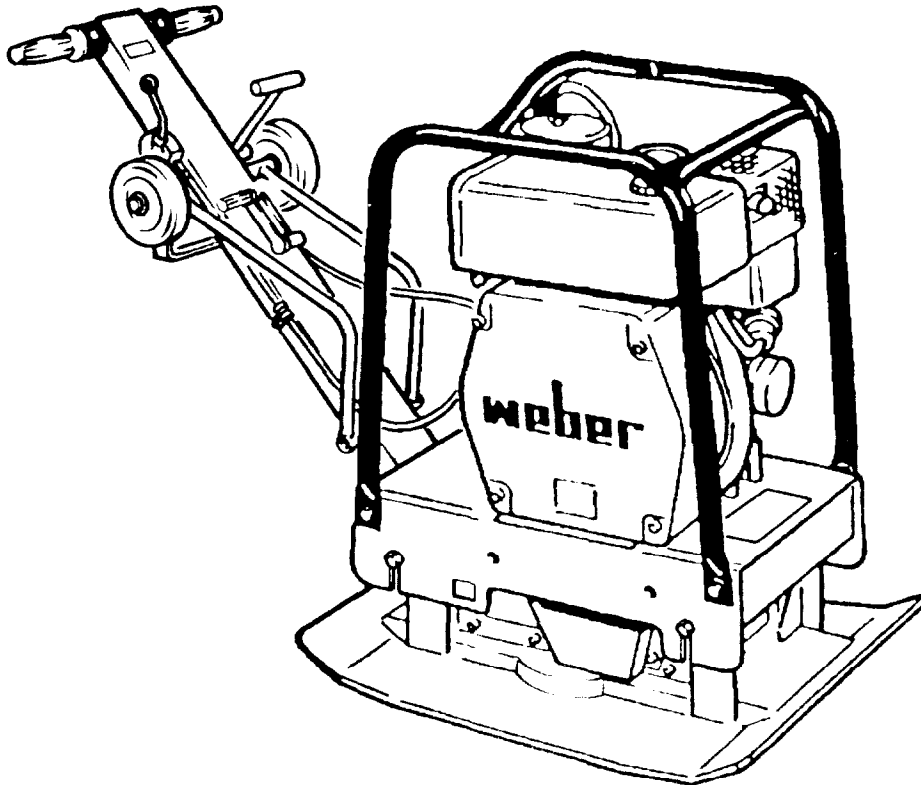


**OPERATOR, UNIT, DIRECT SUPPORT
AND GENERAL SUPPORT MAINTENANCE MANUAL
(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)**



**TAMPER, VIBRATING TYPE,
INTERNAL COMBUSTION ENGINE DRIVEN
MODEL RC48-2
(NSN 3895-01-383-6488) (EIC:E48)**

Approved for public release; distribution is unlimited.

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**HEADQUARTERS, DEPARTMENT OF THE ARMY
15 DECEMBER 1994**

WARNING

DEATH

may result if personnel fail to observe safety precautions

Carbon monoxide occurs in the exhaust fumes of internal combustion engines and becomes dangerously concentrated under conditions of inadequate ventilation. Observe the following safety precautions whenever the engine is running:

- **Operate in a ventilated area only.**
- **Do not idle the engine for long periods without maintaining adequate ventilation.**
- **Be alert at all times for exhaust odors and exposure symptoms.**
- **Be aware: the field protective mask for chemical biological radiological (CBR) protection will not protect you from carbon monoxide poisoning.**

SEVERE BURNS

Illness, death, or injury may result if personnel fail to handle diesel fuel properly. Observe the following safety precautions:

- **Do not inhale vapor.**
- **Do not refuel near open flame, sparks, or excessive heat.**
- **Be certain fuel lines and connections are secure.**
- **Do not overfill the fuel tank.**
- **Work in a well-ventilated area.**

SEVERE BURNS

may result from touching exhaust components during or immediately after operation. Allow unit to cool before performing any service maintenance.

