

TM 5-2420-224-20-2

Volume No. 2

TECHNICAL MANUAL

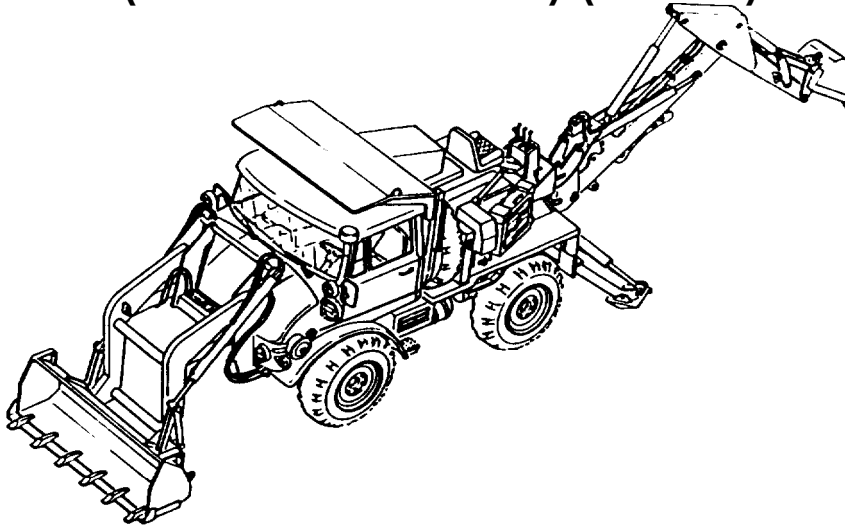
UNIT MAINTENANCE MANUAL

FOR

TRACTOR, WHEELED, 4 X 4 DED

SMALL EMPLACEMENT EXCAVATOR (SEE)

(NSN 2420-01-160-2754) (EIC:EDL)



TRACTOR, WHEELED, 4 X 4 DED

HIGH MOBILITY MATERIAL HANDLER (HMMH)

(NSN 2420-01-205-8636)

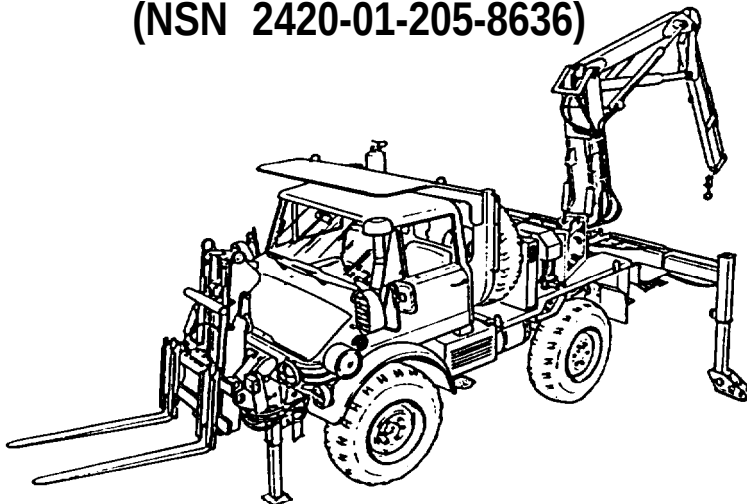


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HEADQUARTERS, DEPARTMENT OF THE ARMY

28 JULY 1993

This manual along with TM5-2420-224-20-1 and TM5-2420-224-34 supersedes

TM5-2420-224-24 dated December 1989

Approved for public release: distribution is unlimited.

Technical Manual
No. 5-2420-224-20-2

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington D.C., 28 July 1993

**UNIT MAINTENANCE MANUAL
FOR
TRACTOR, WHEELED, 4 X 4 DED
SMALL EMPLACEMENT EXCAVATOR (SEE)
(NSN 2420-01-160-2754) (EIC:EDL)**

AND

**TRACTOR, WHEELED, 4 X 4 DED
HIGH MOBILITY MATERIAL HANDLER (HMMH)
(NSN 2420-01-205-8636)**

VOLUME 2 OF 2

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

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HOW TO USE THIS MANUAL

This manual has an edge index that will help you find specific information in a hurry. Simply spread the pages in the right edge of the manual until the printed blocks can be seen. Open the manual where the block on the edge of the page lines up with your selected topic printed in the front cover block.

