

Section III

SUSPENSION SLINGS AND LASHINGS

3-9. Attaching Slings

The specific rigging manual includes the type, size, and length of suspension slings needed and the method used to bolt them to the platform or drop item. When suspension slings must be joined to form a longer suspension sling, either a type IV or a two-point link may be used. Bolt suspension slings to the platform with clevises or suspension links with large suspension clevises (platform-suspended loads) or to the item to be rigged (item-suspended load) with suspension clevises.

3-10. Safetying Slings

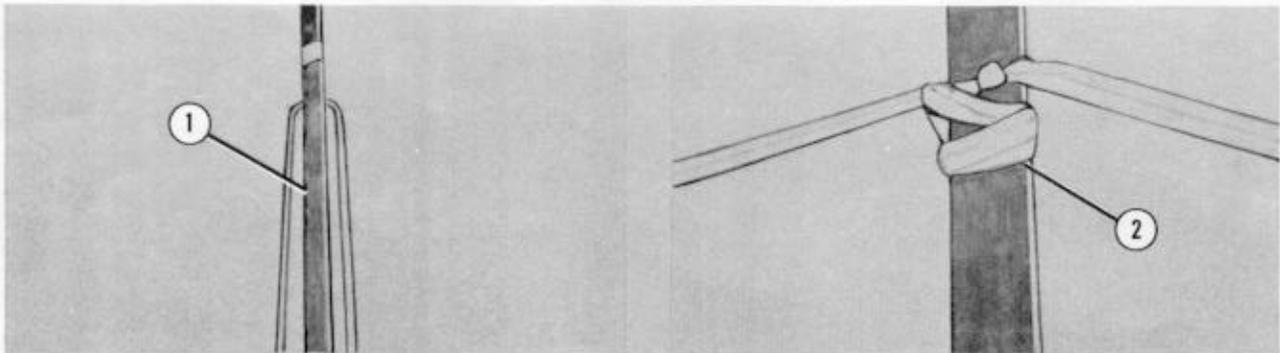
Suspension slings are safetied to keep them from entangling with the load. Safety the slings according to the instructions given in the specific rigging manual for the particular load. Safety all suspension slings with a deadman's tie as shown in Figure 3-12.

CAUTION

The nuts must be tight enough to keep them from loosening during transport and airdrop.

CAUTION

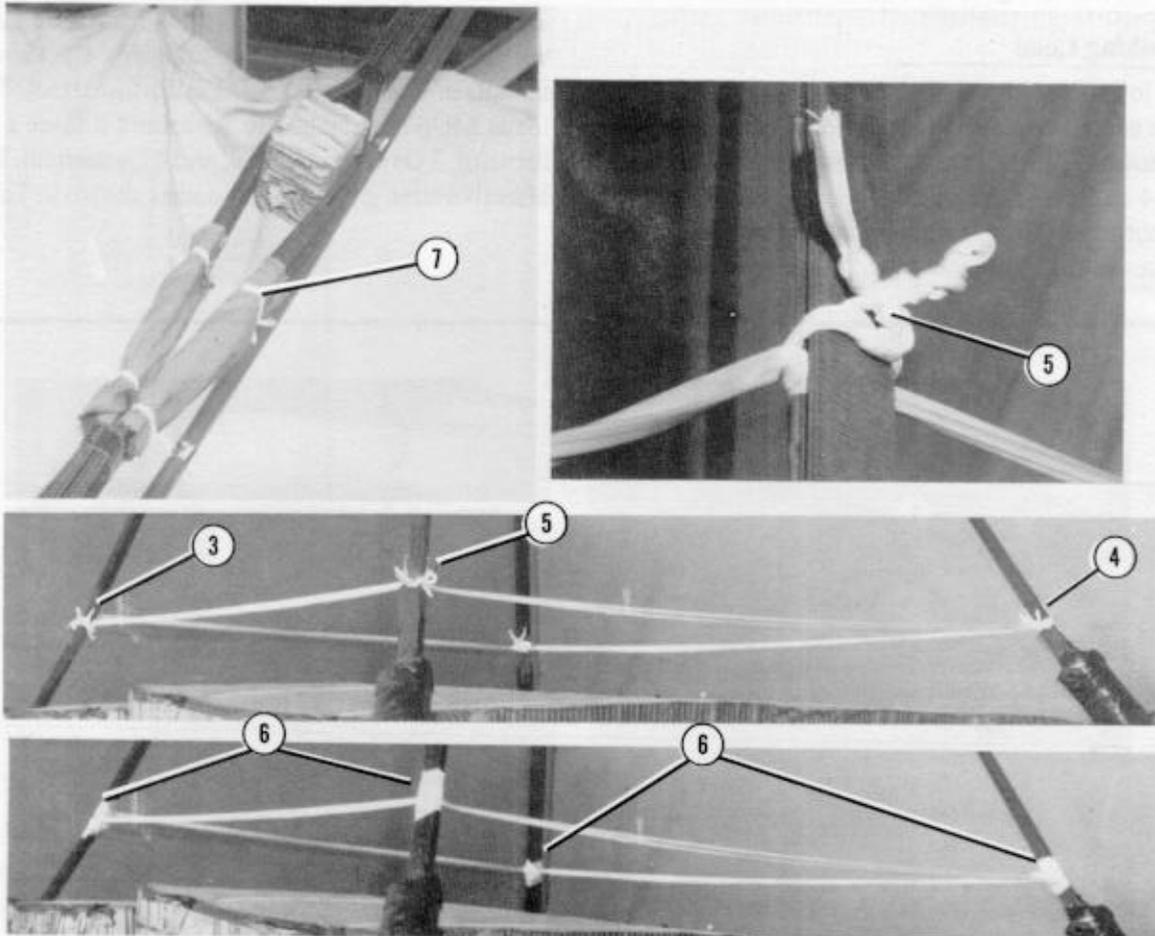
This tie must be located between 6 and 8 inches above the top of the load or as directed in the specific rigging manual.



