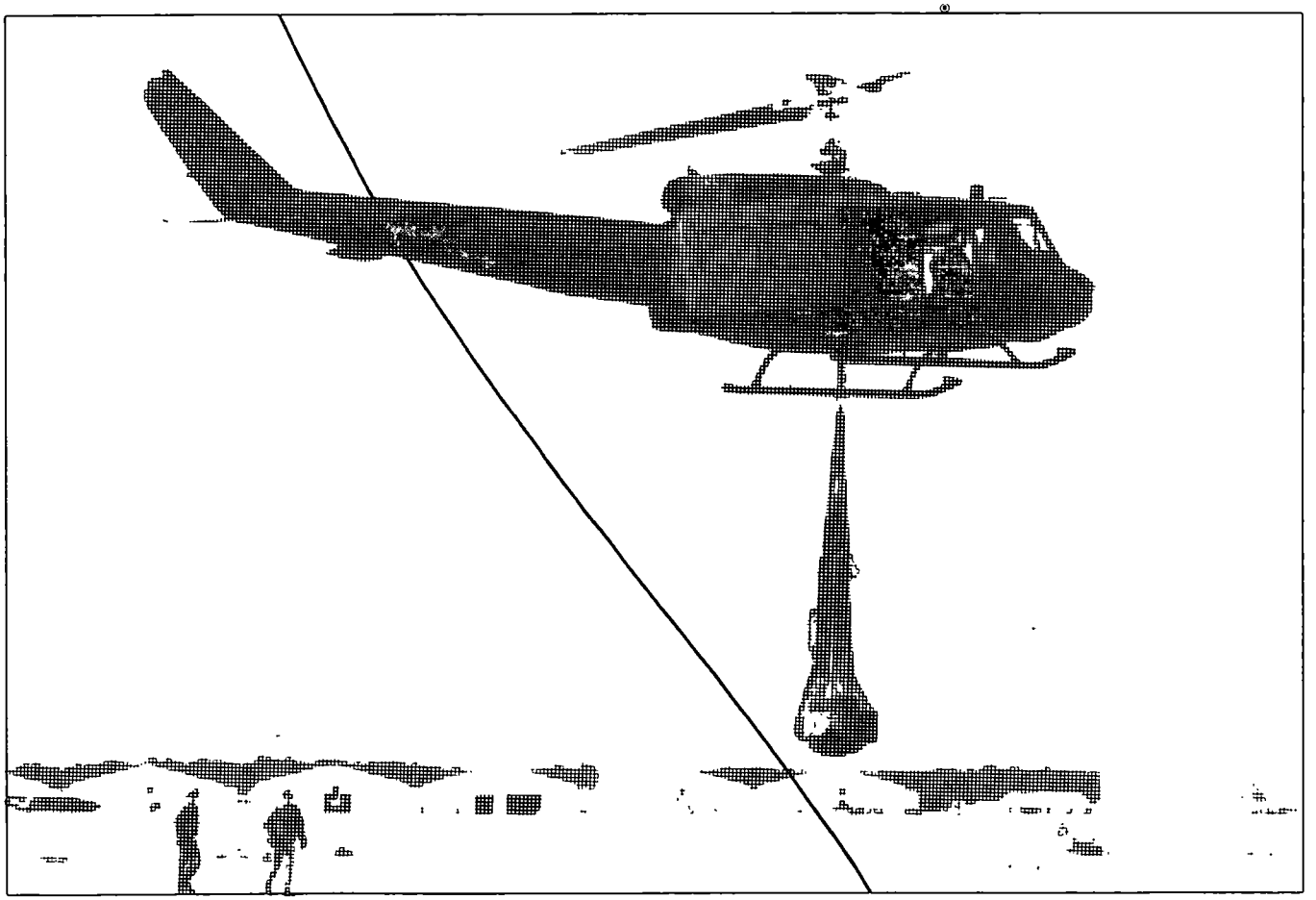
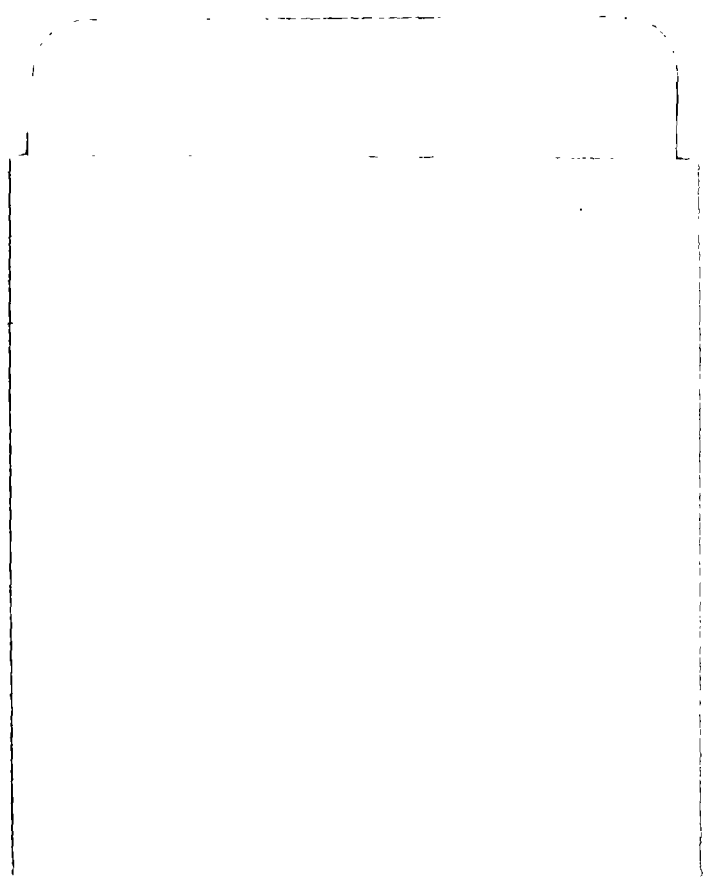
FIELD MANUAL

AIR TRANSPORT PROCEDURES TRANSPORT OF XM129 AND XM159 ATOMIC DEMOLITION CHARGES BY US ARMY HELICOPTERS



HEADQUARTERS, DEPARTMENT OF THE ARMY
JULY 1979



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5 1 Sept 1985

Immediate Action
INTERIM CHANGE

Headquarters,
Department of the Army
Washington, DC
26 October 1984

FM 55-205
Interim Change
No. I01
Expires 26 October 1986

Air Transport Procedures

Transport of XM129 and XM159
Atomic Demolition Changes
By US Army Helicopters

Posted 2 Nov 85

Justification. This interim change provides procedures for the proper application of tiedown straps used to secure nuclear weapons and components on board US Army helicopters. This guidance is safety-related and is required to prevent the inadvertent loosening of the tiedown straps during flight.

Expiration. This interim change expires 2 years from date of publication and will be destroyed at that time unless sooner rescinded or superseded by a permanent change.

1. FM 55-205, 1 July 1979, is changedas follows:

Page 2-2. Paragraph 2-2e is superseded as follows:

e. When attaching tiedown straps to cargo and to tiedown fittings, tension each tiedown strap to form at least one and one-half turns on the take-up spool of the tensioning ratchet. The one and one-half turns must be taken after webbing to webbing contact. Continue to tighten each tiedown, applying approximately equal tension throughout the tiedown arrangement to prevent movement of the cargo. Check tiedowns during flight and tighten as necessary.

2. Post this change per DA Pam 310-13

3. File this interim change in front of the publication.

(MTT-TRC)

By Order of the Secretary of the Army:

JOHN A. WICKHAM, JR.
General, United States Army
Chief of Staff

Official:

ROBERT M. JOYCE
Major General, United States Army
The Adjutant General

Distribution:

Active Army, ARNG, USAR: To be distributed in accordance with DA Form 12-31, requirements for UH-1D/H; CH-54A; CH-54B; CH-47B/C/D; UH-60A; and DA Form 12-35, requirements for SADM; and DA Form 12-34B, requirements for Air Transport Procedures: Nuclear Warheads and Projectiles--A.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1984- 421-029:10108

FM 55-205
1 February 1983
C.2

S/S 1 Sept 1985

FM 55–205
C2

CHANGE
No. 2

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C. *1 February 1983*

AIR TRANSPORT PROCEDURES
TRANSPORT OF XM129 AND XM159 ATOMIC DEMOLITION CHARGES BY US ARMY HELICOPTERS

This change is published to correct errors made in change 1, FM 55–205, 1 December 1982. Errors were made in the page numbering and the placement of tables and figures in chapter 4. Page 4–3 and 4–4 (fig 4–3 & 4–4) of the basic manual should be retained.

FM 55–205, 1 July 1979, is changed as follows:

1. New or changed material is indicated by a star.

2. Remove the following pages of change 1 and insert new pages as indicated below:

Remove pages	*Insert pages*
4–1 through 4–4 (change 1)	4–1 through 4–2.2
4–5 through 4–6.3 (change 1)	4–5 through 4–6.5

Posted MAR 2, 83 md

3. File this sheet in the front of the publication for reference purposes.

By Order of the Secretary of the Army:

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

Official:

ROBERT M. JOYCE
Major General, United States Army
The Adjutant General

DISTRIBUTION:

Active Army, ARNG, USAR: To be distributed in accordance with DA Form 12–31, Requirements for UH–1B; UH–1C/M; UH–1D/H; CH–54A; CH–54B; CH–47B/C; CH–60A, and DA Form 12–35, Requirements for SADM, and DA Form 12–34B.

Copy 2

5/5 1 Sept 1985

FM 55–205
C1

CHANGE
No. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, *1 December 1982*

AIR TRANSPORT PROCEDURES
TRANSPORT OF XM129 AND XM159 ATOMIC DEMOLITION CHARGES BY US ARMY HELICOPTERS

This change provides procedures for internal and external transport of the XM129 and XM159 atomic demolition charges by UH–60A helicopter and adds the H1402 container as a Configuration II container. This change also adds definitions of warnings, cautions, and notes, and replaces the 8,930-pound-capacity cargo net with the 10,000-pound-capacity cargo net.

FM 55–205, July 1979, is changed as follows:

1. New or changed material is indicated by a star in the margin.
2. Remove old pages and insert new pages as indicated below:

Remove pages	*Insert pages*
i	i
1–1	1–1
2–1 and 2–2	2–1 and 2–2
3–1 and 3–2	3–1 and 3–2
4–1 and 4–2	4–1 through 4–4
4–5 and 4–6	4–5 through 4–6.3
5–3 and 5–4	5–3 through 5–4
6–1 and 6–2	6–1 through 6–2

3. File this sheet in the front of the publication for reference purposes.

By Order of the Secretary of the Army:

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

Official:

ROBERT M. JOYCE
Major General, United States Army
The Adjutant General

DISTRIBUTION:

Active Army, ARNG, USAR: To be distributed in accordance with DA Form 12–31, Requirements for UH–1B; UH–1 C/M; UH–1D/H; CH–54A; CH–54B; CH–47B/C; CH–60A, and DA Form 12–35, Requirements for SADM, and DA Form 12–34B.

posted
6 Dec 82
Bob

S/S 1 Sept 1985

FIELD MANUAL
No. 55–205

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, *1 July 1979*

AIR TRANSPORT PROCEDURES TRANSPORT OF XM129 AND XM159 ATOMIC DEMOLITION CHARGES BY US ARMY HELICOPTERS

(Front cover) *UH–1D Helicopter transport of simulated nuclear weapons load in 5,000-pound-capacity nylon cargo net.*

*This manual supersedes FM 55–205, 30 August 1976.

CHAPTER 1

INTRODUCTION

1–1. Purpose and Scope

★*a.* This manual presents Department of the Army-approved procedures for transport of the XM129E1, XM129E2, XM159E1, and XM159E2 atomic demolition charges (ADC) by US Army helicopters. The ADC are commonly referred to as special atomic demolition munitions (SADM). Materials and qualified personnel needed to prepare, load, tie down, and unload, or to rig and derig, the ADC are prescribed herein. Responsibilities of the consignor, consignee, and unit providing transportation are shown in chapter 4, section II, AR 50–5. References are shown in the appendix.

★*b.* The procedures in this manual provide for internal and external transport of one or more ADC when in case, H912, or in container, H913, by UH–1–series, CH–47, CH–54, and UH–60A helicopters.

c. Additional internal cargo, including different types of nuclear weapons, and/or personnel within helicopter load capacity and restrictions prescribed by AR 50–5 or FM 100–50, whichever is appropriate, and pertinent safety regulations (app), may be transported.

d. This manual also provides for emergency internal and external movement of the ADC by helicopter for military contingency, logistic supply, and evacuation.

★*e.* Times given to prepare, load, tie down, and unload or rig and derig the loads described in this manual may vary with existing conditions and the training of personnel involved.

★1–2. Reporting of Publication Improvements

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

★1–3. Definitions of Warnings, Cautions, and Notes

When used in this manual, warnings, cautions, and notes emphasize important or critical guidance. They are used for the following conditions:

a. Warning. Instructions that, if not followed, could result in injury to or death of personnel.

b. Caution. Instructions that, if not strictly observed, could result in damage to, or destruction of, equipment.

c. Note. An operating procedures that must be emphasized.

CHAPTER 2

GENERAL SAFETY AND SECURITY MATTERS

★**WARNING**

During a logistical movement of nuclear weapons by US Army aircraft, jettisoning is not authorized. During emergency movements (external transport by helicopter, chapters 5 and 6), the inflight emergency procedures prescribed by the appropriate aircraft, operator's manual will apply (para 4–3*i* and 4–3*l*, AR 50–5).

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, AR 50–5–1, AR 95–27, and FM 100–50 and insure compliance therewith. In addition, the commander will become familiar with the security, safety, and technical pecularities of the cargo that may affect air transport. Flight plans will include provisions for avoiding built-up and heavily populated areas. When transporting the ADC 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, chapter 1, AR 55–203, and FM 100–50, for transport with the ADC, 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 ADC.

c. A maximum of nine XM129E1 or XM129E2 ADC or seven XM159E1 or XM159E2 ADC in either of the transportation configurations may be transported in a single group without waiver (TM 39–20–7 and TM 39–45–51A). For the quantity of ADC that may be transported in a mixed group, refer to table 8–1, TM 9–1100–205–20. Existing conditions and the allowable cargo load (ACL) may reduce these quantities.

d. Emergency destruction procedures for the ADC are contained in TM 39–50–8. Normally, emergency-destruct materials will not be carried on the same helicopter with nuclear weapons. However, if the operational necessity requires, the operational 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 to prevent movement. Only the number of destruct charges and blasting caps necessary to destroy the ADC will be carried aboard. Blasting caps in their container (recommended use of M2- and 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 paragraph C–26, TM 9–1300–206.

e. The ADC will be loaded and tied down in accordance with the procedures in this manual except that they may be repositioned for helicopter operational reasons, or when loading additional nuclear weapons or other cargo and/or personnel. Mandatory requirements for minimum spacing, numerical limits, and type of array for transport of the ADC are prescribed by TM 39–20–7 and TM 39–45–51A. 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 ADC are secured to tiedown fittings in the same location relative to the ADC as those fittings used in the pertinent tiedown diagram. Required restraint will be provided when the depicted tiedown pattern is maintained.

(3) The requirements prescribed by TM 39–20–7 and TM 39–45–51A are implemented.

2–2. Operational Precautions

The following operational precautions will be observed during loading, rigging, tie down, transport, and unloading of the ADC.

a. Web strap tiedown assemblies used to secure

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 are unpackaged for use by the using organization. At that time, they will be marked, using stencil ink TT–1–1795 (any contrasting color), with the unpackaged date (month and year) in at least ½-in-high letters near the hook end of the strap. Upon expiration of the 36-month useful life, the tiedowns will be marked by a 2-inch-wide band on both sides of the strap, near the previously marked date, using yellow number 33538 stencil ink TT–I–1795 or enamel TT–E–516.

★*Note:* The strap, web, universal tiedown (NSN 5340–00–980–9277) or the strap, web, tiedown (NSN 5340–01–089–4997) may be used in place of the CGU–1/B tiedown device (NSN 1670–00–725–1437). Each identified tiedown has a rated strength of 5,000 pounds.

b. Prior to each usage, tiedowns, and cargo slings will be inspected for burns, tears, punctures, or cuts. Additionally, metal items will be inspected for improper operation, corrosion, cracks, or distortion. If any of these conditions are present, 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 and other cargo. However, when the helicopter or pod is transporting the ADC or other nuclear weapon or component, all tiedowns, to include those used to secure weapon trainers, training devices, and other cargo, must meet the 36-month useful life criterion.

d. Inspect the nylon cargo nets and the sling, cargo net, metallic, to insure their serviceability. Cargo nets and slings in questionable condition will not be used and will be appropriately marked.

e. 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. Excessive tightening must be avoided to prevent damage to soft cargo.

★*f.* Security and safety measures relative to guards, 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 50–5, AR 50–5–1, AR 50–107, TM 9–1300–206, TM 9–1100–205–20, and FM 100–50.

g. 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 static discharge probe, NSN 1670–00–574–8044, or a locally fabricated probe.

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

i. Helicopters and universal military pods will be searched and inspected for unauthorized personnel and equipment, and any possible sabotage. The search and inspection will be conducted by the surety-qualified helicopter commander during peacetime and by the courier officer in an emergency or during wartime. Entry controls will be established by the courier officer to maintain security integrity until completion of the nuclear mission.

j. Restraint required for the SADM case and container is attained by friction between the SADM and tiedown straps passed over each item, and by friction between the SADM and the nonskid surface of the helicopter floor. Further restraint is provided to the SADM case by tiedown straps passed through the case web-handling straps. In order that each item be restrained as required, the helicopter commander must insure that the nonskid surface of the helicopter floor is in condition to provide maximum friction with the SADM.

CHAPTER 3

AIR TRANSPORTABILITY AND HANDLING DATA

3–1. General

a. This chapter identifies the packaging system containers for the ADC and the limitations for internal and external transport of the ADC by helicopter.

★*b.* Air transport load configurations of the ADC are as follows:

(1) Configuration I—Case, H912 (fig. 3–1), which encloses the ADC in the bag, H911.

★(2) Configuration II—Container, H913 (fig. 3–2) or Container H1402, which encloses the ADC, the bag H911, and the case H912.

★*Note*: The modified version of the H913 container is identified as the H1402 container. *Throughout this manual, all references to and instructions for the H913 container apply also to the H1402 container.* The weights and dimensions of both the H913 and the H1402 are shown in table 3–1.

c. A cushioning pad is furnished with the ADC for use with the bag, H911, or the case, H912.

★*d.* Approximate dimensions and weights of configurations I and II are shown in table 3–1.

e. Personnel dosimetry (film badge) or special radiological handling procedures are not required, unless otherwise specified, for any personnel (including aircrew) engaged in operations described in this manual.

f. There is no requirement for facing the case, H912, or the container, H913, in a particular direction for air transport. The center of gravity for each item is at its center.

g. The helicopter center of balance must be computed for all loads to include number and location of nuclear weapon security personnel (two-person concept).

3–2. Air Transport Limitations

a. The ADC will normally be transported as an internal load (chap 4). However, under emergency conditions, the ADC can also be transported as an external load (chap 5). The determination that external transport is justifiable will be approved by the commander authorizing the emergency evacuation.

b. Transport of the ADC in a single group when exceeding the limitations shown in paragraph 2–1*c* must be accomplished by waiver in accordance with the provisions of TM 39–45–51A and TM 39–20–7. Further restrictions governing transport of the ADC in case, H912, are prescribed by TM 39–20–7.

★*Table 3–1. Dimensions and Weights, Configuration I and II*

Identification	Dimensions			Diameter	Weight
	Length	Width	Height		
Configuration I: Case, H912, with ADC and bag, H911			22.0 in. (0.56 m)	16.0 in. (0.41 m)	92 lb (42 kg)
Configuration II: Container, H913, with ADC, bag, H911, and case, H912	35.0 in. (0.90 m)	26.2 in. (0.67 m)	26.6 in. (0.68 m)		163 lb (74 kg)
Container, H1402, with ADC, bag, H911, and case, H912	35.25 in. (0.90 m)	25.25 in. (0.64 m)	25.0 in. (0.64 m)		154 lb (69.9 kg)
Shipping and storage container, MS24347–8, with component removed from container, H913*			9.8 in. (0.25 m)	9.5 in. (0.24 m)	5 lb (2 kg)

*An optional transport configuration of the container, H913, results when it is accompanied on a one to one basis by the container, MS24347–8. The container, MS24347–8, is transported as directed by the helicopter commander.

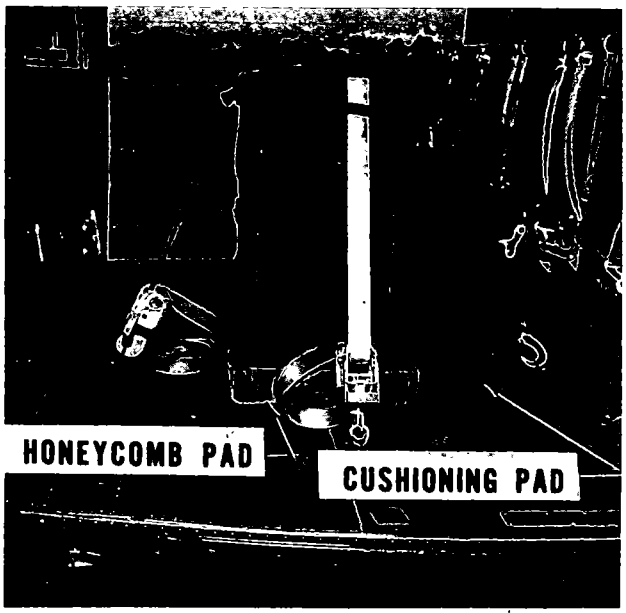


Figure 3–1. Case, H912, positioned and tied down for transport by helicopter.

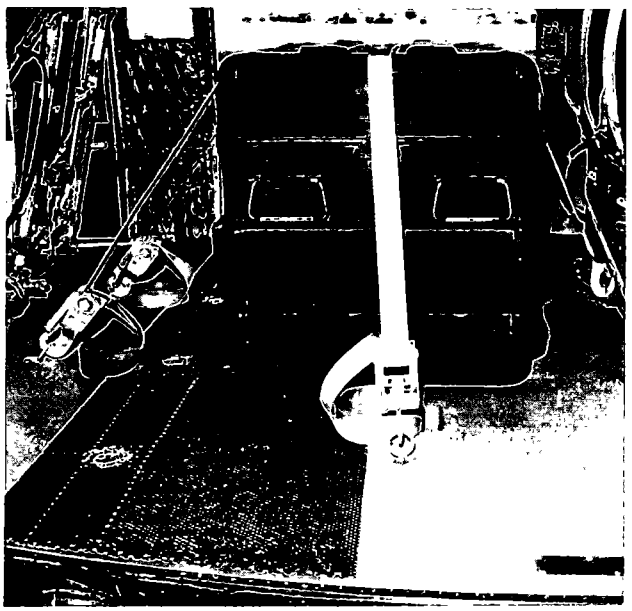


Figure 3–2. Container, H913, positioned and tied down for transport by helicopter.