OVERVIEW

This manual is organized by chapters, sections, and appendices. A summary of the organization of this manual, by major divisions, follows:

Front cover index gives you a quick reference to chapters, sections, and appendices that you will use often.

WARNINGS—All warnings you should observe while working on or around the SEE/HMMH are shown in this part of the manual. These are repeated in the parts of the manual where they apply.

Table of Contents—The contents of the chapters and appendices are listed here.

Chapter 1—This chapter contains general information about the SEE/HMMH. It also shows and describes major components and lists specific data that you will find helpful while performing maintenance tasks.

Chapter 2—This chapter describes services and inspections that must be performed at the unit level, such as services you must perform upon receipt of the vehicle, and preventive maintenance checks and services. Other sections contain painting and restenciling of markings and general repair and cleaning methods.

Chapter 3—This chapter outlines troubleshooting of the SEE/HMMH and their systems. It includes a troubleshooting index, by symptom and system, and procedures on how to use the STE/ICE-R components while troubleshooting.

Chapter 4—This chapter contains step-by-step instructions for doing the maintenance tasks. Each system of the SEE/HMMH has its own section within the chapter, and any special tools, equipment, or supplies you may need for a task are listed.

Appendix A—This appendix lists the technical manuals and other publications you may have to refer to while working on the SEE/HMMH.

Appendix B—This appendix contains the Maintenance Allocation Chart (MAC) for the SEE/HMMH.

Appendix C—This appendix lists the expendable supplies and materials you will need while performing maintenance on the SEE/HMMH.

Appendix D—This appendix lists and describes any manufactured items you will need for performing maintenance on the SEE/HMMH.

Appendix E—This appendix describes the proper method of tightening fasteners.

Index—The index is an alphabetical listing of the contents of this manual.

Back Cover—The inside back cover contains a metric conversion table.

USING THE MANUAL ON THE JOB

Find the task or component that needs repair by using the LIST OF TASKS (page iii) or the index (page Index-1), then turn to the page listed for that task or component.

Read the INITIAL SETUP procedures, and gather the necessary items and personnel. Pay attention to the warnings. The INITIAL SETUP sheet is described on page xiii.

Although tasks are complete in detail, complete only the part of the task required. For example, if your task is to replace both air cleaner elements, you need not perform the remainder of the task to remove and replace the air cleaner canister.

TM 5-2420-224-20-2

1 **FORKLIFT REPLACEMENT**

2 This task covers: a. Removal b. Installation

INITIAL SETUP

3 **Applicable configuration:**
HMMH

General Safety Instructions:

9

4 **Tools and Special Equipment:**
Shop Equipment, SC 4910-95-CL-A74
Tool Kit, SC 5180-90-CL-N26
Stand (2), P/N 419 580 70 18

5 **Materials/Parts:**
Washer, Lock (2)
Caps and Plugs Appendix C, Item 7
Rags Appendix C, Item 32

