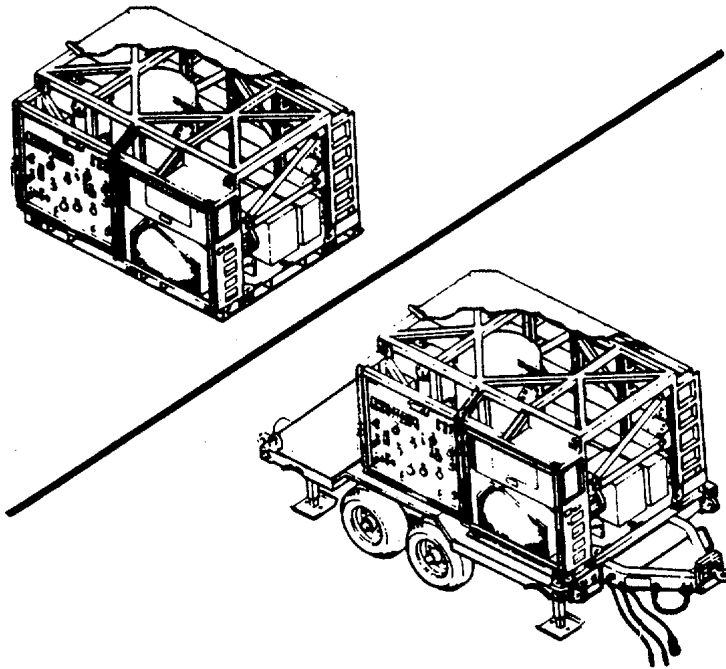


TECHNICAL MANUAL
UNIT, DIRECT SUPPORT,
AND GENERAL SUPPORT
MAINTENANCE MANUAL



WATER PURIFICATION UNIT,
REVERSE OSMOSIS, 600-GHP

TRAILER-MOUNTED, FLATBED CARGO,
5-TON, 4-WHEEL TANDEM
MODEL 0996109001 (ARMY)
(NSN 4610-01-234-2196)

AND
SKID-MOUNTED
MODEL 0996108001 (MARINE CORPS)
(NSN 4610-01-234-2190)

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* Supersedes TM 5-4610-21 5-24/2/TM08580B-24/3, 22 July 1988 including all changes.

HEADQUARTERS, DEPARTMENT OF THE ARMY
HEADQUARTERS, U.S. MARINE CORPS
20 APRIL 1992

TECHNICAL MANUAL

NO. 10-4610-239-24

HEADQUARTERS,
DEPARTMENT OF THE ARMY
HEADQUARTERS, U.S. MARINE CORPS
WASHINGTON, D. C. 20 April 1992

UNIT, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE MANUAL

WATER PURIFICATION UNIT, REVERSE OSMOSIS, 600-GPH

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REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you can 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 directly to: Commander, U.S. Army Aviation and Troop Command, ATTN: AMSAT-I-MTS, 4300 Goodfellow Boulevard, St. Louis, MO 63120-1798. Marine Corps users submit NAVMC Form 10722 to: Commander, Marine Corps Logistics Bases (Code 850), Albany, Georgia 31704-5000.

In either case, a reply will be furnished directly to you.

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HOW TO USE THIS MANUAL

Spend a few minutes looking through this manual. It has a new look that is very different from the manuals you've been using. You'll find the new look is a lot easier to use, and you can find what you're looking for a lot faster.

Each chapter begins with an index that lists each paragraph or section in the chapter. Each section in the maintenance chapter also has an index that lists the procedures in the section and gives page numbers. Or you can look for the information you want in the alphabetical subject index at the back of the manual.

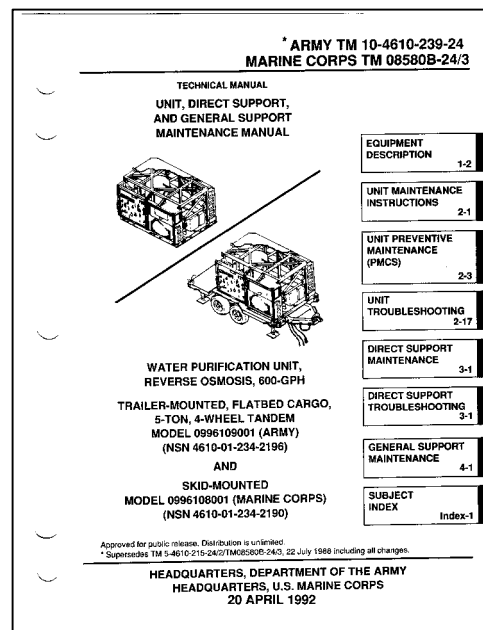
We got rid of as many words as we could and put in lots of illustrations to show just about everything you'll be doing to maintain your equipment.

