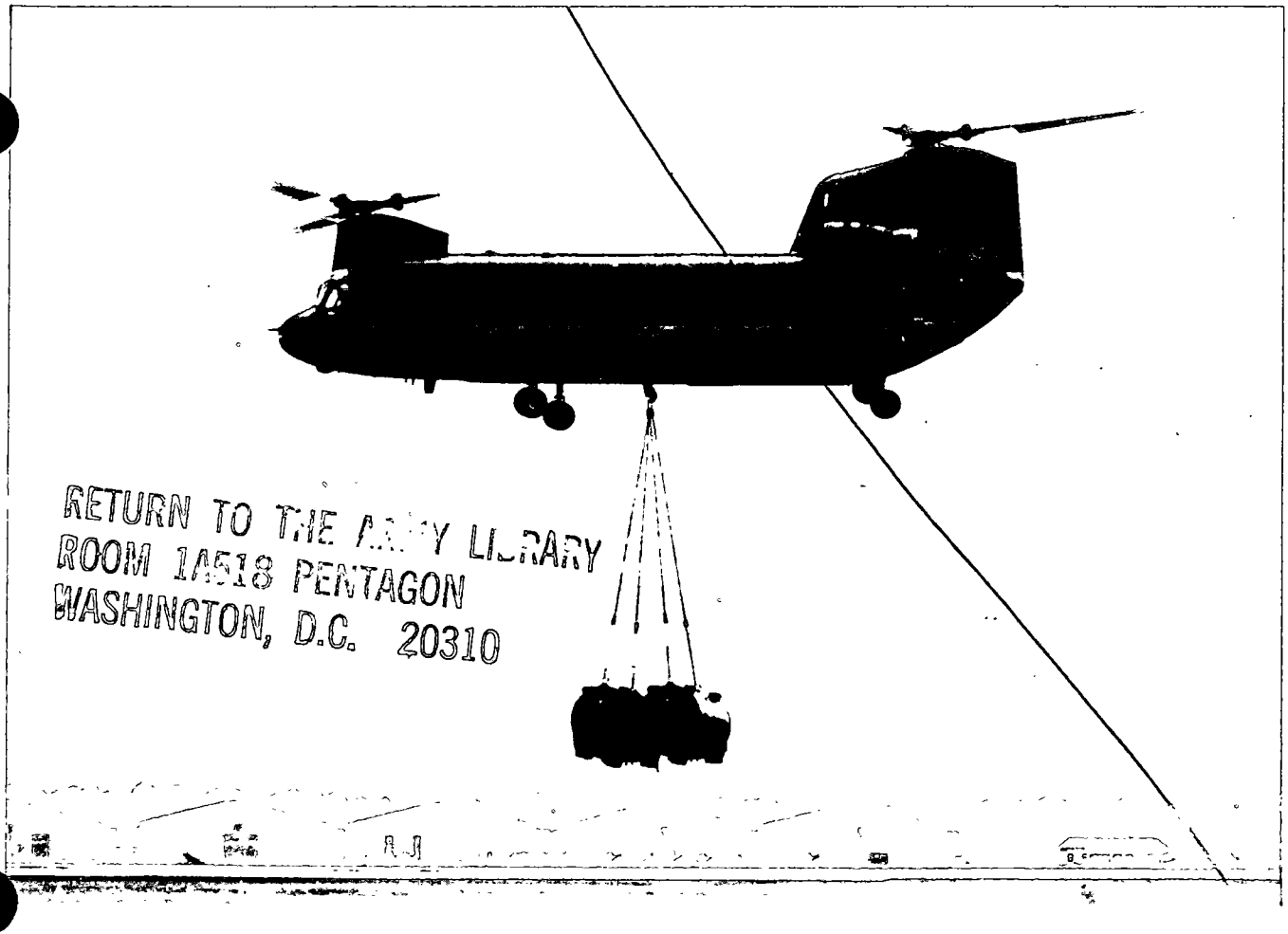
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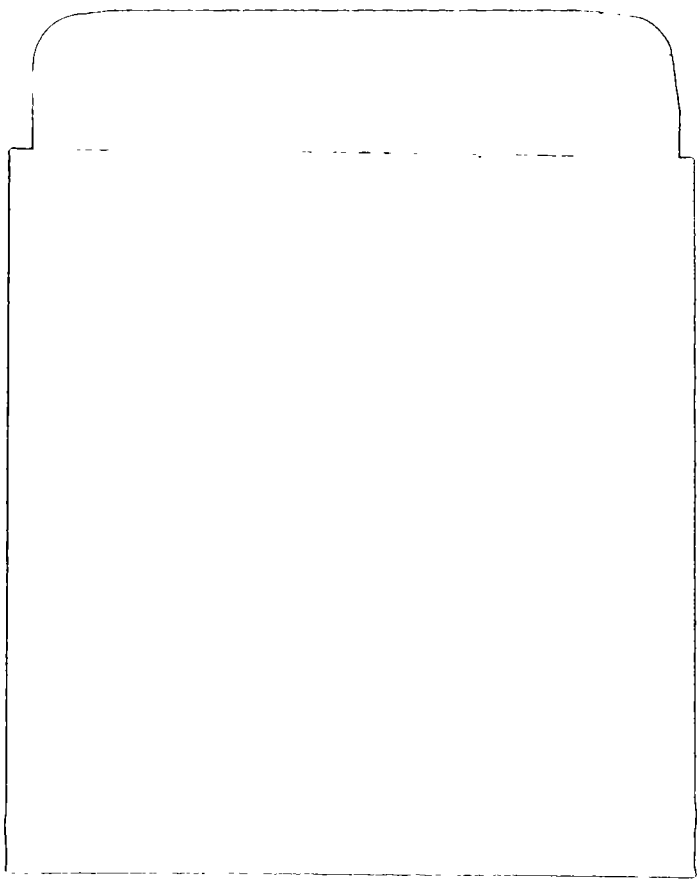
AIR TRANSPORT PROCEDURES

TRANSPORT OF NIKE-HERCULES WARHEAD SECTION IN SHIPPING AND STORAGE CONTAINER, M409, BY US ARMY HELICOPTERS



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Immediate Action
INTERIM CHANGE

FM 55-250
INTERIM CHANGE
NO. 101
Expires 17 December 1980

AIR TRANSPORT PROCEDURES

TRANSPORT OF NIKE-HERCULES WARHEAD SECTION IN SHIPPING AND STORAGE CONTAINER, M409, BY US ARMY HELICOPTERS

This interim change is forwarded to the field to eliminate or modify a policy, procedure, or other specification that could result in loss of life, personal injury, or destruction of property; expires 1 year from date of publication and will be destroyed at that time unless sooner superseded by a formal printed change; is being distributed by 1st class mail through the publications pinpoint distribution system to all holders of FM 55-250; is, as an interim measure, issued in other than page-for-page format; and will be included in FM 55-250 when revised.

Page 2-1. Paragraph 2-1d(3) is added:

2-1d(3). The warhead section faces aft (cover end of container, M409, must face aft).

Page 3-1. Paragraph 3-1d is superseded as follows:

3-1d. The cover end of the container must be faced aft for internal air transport. (Figures in this manual show the cover end of the container facing forward; however, the cover end must now be faced aft. Corrected figures will be shown in the revised FM 55-250.) Container center of balance is approximately 51 inches (1.30 m) from the aft end (end of skids) and is marked on the container.

Page 4-1. Paragraph 4-1a(2)(c) is superseded as follows:

4-1a(2)(c). Position container (cover end faced away from helicopter) on the conveyors, using forklift or crane.

Page 4-1. Paragraph 4-1a(2)(d) is superseded as follows:

4-1a(2)(d). Connect two CGU-1/B tiedown devices, then place them around the container and conveyors, as shown in figure 4-3, to prevent container from being pulled off the conveyors during loading.

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Page 4-4. Paragraph 4-1b(2)(c) is superseded as follows:

4-1b(2)(c). Position container (cover end faced away from helicopter) on the conveyors, using forklift or crane.

Page 4-4. Paragraph 4-1b(2)(d) is superseded as follows:

4-1b(2)(d). Connect two CGU-1/B tiedown devices, then place them around the container and conveyors, as shown in figure 4-3, to prevent container from being pulled off the conveyors during loading.

Page 4-6. The following CAUTION is added after paragraph 4-1b(3):

CAUTION

Loading procedures in paragraphs 4-1c, 4-1d, and 4-1e, for transport of the container, M409, by CH-54 helicopter universal military pod, are changed to show that the cover end of the container must face aft in the pod. Therefore, the procedures for loading the pod are revised to correspond with those shown above for loading the CH-47 helicopter.

(MTT-TRC)

By Order of the Secretary of the Army:

E. C. MEYER
General, United States Army
Chief of Staff

Official:

J. C. PENNINGTON
Major General, United States Army
The Adjutant General

DISTRIBUTION:

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FIELD MANUAL
No. 55–250

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, *3 November 1978*

AIR TRANSPORT PROCEDURES

TRANSPORT OF NIKE-HERCULES WARHEAD SECTION IN SHIPPING AND STORAGE CONTAINER, M409, BY US ARMY HELICOPTERS

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(Front cover) CH–47 helicopter transport of Nike-Hercules warhead section shipping and storage containers, M409, using sling, helicopter, cargo carrying external.

*This manual supersedes TM 55–1100–250–12–1, 15 October 1974.

CHAPTER 1

INTRODUCTION

1–1. Purpose and Scope

a. This manual presents Department of the Army approved procedures for internal and external transport of the Nike-Hercules warhead section in the shipping and storage container, M409 (also referred to as "item"), by US Army helicopters, This manual pertains to the UH–1-series, CH–47, and CH–54 helicopters. Materials and qualified personnel needed to prepare, load, tie down, and unload, or to rig and derig, the item are prescribed herein. Where approriate, metric equivalent are given in parentheses following the dimension or other measurement. References are shown in appendix A.

b. The internal transport procedures in this manual apply when the warhead section is transported by CH–47 helicopter or by universal military pod attached to the CH–54 helicopter. The described internal load of two warhead sections for the CH–47 and the CH–54 pod is a maximum load. The external transport procedures apply when one warhead section is transported by UH–1-series helicopter having an allowable cargo load capacity equal to or greater than the weight of the load, or when one or two warhead sections are transported by CH–47 or CH–54 helicopter. Additional internal cargo, including different types of nuclear weapons and/or personnel within allowable load limits and restrictions prescribed by AR 50–5 and pertinent safety regulations (app), may be transported.

c. Times given to prepare, load, tie down, and unload, or to rig and derig, the loads described in this manual may vary, depending upon existing conditions.