CHAPTER 4

INTERNAL TRANSPORT BY HELICOPTER

WARNING

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

★4–1. Materials and Procedures for Transport of Case, H912 (Configuration I)

a. Materials.

(1) *UH–1C/M/D/H.* Energy-dissipating honeycomb pad (NSN 1670–00–753–3928), 15- by 21- by 3-inch, or suitable substitute (one piece for each H912 case); 2-inch pressure-sensitive tape (NSN 7510–00–663–0196) or suitable substitute.

(2) *UH–60A.* Materials in 4–1*a*(1), above, plus plywood floor-protective shoring, 20- by 20- by ¼-inch, or equivalent. Use one piece of shoring under each H912 case; web tiedown strap (one for each H912 case).

b. Loading.

(1) *UH–1C/M/D/H.*

(*a*) Insure that the case cover is secure and that the cushioning pad is fastened to the case. Fold loose ends of case and cushioning pad straps, and tape to the case.

(*b*) Position honeycomb in helicopter cargo compartment or in universal military pod at ADC

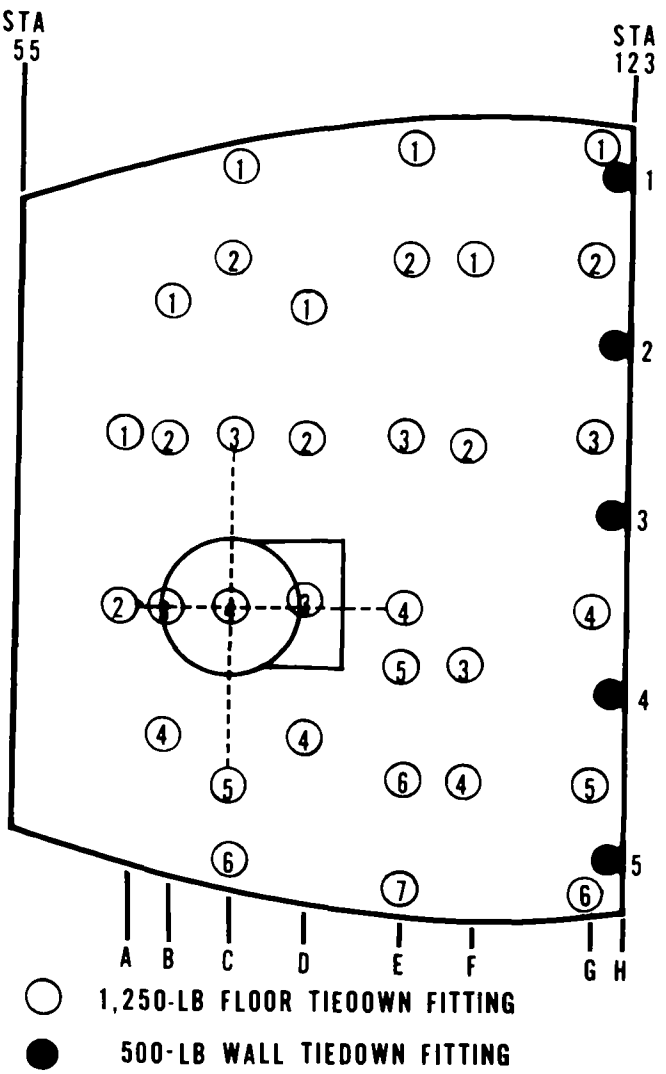


Figure 4–1. Tiedown diagram for case, H912, with ADC, in in UH–60A helicopter.

Table 4–1. Tiedown Data for Case, H912, With ADC, in UH–1C/M Helicopters

Tiedown fitting		Tiedown device		
desig-nation	capacity in 1,000 lb	type	capacity in 1,000 lb	Attach to item
C3/C5	1.25	CGU–1/B	5	Over the case and through case web-handling straps.
A2/E4	1.25	CGU–1/B	5	Over the case, under strap and rope assembly, and through case web-handling straps.

tiedown location. Hand-carry the ADC into the helicopter or pod and center on honeycomb (fig. 3–1). Two persons can prepare, load, and tie down each ADC in about 5 minutes.

(2) *UH–60A.*

(*a*) Insure that all case covers are secure and that cushioning pads are fastened to cases. Fold loose ends of case and cushioning pad straps, and tape to cases.

(*b*) Position shoring at tiedown locations for cases, and place honeycomb pads on shoring.

(*c*) Hand-carry cases into helicopter and center on honeycomb pads. Two persons can prepare, load, and tie down each ADC in about 8 minutes.

c. Tiedown, UH–1–Series and UH–60A. Tie down one or two ADC in accordance with the following figures and tables:

Helicopter	*Figure no.*	*Table no.*
UH–1C/M*	4–1	4–1
UH–1D/H	4–2	4–2
UH–60A	4–2.1	4–2.1

*Cargo floor-fitting pattern in the UH–1B helicopter is similar to the fitting pattern for the UH–1C/M helicopters. Strength of floor fittings in the UH–1B/C/M helicopters is the same.

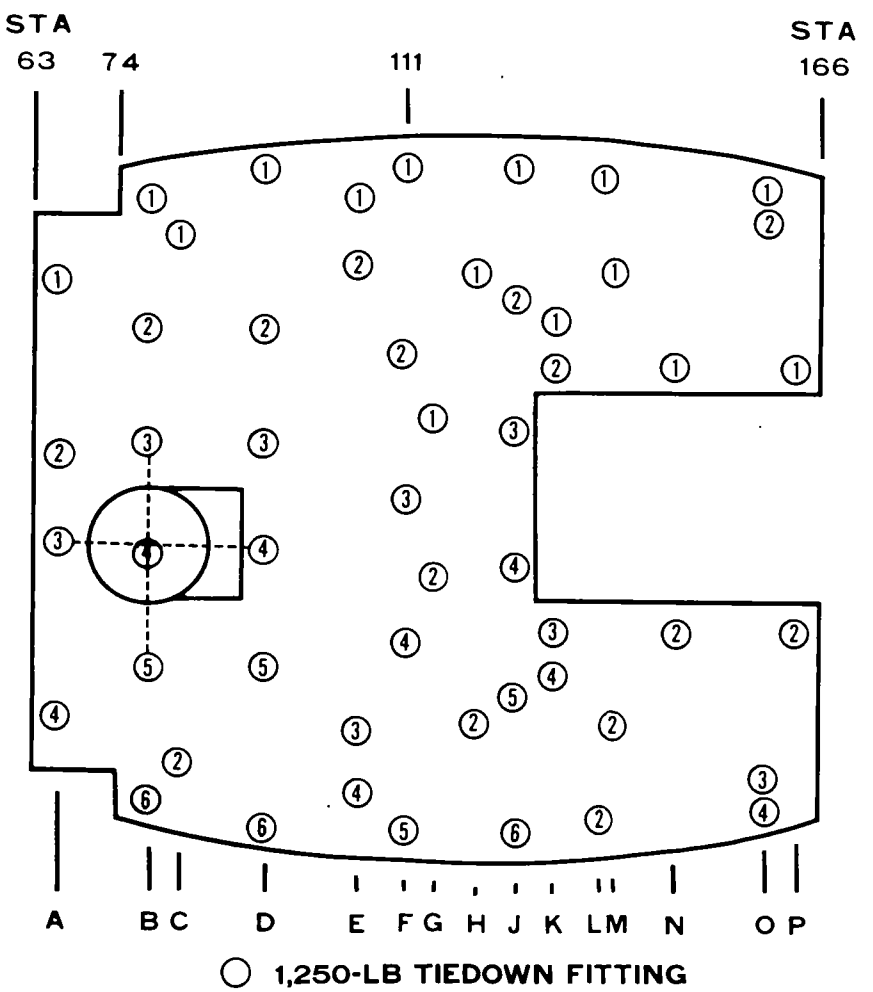


Figure 4–2. Tiedown diagram for case, H912, with ADC, in UH–1D/H helicopters.

Table 4–2. Tiedown Data for Case, H912, With ADC, in UH–1D/H Helicopters

Tiedown fitting		Tiedown device		
desig-nation	capacity in 1,000 lb	type	capacity in 1,000 lb	Attach to item
B3/B5	1.25	CGU–1/B	5	Over the case and through case web-handling straps.
A3/D4	1.25	CGU–1/B	5	Over the case, under strap and rope assembly, and through case web-handling straps.

CAUTION

To prevent damage to the H912 case, excessive tightening of the tiedowns must be avoided.

WARNING

No more than two XM129 ADC or XM159 ADC in the H912 case may be transported by UH–1 series or UH–60A helicopters.

d. Tiedown, CH–47 and CH–54. Tie down single or multiple ADC in accordance with the following figures and tables:

Helicopter	*Figure no.*	*Table no.*
CH–47	4–3	4–3
CH–54 (universal military pod)	4–4	4–4

Note. Figures 4–3 and 4–4 show the maximum number (seven) of XM159 ADC, in case, H912, that may be transported in a single group. A maximum of nine XM129 ADC, in case, H912, may be transported in a single group. However, only eight XM129 ADC in case, H912, may be transported in a single group by CH–47 helicopter, and only seven by CH–54 helicopter universal military pod. When transporting eight XM129 ADC, in case, H912, by CH–47 helicopter, the additional ADC is centered on helicopter station 340 and in line with the ADC shown in figure 4–3.

e. Unloading. Two persons can unload each ADC in about 3 minutes.

★4–2. Materials and Procedures for Transport of Container, H913 (Configuration II)

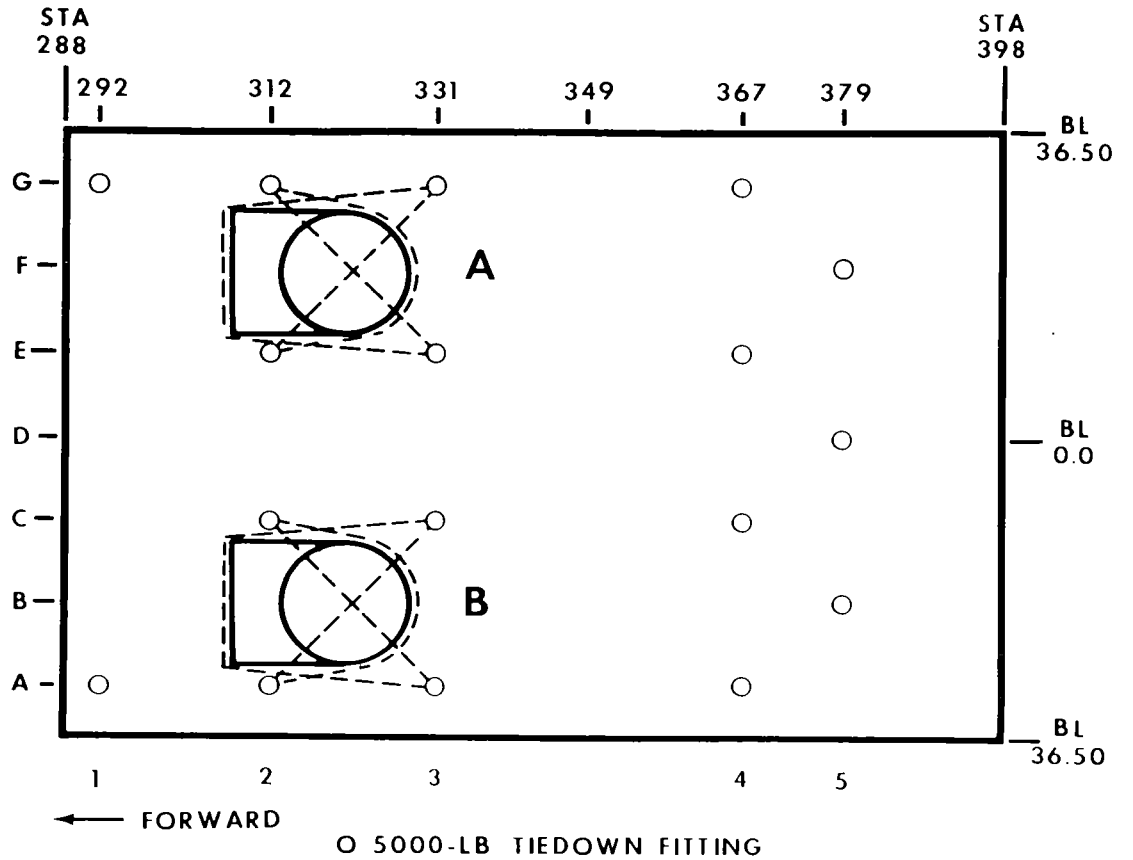
a. Materials.

(1) *UH–1C/M/D/H.* Antichafing plywood pieces as required, about 35- by 26- by ½-inch, or equivalent, for use when transporting multiple containers. Antichafing materials are furnished by the shipping unit.

(2) *UH–60A.* Material in 4–2*a*(1), above, plus plywood floor-protective shoring, 40- by 30- by ¼-inch, or equivalent. Use one piece of shoring under each container.

b. Loading.

(1) Insure that all container covers are secure and sealed.



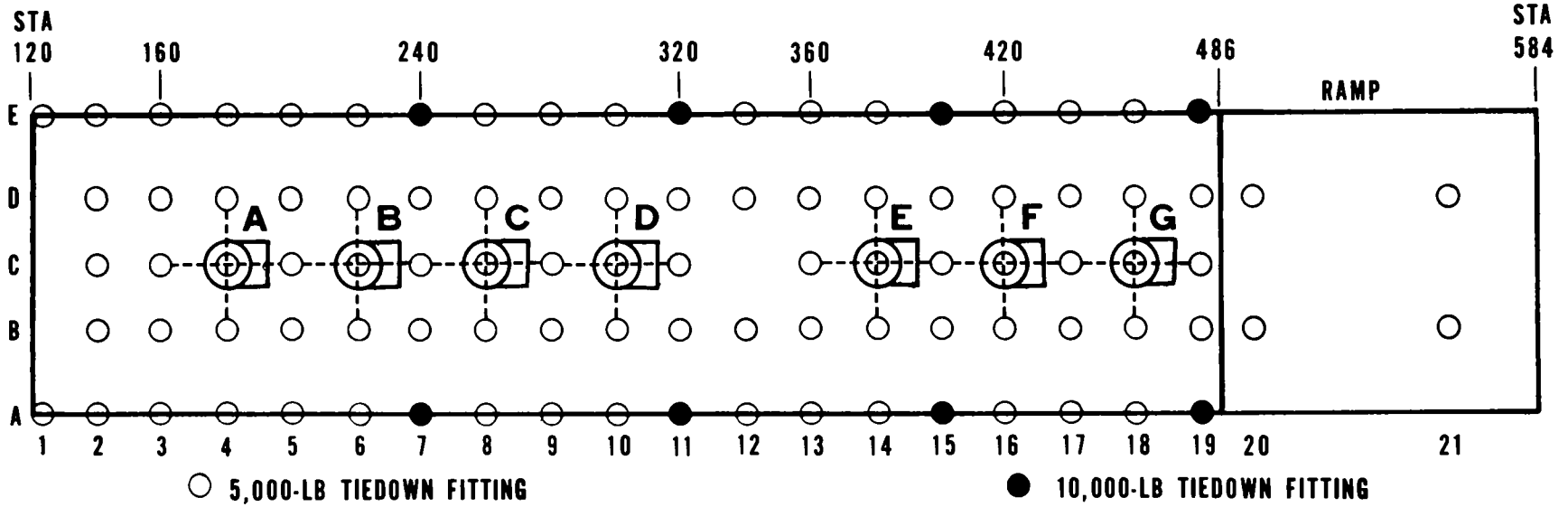
NOTE: CARGO HOOK ACCESS DOOR IS LOCATED IN THE CENTER OF THE FLOOR BETWEEN STATIONS 343 AND 363

★*Figure 4–2.1 Tiedown diagram for two H912 cases, with ADC, in UH–60A helicopter.*

★*Table 4–2.1. Tiedown Data for Two H912 Cases, With ADC, in UH–60A Helicopter*

Item	Tiedown fitting		Tiedown device		Attach to item
	desig-nation	capacity in 1,000 lb	type	capacity in 1,000 lb	
A	A2/C2	5	CGU–1/B	5	One complete loop around both the ADC and the cushioning pad. Position tiedown at center of H912 case.
	A3/C3	5	CGU–1B	5	One complete loop around both the ADC and the cushioning pad. Position tiedown at center of H912 case.
	A2/C3	5	CGU–1/B	5	Over the case, under strap and rope assembly.
	A3/C2	5	CGU–1/B	5	Over the case, under strap and rope assembly.
B	E2/G2	5	CGU–1/B	5	One complete loop around both the ADC and the cushioning pad. Position tiedown at center of H912 case.
	E3/G3	5	CGU–1/B	5	One complete loop around both the ADC and the cushioning pad. Position tiedown at center of H912 case.
	E2/G3	5	CGU–1/B	5	Over the case, under strap and rope assembly.
	E3/G2	5	CGU–1/B	5	Over the case, under strap and rope assembly.

Note: Use a web tiedown strap to combine the fore and aft tiedowns with the vertical tiedowns crossing on top of the H912 case to insure that all tiedowns remain in place.



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

Figure 4–3. Tiedown diagram for case, H912, with ADC, in CH–47 helicopter.

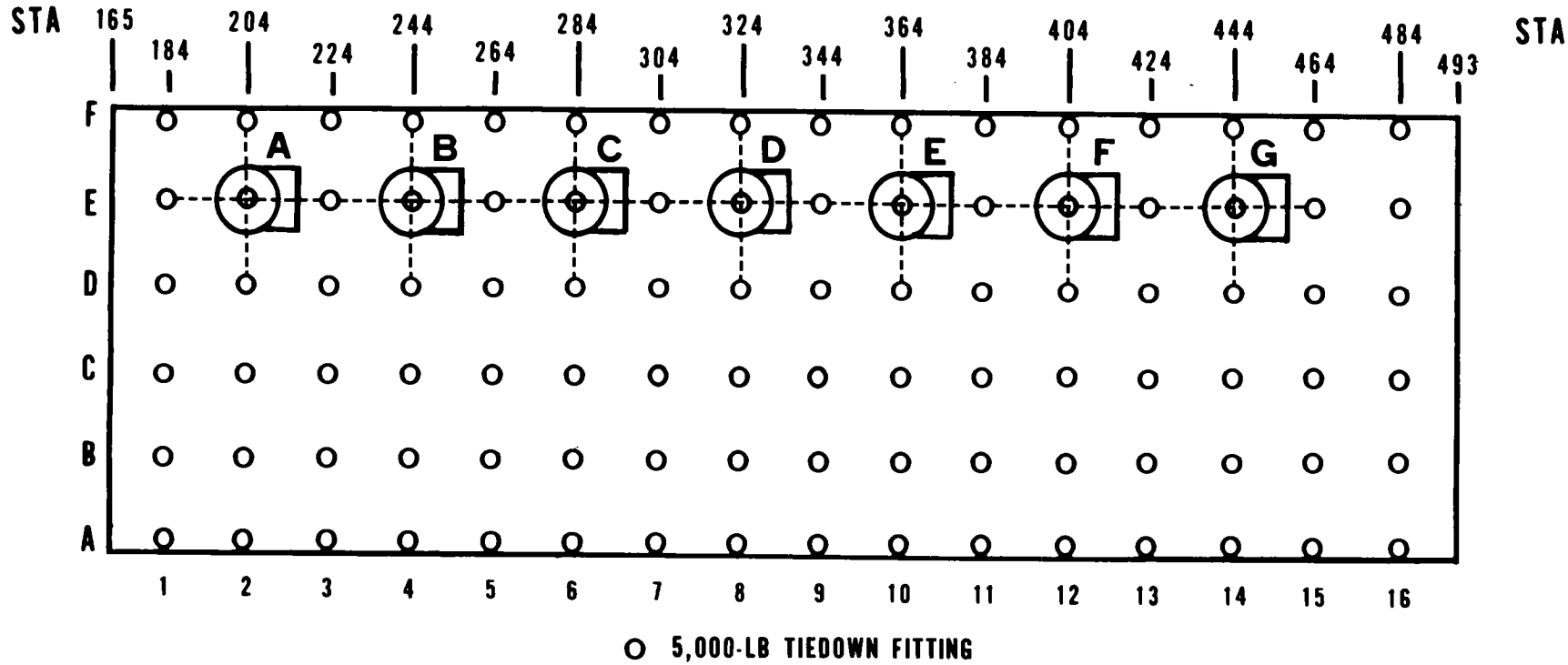


Figure 4-4. Tiedown diagram for case, H912, with ADC, in CH-54 helicopter universal military pod.

Table 4–3 Tiedown Data for Case, H912, With ADC, in CH–47 Helicopter

Item	Tiedown fitting: designation	Tiedown fitting: capacity in 1,000 lb	Tiedown device: type	Tiedown device: capacity in 1,000 lb	Attach to item
A	B4/D4	5	CGU–1/B	5	Over the case and through case web-handling straps.
	C3/C5	5	CGU–1/B	5	Over the case, under strap and rope assembly, and through case web-handling straps.
B through G—Restsrain each item in position shown in figure 4–3 and in manner prescribed for item A above.					

Table 4–4. Tiedown Data for Case, H912, With ADC, in CH–54 Helicopter Universal

Item	Tiedown fitting: designation	Tiedown fitting: capacity in 1,000 lb	Tiedown device: type	Tiedown device: capacity in 1,000 lb	Attach to item
A	D2/F2	5	CGU–1/B	5	Over the case and through case web-handling straps.
	E1/E3	5	CGU–1/B	5	Over the case, under strap and rope assembly, and through case web-handling straps.
B through G—Restrain each item in position shown in figure 4–4 and in manner prescribed for item A above.					

Table 4–5 Tiedown Data for Container, H913, With ADC, in UH–1C/M Helicopters

Tiedown fitting: designation	Tiedown fitting: capacity in 1,000 lb	Tiedown device: type	Tiedown device: capacity in 1,000 lb	Attach to item
C3/G3	1.25	CGU–1/B	5	Over the container
C4/G4	1.25	CGU–1/B	5	Over the container
E2/E6	1.25	CGU–1/B	5	Over the container

(2) Handcarry container(s) into helicopter or pod and place at tiedown location. Place container(s) on floor-protective shoring (UH–60A only). Use antichafing material between containers as required. Four persons can prepare, load, and tie down each container in about 5 minutes.