The text is keyed to the illustrations with callout numbers (sometimes words). The callout numbers are in parentheses in the text.

So HOW DO YOU USE THIS MANUAL?

Like This:

1. Suppose the trailer vibrates when being towed and you want to troubleshoot the unit.
2. Look at the cover and you'll see index boxes near the right-hand edge with subject titles in them. You'll find "UNIT TROUBLESHOOTING 2-17." You can skip over to page 2-17.
OR
3. Bend the pages a bit and look at the edges. You'll see black bars on some of the pages that are lined up with the index boxes on the cover.



		TM 5-4610-215-24/2 TM 08580B-24/3
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4. If you put your thumbnail on the black bar that is lined up with the box on the cover for UNIT TROUBLESHOOTING and open the manual, you'll be on page 2-17.

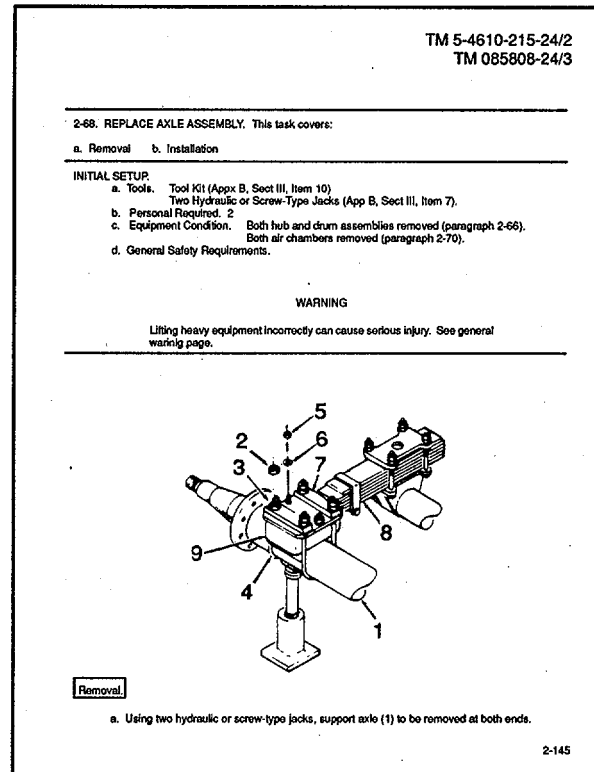
5. On page 2-17, you'll find Section V, TROUBLESHOOTING. The first item in the section is a SYMPTOM INDEX listing the systems and major assemblies that make up the flatbed cargo trailer and the ROWPU. Look for SUSPENSION ASSEMBLY in the Equipment column. Item 3 under SUSPENSION ASSEMBLY will give you page number 2-38 for "TRAILER VIBRATES WHEN BEING TOWED."

TM 5-4610-215-24/2 TM 08580B-24/3		
Table 2-2. Unit Troubleshooting – Continued		
Malfunction	Test or Inspection	Corrective Action
2. WHEELS ARE NOISY – Continued		
	Step 3. Inspect wheel bearings for overheating or damage. Refer to paragraph 2-65.	Replace damage wheel bearings. Refer to paragraph 2-65.
3. TRAILER VIBRATES WHEN BEING TOWED		
	Step 1. Jack up trailer on all four leveling jacks and spin each tire to check for bent wheels and out of round or damage tires. Refer to figure 2-7 for tire wear chart.	
	If wheels and tires are good, go to step 2.	
	If any wheel is bent or any tire is out of round or damaged, replace defective wheel or tire. Refer to paragraph 2-67.	
	Step 2. Check for bent axles.	
	If axles are not bent, go to Step 3.	
	If any axle is bent, replace defective axle. Refer to paragraph 2-68.	
	Step 3. Check wheel bearing adjustments are good, Refer to paragraph 2-65.	
	If wheel bearing adjustments are good, notify Intermediate Direct Support Maintenance.	
	If wheel bearings are out of adjustment, adjust wheel bearings. Refer to paragraph 2-65.	
4. TIRES WEAR UNEVENLY		
NOTE		
Refer to figure 2-7 for tire wear chart.		
	Step 1. Check for bent axles.	
	If axles are not bent, go to step 2.	

