



Inspection, Repair & Maintenance of Barry Helicopter Cargo Nets – HCN

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1. Warning

Improper care and use of your Barry Helicopter Cargo Nets can result in serious injury or death. Never use these products for any other use than their intended purpose.

Note : This document must be used by persons who are competent* in the inspection of 12-strand Dyneema™ rope products, and of knotless nylon netting.

Inspect your Barry Helicopter Cargo Net regularly: It is important to inspect your net before and after each use. This inspection must be done at all times, and also applies to new nets prior to them being put in service. The Net should be thoroughly inspected visually and manually (with bare hands) over its entire area. It is the USER 'S RESPONSIBILITY to maintain a relevant logbook outlining the history of his/her Barry Helicopter Cargo Net and to take the decision as to when the net should be retired. The manufacturer cannot guarantee the specifications for used nets.

* *Competent person: (OSHA) One who is capable of identifying existing and predictable hazards in the surroundings or working conditions that are hazardous or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.*

2. Inspection Criteria

This document must be used by persons who are competent in the inspection of 12-strand Dyneema™ rope products, and of knotless nylon netting in accordance with the manufacturer's recommendations.

Barry Helicopter Cargo Net inspection should be performed in a clean and well-lit place. The visual and physical inspection should be done on the entire area of each net that is to be inspected.

During daily inspections, the inspector should have a reliable logbook describing all the significant information pertaining to the net he/she is inspecting. This information includes the manufacturer's product recommendations and a description of Dyneema™ ropes care instructions.

The following list is not exhaustive and does not exclude the possibility of other types of netting rope degradation and/or manufacturing defects.

3. Rope & Net Condition



CUT STRAND

If a strand is partially or completely cut, reinforce by overlapping the damaged sides and apply metal crimps to solidify the strand. Whipping thread may also be appropriate.



TORN JOINT

If a netting joint is torn or damaged, reattach it with a metal crimp. Then reinforce the area with an appropriate netting patch tied to the net with metal crimps.

3. Rope & Net Condition – Lanyard Damages



CUTS & EXCESSIVE ABRASION

Rope shows two adjacent cut strands. This rope should either be retired or the cut section should be removed and the remaining rope re-spliced. (If a 12-strand rope has two or more adjacent cut strands, the rope should be discarded.)



MELTING OR GLAZING

Rope showing melting or glazing caused by excessive heat. This area will be extremely stiff. Unlike fibre compression, the melted area cannot be mitigated by flexing the rope. The melted area should be cut out and re-spliced or the rope should be retired from service.

4. HCN Repair Guidelines

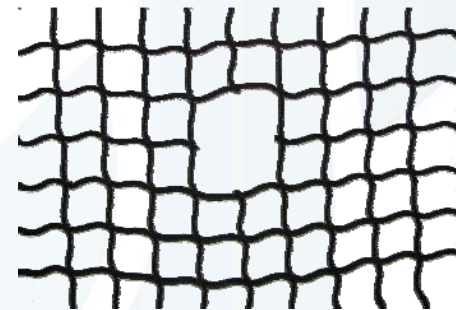
1- Barry can provide an optional HCN repair kit.

The kit includes:

- 1 roll of black nylon braided twine (1/8" x 100')
- 1 pair of metal crimp pliers
- 3 bags of metal crimps (100 ea)
- 1 piece of repair netting (100 ft²)



2- Evaluate the level of damage to your net



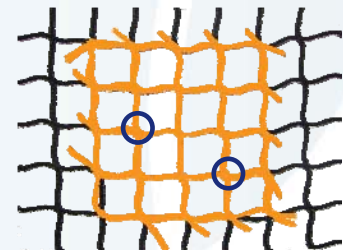
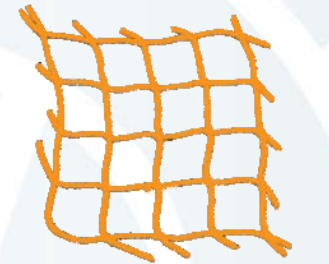
4. HCN Repair Guidelines

3- Cut out a patch of netting that is sufficiently large to surround the damaged patch by one complete mesh around the entire area.

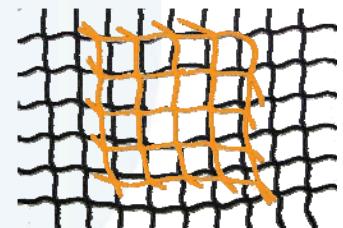
4- Fix the netting patch over the damaged area of the net with metal crimps.

