

CHAPTER 11

CERTIFIED SINGLE-POINT RIGGING PROCEDURES FOR CONTAINERS

11-1. Introduction

This chapter contains rigging procedures for single-point lift of containers that have 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 containers are in this section. Paragraphs 11-2 through 11-8 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.

11-2. Pershing II in Container

a. Applicability. The following items in Table 11-1 are certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

Table 11-1. Pershing II in Container

NOMENCLATURE	MAX WEIGHT (POUNDS)	SLING SET	LINK COUNT FRONT/REAR	RECOMMENDED AIRSPEED (KNOTS)
Pershing II First Stage Section	14,410	25K	3/20	90
Pershing II Second Stage Section	10,158	25K	3/13	110
Pershing II Guidance and Control/Adapter Section	3,500	10K	3/14	100
Pershing II Radar Section	1,708	10K	3/3	70

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

- (1) Sling set (10,000- or 25,000-pound capacity) (as required).
- (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) Ensure the container cover is securely fastened.
 - (b) Ensure the container skids and lift handles are serviceable.
- (2) **Rigging.** Rig the load according to the steps in Figure 11-1.
- (3) **Hookup.** The hookup team stands on top of the container. 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).

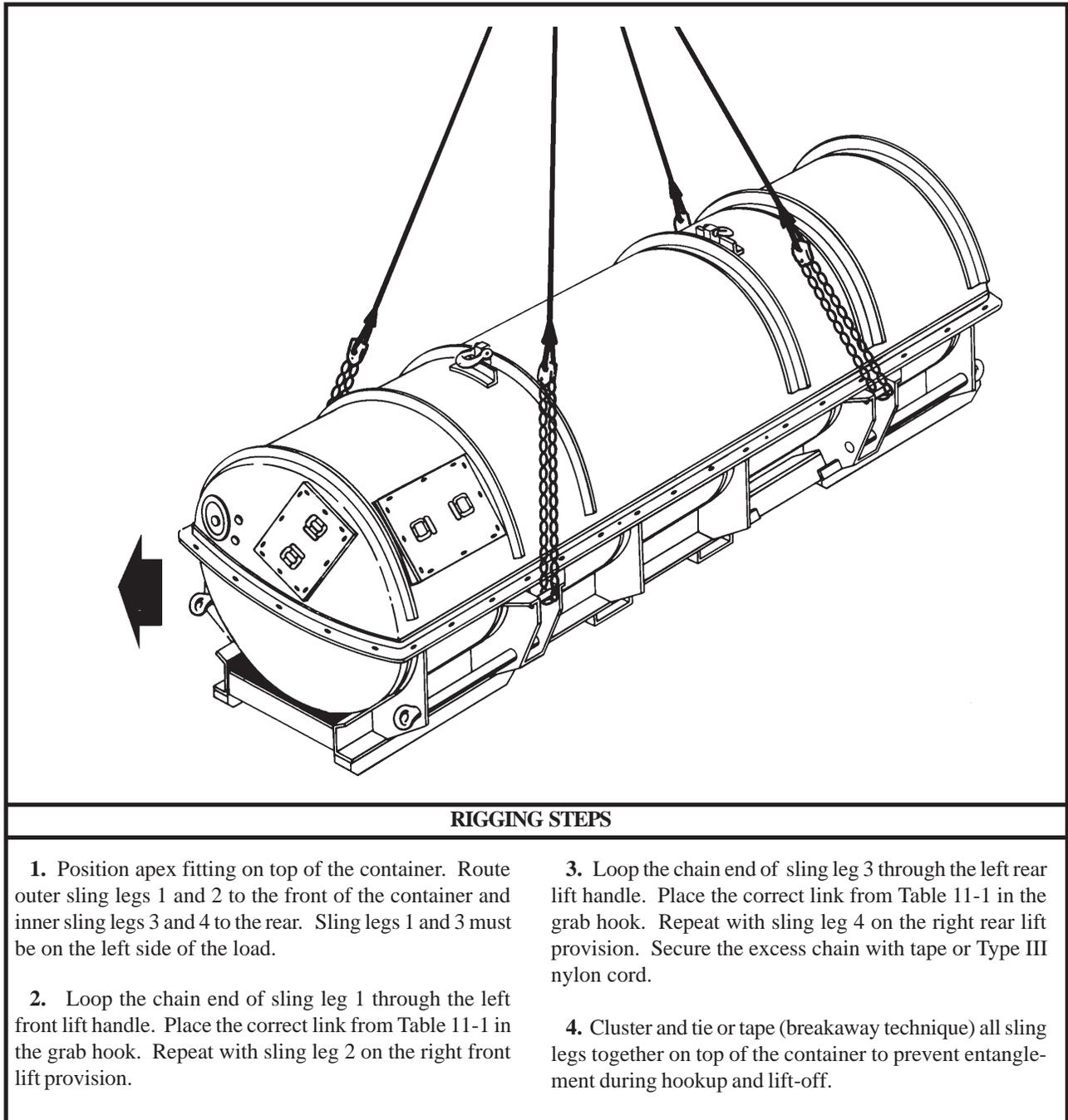


Figure 11-1. Pershing II in Container

11-3. Shipping/Storage Containers

a. Applicability. The following items in Table 11-2 are certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

