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AUTHORITY

AGO, d/a ltr, 29 Apr 1980

DEPARTMENT OF THE ARMY
OFFICE OF THE ADJUTANT GENERAL
WASHINGTON, D.C. 20310

IN REPLY REFER TO
AGAM-P (M) (5 Jan 68) FOR OT RD-67039 9 January 1968

SUBJECT: Extract from Operational Report - Lessons Learned, Headquarters, 12th Combat Aviation Group, Period Ending 31 July 1967

TO: SEE DISTRIBUTION

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2. Information contained in this report is provided to insure appropriate benefits in the future from Lessons Learned during current operations, and may be adapted for use in developing training material.

BY ORDER OF THE SECRETARY OF THE ARMY:

Kenneth G. Wickham

KENNETH G. WICKHAM
Major General, USA
The Adjutant General

1 Incl
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DEPARTMENT OF THE ARMY
HEADQUARTERS, 12TH COMBAT AVIATION GROUP
APO 96266

AVGC-SC 3 July 1967

Instructions for Movement of 155mm Howitzer by CH-47 (Chinook) Helicopter

1. PURPOSE: These instructions are provided as a guide in planning the movement of 155mm howitzer (towed) units by CH-47 (Chinook).

2. GENERAL: The movement of 155mm howitzer for distances up to 30 KM is possible using the procedures stated herein. This range is limited by the reduced fuel load of the Chinook when carrying the 155mm howitzer.

3. CONSIDERATIONS:

a. Preparation of Loads.

(1) Vehicles, unit personnel and ammunition to be transported will be prepared for movement as 8,000 lb loads, the normal payload of the CH-47.

(2) 155mm howitzer will have the following equipment removed:

(a) Trail Spades

(b) Splinter Shields

(c) Jack Float or Plate

(d) Hand spikes and Rammerstaff

(e) Sighting Devices

b. Preparation of Helicopters.

(1) For all loads, except howitzers, no special preparation required.

(2) For helicopter(s) lifting the howitzers, the following personnel and equipment will be removed prior to the lift:

(a) 2 crewmembers

(b) All stored equipment, i.e., survival gear, rations, cargo handling rollers, tie downs, tools, etc.

(c) Defensive armament weapons system and all ammunition. Crew retains personal weapons only.

AVGC-SC

Instructions for Movement of 155mm Howitzer by CH-47 (Chinook) Helicopter

5. CONCLUSIONS:

a. That careful consideration must be given to the limiting factors presented to assure success of this type movement.

b. That detailed planning and training is required by both artillery and aviation units prior to this type move.

FOR THE COMMANDER:

WILLIAM N. WALKER
CPT, Infantry
Asst Adjutant

2 Incl
1. CH-47 (Chinook) and 155mm howitzer weight considerations
2. Rigging for 155mm howitzer.

5.

Inclosure 1 CH-47 (Chinook) and 155mm Howitzer (weight considerations)

1. The maximum allowable gross weight of the CH-47 (Chinook) is 33,000 lbs. The normal payload of this helicopter is 8,000 lbs. Items which make up the gross weight are:

Basic aircraft weight	19,000
Cargo handling equipment, survival gear, tools, and armament system	1,000
5 crew members	1,000
Fuel load	4,000
Payload	8,000
	33,000

2. The weight of the 155mm howitzer complete is 12,700 lbs. There is a necessity to remove all items readily removeable to minimize the weight of the howitzer.

Basic weight of 155mm howitzer			12,700
Less:	Trail Spades	368	
	Splinter Shields	100	
	Jack Float	85	
	Hand Spikes & Rammer-Staff	42	
	Sighting Device	5	600
			12,100

3. By careful planning the 155mm howitzer can be lifted by the CH-47 Chinook. The weight of the aircraft is changed by removing 2 crewmembers, 3 crewmembers being the minimum for operation; by eliminating all onboard equipment (survival gear, tools, cargo handling equipment, and armament system); and by reducing the fuel load of the aircraft.

Basic weight of CH-47	19,000
3 crewmembers	600
Fuel (to permit 30 KM travel w/15 minutes reserve)	1,300
Howitzer	12,100
Gross Weight	33,000

Inclosure 2 Rigging for 155mm howitzer

1. Department of the Army Technical Manual 55-1025-200-10-1 presents an approved rigging procedure for external transport of the 155mm howitzer by CH-47 helicopter. The procedures set forth in this TM require approximately 30 minutes for four men to prepare the howitzer for sling loading. The removal of the rigging is almost as time consuming. Because of the time involved, the rigging procedures set forth in TM 55-1925-200-10-1 are considered unsatisfactory for use in a tactical move of the 155mm howitzer.

