

## AERIAL PLATFORMS

### DESCRIPTION AND USE

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**1. GENERAL**

**1.01** This section has been issued to consolidate information which pertains to aerial platforms in general, and information relating to particular types of platforms, formerly found in Sections 081-300-011, 081-300-200, 081-300-201, and 081-300-203.

**1.02** The practice covers the description, use, and methods of placing D and E Aerial Platforms using the B Aerial Handline.

**1.03** The D Aerial Platform supersedes the B Aerial Platform. The D and B Platforms are basically the same except for differences in hardware.

**1.04** The E Aerial Platform supersedes the C Aerial Platform and the 52-inch and 64-inch closed aerial platforms. The C and E Aerial Platforms are basically the same except for differences in hardware.

**2. DESCRIPTION**

**2.01** The D Aerial Platform is an open platform for use in aerial cable work. It is rectangular in shape and made of four wide boards assembled with a lengthwise opening to accommodate the legs of craftsmen working in a sitting position. A smaller board suspended from the underside of

the platform serves as a footrest. The upper surfaces of platform and footrest have a nonskid finish.

**2.02** The D Aerial Platform is furnished with four support ropes, two guy ropes, and a length of rope for supporting the footrest.

**2.03** The support ropes are equipped with O Hooks, K Hooks, or B Saddles. The guy ropes are 30 feet long and are equipped with snap hooks.

**2.04** The D Platform, which is approximately 42 inches long by 35 inches wide and weighs 38 pounds including guy ropes and support ropes, is illustrated in Fig. 1.

**2.05** The B Platform Foot Bag is used with the open type aerial platform to provide protection for the legs of the workman and a place to store discarded material. This bag is made of canvas duck with a steel frame and is designed to fit in the center opening of the platform. The marking is BELL SYSTEM B as illustrated in Fig. 2.

**2.06** The E Aerial Platform is rectangular in shape. Top and bottom surfaces are of exterior grade plywood bonded to a core of expanded paper honeycomb. The edges are sealed to protect against the entrance of moisture. Toe boards are provided around the edges on both the top and bottom of the platform to make the platform reversible when one side becomes worn. Both top and bottom surfaces have nonskid finish. A gap is left between the toe boards at each corner of the platform to allow for drainage.

**2.07** The hardware is arranged so it can be removed and inserted from the opposite side when the platform is reversed.

**2.08** The E Platform is furnished with either four 6-1/2 foot or four 12-foot support ropes, or with two 6-1/2 foot and two 12-foot support ropes. The 6-1/2 foot support ropes are supplied equipped

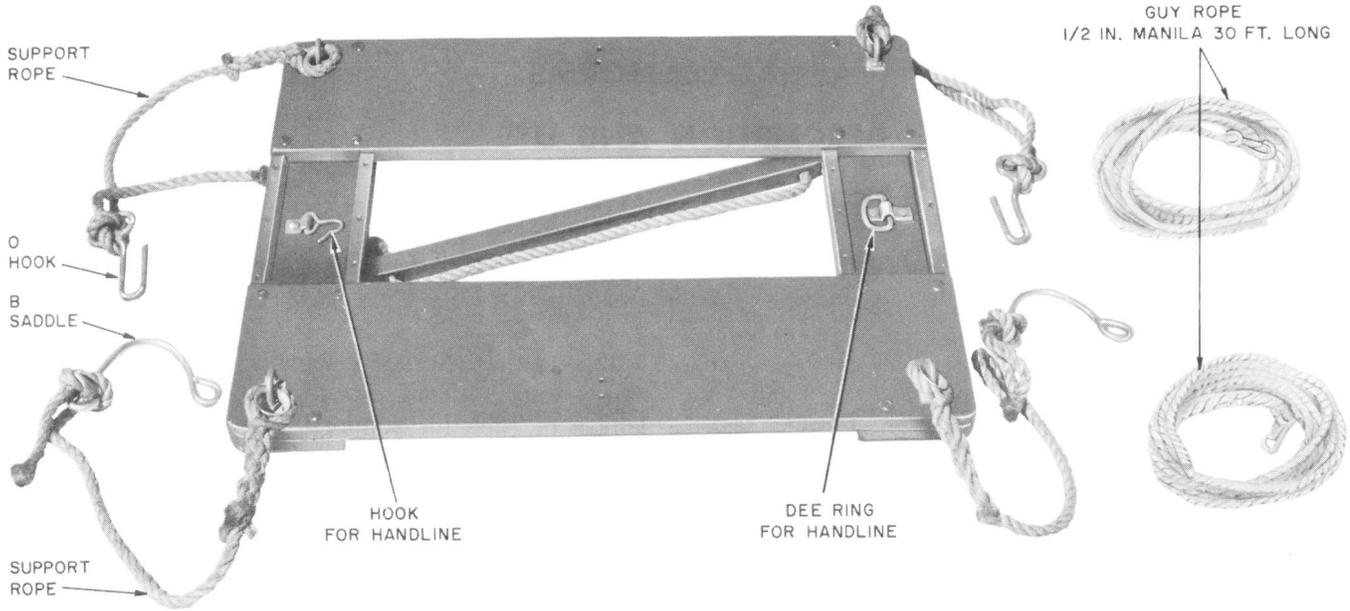


Fig. 1—D Aerial Platform

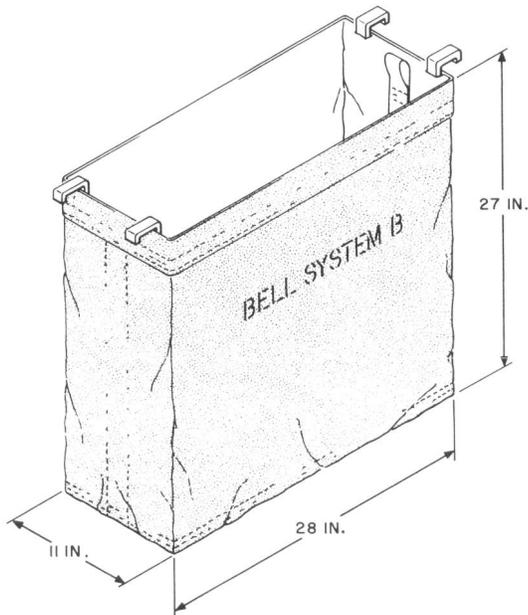


Fig. 2—B Platform Foot Bag

with O Hooks, K Hooks, or B Saddles. The 12-foot ropes are supplied without attachments. Two guy ropes equipped with snap hooks are supplied with each platform. The E Platform with ropes and

handline placed for raising are shown in Fig. 3. The handline had previously been placed on the suspension strand as shown in Fig. 4. The E Aerial Platform is available in two sizes as shown in Table A.