1–2. Reporting of Publication Improvements

Users of this publication are encouraged to recommend changes and submit comments for its improvement. Comments should be prepared on DA Form 2028 (Recommended Changes to Publications and Blank Forms) and forwarded to Director, Military Traffic Management Command Transportation Engineering Agency, ATTN: MTT–TRP, PO Box 6276, Newport News, VA 23606 (electrically transmitted messages should be addressed to: DIRMT-MCTEA FT EUSTIS VA//MTT–TRP//).

CHAPTER 2

GENERAL SAFETY AND SECURITY MATTERS

WARNING

The Nike-Hercules warhead section is not to be jettisoned under any circumstances.

2–1. Warnings

The following warnings will be observed by personnel performing operations, procedures, and practices that are included or implied in this manual. Disregard for these warnings could result in personal injury or loss of life.

a. Prior to each nuclear cargo mission, the helicopter commander will be familiar with provisions of AR 50–5 and AR 95–27 and insure compliance therewith. In addition, the commander will become familiar with the security, safety, and technical peculiarities of the cargo that may affect air transport. Flight plans will include provisions for avoiding built-up and heavily populated areas. When transporting the warhead section in the universal military pod by CH–54 helicopter, the pod must be secured to the helicopter to preclude jettisoning the pod deliberately or inadvertently. Procedures for securing the pod to preclude jettisoning are prescribed in TM 55–1520–217–10/1 and TM 55–1520–217–10/2.

b. To determine compatibility of any other nuclear weapons or other cargo as authorized by chapter 4, AR 50–5, and chapter 1, AR 55–203, for transport with the warhead section, ordnance support channels must be consulted. Information on compatibility is contained in TM 39–45–51C and TM 38–250, which are distributed to major headquarters and to direct support and general support levels. Restrictions listed in TM 39–20–7 will not be exceeded when additional types of nuclear weapons are transported along with the warhead section.

c. Emergency destruction procedures for the warhead section are contained in TM 39–50–8. Normally, emergency-destruct materials will not be carried on the same helicopter as nuclear weapons. In the isolated case where operational necessity limits the availability of escort aircraft, the theater commander may authorize emergency-destruct materials (including blasting caps) to be transported in the load-carrying helicopter. Such materials will be in packagings authorized for transportation, isolated from weapons as far as possible, and tied down so as to prevent movement. Only the number of destruct charges and blasting caps necessary to destroy the warhead section will be carried aboard. Blasting caps in their container (recommend use of M2 or M19 series ammunition boxes) will be tied down separately and surrounded by a restrained sandbag barrier. Transport of electric blasting caps in helicopters is governed by TM 9–1300–206.

d. The warhead section will be loaded and tied down as prescribed in this manual except that it may be repositioned for helicopter operational reasons, or when loading additional nuclear weapons or other cargo and/or mission personnel. If a location other than that shown in the respective tiedown diagram is used, the helicopter commander must insure that—

(1) The number and load capacity of the tiedown devices are as prescribed in this manual.

(2) Tiedown devices restraining the item are secured to tiedown fittings in the same location relative to the item as those fittings used in the pertinent tiedown diagram. Required restraint will be provided when the depicted tiedown pattern is maintained.

2–2. Operational Precautions

The following operational precautions will be observed during loading, rigging, tiedown, transport, and unloading of the warhead section.

a. Web strap tiedown assemblies and cargo slings, as used to secure or sling-transport the items described in this manual, are limited to a maximum time of usage (useful life) of 36 months. The time of usage will commence at the time the tiedowns and slings are unpackaged for use by the using organization. At that time they will be marked, using stencil ink TT–I–1795 (any contrasting color), with the current date (month and year) in at least ½-inch-high letters near the hook end of the strap.

b. Prior to each usage, tiedowns and slings will be inspected for burns, tears, punctures, or cuts. Additionally, metal items will be inspected for improper operation, cracks, or distortion. If any of these conditions exist, or if the time of usage exceeds 36 months, the tiedowns or slings must be replaced. No strength testing of tiedowns or slings will be conducted. Additional storage, inspection, and maintenance criteria for tiedowns and slings are prescribed by 55–450-series technical manuals (app).

c. Web strap tiedown assemblies in use more than 36 months may be used to transport nuclear weapon trainers and training devices. However, the 36-month useful life criteria for tiedowns will still apply when transporting the weapon trainers and training devices, and other cargo within the same helicopter or pod transporting the items described in this manual.

d. Pad and tape tiedown assemblies, safety restraining device, and slings at points of contact with the item to prevent abrasion of webbing.

e. Movement of the warhead section container must be controlled to prevent injury to personnel or damage to the item, helicopter, or pod. During winching of the container, a safety restraining device (web strapping or equivalent) will be used. Attach strapping to the item and pass the free end through a strap fastener (NSN 1670–00–360–0340 or equivalent), which is attached to a tiedown fitting in the forward part of the helicopter or pod. The free end of the strapping is then *manned outside, to the rear, and to one side of the helicopter or pod.* As the container is winched, slack is taken out of the strapping so that the container will be restrained if the winch or cable fails. Safety restraining devices identified in paragraph 4–67, TM 55–450–15, may be used.

f. During winching operations, the area behind the container must be cleared of personnel, and only necessary personnel will be in the cargo compartment. Personnel must not step across taut winch cable.

g. To prevent movement of parking shoring during loading operations, secure a tiedown chain across cargo compartment forward of cargo tiedown location and butt shoring against chain.

h. When attaching tiedown devices to cargo and to tiedown fittings, approximately equal tension must be maintained throughout tiedown arrangements. Tighten the tiedowns to prevent movement of cargo, and secure loose ends of straps. Tiedowns must be checked during flight and tightened as necessary.

i. Security and safety measures relative to security personnel, fire, or emergency destruction procedures, as established by pertinent publications (app), will be observed during all phases of air transport. All operations described herein will be in strict compliance with AR 50–105, TM 9–1300–206, and TM 9–1100–250–12.

j. Passenger seats must be available for the minimum essential security personnel (officer courier and guard).

k. The high noise level of helicopter engines and helicopter auxiliary power unit can cause permanent damage to hearing. All personnel working in the vicinity will wear hearing protectors and avoid entering engine noise danger area. In addition, external cargo hookup personnel will wear goggles and protective headgear (hard hat, steel helmet, or flight helmet), and will use a static electricity discharge probe.

l. Helicopters will be searched and inspected for unauthorized personnel or equipment and any possible sabotage. Entry controls will be established.

CHAPTER 3

AIR TRANSPORTABILITY AND HANDLING DATA

3–1. General

a. The container, M409, with Nike-Hercules warhead section will normally be air-transported as an internal load. However, under emergency conditions, the item can also be transported as an external load (para 4–2). The determination that external transport is justifiable will be approved by the theater commander.

b. Dimensions, volume, and approximate weight of the container, M409 (fig 3–1), with Nike-Hercules warhead section are as follows:

Length	*Width*	*Height*	*Volume*	*Weight**
99.0 in. (2.51 m)	54.0 in. (1.37 m)	62.0 in. (1.57 m)	192 cu ft (5.43 cu m)	3,068 lb (1,392 kg)

*Weight of the empty container, M409, is approximately 1,945 pounds (882 kg).

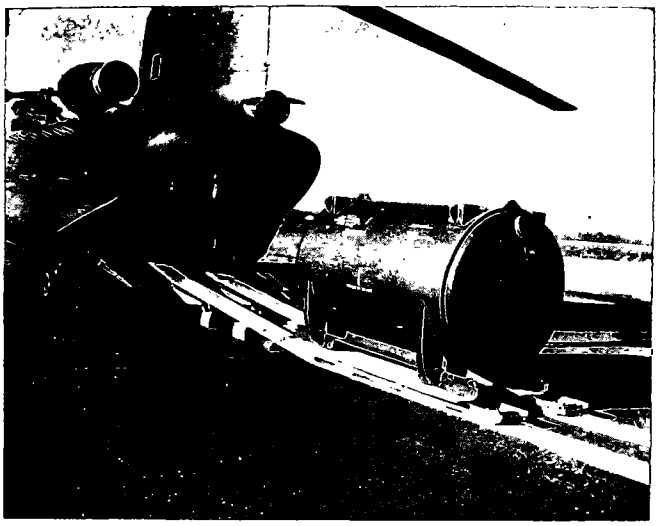


Figure 3–1. Shipping and storage container, M409, for Nike-Hercules warhead section. Container is positioned for loading into CH–47 helicopter.

c. The item is too large for internal transport by UH–1-series helicopters.

d. The container may be faced either forward or aft for internal air transport. (Tiedown diagrams in this manual show the container facing forward.) Container- center of balance is approximately 51 inches (1.30 m) from the aft end (end of skids) and is marked on the container.

e. The container must be inspected for damage other than minor scratches and abrasions. If container is damaged to such an extent that its contents or functions might be affected, notify the support unit and submit a report in accordance with chapter 5, AR 50–5.

f. Insure that latches securing the container cover are tight.

g. If wheeled or roller conveyor sections are not available, the container may be winched on its skids over the shoring.

h. Plywood may be used as parking and rolling shoring in place of all or part of the 2- by 12-inch lumber shoring, except blocking shoring, as prescribed in paragraph 4–1. The plywood shoring must be at least ½-inch thick and 16 inches wide under each conveyor section to provide required distribution of container weight on helicopter or pod ramp and floor.

i. Plywood, 4- by 8-foot by ½-inch, may be used between container and conveyors, but is not required.

j. When attaching web strap tiedown assemblies to the rear of the container, M409, padding must be used to prevent chafing between the tiedown assemblies and the container skid. Two-inch pressure sensitive tape (NSN 7510–00–663–0196) and cushioning material, cellulosic, longitudinally compressed (NSN 8135–00–808–6446), or suitable substitutes, will be used throughout the tiedown arrangement where abrasion may occur.

k. If tiedown points on container, M409, are too large for direct attachment of the fixed snap hook on the CGU–1/B tiedown device, a shackle or clevis assembly must be used to make the attachment. The clevis assembly (NSN 1670–00–360–0304), or equivalent, attached to the oversize tiedown point is suitable for the identified purpose.

l. The helicopter center-of-balance must be computed for each load to include number and location of security personnel.

3–2. Time Required

a. Four persons can prepare, load, and tie down each container in the helicopter or pod in approximately 30 minutes.

b. Four persons can unload each container from the helicopter or pod in approximately 15 minutes.

CHAPTER 4

TRANSPORT BY HELICOPTER

4–1. Internal Transport

a. Materials and Procedures for Transporting one Nike-Hercules Warhead Section, in Container, M409, by CH–47 Helicopter.

(1) *Materials.*

(*a*) Parking shoring: two pieces, 2- by 12-inch by 10-foot.

