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Instructions for Continued Airworthiness

Cargo Hook Kits
For the
Bell 206A and 206B

With
Talon LC Keeperless
Cargo Hook

System Part Numbers
200-267-02
200-389-00
200-390-00

STC SR00896SE

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Record of Revisions

Revision	*Date*	*Page(s)*	*Reason for Revision*
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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's 200-267-02, 200-389-00 and 200-390-00 on the Bell 206A and 206B models. See Section 25.2 for description of these kits. These kits interface with the aircraft's existing cargo hook suspension frame and cargo hook fixed provisions including the internal electrical and manual release systems. Refer to Bell maintenance manuals for these parts of the cargo hook system.

0.5 Purpose

The purpose of this Instructions for Continued Airworthiness (ICA) manual is to provide the information necessary to inspect, service and maintain the P/N's 200-267-02, 200-389-00 and 200-390-00 Cargo Hook Kits in an airworthy condition.

0.6 Arrangement

This manual contains instructions for the maintenance, inspection, and operation of the Cargo Hook Kit P/N's 200-267-02, 200-389-00 and 200-390-00 on Bell Model 206A and 206B helicopters.

The manual is arranged in the general order that maintenance personnel would use to maintain and operate the Cargo Hook Kit in service.

The arrangement is:

Section 0 Introduction.
Section 4 Airworthiness Limitations (None apply to this System.)
Section 5 Inspection and Overhaul Schedule
Section 11 Placards and Markings
Section 25 Equipment and Furnishings

0.7 Applicability

These Instructions for Continued Airworthiness are applicable to Cargo Hook Kit P/Ns 200-267-02, 200-389-00, and 200-390-00 on the Bell 206A and 206B helicopters.

0.9 Abbreviations

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

0.12 Precautions

The following definitions apply to precaution flags used in this manual.

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.

Onboard Systems offers a free notification service via fax or e-mail for product alerts and documentation updates. By registering Onboard Systems products on the web site, we will be able to contact you if a service bulletin is issued, or if the documentation is updated.

Notices can be chosen to be received on an immediate, weekly, or monthly schedule via fax, email or both methods. There is no charge for this service. Please visit the Onboard Systems web site at www.onboardsystems.com/notify.php to get started.

Section 4
Airworthiness Limitations

4.2 Airworthiness Limitations

The Airworthiness Limitations section is FAA approved and specifies inspections and other maintenance required under Secs. 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

No airworthiness limitations are 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 cargo hook suspension 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 and suspension per the following.

NOTICE

*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.*

1. Activate the helicopter's electrical system and press the Cargo Release button to ensure the cargo hook's electrical release system is operating correctly. With no load on it, the cargo hook must open. Reset the cargo hook by hand after release.

CAUTION

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

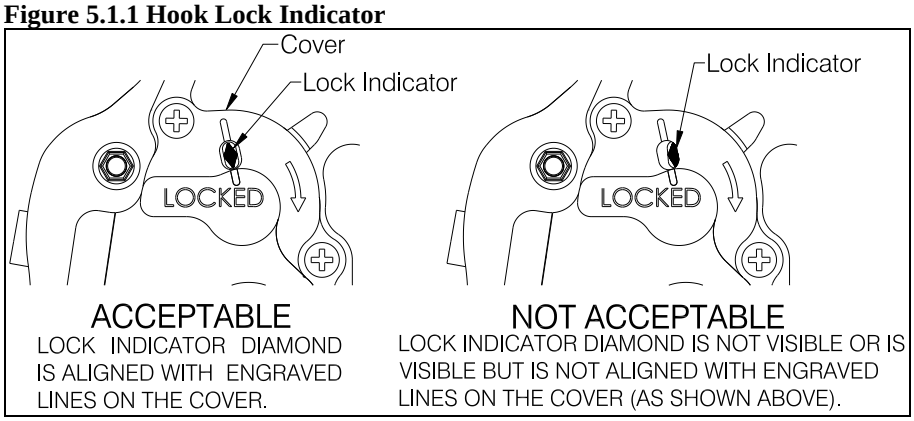
2. Check the cargo hook's manual release system by pulling the release lever in the cockpit. With no load on it, the cargo hook must open. Reset the cargo hook by hand after release. Verify that the hook lock indicator on the side of the hook returns to the fully locked position.

⚠ CAUTION

In the fully locked position the hook lock indicator must align with the lines on the manual release cover (see Figure 5.1.1).

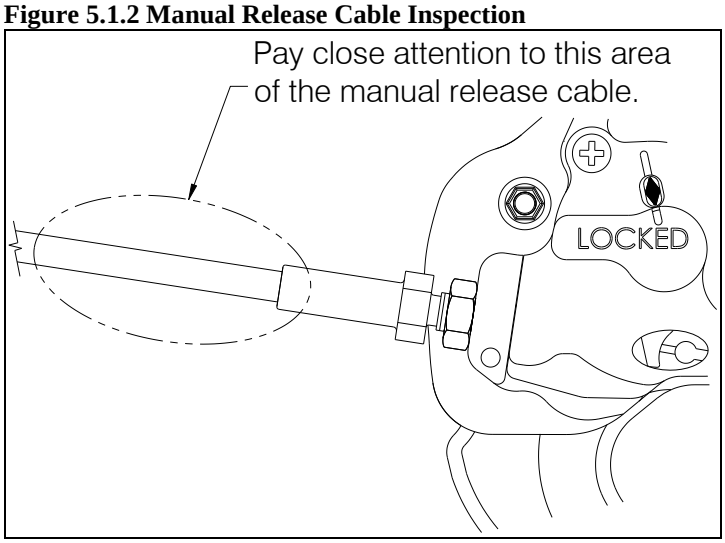
5.1 Cargo Hook Suspension System Inspection Schedule continued

Figure 5.1.1 Hook Lock Indicator



3. Move the cargo hook throughout its full range of motion and observe the manual release cable and electrical harness(es) to ensure that they have enough slack. The release cable and harness(es) must not be the stops that prevent the cargo hook from moving freely in all directions.
4. Rotate the Pivot Link Assembly (item 4 in Figure 5.1.5) about its upper pivot point at the Bell suspension frame and verify that the bolt does not rotate (i.e. – the wear surfaces should be the Pivot Link Assembly bearings on the bolt and not the bolt on the suspension frame ears).
5. Visually inspect for presence and security of fasteners and electrical connections.
6. Visually inspect the external load weigh harness (if load cell is installed) for damage and security. Note: the cargo hook uses the electrical release harness included with the original Bell installation.
7. Visually inspect the manual release cable for damage, paying close attention to the flexible conduit at the area of transition to the cargo hook end fitting (refer to Figure 5.1.2). Inspect for splitting of the outer black conduit in this area and separation of the conduit from the steel end fitting.

Figure 5.1.2 Manual Release Cable Inspection



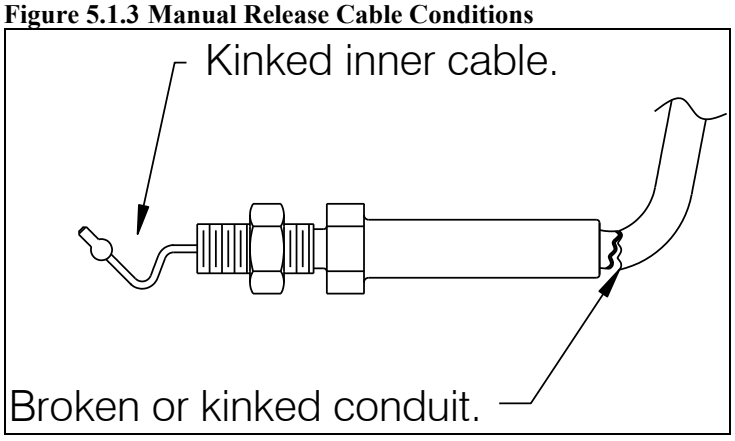
5.1 Cargo Hook Kit Inspection Schedule continued

8. Remove the manual release cover from the cargo hook and inspect the visible section of the inner cable for kinks or frays.

CAUTION

Manual release cables are wearable items and must be replaced as condition requires. Broken or kinked conduit, inner cable kinks (ref Figure 5.1.3), frays, or sticky operation are each cause for immediate replacement.