### 3. PRECAUTIONS

3.01 The following precautions shall be observed when using aerial platforms:

- (a) All aerial suspension strand shall be tested for soundness before placing an aerial platform. The method of testing the strand is covered in Section 627-295-500.
- (b) Use a truck-mounted ladder when it is necessary to make repairs on a cable that does not pass the tests specified in (a) above.
- (c) Platforms must not be attached to or suspended from 2200-pound strand. In no case shall platforms be suspended from any size strand which is attached to a building.
- (d) The body belt and safety strap shall be used when placing or removing the platform, and when working on the platform.

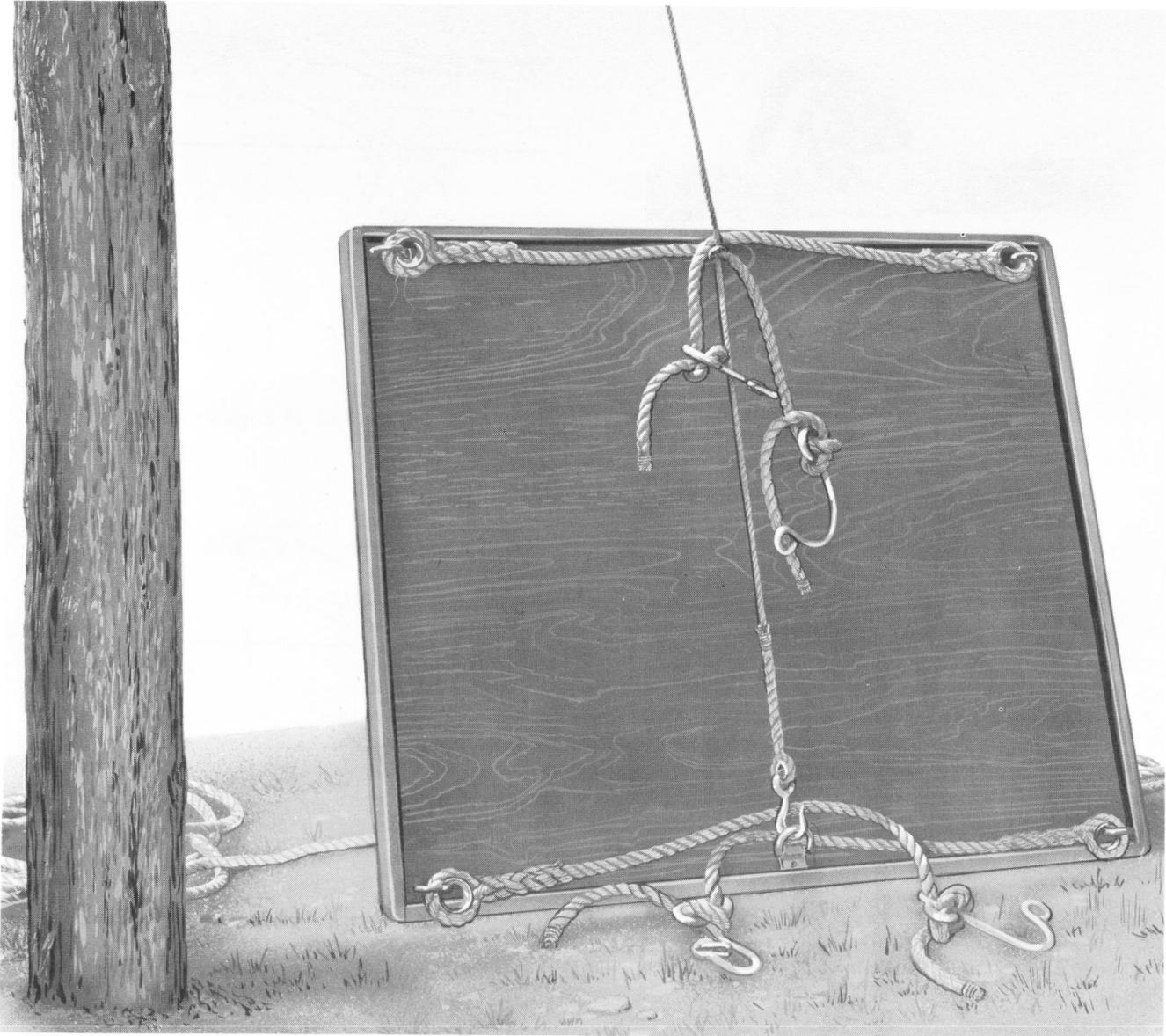


Fig. 3—Method of Placing Ropes and Handline E Platform

TABLE A — E AERIAL PLATFORM SIZES			
SIZE	LENGTH (INCHES)	WIDTH (INCHES)	APPROX WEIGHT (POUNDS)
48	48	32	42
52	52	42	53

**Note:** Approximate weight includes guy ropes hooks, and support ropes.

- (e) Coil the guy ropes before transporting the platform in a vehicle. When moving from one location to another do not drag the ropes on the ground.
- (f) Platforms shall not be dragged from one location to another.
- (g) Make sure that the support hooks have been properly attached to the strand. See Fig. 5, 6, and 7.