(*b*) Rolling shoring: two pieces, 2- by 12-inch by 12-foot; four pieces, 2- by 12-inch by 8-foot.

(*c*) Bridge shoring: one sheet of plywood, 4- by 8-foot by ½-inch (may be used but is not required between container skids and conveyors).

(*d*) Blocking shoring: approximately 22 pieces, 2- by 12- by 20-inch.

(*e*) Wheeled or roller conveyor: two sections, 8-foot (NSN 3910–00–764–0229), or equivalent.

(*f*) Restraint straps: two CGU–1/B tiedown devices, or equivalent.

(*g*) Chain (type used with C–2 or MB–1 tiedown device): two, 10,000-pound capacity, or equivalent.

(*h*) Clevis assembly, suspension, air delivery (NSN 1670–00–360–0304), or equivalent, as required.

(*i*) Truck, forklift or crane: one, load-tested, 6,000-pound minimum capacity.

(2) *Loading.*

(*a*) Position rolling shoring and two helicopter auxiliary loading ramps to align with skids of container. Use parking shoring as rolling shoring.

(*b*) Position shoring and conveyors, rollers down, as shown in figures 4–1 and 4–2. Use 8-foot shoring on ramp and also as first extension into the cargo compartment. Place two 20-inch blocks between conveyors to maintain alignment while item is being towed into helicopter.

(*c*) Position container (cover end towards helicopter) on the conveyors (fig 3–1), using ftorklif or crane.

(*d*) Connect two CGU–1/B tiedown devices, then place them around the forward (cover) end of container and aft end of conveyors, as shown in figure 4–3, to prevent container from being pulled off the conveyors during loading.

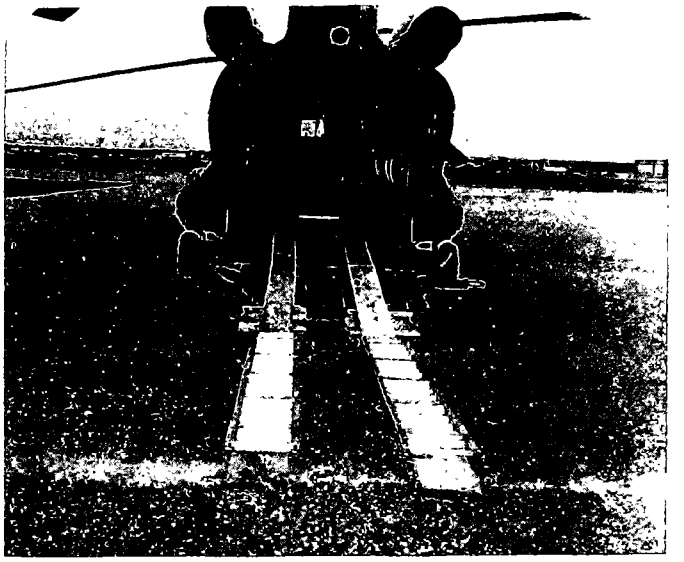


Figure 4–1. Rolling, blocking, and parking shoring and conveyors positioned for loading Nike-Hercules warhead section shipping and storage container, M409, into CH–47 helicopter.

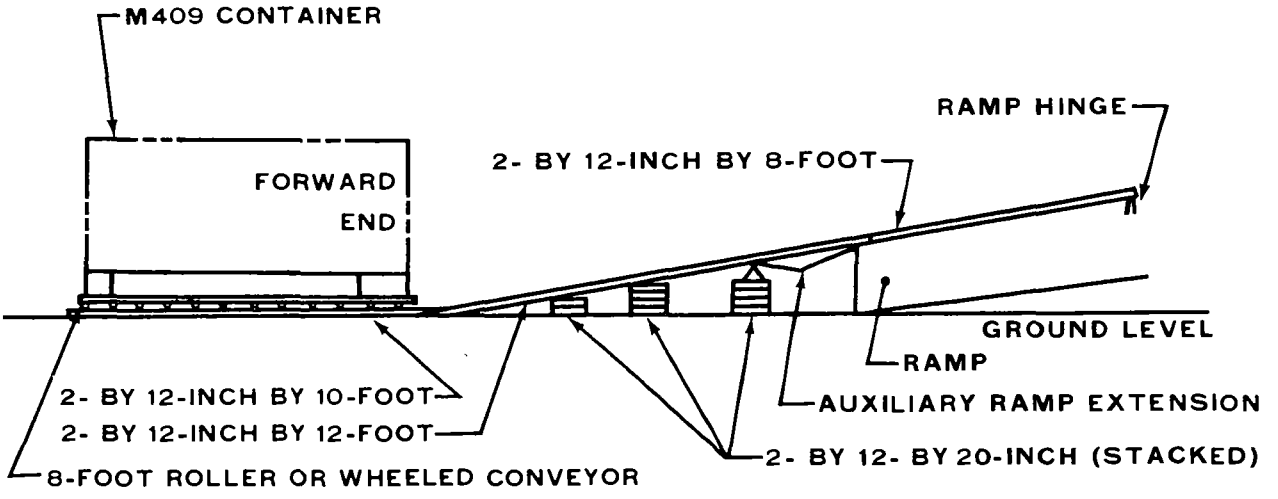


Figure 4–2. Side view schematic of rolling and blocking shoring positioned for loading Nike-Hercules warhead section shipping and storage container, M409, into CH–47 helicopter.

(*e*) Form a bridle by passing the chain through towing eyes on front end of the container. Attach helicopter-winch cable hook to the bridle, and safety tie the hook to prevent accidental release. Safety tying the hook is not required when the hook is equipped with a serviceable safety latch.

(*f*) Place a wood block at ramp hinge, beneath towing cable, to protect helicopter floor.

(*g*) Position guides to adjust shoring, observe clearances, and signal winch operator as necessary

(*h*) Winch container onto helicopter ramp, then reposition ground-level shoring into the helicopter at container tiedown location.

(*i*) Winch container to its tiedown location and apply fore and aft restraints.

(*j*) Release tension on winch cable. The bridle and cable may remain attached to the container for use in unloading.

(*k*) Tie down the container (on the conveyors and shoring) in accordance with figure 4–4 and table 4–1. If container tiedown provisions are too large for direct attachment to the snap hook on tiedown device, use clevis assembly to make the attachment.

(*l*) Reposition materials required during unloading, then tie down as directed by the helicopter commander.

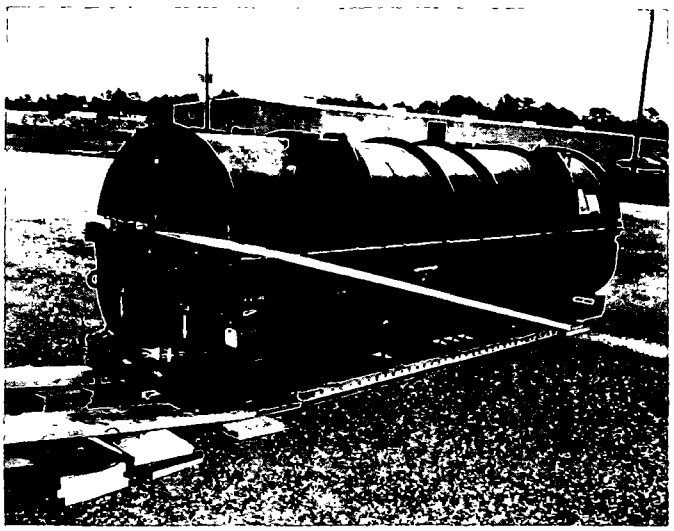
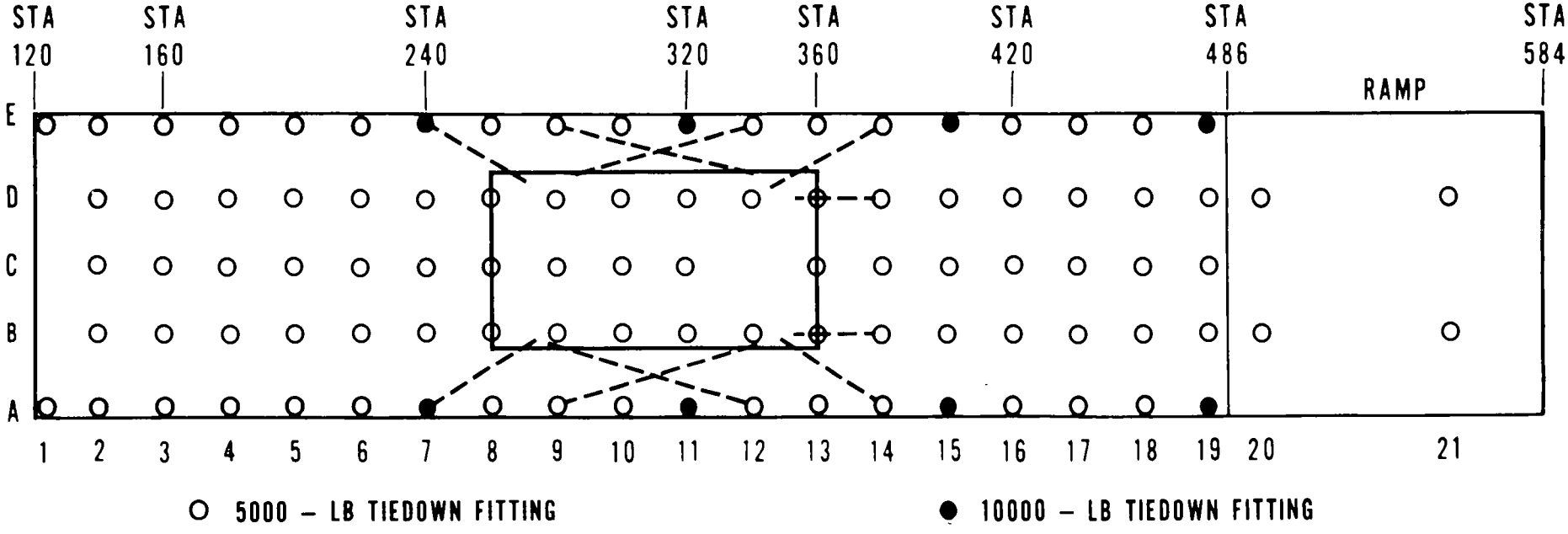


Figure 4–3. Placement of CGU–1/B tiedown devices to restrain container during loading. Shown is the M483 container for Pershing warhead section.

(3) *Unloading.* Unloading procedures are esseetially the reverse of loading procedures. Use thn helicopter winch as a safety restraint when container is manhandled from the helicopter. Care must be exercised when container passes over ramp hinge.



NOTE: UTILITY HATCH DOOR IS LOCATED IN THE CENTER OF THE FLOOR BETWEEN STATIONS 320 AND 360.

