

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

TECHNICAL MANUAL

OPERATOR AND ORGANIZATIONAL

MAINTENANCE MANUAL

INCLUDING REPAIR PARTS AND

SPECIAL TOOLS LIST

CRADLE, BOAT, 27 FT:

BRIDGE ERECTION BOAT

NSN 2090-00-348-8138

This copy is a reprint which includes current
pages from Changes 1 and 2.

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HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D. C., 11 March 1976**OPERATOR. AND ORGANIZATIONAL MAINTENANCE MANUAL****INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST****CRADLE, BOAT, 27 FT; BRIDGE ERECTION BOAT****NSN 2090-00-348-8138****Current as of 14 December 1975****REPORTING OF ERRORS**

You can help to improve this manual by calling attention to errors and by recommending improvements. Your letter, DA Form 2028 (Recommended Changes to Publications) or DA Form 2028-2 (Recommended (Changes to Equipment Technical Manuals), may be used. Copies of DA Form 2028-2 are attached in the back of the manual for your use. Please mail your recommended changes directly to Commander, U.S. Army Troop Support Command, ATTN: AMSTS-MPP, 4300 Goodfellow Blvd., St. Louis, MO 63120. A reply will be furnished directly to you.

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CHAPTER 1

INTRODUCTION

Section I. General

1-1. Scope

This manual is for your use in operating and maintaining the Boat Cradle which is used to transport the 27 foot bridge erection boat and launch it from the Tactical floating Bridge Transport

1-2. Maintenance Forms and Records

- a. Maintenance forms and records that you are required to use are explained in TM 38-750.
- b. You are to use the record and report forms listed below for operator and organizational maintenance
 - (1) DA Form 2400 (Equipment Utilization Record).
 - (2) DA Form 2401 (Organizational Control Record for Equipment).
 - (3) DA Form 2402 (Exchange Tag).
 - (4) DD Form 314 (-Preventive Maintenance Schedule and Record).
 - (5) DA Form 2404 (Equipment Inspection and Maintenance Worksheet).
 - (6) DA Form 2407 (Maintenance Request).
 - (7) DA Form 2408 (Equipment Log Assembly).
 - (8) DA Form 2408-1 (Equipment Daily or Monthly Log).
 - (9) DA Form 2408-5 (Equipment Modification Report).
 - (10) DA Form 2408-9 (Equipment Usage Report).
 - (11) DA Form 2408-10 (Equipment Component Register).
 - (12) DA Form 2408-14 (Uncorrected Fault Record Vehicle)

1-3. Equipment Serviceability Criteria

This equipment is not covered by an ESC.

1-4. Destruction of Army Materiel to Prevent Enemy Use

- a. *Authority.* The cradle will be destroyed if it is in danger of being captured and used by the enemy, and upon the order of the unit commander.
- b. *methods.* Remove the wheel assembly from the dolly and the roller assembly from the cradle and destroy. Destroy the dame parts on all cradles to prevent enemy use through cannibalization. If possible, destroy the entire unit by placing an explosive charge between the dolly and cradle. Be sure to obliterate all serial numbers, nameplates, and unit markings.

1.5. Administrative Storage

- a. *Preparation of Equipment.*
 - (1) Select the best available site for storage and separate stored equipment from equipment in use. Conspicuously mark the area "Administrative Storage". Covered area is preferred.
 - (2) Store equipment so as to provide maximum protection from the elements.
 - (3) Prior to storage, perform the next scheduled major preventive maintenance service. Inspect and approve equipment prior to storage.
- b. *Care of Equipment.*
 - (1) Perform regularly scheduled inspection of equipment.
 - (2) Keep equipment in an optimum state of readiness.
 - (3) Rotate items in accordance with a rotational plan that will keep the equipment in an operational condition.
- c. *Removal of Equipment From Administrative Storage.*
 - (1) Restore equipment to normal operating condition in accordance with pertinent technical manuals.
 - (2) Resume the maintenance service schedule in effect at the commencement of storage.
- d. For further instructions, refer to TM 740-90-1.

Section II. DESCRIPTION AND DATA

1-6. Description

The Boat Cradle (fig. 1-1) is used to support the assembled 27-foot Bridge Erection Boats. The Cradle is used to transport the boat on and launch it from the Tactical Floating Bridge Transporter (TM 5-5420-209-12).