Table 11-2. Shipping/Storage Containers

NOMENCLATURE	MAX WEIGHT (POUNDS)	SLING SET	LINK COUNT FRONT/REAR	RECOMMENDED AIRSPEED (KNOTS)
ISU-60 (Loaded)	11,650	25K	3/3	80
ISU-90 (Loaded)	11,900	25K	3/3	105
ISU-90 (Empty)	1,930	10K	3/3	65

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

- (1) Sling set (10,000- or 25,000-pound capacity) (as required).
- (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:

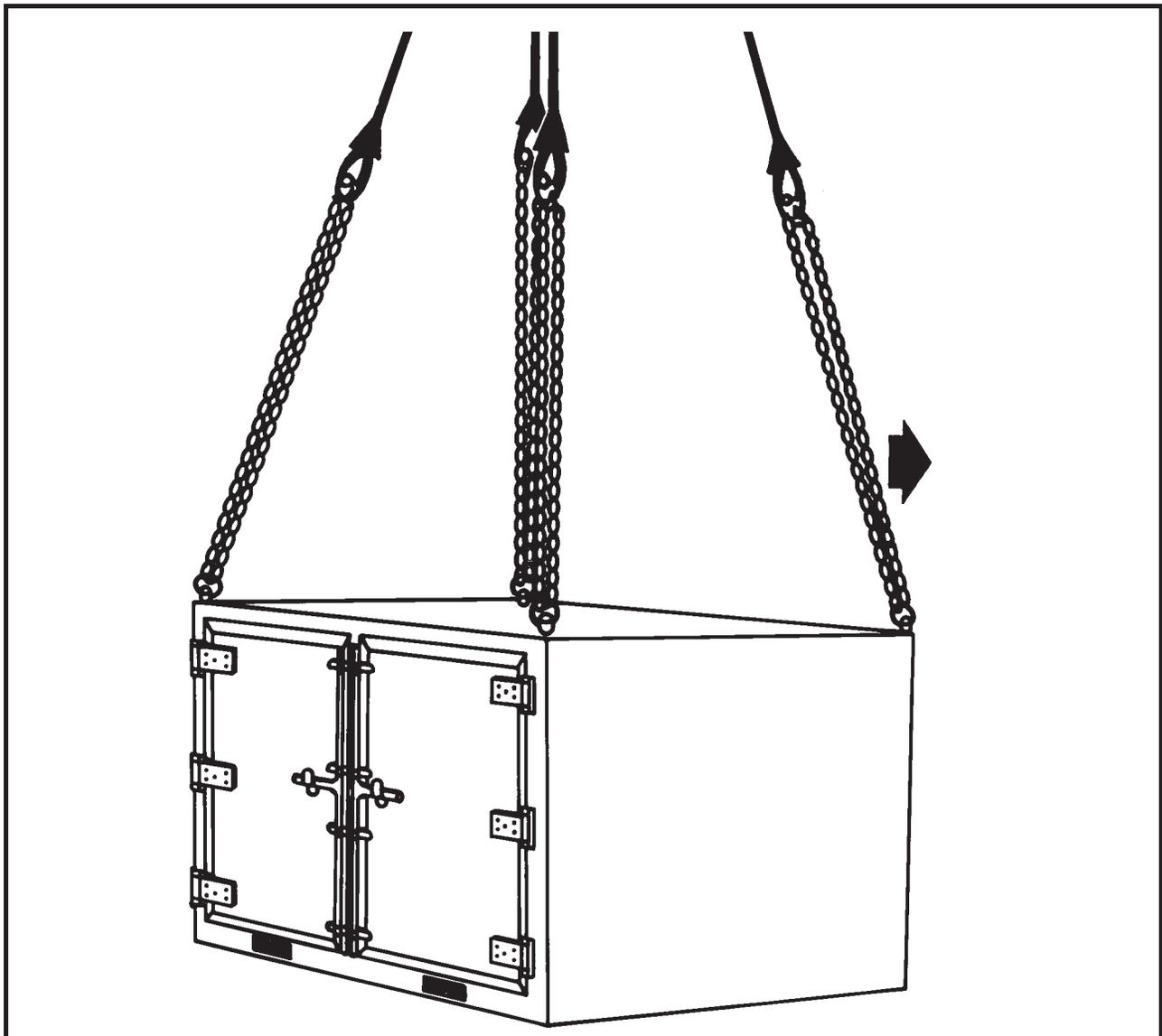
(a) Secure all cargo inside the container.