(3) Tie down a single H913 container in accordance with figures 3–2, 4–5, and 4–5.1 and tables 4–5 and 4–5.1

(4) Tie down multiple H913 containers in accordance with the following figures and tables:

Helicopter	*No. of containers*	*Figure no.*	*Table no.*
UH–1D/H	2	4–5.2	4–5.2
UH–60A	2	4–5.3	4–5.3
UH–1D/H	3	4–6	4–6
CH–47	9	4–7	4–7
CH–54 (universal military pod)	9	4–8	4–8

Note. Figures 4–7 and 4–8 show the maximum number (nine) of XM129E1 or XM129E2 ADC that may be transported in a single group without plutonium weight limits waiver. A maximum of seven XM159E1 or XM159E2 ADC may be transported in a single group without plutonium weight limits waiver.

(5) Completed tiedown for two containers, H913, in a UH–60A helicopter is shown in figures 4–5.4 and 4–5.5

c. Unloading. Four persons can unload each container in about 3 minutes.

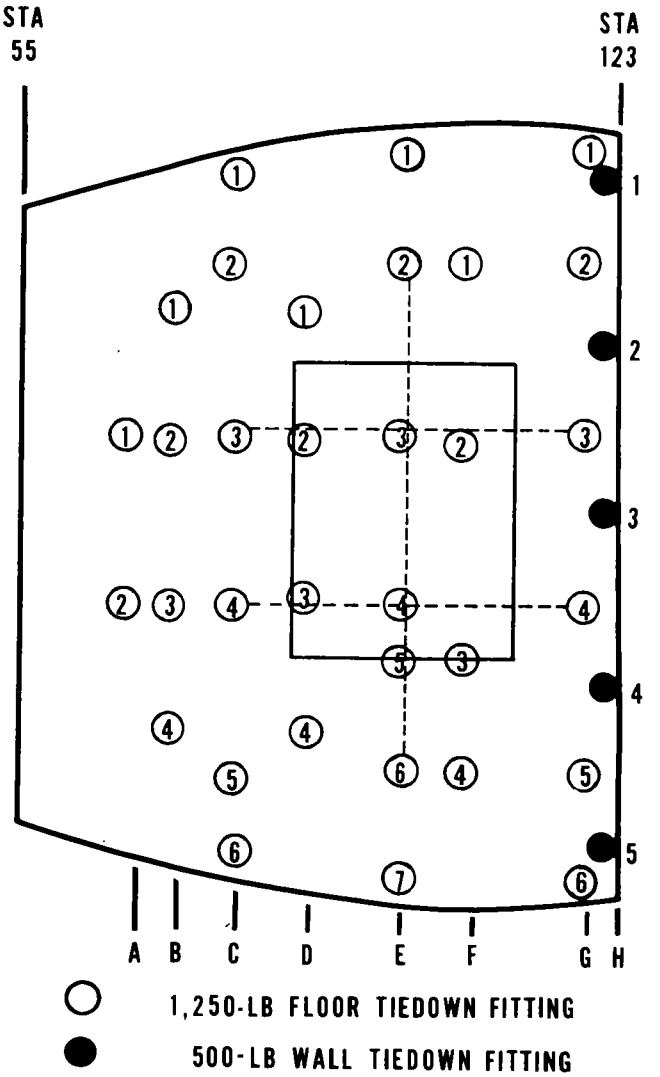
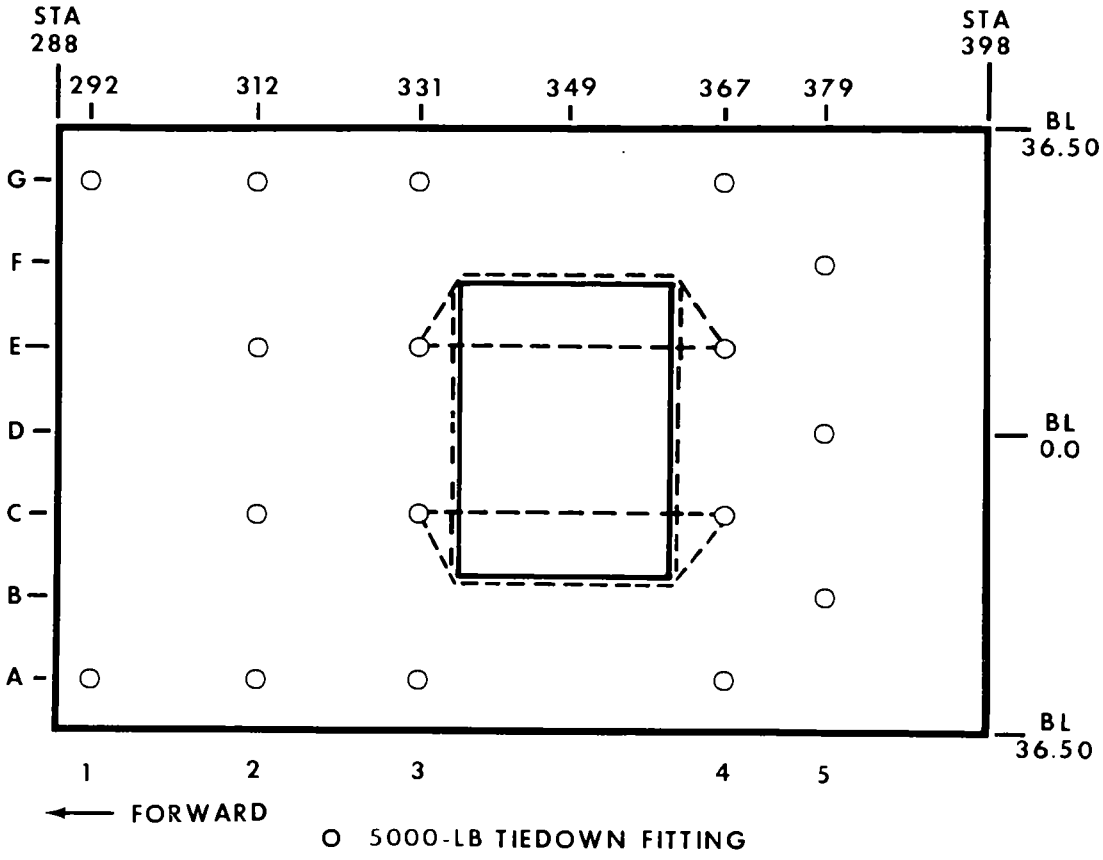


Figure 4–5. Tiedown diagram for container, H913, with ADC, in UH–1C/M helicopters.

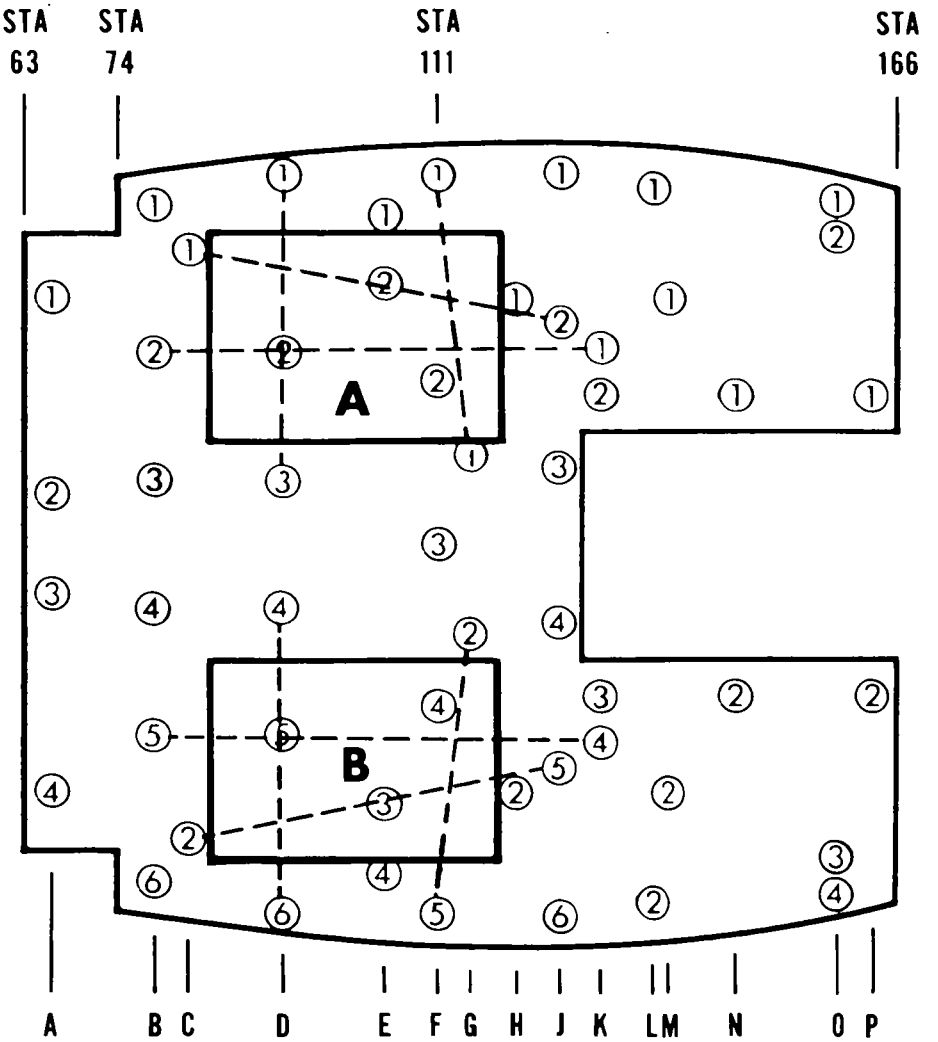


NOTE: CARGO HOOK ACCESS DOOR IS LOCATED IN THE CENTER OF THE FLOOR BETWEEN STATIONS 343 AND 363

★*Figure 4–5.1. Tiedown diagram for single container, H913, with ADC, in UH–60A helicopter.*

★*Table 4–5.1 Tiedown Data for Container, H913, With ADC, in UH–60A Helicopter*

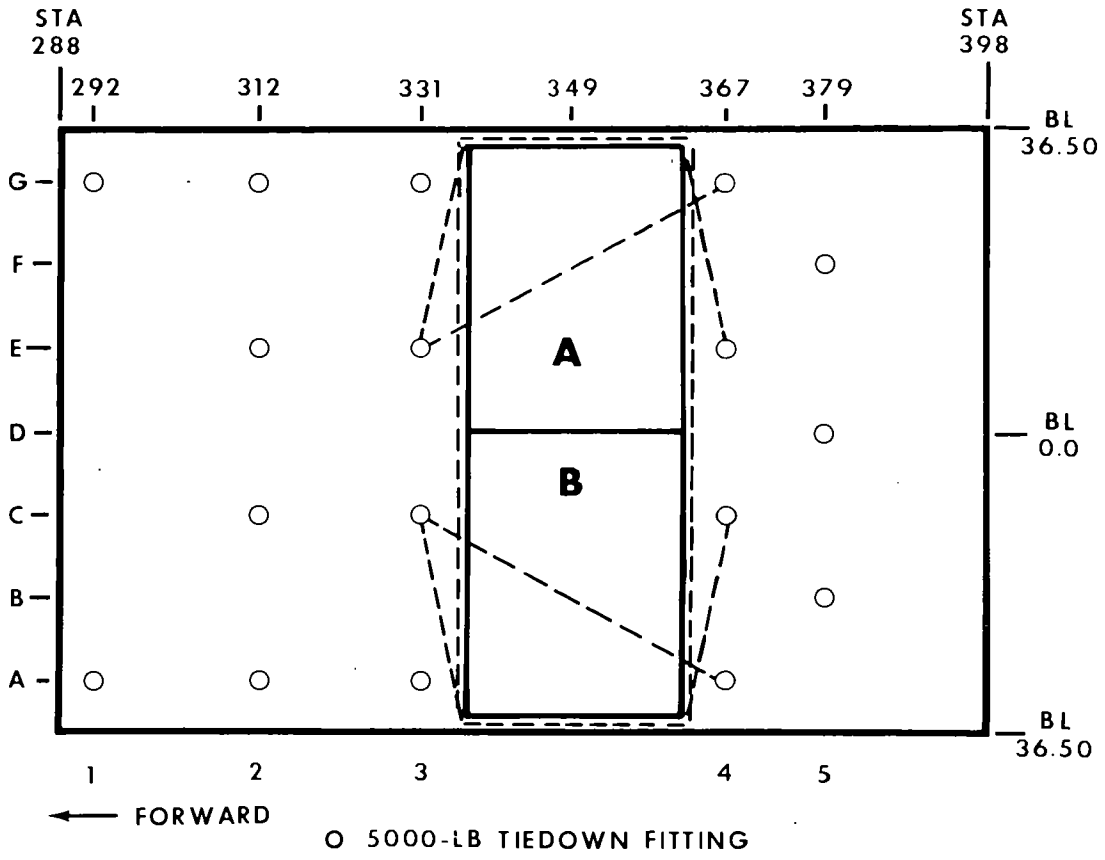
Tiedown fitting		Tiedown device		
desig-nation	capacity in 1,000 lb	type	capacity in 1,000 lb	Attach to item
C3/E3	5	CGU–1/B	5	Pass around rear side of container. Position tiedown above upper reinforcement bulge.
C4/E4	5	CGU–1/B	5	Pass around front side of container. Position tiedown above upper reinforcement bulge.
C3/C4	5	CGU–1/B	5	Over container.
E3/E4	5	CGU–1/B	5	Over container.



★*Figure 4–5.2. Tiedown diagram for two containers, H913, with ADC, in UH–1D/H helicopters.*

★*Table 4–5.2. Tiedown Data for Two Containers, H913, With ADC, in UH–1D/H Helicopters*

Item	Tiedown fitting		Tiedown device		Attach to item
	designation	capacity in 1,000 lb	type	capacity in 1,000 lb.	
A	C1/J2	1.25	CGU–1/B	5	Over container A.
	B2/K1	1.25	CGU–1/B	5	Over container A.
	D1/D3	1.25	CGU–1/B	5	Over container A.
	F1/G1	1.25	CGU–1/B	5	Over container A.
B	B5/K4	1.25	CGU–1/B	5	Over container B.
	C2/J5	1.25	CGU–1/B	5	Over container B.
	D4/D6	1.25	CGU–1/B	5	Over container B.
	G2/F5	1.25	CGU–1/B	5	Over container B.



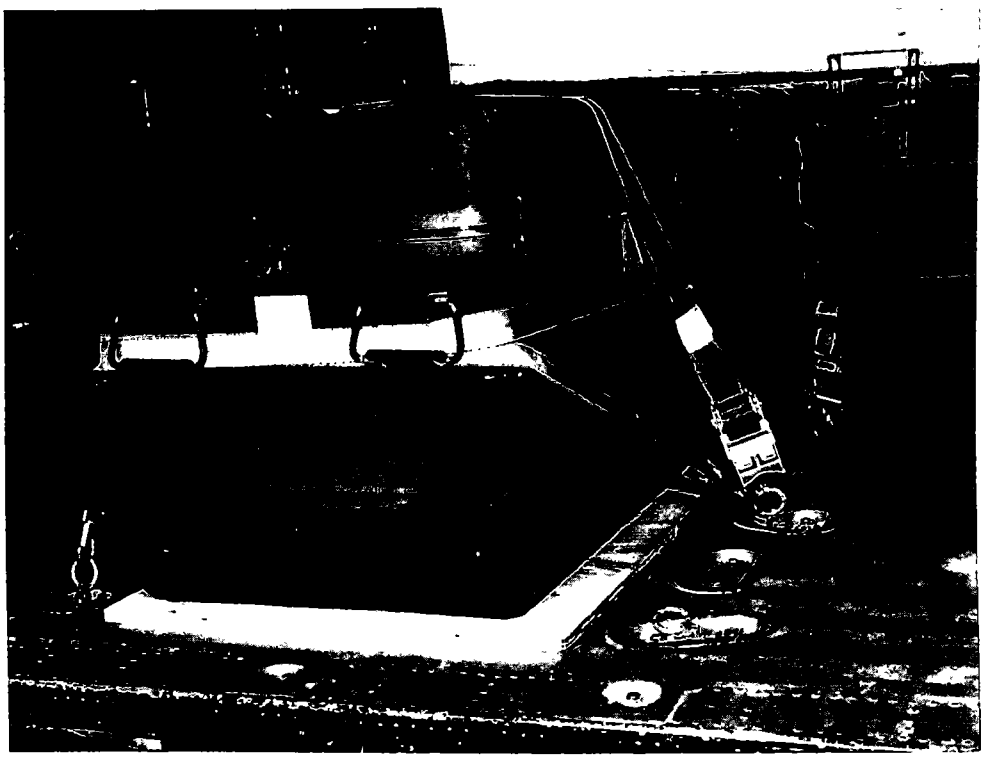
NOTE: CARGO HOOK ACCESS DOOR IS LOCATED IN THE CENTER OF THE FLOOR BETWEEN STATIONS 343 AND 363

★*Figure 4–5.3. Tiedown diagram for two containers, H913, with ADC, in UH–60A helicopter.*

★*Table 4–5.3. Tiedown Data for Two Containers, H913, With ADC in UH–60A Helicopter*

Item	Tiedown fitting		Tiedown device		Attach to item
	desig-nation	capacity in 1,000 lb	type	capacity in 1,000 lb.	
A and B	C3/E3	5	CGU–1/B	5	Pass around rear sides of containers. Position tiedown above upper reinforcement bulge.
	C4/E4	5	CGU–1/B	5	Pass around forward sides of containers. Position tiedown above upper reinforcement bulge.
	C3/A4	5	CGU–1/B	5	Over container B.
	E3/G4	5	CGU–1/B	5	Over container A.

★*Figure 4–5.4. Completed tiedown of two containers, H913, in UH–60A helicopter (left rear view).*



★*Figure 4–5.5. Completed tiedown of two containers, H913, in UH–60A helicopter (right front view).*

Table 4–6. Tiedown Data for Container, H913, With ADC, in UH–1D/H Helicopters

Item	Tiedown fitting		Tiedown device*		
	desig-nation	capacity in 1,000 lb	type	desig-nation	Attach to item
A, B, and C	C1/J2	1.25	CGU–1/B	5	Over container A
	B2/K1	1.25	CGU–1/B	5	Over container A
	B3/J3	1.25	CGU–1/B	5	Over container B
	B4/J4	1.25	CGU–1/B	5	Over container B
	B5/K4	1.25	CGU–1/B	5	Over container C
	C2/J5	1.25	CGU–1/B	5	Over container C
	D1/D6	1.25	CGU–1/B	5	Over all containers
	F1/F5	1.25	CGU–1/B	5	Over all containers

* MC–1 tiedown device may be used.

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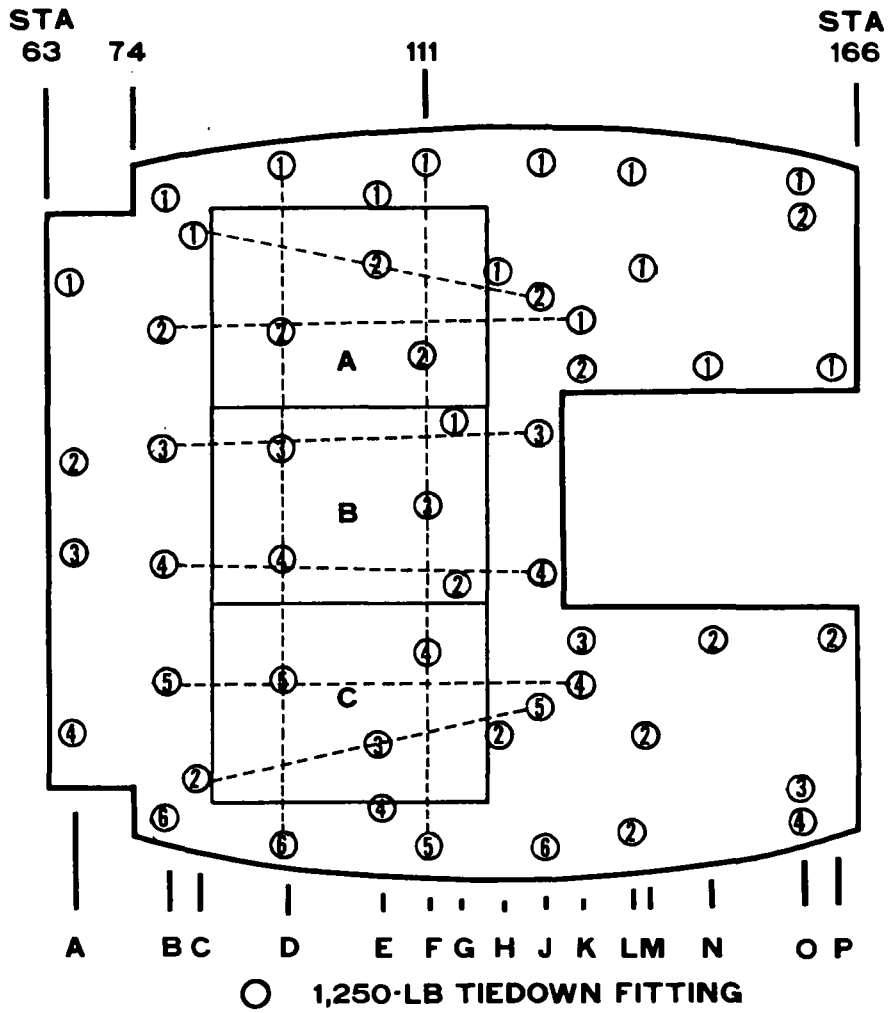


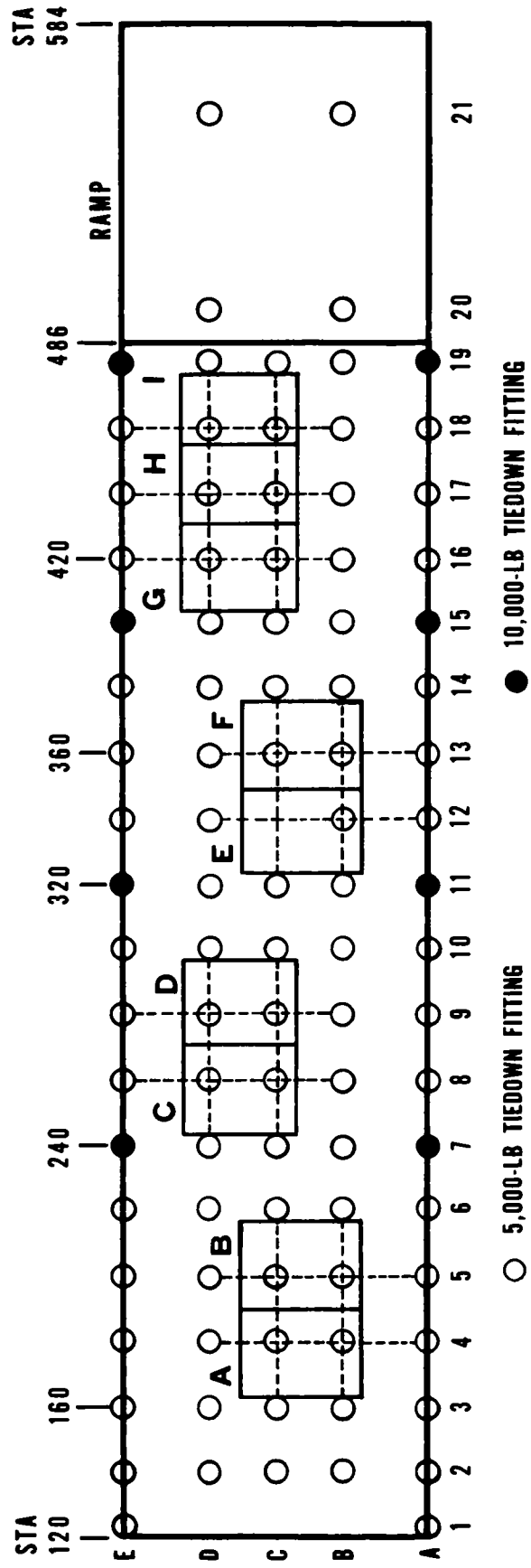
NOTE: INSERT ANTICHAFING MATERIAL BETWEEN COMBINED CONTAINERS.

