

CHAPTER 9

CERTIFIED DUAL-POINT RIGGING PROCEDURES FOR LIQUID CONTAINERS

9-1. INTRODUCTION

This chapter contains rigging procedures for dual-point lift of liquid 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 dual-point rigging

procedures for liquid containers are in this section. Paragraphs 9-2 and 9-3 give detailed instructions for rigging loads.

NOTE: Reach Pendants may be used on dual point loads. Place a Reach Pendant on each apex fitting. A static discharge person is not required when using a Reach Pendant.

9-2. Two Storage Modules, Fuel/Water (Side by Side)

a. Applicability. The following items in Table 9-1 are certified for the helicopter(s) listed in the following table by the US Army Soldier Systems Center:

Table 9-1. Two Storage Modules, Fuel/Water (Side by Side)

NOMENCLATURE	MAX WEIGHT (POUNDS)	SLING SET	LINK COUNT FRONT/ REAR	TYPE OF AIRCRAFT	RECOMMENDED AIRSPEED (KNOTS)
Two Sixcon Storage Modules, Fuel/Water, TAMCN B2085/B2086 (Empty), Side by Side	5,500	15K	3/3	CH-53	120
Two Sixcon Storage Modules, Fuel/Water, TAMCN B2085/B2086 (Full), Side by Side	20,100	40K	3/3	CH-53	120
One Sixcon, Storage Module, Fuel/Water, TAMCN B2085/B2086 (Empty) and One Sixcon Pump Module, Fuel/Water, TAMCN B1580/B1581, Side by Side	5,100	15K	3/3	CH-53	120
Two Sixcon Pump Modules, Fuel/Water, TAMCN B1580/B1581, Side by Side	4,700	15K	3/3	CH-53	120

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

(1) Sling set (15,000-pound capacity) (2 each).

OR

(2) Sling set (40,000-pound capacity) with one additional apex fitting.

(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:

CAUTION
The Tandemloc horizontal connector, MFR Part NO. 712946-M-PZN, NSN 5410-01-363-7086, must be used to secure the Sixcons together. DO NOT USE ANY OTHER TYPE OF CONNECTOR.

(a) Connect the two modules together side by side using the horizontal connectors. Ensure the connectors are properly secured.

(b) Ensure the modules are in one of the configurations shown in Table 9-1.

