

## CHAPTER 3

### CERTIFIED SINGLE-POINT RIGGING PROCEDURES FOR TRAILERS

#### 3-1. INTRODUCTION

This chapter contains rigging procedures for single-point trailer loads 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 proce-

dures for trailers are in this section. Paragraphs 3-2 through 3-21 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.**

#### 3-2. M416 1/4 Ton Trailer

**a. Applicability.** The following item in Table 3-1 is certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

Table 3-1. M416 1/4-Ton Trailer

| NOMENCLATURE         | MAX WEIGHT ( POUNDS ) | SLING SET | LINK COUNT FRONT / REAR | RECOMMENDED AIRSPEED ( KNOTS ) |
|----------------------|-----------------------|-----------|-------------------------|--------------------------------|
| M416 1/4-Ton Trailer | 1,080                 | 10K       | 3/3                     | 90                             |

#### WARNING

**THE M416 1/4-TON TRAILER MUST HAVE A GROSS WEIGHT OF 800 POUNDS OR MORE. ADD ADDITIONAL WEIGHT OR CARGO TO ANY TRAILER WHICH WEIGHS LESS THAN 800 POUNDS.**

**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, CGU-1B or Dacron lashing and load binder.

**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)** Lower and lock the trailer support leg in the down position.

**(b)** Tape or tie the light cable firmly to the top of the drawbar.

**(c)** Load and lash the cargo in the bed of the trailer.

**(d)** Ensure the parking brake is set.

**(2) Rigging.** Rig the load according to the steps in Figure 3-1.

**(3) Hookup.** The hookup team stands in the bed of

the trailer. 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 carefully dismounts the vehicle and 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).

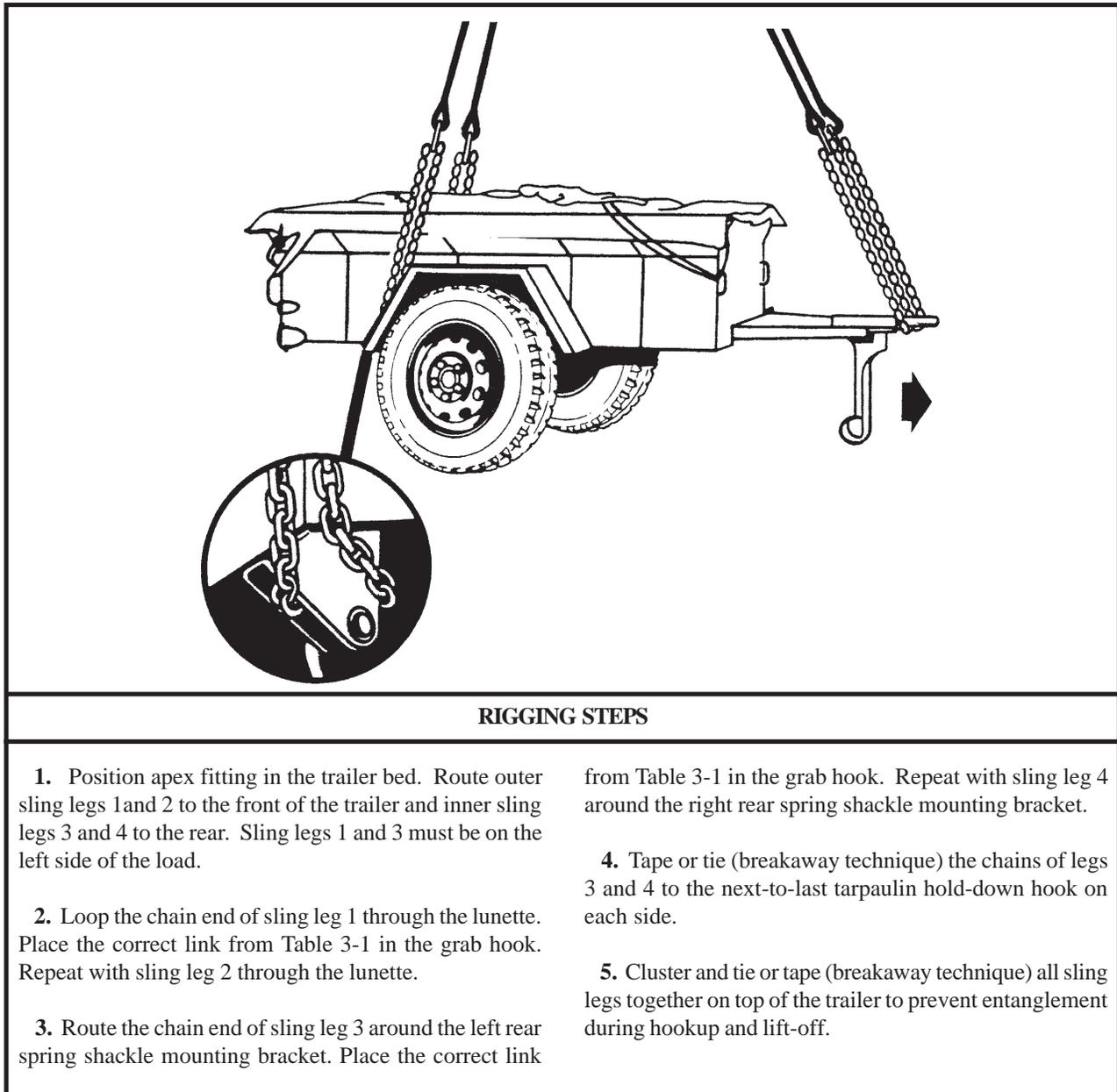


Figure 3-1. M416 1/4 Ton Trailer

### 3-3. M101A2 3/4-Ton Trailer

**a. Applicability.** The following items in Table 3-2 are certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

**Table 3-2. M101A2 3/4-Ton Trailer**

| NOMENCLATURE                  | MAX WEIGHT (POUNDS) | SLING SET | LINK COUNT FRONT/REAR | RECOMMENDED AIRSPEED (KNOTS) |
|-------------------------------|---------------------|-----------|-----------------------|------------------------------|
| M101A2 with Accompanying Load | 3,000               | 10K       | 3/40                  | 65                           |
| Command Version 1 Trailer     | 1,958               | 10K       | 3/40                  | 65                           |
| Command Version 2 Trailer     | 1,981               | 10K       | 3/40                  | 65                           |
| Len Cable Trailer             | 2,796               | 10K       | 3/40                  | 65                           |
| NC Support Trailer            | 2,643               | 10K       | 3/40                  | 65                           |
| Maintenance Trailer #2        | 1,430               | 10K       | 3/40                  | 65                           |
| Battalion Spares Trailer #1   | 1,594               | 10K       | 3/40                  | 65                           |
| Battalion Spares Trailer #2   | 2,206               | 10K       | 3/40                  | 65                           |

#### WARNINGS

**THE M101A2 3/4-TON TRAILER MUST HAVE A GROSS WEIGHT OF 1,575 POUNDS OR MORE. ADD ADDITIONAL WEIGHT OR CARGO TO ANY TRAILER WHICH WEIGHS LESS THAN 1,575 POUNDS. PLACE THE WEIGHT NEAR THE CENTER OF THE TRAILER.**

**MAXIMUM WEIGHT DURING SLING LOAD OPERATIONS FOR ANY VARIANT OF THE M101A2 3/4-TON TRAILER IS 3,000 POUNDS.**

**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, CGU-1B or dacron lashing and load binder.

**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) Fasten the tailgate in the open position with the chains on each side hooked through the keeper.

(b) Remove the front rack and place it in the bed of the trailer. Place the accompanying load on top of the front rack. Secure the accompanying load to the trailer using tie-down straps. Route the straps diagonally across the load from the tailgate hinge to the front lifting shackles.

(c) Tape or tie the light cable firmly to the top of the drawbar.

(d) Ensure the parking brake is set.

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

(3) **Hookup.** The hookup team stands in the bed of the trailer. 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 carefully dismounts the vehicle and 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).

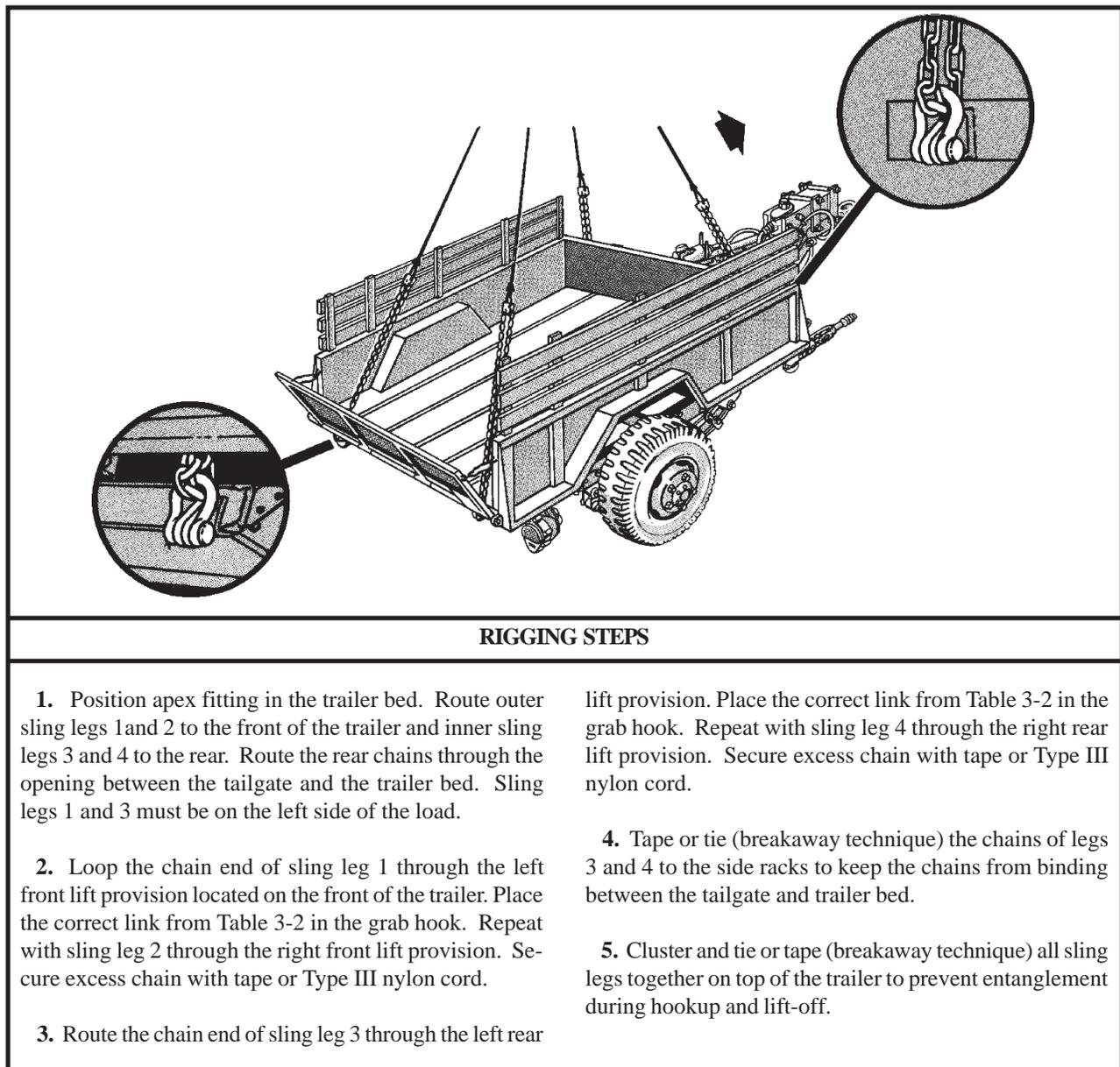


Figure 3-2. M101A2 3/4-Ton Trailer

### 3-4. M1048/M1073 Trailer

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

**Table 3-3. M1048/M1073 Trailer**

| NOMENCLATURE  | MAX WEIGHT (POUNDS) | SLING SET | LINK COUNT FRONT/REAR | RECOMMENDED AIRSPEED (KNOTS) |
|---------------|---------------------|-----------|-----------------------|------------------------------|
| M1048 Trailer | 5,880               | 10K       | 44/6                  | 120                          |
| M1073 Trailer | 6,260               | 15K       | 58/3                  | 110                          |

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

- (1) Sling set (10,000-pound capacity).

**OR**

- (2) Multileg sling set (15,000-pound capacity).
- (3) Tape, adhesive, pressure-sensitive, 2-inch wide roll.
- (4) Cord, nylon, Type III, 550-pound breaking strength.
- (5) 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) Secure all loose chains, hoses, and cables to the trailer drawbar with Type III nylon cord.

- (b) Secure any lids, caps, or loose items with tape or Type III nylon cord.

- (c) Tape or tie the light cable firmly to the top of the drawbar.

