

CHAPTER 14

CERTIFIED SINGLE-POINT RIGGING PROCEDURES FOR MISCELLANEOUS EQUIPMENT

14-1. Introduction

This chapter contains rigging procedures for single-point lift of miscellaneous equipment that has been certified for sling load. Each rigging procedure is found in a paragraph that includes a description of the load, materials required for rigging, and steps to complete the procedure. An applicability paragraph is also a part of each paragraph and identifies the certified loads. The certified single-point rigging procedures for miscellaneous equip-

ment is in this section. Paragraphs 14-2 through 14-7 give detailed instructions for rigging loads.

NOTE: Reach Pendants may be used on all single point loads. A static discharge person is not required when using a Reach Pendant.

14-2. Forward Area Refueling Equipment (FARE)

a. Applicability. The following item in Table 14-1 is certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

Table 14-1. Forward Area Refueling Equipment (FARE)

NOMENCLATURE	MAX WEIGHT (POUNDS)	SLING SET	LINK COUNT FRONT/REAR	RECOMMENDED AIRSPEED (KNOTS)
Generator, 1.5KW, Fuel Hoses with Reels and Carrying Bags (2 each), Assembly Pump, Fire Extinguishers (3 each)	820	5K Cargo Net	N/A	60

b. Materials. The following materials are required to rig this load:

- (1) Net, cargo (5,000-pound capacity).
- (2) Tape, adhesive, pressure-sensitive, 2-inch wide roll.
- (3) Cord, nylon, Type III, 550-pound breaking strength.
- (4) Webbing, cotton, 1/4-inch, 80-pound breaking strength.
- (5) Tie-down strap, cargo, CGU-1/B (4 each).
- (6) Webbing, nylon, tubular, 1/2-inch, 1,000-pound breaking strength.

c. Personnel. Two persons can prepare and rig this load in 15 minutes.

d. Procedures. The following procedures apply to this load:

(1) Preparation. Prepare the load using the following steps:

(a) Secure the two fire extinguishers to the inside frame of the fuel hose reels with 1/2-inch tubular nylon webbing. Secure the two fuel hose reels together with Type III nylon cord.

(b) Spread a 5,000-pound capacity cargo net on the ground. Center the two fuel hose reels on the net. Place the pump assembly on either side of the reels. Place the

1.5KW generator, with 5-gallon gas can attached, on the opposite side of the reels. Place fuel hose carrying bags in front of the reels. Secure the two carrying bags with the remaining fire extinguisher together with nylon cord. Secure the carrying bag to the reels.

(2) **Rigging.** Rig the load according to the steps in Figure 14-1.

(3) **Hookup.** The hookup team stands alongside the load. The static wand person discharges the static elec-

tricity with the static wand. The hookup person places the apex fitting onto the aircraft cargo hook. The hookup team then moves clear of the load but remains close to the load as the helicopter removes slack from the sling legs. When successful hookup is assured, the hookup team quickly exits the area underneath the helicopter to the designated rendezvous point.

(4) **Derigging.** Derigging is the reverse of the preparation and rigging procedures in steps d (1) and d (2).