2. A sturdy sling has been fabricated by the 147th Assault Support Helicopter Company which meets the tactical requirement of rapid rigging and de-rigging of the howitzer and exceeds the strength requirements of the load lifted. The complete sling is shown at figure 1. Figures 2, 3 and 4 show the manner of attachment of the sling to the howitzer. Figure 5 displays the components of the 155mm howitzer sling. Figure 6 portrays the manner in which the sling legs are attached to the donut of the sling. Figure 7 shows the 155mm howitzer being transported by the CH-47 (Chinook).

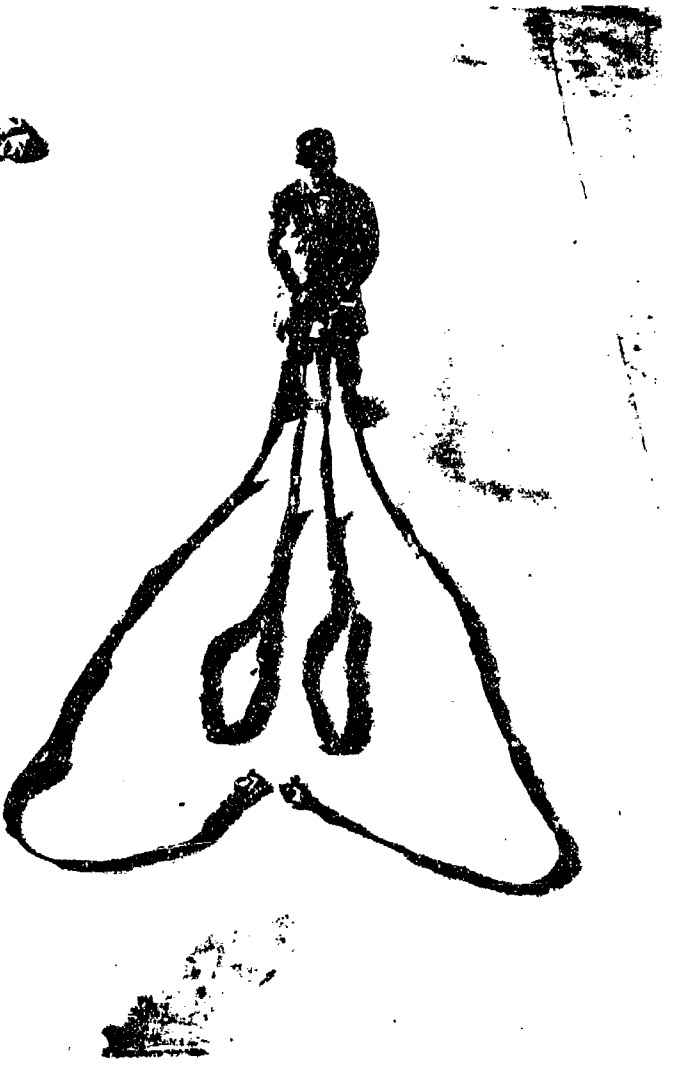

FIGURE 1. The complete sling for lifting the 155mm howitzer by CH-47 (Chinook) consists of a donut (held by Pathfinder) and four sling legs. Each sling leg is rated at 13,500 lbs strength. Two of the legs are 16 feet long and have a medium clevis attached to each, the other two legs are 9 feet in length and are insulated and taped to prevent friction damage.

