

ARS AIR RESCUE SYSTEMS



CABLE BUDDY - HC 600™

Hoist Cable Inspection System

Instruction Manual



CABLE BUDDY FEATURES:

- Best practice for accurate hoist cable inspection and cleaning.
- Adjustable connectors fit all aircraft.
- Light weight system designed for field use.
- Quick and easy installation.

Operational Use:

- Hoist/Winch Operations.

Materials:

- Cable safe, high impact composite sheave.
- High efficiency bronze pulley bearing.
- Aircraft grade aluminum alloy plates.

LIMITED WARRANTY:

Air Rescue Systems warrants for one year from the purchase date and only to the original retail buyer that our products are free from defects in material and workmanship. If the buyer discovers a warranty related defect, the buyer should return the product to Air Rescue Systems. Air Rescue Systems reserves the option to repair or replace any product returned under warranty. That is the extent of our liability under this warranty and, upon the expiration of the applicable warranty period, all such liability shall terminate.

WARRANTY EXCLUSIONS:

Air Rescue Systems does not warrant products against normal wear and tear, unauthorized modification or alteration, improper use, improper maintenance, accident, misuse, negligence, damage, or if the product is used for a purpose for which it was not designed. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Except as expressly stated in this warranty, Air Rescue Systems shall not be liable for direct, indirect, incidental, or other types of damages arising out of, or resulting from the use of the product.

WARNING:

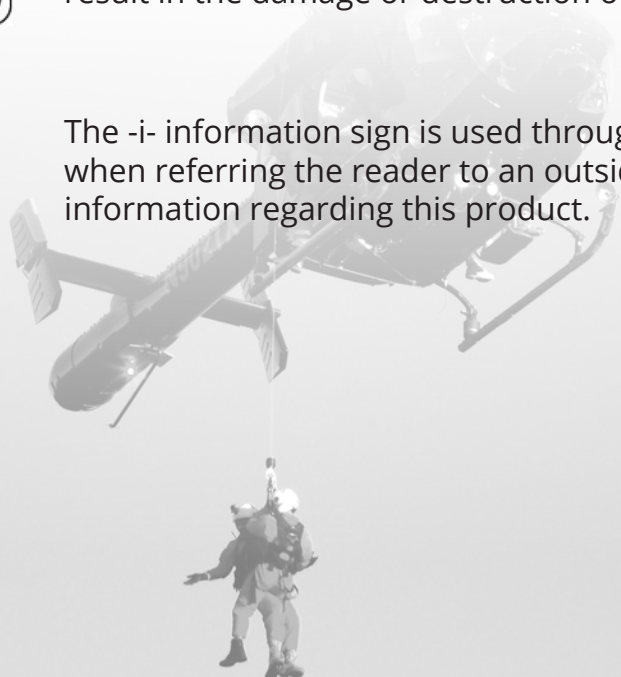
Products manufactured by Air Rescue Systems are intended for use by professionals trained and experienced in the use, inspection, and maintenance of these products. Many products which Air Rescue Systems manufactures are used in helicopter operations which pose a very substantial risk of serious injury or death. You must read and understand all of the manufacturer's instructions before use. Any person purchasing and or using this equipment assumes the responsibility for seeking proper training in its use. Purchaser also assumes all risk for any injury or damage sustained while using any of this equipment. Failure to follow these warnings increases the risk of injury and death.



The -CAUTION- sign is used throughout this product manual to highlight policies, procedures, and practices that when not followed could result in the damage or destruction of this product.



The -i- information sign is used throughout this product manual when referring the reader to an outside source for further information regarding this product.



INTRODUCTION:

Air Rescue Systems Corp. has designed the solution to conducting helicopter hoist cable inspections. The ARS Cable Buddy is a multi-aircraft portable hoist cable inspection system intended to enhance the speed, simplicity, and visual acuteness in executing routine cable inspections. Purpose built by working helicopter operations professionals, the ARS Cable Buddy allows the hoist operator to rapidly reel out cable around a sheave resembling the curvature of the hoist drum, while maintaining continuous tension and zero fleet angle. Multiple crew members can then visually and physically inspect the cable in a clean and abrasion free environment.