- ① Cut two lengths of 1/2-inch tubular nylon webbing, making each long enough to encircle all slings plus 8 feet. Mark the lengths of webbing at their centers. Pass an end of both pieces of webbing through the center plies of the right front sling until the marks reach the sling.
- ② Pass the running end of each length around the inboard side. Tie it on the outboard side with a surgeon's knot, a locking knot, and an overhand knot in the running ends.

Figure 3-12. Slings safetied with a deadman's tie

Note: One-half-inch or 5/8-inch tubular nylon webbing may be used for all deadman ties.



- ③ Pass one running end to the left front sling through the plies and around the outside of the plies to the inside around all plies. Tie it to the inside of the plies with three alternating half hitches and an overhand knot in the running end.
- ④ Repeat step 3 for the right rear sling.
- ⑤ Run the webbing through the center plies of the left rear sling and around the inboard side of the sling to the outboard side. Safety tie it with a surgeon's knot, a locking knot, and an overhand knot in the free ends.
- ⑥ Tape the webbing to the slings.
- ⑦ When using four-loop, type XXVI suspension slings, wrap each four plies with a 10- by 10-inch piece of cotton muslin. Secure each wrap with one single turn of 1/4-inch cotton webbing.

Figure 3-12. Slings safetied with a deadman's tie (continued)