(b) Secure all doors in the secured and locked position.

(2) **Rigging.** Rig the load according to the steps in Figure 11-2.

(3) **Hookup.** The hookup team stands on top of the container. 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 on top of the container. Route outer sling legs 1 and 2 to the front of the container and inner sling legs 3 and 4 to the rear. 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. Place the correct link from Table 11-2 in the grab hook. Repeat with sling leg 2 on the right front lift provision.

3. Loop the chain end of sling leg 3 through the left rear lift provision. Place the correct link from Table 11-2 in the grab hook. Repeat with sling leg 4 on the right rear lift provision.

4. Cluster and tie or tape (breakaway technique) all sling legs together on top of the container to prevent entanglement during hookup and lift-off.

Figure 11-2. Shipping/Storage Containers

11-4. Multiple Launch Rocket System (MLRS) with Rocket Pod/Container (RP/C) (with Six Rockets)

a. Applicability. The following item in Table 11-3 is certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

Table 11-3. Multiple Launch Rocket System with Rocket Pod/Container

NOMENCLATURE	MAX WEIGHT (POUNDS)	SLING SET	LINK COUNT FRONT/REAR	RECOMMENDED AIRSPEED (KNOTS)
Multiple Launch Rocket System with Rocket Pod/Container (with Six Rockets)	5,005	10K	3/3	90

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:

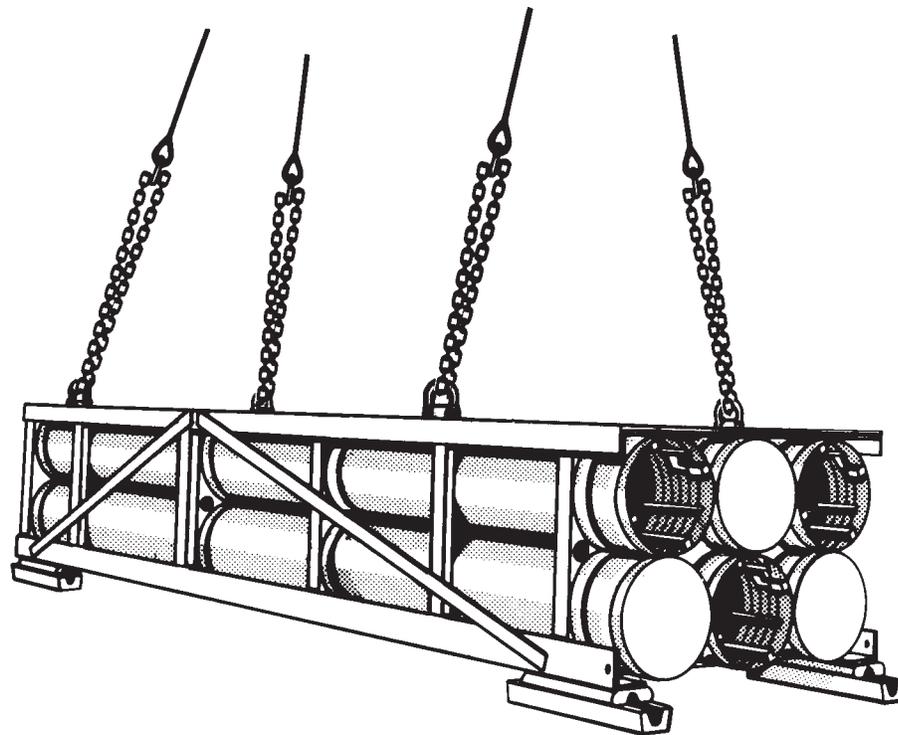
(1) Preparation. Prepare the MLRS RP/C for travel in accordance with standard procedures.

(2) Rigging. Rig the load according to the steps in Figure 11-3.

NOTE: Connect the apex fitting to the cargo hook so the front of the RP/C is forward.

(3) Hookup. The hookup team stands on top of the RP/C. 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 on top of the MLRS. Route outer sling legs 1 and 2 to the front of the RP/C and inner sling legs 3 and 4 to the rear. 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. Place the correct link from Table 11-3 in the grab hook. Repeat with sling leg 2 on the right front lift provision.

