

CHAPTER 5

CERTIFIED SINGLE-POINT RIGGING PROCEDURES FOR TRUCK AND TOWED COMBINATIONS

5-1. INTRODUCTION

This chapter contains rigging procedures for single-point truck and towed combination 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 procedures for truck and towed combination loads are in this section. Paragraphs 5-2 and 5-3 give detailed instructions for rigging loads.

5-2. M973/M973E1/M1065/M1066 Small Unit Support Vehicle (SUSV)

a. Applicability. The following items in Table 5-1 are certified for all helicopters with suitable lift capacity by the US Army Soldier Systems Center:

Table 5-1. Small Unit Support Vehicle (SUSV)

NOMENCLATURE	MAX WEIGHT (POUNDS)	SLING SET	LINK COUNT FRONT/REAR	RECOMMENDED AIRSPEED (KNOTS)
M973, Cargo, Tracked	Front-6,380 Rear-6,600 Total-12,980	25K	Listed in Rigging Instructions	80
M973E1, Cargo, Tracked	Front-6,380 Rear-6,600 Total-12,980	25K	Listed in Rigging Instructions	80
M1065, Command Post, Tracked	Front-6,380 Rear-6,600 Total-12,980	25K	Listed in Rigging Instructions	80
M1066, Ambulance, Tracked	Front-6,380 Rear-6,600 Total-12,980	25K	Listed in Rigging Instructions	80

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

(1) Sling set (25,000-pound capacity) (2 sets).

(2) Additional chain length, part number 38850-00053-102, from 25,000-pound capacity sling sets (8 each).

(3) Additional coupling links, part number 664241, from 25,000-pound capacity sling sets (8 each).

(4) Aerial delivery slings, Type XXVI nylon, 4 loop, 20 foot length (2 each) (Used to form 40 foot vertical pendant) (For CH-47 use only).

(5) Apex fitting (25,000-pound capacity) (2 each) (For CH-47 use only).

(6) Tape, adhesive, pressure-sensitive, 2-inch wide roll.

(7) Webbing, cotton, 1/4-inch, 80-pound breaking strength.

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

(9) Cord, nylon, Type III, 550-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) Secure all internal cargo and loose items with Type III nylon cord or tie-down straps.

(b) Lock the articulated steering unit with the steering cylinder locks.

(c) Secure all doors, windows, and roof hatches in the closed position.

(d) Tape all lights and glass fixtures including the windshield.

(e) Fold side mirrors inboard and tie or tape as required.

(f) Tape windshield wipers to windshield.

(g) Secure all hoses and cables located between the two cars with tape or nylon cord to avoid entanglement with sling legs.

(h) Screw the lifting eyes in as far as possible while ensuring that they are pointing towards the middle of each car. Tie diagonally opposing rings of each car together (for example, the front right ring to the left rear ring) with Type III nylon cord.

(i) Place the mud flaps in the up position and tape them in place.

(j) Ensure the fuel tank is not over 3/4 full. Inspect fuel tank cap, oil filler cap, and battery caps for proper installation.

(2) **Rigging.** Rig the load according to the steps in Figure 5-1.

(3) **Hookup.** The helicopter lands near the vehicle. The hookup team crawls under the helicopter. 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 helicopter 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).