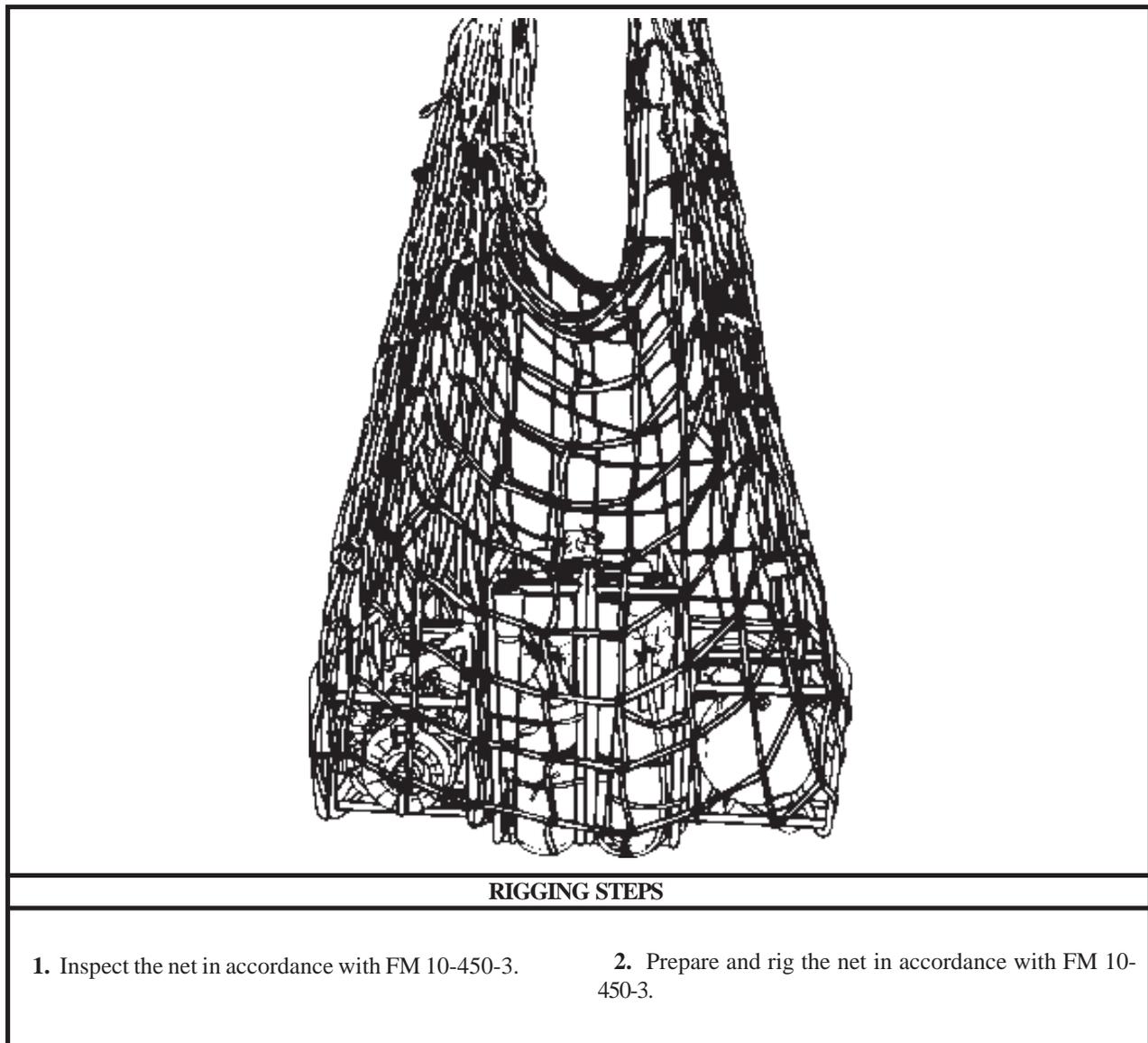


Figure 14-1. Forward Area Refueling Equipment (FARE)

14-3. Fire Extinguisher, Dry Chemical

a. Applicability. The following item in Table 14-2 is certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

Table 14-2. Fire Extinguisher, Dry Chemical

NOMENCLATURE	MAX WEIGHT (POUNDS)	SLING SET	LINK COUNT FRONT/REAR	RECOMMENDED AIRSPEED (KNOTS)
Fire Extinguisher, Dry Chemical, Self Contained, TAMCN C4765	3,000	15K	5/5	100

b. Materials. The following materials are required to rig this load:

- (1) Sling set (15,000-pound capacity).
- (2) Tape, adhesive, pressure-sensitive, 2-inch wide roll.
- (3) Cord, nylon, Type III, 550-pound breaking strength.
- (4) Webbing, cotton, 1/4-inch, 80-pound breaking strength.

c. Personnel. Two persons can prepare and rig this load in 10 minutes.

d. Procedures. The following procedures apply to this load:

(1) **Preparation.** Prepare the load using the following steps:

