

## Helicopter Hoist Static Discharge Cable

The Helicopter Hoist Static Discharge Cable (HHSDC) is a 5/16 in. diameter conductive steel cable with HI-VIZ neon yellow-green or orange plastic insulator with a reflective stripe. The cable is 10 feet in length and comes with or without a Torpedo weight. The weighted HHSDC is used to help stabilize the cable and reduce movement in the rotor wash and should be let out/down prior to being deployed from the Helicopter. The unweighted cable can be kept coiled-up and released prior to contact with the surface. The HHSDC has a breaking strength of 250-300 lbs. The HHSDC is attached to the hoist hook prior to delivery and/or recovery of rescue personnel. Using the carabiner provided, the HHSDC is attached directly to the equipment attachment eye on the hoist hook. The HHSDC extends below the personnel or rescue device being delivered. The HHSDC helps discharge the static electricity by grounding the aircraft through the hoist cable, prior to the personnel or device coming into contact with the surface (ground, water, or vessel deck).



**BASED ON ENVIRONMENTAL ATMOSPHERIC CONDITIONS,  
USE OF THE HHSDC SHOULD BE CONSIDERED PRIOR TO EVERY LIVE  
DEPLOYMENT.**

During hoist evolutions, the discharge of static electricity is a common phenomenon between the surface (ground, water, or vessel deck) and hoisting device (hook, basket, or person). The potential for and the degree of static electricity discharge is a result of an electric potential difference (electrical field measured in kilovolts per meter (kv/m) between the surface and a helicopter).

There are environmental conditions that can cause the development of substantial electrical fields. These conditions include cold dry weather, widespread and low thick ceilings, electrical storms forming nearby, and calm sea states. The area where electrical fields meet the surface (water or ground) we can refer to as the boundary layer. Over open water, this boundary layer tends to be more conducive to static discharge release than overland. In fair weather or higher sea states, these electric fields are significantly less due to the continual disturbances of the water surface in the boundary layer. There is no exact methodology for predicting when substantial electrical fields exist, only more probable conditions as described above.

The HHSDC is compatible with all rescue hoist hooks and will discharge static electricity prior to contacting the surface. It should be used for all hoisting of live personnel deployments (rescue swimmer, rescue technician, vertical delivery of boarding team, medic members, etc.) unless its determined that conditions exist that could potentially cause the HHSDC to become a hazard to the deployed member (e.g. heavy sea state, snag hazard, emergency recovery, significant vessel rigging, wrapping hazard during direct deployment, etc.).

# MAINTENANCE

## HELICOPTER HOIST STATIC DISCHARGE CABLE (HHSDC):

### A. Inspections and Intervals

**1. Acceptance / In-Service** - An acceptance / in-service inspection should be accomplished upon original issue, when received from supply, or accepted from another unit for permanent custody. The acceptance / in-service inspection shall be performed as follows:

- a) Remove HHSD from stowage case. Remove stowage strap and unwind cable. Inspect stowage case and strap for cuts, tears, and abrasion.
- b) Inspect the carabiner for proper operation. The gate mechanism should operate freely. The gate should close straight so that it cleanly engages the latch pin. The body of the carabiner should be free of cracks, marks, and deep scratches. There should be no corrosion evident.
- c) Inspect the swivel for smooth rotation, ensure no binding occurs.
- d) Inspect the attachment gate and cable swedge for slippage, broken or cracked wires, deformation, and abnormalities, checking for corrosion or severe abrasion.
- e) Inspect the plastic insulator for cracks, cuts, breaks, abrasion or any other visible damage.
- f) Locking mechanisms should operate freely. All metal parts should be wiped down with a silicone-based lubricant / corrosion preventative.

**2. Weekly**- A weekly inspection shall consist of verification of overall condition and treatment with corrosion preventative as needed. All metal parts should be wiped down with a silicone-based lubricant / corrosion preventative.

**3. Pre/Post use** – Pre-flight inspection should be a “quick look” at the HHSDC prior to the first flight of the day and shall consist of verification of overall condition. Inspecting for any cracks, cuts, breaks, abrasion or any other visible damage. The post-flight inspection should be accomplished after the last flight of the day and shall consist of verification of overall condition, rinsed with fresh water and treated with silicone-based lubricant / corrosion preventative.

### B. Modifications and Repairs to the Helicopter Hoist Static Discharge Cable

- a) There are no modifications authorized to the HHSDC.
- b) Authorized repairs to the HHSDC include removal of corrosion, burrs, and sharp edges with emery cloth in accordance with Capewell’s Manufacturing Specifications.

## Specifications

<b>Break Away Pin</b>	Integrated safety feature that breaks at 250 – 300 lbs.
<b>Cable Material</b>	5/16 in. diameter steel cable with orange plastic insulator with a reflective stripe.
<b>Compatible</b>	With all rescue hoist hooks with eye.
<b>Length</b>	10 ft.
<b>Prevents</b>	Electrostatic Shock.
<b>Weight</b>	<ul style="list-style-type: none"><li>• Weighted: 2.2 lbs.</li><li>• Standard: 1.2 lbs.</li></ul>

## Contact Information

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