DESCRIPTION OF ITEM	ITEM FACING	LOCATION OF REFERENCE POINT		LOCATION OF CG (STA)	APPROX WT (LB)
		REFERENCE POINT	STATION		
CONTAINER, M409, WITH NIKE-HERCULES	COVER END	FORWARD EDGE	260	308	3068
WARHEAD SECTION	FORWARD	OF CONTAINER			

Figure 4–4. Tiedown diagram for one Nike-Hercules warhead section shipping and storage container, M409, in CH–47 helicopter.

Table 4–1. Tiedown Data for One Nike-Hercules Warhead Section Shipping and Storage Container, M409, in CH–47 Helicopter

Tiedown fitting		Tiedown device*		Attach to item
Designation	Capacity in 1,000 lb	Type	Capacity in 1,000 lb	
A7	10	CGU–1/B	5	Left front stacking bracket
E7	10	CGU–1/B	5	Right front stacking bracket
A9	5	CGU–1/B	5	Left rear inner tiedown point
E9	5	CGU–1/B	5	Right rear inner tiedown point
A12	5	CGU–1/B	5	Left front inner tiedown point
E12	5	CGU–1/B	5	Right front inner tiedown point
A14	5	CGU–1/B	5	Left rear stacking bracket
E14	5	CGU–1/B	5	Right rear stacking bracket
B14**	5	CGU–1/B	5	Left rear tiedown point
D14**	5	CGU–1/B	5	Right rear tiedown point

*MC–1 tiedown device may be used.
**Use padding as required to prevent chafing between the tiedown assemblies and the container skids.

b. Materials and Procedures for Transporting two Nike-Hercules Warhead Sections, in Containers, M409, by CH–47 Helicopter.

(1) *Materials.*

(*a*) Parking shoring: four pieces, 2- by 12-inch by 10-foot; two pieces, 2- by 12-inch by 5-foot.

(*b*) Rolling shoring: two pieces, 2- by 12-inch by 12-foot; two pieces, 2- by 12-inch by 8-foot.

(*c*) Bridge shoring: two sheets of plywood, 4- by 8-foot by ½-inch (may be used but is not required between container skids and conveyors).

(*d*) Blocking shoring: approximately 24 pieces, 2- by 12- by 20-inch.

(*e*) Wheeled or roller conveyor: four sections, 8-foot (NSN 3910–007–64–0229), or equivalent.

(*f*) Restraint straps: four CGU–1/B tiedown devices, or equivalent.

(*g*) Chain (type used with C–2 or MB–1 tiedown device): two, 10,000-pound capacity, or equivalent.

(*h*) Clevis assembly, suspension, air delivery (NSN 1670–00–360–0304), or equivalent, as required.

(*i*) Truck, forklift or crane: one, load-tested, 6,000-pound minimum capacity.

(2) *Loading.*

(*a*) Position rolling shoring and two helicopter auxiliary loading ramps to align with skids of container. Use parking shoring as rolling shoring.

(*b*) Position shoring and conveyors, rollers down, as shown in figures 4–1 and 4–2. Use 8-foot pieces on ramp and 5-foot pieces as first extension into the cargo compartment. Use two 10-foot pieces in cargo compartment, aligned with 5-foot pieces. Place two 20-inch blocks between each set of conveyors to maintain alignment while item is being towed into helicopter.

(*c*) Position container (cover end towards helicopter) on the conveyors (fig 3–1), using forklift or crane.

(*d*) Connect two CGU–1/B tiedown devices, then place them around the forward (cover) end of container and aft end of conveyors, as shown in figure 4–3, to prevent container from being pulled off the conveyors during loading.

(*e*) Form a bridle by passing chain through towing eyes on front end of the container. Attach helicopter-winch cable hook to the bridle, then safety tie the hook to prevent accidental release. Safety tying the hook is not required when the hook is equipped with a serviceable safety latch.

(*f*) Place a wood block at ramp hinge, beneath towing cable, to protect helicopter floor.

(*g*) Position guides to adjust shoring, observe clearances, and signal winch operator as necessary.

(*h*) Winch first container onto helicopter ramp, then reposition ground-level shoring into the helicopter at container tiedown location.

(*i*) Winch container to its tiedown location and apply fore and aft restraints.

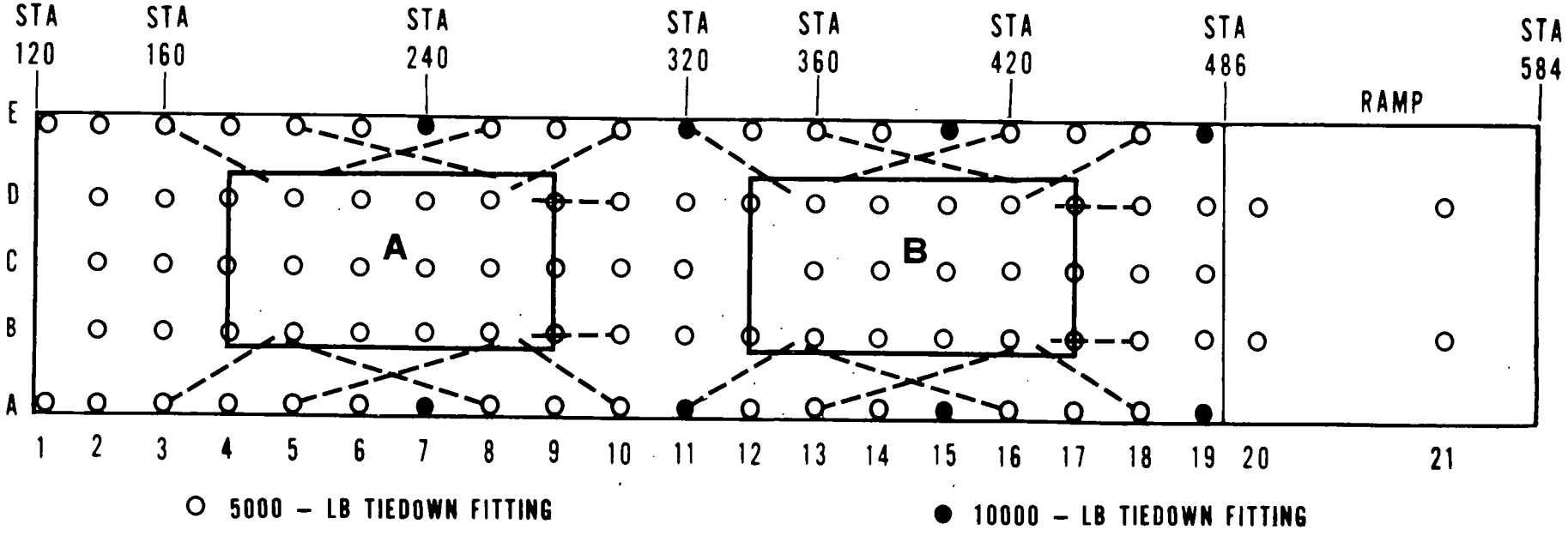
(*j*) Disconnect winch cable hook, pass beneath first container, and attach hook to bridle on second container.

(*k*) Temporarily relocate 10-foot parking shoring from helicopter to ground level, then load second container as prescribed for first container. Position 10-foot shoring at container tiedown position, then winch container to tiedown location.

(*l*) Release tension on winch cable. The bridle and cable may remain attached to the aft container for use in unloading.

(*m*) Tie down the containers (on the conveyors and shoring) in accordance with figure 4–5 and table 4–2. If container tiedown provisions are too large for direct attachment to the snap hook on tiedown device, use clevis assembly to make the attachment.

(*n*) Reposition materials required during unloading, then tie down as directed by the helicopter commander.



NOTE: UTILITY HATCH DOOR IS LOCATED IN THE CENTER OF THE FLOOR BETWEEN STATIONS 320 360.

ITEM	DESCRIPTION OF ITEM	ITEM FACING	LOCATION OF REFERENCE POINT		LOCATION OF CG (STA)	APPROX WT (LB)
			REFERENCE POINT	STATION		
A	CONTAINER, M409, WITH NIKE-HERCULES	COVER END	FORWARD EDGE	180	228	3068
	WARHEAD SECTION	FORWARD	OF CONTAINER			
B	CONTAINER, M409, WITH NIKE-HERCULES	COVER END	FORWARD EDGE	340	388	3068
	WARHEAD SECTION	FORWARD	OF CONTAINER			

Figure 4–5. Tiedown diagram for two Nike-Hercules warhead section shipping and storage containers, M409, in CH–47 helicopter.

Table 4–2. Tiedown Data for Two Nike-Hercules Warhead Section Shipping and Storage Containers, M409, in CH–47 Helicopter

Item	Tiedown fitting		Tiedown device *		Attach to item
	Designation	Capacity in 1,000 lb	Type	Capacity in 1,000 lb	
A	A3	5	CGU–1/B	5	Left front stacking bracket
	E3	5	CGU–1/B	5	Right front stacking bracket
	A5	5	CGU–1/B	5	Left rear inner tiedown point
	E5	5	CGU–1/B	5	Right rear inner tiedown point
	A8	5	CGU–1/B	5	Left front inner tiedown point
	E8	5	CGU–1/B	5	Right front inner tiedown point
	A10	5	CGU–1/B	5	Left rear stacking bracket
	E10	5	CGU–1/B	5	Right rear stacking bracket
	B10**	5	CGU–1/B	5	Left rear tiedown point
	D10**	5	CGU–1/B	5	Right rear tiedown point
B	A11	10	CGU–1/B	5	Left front stacking bracket
	E11	10	CGU–1/B	5	Right front stacking bracket
	A13	5	CGU–1/B	5	Left rear inner tiedown point
	E13	5	CGU–1/B	5	Right rear inner tiedown point
	A16	5	CGU–1/B	5	Left front inner tiedown point
	E16	5	CGU–1/B	5	Right front inner tiedown point
	A18	5	CGU–1/B	5	Left rear stacking bracket
	E18	5	CGU–1/B	5	Right rear stacking bracket
	B18**	5	CGU–1/B	5	Left rear tiedown point
	D18**	5	CGU–1/B	5	Right rear tiedown point

*MC–1 tiedown device may be used.
**Use padding as required to prevent chafing between the tiedown assemblies and the container skids.

NOTE

If flight is continued after unloading only the aft container, the helicopter center of gravity must be recomputed and the forward container moved as necessary to insure that the helicopter is balanced for flight.

(3) *Unloading.* Unloading procedures are essentially the reverse of loading procedures. Use the helicopter winch as a safety restraint when containers are manhandled from the helicopter. Care must be exercised when containers pass over ramp hinge.

c. Materials and Procedures for Transporting one Nike-Hercules Warhead Section, in Container, M409, by CH–54 Helicopter Universal Military Pod in Flight Configuration.