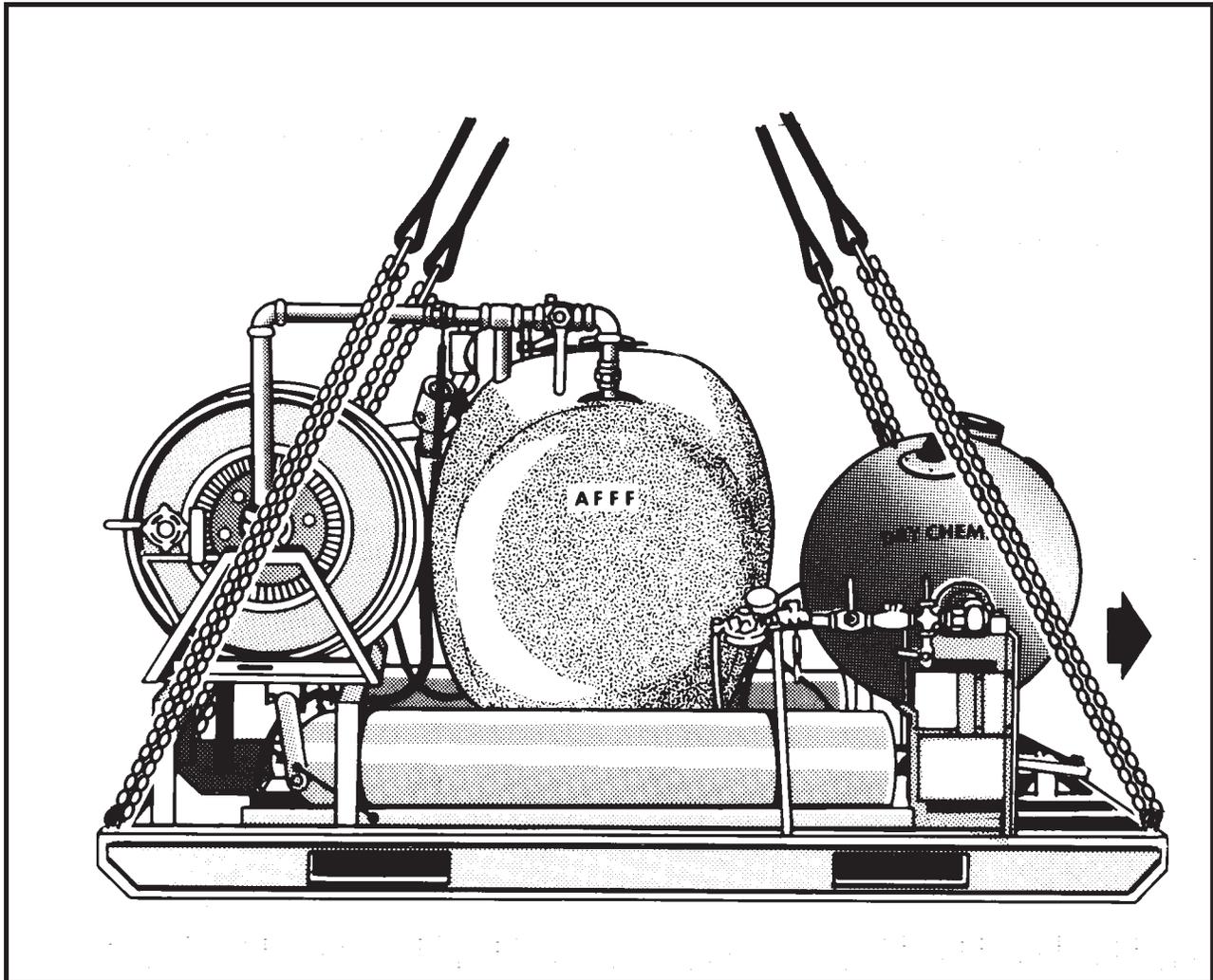
(a) Tie hose reel and nozzle to the frame with Type III nylon cord.

(b) Secure or remove all loose attachments. Tape all glass including the gages.

(2) **Rigging.** Rig the load according to the steps in Figure 14-2.

(3) **Hookup.** The hookup team stands alongside the load. The static wand person discharges the static electricity with the static wand. The hookup person places the apex fitting onto the aircraft cargo hook. The hookup team then moves clear of the load but remains close to the load as the helicopter removes slack from the sling legs. When successful hookup is assured, the hookup team quickly exits the area underneath the helicopter to the designated rendezvous point.

(4) **Derigging.** Derigging is the reverse of the preparation and rigging procedures in steps d (1) and d (2).



RIGGING STEPS

1. Position apex fitting/web ring on top of the fire extinguisher. Route outer sling legs 1 and 2 to the front of the fire extinguisher and inner sling legs 3 and 4 to the rear end (hose reel). Sling legs 1 and 3 must be on the left side of the load.

2. Loop the chain end of sling leg 1 through the left front lift provision located at the top corner of the frame near the pressure vessel. Place the correct link from Table 14-2 in the grab hook. Repeat with sling leg 2 and the right front lift provision.

3. Loop the chain end of sling leg 3 through the left rear lift provision located at the top corner of the frame near the hose reel. Place the correct link from Table 14-2 in the grab hook. Repeat with sling leg 4 and the right rear lift provision.

4. Cluster and tie or tape (breakaway technique) all sling legs together on top of the fire extinguisher to prevent entanglement during hookup and lift-off. Pay close attention to the pipes and valves.

Figure 14-2. Fire Extinguisher, Dry Chemical

14-4. Rigid Raiding Craft

a. Applicability. The following item in Table 14-3 is certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

Table 14-3. Rigid Raiding Craft

NOMENCLATURE	MAX WEIGHT (POUNDS)	SLING SET	LINK COUNT FRONT/REAR	RECOMMENDED AIRSPEED (KNOTS)
Rigid Raiding Craft, Fiberglass, 18-foot, TAMCN C5902	3,200	40K	5/10	75

b. Materials. The following materials are required to rig this load:

- (1) Sling set (40,000-pound capacity).
- (2) Tape, adhesive, pressure-sensitive, 2-inch wide roll.
- (3) Cord, nylon, Type III, 550-pound breaking strength.
- (4) Webbing, cotton, 1/4-inch, 80-pound breaking strength.

c. Personnel. Two persons can prepare and rig this load in 15 minutes.

d. Procedures. The following procedures apply to this load:

(1) **Preparation.** Prepare the load using the following steps:

(a) Tighten all straps on the anchor, paddles, cushions, and loose equipment.