The Cradle is constructed of an aluminum cradle frame with a captive cradle dolly, four guide stanchions, a latch-release, lashing ropes, cable assemblies and tie-down hooks.

1-7. Tabulated Data

a. General.

Manufacturer.....	Pacific Card Foundry
NSN.....	2090-00-348-8138

b. Dimensions and Weight.

Length.....	275.38 inches (69.95 meters)
Width.....	105.72 inches (26.88 meters)
Height.....	71.72 inches (18.16 meters)
Weight (Total).....	1,975 (895.73 kgs)
Weight (Cradle support and roller assy.).....	175 pounds (79.45 kgs)

c. Dimensions and Weight (with cradle and boat loaded on transporter).

(1) Dimensions.

Length.....	449 inches (114.05 meter ,
Width.....	136 inches (34.55 meters)
Height.....	162 inches, (144 inches min (41.15 meters, 36.58 meters min.)
CG Length.....	213.40 inches (54.20 meters)
CG Height.....	55.24 inches (14.03 meters)

(2) Weight.

Front Axle.....	10,270 pounds (4,662.6.58 kgs)
Inner Axle.....	12,935 pounds (5,872.49 kgs)
Rear Axle.....	12,935 pounds 65,872.49 kgs)[
Total.....	36,140 pounds (16,407.56 kgs)

Key to figure 1-1

1 Cradle guide stanchion	10 Tie-down bracket
2 Lifting bracket	11 Guide and locking bracket
3 Access cover	12 Cradle guide roller
4 Intermediate support	13 Stop pin (forward)
5 Tie down bracket	14 Lifting bracket
6 Lashing rope	15 Tie-down brackets
7 Boat guide stanchion	16 Tie-down bracket
8 Push-pull release cable	17 Stop pin (rear)
9 Boat cradle dolly	