Figure 5.1.3 Manual Release Cable Conditions

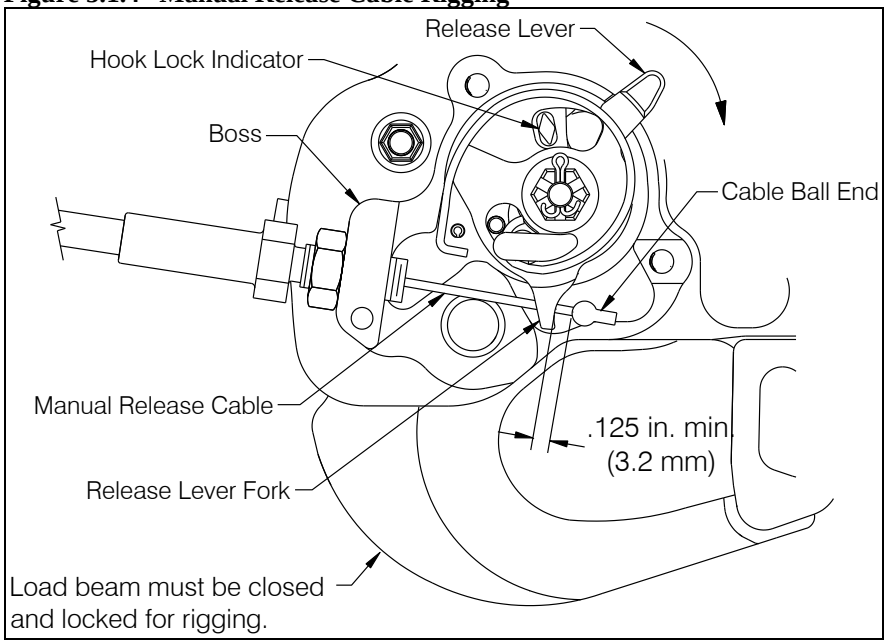


5.1 Cargo Hook Kit Inspection continued

9. Check the manual release cable rigging per the following. With the cargo hook in the closed and locked position, rotate the release lever in the clockwise direction to remove free play (the free play is taken up when the hook lock indicator begins to move) and measure the gap between the cable ball end and the release lever fork with the manual release handle in the cockpit in the non-release position. There must be a minimum of .125 inches (3.2 mm) between the cable ball end and fork fitting as shown in Figure 5.1.4. The maximum amount of free play is limited by the manual release cover, i.e. – the ball end must fit inside the manual release cover when it is installed.

   If necessary adjust the manual release cable system to obtain a minimum of .125 inches (3.2 mm). Some adjustment can be made at the cargo hook by loosening the jam nut and turning the manual release cable or cargo hook the required direction and re-tightening the jam nut. Ensure the manual release cable fitting threads maintain full thread engagement with the cargo hook side plate boss (i.e.- the end of the threads should not be recessed within the boss). Tighten jam nut. Re-install the manual release cover with two screws.

Figure 5.1.4 Manual Release Cable Rigging



5.1 Cargo Hook Kit Inspection continued

Every 5 years or 1000 hours of external load operations, whichever comes first, remove the cargo hook kit components from the helicopter and disassemble per the following instructions and inspect. Refer to section 5.2 for the overhaul schedule for the cargo hook. Refer to Figure 5.1.5 for identification of the primary parts of the cargo hook kits, hardware, etc. are not shown.

1. Remove the cushioned loop clamps securing the shock cord to the cargo hook.
2. Disconnect the electrical release cable (cargo hook kits use the electrical release cable included with the Bell kit) from the cargo hook (1) and the pin load cell (2) connector (if load weigh system is installed) at the belly of the helicopter.
3. Remove the nut and washer securing the manual release cable (5) to the bracket on the Bell suspension frame and disconnect the inner cable of the manual release cable from the fixed manual release cable.
4. Remove the hardware attaching the Pivot Link Assembly (4) to the Bell suspension frame and remove the Pivot Link Assembly and Cargo Hook from the aircraft with the manual release cable attached.
5. Remove the manual release cover from the cargo hook and disengage the inner cable of the manual release cable from the release lever on the cargo hook. Loosen its jam nut, and unthread the manual release cable from the cargo hook.
6. Separate the Pivot Link Assembly from the cargo hook by removing the cotter pin, nut, and washers from the end of the attach bolt (8) or pin load cell assembly (if load weigh system is present).
7. If Pivot Link Assembly bushing and bearings (see Figure 5.1.6 and Table 5.1.2) are worn (see Table 5.1.3 for wear limits) press them out using an arbor press or similar.

5.1 Cargo Hook Kit Inspection continued

Figure 5.1.5 Cargo Hook Kit Parts

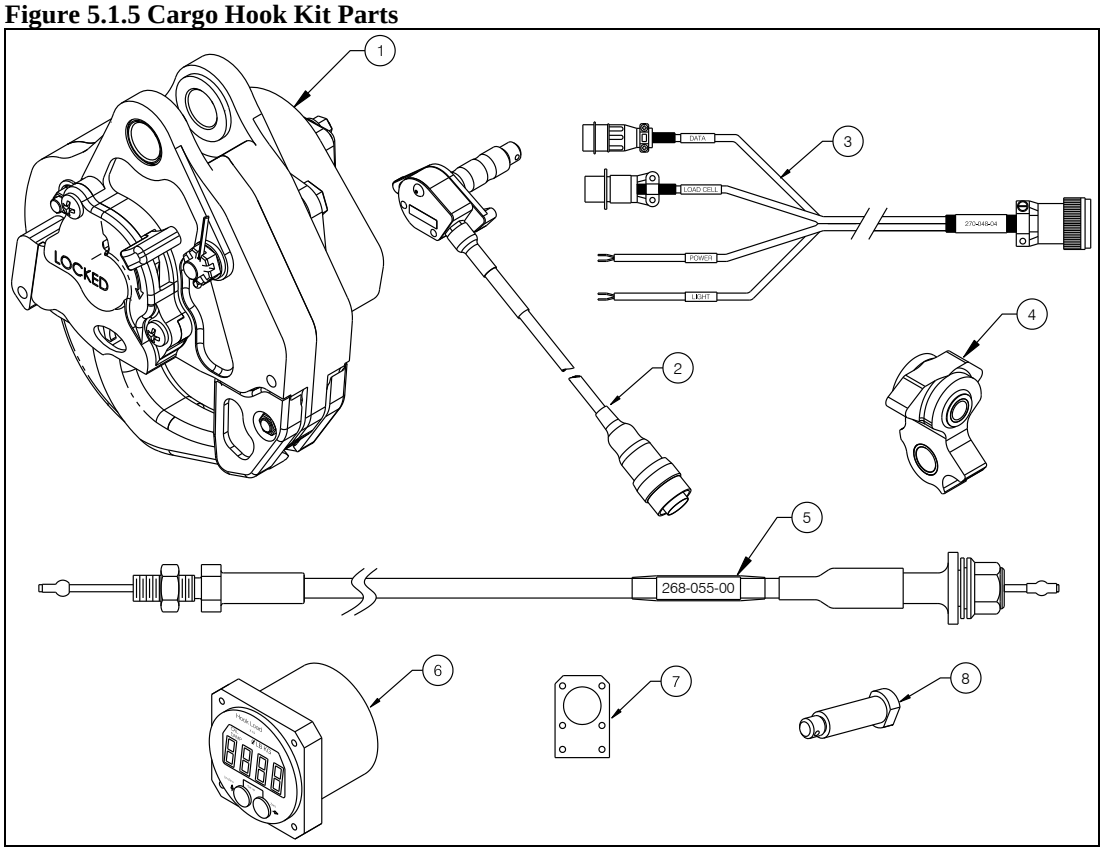


Table 5.1.1 Cargo Hook Kit Parts

ITEM	PART NO.	DESCRIPTION	QTY
1	528-029-00	Cargo Hook	1
2	210-301-01*	Pin Load Cell Assembly	1
3	270-048-04*	Load Weigh Internal Harness	1
4	232-732-00	Pivot Link Assembly	1
5	268-055-00	Manual Release Cable Assembly	1
6	210-095-00*	C-39 Indicator	1
7	235-035-00*	QD Bracket	1
8	290-332-00	Attach Bolt	1

*Parts are included with load weigh system only. If load weigh system is not installed, the Pin Load Cell Assembly is replaced by Attach Bolt (item 8).