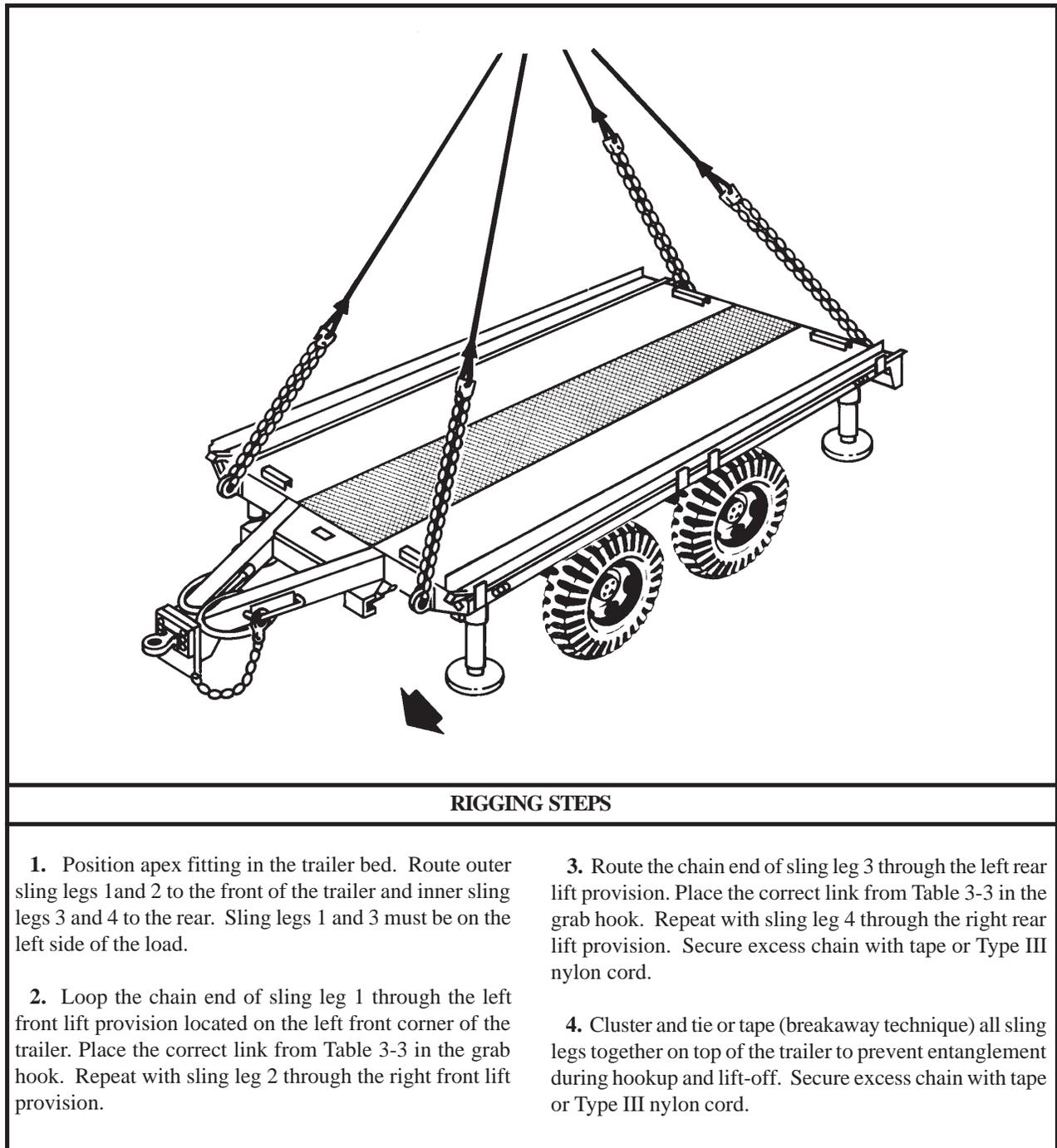
- (d) Place the leveling jacks in the down position. Ensure the base of the leveling jacks are not extended. Stow the jack handles and secure with Type III nylon cord. The trailer should lean downward at the lunette end.

- (e) Ensure the parking brake is set.

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

(3) **Hookup.** The hookup team stands in the bed of the trailer. 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 carefully dismounts the vehicle and 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 3-3. M1048/M1073 Trailer*

### 3-5. M1048 Trailer with Tracked Suspension System (TSS)

**a. Applicability.** The following item in Table 3-4 is certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

**Table 3-4. M1048 Trailer (TSS)**

| NOMENCLATURE        | MAX WEIGHT (POUNDS) | SLING SET | LINK COUNT FRONT/REAR | RECOMMENDED AIRSPEED (KNOTS) |
|---------------------|---------------------|-----------|-----------------------|------------------------------|
| M1048 Trailer (TSS) | 7,880               | 10K       | 26/3                  | 120                          |

**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) Secure all loose chains, hoses, and cables to the trailer drawbar with Type III nylon cord.
  - (b) Secure any lids, caps, or loose items with tape or Type III nylon cord.

(c) Tape or tie the light cable firmly to the top of the drawbar.

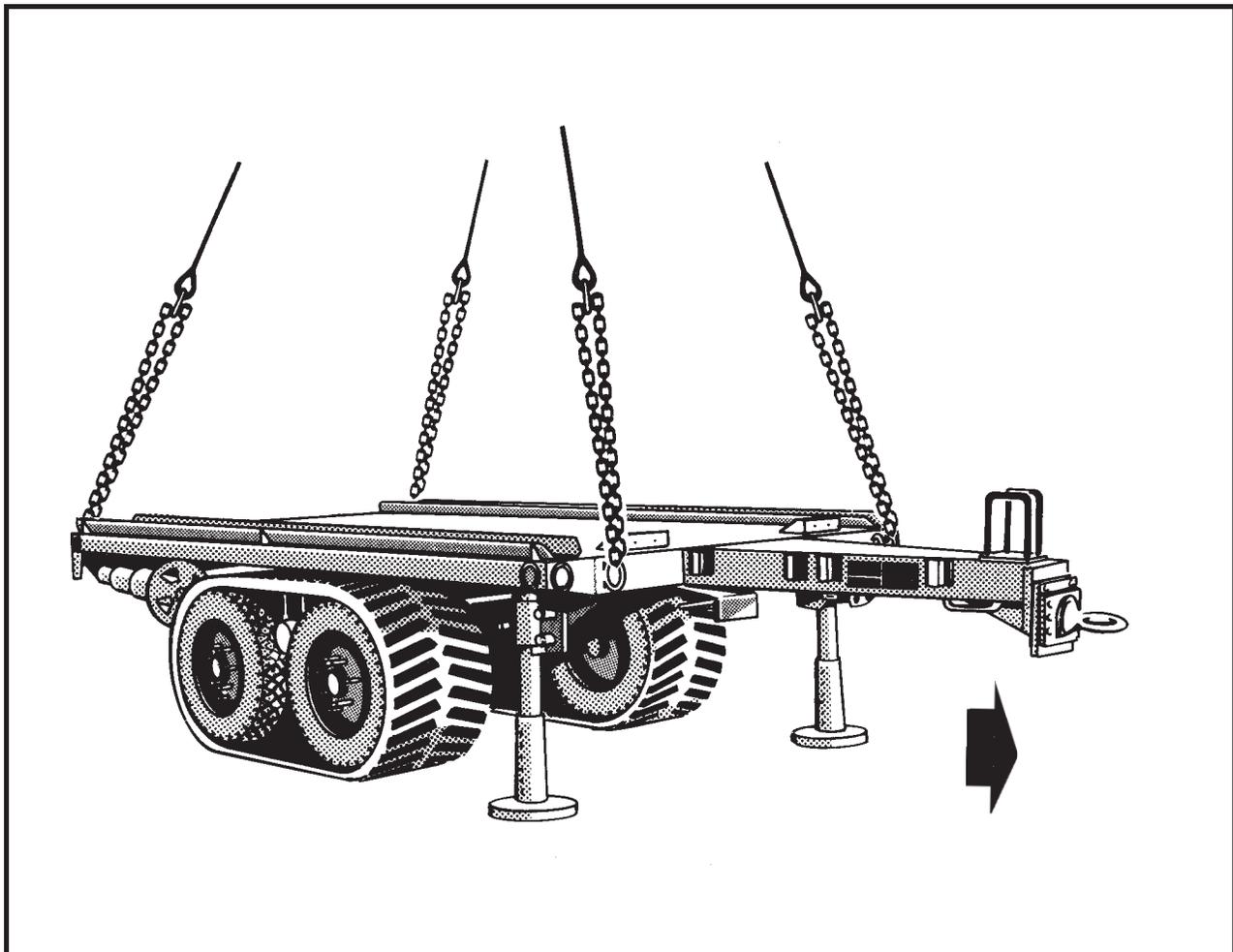
(d) Place the front leveling jacks in the down position. Ensure the base of the leveling jacks are not extended. Stow the jack handles and secure with Type III nylon cord. Secure the rear leveling jacks in the up position. The trailer should lean downward at the lunette end.

(e) Ensure the parking brake is set.

(2) **Rigging.** Rig the load according to the steps in Figure 3-4.

(3) **Hookup.** The hookup team stands in the bed of the trailer. 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 carefully dismounts the vehicle and 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 in the trailer bed. Route outer sling legs 1 and 2 to the front of the trailer 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 located on the left front corner of the trailer. Place the correct link from Table 3-4 in the grab hook. Repeat with sling leg 2 through the right front lift provision. Secure excess chain with tape or Type III nylon cord.

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

4. Cluster and tie or tape (breakaway technique) all sling legs together on top of the trailer to prevent entanglement during hookup and lift-off. Secure excess chain with tape or Type III nylon cord.

*Figure 3-4. M1048 Trailer (TSS)*

### 3-6. M149A2 Water Trailer (USMC)

**a. Applicability.** The following item in Table 3-5 is certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

**Table 3-5. M149A2 Water Trailer**

| NOMENCLATURE  | MAX WEIGHT (POUNDS) | SLING SET | LINK COUNT FRONT/REAR | RECOMMENDED AIRSPEED (KNOTS) |
|---|---------------------|-----------|-----------------------|------------------------------|
| M149A2 Water Trailer Modified with Clevis Type Lifting Provisions | 6,100               | 15K       | 3/11                  | 90                           |

**NOTES:**

**1. This load is only certified for sling loading at its full weight of 6,100 pounds.**

**2. The rigging procedures for the M149 Water Trailer (US Army) are located in chapter 16.**

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

- (1) Multileg 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.
- (5) Felt sheet, cattle hair, Type IV, 1/2-inch or suitable substitute.

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

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

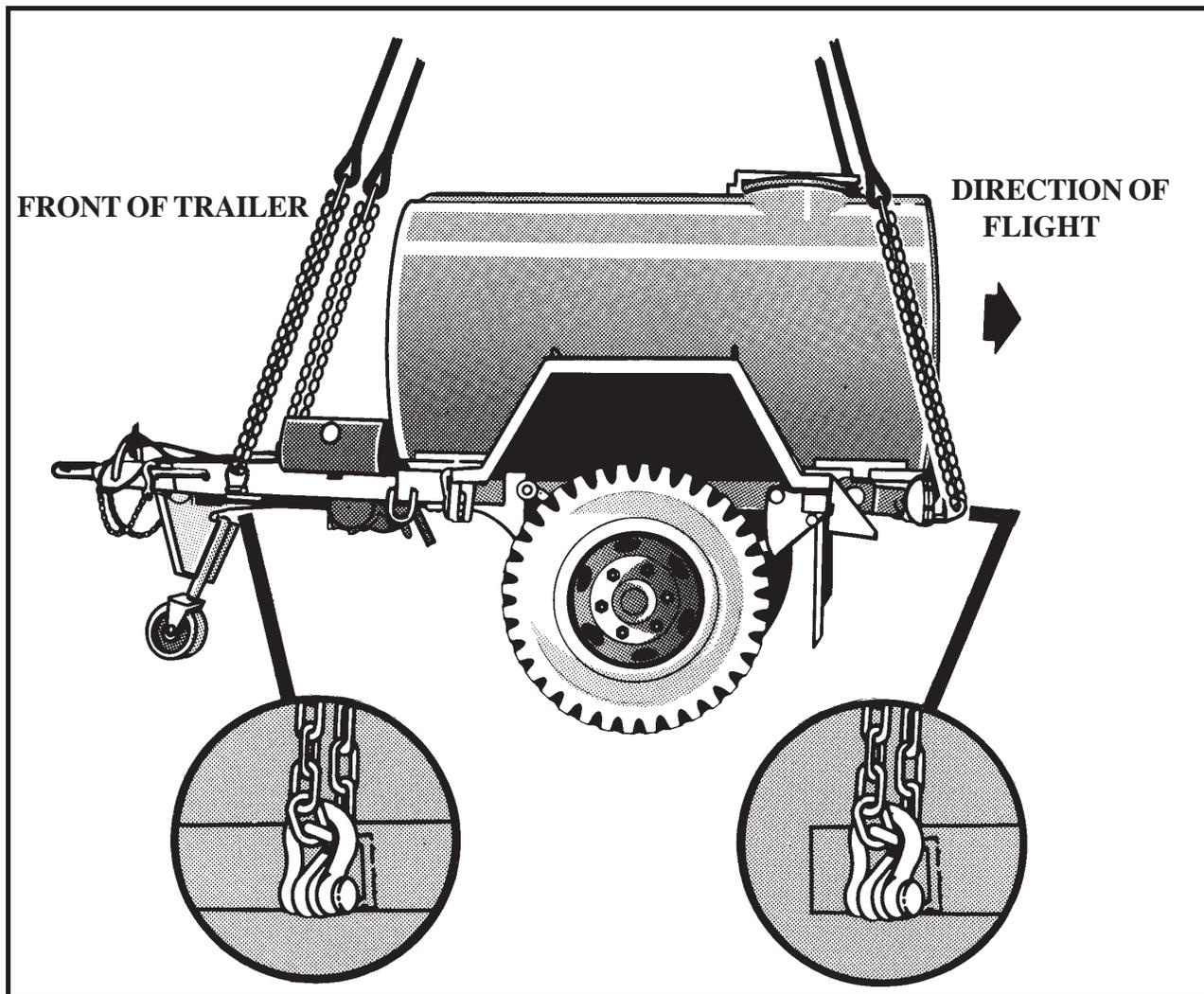
**(1) Preparation.** Prepare the load using the following steps:

- (a) Secure all loose chains, hoses, and cables to the trailer drawbar with Tape or Type III nylon cord.
- (b) Ensure the tongue wheel is locked in the down position.
- (c) Close the tank lid and secure.
- (d) Ensure that one trailer brake is set.

**(2) Rigging.** Rig the load according to the steps in Figure 3-5.

**(3) Hookup.** The hookup team stands on the trailer fenders or the front of the trailer. 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 carefully dismounts the vehicle and 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 water tank. Route outer sling legs 1 and 2 to the front of the trailer 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 located on the left front corner of the trailer. Place the correct link from Table 3-5 in the grab hook. Repeat with sling leg 2 through the right front lift provision.
3. Route the chain end of sling leg 3 through the left rear

lift provision. Place the correct link from Table 3-5 in the grab hook. Repeat with sling leg 4 through the right rear lift provision. Pad the rear slings where they contact the water tank. Secure excess chain with tape or Type III nylon cord.

4. Position the two rear slings around the side of the tank so that the sling legs cradle the tank.

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

*Figure 3-5. M149A2 Water Trailer*

### 3-7. M989 Heavy-Expanded Mobility Ammunition Trailer (HEMAT)

**a. Applicability.** The following item in Table 3-6 is certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

**Table 3-6. M989 HEMAT**

| NOMENCLATURE       | MAX WEIGHT (POUNDS) | SLING SET | LINK COUNT FRONT/REAR | RECOMMENDED AIRSPEED (KNOTS) |
|--------------------|---------------------|-----------|-----------------------|------------------------------|
| M989 HEMAT (Empty) | 7,640               | 10K       | 40/4                  | 120                          |

**NOTE:** This load is only certified for sling loading at its empty weight.

Place the remaining panels on top of the respective panels on the trailer.