Figure 4-6. Tiedown diagram for container, H913, with ADC, in UH-1D/H helicopters.

Table 4-7. Tiedown Data for Container, H913, With ADC, 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 and B	B3/B6	5	CGU-1/B	5	Over both containers
	C3/C6	5	CGU-1/B	5	Over both containers
	A4/D4	5	CGU-1/B	5	Over container A
	A5/D5	5	CGU-1/B	5	Over container B
C and D	C7/C10	5	CGU-1/B	5	Over both containers
	D7/D10	5	CGU-1/B	5	Over both containers
	D8/E8	5	CGU-1/B	5	Over container C
	B9/E9	5	CGU-1/B	5	Over container D
E and F	B11/B14	5	CGU-1/B	5	Over both containers
	C11/C14	5	CGU-1/B	5	Over both containers
	A12/D12	5	CGU-1/B	5	Over container E
	A13/D13	5	CGU-1/B	5	Over container F
G, H, and I	C15/C19	5	CGU-1/B	5	Over all containers
	D15/D19	5	CGU-1/B	5	Over all containers
	B16/E16	5	CGU-1/B	5	Over container G
	B17/E17	5	CGU-1/B	5	Over container H
	B18/E18	5	CGU-1/B	5	Over container I

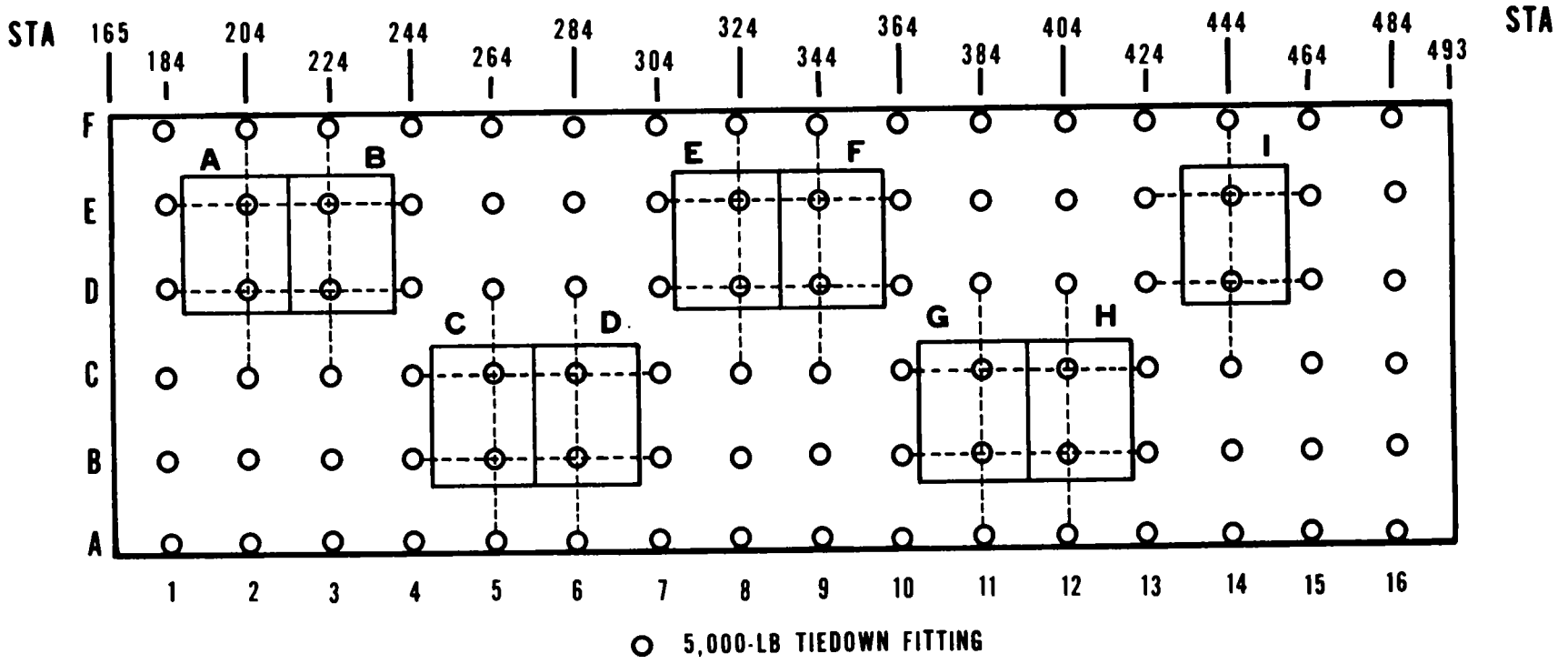
* MC-1 tiedown device may be used.



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

NOTE: INSERT ANTICHAFING MATERIAL BETWEEN COMBINED CONTAINERS.

Figure 4–7. Tiedown diagram for container, H918, with ADC, in CH–47 helicopter.



NOTE: INSERT ANTICHAFING MATERIAL BETWEEN COMBINED CONTAINERS.

Figure 4–8. Tiedown diagram for container, H913, with ADC, in CH–54 helicopter universal military pod.

Table 4–8. Tiedown Data for Container, H913, With ADC, in CH–54 Helicopter Universal Military Pod

Item	Tiedown fitting		Tiedown device*		
	desig-nation	capacity in 1,000 lb	type	capacity in 1,000 lb	Attach to item
A and B	D1/D4	5	CGU–1/B	5	Over both containers
	E1/E4	5	CGU–1/B	5	Over both containers
	C2/F2	5	CGU–1/B	5	Over container A
	C3/F3	5	CGU–1/B	5	Over container B
C and D	B4/B7	5	CGU–1/B	5	Over both containers
	C4/C7	5	CGU–1/B	5	Over both containers
	A5/D5	5	CGU–1/B	5	Over container C
	A6/D6	5	CGU–1/B	5	Over container D
E and F	D7/D10	5	CGU–1/B	5	Over both containers
	E7/E10	5	CGU–1/B	5	Over both containers
	C8/F8	5	CGU–1/B	5	Over container E
	C9/F9	5	CGU–1/B	5	Over container F
G and H	B10/B13	5	CGU–1/B	5	Over both containers
	C10/C13	5	CGU–1/B	5	Over both containers
	A11/D11	5	CGU–1/B	5	Over container G
	A12/D12	5	CGU–1/B	5	Over container H
I	D13/D15	5	CGU–1/B	5	Over the container
	E13/E15	5	CGU–1/B	5	Over the container
	C14/F14	5	CGU–1/B	5	Over the container

* MC–1 tiedown device may be used.

CHAPTER 5

EXTERNAL TRANSPORT BY HELICOPTER (Emergency Procedure)

5–1. General

This chapter prescribes procedures for external transport of the ADC in case, H912 (configuration I), or in container, H913 (configuration II), in cargo nets. Information pertaining to the case and container is shown in chapter 3.

Warning. **The contents of chapter 5 are for information and training purposes only and are not to be construed as authority for external transport by helicopter of the XM129 and XM159 ADC. 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 (chap 4).***

Warning. **Always assume that a charge of static electricity is present on the helicopter. It is necessary to use some type of discharge apparatus (static probe) (fig 2–3, FM 55–413) to ground the hook and discharge electricity 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, ground the load again to discharge any accumulated/retained static electricity.**

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

Caution. **A maximum of two ADC in case, H912, may be transported simultaneously in any of the described cargo nets.**

Caution. **A maximum of seven XM159 or nine XM129 ADC in container, H913, may be transported simultaneously, without plutonium weight limits waiver, in any of the described cargo nets.**

5–2. Materials and Procedures for Transport of Case, H912 (Configuration I), Using the 5,000-Pound-Capacity Sling, Cargo Net, Metallic, Octagonal

a. Materials.

(1) Sling, cargo net, metallic, octagonal, 5,000-pound capacity (NSN 3940–00–774–8507).

(2) Cord, nylon, 1/16-inch nominal diameter, 330-pound breaking strength (NSN 4020–00–903–8594), or equivalent.

(3) One piece energy-dissipating honeycomb pad (NSN 1670–00–753–3928), 15- by 21- by 3-inch or suitable substitute.

(4) One piece plywood, 32- by 32- by ¾-inch.

(5) Two load binders (NSN 3990–00–360–0248).

(6) Two quick-fit cargo-tiedown strap fasteners (NSN 1670–00–360–0340).

(7) Two 15-foot cargo-tiedown straps (NSN 1670–00–360–0540).

(8) Tape, adhesive, 2-inch wide (NSN 7510–00–266–5016), or equivalent.

(9) Additional materials used with CH–47 helicopter only:

(*a*) One 8-foot, two-loop, air-delivery cargo sling (NSN 1670–00–753–3789) (has rated capacity of 6,500 pounds).

(*b*) One 3-foot, three-loop, air-delivery cargo sling ring (NSN 1670–00–753–3788) (has rated capacity of 10,000 pounds).

b. Preparation and Rigging.

(1) Insure that the case cover is secure and that the cushioning pad is fastened to the case. Fold running ends of case and cushioning pad straps, and tape to the case.

(2) Spread cargo net and place piece of plywood in center of net with tiedown straps positioned under plywood. Two persons can prepare the case, H912, and rig the net for external transport in approximately 10 minutes.

(3) Place piece of honeycomb on plywood and position the case, H912, on the honeycomb.

(4) Pass tiedown straps with quick-fit fasteners over case, H912, and tighten securely with load binders. Fold the running ends of the strap assemblies, and safety tape to the load binders.

(5) Attach net draw cables to the 6-inch ring forming the apex that is attached to the helicopter hook; this should be done so that four ring-end snap fasteners converge at the base of the 6-inch ring and three free-end snap fasteners are attached to the 2⅜-inch rings (fig 5–1).

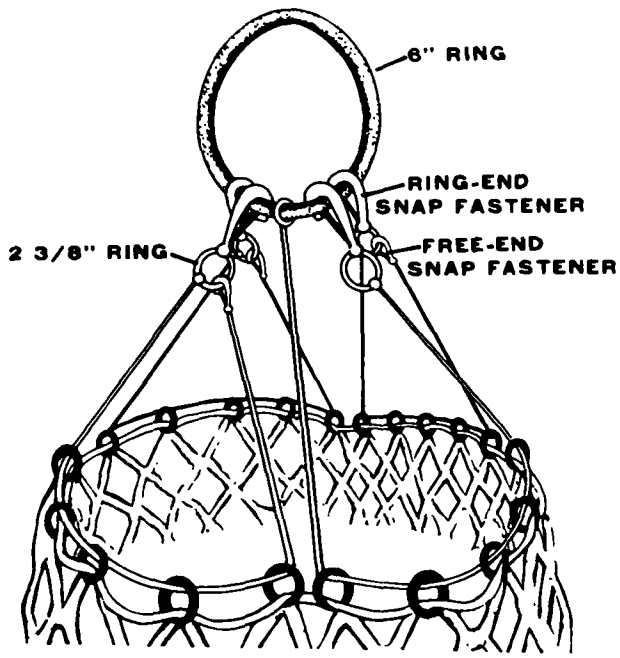


Figure 5–1. Attachment of draw cable snap fasteners to 6-inch ring (top) and to 2⅜-inch rings.

(6) Draw the net up evenly and smoothly around the load, cluster the draw cables by hand, and tie or tape the net above the load to prevent fouling during lift-off (fig 5–2). Helicopter must be centered over load before tension is placed on the net.

(7) In addition to the foregoing, the following procedure is applicable when the ADC is transported by CH–47 helicopter: choker-hitch one end of the 8-foot cargo sling (functions as vertical riser) to the 6-inch ring on the cargo net; then pass the 3-foot sling ring through the upper loop of the 8-foot sling. Connect free ends of the 3-foot sling with the link assembly. The 3-foot sling forms the apex or attachment to the helicopter cargo hook. The vertical riser dampens vibration tendencies.

c. Derigging. Two persons can derig the cargo net in approximately 5 minutes.

5–3. Materials and Procedures for Transport of Container, H913 (Configuration II), Using the 5,000-Pound Capacity Sling, Cargo Net, Metallic, Octagonal

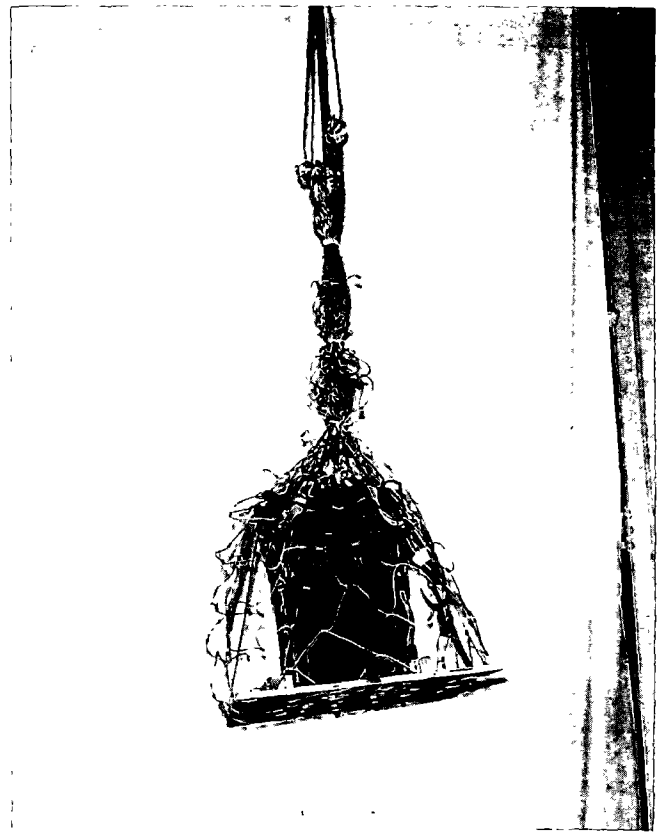


Figure 5–2. Case, H912, with ADC, in metallic cargo net prepared for external transport. Note that net is tied above load.

a. Materials.

(1) Sling, cargo net, metallic, octagonal, 5,000-pound capacity (NSN 3940–00–774–8507).

(2) Cord, nylon, 1/16-inch nominal diameter, 330-pound breaking strength (NSN 4020–00–903–8594), or equivalent.

(3) Tape, adhesive, 2-inch wide (NSN 7510–00–266–5016), or equivalent.

(4) Additional materials used with CH–47 helicopter only:

(a) One 8-foot, two-loop, air-delivery cargo sling (NSN 1670–00–753–3789) (has rated capacity of 6,500 pounds).

(*b*) One 3-foot, three-loop, air-delivery cargo sling (NSN 1670–00–753–3788) (has rated capacity of 10,000 pounds).

b. Preparation and rigging.

(1) Insure that the container cover is secured and sealed.

(2) Spread cargo net and position container(s) in center of net. Multiple containers, within limitations (para 2–1*c*), are positioned so as not to exceed the array restrictions imposed by TM 39–20–7 and TM 39–45–51A. Two persons can

prepare the container(s), H913, and rig the net for external transport in about 10 minutes.

(3) Attach new draw cables to the 6-inch ring forming the apex, which is attached to the helicopter hook; this should be done so that four ring-end snap fasteners converge at the base of the 6-inch ring and three free-end snap fasteners are attached to the 2⅜-inch ring (fig. 5–1).

(4) Draw the net up evenly and smoothly around the load, cluster the draw cables by hand, and tie or tape the net above the load to prevent fouling during lift-off (fig. 5–2). Helicopter must be centered over load before tension is placed on the net.

(5) In addition to the foregoing, the following procedure is applicable when the ADC is transported by CH–47 helicopter: choker-hitch one end of the 8-foot cargo sling (functions as vertical riser) to the 6-inch ring on the cargo net; then pass the 3-foot sling ring through the upper loop of the 8-foot sling. Connect free ends of the 3-foot sling with the link assembly. The 3-foot sling forms the apex for attachment to the helicopter cargo hooks. The vertical riser dampens vibration tendencies.

c. Derigging. Two persons can derig the cargo net in about 5 minutes.

5–4. Materials and Procedures for Transport of Case, H912 (Configuration 1), Using the 5,000-Pound-Capacity Nylon Cargo Net

a. Materials.

(1) Net, cargo, nylon, 5,000-pound capacity (NSN 1670–01–058–3811).

(2) Items shown in 5–2*a*(2) through 5–2*a*(8).

b. Preparation and rigging.

(1) Observe procedures in 5–2*b*(1) through 5–2*b*(4).

(2) Draw the cargo net up around the load, and secure the four corner hooks in net apex stirrup.

(3) Lace nylon cord through the cargo net above the load.

(4) Attach the cargo net apex stirrup to the helicopter cargo hook. Helicopter must be centered over load before tension is placed on the net.

c. Derigging. Two persons can derig the cargo net in about 5 minutes.

5–5. Materials and Procedures for Transport of Container, H913 (Configuration II), Using the 5,000-Pound-Capacity Nylon Cargo Net.

a. Materials.

(1) Net, cargo, nylon, 5,000-pound capacity (NSN 1670–01–058–3811).

(2) Items shown in 5–3*a*(2) and 5–3*a*(3).

b. Preparation and rigging.

(1) Observe procedures in 5–3*b*(1) and 5–3*b*(2).

(2) Observe procedures in 5–4*b*(2) through 5–4*b*(4).

c. Derigging. Two persons can derig the cargo net in about 5 minutes.

5–6. Materials and Procedures for Transport of Case, H912 (Configuration I), Using the 10,000-Pound-Capacity Nylon Cargo Net.

a. Materials.

★(1) One net, cargo, nylon, 10,000-pound capacity (NSN 1670–01–058–3810) (for use in combination with slings described below in (2), or in (4), or in (5), or in (6)).

(2) Two 16-foot, two-loop cargo slings (NSN 1670–00–753–3793) (each has rated capacity of 6,500 pounds).

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

(4) One 23-foot, nylon and chain, four-leg sling (NSN 1670–00–902–3080) (has rated capacity of 15,000 pounds).

(5) One sling, helicopter, cargo-carrying, external, four-leg sling (NSN 1670–01–027–2902) (has rated capacity of 10,000 pounds).

(6) One sling helicopter, cargo-carrying, external, four-leg sling (NSN 1670–01–027–2900) (has rated capacity of 25,000 pounds).

(7) Cord, nylon, 1/16-inch nominal diameter, 330-pound breaking strength (NSN 4020–00–903–8594), or equivalent.

★(8) Tape, adhesive, 2-inch wide (NSN 7510–00–266–5016), or equivalent.

(9) Items shown in 5–2*a*(3), through 5–2*a*(7).

b. Preparation and Rigging When Using Two 16-Foot Two-Loop, Cargo Slings to Rig Nylon Cargo Net.

(1) Observe procedures in 5–2*b*(1) through 5–2*b*(4).

(2) Pass the first cargo-sling end through two adjoining hoist links on cargo net. Pass the second cargo-sling end through the other two hoist links on cargo net.

(3) Combine the four ends of the cargo slings to form a single loop, and attach loop to the 3-foot sling. Connect free ends of the 3-foot sling with the link assembly. The 3-foot sling forms the apex for attachment to the helicopter cargo hook.

(4) Lace nylon cord through the cargo net above the load.

(5) Cluster and tape or tie sling legs (breakaway technique) to prevent fouling during lift off.

(6) Attach apex to the helicopter cargo hook.

Helicopter must be centered over load before tension is placed on the net.

c. Preparation and Rigging When Using the 23-Foot, Nylon and Chain, Four-Leg Sling; or the Sling, Helicopter, Cargo-Carrying, External, Four-Sling (Either the 10,000- or 25,000-Pound-Capacity Sling), to Rig Nylon Cargo Net.

Note. Each leg of the nylon and chain, four-leg sling 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.

Note. Each leg of the sling, helicopter, cargo-carrying, external, four-leg sling, either 10,000- or 25,000-pound capacity, is constructed of a 12-foot anti-abrasive nylon braided 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 leg of the 10,000-pound capacity sling consists of approximately 111 links. The chain leg of the 25,000-pound-capacity sling consists of approximately 88 links. On each sling, the link at the free end is referred to as link number 1.

(1) Observe procedures in 5–2*b*(1) through 5-2*b*(4).

(2) Pass each of the sling chain legs through a single hoist link on cargo net, then insert link number 3 of each chain into the grab link or hook to form hitch.

(3) The 12-inch ring of the nylon and chain, four-leg sling forms the apex for attachment to the helicopter cargo hook.

(4) The metal clevis of the sling, helicopter, cargo-carrying, external, four-leg sling forms the apex for attachment to the helicopter cargo hook.

(5) Observe procedures in *b*(4) through *b*(6) above.

d. Derigging. Two persons can derig the cargo net in about 5 minutes.

5–7. Materials and Procedures for Transport of Container, H913 (Configuration II), Using the 10,000-Pound-Capacity Nylon Cargo Net.

a. Materials.

★(1) One net, cargo, nylon, 10,000-pound-capacity (NSN 1670–01–058–3810) (for use in combination with slings described below in (2), or in (4), or in (5), or in (6)).

(2) Two 16-foot, two-loop cargo slings (NSN 1670–00–753–3793) (each has rated capacity of 6,500 pounds).

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

(4) One 23-foot, nylon and chain, four-leg sling (NSN 1670–00–902–3080) (has rated capacity of 15,000 pounds).

(5) One sling, helicopter, cargo carrying external, four-leg sling (NSN 1760–01–027–2902) (has rated capacity of 10,000 pounds).

(6) One sling, helicopter, cargo carrying external, four-leg sling (NSN 1670–01–027–2900) (has rated capacity of 25,000 pounds).

(7) Cord, nylon 1/16-inch nominal diameter, 330-pound breaking strength (NSN 4020–00–903–8594), or equivalent.