5.1 Cargo Hook Kit Inspection continued

Figure 5.1.6 Pivot Link Assembly Parts

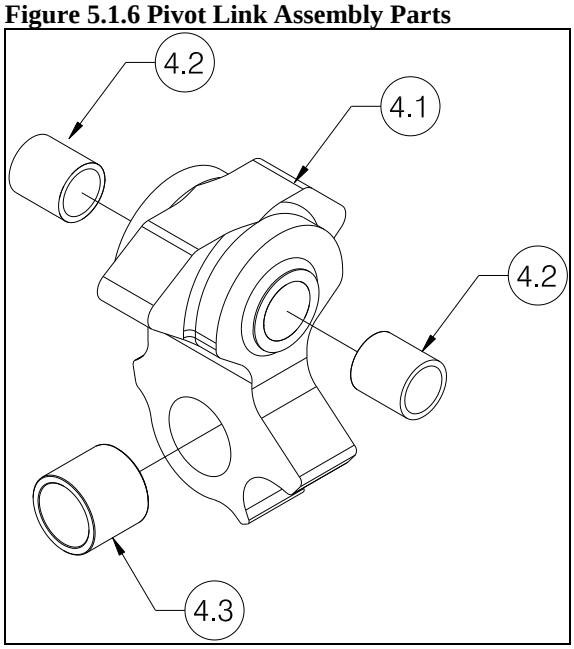


Table 5.1.2 Pivot Link Assembly Parts

ITEM	PART NO.	DESCRIPTION	QTY
1	291-910-00	Pivot Link	1
2	517-016-00	DU Bearing	2
3	290-364-00	Bushing	1

5.1 Cargo Hook Kit Inspection continued

Perform magnetic particle inspection in accordance with ASTM E-1444 and MIL-STD-1907, Grade A on the parts listed below. No cracks are permitted in any of these part(s).

- Pin Load Cell Assembly (2). Inspect shoulder of pin and do not remove cover.

In addition, carefully inspect the detail parts in accordance with the instructions in Table 5.1.3. Inspect the parts in a clean, well-lighted room.

Table 5.1.3 Cargo Hook Kit Inspection Criteria

Seq	Component	Inspection Criteria & Limit	Repair Action	Finish
1.	Pivot Link Assembly (4)	Dents, nicks, gouges, scratches and corrosion – 0.030 in. (0.76mm) deep. Wear on lower bushing inside diameter (ID), .520 in. (16 mm) maximum. Wear on ID of upper bushings, more than 50% copper showing.	Glass bead blast at less than 30 PSI to remove corrosion. Blend at 10:1 ratio as required to provide smooth transitions. Replace bushings if required. Install bushings with zinc chromate primer (TT-P-1757 or similar).	Passivate per AMS-QQ-P-35 or ASTM A967
2.	Attach Bolt (8)	Wear on outside diameter (OD) - .495 in. (12.57 mm).	None.	N/A
3.	Pin Load Cell Assembly (2) (replaced by Load Cell Assembly if Load Weigh System is installed).	Wear on outside diameter (OD) - .495 in. (12.57 mm). Loose or damaged strain relief, wear or chafing on wire harness exposing inner wires.	None. Return to factory for repair.	N/A
4.	Cargo Hook (1)	Refer to Component Maintenance Manual 122-017-00.		
5.	Manual Release Cable Assembly (5)	Kinked or bound inner cable, split outer conduit, conduit separated from end fittings, inner wires under conduit exposed.	None.	N/A
6.	All remaining nuts, bolts, cotter pins, washers.	Wear, corrosion, or deterioration	None	N/A

Upon completion of the inspection, re-assemble and re-install the cargo hook kit components per Section 25.17.

5.2 Cargo Hook Overhaul Schedule

Time Between Overhaul (TBO): 5 years or 1000 hours of external load operations (*), 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 the cargo hook per Component Maintenance Manual 122-017-00. Contact Onboard Systems for guidance to locate authorized overhaul facilities.

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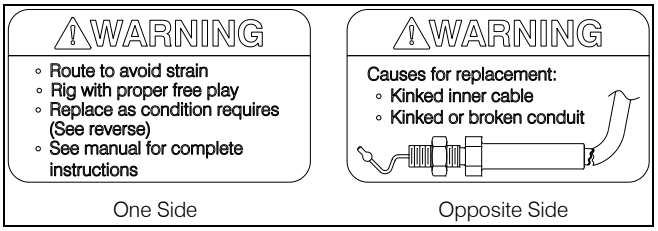
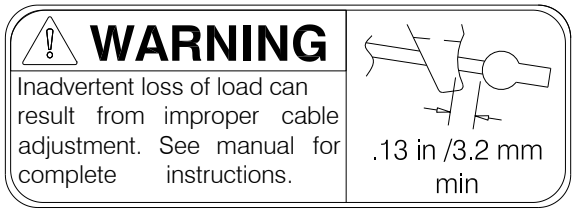
Section 11
Placards and Markings

11.1 Placards

The Cargo Hook Kits include the following placards shown in Table 11.1.

Table 11.1 Cargo Hook Kit Placards

Placard part number and appearance	Location
P/N 215-010-00 ELECTRONIC WEIGHING SYSTEM	Located next to the power switch and circuit breaker. **Note:** This placard is included only with kit P/Ns 200-389-00 and 200-390-00.
P/N 215-012-00 TURN THE WEIGHING SYSTEM OFF WHEN NAVIGATION EQUIPMENT IN USE. NO AIRCRAFT OPERATION SHOULD BE PREDICATED ON THE READING OF THE ONBOARD WEIGHING SYSTEM	Located next to the load weigh indicator. **Note:** This placard is included only with kit P/Ns 200-389-00 and 200-390-00.
	Located on the manual release cable, near the cargo hook.
	Located on the underside of the cargo hook.

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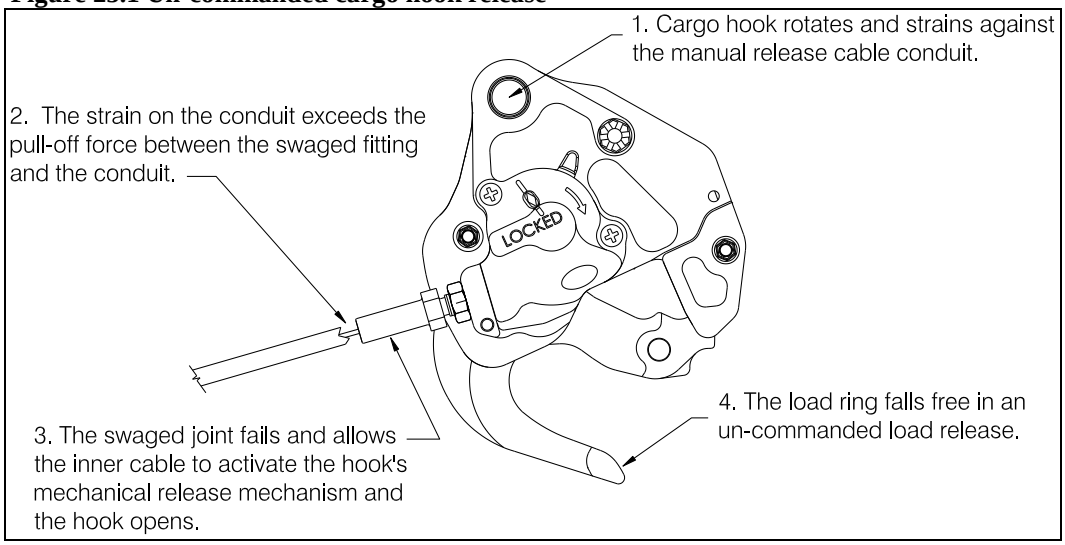
Section 25
Equipment and Furnishings

WARNING

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 25.1.1 Cargo Hook Connector