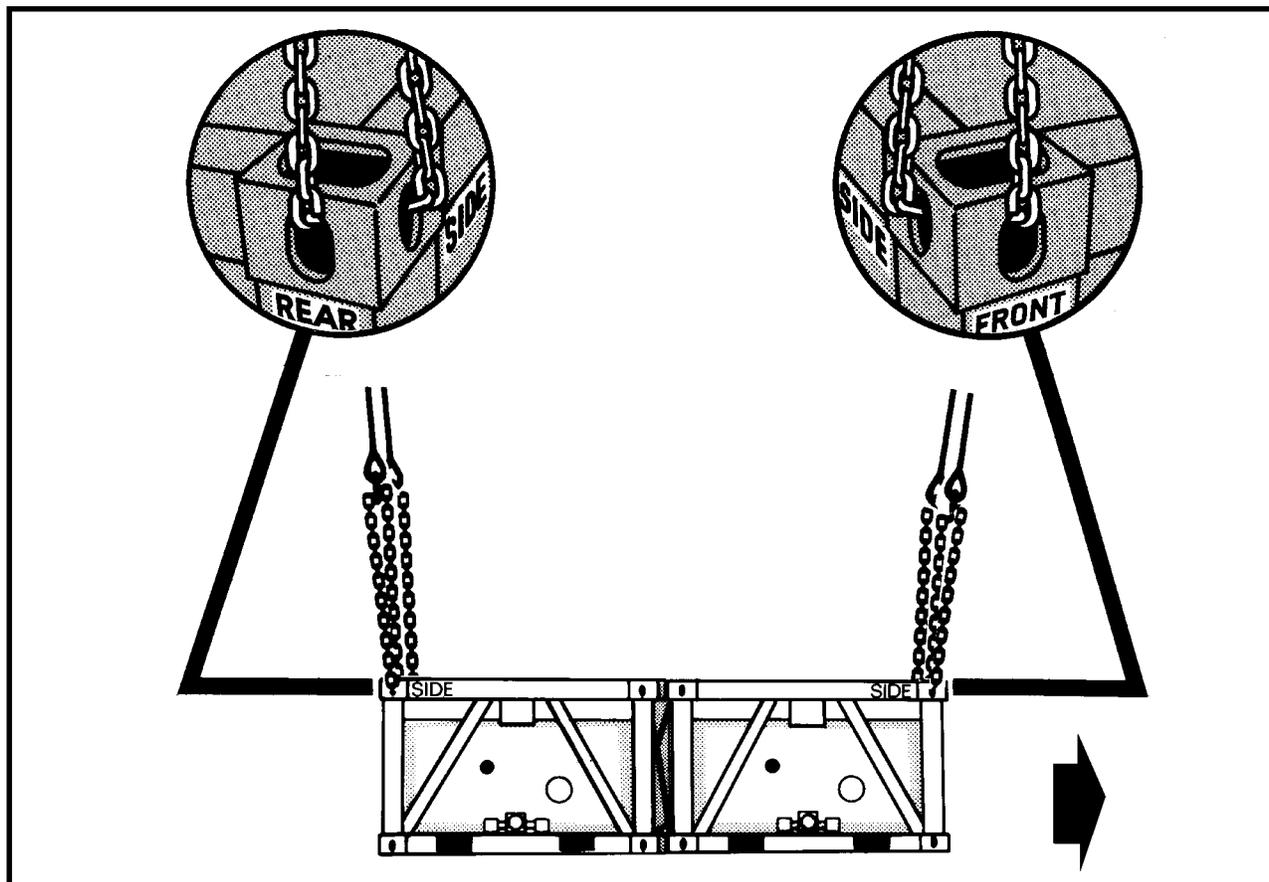
(c) Secure all hatches, hose valves, and loose equipment with tape or Type III nylon cord.

(2) **Rigging.** Rig the load according to the steps in Figure 9-1.

NOTE: When using the 15,000-pound capacity multileg sling set, tie or tape the inner sling legs to the outer sling legs.

(3) **Hookup.** Two hookup teams are required for this load. The static discharge person discharges the static electricity. The forward hookup person stands on top of the front module and places apex fitting 1 onto the forward cargo hook. The aft hookup person stands on the top of the rear module and places apex fitting 2 onto the aft cargo hook. The hookup teams then carefully dismount the load and remain close to the load as the helicopter removes slack from the sling legs. When successful hookup is assured, the hookup teams quickly exit 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: All sling sets use the same link count

1. Place two sling legs on apex fitting number 1. Position apex fitting number 1 on top of the front module.
2. Loop the chain end of the left and right sling legs through the front and side of their respective lift provisions located on the top front corners of the module. Place the correct link from Table 9-1 in the grab hook.
3. Place two sling legs on apex fitting number 2. Posi-

tion apex fitting number 2 on top of the rear module.

4. Loop the chain end of the left and right sling legs through the rear and side of their respective lift provisions located on the top rear corners of the module. Place the correct link from Table 9-1 in the grab hook.
5. Raise the apex fittings above the tractor. Cluster and tie or tape (breakaway technique) the sling legs in each sling set together to prevent entanglement during hookup and lift-off.

Figure 9-1. Two Storage Modules, Fuel/Water (Side by Side)

9-3. Three Storage Modules, Fuel/Water (Side by Side)

a. Applicability. The following items in Table 9-2 are certified for the helicopter(s) listed in the following table by the US Army Soldier Systems Center:

Table 9-2. Three Storage Modules, Fuel/Water (Side by Side)