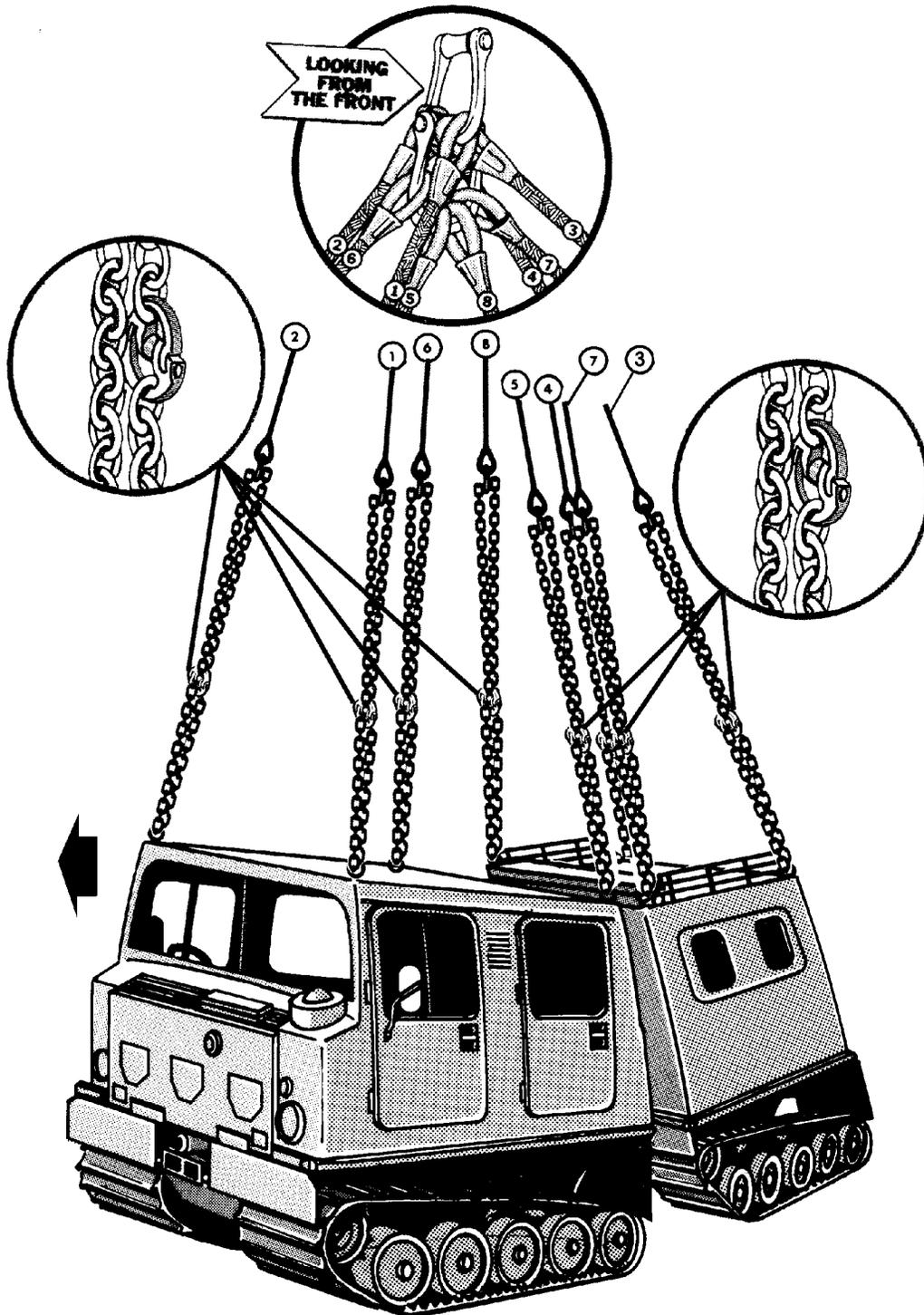


Figure 5-1. Small Unit Support Vehicle (SUSV)

RIGGING STEPS

1. Assemble the two sling sets as shown in the insert on page 5-3. Note the sling numbering sequences.
2. Route outer sling legs 1 and 2 to the front of the front provisions of the front car. Route inner sling legs 3 and 4 under the roof rack and to the rear provisions of the rear car. Sling legs 1 and 3 must be on the left side of the load.
3. Route sling legs 5 and 6 to the rear provisions of the front car. Route sling legs 7 and 8 to the front provisions of the rear car. Sling legs 5 and 7 must be on the left side of the load.
4. Loop the chain end of sling leg 1 through the left front lift provision of the front car. Add an additional chain length using the coupling links. The chain must be looped through the lifting provision prior to attaching the additional chain. Place link **40** in the grab hook. Repeat with sling leg 2 through the right front lift provision of the front car. Secure the excess chain with Type III nylon cord.
5. Route the chain end of sling leg 5 through the left rear lift provision of the front car. Add an additional chain length using the coupling links. The chain must be looped through the lifting provision prior to attaching the additional chain. Place link **67** in the grab hook. Repeat with sling leg 6 through the right rear lift provision of the front car. Secure the excess chain with Type III nylon cord.
6. Route the chain end of sling leg 7 through the left front lift provision of the rear car. Add an additional chain length using the coupling links. The chain must be looped through the lifting provision prior to attaching the additional chain. Place link **67** in the grab hook. Repeat with sling leg 8 through the right front lift provision of the rear car. Secure the excess chain with Type III nylon cord.
7. Route the chain end of sling leg 3 through the left rear lift provision of the rear car. Add an additional chain length using the coupling links. The chain must be looped through the lifting provision prior to attaching the additional chain. Place link **40** in the grab hook. Repeat with sling leg 4 through the right rear lift provision of the rear car. Ensure sling legs 3 and 4 are routed under the roof rack. Secure the excess chain with Type III nylon cord.
8. Cluster and tie or tape (breakaway technique) the sling legs together on top of the vehicle to prevent entanglement during hookup and lift-off.
9. When using a CH-47 helicopter, assemble a 40-foot vertical pendant using two 20-foot aerial delivery slings and two 25,000-pound capacity apex fittings. Attach the end of the 40-foot vertical pendant to the top apex fitting of the sling set by removing the bolt from the apex fitting. Insert the looped end of the vertical pendant into the apex fitting and replace the bolt.