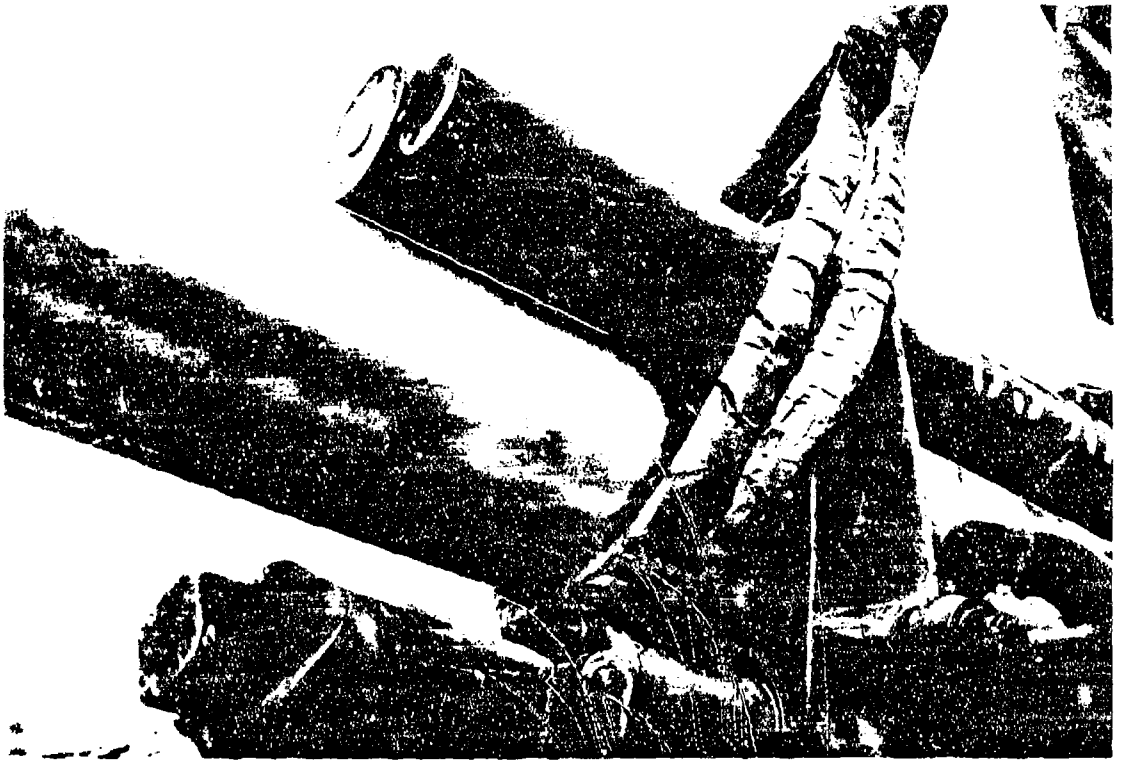

FIGURE 2. The nine foot sling legs attached to the 155mm howitzer. Note padding to prevent friction heat and wear on sling.

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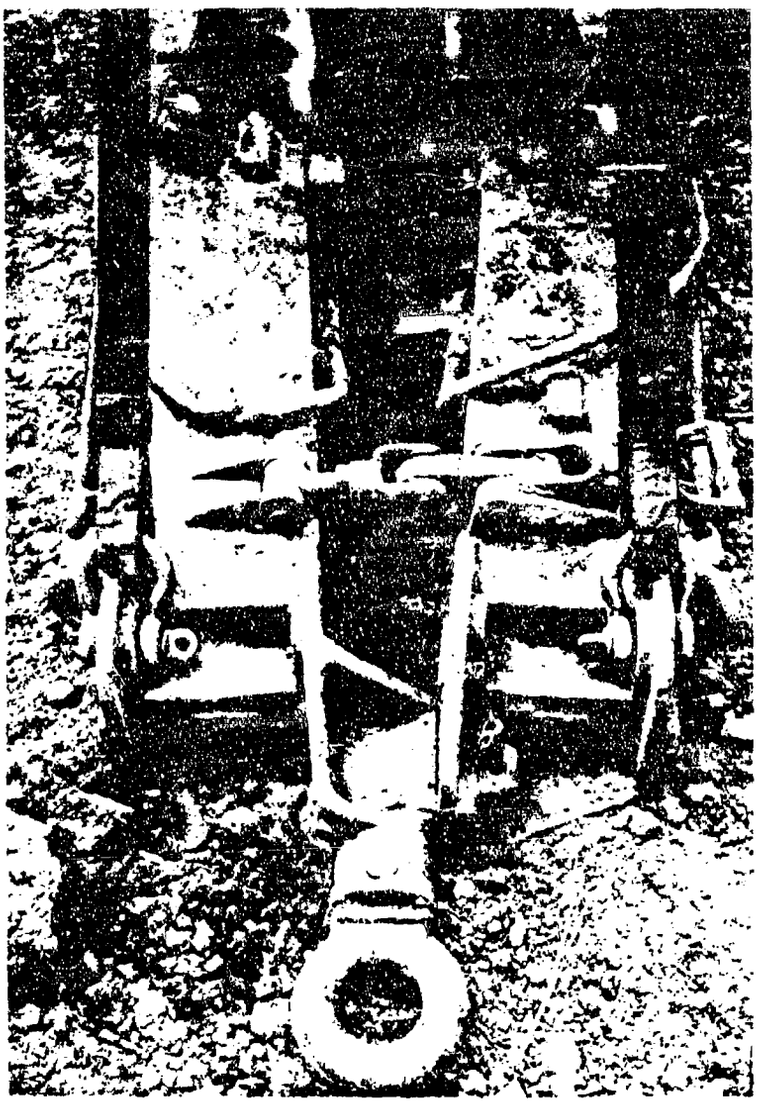

FIGURE 3. The sixteen foot sling legs attached to trails of 155mm howitzer. These legs are attached after the placement of the 9 foot legs under the tube.

