

SECTION III

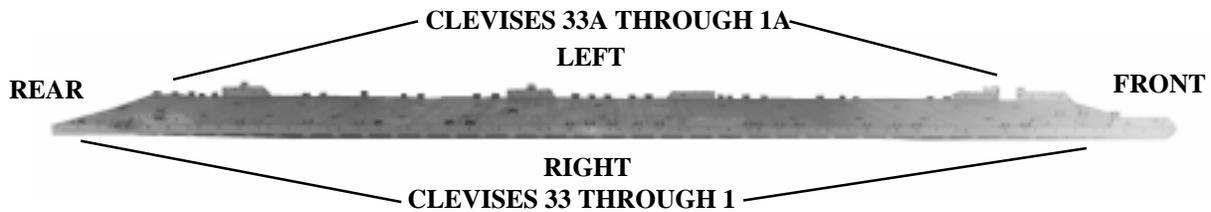
RIGGING FIVE 500-GALLON DRUMS

11-47. Description of Load

The five collapsible fuel drums are rigged on a 32-foot, type V platform with six G-11 cargo parachutes. Each drum is filled with 432 gallons of liquid. Each drum weighs 3,832 pounds and is 62 inches long and 53 inches in diameter. The five drums also have a 350-GPM pump with a separator and hose box as an accompanying load. The total rigged load has a maximum weight of 30,355 pounds with a width of 108 inches and length of 398 inches. It has an overhang of 18 inches in the front and 22 inches in the rear. If the drums are filled with fuel, the weight must be computed using the conversion table shown in Figure 11-1.

11-48. Preparing the Platform

Prepare a 32-foot, type V platform using two tandem multipurpose links, eight suspension links and 72 tiedown clevises as shown in Figure 11-45.



Steps:

1. Install a tandem multi-purpose link to each platform side rail using holes 1, 2, and 3.
2. Install a suspension link to each platform side rail using holes 6, 7, and 8.
3. Install a suspension link to each platform side rail using holes 26, 27, and 28.
4. Install a suspension link to each platform side rail using holes 37, 38, and 39.
5. Install a suspension link to each platform side rail using holes 57, 58, and 59.
6. Install a clevis on bushing 4 of each of the front tandem links.
7. Install a clevis on bushings 1 and 3 of the first suspension links.
8. Install a clevis on bushing 2 of each of the third suspension links.
9. Install doubled clevises on bushing 2 of each of the fourth suspension links.
10. Starting at the front of each platform side rail, install clevises on the bushings bolted on holes 9, 10, 15, 16, 18, 22, 24, 25, 30, 31, 33, 34, 35, 41, 42, 46, 47, 50, 53, 54, 60 (tripled), 61 (tripled), 62, 63, and 64 (doubled).
11. Starting at the front of the platform, number the clevises 1 through 33 on the right side and 1A through 33A on the left side.

Note: A double clevis has one clevis attached to the bushing and another clevis attached to the first clevis. A triple clevis has one clevis attached to the bushing and two clevises attached to the first clevis.

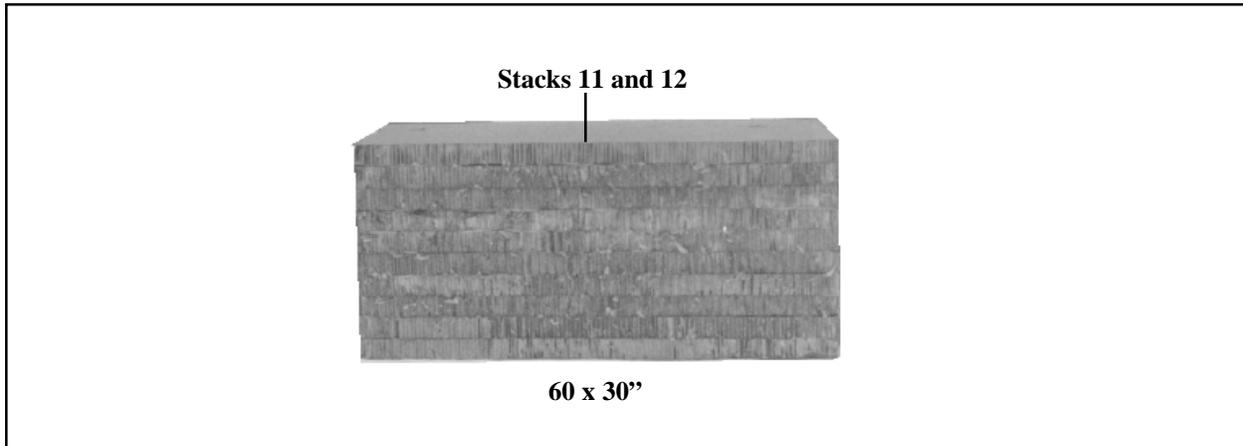
Note: Use the clevis on bushing 64 as clevises 33 and 33A and the doubled clevis as 32 and 32A.

Figure 11-45. Platform prepared

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11-49. Preparing Honeycomb Stacks

Build honeycomb stacks as shown in Figures 11-3 and 11-4 and Figures 11-46 and 11-47.

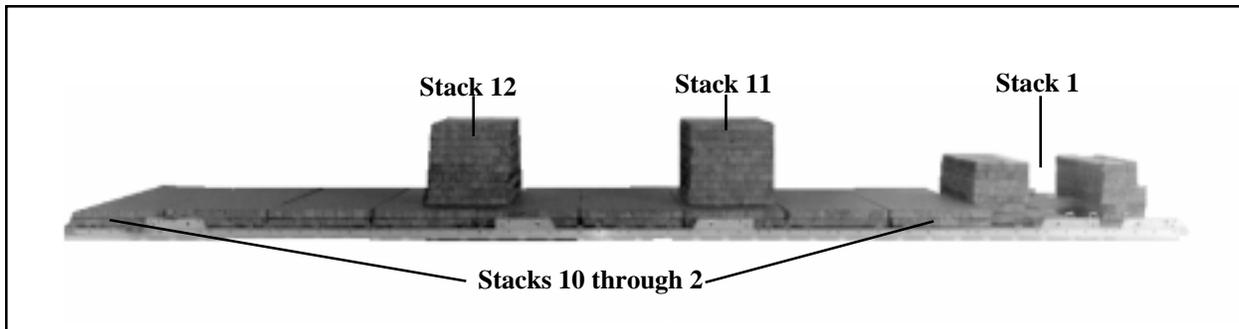


Stack Number	Pieces	Width (Inches)	Length (Inches)	Material	Instructions
1	Prepare honeycomb stack 1 as shown in Figure 11-3.				
2-10	Prepare honeycomb stacks 2-10 as shown in Figure 11-4.				
11	10	60	30	Honeycomb	Glue together.
12	10	60	30	Honeycomb	Glue together.

Figure 11-46. Honeycomb stacks 1 through 12 prepared

11-50. Positioning Honeycomb Stacks

Position honeycomb stacks as shown in Figure 11-47.