6 **Personnel Required: (2)**

7 **References:**
TM 5-2420-224-10

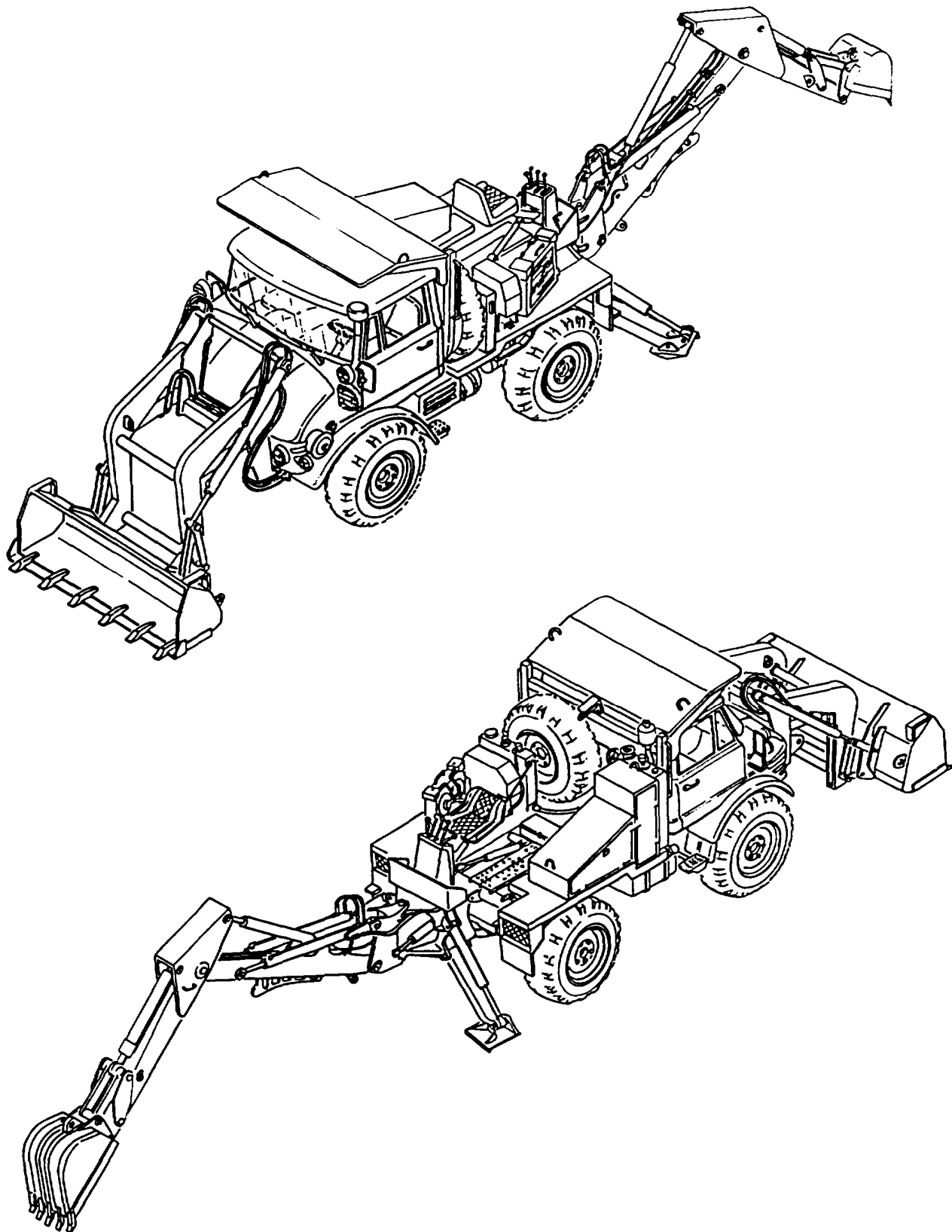
8 **Equipment Condition:**