(b) Stow the boat utility bags in the console. Remove the anchor chain and line and stow in the console. Protect the battery from the chain.

(c) Secure the console hatch with tape. Secure the anchor to the deck and secure the loose end of the anchor.

(d) Secure the running lights to an inner handrail with tape or Type III nylon cord.

(e) Secure the base of the outboard motors tightly to the bar directly above with Type III nylon cord.

(f) Tape the compass glass on top of the console.

(2) **Rigging.** Rig the load according to the steps in Figure 14-3.

(3) **Hookup.** The hookup team stands alongside the load. The static wand person discharges the static electricity with the static wand. The hookup person places the apex fitting onto the aircraft cargo hook. The hookup team then moves clear of the load but remains close to the load as the helicopter removes slack from the sling legs. When successful hookup is assured, the hookup team quickly exits the area underneath the helicopter to the designated rendezvous point.

(4) **Derigging.** Derigging is the reverse of the preparation and rigging procedures in steps d (1) and d (2).

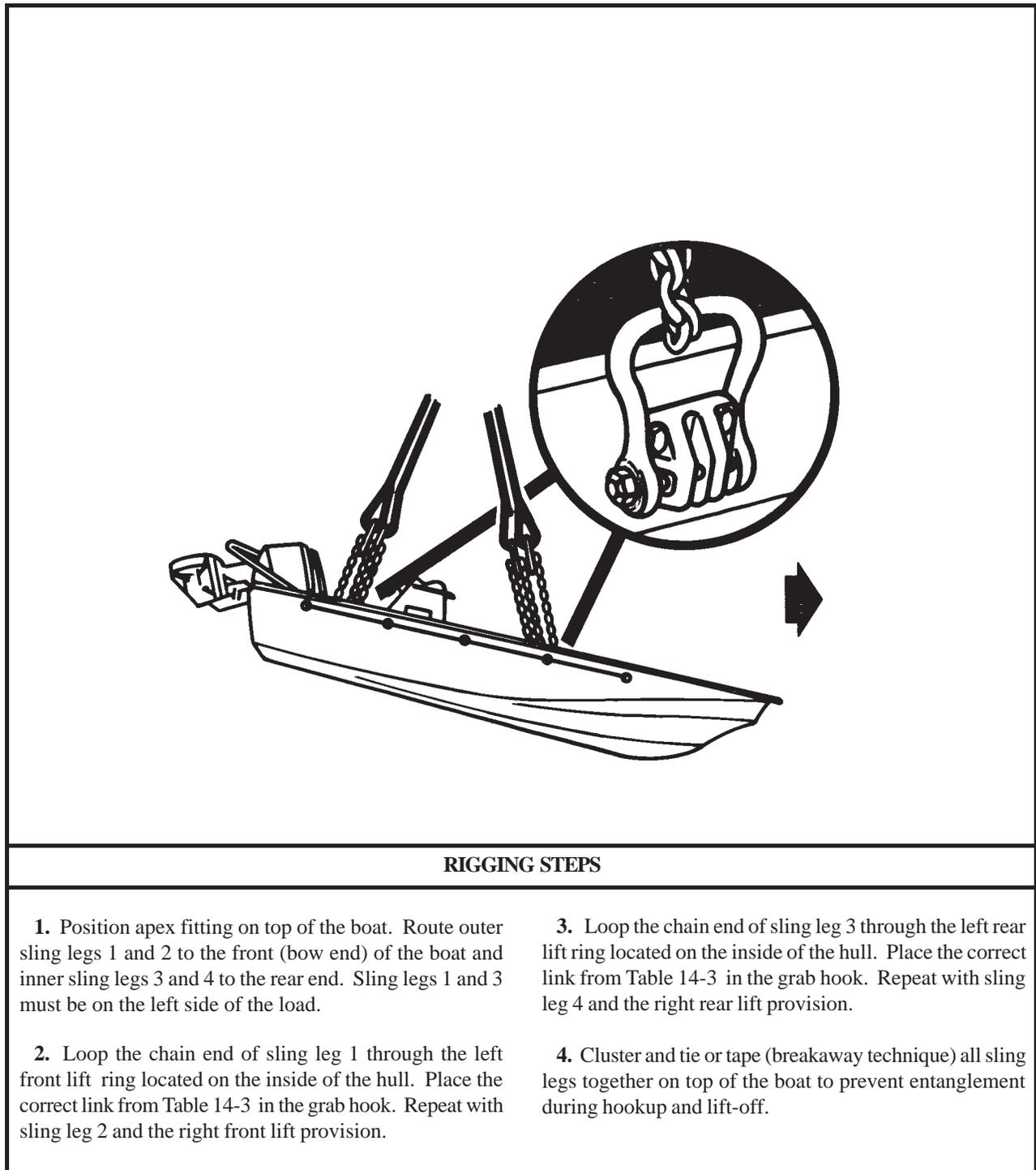


Figure 14-3. Rigid Raiding Craft

14-5. 2.75-inch Rocket Fastpack Pallet

a. Applicability. The following items in Table 14-4 are certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

Table 14-4. 2.75-inch Rocket Fastpack Pallet

NOMENCLATURE	MAX WEIGHT (POUNDS)	SLING SET	LINK COUNT FRONT/REAR	RECOMMENDED AIRSPEED (KNOTS)
PA 150 Pallet with Twelve (12) 2.75-inch Rockets	2,200	10K	3/3	60
PA 151 Pallet with Twelve (12) 2.75-inch Rockets	2,000	10K	3/3	60

b. Materials. The following materials are required to rig this load:

- (1) Sling set (10,000-pound capacity).
- (2) Tape, adhesive, pressure-sensitive, 2-inch wide roll.
- (3) Cord, nylon, Type III, 550-pound breaking strength.
- (4) Webbing, cotton, 1/4-inch, 80-pound breaking strength.

c. Personnel. Two persons can prepare and rig this load in 10 minutes.

d. Procedures. The following procedures apply to this load:

(1) **Preparation.** Prepare the load using the following steps:

(a) Close the safety latches on the lids of the rocket containers. Secure the lids with Type III nylon cord.

(b) Secure the loose ends of any cables, bands, or chains with tape or Type III nylon cord.

(c) Ensure the 1-1/4-inch steel banding around the pallet is in serviceable condition and the containers are locked together.

(d) Tape the upper corners of the pallet from the top to the second row of rockets.

(2) **Rigging.** Rig the load according to the steps in Figure 14-4.

(3) **Hookup.** The hookup team stands alongside the load. The static wand person discharges the static electricity with the static wand. The hookup person places the apex fitting onto the aircraft cargo hook. The hookup team then moves clear of the load but remains close to the load as the helicopter removes slack from the sling legs. When successful hookup is assured, the hookup team quickly exits the area underneath the helicopter to the designated rendezvous point.

(4) **Derigging.** Derigging is the reverse of the preparation and rigging procedures in steps d (1) and d (2).