Steps:

1. Position stack 1 on the front edge of the platform and centered.
2. Position stacks 2 through 10 flush on the rear edge of stack 1 and flush with each other.
3. Position stack 11 on top of stack 4 ensuring the 30-inch length is aligned with the side rails (do not glue).
4. Position stack 12 on top of stacks 6 and 7 ensuring the 30-inch length is aligned with the side rails (do not glue).

NOTE: Stacks 11 and 12 may need to be adjusted to allow for placement of the drums.

Figure 11-47. Honeycomb stacks positioned

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11-51. Building the Equipment Hose Box

Build the equipment hose box as shown in Figure 11-7.

11-52. Positioning Equipment Hose Box

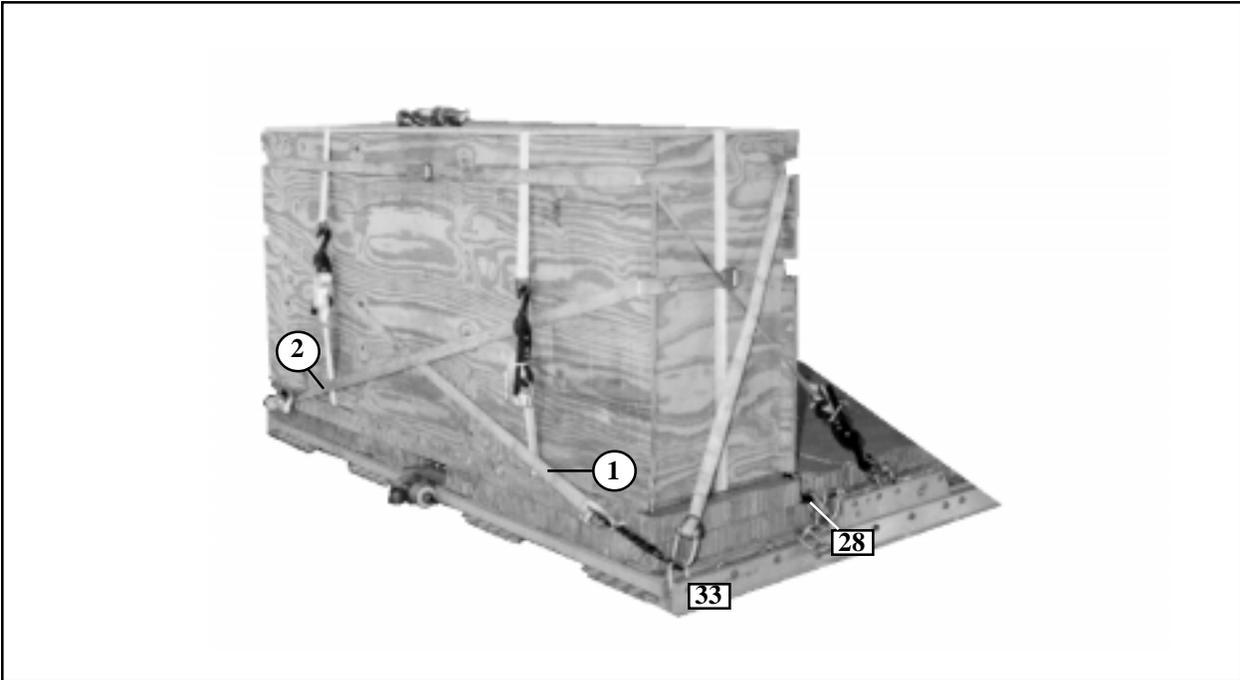
Position the equipment hose box as shown in Figure 11-8.

11-53. Storing Equipment in Equipment Hose Box

Store equipment in the equipment hose box as shown in Figure 11-9.

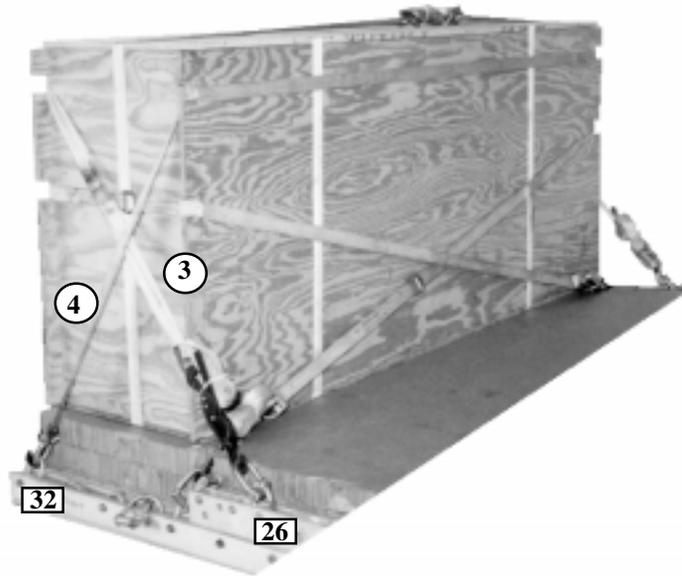
11-54. Lashing Equipment Hose Box to Platform

Lash the equipment hose box to the platform as shown in Figures 11-48 and 11-49.



Lashing Number	Clevis Number	Instructions
1	33	Route a 30-foot lashing from clevis 33 to the rear bottom left cutout, to the front bottom left cutout, to clevis 28. Ensure lashing is routed under the load to binders on the rear of the box.
2	33A	Route a 30-foot lashing from clevis 33A to the rear bottom right cutout, to the front bottom right cutout, to clevis 28A. Ensure lashing is routed under the load binders on the rear of the box.

Figure 11-48. Lashings 1 and 2 installed



Lashing Number	Clevis Number	Instructions
3	26	Route a 30-foot lashing from clevis 26 to the rear top cutouts, to clevis 26A.
4	32	Route a 15 lashing through its own D-ring on clevis 32 to the front top cutouts to clevis 32A.

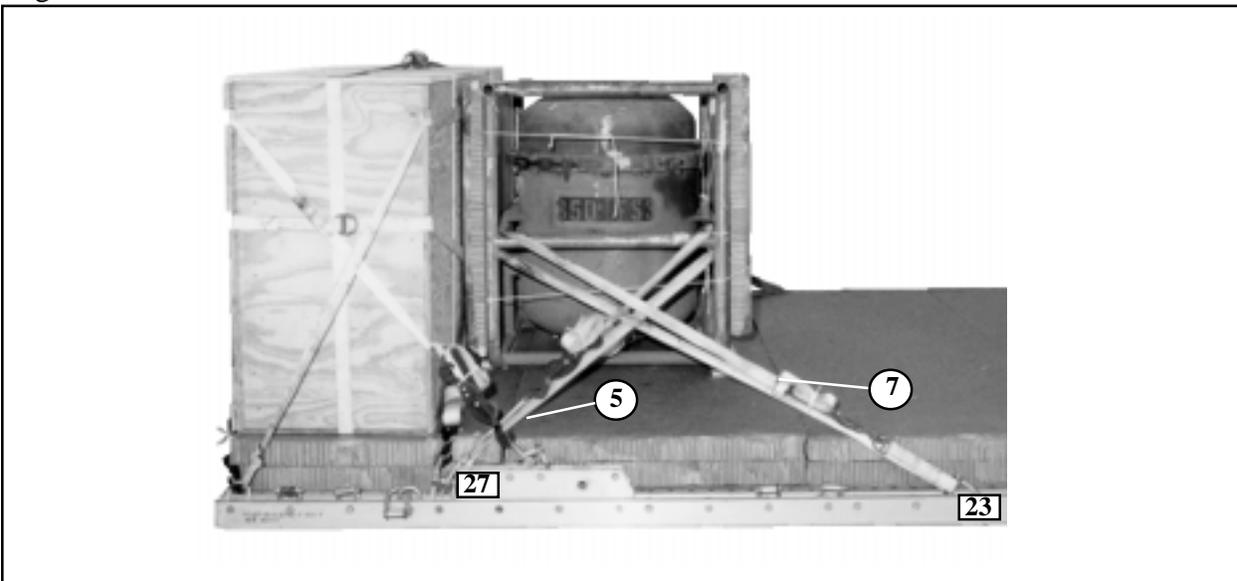
Figure 11-49. Lashings 3 and 4 installed

