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**Owner's Manual
Cargo Hook Kit**
for the
**MD Helicopter's 369 Series
and 500N Helicopters**

Part Number 200-187-00

Owner's Manual Number 120-047-00
Revision 12
April 29, 2008



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RECORD OF REVISIONS

<i>Revision</i>	<i>Date</i>	<i>Page(s)</i>	<i>Reason for Revision</i>
5	10-10-00	Section 4	Removed overhaul instructions from Section 4 and moved information to the new Service Manual 122-001-00
6	5-31-01	3-5	Replaced old hook no. 528-010-00 with current rev.
		RFMS Pg. 5 2-1, 2-4	
7	9/11/02	Title, 4-3	Factory address change.
8	9/26/05	2-3, 2-5, Section 4	Clarified manual release cable rigging instructions, added CAUTION note for electrical connector, added kg equivalents to Table 2-1. Added reference to Cargo Hook Service Manual 122-001-00 in Section 4 and removed duplicate information from this manual.
9	02/07/07	1-1, 2-2, 3-1, 4-1	Changed cargo hook part number from 528-010-00 to 528-010-04 per Service Bulletin 159-017-00. Added reference to service manual on page 3-1 and removed reference to troubleshooting table.
10	09/12/07	Sections 1, 2, and 3	Listed RFMS 121-043-00 in Bill of Materials, removed RFMS from back of manual. Added "Warnings, Cautions, and Notes" section and re-formatted these items where applicable. Updated Figure 2-3.
11	02/21/08	Page 1-1	Removed MD Helicopter kit p/n 369H90072-503 from the list of approved installations.
12	04/29/08	Page 1-1	Clarified part numbers and applicability in Introduction section.

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CONTENTS

Section 1 **General Information**

Introduction, 1-1
Warnings, Cautions, and Notes, 1-1
Bill of Materials, 1-2
Inspection, 1-2
Specifications, 1-2
Theory of Operation, 1-3

Section 2 **Installation Instructions**

Cargo Hook Removal, 2-1
Cargo Hook Installation, 2-1
Secure the Release Cables, 2-4
Installation Overview, 2-4
Installation Check-Out, 2-5
Component Weights, 2-5
Paper Work, 2-5

Section 3 **Operation Instructions**

Operating Procedures, 3-1
Cargo Hook Rigging, 3-2
Cargo Hook Rigging Illustrations, 3-3

Section 4 **Maintenance**

Inspection, 4-1
Instructions for Returning a System to the Factory, 4-2

Section 5 **Certification**

STC, 5-1
STA, 5-3
EASA STC, 5-5

CONTENTS, continued

Figures

- 2-1 Travel Limit Bumper Installation, 2-1
- 2-2 Attach Hardware Installation, 2-2
- 2-3 Bumper Pads, 2-2
- 2-4 Manual Release Cable Rig, 2-3
- 2-5 Un-commanded Release From Incorrectly Secured Cable, 2-4
- 2-6 Installation Overview, 2-4
- 3-1 Examples of Correct and Incorrect Cargo Hook Rigging, 3-3
- 3-2 Un-commanded Release Due to Large Load Ring, 3-4
- 3-3 Load Hang-Up, Too Small or Multiple Load Rings, 3-5
- 3-4 Un-Commanded Release Due to Nylon Straps, 3-6
- 3-5 Un-Commanded Release Due to Cable or Rope Straps, 3-7

Tables

- 1-1 Specifications, 1-2
- 2-1 Component Weights, 2-5
- 4-1 Inspection, 4-1

Section 1

General Information

Introduction

The 200-187-00 cargo hook kit is approved for installation with the following MD Helicopters' cargo hook kits which use the 369H92105-501 cargo hook assembly.

369H90072-501	369H90072-515
369H90072-505	369H90072-517
369H90072-507	369H90072-519
369H90072-511	369H90072-523

The 528-010-04 Cargo Hook, 270-073-00 Electrical Release Cable, and 268-005-01 Manual Release Cable included in this 200-187-00 cargo hook kit are suitable as replacements for the cargo hook (Breeze-Eastern P/N 17149-4), electrical release cable, and manual release cable in the MD Helicopters' 369H92105-501 cargo hook assembly.

Warnings, Cautions and Notes

The following definitions apply to Warnings, Cautions and Notes used in this manual.



Means that if this information is not observed, serious injury, death or immediate loss of flight safety could occur.



Means that there is a risk of injury or degradation in performance of equipment if this information is not observed.



Draws the reader's attention to information which may not be directly related to safety, but which is important or unusual.

Bill of Materials

The following items are included with the Cargo Hook Kit, if shortages are found contact the company from whom the system was purchased.

Part Number	Description	Quantity
528-010-04	Cargo Hook	1
270-073-00	Electrical Release Cable	1
268-005-01	Manual Release Cable	1
290-360-01	Travel Limit Bumper	1
290-361-00	Bumper Pads	2
120-047-00	Owner's Manual	1
121-043-00	RFMS	1
122-001-00	Talon LC Hook Service Manual	1

Inspection

Inspect the kit items 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.

Specifications

Table 1-1 Specifications

Design load	3,500 lb. (1,587 kg.)
Design ultimate strength	15,750 lb. (7,142 kg.)
Electrical release capacity	8,750 lb. (3,968 kg.)
Mechanical release capacity	8,750 lb. (3,968 kg.)
Force required for mechanical release at 3,500 lb.	8 lb. Max. (.400" travel)
Electrical requirements	22-28 VDC 9 amps
Minimum release load	7 pounds
Unit weight	3 pounds (1.36 kg.)
Mating electrical connector	PC06A8-2S SR

Theory of Operation

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 DC solenoid and an external manual release cable provide the means for unlatching the load beam.

The load beam is normally returned to its closed position after release of the load by a spring in the internal mechanism. In the closed position, a latch engages the load beam and latches it in this position. The load is attached to the load beam by passing the cargo sling ring into the throat of the load beam past a spring-loaded keeper, which secures the load.

To release the load, the latch is disengaged from the load beam. With the latch disengaged, the weight of the load causes the load beam to swing to its open position, and the cargo sling slides off the load beam. A spring in the internal mechanism then drives the load beam back to its closed and latched position.

A load release can be initiated by three different methods. Normal release is achieved by pilot actuation of the push-button switch in the cockpit. When the push-button switch is pressed, it energizes the DC solenoid in the Cargo Hook, and the solenoid opens the latch in the internal mechanism. In an emergency, release can be achieved by operating a mechanical release lever. A manual release cable attached to the lever operates the internal mechanism of the Cargo Hook to unlatch the load beam. The load can also be released by the actuation of a lever located on the side of the cargo hook.