WARNING

Insure that the universal military pod is secured to the CH–54 helicopter to preclude jettisoning the pod either deliberately or inadvertently.

(1) *Materials.*

(*a*) Parking shoring: two pieces, 2- by 12-inch by 12-foot.

(*b*) Rolling shoring: two pieces, 2- by 12-inch by 12-foot; two pieces 2- by 12-inch by 8-foot.

(*c*) Bridge shoring: one sheet of plywood, 4- by 8-foot by ½-inch (may be used but is not required between container and conveyors).

(*d*) Blocking shoring: approximately 36 pieces, 2- by 12- by 20-inch.

(*e*) Wheeled or roller conveyor: two sections, 8-foot (NSN 3910–00–764–0229), or equivalent.

(*f*) Restraint straps: two CGU–1/B tiedown devices, or equivalent.

(*g*) Chain (type used with C–2 or MB–1 tiedown device): three, 10,000-pound capacity, or equivalent.

(*h*) Clevis assembly, suspension, air delivery (NSN 1670–00–360–0304), or equivalent as required.

(*i*) Truck, forklift or crane: one, load-tested, 6,000-pound minimum capacity.

(*j*) Truck: wrecker, medium, 5-ton, 6x6, M543A2, with winch or suitable substitute.

(*k*) Snatch block, tackle, single-sheave: two, NSN 3940–00–239–0372, organic to the M543A2 wrecker, or equivalent block may be used.

(*l*) Plywood: two pieces, ½-inch by 2- by 2-foot, or equivalent.

(2) *Loading.*

(*a*) Position rolling shoring and conveyors, rollers down, as shown in figure 4–6. Use 8-foot pieces as first extension into the pod. Place two 20-inch blocks between conveyors to maintain alignment while item is being towed into pod. Use parking shoring as rolling shoring.

(*b*) Position container (cover end towards pod) on the conveyors (fig 4–6), using forklift or crane.

(*c*) Connect two CGU–1 tiedown devices, then place them around the forward (cover) end of con-

tainer and aft end of conveyors (fig 4–3) to prevent container from being pulled off the conveyors during loading.

(*d*) Form a bridle by passing chain through towing eyes on front end of the container as shown in figure 4–7.

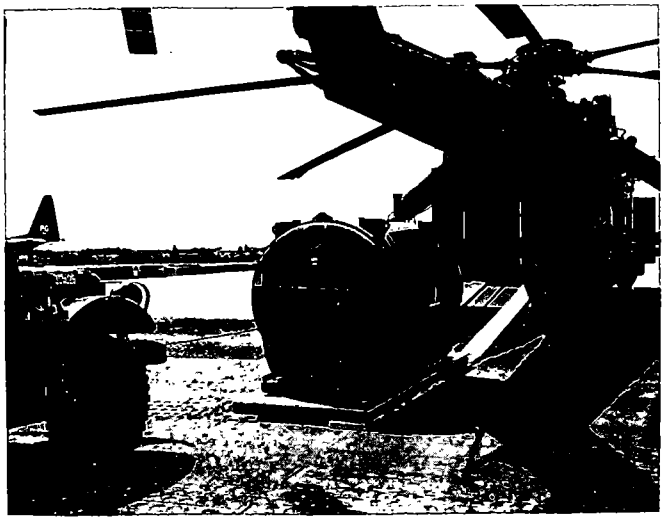


Figure 4–6. Shipping and storage container, M409, for Nike-Hercules warhead section. Container is positioned for loading into CH–54 helicopter universal military pod.

(*e*) Attach snatch blocks, using tiedown chains, to pod tiedown fittings A1 and D1. Adjust chains to insure that container is winched down the centerline of the pod. Place plywood pieces beneath snatch blocks to protect floor. Winching diagram is shown in figure 4–8.

(*f*) Pass towing cable through open snatch blocks, attach cable hook to bridle on container, and safety tie the hook to prevent accidental release. Safety tying the hook is not required when the hook is equipped with a serviceable safety latch. Close and lock blocks. Place wood blocks beneath towing cable (fig 4–7) to protect pod floor.

(*g*) Position guides to adjust shoring, observe clearances and winching cable, and signal truck-winch operator as necessary.

(*h*) Winch container into the pod by either taking up on the truck winch or backing the truck with winch locked. Reposition rolling shoring for use as parking shoring.

(*i*) Winch container to its tiedown location and apply fore and aft restraints.

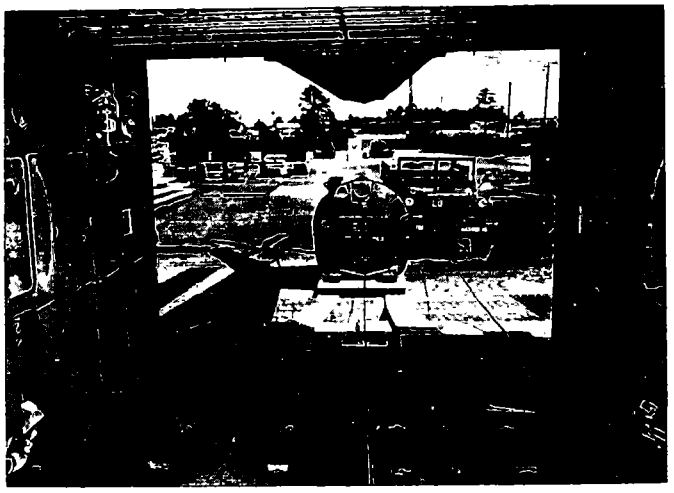


Figure 4–7. Formation of bridle on shipping and storage container, M409, and attachment of truck winch cable hook. Note position of blocks at ramp hinge to protect floor from towing cable.

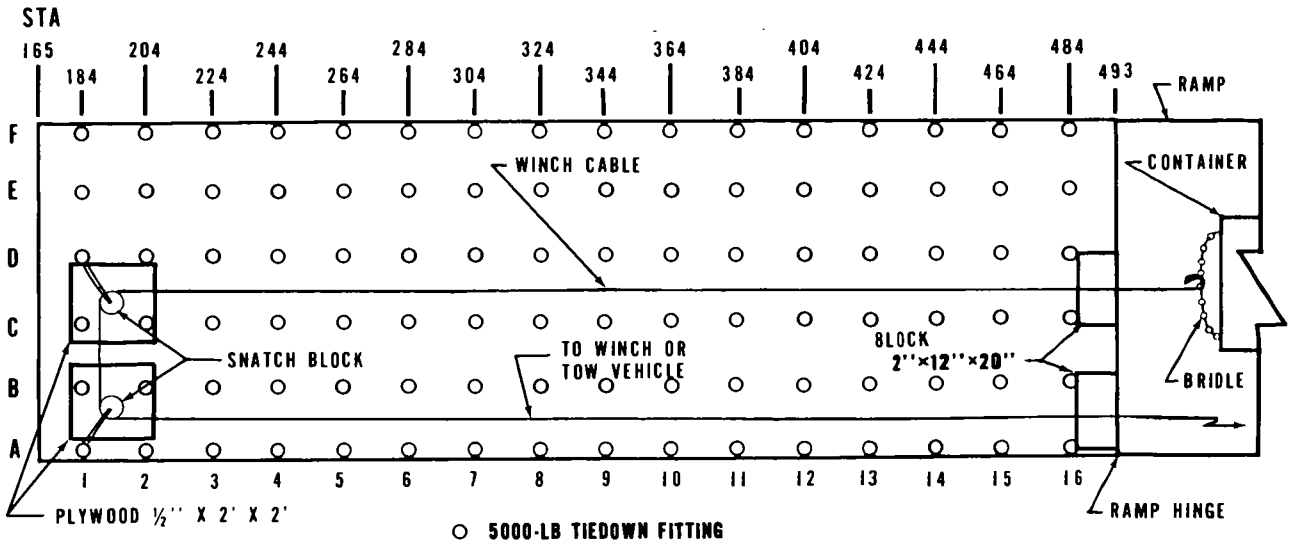


Figure 4–8. Winching diagram for loading Nike-Hercules warhead section shipping and storage container, M409, into CH–54 helicopter universal military pod.

(*j*) Tie down the container (on the conveyors and shoring) in accordance with figure 4–9 and table 4–3, then remove towing cable and blocks. If container tiedown provisions are too large for direct attachment to the snap hook on tiedown device, use clevis assembly to make the attachment.

(*k*) Reposition materials required during unloading, then tie down as directed by the helicopter commander.

(3) *Unloading.* Unloading procedures are essentially the reverse of loading procedures. Use winching cable as a safety restraint when container is manhandled from the pod. Care must be exercised when container passes over ramp hinge.

NOTE

See paragraph 4–1*d* for alternate materials and procedures when CH–54 is not in flight configuration.

d. Alternate Materials and Procedures for Transporting One or Two Nike-Hercules Warhead Sections, in Containers, M409, by CH–54 Helicopter Universal Military Pod With Pod in Other Than Flight Configuration.

(1) The pod may be loaded and unloaded when—

(*a*) The helicopter (CH–54A only) is in a heeled position.

(*b*) The pod four-wheel system is fully retracted and pod is resting on the ground.

(2) Procedures for loading and unloading the pod when in one of the configurations described in (1) above are the same as prescribed in *c* and *e*, above. However, with the pod floor at lower levels, the ramp angle is reduced and less blocking shoring is required.

e. Materials and Procedures for Transporting Two Nike-Hercules Warhead Sections, in Containers, M409, by CH–54 Helicopter Universal Military Pod in Flight Configuration.

WARNING

Insure that the universal military pod is secured to the CH–54 helicopter to preclude jettisoning the pod either deliberately or inadvertently.

(1) *Materials.*

(*a*) Parking shoring: four pieces, 2- by 12-inch by 12-foot.

(*b*) Rolling shoring: two pieces, 2- by 12-inch by 12-foot.

(*c*) Bridge shoring: two sheets of plywood, 4- by 8-foot by ½-inch (may be used but is not required between container and conveyors).

(*d*) Blocking shoring: approximately 36 pieces, 2- by 12- by 20-inch.

(*e*) Wheeled or roller conveyor: four sections, 8-foot (NSN 3910–00–764–0229), or equivalent.

(*f*) Restraint straps: four CGU–1/B tiedown devices, or equivalent.

(*g*) Chain (type used with C–2 or MB–1 tiedown device): four, 10,000-pound capacity, or equivalent.

(*h*) Clevis assembly, suspension, air delivery (NSN 1670–00–360–0304), or equivalent as required.

(*i*) Truck, forklift or crane: one load-tested, 6,000-pound minimum capacity.

(*j*) Truck: wrecker, medium, 5-ton, 6x6, M543A2, with winch or suitable substitute.