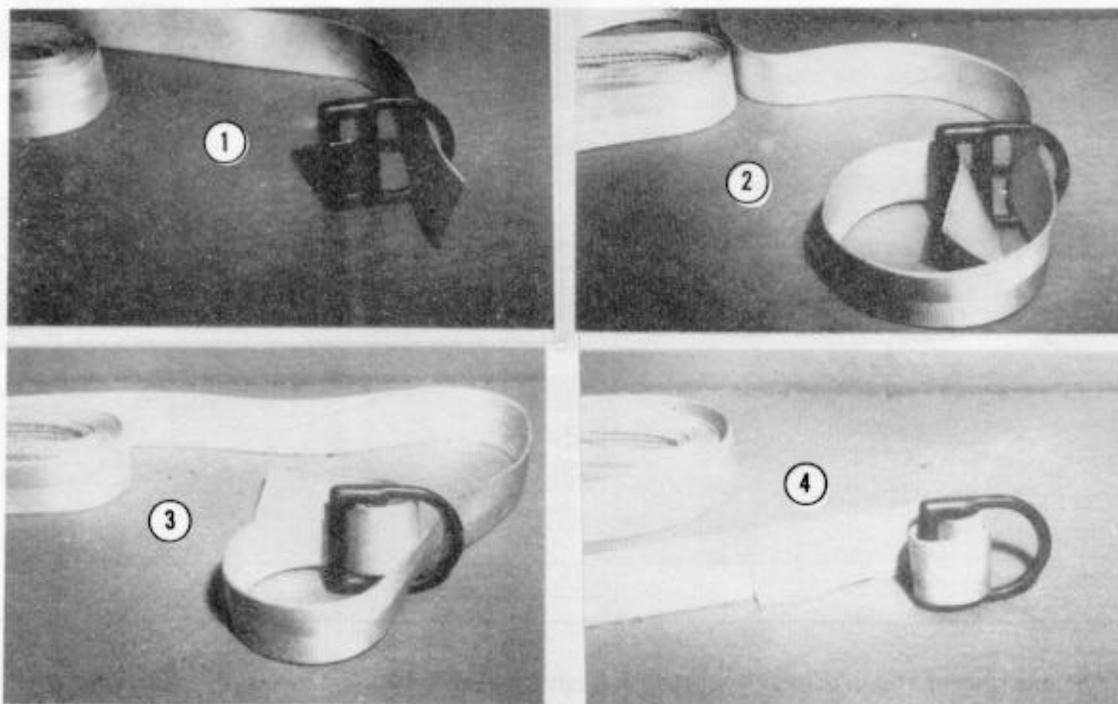
3-11. Fitting D-Rings

Fit a heavy-duty D-ring to the end of each tie-down strap as shown in Figure 3-13.

3-12. Lashing Load

Lash a low-velocity or LAPE airdrop load to the platform according to the instructions in the specific rigging manual. Install the lashings as shown in Figures 3-14 and 3-15. When a load is rigged for which there is not a specific rigging manual, the lashings must provide restraint to withstand extraction, recovery, and

ground impact forces (referred to as gravity force (G)). A G force is equal to the weight of the load lashed on a platform. The low-velocity load must be lashed to withstand a force of 3 Gs forward, 1.5 Gs aft and lateral, and 2 Gs vertical. Platform-extracted LAPE loads **MUST** be lashed to withstand a force of 12 Gs forward, 3 Gs aft and lateral, and 4 Gs vertical. Lashing effective strength is determined as shown in Table 2-4.



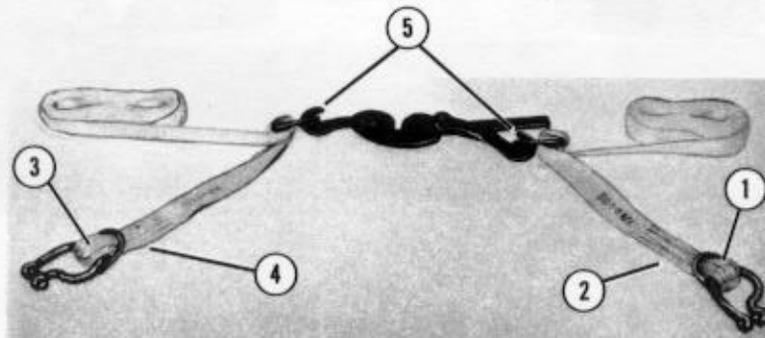
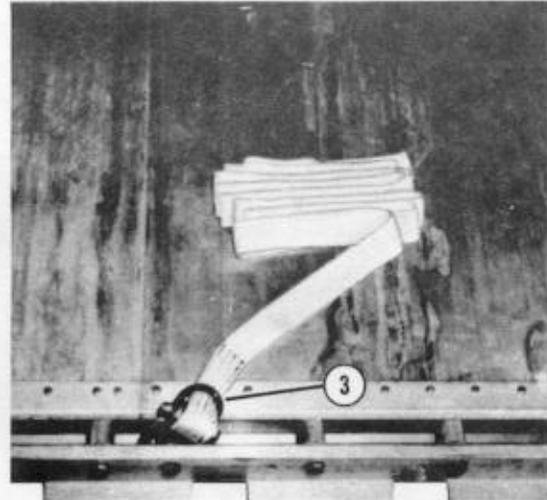
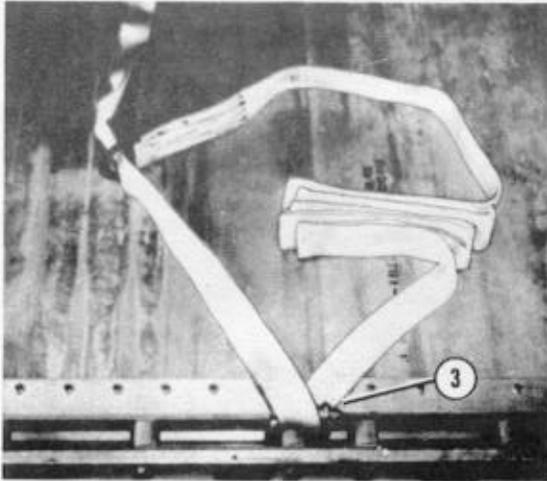
- ① Run the free end of the tie-down strap through the large opening in the D-ring.
- ② Run the strap around and through the small opening in the D-ring.
- ③ Run the strap back through the large opening in the D-ring.
- ④ Pull the strap taut.