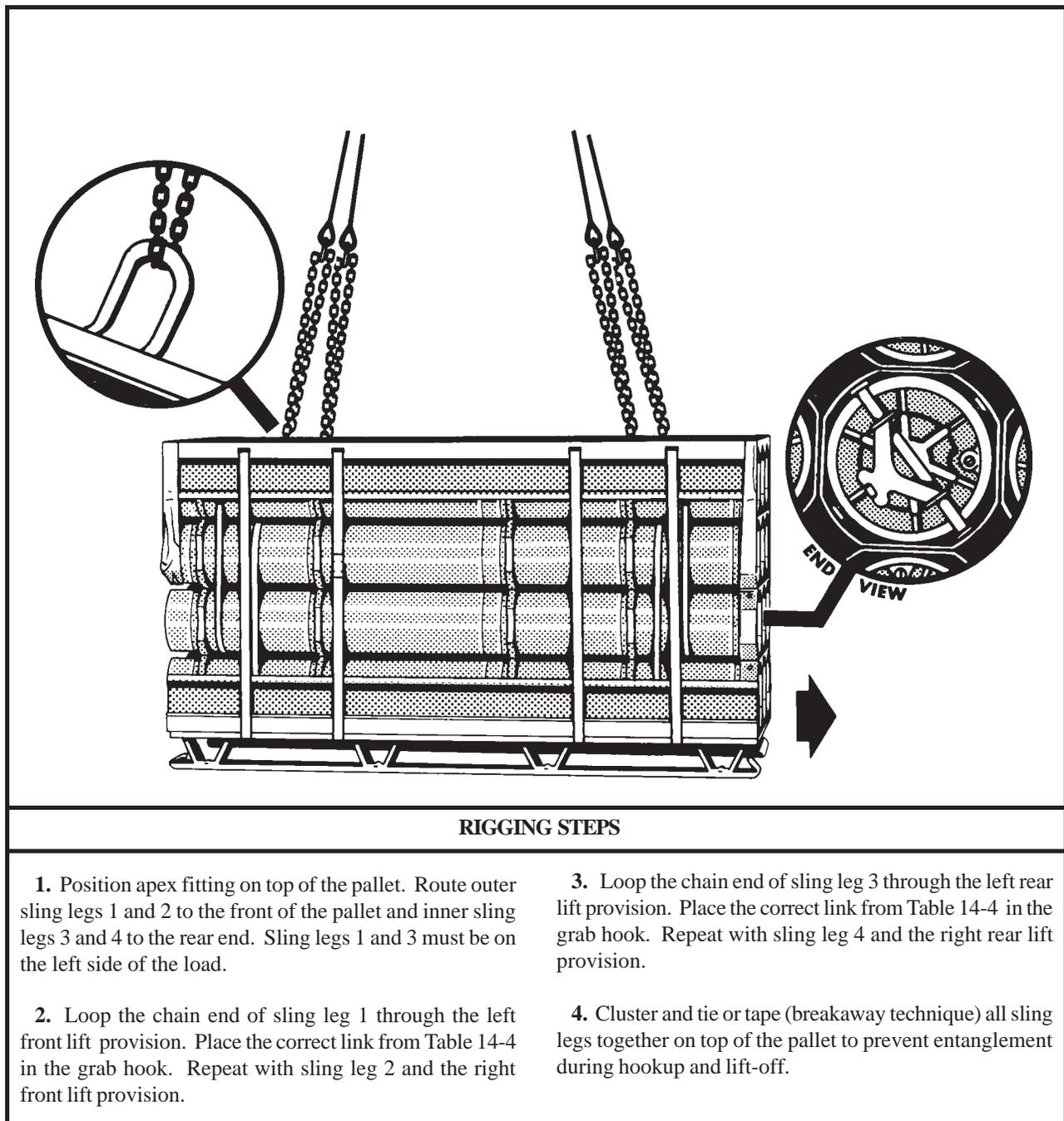


Figure 14-4. 2.75-inch Rocket Fastpack Pallet

14-6. Special Divers Air Support System (SDASS)

a. Applicability. The following item in Table 14-5 is certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

Table 14-5. Special Divers Air Support System (SDASS)

NOMENCLATURE	MAX WEIGHT (POUNDS)	SLING SET	LINK COUNT FRONT/REAR	RECOMMENDED AIRSPEED (KNOTS)
Four SDASS Racks with Two Empty Air Cylinders each in a 2X2 Configuration	1,800	10K Cargo Net	N/A	70

b. Materials. The following materials are required to rig this load:

- (1) Net, cargo (10,000-pound capacity).