11-55. Preparing and Positioning Fuel Separator

Prepare and position the fuel separator as shown in Figure 11-12.

11-56. Lashing Fuel Separator to Platform

Lash fuel separator to the platform as shown in Figure 11-50.



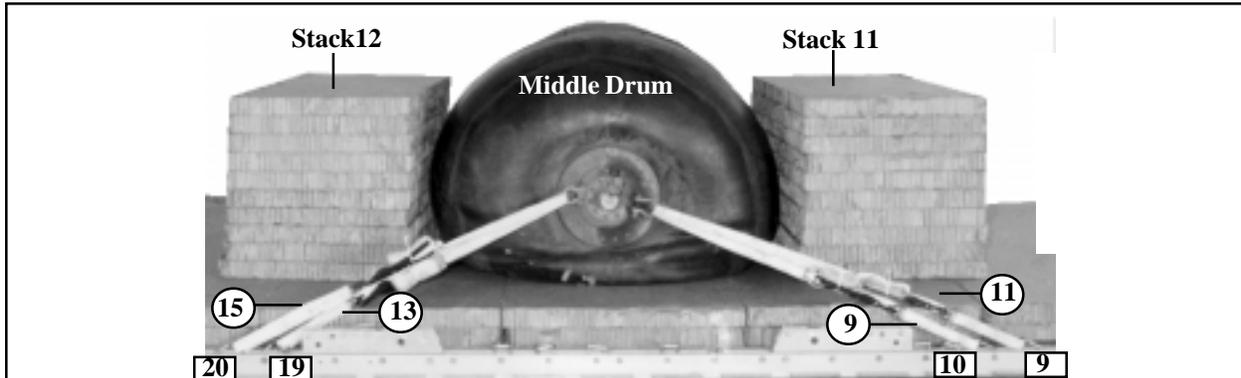
Lashing Number	Clevis Number	Instructions
5	27	Route a 15-foot lashing from clevis 27 around the front right middle cross member.
6	27A	Route a 15-foot lashing from clevis 27A around the front left middle cross member.
7	23	Route a 15-foot lashing from clevis 23 around the rear right middle cross member.
8	23A	Route a 15-foot lashing from clevis 23A around the rear left middle cross member.

Figure 11-50. Lashings 5 through 8 installed

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11-57. Positioning and Lashing the Drums

Position and lash drums in Figures 11-51 through 11-57.

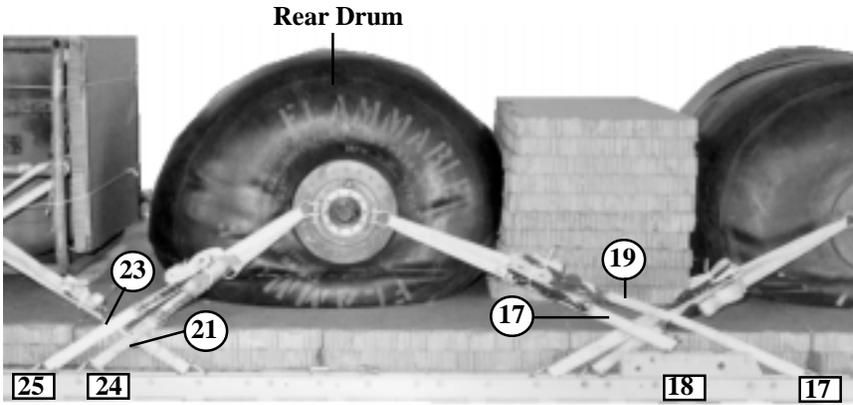


Steps:

1. Place a platform clevis on one end of two 9-foot (2-loop), type XXVI slings. Attach sling to each side of the drum for lifting purposes only and remove after positioning (not shown).
2. Position the middle drum centered from front to rear, and left to right on the platform. Stacks 11 and 12 may need to be moved during placement.

Lashing Number	Clevis Number	Instructions
9	10	Route a 15-foot lashing from clevis 10 to the front shackle of the drum.
10	10A	Route a 15-foot lashing from clevis 10A to the front shackle of the drum.
11	9	Route a 15-foot lashing from clevis 9 to the front shackle of the drum.
12	9A	Route a 15-foot lashing from clevis 9A to the front shackle of the drum.
13	19	Route a 15-foot lashing from clevis 19 to the rear shackle of the drum.
14	19A	Route a 15-foot lashing from clevis 19A to the rear shackle of the drum.
15	20	Route a 15-foot lashing from clevis 20 to the rear shackle of the drum.
16	20A	Route a 15-foot lashing from clevis 20A to the rear shackle of the drum.

Figure 11-51. Lashings 9 through 16 installed

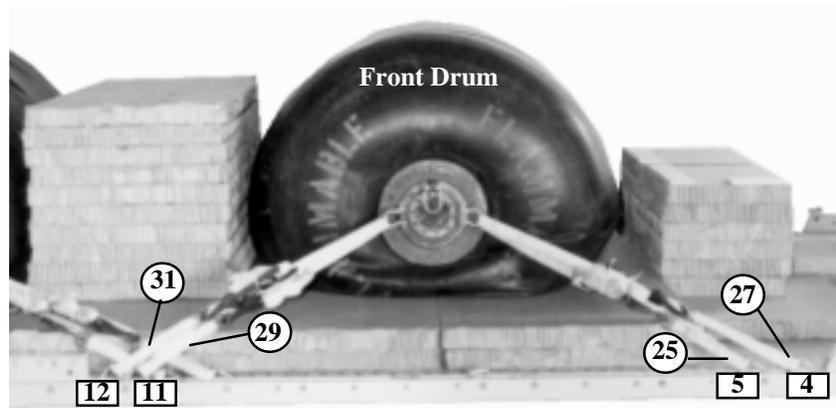


Steps:

1. Place a platform clevis on one end of two 9-foot (2-loop), type XXVI slings. Attach sling to each side of the drum for lifting purposes only and remove after positioning (not shown).
2. Position the rear drum behind stack 12. Stack 12 may need to be moved during placement.