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Section 2

Installation Instructions

These procedures are provided for the benefit of experienced aircraft maintenance facilities capable of carrying out the procedures. They must not be attempted by those lacking the necessary expertise.

Cargo Hook Removal

Remove the MD Helicopters' supplied Cargo Hook from the aircraft by disconnecting the electrical release cable from the belly mounted bulk-head type connector. Disconnect the manual release cable from the cyclic stick release lever assembly and attaching clamps. Remove the single bolt used to attach the Cargo Hook to the airframe-mounting bracket and separate the Cargo Hook from the aircraft.

Cargo Hook Installation

Verify that the part number of the cargo hook removed is a Breeze-Eastern 2A20B P/N 17149-4. If it is not, do not attempt to use the new cargo hook unless compatibility is determined.

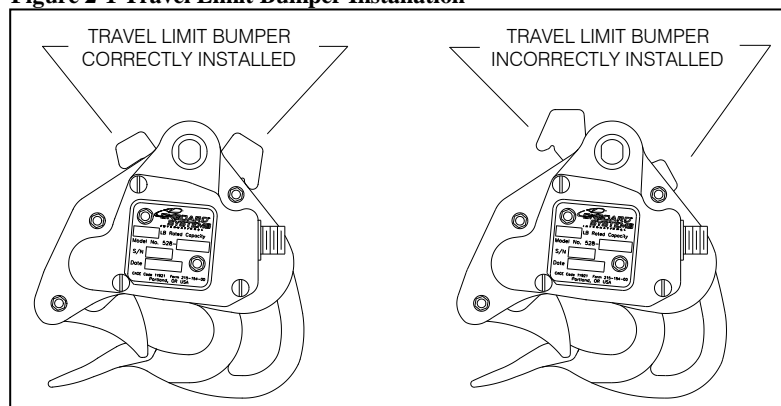
Inspect the airframe to cargo hook mounting bracket and its hardware to ensure that all components are in serviceable condition.

Install the P/N 290-360-01 travel limit bumper to the Cargo Hook as illustrated in Figure 2-1. The Travel Limit Bumper helps protect the aircraft skin and the release cables from excessive hook movement.



Do not use the hook without the travel limit bumper in place.

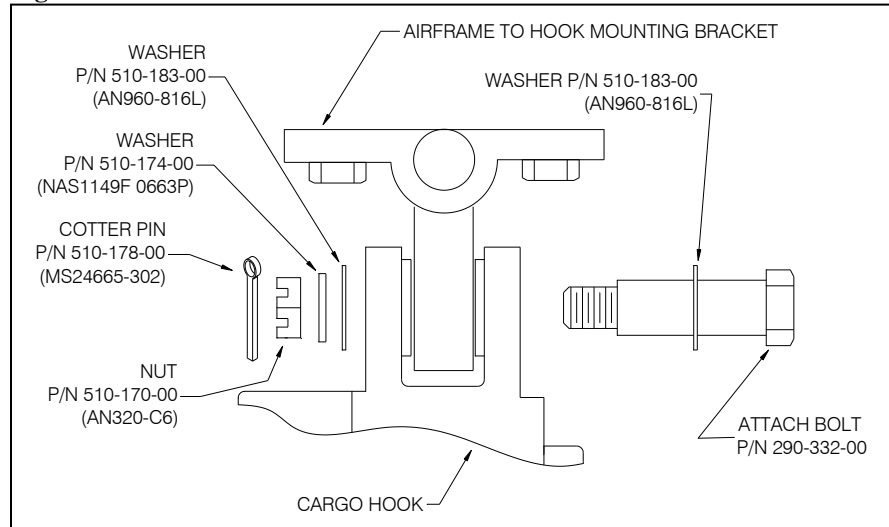
Figure 2-1 Travel Limit Bumper Installation



Install the new Cargo Hook to the existing MDHC airframe mounting bracket using the load bolt, nut and cotter pin supplied with the new hook, as illustrated in Figure 2-2. The cargo hook load beam is to point aft.

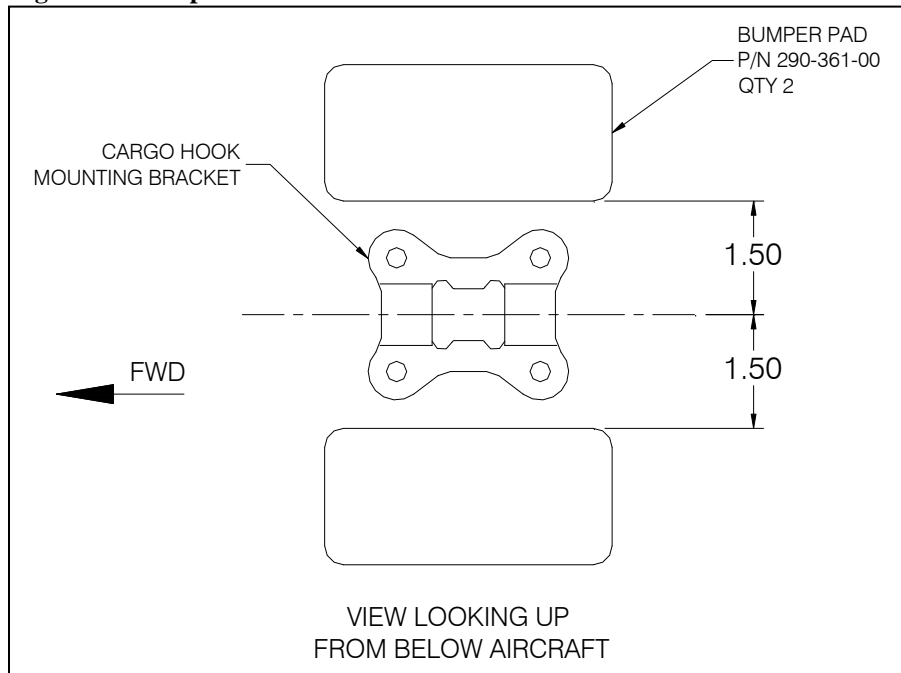
Cargo Hook Installation, continued

Figure 2-2 Attach Hardware Installation



Remove any existing hook bumper pads that may be attached to the A/C skin. Install the P/N 290-361-00 Bumper Pads to the airframe skin in the location illustrated in Figure 2-3 with 3M trim cement.