Pin	*Function*
A	Ground
B	Positive

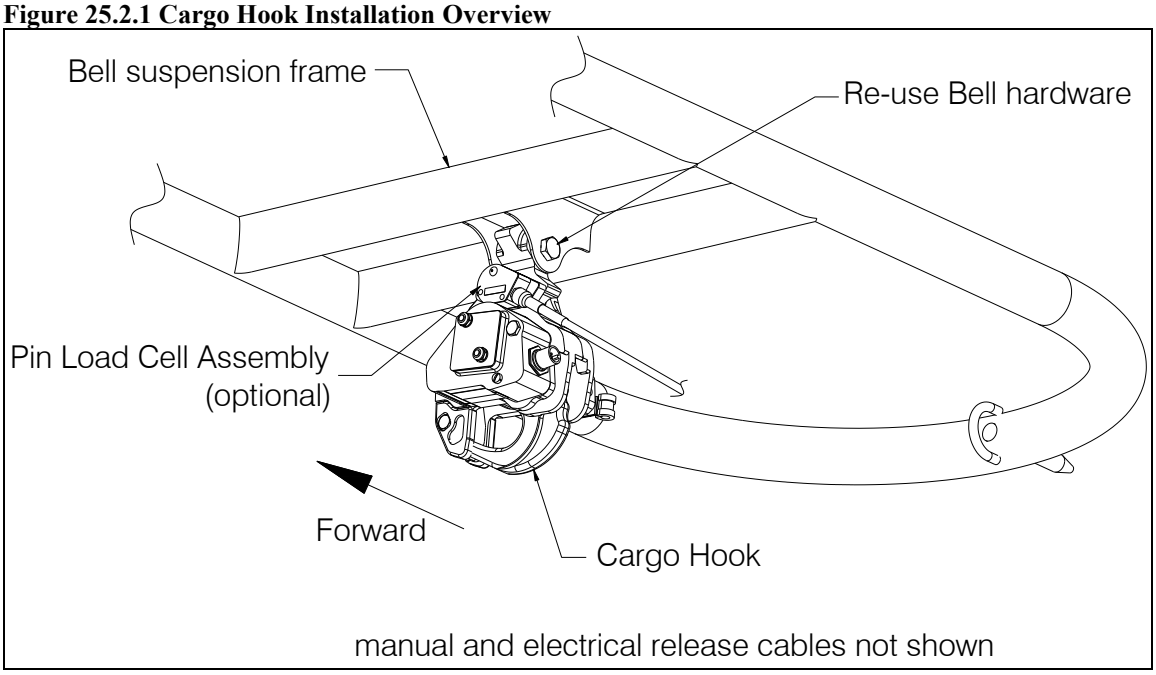
25.2 Description

Kit P/N 200-267-02 includes the cargo hook, a Pivot Link Assembly which serves to attach the cargo hook to the Bell "horseshoe" suspension frame, and a manual release cable to connect the cargo hook's release mechanism to the Bell internal manual release system.

Kit P/N 200-390-00 is the same as the 200-267-02 kit except it includes a load weigh system. The load weigh system includes the pin load cell at the cargo hook (which replaces the attach bolt in kit P/N 200-267-02), a load weigh indicator installed in the cockpit and an interconnecting wire harness. The load weigh system's purpose is to provide the pilot with an indication of the weight of the external load carried by the helicopter.

Kit P/N 200-389-00 is an upgrade kit for an operator with an Onboard Systems E-45 Load Weigh System previously installed. It utilizes the load weigh indicator and the internal wire harness of the E-45 load weigh system but replaces the link style load cell with the pin load cell. It does not include a cargo hook. It is compatible with Onboard Systems cargo hook P/Ns 528-023-01 and 528-029-00.

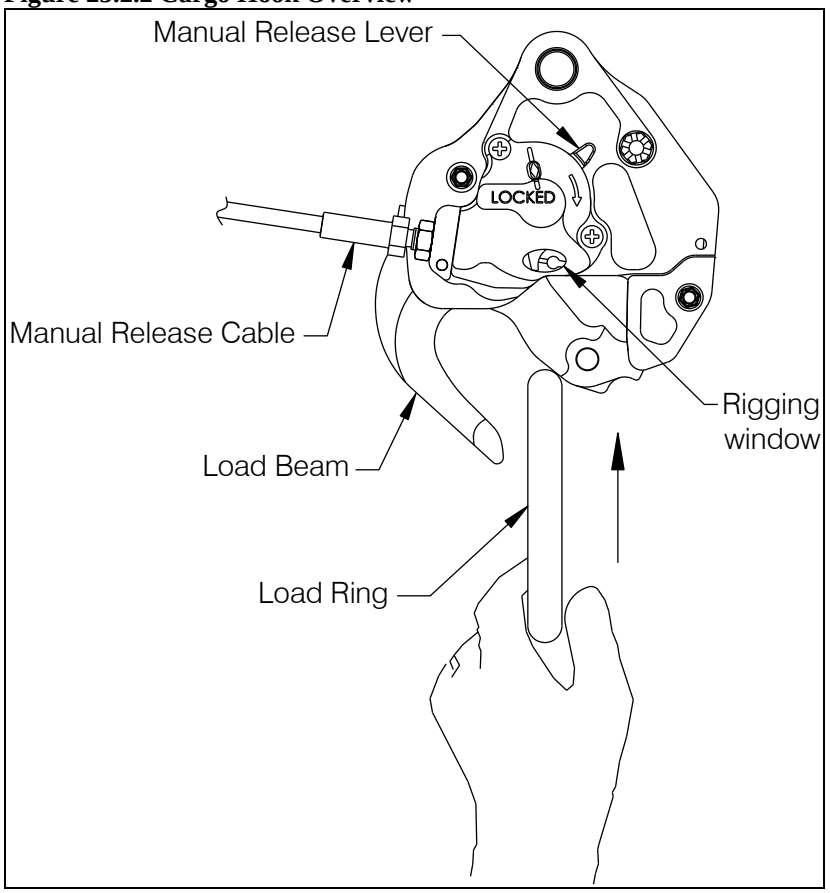
Figure 25.2.1 Cargo Hook Installation Overview



25.2 Description continued

The cargo hook is attached to the Bell suspension frame and interfaces with the existing fixed provisions on the helicopter through an electrical harness and a manual release cable. A load is attached to the cargo hook by passing a cargo sling ring into the throat of the load beam and pushing the ring against the upper portion of the load beam throat, which will initiate the hook to close. In the closed position, a latch engages the load beam and latches it in this position. A load release can be initiated by three different methods. Normal release is achieved by pilot actuation of a push-button switch in the cockpit. When the push-button switch is pressed, it energizes a solenoid in the cargo hook, and the solenoid opens the latch in the internal mechanism. In the event of an electrical failure, load release can be achieved by operating the manual release cable. The release cable actuates the internal mechanism of the cargo hook to unlatch the load beam. Ground personnel can also release the load by actuating a lever located on the side of the cargo hook.

Figure 25.2.2 Cargo Hook Overview



25.5 Component Weights

The weights of the Cargo Hook Kits are listed in Table 25.5.1 below. Select kit component weights and their locations are listed in Table 25.5.2. Pin Load Cell Assembly, C-39 Indicator and Load Weigh Internal Harness are only included if Load Weigh System is installed.

Table 25.5.1 Kit Weights

Item	Weight
Kit P/N 200-267-02	4.1 lbs (1.86 kgs)
Kit P/N 200-389-00	2.4 lbs (1.1 kgs)
Kit P/N 200-390-00	5.4 lbs (2.45 kgs)

Table 25.5.2 Component Weights and Locations

Item	Weight	Location
Cargo Hook	3.1 lbs (1.4 kgs)	FS108.4
Pivot Link Assembly	0.63 lbs (.29 kgs)	FS108.4
Manual Release Cable	0.27 lbs (.12 kgs)	FS101.0*
Pin Load Cell Assembly	0.30 lbs (.13 kgs)	FS106.0*
C-39 Indicator	0.47 lbs (.21 kgs)	**
Load Weigh Internal Harness	0.64 lbs (.29 kgs)	**

*Approximate location.

** C-39 Indicator installation location is optional, typically installed on the instrument panel. Load Weigh Harness cg location would be approximately halfway between the C-39 indicator location and FS91.9.