3. Loop the chain end of sling leg 3 through the left rear lift provision. Place the correct link from Table 11-3 in the grab hook. Repeat with sling leg 4 on the right rear lift provision.

4. Cluster and tie or tape (breakaway technique) all sling legs together on top of the container to prevent entanglement during hookup and lift-off.

Figure 11-3. Multiple Launch Rocket System with Rocket Pod/Container

11-5. Multiple Launch Rocket System (MLRS) with Two Rocket Pods/Containers (RP/C) (with Six Rockets)

a. Applicability. The following item in Table 11-4 is certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

Table 11-4. Multiple Launch Rocket System with Two Rocket Pods/Containers

NOMENCLATURE	MAX WEIGHT (POUNDS)	SLING SET	LINK COUNT FRONT/REAR	RECOMMENDED AIRSPEED (KNOTS)
Multiple Launch Rocket System with Two Rocket Pods/Containers (with Six Rockets)	10,010	25K	3/3	85

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

- (1) Sling set (25,000-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) Felt sheet, cattle hair, Type IV, 1/2-inch or suitable substitute.
- (6) Tie-down strap, cargo, CGU-1/B (as required).

c. Personnel. Two persons can prepare and rig this load in 30 minutes.

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

- (a) Prepare the MLRS RP/Cs for travel in accordance with standard procedures.
- (b) Stack the RP/Cs one on top of the other, with both RP/Cs facing the same direction.

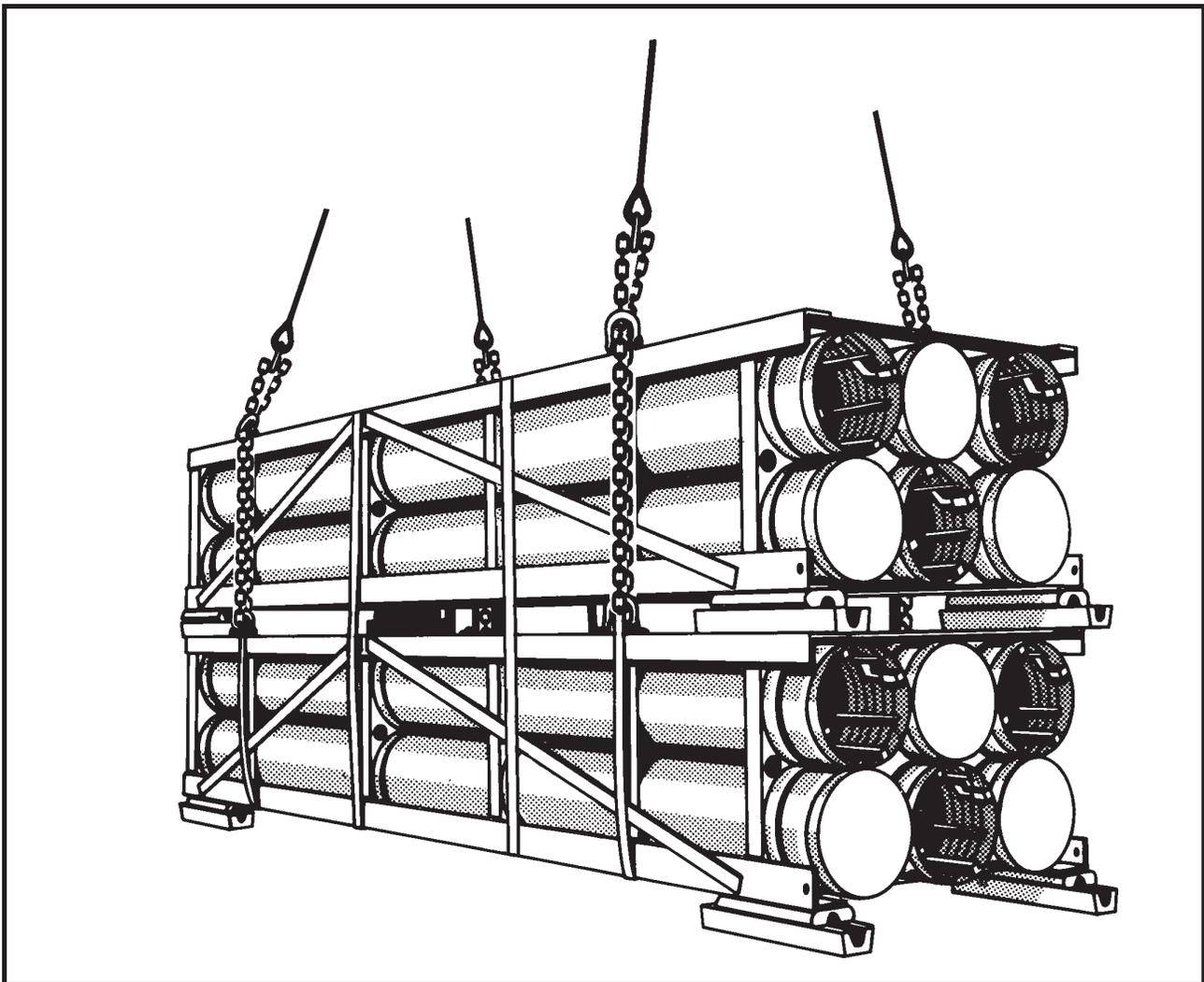
(c) Lash the stack of RP/Cs together using the CGU-1/B tie-down straps. Two of the straps should run through both sets of lifting provisions on each end of the RP/Cs, to keep them aligned during flight. Evenly space the remaining two straps between the lifting provisions, running them around the RP/Cs. **DO NOT ROUTE THE STRAPS OVER THE ROCKET TUBES.** Pad all straps in the area where they contact the edges of the RP/Cs.