Lashing Number	Clevis Number	Instructions
17	18	Route a 15-foot lashing from clevis 18 to the front shackle of the drum.
18	18A	Route a 15-foot lashing from clevis 18A to the front shackle of the drum.
19	17	Route a 15-foot lashing from clevis 17 to the front shackle of the drum.
20	17A	Route a 15-foot lashing from clevis 17A to the front shackle of the drum.
21	24	Route a 15-foot lashing from clevis 24 to the rear shackle on the drum.
22	24A	Route a 15-foot lashing from clevis 24A to the rear shackle on the drum.
23	25	Route a 15-foot lashing from clevis 25 to the rear shackle of the drum.
24	25A	Route a 15-foot lashing from clevis 25A to the rear shackle of the drum.

Figure 11-52. Lashings 17 through 24

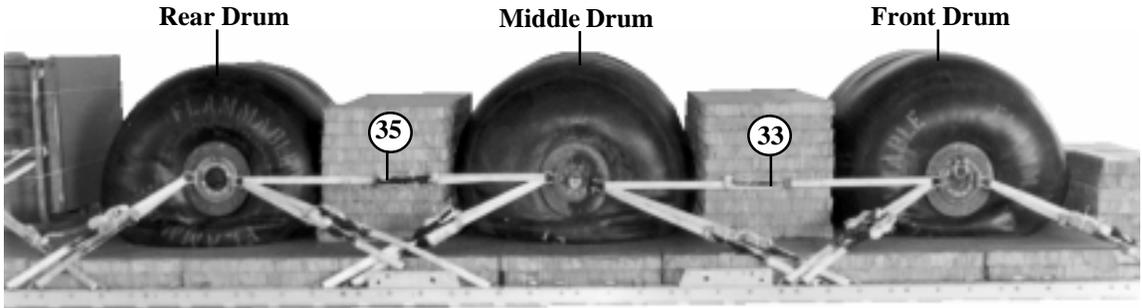


Steps:

1. Place a platform clevis on one end of two 9-foot (2-loop), type XXVI slings. Attach sling to each side of the drum for lifting purposes only and remove after positioning (not shown).
2. Position the front drum to the front of stack 11. Stack 11 may need to be moved during placement.

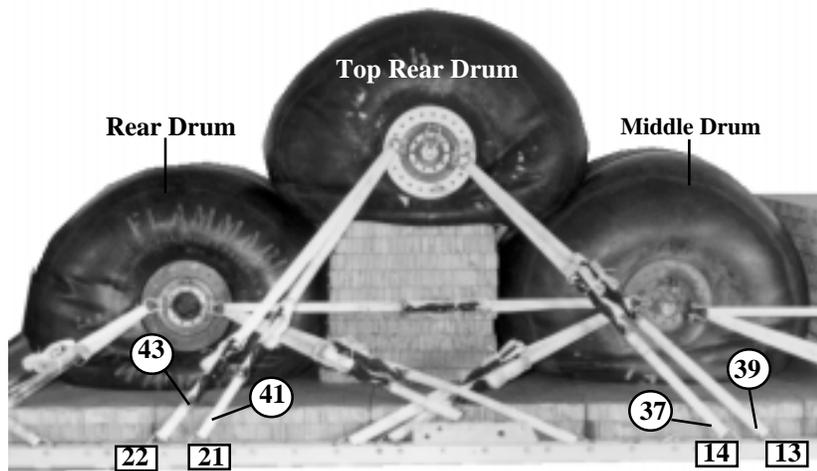
Lashing Number	Clevis Number	Instructions
25	5	Route a 15-foot lashing from clevis 5 to the front shackle of the drum.
26	5A	Route a 15-foot lashing from clevis 5A to the front shackle of the drum.
27	4	Route a 15-foot lashing from clevis 4 to the front shackle of the drum.
28	4A	Route a 15-foot lashing from clevis 4A to the front shackle of the drum.
29	11	Route a 15-foot lashing from clevis 11 to the rear shackle of the drum.
30	11A	Route a 15-foot lashing from clevis 11A to the rear shackle of the drum.
31	12	Route a 15-foot lashing from clevis 12 to the rear shackle of the drum.
32	12A	Route a 15-foot lashing from clevis 12A to the rear shackle of the drum.

Figure 11-53. Lashings 25 through 32 installed



Lashing Number	Clevis Number	Instructions
33		Route a 15-foot lashing from the front shackle of the middle drum to the rear shackle of the front drum on the right side.
34		Route a 15-foot lashing from the front shackle of the middle drum to the rear shackle of the front drum on the left side(not shown).
35		Route a 15-foot lashing from the rear shackle of the middle drum to the front shackle of the rear drum on the right side.
36		Route a 15-foot lashing from the rear shackle of the middle drum to the front shackle of the rear drum on the left side (not shown).

Figure 11-54. Lashings 33 through 36 installed

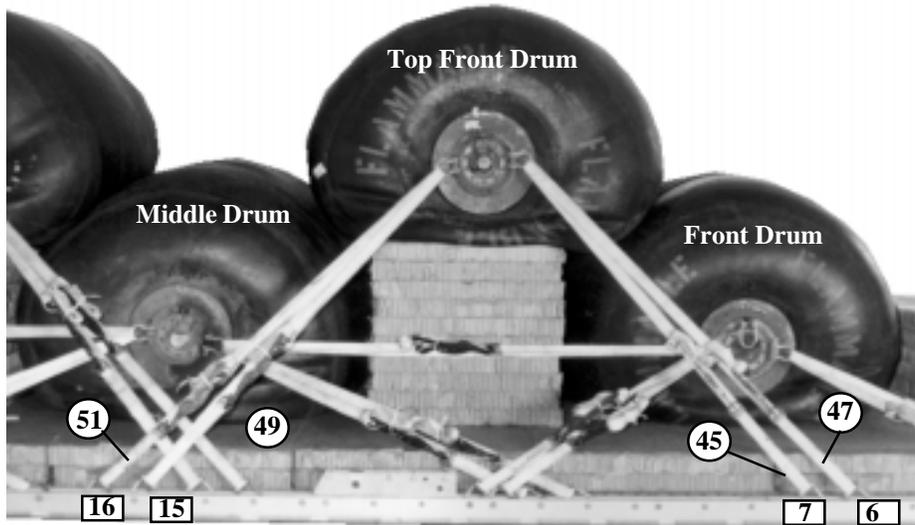


Steps:

1. Place a platform clevis on one end of two 9-foot (2-loop), type XXVI slings. Attach sling to each side of the drum for lifting purposes only and remove after positioning (not shown).
2. Position the top rear drum on top of stack 12.

Lashing Number	Clevis Number	Instructions
37	14	Route a 15-foot lashing from clevis 14 to the front shackle of the drum.
38	14A	Route a 15-foot lashing from clevis 14A to the front shackle of the drum.
39	13	Route a 15-foot lashing from clevis 13 to the front shackle of the drum
40	13A	Route a 15-foot lashing from clevis 13A to the front shackle of the drum.
41	21	Route a 15-foot lashing from clevis 21 to the rear shackle of the drum.
42	21A	Route a 15-foot lashing from clevis 21A to the rear shackle of the drum.
43	22	Route a 15-foot lashing from clevis 22 to the rear shackle of the drum.
44	22A	Route a 15-foot lashing from clevis 22A to the rear shackle of the drum.