Reference	Condition Description
Page 2-23	Hydraulic Pressure Relieved

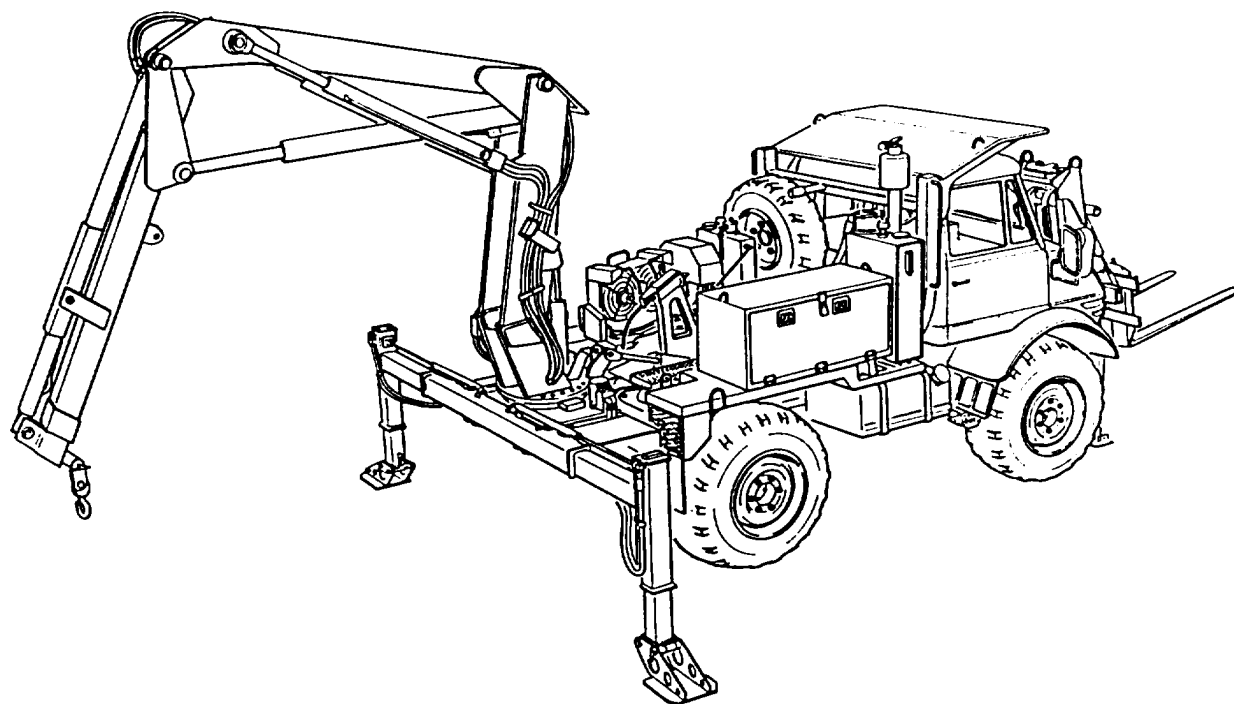
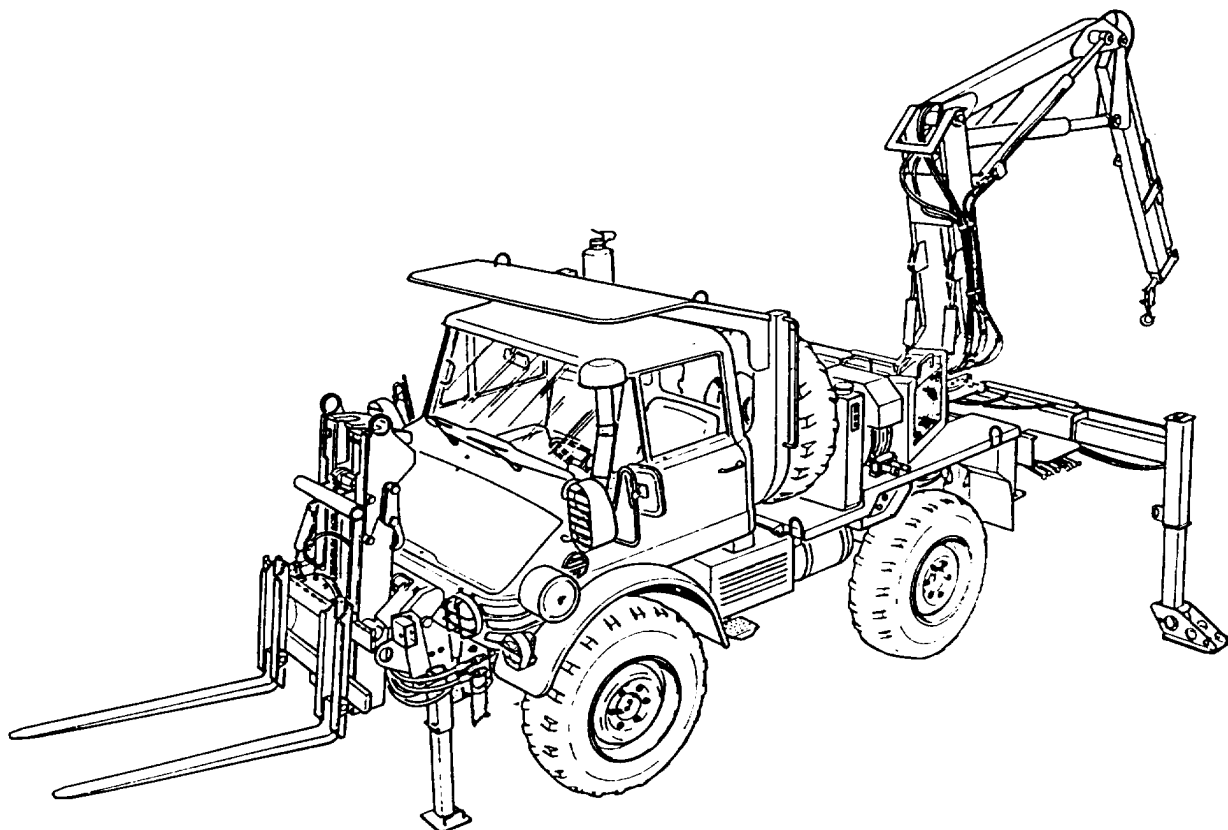
WARNING