Fig. 4—B Aerial Handline

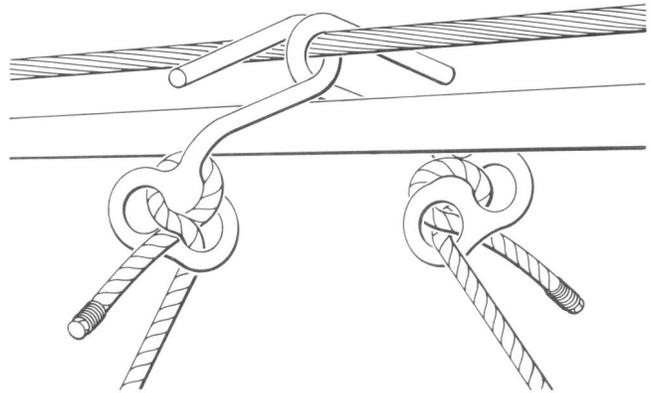


Fig. 5—Method of Engaging O Hooks

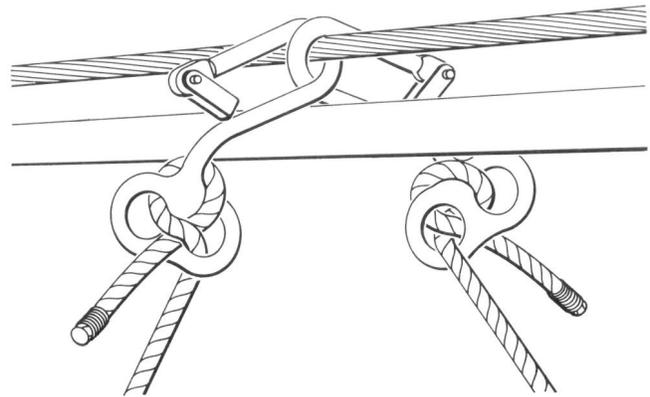
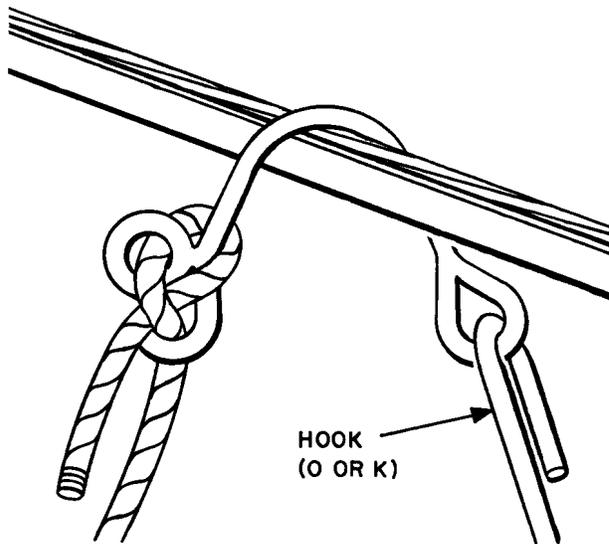


Fig. 6—Method of Engaging K Hooks

- (h) Hooks shall not be attached to guys at dead-end or false dead-end poles.
- (i) Always attach the hooks to the main strand at dead-end poles.
- (j) The platform shall be leveled before the guy ropes are tensioned.
- (k) Make sure that the guy ropes are taut after the platform is loaded and that they have been tied using methods shown in this practice.
- (l) Avoid twists and kinks in the ropes. Rope kinks shall be turned out by hand before the rope is stressed.



**Fig. 7—Method of Engaging B Saddle and O or K Hooks**

- (m) The weight on a platform or a platform and ladder shall be limited to two men and the tools and materials required. Only one man shall be on the ladder at any time.
- (n) When placing aerial tents or umbrellas, care shall be exercised to avoid bringing the tent or umbrella into contact with power wires or equipment.
- (o) The work area should be guarded as covered in the sections of Division 620 dealing with guarding work areas. Pedestrians and vehicles shall be kept away from the area beneath a workman.
- (p) Tools or materials shall not be placed on a platform from which they may fall. They shall preferably be kept in a canvas tray or canvas bucket securely attached to the strand or in some other approved container.
- (q) Tools and materials shall be raised and lowered by the use of a handline. Observe precautions on use of handlines which are covered in Section 081-512-100. See Fig. 4. Tools and materials shall not be thrown to or from a platform.
- (r) Only approved heaters shall be operated on the platform. Furnaces equipped with hoods may be used on the platform, but only when the regulator has been set to deliver gas at recommended heating pressure.
- (s) Care shall be exercised when using torches on a platform to avoid burning ropes, platform, strand, or cable.
- (t) Do not place hot solder or paraffin pots directly on the platform. Paraffin and solder pots shall be suspended from the strand by means of a pot hook.
- (u) Paraffin and solder drippings shall be removed from the platform.
- (v) Avoid spilling solder or paraffin on ropes.
- (w) Ropes shall be kept away from storage batteries or surfaces such as garage floors or truck platforms upon which acid or alkali may have been spilled.
- (x) Observe all precautions for the use of aerial platforms and extension ladders as covered in Section 081-740-105.

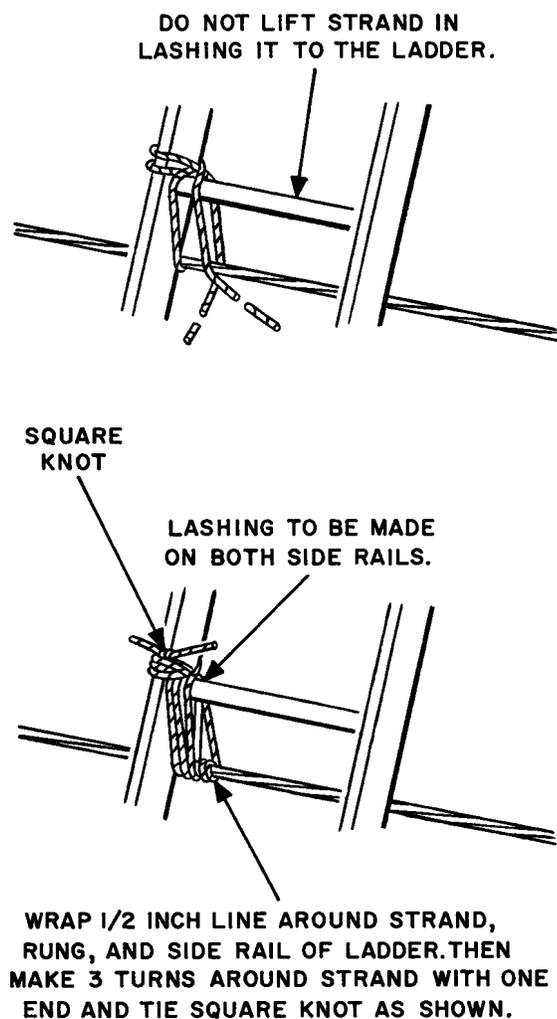
#### 4. PLACING PLATFORMS

**4.01** When a platform is suspended from the strand, it must be guyed with ropes tied to either a pole or a ladder. If the platform is suspended three feet or less from the pole, the guy ropes shall be tied to the pole. At greater distances from the pole, an extension ladder shall be used to facilitate guying and to afford access to the platform. See Section 081-740-105 for extension ladders and attachments, description, and use.