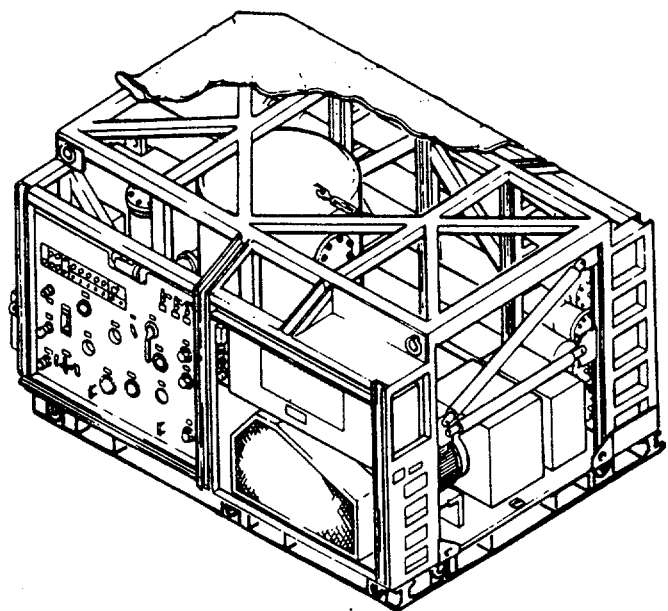
2-38

6. Turn to page 2-38 and find the symptom "TRAILER VIBRATES WHEN BEING TOWED."

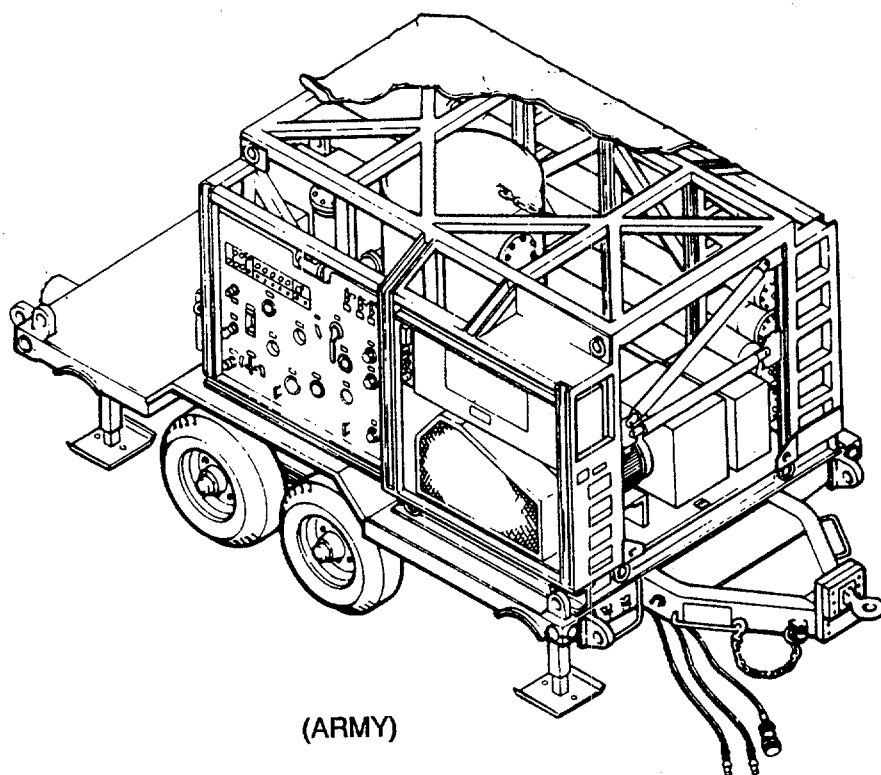
7. As you do the tests and corrective actions in the order listed, you will get to "If any axle is bent, replace defective axle. Refer to paragraph 2-68."