NOMENCLATURE	MAX WEIGHT (POUNDS)	SLING SET	LINK COUNT FRONT/ REAR	TYPE OF AIRCRAFT	RECOMMENDED AIRSPEED (KNOTS)
Three Sixcon Storage Modules, Fuel/Water, TAMCN B2085/B2086 (Empty), Side by Side	8,300	15K	3/3	CH-53	120
Two Full Sixcon Storage Modules, Fuel/Water, TAMCN B2085/B2086 and One Empty Sixcon Storage Module, Side by Side	22,900	40K	3/3	CH-53	120
Two Empty Sixcon Storage Modules, Fuel/Water, TAMCN B2085/B2086 and One Full Sixcon Storage Module, Side by Side	15,600	40K	3/3	CH-53	120
Two Full Sixcon, Storage Modules, Fuel/Water, TAMCN B2085/B2086 and One Sixcon Pump Module, Fuel/Water, TAMCN B1580/B1581, Side by Side	22,500	40K	3/3	CH-53	120
Two Empty Sixcon, Storage Modules, Fuel/Water, TAMCN B2085/B2086 and One Sixcon Pump Module, Fuel/Water, TAMCN B1580/B1581, Side by Side	7,900	15K	3/3	CH-53	120
One Full Sixcon, Storage Modules, Fuel/Water, TAMCN B2085/B2086 and Two Sixcon Pump Modules, Fuel/Water, TAMCN B1580/B1581, Side by Side	14,800	15K	3/3	CH-53	120
One Empty Sixcon, Storage Modules, Fuel/Water, TAMCN B2085/B2086 and Two Sixcon Pump Modules, Fuel/Water, TAMCN B1580/B1581, Side by Side	7,500	15K	3/3	CH-53	120
Three Sixcon Pump Modules, Fuel/Water, TAMCN B1580/B1581, Side by Side	7,100	15K	3/3	CH-53	120
One Full and One Empty Sixcon, Storage Modules, Fuel/Water, TAMCN B2085/B2086 and One Sixcon Pump Module, Fuel/Water, TAMCN B1580/B1581, Side by Side	15,200	40K	3/3	CH-53	120

NOTE: The configurations below are the only certified configurations.

1. Empty Storage/Empty Storage/Empty Storage
2. Full Storage/Empty Storage/Full Storage
3. Empty Storage/Full Storage/Empty Storage
4. Full Storage/Pump/Full Storage
5. Empty Storage/Pump/Empty Storage
6. Pump/Full Storage/Pump
7. Pump/Empty Storage/Pump
8. Pump/Pump/Pump
9. Pump/Full Storage/Empty Storage

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

- (1) Sling set (15,000-pound capacity) (2 each).

OR

(2) Sling set (40,000-pound capacity) with one additional apex fitting.

(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:

CAUTION

The Tandemloc horizontal connector, MFR Part NO. 712946-M-PZN, NSN 5410-01-363-7086, must be used to secure the Sixcons together. **DO NOT USE ANY OTHER TYPE OF CONNECTOR.**

(a) Connect the three modules together side by side using the horizontal connectors. Ensure the connectors are properly secured.

(b) Ensure the modules are either completely full or empty and in one of the configurations shown in the note after Table 9-2.