(2) **Rigging.** Rig the load according to the steps in Figure 11-4.

NOTE: Connect the apex fitting to the cargo hook so the front of the RP/Cs are forward.

(3) **Hookup.** The hookup team stands on top of the RP/Cs. 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 on top of the MLRS. Route outer sling legs 1 and 2 to the front of the RP/C and inner sling legs 3 and 4 to the rear. 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 on the top RP/C and through the front lift provision on the bottom RP/C. Thread it back through the front lift provision on the top RP/C. Place the correct link from Table 11-4 in the grab hook. Repeat with sling leg 2 on the right front lift provision.

3. Loop the chain end of sling leg 3 through the left rear lift provision on the top RP/C and through the rear lift provision on the bottom RP/C. Thread it back through the rear lift provision on the top RP/C. Place the correct link from Table 11-4 in the grab hook. Repeat with sling leg 4 on the right rear lift provision.

4. Cluster and tie or tape (breakaway technique) all sling legs together on top of the RP/C to prevent entanglement during hookup and lift-off.

Figure 11-4. Multiple Launch Rocket System with Two Rocket Pods/Containers

11-6. M1A1 Full-Up Power Pack (FUPP) Container

a. Applicability. The following item in Table 11-5 is certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

Table 11-5. M1A1 Full-Up Power Pack

NOMENCLATURE	MAX WEIGHT (POUNDS)	SLING SET	LINK COUNT FRONT/REAR	RECOMMENDED AIRSPEED (KNOTS)
M1A1 Full-Up Power Pack Container with Full-Up Power Pack (Metal or Fiberglass)	13,620	25K	3/10	110

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

- (1) Sling set (25,000-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 (as required).

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

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

- (a) Secure all equipment inside the container with

tape or Type III nylon cord.

(b) Close and secure all doors and vents with tape or Type III nylon cord.

(2) **Rigging.** Rig the load according to the steps in Figure 11-5.

(3) **Hookup.** The hookup team stands on top of the container. 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).