**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 CGU-1/B (4 each).

**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)** At each corner of the trailer, slide the lifting provisions out until they are completely extended. Do not lift the trailer unless the provisions are fully extended and secured in position.

**(b)** Remove the side and end panels. Place two panels side by side on the trailer so that the panel ends are approximately 10 inches from the front of the trailer. Make sure the panels are positioned lengthwise on the trailer.

**(c)** Secure the panels on the trailer with the tie-down straps. Attach the hook end of one tie-down strap to a tie-down ring on the trailer bed beside the panels approximately 1 foot from the end of the panels. Connect and tighten the ratchet end to a tie-down ring on the other side of the panels. Secure loose end of strap. Repeat with a second tie-down strap at the other end of the panels.

**(d)** To secure the panels lengthwise, route the hook end of one tie-down strap around the vertical metal stiffeners on the top panel of the stack of panels on the left side of the trailer. Attach the hook end to a tie-down ring on the front end of the trailer bed. Connect and tighten the ratchet end to a tie-down ring on the other end of the stack of panels. Secure loose end of strap. Repeat with a second tie-down strap on the other stack of panels.

**(e)** Tape or tie the intervehicular cable, hoses, and safety chains firmly to the top of the drawbar with tape or Type III nylon cord.

**(f)** Engage the parking brake.

**(2) Rigging.** Rig the load according to the steps in Figure 3-6.

**(3) Hookup.** The hookup team stands on the bed of the trailer. 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 carefully dismounts the vehicle and 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).

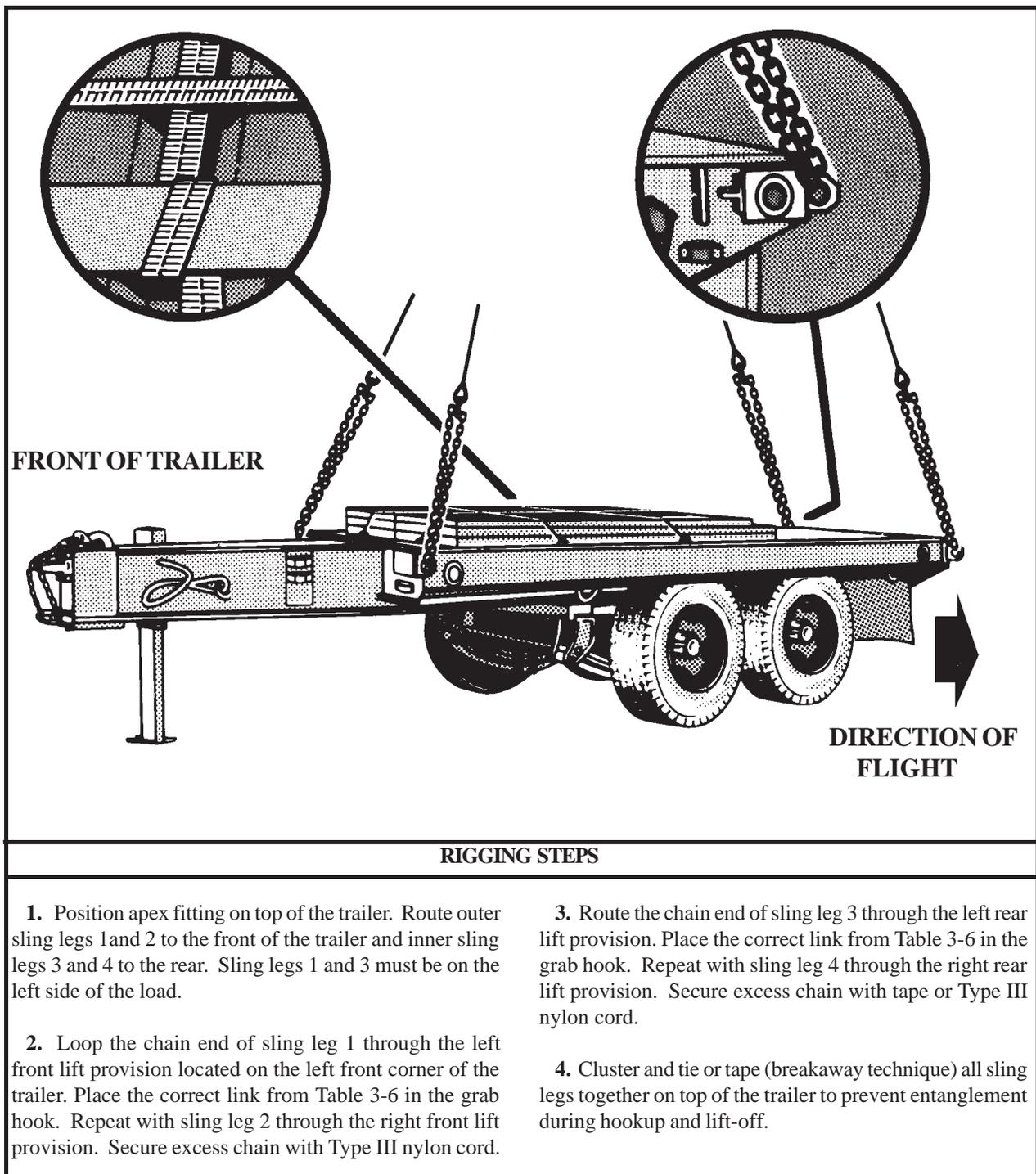


Figure 3-6. M989 HEMAT

### 3-8. M989A1 Heavy-Expanded Mobility Ammunition Trailer (HEMAT II)

**a. Applicability.** The following item in Table 3-7 is certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

**Table 3-7. M989A1 HEMAT II**

| NOMENCLATURE    | MAX WEIGHT (POUNDS) | SLING SET | LINK COUNT FRONT/REAR | RECOMMENDED AIRSPEED (KNOTS) |
|-----------------|---------------------|-----------|-----------------------|------------------------------|
| M989A1 HEMAT II | 10,650              | 25K       | 15/3                  | 125                          |

#### CAUTION

The following rigging procedures are for the M989A1 HEMAT II only. Do not use these procedures when rigging the M989 HEMAT.

**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 CGU-1/B (8 each).
- (6) Felt sheet, cattle hair, Type IV, 1/2-inch or suitable substitute.

**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) Inspect the lift provisions at the four upper corners of the cargo bed.

(b) Raise the trailer tongue and secure it in the up position with a CGU-1/B.

(c) Secure the brake hose, safety hose, intervehicular cables, and safety chains to the trailer and tongue with tape or Type III nylon cord.

(d) Engage the steering lockout pin.

(e) Secure the side panels to the cargo deck with CGU-1/Bs.

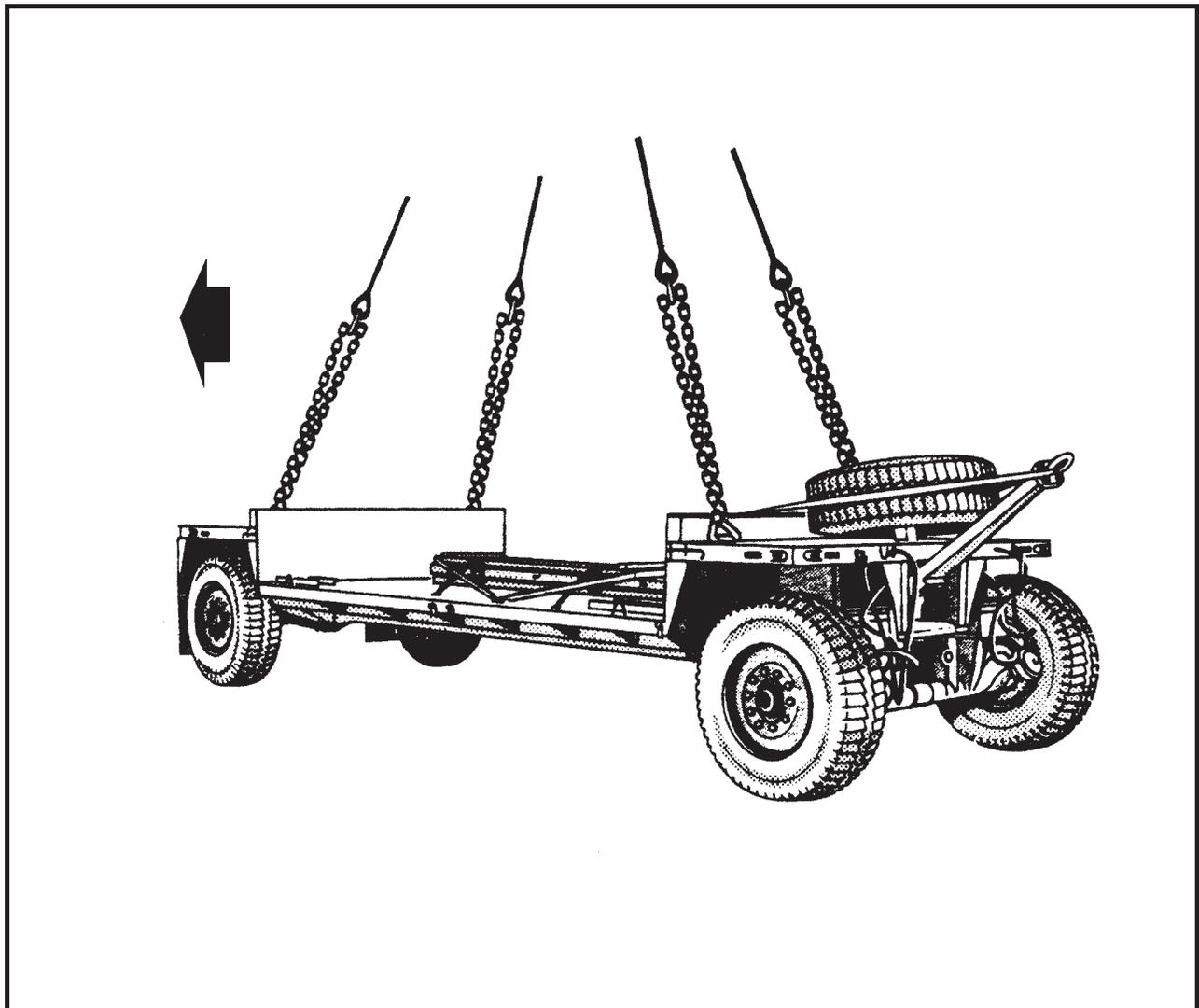
(2) **Rigging.** Rig the load according to the steps in Figure 3-7.

(3) **Hookup.** The hookup team stands on the bed of the trailer. 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 carefully dismounts the vehicle and 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.

#### CAUTION

Brief the aircrew to relax sling leg tension and hover to the side of the load when releasing the apex fitting to prevent damage to the panels on top of the trailer.

(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 trailer. Route outer sling legs 1 and 2 to the front of the trailer 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 located on the left front corner of the trailer. Place the correct link from Table 3-7 in the grab hook. Repeat with sling leg 2 through the right front lift provision. Secure excess chain with Type III nylon cord.

3. Route the chain end of sling leg 3 through the left rear lift provision. Place the correct link from Table 3-7 in the grab hook. Repeat with sling leg 4 through the right rear lift provision. Secure excess chain with tape or Type III nylon cord.
4. Cluster and tie or tape (breakaway technique) all sling legs together on top of the trailer to prevent entanglement during hookup and lift-off.

*Figure 3-7. M989A1 HEMAT II*

### 3-9. Mk14, Trailer, Container Hauler

**a. Applicability.** The following item in Table 3-8 is certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

**Table 3-8. Mk14, Trailer, Container Hauler**

| NOMENCLATURE                    | MAX WEIGHT (POUNDS) | SLING SET | LINK COUNT FRONT/REAR | RECOMMENDED AIRSPEED (KNOTS) |
|---------------------------------|---------------------|-----------|-----------------------|------------------------------|
| Mk14, Trailer, Container Hauler | 16,000              | 40K       | 3/3                   | 100                          |

**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) Disengage the Mk14 from the Mk48 prime mover according to the operator's manual.
- (b) Secure all hoses with tape or nylon cord.
- (c) Tape all lights, reflectors, and glass fixtures.

**(d)** Remove the safety retainer pins from the lifting eyelets located under the doors in the bed of the trailer. Unscrew the lifting eyelets from their stored position and reinsert the lifting eyelets so that the eyelet portion is accessible from the bed of the trailer through the access doors. Screw the lifting eyelets all the way in and back out one full turn. Reinsert the safety retainer pins to prevent the lifting eyelets from backing out in flight.

**(e)** Make sure all tool compartment doors are secured shut.

**(2) Rigging.** Rig the load according to the steps in Figure 3-8.

**(3) Hookup.** The hookup team stands on the bed of the trailer. 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 carefully dismounts the vehicle and 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).