- (2) Tape, adhesive, pressure-sensitive, 2-inch wide roll.
- (3) Cord, nylon, Type III, 550-pound breaking strength.
- (4) Webbing, cotton, 1/4-inch, 80-pound breaking strength.
- (5) Tie-down strap, cargo, CGU-1/B (4 each).
- (6) Dunnage material.
- (7) Plywood 44 X 75 X 1/2-inch (2 each).

c. Personnel. Two persons can prepare and rig this load in 20 minutes.

d. Procedures. The following procedures apply to this load:

(1) Preparation. Prepare the load using the following steps:

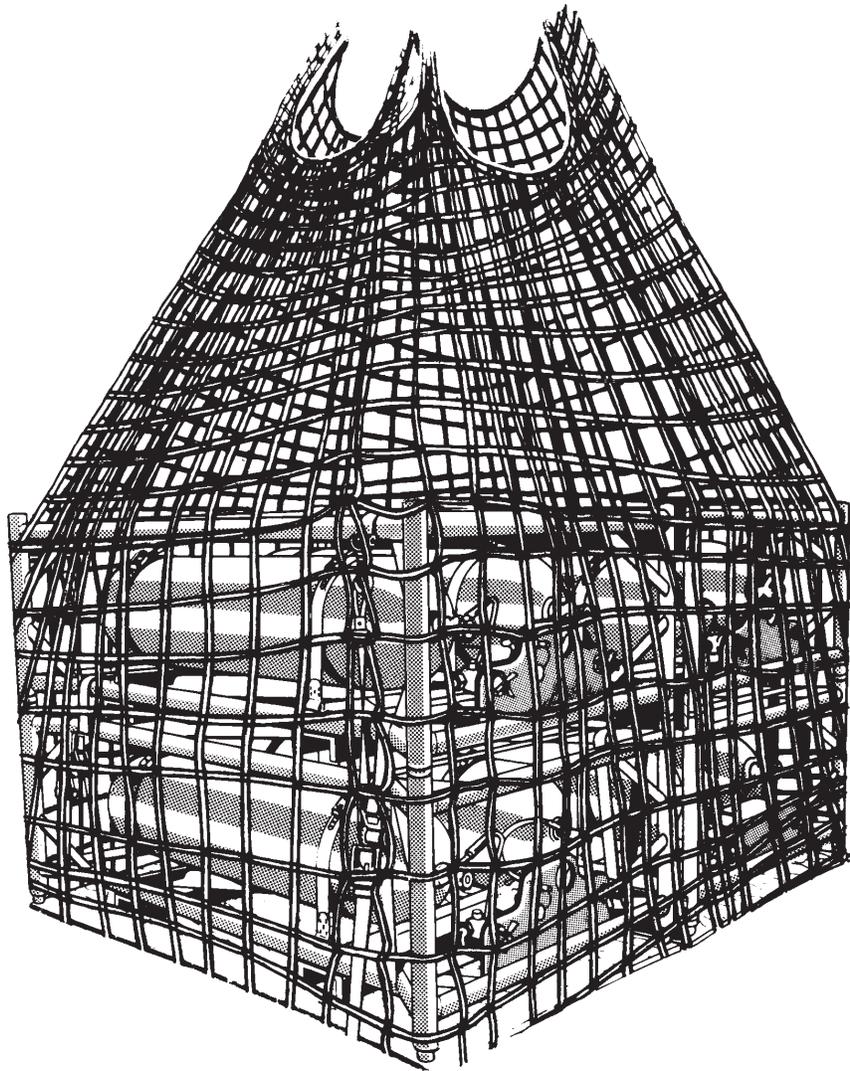
(a) Inspect the cargo net in accordance with FM 10-450-3.