Figure 5-1. Small Unit Support Vehicle (SUSV) (continued)

5-3. M1067 Flatbed Small Unit Support Vehicle (SUSV)

a. Applicability. The following item in Table 5-2 is certified for the **CH-47 HELICOPTER ONLY** by the US Army Soldier Systems Center:

Table 5-2. Flatbed Small Unit Support Vehicle (SUSV)

NOMENCLATURE	MAX WEIGHT (POUNDS)	SLING SET	LINK COUNT FRONT/REAR	RECOMMENDED AIRSPEED (KNOTS)
M1067, Flatbed, Tracked	Front-6,600 Rear-7,150 Total-12,980	25K	Listed in Rigging Instructions	70

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

- (1) Sling set (25,000-pound capacity) (2 sets).
- (2) Additional chain length, part number 38850-00053-102, from 25,000-pound capacity sling sets (12 each).
- (3) Additional coupling links, part number 664241, from 25,000-pound capacity sling sets (12 each).
- (4) Aerial delivery slings, Type XXVI nylon, 4 loop, 20 foot length (2 each) (Used to form 40 foot vertical pendant) (For CH-47 use only).
- (5) Apex fitting (25,000-pound capacity) (2 each) (For CH-47 use only).
- (6) Tape, adhesive, pressure-sensitive, 2-inch wide roll.
- (7) Webbing, cotton, 1/4-inch, 80-pound breaking strength.
- (8) Tie-down strap, CGU/1B (as required).
- (9) Cord, nylon, Type III, 550-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) Secure all internal cargo and loose items with Type III nylon cord or tie-down straps.
- (b) Lock the articulated steering unit with the steering cylinder locks.
- (c) Secure all doors, windows, and roof hatches in the closed position.
- (d) Tape all lights and glass fixtures including the windshield.
- (e) Fold side mirrors inboard and tie or tape as required.
- (f) Tape windshield wipers to windshield.
- (g) Secure all hoses and cables located between the two cars with tape or nylon cord to avoid entanglement with sling legs.
- (h) Screw the lifting eyes in as far as possible while ensuring that they are pointing towards the middle of each car. Tie diagonally opposing rings of each car together (for example, the front right ring to the left rear ring) with Type III nylon cord.
- (i) Place the mud flaps in the up position and tape them in place.
- (j) Cargo in the rear car must be loaded so that it will not make contact with the sling legs and that it is not higher than the sides of the rear car.

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

(3) **Hookup.** The helicopter lands near the vehicle. The hookup team crawls under the helicopter. 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 helicopter 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).