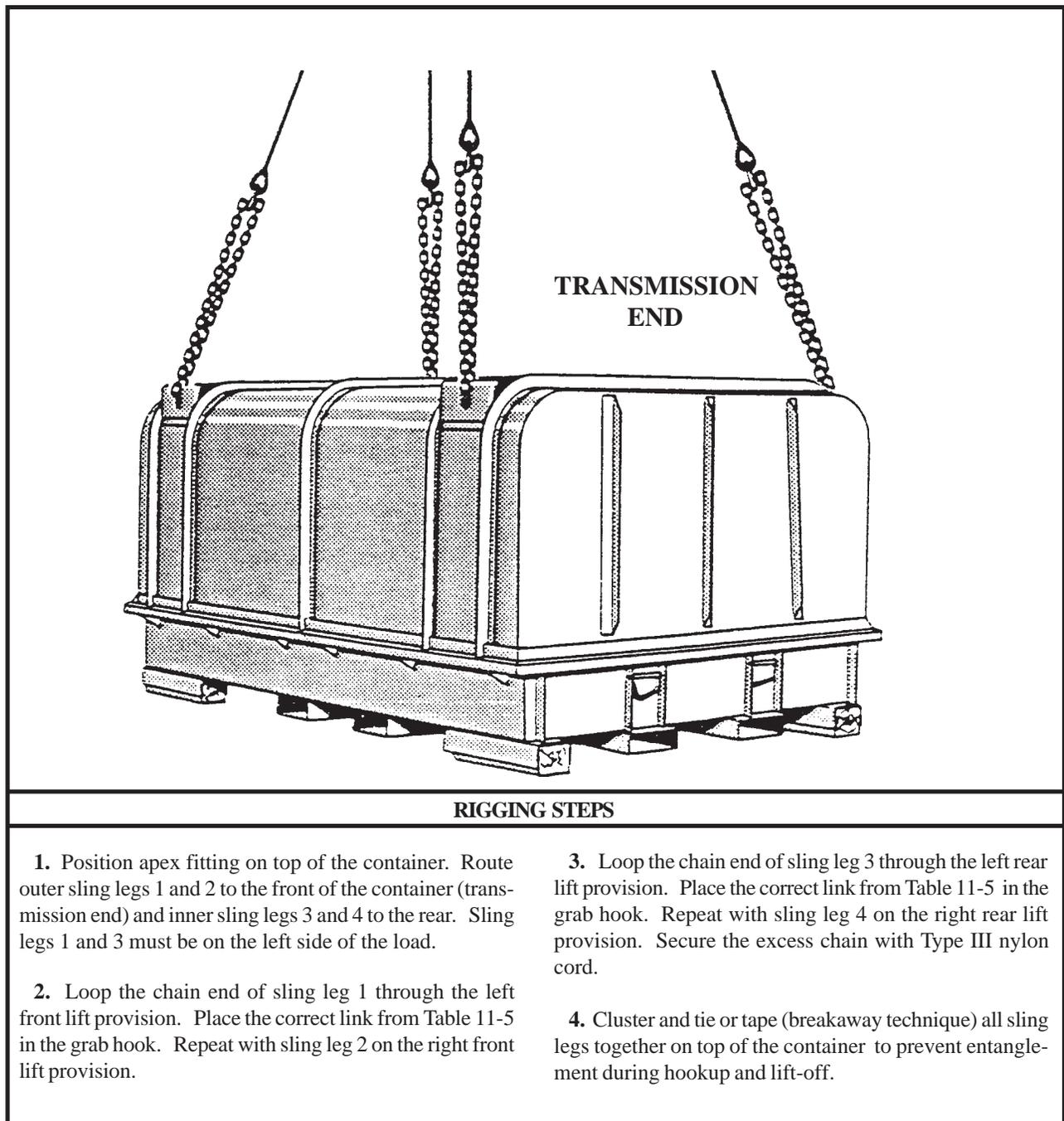


Figure 11-4. MIA1 Full-Up Power Pack

11-7. Field Medical Oxygen Generation/Distribution System (FMOGDS)

a. Applicability. The following items in Table 11-6 are certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

Table 11-6. Field Medical Oxygen Generation/Distribution System

NOMENCLATURE	MAX WEIGHT (POUNDS)	SLING SET	LINK COUNT FRONT/REAR	RECOMMENDED AIRSPEED (KNOTS)
Oxygen Generation/Distribution Module (OGDM)	3,405	10K	3/3	70
Cylinder Filling Module (CFM)	2,049	10K	3/3	70

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.
- (5) Tie-down strap, cargo, CGU-1/B (as required).

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

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

- (a) Ensure all tools are properly stowed. Secure all

loose equipment inside the container with tape or Type III nylon cord.

(b) Secure all doors and vents with tape. Secure all hoses and chains with tape or 1/4-inch cotton webbing.

(2) **Rigging.** Rig the load according to the steps in Figure 11-6.

(3) **Hookup.** The hookup team stands on top of the container. 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).