SERIOUS INJURY

can result from excessive operation of the Vibrating Tamper. Limit operation to not more than two hours per day per operator

could result from Improper use of lifting equipment. Make sure that hoists and other lifting equipment are in good repair and of sufficient capacity to safely handle loads without injury to personnel or damage to equipment. Securely attach lifting equipment. Before lifting, be sure load is balanced.

HEALTH AND SAFETY HAZARD

exists when cleaning solvents are used. Dry cleaning solvent is flammable and potentially dangerous to people and property. Do not use near open flame, sparks, excessive heat, or on hot surfaces. Flash point of P-D-680, Type III solvent is 200°F (93.3°C). Use solvent in a well-ventilated area, and avoid inhaling fumes. If repeatedly exposed to fumes, seek fresh air and immediate medical help. Avoid prolonged exposure of skin to solvent. Wash exposed skin immediately and thoroughly.

TECHNICAL MANUAL

No. 5-3895-376-14&P

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington D.C., 15 December 1994

**Operator, Unit, Direct Support, and General Support Maintenance Manual
including Repair Parts and Special Tools List**

**TAMPER, VIBRATING TYPE,
INTERNAL COMBUSTION ENGINE DRIVEN, MODEL RC48-2**

(NSN 3895-01-383-6488) (EIC: E48)

REPORTING OF ERRORS

Reporting of Errors and Recommending Improvements. You can help improve this manual. If you find any mistakes or If you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA form 2028-2 located in the back of this manual direct to: Commander, US Army Tank-auto motive and Armaments Command, ATTN: AMSTA-IM-MMAA, Warren, MI 48397-5000. A reply will be furnished to you. You may also provide DA Form 2028-2 Information to TACOM via datafax or e-mail TACOM's datafax number for AMSTA-IM-MMAA is: (810) 574-8231 and the e-mail address is: amsta-im-mmaa@cc.tacom.army.mil

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HOW TO USE THIS MANUAL

Section I. OVERVIEW

This manual is divided into six chapters and SIX appendices, providing all necessary information to operate and maintain the compactor.

Section II. INDEXING

This manual contains several types of Indexes to help the user locate information quickly and efficiently. The different indexes are as follows:

1. Front Cover Index. Located on the front cover of your manual, this index lists the most frequently needed areas of instruction. To find the area quickly, black tabs are provided which line up with black tabs in the manual, where the listed area begins. The index also lists the page number to turn to.

2. Table of Contents. Lists all chapters, sections, and appendices contained in the manual, along with the page numbers where they begin. Entries which correspond to the front cover index are boxed for use if the front cover of the manual is lost.

3. Chapter Index. At the beginning of each chapter, this index lists all sections and paragraphs contained in the chapter.

4. Alphabetical Index. Located at the back of the manual, this index lists entries that personnel are most likely to look for. Most listings are provided several times in the index (i.e. "Maintenance Forms and Records" can also be found as "Forms and Records, Maintenance", and "Records, Maintenance Forms and"). This increases the likelihood of finding the information the first place you look. Each entry also lists the paragraph where the information can be found.

Section III. USAGE

Refer to the practice problem, below, for an example of how to use this manual. You must familiarize yourself with the entire maintenance procedure before beginning any maintenance task in this manual.

PROBLEM

As a maintenance technician, you are responsible for maintaining and repairing equipment. During training they told you the surest and quickest way to fix your compactor was by using your manual, so you grab your manual.

1. How do you start?

Turn to the cover of your manual.

On the right side you will find a listing for "OPERATOR MAINTENANCE." It tells you to go to page 3-1. (To find that section quickly, open the manual by using the black tab on the side of the manual that lines up with the "OPERATOR MAINTENANCE INSTRUCTIONS" chapter.)

2. What kind of problems do you have?

Open your manual to page 3-2.

You find there the troubleshooting table. The table contains the headings "MALFUNCTION", "TEST OR INSPECTION", and "CORRECTIVE ACTION". Read down through the troubleshooting table until you find your problem listed under "MALFUNCTION". Let's assume your problem is that XXXXX

3. How do you determine what is causing your problem?

Follow the troubleshooting instructions.