25.12 Storage Instructions

Refer to the Component Maintenance Manual (CMM) 122-017-00 for storage instructions for the cargo hook. Clean the exterior components thoroughly of excess dirt and grease with a rag before packaging. Pack the components in a heat-sealable package. If the unit is to be stored for long periods in a tropical climate it should be packed in a reliable manner to suit local conditions. Refer to MIL-PRF-23199 and MIL-STD-2073-1 for additional guidance.

Package the unit in a suitable fiberboard box and cushion the unit to prevent shifting. Seal the fiberboard box with tape and mark the box with the contents and date of packaging.

25.15 Trouble Shooting

Table 25.15.1 Trouble Shooting

MALFUNCTION	PROBABLE CAUSE	CORRECTIVE ACTION
Cargo hook does not operate electrically, manual cable release operates normally.	Open electrical circuit, faulty wiring, fuse, switch or solenoid.	Disconnect cable from electrical connector on cargo hook. Using multi-meter, check for 3.0 to 4.0 ohms between pins A and B of electrical connector (see note 1 below). If open indication is obtained, remove and replace cargo hook (see sections 25.16 and 25.17).
Cargo hook does not operate electrically or manually.	Defective internal mechanism	Remove and replace with serviceable unit or repair per CMM 122-017-00.
Load beam fails to relatch after being reset.	Defective latch mechanism	Remove and replace with serviceable unit or repair per CMM 122-017-00.
Cargo hook manual release cable pull-off force exceeds 8 Lbs. (at the hook).	Friction in internal mechanism.	Remove and replace with serviceable unit or repair per CMM 122-017-00.
Failure to open or re-lock properly	Defective internal mechanism	Remove and replace with serviceable unit or repair per CMM 122-017-00.
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.
Circuit breaker opens when the circuit to Load Weigh System is energized.	Short in the system, faulty wiring, circuit breaker or switch.	Repair or replace defective wiring, circuit breaker or switch.
Load Weigh Indicator does not light up.	Faulty wiring, circuit breaker or switch.	Check the power switch, circuit breaker and wiring. If this doesn't help, remove and replace C-39 indicator.
Indicator displayed load is incorrect.	Incorrect Calibration Code.	Ensure the correct Calibration Code has been entered (see Note 2).
Indicator displayed load is not stable.	Dampening level is too low.	Adjust the dampening level to a higher number (see Note 3).
Indicator displayed load takes too long to change the reading when the load is changed.	Dampening level is too high.	Adjust the dampening level to a lower number (see Note 3).
Indicator does not change with changing hook loads.	Defective load cell, indicator failure or damaged internal harness.	Check for damaged internal wire harness, remove and replace harness assembly or load cell.

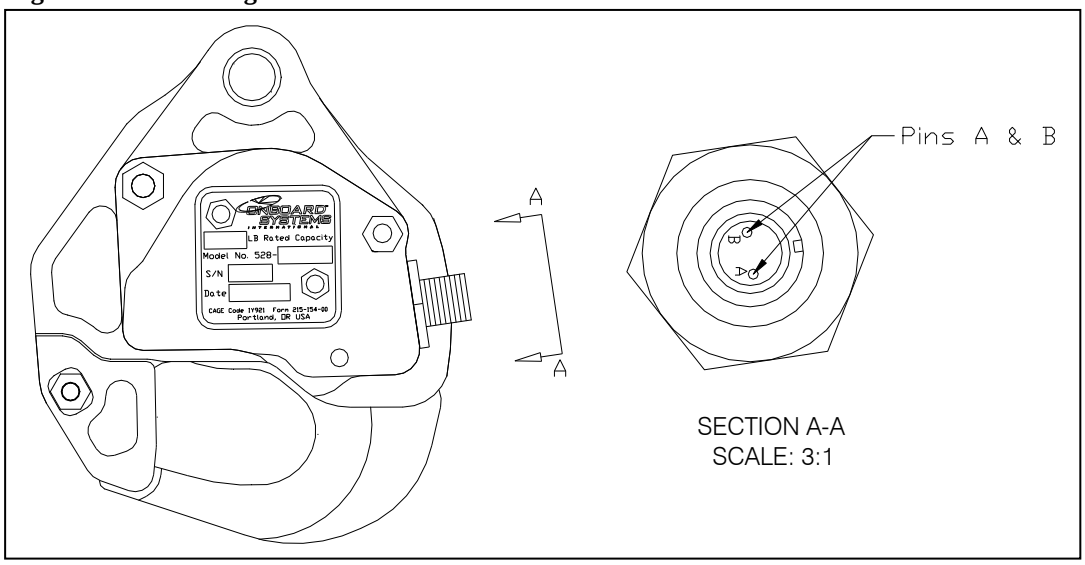
25.15 Trouble Shooting continued

Notes:

1. Checking resistance at pins A and B.

Check for 3.0 to 4.0 ohms between pins A and B of electrical connector located on the cargo hook (see below).

Figure 25.15.1 Cargo Hook Electrical Connector



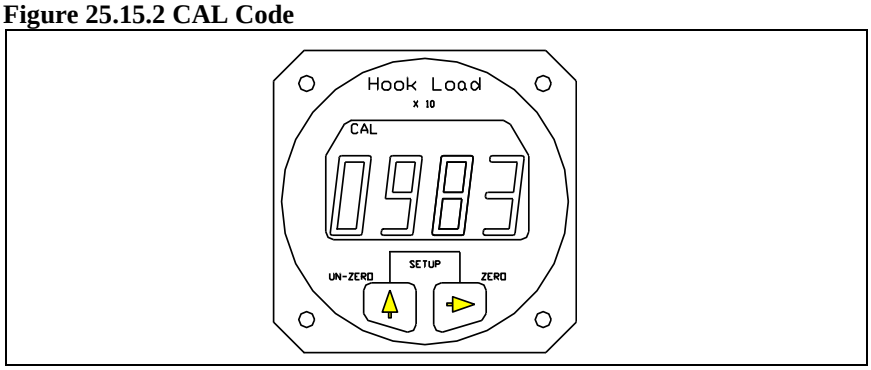
25.15 Trouble Shooting continued

Table 25-4 Notes continued:

2. Checking Load Weigh Indicator calibration code:

With the Indicator powered up and in the Run Mode, press both buttons at the same time to go to Setup. Scroll through the menu until the word CODE is displayed, then press the Right button. The display should look like this:

Figure 25.15.2 CAL Code

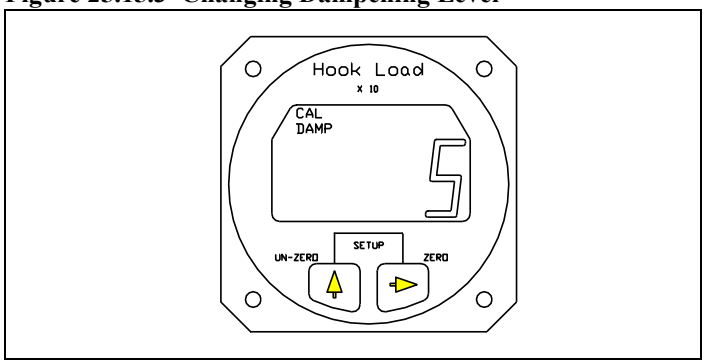


This code should match the code printed on the tag attached to the load cell cable. If this code does not match, contact Onboard Systems for further guidance.

3. Adjusting dampening level:

With the Indicator powered up and in the Run Mode, press both buttons at the same time to go to Setup. Scroll through the menu, using the Left button, until the word DAMP is displayed. To look at or change the Dampening Level press the Right button. The display should look like this:

Figure 25.15.3 Changing Dampening Level



The CAL and the DAMP legend is turned on and the previously set dampening level is displayed. To return to Run without changing the current dampening level press both the Right and Left buttons at the same time. To change the dampening number, use the Left button to scroll the blinking digit to the desired number. Ten dampening levels are available, from 0 through 9. At level 0 the display responds to the slightest change in weight. However, if the load bounced even slightly, the display digits would respond instantly, making the display look unstable. With a dampening level of 9, the display would be stable under the most turbulent conditions, however, it would take several seconds for the display to respond to a change in weight. The ideal dampening level will depend on the flying conditions. A mid range setting of 5 or 6 is usually adequate. After the selection has been made press both the Right and Left buttons at the same time to return to Run.