★(8) Tape, adhesive, 2-inch wide (NSN 7510–00–266–5016), or equivalent.

b. Preparation and Rigging When Using Two 16-Foot, Two-Loop, Cargo Sling to Rig Nylon Cargo Net.

(1) Observe procedures in 5–3*b*(1) and 5–3*b*(2).

(2) Observe procedures in 5–6*b*(2) through 5–6*b*(6).

c. Preparation and Rigging When Using the 23-Foot, Nylon and Chain, Four-Leg Sling; or the Sling, Helicopter, Cargo-Carrying, External, Four-Leg, Sling (Either the 10,000- or 25,000-Pound-Capacity Sling), to Rig Nylon Cargo Net.

(1) Observe procedures in 5–3*b*(1) and 5–3*b*(2).

(2) Observe procedures in 5–6*c*(2) through 5–6*c*(5).

d. Derigging. Two persons can derig the cargo net in about 5 minutes.

CHAPTER 6

EMERGENCY MOVEMENT BY HELICOPTER

6–1. General

a. This chapter provides for emergency logistic movement (para 2–11, TM 39–45–51C) of the ADC (para 3–1*d*) for military contingency or logistic supply during periods of tension. It also provides for emergency evacuation under political or military conditions of such nature that noncompliance with portions of the nuclear and flight safety regulations is the only alternative to destruction of weapons.

b. Exercise of emergency movement authority is restricted to situations wherein the security of nuclear assets is endangered or when emergency logistic movement is dictated by a pending regional or world crisis. The determination that emergency movement is justifiable will be approved by the theater commander.

c. Minimum spacing and numerical limits for nuclear weapons and class II nuclear components are necessary to preclude the possibility of nuclear material interaction and to minimize sympathetic detonation of high explosive components in event of an accident. The minimum spacing requirements between nuclear weapons and/or class II nuclear components, provided in section 4, TM 39–45–51A, must be scrupulously observed to preclude the possibility of nuclear material interaction.

d. If emergency logistic movement is directed, there may be an operational necessity to airlift dangerous items that should not be mixed, as indicated in table 2–1, TM 39–45–51C. Should this occur, the commander who ordered the emergency movement may waive the requirements of table 2–1.

Note. Table and tiedown diagrams have not been developed for mixed loads of nuclear weapons or class II nuclear components. This, however, does not preclude the shipment of mixed loads if the limitations specified in TM 39–45–51A and TM 39-20-7 are adhered to.

6–2. Emergency Movement of the ADC as Helicopter Internal Loads

a. Case, H912, with ADC (configuration I). The maximum helicopter loads for case, H912, are the same as shown in paragraph 4–1.

b. Container, H913, with ADC (configuration II).

(1) Materials and procedures for transport of the container, H913, are prescribed by paragraph 4–2.

(2) A waiver of plutonium weight limits is required (TM 39–20–7 and TM 39–45–51A) before more than nine XM129ADC or seven XM159ADC may be transported in a single group. For the quantity of ADC that may be transported in a mixed group, refer to table 8–1, TM 9–1100–205–20.

★(3) Tie down the container, H913, in the respective helicopter or pod in accordance with the following figures and tables:

Helicopter	*Figure no.*	*Table no.*
UH–60A	4–5.3	4–5.3
UH–1D/H	4–6	4–6
CH–47	6–1	6–1
CH–54 (universal military pod)	6–2	6–2

6–3. Emergency Movement of the ADC as Helicopter External Loads

Note. External loads have not been developed for maximum loads of individual or mixed nuclear weapons or class II nuclear components. This, however, does not preclude such external loads if the limitations specified in TM 39–45–51A and TM 39–20–7 are adhered to and if the loads are justifiable and directed. Also applicable are the limitations for external transport by helicopter (chap 5).

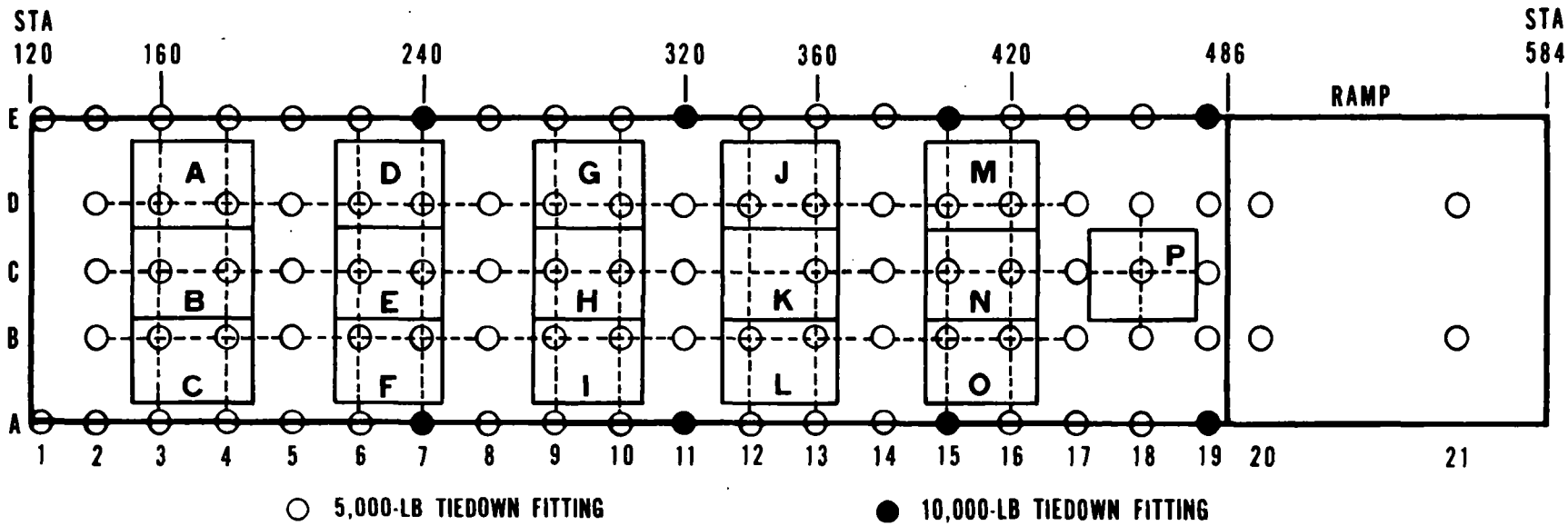
a. Case, H912, with ADC (configuration 1). The maximum helicopter loads for case, H912, are the same as shown in paragraph 5–1.

b. Container, H913, with ADC (configuration II).

(1) Materials and procedures for transport of the container, H913, are prescribed by paragraphs 5–3, 5–5, and 5–7.

(2) External loads of the container, H913, must not exceed the rigging material capacities shown in chapter 5 or the helicopter capability.

(3) A waiver of plutonium weight limits is required (TM 39–20–7 and TM 39–45–51A) before more than nine XM129ADC or seven XM159ADC may be transported in a single group. For the quantity of ADC that may be transported in a mixed group, refer to table 8–1, TM 9–1100–205–20.



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

NOTE: INSERT ANTICHAFING MATERIAL BETWEEN COMBINED CONTAINERS.

Figure 6–1. Tiedown diagram for maximum load of 16 containers, H913, in CH–47 helicopter.

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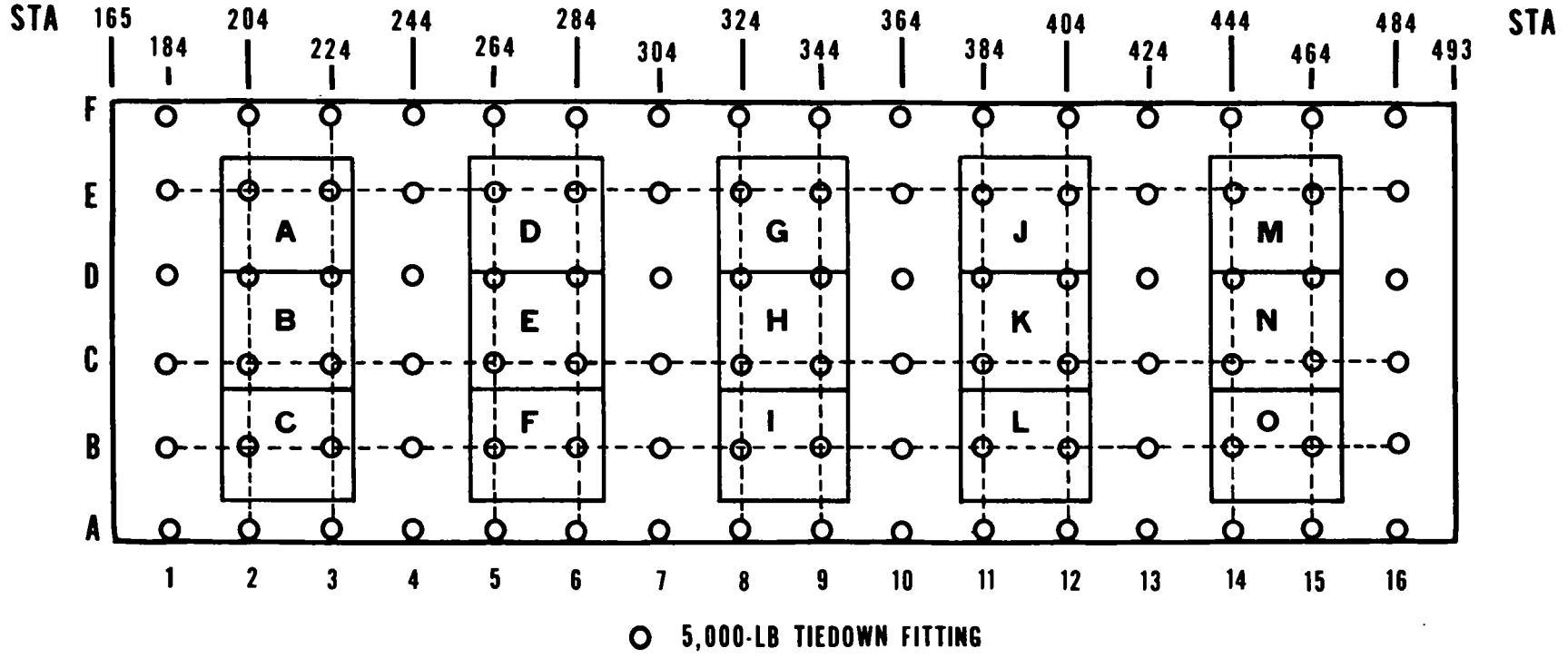

NOTE: INSERT ANTICHAFING MATERIAL BETWEEN COMBINED CONTAINERS.

Figure 6–2. Tiedown diagram for maximum load of 15 containers, H913, in CH–54 helicopter universal military pod.

Table 6-1. Tiedown Data for Maximum Load of 16 Containers, H913, in CH-47 Helicopter

Item	Tiedown fitting		Tiedown device*		
	designation	capacity in 1,000 lb	type	capacity in 1,000 lb	Attach to item
A, B, and C	B2/B5	5	CGU-1/B	5	Over container C
	C2/C5	5	CGU-1/B	5	Over container B
	D2/D5	5	CGU-1/B	5	Over container A
	A3/E3	5	CGU-1/B	5	Over all containers
	A4/E4	5	CGU-1/B	5	Over all containers
D, E, and F	B5/B8	5	CGU-1/B	5	Over container F
	C5/C8	5	CGU-1/B	5	Over container E
	D5/D8	5	CGU-1/B	5	Over container D
	A6/E6	5	CGU-1/B	5	Over all containers
	A7/E7	10	CGU-1/B	5	Over all containers
G, H, and I	B8/B11	5	CGU-1/B	5	Over container I
	C8/C11	5	CGU-1/B	5	Over container H
	D8/D11	5	CGU-1/B	5	Over container G
	A9/E9	5	CGU-1/B	5	Over all containers
	A10/E10	5	CGU-1/B	5	Over all containers
J, K, and L	B11/B14	5	CGU-1/B	5	Over container L
	C11/C14	5	CGU-1/B	5	Over container K
	D11/D14	5	CGU-1/B	5	Over container J
	A12/E12	5	CGU-1/B	5	Over all containers
	A13/E13	5	CGU-1/B	5	Over all containers
M, N, and O	B14/B17	5	CGU-1/B	5	Over container O
	C14/C17	5	CGU-1/B	5	Over container N
	D14/D17	5	CGU-1/B	5	Over container M
	A15/E15	10	CGU-1/B	5	Over all containers
	A16/E16	5	CGU-1/B	5	Over all containers
P	B18/D18	5	CGU-1/B	5	Over container P
	C17/C19	5	CGU-1/B	5	Over container P

* MC-1 tiedown device may be used.

Table 6-2. Tiedown Data for Maximum Load of 15 Containers, H913, in CH-54 Helicopter Universal Military Pod

Item	Tiedown fitting		Tiedown device*		
	designation	capacity in 1,000 lb	type	capacity in 1,000 lb	Attach to item
A, B, and C	B1/B4	5	CGU-1/B	5	Over container C
	C1/C4	5	CGU-1/B	5	Over container B
	E1/E4	5	CGU-1/B	5	Over container A
	A2/F2	5	CGU-1/B	5	Over all containers
	A3/F3	5	CGU-1/B	5	Over all containers
D, E, and F	B4/B7	5	CGU-1/B	5	Over container F
	C4/C7	5	CGU-1/B	5	Over container E
	E4/E7	5	CGU-1/B	5	Over container D
	A5/F5	5	CGU-1/B	5	Over all containers
	A6/F6	5	CGU-1/B	5	Over all containers
G, H, and I	B7/B10	5	CGU-1/B	5	Over container I
	C7/C10	5	CGU-1/B	5	Over container H
	E7/E10	5	CGU-1/B	5	Over container G
	A8/F8	5	CGU-1/B	5	Over all containers
	A9/F9	5	CGU-1/B	5	Over all containers
J, K, and L	B10/B13	5	CGU-1/B	5	Over container L
	C10/C13	5	CGU-1/B	5	Over container K
	E10/E13	5	CGU-1/B	5	Over container J
	A11/F11	5	CGU-1/B	5	Over both containers
	A12/F12	5	CGU-1/B	5	Over both containers
M, N, and O	B13/B16	5	CGU-1/B	5	Over container O
	C13/C16	5	CGU-1/B	5	Over container N
	E13/E16	5	CGU-1/B	5	Over container M
	A14/F14	5	CGU-1/B	5	Over both containers
	A15/F15	5	CGU-1/B	5	Over both containers

* MC-1 tiedown device may be used.

APPENDIX

REFERENCES

1. Army Regulations (AR)

10–16	US Nuclear Agency
40–14	Control and Recording Procedures: Occupational Exposure to Ionizing Radiation
50–5	Nuclear and Chemical Weapons and Materiel: Nuclear Surety
(C) 50–5–1	Nuclear and Chemical Weapons and Materiel: Nuclear Surety (U)
(C) 50–107	Safety Rules for Operations With the Special Atomic Demolition Munition (SADM) (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. Army Field Manuals (FM)

1–100	Army Aviation Utilization
55–413	Aerial Recovery of US Army and Air Force Aircraft
55–450–19	Army Helicopter External Load Operations
100–50	Nuclear Unit Operations in Combat
101–20	US Army Aviation Planning Manual

3. Army Technical Bulletins (TB)

(SRD) 9–1100–811–40	Security Classification of Nuclear Weapons Information (U)
385–2	Nuclear Weapons Firefighting Procedures

4. Army Technical Manuals (TM)

5–315	Fire Fighting and Rescue Procedures in Theaters of Operations
(CRD) 9–1100–205–10	Operator's Manual: XM129 and XM159 Atomic Demolition Charges (ADC) (U)
(CRD) 9–1100–205–20	Organizational Maintenance: XM129 and XM159 Atomic Demolition Charges; XM130 Training Atomic Demolition Charge (U)
9–1300–206	Ammunition and Explosives Standards
38–250	Packaging and Materials Handling: Preparation of Hazardous Materials for Military Air Shipment
(CRD) 39–0–1A	Numerical Index to Joint Atomic Weapons Publications (Including Related Publications) (Army Supplement) (U)
(SRD) 39–20–7	Nuclear Safety Criteria (U)
(CRD) 39–20–11	General Firefighting Guidance for Nuclear Weapons (U)
39–45–51	Transportation of Nuclear Weapons Materiel
(SRD) 39–45–51A	Transportation of Nuclear Weapons Materiel (Supplement): Shipping and Identification Data for Stockpile Major Assemblies (U)
39–45–51C	Transportation of Nuclear Weapons Materiel (Supplement): Military Criteria for Shipment
(CRD) 39–50–8	Emergency Destruction of Nuclear Weapons (U)

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
55–1520–209–10	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

By Order of the Secretary of the Army:

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CHAPTER 4

INTERNAL TRANSPORT BY HELICOPTER

WARNING

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

★4–1. Materials and Procedures for Transport of Case, H912 (Configuration I)

a. Materials.

(1) *UH–1 C/M/D/H.* Energy-dissipating honeycomb pad (NSN 1670–00–753–3928), 15- by 21- by 3-inch, or suitable substitute (one piece for each H912 case); 2-inch pressure-sensitive tape (NSN 7510–00–663–0196) or suitable substitute.

(2) *UH–60A.* Materials in 4–1*a*(1), above, plus plywood floor-protective shoring, 20- by 20- by ¼-inch, or equivalent. Use one piece of shoring under each H912 case; web tiedown strap (one for each H912 case).

b. Loading.

(1) *UH–1C/M/D/H.*

(*a*) Insure that the case cover is secure and that the cushioning pad is fastened to the case. Fold loose ends of case and cushioning pad straps, and tape to the case.

(*b*) Position honeycomb in helicopter cargo compartment or in universal military pod at ADC

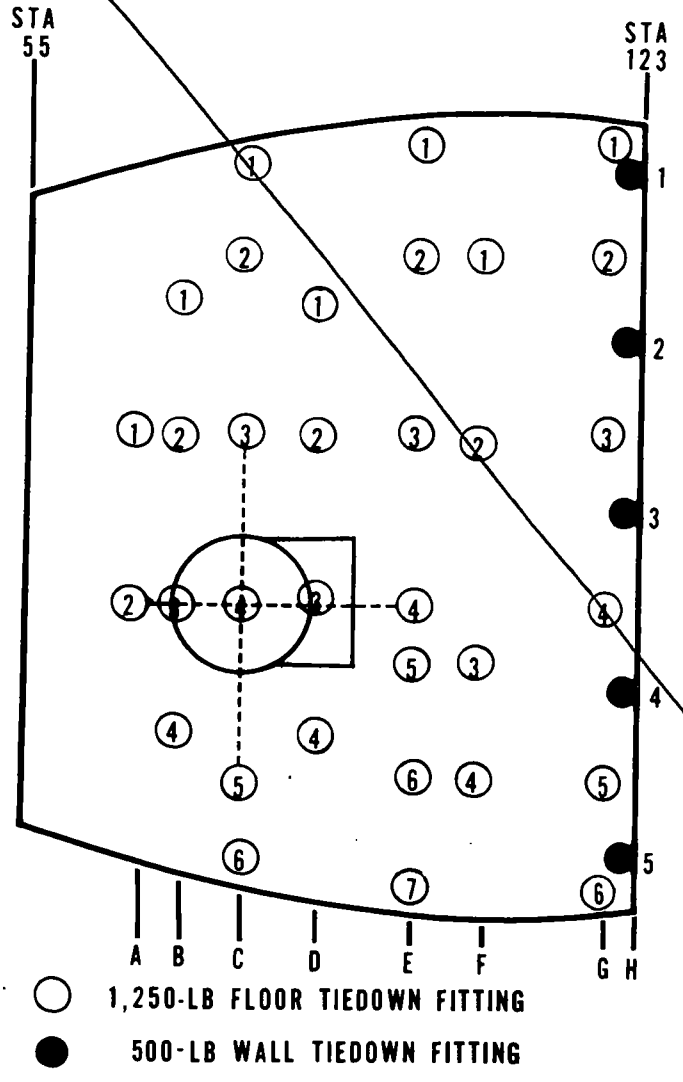


Figure 4–1. Tiedown diagram for case, H912, with ADC, in UH–1C/M helicopters

Table 4–1. Tiedown Data for Case, H912, With ADC, in UH–1C/M Helicopters

Tiedown fitting		Tiedown device		
desig-nation	capacity in 1,000 lb	type	capacity in 1,000 lb	Attach to item
C3/C5	1.25	CGU–1/B	5	Over the case and through case web-handling straps.
A2/E4	1.25	CGU–1/B	5	Over the case, under strap and rope assembly, and through case web-handling straps.

tiedown location. Hand-carry the ADC into the helicopter or pod and center on honeycomb (fig. 3–1). Two persons can prepare, load, and tie down each ADC in about 5 minutes.

(2) *UH–60A.*

(*a*) Insure that all case covers are secure and that cushioning pads are fastened to cases. Fold loose ends of case and cushioning pad straps, and tape to cases.

(*b*) Position shoring at tiedown locations for cases, and place honeycomb pads on shoring.

(*c*) Hand-carry cases into helicopter and center on honeycomb pads. Two persons can prepare, load, and tie down each ADC in about 8 minutes.

c. Tiedown, UH–1–Series and UH–60A. Tie down one or two ADC in accordance with the following figures and tables:

Helicopter	*Figure no.*	*Table no.*
UH–1C/M*	4–1	4–1
UH–1D/H	4–2	4–2
UH–60A	4–2.1	4–2.1

*Cargo floor-fitting pattern in the UH–1B helicopter is similar to the fitting pattern for the UH–1C/M helicopters. Strength of floor fittings in the UH–1B/C/M helicopters is the same.