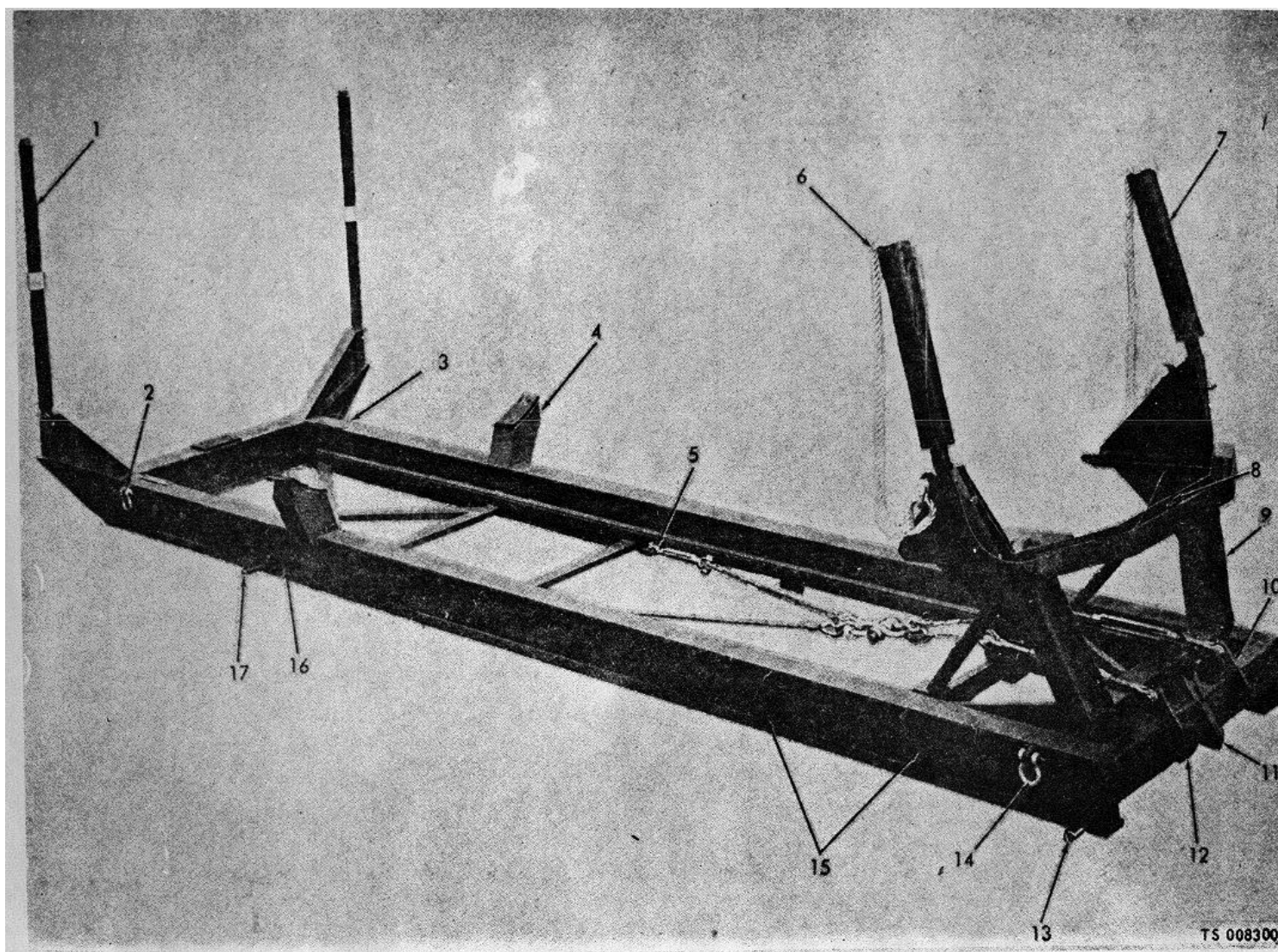


Figure 1-1. Boat Cradle.

CHAPTER 2

OPERATING INSTRUCTIONS

Section I. OPERATING PROCEDURES

2-1. General

The Boat Cradle is used to support the 27-foot bridge erection boat while stored on a hardstand or transporter (fig. 2-1), to load itself and the boat onto the transporter from a hardstand by using the transporter boom and winch, to transport the boat, to launch the boat, to retrieve the boat from the water, and to set itself and the boat off of the transporter by using the transporter boom and winch.