**4.02** When a ladder is used with a platform on the strand, the top of the ladder must be lashed to the strand as shown in Fig. 8.

**4.03** If the platform is suspended from a slack span, an extension ladder must be used for guying the platform.

**4.04** If more than one platform is installed on a span, use an extension ladder with each platform.



**CAUTION:**

**BASE OF LADDER SHOULD NOT BE MOVED AFTER THE LADDER IS LASHED TO STRAND.**

**Fig. 8—Method of Lashing Ladder to Strand**

**4.05 Use the following method for placing either D or E Platform:**

- (a) Arrange support ropes, guy ropes, and handline as shown in Fig. 3.

- (b) Make sure hooks and saddles are tied as shown in Fig. 5, 6, and 7.

- (c) Place the B Aerial Handline block on the strand, as shown in Fig. 4, near the position to be occupied by the outer support ropes of the platform.

- (d) Raise the platform to position approximately 30 inches below the strand and engage the locking mechanism of the B Handline to hold the platform. Engage the outer hooks or saddle and hook on the strand as shown in Fig. 5, 6, or 7. Release the B Handline lock and lower the platform until it is supported by the platform support ropes.

- (e) Disengage the handline from the hook on the platform and move the handline block along the strand to a position approximately 6 inches from the pole or ladder. Raise the lower side of the platform. Lock the handline and engage the hooks or saddle and hook as shown in Fig. 5, 6, or 7. Release the handline lock and lower the platform until the support ropes hold it. See Fig. 9. When platform is placed adjacent to a pole the support ropes are located as shown in Fig. 10. When platform is placed at a dead-end pole the support ropes are located as shown in Fig. 11. The hooks or hook and saddle should be attached:

- (1) To the through end of the strand if a 3-bolt clamp is used
- (2) Through the bail if a Strandwise is used
- (3) Through the eye if a B Strand Grip is used.

A one-bolt clamp, cable lashing clamp, or lashing wire grip may be used on the strand to prevent the hooks or saddle from sliding.

- (f) After the hooks or saddles and hooks are in place on the strand, the platform may be leveled by moving the support ropes through the double eye of the hook or saddle. **Do not attempt any adjustments on the support ropes when standing or sitting on the platform.** See Fig. 5, 6, and 7.



Fig. 9—E Platform Suspended at Pole



Fig. 10—D Platform Placed Adjacent to Pole

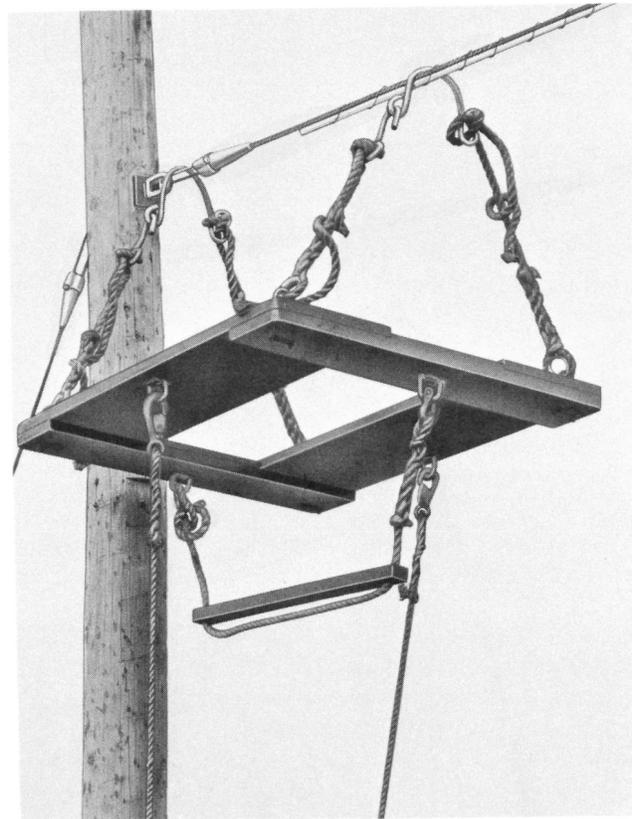


Fig. 11—D Platform At Dead-End Pole

4.06 Use the following method for guying platforms attached to the strand:

- (a) Guying to a pole is done as shown in Fig. 12, 13, or 14.
- (b) Guying to one ladder is done as shown in Fig. 12, 15, and 16.
- (c) Guying to two ladders ("A" frame) is done as shown in Fig. 12, 15, and 17. Fig. 17A, 17B, 17C, and 17D show details of two ladder ("A" frame) assembly which is shown in Fig. 17.