- HMMH should not be operated with forklift removed, except in a maintenance facility. When maintenance is required and forklift is removed, never operate HMMH at speeds greater than 5 mph. Tractor stability and handling characteristics are greatly affected with forklift removed. This could cause loss of control and injury to personnel or damage to vehicle.
- High pressure hydraulics [oil under 2450 psi (26,893 kPa)] operate this equipment. Never disconnect any hydraulic line or fitting without first dropping

1. TITLE—This is the name of the task.
2. TASK COVERS—This lists all the tasks included in the module.
3. APPLICABLE CONFIGURATION—If the task is applicable to only one of the vehicles, SEE or HMMH (as appropriate) will be, listed here.
4. TOOLS AND SPECIAL EQUIPMENT—These are the tools and equipment you will need to do the task.
5. MATERIALS/PARTS—These are the supplies you will need to do the task. If parts or materials are required, they are listed here or referenced to Appendix C.
6. PERSONNEL REQUIRED—Personnel required to perform a task will be identified if the task requires more than one.
7. REFERENCES—These are the other technical publications you will need to do the task.
8. EQUIPMENT CONDITION—This is the condition(s) the vehicle must be in before you start the task. Other tasks that must be done first are listed by page number or by technical manual number if another manual is required.
9. GENERAL SAFETY INSTRUCTIONS—These are the safety precautions that must be observed while you are doing the task.
10. FOLLOW-ON MAINTENANCE—These are the tasks listed at the end of the procedure that must be completed to return the vehicle to an operational condition.



Small Emplacement Excavator (SEE)



High Mobility Material Handler (HMMH)

CHAPTER 4

VEHICLE MAINTENANCE INSTRUCTIONS

OVERVIEW

This chapter illustrates and describes Procedures for maintenance of the SEE/HMMH. A list of the sections contained in this chapter is shown 'below.

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Section 1.	Power Package Maintenance	4-2
Section II.	Clutch Maintenance	4-12
Section III.	Fuel System Maintenance	4-24
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Section V.	Cooling System Maintenance	4-86
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Section I. POWER PACKAGE MAINTENANCE

OVERVIEW

This section illustrates and describes procedures for maintenance of the power package. A list of tasks contained in this section is shown below.

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Valve Adjustment	4-5
Oil Separator Replacement	4-6
Engine Oil Fitter Element and Bowl Replacement	4-7
Engine Oil Hose and Fittings Replacement	4-9
Engine Inlet and Outlet Air lines Replacement	4-10