(b) Prepare the plywood sheets and the dunnage.

(2) Rigging. Rig the load according to the steps in Figure 14-5.

(3) Hookup. The hookup team stands alongside the load. The static wand person discharges the static electricity with the static wand. The hookup person places the apex fitting onto the aircraft cargo hook. The hookup team then moves clear of the load but remains close to the load as the helicopter removes slack from the sling legs. When successful hookup is assured, the hookup team quickly exits the area underneath the helicopter to the designated rendezvous point.

(4) Derigging. Derigging is the reverse of the preparation and rigging procedures in steps d (1) and d (2).



RIGGING STEPS

1. Spread the cargo net on the ground.
2. Position the bottom two racks on the plywood sheets. Secure each rack to the plywood using CGU-1/B tie-down straps.
3. Place the remaining two racks on top of the bottom racks, fitting together the feet at each of the five junction points.
4. Insert dunnage between the two stacks of racks and secure the dunnage to the stacks with Type III nylon cord.
5. Route two CGU-1/B tie-down straps around the lower bottom racks and two CGU-1B tie-down straps around the upper racks.
6. Rig the net in accordance with FM 10-450-3.

Figure 14-5. Special Divers Air Support System (SDASS)

14-7. Two Mobile Oversnow Transport (MOST) Snowmobiles with or without Two Sleds

a. Applicability. The following items in Table 14-6 are certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

Table 14-6. Two Mobile Oversnow Transport (MOST) Snowmobiles with or without Two Sleds

NOMENCLATURE	MAX WEIGHT (POUNDS)	SLING SET	LINK COUNT FRONT/REAR	RECOMMENDED AIRSPEED (KNOTS)
Polaris Indy Wide-Track Snowmobile	638 each	10K Cargo Net	N/A	70
Norwegian Pulk Sled, Model BN 2010C	381 loaded	10K Cargo Net	N/A	70

b. Materials. The following materials are required to rig this load:

- (1) Net, cargo (10,000-pound capacity) (2 each).
- (2) One sling leg from a sling set (10,000-pound capacity).
- (3) Cord, nylon, Type III, 550-pound breaking strength.
- (4) Webbing, cotton, 1/4-inch, 80-pound breaking strength.
- (5) Tape, adhesive, pressure-sensitive, 2-inch wide roll.
- (6) Felt sheet, cattle hair, Type IV, 1/2-inch or suitable substitute.
- (7) Pad, energy dissipating, honeycomb (2 sheets).

c. Personnel. Eight persons can prepare and rig this load in 10 minutes. The large number of personnel is required to lift and position the MOST.

d. Procedures. The following procedures apply to this load:

(1) **Preparation.** Prepare the load using the following steps:

- (a) Inspect the cargo net in accordance with FM 10-450-3.

(b) Position the two MOSTs on level ground.

(c) Secure the canvas cargo cover over the sled.

(d) Secure the fuel cap on the MOST with tape.

(e) Remove the snap-off wind screen from the MOST, pad it with felt, and secure it over the seat with Type III nylon cord.

(2) **Rigging.** Rig the load according to the steps in Figure 14-6.