25.16 Component Removal

Cargo Hook Removal

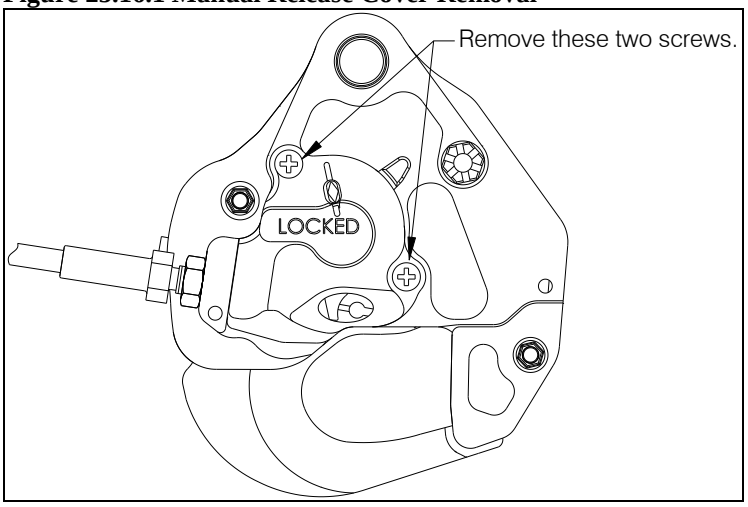
1. Disconnect the electrical connector at the cargo hook.
2. Remove the two cushioned loop clamps securing the shock cord to the cargo hook by removing the screw at each clamp.

NOTICE

The cargo hook kit uses the shock cord included with the original Bell suspension installation.

3. Remove the cotter pin (P/N 510-178-00), castellated nut (P/N 510-170-00), and washers (P/N 510-174-00 and P/N 510-183-00) from the attach bolt (P/N 290-332-00) or Pin Load Cell Assembly P/N 210-301-01 (if the load weigh system is present).
4. Remove attach bolt and remaining washer (or Pin Load Cell Assembly).
5. Remove manual release cover from the cargo hook by removing the two screws.

Figure 25.16.1 Manual Release Cover Removal



6. Loosen the jam nut on the manual release cable and remove the manual release cable from the Cargo Hook by holding the cable and rotating the cargo hook about the threaded end of the cable.
7. Remove cargo hook from suspension system.

Pivot Link Assembly Removal

1. Remove the nut, washers and bolt securing the Pivot Link Assembly to the Bell suspension frame. The cargo hook kits use the existing hardware included with the Bell suspension assembly.

25.16 Component Removal

Manual Release Cable Assembly Removal

1. At the bracket on the Bell suspension frame remove the nut and washer from the threaded end of the manual release cable.
2. Disconnect the inner cable from the fixed manual release cable by compressing the spring on the Coupler and sliding the cable ball end out.

NOTICE

The manual release cable assembly interfaces with the fixed manual release cable as supplied by Bell (refer to Bell documentation for fixed side).

3. Remove the manual release cover from the cargo hook (as described above).
4. Unhook the cable ball end of the inner cable from the release lever of the cargo hook, loosen the jam nut on the manual release cable and unthread the release cable from the cargo hook.

C-39 Load Weigh Indicator Removal

The C-39 Indicator location is optional within the cockpit. It is designed to fit within a standard 2 ¼" instrument panel hole.

1. Remove the four mounting screws that secure it within its mounting position.
2. Disconnect the electrical connector from the back of the indicator and remove the indicator from the aircraft.

25.17 Component Re-installation

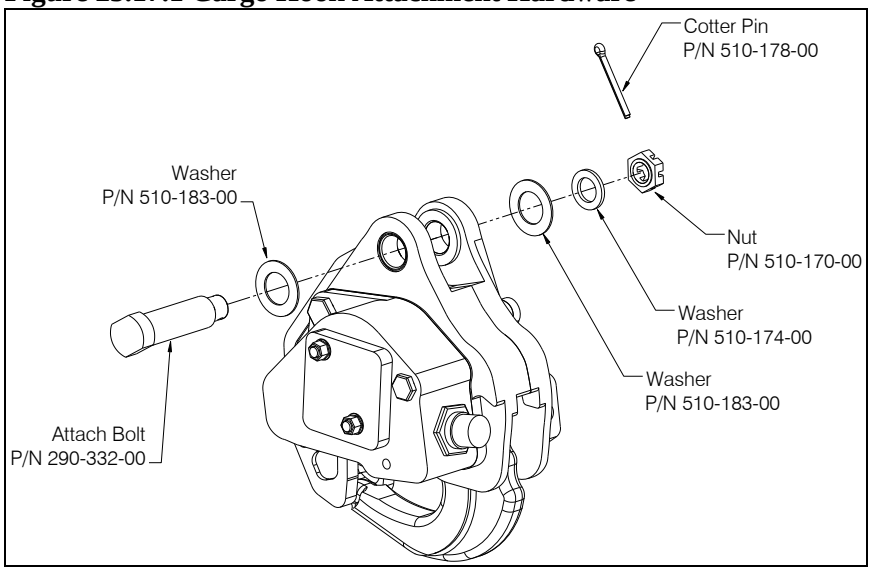
Cargo Hook Re-installation

1. Attach the Cargo Hook to the Pivot Link Assembly by installing attach bolt P/N 290-332-00 with a washer P/N 510-183-00 under the bolt head (as illustrated in Figure 25.17.1). If the load weigh system is installed refer to Figure 25.17.2 for pin load cell installation orientation and hardware.
2. Install washers (P/N 510-183-00 and P/N 510-174-00) over bolt threads (or pin load cell threads)
3. Tighten nut on attach bolt (or pin load cell) until fully seated, finger tight only. Back off nut to previous castellation, if needed, when aligning cotter pin for installation. Install and secure cotter pin (P/N 510-178-00).

CAUTION

Do not tighten nut on pin load cell more than finger tight. Over-tightening will damage load cell.

Figure 25.17.1 Cargo Hook Attachment Hardware



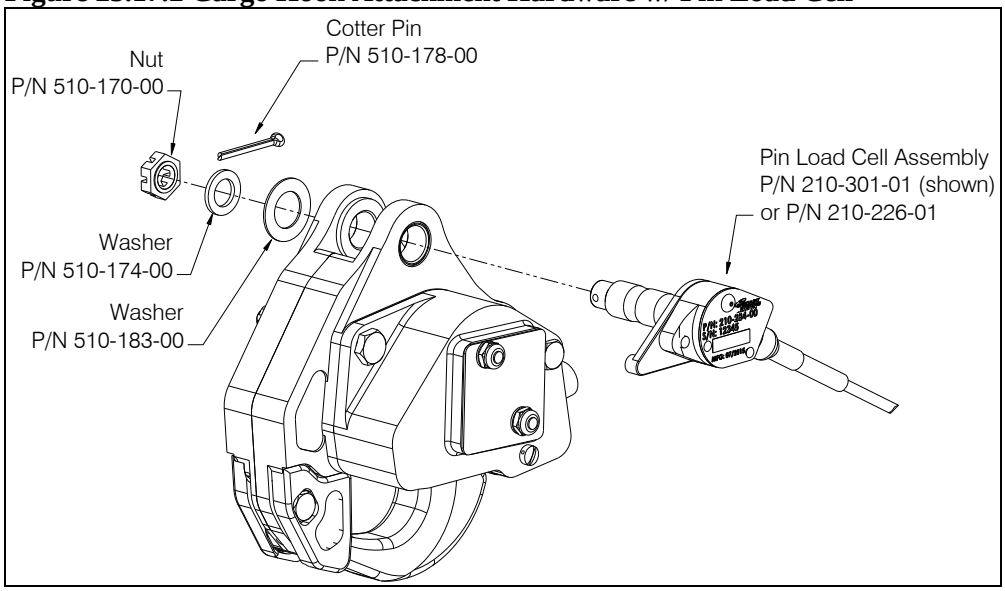
NOTICE

The Cargo Hook load beam must point to the right side of the helicopter when looking from the rear.