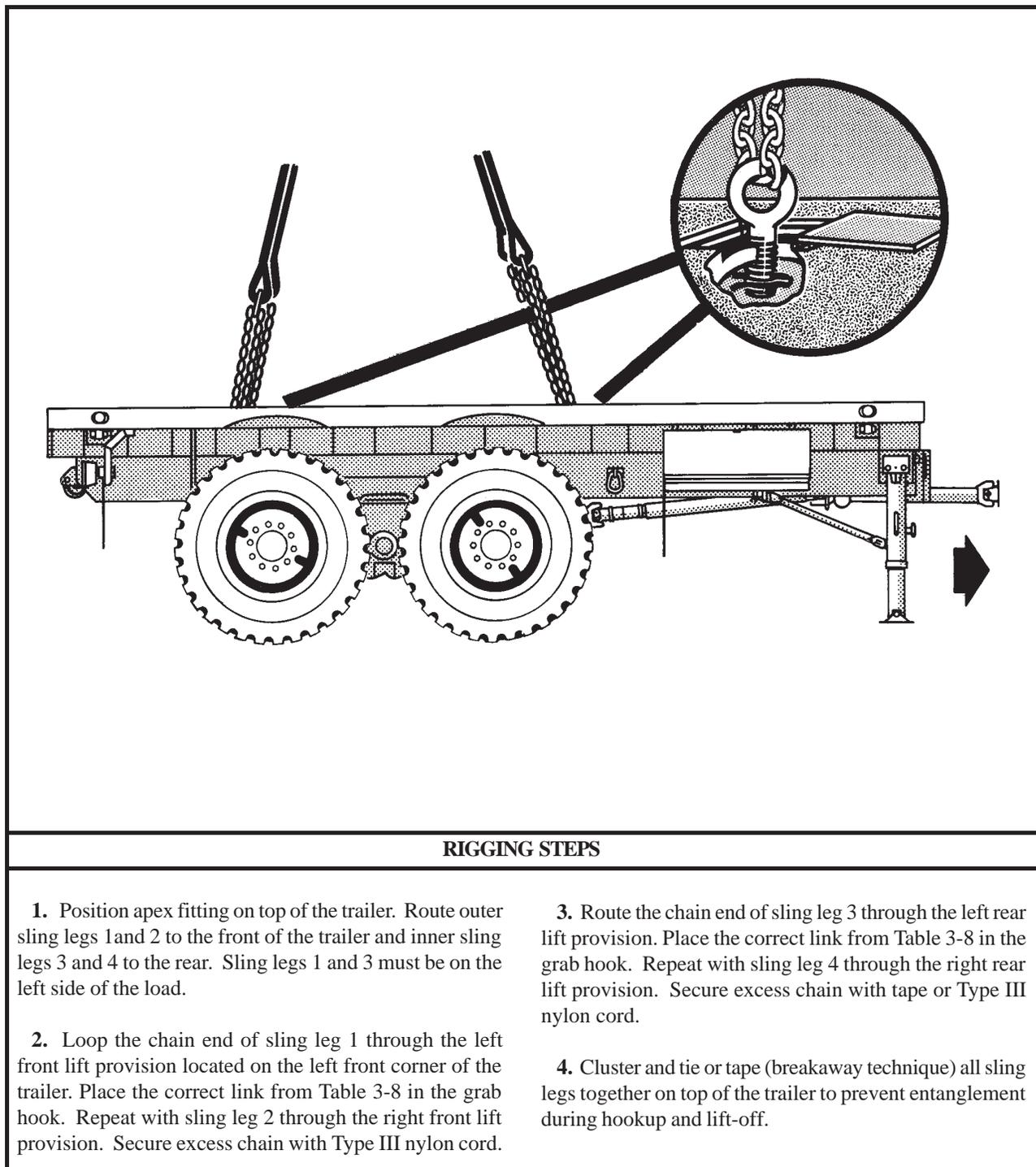


Figure 3-7. Mk14, Trailer, Container Hauler

### 3-10. Mk15, Trailer, Wrecker /Recovery

**a. Applicability.** The following item in Table 3-9 is certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

**Table 3-9. Mk15, Trailer, Wrecker /Recovery**

| NOMENCLATURE                     | MAX WEIGHT (POUNDS) | SLING SET | LINK COUNT FRONT/REAR | RECOMMENDED AIRSPEED (KNOTS) |
|----------------------------------|---------------------|-----------|-----------------------|------------------------------|
| Mk15, Trailer, Wrecker /Recovery | 26,000              | 40K       | 3/10                  | 90                           |

**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.
- (5) 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:

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

- (a) Disengage the Mk15 from the Mk48 prime mover according to the operator's manual.
- (b) Remove the A-frame from the rear of the trailer.
- (c) Secure all hoses with tape or nylon cord.

**(d)** Tape all lights, reflectors, and glass fixtures.

**(e)** Remove the safety retainer pins from the lifting eyelets located under the doors in the bed of the trailer. Unscrew the lifting eyelets from their stored position and reinsert the lifting eyelets so that the eyelet portion is accessible from the bed of the trailer through the access doors. Screw the lifting eyelets all the way in and back out one full turn. Reinsert the safety retainer pins to prevent the lifting eyelets from backing out in flight.

**(f)** Make sure all tool compartment doors are secured shut.

**(2) Rigging.** Rig the load according to the steps in Figure 3-9.

**(3) Hookup.** The hookup team stands on the bed of the trailer. 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 carefully dismounts the vehicle and 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).

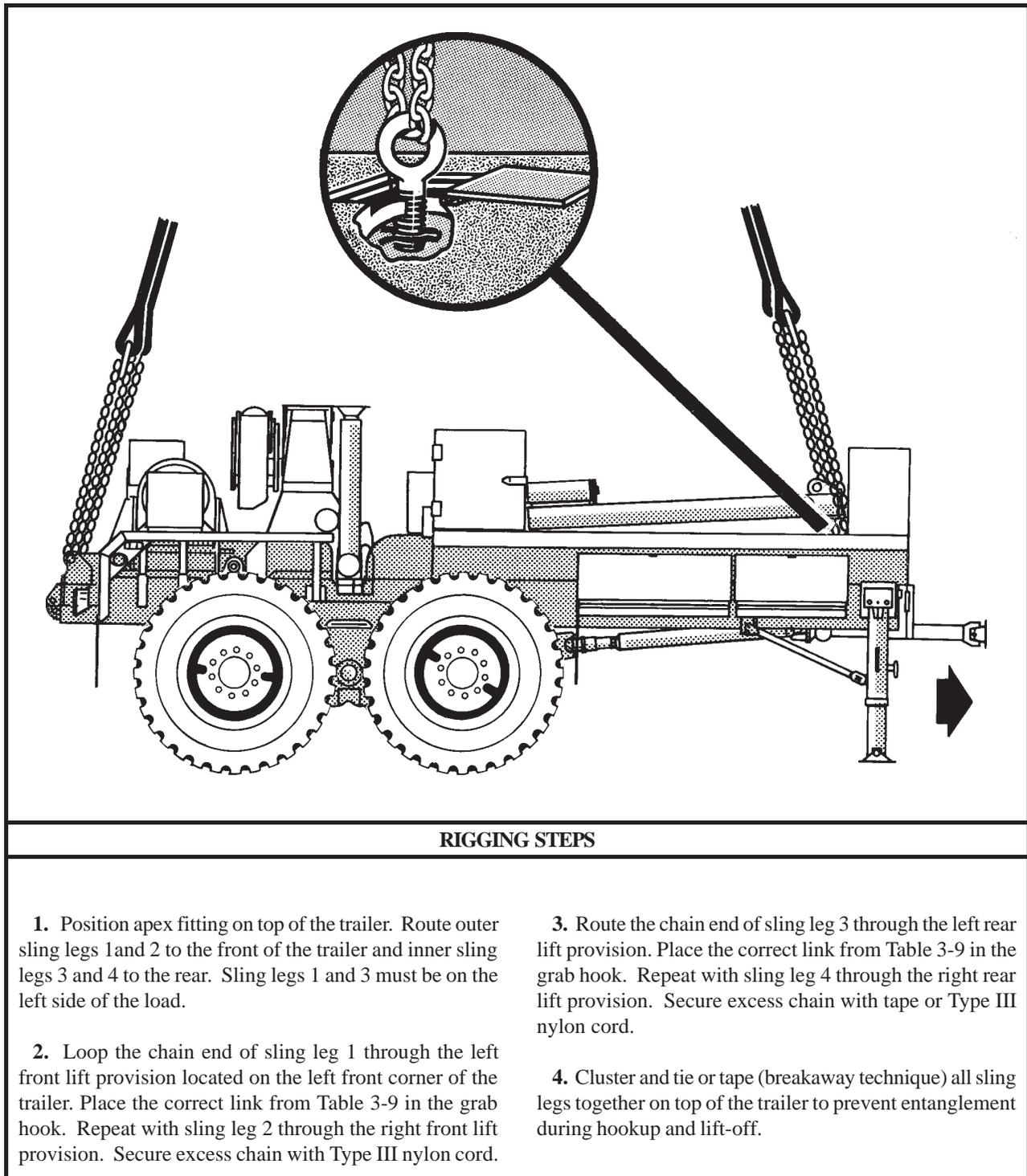


Figure 3-9. Mk15, Trailer, Wrecker/Recovery

### 3-11. Mk16, Trailer, Fifth-Wheel Adapter

**a. Applicability.** The following item in Table 3-10 is certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

**Table 3-10. Mk16, Trailer, Fifth-Wheel Adapter**

| NOMENCLATURE                       | MAX WEIGHT (POUNDS) | SLING SET | LINK COUNT FRONT/REAR | RECOMMENDED AIRSPEED (KNOTS) |
|------------------------------------|---------------------|-----------|-----------------------|------------------------------|
| Mk16, Trailer, Fifth-Wheel Adapter | 16,000              | 40K       | 3/3                   | 90                           |

**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 30 minutes.

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

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

- (a) Disengage the Mk16 from the Mk48 prime mover according to the operator's manual.

- (b) Secure all hoses with tape or nylon cord.

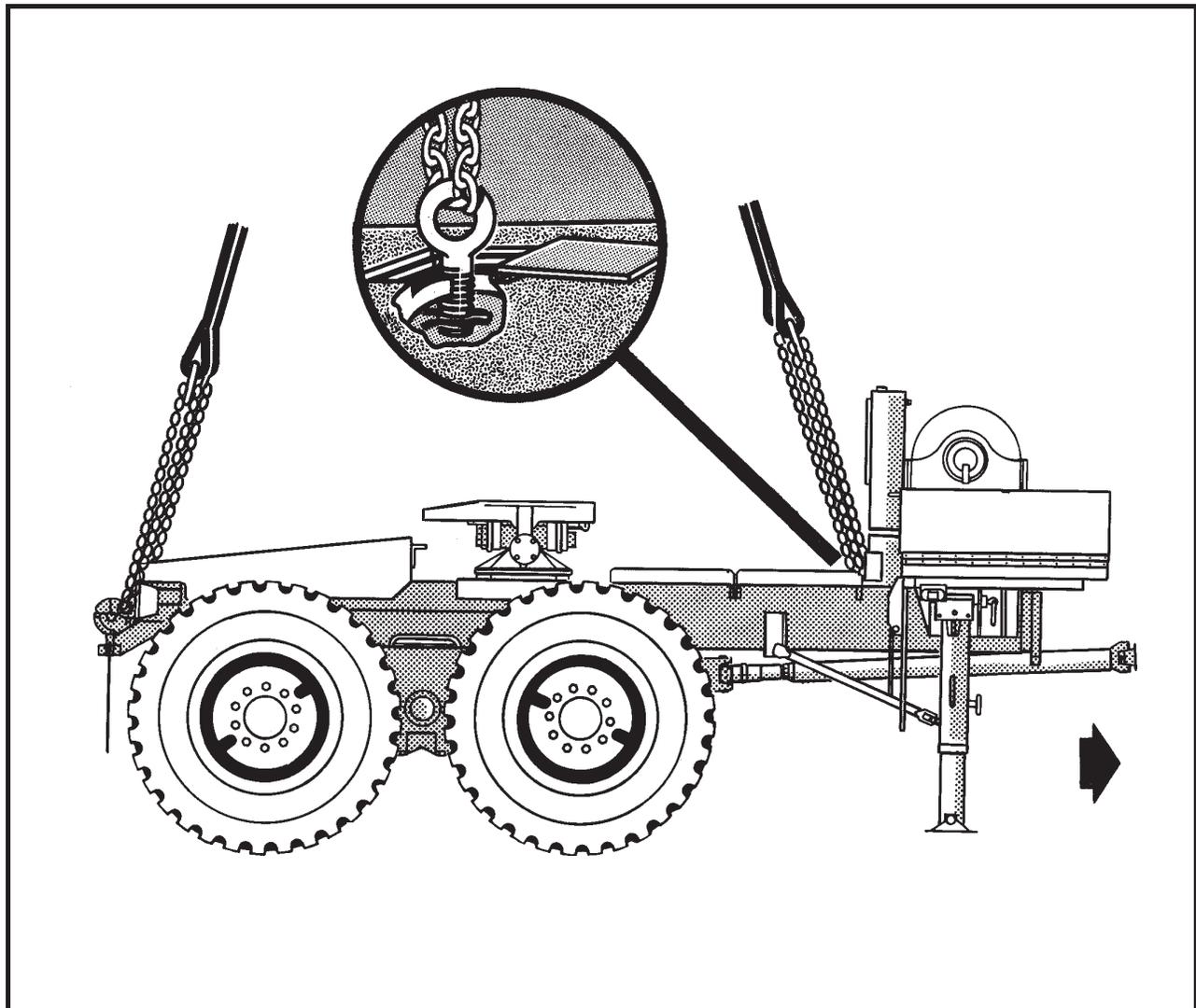
- (c) Tape all lights, reflectors, and glass fixtures.

- (d) Make sure all tool compartment doors are secured shut.

(2) **Rigging.** Rig the load according to the steps in Figure 3-10.

(3) **Hookup.** The hookup team stands on top of the fifth-wheel adapter. 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 carefully dismounts the vehicle and 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 fifth-wheel. Route outer sling legs 1 and 2 to the front of the trailer 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 located on the main frame below the winch and behind the left front stowage compartment. Place the correct link from Table 3-10 in the grab hook. Repeat with sling leg 2 through the right front lift provision.

3. Route the chain end of sling leg 3 through the left rear lift provision located on the left side of the towing pintle. Place the correct link from Table 3-10 in the grab hook. Repeat with sling leg 4 through the right rear lift provision.

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

Figure 3-10. Mk16, Trailer, Fifth-Wheel Adapter

### 3-12. Mk17, Trailer, Drop-side, Cargo

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

**Table 3-11. Mk17, Trailer, Drop-side, Cargo**

| NOMENCLATURE                    | MAX WEIGHT (POUNDS) | SLING SET | LINK COUNT FRONT/REAR | RECOMMENDED AIRSPEED (KNOTS) |
|---------------------------------|---------------------|-----------|-----------------------|------------------------------|
| Mk17, Trailer, Drop-side, Cargo | 23,000              | 40K       | 3/13                  | 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 20 minutes.

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

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

(a) Disengage the Mk17 from the Mk48 prime mover according to the operator's manual.

(b) Secure all hoses with tape or nylon cord.

(c) Tape all lights, reflectors, and glass fixtures.