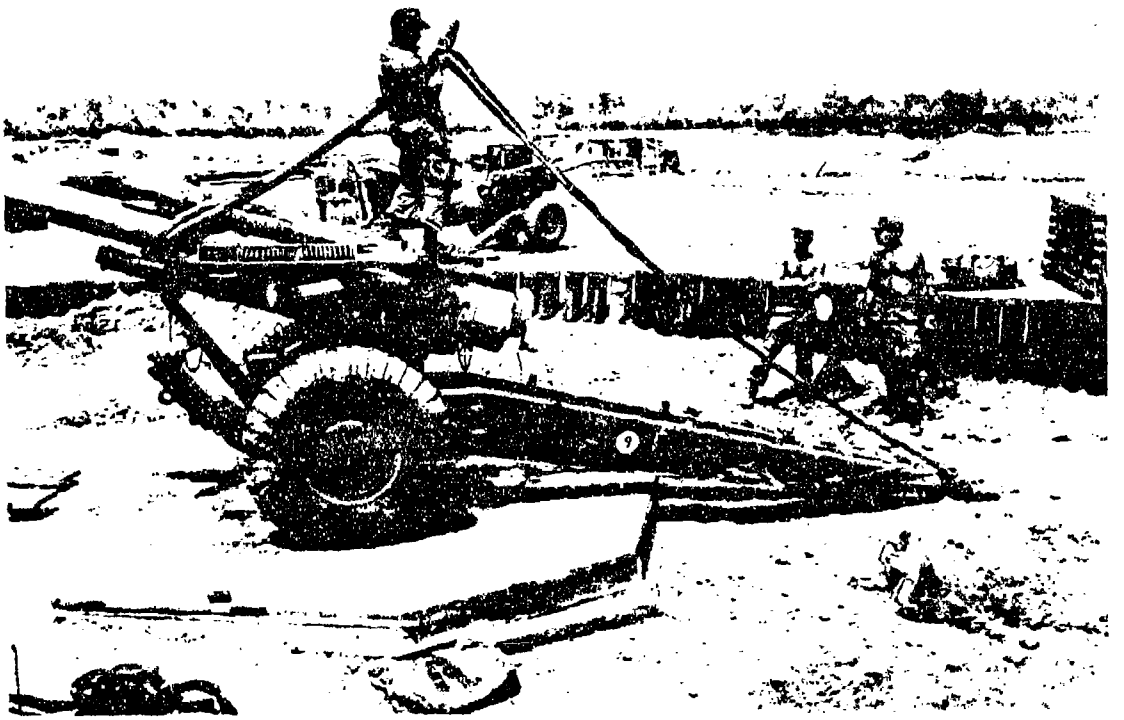

FIGURE 4. The 155mm howitzer rigged for sling pickup. (Note splinter shields have not been removed. They would be removed prior to actual lift).