Note: A D-ring must be fitted to both ends of a type X nylon webbing lashing on a LAPE load.

Figure 3-13. D-ring fitted to tie-down strap

CAUTION

Do not tighten the lashings so tight that they cause the platform to bow.



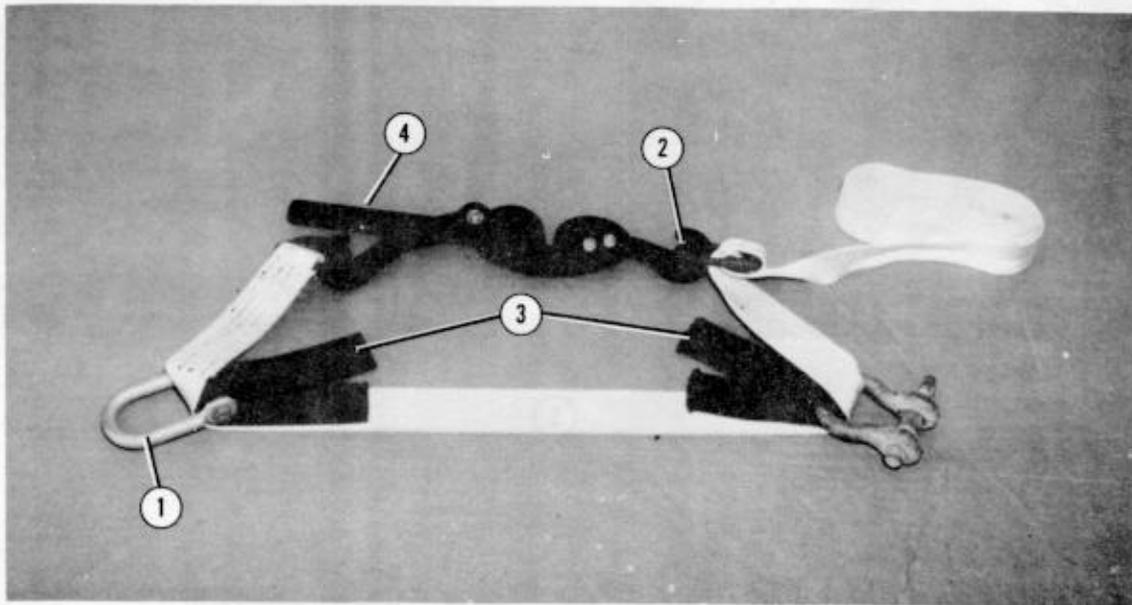
- ① Pass the free end of one tiedown strap through a clevis on the right rail and through its own D-ring. Pull the strap taut.
- ② Run the free end of the strap up over the load.
- ③ Pass the free end of a second tiedown strap through a clevis on the left rail and through its own D-ring. Pull the strap taut.
- ④ Run the free end of the strap up over the load.
- ⑤ Fit a D-ring on the free end of each strap as described in Figure 3-13, and place the D-rings on the hooks of a load binder. Safety the binder handle closed as shown in Figure 3-16.

Notes:

1. When the tiedown strap length is not a factor, it is permissible to use a single tiedown strap and D-ring with a load binder attached directly to a side rail clevis or tiedown ring.
2. Pad all sharp edges that may touch the strap with cellulose wadding or other suitable material.

Figure 3-14. Single line lashing

Note: The looped (floating binder) lashing is the most desirable lashing style to use.