8. Turn to paragraph 2-68 and look at the procedure. The "INITIAL SETUP" section tells you what tools, materials, and parts are needed to do this task. It also tells you anything you must do before starting this task and it gives general warnings about hazards that can exist while you do this task.
9. The procedure itself has a picture to show you where to look and what to look at, plus the steps you will do to perform the task.
10. Notice the numbered arrows. These are the callout numbers. As you read each step, we tell you where to look by including the callout number (in parentheses) after the name of each thing we call out.
11. Do the procedure, then check to see if you have corrected the fault symptom.



(MARINE CORPS)



(ARMY)

Figure 1-1. Reverse Osmosis Water Purification Unit (ROVVP)

CHAPTER 1 INTRODUCTION

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Section I. GENERAL INFORMATION

1-1. SCOPE. This manual covers unit, direct support, and general support troubleshooting and maintenance procedures required to repair and maintain the 600-gallon per hour (gph) Reverse Osmosis Water Purification Unit (ROWPU), Models 0996109001 (Army) and 0996108001 (USMC) (figure 1-1). The ROWPU produces up to 600 gph of drinking water from any nonpure water source; i.e., streams, rivers, lakes, or salt water.

1-2. MAINTENANCE FORMS, RECORDS, AND REPORTS.

- a. Reports of Maintenance and Unsatisfactory Equipment. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA Pam 738-750, as contained in Maintenance Management Update. USMC personnel refer to TM 4700-15/1 for equipment records and forms procedures.
- b. Report of Packaging and Handling Deficiencies. Fill out and forward SF 364 [Report of Discrepancy (ROD)] as prescribed in AR 735-11-2/DLAR 4140.55/NAVMATINST 4355.73B/MCO 4430.3H.
- c. Discrepancy in Shipment Report (DISREP) (SF 361). Fill out and forward Discrepancy in Shipment Report (DISREP) (SF 361) as prescribed in AR 55-38/NAVSUPINST 4610.33C/MCO P4610.19D/DLAAR 4500.15.

1-3. CONSOLIDATED INDEX OF ARMY PUBLICATIONS AND BLANK FORMS. Refer to the latest issue of DA Pam 25-30 to determine whether there are new additions, changes, or additional publications pertaining to the equipment. USMC users refer to SL-1-2.

1-4. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE. Methods and/or procedures for the destruction of Army materiel to prevent enemy use are covered in TM 750-244-3.

1-5. PREPARATION FOR STORAGE OR SHIPMENT. Instructions on preparation for storage or shipment are found in Chapter 2, Section XIX.

1-6. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIRs).

- a. Army. If your ROWPU needs improvement, let us know. Send us an EIRZ. You, the user, are the only one who can tell us what you don't like about your equipment. Put it on an SF 368 (Quality Deficiency Report). Mail it to us at: Commander, U.S. Army Aviation and Troop Command, ATTN: AMSAT-I-MDO, 4300 Goodfellow Boulevard, St. Louis, MO 63120-1798. We'll send you a reply.
- b. Marine Corps. USMC personnel submit EIRs in accordance with MCO 16550.17.

1-7. WARRANTY INFORMATION. The ROWPU is warranted by Mechanical Equipment Company in accordance with the terms of contract DAAK-01-85-C-B312 for a period of 3 years from the date of delivery. Report all defects in material or workmanship to your supervisor who will take appropriate action.

Section II. EQUIPMENT DESCRIPTION AND DATA

1-8. EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES. For information on equipment characteristics, capabilities, and features of the equipment covered in this manual, refer to TM 10-4610-239-10/TM08580B-10/1.

1-9. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS. For information on the location and description of the major components, refer to TM 10-4610-239-10.

1-10. DIFFERENCES BETWEEN MODELS. There are two models of the ROWPU:

Model 0996109001 Trailer-mounted with generator (Army)

Model 0996108001 Skid-mounted (Marine Corps)

1-11. EQUIPMENT DATA. For equipment data pertaining to the ROWPU, refer to TM 10-4610-239-10.