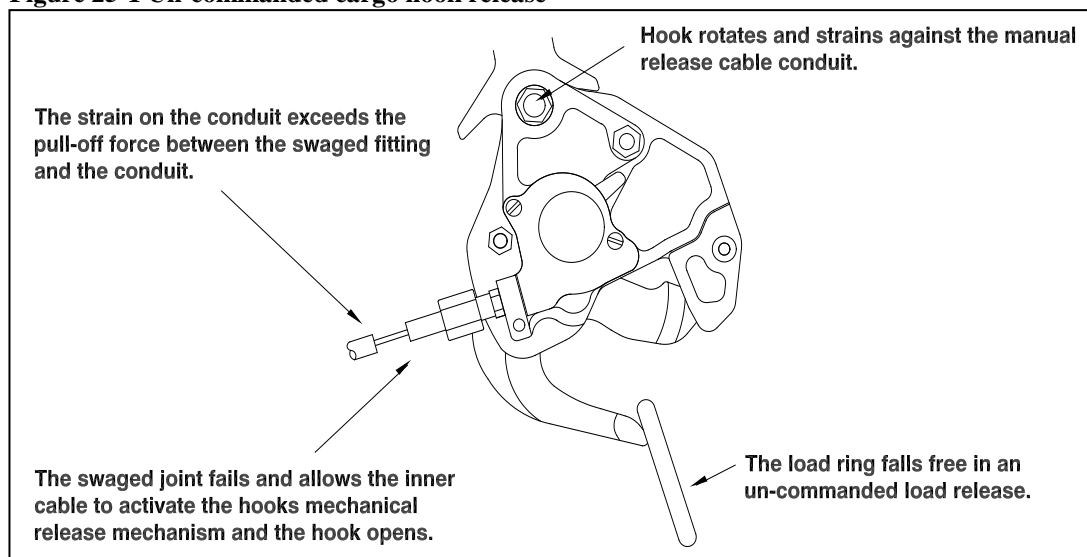
Section 25

Equipment and Furnishings



Un-commanded cargo hook release will happen if the manual release cable is improperly restrained. The cable must not be the stops that prevent the Cargo Hook from swinging freely in all directions. If the Cargo Hook loads cause the hook to strain against the manual release cable the swaged end of the cable may separate allowing the inner cable to activate the cargo hook manual release mechanism. The result is an un-commanded release. Ensure that no combination of cyclic stick or Cargo Hook position is restrained by the manual release cable.

Figure 25-1 Un-commanded cargo hook release



25.1 Cargo Hook Connector

Listed below is the pin out for the cargo hook connector.

Table 25-1 Cargo Hook Connector

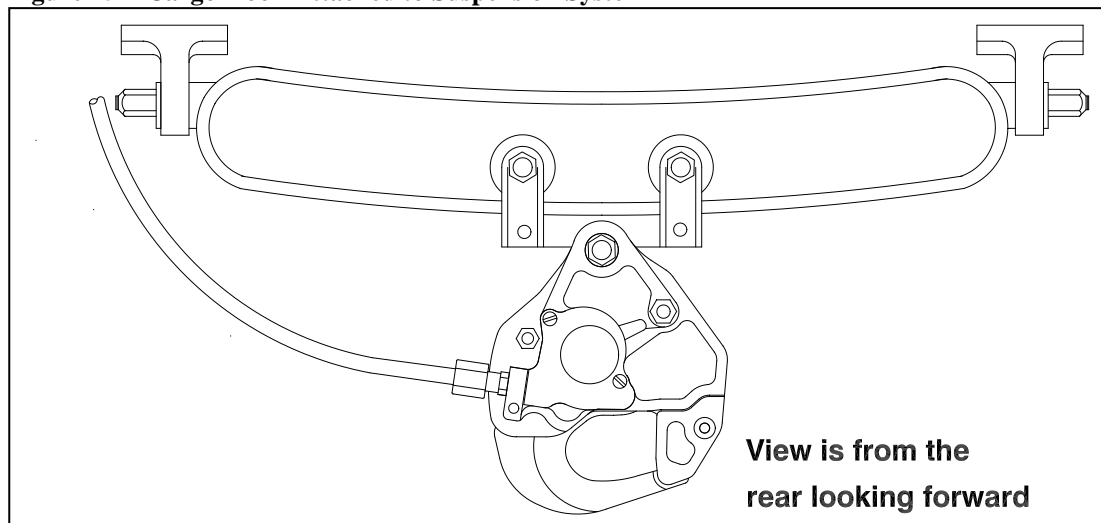
Pin	Function
A	Ground
B	Power

25.2 Description

The type design change consists of the installation of Cargo Hook P/N 528-023-01 that uses the existing rotorcraft cargo hook suspension system, electrical release system and internal mechanical release system. An external manual release cable (P/N 268-004-01) is provided which interfaces with the rotorcraft's internal mechanical release cable.

The primary elements of the Cargo Hook are the load beam, the internal mechanism, and a DC solenoid. The load beam supports the load and is latched through the internal mechanism. The solenoid and an external manual release cable in combination with the existing aircraft cargo hook provisions provide the means for unlatching the load beam.