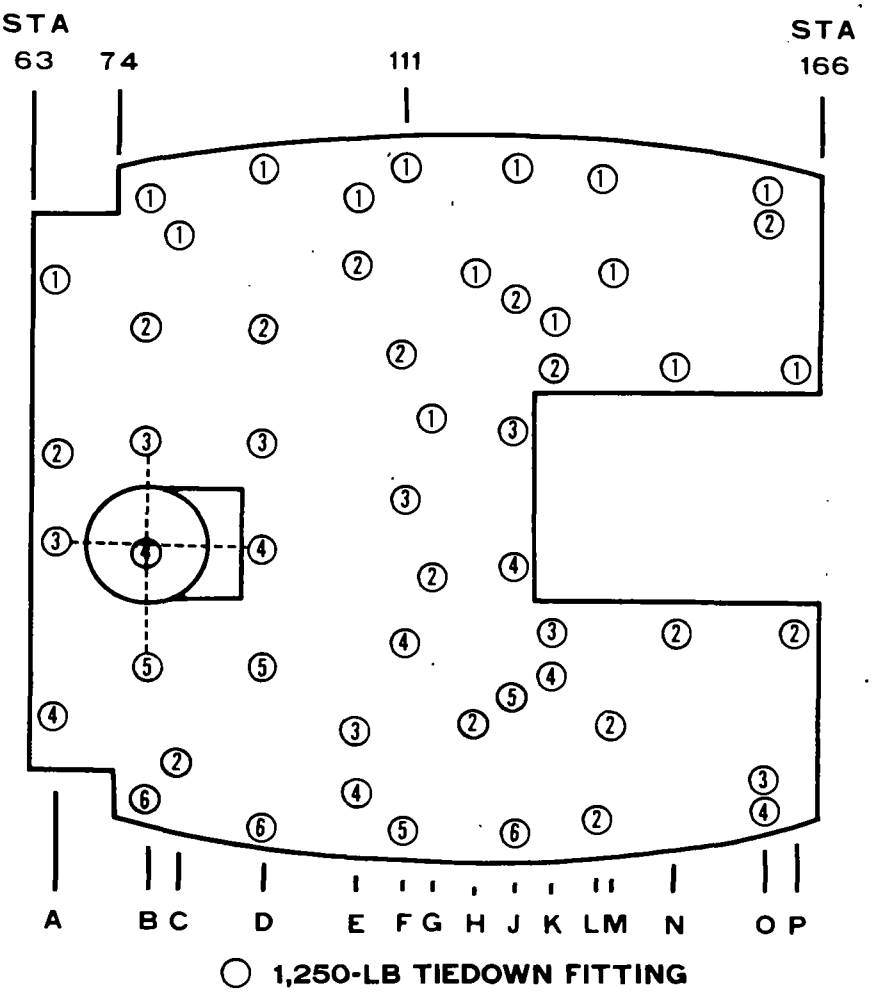


Figure 4–2. Tiedown diagram for case, H912, with ADC, in UH–1D/H helicopters.

inch, or equivalent. Use one piece of shoring under each container.

b. Loading.

(1) Insure that all container covers are secure and sealed.

(2) Handcarry container(s) into helicopter or pod and place at tiedown location. Place container(s) on floor-protective shoring (UH–60A only). Use antichafing material between containers as required. Four persons can prepare, load, and tie down each container in about 5 minutes.

(3) Tie down a single H913 container in accordance with figures 3–2, 4–5, and 4–5.1 and tables 4–5 and 4–5.1

(4) Tie down multiple H913 containers in accordance with the following figures and tables:

Helicopter	*No. of containers*	*Figure no.*	*Table no.*
UH–1D/H	2	4–5.2	4–5.2
UH–60A	2	4–5.3	4–5.3
UH–1D/H	3	4–6	4–6
CH–47	9	4–7	4–7
CH–54 (universal military pod)	9	4–8	4–8

Note. Figures 4–7 and 4–8 show the maximum number (nine) of XM129E1 or XM129E2 ADC that may be transported in a single group without plutonium weight limits waiver. A maximum of seven XM159E1 or XM159E2 ADC may be transported in a single group without plutonium weight limits waiver.

(5) Completed tiedown for two containers, H913, in a UH–60A helicopter is shown in figures 4–5.4 and 4–5.5

c. Unloading. Four persons can unload each container in about 3 minutes.

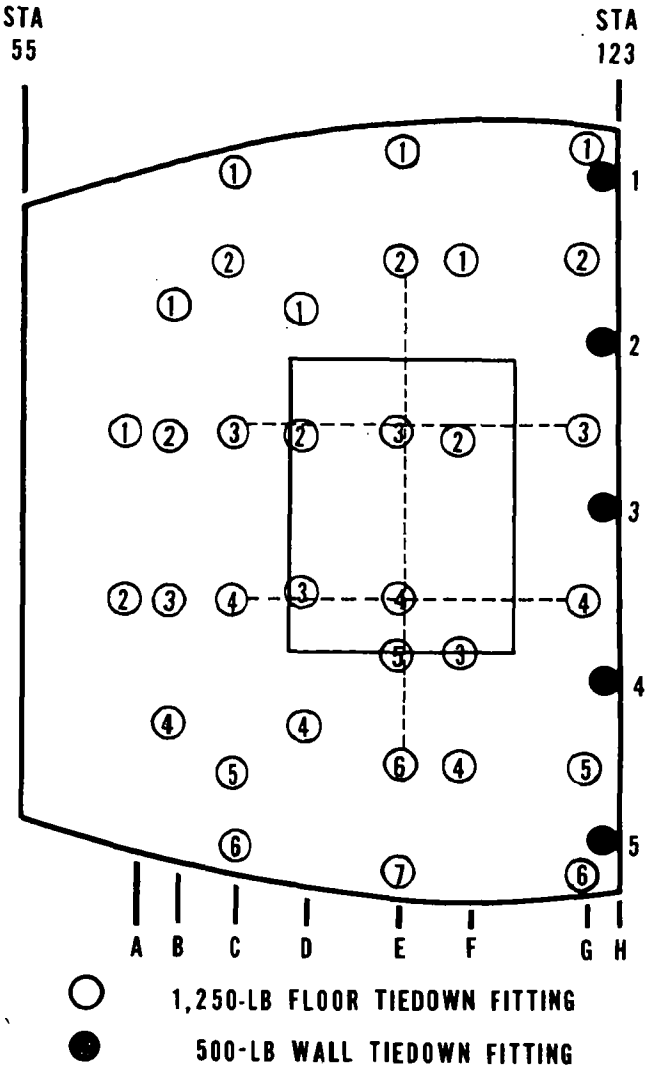


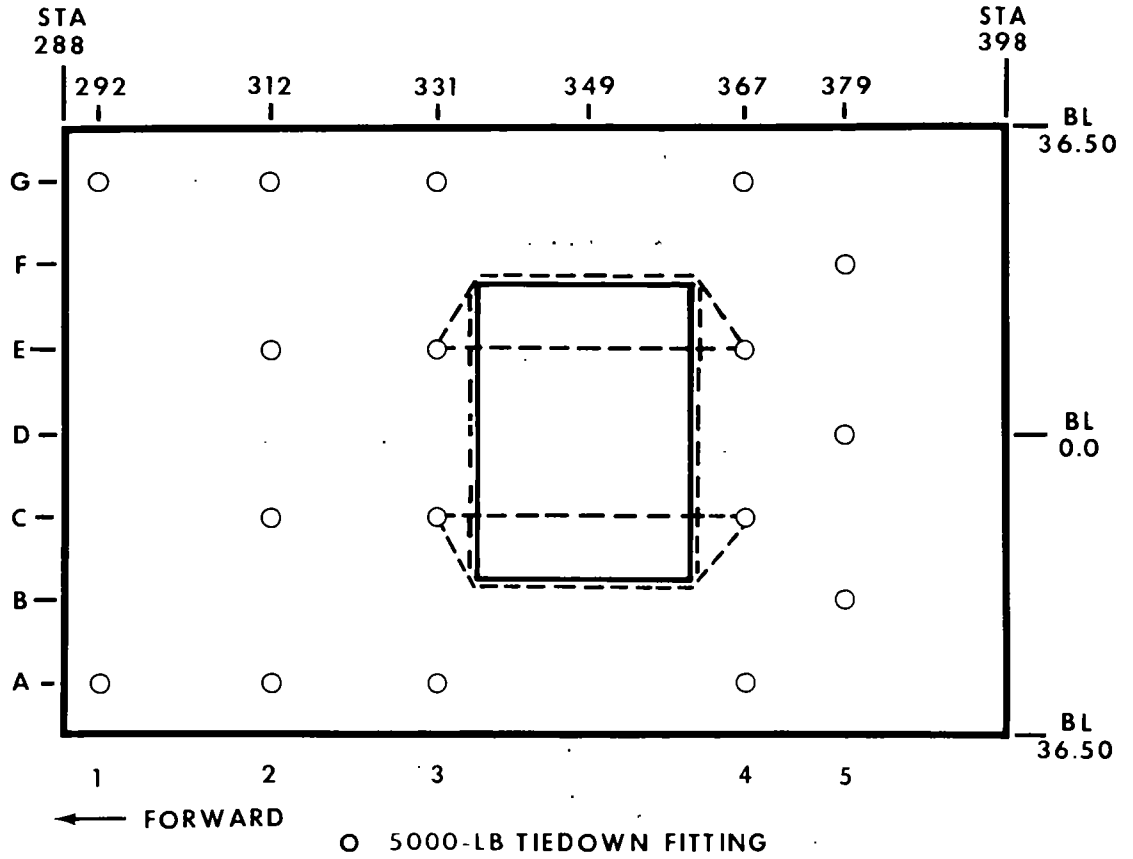
Figure 4–5. Tiedown diagram for container, H913, with ADC, in UH–1C/M helicopters.

Table 4–5 Tiedown Data for Container, H913, With ADC, in UH–1C/M Helicopters

Tiedown fitting		Tiedown device		
desig-nation	capacity in 1,000 lb	type	capacity in 1,000 lb	Attach to item
C3/G3	1.25	CGU–1/B	5	Over the container
C4/G4	1.25	CGU–1/B	5	Over the container
E2/E6	1.25	CGU–1B		Over the container

★*Table 4–5.1 Tiedown Data for Container, H913, With ADC, in UH–60A Helicopter*

Tiedown fitting		Tiedown device		
desig-nation	capacity in 1,000 lb	type	capacity in 1,000 lb	Attach to item
C3/E3	5	CGU–1/B	5	Pass around rear side of container. Position tiedown above upper reinforcement bulge.
C4/E4	5	CGU–1/B	5	Pass around front side of container. Position tiedown above upper reinforcement bulge.
C3/C4	5	CGU–1/B	5	Over container.
E3/E4	5	CGU–1/B	5	Over container.

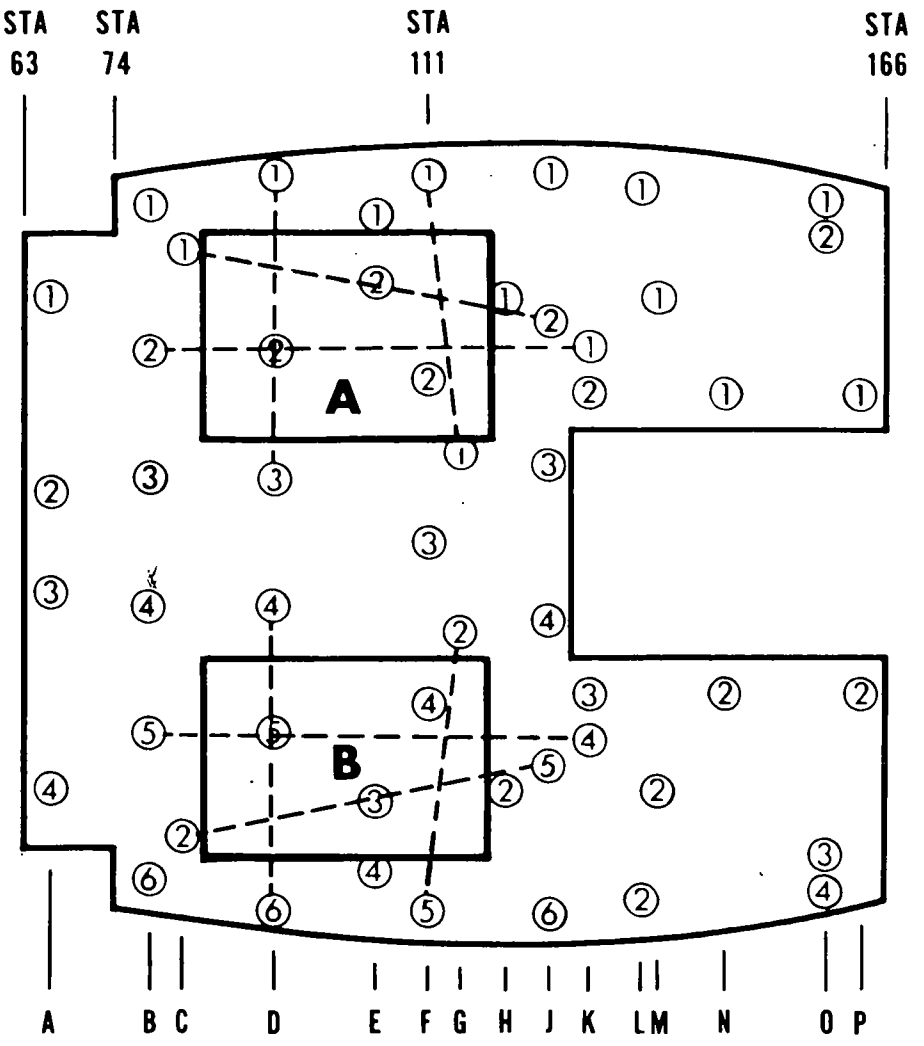


NOTE: CARGO HOOK ACCESS DOOR IS LOCATED IN THE CENTER OF THE FLOOR BETWEEN STATIONS 343 AND 363

★*Figure 4–5.1. Tiedown diagram for single container, H913, with ADC, in UH–60A helicopter.*

★*Table 4–5.2. Tiedown Data for Two Containers, H913, With ADC, in UH–1D/H Helicopters*

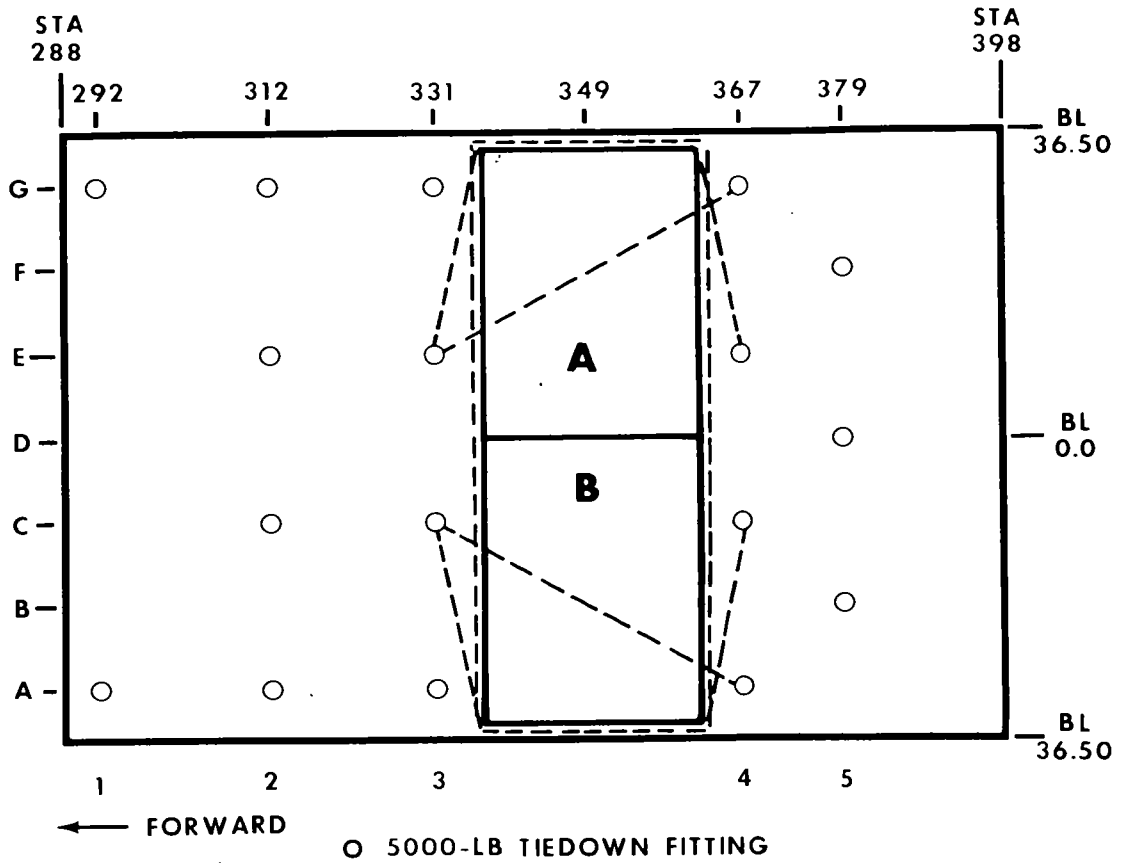
Item	Tiedown fitting		Tiedown device		Attach to item
	designation	capacity in 1,000 lb	type	capacity in 1,000 lb.	
A	C1/J2	1.25	CGU–1/B	5	Over container A.
	B2/K1	1.25	CGU–1/B	5	Over container A.
	D1/D3	1.25	CGU–1/B	5	Over container A.
	F1/G1	1.25	CGU–1/B	5	Over container A.
B	B5/K4	1.25	CGU–1/B	5	Over container B.
	C2/J5	1.25	CGU–1/B	5	Over container B.
	D4/D6	1.25	CGU–1/B	5	Over container B.
	G2/F5	1.25	CGU–1/B	5	Over container B.



★*Figure 4–5.2. Tiedown diagram for two containers, H913, with ADC, in UH–1D/H helicopters.*

★*Table 4–5.3. Tiedown Data for Two Containers, H913, With ADC in UH–60A Helicopter*

Item	Tiedown fitting		Tiedown device		Attach to item
	designation	capacity in 1,000 lb	type	capacity in 1,000 lb.	
A and B	C3/E3	5	CGU–1/B	5	Pass around rear sides of containers. Position tiedown above upper reinforcement bulge.
	C4/E4	5	CGU–1/B	5	Pass around forward sides of containers. Position tiedown above upper reinforcement bulge.
	C3/A4	5	CGU–1/B	5	Over container B.
	E3/G4	5	CGU–1/B	5	Over container A.



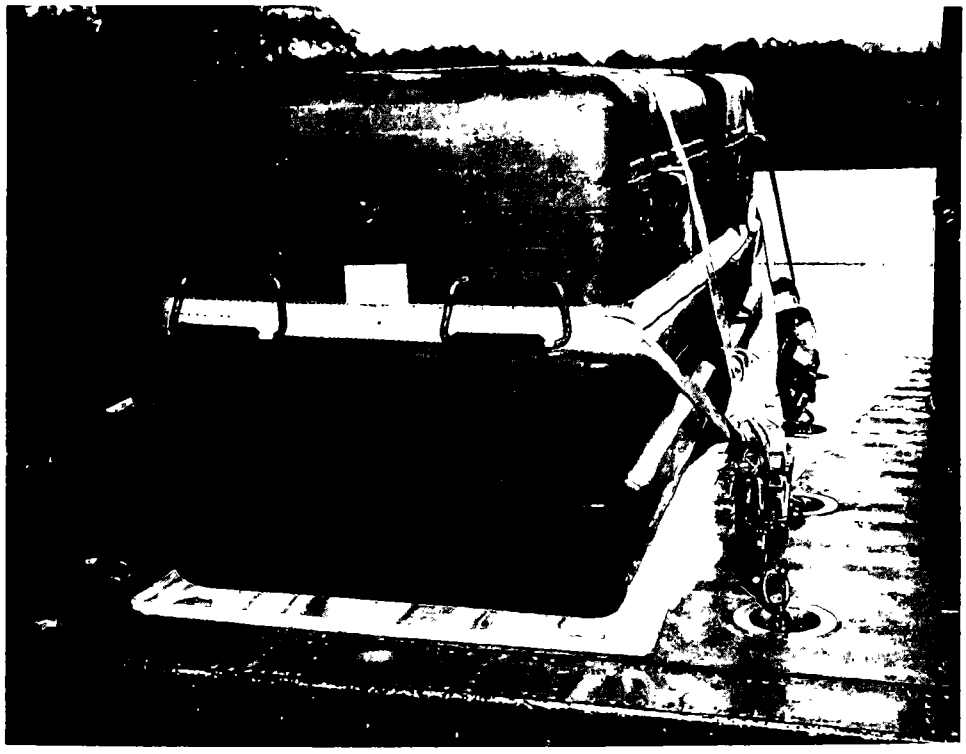
NOTE: CARGO HOOK ACCESS DOOR IS LOCATED IN THE CENTER OF THE FLOOR BETWEEN STATIONS 343 AND 363

★*Figure 4–5.3. Tiedown diagram for two containers, H913, with ADC, in UH–60A helicopter.*

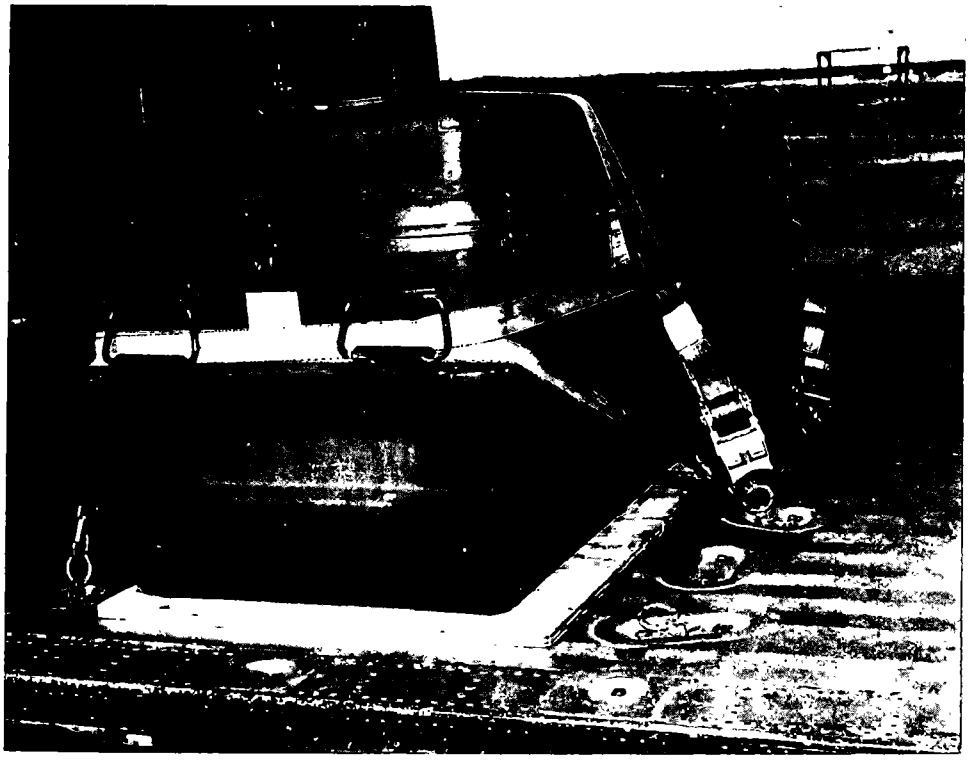
Table 4–6. Tiedown Data for Container, H913, With ADC, in UH–1D/H Helicopters

Item	Tiedown fitting		Tiedown device*		Attach to item
	desig-nation	capacity in 1,000 lb	type	desig-nation	
A, B, and C	C1/J2	1.25	CGU–1/B	5	Over container A
	B2/K1	1.25	CGU–1/B	5	Over container A
	B3/J3	1.25	CGU–1/B	5	Over container B
	B4/J4	1.25	CGU–1/B	5	Over container B
	B5/K4	1.25	CGU–1/B	5	Over container C
	C2/J5	1.25	CGU–1/B	5	Over container C
	D1/D6	1.25	CGU–1/B	5	Over all containers
	F1/F5	1.25	CGU–1/B	5	Over all containers

* MC–1 tiedown device may be used.