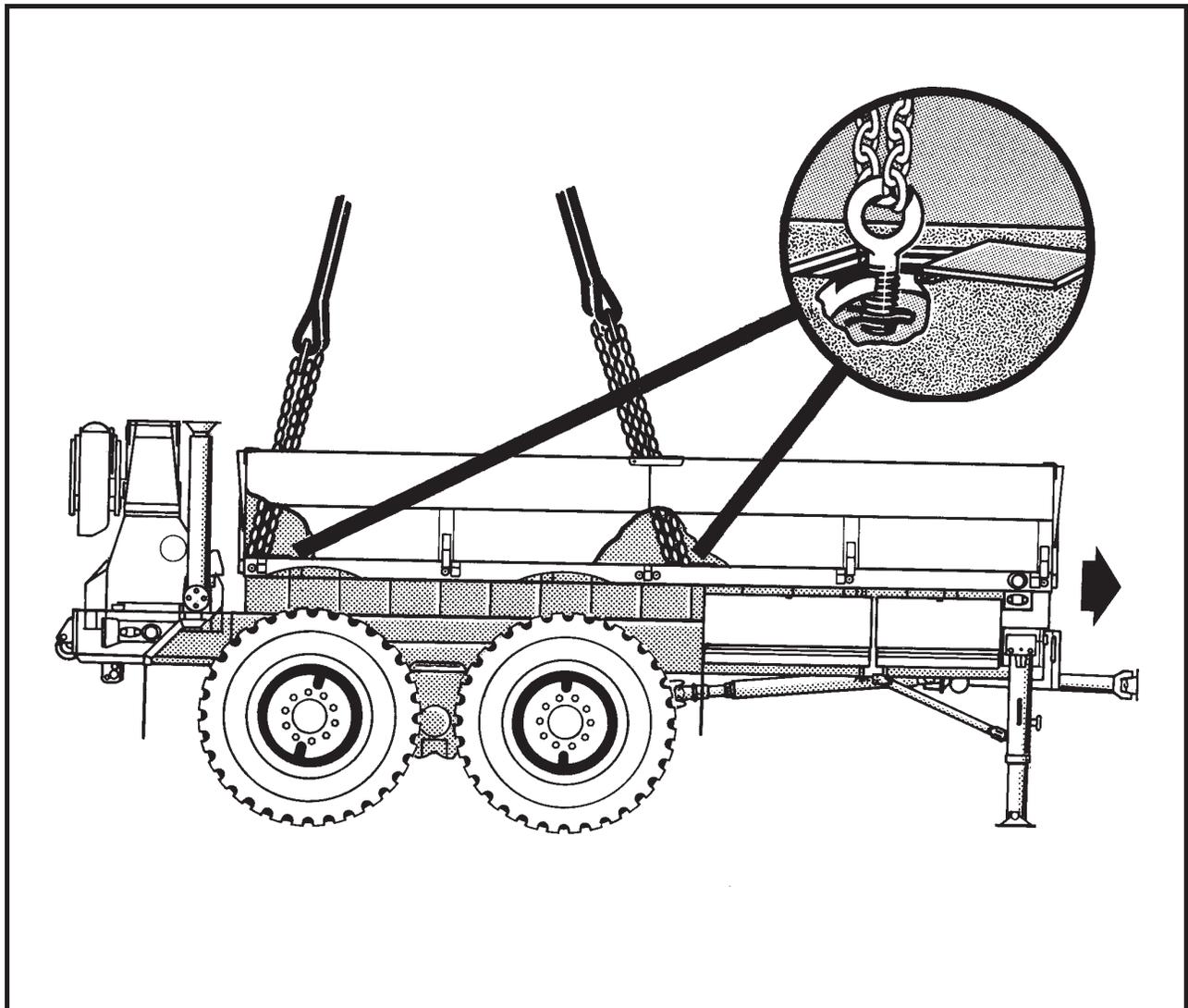
(d) Remove the safety retainer pins from the lifting eyelets located under the doors in the bed of the trailer. Unscrew the lifting eyelets from their stored position and reinsert the lifting eyelets so that the eyelet portion is accessible from the bed of the trailer through the access doors. Screw the lifting eyelets all the way in and back out one full turn. Reinsert the safety retainer pins to prevent the lifting eyelets from backing out in flight.

(e) Make sure all tool compartment doors are secured shut.

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

(3) **Hookup.** The hookup team stands on top of the trailer. 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 carefully dismounts the vehicle and 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 trailer. Route outer sling legs 1 and 2 to the front of the trailer 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 located in the middle of the left side of the trailer bed. Place the correct link from Table 3-11 in the grab hook. Repeat with sling leg 2 through the right front lift provision.

3. Route the chain end of sling leg 3 through the left rear lift provision located in the left rear corner of the trailer bed by the towing pintle hook. Place the correct link from Table 3-11 in the grab hook. Repeat with sling leg 4 through the right rear lift provision.

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

Figure 3-11. Mk17, Trailer, Drop-side, Cargo

### 3-13. M116A2 Trailer with Antenna Groups, AS-3954/TRC (2 each) (USMC)

**a. Applicability.** The following item in Table 3-12 is certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

**Table 3-12. M116A2 Trailer with Antenna Groups, AS-3954/TRC (2 each)**

| NOMENCLATURE   | MAX WEIGHT (POUNDS) | SLING SET | LINK COUNT FRONT/REAR | RECOMMENDED AIRSPEED (KNOTS) |
|--|---------------------|-----------|-----------------------|------------------------------|
| M116A2 Trailer with Antenna Groups, AS-3954/TRC (2 each) | 3,230               | 15K       | 3/3                   | 65                           |

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

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

**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 loose items inside the trailer with tape or Type III nylon cord.

(b) Secure all covers in their proper place. Do not remove the tarps. The tarps protect the antennae.

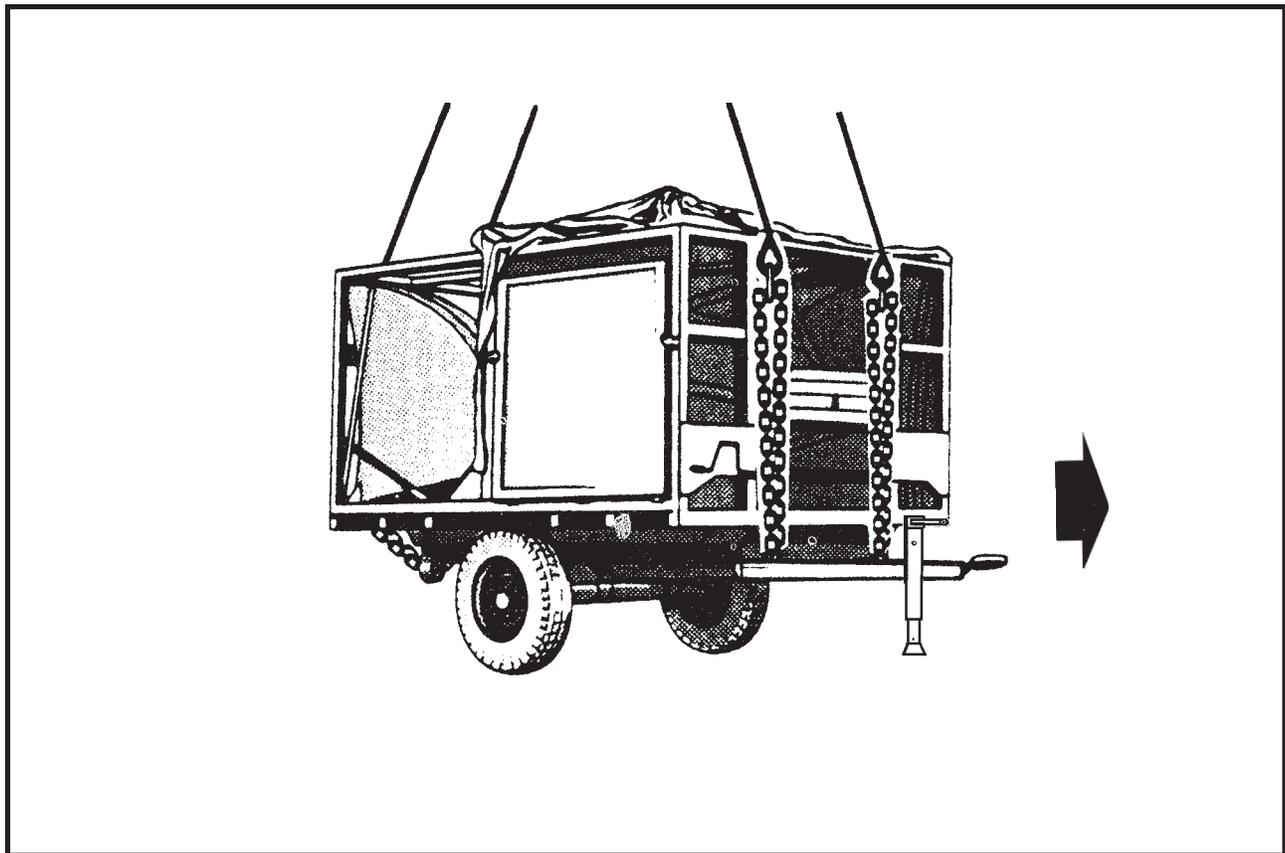
(c) Secure all chains, hoses, and cables with Type III nylon cord.

(d) Engage both trailer parking brakes and ensure the front support leg is down.

(2) **Rigging.** Rig the load according to the steps in Figure 3-12.

(3) **Hookup.** The hookup team stands on top of the trailer. 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 carefully dismounts the vehicle and 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 trailer. Route outer sling legs 1 and 2 to the front of the trailer (lunette end) 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 located on the aluminum frame attached to the trailer. Do not use the trailer lifting provisions attached to the chassis. Place the correct link from Table 3-12 in the grab hook. Repeat with sling leg 2 through the right front lift provision.

**3.** Route the chain end of sling leg 3 through the left rear lift provision located on the aluminum frame attached to the trailer. Do not use the trailer lifting provisions attached to the chassis. Place the correct link from Table 3-12 in the grab hook. Repeat with sling leg 4 through the right rear lift provision.

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

*Figure 3-12. M116A2 Trailer with Antenna Groups, AS-3954/TRC (2 each)*

### 3-14. M116A2 Trailer with AN/TPQ-36 Firefinder Antenna Transceiver Group (ATG)

**a. Applicability.** The following item in Table 3-13 is certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

**Table 3-13. M116A2 Trailer with AN/TPQ-36 Firefinder Antenna Transceiver Group (ATG)**

| NOMENCLATURE                                   | MAX WEIGHT (POUNDS) | SLING SET | LINK COUNT FRONT/REAR | RECOMMENDED AIRSPEED (KNOTS) |
|--|---------------------|-----------|-----------------------|------------------------------|
| AN/TPQ-36 Firefinder Antenna Transceiver Group | 3,320               | 10K       | 3/25                  | 105                          |

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

- (1) Sling set (10,000-pound capacity).
- (2) Chain length, part number 38850-00053-101, from a 10,000-pound capacity sling set (4 each).
- (3) Coupling link, part number 577-0615, from a 10,000-pound sling set (4 each).
- (4) Tape, adhesive, pressure-sensitive, 2-inch wide roll.
- (5) Cord, nylon, Type III, 550-pound breaking strength.
- (6) Webbing, cotton, 1/4-inch, 80-pound breaking strength.
- (7) Felt sheet, cattle hair, Type IV, 1/2-inch or suitable padding.
- (8) Padding, Cellulose.

**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) Connect one additional chain length to each chain of the sling set with the coupling link.
- (b) Engage the trailer parking brake.

(c) Secure the doors closed with Type III nylon cord.

(d) Place the radar set in the travel mode and secure the antenna cover to the antenna with tape.

(2) **Rigging.** Rig the load according to the steps in Figure 3-13.

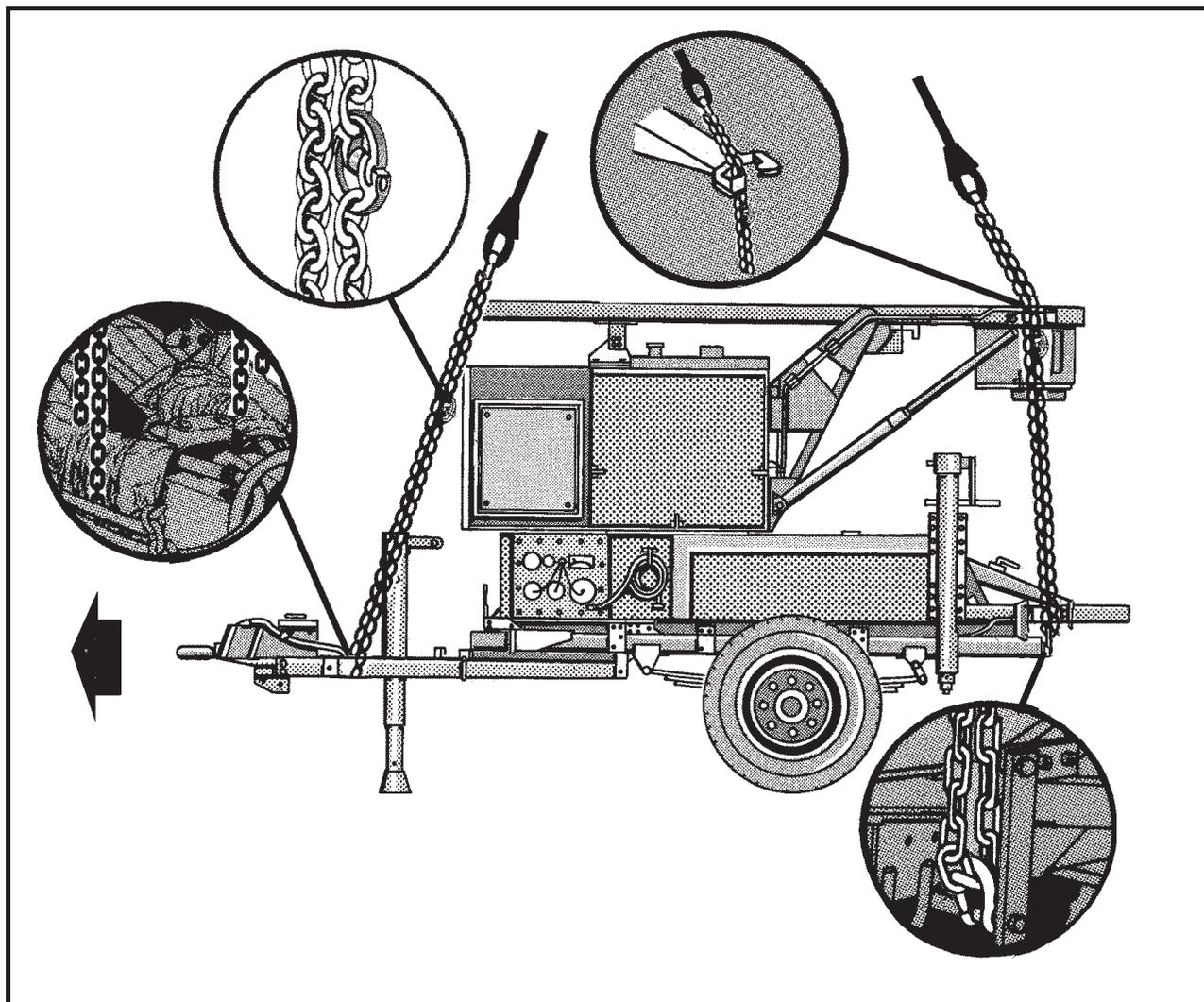
(3) **Hookup.** The hookup team stands on top of the ATG trailer frame. The static wand person discharges the static electricity with the static wand. The hookup person places the apex fitting onto the aircraft cargo hook. The hookup team then carefully dismounts the ATG and remains close to the load 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.