(*k*) Snatch block, tackle, single-sheave: two, NSN 3940–00–239–0372, organic to the M543A2 wrecker, or equivalent block may be used.

(*l*) Plywood: two pieces, ½-inch by 2- by 2-foot, or equivalent.

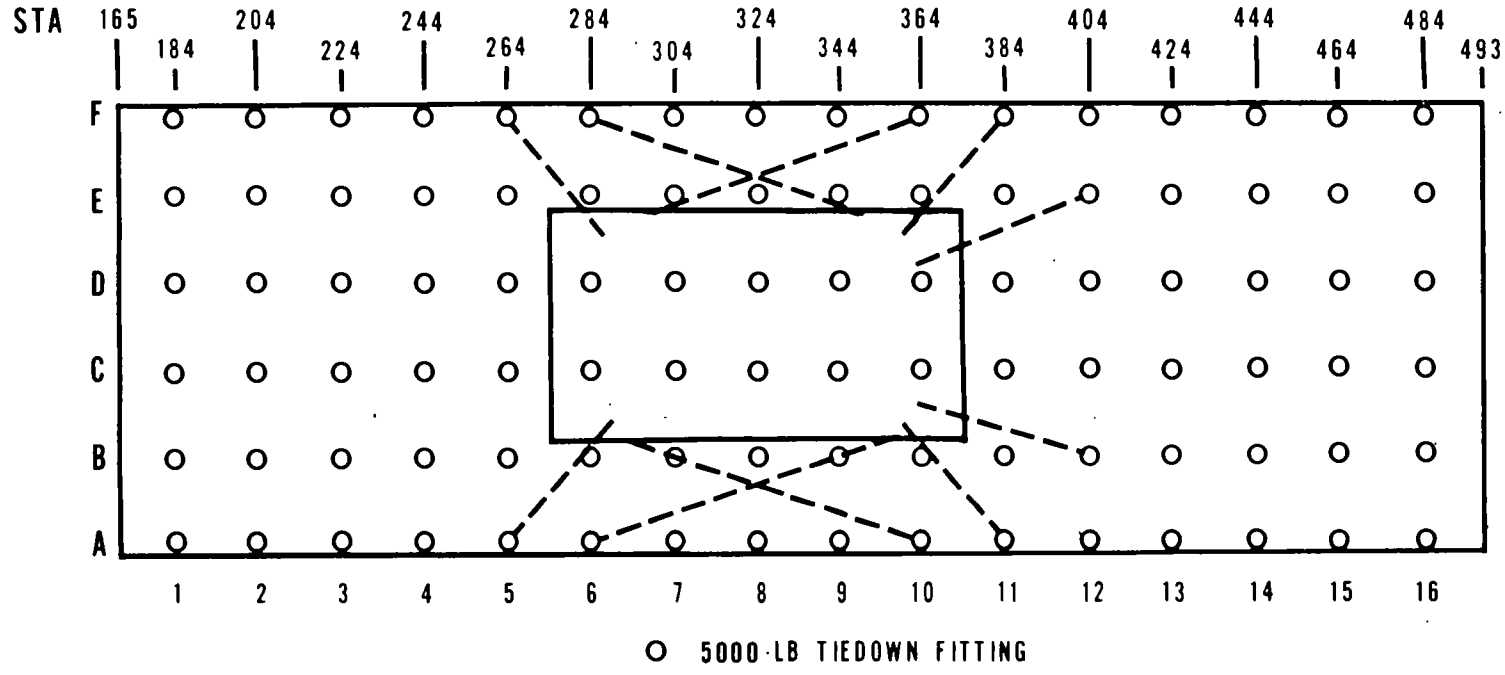
(2) *Loading.*

(*a*) Position rolling shoring and conveyors, rollers down, as shown in figure 4–6, and extend parking shoring into the pod. Place two 20-inch blocks between conveyors to maintain alignment while item is being towed into pod. Use parking shoring as rolling shoring.

Table 4–3. Tiedown Data for One Nike-Hercules Warhead Section Shipping and Storage Container, M409, in CH–54 Helicopter Universal Military Pod

Tiedown fitting		Tiedown device*		Attach to item
Designation	Capacity in 1,000 lb	Type	Capacity in 1,000 lb	
A5	5	CGU–1/B	5	Left front stacking bracket
F5	5	CGU–1/B	5	Right front stacking bracket
A6	5	CGU–1/B	5	Left rear inner tiedown point
F6	5	CGU–1/B	5	Right rear inner tiedown point
A10	5	CGU–1/B	5	Left front inner tiedown point
F10	5	CGU–1/B	5	Right front inner tiedown point
A11	5	CGU–1/B	5	Left rear stacking bracket
F11	5	CGU–1/B	5	Right rear stacking bracket
B12	5	CGU–1/B	5	Left rear tiedown point
E12	5	CGU–1/B	5	Right rear tiedown point

*MC–1 tiedown device may be used.



DESCRIPTION OF ITEM	ITEM FACING	LOCATION OF REFERENCE POINT		LOCATION OF CG (STA)	APPROX WT (LB)
		REFERENCE POINT	STATION		
CONTAINER, M409, WITH	COVER END	FORWARD EDGE OF	274	322	3068
NIKE-HERCULES WARHEAD SECTION	FORWARD	CONTAINER			

Figure 4–9. Tiedown diagram for one Nike-Hercules warhead section shipping and storage container, M409, in CH–54 helicopter univereal military pod.

(*b*) Position container (cover end towards pod) on the conveyors (fig 4–6), using forklift or crane.

(*c*) Connect two CGU–1/B tiedown devices and place them around the forward (cover) end of container and aft end of conveyors (fig 4–3) to prevent container from being pulled off the containers during loading.

(*d*) Form a bridle by passing chain through towing eyes on front end of the container as shown in figure 4–7.

(*e*) Attach snatch blocks, using tiedown chains, to pod tiedown fittings A1 and D1. Adjust chains to insure that container is winched down the centerline of the pod. Place plywood pieces beneath blocks to protect floor. Winching diagram is shown in figure 4–8.

(*f*) Pass towing cable through opened snatch blocks, attach cable hook to bridle on container, and safety tie the hook to prevent accidental release. Safety tying the hook is not required when the hook is equipped with a serviceable safety latch. Close and lock blocks. Place wood blocks beneath towing cable (fig 4–7) to protect pod floor.

(*g*) Position guides to adjust shoring, observe clearances and winching cable, and signal truck-winch operator as necessary.

(*h*) Winch first container onto the pod ramp by either taking up on the truck winch or backing the truck with winch locked. Reposition ground-level shoring into the pod, then winch container to its tiedown location. Apply fore and aft restraints.

(*i*) Form a bridle on second container, then chain snatch blocks to pod tiedown fittings A9 and D9. Adjust chains to insure that container is winched down the centerline of the pod. Place plywood pieces beneath blocks to protect floor. Reposition parking shoring to ground-level for use as rolling shoring.

(*j*) Load second container as prescribed for first container. Stop winching when container is on ramp, then reposition ground-level rolling shoring for use as parking shoring.

(*k*) Winch container to its tiedown location and apply fore and aft restraints. Remove towing cable and snatch blocks. The bridle may remain attached to the container for use in unloading.

(*l*) Tiedown the containers (on the conveyors and shoring) in accordance with figure 4–10 and table 4–4. If container tiedown provisions are too large for direct attachment to the snap hook on tiedown device, use clevis assembly to make the attachment.

(*m*) Reposition materials required during unloading, then tie down as directed by the helicopter commander.

(3) *Unloading.* Unloading procedures are essentially the reverse of loading procedures. Use towing cable as a safety restraint when containers are manhandled from the pod. Care must be exercised when container passes over ramp hinge.

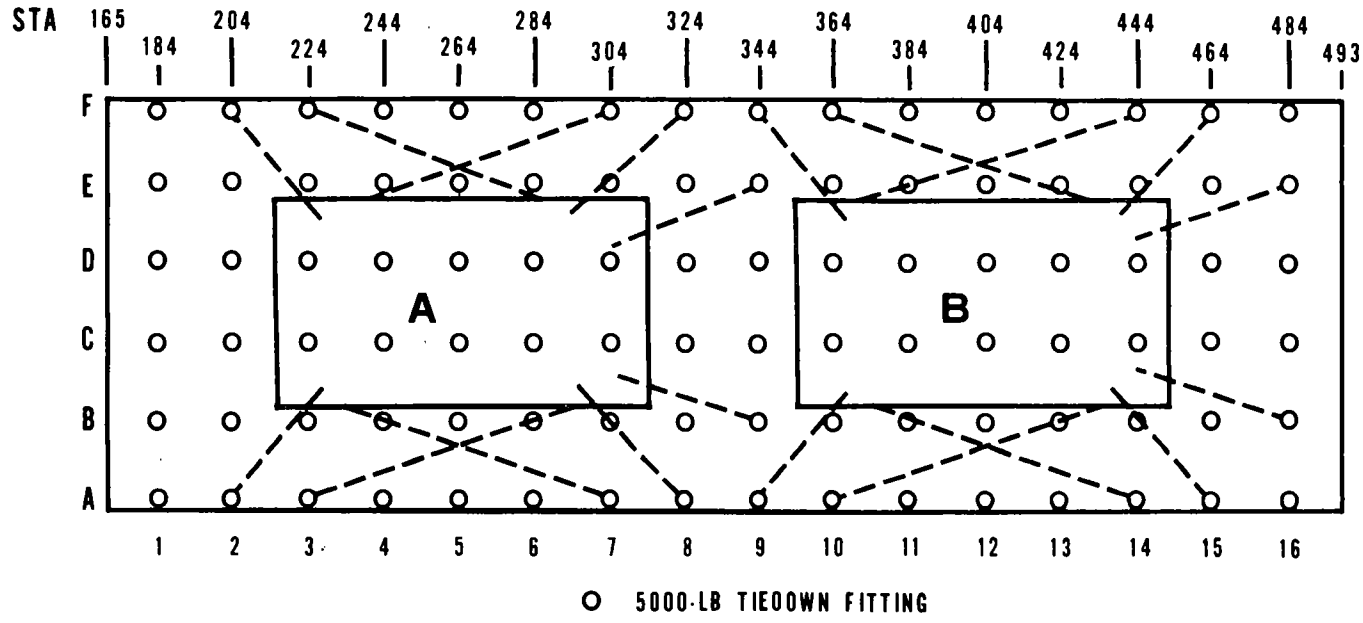
NOTE

See paragraph 4–1*d* for alternate materials and procedures when CH–54 is not in flight configuration.