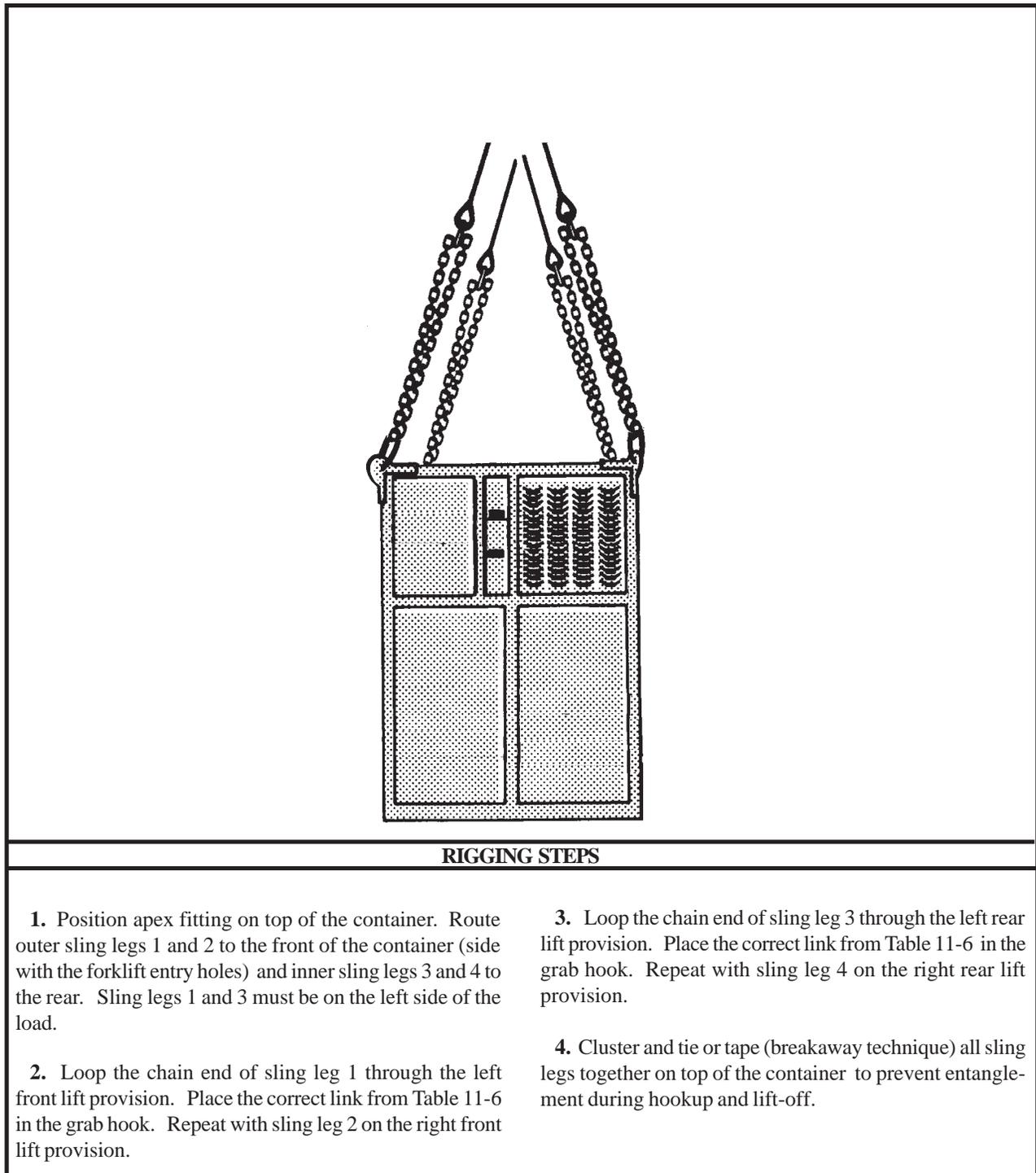


Figure 11-6. Field Medical Oxygen Generation/Distribution System

11-8. Field Medical Oxygen Generation/Distribution System (FMOGDS) (Combined)

a. Applicability. The following item in Table 11-7 is certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

Table 11-7. Field Medical Oxygen Generation/Distribution System (Combined)

NOMENCLATURE	MAX WEIGHT (POUNDS)	SLING SET	LINK COUNT FRONT/REAR	RECOMMENDED AIRSPEED (KNOTS)
Oxygen Generation Distribution Module and Cylinder Filling Module	5,454	10K	3/20/3	85

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

- (1) Sling set (10,000-pound capacity) with two additional chain legs.
- (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 (as required).
- (6) Lumber, 2 x 4 x 72-inch (4 each).

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

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

- (a) Ensure all tools are properly stored. Secure all loose equipment inside the container with tape or Type III nylon cord.

- (b) Secure all doors and vents with tape. Secure all hoses and chains with tape or 1/4-inch cotton webbing.

- (c) Position the units together with the "A" sides facing each other.

