

**TECHNICAL MANUAL
MAINTENANCE INSTRUCTIONS
DIRECT SUPPORT AND GENERAL SUPPORT**

**M977 SERIES, 8 x 8 HEAVY
EXPANDED MOBILITY
TACTICAL TRUCKS (HEMTT)**

MODEL	NSN
TRUCK, CARGO, WITH WINCH M977	2320-01-097-0260
TRUCK, CARGO, WITHOUT WINCH M977	2320-01-099-6426
TRUCK, TANK, FUEL, WITH WINCH M978	2320-01-097-0249
TRUCK, TANK, FUEL, WITHOUT WINCH M978	2320-01-100-7672
TRUCK, TRACTOR, WITH WINCH, WITHOUT CRANE M983	2320-01-097-0247
TRUCK, TRACTOR, WITH WINCH, WITH CRANE M983	2320-01-099-6421
TRUCK, WRECKER-RECOVERY M984	2320-01-097-0248
TRUCK, WRECKER-RECOVERY M984E1	2320-01-195-7641
TRUCK, CARGO, WITH WINCH M985	2320-01-097-0261
TRUCK, CARGO, WITHOUT WINCH M985	2320-01-100-7673
TRUCK, CARGO, WITH WINCH M985E1	2320-01-194-7032
TRUCK, CARGO, WITHOUT WINCH M985E1	2320-01-194-7031

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HEADQUARTERS, DEPARTMENT OF THE ARMY

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TECHNICAL MANUAL

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 3 June 1987

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REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this publication. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Submit your DA Form 2028 (Recommended Changes to Equipment Technical Publications), through the Internet, on the Army Electronic Product Support (AEPS) Web site. The Internet address is <http://aeprs.ria.army.mil>. If you need a password, scroll down and click on "ACCESS REQUEST FORM." The DA Form 2028 is located in the ONLINE FORMS PROCESSING section of the AEPS. Fill out the form and click on SUBMIT. Using this form on the AEPS will enable us to respond quicker to your comments and better manage the DA Form 2028 program. You may also mail, fax, or e-mail your letter or DA Form 2028 direct to: AMSTA-LC-CI/TECH PUBS, TACOM-RI, 1 Rock Island Arsenal, Rock Island, IL 61299-7630. The e-mail address is TACOM-TECH-PUBS@ria.army.mil. The fax number is DSN 793-0726 or Commercial (309) 782-0726.

M983 with crane and M985E1 without winch are no longer in the fleet. Ignore all references to these vehicles. The M984E1 and M984A1 are the same vehicle. All references to M984E1 shall be interpreted as the M984A1 model.

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HOW TO USE THIS MANUAL

This manual is designed to help maintain the M977 series vehicles. In addition to this manual TM 9-2320-354-24&P provides additional unique maintenance instructions for the M984 with HIAB 8109 crane and TM 9-2320-355-24&P provides additional unique maintenance instructions for the M985E1 with HIAB 8108 crane. Listed below are some of the special features which have been put into help locate and use needed information.

- The front cover index provides a quick reference to chapters and sections that will be used often.
- The appendixes are located at the end of the manual. They contain a reference guide to other manuals, a manufactured items list, a list of expendable supplies and materials, and tables for torque values.
- Subject headings and certain other essential information are printed in bold type throughout the manual to make them more visible.
- The maintenance tasks describe what must be done to the vehicle before starting the task, and what must be done to return the vehicle to operating condition after the task is finished.

The manual is divided into chapters containing direct support and general support maintenance procedures. These procedures describe a number of things such as:

- What will be needed to do the job.
- If any assistance will be needed.
- How long the job will take.
- Important safety precautions.

In addition to the text, there will be an exploded-view illustration of most steps. This illustration is keyed to the text and shows you how to take the part off and put it on. Cleaning and inspection procedures are also included when required. The following problem will describe some of the features of this manual.

PROBLEM

The vehicle operator brings an M977 vehicle into the shop with a problem. Whenever the crane is operated, the remote controller will not operate the crane. Organizational maintenance troubleshooting has been completed and trouble has not been fixed.

1. How do you start?

Look at the cover of the manual.

On the cover is a listing of different sections in the manual. It will be necessary to troubleshoot the problem to find the cause, so the Troubleshooting section will be needed. Open the manual to the page stated on the cover, or to find the Troubleshooting section fast, bend the pages slightly and line up the troubleshooting block on the cover with the black tab on the pages. The manual will be opened to Section III of Chapter 2, Troubleshooting.

2. What kind of problem is it?

Find it in the symptom index.

There are two symptom indexes in the Troubleshooting section. One is arranged alphabetically by **fault symptom** and the other is arranged alphabetically by **subject/symptom**. The symptom causing the problem might be in the Troubleshooting Fault Symptom Index under Material Handling Crane or Hydraulic System. In the Subject/Symptom Index, it might be under Remote Controller, or Crane. When the symptom to the problem is found, go to the troubleshooting procedure page listed for that symptom. For example, look for "Remote Controller will not operate crane."

3. How can the cause of the problem be determined?

Go to page 2-83.

Troubleshooting for CRANE WILL NOT OPERATE MANUALLY OR WITH REMOTE CONTROLLER is on that page. The troubleshooting procedures have columns with the headings: MALFUNCTION, TEST OR INSPECTION, and CORRECTIVE ACTION. Starting at step 1, read the procedure. Each step describes what to do and what to look for. Follow the steps, in order, to troubleshoot the symptom until the problem is found. When the problem is found, the CORRECTIVE ACTION column will describe how to fix it.

4. Let's assume it was determined that the two-way solenoid valve is bad. The replacement is in paragraph 17-32.

The procedure contains all the information needed to replace the two-way solenoid valve. First, check the introductory material. It tells what will be needed before starting the job. Following the introductory material is an exploded-view illustration and step-by-step instructions which show how to remove and install the two-way solenoid valve.

FOLLOW THESE GUIDELINES WHEN USING THIS MANUAL:

- Become familiar with the entire maintenance procedure before beginning a maintenance task.
- Read all WARNINGS and CAUTIONS before performing any procedures.