Figure 11-55. Lashings 37 through 44 installed

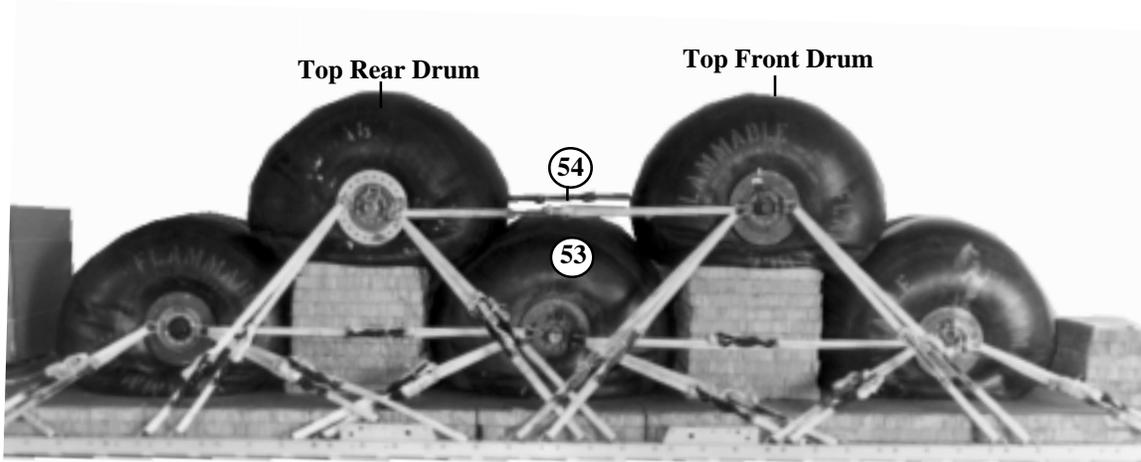


Steps:

1. Place a platform clevis on one end of two 9-foot (2-loop), type XXVI slings. Attach sling to each side of the drum for lifting purposes only and remove after positioning (not shown).
2. Position the top front drum on top of stack 11.

Lashing Number	Clevis Number	Instructions
45	7	Route a 15-foot lashing from clevis 7 to the front shackle of the drum.
46	7A	Route a 15-foot lashing from clevis 7A to the front shackle of the drum.
47	6	Route a 15-foot lashing from clevis 6 to the front shackle of the drum.
48	6A	Route a 15-foot lashing from clevis 6A to the front shackle of the drum.
49	15	Route a 15-foot lashing from clevis 15 to the rear shackle of the drum.
50	15A	Route a 15-foot lashing from clevis 15A to the rear shackle of the drum.
51	16	Route a 15-foot lashing from clevis 16 to the rear shackle of the drum.
52	16A	Route a 15-foot lashing from clevis 16A to the rear shackle of the drum.

Figure 11-56. Lashings 45 through 52 installed



Lashing Number	Clevis Number	Instructions
53		Route a 15-foot lashing from the front shackle of the top rear drum to the rear shackle of the top front drum on the right side.
54		Route a 15-foot lashing from the rear shackle of the top rear drum to the front shackle of the top front drum on the left side.

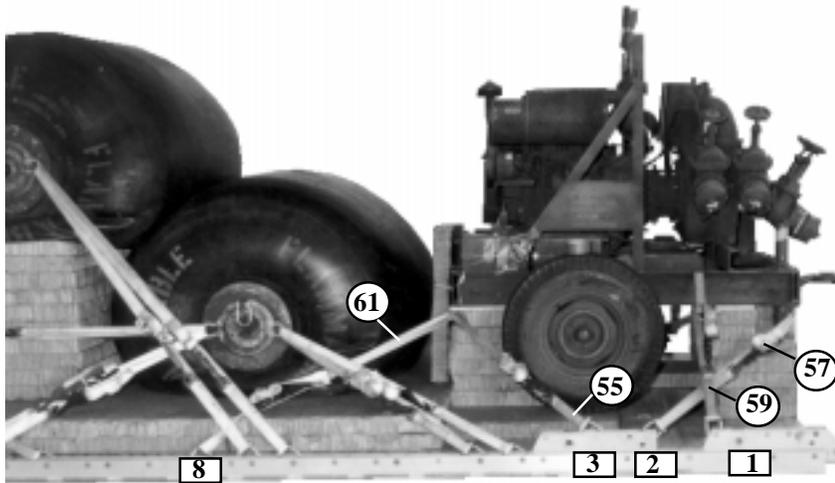
Figure 11-57. Lashings 53 and 54 installed

11-58. Preparing and Positioning Pump

Prepare and position the pump as shown in Figure 11-16.

11-59. Lashing Pump to Platform

Lash the pump to platform as shown in Figure 11-58.



Lashing Number	Clevis Number	Instructions
55	3	Route a 15-foot lashing from clevis 3 to the right rear tiedown point.
56	3A	Route a 15-foot lashing from clevis 3A to the left rear tiedown point.
57	2	Route a 15-foot lashing from clevis 2 to the right front tiedown point.
58	2A	Route a 15-foot lashing from clevis 2A to the left front tiedown point.
59	1	Route a 15-foot lashing from clevis 1 to the right side frame.
60	1A	Route a 15-foot lashing from clevis 1A to the left side frame.
61	8	Route a 15-foot lashing from clevis 8 to the left rear tiedown point.
62	8A	Route a 15-foot lashing from clevis 8A to the left rear tiedown point.

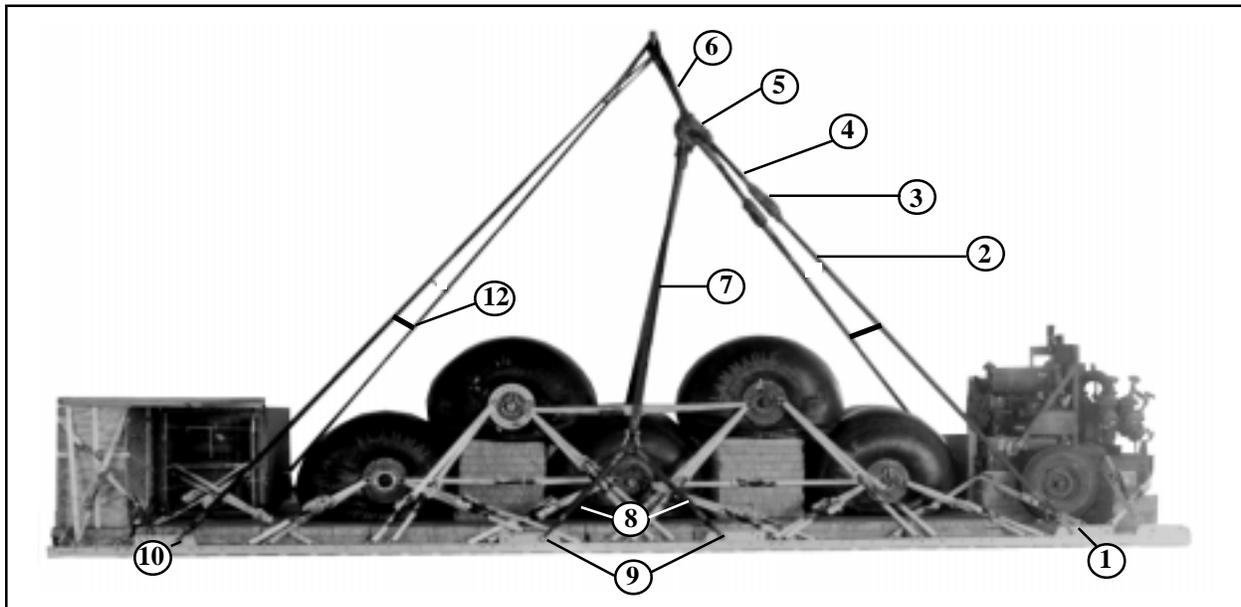
Figure 11-58. Lashings 55 through 62 installed

11-60. Installing Suspension Slings and Safety Tie

Install suspension slings and safety tie as shown in Figure 11-59.