25.17 Component Re-installation continued

Cargo Hook Re-installation continued

Figure 25.17.2 Cargo Hook Attachment Hardware w/ Pin Load Cell

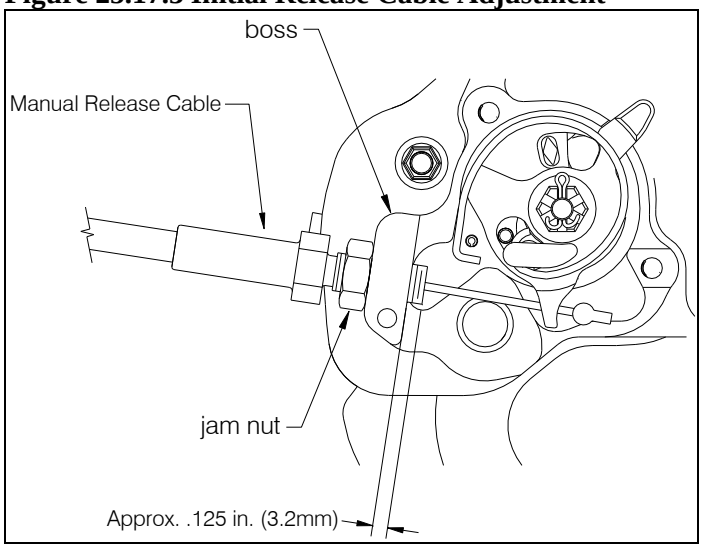


25.17 Component Re-installation continued

Manual Release Cable Re-installation

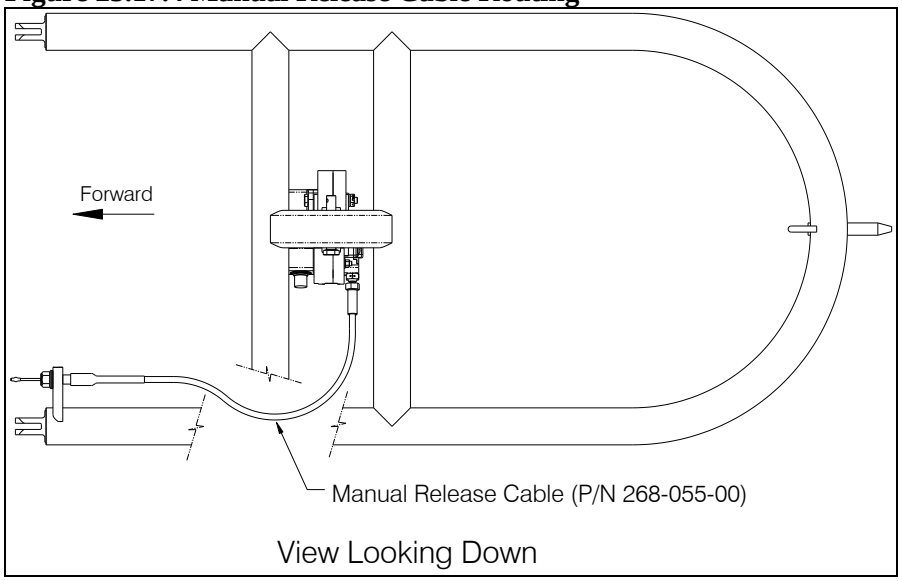
1. Remove the manual release cover from the cargo hook by removing the two screws.
2. Thread the fitting at the end of the manual release cable into the manual release boss on the cargo hook side plate until the threads protrude approximately .125 inches (3.2 mm) beyond the boss and secure with jam nut. Leave the cover off of the cargo hook until the other end of the release cable is connected, in order to verify proper setting.

Figure 25.17.3 Initial Release Cable Adjustment



3. Route the manual release cable as shown to the bracket on the left side of the Bell suspension frame and secure it to the bracket with the washer and nut.

Figure 25.17.4 Manual Release Cable Routing

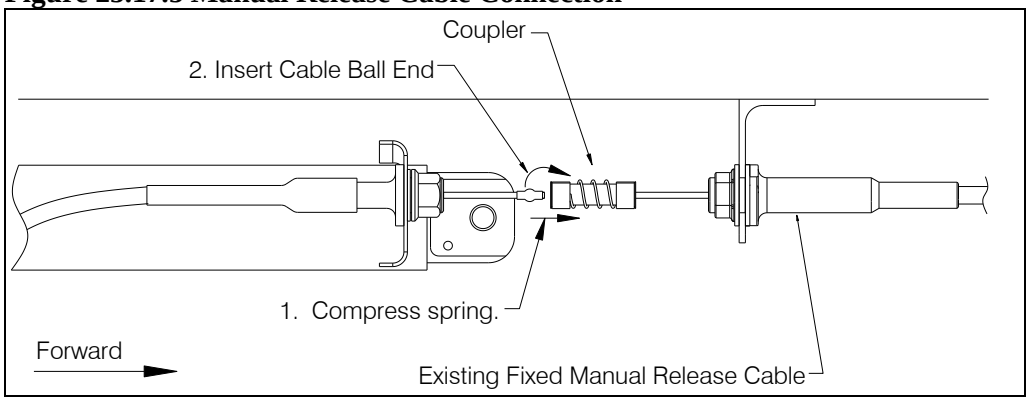


25.17 Component Re-installation continued

Manual Release Cable Re-installation continued

4. Connect the cable ball end of the inner cable to the fixed manual release cable's coupler by compressing its spring and inserting the ball.

Figure 25.17.5 Manual Release Cable Connection



5. At the cargo hook, place the cable ball end fitting into the manual release lever fork as illustrated in Figure 25.17.5.
6. With the cargo hook in the closed and locked position, rotate the release lever in the clockwise direction to remove free play (the free play is taken up when the hook lock indicator begins to move) and measure the cable ball end free play with the release lever in the cockpit in the non-release position. There must be a minimum of .125 inches (3.2 mm) between the cable ball end and fork fitting as shown in Figure 25.17.5. The maximum amount of free play is limited by the manual release cover, i.e. – the ball end must fit inside the cover when it is installed.

⚠ CAUTION

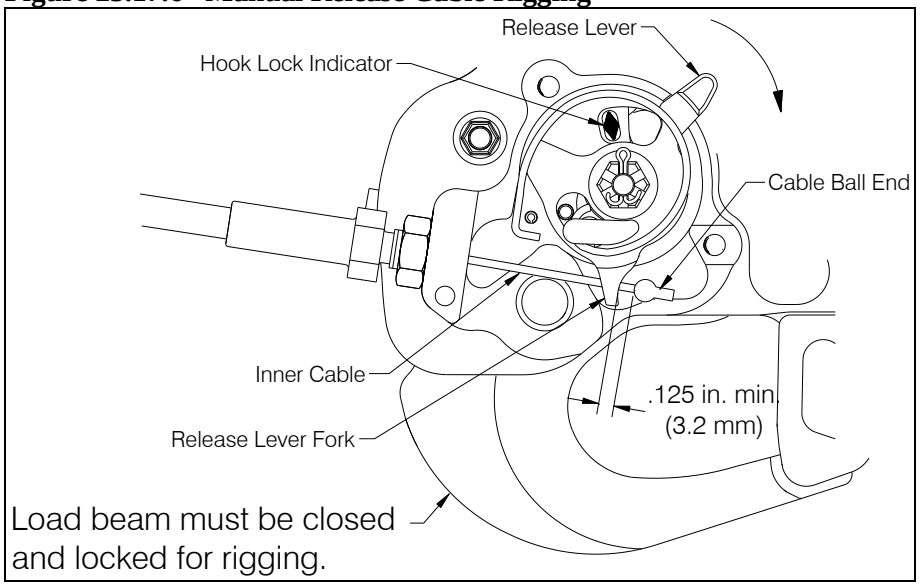
Manual release cable rigging must be done with the cargo hook in the closed and locked position.

7. If necessary adjust the manual release cable system to obtain a minimum of .125 inches (3.2 mm). Some adjustment can be made at the cargo hook by loosening the jam nut and turning the manual release cable or cargo hook in the required direction and re-tightening the jam nut. Ensure the manual release cable fitting threads maintain full thread engagement with the cargo hook side plate boss (i.e.- the end of the threads should not be recessed within the boss). Tighten jam nut.