Starting with step 1, read the procedure. Each step tells you what to do ("TEST OR INSPECTION" heading). Let's assume that when you test XXXXXX, a malfunction occurs. To repair the XXXXXX you are told ("CORRECTIVE ACTION" column) to go to Paragraph XXXX.

4. *How do you fix it?*

Turn to Paragraph XXXX

This is the maintenance procedure for repairing the XXXXXX. Read the "INITIAL SETUP" section at the beginning of the task. This will identify what you need to do the job. When you have all the necessary items, go to step 1 in the procedure. Read down through the task, before beginning any work, to get familiar with the procedure. Return to step 1, Starting with step 1, read down the page, performing the action of each step, in the order listed, before going on to the next step. When you have finished the last step, you will have repaired the XXXXXX.

CHAPTER 1

INTRODUCTION

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Section I. GENERAL INFORMATION

1-1. SCOPE

Type of Manual: Operator, Unit, Direct and General Support Maintenance with Repair Parts and Special Tools List

Model Number and Equipment Name: RC48-2 Tamper, Vibrating Type, Internal Combustion Engine Driven. The common name used throughout this manual is Compactor.

Purpose of Equipment: Compacts soil, sand, gravel and aggregate in trenches, curbs, and backfill situations. Provides easy maneuverability, even in restricted areas.

1-2. MAINTENANCE FORMS AND RECORDS

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA Pam 738-750 as contained in the Maintenance Management Update.

1-3. DESTRUCTION OF ARMY MATERIAL TO PREVENT ENEMY USE

Command decisions, according to tactical situations, will determine when destruction of the plate compactor will be accomplished.

A destruction plan will be prepared by the using organization, unless one has been prepared by higher authority. For general destruction procedures for this equipment, refer to TM750-244-6, Procedures for Destruction of Tank-Automotive Equipment to Prevent Enemy Use.

1-4. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATION (EIR)

If your compactor needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance. Put it on an SF368 (Product Quality Deficiency Report). Mail it to us at: Commander, U.S. Army Tank-automotive and Armaments Command, ATTN: AMSTA-IM-MMAA, Warren, MI 48397-5000. We will send you a reply.