★*Figure 4–5.4. Completed tiedown of two containers, H913, in UH–60A helicopter (left rear view).*



★*Figure 4–5.5. Completed tiedown of two containers, H913, in UH–60A helicopter (right front view).*

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FIELD MANUAL
No. 55-205

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, *1 July 1979*

AIR TRANSPORT PROCEDURES

TRANSPORT OF XM129 AND XM159 ATOMIC DEMOLITION CHARGES BY US ARMY HELICOPTERS

(Front cover) *UH-1D Helicopter transport of simulated nuclear weapon load in 5,000-pound-capacity nylon cargo net.*

* This manual supersedes FM 55-205, 30 August 1976.

CHAPTER 1

INTRODUCTION

1–1. Purpose and Scope

a. This manual presents Department of the Army-approved procedures for transport of the XM129E1, XM129E2, XM159E1, and XM159E2 atomic demolition charges (ADC) by US Army helicopters. The ADC are commonly referred to as special atomic demolition munitions (SADM). Materials and qualified personnel needed to prepare, load, tie down, and unload, or to rig and derig, the ADC are prescribed herein. Responsibilities of the cosigner, consignee, and unit providing transportation are shown in Section II, AR 50–5. References are shown in the appendix.

b. The procedures in this manual provide for internal and external transport of one or more ADC when in case, H912, or in container, H913, by UH–1–series, CH–47, and CH–54 helicopters.

c. Additional internal cargo, including different types of nuclear weapons and/or personnel within helicopter load capacity and restrictions prescribed by AR 50–5 or FM 100–50, whichever is appropriate, and pertinent safety regulations (app), may be transported.

d. This manual also provides for emergency internal and external movement of the ADC by helicopter for military contingency, logistic supply, and evacuation.

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

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: DIRMTMCTEA FT EUSTIS VA //MTT–TRP//).

CHAPTER 2

GENERAL SAFETY AND SECURITY MATTERS

Warning. **During a logistical movement of nuclear weapons by US Army aircraft, jettisoning is not authorized. During emergency movements (external transport by helicopter, chapters 5 and 6), the inflight emergency procedures prescribed by the appropriate aircraft operator's manual will apply (para 4-3*i* and 4-31, AR 50-5).**

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, AR 50-5-1, AR 95-27, and FM 100-50 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 builtup and heavily populated areas. When transporting the ADC 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, chapter 1, AR 55-203, and FM 100-50, for transport with the ADC, 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 ADC.

c. A maximum of nine XM129E1 or XM129E2 ADC or seven XM159E1 or XM159E2 ADC in either of the transportation configurations may be transported in a single group without waiver (TM 39-20-7 and TM 39-45-51A). For the quantity of ADC that may be transported in a mixed group, refer to table 8-1, TM 9-1100-205-20. Existing conditions and the allowable cargo load (ACL) may reduce these quantities.

d. Emergency destruction procedures for the ADC are contained in TM 39-50-8. Normally, emergency-destruct materials will not be carried on the same helicopter with nuclear weapons. However, if the operational necessity requires, the operational 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 to prevent movement. Only the number of destruct charges and blasting caps necessary to destroy the ADC will be carried aboard. Blasting caps in their container (recommend use of M2- and 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 paragraph C-26, TM 9-1300-206.

e. The ADC will be loaded and tied down in accordance with the procedures in this manual except that they may be repositioned for helicopter operational reasons, or when loading additional nuclear weapons or other cargo and/or personnel. Mandatory requirements for minimum spacing, numerical limits, and type of array for transport of the ADC are prescribed by TM 39-20-7 and TM 39-45-51A. 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 ADC are secured to tiedown fittings in the same location relative to the ADC as those fittings used in the pertinent tiedown diagram. Required restraint will be provided when the depicted tiedown pattern is maintained.

(3) The requirements prescribed by TM 39-20-7 and TM 39-45-51A are implemented.

2-2. Operational Precautions

The following operational precautions will be observed during loading, rigging, tie down, transport, and unloading of the ADC.

a. Web strap tiedown assemblies used to secure 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 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 unpackaged date (month and year) in at least ½-in-high letters near the hook end of the strap. Upon expiration of the 36-month useful life, the tiedowns will be marked by a 2-inch-wide band on both sides of the strap, near the previously marked date, using yellow number 33538 stencil ink TT-I-1795 or enamel TT-E-516.

b. Prior to each usage, tiedowns and cargo slings will be inspected for burns, tears, punctures, or cuts. Additionally, metal items will be inspected for improper operation, corrosion, cracks, or distortion. If any of these conditions are present, 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 and other cargo. However, when the helicopter or pod is transporting the ADC or other nuclear weapon or component, all tie downs, to include those used to secure weapon trainers, training devices, and other cargo must meet the 36-month useful life criterion.

d. Inspect the nylon cargo nets and the sling, cargo net, metallic, to insure their serviceability. Cargo nets and slings in questionable condition will not be used and will be appropriately marked.

e. 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. Excessive tightening must be avoided to prevent damage to soft cargo.

f. Security and safety measures relative to guards, 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 50-5, AR 50-5-1, AR 50-107, TM 9-1300-205-20, and FM 100-50.

g. 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 static discharge probe, NSN 1670-00-574-8044, or a locally fabricated probe.

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

i. Helicopters and universal military pods will be searched and inspected for unauthorized personnel and equipment, and any possible sabotage. The search and inspection will be conducted by the surety qualified helicopter commander during peacetime and by the courier officer in an emergency or during wartime. Entry controls will be established by the courier officer to maintain security integrity until completion of the nuclear mission.

j. Restraint required for the SADM case and container is attained by friction between the SADM and tiedown straps passed over each item, and by friction between the SADM and the nonskid surface of the helicopter floor. Further restraint is provided to the SADM case by tiedown straps passed through the case web-handling straps. In order that each item be restrained as required, the helicopter commander must insure that the nonskid surface of the helicopter floor is in condition to provide maximum friction with the SADM.

CHAPTER 3

AIR TRANSPORTABILITY AND HANDLING DATA

3-1. General

a. This chapter identifies the packaging system containers for the ADC and the limitations for internal and external transport of the ADC by helicopter.

b. Air transport load configurations of the ADC are as follows:

(1) Configuration I—Case, H912 (fig 3-1), which encloses the ADC in the bag, H911.

(2) Configuration II—Container, H913, (fig 3-2), which incloses the ADC, the bag, H911, and the case, H912.

c. A cushioning pad is furnished with the ADC for use with the bag, H911, or the case, H912.

d. Approximate dimensions and weights of configurations I and II are shown below.

e. Personnel dosimetry (film badge) or special radiological handling procedures are not required, unless otherwise specified, for any personnel (including aircrew) engaged in operations described in this manual.

f. There is no requirement for facing the case, H912, or the container, H913, in a particular direction for air transport. The center of gravity for each item is at its center.

Figure 3-1. Case, H912, positioned and tied down for transport by helicopter.

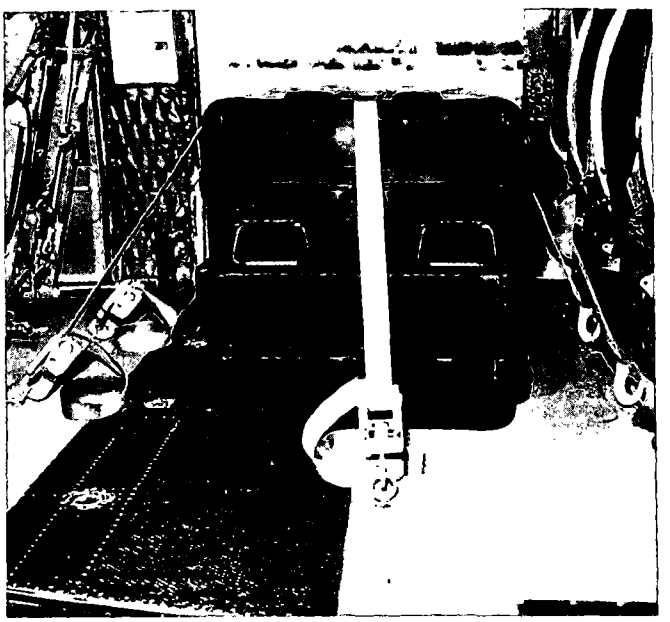


Figure 3-2. Container, H913, positioned and tied down for transport by helicopter.

Identification	Dimensions				Weight
	Length	Width	Height	Diameter	
Configuration I: Case, H912, with ADC and bag, H911			22.0 in. (0.56 m)	16.0 in. (0.41 m)	92 lb (42 kg)
Configuration II: Container, H913, with ADC, bag, H911, and case, H912	35.0 in. (0.90 m)	26.2 in. (0.67 m)	26.6 in. (0.68 m)		163 lb (74 kg)
Shipping and storage container, MS24347-8, with component removed from container, H913*			9.8 in. (0.25 m)	9.5 in. (0.24 m)	5 lb (2 kg)

* An optional transport configuration of the container, H913, results when it is accompanied on a one to one basis by the container, MS24347-8. The container, MS24347-8, is transported as directed by the helicopter commander.

g. The helicopter center of balance must be computed for all loads to include number and location of nuclear weapon security personnel (two-person concept).

3–2. Air Transport Limitations

a. The ADC will normally be transported as an internal load (chap 4). However, under emergency conditions, the ADC can also be transported as an external load (chap 5). The determination that external transport is justifiable will be approved by the commander authorizing the emergency evacuation.

b. Transport of the ADC in a single group when exceeding the limitations shown in paragraph 2–1c must be accomplished by waiver in accordance with the provisions of TM 39–45–51A and TM 39–20–7. Further restrictions governing transport of the ADC in case, H912, are prescribed by TM 39–20–7.

CHAPTER 4

INTERNAL TRANSPORT BY HELICOPTER

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

4–1. Materials and Procedures for Transport of Case, H912 (Configuration I)

a. Materials. Energy-dissipating honeycomb pad (NSN 1670–00–753–3928), one piece, 15- by 21- by 3-inch or suitable substitute; 2-inch pressure sensitive tape (NSN 7510–00–663–0196), or suitable substitute.

b. Loading.

(1) Insure that the case cover is secure and that the cushioning pad is fastened to the case. Fold running ends of case and cushioning pad straps, and tape to the case.

(2) Position piece of honeycomb in helicopter cargo compartment or in universal military pod at ADC tiedown location. Hand-carry the ADC into the helicopter or pod and center on honeycomb (fig 1). Two persons can prepare, load, and tie down each ADC in approximately 5 minutes.

(3) Tie down a single ADC in accordance with figure 3–1 or in accordance with the following figures and tables:

Helicopter	Figure no.	Table no.
UH–1C/M*	4–1	4–1
UH–1D/H	4–2	4–2

* Cargo floor-fitting pattern in the UH–1B helicopter is similar to the fitting pattern for the UH–1C/M helicopters. Strength of floor fittings in the UH–1B/C/M helicopters is the same.

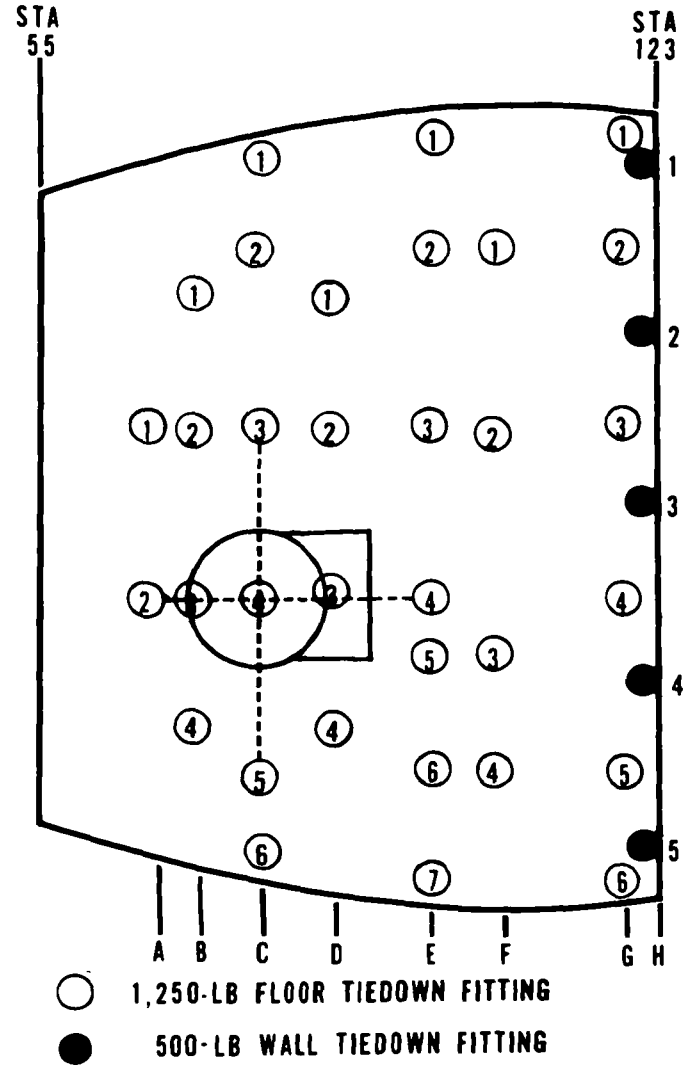


Figure 4–1. Tiedown diagram for case, H912, with ADC, in UH–1C/M helicopters.

Table 4–1. Tiedown Data for Case, H912, With ADC, in UH–1C/M Helicopters

Tiedown fitting		Tiedown device*		
designation	capacity in 1,000 lb	type	capacity in 1,000 lb	Attach to item
C3/C5	1.25	CGU–1/B	5	Over the case and through case web-handling straps.
A2/E4	1.25	CGU–1/B	5	Over the case, under strap and rope assembly, and through case web-handling straps.

* MC–1 tiedown device may be used.

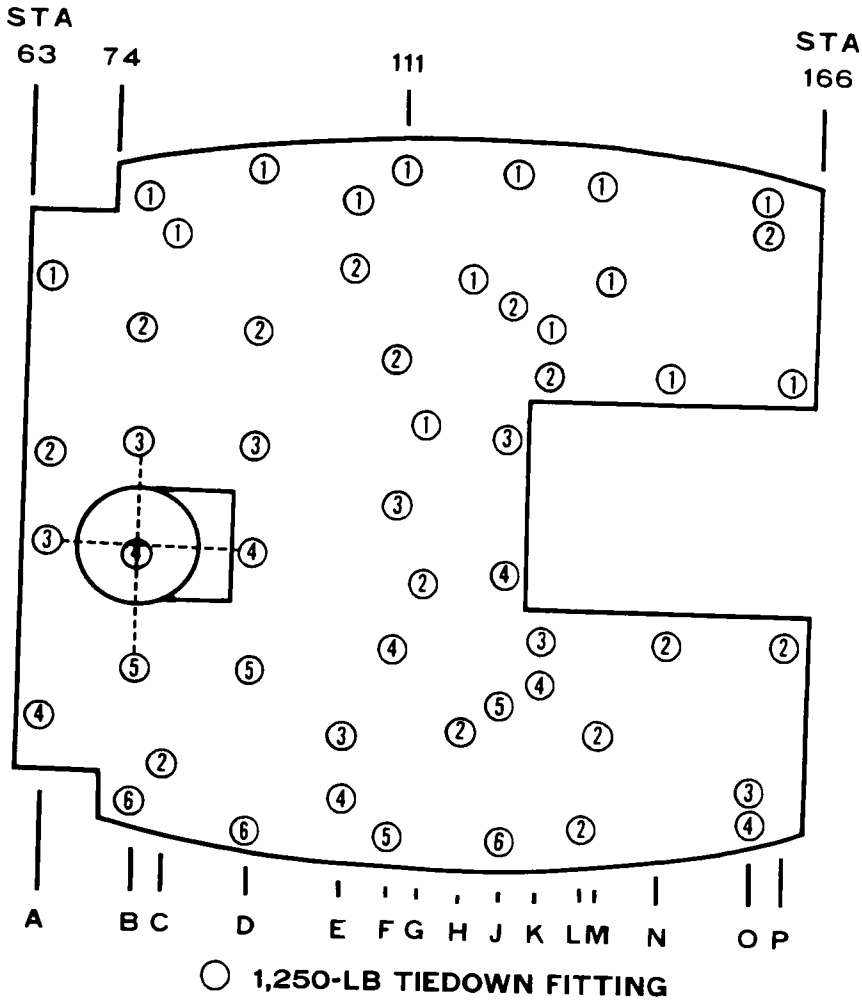


Figure 4–2. Tiedown diagram for case, H912, with ADC, in UH–1D/H helicopters.

Table 4–2. Tiedown Data for Case, H912, With ADC, in UH–1D/H Helicopters

Tiedown fitting		Tiedown device*		
desig-nation	capacity in 1,000 lb	type	capacity in 1,000 lb	Attach to item
B3/B5	1.25	CGU–1/B	5	Over the case and through case web-handling straps.
A3/D4	1.25	CGU–1/B	5	Over the case, under strap and rope assembly, and through case web-handling straps.

* MC–1 tiedown device may be used.

Note. A maximum of two XM129 ADC in case, H912, or two XM159 ADC, in case, H912, may be transported in a single group by UH–1C/M or UH–1D/H helicopters.

(4) Tie down single or multiple ADC in accordance with the following figures and tables:

Helicopter	Figure no.	Table no.
CH–47	4–3	4–3
CH–54 (universal military pod)	4–4	4–4

Note. Figures 4–3 and 4–4 show the maxium number (seven) of XM159 ADC, in case, H912, that may be transported in a single group. A maximum of nine XM129 ADC, in case, H912, may be transported in a single group. However, only eight XM129 ADC in case, H912, may be transported in a single group by CH–47 helicopter, and only seven by CH–54 helicopter universal military pod. When transporting eight XM129 ADC, in case, H912, by CH–47 helicopter, the additional ADC is centered on helicopter station 340 and in line with the ADC shown in figure 4–3.

Table 4–3. Tiedown Data for Case, H912, With ADC, in CH–47 Helicopter

Item	Tiedown fitting: designation	Tiedown fitting: capacity in 1,000 lb	Tiedown device*: type	Tiedown device*: capacity in 1,000 lb	Attach to item
A	B4/D4	5	CGU–1/B	5	Over the case and through case web-handling straps.
	C3/C5	5	CGU–1/B	5	Over the case, under strap and rope assembly, and through case web-handling straps.
B through G—Restrain each item in position shown in figure 4–3 and in manner prescribed for item A above.					

* MC–1 tiedown device may be used.

Table 4–4. Tiedown Data for Case, H912, With ADC, in CH–54 Helicopter Universal

Item	Tiedown fitting: designation	Tiedown fitting: capacity in 1,000 lb	Tiedown device*: type	Tiedown device*: capacity in 1,000 lb	Attach to item
A	D2/F2	5	CGU–1/B	5	Over the case and through case web-handling straps.
	E1/E3	5	CGU–1/B	5	Over the case, under strap and rope assembly, and through case web-handling straps.
B through G—Restrain each item in position shown in figure 4–4 and in manner prescribed for item A above.					

* MC–1 tiedown device may be used.

Table 4–5. Tiedown Data for Container, H913, With ADC, in UH–1C/M Helicopters

Tiedown fitting: designation	Tiedown fitting: capacity in 1,000 lb	Tiedown device*: type	Tiedown device*: capacity in 1,000 lb	Attach to item
C3/G3	1.25	CGU–1/B	5	Over the container
C4/G4	1.25	CGU–1/B	5	Over the container
E2/E6	1.25	CGU–1/B	5	Over the container

* MC–1 tiedown device may be used.

c. Unloading. Two persons can unload each ADC in approximately 3 minutes.

4–2. Materials and Procedures for Transport of Container, H913 (Configuration II)

a. Materials. Antichafing: Plywood pieces, as required, approximately 35- by 26- by ½-inch, or equivalent, for use when transporting multiple containers. Antichafing materials are a responsibility of the custodial unit.

b. Loading.

(1) Insure that the container cover is secured and sealed.

(2) Hand-carry the ADC into helicopter or pod and place at tiedown location. Use antichafing material between containers as required. Four persons can prepare, load, and tie down each ADC in approximately 5 minutes.

(3) Tie down a single ADC in accordance with figures 3–2 and 4–5 and table 4–5.

Note. When transporting a single ADC in UH–1D/H helicopters, restrain the container as shown in figures 3–2 and 4–5.

(4) Tiedown multiple ADC in accordance with the following figures and tables:

Helicopter	Figure no.	Table no.
UH–1D/H	4–6	4–6
CH–47	4–7	4–7
CH–54 (universal military pod)	4–8	4–8

Note. Figures 4–7 and 4–8 show the maximum number (nine) of XM129E1 or XM129E2 ADC that may be transported in a single group without plutonium weight limits waiver. A maximum of seven XM159E1 or XM159E2 ADC may be transported in a single group without plutonium weight limits waiver.

c. Unloading. Four persons can unload each ADC in approximately 3 minutes.