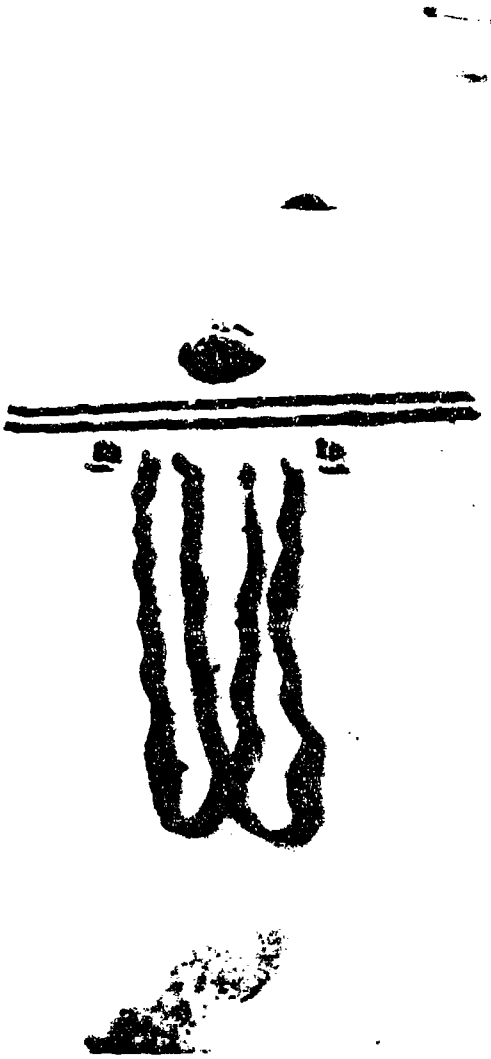

FIGURE 5. Components of the 155mm howitzer sling.

A. Sling, cargo A/D, 13,500 lbs cap, 16 ft (2 loop)
FSN 1670-753-3793 (2 ea)

B. Sling, cargo A/D, 13,500 lbs cap, 9 ft (2 loop)
FSN 1670-753-3790 (2 ea)

C. Clevis, medimum (FSN not available)

D. Sling, cargo A/C, 13,500 lbs cap, 8 ft (2 loop)
FSN 1670-753-3789 (1 ea)

E. Link assembly, single suspension or extraction, quick release.
FSN 1670-785-5988

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FIGURE 6. Donut assembly and sling leg attachment technique. The donut is fabricated by looping the 8 ft sling 3 times and securing the ends with the link assembly. The upper portion of the donut is insulated and taped to prevent friction wear from the cargo hook. The sling legs are attached to the donut by means of a choker hitch.

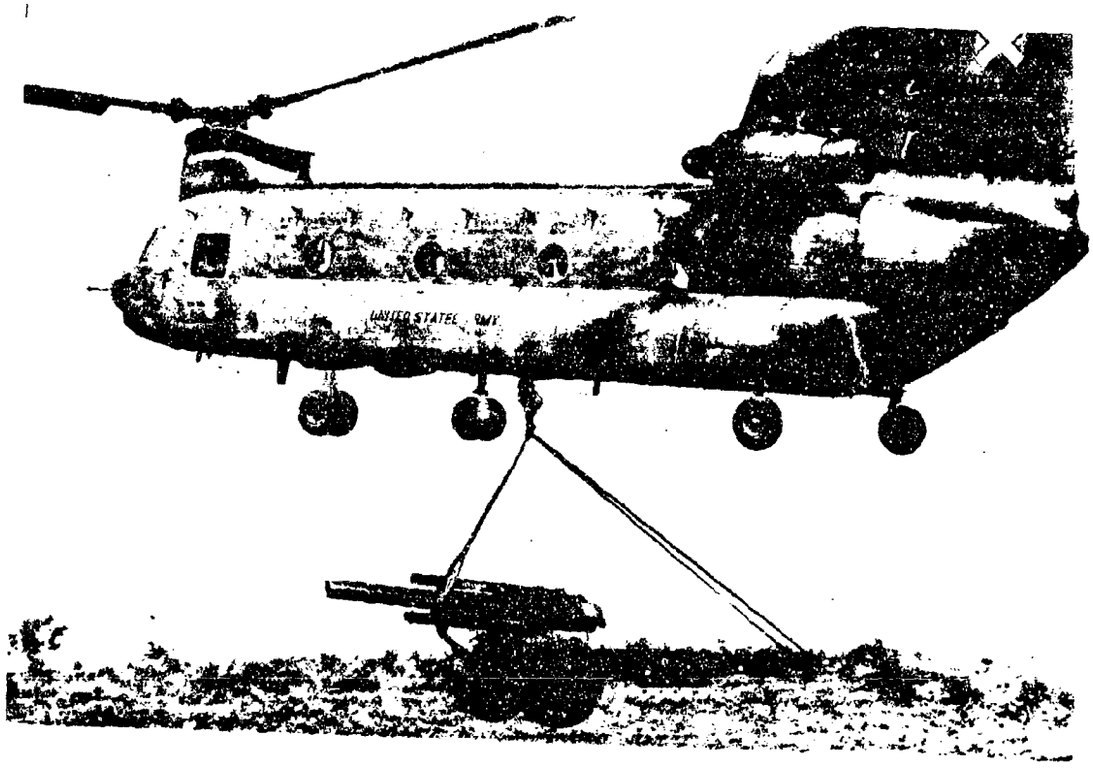

FIGURE 7. The 155mm howitzer being transported by CH-47 (Chinook).

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