Figure 25-2 Cargo Hook Attached to Suspension System



25.5 Component Weights

The weight of the Cargo Hook kit components are listed below.

Table 25-2 Component Weights

Item	Weight
Cargo Hook P/N 528-023-01	3.0 lbs (1.36 kgs)
Manual Release Cable P/N 268-004-01	0.35 lbs (0.16 kgs)

25.12 Storage Instructions

Refer to CMM 122-005-00 for storage instructions for the Cargo Hook.

25.15 Trouble Shooting

Table 25-3 Trouble Shooting

MALFUNCTION	PROBABLE CAUSE	CORRECTIVE ACTION
Cargo hook does not operate electrically, manual cable release operates normally.	Open electrical circuit, faulty wiring, circuit breaker, switch or solenoid	Disconnect cable from electrical connector on Cargo Hook. Using multimeter, check for 3.0 to 4.0 ohms between pins A and B of electrical connector. If open indication is obtained, replace the cargo hook per this section or repair per CMM 122-005-00. Refer to Bell maintenance documentation for aircraft side cargo hook electrical system.
Cargo hook does not operate electrically or manually.	Defective internal mechanism	Remove and replace cargo hook per this section or repair per CMM 122-005-00.
Cargo hook operates electrically, but not manually.	Defective manual release cable Defective manual release system	Check manual release cable for damage, remove manual release cover from cargo hook and inspect inner cable for kinks, frays, and corrosion. Disconnect external manual release cable at its connection point on the belly and pull its inner cable and check for sticky operation. Correct any defects. Refer to Bell maintenance documentation for internal manual release cable.
Load beam fails to relatch after being reset.	Defective latch mechanism	Remove and replace cargo hook per this section or repair per CMM 122-005-00.
Cargo hook manual release cable pull-off force exceeds 8 Lbs. (at the hook).	Friction in internal mechanism.	Check operation of unit using manual release lever. Remove and replace cargo hook per this section or repair per CMM 122-005-00.
Failure to open or relock properly	Failure to open or relock properly	Remove and replace cargo hook per this section or repair per CMM 122-005-00.
Circuit breaker opens when Cargo Hook is energized.	Short in the system, faulty wiring, circuit breaker or solenoid	Check for shorts to ground. Check solenoid resistance, repair or replace defective parts.

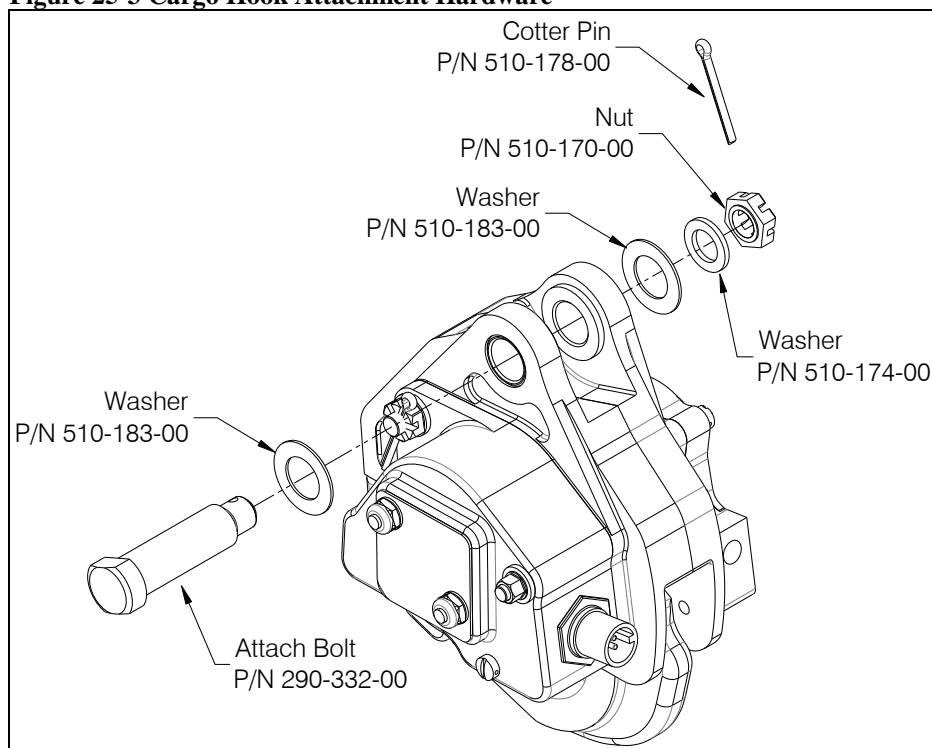
25.16 Cargo Hook Removal

1. Cut and remove all lockwire.
2. Remove manual release cover by removing 2 screws.
3. Remove the manual and electrical release cables from the Cargo Hook.
4. Remove the cotter pin P/N 510-178-00 from the Attach Bolt P/N 290-332-00.
5. Remove the castellated nut P/N 510-170-00 from the Attach Bolt.
6. Remove Attach Bolt and all washers.
7. Remove cargo hook from suspension system.