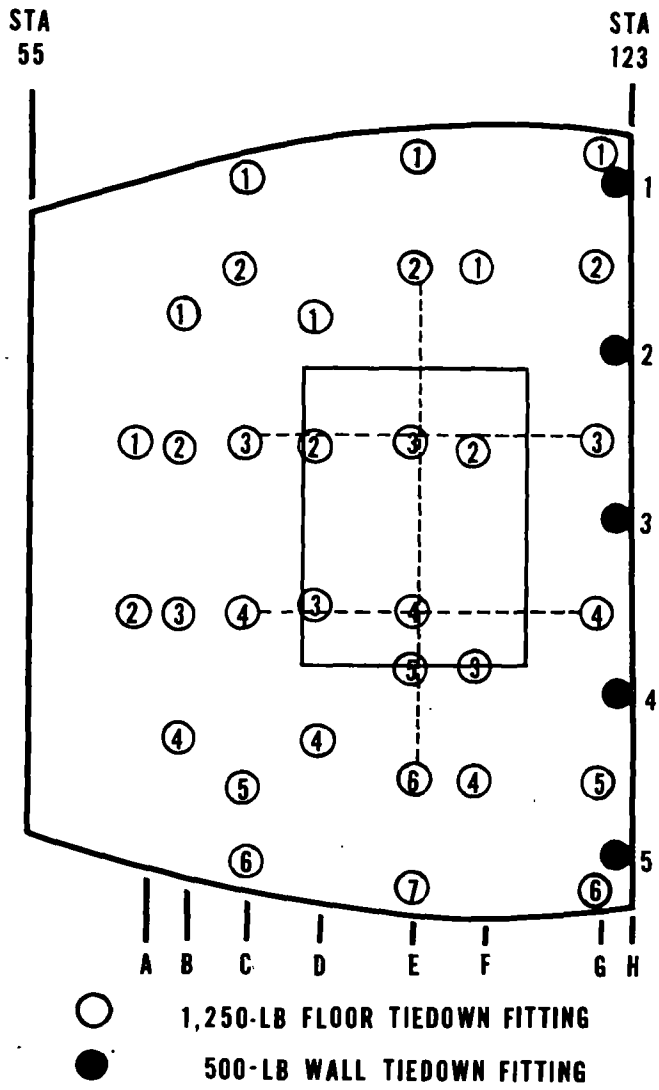
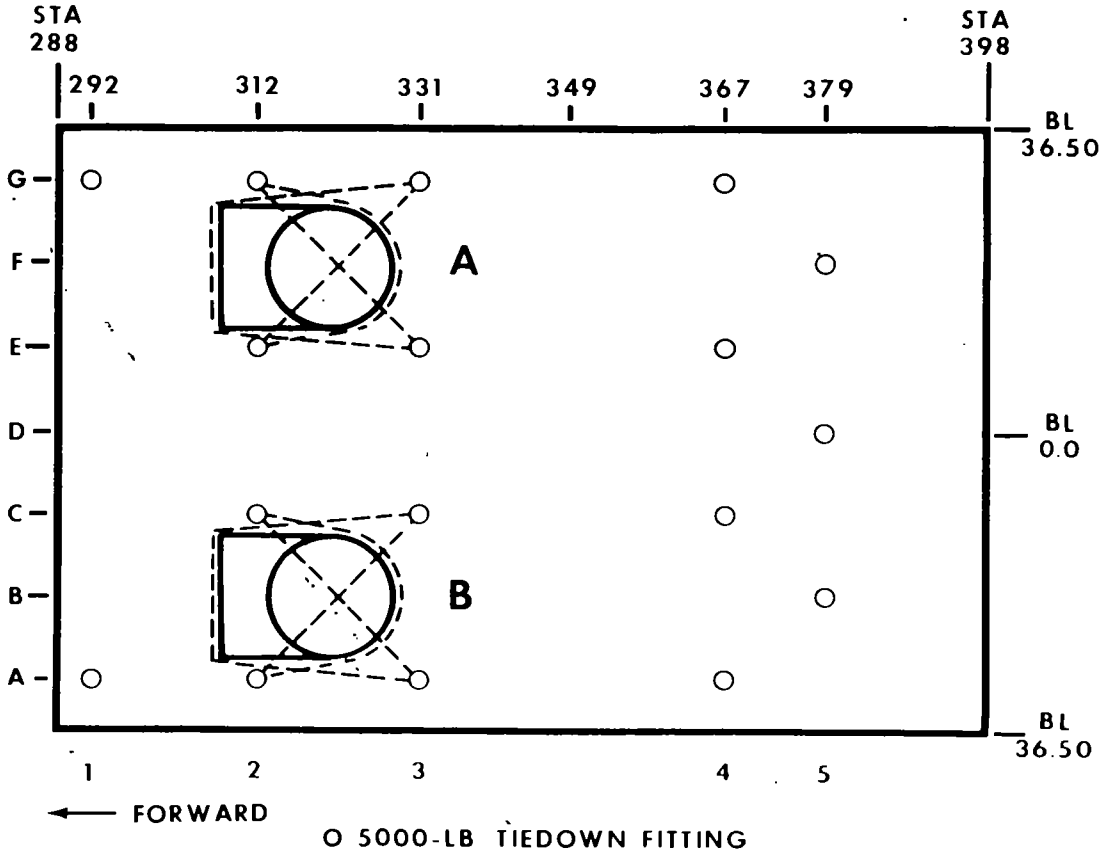


Figure 4–5. Tiedown diagram for container, H913, with ADC, in UH–1C/M helicopters.

Table 4–6. Tiedown Data for Container, H913, With ADC, in UH–1D/H Helicopters

Item	Tiedown fitting		Tiedown device*		Attach to item
	desig-nation	capacity in 1,000 lb	type	desig-nation	
A, B, and C	C1/J2	1.25	CGU–1/B	5	Over container A
	B2/K1	1.25	CGU–1/B	5	Over container A
	B3/J3	1.25	CGU–1/B	5	Over container B
	B4/J4	1.25	CGU–1/B	5	Over container B
	B5/K4	1.25	CGU–1/B	5	Over container C
	C2/J5	1.25	CGU–1/B	5	Over container C
	D1/D6	1.25	CGU–1/B	5	Over all containers
	F1/F5	1.25	CGU–1/B	5	Over all containers

* MC–1 tiedown device may be used.



NOTE: CARGO HOOK ACCESS DOOR IS LOCATED IN THE CENTER OF THE FLOOR BETWEEN STATIONS 343 AND 363

★*Figure 4–2.1. Tiedown diagram for two H912 cases, with ADC, in UH–60A helicopter*

CAUTION

To prevent damage to the H912 case, excessive tightening of the tiedowns must be avoided.

WARNING

No more than two XM129 ADC or XM159 ADC in the H912 case may be transported by UH–1 series or UH–60A helicopters.

d. Tiedown, CH–47 and CH–54. Tie down single or multiple ADC in accordance with the following figures and tables:

Helicopter	*Figure no.*	*Table no.*
CH–47	4–3	4–3
CH–54 (universal military pod)	4–4	4–4

Table 4–2. Tiedown Data for Case, H912, With ADC, in UH–1D/H Helicopters

Tiedown fitting		Tiedown device		
desig-nation	capacity in 1,000 lb	type	capacity in 1,000 lb	Attach to item
B3/B5	1.25	CGU–1/B	5	Over the case and through case web-handling straps.
A3/D4	1.25	CGU–1/B	5	Over the case, under strap and rope assembly, and through case web-handling straps.

Note. Figures 4–3 and 4–4 show the maximum number (seven) of XM159 ADC, in case, H912, that may be transported in a single group. A maximum of nine XM129 ADC, in case, H912, may be transported in a single group. However, only eight XM129 ADC in case, H912, may be transported in a single group by CH–47 helicopter, and only seven by CH–54 helicopter universal military pod. When transporting eight XM129 ADC, in case, H912, by CH–47 helicopter, the additional ADC is centered on helicopter station 340 and in line with the ADC shown in figure 4–3.

e. Unloading. Two persons can unload each ADC in about 3 minutes.

★4–2. Materials and Procedures for Transport of Container, H913 (Configuration II)

a. Materials.

(1) *UH–1 C/M/D/H.* Antichafing plywood pieces as required, about 35- by 26- by ½-inch, or equivalent, for use when transporting multiple containers. Antichafing materials are furnished by the shipping unit.

(2) *UH–60A.* Material in 4–2*a*(1), above, plus plywood floor-protective shoring, 40- by 30- by ¼-

★*Table 4–2.1. Tiedown Data for Two H912 Cases, With ADC, in UH–60A Helicopter*

Item	Tiedown fitting		Tiedown device		Attach to item
	designation	capacity in 1,000 lb	type	capacity in 1,000 lb	
A	A2/C2	5	CGU–1/B	5	One complete loop around both the ADC and the cushioning pad. Position tiedown at center of H912 case.
	A3/C3	5	CGU–1B	5	One complete loop around both the ADC and the cushioning pad. Position tiedown at center of H912 case.
	A2/C3	5	CGU–1B	5	Over the case, under strap and rope assembly.
	A3/C2	5	CGU–1/B	5	Over the case, under strap and rope assembly.
B	E2/G2	5	CGU–1/B	5	One complete loop around both the ADC and the cushioning pad. Position tiedown at center of H912 case.
	E3/G3	5	CGU–1/B	5	One complete loop around both the ADC and the cushioning pad. Position tiedown at center of H912 case.
	E2/G3	5	CGU–1/B	5	Over the case, under strap and rope assembly.
	E3/G2	5	CGU–1/B	5	Over the case, under strap and rope assembly.

Note: Use a web tiedown strap to combine the fore and aft tiedowns with the vertical tiedowns crossing on top of the H912 case to insure that all tiedowns remain in place.

Table 4–3 Tiedown Data for Case, H912, With ADC, 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	B4/D4	5	CGU–1/B	5	Over the case and through case web-handling straps.
	C3/C5	5	CGU–1/B	5	Over the case, under strap and rope assembly, and through case web-handling straps.
B through G—Restrain each item in position shown in figure 4–3 and in manner prescribed for item A above.					

Table 4–4. Tiedown Data for Case, H912, With ADC, in CH–54 Helicopter Universal

Item	Tiedown fitting		Tiedown device		Attach to item
	designation	capacity in 1,000 lb	type	capacity in 1,000 lb	
A	D2/F2	5	CGU–1/B	5	Over the case and through case web-handling straps.
	E1/E3	5	CGU–1/B	5	Over the case, under strap and rope assembly, and through case web-handling straps.
B through G—Restrain each item in position shown in figure 4–4 and in manner prescribed for item A above.					

prepare the container(s), H913, and rig the net for external transport in approximately 10 minutes.

(3) Attach net draw cables to the 6-inch ring forming the apex which is attached to the helicopter hook; this should be done so that four ring-end snap fasteners converge at the base of the 6-inch ring and three free-end snap fasteners are attached to the 2⅜-inch rings (fig 5–1).

(4) Draw the net up evenly and smoothly around the load, cluster the draw cables by hand, and tie or tape the net above the load to prevent fouling during lift-off (fig 5–2). Helicopter must be centered over load before tension is placed on the net.

(5) In addition to the foregoing, the following procedure is applicable when the ADC is transported by CH–47 helicopter: choker-hitch one end of the 8-foot cargo sling (functions as vertical riser) to the 6-inch ring on the cargo net; then pass the 3-foot sling ring through the upper loop of the 8-foot sling. Connect free ends of the 3-foot sling with the link assembly. The 3-foot sling forms the apex for attachment to the helicopter cargo hook. The vertical riser dampens vibration tendencies.

c. Derigging. Two persons can derig the cargo net in approximately 5 minutes.

5–4. Materials and Procedures for Transport of Case, H912 (Configuration I) Using the 5,000-Pound-Capacity Nylon Cargo Net

a. Materials.

(1) Net, cargo, nylon, 5,000-pound capacity (NSN 1670–01–058–3811).

(2) Items shown in 5–2*a*(2) through 5–2*a*(8).

b. Preparation and rigigng.

(1) Observe procedures in 5–2*b*(1) through 5–2*b*(4).

(2) Draw the cargo net up around the load, and secure the four corner hooks in net apex stirrup.

(3) Lace nylon cord through the cargo net above the load.

(4) Attach the cargo net apex stirrup to the helicopter cargo hook. Helicopter must be centered over load before tension is placed on the net.

c. Derigging. Two persons can derig the cargo net in approximately 5 minutes.

5–5. Materials and Procedures for Transport of Container, H913 (Configuration II), Using the 5,000-Pound-Capacity Nylon Cargo Net

a. Materials.

(1) Net, cargo, nylon, 5,000-pound capacity (NSN 1670–01–058–3811).

(2) Items shown in 5–3*a*(2) and 5–3*a*(3).

b. Preparation and rigging.

(1) Observe procedures in 5–3*b*(1) and 5–3*b*(2).

(2) Observe procedures in 5–4*b*(2) through 5–4*b*(4).

c. Derigging. Two persons can derig the cargo net in approximately 5 minutes.

5–6. Materials and Procedures for Transport of Case, H912 (Configuration I), Using the 8,930-Pound Capacity Nylon Cargo Net

a. Materials.

(1) Sling, cargo net, nylon, 8,930-pound capacity (NSN 3940–00–892–4374) (for use in combination with slings described below in (2), or in (4), or in (5), or in (6)).

(2) Two 16-foot, two-loop cargo slings (NSN 1670–00–753–3793) (each has rated capacity of 6,500 pounds).

(3) One 3-foot, three-loop, air delivery cargo sling ring (NSN 1670–00–753–3788) (has rated capacity of 10000 pounds) with link assembly, type IV (NSN 1670–00–783–5988).

(4) One 23-foot, nylon and chain, four-leg sling (NSN 1670–00–902–3080) (has rated capacity of 15,000 pounds).

(5) One sling, helicopter, cargo carrying external, four-leg sling (NSN 1670–01–027–2902) (has rated capacity of 10,000 pounds).

(6) One sling helicopter, cargo carrying external, four-leg sling (NSN 1670–01–027–2900) (has rated capacity of 25,000 pounds).

(7) Cord, nylon, 1/16-inch nominal diameter, 330-pound breaking strength (NSN 4020–00–903–8594), or equivalent.

(8) Tape, adhesive, 2-inch wide (NSN 7510–00–166–5016), or equivalent.

(9) Items shown in 5–2*a*(3) through 5–2*a*(7).

b. Preparation and Rigging When Using Two 16-Foot Two-Loop, Cargo Slings to Rig Nylon Cargo Net.

(1) Observe procedures in 5–2*b*(1) through 5–2*b*(4).

(2) Pass the first cargo sling end through two adjoining hoist links on cargo net. Pass the second cargo sling end through the other two hoist links on cargo net.

(3) Combine the four ends of the cargo slings to form a single loop, and attach loop to the 3-foot sling. Connect free ends of the 3-foot sling with the link assembly. The 3-foot sling forms the apex for attachment to the helicopter cargo hook.

(4) Lace nylon cord through the cargo net above the load.

(5) Cluster and tape or tie sling legs (breakaway technique) to prevent fouling during lift off.

(6) Attach apex to the helicopter cargo hook. Helicopter must be centered over load before tension is placed on the net.

c. Preparation and Rigging When Using the 23-Foot, Nylon and Chain, Four-Leg Sling; or the Sling, Helicopter, Cargo Carrying External, Four-Sling (Either the 10,000- or 25-000-Pound-Capacity Sling), to Rig Nylon Cargo Net.

Note. Each leg of the nylon and chain, four-leg sling 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.

Note. Each leg of the sling, helicopter, cargo carrying external, four-leg sling, either 10,000- or 25,000-pound capacity, is constructed of a 12-foot anti-abrasive nylon braided 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 leg of the 10,000-pound-capacity sling consists of approximately 111 links. The chain leg of the 25,000-pound-capacity sling consists of approximately 88 links. On each sling, the link at the free end of the chain is referred to as link number 1.

(1) Observe procedures in 5–2*b*(1) through 5–2*b*(4).

(2) Pass each of the sling chain legs through a single hoist link on cargo net, then insert link number 3 of each chain into the grab link or hook to form hitch.

(3) The 12-inch ring of the nylon and chain, four-leg sling forms the apex for attachment to the helicopter cargo hook.

(4) The metal clevis of the sling, helicopter, cargo carrying external, four-leg sling forms the apex for attachment to the helicopter cargo hook.

(5) Observe procedures in *b*(4) through *b* (6) above.

d. Derigging. Two persons can derig the cargo net in approximately 5 minutes.

5–7. Materials and Procedures for Transport af Container, H913 (Configuration II), Using the 8,930-Pound Capacity Nylon Cargo Net

a. Materials.

(1) Sling, cargo net, nylon, 8,930-pound (NSN 3940–00–892–4374) (for use in combination with slings described below in (2), or in (4), or in (5), or in (6)).

(2) Two 16-foot, two-loop cargo slings (NSN 1670–00–753–3793) (each has rated capacity of 6,500 pounds).

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

(4) One 23-foot, nylon and chain, four-leg sling (NSN 1670–00–902–3080) (has rated capacity of 15,000 pounds).

(5) One sling, helicopter, cargo carrying external, four-leg sling (NSN 1670–01–027–2902) (has rated capacity of 10,000 pounds).

(6) One sling, helicopter, cargo carrying external, four-leg sling (NSN 1670–01–027–2900) (has rated capacity of 25,000 pounds).

(7) Cord, nylon 1/16-inch nominal diameter, 330-pound breaking strength (NSN 4020–00–903–8594), or equivalent.

(8) Tape, adhesive, 2-inch wide (NSN 7510–00–206–5016, or equivalent.

b. Preparation and Rigging When Using Two 16-Foot, Two-Loop, Cargo Slings to Rig Nylon Cargo Net.

(1) Observe procedures in 5–3*b*(1) and 5–3*b* (2).

(2) Observe procedures in 5–6*b*(2) through 5–6*b*(6).

c. Preparation and Rigging When Using the 23-Foot, Nylon and Chain, Four-Leg Sling; or the Sling, Helicopter, Cargo Carrying External, Four-Leg Sling (Either the 10,000- or 25,000-Pound-Capacity Sling), to Rig Nylon Cargo Net.

(1) Observe procedures in 5–3*b*(1) and 5–3*b* (2).

(2) Observe procedures in 5–6*c*(2) through 5–6*c*(5).

d. Derigging. Two persons can derig the cargo net in approximately 5 minutes.

CHAPTER 6

EMERGENCY MOVEMENT BY HELICOPTER

6-1. General

a. This chapter provides for emergency logistic movement (para 2-11, TM 39-45-51C) of the ADC (para 3-1d) for military contingency or logistic supply during periods of tension. It also provides for emergency evacuation under political or military conditions of such nature that noncompliance with portions of the nuclear and flight safety regulations is the only alternative to destruction of weapons.

b. Exercise of emergency movement authority is restricted to situations wherein the security of nuclear assets is endangered or when emergency logistic movement is dictated by a pending regional or world crisis. The determination that emergency movement is justifiable will be approved by the theater commander.

c. Minimum spacing and numerical limits for nuclear weapons and class II nuclear components are necessary to preclude the possibility of nuclear material interaction and to minimize sympathetic detonation of high explosive components in event of an accident. The minimum spacing requirements between nuclear weapons and/or class II nuclear components, provided in section 4, TM 39-45-51A, must be scrupulously observed to preclude the possibility of nuclear material interaction.

d. If emergency logistic movement is directed, there may be an operational necessity to airlift dangerous items that should not be mixed, as indicated in table 2-1, TM 39-45-51C. Should this occur, the commander who ordered the emergency movement may waive the requirements of table 2-1.

Note. Table and tiedown diagrams have not been developed for mixed loads of nuclear weapons or class II nuclear components. This, however, does not preclude the shipment of mixed loads if the limitations specified in TM 39-45-51A and TM 39-20-7 are adhered to.

6-2. Emergency Movement of the ADC as Helicopter Internal Loads

a. Case, H912, with ADC (configuration I). The maximum helicopter loads for case, H912, are the same as shown in paragraph 4-1.

b. Container, H913, with ADC (configuration II).

(1) Materials and procedures for transport of the container, H913, are prescribed by paragraph 4-2.

(2) A waiver of plutonium weight limits is required (TM 39-20-7 and TM 39-45-51A) before more than nine XM129ADC or seven XM159ADC may be transported in a single group. For the quantity of ADC that may be transported in a mixed group, refer to table 8-1, TM 9-1100-205-20.

(3) Tie down the container, H913, in the respective helicopter or pod in accordance with the following figures and tables:

Helicopter	Figure no.	Table no.
UH-1D/H	4-6	4-6
CH-47	6-1	6-1
CH-54 (universal military pod)	6-2	6-2

6-3. Emergency Movement of the ADC as Helicopter External Loads

Note. External loads have not been developed for maximum loads of individual or mixed nuclear weapons or class II nuclear components. This, however, does not preclude such external loads if the limitations specified in TM 39-45-51A and TM 39-20-7 are adhered to and if the loads are justifiable and directed. Also applicable are the limitations for external transport by helicopter (chap 5).

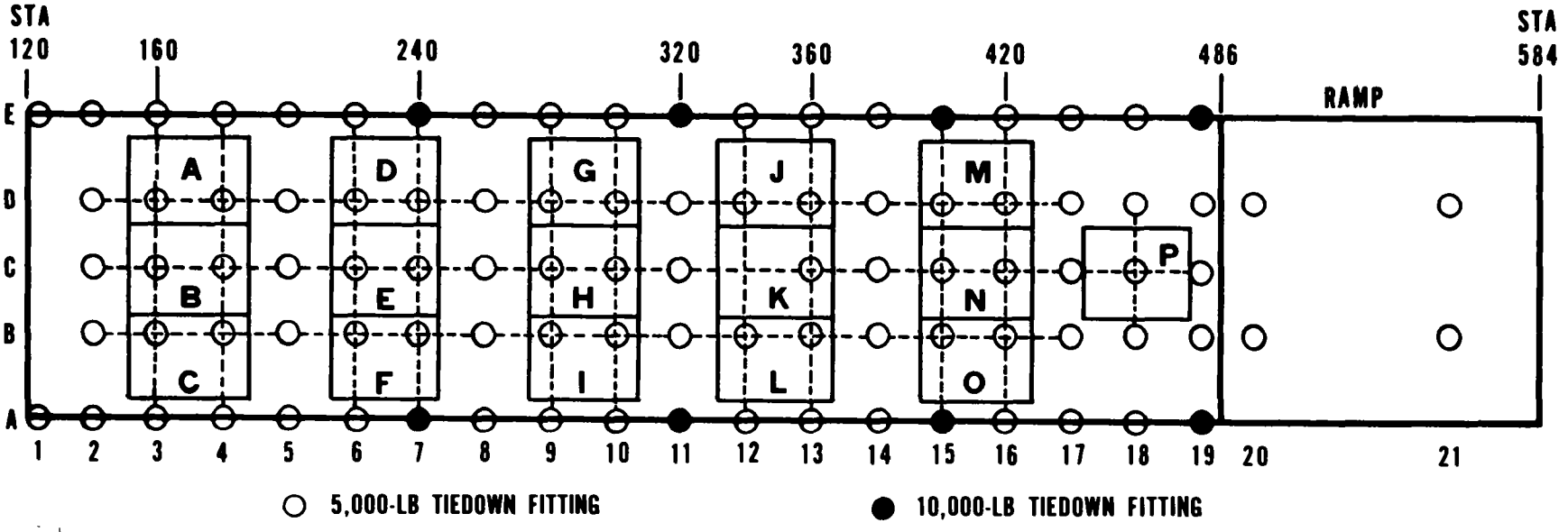
a. Case, H912 with ADC (configuration I). The maximum helicopter loads for case, H912, are the same as shown in paragraph 5-1.

b. Container, H913, with ADC (configuration II).

(1) Materials and procedures for transport of the container, H913, are prescribed by paragraphs 5-3, 5-5, and 5-7.

(2) External loads of the container, H913, must not exceed the rigging material capacities shown in chapter 5 or the helicopter capability.

(3) A waiver of plutonium weight limits is required (TM 39-20-7 and 39-45-51A) before more than nine XM129ADC or seven XM159ADC may be transported in a single group. For the quantity of ADC that may be transported in a mixed group, refer to table 8-1, TM 9-1100-205-20.



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

NOTE: INSERT ANTICHAFING MATERIAL BETWEEN COMBINED CONTAINERS.

3000021256

Figure 6-1. Tiedown diagram for maximum load of 16 containers, H913, in CH-47 helicopter.

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