(3) **Hookup.** The hookup team consists of four people. The hookup team stands alongside the load. The static wand person discharges the static electricity with the static wand. One hookup person places the apex fitting onto the aircraft cargo hook. The other two people kneel, one on each side of the load, to ensure the net does not catch on the handle bars, tie-down points, or trailer hitch as the load is lifted. As the first net is lifted off the ground, after successful hookup is assured, the hookup team quickly exits the area underneath the helicopter to the designated rendezvous point. This will ensure the hookup team is not struck by the second cargo net as it is being lifted off the ground.

NOTE: Brief the pilot to hover to the side after the sleds are on the ground to lower the MOSTs to the ground. Once the MOSTs are on the ground, the pilot must hover to the side before releasing the apex fitting.

(4) **Derigging.** Derigging is the reverse of the preparation and rigging procedures in steps d (1) and d (2).

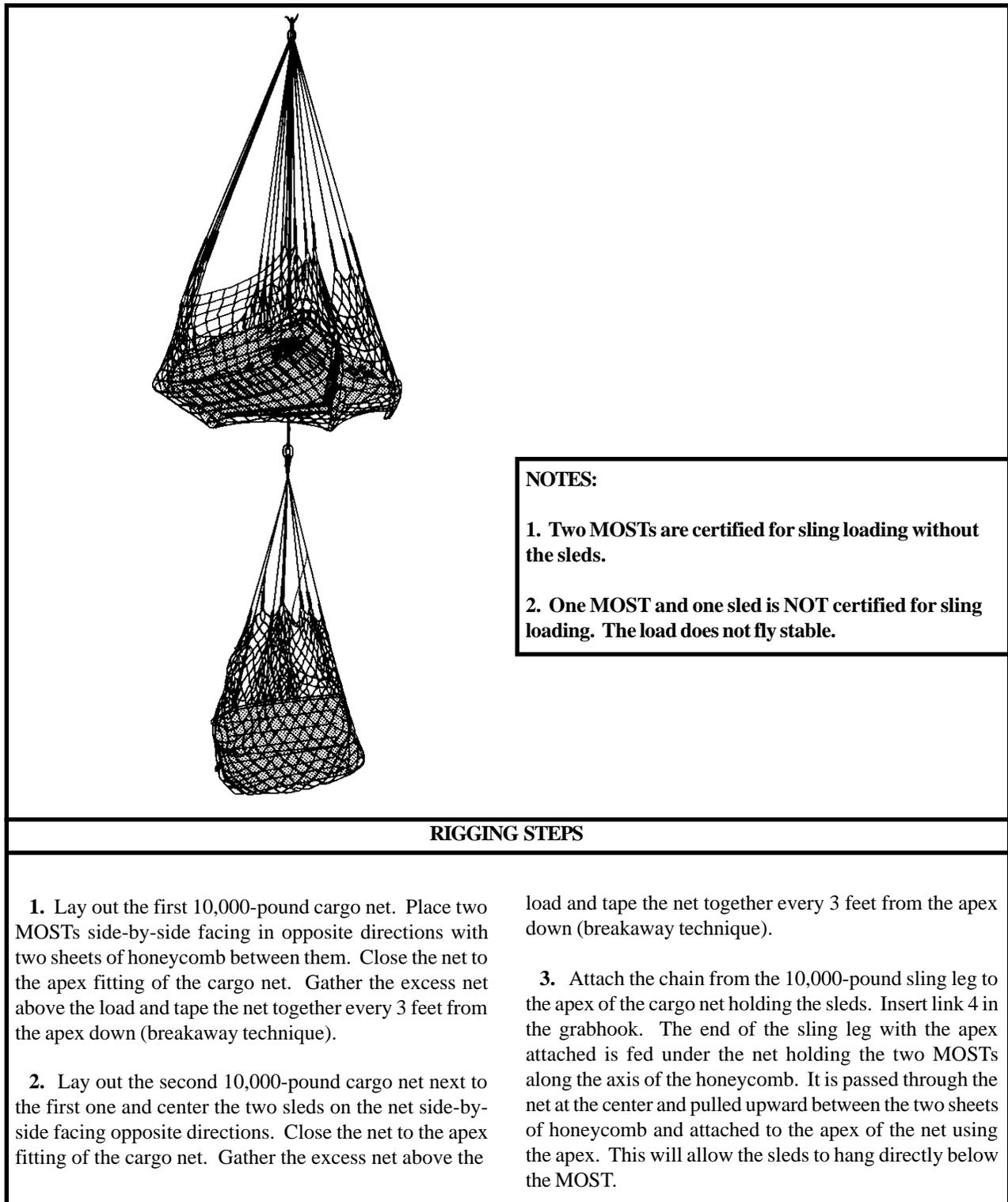


Figure 14-6. Two Mobile Oversnow Transport (MOST) Snowmobiles with or without Two Sleds