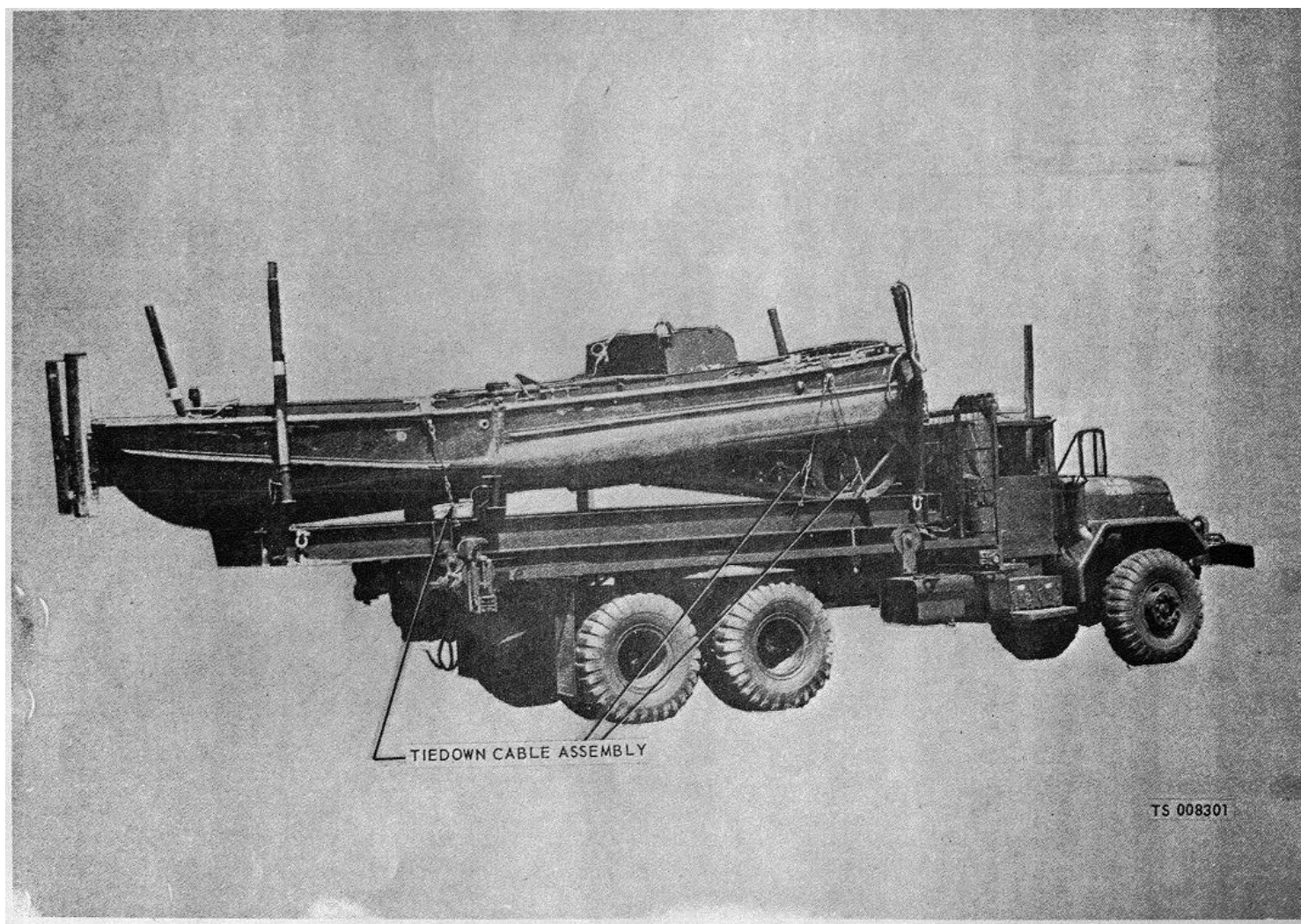


Figure 2-1. The boat loaded for transporting.

2-2. Loading

a. *Loading the Boat and Boat Cradle.* To load the boat cradle with 27-foot boat on it onto the tactical floating bridge transporter form a hardstand, use the rear winch and boom on the transporter and proceed as follows:

- (1) Remove the anchor snatch block (fig. 2-2) from the transporter boom.
- (2) Install the left and right inboard roller assemblies on the rear support of the transporter, as shown in figure 2-3, so that the rollers are positioned at the bases of boom legs.
- (3) Make sure the inboard roller assemblies are swung upward until a travel is stopped by the seating of the cradle stop bracket against the inclined surface on the transporter boom. The correct position is shown in figure 2-4. Tighten the roller bracket bolts to secure the roller assemblies in the correct position.
- (4) Place the transporter into a load position.
 - (a) Start the transporter (refer to TM 9-2320-260-10).
 - (b) Use an assistant to guide the driver and back the transporter into position so that the rear support is about one foot in front of the forward (dolly) end of the boat cradle. Make sure that the boat cradle side beams are in line with the inboard rollers on the transporter rear support.
 - (c) When positioned, depress the clutch pedal, place the transmission shift lever in the neutral position, engage the parking brake, engage the power take-off control lever for the hydraulic pump by pushing the lever down and release the clutch pedal.
 - (d) Set the hand throttle so that the transporter engine operates at 1,700 RPM.
 - (e) Take your position as driver/operator at the hydraulic controls located on the left side behind the cab and station an assistant near the latch block of the boat cradle.
 - (f) Engage the hydraulic control lever to disengage the forward tie down pin (fig. 2-4) and push the hydraulic winch control to pay out enough slack in the boom cable so that the hook reaches the ground.
 - (g) Push the hydraulic boom elevation control (outside lever) to raise the boom. Raise the boom until it passes slightly beyond vertical, so that the cable will clear the rear support. Pay out the boom cable until there is about three feet of slack on the ground.
- (5) Lift the latch hook on the boat cradle and secure it in the unlatched position. Remove the retainer (9, fig. 2-5) from the screw (10), and remove the screw (10) and latch block (11).
- (6) Place the boom cable on the sheave, thread it through the hole in the front beam of the dolly, and engage the cable hook in the eye on top of the dolly base.
- (7) Reinstall the latch block (11), retaining screw (10), and retainer (9), so that the boom cable runs between the latch block and the sheave (7). Release and relatch the latch hook (18).
- (8) Pull the winch control lever to rewind the boom cable. Lift the dolly end of the boat cradle until the forward cradle stop pins will clear the stop brackets on the rear support inboard rollers.