- This document lists user operator instructions, operational capability and equipment limitations for the Cable Buddy.
- This document includes instructions on how and when to conduct inspections as well as product maintenance and storage procedures.
- This document does not contain any troubleshooting information, as any alterations or repairs to the Cable Buddy not conducted by Air Rescue Systems may damage structural integrity. This is prohibited and voids the product warranty.

MAINTENANCE AND INSPECTION:

- Before and after each use, inspect Cable Buddy to ensure that it is in a serviceable condition.
- Inspect nylon pulley for any sharp edges, burrs, or cracks.
- Inspect webbing for wear, cuts, burns, frayed edges, or any other damage.
- Thoroughly inspect cable buddy after any period of storage greater than 60 days.

ADVANCED INSPECTION:

- For advanced inspections contact: Air Rescue Systems at info@airrescuesystems.com
Phone: 541-488-094

Cable Buddy HC-600 Hoist Cable System Includes:

- 1x Composite Sheave
- 1x Pulley Connector
- 2x Adjusting Lanyards



2.0 INSTALLATION PROCEDURES



To avoid injury to personnel from broken wire strands, sturdy gloves must be worn at all times when handling hoist cable assembly.



In order to prolong the durability and life of the hoist cable, ensure that hoist cable does not rub against any object or the ground during inspection/cleaning procedures. Protect hoist cable from damage. Do not allow kinks or bends to occur. Maintain tension on cable at all times.

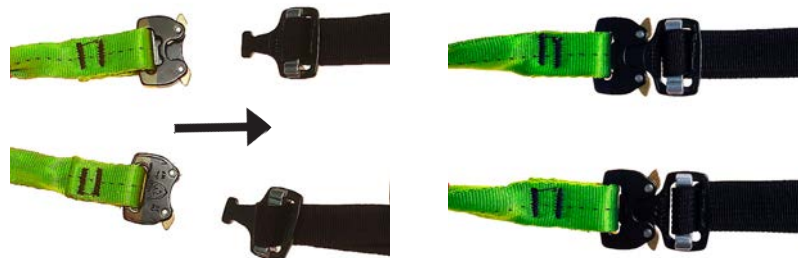
S1. Secure Both Adjusting Lanyards

Secure both adjusting lanyards to adjacent helicopter anchors using a Girth Hitch. (Lark's Foot)



S2. Connect Pulley Connector to Adjusting Lanyards

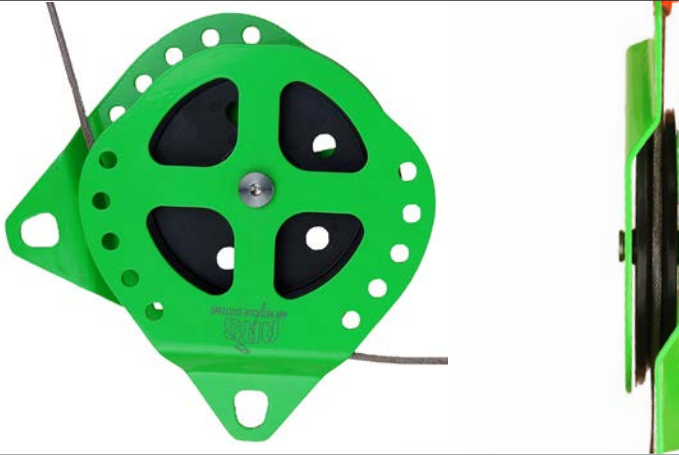
Connect the Pulley Connector to the two adjusting lanyards.



S3. Seat Hoist Cable

Slide the pulley's plates away from one another and into the open position. Gently seat the hoist cable onto the pulley sheave.