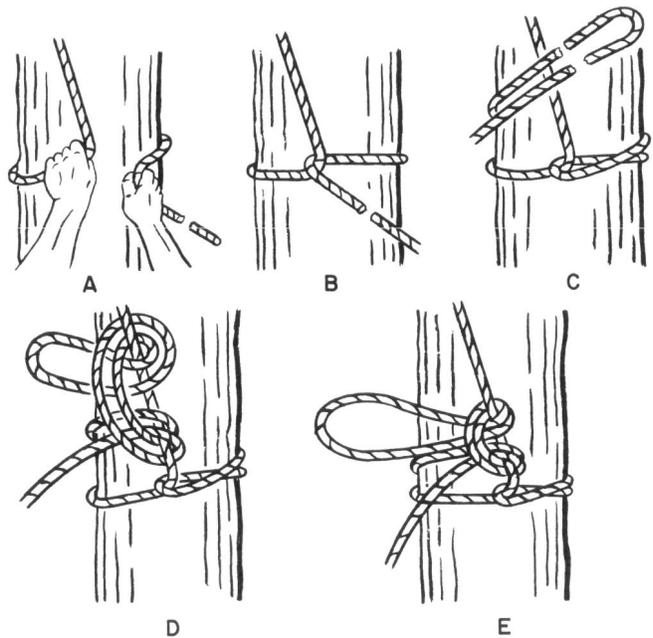


Fig. 12—Line Method of Tying Guy Ropes to Pole or Ladder Side Rail

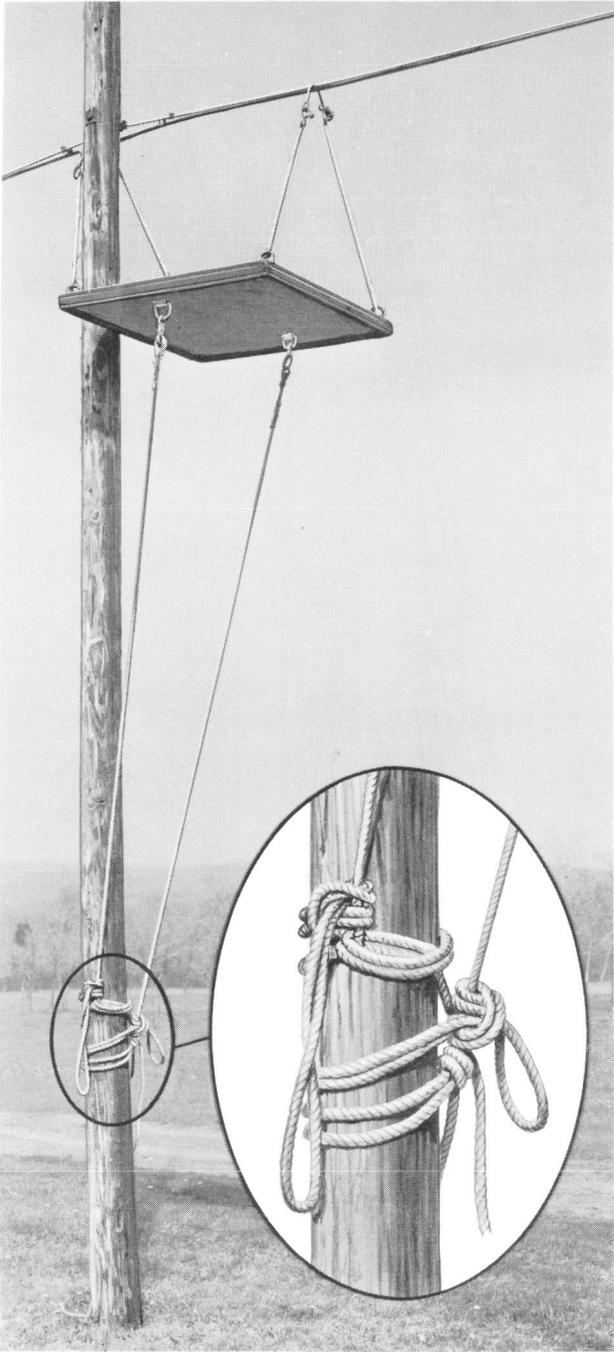


Fig. 13—Platform With Guy Ropes Tied To Pole

(d) The following steps required in tying the guy ropes to a pole or ladder are illustrated in Fig. 12. However, there are two methods of tying ropes to a pole or ladder. See Fig. 14 and 15 for the alternate methods.