Figure 2-3 Bumper Pads



Cargo Hook Installation, continued

Connect the manual release cable to the Cargo Hook per the following:

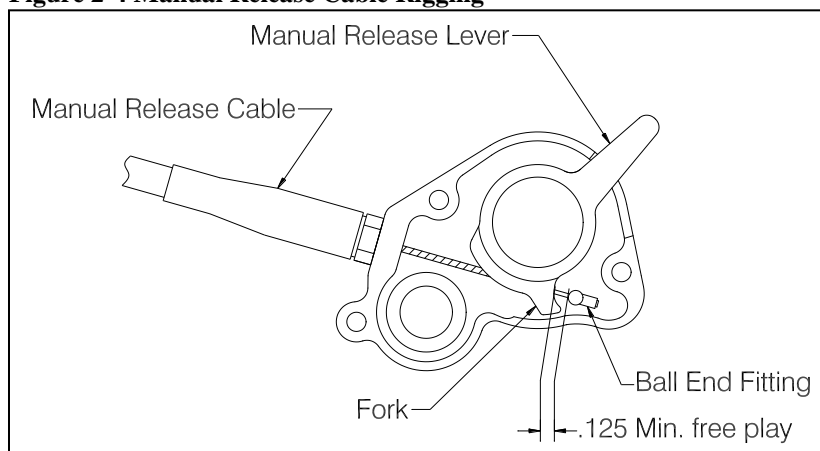
Remove the cargo hook manual release cover.

Locate the swaged end of the manual release cable assembly (the other end is the cable adjuster) and thread this end of the manual release cable all the way into the hook and tighten against the hook (see Figure 2-4).

Place the cable ball end fitting into the fork of the manual release lever as illustrated in Figure 2-4.

Adjust the manual release cable system for a minimum of .125 inches of free play at the fork as shown with the manual release handle in the cockpit in the non-release position.

Figure 2-4 Manual Release Cable Rigging



Route the manual release cable and rig the cyclic stick release lever assembly following the MDHC Installation and Maintenance Instructions, Publication No. CSP-005 or later approved source. Replace the cargo hook manual release cover and safety wire.

Connect the Cargo Hook electrical release cable connector to the belly mounted bulkhead receptacle and safety wire the connector.

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



The Cargo Hook is equipped with a suppression diode that will be damaged if the Cargo Hook electrical connections are reversed. Do not attach the electrical connector until the polarity of the aircraft connector is determined to be compatible with the Cargo Hook connector listed below.

Cargo Hook Connector

Pin	Function
A	Ground
B	Power

Bulkhead Connector

Pin	Function
A	Power
B	Ground
C	Shield

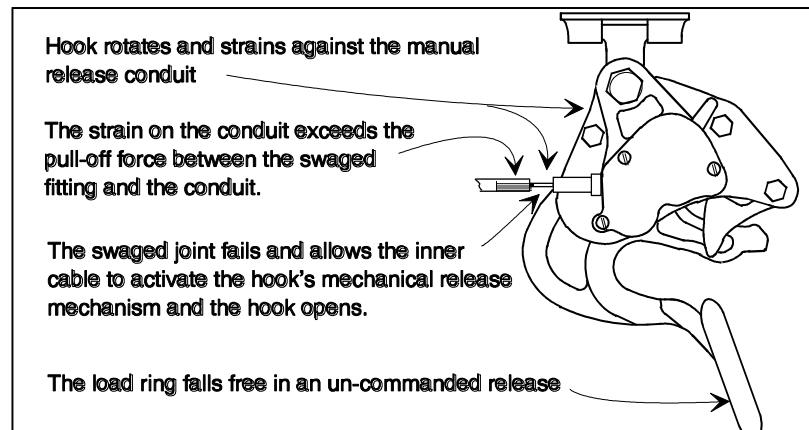
Secure the Release Cables

Secure the cargo hook manual and electrical release cables following the MDHC Installation and Maintenance Instructions, Publication No CSP-005 or later approved source. The first clamp used to secure the manual release to the A/C skin **should not be less than 23 inches** from the hook.



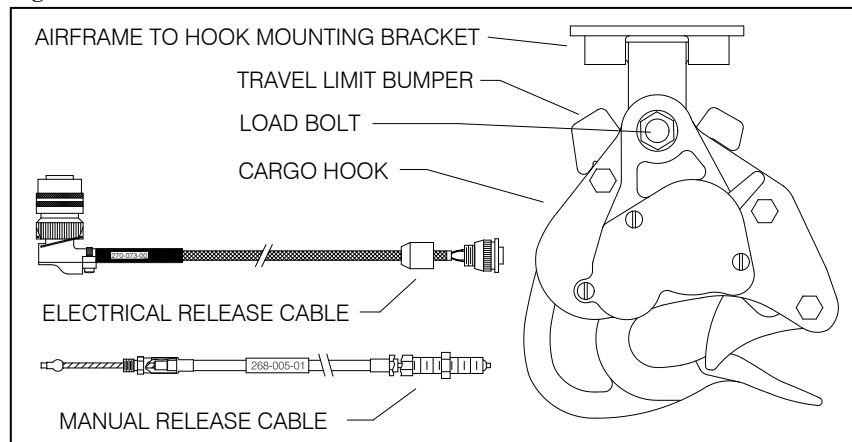
Un-commanded cargo hook release will happen if the manual and electrical release cables are improperly restrained. The cables must not be the stops that prevent the Cargo Hook from swinging freely in all directions. If the Cargo Hook loads cause the hook to strain against the manual release cable the 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 or electrical release cables.

Figure 2-5 Un-commanded Release From Incorrectly Secured Cable



Installation Overview

Figure 2-6 Installation Overview



Installation Check-Out

After installation of the Cargo Hook, perform the following functional checks.

1. Swing the installed Cargo Hook and 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.
2. Apply 10 - 20 pounds to the cargo hook load beam and squeeze the lever operated cargo hook mechanical release, the cargo hook should release.
3. Close the cargo hook release circuit breaker and position the battery switch to the ON position. Apply 10 - 20 pounds to the cargo hook load beam and depress the cargo hook electrical release button, the cargo hook should release.
4. See the MDHC service instructions for your specific helicopter model for additional installation instructions.

Component Weights

The weight of the cargo hook components are listed in Table 2-1.

Table 2-1 Component Weights

Item	Weight lbs (kgs)
Cargo Hook	3.0 (1.36)
Manual Release Cable	1.0 (0.45)
Electrical Release Cable	0.5 (0.23)
Bumper Pads	0.2 (0.09)
Travel Limit Bumper	0.1 (0.05)

Paper Work

Insert the Rotorcraft Flight Manual Supplement (document number 121-043-00) into the Rotorcraft Flight Manual. In the US, fill in FAA form 337 for the initial installation. This procedure may vary in different countries. Make the appropriate aircraft log book entry.

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Section 3

Operation Instructions

Operating Procedures

Prior to each job perform the following:

1. Ensure that the Cargo Hook has been properly installed and that the manual and electrical release cables do not limit the movement of the hook.
2. Be completely familiar with this manual, particularly the Cargo Hook rigging section.
3. Be completely familiar with all MDHC cargo hook operating instructions.
4. Activate the electrical system and press the release button to ensure the cargo hook electrical release is operating correctly. The mechanism should operate smoothly and the Cargo Hook must re-latch after release. If the hook does not re-latch do not use the unit until the difficulty is resolved.