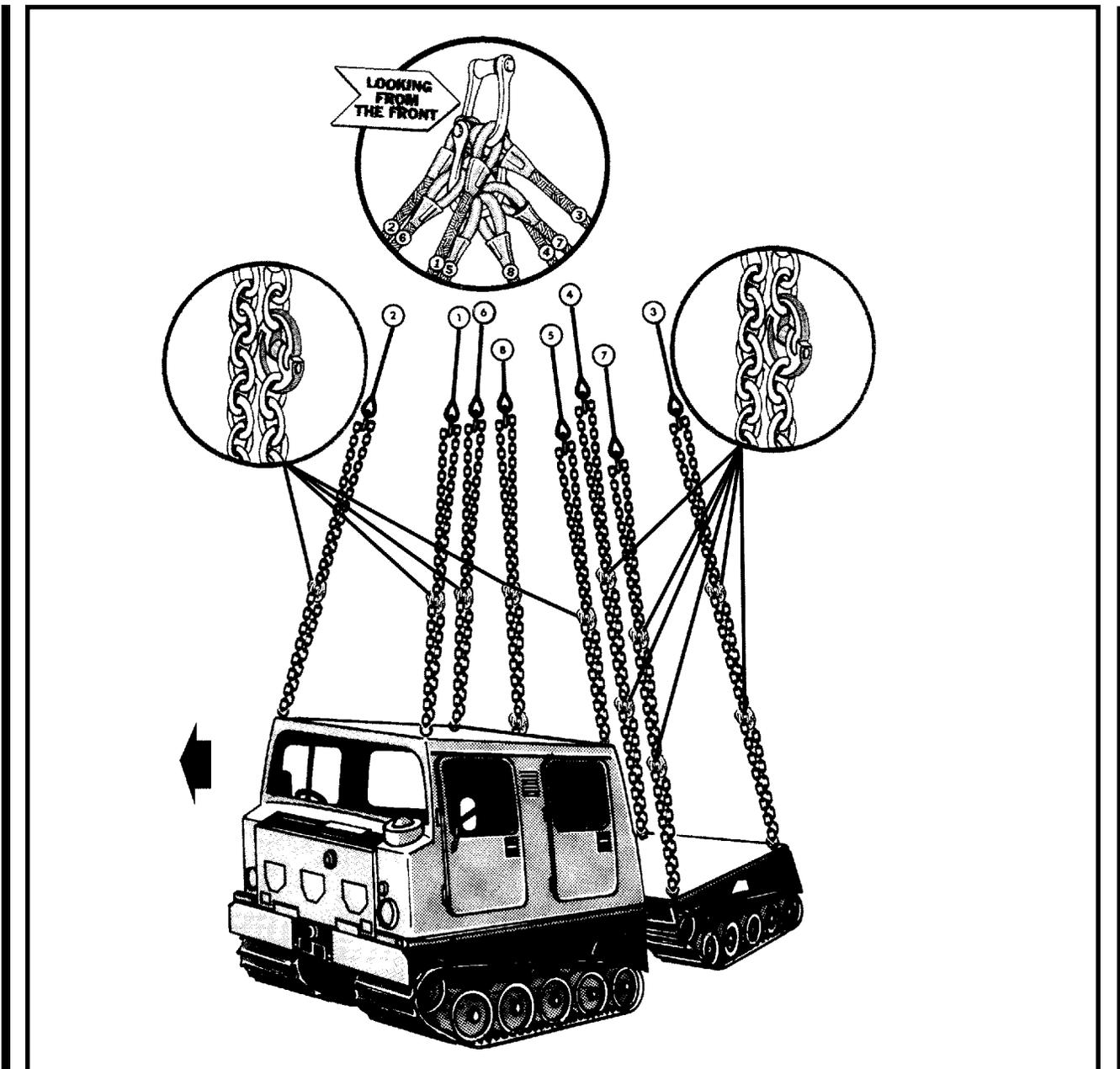


Figure 5-2. Flatbed Small Unit Support Vehicle (SUSV)

RIGGING STEPS

1. Assemble the two sling sets as shown on page 5-6. Note the sling numbering sequences.
2. Route outer sling legs 1 and 2 to the front of the front provisions of the front car. Route inner sling legs 3 and 4 to the rear provisions of the rear car. Sling legs 1 and 3 must be on the left side of the load.
3. Route sling legs 5 and 6 to the rear provisions of the front car. Route sling legs 7 and 8 to the front provisions of the rear car. Sling legs 5 and 7 must be on the left side of the load.
4. Loop the chain end of sling leg 1 through the left front lift provision of the front car. Attach an additional chain length using the coupling links. The chain must be looped through the lifting provision prior to attaching the additional chain. Place link **40** in the grab hook. Repeat with sling leg 2 through the right front lift provision of the front car. Secure the excess chain with Type III nylon cord.
5. Route the chain end of sling leg 5 through the left rear lift provision of the front car. Attach an additional chain length using the coupling links. The chain must be looped through the lifting provision prior to attaching the additional chain. Place link **67** in the grab hook. Repeat with sling leg 6 through the right rear lift provision of the front car. Secure the excess chain with Type III nylon cord.
6. Route the chain end of sling leg 7 through the left front lift provision of the rear car. Attach two additional chain lengths using the coupling links. The chain must be looped through the lifting provision prior to attaching the additional chains. Place link **67** in the grab hook. Repeat with sling leg 8 through the right front lift provision of the rear car. Secure the excess chain with Type III nylon cord.
7. Route the chain end of sling leg 3 through the left rear lift provision of the rear car. Attach two additional chain lengths using the coupling links. The chain must be looped through the lifting provision prior to attaching the additional chains. Place link **40** in the grab hook. Repeat with sling leg 4 through the right rear lift provision of the rear car.
8. Cluster and tie or tape (breakaway technique) the sling legs together on top of the vehicle to prevent entanglement during hookup and lift-off.
9. Secure legs 7 and 8 to the outside supports of the spare fuel can racks using 1/4-inch cotton webbing to prevent damage to the racks during lift-off.
10. Assemble a 40-foot vertical pendant using two 20-foot aerial delivery slings and two 25,000-pound capacity apex fittings. Attach the end of the 40-foot vertical pendant to the top apex fitting of the sling set by removing the bolt from the apex fitting, inserting the looped end of the vertical pendant into the apex fitting and replacing the bolt.

Figure 5-2. Flatbed Small Unit Support Vehicle (SUSV) (continued)