1-5. LIST OF ABBREVIATIONS

BDC Bottom dead center
TDC Top dead center

Section II. EQUIPMENT DESCRIPTION

1-6. EQUIPMENT CHARACTERISTICS, CAPABILITIES AND FEATURES

Highly portable with self-storing transport dolly

Highly maneuverable with reversing capability

Multiple applications: sand, gravel, chippings, aggregate

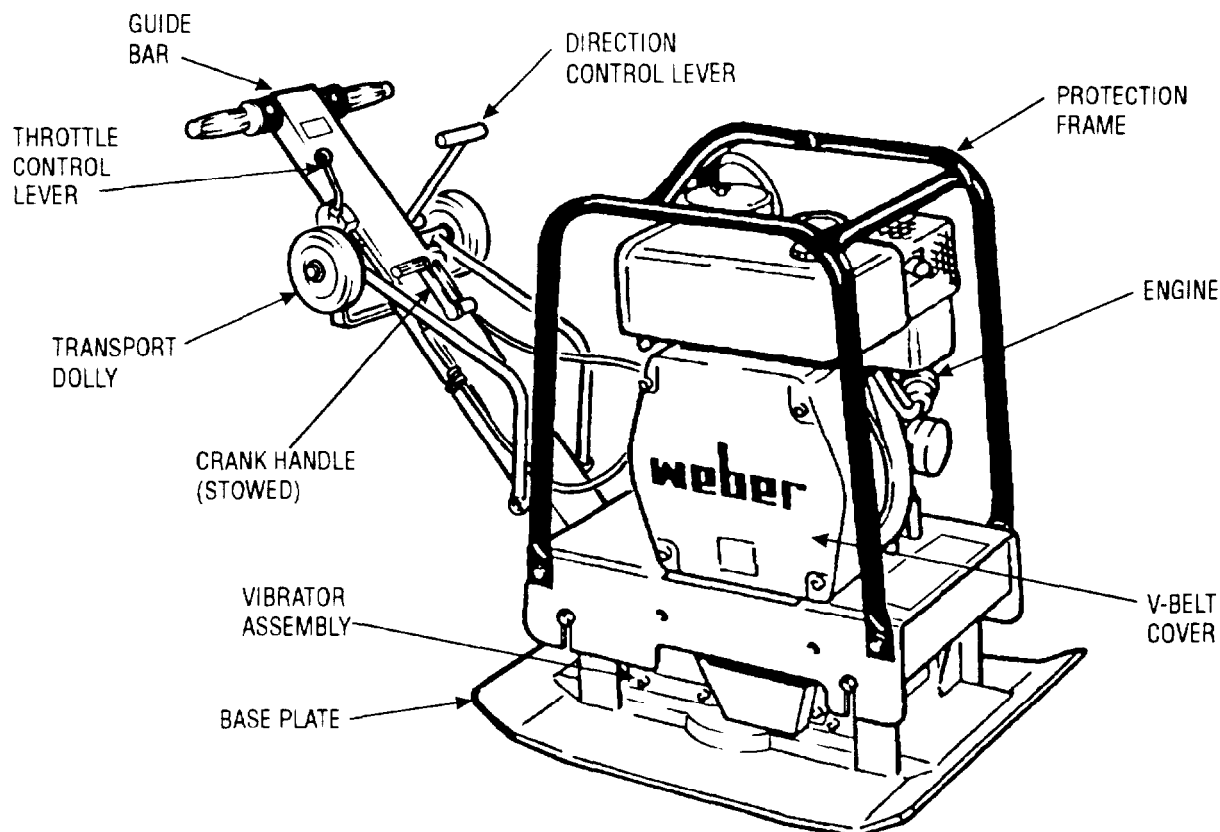
Compacts soil at speeds up to 66 feet per minute

Compaction depth approximately 16 inches

Operates on diesel fuel conforming to W-F-800, MIL-F-46162 and MIL-T-83133 (JP-8)

1-7. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

1. **GUIDE BAR:** This shock mounted guide bar provides operator control for guiding the unit during operation and also serves as a draw bar when transporting the unit on its transport dolly. The guide bar also serves as the carrier of the engine speed and direction of travel controls.
2. **PROTECTION FRAME:** Provides protection for operator and the unit. The protection frame also incorporates a lift point for mechanical lifting of the unit.
3. **ENGINE:** The air cooled, 4-stroke diesel engine powers the unit.
4. **V-BELT DRIVE:** Power in the form of torque is transmitted by a v-belt drive to the vibrator assembly.
5. **BASE PLATE:** The working surface that engages the medium being compacted



6. VIBRATOR ASSEMBLY: Provides the vibratory motion necessary for compaction and travel.
7. TRANSPORT DOLLY. A swing down dolly for manual movement around the worksite without mechanical power.

1-8. EQUIPMENT DATA.

Dimensions and Weights

Width	17 inches
Height	36 inches
Length	49.4 inches
Weight	410 lbs.
Plate Width (Working Width)	15 inches

Power Output

Engine brake horsepower at 3600 rpm	5.8 hp
Engine operating speed	2850 rpm
Frequency of vibration	440 rpm
Centrifical Force	16 inches

Capacities

Fuel Tank	1.056 Gal
Engine Oil Sump	1.2 qts
Vibrator assembly sump	1.6 pts

Section III. PRINCIPLES OF OPERATION

1-9. PRINCIPLES OF OPERATION

The hand crank started diesel engine supplies power transmitted through a centrifical clutch and v-belt drive to the vibrator assembly. The vibrator assembly consists of two eccentric weights, one on a fixed shaft and one on a shiftable shaft. Shifting of this shaft allows adjustment of the timing of weights to provide the direction of travel.

The action of the eccentric weights in the vibrator assembly also provide the vibratory motion transmitted through the base plate causing compaction of the material in the path of the compactor. Three points of shock mounts minimize the amount of vibration felt by the operator at the guide bar.

The controls for engine speed and direction of travel are conveniently mounted on the guide bar for easy access by the operator.