The cargo hook 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.

5. Activate the release lever assembly located on the cyclic stick to test the cargo hook manual release mechanism. The mechanism should operate smoothly and the Cargo Hook must relatch after release. If the hook does not relatch do not use the unit until the difficulty is resolved.

See the Cargo Hook Service Manual 122-001-00 and the MD Helicopters' service instructions that cover the original Cargo Hook installation for additional instructions.

Cargo Hook Rigging

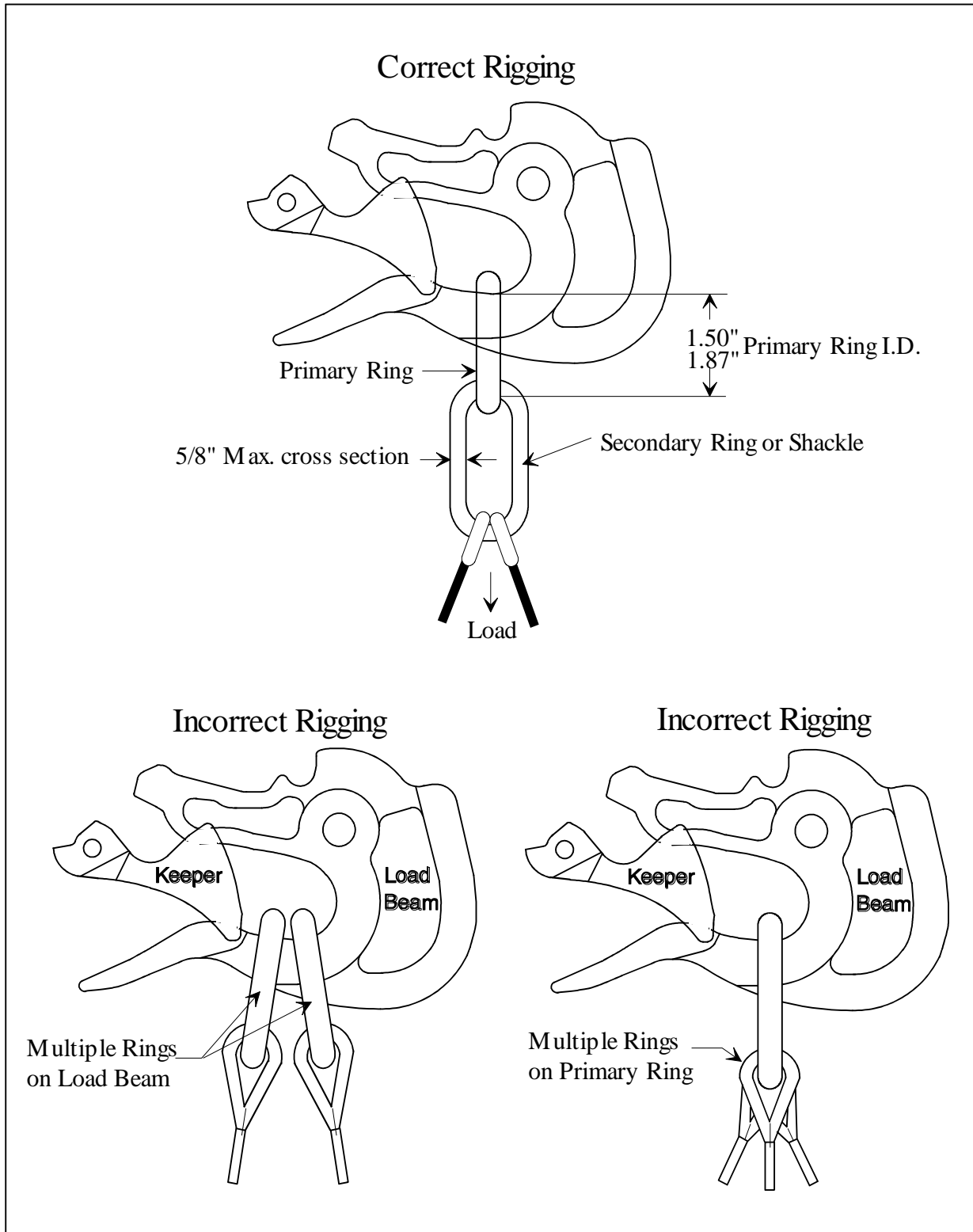
Extreme care must be exercised in rigging a load to the Cargo Hook. If the load ring is too big it may work its way around the end of the load beam and be supported for a time on the keeper and then fall free. If the load ring is too small it may jam itself against the load beam during an attempted release. The following illustrations show recommended configurations and potential difficulties that must be avoided.



The examples shown are not intended to represent all problem possibilities. It is the responsibility of the operator to assure the hook will function properly with the rigging.