Table 4–4. Tiedown Data for Two Nike-Hercules Warhead Section Shipping and Storage Containers, M409, in CH–54 Helicopter Universal Military Pod

Item	Tiedown fitting		Tiedowu device*		Attach to item
	Designation	Capacity in 1,000 lb	Type	Capacity in 1,000 lb	
A	A2	5	CGU–1/B	5	Left front stacking bracket
	F2	5	CGU–1/B	5	Right front stacking braeket
	A3	5	CGU–1/B	5	Left rear inner tiedown point
	F3	5	CGU–1/B	5	Right rear inner tiedown point
	A7	5	CGU–1/B	5	Left front inner tiedown point
	F7	5	CGU–1/B	5	Right front inner tiedown point
	A8	5	CGU–1/B	5	Left rear stacking braeket
	F8	5	CGU–1/B	5	Right rear stacking bracket
	B9	5	CGU–1/B	5	Left rear tiedown point
	E9	5	CGU–1/B	5	Right rear tiedown point
B	A9	5	CGU–1/B	5	Left front stacking bracket
	F9	5	CGU–1/B	5	Right front stacking braeket
	A10	5	CGU–1/B	5	Left rear inner tiedown point
	F10	5	CGU–1/B	5	Right rear inner tiedown point
	A14	5	CGU–1/B	5	Left front inner tiedown point
	F14	5	CGU–1/B	5	Right front inner tiedown point
	A15	5	CGU–1/B	5	Left rear stacking bracket
	F15	5	CGU–1/B	5	Right rear staeking bracket
	B16	5	CGU–1/B	5	Left rear tiedown point
	E16	5	CGU–1/B	5	Right rear tiedown point

*MC–1 tiedown device may be used.



ITEM	DESCRIPTION OF ITEM	ITEM FACING	LOCATION OF REFERENCE POINT		LOCATION OF CG (STA)	APPROX WT (LB)
			REFERENCE POINT	STATION		
A	CONTAINER, M409, WITH NIKE-HERCULES	COVER END	FORWARD EDGE	214	262	3068
	WARHEAD SECTION	FORWARD	OF CONTAINER			
B	CONTAINER, M409, WITH NIKE-HERCULES	COVER END	FORWARD EDGE	354	402	3068
	WARHEAD SECTION	FORWARD	OF CONTAINER			

Figure 4–10. Tiedown diagram for two Nike-Hercules warhead section shipping and storage containers, M409, in CH–54 helicopter universal military pod.

4–2. External Transport (Emergency Procedure)

These procedures apply when one or two Nike-Hercules warhead shipping and storage containers, M409, with or without warhead sections, are rigged with one of the following sling systems for transport as an external load. Optimum speed with one container is from 40 to 50 knots, and with two containers, up to 115 knots.

WARNING

The contents of paragraph 4–2 are for information and training purposes only and are not to be construed as authority for external transport by helicopter of the container, M409, with Nike-Hercules warhead section. Only dummy loads may be used for practice and/or training exercises. *Nuclear weapons will not be moved by external helicopter transport except in emergency conditions (such as emergency evacuation ordered to maintain US custody or to prevent loss because of fire or flood), and only when the situation does not allow time to prepare and move the nuclear weapons by internal transport (para 4–1).*

WARNING

Always assume that a charge of static electricity is present on the helicopter. Use of some type of discharge apparatus (static probe) (fig 4–1, TM 55–450–19) to ground the hook and discharge electricity is necessary to prevent shock when the hook is touched. After discharge of electricity, the hook is grasped quickly and firmly and held, if possible, until the hookup is completed. If contact with the hook is lost after initial grounding, the hook must be grounded again before it is touched. Do not use the load as a ground contact. After air delivery and before handling, again ground the load to discharge any accumulated/retained static electricity.

CAUTION

When performing external air transport by CH–54 helicopter, use a large metal clevis to attach the load to the cargo hook, as a nylon sling ring will tend to adhere to the cargo hook beam and prevent release of the load.

NOTE

The container, M409, is equipped with two lifting lug assemblies located along the top centerline. The lug assemblies are approximately 1 inch thick with ¾-inch diameter eyes.

a. Rigging One Nike-Hercules Warhead Section Container, M409, Using Sling, Helicopter, Cargo Carrying External.

(1) *Materials.*

(*a*) Sling set: one helicopter, cargo carrying external, four-leg sling (NSN 1670–01–027–2902) (has rated capacity of 10,000 pounds).

(*b*) Clevis assembly, medium: two, air delivery (NSN 1670–00–678–8562), or equivalent.

(2) *Preparation and rigging.*

NOTE

Each sling leg is constructed of a 12-foot nylon-coated braided nylon rope and an 8-foot chain. The rope and chain are connected by a grab hook that is equipped with a spring-loaded keeper. The chain consists of approximately 111 links, and the link at the free end is referred to as link number 1. Sling legs are numbered 1 through 4.

(*a*) Attach a medium clevis assembly to each lift lug on container.

(*b*) Pass the chain legs of slings 1 and 4 through clevis assembly on forward end of container, then insert link number 3 of each chain into the grab link to form hitch. Repeat procedure with slings 2 and 3 through clevis assembly on aft end of container. The spring keeper prevents the chain from sliding out of the grab link until the keeper is depressed and the chain is removed.

(*c*) Attach sling clevis (apex) to the helicopter cargo hook.

(*d*) Two persons can rig the container in approximately 5 minutes.

(3) *Derigging.* Depress spring-loaded keeper on grab hook and remove chain leg from hook and from each clevis assembly. Remove clevis assemblies from lift-lugs on container. Two persons can derig the container in approximately 3 minutes.

NOTE

Materials, preparation and rigging, and derigging prescribed above are applicable when using the helicopter, cargo carrying external, four-leg sling (NSN 1670–01–027–2900) (has rated capacity of 25,000 pounds) in place of the 10,000-pound-capacity sling. Length of the 10,000- and 25,000-pound-capacity slings is the same; however, the 25,000-pound-capacity chain consists of approximately 88 links.

b. Rigging One Nike-Hercules Warhead Section Container, M409, Using Sling, Cargo, Nylon and Chain, Multiple Leg.

(1) *Materials.*

(*a*) Sling set: one 23-foot nylon and chain, four-leg sling (NSN 1670–00–902–3080) (has rated capacity of 15,000 pounds).

(*b*) Clevis assembly, medium: two, air delivery (NSN 1670–00–678–8562), or equivalent.

(*c*) Clevis assembly, large: one, air delivery, type I (NSN 1670–00–090–5354), or equivalent. For use with CH–54 helicopter.

(2) *Preparation and rigging.*

NOTE

Each nylon and chain sling leg is constructed of a 15-foot nylon web sling with a metal grab link on its lower end. The grab link is approximately 10 inches long and is equipped with a spring-loaded keeper. Attached to the lower or small end of the grab link is a hammer lock, which connects the chain leg to the grab link. The chain leg is approximately 6 feet long and has 64 links. The link at the free end is referred to as link number 1. Sling legs are numbered 1 through 4.

(*a*) Observe procedures in *a*(2)(*a*) and *a*(2)(*b*) above.

(*b*) The 12-inch ring of the sling forms the apex for attachment to the helicopter cargo hook (UH–1-series and CH–47 helicopters). See Caution above regarding transport by CH–54 helicopter.

(*c*) Two persons can rig the container in approximately 5 minutes.

(3) *Derigging.* Depress spring-loaded keeper on grab link and remove chain leg from link and from clevis assembly. Remove clevis assemblies from lift-lugs on container. Two persons can derig the container in approximately 3 minutes.

c. Rigging One Nike-Hercules Warhead Section Container, M409, Using Air Delivery Cargo Slings.

(1) *Materials.*

(*a*) Sling legs: two 16-foot, three-loop cargo slings (NSN 1670–00–823–5042) (each has rated capacity of 10,000 pounds).

(*b*) Tape: 2-inch pressure sensitive (NSN 8135–00–266–5016), or equivalent, as required.

(*c*) Clevis assembly, medium: two, air delivery (NSN 1670–00–678–8562), or equivalent.

(*d*) Sling ring: one 3-foot, three-loop cargo sling (NSN 1670–00–753–3788) (has rated capacity of 10,000 pounds), with link assembly, type IV (NSN 1670–00–783–5988).

(*e*) Clevis assembly, large: one, air delivery, type I (NSN 1670–00–090–5354), or equivalent. For use with CH–54 helicopter.

(2) *Preparation and rigging.*

(*a*) Attach a sling leg to each lift-lug on container, using a medium clevis assembly.

(*b*) Twist each sling leg one turn for each 3 feet of sling.

(*c*) Combine the free ends of the sling legs to form a single loop, and attach this loop to the 3-foot sling. Connect free ends of the 3-foot sling with the link assembly. The 3-foot sling (ring) forms the apex for attachment to the helicopter cargo hook (UH–1-series and CH–47 helicopters). See Caution above regarding transport by CH–54 helicopter.

(*d*) Cluster and tape sling legs (breakaway technique) to prevent fouling during lift-off.

(*e*) Two persons can rig the container in approximately 5 minutes.

(3) *Derigging.* Two persons can derig the container in approximately 3 minutes.

d. Rigging Two Nike-Hercules Warhead Section Containers, M409, Using Sling, Helicopter, Cargo Carrying External.

(1) *Materials.*

(*a*) Sling set: one helicopter, cargo carrying external, four-leg sling (NSN 1670–01–027–2902) (has rated capacity of 10,000 pounds). For sling description see note in *a*(2) above.

(*b*) Clevis assembly, medium: four, air delivery (NSN 1670–00–678–8562), or equivalent.

(*c*) Chain (type used with C–2 or MB–1 tiedown device): two, 10,000-pound capacity, or equivalent.

(2) *Preparation and rigging.*

(*a*) Place containers so that sides touch and matching ends face opposite directions.

(*b*) Lash containers together at both ends, using chains between the tiedown bars (bottom of containers), as shown in figure 4–11.

(*c*) Attach a medium clevis assembly to the lift-lugs on each container.

(*d*) Attach the end sling legs (as positioned on sling clevis) to first container, and the center sling legs to second container. Pass one chain leg through each clevis assembly on first container, then insert link number 3 of chain into the grab hook to form hitch. Repeat procedure for second container, using other two chain legs. The spring keeper prevents the chain from sliding out of the grab hook until the keeper is depressed and the chain is removed.

(*e*) Attach sling clevis (apex) to the CH–47 or CH–54 helicopter cargo hook.

(*f*) Two persons can rig the container in approximately 10 minutes.

(3) *Derigging.* Depress spring-loaded keeper on grab hook and remove chain leg from hook and from clevis assembly. Remove clevis assemblies from lift-lugs on containers. Two persons can derig the containers in approximately 5 minutes.