**NOTES:**

1. Do not stand on the radar panel during hookup.
2. Due to limited clearance between the helicopter and the top of the ATG, the hookup team may want to use an extended sling system on this load and hook this load from the ground or the bed of a truck. Polyester round slings are recommended for use as vertical pendants. The extended sling legs may not be ideal for flying this load "nap of the earth" in a tactical environment.
3. Hookup of this load presents substantial risk of damage to the load or injury to the hookup personnel. Use of a reach pendant is recommended for this load.

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

**NOTE:** When releasing the apex fitting after setting the load down, the helicopter pilot should hover to the side to prevent damaging the radar panel.



#### RIGGING STEPS

1. Position apex fitting on top of the trailer (but not on top of the radar panel). Route outer sling legs 1 and 2 to the front of the trailer (lunette end) 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 under the trailer A-frame just aft of the lunette and through the keeper from left to right on the left side of the drawbar. Place the correct link from Table 3-13 in the grab hook. Repeat with sling leg 2 on the right side of the drawbar.

3. Route the chain end of sling leg 3 through the left rear lift provision located on the rear of the trailer. Place the correct link from Table 3-13 in the grab hook. Repeat with sling leg 4 through the right rear lift provision. Secure the excess chain with Type III nylon cord.

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

Figure 3-13. M116A2 Trailer with AN/TPQ-36 Firefinder Antenna Transceiver Group (ATG)

### 3-15. M116A2 Trailer with M894 18,000-BTU Air Conditioner and MEP-003A Generator

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

**Table 3-14. M116A2 Trailer with M894 18,000-BTU Air Conditioner and MEP-003A Generator**

| NOMENCLATURE   | MAX WEIGHT (POUNDS) | SLING SET | LINK COUNT FRONT/REAR | RECOMMENDED AIRSPEED (KNOTS) |
|--|---------------------|-----------|-----------------------|------------------------------|
| M116A2 Trailer with M894 18,000-BTU Air Conditioner and MEP-003A Generator | 2,620               | 10K       | 3/3                   | 80                           |

**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) Felt sheet, cattle hair, Type IV, 1/2-inch or suitable substitute.

**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 all lids, doors, and caps with tape or Type III nylon cord.

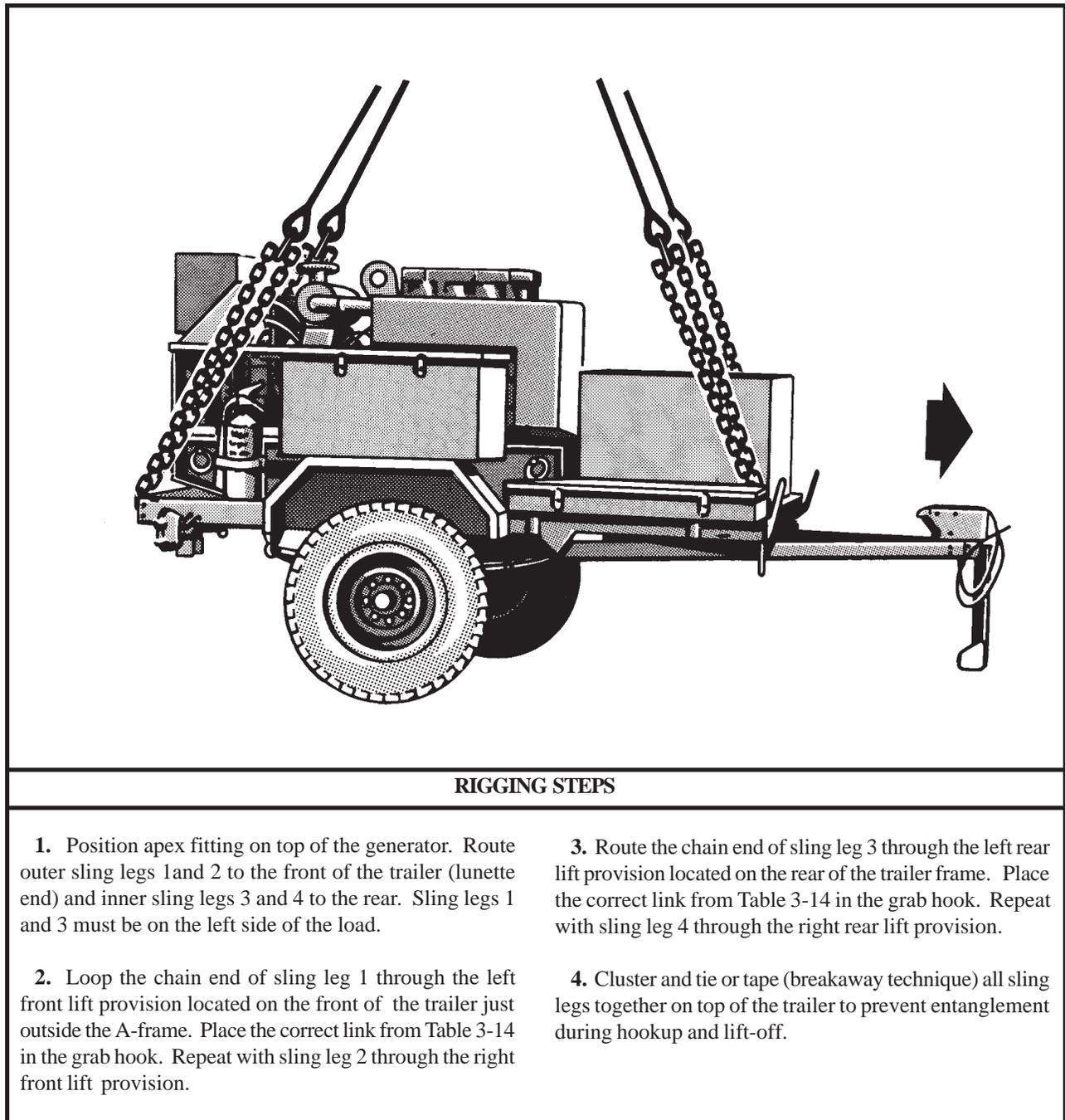
(b) Secure all chains, hoses, and cables with Type III nylon cord.

(c) Engage both trailer parking brakes and ensure the front support leg is down.

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

(3) **Hookup.** The hookup team stands on top of the trailer. 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 carefully dismounts the vehicle and 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 3-14. M116A2 Trailer with M894 18,000-BTU Air Conditioner and MEP-003A Generator*

### 3-16. MKT-90 Field Kitchen Trailer

**a. Applicability.** The following item in Table 3-15 is certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

Table 3-15. MKT-90 Field Kitchen Trailer

| NOMENCLATURE                 | MAX WEIGHT (POUNDS) | SLING SET | LINK COUNT FRONT/REAR | RECOMMENDED AIRSPEED (KNOTS) |
|------------------------------|---------------------|-----------|-----------------------|------------------------------|
| MKT-90 Field Kitchen Trailer | 5,730               | 10K       | 3/11                  | 70                           |

**NOTE: Only MKT-90 versions equipped with internal spreader bars (PIP No. 1-85-08-2802) may be sling loaded. The data plate next to the item data plate must contain an etched helicopter.**

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

- (1) Sling set (10,000-pound capacity).

(a) Chain length, part number 38850-00053-101, from a 10,000-pound capacity sling set (4 each).

(b) Coupling link, part number 577-0615, from a 10,000-pound sling set (4 each).

(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.

**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) Secure all items in their proper storage location before closing the unit.

(b) Configure the MKT for ground transportation according to the operator's instructions.

(c) Retract and stow all landing legs. Secure each landing leg with Type III nylon cord.

(d) Lower the lunette as far as possible by adjusting the landing wheel hand screw. Do not retract the landing wheel.

(e) Secure all chains, hoses, and cables with Type III nylon cord to the trailer drawbar.

(f) Engage both trailer parking brakes and ensure the front support leg is down.

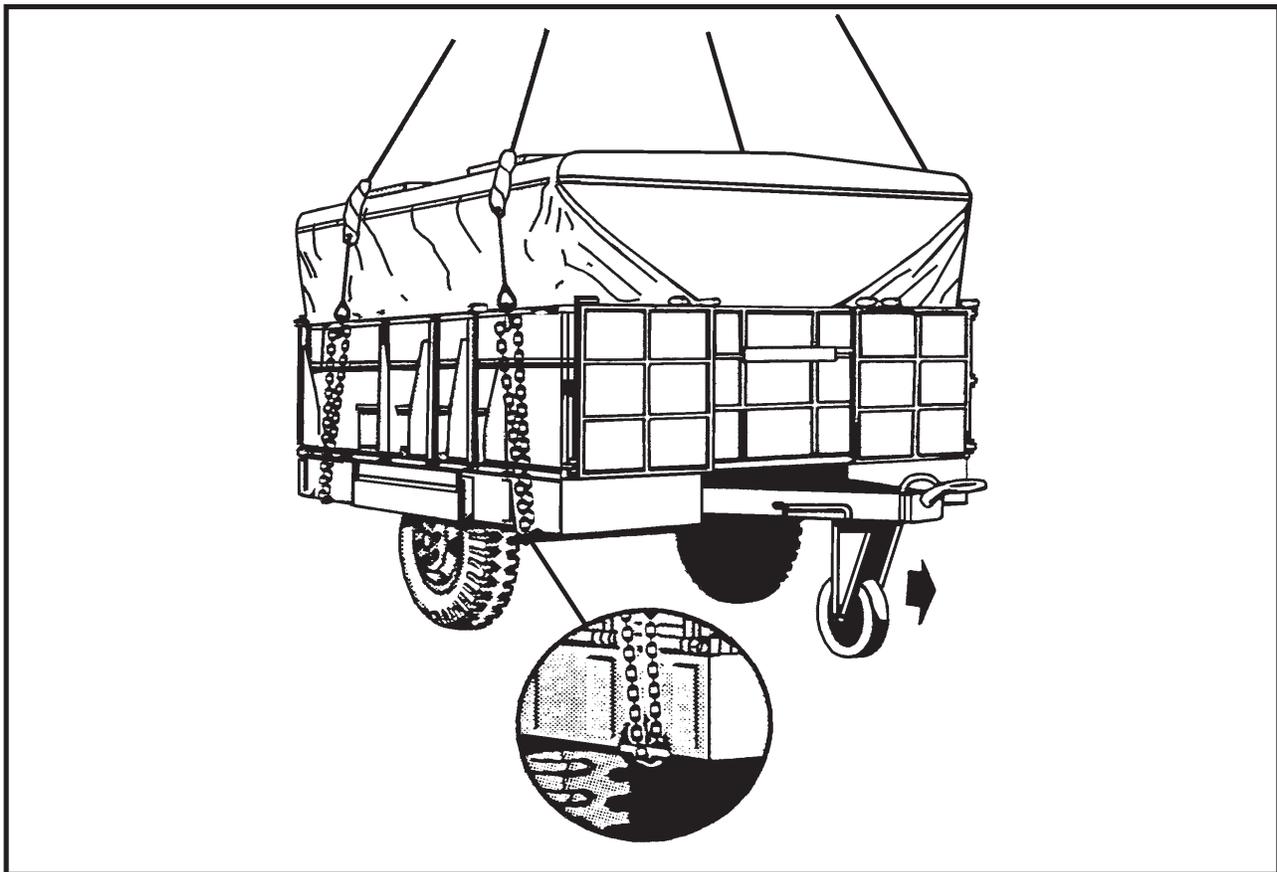
(g) Secure all loose canvas with tape.

(h) Extend the sling leg chains by connecting one additional chain length to each chain on a 10,000-pound capacity sling set with coupling links.

(2) **Rigging.** Rig the load according to the steps in Figure 3-15.

(3) **Hookup.** The hookup team stands on top of the trailer forward of the trailer axle. 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 carefully dismounts the vehicle and 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

##### CAUTION

While on the roof of the trailer, stay in front of the trailer axle. Moving behind the axle may cause the trailer to tip rearwards, causing possible injury to personnel and damage to the load.

1. Position apex fitting on top of the trailer roof. Route outer sling legs 1 and 2 to the front of the trailer (lunette end) 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 located in the trailer frame. Place the correct link from Table 3-15 in the grab hook. Repeat with sling leg 2 through the right front lift provision. The lift provisions are in the form of cutouts in the frame.

3. Route the chain end of sling leg 3 through the left rear lift provision located on the rear of the trailer frame. Place the correct link from Table 3-15 in the grab hook. Repeat with sling leg 4 through the right rear lift provision. Secure the excess chain with Type III nylon cord.

4. Pull sling legs 1 and 2 up on the roof. Tie (breakaway technique) the grabhooks together to keep them from sliding off the roof. Repeat with sling legs 3 and 4.