Cargo Hook Rigging, continued

Figure 3-1 Examples of Correct and Incorrect Cargo Hook Rigging

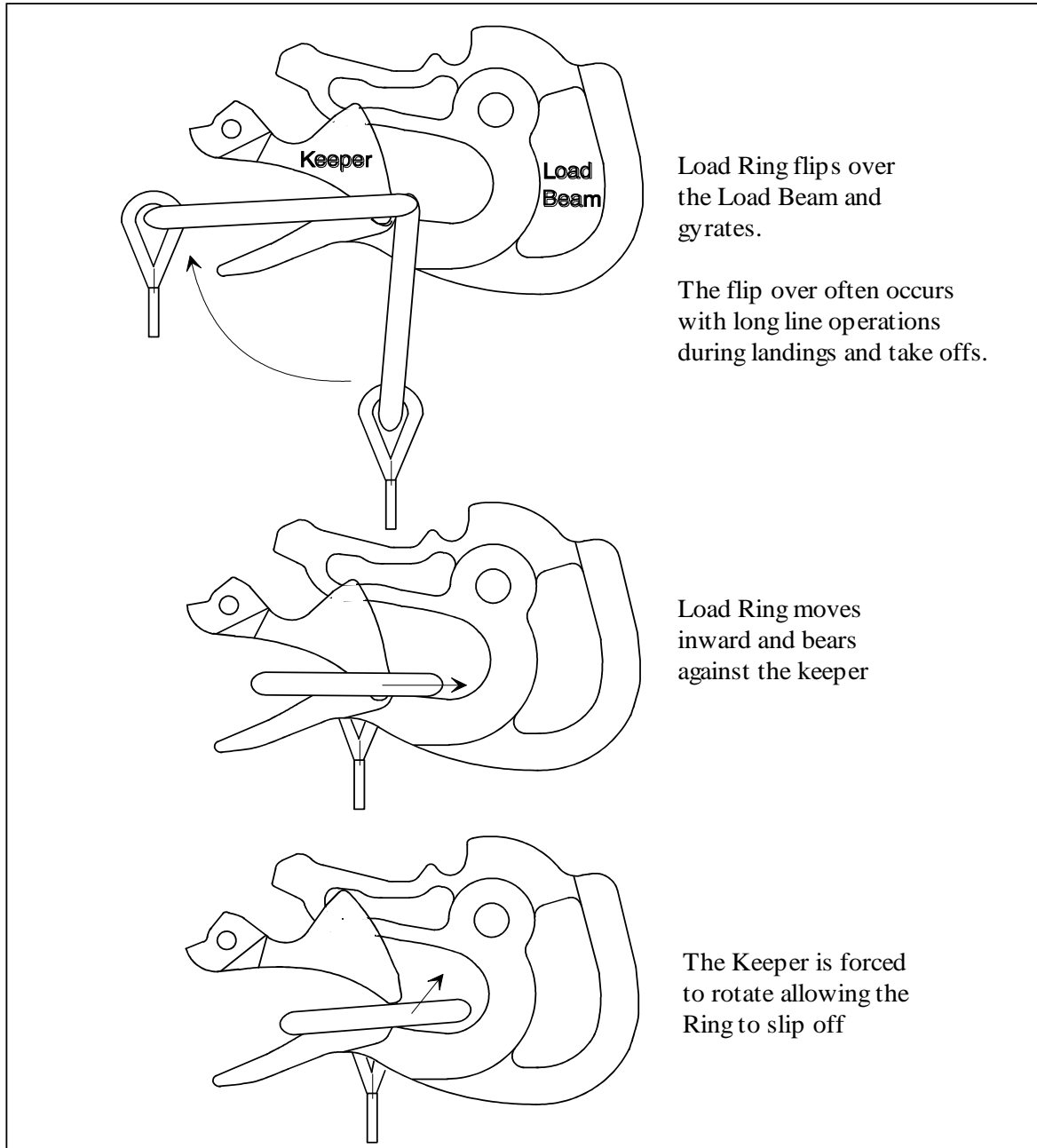


Un-Commanded Release Due to Too Large of a Load Ring



Load rings that are too large will cause an un-commanded release. The ring will flip over the end of the load beam and flip the keeper up and then fall free. Only correctly sized load rings must be used. See examples below.

Figure 3-2 Un-Commanded Release Due to Too Large of a Load Ring

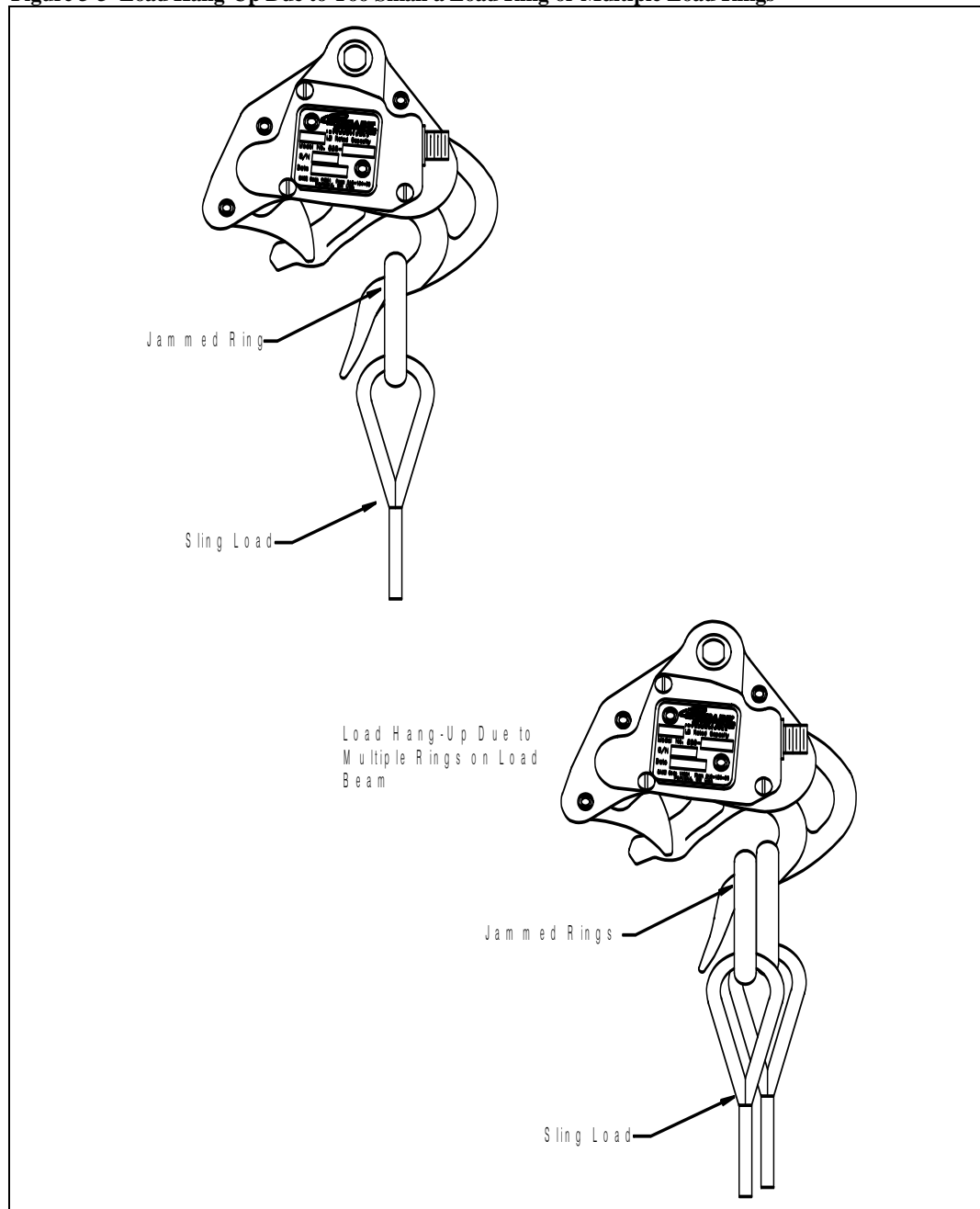


Load Hang-Up Due to Too Small of a Load Ring or Multiple Load Rings



Load rings that are too small or multiple load rings will hang on the load beam when the load is released. Only correctly sized load rings must be used. See examples below.