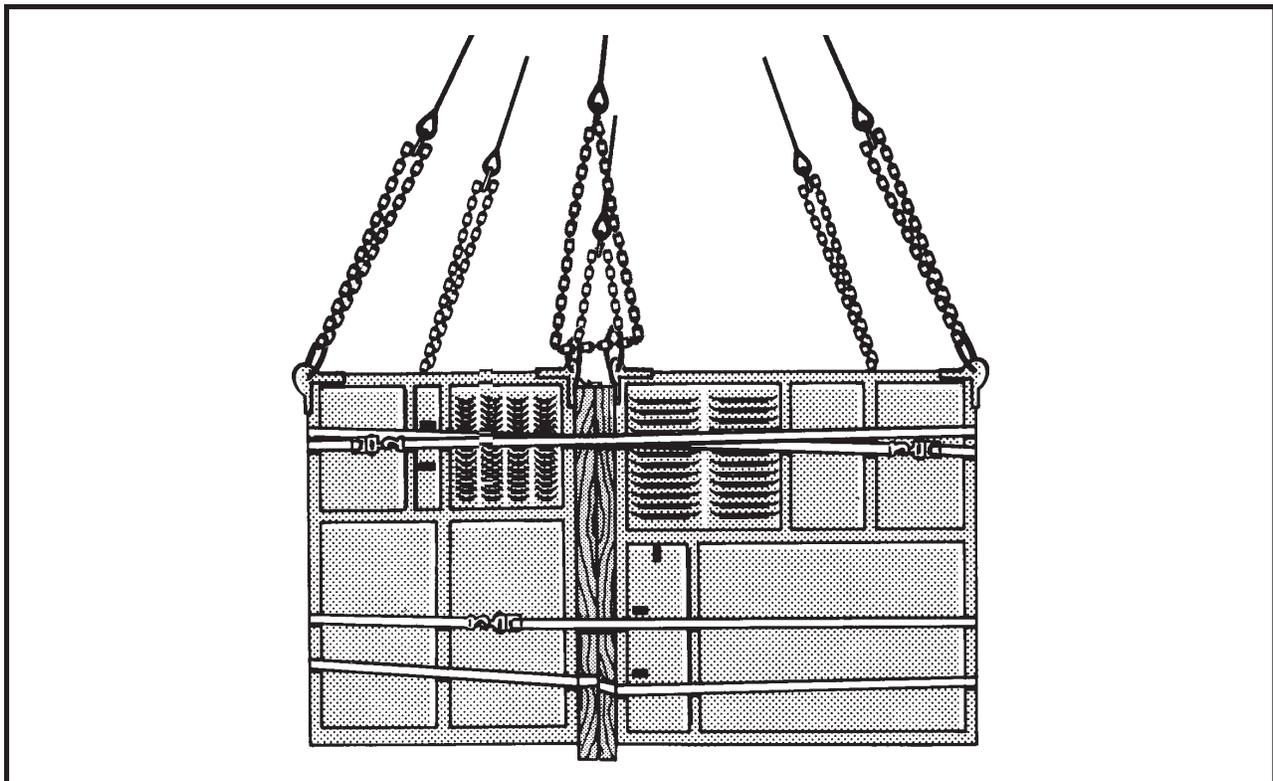
- (d) Cut slots in four 2 x 4 x 72-inch pieces of lumber to keep the CGU-1/B tie-down straps from sliding.

- (e) Place the 2 x 4 x 72-inch pieces of lumber between the OGMD and the CFM as dunnage.

- (2) **Rigging.** Rig the load according to the steps in Figure 11-7.

- (3) **Hookup.** The hookup team stands on top of the container. 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. Configure a six leg sling set.
2. Attach two (2) 2 x 4 x 72-inch pieces of lumber to the "A" side of each unit using the CGU-1/B tie-down straps. Ensure the straps are routed horizontally around the unit and through the slots in the lumber.
3. Strap OGDM and CFM together using the tiedown straps, two fastenings evenly spaced around the sides. Fasten the straps together as necessary to span the two pieces of equipment.
4. Position apex fitting on top of the units. Route outer sling legs 1 and 2 to the front of the OGDM. Route inner sling legs 3 and 4 to the rear of the CFM and the middle sling legs 5 and 6 to the interface of the OGDM and the CFM. Sling legs 1, 3, and 5 must be on the left side of the load.
5. Route the chain end of sling leg 1 through the left front lift provision located on the front of the OGDM. Place the correct link from Table 11 -7 in the grab hook. Repeat with sling leg 2 on the right front lift provision.
6. Route the chain end of sling leg 3 through the left rear lift provision located on the rear of the CFM. Place the correct link from Table 11 -7 in the grab hook. Repeat with sling leg 4 on the right rear lift provision.
7. Route the chain end of sling leg 5 through the left lifting provision on the interfacing "A" sides of the OGDM and the CFM. Place the correct link from Table 11-7 in the grab hook. Repeat with sling leg 6 and the right lifting provision on the interfacing "A" sides of the OGDM and the CFM. Secure the excess chain with Type III nylon cord.
8. Cluster and tie or tape (breakaway technique) all sling legs together on top of the ODGM and CFM to prevent entanglement during hookup and lift-off.

Figure 11-7. Field Medical Oxygen Generation/Distribution System (Combined)