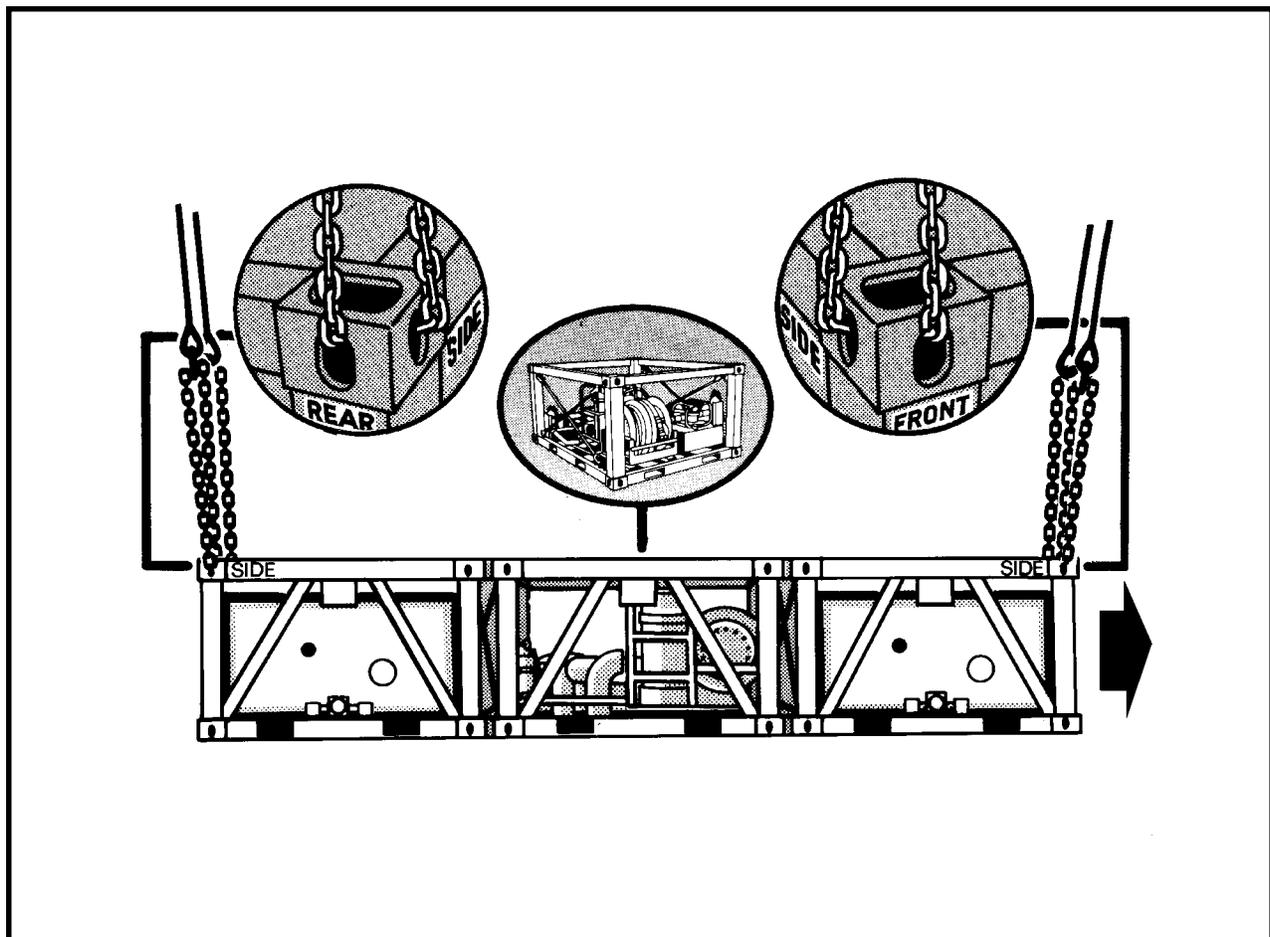
(c) Secure all hatches, hose valves, and loose equipment with tape or Type III nylon cord.

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

NOTE: When using the 15,000-pound capacity multileg sling set, tie or tape the inner sling legs to the outer sling legs.

(3) **Hookup.** Two hookup teams are required for this load. The static discharge person discharges the static electricity. The forward hookup person stands on top of the front module and places apex fitting 1 onto the forward cargo hook. The aft hookup person stands on the top of the rear module and places apex fitting 2 onto the aft cargo hook. The hookup teams then carefully dismount the load and remain close to the load as the helicopter removes slack from the sling legs. When successful hookup is assured, the hookup teams quickly exit 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: All sling sets use the same link count

1. Place two sling legs on apex fitting number 1. Position apex fitting number 1 on top of the front module.
2. Loop the chain end of the left and right sling legs through the front and side of their respective lift provisions located on the top front corners of the module. Place the correct link from Table 9-2 in the grab hook.
3. Place two sling legs on apex fitting number 2. Posi-

tion apex fitting number 2 on top of the rear module.

4. Loop the chain end of the left and right sling legs through the rear and side of their respective lift provisions located on the top rear corners of the module. Place the correct link from Table 9-2 in the grab hook.
5. Raise the apex fittings above the tractor. Cluster and tie or tape (breakaway technique) the sling legs in each sling set together to prevent entanglement during hookup and lift-off.

Figure 9-2. Three Modules, Fuel/Water (Side by Side)