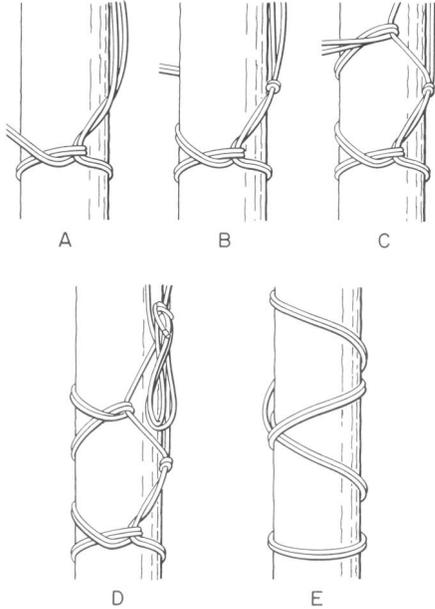


Fig. 14—Alternate Method of Tying Guy Ropes To Pole

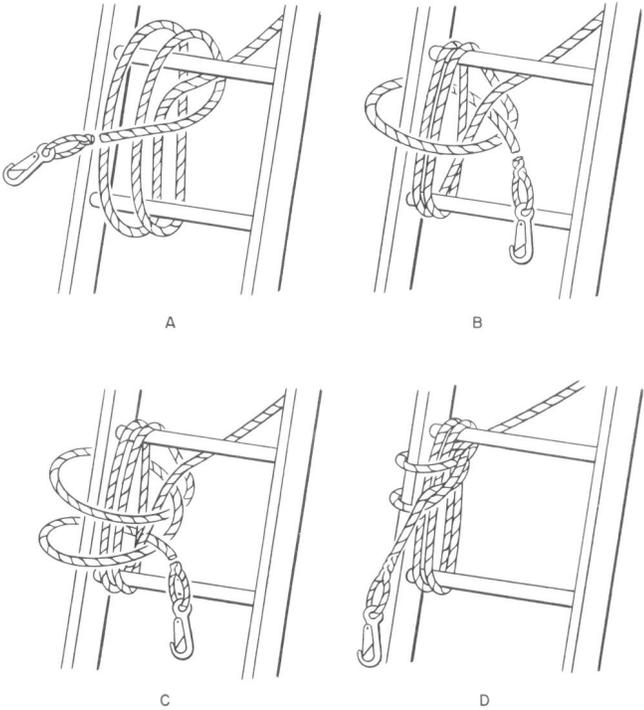
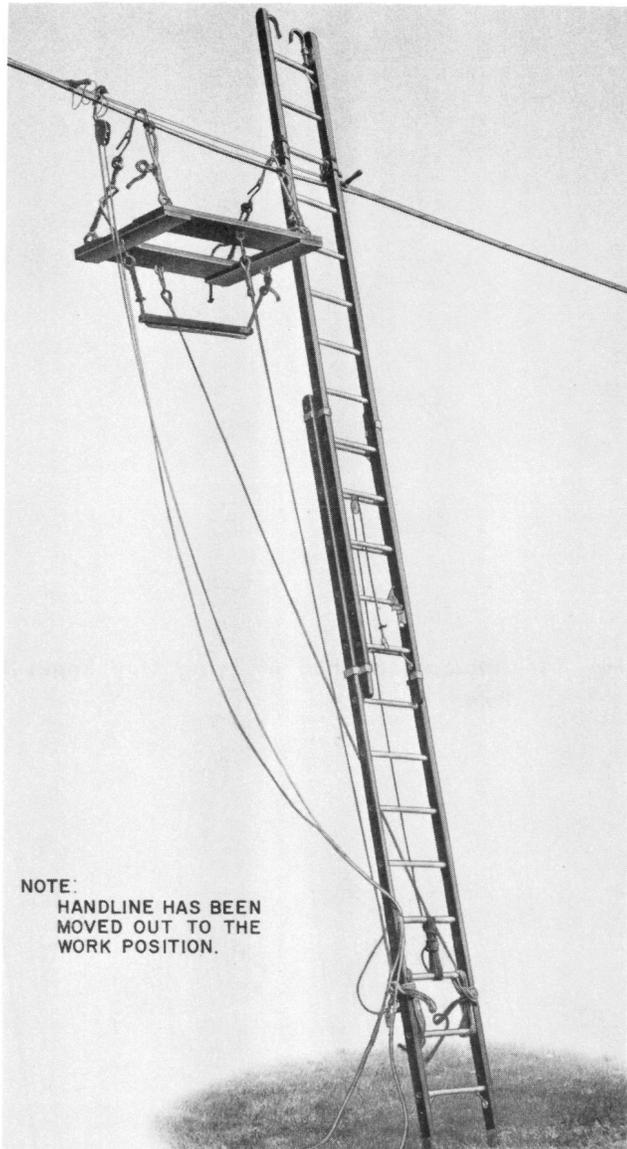
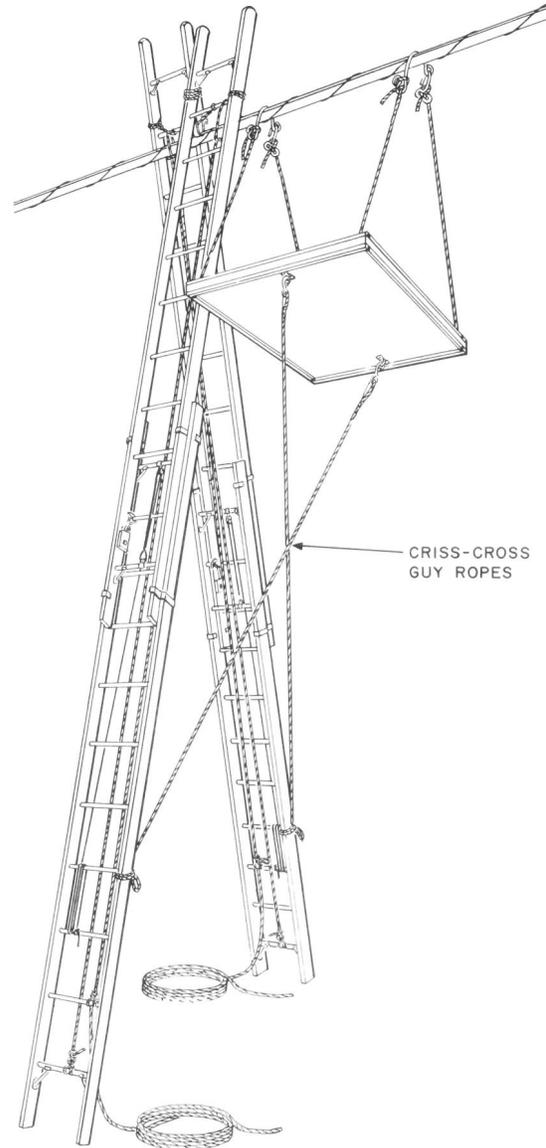


Fig. 15—Method Of Tying Guy Ropes To Ladder



**Fig. 16—D Platform Installed in Span**

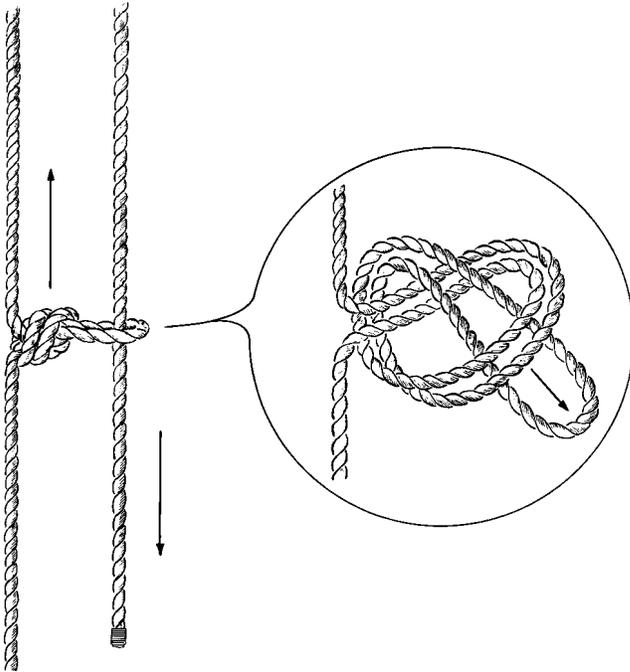
- (1) Face the pole or ladder side rail from the side on which the platform is hanging or will be hung. Hold the standing end of the left-hand guy rope in the left hand and pass the loose end of the guy rope around the pole or ladder rail as shown in A of Fig. 12. Place the hitch so it will not interfere with pole steps.
- (2) Pass the loose end of the rope over the standing end, as indicated in B of Fig. 12 and pull to the desired tension. The hitch