Figure 3-3 Load Hang-Up Due to Too Small a Load Ring or Multiple Load Rings

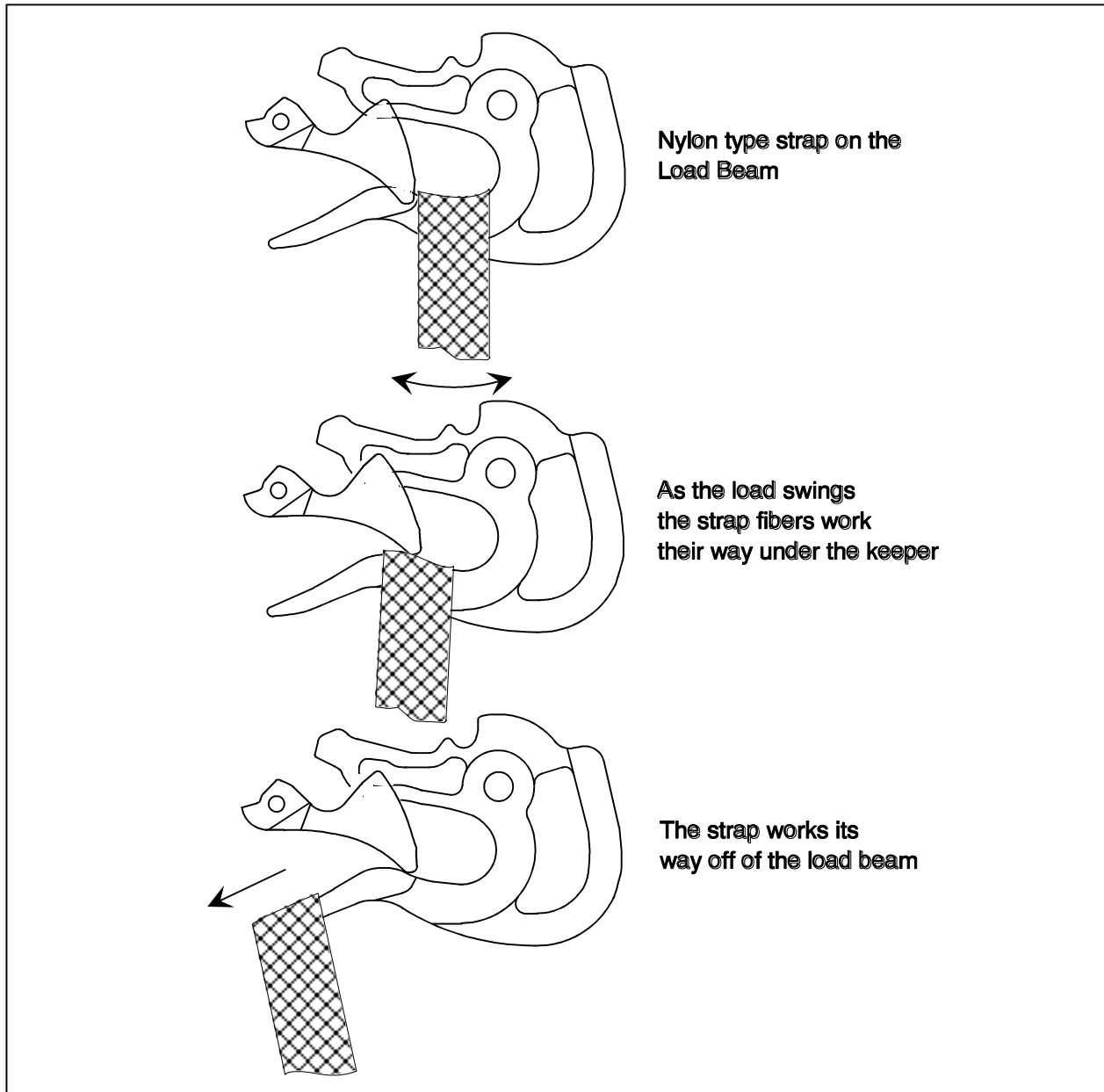


Un-Commanded Release Due to Nylon Type Straps



Nylon type straps (or similar material) must not be used directly on the cargo hook load beam as they have a tendency to creep under the keeper and fall free. If nylon straps must be used they should be first attached to a correctly sized primary ring. Only the primary ring should be in contact with the cargo hook load beam. See examples below.