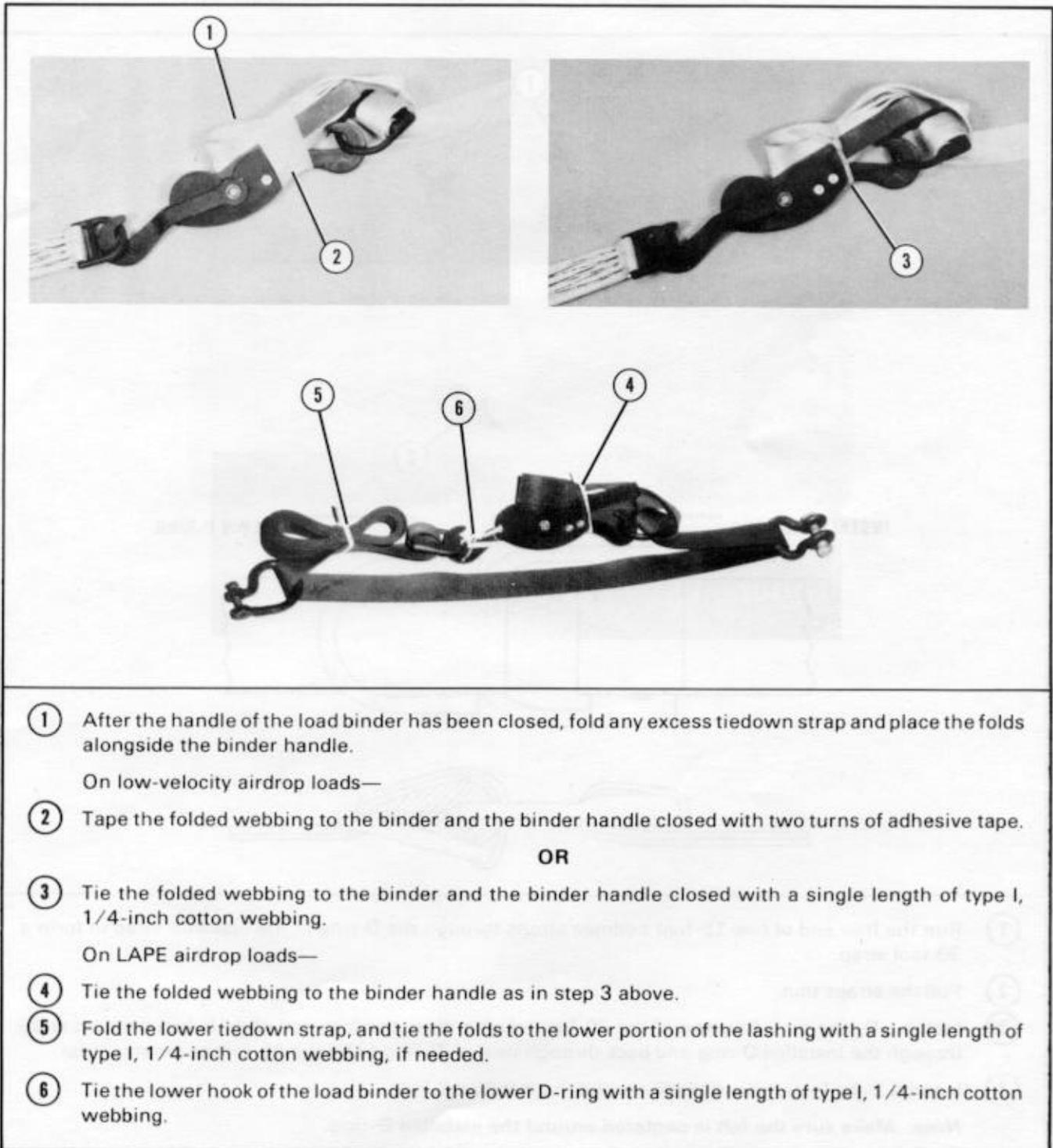


- ① Pass the free end of a tiedown strap through a clevis on a rail and up and over, around, or through the indicated tiedown provision on the load. The tiedown provision will be listed in the specific rigging manual for a particular load. Run the strap back toward the clevis.
- ② Fit a D-ring to the free end of the strap (Figure 3-13), and place the D-rings on the hooks of a load binder. Have the handle of the open load binder pointing toward the platform.
- ③ Add a cotton buffer to increase the strength of the lashing, if needed.
- ④ Safety the binder handle closed as shown in Figure 3-16.

Figure 3-15. A looped (floating binder) lashing

3-13. Safetying Load Binder Handles

Fold the excess tiedown strap, and place the folds alongside the load binder handle. Safety the binder handle closed as shown in Figure 3-16.



- ① After the handle of the load binder has been closed, fold any excess tiedown strap and place the folds alongside the binder handle.
On low-velocity airdrop loads—
- ② Tape the folded webbing to the binder and the binder handle closed with two turns of adhesive tape.
OR
- ③ Tie the folded webbing to the binder and the binder handle closed with a single length of type I, 1/4-inch cotton webbing.
On LAPE airdrop loads—
- ④ Tie the folded webbing to the binder handle as in step 3 above.
- ⑤ Fold the lower tiedown strap, and tie the folds to the lower portion of the lashing with a single length of type I, 1/4-inch cotton webbing, if needed.
- ⑥ Tie the lower hook of the load binder to the lower D-ring with a single length of type I, 1/4-inch cotton webbing.