5. Pad each sling leg where it contacts the edge of the roof. Secure the padding with tape or Type III nylon cord.

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

Figure 3-15. MKT-90 Field Kitchen Trailer

### 3-17. Hydraulic System Test and Repair Unit (HSTRU)

**a. Applicability.** The following item in Table 3-16 is certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

**Table 3-16. Hydraulic System Test and Repair Unit (HSTRU)**

| NOMENCLATURE                                  | MAX WEIGHT (POUNDS) | SLING SET | LINK COUNT FRONT/REAR | RECOMMENDED AIRSPEED (KNOTS) |
|---|---------------------|-----------|-----------------------|------------------------------|
| Hydraulic System Test and Repair Unit (HSTRU) | 2,878               | 10K       | 16/3                  | 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.

**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) Safety tie the covers in the down position with

Type III nylon cord.

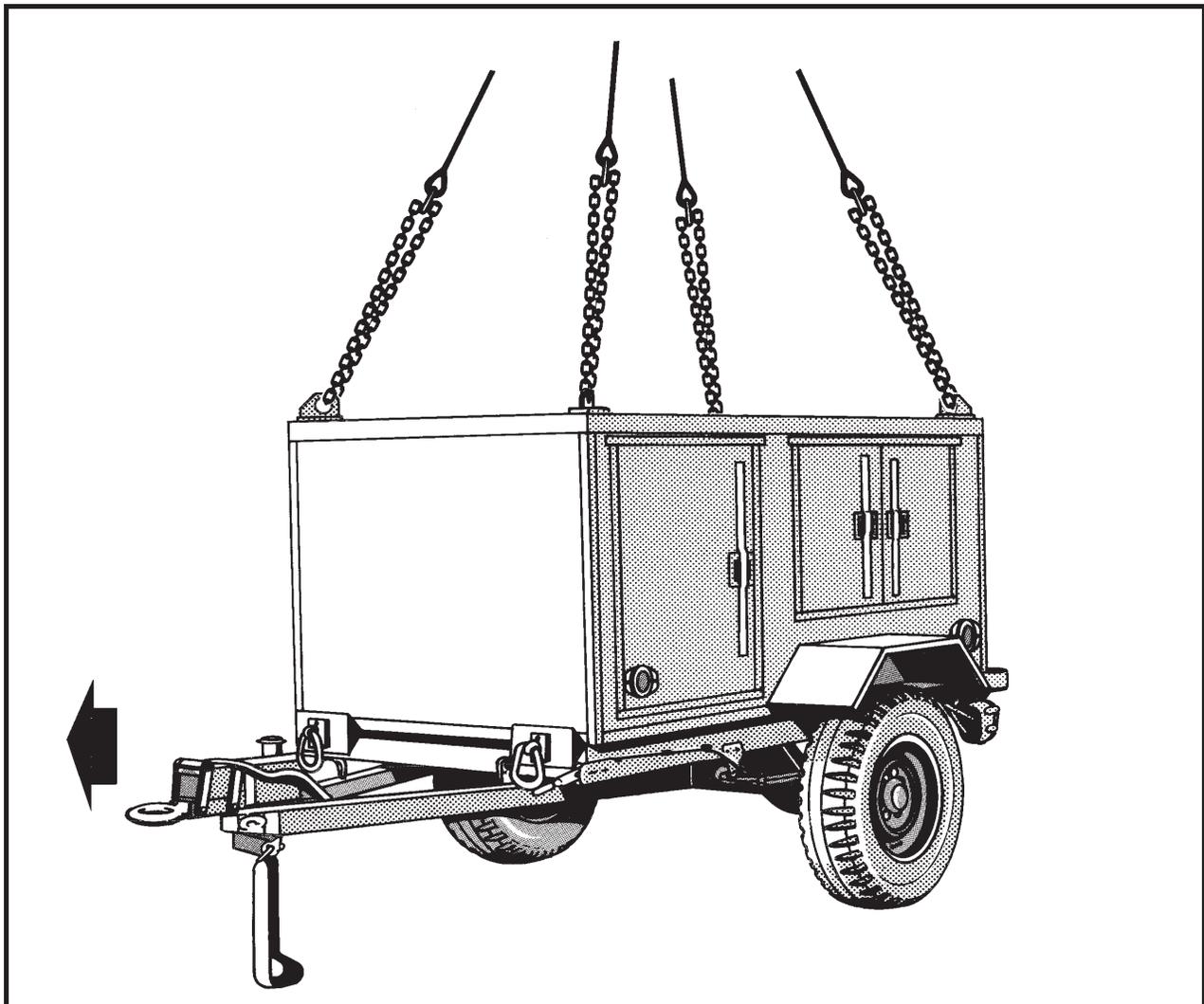
(b) Secure all chains, hoses, and cables with Type III nylon cord to the trailer drawbar.

(c) Engage both trailer parking brakes and ensure the front support leg is down.

(2) **Rigging.** Rig the load according to the steps in Figure 3-16.

(3) **Hookup.** The hookup team stands on top of the HSTRU. 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 carefully dismounts the vehicle and 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 trailer roof. Route outer sling legs 1 and 2 to the front of the trailer (lunette end) 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 located on the front of the HSTRU roof. Place the correct link from Table 3-16 in the grab hook. Repeat with sling leg 2 through the right front lift

provision. Secure the excess chain with Type III nylon cord.

3. Route the chain end of sling leg 3 through the left rear lift provision located on the rear of the HSTRU roof. Place the correct link from Table 3-16 in the grab hook. Repeat with sling leg 4 through the right rear lift provision.

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

Figure 3-16. Hydraulic System Test and Repair Unit (HSTRU)

### 3-18. M116A2 Trailer, Single Channel Objective Tactical Terminal (SCOTT)

**a. Applicability.** The following item in Table 3-17 is certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

**Table 3-17. M116A2 Trailer, Single Channel Objective Tactical Terminal (SCOTT)**

| NOMENCLATURE   | MAX WEIGHT (POUNDS) | SLING SET | LINK COUNT FRONT/REAR | RECOMMENDED AIRSPEED (KNOTS) |
|--|---------------------|-----------|-----------------------|------------------------------|
| M116A2 Trailer, Single Channel Objective Tactical Terminal (SCOTT) | 2,830               | 10K       | 18/3                  | 85                           |

**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) Felt sheet, cattle hair, Type IV, 1/2-inch or suitable substitute.
- (6) Tie-down, cargo, CGU-1/B.

**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 all cargo in the bed of the trailer with tie-down straps.

- (b) Remove and secure nylon tarps to upper trailer structure with tape or Type III nylon cord.

- (c) Secure all chains, hoses, and cables to the draw-bar with Type III nylon cord.

- (d) Engage both hand brakes.

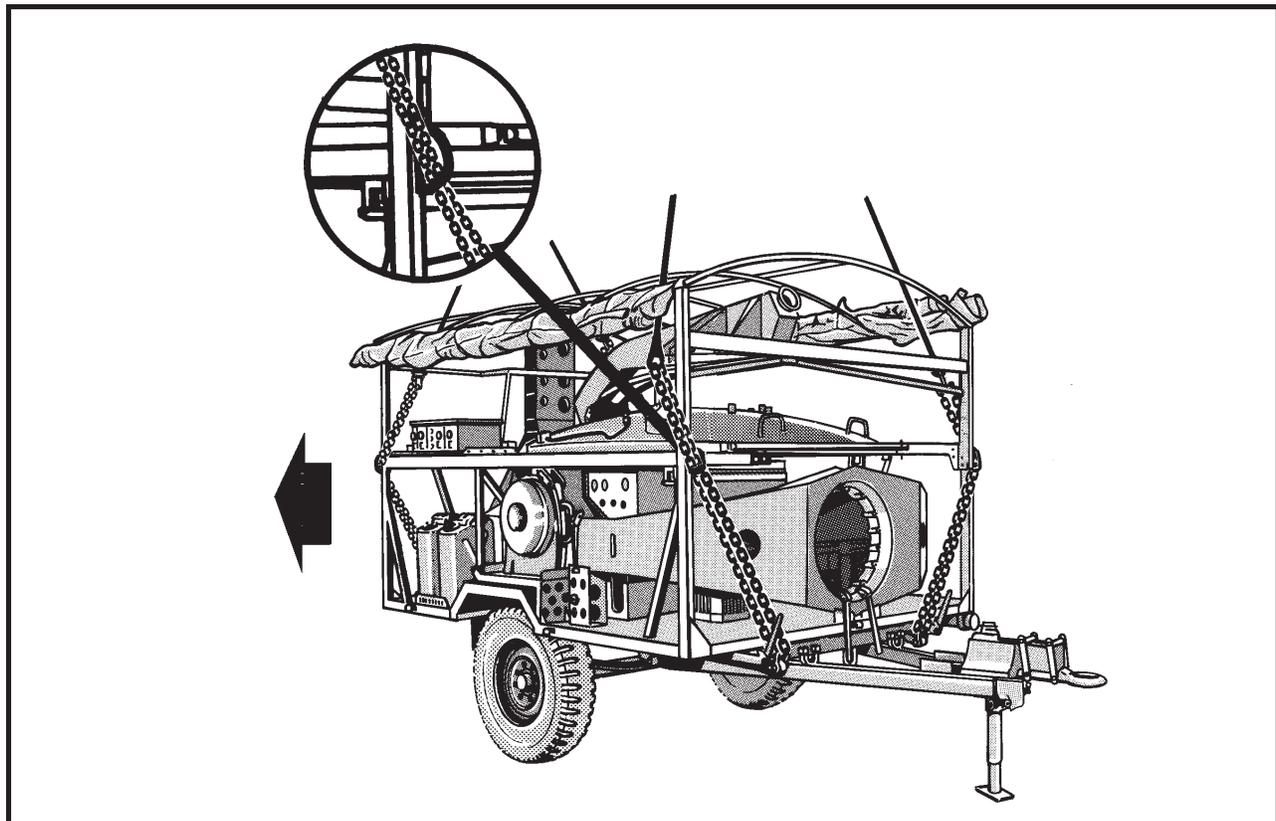
**(2) Rigging.** Rig the load according to the steps in Figure 3-17.

#### CAUTION

**Brief the pilots to hover to the side of the trailer prior to jettisoning the apex fitting during landing operations.**

**(3) Hookup.** The hookup team stands on the trailer chassis. 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 carefully dismounts the vehicle and 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

**NOTE: This trailer will fly with the front end (trailer lunette) aft.**

1. Position apex fitting on top of the trailer. Route outer sling legs 1 and 2 to the front of the trailer (lunette end) 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. Route sling leg 1 through the trailer canopy structure to the side of the trailer and through the front left sling guide on the horizontal reflector support tube. Repeat with sling leg 2 and the right front sling guide provision.

3. Loop the chain end of sling leg 1 through the left front lift provision located on the front of the trailer. Place the correct link from Table 3-17 in the grab hook. Repeat with sling leg 2 through the right front lift provision. Secure the excess chain with Type III nylon cord.

4. Route sling leg 3 through the trailer canopy structure to the side of the trailer and through the rear left sling guide on the horizontal reflector support tube. Repeat with sling leg 4 and the right rear sling guide provision.

5. Route the chain end of sling leg 3 through the left rear lift provision located on the rear of the trailer. Place the correct link from Table 3-17 in the grab hook. Repeat with sling leg 4 through the right rear lift provision.

6. Pad the chain and/or trailer support where there is chain contact.

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

Figure 3-17. M116A2 Trailer, Single Channel Objective Tactical Terminal (SCOTT)

### 3-19. High Mobility Trailers (HMT), M1101/M1102

**a. Applicability.** The following items in Table 3-18 are certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

**Table 3-18. High Mobility Trailers**

| NOMENCLATURE                         | MAX WEIGHT (POUNDS) | SLING SET | LINK COUNT FRONT/REAR | RECOMMENDED AIRSPEED (KNOTS) |
|--------------------------------------|---------------------|-----------|-----------------------|------------------------------|
| High Mobility Trailer (Light), M1101 | 3,400               | 10K       | 20/3                  | 120                          |
| High Mobility Trailer (Light), M1102 | 4,200               | 10K       | 20/3                  | 120                          |

**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) Felt sheet, cattle hair, Type IV, 1/2-inch or suitable substitute.
- (6) Tie-down, cargo, CGU-1/B or suitable tie-down lashings.

**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) Remove the two rear stabilizer legs from their storage location on the front of the trailer. Place the lower support section in the fully retracted position. Install the stabilizer legs on the rear of the trailer.

(b) Install the front jack and lower the lunette as

close to the ground as possible.

(c) Remove the canvas cover and racks from the trailer. Place these items in the bed of the trailer. Place the accompanying load on top of the canvas cover and secure with the tie-down lashings.

(d) Secure the light cable to the top of the drawbar with Type III nylon cord.

(e) Engage the parking brake.

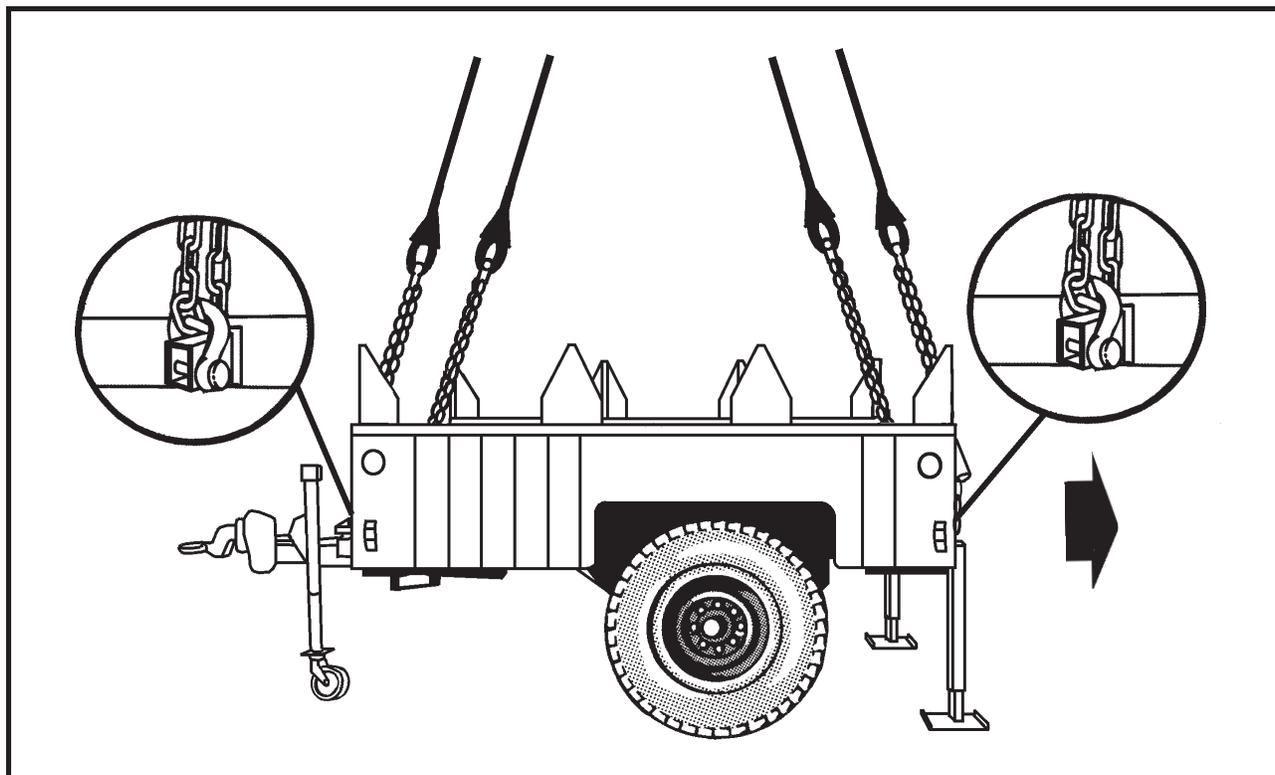
(2) **Rigging.** Rig the load according to the steps in Figure 3-18.