11-61. Placing Canvas Cover Over Pump

Place a canvas cover over the pump as shown in Figure 11-18.



1. Attach a large clevis to the first right suspension link.
2. Place a large clevis in one end of a 12-foot (4-loop), type XXVI nylon suspension sling. Attach the clevis to the clevis in step one and safety them together with type III nylon cord using a hourglass tie.
3. Attach the running end of the 12-foot sling to a 5 1/2-inch 2-point link.
4. Attach a 3-foot (4-loop), type XXVI nylon suspension sling to the 2-point link.
5. Attach a 3-point link to the 3-foot sling.
6. Attach a 3-foot (4-loop), type XXVI nylon suspension sling to the 3-point link.
7. Fold in half a 20-foot (2-loop), type XXVI nylon suspension sling on the final corner of the 3-point link.
8. Attach two 3-foot (4-loop), type XXVI nylon suspension slings to a large clevis and attach this clevis to the running ends of the folded 20-foot sling.
9. Attach one clevis to each running end of the two 3-foot slings and attach one clevis to each center suspension link.
10. Place a large clevis in one end of a 20-foot (4-loop), type XXVI suspension sling and attach the clevis to the right rear suspension link.
11. Repeat steps 1 through 10 for the left side of the platform.
12. Raise the slings and install the safety tie to the front and rear set of suspension slings using doubled 1/2-inch tubular nylon.

Figure 11-59. Suspension slings and safety tie installed

11-62. Building and Positioning Parachute Stowage Platform

Build and position parachute stowage platform as shown in Figure 11-60. After building the parachute stowage platform, place it on the equipment hose box.

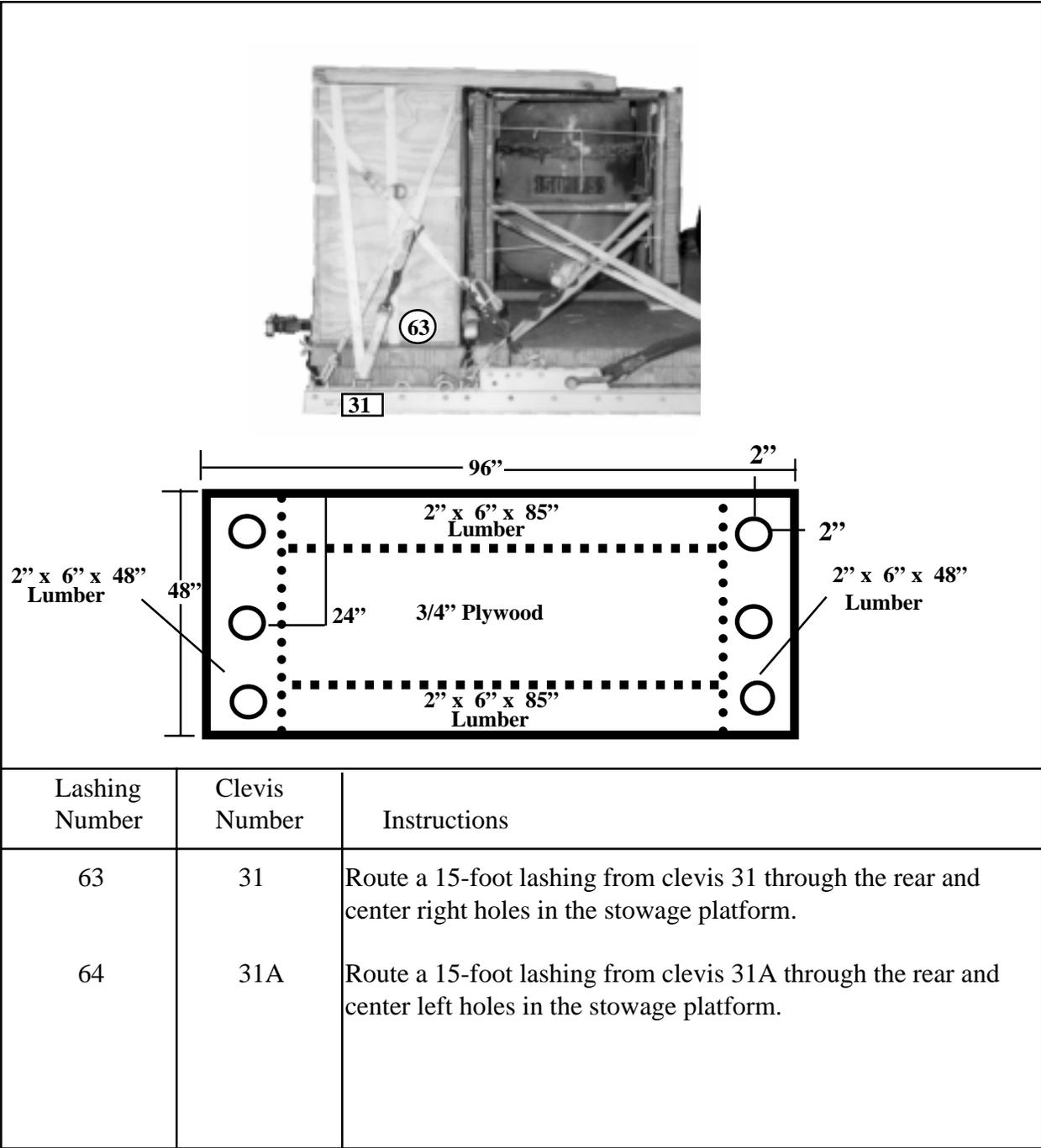
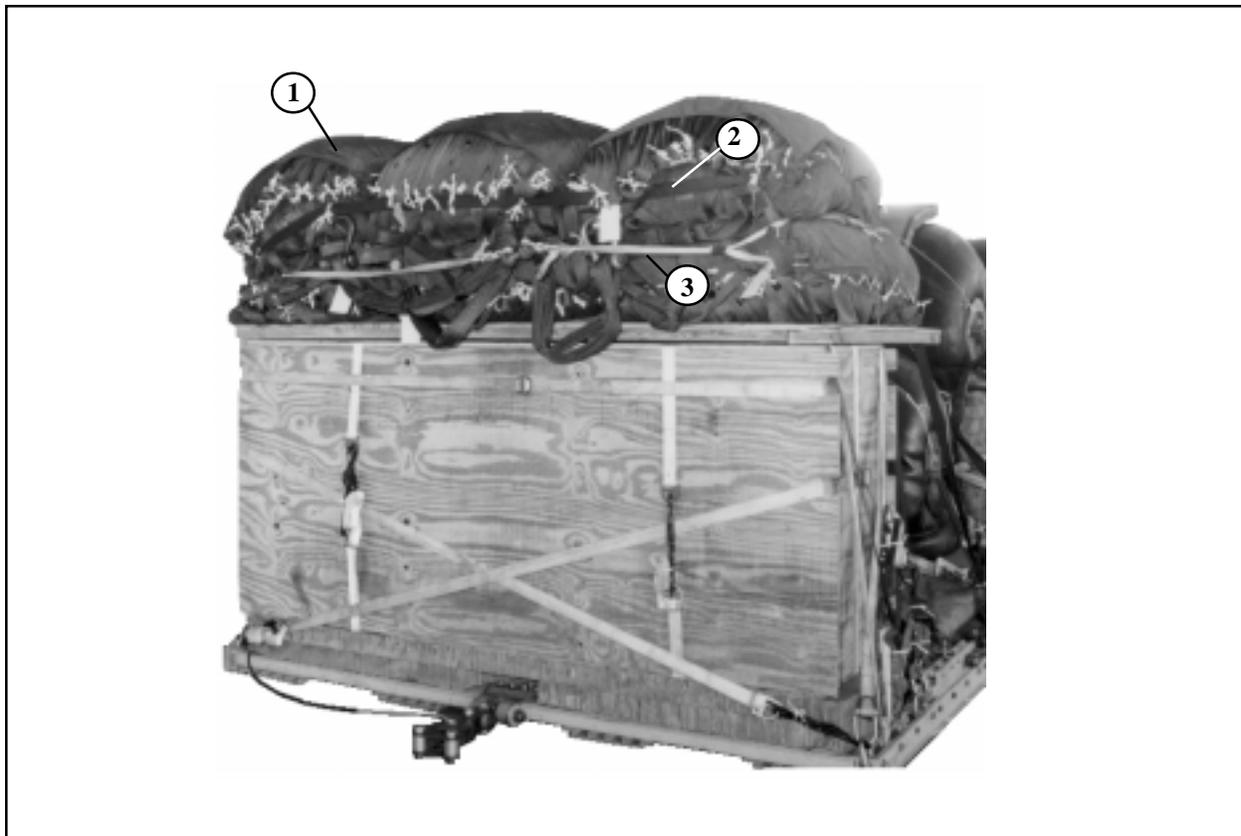