Figure 3-16. Load binder handle and excess webbing safetied

3-14. Forming 30-Foot, 45-Foot, or Greater Length Tiedown Strap

When needed, attach 15-foot tiedown straps together to form a 30-foot, 45-foot, or greater length tiedown strap as shown in Figure 3-17.

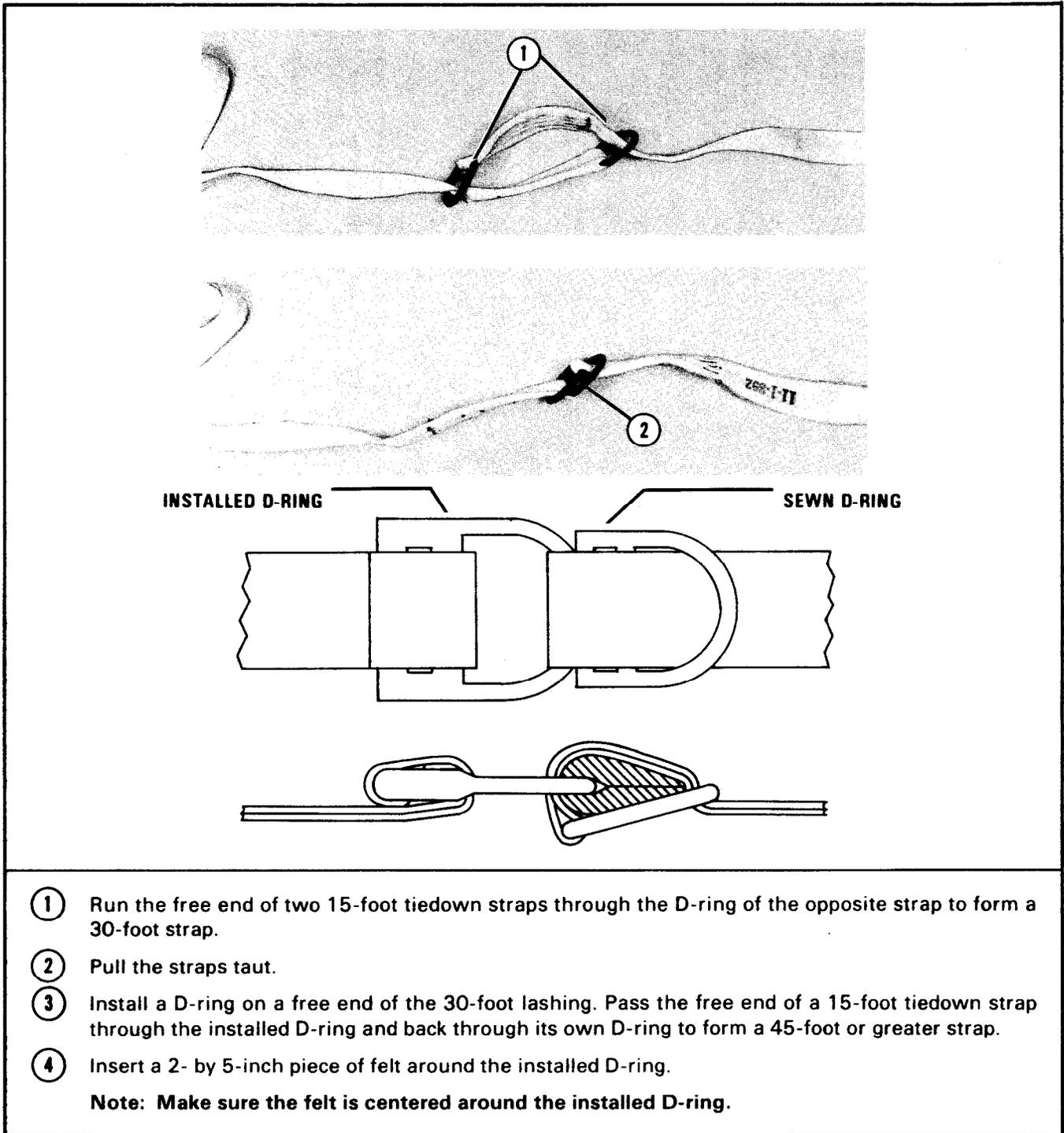


Figure 3-17. A 30-foot, 45-foot, or greater length tiedown strap formed