(3) **Hookup.** The hookup team stands on the drawbar or in the bed of the trailer (if possible). 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 carefully dismounts the trailer and 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.

**CAUTION**

**The hookup team should dismount the trailer towards the lunette to keep the trailer from tipping towards the rear.**

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



#### RIGGING STEPS

**NOTE: This trailer will fly with the front end (trailer lunette) aft.**

1. Position apex fitting on top of the trailer. Route outer sling legs 1 and 2 to the front of the trailer (lunette end) 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 located on the front of the trailer. Place the correct link from Table 3-18 in the grab hook. Repeat with sling leg 2 through the right side front lift provision. Secure the excess chain with Type III nylon cord.

3. Route the chain end of sling leg 3 through the left rear lift provision located on the rear of the trailer. Place the correct link from Table 3-18 in the grab hook. Repeat with sling leg 4 through the right rear lift provision.

4. Pad the chain at and below where the chain contacts the trailer walls.

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

*Figure 3-18. High Mobility Trailers*

### 3-20. M116A3 Trailer with OE334 Antenna Coupler Group

**a. Applicability.** The following items in Table 3-19 are certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

**Table 3-19. M116A3 Trailer with OE334 Antenna Coupler Group**

| NOMENCLATURE  | MAX WEIGHT (POUNDS) | SLING SET | LINK COUNT FRONT/REAR | RECOMMENDED AIRSPEED (KNOTS) |
|---|---------------------|-----------|-----------------------|------------------------------|
| High Mobility Downsized (HMD), Direct Air Support Central (DASC), OE334 Antenna Coupler Group | 3,280               | 15K       | 3/15                  | 80                           |

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

- (1) Multileg 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.
- (5) Felt sheet, cattle hair, Type IV, 1/2-inch or suitable substitute.

**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) Lower and lock the rear landing leg in place.

(b) Lower the front jack on the lunette as close to the ground as possible.

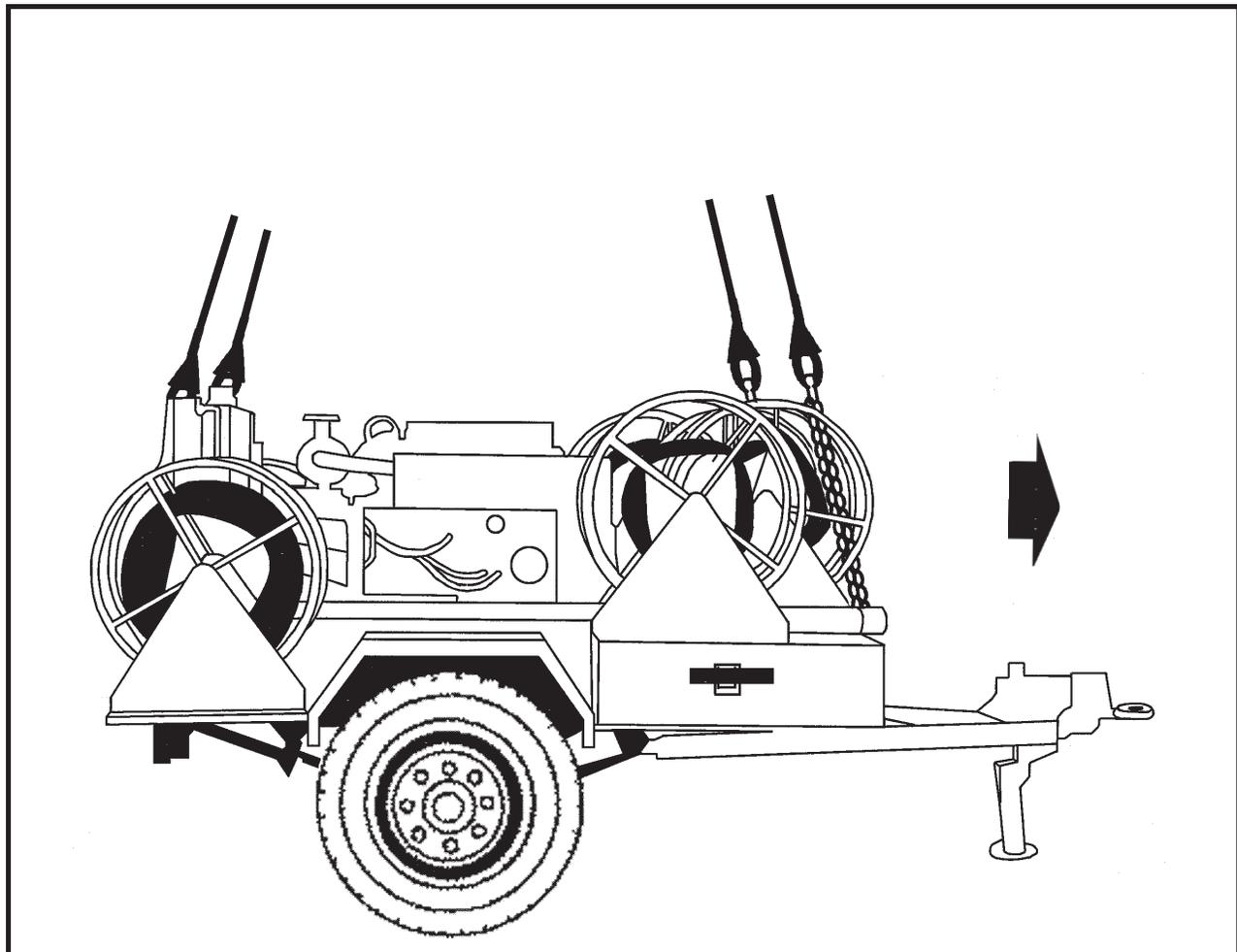
(c) Secure the light cable to the top of the drawbar with Type III nylon cord.

(d) Engage both parking brakes.

(2) **Rigging.** Rig the load according to the steps in Figure 3-19.

(3) **Hookup.** The hookup team stands next to the trailer. 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 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 trailer. Route outer sling legs 1 and 2 to the front of the trailer (lunette end) 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. Pass the chain end of sling leg 1 through the right inner cable reel assembly at the front of the trailer. Loop the chain end of sling leg 1 through the left front multipurpose provision located on the front of the trailer. Place the correct link from Table 3-19 in the grab hook. Repeat with sling leg 2 through the right multipurpose provision.

3. Route the chain end of sling leg 3 through the left rear multipurpose provision located on the rear of the trailer. Place the correct link from Table 3-19 in the grab hook. Repeat with sling leg 4 through the right rear multipurpose provision. Secure the excess chain with Type III nylon cord.

4. Pad the front chains where the chains contact the generator and reels.

5. Cluster and tie or tape (breakaway technique) all sling legs together to prevent entanglement during hookup and lift-off.

Figure 3-19. M116A3 Trailer with OE334 Antenna Coupler Group

### 3-21. Desert Operation Trailer (DOT) with Desert Operation Motorcycle (DOM)

**a. Applicability.** The following items in Table 3-20 are certified for all helicopters with suitable lift capacity by the US Army Natick Research, Development, and Engineering Center:

**Table 3-20. Desert Operation Trailer (DOT) with Desert Operation Motorcycle (DOM)**

| NOMENCLATURE  | MAX WEIGHT (POUNDS) | SLING SET | LINK COUNT FRONT/REAR | RECOMMENDED AIRSPEED (KNOTS) |
|---|---------------------|-----------|-----------------------|------------------------------|
| Desert Operation Trailer (DOT) with Desert Operation Motorcycle (DOM) | 3,300               | 10K       | 20/3                  | 80                           |

**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) Felt sheet, cattle hair, Type IV, 1/2-inch or suitable substitute.
- (6) Tie-down strap, cargo, CGU-1/B (4 each).
- (7) Canvas to cover the motorcycle.

**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 motorcycle to the trailer using standard mounting methods or using at least four (4) CGU-1/B tie-down straps.

(b) Secure the tailgate in the up position.

(c) Secure all chains and hoses with tape or Type III nylon cord.

(d) Engage the parking brake and place the front support leg in the down position.

(d) Safety the spare tire with Type III nylon cord.

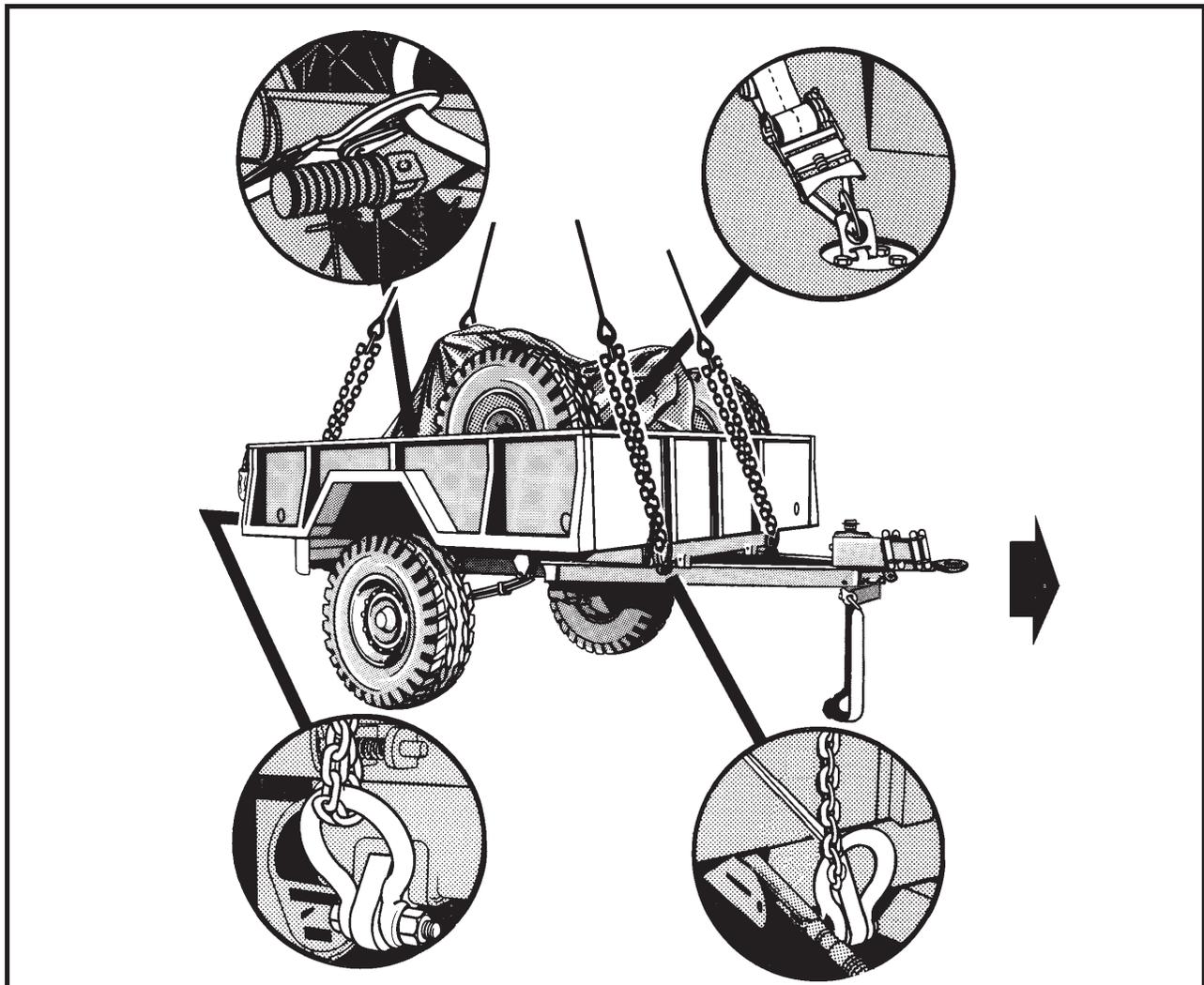
(e) Pad the motorcycle handlebars and luggage rack with felt padding.

(f) Cover the motorcycle with canvas and secure the canvas with Type III nylon cord.

**(2) Rigging.** Rig the load according to the steps in Figure 3-20.

**(3) Hookup.** The hookup team stands on the trailer fender or in the trailer bed. 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 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 motorcycle. Route outer sling legs 1 and 2 to the front of the trailer (lunette end) 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 located on the front of the trailer. Place the correct link from Table 3-20 in the grab hook. Repeat with sling leg 2 through the right front lift provision. Secure the excess chain with Type III nylon cord.
3. Route the chain end of sling leg 3 over the tailgate and through the left rear lift provision located on the rear of the trailer. Place the correct link from Table 3-20 in the grab hook. Repeat with sling leg 4 through the right rear lift provision.
4. Secure the excess chain taut to the sidewall with tape or Type III nylon cord.
5. Cluster and tie or tape (breakaway technique) all sling legs together on top of the motorcycle to prevent entanglement during hookup and lift-off.

Figure 3-20. Desert Operation Trailer (DOT) with Desert Operation Motorcycle (DOM)