**Fig. 17—Platform in Place and Lashed To Ladders**

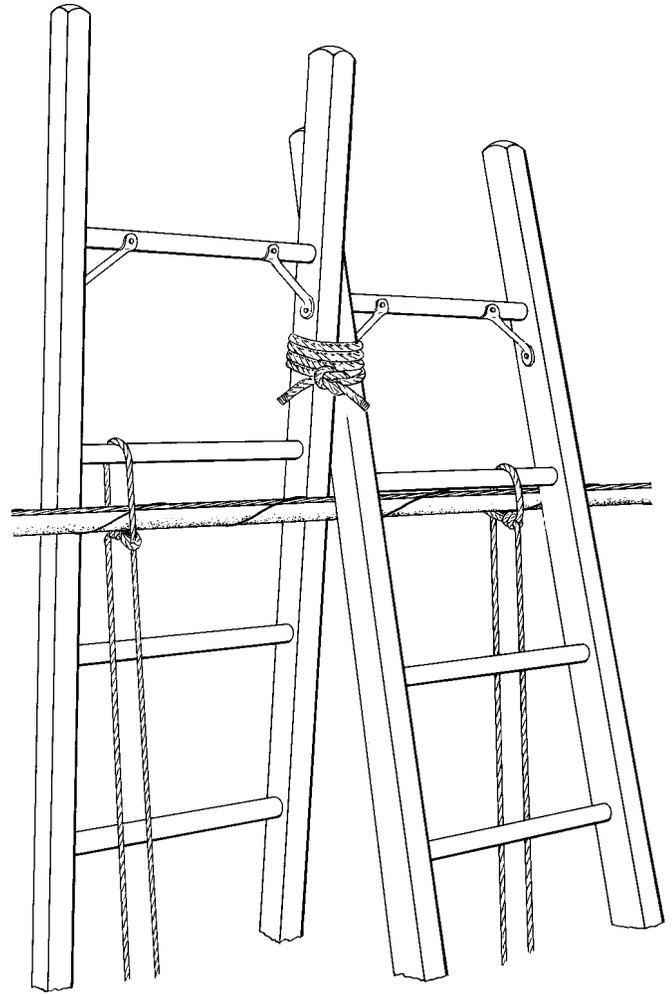
should be made about 4-1/2 feet from the ground.

- (3) Pass the free end up and over the first turn and around the back of the pole or ladder rail as shown in C of Fig. 12.
- (4) Secure the rope with two half hitches on the standing end as shown in D of Fig. 12.
- (5) Complete the tie on the left-hand guy rope as shown in E of Fig. 12.

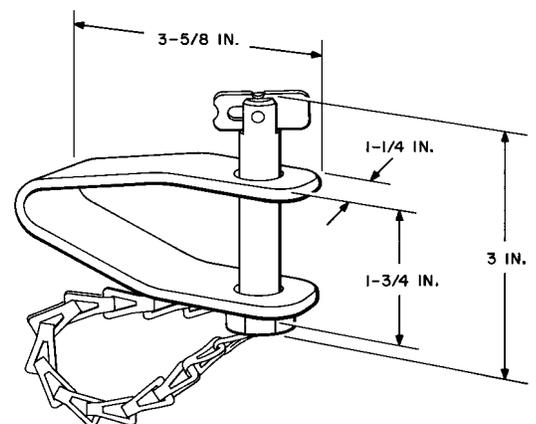


**Fig. 17A—Handline With Bight and Loop**

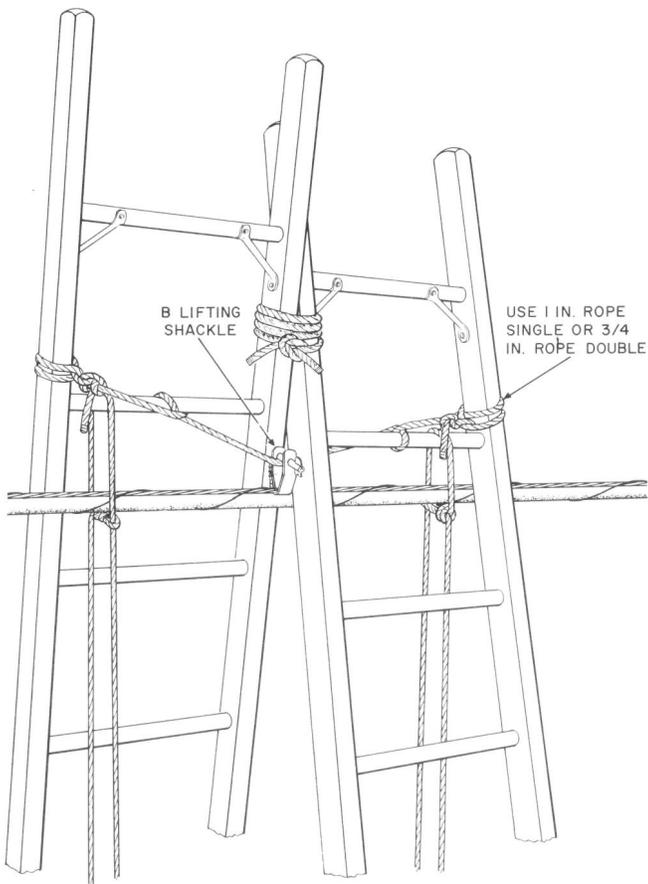
- (6) Pass the right-hand guy rope around the opposite ladder rail or beneath the first tie on the pole. This rope must be snubbed in the opposite direction from the first rope.
  - (7) Hold the standing end in the right hand. Pass the free end around the pole or ladder rail and over the standing end.
  - (8) Complete the tie as before, keeping clear of pole steps.
  - (9) If the guy rope is too long for convenient handling, double the rope and proceed as outlined in 4.06 (d) (1). Fig. 13 illustrates the platform suspended and the guy ropes tied with the end of the rope doubled.
- (e) Fig. 14 illustrates an alternate method of tying the platform guy ropes to a pole as follows:
- (1) Face the side of the pole on which the platform is hung. Hold both ropes together and pass around the pole as shown in A.



