	<b>Cincinnati Fire Department Fire Training Supplement DRILL BOOK</b>	<b>SECTION #1 General Fire Fighting</b>
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## TOPIC #2: CFD ROPES

Ropes and knots are explained in the Essentials manual. The Cincinnati Fire Division currently carries specific types of ropes and has developed certain procedures in regard to these ropes. The following pages will describe the ropes and their uses.

### LIFE SAFETY ROPE

The Life Safety Rope is a Blue 200-foot 1/2" Static Kernmantle rope. It is the only rope to be used in situations where a person is being raised, lowered, or when removing an object that may be entrapping a victim. The Life safety rope is used for stokes basket rescues, when rappelling, or whenever a Fire Fighter is in danger of falling.

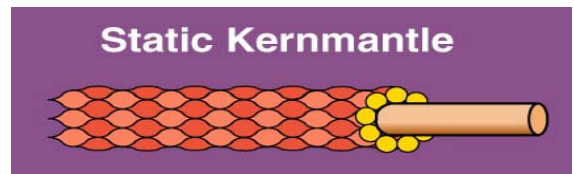
The rule of thumb is that if a person's life is involved, **USE A LIFE SAFETY ROPE!**

**Breaking strength:** 9,000 lb-

**Safe working load:** 600 lb (15:1 safety factor)


#### **Construction:**

Kernmantle translates to "core and sheath. The core or kern, is made up of parallel fibers carrying approximately 85% to 90% of the rope strength. The mantel or sheath protects the core and provides 10% to 15% of the overall rope strength.



#### **Storage:**

The life safety rope and its accessories must be protected from physical damage. It should be kept dry, out of direct sunlight and in its designated bag. The storage compartment shall be clean and have adequate ventilation. The rope should never be exposed to chemical contaminants such as battery acid, hydrocarbon fuels or the fumes from hydrocarbon fuels. Life safety rope should never be stored in the same compartment where gasoline or gasoline-powered tools are stored.

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### **Maintenance:**

In order for Life Safety Rope to be ready and safe for use when needed, it must be properly maintained. Company level maintenance includes inspecting and cleaning the rope as well as keeping a “Rope Log” of its use and maintenance. The correct procedure for inspecting and cleaning of kernmantle rope as well as instructions for keeping a Rope Log are discussed in detail and should be followed.

**NOTE:** Do **NOT** use company level washing machines for cleaning ropes.

Companies can send their Life Safety Ropes to central stores for cleaning in the extractor.

Life Safety Rope and its associated equipment will be inspected after every use; this equipment shall also be inspected each April and October. The results of all inspections will be noted on the Rope Log. If, after inspection, there is any question as to the ropes integrity or if the rope was shock loaded during use, the Life Safety Rope along with associated equipment must be sent to a Heavy Rescue Squad for further evaluation.


A form 47 must be prepared and a copy must accompany the equipment to a Heavy Rescue Squad. The F-47 must contain the following:

1. Life safety rope serial number.
2. What equipment was used and the evolution that was being performed.
3. If the Life Safety Rope is shock loaded, (victim or rescuer falls while secured by the rope).  
List:
  - A. Length of the rope involved in the fall.
  - B. Weight of the victim and or rescuer.
  - C. Distance of the fall in feet.
4. A brief narrative explaining the rescue. Or the reason you believe the rope or hardware is damaged.

### **Rope Log:**

All life safety rope should be tracked during its “in-service” time. The date of each use and the inspection/maintenance records should be entered onto the Rope Log. This information helps determine when the rope should be replaced.

Every company using life safety rope shall keep a rope log. The log will be kept in a protective sleeve in the rope bag. The log will be filled out any time the rope is used for rescue, company drill or inspected. The Life Safety Rope number, Company number, rope length, and size are located under a clear plastic sleeve on each end of the rope. This information can be used for filling out the rope log.

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## UTILITY ROPE

Due to the purchase of the blue 1/2" Life safety rope, the red 200-foot 9/16" Kernmantle has been downgraded to utility rope. This rope can now be used as a tag line, search line, protective barricade, haul line or any purpose that does not involve life safety as defined in the LIFE SAFETY ROPE section. The Utility rope should be inspected and cleaned as described in the IFSTA Essentials chapter on rope. Due to it's "utility" status there is no need to keep a rope log of it's activity but if during an inspection it appears to be damaged, it must be forwarded to a Heavy Rescue Squad for further evaluation and possible retirement.

**NOTE:** The "Rack" is not designed for, and shall not be used with, the 9/16 utility rope


## LADDER PIPE CONTROL ROPES

Each ladder company is supplied with (2) two 250-foot 3/8" white nylon ropes. Each rope is equipped with a snap on each end. These ropes are used to control the vertical movement of the ladder pipe stream, as well as adjusting the nozzle pattern. These ropes should be stuffed in a bag. Follow the instructions for storage.

### Handling Ladder Pipe Control Ropes

**Bagging:** Lay out the control rope and double it. Begin with the doubled end first and simply stuff the rope into the bag until the snap ends are near the bag. The snaps can be snapped to the drawstring of the bag or place inside.

**Placing a bagged line into service:** Remove the snaps from the drawstring or remove the clips from inside the bag. Grasp both snaps in one hand and toss the remaining line in the bag toward a safe and advantageous position. This should release the line as the bag travels in the air. Snap the ends to the Ladder Pipe control rods or to the nozzle and guide the line as the ladder is raised and extended. Additional line should feed from the bag as the Ladder Pipe is maneuvered for service.

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## HANDY LINE

The Handy Line is a 100-foot length of 3/8" white nylon rope with a snap on one end . It is to be carried on all CFD companies Engines, Ladders and Squad 52. The Handy Line can be used in a variety of ways depending on the situation. It will be carried stuffed in its bag with the company numbers printed on the outside.

**Bagging:** Lay out the Handy line, check for and remove any knots. Begin stuffing the rope into the bag until the snap end is near the bag. The snap can be snapped to the drawstring of the bag or placed inside the bag.

**Placing a bagged line into service:** Remove the snap from the drawstring or remove it from inside the bag. For a search tag line, clip the end of rope to a substantial object outside the structure; take the bag with you during the search feeding the line out as you go. Lifting objects with the handy line can be accomplished by taking the bag to the point of service and lowering the clip to the equipment staging area, once the object is attached, pull on the rope.



## SEARCH ROPES

Search Ropes are covered in Ladder Company Operations.