Figure 11-60. Lashings 63 and 64 installed

11-63. Preparing and Stowing Cargo Parachutes

Prepare and stow cargo parachutes as shown in Figure 11-61.



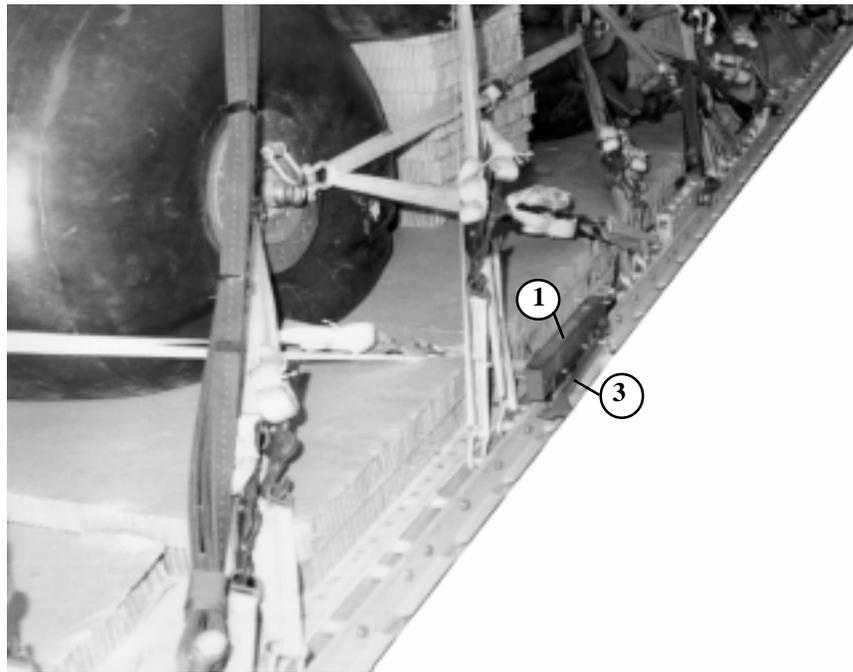
Steps:

1. Prepare and stow six G-11 cargo parachutes in accordance with FM 10-500-2/TO13C7-1-5.
2. Restrain the parachutes using type X nylon webbing and clevises 25, 25A, 29, 29A, 30, and 30A.
3. Install the parachute release straps in accordance with FM 10-500-2/TO13C7-1-5.

Figure 11-61. Cargo parachutes prepared and stowed

11-64. Installing the Extraction System

Install the extraction system as shown in Figure 11-62.

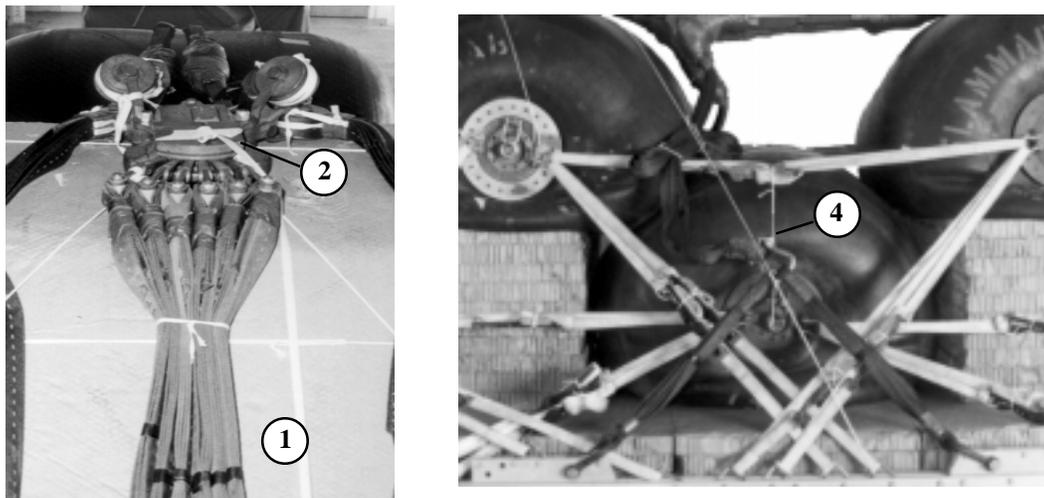


- ① Install the extraction force transfer coupling system in accordance with FM 10-500-2/TO13C7-1-5.
- ② Use a 9-foot (2-loop), type XXVI nylon sling as a deployment line (not shown).
- ③ Use the rear mounting holes for the EFTC bracket and 28-foot cable.