The metal crimps should be installed at each mesh's joint. 

Ensure that the patch's and net's meshes are aligned in the appropriate direction of braiding



RIGHT



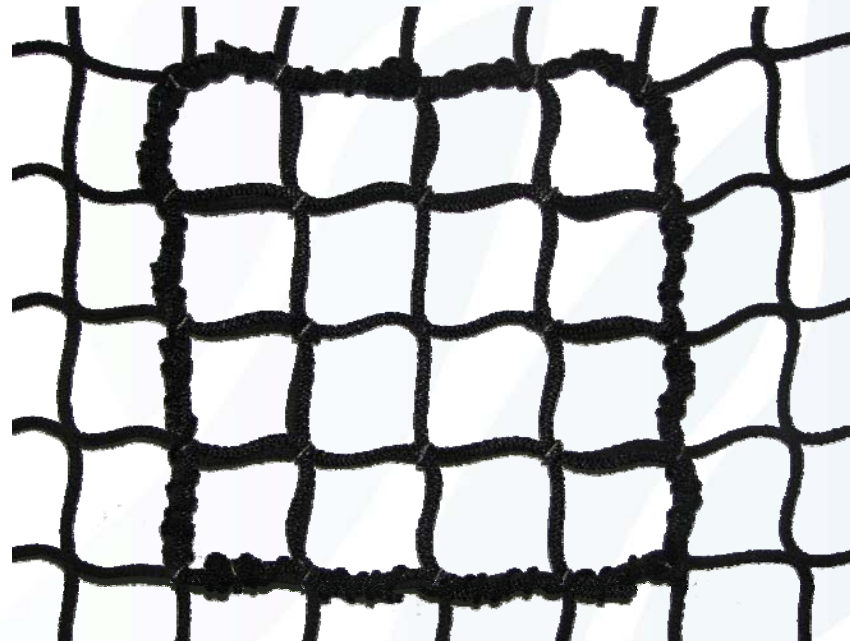
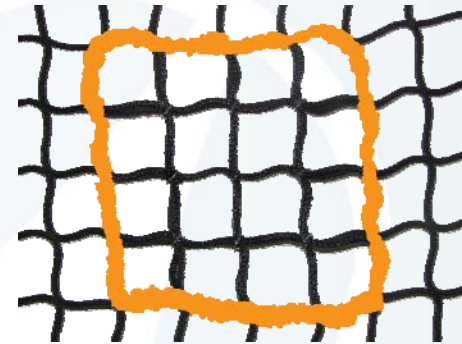
WRONG

4. HCN Repair Guidelines

5- Secure the netting patch by circling the twine around the perimeter as such:

Make sure that it is wrapped very tight around the perimeter

Melt all remaining ends with an appropriate rope burner, to delete any uneven strand or imperfection. Make sure that fumes are ventilated adequately, and not to inhale these fumes.



5. Inspection Criteria

Strand damage: Take special care to protect your *Barry* Helicopter Cargo Nets from abrasion. Rope strand damage is the most common cause of early net retirement. This damage occurs most often when your net, when under tension, comes into contact with rough or sharp edges, the inside edges of shackles, bollards, or any other potential hazard that might be found in the surrounding environment. Remember, a net under tension is more susceptible to damage than one that is not.

Accidental dynamic loading: Your *Barry* Helicopter Cargo Nets are **not** designed to absorb the energy of an accidental dynamic loading. Care must be taken to avoid this. If an accidental dynamic loading does occur, **retire your net.**

Avoid stepping or passing over your rope: Besides the possibility of cutting the netting rope, stepping or passing over a *Barry* Helicopter Cargo Net will grind dirt into the strands and increase the possibility of internal abrasion which may cut filaments and lead to net and rope failure.

5. Inspection Criteria

Chemicals: Protect your *Barry* Helicopter Cargo Net from exposure to harsh chemicals. Do not allow your nets to come in contact with any compounds containing acid or alkaline chemicals, oxidizing agents or bleaching compounds. Be especially careful to avoid contact with battery acid and acid fumes.