Figure 3-4 Un-Commanded Release Due to Nylon Type Straps

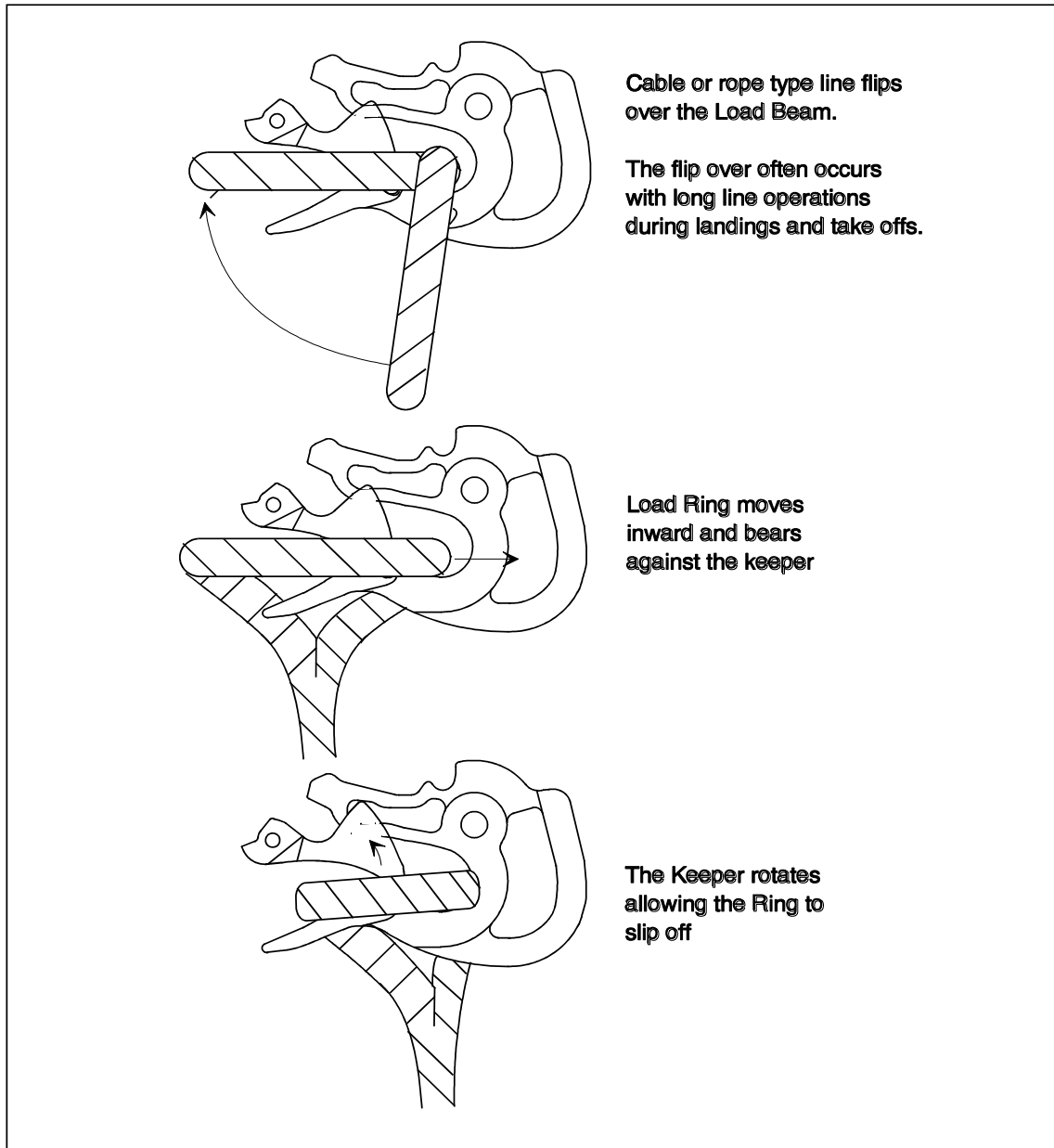


Un-Commanded Release Due to Cable or Rope Type Straps



Cable or rope type straps must not be used directly on the cargo hook load beam. Their braided eyes will work around the end of the load beam and fall free. If cable or rope is used they should be first attached to a correctly sized primary ring. Only the primary ring should be in contact with the cargo hook load beam. See example below.

Figure 3-5 Un-Commanded Release Due to Cable or Rope Type Straps



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Section 4

Maintenance

Refer to Cargo Hook Service Manual 122-001-00 for maintenance of the cargo hook.

Inspection

The inspection of the Cargo Hook Kit shall be in accordance with the table 4-1 shown below.

Table 4-1 Inspection

Part Number	Daily Check	At Overhaul Interval*
528-010-04 Cargo Hook	Refer to Service Manual 122-001-00.	Refer to Service Manual 122-001-00.
268-005-01 Manual Release Cable	Visually check the end fittings for damage and security. Visually check the cable for damage. Cycle the manual release system to ensure proper cargo hook operation.**	Same as daily check.
270-073-00 Electrical Release Cable	Visually check the electrical connectors for damage and security. Visually check the cable for damage and chafing. Cycle the electrical release system to ensure proper cargo hook operation.**	Same as daily check.
290-360-01 Travel Limit Bumper	Visually check for damage, cracks, and security of attachment.	Same as daily check.
290-361-00 Bumper Pad	Visually check for damage, cracks, and security of attachment.	Same as daily check.

* Refer to Service Manual 122-001-00 for overhaul interval for the Cargo Hook, inspect other kit items per Table 4-1 at the cargo hook interval.

** Refer to MD Helicopters' maintenance documentation that covers the original Cargo Hook installation for additional instructions.

Instructions for Returning Equipment to the Factory

If an Onboard Systems product must be returned to the factory for any reason (including returns, service, repairs, overhaul, etc) obtain an RMA number before shipping your return.



An RMA number is required for all equipment returns.

- To obtain an RMA, please use one of the listed methods.
 - Contact Technical Support by phone or e-mail (Techhelp@OnboardSystems.com).
 - Generate an RMA number at our website: <http://www.onboardsystems.com/rma.php>
- After you have obtained the RMA number, please be sure to:
 - Package the component carefully to ensure safe transit.
 - Write the RMA number on the outside of the box or on the mailing label.
 - Include the RMA number and reason for the return on your purchase or work order.
 - Include your name, address, phone and fax number and email (as applicable).
 - Return the components freight, cartage, insurance and customs prepaid to:
Onboard Systems
13915 NW 3rd Court
Vancouver, Washington 98685
USA
Phone: 360-546-3072

Section 5 Certification STC

United States of America
Department of Transportation—Federal Aviation Administration
Supplemental Type Certificate

Number SR00407SE

This certificate, issued to Onboard Systems
13915 NW 3rd Court
Vancouver, WA 98685

certifies that the change in the type design for the following product with the limitations and conditions therefor as specified hereon meets the airworthiness requirements of Part 6 of the Civil Air Regulations.

Original Product—Type Certificate Number: H3WE
Make: McDonnell Douglas Helicopters Company
Model: 369D, 369E, 369F, 369FF, 369HE, 369HM, 369HS, and 500N

Description of the Type Design Change: Fabrication of Onboard Systems Model 200-187-00 cargo hook kit in accordance with FAA Approved Onboard Systems Master Drawing List No. 155-030-00, Revision 13, dated May 6, 2008, or later FAA-approved revision; and installation of this replacement cargo hook in accordance with FAA approved Onboard Systems Owner's Manual No. 120-047-00, Revision 12, dated April 29, 2008, or later FAA-approved revisions. Inspect cargo hook in accordance with Onboard Systems Owner's Manual No. 120-047-00, Revision 12, dated April 29, 2008, and Cargo Hook Service Manual No. 122-001-00, Revision 0, dated June 13, 2000, or later FAA-approved revision.

Limitations and Conditions: Approval of this change in type design applies to only those McDonnell Douglas model rotorcraft listed above, which were previously equipped with an FAA-approved installation of McDonnell Douglas cargo hook suspension systems and cargo hooks shown in the table on Continuation Sheet Page 3. This approval should not be extended to rotorcraft of these models on which other previously approved modifications are incorporated unless it is determined by the installer that the relationship between this change and any of those other previously approved modifications, including changes in type design, will introduce no adverse effect upon the airworthiness of that rotorcraft. Modified rotorcraft must be operated in accordance with an FAA-approved copy of Onboard Rotorcraft Flight Manual Supplement (RFMS) No. 121-043-00, Revision 0, dated October 1, 2007, or later FAA-approved revision.

(See Continuation Sheet - Page 3)

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: November 10, 1996

Date reissued:

Date of issuance: January 17, 1997

Date amended: 7/8/1997; 6/3/1998; 5/4/2001;
1/13/2003, 10/2/2007, 5/14/2008



5/14/2008

By direction of the Administrator

(Signature)
Acting Manager, Seattle Aircraft
Certification Office
(Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.

This certificate may be transferred in accordance with FAR 21.47.

FAA FORM 8110-2(10-68)

United States of America
 Department of Transportation—Federal Aviation Administration
Supplemental Type Certificate
 (Continuation Sheet)

Number SR00407SE

Onboard Systems

Reissued:

Amended: 7/8/1997; 6/3/1998; 5/4/2001; 1/13/2003; 10/2/2007; 5/14/2008

Limitations and Conditions continued.

A copy of this Certificate and the RFMS must be maintained as part of the permanent records of the modified rotorcraft.