(Assure cable is properly seated in the groove)



S4. Connect Pulley Connector to Pulley

Slide the pulley plates back together and into the closed position. Connect Pulley Connector to the Pulley as shown.



S5. Perform Hoist Cable Inspection

Your Cable Buddy is now properly installed. Proceed with cable inspection.



3.0 INSPECTION TECHNIQUES

Position Cable Buddy Directly Under Hoist

- The Adjusting Lanyards can be attached to floor anchors, aircraft skids, aircraft struts (front/back), etc.
- Adjust Lanyards so that the cable sits plum with the hoist; both vertically and horizontally.



Maintain Tension During Reel Out/Reel In Evolutions

- Connect the hoist hook to a harnessed team member, have him/her lean into their harness, and have them maintain substantial tension during reel out/reel in evolutions.
- Reel the cable out 10% past the longest hoist performed.



Inspect Hoist Cable

- Inspect hoist cable during reel in/reel out evolutions for damages listed below.
- ARS strongly recommends that all team members conducting cable inspection wear sturdy gloves while handling the hoist cable.



HOIST CABLE INSPECTION GUIDE:

A systematic and consistent approach to the inspection of the hoist cable will assure proper function, safety and extended component life. The cable should be checked after all hoist/winch operations. During a hoist cable inspection, the helicopter needs to be running or connected to shore power. Operating the hoist on aircraft battery alone could lead to premature battery discharge.

During reel in/reel out evolutions, team members should be inspecting for broken wires, kinks, bird caging, abrasions, necking or corrosion deposits.

Milking - Often mistaken for Bird Caging, Milking is a common end of life phenomena that occurs on the "hook end" of the cable. Milking is normally an indication cable fatigue and is the result of short repetitive hoist evolutions, improper cable conditioning/seating, and unweighted hook placement. The cause of milking must be investigated and repaired or replaced.

Broken Wires - Broken wires occur as a result of cable damage, abrasion, or shock load. If wire or strand is discovered, immediate replacement is required.

Kinks - A kink is identified as a permanent bend in a cable. An example would be when a loop of cable is suddenly pulled tight. A kinked cable must be replaced.

Bird Caging - Bird cages are defined as short lengths of wire rope with the outer wire strands stretched and opened to be formed in the appearance of a bird cage. This occur as a result of shock loading the cable. A birdcage is a permanent deformation and the cable must be replaced.
This is different than Milking

Abrasion - Abrasion is defined as wear of individual wires resulting in flattened areas on the wire. Abrasive wear can be caused by interference with other components, dragging the cable over abrasive surfaces (rocks, building, deck railings), or as a result of other cable damage. Cables, which have abrasive damage, must be replaced and, if applicable, the cause of the abrasion must be investigated and repaired.

Necking - Necking is defined as the decrease in cable diameter at a specific point. Necking is normally an indication of broken internal wires or strands and is cause for cable replacement.

Corrosion Deposits - Off colored deposits/powder on the steel surface may indicate superficial corrosion or internal corrosion. The cause of the corrosion must be investigated and it must be determined whether the cable is still operational and/or requires repair.

THE CABLE CUDDY - HC 600 PROVIDES THE BEST PRACTICE FOR HOIST CABLE INSPECTION AND CLEANING, BUT YOU SHOULD MAKE SURE TO REFER TO YOUR HOIST MANUFACTURER'S OPERATIONS MANUAL AND HOIST CABLE'S GUIDELINES FOR DETAILED SPECIFICATIONS. AIR RESCUE SYSTEMS BELIEVES THAT WITH PROPER INSPECTION, MAINTENANCE, AND OPERATION TECHNIQUES, THE HOIST CABLE SHOULD SEE ITS ENTIRE LIFE EXPECTANCY OF CYCLES AND TIME.

AIR RESCUE SYSTEMS
445 Dead Indian Memorial Rd.
Ashland, OR 97520
www.airrescuesystems.com
(541) 488-0941