25.17 Component Re-installation continued

Manual Release Cable Re-installation continued

Figure 25.17.6 Manual Release Cable Rigging



8. Re-install the manual release cover with the two screws.
9. Check the operation of manual release system by pulling the release lever in the cockpit. With no load, the cargo hook must release. Reset the cargo hook by hand after release. Verify that the hook lock indicator on the side of the hook returns to the fully locked position.
10. Re-install the shock cord per the following section.

25.17 Component Re-installation, continued

Shock Cord Re-installation

1. Attach the cushioned loop clamps (P/N 512-010-00) through the end loops of the existing cargo hook restraining shock cord. Route the shock cord through the eyelet on the Bell suspension frame and over the threaded rod as illustrated in Figure 25.17.7.
2. Secure the loop clamps to the cargo hook as illustrated in Figure 25.17.8 using bolts (P/N 510-257-00) and washers (P/N 510-042-00). Tighten bolts to 20-25 in-lbs.

Figure 25.17.7 Shock Cord Routing Overview

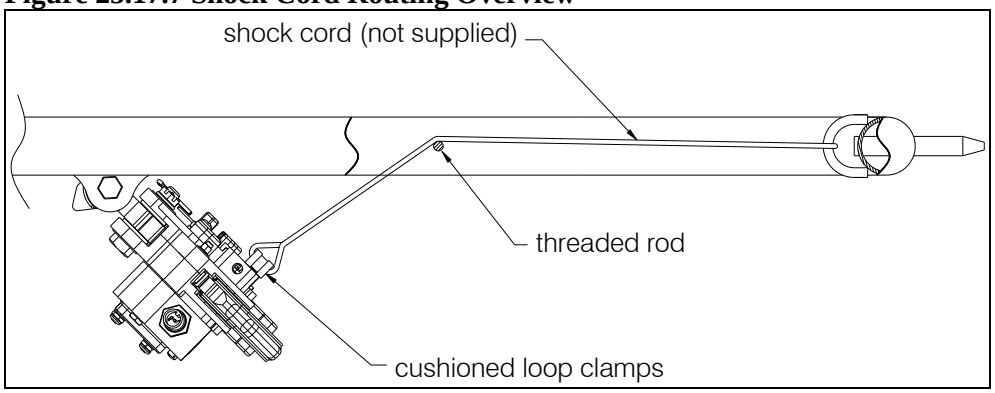
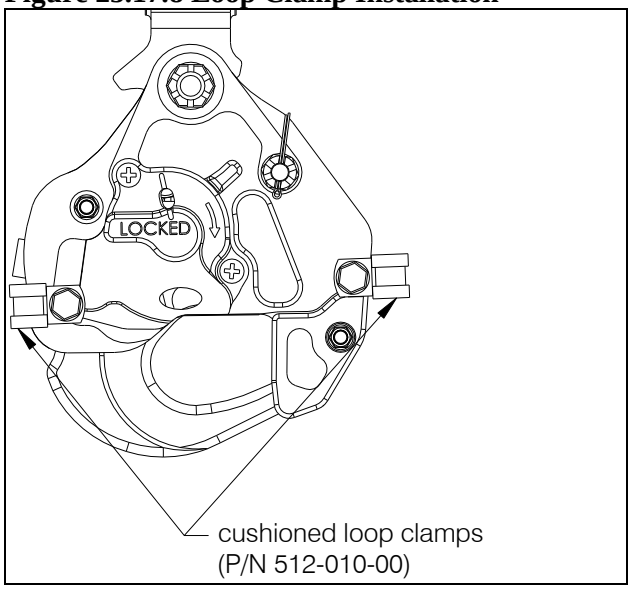


Figure 25.17.8 Loop Clamp Installation

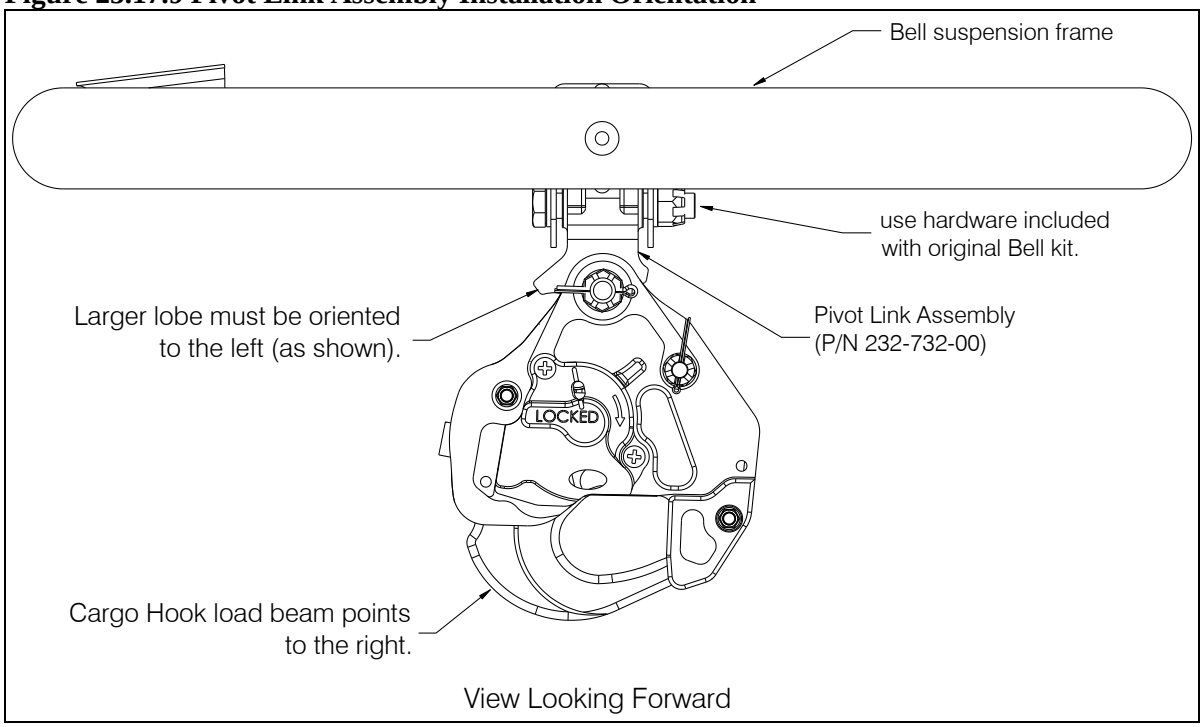


25.17 Component Re-installation, continued

Pivot Link Assembly Re-installation

1. Orient the Pivot Link Assembly (P/N 232-732-00) as shown in Figure 25.17.9 and secure it to the Bell suspension frame using the hardware included with the original Bell kit.
2. Tighten the nut per the Bell maintenance instructions. When tightened the Pivot Link Assembly should pivot freely on the bolt and the bolt shouldn't rotate with respect to the suspension frame attachment ears.

Figure 25.17.9 Pivot Link Assembly Installation Orientation



C-39 Load Weigh Indicator Re-installation

The C-39 load weigh indicator location is optional within the cockpit. It is designed to fit within a standard 2 ¼" instrument panel mounting hole.

1. Connect the electrical connector on the wiring harness to the connector on the back of the indicator.
2. Place the load weigh indicator within its mounting location and secure with four screws.

25.18 General Procedural Instructions-Check

After re-installation of the cargo hook or manual release cable perform the following:

1. Swing the installed Cargo Hook to its full extremes to ensure that the manual release cable assembly and the electrical release cable have enough slack to allow full swing of the cargo hook without straining or damaging the cables. The cables must not be the stops that prevent the Cargo Hook from swinging freely in all directions.
2. With no load on the cargo hook load beam, pull the handle operated cargo hook mechanical release, the Cargo Hook should release. Reset the cargo hook load beam.
3. Close the cargo hook release circuit breaker and position the battery switch to the ON position. With no load on the cargo hook load beam, depress the Cargo Hook release button to ensure the cargo hook electrical release is operating correctly. The Cargo Hook must release. Reset the hook by hand after the release. If the hook does not release or re-latch, 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.