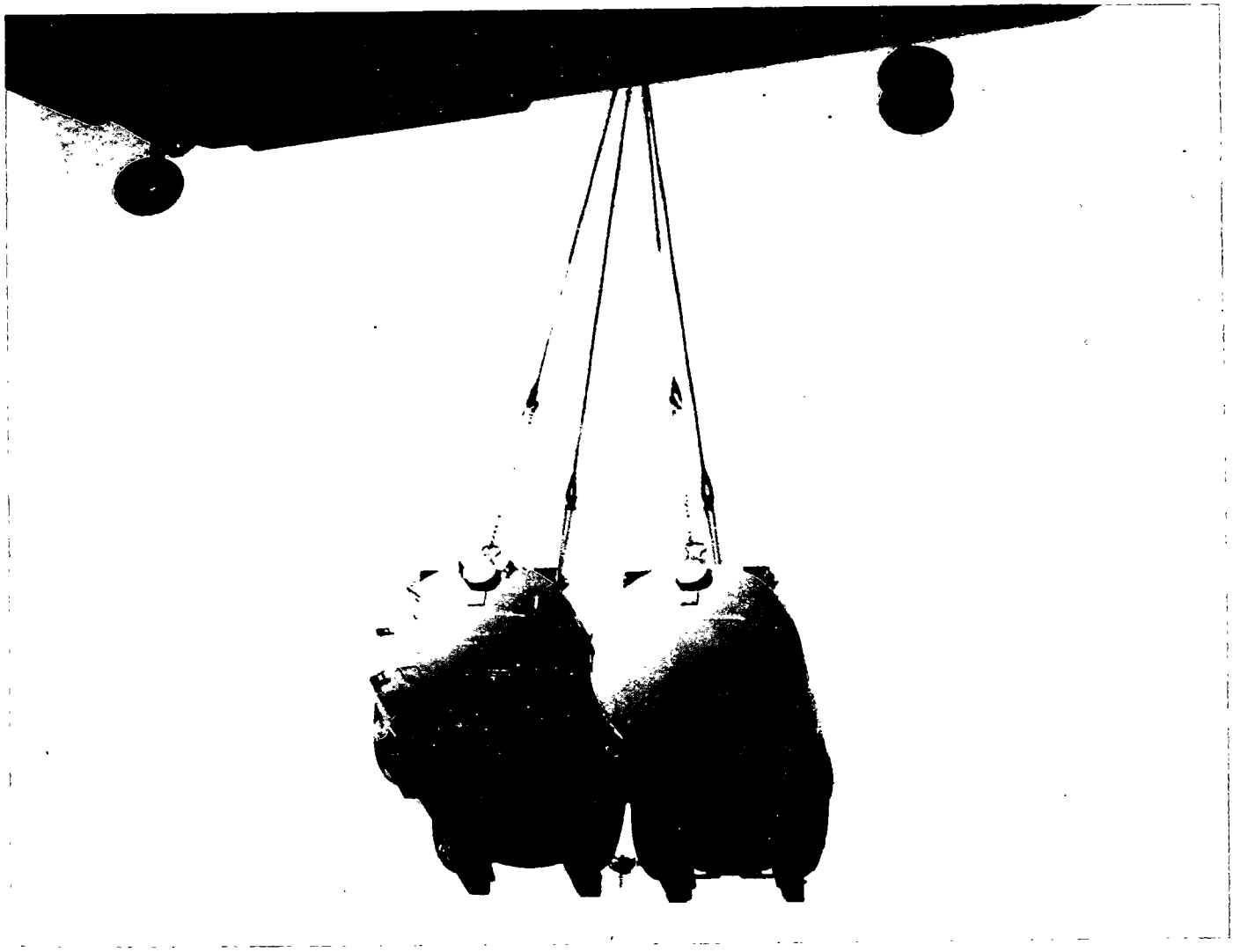


Figure 4–11. External transport of two Nike-Hercules warhead section containers, M409. Containers are lashed together at both ends by chains between the tiedown bars.

NOTE

Materials, preparation and rigging, and derigging prescribed above are applicable when using the helicopter, cargo carrying external, four-leg sling (NSN 1670–01–027–2900) (has rated capacity of 25,000 pounds) in place of the 10,000-pound-capacity sling. Length of the 10,000- and 25,000-pound-capacity slings is the same; however, the 25-pound-capacity chain consists of approximately 88 links.

e. Rigging Two Nike-Hercules Warhead Section Containers, M409, Using Sling, Cargo, Nylon and Chain, Multiple Leg.

(1) *Materials.*

(*a*) Sling set: one 23-foot nylon and chain, four-leg sling (NSN 1670–00–902–3030) (has rated capacity of 15,000 pounds). For sling description see note in *b*(2) above.

(*b*) Clevis assembly, medium: four, air delivery (NSN 1670–00–678–8562), or equivalent.

(*c*) Clevis assembly, large: one, air delivery, type I (NSN 1670–00–090–5354), or equivalent. For use with CH–54 helicopter.

(*d*) Chain (type used with C–2 or MB–1 tiedown device: two, 10,000-pound-capacity, or equivalent.

(2) *Preparation and rigging.*

(*a*) Observe procedures in *d*(2)(*a*) through *d*(2)(*c*) above.

(*b*) Attach the end sling legs (as positioned on 12-inch sling ring) to first container, then attach the center sling legs to second container. Pass one chain leg through each clevis assembly on first container, then insert link number 3 of chain into the grab link to form hitch. Repeat procedure for second container, using other two chain legs. The spring keeper prevents the chain from sliding out of the grab link until the keeper is depressed and the chain is removed.

(*c*) The 12-inch ring of the sling forms the apex for attachment to the CH–47 helicopter cargo hook. See Caution above regarding transport by CH–54 helicopter.

(*d*) Two persons can rig the containers in approximately 10 minutes.

(3) *Derigging.* Depress spring-loaded keeper on grab link and remove chain leg from link and from clevis assembly. Remove clevis assemblies from lift-lugs on containers. Two persons can derig the containers in approximately 5 minutes.

f. Rigging Two Nike-Hercules Warhead Section Containers, M409, Using Air Delivery Cargo Slings.

(1) *Materials.*

(*a*) Sling legs: four 16-foot, three-loop cargo slings (NSN 1670–00–823–5042) (each has rated capacity of 10,000 pounds).

(*b*) Tape: 2-inch pressure sensitive (NSN 8135–00–266–5016), or equivalent as required.

(*c*) Clevis assembly, medium: four air delivery (NSN 1670–00–678–8562), or equivalent.

(*d*) Sling ring: one 3-foot, three-loop cargo sling (NSN 1670–00–753–3788) (has rated capacity of 10,000 pounds), with link assembly, type IV (NSN 1670–00–783–5988).

(*e*) Clevis assembly, large: one air delivery, type I (NSN 1670–00–090–5354), or equivalent. For use with CH–54 helicopter.

(*f*) Chain (type used with C–2 or MB–1 tiedown device): two, 10,000-pound capacity, or equivalent.

(2) *Preparation and rigging.*

(*a*) Place containers so that sides touch, and with matching ends facing opposite directions.

(*b*) Lash containers together at both ends, using chains between tiedown bars (bottom of containers) (fig 4–11).

(*c*) Attach a sling leg to lift-lugs on each container, using medium clevis assemblies.

(*d*) Twist each sling leg one turn for each 3 feet of sling.

(*e*) Combine the free ends of the sling legs to form a single loop (legs from second container are placed between legs from first container), and attach this loop to the 3-foot sling. Connect free ends of the 3-foot sling with the link assembly.

(*f*) The 3-foot sling (ring) forms the apex for attachment to the CH–47 helicopter cargo hook. See Caution above regarding transport by CH–54 helicopter.

(*g*) Cluster and tape sling legs (breakaway technique) to prevent fouling during lift-off.

(*h*) Two persons can rig the containers in approximately 10 minutes.

(3) *Derigging.* Two persons can derig the containers in approximately 5 minutes.

APPENDIX A

REFERENCES

1. Army Regulations (AR)

10–16	US Army Nuclear Agency.
40–14	Control and Recording Procedures: Occupational Exposure to Ionizing Radiation.
50–5	Nuclear and Chemical Weapons and Materiel: Nuclear Surety.
(C) 50–105	Safety Rules for the Operation of the Nike-Hercules Nuclear Weapon System (U).
55–203	Movement of Nuclear Weapons, Nuclear Components, and Related Classified Nonnuclear Materiel.
95–1	Army Aviation: General Provisions and Flight Regulations.
95–27	Operational Procedures for Aircraft Carrying Dangerous Materials.
360–5	Army Information: Public Information Policies.
385–40	Accident Reporting and Records.
700–65	Nuclear Weapons and Nuclear Weapons Materiel.
740–1	Storage and Supply Activity Operations.

2. Field Manuals (FM)

1–100	Army Aviation Utilization.
101–20	US Army Aviation Planning Manual.

3. Technical Bulletins (TB)

(SRD)9–1100–811–40	Security Classification of Nuclear Weapons Information (U).
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4. Technical Manuals (TM)

5–315	Fire Fighting and Rescue Procedures in Theaters of Operations.
(C)9–1100–250–12	Operator and Organizational Maintenance: M22 and M97 Atomic Warhead Sections (Nike-Herclues Air Defense Guided Missile System) (U).
9–1300–206	Ammunition and Explosives Standards.
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(CRD)39–20–11	General Firefighting Guidance (U).
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55–450–8	Air Transport of Supplies and Equipment: External Transport Procedures.
55–450–11	Air Transport of Supplies and Equipment: Helicopter External Loads Rigged With Air Delivery Equipment.
55–450–12	Air Transport of Supplies and Equipment: Helicopter External Loads for Sling, Nylon and Chain, Multiple Leg.
55–450–15	Air Movement of Troops and Equipment (Nontactical).
55–450–18	Air Transport of Supplies and Equipment: Internal and External Loads, CH–47 Helicopter.
55–450–19	Air Transport of Supplies and Equipment: Helicopter External Lift Rigging Materiel, Techniques, and Procedures.
55–1400–250–14	Transportability Guidance: Nike-Hercules and Improved Nike-Hercules Air Defense Guided Missile Systems.

55–1520–209–10	Operator's Manual: Army Model, CH–47A Helicopter.
55–1520–210–10	Operator's Manual: Army Model, UH–1D/H Helicopter.
55–1520–217–10/1	Operator's Manual: Army Model, CH–54A Helicopters.
55–1520–217–10/2	Operator's Manual: Army Model, CH–54B Helicopters.
55–1520–219–10	Operator's Manual: Army Model, UH–1B Helicopter.
55–1520–220–10	Operator's Manual: Army Model, UH–1C/M Helicopter.
55–1520–227–10	Operator's Manual: Army Model, CH–47B and CH–47C Helicopters.

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Chief of Staff

Official:

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Brigadier General, United States Army
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