Figure 11-62. Extraction system installed

11-65. Installing the Release System

Install the release system as shown in Figure 11-63.



Step:

1. Place and secure a 96-inch by 36-inch piece of honeycomb from the separator to the top of the rear drum, securing it with type III nylon cord.
2. Attach the suspension slings and the riser extensions to the M-2 release according to FM 10-500-2/TO 13C7-1-5. Secure the release to the platform with type III nylon cord.
3. S-fold and tie any slack in the suspension slings with 1/4-inch cotton webbing (not shown).
4. Secure the large clevis attached to the folded 20-foot suspension sling to the lashing installed between the top two drums with a piece of type III nylon cord.

Figure 11-63. Release system installed

11-66. Installing Provisions for Emergency Restraints

Select and install provisions for the emergency restraints according to the emergency aft restraint requirement table in FM 10-500-2/TO13C7-1-5.

11-67. Placing Extraction Parachutes

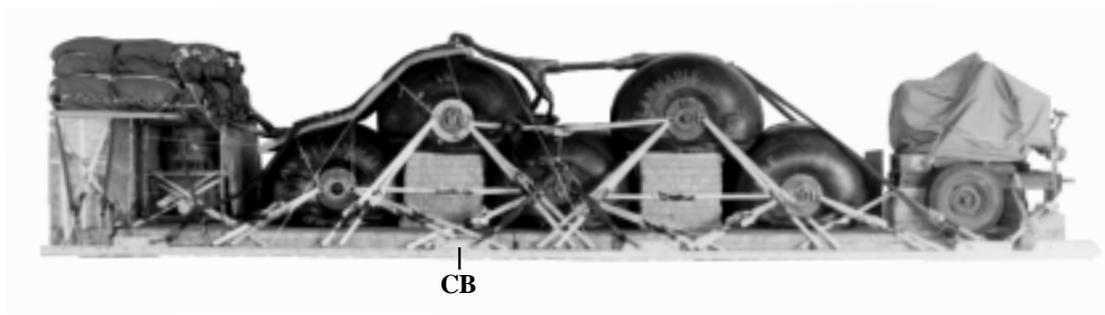
Select the extraction parachute and extraction line needed using the extraction line requirements table in FM 10-500-2/TO13C7-1-5. Place the extraction line on the load for installation in aircraft.

11-68. Marking Rigged Load

Mark the rigged load according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure 11-64. Complete Shipper's Declaration for Dangerous Goods form. If the load varies from the one shown, the weight, height, CB, and parachute requirements must be recomputed.

11-69. Equipment Required

Use the equipment listed in Table 11-3 to rig this load.



RIGGED LOAD DATA

WEIGHT _____ **28,855 POUNDS**

MAXIMUM WEIGHT _____ **30,355 POUNDS**

HEIGHT _____ **75 INCHES**

WIDTH _____ **108 INCHES**

LENGTH _____ **398 INCHES**

OVERHANG _____ **FRONT 18 INCHES**
REAR 22 INCHES

CENTER OF BALANCE: FROM THE FRONT EDGE OF THE PLATFORM:
198 INCHES

Figure 11-64. Five 500-gallon drums with a pump and separator rigged

Table 11-3. Equipment required for rigging five 500-gallon drums with a pump separator for low velocity airdrop on a type V platform

National Stock Number	Item	Quantity
8040-00-273-8713	Adhesive, paste, 1-gal	As Required
4030-00-090-5354	Clevis, suspension, 1-in (large)	11
8305-00-242-3593	Cloth, cotton duck, 60-in	As Required
4020-00-240-2146	Cord, nylon III, 550-lb	As Required
1670-01-326-7309	Coupling, airdrop, extraction force transfer with cable, 28ft	1
	Cover:	
1670-00-360-0328	Clevis, large	1
1670-00-360-0329	Link, type IV	5
8135-00-664-6958	Cushioning material, packaging, cellulose wadding	As Required
1670-01-183-2678	Leaf, extraction line, (line bag)	2
	Line, extraction:	
1670-01-062-6313	60-ft (3-loop), type XXVI (for C130)	1
1670-01-107-7651	140-ft (3-loop), type XXVI (for C141, C5, and C17)	1
1670-01-064-4452	Line, drouge (C17) 60-ft (1-loop), type XXVI	1
	Link assembly:	
1670-00-782-2752	Three-point, 5 1/2-in	2
1670-00-783-5988	Type IV	5
	Two-point	
5306-00-435-8994	Bolt, 1-in diam, 4-in long	1
5310-00-232-5165	Nut, 1-in, hexagonal	1
1670-00-003-3454	Plate, side, 5 1/2-in	1
1670-00-007-3414	Space, large	1

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Table 11-3. Equipment required for rigging five 500-gallon drums with a pump separator for low velocity airdrop on a type V platform (continued)

National Stock Number	Item	Quantity
5315-00-010-4657	Nail, steel wire, common, 6d	As required
1670-00-753-3928	Pad, energy-dissipating (honeycomb)	39 sheets
5530-00-220-6274	Lumber, 2 by 4-in	As required
5530-00-618-8073	Plywood, 3/4-in:	4 sheets
1670-01-016-7841	Parachute: Cargo: G-11C Cargo extraction	6
1670-00-040-8135	28ft	2
1670-01-063-3715	Drouge, 15-ft (C17), with tow plate	1
	Platform, airdrop, type V, 32ft	1
1670-01-353-8425	Bracket, assembly, coupling	1
1670-01-162-2372	Clevis assembly, type V	72
1670-01-353-8424	Extraction bracket assembly	1
1670-01-247-2389	Suspension link	8
1670-01-162-2381	Tandem link	2
1670-01-097-8816	Release, cargo parachute, M-1	1
	Sling, cargo, airdrop	
	Suspension and lifting:	
1670-01-062-6308	16-ft (4-loop), type XXVI nylon webbing	2
1670-01-062-6306	3-ft (4-loop), type XXVI nylon webbing	6
1670-01-064-4453	20-ft (4-loop), type XXVI nylon webbing	2
1670-01-062-6305	9-ft (4-loop), type XXVI nylon webbing	2
	For deployment:	
1670-01-062-6304	9-ft (2-loop), type XXVI nylon webbing	1
	For riser extension:	
1670-01-062-6314	60-ft (3-loop), type XXVI nylon webbing	5
1670-01-062-6302	20-ft (2-loop), type XXVI nylon webbing	5

Table 11-3. Equipment required for rigging five 500-gallon drums with a pump separator for low velocity airdrop on a type V platform (continued)

National Stock Number	Item	Quantity
1670-01-062-6305	Link, assembly, coupling, 3-point	2
1670-00-040-8219	Knife, multi, strap, parachute release	2
7510-00-266-5016	Tape, PSA, cloth back, 2-in	As required
1670-00-937-0271	Tiedown assembly, 15-ft	72
	Webbing:	
8305-00-268-2411	Cotton, 1/4-in, type I	As required
8305-00-082-5752	Nylon, tublar, 1/2-in	As required
8305-00-263-3591	Type VIII	As required