Keep your net clean: Dirt can shorten the life of netting or rope by increasing internal and external abrasion. Wash your *Barry* Helicopter Cargo Net occasionally in cold water with small amounts of mild soap only. Make sure to rinse thoroughly. DO NOT USE BLEACH OR BLEACH SUBSTITUTES. Your *Barry* Helicopter Cargo Net should be air-dried away from direct sunlight - DO NOT DRY THE NET IN A DRYER.

5. Inspection Criteria

When to retire your Barry Helicopter Cargo Net:

The following is a list of general guidelines that can assist you in deciding when to retire a *Barry* Helicopter Cargo Net ;

- **Shock loading:** net that has been subjected to severe shock loading.
- **Overloading:** net that has been subjected to the kind of overload for which it was not designed, such as lifting heavy objects beyond the working load limits.
- **Chemical contamination:** unless the chemical is specifically known to be harmless, it should be considered a contaminant.
- **Texture inconsistency:** soft, mushy places or hard spots (localized or over an extended area).
- **Age:** the net is simply “worn out” from use.
- **Diameter inconsistency:** a visible change in diameter of lanyards; localized diameter reduction, flat area, lumps and bumps in rope.
- **Missing identification label:** the metal label should always be attached to the net to allow to see the working load limit and to document the use and age of the net to assist in the inspection process.

5. Inspection Criteria

- **Loss of confidence:** the *Barry* Helicopter Cargo Net was used by persons who you suspect may not have taken proper care of it.

Although there is no conclusive evidence from manufacturers, we recommend that a *Barry* Helicopter Cargo Net be taken out of service within five years of the manufacturing date.

Seek proper instruction in the correct techniques and use of all ropes and equipment. A novice's lack of experience is often the reason *Barry* Helicopter Cargo Nets are inadvertently exposed to situations that cause premature net damage.

A *Barry* Helicopter Cargo Net is not as valuable as human life: if for any reason you do not feel comfortable using your net, retire it from service immediately.

6. Controlling Contingent Risk

There are two main categories of contingent risk.

The **first** category includes the risks that crew members who handle the net face directly. These individuals are required to observe the prevailing conditions, especially changes in how nets are used. The person responsible for these products should be aware of all information regarding the safe use of nets.

When the individual responsible for product safety leaves the site, work should be immediately stopped, unless he or she has passed on key instructions concerning proper use of the *Barry* Helicopter Cargo Net .

Before the last person responsible for product safety leaves the job site, work should be discontinued, and he or she should:

- Store the *Barry* Helicopter Cargo Net
- Inform the supervisor of any hazards
- Take all the necessary precautions related to the specific job.

6. Controlling Contingent Risk

The **second** category of contingent risk encompasses all risks that anyone not directly involved in the use of helicopter cargo nets face. It is virtually impossible for those responsible for the use of *Barry* Helicopter Cargo Nets to be continually on the look-out for such dangers. To minimize the risk of accidents they can nevertheless engage in the following:

- Obtain all information regarding the use of ropes and nets, especially with regard to their respective limitations
- Make sure that *Barry* Helicopter Cargo Net installations are adequate
- Establish safe working loads
- Post instructions on the proper use of *Barry* Helicopter Cargo Net
- Keep informed of all activities which may exceed a net's limitations (e.g. high temperature, exposure to chemicals, shock loading, overloading)
- Inspect **all *Barry* Helicopter Cargo Nets** periodically and systematically, and document these inspections in a logbook.

6. Controlling Contingent Risks

Critical Use Conditions:

The user should always review the design factors (or working load limits – WLL) and frequency of inspections of *Barry* Helicopter Cargo Nets if;

- Loads are not accurately known
- Operators are poorly trained
- Operating procedures are not well defined
- Inspections are infrequent
- Abrasions, cuts and dirt are observed on the netting
- There is a chance of shock loads or extreme dynamic loadings
- It is used at high temperatures
- There are chemicals nearby
- It has been in service indefinitely
- It is continually under tension
- It has a manufacturing defect.

If one or more of these conditions are met, it is preferable to reduce the working load as per the manufacturer's instructions, or to remove the defective or worn-out net from service. Serious accidents can thus be prevented.

7. Hardware Inspection

All hardware components used in conjunction with *Barry Helicopter Cargo Nets* should be inspected by a competent person. All hardware (thimbles, rings) should not show any damage or sharp edges, any kind of permanent deformation or any corrosion.

If you have any questions or concerns regarding the proper use, inspection and repair of you Barry Helicopter Cargo Net, please contact your local representative or Barry for assistance.

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