25.17 Cargo Hook Re-installation

1. Inspect the Cargo Hook for evidence of damage, corrosion and security of lock wire and fasteners. If damage is evident, do not use the items until they are repaired.
2. Verify that the part number of the cargo hook removed matches one of the numbers on the list in the Applicability section of this manual. If it does not, do not attempt to use the cargo hook, contact the factory for clarification.
3. Inspect the suspension system to ensure that all components are in serviceable condition before re-installing the cargo hook to the suspension system.
4. Attach the Cargo Hook, P/N 528-023-01 to the suspension system by installing the Attach Bolt P/N 290-332-00 and washer P/N 510-183-00 as illustrated in Figure 25-3.
5. Install washer P/N 510-183-00 and washer P/N 510-174-00 over bolt end.
6. Tighten nut P/N 510-170-00 on bolt P/N 290-332-00 to finger tight, then rotate nut to previous castellation if necessary to insert cotter pin. Install and secure cotter pin P/N 510-178-00.
7. Connect the electrical release harness connector to the cargo hook connector.

Figure 25-3 Cargo Hook Attachment Hardware



Note: The Cargo Hook Load Beam must point to the right side of the helicopter when looking from the rear.

25.17 Cargo Hook Re-installation, continued

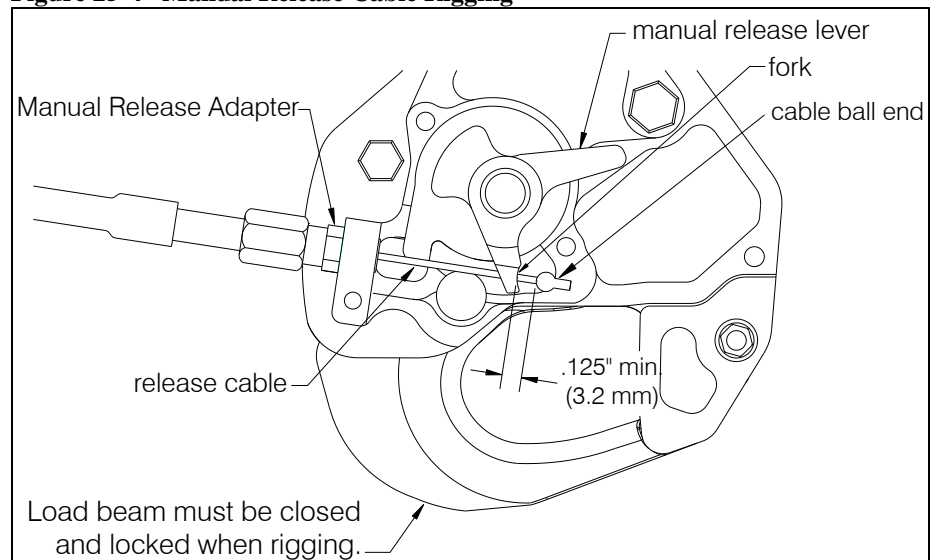
Connection of manual release cable

1. Remove the manual release cover from the cargo hook.
2. Thread the manual release adapter, P/N 290-331-00, into the cargo hook manual release boss on the cargo hook side plate.
3. Connect the manual release cable to the adapter.
4. Place the cable ball end fitting into the hook manual release fork fitting as illustrated in Figure 25-4.
5. Move the manual release lever in the clockwise direction until it is against the cam stop. This is readily apparent as the lever rotates relatively easily for several degrees before resistance is felt as it comes up against the internal cam.
6. Measure the cable ball end free play with the manual release handle in the cockpit in the non-release position.
7. Verify that the manual release cable system has a minimum of .125" of freeplay at the fork fitting as shown in Figure 25-4.
8. Re-install the manual release cover with the two screws and lockwire.



Manual release cable rigging must be done with the cargo hook in the closed and locked position.

Figure 25-4 Manual Release Cable Rigging



25.18 General Procedural Instructions-Testing

After re-installation of the cargo hook, perform the following:

1. Activate the electrical system and press the Cargo Hook release button to ensure the cargo hook electrical release is operating correctly. The mechanism should operate smoothly and the Cargo Hook must release. Reset the hook by hand after the release. If the hook does not release or relatch, do not use the unit until the difficulty is resolved.



The release solenoid is intended to be energized only intermittently. Depressing the electrical release button continuously in excess of 20 seconds will cause the release solenoid to overheat, possibly causing permanent damage.

2. Activate the release handle located between the seats to test the cargo hook manual release mechanism. The mechanism should operate smoothly and the Cargo Hook must release. Reset the hook by hand after release. If the hook does not release or relatch do not use the unit until the difficulty is resolved.
3. Swing the installed Cargo Hook to ensure that the manual release cable assembly and the electrical release cable have enough slack to allow full swing of the suspension assembly without straining or damaging the cables. The cables must not be the stops that prevent the Cargo Hook from swinging freely in all directions.