Cargo Hook Kit	Rotorcraft Model	Cargo Hook
369H90072-501, -505, -507 & -515	369D	369H92105-501
369H90072-505 & -517	369E	Same
369H90072-505	369F	Same
369H90072-505 & -511	369FF	Same
369H90072-519 & -523	500N	Same
369H90072-501	369HE	Same
369H90072-501	369HM	Same
369H90072-501	369HS	Same

If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

-- END --

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.

This certificate may be transferred in accordance with FAR 21.47.

STA



Transport Canada Transports Canada

Department of Transport

Supplemental Type Certificate

This approval is issued to:

Onboard Systems
11212 NW St. Helens Road
Portland, OREGON
97231 UNITED STATES OF AMERICA

Number: SH97-30

Issue No.: 3

Approval Date: May 15, 1997

Issue Date: July 30, 2001

Responsible Office: Pacific

Aircraft/Engine Type or Model: HUGHES 369D, 369E, 369F, 369FF, 369HE, 369HM, 369HS, 500N

Canadian Type Certificate or Equivalent: H-95 (500N only) and FAA H3WE

Description of Type Design Change: Installation of Onboard Systems Model 200-187-00 Cargo Hook Kit per FAA STC SR00407SE

Installation/Operating Data,
Required Equipment and Limitations:

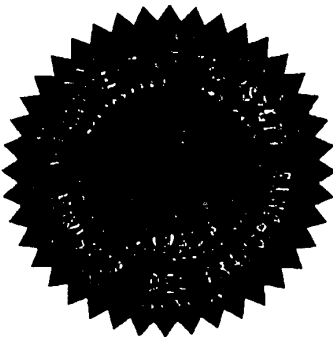
Fabrication of Onboard Systems Model 200-187-00 Cargo Hook Kit in accordance with FAA approved Onboard Systems Master Drawing List No. 155-030-00, Revision 4, dated October 31, 2000 *.

Installation of this replacement cargo hook in accordance with FAA approved Onboard Systems Owner's Manual No. 120-047-00, Revision 5, dated October 10, 2000 *.

Inspect Cargo Hook in accordance with Onboard Systems Owner's Manual No. 120-047-00, Revision 5, dated October 10, 2000 *, and Cargo Hook Service Manual No. 122-001-00, Revision 0, dated June 13, 2000*.

Basis of Certification as defined in the applicable Type Certificate Data Sheets.

See Required Equipment and Limitations in Continuation Sheet



Conditions: This approval is only applicable to the type/model of aeronautical product specified therein. Prior to incorporating this modification, the installer shall establish that the interrelationship between this change and any other modification(s) incorporated will not adversely affect the airworthiness of the modified product.

John Nehera
Regional Manager Aircraft Certification
For Minister of Transport

Canada

(Continuation Sheet)

Number: SH97-30 Issue: 3

NOTE: THIS ADDENDUM SHALL REMAIN PART OF THE CERTIFICATE REFERRED TO THEREIN.

Required Equipment:

Modified rotorcraft must be operated in accordance with an FAA approved copy of Onboard Rotorcraft Flight Manual Supplement (RFMS) No. 120-047-00, dated October 2, 1998 *.

(* or later FAA approved revisions)

Limitations

Approval of this changes in type design applies to only those McDonnell Douglas model rotorcraft listed on the front page, which were previously equipped with a FAA approved installation of McDonnell Douglas cargo hook suspension systems and Breeze-Eastern cargo hooks shown on the table below.

Cargo Hook Kit	Helicopters Model	Cargo Hook
369H90072-501, -505, -507 & -515	369D	369H92105-501
369H90072-505 & -517	369E	Same
369H90072-505	369F	Same
369H90072-505 & -511	369FF	Same
369H90072-519 & -523	500N	Same
369H90072-501	369HE	Same
369H90072-501	369HM	Same
369H90072-501	369HS	Same

-- End --



European Aviation Safety Agency

SUPPLEMENTAL TYPE CERTIFICATE

EASA.IM.R.S.01396

This certificate, established in accordance with Regulations (EC) No 1592/2002 and (EC) No 1702/2003 and issued to:

Onboard Systems
13915 NW 3rd Court
Vancouver, WA 98685
United States

certifies that the change in the type design for the product listed below with the limitations and conditions specified meets the applicable type certification basis and environmental protection requirements when operated within the conditions and limitations specified below:

Original Product Type Certificate number: *FAA H3WE*

Manufacturer: *MDHI*

Model: *369D, 369E, 369FF, 369HE, 369HM, 369HS, 500N*

Original STC Number: *FAA STC SR00407SE*

Description of Design Change:

Onboard Systems Model 200-187-00 cargo hook on helicopters 369D, 369E, 369FF, 369HE, 369HM, 369HS, 500N;

Associated Technical Documentation:

1. Onboard Systems Master Drawing List No. 155-030-00, Revision 13, dated 6 May 2008 or later approved revisions;
2. Onboard Systems Owner's Manual No. 120-047-00, Revision 12, dated 29 April 2008 or later approved revisions;
3. Cargo Hook Service Manual No. 122-001-00, Revision 0, dated June 13, 2000 or later approved revisions,
4. Onboard Rotorcraft Flight Manual Supplement (RFMS) No. 121-043-00, Revision 1, dated February 22, 2008 or later approved revisions;



European Aviation Safety Agency

- 5. FAA letter 130S-GA-08-27 dated 3 March 2008;
- 6. FAA letter 130S-GA-08-82 dated 14 May 2008.

Limitations and Conditions:

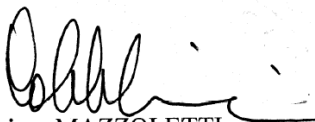
- 1. This cargo hook is not approved for human external load;
- 2. Approval of this change in type design applies to only those McDonnell Douglas model rotorcraft listed above, which were previously equipped with an approved McDonnell Douglas cargo hook 369H92105-0501 and cargo hook suspension systems kits shown in the following table:

Cargo Hook Kit	Rotorcraft Model	Cargo Hook
369H90072-501, -505, -507 & -515	369D	369H92105-501
369H90072-505 & -517	369E	Same
369H90072-505 & -511	369FF	Same
369H90072-519 & -523	500N	Same
369H90072-501	369HE	Same
369H90072-501	369HM	Same
369H90072-501	369HS	Same

- 3. Prior to installation of this modification the installer must determine that the interrelationship between this modification and any other previously installed modification will introduce no adverse effect upon the airworthiness of the product.

This certificate shall remain valid unless otherwise surrendered or revoked.

For the European Aviation Safety Agency,
Date of Issue: 08/07/2008

For 
 Massimo MAZZOLETTI
 Certification Manager
 Rotorcraft, Balloons, Airships