**Fig. 17B— Ladders Side Rails Lashed Together**

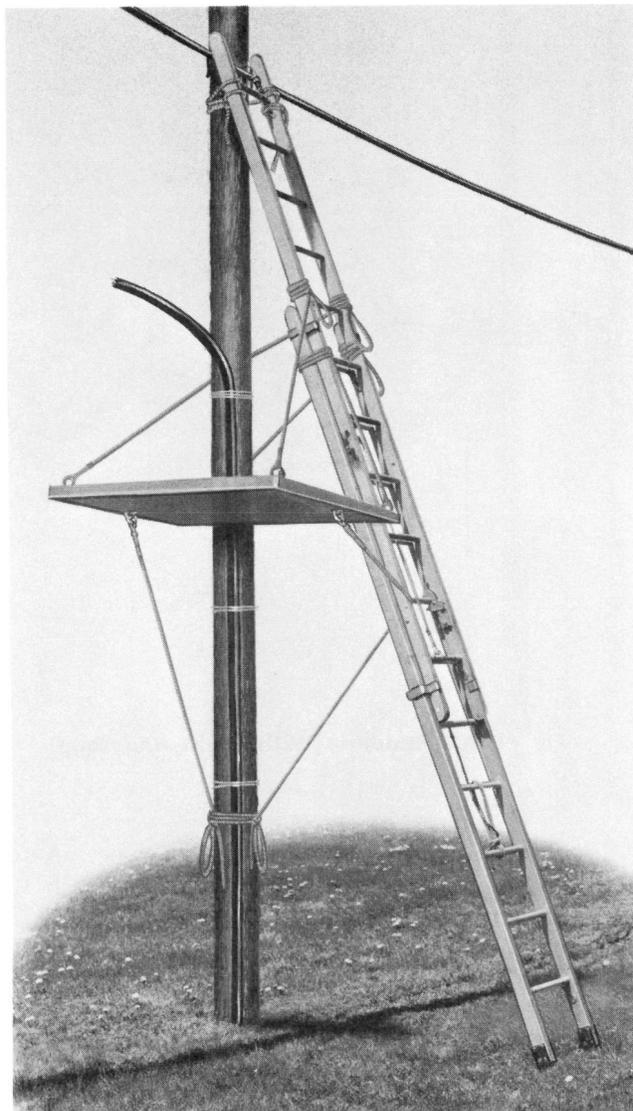


**Fig. 17C—B Lifting Shackle**



**Fig. 17D—Rope Sling With B Lifting Shackle**

- (2) Pass the loose ends of the ropes over the standing ends, as indicated also in A and pull to the desired tension.
- (3) Pass the free ends around the pole, up and over the standing ends approximately 1 foot above the first hitch as shown in B.
- (4) Pass the free ends around the pole, up and over the rope that goes to the side of the platform opposite the side from which the splicer will be working as indicated in C and pull to the desired tension. This will bring the platform slightly off level but the weight of the splicer will level it again.
- (5) Pass the free ends around the pole, up and over the same single rope as in D.
- (6) Secure the ropes with two half hitches on the standing end as shown in "D.



**Fig. 18—Platform Placed Without Attachment To Strand**

- (7) View of back side of pole after tie is completed is shown in E.

**4.07** Use the following method when placing the platform without attaching to strand. (See Fig. 18.)

- (a) Remove the hooks and saddles from the support ropes before raising the platform.
- (b) Place an extension ladder against the pole with the top of the ladder approximately 7 feet above the proposed level of the platform. Lash the ladder to the pole.

(c) Make a rope sling on the pole well above proposed platform level and attach the handline block to the sling.

(d) Arrange the support ropes and handline in the manner shown in Fig. 18. Position the platform so the handline will be between the pole and the platform while the platform is being raised. Raise the platform with the handline until the bottom edge of the platform is at the proposed level. Lock the handline to support the platform in this position.

(e) Tie the two support ropes attached to the lower edge of the platform to the ladder side rails using a clove hitch and two half hitches. The one nearest the ladder is tied around the side rail adjacent to the platform and three rungs above the platform level. The other support rope is passed around the pole and tied to the opposite side rail three rungs above the platform level.

(f) Release the handline lock and lower the upper edge of the platform allowing it to fall away from the pole, until it has reached the desired level. Lock the handline to maintain the platform in this position.

(g) Tie the other two support ropes to the ladder using a clove hitch and two half hitches. The support rope nearest the ladder is tied to the ladder side rail adjacent to the platform four rungs above the platform level. The other support rope is passed around the pole and tied to the opposite side rail four rungs above the platform level. Remove the handline from the platform hook and Dee ring.

(h) Secure the guy ropes to the base of the pole. Pass the guy rope nearest the ladder over the side rail and between two rungs to hold the platform against the pole.

## 5. REMOVE PLATFORMS

5.01 To remove the platforms reverse the placing steps.

## 6. INSPECTION PROCEDURES

6.01 Platforms, ropes, and associated hardware shall be inspected before each usage to determine that they are in good condition.

6.02 If inspection reveals the platform or any associated item to be in need of repair or replacement, exchange it in accordance with the company's established routine.

### PLATFORM INSPECTION

6.03 Conditions to look for when inspecting the platform are:

- (1) Broken or cracked boards
- (2) Defective hardware
- (3) Loose bolts or screws
- (4) Proper knots and ties to secure hooks and saddles to ropes
- (5) Excessive wear that would reduce the strength of the platform
- (6) Need for refinishing.

### ROPE INSPECTION

6.04 Examine the surface of the entire length of rope being inspected for:

- (1) Abrasions or broken fibers
- (2) Cuts
- (3) Soft spots (badly worn rope is soft and has lost its stretch.)
- (4) Decayed or burnt fibers.

## SECTION 081-300-015

**6.05** At least once each month examine unexposed portions of the strands by separating the strands at 3-foot intervals along the rope and at any place along the rope that appears worn or is soft. Examine the unexposed portions for:

- (1) Broken fibers
- (2) Fine powder, which indicates presence of grit
- (3) Mildew or mold
- (4) Change in color of fiber. Compare the color of the fiber at various intervals along the rope to determine any change.

### HARDWARE INSPECTION

**6.06** Items of hardware must be in good condition and examined at regular intervals to determine that:

- (1) The ends of all bolts and shackle screw pins are riveted over or staked.
- (2) It is possible to rotate rings, hooks, and thimbles freely in their anchor fittings throughout their full range.
- (3) The gravity keepers on K Hooks are not deformed and that they fall freely.
- (4) Snap-hook keepers operate smoothly and after being depressed and released, seat properly against the nose of the hook due to positive spring action.
- (5) All hardware is free of fractures.